

6 - 11 . Result of distribution pipe network analysis

(1) Condition of network analysis

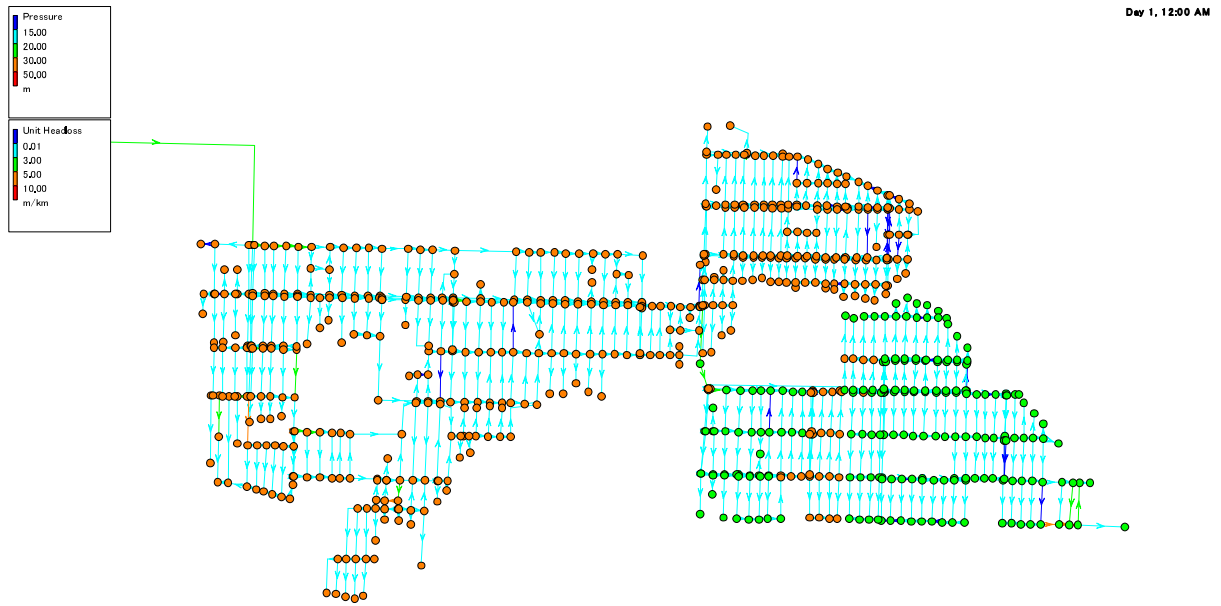
The following shows the condition of network analysis.

Items	Descriptions
Total head at distribution site (BPS No.7)	Distribution reservoir L.W.L.: +70.55m Pump head: 55m (5m is assumed as head loss around pump equipment) 50 m is used for network analysis Therefore, total head is 120.55m (70.55+50.00=120.55m).
Application formula	Hazen Williams formula $H=10.666*C^{-1.85}*D^{-4.87}*Q^{1.85}*L$ H: Friction head loss (m) C: Coefficient of velocity (110 is applied) D: Pipe internal diameter (m) Q: Flow rate (m ³ /s) L: Length (m)
Minimum dynamic water pressure to be secured at the end of distribution pipe network	More than 150 kPa (0.15MPa) Note; The end of distribution pipe network means the location branched from distribution pipe for house connection.
Minimum static water pressure to be secured at the end of distribution pipe network	Less than 740 kPa (0.74MPa) Note; The end of distribution pipe network means the location branched from distribution pipe for house connection.
Minimum dynamic water pressure to be secured in firefighting under fire	Positive pressure shall be secured. In this analysis, two (2) locations at the end of distribution pipe network are assumed as consumption points for firefighting. Planned population served is less than 100 thousand; therefore, the total amount of the planned daily maximum water supply amount and firefighting amount is used for analysis
Network analysis software	EPANET

(2) Result of distribution pipe network analysis

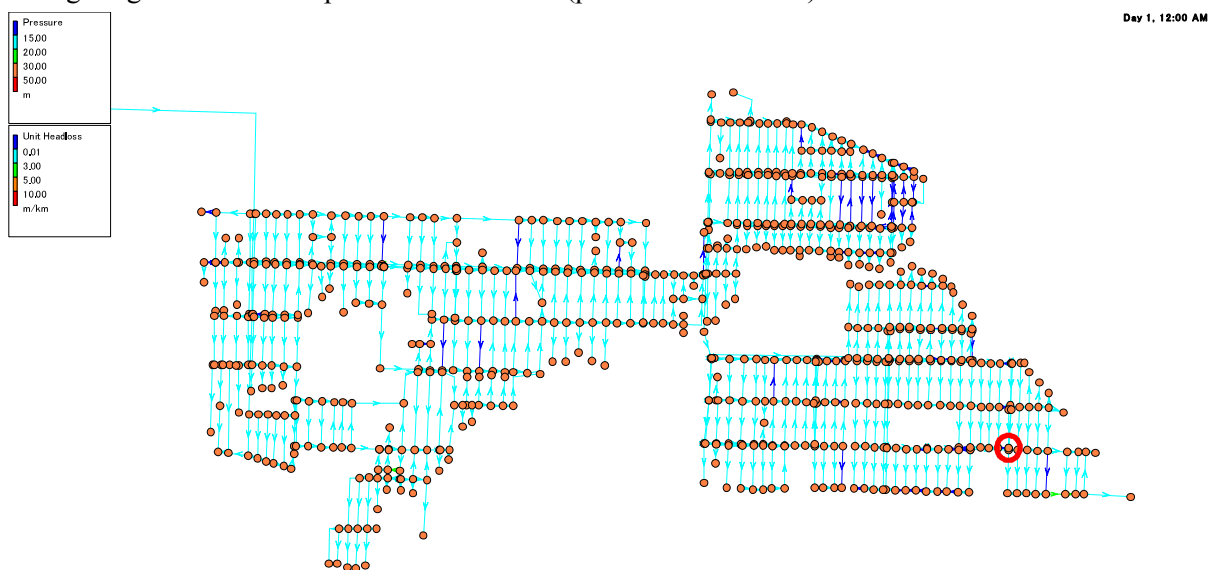
1) Normal condition

Minimum dynamic water pressure ranging 0.25 to 0.35MPa in distribution pipe network is secured.



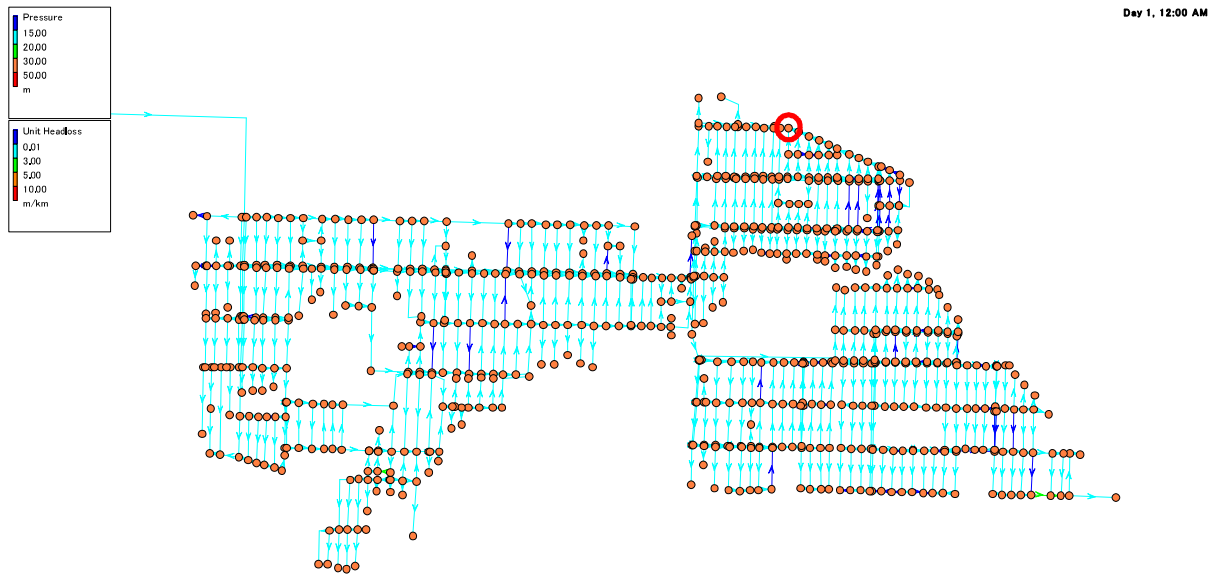
2) Under fire (Case 1)

Positive pressure is secured in the whole distribution pipe network. The consumption amount of firefighting is added at the points shown below (point with red color).



3) Under fire (Case 2)

Positive pressure is secured in the whole distribution pipe network. The consumption amount of firefighting is added at the points shown below (point with red color).



(3) Calculation data of distribution pipe network analysis

The followings show the calculation data in normal condition and under fire.

Node Results

Hourly maximum water flow rate

Normal condition

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 2	23.47	104.3	72.4	31.9	
Junc 3	23.47	104.1	71.9	32.1	
Junc 5	8.90	106.4	72.9	33.4	
Junc 6	8.90	106.4	72.9	33.4	
Junc 8	23.47	103.6	71.9	31.6	
Junc 9	23.47	104.1	72.1	32.0	
Junc 11	0.00	112.3	72.9	39.3	
Junc 12	23.47	103.5	73.6	29.8	
Junc 18	8.90	107.8	71.1	36.6	
Junc 19	8.90	104.8	72.0	32.8	
Junc 21	8.90	108.4	70.5	37.8	
Junc 22	8.90	104.9	71.7	33.1	
Junc 24	8.90	104.4	72.3	32.0	
Junc 25	8.90	104.4	72.1	32.2	
Junc 27	8.90	105.1	71.5	33.5	
Junc 28	8.90	105.0	71.6	33.3	
Junc 30	8.90	105.2	72.3	32.8	
Junc 31	8.90	105.1	72.4	32.6	
Junc 33	8.90	105.2	72.7	32.4	
Junc 34	8.90	105.2	72.7	32.5	
Junc 36	8.90	105.3	72.5	32.7	
Junc 37	8.90	105.4	72.4	32.9	
Junc 39	8.90	105.3	72.8	32.4	
Junc 40	8.90	105.3	72.9	32.3	
Junc 42	8.90	104.9	71.6	33.3	
Junc 43	8.90	105.0	71.5	33.4	
Junc 45	8.90	105.4	71.8	33.6	
Junc 46	8.90	105.4	71.9	33.5	
Junc 48	8.90	105.5	72.2	33.2	
Junc 49	8.90	105.5	72.2	33.2	
Junc 51	8.90	105.6	72.3	33.2	
Junc 52	8.90	105.6	72.3	33.2	
Junc 54	8.90	105.7	72.9	32.7	
Junc 55	8.90	105.7	72.9	32.7	
Junc 57	8.90	105.9	73.2	32.6	
Junc 58	8.90	105.9	73.2	32.6	
Junc 60	8.90	106.1	73.4	32.6	
Junc 61	8.90	106.1	72.9	33.1	
Junc 63	8.90	106.2	73.3	32.8	
Junc 64	8.90	106.1	72.9	33.1	
Junc 66	8.90	106.3	73.0	33.2	
Junc 67	8.90	106.3	72.9	33.3	
Junc 69	8.90	106.4	73.3	33.0	
Junc 70	8.90	106.4	73.3	33.0	
Junc 72	8.90	106.5	72.8	33.6	
Junc 73	8.90	106.5	72.6	33.9	
Junc 75	8.90	106.7	72.8	33.9	
Junc 76	8.90	106.7	72.5	34.2	
Junc 78	8.90	106.9	72.6	34.2	
Junc 79	8.90	106.9	72.1	34.7	
Junc 81	8.90	107.0	72.7	34.2	
Junc 82	8.90	107.0	72.3	34.6	
Junc 84	8.90	107.1	72.7	34.3	
Junc 85	8.90	107.1	72.6	34.4	
Junc 87	8.90	107.2	72.6	34.6	
Junc 88	8.90	107.3	72.4	34.8	
Junc 90	8.90	107.4	72.4	34.9	
Junc 91	8.90	107.5	72.0	35.5	
Junc 93	8.90	107.4	72.0	35.4	
Junc 94	8.90	107.3	72.4	34.8	
Junc 96	8.90	107.6	72.0	35.5	
Junc 97	8.90	107.6	72.0	35.6	

Node Results

Hourly maximum water flow rate

Normal condition

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 99	8.90	107.7	71.8	35.8	
Junc 100	8.90	107.8	70.4	37.3	
Junc 102	8.90	107.7	71.4	36.2	
Junc 103	8.90	108.0	70.4	37.5	
Junc 105	8.90	107.8	71.2	36.4	
Junc 106	8.90	108.2	70.4	37.7	
Junc 108	8.90	107.8	71.3	36.4	
Junc 110	8.90	108.4	70.5	37.8	
Junc 111	8.90	107.8	71.4	36.3	
Junc 113	8.90	107.8	71.4	36.3	
Junc 116	8.90	107.8	71.4	36.3	
Junc 119	8.90	107.8	71.4	36.3	
Junc 120	8.90	108.4	70.5	37.8	
Junc 123	8.90	107.8	71.4	36.3	
Junc 125	8.90	107.8	72.7	35.0	
Junc 127	8.90	107.4	72.2	35.2	
Junc 131	8.90	106.7	72.8	33.9	
Junc 133	8.90	107.7	71.5	36.1	
Junc 134	8.90	107.4	73.0	34.4	
Junc 136	8.90	107.6	71.8	35.7	
Junc 137	8.90	107.4	73.0	34.4	
Junc 139	8.90	107.5	72.2	35.2	
Junc 140	8.90	107.4	73.0	34.4	
Junc 142	8.90	107.8	71.4	36.3	
Junc 143	8.90	107.8	72.6	35.1	
Junc 145	8.90	107.8	72.6	35.1	
Junc 147	8.90	107.8	72.6	35.1	
Junc 148	8.90	107.8	71.4	36.3	
Junc 150	8.90	107.2	73.0	34.2	
Junc 151	8.90	107.3	72.5	34.8	
Junc 153	8.90	107.2	72.6	34.5	
Junc 154	8.90	107.2	72.6	34.6	
Junc 156	8.90	107.1	73.0	34.1	
Junc 157	8.90	107.1	73.0	34.1	
Junc 159	8.90	107.0	73.4	33.6	
Junc 160	8.90	107.0	73.4	33.5	
Junc 162	8.90	106.7	72.5	34.1	
Junc 163	8.90	106.9	72.5	34.3	
Junc 165	8.90	106.8	72.7	34.0	
Junc 167	8.90	106.6	72.4	34.2	
Junc 168	8.90	106.5	72.6	33.9	
Junc 170	8.90	106.7	72.8	33.8	
Junc 171	8.90	105.8	73.6	32.1	
Junc 175	8.90	104.9	72.3	32.6	
Junc 176	8.90	104.3	72.3	32.0	
Junc 178	8.90	106.7	72.6	34.1	
Junc 179	8.90	106.2	73.3	32.9	
Junc 181	8.90	106.3	72.6	33.6	
Junc 182	8.90	105.9	73.6	32.2	
Junc 184	8.90	105.8	73.6	32.2	
Junc 185	8.90	105.8	73.6	32.1	
Junc 187	8.90	105.8	73.6	32.2	
Junc 188	8.90	105.9	72.7	33.2	
Junc 190	8.90	104.8	72.2	32.6	
Junc 192	8.90	105.9	72.7	33.1	
Junc 193	8.90	105.2	73.1	32.1	
Junc 195	8.90	106.1	73.2	32.9	
Junc 196	8.90	105.8	72.7	33.1	
Junc 198	8.90	105.8	73.3	32.4	
Junc 201	8.90	105.8	73.1	32.6	
Junc 202	8.90	105.9	73.6	32.3	
Junc 204	8.90	105.8	73.5	32.3	

Node Results

Hourly maximum water flow rate

Normal condition

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 205	8.90	105.7	73.5	32.1	
Junc 207	8.90	105.7	73.3	32.3	
Junc 208	8.90	105.7	73.4	32.2	
Junc 210	8.90	105.6	73.2	32.4	
Junc 211	8.90	105.6	73.5	32.0	
Junc 213	8.90	105.6	73.3	32.2	
Junc 214	8.90	105.5	73.0	32.5	
Junc 216	8.90	105.5	73.3	32.1	
Junc 217	8.90	105.5	73.3	32.1	
Junc 219	8.90	105.4	72.8	32.5	
Junc 220	8.90	105.4	72.4	32.9	
Junc 222	8.90	105.5	72.7	32.7	
Junc 223	8.90	105.4	72.8	32.6	
Junc 227	8.90	105.3	72.0	33.3	
Junc 231	8.90	105.3	73.2	32.0	
Junc 233	8.90	105.2	73.1	32.1	
Junc 235	8.90	105.2	73.1	32.0	
Junc 236	8.90	105.1	72.9	32.2	
Junc 238	8.90	105.1	73.0	32.1	
Junc 240	8.90	105.1	72.9	32.1	
Junc 241	8.90	105.1	72.5	32.5	
Junc 243	8.90	105.0	71.6	33.3	
Junc 244	8.90	105.0	71.7	33.3	
Junc 246	8.90	104.9	71.7	33.2	
Junc 249	8.90	104.4	72.3	32.0	
Junc 251	8.90	104.8	72.3	32.4	
Junc 252	8.90	104.8	72.2	32.6	
Junc 254	8.90	104.7	72.6	32.0	
Junc 255	8.90	104.8	72.2	32.5	
Junc 257	8.90	104.7	72.2	32.5	
Junc 258	8.90	104.6	72.2	32.4	
Junc 260	8.90	104.6	72.2	32.3	
Junc 261	8.90	104.5	72.4	32.0	
Junc 263	8.90	104.5	72.0	32.5	
Junc 264	8.90	104.5	72.1	32.4	
Junc 266	8.90	104.4	72.2	32.2	
Junc 274	23.47	104.3	72.4	31.9	
Junc 277	23.47	104.0	71.6	32.4	
Junc 278	23.47	103.8	71.5	32.3	
Junc 280	23.47	104.3	72.4	31.9	
Junc 281	23.47	104.2	71.5	32.6	
Junc 283	23.47	104.1	73.1	31.0	
Junc 285	23.47	103.7	72.2	31.4	
Junc 287	23.47	104.2	71.5	32.6	
Junc 288	23.47	104.0	72.8	31.2	
Junc 290	23.47	104.2	71.5	32.6	
Junc 291	23.47	104.1	71.8	32.2	
Junc 293	23.47	104.1	72.0	32.0	
Junc 295	23.47	104.1	71.8	32.3	
Junc 297	23.47	104.1	71.1	32.9	
Junc 299	23.47	104.0	71.4	32.6	
Junc 301	11.74	103.8	71.0	32.7	
Junc 302	23.47	103.7	70.7	33.0	
Junc 304	11.73	103.8	71.0	32.8	
Junc 305	23.47	103.7	71.0	32.7	
Junc 307	23.47	103.7	70.9	32.8	
Junc 308	23.47	103.7	70.6	33.0	
Junc 310	23.47	103.7	71.2	32.5	
Junc 311	23.47	103.6	70.6	33.0	
Junc 313	23.47	103.7	71.2	32.5	
Junc 314	23.47	103.6	70.9	32.7	
Junc 316	11.74	103.7	71.2	32.5	

Node Results

Hourly maximum water flow rate

Normal condition

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 317	23.47	103.6	71.0	32.6	
Junc 319	23.47	103.7	71.3	32.4	
Junc 320	23.47	103.6	71.4	32.1	
Junc 322	23.47	103.7	71.4	32.2	
Junc 323	23.47	103.6	71.5	32.1	
Junc 325	23.47	103.7	71.4	32.2	
Junc 326	23.47	103.6	71.6	32.0	
Junc 328	23.47	103.6	71.7	31.9	
Junc 329	23.47	103.6	71.8	31.8	
Junc 331	23.47	103.6	71.8	31.8	
Junc 332	23.47	103.5	71.9	31.6	
Junc 334	23.47	103.7	72.0	31.6	
Junc 335	23.47	103.6	71.5	32.0	
Junc 337	23.47	103.6	71.9	31.7	
Junc 338	23.47	103.6	71.9	31.6	
Junc 340	23.47	103.6	72.0	31.6	
Junc 341	23.47	103.5	71.8	31.7	
Junc 343	23.47	103.6	71.8	31.8	
Junc 344	23.47	103.5	71.5	32.0	
Junc 346	23.47	103.7	71.4	32.2	
Junc 348	23.47	103.7	71.6	32.0	
Junc 349	0.00	103.7	72.3	31.3	
Junc 351	23.47	103.7	71.5	32.1	
Junc 352	23.47	103.6	71.5	32.0	
Junc 354	23.47	103.7	71.3	32.4	
Junc 355	23.47	103.5	70.8	32.6	
Junc 357	23.47	103.7	71.5	32.1	
Junc 358	23.47	103.6	71.3	32.3	
Junc 360	23.47	103.5	70.9	32.6	
Junc 362	23.47	103.7	71.3	32.3	
Junc 363	23.47	103.8	71.0	32.7	
Junc 365	11.74	103.8	70.4	33.3	
Junc 366	23.47	103.7	70.7	32.9	
Junc 370	23.47	103.9	71.6	32.2	
Junc 372	11.74	103.8	70.8	32.9	
Junc 373	23.47	103.8	71.4	32.4	
Junc 375	23.47	103.8	70.8	32.9	
Junc 377	23.47	103.7	70.8	32.8	
Junc 379	23.47	103.8	70.8	32.9	
Junc 380	23.47	103.7	71.3	32.4	
Junc 382	11.73	103.7	70.8	32.9	
Junc 383	23.47	103.7	71.0	32.7	
Junc 385	23.47	103.7	70.8	32.9	
Junc 388	11.74	103.7	70.8	32.8	
Junc 389	23.47	103.7	71.0	32.7	
Junc 391	23.47	103.7	70.9	32.8	
Junc 392	23.47	103.7	70.9	32.7	
Junc 394	0.00	103.7	70.8	32.8	
Junc 395	23.47	103.7	70.9	32.8	
Junc 397	11.74	103.7	70.8	32.9	
Junc 399	23.47	103.8	70.9	32.8	
Junc 400	11.73	103.7	71.4	32.3	
Junc 402	23.47	103.7	71.2	32.5	
Junc 404	11.74	103.7	71.2	32.5	
Junc 405	23.47	103.7	71.1	32.6	
Junc 407	23.47	103.7	71.4	32.2	
Junc 409	23.47	103.6	71.2	32.4	
Junc 410	23.47	103.7	71.4	32.3	
Junc 412	23.47	103.7	71.3	32.4	
Junc 413	23.47	103.7	71.1	32.5	
Junc 415	23.47	103.7	71.2	32.5	
Junc 416	23.47	103.7	70.9	32.7	

Node Results

Hourly maximum water flow rate

Normal condition

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 418	23.47	103.6	71.5	32.1	
Junc 421	23.47	103.7	71.8	31.8	
Junc 422	23.47	103.7	71.7	31.9	
Junc 424	11.73	103.7	72.2	31.4	
Junc 425	23.47	103.7	71.8	31.8	
Junc 427	23.47	103.7	72.0	31.6	
Junc 428	0.00	103.7	72.3	31.3	
Junc 430	23.47	103.7	71.9	31.7	
Junc 431	11.74	103.7	72.7	30.9	
Junc 433	23.47	103.7	72.0	31.6	
Junc 434	11.74	103.7	72.9	30.7	
Junc 436	23.47	103.5	71.6	31.8	
Junc 437	23.47	103.7	72.7	30.9	
Junc 439	23.47	103.7	71.7	31.9	
Junc 440	23.47	103.6	71.5	32.1	
Junc 442	23.47	103.6	71.7	31.9	
Junc 443	11.73	103.7	71.9	31.7	
Junc 445	23.47	103.6	72.0	31.6	
Junc 446	23.47	103.7	71.8	31.8	
Junc 448	23.47	103.6	72.3	31.2	
Junc 450	23.47	103.6	72.8	30.7	
Junc 452	23.47	103.6	72.8	30.8	
Junc 454	23.47	103.6	72.6	30.9	
Junc 456	23.47	103.6	72.6	30.9	
Junc 457	11.74	103.7	72.7	30.9	
Junc 459	23.47	103.7	72.7	30.9	
Junc 460	23.47	103.6	72.5	31.1	
Junc 462	23.47	103.7	72.7	30.9	
Junc 463	23.47	103.6	72.2	31.4	
Junc 465	23.47	103.6	72.6	31.0	
Junc 466	23.47	103.6	72.7	30.9	
Junc 469	23.47	103.5	72.2	31.3	
Junc 471	23.47	103.6	72.0	31.5	
Junc 473	23.47	103.6	72.0	31.5	
Junc 474	23.47	103.6	72.5	31.1	
Junc 476	23.47	103.7	72.2	31.4	
Junc 477	23.47	103.6	71.6	32.0	
Junc 479	15.17	103.1	73.0	30.0	
Junc 480	15.17	102.2	71.7	30.5	
Junc 482	15.17	102.4	72.2	30.2	
Junc 483	15.17	103.1	73.0	30.0	
Junc 485	15.17	102.5	72.4	30.0	
Junc 486	15.17	102.5	72.0	30.4	
Junc 488	15.17	102.5	72.4	30.1	
Junc 490	7.57	102.5	72.5	30.0	
Junc 491	15.17	102.6	72.6	29.9	
Junc 493	7.57	102.6	72.9	29.7	
Junc 494	15.17	102.6	72.9	29.6	
Junc 496	7.57	102.6	72.9	29.6	
Junc 497	15.17	102.6	73.1	29.4	
Junc 499	15.17	102.6	73.2	29.3	
Junc 500	7.57	102.6	73.0	29.6	
Junc 502	15.17	102.6	73.2	29.3	
Junc 503	7.57	102.6	73.2	29.4	
Junc 505	15.17	102.6	73.1	29.4	
Junc 506	7.57	102.7	73.2	29.4	
Junc 508	15.17	102.7	73.8	28.9	
Junc 509	15.17	102.6	73.7	28.9	
Junc 511	15.27	102.9	73.3	29.5	
Junc 512	15.17	102.5	72.1	30.3	
Junc 514	15.17	102.5	72.6	29.8	
Junc 515	15.17	102.5	72.3	30.2	

Node Results

Hourly maximum water flow rate

Normal condition

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 517	15.17	102.5	72.7	29.7	
Junc 518	15.17	102.5	72.3	30.2	
Junc 520	15.17	102.5	72.6	29.8	
Junc 522	15.17	102.6	72.8	29.7	
Junc 524	15.17	102.6	72.9	29.6	
Junc 526	15.17	102.6	72.9	29.7	
Junc 527	15.17	102.6	72.5	30.0	
Junc 529	15.17	102.6	73.2	29.4	
Junc 530	15.17	102.7	73.0	29.7	
Junc 532	15.17	102.7	73.4	29.3	
Junc 534	15.17	102.8	73.0	29.7	
Junc 536	15.17	102.8	73.4	29.4	
Junc 537	15.17	102.8	73.2	29.5	
Junc 539	15.17	102.8	73.4	29.4	
Junc 540	15.17	102.6	73.0	29.6	
Junc 542	15.17	102.4	72.2	30.2	
Junc 543	15.17	102.4	71.7	30.7	
Junc 546	15.17	102.4	71.7	30.7	
Junc 547	15.17	102.5	72.4	30.1	
Junc 549	15.17	102.5	72.4	30.1	
Junc 550	15.17	102.4	72.0	30.4	
Junc 552	27.12	101.7	72.5	29.1	
Junc 554	27.12	101.8	72.5	29.3	
Junc 556	27.12	99.1	73.5	25.5	
Junc 557	27.12	99.1	73.5	25.5	
Junc 559	26.88	101.6	73.5	28.1	
Junc 560	27.12	101.7	74.5	27.1	
Junc 562	27.12	101.4	73.5	27.8	
Junc 564	27.12	101.3	73.5	27.7	
Junc 565	27.12	100.9	72.6	28.2	
Junc 567	27.12	101.3	73.5	27.7	
Junc 568	27.12	100.5	72.6	27.8	
Junc 570	27.12	99.9	72.6	27.2	
Junc 572	27.12	101.7	72.6	29.1	
Junc 573	27.12	101.7	74.5	27.1	
Junc 575	27.12	101.8	72.9	28.9	
Junc 576	27.12	101.7	72.5	29.2	
Junc 578	27.12	101.8	73.1	28.6	
Junc 579	27.12	101.7	72.5	29.2	
Junc 581	27.12	101.7	73.6	28.1	
Junc 582	27.12	101.7	73.2	28.4	
Junc 584	27.12	101.7	73.2	28.4	
Junc 585	27.12	101.7	72.9	28.7	
Junc 587	27.12	101.7	72.8	28.9	
Junc 588	27.12	101.7	73.3	28.3	
Junc 590	27.12	101.7	72.7	28.9	
Junc 591	27.12	101.7	73.3	28.3	
Junc 593	27.12	101.7	72.7	29.0	
Junc 594	27.12	101.7	73.3	28.3	
Junc 596	27.12	101.7	73.5	28.2	
Junc 597	27.12	101.7	73.5	28.2	
Junc 600	27.12	101.8	73.3	28.4	
Junc 601	27.12	101.7	72.5	29.2	
Junc 603	27.12	101.8	73.4	28.3	
Junc 604	27.12	101.7	72.5	29.2	
Junc 606	27.12	101.7	73.5	28.2	
Junc 607	27.12	101.7	73.0	28.6	
Junc 609	27.12	101.6	72.7	28.9	
Junc 611	27.12	101.6	72.7	28.8	
Junc 613	27.12	101.6	72.7	28.8	
Junc 615	27.12	101.6	72.9	28.6	
Junc 617	27.12	101.6	72.7	28.8	

Node Results

Hourly maximum water flow rate

Normal condition

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 619	27.12	101.6	72.8	28.7	
Junc 621	27.12	101.6	73.3	28.3	
Junc 623	27.12	101.7	73.4	28.2	
Junc 625	27.12	101.6	73.4	28.2	
Junc 627	27.12	101.6	73.5	28.1	
Junc 629	27.12	101.6	73.5	28.1	
Junc 631	27.12	101.7	71.7	29.9	
Junc 632	27.12	101.4	72.6	28.8	
Junc 634	27.12	101.4	72.6	28.7	
Junc 635	27.12	101.3	72.3	29.0	
Junc 637	27.12	101.4	72.6	28.7	
Junc 638	27.12	101.3	73.0	28.2	
Junc 640	27.12	101.3	73.1	28.1	
Junc 641	27.12	101.3	73.8	27.4	
Junc 643	27.12	101.8	72.5	29.3	
Junc 644	27.12	101.7	72.6	29.1	
Junc 648	27.12	101.7	72.6	29.0	
Junc 650	27.12	101.7	72.0	29.7	
Junc 652	27.12	101.7	72.1	29.5	
Junc 654	27.12	101.6	72.8	28.8	
Junc 655	27.12	101.6	72.1	29.4	
Junc 657	27.12	101.8	72.5	29.3	
Junc 658	27.12	101.8	71.7	30.0	
Junc 660	27.12	101.8	72.2	29.6	
Junc 661	27.12	101.6	72.7	28.8	
Junc 663	27.12	101.6	72.1	29.5	
Junc 664	27.12	101.8	71.8	29.9	
Junc 667	27.12	101.8	71.7	30.0	
Junc 668	27.12	101.6	72.1	29.4	
Junc 671	27.12	101.7	72.1	29.6	
Junc 672	27.12	101.7	72.7	28.9	
Junc 674	27.12	101.8	72.5	29.3	
Junc 675	27.12	101.7	73.2	28.5	
Junc 677	27.12	101.4	72.1	29.3	
Junc 678	27.12	101.7	72.2	29.4	
Junc 680	27.12	101.7	72.5	29.1	
Junc 681	27.12	101.6	72.8	28.8	
Junc 683	27.12	101.7	71.5	30.2	
Junc 685	27.12	101.7	71.7	30.0	
Junc 688	27.12	101.7	71.7	30.0	
Junc 689	27.12	101.5	72.1	29.3	
Junc 691	27.12	101.7	72.2	29.4	
Junc 692	27.12	101.7	71.7	29.9	
Junc 694	27.12	101.8	71.9	29.8	
Junc 695	27.12	101.7	72.2	29.4	
Junc 697	27.12	101.8	72.5	29.3	
Junc 698	27.12	101.7	72.1	29.5	
Junc 700	27.12	101.7	72.1	29.5	
Junc 702	27.12	101.7	73.6	28.1	
Junc 703	27.12	101.5	72.8	28.6	
Junc 705	27.12	101.8	72.9	28.8	
Junc 706	27.12	101.6	72.0	29.5	
Junc 708	27.12	101.6	72.6	28.9	
Junc 709	27.12	101.7	73.2	28.5	
Junc 711	27.12	101.7	73.3	28.3	
Junc 712	27.12	101.6	72.6	29.0	
Junc 714	27.12	101.7	73.5	28.2	
Junc 716	27.12	101.7	73.5	28.1	
Junc 717	27.12	101.6	72.6	28.9	
Junc 719	27.12	101.7	73.5	28.2	
Junc 720	27.12	101.6	72.8	28.7	
Junc 722	27.12	101.7	72.0	29.7	

Node Results

Hourly maximum water flow rate

Normal condition

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 723	27.12	101.6	71.9	29.6	
Junc 725	27.12	101.6	72.5	29.0	
Junc 729	35.06	104.5	73.3	31.2	
Junc 730	35.06	104.1	72.6	31.4	BPS No.7
Junc 732	35.06	105.2	72.9	32.3	
Junc 734	35.06	106.0	71.6	34.3	
Junc 737	35.06	104.6	73.1	31.5	
Junc 739	35.06	104.5	72.7	31.8	
Junc 740	35.06	104.7	72.7	32.0	
Junc 742	35.06	104.7	72.7	32.0	
Junc 743	35.06	104.9	72.7	32.1	
Junc 745	35.06	104.6	72.7	31.8	
Junc 746	35.06	104.8	72.7	32.0	
Junc 748	35.06	104.6	73.1	31.4	
Junc 749	35.06	104.3	73.1	31.2	
Junc 751	35.06	104.6	73.5	31.0	
Junc 752	35.06	104.3	73.5	30.7	
Junc 754	35.06	104.5	73.3	31.2	
Junc 755	35.06	104.3	73.3	30.9	
Junc 757	35.06	104.5	73.5	30.9	
Junc 758	35.06	104.3	73.5	30.7	
Junc 760	35.06	104.6	73.1	31.4	
Junc 761	35.06	104.4	73.1	31.2	
Junc 763	35.06	104.6	73.5	31.0	
Junc 764	35.06	104.4	73.5	30.9	
Junc 766	35.06	104.7	72.7	32.0	
Junc 767	35.06	104.9	72.7	32.1	
Junc 769	35.06	104.8	72.7	32.1	
Junc 770	35.06	104.8	72.7	32.0	
Junc 772	35.06	104.6	72.8	31.7	
Junc 774	35.06	104.4	71.2	33.1	
Junc 776	35.06	104.3	71.3	33.0	
Junc 778	35.06	104.3	71.2	33.1	
Junc 780	35.06	103.9	71.2	32.7	
Junc 782	35.06	104.0	71.2	32.8	
Junc 784	35.06	104.3	71.2	33.1	
Junc 785	35.06	104.0	71.2	32.8	
Junc 787	35.06	104.0	71.2	32.8	
Junc 789	35.06	104.0	71.3	32.7	
Junc 791	17.53	105.3	71.8	33.4	
Junc 792	35.06	104.5	71.9	32.6	
Junc 794	35.06	104.5	71.9	32.5	
Junc 795	35.06	104.8	72.8	31.9	
Junc 797	17.53	105.3	72.2	33.0	
Junc 798	35.06	104.5	72.5	31.9	
Junc 800	35.06	104.7	72.8	31.8	
Junc 802	35.06	104.6	72.8	31.7	
Junc 804	35.06	105.9	71.6	34.2	
Junc 805	35.06	105.1	72.9	32.2	
Junc 807	35.06	105.7	70.5	35.1	
Junc 808	35.06	105.8	72.4	33.3	
Junc 810	35.06	105.6	71.0	34.5	
Junc 811	35.06	105.6	72.4	33.1	
Junc 813	35.06	105.5	70.8	34.6	
Junc 814	35.06	105.5	72.4	33.0	
Junc 816	35.06	105.4	72.4	32.9	
Junc 817	35.06	105.5	70.7	34.7	
Junc 819	35.06	105.4	72.4	32.9	
Junc 820	35.06	105.4	71.0	34.3	
Junc 822	35.06	105.1	72.2	32.8	
Junc 824	35.06	105.7	71.0	34.7	
Junc 826	35.06	105.9	71.6	34.3	

Node Results

Hourly maximum water flow rate

Normal condition

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 827	35.06	105.8	72.0	33.7	
Junc 829	35.06	105.9	71.6	34.2	
Junc 830	35.06	105.7	72.0	33.7	
Junc 832	35.06	105.9	71.6	34.2	
Junc 833	35.06	105.7	72.0	33.7	
Junc 835	35.06	105.7	71.0	34.7	
Junc 836	35.06	105.9	71.6	34.2	
Junc 838	35.06	104.5	71.2	33.2	
Junc 840	35.06	104.5	71.3	33.2	
Junc 842	35.06	104.3	71.9	32.3	
Junc 844	35.06	104.5	72.5	31.9	
Junc 845	35.06	104.6	72.5	32.0	
Junc 847	35.06	104.7	72.8	31.8	
Junc 848	35.06	104.6	72.8	31.7	
Junc 850	35.06	104.5	72.8	31.6	
Junc 852	35.06	104.1	72.8	31.2	
Junc 854	35.06	104.3	71.3	32.9	
Junc 859	35.06	105.6	71.4	34.2	
Junc 861	35.34	107.1	71.8	35.2	
Junc 862	35.06	106.3	73.1	33.2	
Junc 864	35.06	107.4	72.7	34.6	
Junc 865	35.06	107.0	72.9	34.1	
Junc 867	35.06	106.8	71.4	35.3	
Junc 869	8.90	107.3	72.4	34.8	
Junc 871	35.06	105.8	72.0	33.8	
Junc 872	35.06	105.8	72.0	33.7	
Junc 876	35.06	106.8	71.4	35.3	
Junc 877	35.06	105.9	71.4	34.4	
Junc 879	35.06	106.8	71.4	35.4	
Junc 880	35.06	105.8	72.0	33.7	
Junc 883	35.06	106.9	71.4	35.5	
Junc 884	35.06	106.5	71.4	35.0	
Junc 886	35.06	106.2	72.0	34.2	
Junc 889	35.06	107.0	72.9	34.1	
Junc 890	35.06	106.4	73.4	33.0	
Junc 892	35.06	106.6	72.3	34.2	
Junc 893	35.06	107.1	72.9	34.1	
Junc 895	35.06	107.2	72.9	34.2	
Junc 896	35.06	106.6	71.9	34.7	
Junc 898	35.06	106.4	71.6	34.8	
Junc 900	35.06	106.4	71.9	34.4	
Junc 902	35.06	106.3	72.6	33.6	
Junc 904	8.90	107.3	72.4	34.8	
Junc 905	35.06	106.9	71.4	35.4	
Junc 907	35.06	106.8	71.4	35.4	
Junc 908	8.90	107.3	72.4	34.8	
Junc 910	35.06	106.8	71.4	35.3	
Junc 912	8.90	107.3	72.4	34.9	
Junc 913	35.06	107.0	71.6	35.4	
Junc 915	35.06	107.0	71.8	35.2	
Junc 916	35.06	106.8	71.2	35.6	
Junc 918	27.12	101.7	71.7	29.9	
Junc 929	8.90	107.8	71.4	36.3	
Junc 1228	8.90	107.4	72.6	34.7	
Junc 1267	8.90	107.4	72.8	34.6	
Junc 1273	8.90	107.4	73.0	34.4	
Junc 1500	8.90	105.8	73.6	32.1	
Junc 1505	8.90	105.8	73.5	32.2	
Junc 1510	8.90	105.8	73.7	32.0	
Junc 1515	8.90	105.7	73.4	32.3	
Junc 1520	8.90	105.6	73.3	32.3	
Junc 1525	8.90	105.6	73.2	32.3	

Node Results

Hourly maximum water flow rate

Normal condition

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 1530	8.90	105.5	73.3	32.1	
Junc 1546	8.90	105.3	72.4	32.9	
Junc 1551	8.90	105.3	73.3	31.9	
Junc 1556	8.90	105.1	72.6	32.4	
Junc 1570	8.90	105.0	72.0	33.0	
Junc 1636	23.47	104.1	72.1	32.0	
Junc 1641	23.47	104.1	71.7	32.4	
Junc 1646	23.47	104.1	71.1	33.0	
Junc 1651	23.47	104.1	71.1	33.0	
Junc 1656	23.47	103.6	71.4	32.2	
Junc 1661	23.47	103.6	71.8	31.8	
Junc 1666	23.47	103.6	71.5	32.0	
Junc 1671	23.47	103.6	71.9	31.7	
Junc 1676	23.47	103.6	71.8	31.8	
Junc 1681	23.47	103.6	71.5	32.0	
Junc 1797	23.47	103.6	72.1	31.5	
Junc 1914	23.47	103.7	71.5	32.1	
Junc 1919	23.47	103.6	71.7	31.9	
Junc 1924	23.47	103.6	72.0	31.6	
Junc 1929	23.47	103.6	72.3	31.3	
Junc 1988	27.12	101.7	72.0	29.6	
Junc 1993	27.12	101.7	72.6	29.0	
Junc 1998	27.12	101.7	72.6	29.0	
Junc 2003	27.12	101.6	72.6	29.0	
Junc 2008	13.56	101.7	72.2	29.5	
Junc 2013	13.56	101.7	72.6	29.1	
Junc 2018	13.56	101.7	72.7	29.0	
Junc 2023	13.56	101.7	72.7	28.9	
Junc 2028	13.56	101.7	72.6	29.1	
Junc 2033	13.56	101.7	72.1	29.5	
Junc 2038	27.12	101.7	71.5	30.2	
Junc 2043	27.12	101.7	71.5	30.2	
Junc 2048	27.12	101.7	71.5	30.2	
Junc 2233	27.12	101.7	72.0	29.7	
Junc 2238	27.12	101.7	72.0	29.7	
Junc 2243	15.17	102.5	72.1	30.3	
Junc 2248	15.17	102.5	72.1	30.3	
Junc 2253	15.17	102.5	72.4	30.0	
Junc 2258	15.17	102.5	72.7	29.7	
Junc 2263	15.17	102.5	72.7	29.8	
Junc 2268	15.17	102.5	72.7	29.8	
Junc 2273	15.17	102.6	72.7	29.8	
Junc 2278	15.17	102.6	72.8	29.7	
Junc 2283	15.17	102.7	72.8	29.8	
Junc 2291	7.57	102.7	73.2	29.5	
Junc 2326	15.17	102.5	72.0	30.4	
Junc 2331	15.17	102.5	72.0	30.4	
Junc 2342	27.12	101.7	72.1	29.5	
Junc 2347	27.12	101.7	72.1	29.5	
Junc 2352	27.12	101.7	72.6	29.0	
Junc 2357	27.12	101.7	72.4	29.2	
Junc 2362	27.12	101.7	72.4	29.2	
Junc 2367	27.12	101.7	72.4	29.2	
Junc 2372	27.12	101.7	72.7	28.9	
Junc 2377	27.12	101.6	72.7	28.9	
Junc 2382	27.12	101.6	72.9	28.7	
Junc 2387	13.56	101.6	73.0	28.6	
Junc 2404	27.12	101.5	73.5	28.0	
Junc 2409	27.12	101.5	73.5	27.9	
Junc 2414	27.12	101.4	73.5	27.8	
Junc 2494	8.90	105.0	71.7	33.3	
Junc 2497	8.90	105.0	71.6	33.3	

Node Results

Hourly maximum water flow rate

Normal condition

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 2500	23.47	103.6	72.6	31.0	
Junc 2503	23.47	103.7	71.6	32.0	
Junc 2506	27.12	101.5	73.2	28.2	
Junc 2509	27.12	101.4	72.6	28.7	
Junc 2512	27.12	101.6	73.3	28.3	
Junc 2515	15.17	102.5	72.4	30.1	
Junc 2521	8.90	106.1	72.7	33.4	
Junc 2524	35.06	106.0	72.4	33.5	
Junc 2527	35.06	105.7	70.9	34.7	
Junc 2530	8.90	108.4	70.5	37.8	
Junc 2533	8.90	107.8	70.1	37.6	
Junc 2536	8.90	107.8	70.1	37.6	
Junc 2541	8.90	107.8	71.1	36.6	
Junc 2544	8.90	108.4	70.4	37.9	
Junc 2548	8.90	105.2	72.7	32.5	
Junc 2551	8.90	105.1	72.7	32.4	
Junc 2554	8.90	107.8	71.1	36.6	
Junc 2557	8.90	107.4	73.0	34.4	
Junc 2561	35.06	107.3	72.9	34.4	
Junc 2568	35.06	106.0	72.4	33.5	
Junc 2571	35.06	105.7	70.9	34.7	
Junc 2580	9.80	106.1	73.3	32.7	
Junc 2586	8.90	106.1	73.2	32.8	
Junc 2589	8.90	106.1	73.3	32.7	
Junc 2593	8.90	105.8	73.6	32.2	
Junc 2597	8.90	105.2	73.0	32.1	
Junc 2602	8.90	105.3	72.4	32.8	
Junc 2606	8.90	105.2	73.0	32.2	
Junc 2609	8.90	104.9	72.2	32.5	
Junc 2612	8.90	104.9	72.1	32.7	
Junc 2616	8.90	104.4	72.2	32.2	
Junc 2620	8.90	104.6	72.5	32.1	
Junc 2623	8.90	104.6	72.7	31.9	
Junc 2625	8.90	104.6	73.6	31.0	
Junc 2629	23.47	103.8	71.5	32.3	
Junc 2632	23.47	104.0	71.6	32.4	
Junc 2636	23.47	103.6	71.4	32.1	
Junc 2640	23.47	103.6	72.6	30.9	
Junc 2642	23.47	103.7	72.7	30.9	
Junc 2646	23.47	103.6	72.6	30.9	
Junc 2650	23.47	103.6	72.6	30.9	
Junc 2653	23.47	103.6	72.2	31.4	
Junc 2666	23.47	103.7	72.7	30.9	
Junc 2671	23.47	103.7	72.2	31.4	
Junc 2675	23.47	103.5	72.0	31.5	
Junc 2677	23.47	103.6	72.0	31.5	
Junc 2680	23.47	103.6	72.0	31.5	
Junc 2683	27.12	101.7	73.2	28.5	
Junc 2686	27.12	101.6	71.8	29.7	
Junc 2688	27.12	101.7	72.5	29.1	
Junc 2693	27.12	101.7	74.5	27.1	
Junc 2697	27.12	101.7	72.5	29.1	
Junc 2700	27.12	101.7	73.5	28.1	
Junc 2703	27.12	101.6	73.5	28.1	
Junc 2708	27.12	101.6	73.5	28.1	
Junc 2711	27.12	101.6	73.5	28.1	
Junc 2718	27.12	99.7	72.6	27.0	
Junc 2726	15.17	102.6	72.9	29.6	
Junc 2736	15.17	103.1	73.0	30.0	
Junc 2738	15.17	103.1	73.0	30.0	
Junc 2742	15.17	102.9	73.3	29.5	
Junc 2746	15.17	102.7	73.8	28.9	

Node Results

Hourly maximum water flow rate

Normal condition

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 2750	15.17	102.5	72.4	30.0	
Junc 2753	7.60	102.5	72.4	30.0	
Junc 2755	15.17	102.5	72.4	30.0	
Junc 2759	15.17	102.4	72.2	30.2	
Junc 2762	7.60	102.4	72.2	30.2	
Junc 2764	15.17	102.5	72.4	30.0	
Junc 2769	8.90	104.9	72.4	32.4	
Junc 2774	27.12	101.4	73.8	27.5	
Junc 2779	27.12	101.4	73.8	27.5	
Junc 2784	27.12	101.5	73.8	27.6	
Junc 2789	27.12	101.6	73.8	27.7	
Junc 2794	27.12	101.7	72.0	29.6	
Junc 2823	0.00	106.1	73.2	32.8	
Junc 1	0.00	106.7	72.6	34.0	
Junc 4	17.53	104.4	71.8	32.5	
Junc 7	17.53	104.4	72.2	32.2	
Junc 10	11.73	103.8	71.0	32.7	
Junc 13	11.74	103.8	71.0	32.8	
Junc 14	11.73	103.7	71.2	32.5	
Junc 15	11.73	103.7	71.2	32.5	
Junc 16	0.00	103.8	71.0	32.7	
Junc 17	0.00	104.0	71.6	32.4	
Junc 20	0.00	103.7	72.0	31.6	
Junc 23	0.00	103.7	72.0	31.6	
Junc 26	0.00	103.7	72.2	31.4	
Junc 29	0.00	103.7	72.2	31.4	
Junc 32	0.00	103.7	72.2	31.4	
Junc 35	11.73	103.8	70.4	33.3	
Junc 38	11.73	103.8	70.8	32.9	
Junc 41	23.47	103.8	70.8	32.9	
Junc 44	0.00	103.8	71.5	32.3	
Junc 47	0.00	103.8	70.8	32.9	
Junc 50	11.74	103.7	71.4	32.3	
Junc 53	11.73	103.7	70.8	32.9	
Junc 56	11.90	103.7	70.8	32.8	
Junc 59	11.90	103.7	70.8	32.8	
Junc 62	11.74	103.67	71.9	31.7	
Junc 68	11.74	103.66	72.17	31.43	
Junc 71	23.47	103.66	72.29	31.31	
Junc 74	23.47	103.65	72.29	31.3	
Junc 77	11.73	103.64	72.68	30.9	
Junc 80	11.73	103.64	72.87	30.71	
Junc 83	23.47	103.64	72.67	30.91	
Junc 86	11.73	103.65	72.71	30.88	
Junc 89	7.6	102.67	73.17	29.44	
Junc 92	7.6	102.64	73.16	29.42	
Junc 95	7.6	102.62	73.19	29.37	
Junc 98	7.6	102.59	72.97	29.56	
Junc 101	7.6	102.57	72.89	29.62	
Junc 104	7.6	102.56	72.85	29.65	
Junc 107	7.6	102.54	72.46	30.02	
Junc 109	7.57	102.46	72.39	30.01	
Junc 112	7.57	102.42	72.16	30.2	
Junc 114	0	101.72	72.11	29.55	
Junc 115	13.56	101.69	72.2	29.43	
Junc 117	13.56	101.68	72.59	29.03	
Junc 118	13.56	101.67	72.71	28.9	
Junc 121	0	101.66	72.67	28.93	
Junc 122	13.56	101.66	72.74	28.86	
Junc 124	13.56	101.66	72.6	29.01	
Junc 126	13.56	101.68	72.13	29.49	
Junc 128	0	101.7	71.95	29.69	

Node Results

Hourly maximum water flow rate

Normal condition

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 129	0	101.7	73.23	28.42	
Junc 130	0	101.67	72.63	28.98	
Junc 132	0	101.65	72.7	28.89	
Junc 135	0	101.64	73.35	28.24	
Junc 138	13.56	101.64	72.99	28.59	
Junc 141	0	101.65	73.35	28.24	
Junc 65	0	103.69	71.42	32.2	
Resvr 727	-14662	120.55	120.55	0	

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
7	5	6	50	106	110	9	0.05	0.16	Open
17	480	554	300	173	110	4122	0.67	2.22	Open
26	24	25	100	176	110	9	0.01	0.01	Open
32	30	31	50	202	110	15	0.09	0.40	Open
38	36	37	100	202	110	-28	0.04	0.05	Open
41	39	40	50	202	110	9	0.05	0.16	Open
47	45	46	50	202	110	4	0.02	0.03	Open
50	48	49	50	202	110	-5	0.03	0.06	Open
53	51	52	50	202	110	4	0.02	0.03	Open
56	54	55	100	202	110	-13	0.02	0.01	Open
59	57	58	50	62	110	9	0.05	0.16	Open
65	63	64	50	142	110	16	0.10	0.48	Open
68	66	67	50	202	110	-7	0.04	0.10	Open
71	69	70	50	202	110	-5	0.03	0.06	Open
74	72	73	50	202	110	-4	0.02	0.04	Open
77	75	76	100	202	110	-13	0.02	0.01	Open
80	78	79	50	202	110	-4	0.02	0.03	Open
83	81	82	50	201	110	-6	0.03	0.07	Open
86	84	85	50	201	110	-7	0.04	0.10	Open
95	93	94	50	74	110	29	0.17	1.41	Open
98	96	97	100	201	110	-82	0.12	0.33	Open
101	99	100	50	201	110	-21	0.13	0.81	Open
104	102	103	50	201	110	-29	0.17	1.42	Open
107	105	106	50	201	110	-35	0.21	2.04	Open
112	110	111	50	207	110	42	0.24	2.75	Open
121	119	120	50	210	110	-41	0.24	2.66	Open
126	111	125	50	216	110	9	0.05	0.16	Open
135	133	134	50	210	110	28	0.16	1.29	Open
138	136	137	50	210	110	23	0.13	0.91	Open
141	139	140	50	209	110	16	0.10	0.49	Open
144	142	143	50	175	110	9	0.05	0.16	Open
146	145	116	50	202	110	-9	0.05	0.16	Open
149	147	148	50	204	110	-9	0.05	0.16	Open
152	150	151	50	199	110	-9	0.05	0.16	Open
155	153	154	50	129	110	-9	0.05	0.16	Open
158	156	157	50	96	110	9	0.05	0.16	Open
161	159	160	50	190	110	9	0.05	0.16	Open
164	162	163	50	150	110	-30	0.18	1.55	Open
169	167	168	50	50	110	38	0.23	2.39	Open
183	181	182	50	235	110	29	0.17	1.42	Open
189	187	188	50	108	110	-19	0.11	0.63	Open
218	216	217	50	215	110	9	0.05	0.16	Open
224	222	223	50	180	110	12	0.07	0.28	Open
234	233	193	50	210	110	-7	0.04	0.09	Open
237	235	236	50	209	110	8	0.05	0.13	Open
239	235	238	50	161	110	9	0.05	0.16	Open
245	243	244	50	208	110	-11	0.07	0.25	Open
253	251	252	50	207	110	-15	0.09	0.39	Open
256	254	255	50	206	110	-14	0.08	0.39	Open
265	263	264	50	99	110	2	0.01	0.01	Open
279	17	278	250	208	110	1487	0.35	0.82	Open
289	287	288	50	197	110	23	0.14	0.96	Open
292	290	291	50	127	110	23	0.14	0.96	Open
294	281	293	50	107	110	23	0.14	0.96	Open
303	10	302	50	100	110	23	0.14	0.96	Open
306	304	305	50	94	110	23	0.14	0.96	Open
309	307	308	50	88	110	23	0.14	0.96	Open
312	310	311	50	101	110	21	0.12	0.78	Open
315	313	314	50	102	110	20	0.12	0.72	Open
318	14	317	100	103	110	125	0.18	0.72	Open
324	322	323	50	101	110	15	0.09	0.41	Open
327	325	326	50	100	110	15	0.09	0.39	Open
333	331	332	50	128	110	23	0.14	0.96	Open
359	357	358	50	156	110	16	0.09	0.45	Open

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
361	358	360	50	144	110	23	0.14	0.96	Open
367	35	366	50	211	110	14	0.08	0.35	Open
371	365	370	50	202	110	-16	0.09	0.45	Open
374	372	373	50	202	110	-14	0.08	0.36	Open
376	16	375	100	208	110	86	0.13	0.36	Open
378	38	377	50	211	110	13	0.08	0.31	Open
381	41	380	100	211	110	78	0.12	0.30	Open
384	382	383	50	209	110	10	0.06	0.19	Open
387	385	400	50	207	110	-8	0.05	0.13	Open
390	388	389	50	207	110	6	0.04	0.09	Open
393	391	392	50	207	110	-6	0.03	0.07	Open
396	59	395	50	206	110	5	0.03	0.06	Open
398	13	397	50	203	110	10	0.06	0.20	Open
401	399	50	50	203	110	8	0.04	0.12	Open
403	53	402	50	202	110	-7	0.04	0.09	Open
406	15	405	100	101	110	64	0.09	0.21	Open
411	409	410	50	101	110	-10	0.06	0.21	Open
414	412	413	50	101	110	15	0.09	0.44	Open
417	415	416	50	203	110	7	0.04	0.10	Open
420	418	62	50	100	110	-12	0.07	0.27	Open
426	68	425	50	203	110	2	0.01	0.01	Open
429	20	71	100	203	110	14	0.02	0.01	Open
432	430	431	50	204	110	-2	0.01	0.01	Open
435	433	434	50	204	110	-1	0.01	0.00	Open
438	436	437	50	157	110	-23	0.14	0.96	Open
451	450	77	50	104	110	-18	0.11	0.58	Open
453	452	80	50	89	110	-19	0.11	0.67	Open
455	454	83	50	71	110	-22	0.13	0.83	Open
458	456	86	50	53	110	-27	0.16	1.21	Open
467	465	466	50	108	110	-2	0.01	0.01	Open
468	463	460	50	108	110	2	0.01	0.01	Open
470	460	469	50	125	110	23	0.14	0.96	Open
2807	2738	480	100	540	110	197	0.29	1.67	Open
492	107	491	100	177	110	-18	0.03	0.02	Open
495	104	494	50	180	110	4	0.02	0.04	Open
498	101	497	50	183	110	6	0.04	0.09	Open
501	499	98	50	185	110	-9	0.05	0.15	Open
504	502	95	100	183	110	-74	0.11	0.28	Open
507	505	92	50	178	110	-15	0.09	0.43	Open
510	508	509	50	168	110	15	0.09	0.43	Open
528	526	527	50	90	110	6	0.03	0.07	Open
533	506	532	50	182	110	-14	0.08	0.36	Open
535	532	534	50	174	110	-20	0.12	0.70	Open
538	536	537	50	100	110	15	0.09	0.43	Open
558	556	557	50	39	110	27	0.16	1.25	Open
566	564	565	50	179	110	39	0.23	2.50	Open
569	567	568	50	178	110	55	0.32	4.59	Open
571	556	570	50	178	110	-54	0.32	4.51	Open
577	575	576	50	185	110	15	0.09	0.43	Open
580	578	579	50	185	110	15	0.09	0.41	Open
583	581	582	50	186	110	13	0.08	0.33	Open
586	129	585	100	183	110	72	0.11	0.26	Open
589	587	588	50	183	110	10	0.06	0.21	Open
592	590	591	50	183	110	10	0.06	0.19	Open
595	593	594	50	183	110	10	0.06	0.19	Open
598	596	597	50	186	110	13	0.08	0.32	Open
602	600	601	50	185	110	14	0.08	0.36	Open
605	603	604	100	186	110	77	0.11	0.30	Open
608	606	607	50	186	110	13	0.08	0.33	Open
624	585	141	100	175	110	34	0.05	0.06	Open
626	588	625	50	174	110	5	0.03	0.05	Open
628	591	627	50	174	110	5	0.03	0.05	Open
630	594	629	50	173	110	5	0.03	0.05	Open
645	643	644	50	184	110	16	0.09	0.46	Open

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
699	697	698	50	120	110	27	0.16	1.25	Open
701	697	700	50	119	110	27	0.16	1.25	Open
715	714	672	100	125	110	66	0.10	0.22	Open
724	128	723	50	54	110	27	0.16	1.25	Open
726	725	680	50	54	110	-27	0.16	1.25	Open
728	727	11	450	2,552	110	14662	1.07	3.24	Open
731	729	730	50	239	110	35	0.21	2.01	Open
741	739	740	50	327	110	-19	0.11	0.63	Open
744	742	743	50	326	110	-18	0.11	0.59	Open
747	745	746	50	328	110	-20	0.12	0.71	Open
750	748	749	50	120	110	35	0.21	2.01	Open
753	751	752	50	121	110	35	0.21	2.01	Open
756	754	755	50	128	110	35	0.21	2.01	Open
759	757	758	50	123	110	35	0.21	2.01	Open
762	760	761	50	90	110	35	0.21	2.01	Open
765	763	764	50	72	110	35	0.21	2.01	Open
768	766	767	50	88	110	-35	0.21	2.01	Open
771	769	770	50	42	110	35	0.21	2.01	Open
773	739	772	50	128	110	-16	0.10	0.48	Open
777	774	776	100	39	110	85	0.12	0.35	Open
781	778	780	50	179	110	35	0.21	2.01	Open
783	778	782	50	146	110	35	0.21	2.01	Open
786	784	785	50	160	110	35	0.21	2.01	Open
788	774	787	50	167	110	35	0.21	2.01	Open
799	7	798	50	85	110	-18	0.10	0.56	Open
803	802	745	50	124	110	15	0.09	0.42	Open
809	807	808	50	191	110	-19	0.11	0.64	Open
812	810	811	50	191	110	-6	0.03	0.07	Open
815	813	814	50	189	110	9	0.05	0.15	Open
818	816	817	50	188	110	-12	0.07	0.27	Open
821	819	820	50	189	110	-13	0.08	0.32	Open
823	797	822	50	89	110	35	0.21	2.01	Open
828	826	827	50	185	110	23	0.14	0.96	Open
831	829	830	50	195	110	23	0.13	0.90	Open
834	832	833	50	205	110	23	0.13	0.90	Open
837	835	836	50	215	110	-23	0.14	0.92	Open
839	784	838	50	252	110	-19	0.11	0.62	Open
841	776	840	50	215	110	-20	0.12	0.74	Open
843	842	792	50	132	110	-35	0.21	2.01	Open
846	844	845	50	47	110	-35	0.21	2.01	Open
849	847	848	50	49	110	35	0.21	2.01	Open
851	802	850	50	60	110	35	0.21	2.01	Open
853	852	772	50	232	110	-35	0.21	2.01	Open
855	776	854	50	33	110	35	0.21	2.01	Open
860	824	859	50	65	110	35	0.21	2.01	Open
878	876	877	50	174	110	57	0.34	4.92	Open
881	879	880	50	367	110	42	0.25	2.84	Open
882	872	877	50	190	110	-22	0.13	0.83	Open
885	883	884	50	199	110	35	0.21	2.01	Open
888	865	862	50	203	110	46	0.27	3.35	Open
891	889	890	50	203	110	43	0.25	2.89	Open
894	892	893	50	202	110	-41	0.24	2.65	Open
897	895	896	50	202	110	41	0.24	2.65	Open
899	896	898	50	97	110	35	0.21	2.01	Open
901	892	900	50	95	110	35	0.21	2.01	Open
903	890	902	50	81	110	35	0.21	2.01	Open
906	904	905	50	207	110	36	0.21	2.11	Open
909	907	908	50	205	110	-39	0.23	2.42	Open
911	869	910	50	204	110	39	0.23	2.49	Open
914	912	913	50	204	110	31	0.18	1.60	Open
917	915	916	50	108	110	35	0.21	2.01	Open
919	21	110	100	12	110	109	0.16	0.56	Open
933	929	123	50	85	110	9	0.05	0.16	Open
935	929	119	100	41	110	-18	0.03	0.02	Open

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
938	119	148	100	2	110	14	0.02	0.01	Open
941	148	116	100	37	110	-4	0.01	0.00	Open
944	116	142	100	46	110	-30	0.04	0.05	Open
947	142	113	100	6	110	-48	0.07	0.12	Open
950	113	111	100	44	110	-66	0.10	0.22	Open
951	111	108	100	7	110	-42	0.06	0.10	Open
953	11	21	450	1,205	110	14662	1.07	3.24	Open
962	106	103	150	38	110	946	0.62	4.26	Open
965	103	100	150	48	110	908	0.59	3.95	Open
968	100	97	150	48	110	878	0.57	3.71	Open
971	97	91	150	50	110	786	0.52	3.03	Open
974	91	88	150	75	110	753	0.49	2.79	Open
977	88	85	150	52	110	750	0.49	2.77	Open
980	85	82	150	52	110	734	0.48	2.67	Open
983	82	79	150	50	110	720	0.47	2.57	Open
986	79	76	150	50	110	707	0.46	2.49	Open
989	76	73	150	103	110	685	0.45	2.35	Open
992	73	70	150	49	110	672	0.44	2.26	Open
995	70	67	150	48	110	658	0.43	2.18	Open
998	67	61	150	89	110	642	0.42	2.08	Open
1001	61	55	150	243	110	596	0.39	1.81	Open
1004	55	51	150	49	110	574	0.38	1.69	Open
1007	51	49	150	47	110	562	0.37	1.62	Open
1010	49	45	150	54	110	548	0.36	1.55	Open
1013	45	37	150	46	110	535	0.35	1.48	Open
1016	37	39	150	52	110	498	0.33	1.30	Open
1019	39	34	150	54	110	480	0.31	1.21	Open
1022	27	43	50	84	110	28	0.16	1.29	Open
1023	43	28	50	118	110	-2	0.01	0.01	Open
1028	34	30	150	50	110	462	0.30	1.13	Open
1029	30	27	150	48	110	439	0.29	1.03	Open
1037	105	102	100	34	110	159	0.23	1.12	Open
1040	133	136	150	36	110	660	0.43	2.19	Open
1043	136	139	150	44	110	629	0.41	2.00	Open
1046	102	99	100	47	110	179	0.26	1.40	Open
1049	99	96	100	51	110	191	0.28	1.59	Open
1055	18	127	400	178	110	8710	0.80	2.19	Open
1058	96	90	100	50	110	265	0.39	2.90	Open
1064	151	154	150	35	110	691	0.45	2.38	Open
1067	154	156	150	38	110	673	0.44	2.27	Open
1070	90	87	100	73	110	242	0.36	2.47	Open
1073	156	159	150	51	110	655	0.43	2.16	Open
1076	87	84	100	51	110	248	0.36	2.57	Open
1079	84	81	100	52	110	246	0.36	2.53	Open
1082	159	163	150	50	110	638	0.42	2.05	Open
1085	163	165	150	54	110	598	0.39	1.82	Open
1088	81	78	100	50	110	242	0.36	2.46	Open
1091	127	131	400	323	110	8566	0.79	2.12	Open
1094	78	75	100	50	110	237	0.35	2.37	Open
1097	131	170	400	8	110	8557	0.79	2.12	Open
1100	170	178	150	6	110	-555	0.36	1.59	Open
1103	1	5	100	100	110	260	0.38	2.81	Open
1106	75	72	100	101	110	241	0.36	2.44	Open
1109	72	69	100	49	110	236	0.35	2.35	Open
1112	5	181	100	52	110	242	0.36	2.47	Open
1113	181	179	100	49	110	204	0.30	1.80	Open
1118	69	66	100	49	110	233	0.34	2.29	Open
1121	66	63	100	46	110	231	0.34	2.25	Open
1124	179	195	100	49	110	168	0.25	1.25	Open
1130	63	60	100	44	110	206	0.30	1.82	Open
1136	202	204	100	53	110	245	0.36	2.52	Open
1139	60	57	100	105	110	212	0.31	1.93	Open
1142	204	208	100	47	110	222	0.33	2.10	Open
1145	208	210	100	45	110	204	0.30	1.80	Open

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
1148	210	214	100	40	110	191	0.28	1.58	Open
1151	57	54	100	136	110	194	0.29	1.64	Open
1154	54	52	100	51	110	198	0.29	1.70	Open
1157	214	222	100	56	110	192	0.28	1.60	Open
1160	222	220	100	50	110	171	0.25	1.29	Open
1163	52	48	100	51	110	193	0.28	1.62	Open
1166	48	46	100	49	110	190	0.28	1.57	Open
1169	220	227	100	50	110	169	0.25	1.27	Open
1172	227	231	100	46	110	166	0.24	1.22	Open
1175	46	36	100	49	110	184	0.27	1.49	Open
1178	36	40	100	50	110	204	0.30	1.79	Open
1181	231	233	100	53	110	178	0.26	1.39	Open
1184	233	236	100	53	110	175	0.26	1.35	Open
1187	40	33	100	54	110	204	0.30	1.79	Open
1190	33	31	100	48	110	186	0.27	1.51	Open
1193	236	241	100	49	110	175	0.26	1.34	Open
1196	241	243	100	47	110	176	0.26	1.36	Open
1199	31	28	100	48	110	192	0.28	1.60	Open
1202	28	42	100	50	110	181	0.27	1.43	Open
1205	243	246	100	50	110	178	0.26	1.39	Open
1206	246	190	100	52	110	183	0.27	1.46	Open
1210	42	22	100	54	110	184	0.27	1.48	Open
1211	22	19	150	7	110	568	0.37	1.66	Open
1213	190	251	100	41	110	226	0.33	2.17	Open
1216	251	254	100	35	110	232	0.34	2.27	Open
1219	254	258	100	39	110	238	0.35	2.38	Open
1222	258	264	100	38	110	218	0.32	2.02	Open
1225	264	266	100	40	110	211	0.31	1.91	Open
1226	266	249	100	38	110	193	0.29	1.62	Open
2819	178	165	150	52	110	-563	0.37	1.63	Open
1230	1228	151	150	52	110	709	0.46	2.50	Open
1232	1228	127	150	5	110	-136	0.09	0.12	Open
1233	139	1228	150	51	110	603	0.40	1.85	Open
1235	60	64	100	100	110	-44	0.07	0.11	Open
1236	64	61	100	102	110	-37	0.05	0.08	Open
1244	134	137	100	32	110	-34	0.05	0.06	Open
1247	137	140	100	47	110	-20	0.03	0.02	Open
1251	889	865	100	52	110	81	0.12	0.33	Open
1254	893	889	100	48	110	159	0.23	1.13	Open
1257	895	893	100	34	110	235	0.35	2.32	Open
1259	864	912	100	13	110	181	0.27	1.43	Open
1262	912	904	100	46	110	141	0.21	0.90	Open
1265	904	908	100	50	110	96	0.14	0.44	Open
1266	908	869	100	36	110	48	0.07	0.12	Open
1270	108	1267	300	216	110	3894	0.64	2.00	Open
1274	140	1273	100	53	110	-13	0.02	0.01	Open
1275	1273	1228	100	209	110	-21	0.03	0.03	Open
1278	910	867	100	9	110	70	0.10	0.25	Open
1281	876	910	100	26	110	66	0.10	0.22	Open
1284	907	876	100	9	110	158	0.23	1.11	Open
1287	879	907	100	26	110	154	0.23	1.07	Open
1290	905	879	100	24	110	231	0.34	2.26	Open
1293	883	905	100	12	110	230	0.34	2.25	Open
1295	861	913	100	9	110	305	0.45	3.77	Open
1296	913	883	100	34	110	301	0.44	3.67	Open
1298	861	915	250	5	110	2670	0.63	2.42	Open
2815	915	896	250	177	110	2628	0.62	2.35	Open
1301	861	734	100	207	110	363	0.53	5.21	Open
1302	1267	864	300	12	110	3963	0.65	2.07	Open
1303	864	861	300	201	110	3372	0.55	1.53	Open
1305	734	826	100	37	110	168	0.25	1.25	Open
1308	826	829	100	36	110	110	0.16	0.57	Open
1311	829	832	100	35	110	52	0.08	0.14	Open
1314	832	836	100	34	110	-6	0.01	0.00	Open

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
1317	836	804	100	39	110	-64	0.09	0.21	Open
1322	734	871	100	174	110	160	0.24	1.14	Open
1323	871	827	100	37	110	119	0.17	0.66	Open
1325	827	830	100	35	110	107	0.16	0.54	Open
1328	830	833	100	32	110	95	0.14	0.43	Open
1331	833	835	100	42	110	82	0.12	0.33	Open
1338	871	880	50	77	110	6	0.04	0.08	Open
1339	880	872	50	41	110	13	0.08	0.33	Open
1340	835	824	100	32	110	70	0.10	0.25	Open
1345	808	811	100	58	110	274	0.40	3.09	Open
1348	811	814	100	47	110	233	0.34	2.29	Open
1351	814	816	100	34	110	207	0.30	1.83	Open
1354	816	819	100	38	110	183	0.27	1.47	Open
1355	819	805	100	202	110	161	0.24	1.16	Open
1357	805	732	100	195	110	-86	0.13	0.36	Open
1363	817	820	250	38	110	1850	0.44	1.23	Open
1366	813	817	250	32	110	1897	0.45	1.28	Open
1369	810	813	250	49	110	1941	0.46	1.34	Open
1372	807	810	250	51	110	1970	0.46	1.38	Open
1374	820	791	250	109	110	1802	0.42	1.17	Open
1376	791	797	250	36	110	1785	0.42	1.15	Open
1377	797	732	250	51	110	1732	0.41	1.08	Open
1379	4	794	50	84	110	-18	0.10	0.56	Open
1380	794	792	50	37	110	-38	0.22	2.33	Open
1382	794	798	50	36	110	-15	0.09	0.40	Open
1383	798	795	50	51	110	-67	0.40	6.71	Open
1385	732	795	150	87	110	978	0.64	4.53	Open
1387	795	800	150	35	110	876	0.57	3.69	Open
1390	800	845	150	49	110	599	0.39	1.83	Open
1395	840	838	150	41	110	365	0.24	0.73	Open
1396	838	774	150	213	110	312	0.20	0.54	Open
1398	800	847	100	5	110	242	0.36	2.45	Open
1400	845	792	150	37	110	529	0.35	1.45	Open
1401	792	840	150	34	110	421	0.28	0.95	Open
1402	847	802	100	49	110	172	0.25	1.30	Open
1403	802	772	100	53	110	86	0.13	0.37	Open
1408	732	743	150	150	110	633	0.41	2.03	Open
1411	743	767	150	3	110	580	0.38	1.72	Open
1414	767	769	150	37	110	510	0.33	1.36	Open
1416	769	737	150	198	110	440	0.29	1.03	Open
1419	737	760	150	37	110	491	0.32	1.26	Open
1422	760	748	150	12	110	421	0.28	0.95	Open
1425	748	763	150	23	110	351	0.23	0.68	Open
1428	763	751	150	25	110	280	0.18	0.45	Open
1431	751	754	150	48	110	210	0.14	0.26	Open
1434	754	757	150	49	110	140	0.09	0.12	Open
1435	757	729	150	39	110	70	0.05	0.03	Open
1436	165	167	50	154	110	26	0.15	1.14	Open
1437	167	162	50	53	110	-22	0.13	0.81	Open
1438	1	168	100	157	110	152	0.22	1.04	Open
1442	184	171	50	101	110	3	0.02	0.02	Open
1444	184	187	50	43	110	-1	0.01	0.00	Open
1445	187	185	50	32	110	9	0.05	0.16	Open
1450	188	192	100	43	110	145	0.21	0.96	Open
1451	192	184	50	110	110	11	0.07	0.24	Open
1453	192	196	100	47	110	125	0.18	0.73	Open
1456	196	198	100	44	110	118	0.17	0.65	Open
1459	198	201	100	56	110	152	0.22	1.04	Open
1463	746	805	100	183	110	-212	0.31	1.92	Open
1466	740	746	100	48	110	-157	0.23	1.10	Open
1468	737	742	100	182	110	-86	0.13	0.36	Open
1469	742	740	100	48	110	-103	0.15	0.50	Open
1471	201	205	100	49	110	149	0.22	1.01	Open
1474	205	207	100	49	110	143	0.21	0.93	Open

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
1477	207	211	100	47	110	130	0.19	0.78	Open
1480	211	213	100	36	110	113	0.17	0.60	Open
1483	213	216	50	55	110	32	0.19	1.71	Open
1498	182	171	50	24	110	48	0.28	3.53	Open
1501	171	1500	100	49	110	42	0.06	0.10	Open
1503	195	1500	50	214	110	27	0.16	1.27	Open
1504	1500	196	50	211	110	1	0.01	0.00	Open
1506	1500	1505	100	44	110	59	0.09	0.18	Open
1508	198	1505	100	212	110	-43	0.06	0.10	Open
1511	1505	1510	200	53	110	1016	0.37	1.20	Open
1513	201	1510	50	212	110	-6	0.04	0.07	Open
1514	1510	202	50	213	110	-20	0.12	0.70	Open
1516	1510	1515	200	50	110	1020	0.38	1.21	Open
1518	204	1515	50	213	110	14	0.08	0.36	Open
1519	1515	205	50	213	110	3	0.02	0.02	Open
1521	1515	1520	200	48	110	1023	0.38	1.21	Open
1523	207	1520	50	213	110	4	0.02	0.04	Open
1524	1520	208	50	212	110	-9	0.05	0.17	Open
1526	1520	1525	200	46	110	1027	0.38	1.22	Open
1528	210	1525	50	212	110	5	0.03	0.05	Open
1529	1525	211	50	214	110	-8	0.05	0.13	Open
1531	1525	1530	200	41	110	1031	0.38	1.23	Open
1533	213	1530	100	214	110	72	0.11	0.26	Open
1534	1530	214	100	212	110	10	0.02	0.01	Open
1541	1530	217	200	54	110	1084	0.40	1.35	Open
1544	217	219	200	49	110	1084	0.40	1.35	Open
1547	219	1546	200	49	110	1086	0.40	1.35	Open
1549	227	1546	50	210	110	-5	0.03	0.06	Open
1552	1546	1551	200	49	110	1062	0.39	1.30	Open
1555	1551	231	100	210	110	21	0.03	0.03	Open
1559	240	1556	50	178	110	-9	0.05	0.16	Open
1560	1556	241	50	209	110	10	0.06	0.19	Open
1562	1551	193	200	50	110	1023	0.38	1.21	Open
1565	193	235	200	54	110	999	0.37	1.16	Open
1566	235	1556	200	49	110	973	0.36	1.11	Open
1568	1556	244	200	48	110	946	0.35	1.05	Open
1571	244	1570	200	51	110	925	0.34	1.01	Open
1573	246	1570	50	208	110	-14	0.08	0.34	Open
1576	1570	175	200	51	110	903	0.33	0.96	Open
1582	175	252	100	41	110	251	0.37	2.63	Open
1585	252	255	100	37	110	228	0.34	2.19	Open
1588	255	257	100	40	110	204	0.30	1.80	Open
1594	257	260	50	106	110	26	0.15	1.17	Open
1595	260	258	50	99	110	-11	0.06	0.23	Open
1597	260	263	50	39	110	28	0.17	1.34	Open
1609	19	24	400	228	110	8655	0.80	2.16	Open
1610	24	176	400	3	110	8637	0.80	2.15	Open
1612	261	249	100	98	110	150	0.22	1.02	Open
1613	249	176	100	6	110	335	0.49	4.49	Open
1615	176	274	400	11	110	8963	0.83	2.31	Open
1616	274	12	300	241	110	5207	0.85	3.43	Open
1618	274	280	300	5	110	3732	0.61	1.85	Open
1623	2	283	50	203	110	23	0.14	0.96	Open
1625	280	2	100	8	110	279	0.41	3.19	Open
1628	2	287	100	33	110	203	0.30	1.78	Open
1631	287	290	100	37	110	133	0.20	0.81	Open
1632	290	281	100	41	110	66	0.10	0.22	Open
1634	280	9	300	107	110	3430	0.56	1.58	Open
1638	1636	9	100	7	110	-97	0.14	0.45	Open
1639	2	1636	50	107	110	29	0.17	1.39	Open
1640	1636	3	50	76	110	23	0.14	0.96	Open
1643	1641	1636	100	34	110	-79	0.12	0.31	Open
1644	287	1641	50	107	110	23	0.14	0.94	Open
1645	1641	295	50	12	110	23	0.14	0.96	Open

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
1648	1646	1641	100	37	110	-55	0.08	0.16	Open
1649	290	1646	50	106	110	20	0.12	0.71	Open
1650	1646	297	50	42	110	23	0.14	0.96	Open
1653	1651	1646	100	40	110	-28	0.04	0.05	Open
1654	281	1651	50	106	110	19	0.11	0.65	Open
1655	1651	299	50	101	110	23	0.14	0.96	Open
1659	319	1656	50	102	110	17	0.10	0.53	Open
1660	1656	320	50	22	110	23	0.14	0.96	Open
1662	8	1661	100	33	110	-16	0.02	0.02	Open
1664	328	1661	50	102	110	15	0.09	0.42	Open
1665	1661	329	50	21	110	23	0.14	0.96	Open
1667	8	1666	100	38	110	-7	0.01	0.00	Open
1669	23	1666	100	104	110	102	0.15	0.50	Open
1670	1666	335	50	52	110	23	0.14	0.96	Open
1672	1666	1671	100	44	110	48	0.07	0.12	Open
1674	337	1671	50	104	110	16	0.09	0.46	Open
1675	1671	338	50	48	110	23	0.14	0.96	Open
1677	1671	1676	100	39	110	17	0.02	0.02	Open
1679	340	1676	50	106	110	15	0.09	0.41	Open
1680	1676	341	50	59	110	23	0.14	0.96	Open
1682	1676	1681	100	40	110	-15	0.02	0.01	Open
1684	343	1681	50	105	110	15	0.09	0.41	Open
1685	1681	344	50	66	110	23	0.14	0.96	Open
1694	314	311	100	34	110	2	0.00	0.00	Open
1696	1656	317	100	40	110	-95	0.14	0.44	Open
1697	317	314	100	28	110	6	0.01	0.00	Open
1700	323	1656	100	36	110	-65	0.10	0.22	Open
1702	1661	326	100	42	110	-48	0.07	0.12	Open
1703	326	323	100	42	110	-57	0.08	0.17	Open
1705	9	277	300	104	110	3310	0.54	1.48	Open
1711	370	373	100	41	110	128	0.19	0.75	Open
1717	373	16	100	43	110	90	0.13	0.40	Open
1723	304	307	100	36	110	139	0.20	0.88	Open
1744	316	404	250	3	110	932	0.22	0.35	Open
1747	404	334	250	244	110	788	0.19	0.25	Open
1780	334	427	250	5	110	542	0.13	0.13	Open
1783	427	285	250	172	110	425	0.10	0.08	Open
1799	1797	477	100	39	110	50	0.07	0.13	Open
1800	466	1797	50	104	110	1	0.01	0.01	Open
1801	1797	471	50	84	110	23	0.14	0.96	Open
1806	285	476	250	3	110	252	0.06	0.03	Open
1809	473	477	50	59	110	-23	0.14	0.96	Open
1810	477	474	50	104	110	3	0.02	0.02	Open
1812	26	459	250	102	110	72	0.02	0.00	Open
1818	466	474	100	36	110	65	0.10	0.22	Open
1819	474	460	100	3	110	45	0.07	0.11	Open
1822	465	463	100	39	110	52	0.08	0.14	Open
1830	457	437	100	42	110	23	0.03	0.03	Open
1833	437	434	100	42	110	-24	0.03	0.03	Open
1836	434	431	100	41	110	-37	0.05	0.08	Open
1842	462	428	250	176	110	-355	0.08	0.06	Open
1843	428	349	250	5	110	-407	0.10	0.07	Open
1849	459	462	250	109	110	-68	0.02	0.00	Open
1850	462	457	100	6	110	35	0.05	0.07	Open
1858	446	443	100	41	110	-44	0.06	0.10	Open
1861	443	439	100	48	110	-66	0.10	0.22	Open
1864	439	346	100	41	110	-98	0.14	0.46	Open
1876	392	388	100	36	110	-54	0.08	0.15	Open
1879	388	400	100	37	110	-73	0.11	0.26	Open
1892	375	379	250	6	110	-776	0.18	0.24	Open
1903	405	413	50	41	110	25	0.14	1.04	Open
1906	413	409	50	37	110	17	0.10	0.50	Open
1909	409	418	50	37	110	3	0.02	0.02	Open
1910	418	407	50	102	110	-8	0.05	0.14	Open

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
1913	348	346	150	95	110	-149	0.10	0.14	Open
1915	348	1914	100	38	110	109	0.16	0.56	Open
1917	439	1914	50	94	110	9	0.05	0.16	Open
1918	1914	440	50	98	110	13	0.08	0.31	Open
1920	1914	1919	100	44	110	81	0.12	0.33	Open
1922	442	1919	50	79	110	-16	0.10	0.48	Open
1923	1919	443	50	96	110	-10	0.06	0.20	Open
1925	1919	1924	100	38	110	52	0.08	0.14	Open
1927	445	1924	50	62	110	-19	0.11	0.63	Open
1928	1924	446	50	95	110	-11	0.06	0.22	Open
1930	1924	1929	100	39	110	20	0.03	0.03	Open
1932	448	1929	50	45	110	-22	0.13	0.88	Open
1933	1929	424	50	95	110	-11	0.06	0.23	Open
1935	44	351	150	211	110	293	0.19	0.49	Open
1938	351	362	150	41	110	207	0.14	0.25	Open
1941	362	366	150	36	110	160	0.10	0.16	Open
1944	366	377	150	37	110	150	0.10	0.14	Open
1947	377	380	150	34	110	139	0.09	0.12	Open
1950	380	354	150	8	110	194	0.13	0.23	Open
1953	354	383	150	36	110	116	0.08	0.09	Open
1956	383	385	150	35	110	102	0.07	0.07	Open
1959	385	389	150	35	110	87	0.06	0.05	Open
1962	389	391	150	37	110	70	0.05	0.03	Open
1965	391	395	150	27	110	52	0.03	0.02	Open
1968	351	357	100	10	110	63	0.09	0.20	Open
1969	357	352	50	107	110	23	0.14	0.96	Open
1971	354	358	50	10	110	55	0.32	4.59	Open
1972	358	355	50	159	110	23	0.14	0.96	Open
1974	114	678	150	179	110	233	0.15	0.32	Open
1978	680	121	150	178	110	-97	0.06	0.06	Open
1981	695	678	100	42	110	-38	0.06	0.08	Open
1984	691	695	100	41	110	-20	0.03	0.03	Open
1989	678	1988	150	44	110	168	0.11	0.17	Open
1992	1988	706	50	55	110	27	0.16	1.25	Open
1994	1988	1993	150	39	110	124	0.08	0.10	Open
1996	708	1993	50	80	110	-27	0.16	1.25	Open
1999	1993	1998	150	41	110	78	0.05	0.04	Open
2000	1998	680	150	41	110	30	0.02	0.01	Open
2002	1998	712	50	59	110	27	0.16	1.25	Open
2005	2003	717	50	30	110	27	0.16	1.25	Open
2006	680	2003	100	43	110	73	0.11	0.27	Open
2007	2003	681	100	34	110	27	0.04	0.04	Open
2009	705	2008	50	126	110	11	0.06	0.23	Open
2010	115	1988	50	178	110	10	0.06	0.21	Open
2014	2008	2013	200	36	110	219	0.08	0.07	Open
2016	1993	117	50	178	110	-8	0.05	0.14	Open
2017	2013	709	50	125	110	-4	0.02	0.02	Open
2019	2013	2018	200	43	110	210	0.08	0.06	Open
2021	711	2018	50	125	110	-7	0.04	0.11	Open
2022	118	1998	50	178	110	7	0.04	0.09	Open
2024	2018	2023	200	85	110	189	0.07	0.05	Open
2026	716	2023	50	124	110	-9	0.06	0.18	Open
2027	122	2003	50	177	110	8	0.05	0.13	Open
2029	2023	2028	200	40	110	166	0.06	0.04	Open
2031	702	2028	50	124	110	-9	0.05	0.15	Open
2032	124	703	50	153	110	27	0.16	1.25	Open
2034	2028	2033	200	38	110	144	0.05	0.03	Open
2036	719	2033	50	123	110	-10	0.06	0.09	Open
2037	126	720	50	102	110	27	0.16	1.25	Open
2039	688	2038	50	129	110	14	0.08	0.37	Open
2040	2038	689	50	171	110	27	0.16	1.25	Open
2042	2038	683	100	35	110	40	0.06	0.09	Open
2045	2043	2038	100	42	110	81	0.12	0.32	Open
2046	691	2043	50	183	110	-7	0.04	0.09	Open

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
2047	2043	692	50	128	110	-14	0.08	0.37	Open
2049	671	2048	100	44	110	122	0.18	0.69	Open
2050	2048	2043	100	39	110	100	0.15	0.48	Open
2051	694	2048	50	127	110	15	0.09	0.44	Open
2052	2048	695	50	184	110	10	0.06	0.19	Open
2054	677	683	50	181	110	-27	0.16	1.25	Open
2055	683	685	50	129	110	-14	0.08	0.36	Open
2057	2033	722	200	40	110	120	0.04	0.02	Open
2063	554	674	200	6	110	1160	0.43	1.53	Open
2064	674	697	200	5	110	798	0.29	0.77	Open
2066	12	483	300	111	110	5184	0.85	3.40	Open
2072	479	482	300	407	110	3513	0.58	1.65	Open
2073	482	480	300	110	110	3941	0.65	2.05	Open
2075	554	643	300	5	110	1665	0.27	0.41	Open
2078	643	575	300	38	110	1622	0.27	0.40	Open
2081	674	705	100	43	110	168	0.25	1.26	Open
2084	705	709	100	38	110	130	0.19	0.78	Open
2087	575	578	300	39	110	1580	0.26	0.38	Open
2090	709	711	100	39	110	100	0.15	0.47	Open
2093	578	600	300	39	110	1538	0.25	0.36	Open
2096	711	714	100	43	110	80	0.12	0.31	Open
2099	600	603	300	44	110	1497	0.25	0.34	Open
2102	714	716	100	44	110	-14	0.02	0.01	Open
2105	603	606	300	43	110	1393	0.23	0.30	Open
2108	716	702	100	40	110	-32	0.05	0.06	Open
2111	606	581	300	39	110	1353	0.22	0.28	Open
2114	702	719	100	41	110	-50	0.07	0.13	Open
2117	581	596	300	39	110	1312	0.21	0.27	Open
2120	596	584	300	41	110	1272	0.21	0.25	Open
2123	722	675	200	123	110	-48	0.02	0.00	Open
2124	675	584	200	7	110	-196	0.07	0.06	Open
2126	584	552	300	168	110	892	0.15	0.13	Open
2129	587	590	100	39	110	48	0.07	0.12	Open
2132	590	593	100	41	110	11	0.02	0.01	Open
2133	593	2688	100	45	110	-26	0.04	0.04	Open
2135	552	631	100	35	110	74	0.11	0.27	Open
2136	631	918	100	15	110	27	0.04	0.04	Open
2138	674	694	100	45	110	166	0.24	1.22	Open
2141	694	692	100	37	110	123	0.18	0.71	Open
2144	692	688	100	42	110	82	0.12	0.33	Open
2145	688	685	100	33	110	41	0.06	0.09	Open
2148	667	658	100	40	110	40	0.06	0.09	Open
2151	664	667	100	36	110	80	0.12	0.31	Open
2153	657	660	100	10	110	162	0.24	1.17	Open
2154	660	664	100	36	110	120	0.18	0.67	Open
2156	554	657	250	5	110	1270	0.30	0.61	Open
2160	546	543	100	37	110	7	0.01	0.00	Open
2162	542	550	100	40	110	19	0.03	0.02	Open
2163	550	546	100	38	110	13	0.02	0.01	Open
2165	482	542	200	5	110	-443	0.16	0.26	Open
2169	511	483	200	179	110	-1096	0.40	1.38	Open
2174	536	539	100	6	110	206	0.30	1.82	Open
2177	539	532	100	43	110	174	0.26	1.34	Open
2183	543	512	50	177	110	-9	0.05	0.15	Open
2187	650	658	50	177	110	-13	0.07	0.30	Open
2189	657	572	250	178	110	1080	0.25	0.45	Open
2192	572	644	100	5	110	90	0.13	0.39	Open
2195	644	576	100	37	110	78	0.12	0.30	Open
2198	576	579	100	41	110	66	0.10	0.22	Open
2201	579	601	100	35	110	54	0.08	0.15	Open
2204	601	604	100	42	110	41	0.06	0.09	Open
2207	604	607	100	46	110	91	0.13	0.40	Open
2210	607	582	100	40	110	77	0.11	0.29	Open
2213	582	597	100	39	110	63	0.09	0.20	Open

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
2216	597	585	100	42	110	41	0.06	0.09	Open
2219	585	588	100	42	110	52	0.08	0.14	Open
2222	588	591	100	33	110	31	0.05	0.05	Open
2225	591	594	100	37	110	9	0.01	0.01	Open
2226	594	573	100	42	110	-13	0.02	0.01	Open
2231	573	560	250	2	110	-408	0.10	0.07	Open
2235	2233	664	50	178	110	-13	0.08	0.34	Open
2239	2233	2238	100	36	110	54	0.08	0.15	Open
2240	2238	650	100	44	110	27	0.04	0.04	Open
2241	667	2238	50	177	110	13	0.08	0.31	Open
2245	2243	512	100	37	110	16	0.02	0.02	Open
2246	546	2243	50	176	110	-9	0.05	0.15	Open
2250	2248	2243	100	39	110	32	0.05	0.06	Open
2252	2248	550	50	176	110	9	0.05	0.16	Open
2255	2253	2248	100	38	110	47	0.07	0.12	Open
2260	2258	2253	100	35	110	94	0.14	0.43	Open
2261	514	2258	50	175	110	-8	0.05	0.12	Open
2262	2258	515	50	184	110	-10	0.06	0.19	Open
2265	2263	2258	100	41	110	107	0.16	0.54	Open
2266	517	2263	50	174	110	-7	0.04	0.08	Open
2267	2263	518	50	184	110	-9	0.05	0.16	Open
2270	2268	2263	100	40	110	120	0.18	0.67	Open
2271	520	2268	100	175	110	-25	0.04	0.04	Open
2272	2268	490	100	184	110	-48	0.07	0.12	Open
2274	526	2273	100	34	110	122	0.18	0.69	Open
2275	2273	2268	100	49	110	112	0.17	0.59	Open
2276	522	2273	50	175	110	-1	0.01	0.00	Open
2277	2273	493	50	183	110	-7	0.04	0.09	Open
2280	2278	526	100	37	110	139	0.20	0.88	Open
2281	524	2278	50	175	110	6	0.04	0.08	Open
2282	2278	500	50	183	110	4	0.02	0.03	Open
2284	532	2283	100	51	110	165	0.24	1.21	Open
2285	2283	2278	100	51	110	151	0.22	1.03	Open
2286	529	2283	100	182	110	-58	0.09	0.17	Open
2287	2283	530	100	174	110	-59	0.09	0.18	Open
2290	508	511	200	182	110	-835	0.31	0.83	Open
2294	539	2291	50	183	110	17	0.10	0.51	Open
2295	89	540	50	80	110	15	0.09	0.43	Open
2298	506	2291	200	50	110	-688	0.25	0.58	Open
2301	529	506	200	48	110	-694	0.26	0.59	Open
2304	503	529	200	6	110	-737	0.27	0.66	Open
2307	500	503	200	47	110	-621	0.23	0.48	Open
2310	496	500	200	37	110	-617	0.23	0.48	Open
2313	493	496	200	35	110	-600	0.22	0.45	Open
2316	490	493	200	54	110	-586	0.22	0.43	Open
2319	518	490	200	43	110	-611	0.23	0.47	Open
2322	515	518	200	41	110	-587	0.22	0.43	Open
2325	485	515	200	34	110	-562	0.21	0.40	Open
2327	549	2326	50	174	110	-5	0.03	0.06	Open
2328	2326	2248	50	184	110	9	0.05	0.15	Open
2329	485	2326	100	36	110	83	0.12	0.34	Open
2332	2326	2331	100	40	110	54	0.08	0.15	Open
2333	2331	486	100	36	110	27	0.04	0.04	Open
2334	2243	2331	50	183	110	-8	0.05	0.13	Open
2335	2331	547	50	175	110	4	0.02	0.04	Open
2337	512	486	50	183	110	-8	0.05	0.13	Open
2338	486	488	50	176	110	4	0.02	0.03	Open
2340	655	652	50	176	110	-13	0.08	0.33	Open
2341	652	650	50	182	110	-13	0.07	0.31	Open
2343	2238	2342	50	182	110	13	0.08	0.31	Open
2344	2342	668	50	177	110	13	0.08	0.34	Open
2346	2342	652	100	40	110	28	0.04	0.04	Open
2349	2347	2342	100	40	110	55	0.08	0.16	Open
2350	663	2347	50	178	110	-14	0.08	0.36	Open

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
2351	2347	2233	50	181	110	-13	0.07	0.31	Open
2353	648	2352	100	10	110	113	0.17	0.60	Open
2354	2352	2347	100	36	110	84	0.12	0.34	Open
2356	2352	661	50	179	110	15	0.09	0.41	Open
2361	2357	609	50	175	110	13	0.08	0.32	Open
2363	2357	2362	100	44	110	49	0.07	0.13	Open
2366	2362	611	50	175	110	12	0.07	0.28	Open
2368	2362	2367	100	41	110	10	0.01	0.01	Open
2371	2367	613	50	176	110	12	0.07	0.27	Open
2373	2367	132	100	45	110	-29	0.04	0.05	Open
2376	132	615	100	177	110	73	0.11	0.27	Open
2378	2372	623	250	182	110	347	0.08	0.06	Open
2381	2377	617	50	178	110	11	0.06	0.22	Open
2383	2377	2382	100	44	110	23	0.03	0.03	Open
2386	2382	619	50	178	110	10	0.06	0.21	Open
2388	2382	138	100	43	110	-14	0.02	0.01	Open
2390	597	2387	50	177	110	7	0.04	0.11	Open
2391	138	621	50	179	110	10	0.06	0.21	Open
2396	625	627	100	38	110	20	0.03	0.02	Open
2399	627	629	100	38	110	-3	0.00	0.00	Open
2402	629	2703	100	45	110	-25	0.04	0.04	Open
2405	559	2404	100	36	110	258	0.38	2.77	Open
2408	2404	632	50	181	110	19	0.11	0.63	Open
2410	2404	2409	100	38	110	218	0.32	2.02	Open
2412	634	2409	50	181	110	-14	0.08	0.35	Open
2415	2409	2414	100	40	110	179	0.26	1.41	Open
2416	2414	562	100	39	110	147	0.22	0.98	Open
2417	637	2414	50	180	110	-8	0.05	0.14	Open
2423	562	564	100	77	110	148	0.22	0.99	Open
2426	564	567	100	45	110	82	0.12	0.33	Open
2430	623	559	250	163	110	203	0.05	0.02	Open
2435	572	648	250	181	110	858	0.20	0.30	Open
2442	634	637	100	37	110	103	0.15	0.51	Open
2445	632	634	100	38	110	117	0.17	0.64	Open
2451	619	621	100	41	110	-20	0.03	0.02	Open
2454	617	619	100	40	110	-3	0.00	0.00	Open
2457	615	617	100	41	110	13	0.02	0.01	Open
2460	613	615	100	43	110	-33	0.05	0.06	Open
2463	611	613	100	40	110	-18	0.03	0.02	Open
2466	609	611	100	41	110	-3	0.00	0.00	Open
2468	130	654	100	175	110	91	0.13	0.40	Open
2469	654	609	100	36	110	11	0.02	0.01	Open
2471	654	661	100	10	110	53	0.08	0.15	Open
2474	661	663	100	38	110	41	0.06	0.09	Open
2477	663	668	100	38	110	28	0.04	0.04	Open
2478	668	655	100	41	110	14	0.02	0.01	Open
2481	547	488	100	30	110	12	0.02	0.01	Open
2484	549	547	100	42	110	23	0.03	0.03	Open
2486	90	93	50	108	110	13	0.08	0.33	Open
2487	93	91	50	93	110	-25	0.15	1.04	Open
2489	87	94	50	109	110	-14	0.08	0.37	Open
2490	94	88	50	93	110	6	0.04	0.08	Open
2492	219	223	50	80	110	4	0.02	0.03	Open
2493	223	220	50	130	110	7	0.04	0.10	Open
2495	27	2494	150	102	110	402	0.26	0.87	Open
2496	2494	22	150	202	110	393	0.26	0.84	Open
2498	42	2497	50	117	110	-12	0.07	0.28	Open
2499	2497	43	50	49	110	-21	0.12	0.77	Open
2501	1929	2500	100	33	110	-15	0.02	0.01	Open
2502	2500	74	100	95	110	-67	0.10	0.23	Open
2504	395	2503	150	33	110	34	0.02	0.01	Open
2505	2503	348	150	109	110	-16	0.01	0.00	Open
2507	559	2506	100	181	110	152	0.22	1.04	Open
2508	2506	632	100	35	110	125	0.18	0.73	Open

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
2510	637	2509	100	41	110	85	0.12	0.35	Open
2511	2509	562	100	180	110	-11	0.02	0.01	Open
2513	621	2512	100	46	110	-37	0.05	0.08	Open
2514	2512	135	100	180	110	-64	0.09	0.21	Open
2516	485	2515	100	174	110	48	0.07	0.12	Open
2517	2515	549	100	36	110	33	0.05	0.06	Open
2522	168	2521	100	270	110	182	0.27	1.45	Open
2523	2521	188	100	151	110	173	0.25	1.32	Open
2525	804	2524	250	63	110	-2127	0.50	1.59	Open
2528	804	2527	250	129	110	2028	0.48	1.45	Open
2531	120	2530	100	57	110	9	0.01	0.01	Open
2534	113	2533	50	105	110	9	0.05	0.16	Open
2537	116	2536	50	105	110	9	0.05	0.16	Open
2540	110	120	100	134	110	59	0.09	0.18	Open
2542	18	2541	100	6	110	99	0.15	0.47	Open
2543	2541	105	100	46	110	132	0.19	0.80	Open
2545	21	2544	150	6	110	1041	0.68	5.09	Open
2546	2544	106	150	42	110	990	0.65	4.64	Open
2547	2541	2544	50	201	110	-42	0.25	2.83	Open
2550	2548	34	50	66	110	-9	0.05	0.16	Open
2552	33	2551	50	80	110	9	0.05	0.16	Open
2555	18	2554	150	5	110	739	0.48	2.70	Open
2556	2554	133	150	47	110	697	0.46	2.42	Open
2558	134	2557	100	46	110	53	0.08	0.15	Open
2559	2557	1267	100	5	110	77	0.11	0.30	Open
2560	2554	2557	50	211	110	34	0.20	1.86	Open
2562	864	2561	100	7	110	374	0.55	5.52	Open
2563	2561	895	100	41	110	311	0.46	3.90	Open
2564	2561	915	50	201	110	29	0.17	1.40	Open
2566	867	886	50	285	110	35	0.21	2.01	Open
2567	2524	862	250	143	110	-2553	0.60	2.23	Open
2569	2524	2568	100	5	110	391	0.58	5.99	Open
2570	2568	808	100	48	110	328	0.48	4.31	Open
2572	2527	2571	250	5	110	1993	0.47	1.41	Open
2573	2571	807	250	50	110	1986	0.47	1.40	Open
2574	2568	2571	50	192	110	28	0.17	1.37	Open
2575	776	789	50	156	110	35	0.21	2.01	Open
2578	179	182	50	191	110	27	0.16	1.28	Open
2581	170	2580	400	284	110	8690	0.80	2.18	Open
2582	2580	19	400	742	110	7532	0.69	1.67	Open
2826	195	2823	100	41	110	132	0.19	0.80	Open
2824	2586	2823	200	5	110	-1036	0.38	1.24	Open
2590	2586	2589	50	4	110	34	0.20	1.91	Open
2594	1505	2593	200	9	110	-1009	0.37	1.18	Open
2595	2593	2586	200	199	110	-993	0.37	1.15	Open
2599	2597	193	50	126	110	-9	0.05	0.16	Open
2600	219	216	50	267	110	-14	0.08	0.38	Open
2604	2602	1546	50	169	110	-9	0.05	0.16	Open
2607	1551	2606	50	168	110	9	0.05	0.16	Open
2822	190	19	200	6	110	564	0.21	0.40	Open
2613	175	2612	200	6	110	643	0.24	0.51	Open
2614	2612	2609	200	194	110	618	0.23	0.48	Open
2617	266	2616	50	43	110	9	0.05	0.16	Open
2619	263	261	50	75	110	17	0.10	0.52	Open
2621	257	2620	100	39	110	169	0.25	1.27	Open
2624	2620	2623	50	36	110	9	0.05	0.16	Open
2626	2620	2625	50	38	110	9	0.05	0.16	Open
2628	261	2620	100	180	110	-142	0.21	0.92	Open
2631	2629	278	100	8	110	-82	0.12	0.33	Open
2633	17	2632	100	6	110	211	0.31	1.92	Open
2634	2632	370	100	78	110	167	0.25	1.23	Open
2635	2629	2632	50	203	110	-21	0.13	0.80	Open
2637	362	2636	50	150	110	23	0.14	0.96	Open
2639	405	56	100	101	110	16	0.02	0.02	Open

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
2641	2500	2640	50	30	110	28	0.17	1.37	Open
2643	462	2642	100	5	110	140	0.21	0.89	Open
2644	2642	465	100	37	110	95	0.14	0.43	Open
2649	465	2646	50	42	110	22	0.13	0.83	Open
2651	2646	2650	50	40	110	1	0.01	0.00	Open
2652	2650	2642	50	58	110	-22	0.13	0.88	Open
2654	463	2653	50	24	110	26	0.15	1.18	Open
2655	2653	2646	50	43	110	3	0.02	0.02	Open
2656	456	454	50	45	110	3	0.02	0.02	Open
2657	454	452	50	42	110	2	0.01	0.01	Open
2659	452	450	50	39	110	-3	0.01	0.02	Open
2660	450	2640	50	53	110	-8	0.05	0.13	Open
2661	2640	448	50	39	110	-3	0.02	0.02	Open
2662	448	445	50	42	110	-4	0.02	0.04	Open
2663	445	442	50	43	110	-9	0.05	0.15	Open
2664	442	440	50	45	110	-16	0.09	0.47	Open
2665	440	2503	50	43	110	-27	0.16	1.21	Open
2667	459	2666	100	6	110	117	0.17	0.64	Open
2668	2666	466	100	37	110	92	0.14	0.41	Open
2669	2642	2666	50	109	110	-1	0.01	0.00	Open
2670	457	32	50	207	110	0	0.00	0.00	Open
2672	476	2671	100	4	110	142	0.21	0.92	Open
2673	2671	1797	100	36	110	95	0.14	0.44	Open
2674	2666	2671	50	105	110	0	0.00	0.00	Open
2676	2671	2675	50	109	110	23	0.14	0.96	Open
2678	1681	2677	100	41	110	-47	0.07	0.12	Open
2679	2677	29	100	106	110	-94	0.14	0.43	Open
2681	2677	2680	50	36	110	23	0.14	0.96	Open
2684	719	2683	100	35	110	-67	0.10	0.23	Open
2685	2683	675	100	5	110	-121	0.18	0.68	Open
2687	2683	2686	50	112	110	27	0.16	1.25	Open
2690	2688	552	250	5	110	-791	0.19	0.25	Open
2694	560	2693	250	7	110	-683	0.16	0.19	Open
2695	2693	2688	250	173	110	-702	0.17	0.20	Open
2698	2688	2697	50	5	110	35	0.21	2.06	Open
2702	2700	573	250	11	110	-368	0.09	0.06	Open
2704	559	2703	250	6	110	-234	0.06	0.03	Open
2705	2703	2700	250	163	110	-285	0.07	0.04	Open
2709	2703	2708	50	163	110	-2	0.01	0.00	Open
2710	2708	2700	50	4	110	-29	0.17	1.38	Open
2712	2700	2711	50	5	110	27	0.16	1.26	Open
2713	2711	2703	50	163	110	0	0.00	0.00	Open
2714	2693	2697	50	173	110	-8	0.05	0.14	Open
2715	2509	565	50	75	110	69	0.40	6.95	Open
2716	565	568	50	41	110	81	0.48	9.45	Open
2717	568	570	50	33	110	108	0.64	16.28	Open
2719	570	2718	50	185	110	27	0.16	1.25	Open
2720	2372	648	250	172	110	-537	0.13	0.12	Open
2721	502	499	100	47	110	59	0.09	0.18	Open
2722	499	497	100	40	110	53	0.08	0.15	Open
2723	497	494	100	34	110	44	0.07	0.11	Open
2724	494	491	100	51	110	33	0.05	0.06	Open
2727	526	2726	50	175	110	-4	0.03	0.04	Open
2728	542	514	100	38	110	-120	0.18	0.67	Open
2729	514	517	100	39	110	-128	0.19	0.75	Open
2730	517	520	100	41	110	-136	0.20	0.85	Open
2731	520	522	100	48	110	-126	0.19	0.73	Open
2732	522	2726	100	34	110	-140	0.21	0.89	Open
2733	2726	524	100	35	110	-159	0.23	1.14	Open
2734	524	530	100	49	110	-181	0.27	1.43	Open
2735	530	534	100	56	110	-255	0.38	2.72	Open
2737	534	2736	100	70	110	-290	0.43	3.45	Open
2739	483	2738	300	4	110	4073	0.67	2.17	Open
2740	2738	479	300	4	110	3528	0.58	1.67	Open

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
2741	2736	2738	100	5	110	-333	0.49	4.45	Open
2743	511	2742	100	3	110	245	0.36	2.52	Open
2744	2742	536	100	29	110	236	0.35	2.35	Open
2745	2736	2742	50	174	110	28	0.16	1.29	Open
2747	2291	2746	200	48	110	-679	0.25	0.57	Open
2748	2746	508	200	3	110	-673	0.25	0.56	Open
2749	2742	2746	50	182	110	21	0.13	0.80	Open
2751	2253	2750	200	6	110	-370	0.14	0.19	Open
2754	2750	2753	50	5	110	-2	0.01	0.01	Open
2756	2750	2755	200	171	110	-381	0.14	0.19	Open
2757	2755	485	200	8	110	-416	0.15	0.23	Open
2758	2753	2755	50	177	110	-10	0.06	0.19	Open
2760	542	2759	200	5	110	-357	0.13	0.17	Open
2763	2759	2762	50	5	110	-2	0.01	0.01	Open
2765	2759	2764	200	165	110	-368	0.14	0.18	Open
2766	2764	2253	200	5	110	-402	0.15	0.22	Open
2767	2762	2764	50	170	110	-9	0.06	0.18	Open
2768	2589	2593	50	203	110	25	0.15	1.09	Open
2770	2609	2769	50	6	110	-7	0.04	0.10	Open
2771	2769	2612	50	200	110	-16	0.09	0.46	Open
2772	774	784	100	36	110	157	0.23	1.10	Open
2773	784	778	100	36	110	105	0.15	0.53	Open
2775	640	2774	50	60	110	-27	0.16	1.25	Open
2776	2774	641	50	74	110	27	0.16	1.25	Open
2777	562	2774	100	183	110	-40	0.06	0.09	Open
2780	2774	2779	100	39	110	-121	0.18	0.68	Open
2782	2414	2779	50	183	110	-3	0.02	0.03	Open
2783	2779	638	50	103	110	27	0.16	1.25	Open
2785	2779	2784	100	38	110	-179	0.26	1.40	Open
2787	2409	2784	50	182	110	-2	0.01	0.01	Open
2788	2784	635	50	146	110	27	0.16	1.25	Open
2790	2784	2789	100	37	110	-235	0.35	2.33	Open
2791	2789	560	100	37	110	-248	0.37	2.58	Open
2792	631	2789	50	184	110	19	0.11	0.67	Open
2793	2789	2404	50	182	110	5	0.03	0.06	Open
2795	572	2794	100	10	110	105	0.16	0.53	Open
2796	2794	2233	100	35	110	81	0.12	0.32	Open
2797	660	2794	50	178	110	15	0.09	0.42	Open
2798	2794	2352	50	181	110	13	0.07	0.30	Open
2800	21	108	450	207	110	13503	0.98	2.78	Open
2801	108	18	400	9	110	9558	0.88	2.60	Open
2803	697	671	200	121	110	717	0.26	0.63	Open
2804	671	2008	200	43	110	222	0.08	0.07	Open
2816	896	892	250	35	110	2599	0.61	2.30	Open
2813	892	890	250	46	110	2570	0.61	2.25	Open
2810	890	862	250	52	110	2542	0.60	2.21	Open
2821	2609	190	200	8	110	616	0.23	0.47	Open
2825	2823	2580	200	6	110	-1178	0.43	1.57	Open
2828	60	2580	100	6	110	29	0.04	0.05	Open
2827	2823	202	100	51	110	274	0.40	3.09	Open
1	170	1	100	6	110	412	0.61	6.60	Open
2	301	10	100	5	110	209	0.31	1.87	Open
3	301	316	250	183	110	1219	0.29	0.57	Open
4	10	304	100	43	110	174	0.26	1.33	Open
5	307	310	100	37	110	92	0.13	0.41	Open
6	310	313	100	37	110	47	0.07	0.12	Open
9	316	14	100	5	110	275	0.40	3.11	Open
10	313	14	100	31	110	3	0.01	0.00	Open
11	301	16	100	4	110	148	0.22	0.99	Open
12	16	13	100	43	110	153	0.22	1.05	Open
13	13	399	100	39	110	131	0.19	0.79	Open
14	399	402	100	34	110	100	0.15	0.48	Open
15	402	415	100	41	110	70	0.10	0.24	Open
16	415	15	100	29	110	39	0.06	0.08	Open

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
18	15	404	100	5	110	-132	0.20	0.80	Open
19	277	301	250	168	110	1588	0.37	0.92	Open
20	17	277	250	3	110	-1698	0.40	1.05	Open
21	15	412	100	44	110	96	0.14	0.44	Open
22	412	410	100	40	110	57	0.08	1.07	Open
23	410	407	100	41	110	23	0.03	0.18	Open
24	407	422	100	40	110	-9	0.01	0.03	Open
25	422	425	100	43	110	-28	0.04	0.05	Open
27	425	20	100	42	110	-49	0.07	0.13	Open
28	20	427	100	5	110	-93	0.14	0.42	Open
29	14	319	100	41	110	142	0.21	0.92	Open
30	319	322	100	40	110	102	0.15	0.49	Open
31	322	325	100	44	110	63	0.09	0.20	Open
33	325	328	100	43	110	25	0.04	0.04	Open
34	328	331	100	35	110	-13	0.02	0.01	Open
35	331	23	100	43	110	-60	0.09	0.19	Open
36	23	334	100	5	110	-223	0.33	2.11	Open
37	26	476	250	4	110	-86	0.02	0.00	Open
39	29	285	100	4	110	-150	0.22	1.01	Open
40	32	26	100	3	110	-14	0.02	0.01	Open
42	23	337	100	47	110	60	0.09	0.19	Open
43	337	340	100	44	110	21	0.03	0.14	Open
44	340	343	100	44	110	-17	0.03	0.02	Open
45	343	29	100	44	110	-56	0.08	0.16	Open
46	20	430	100	47	110	30	0.04	0.25	Open
48	430	433	100	42	110	8	0.01	0.02	Open
49	433	32	100	83	110	-14	0.02	0.01	Open
51	278	44	250	5	110	399	0.09	0.07	Open
52	44	35	100	86	110	106	0.16	0.53	Open
54	35	38	100	38	110	81	0.12	0.32	Open
55	38	41	100	35	110	56	0.08	0.16	Open
57	41	379	100	5	110	-160	0.24	1.14	Open
58	278	363	250	44.97	110	982.93	0.23	0.38	Open
60	363	379	250	114.03	110	959.46	0.23	0.36	Open
61	2629	365	100	79.5	110	79.78	0.12	0.31	Open
62	365	372	100	39.92	110	83.73	0.12	0.34	Open
63	372	47	100	40.54	110	85.89	0.13	0.36	Open
64	375	394	250	185.28	110	838.75	0.2	0.28	Open
66	41	382	100	48.85	110	113.68	0.17	0.61	Open
67	382	400	100	38.5	110	92.16	0.14	0.41	Open
69	392	59	100	31.53	110	25.25	0.04	0.04	Open
72	47	397	100	42.92	110	85.89	0.13	0.36	Open
73	397	50	100	38	110	84.28	0.12	0.35	Open
75	50	53	100	36.79	110	80.06	0.12	0.32	Open
76	53	416	100	40.36	110	75.05	0.11	0.28	Open
78	416	56	100	26.9	110	58.54	0.09	0.18	Open
79	56	394	100	5.5	110	-10.02	0.01	0.01	Open
81	422	421	50	202.76	110	-3.71	0.02	0.03	Open
82	59	346	100	37.57	110	7.89	0.01	0	Open
84	446	424	100	42.47	110	9.79	0.01	0.01	Open
85	424	74	100	36.78	110	-12.71	0.02	0.01	Open
87	74	349	100	7.33	110	-158.9	0.23	1.13	Open
88	56	62	100	126.62	110	72.6	0.11	0.26	Open
89	62	421	100	41.25	110	49.03	0.07	0.13	Open
90	421	68	100	41.28	110	21.85	0.03	0.03	Open
91	68	71	100	42.43	110	7.63	0.01	0	Open
92	71	428	100	6.04	110	-52.35	0.08	0.14	Open
93	71	431	100	48.16	110	50.88	0.07	0.14	Open
94	462	86	100	5.9	110	88.49	0.13	0.38	Open
96	74	77	100	52.94	110	56	0.08	0.16	Open
97	77	80	100	40.76	110	26.32	0.04	0.04	Open
99	80	83	100	41.33	110	-4.82	0.01	0	Open
100	83	86	100	43.26	110	-50.07	0.07	0.13	Open
102	527	496	50	93.08	110	-9.28	0.05	0.17	Open

Link Results

Hourly maximum water flow rate

Normal condition

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
103	508	89	100	53.78	110	132.49	0.2	0.81	Open
105	89	92	100	50.62	110	109.72	0.16	0.57	Open
106	92	95	100	58.18	110	86.95	0.13	0.37	Open
108	95	503	100	5.04	110	-108.49	0.16	0.56	Open
109	95	98	100	50.26	110	113.59	0.17	0.61	Open
110	98	101	100	40.61	110	96.97	0.14	0.45	Open
111	101	104	100	37.18	110	82.93	0.12	0.34	Open
113	104	107	100	53.69	110	71.17	0.1	0.26	Open
114	107	490	100	4.22	110	81.59	0.12	0.33	Open
115	2755	109	50	172.1	110	9.89	0.06	0.19	Open
116	109	2750	50	6.21	110	2.32	0.01	0.01	Open
117	2764	112	50	165.62	110	9.57	0.06	0.18	Open
118	112	2759	50	5.63	110	2	0.01	0.01	Open
119	671	114	150	6.58	110	346.06	0.23	0.66	Open
120	114	115	100	46.38	110	113.29	0.17	0.6	Open
122	115	117	100	39.45	110	89.48	0.13	0.39	Open
123	117	118	100	45.99	110	67.57	0.1	0.23	Open
124	118	121	100	43.7	110	47.41	0.07	0.12	Open
125	121	672	150	7.45	110	-39.32	0.03	0.01	Open
127	121	122	100	47.92	110	-10.54	0.02	0.01	Open
128	122	124	100	43.68	110	-32.15	0.05	0.06	Open
129	124	126	100	41.38	110	-72.83	0.11	0.27	Open
130	126	128	100	43.31	110	-113.51	0.17	0.61	Open
131	128	722	100	7.48	110	-140.63	0.21	0.9	Open
132	584	129	100	4.32	110	157.28	0.23	1.11	Open
133	129	587	100	42.44	110	85.3	0.13	0.36	Open
134	648	130	100	5.08	110	180.78	0.27	1.43	Open
136	130	2357	100	41.11	110	89.41	0.13	0.39	Open
137	2372	132	100	4.83	110	163.55	0.24	1.19	Open
139	132	2377	100	47.73	110	61.14	0.09	0.19	Open
140	138	135	100	48.58	110	-37.98	0.06	0.08	Open
142	623	135	100	3.77	110	101.96	0.15	0.5	Open
143	2387	623	50	48.17	110	-6.29	0.04	0.08	Open
145	623	141	100	5.23	110	7.9	0.01	0.01	Open
147	141	625	100	41.61	110	41.86	0.06	0.1	Open
8	65	349	250	208.27	110	566.23	0.13	0.14	Open
148	65	394	250	37.67	110	-828.73	0.2	0.28	Open
150	65	346	150	8.39	110	262.5	0.17	0.4	Open

Node Results

Daily maximum water flow

Emergency case 1

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 2	15.65	112.1	72.4	39.7	
Junc 3	15.65	112.0	71.9	40.0	
Junc 5	5.93	113.3	72.9	40.3	
Junc 6	5.93	113.3	72.9	40.3	
Junc 8	15.65	111.8	71.9	39.8	
Junc 9	15.65	112.1	72.1	39.9	
Junc 11	0.00	116.3	72.9	43.3	
Junc 12	15.65	111.7	73.6	38.0	
Junc 18	5.93	114.0	71.1	42.8	
Junc 19	5.93	112.4	72.0	40.3	
Junc 21	5.93	114.3	70.5	43.8	
Junc 22	5.93	112.4	71.7	40.7	
Junc 24	5.93	112.2	72.3	39.8	
Junc 25	5.93	112.2	72.1	40.0	
Junc 27	5.93	112.6	71.5	41.0	
Junc 28	5.93	112.5	71.6	40.8	
Junc 30	5.93	112.6	72.3	40.2	
Junc 31	5.93	112.6	72.4	40.1	
Junc 33	5.93	112.6	72.7	39.8	
Junc 34	5.93	112.6	72.7	39.9	
Junc 36	5.93	112.7	72.5	40.1	
Junc 37	5.93	112.7	72.4	40.3	
Junc 39	5.93	112.7	72.8	39.8	
Junc 40	5.93	112.7	72.9	39.7	
Junc 42	5.93	112.5	71.6	40.8	
Junc 43	5.93	112.5	71.5	40.9	
Junc 45	5.93	112.8	71.8	40.9	
Junc 46	5.93	112.7	71.9	40.8	
Junc 48	5.93	112.8	72.2	40.5	
Junc 49	5.93	112.8	72.2	40.5	
Junc 51	5.93	112.8	72.3	40.4	
Junc 52	5.93	112.8	72.3	40.4	
Junc 54	5.93	112.9	72.9	39.9	
Junc 55	5.93	112.9	72.9	39.9	
Junc 57	5.93	113.0	73.2	39.7	
Junc 58	5.93	113.0	73.2	39.7	
Junc 60	5.93	113.1	73.4	39.6	
Junc 61	5.93	113.1	72.9	40.1	
Junc 63	5.93	113.1	73.3	39.8	
Junc 64	5.93	113.1	72.9	40.1	
Junc 66	5.93	113.2	73.0	40.2	
Junc 67	5.93	113.2	72.9	40.3	
Junc 69	5.93	113.3	73.3	39.9	
Junc 70	5.93	113.3	73.3	39.9	
Junc 72	5.93	113.3	72.8	40.4	
Junc 73	5.93	113.3	72.6	40.7	
Junc 75	5.93	113.5	72.8	40.6	
Junc 76	5.93	113.5	72.5	40.9	
Junc 78	5.93	113.5	72.6	40.9	
Junc 79	5.93	113.5	72.1	41.4	
Junc 81	5.93	113.6	72.7	40.8	
Junc 82	5.93	113.6	72.3	41.2	
Junc 84	5.93	113.7	72.7	40.8	
Junc 85	5.93	113.7	72.6	41.0	
Junc 87	5.93	113.7	72.6	41.0	
Junc 88	5.93	113.7	72.4	41.3	
Junc 90	5.93	113.8	72.4	41.3	
Junc 91	5.93	113.8	72.0	41.8	
Junc 93	5.93	113.8	72.0	41.8	
Junc 94	5.93	113.7	72.4	41.3	
Junc 96	5.93	113.9	72.0	41.8	
Junc 97	5.93	113.9	72.0	41.9	

Node Results

Daily maximum water flow

Emergency case 1

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 99	5.93	113.9	71.8	42.1	
Junc 100	5.93	114.0	70.4	43.5	
Junc 102	5.93	114.0	71.4	42.4	
Junc 103	5.93	114.1	70.4	43.6	
Junc 105	5.93	114.0	71.2	42.7	
Junc 106	5.93	114.2	70.4	43.7	
Junc 108	5.93	114.0	71.3	42.6	
Junc 110	5.93	114.3	70.5	43.7	
Junc 111	5.93	114.0	71.4	42.5	
Junc 113	5.93	114.0	71.4	42.5	
Junc 116	5.93	114.0	71.4	42.5	
Junc 119	5.93	114.0	71.4	42.5	
Junc 120	5.93	114.3	70.5	43.7	
Junc 123	5.93	114.0	71.4	42.5	
Junc 125	5.93	114.0	72.7	41.2	
Junc 127	5.93	113.8	72.2	41.6	
Junc 131	5.93	113.4	72.8	40.6	
Junc 133	5.93	113.9	71.5	42.3	
Junc 134	5.93	113.8	73.0	40.8	
Junc 136	5.93	113.9	71.8	42.0	
Junc 137	5.93	113.8	73.0	40.8	
Junc 139	5.93	113.9	72.2	41.5	
Junc 140	5.93	113.8	73.0	40.8	
Junc 142	5.93	114.0	71.4	42.5	
Junc 143	5.93	114.0	72.6	41.3	
Junc 145	5.93	114.0	72.6	41.3	
Junc 147	5.93	114.0	72.6	41.3	
Junc 148	5.93	114.0	71.4	42.5	
Junc 150	5.93	113.7	73.0	40.7	
Junc 151	5.93	113.7	72.5	41.2	
Junc 153	5.93	113.7	72.6	41.0	
Junc 154	5.93	113.7	72.6	41.1	
Junc 156	5.93	113.6	73.0	40.6	
Junc 157	5.93	113.6	73.0	40.6	
Junc 159	5.93	113.6	73.4	40.1	
Junc 160	5.93	113.6	73.4	40.1	
Junc 162	5.93	113.4	72.5	40.8	
Junc 163	5.93	113.5	72.5	40.9	
Junc 165	5.93	113.5	72.7	40.7	
Junc 167	5.93	113.4	72.4	40.9	
Junc 168	5.93	113.3	72.6	40.7	
Junc 170	5.93	113.4	72.8	40.5	
Junc 171	5.93	113.0	73.6	39.3	
Junc 175	5.93	112.5	72.3	40.1	
Junc 176	5.93	112.2	72.3	39.8	
Junc 178	5.93	113.4	72.6	40.8	
Junc 179	5.93	113.1	73.3	39.8	
Junc 181	5.93	113.2	72.6	40.5	
Junc 182	5.93	113.0	73.6	39.3	
Junc 184	5.93	113.0	73.6	39.3	
Junc 185	5.93	113.0	73.6	39.3	
Junc 187	5.93	113.0	73.6	39.3	
Junc 188	5.93	113.0	72.7	40.2	
Junc 190	5.93	112.4	72.2	40.2	
Junc 192	5.93	113.0	72.7	40.2	
Junc 193	5.93	112.6	73.1	39.5	
Junc 195	5.93	113.1	73.2	39.8	
Junc 196	5.93	113.0	72.7	40.2	
Junc 198	5.93	113.0	73.3	39.6	
Junc 201	5.93	112.9	73.1	39.7	
Junc 202	5.93	113.0	73.6	39.4	
Junc 204	5.93	112.9	73.5	39.4	

Node Results

Daily maximum water flow

Emergency case 1

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 205	5.93	112.9	73.5	39.3	
Junc 207	5.93	112.9	73.3	39.5	
Junc 208	5.93	112.9	73.4	39.4	
Junc 210	5.93	112.8	73.2	39.6	
Junc 211	5.93	112.9	73.5	39.2	
Junc 213	5.93	112.8	73.3	39.5	
Junc 214	5.93	112.8	73.0	39.7	
Junc 216	5.93	112.8	73.3	39.4	
Junc 217	5.93	112.8	73.3	39.4	
Junc 219	5.93	112.7	72.8	39.9	
Junc 220	5.93	112.7	72.4	40.2	
Junc 222	5.93	112.8	72.7	40.0	
Junc 223	5.93	112.7	72.8	39.9	
Junc 227	5.93	112.7	72.0	40.7	
Junc 231	5.93	112.7	73.2	39.4	
Junc 233	5.93	112.6	73.1	39.5	
Junc 235	5.93	112.6	73.1	39.5	
Junc 236	5.93	112.6	72.9	39.6	
Junc 238	5.93	112.6	73.0	39.5	
Junc 240	5.93	112.6	72.9	39.6	
Junc 241	5.93	112.6	72.5	40.0	
Junc 243	5.93	112.5	71.6	40.8	
Junc 244	5.93	112.5	71.7	40.8	
Junc 246	5.93	112.5	71.7	40.7	
Junc 249	5.93	112.2	72.3	39.8	
Junc 251	5.93	112.4	72.3	40.0	
Junc 252	5.93	112.4	72.2	40.2	
Junc 254	5.93	112.3	72.6	39.6	
Junc 255	5.93	112.4	72.2	40.2	
Junc 257	5.93	112.4	72.2	40.1	
Junc 258	5.93	112.3	72.2	40.1	
Junc 260	5.93	112.3	72.2	40.0	
Junc 261	5.93	112.2	72.4	39.7	
Junc 263	5.93	112.3	72.0	40.2	
Junc 264	5.93	112.3	72.1	40.1	
Junc 266	5.93	112.2	72.2	39.9	
Junc 274	15.65	112.2	72.4	39.7	
Junc 277	15.65	112.0	71.6	40.4	
Junc 278	15.65	111.9	71.5	40.3	
Junc 280	15.65	112.2	72.4	39.7	
Junc 281	15.65	112.1	71.5	40.5	
Junc 283	15.65	112.0	73.1	38.9	
Junc 285	15.65	111.8	72.2	39.6	
Junc 287	15.65	112.1	71.5	40.5	
Junc 288	15.65	112.0	72.8	39.1	
Junc 290	15.65	112.1	71.5	40.5	
Junc 291	15.65	112.0	71.8	40.2	
Junc 293	15.65	112.0	72.0	40.0	
Junc 295	15.65	112.1	71.8	40.2	
Junc 297	15.65	112.0	71.1	40.9	
Junc 299	15.65	112.0	71.4	40.6	
Junc 301	7.83	111.9	71.0	40.8	
Junc 302	15.65	111.9	70.7	41.1	
Junc 304	7.82	111.9	71.0	40.9	
Junc 305	15.65	111.9	71.0	40.8	
Junc 307	15.65	111.9	70.9	40.9	
Junc 308	15.65	111.8	70.6	41.1	
Junc 310	15.65	111.9	71.2	40.6	
Junc 311	15.65	111.8	70.6	41.2	
Junc 313	15.65	111.9	71.2	40.6	
Junc 314	15.65	111.8	70.9	40.8	
Junc 316	7.83	111.9	71.2	40.6	

Node Results

Daily maximum water flow

Emergency case 1

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 317	15.65	111.8	71.0	40.8	
Junc 319	15.65	111.9	71.3	40.5	
Junc 320	15.65	111.8	71.4	40.3	
Junc 322	15.65	111.8	71.4	40.4	
Junc 323	15.65	111.8	71.5	40.3	
Junc 325	15.65	111.8	71.4	40.4	
Junc 326	15.65	111.8	71.6	40.2	
Junc 328	15.65	111.8	71.7	40.1	
Junc 329	15.65	111.8	71.8	40.0	
Junc 331	15.65	111.8	71.8	40.0	
Junc 332	15.65	111.8	71.9	39.8	
Junc 334	15.65	111.8	72.0	39.8	
Junc 335	15.65	111.8	71.5	40.2	
Junc 337	15.65	111.8	71.9	39.8	
Junc 338	15.65	111.8	71.9	39.8	
Junc 340	15.65	111.8	72.0	39.7	
Junc 341	15.65	111.8	71.8	39.9	
Junc 343	15.65	111.8	71.8	39.9	
Junc 344	15.65	111.8	71.5	40.2	
Junc 346	15.65	111.9	71.4	40.4	
Junc 348	15.65	111.9	71.6	40.2	
Junc 349	0.00	111.8	72.3	39.5	
Junc 351	15.65	111.9	71.5	40.2	
Junc 352	15.65	111.8	71.5	40.2	
Junc 354	15.65	111.9	71.3	40.5	
Junc 355	15.65	111.8	70.8	40.9	
Junc 357	15.65	111.9	71.5	40.2	
Junc 358	15.65	111.8	71.3	40.5	
Junc 360	15.65	111.8	70.9	40.8	
Junc 362	15.65	111.9	71.3	40.5	
Junc 363	15.65	111.9	71.0	40.8	
Junc 365	7.83	111.9	70.4	41.4	
Junc 366	15.65	111.9	70.7	41.1	
Junc 370	15.65	111.9	71.6	40.2	
Junc 372	7.83	111.9	70.8	41.0	
Junc 373	15.65	111.9	71.4	40.5	
Junc 375	15.65	111.9	70.8	41.0	
Junc 377	15.65	111.9	70.8	41.0	
Junc 379	15.65	111.9	70.8	41.0	
Junc 380	15.65	111.9	71.3	40.5	
Junc 382	7.82	111.9	70.8	41.0	
Junc 383	15.65	111.9	71.0	40.8	
Junc 385	15.65	111.9	70.8	41.0	
Junc 388	7.83	111.9	70.8	41.0	
Junc 389	15.65	111.9	71.0	40.8	
Junc 391	15.65	111.9	70.9	40.9	
Junc 392	15.65	111.9	70.9	40.8	
Junc 394	0.00	111.9	70.8	40.9	
Junc 395	15.65	111.9	70.9	40.9	
Junc 397	7.83	111.9	70.8	41.1	
Junc 399	15.65	111.9	70.9	40.9	
Junc 400	7.82	111.9	71.4	40.4	
Junc 402	15.65	111.9	71.2	40.6	
Junc 404	7.83	111.9	71.2	40.6	
Junc 405	15.65	111.9	71.1	40.7	
Junc 407	15.65	111.8	71.4	40.4	
Junc 409	15.65	111.8	71.2	40.6	
Junc 410	15.65	111.8	71.4	40.4	
Junc 412	15.65	111.9	71.3	40.5	
Junc 413	15.65	111.8	71.1	40.7	
Junc 415	15.65	111.9	71.2	40.6	
Junc 416	15.65	111.9	70.9	40.8	

Node Results

Daily maximum water flow

Emergency case 1

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 418	15.65	111.8	71.5	40.3	
Junc 421	15.65	111.8	71.8	40.0	
Junc 422	15.65	111.8	71.7	40.1	
Junc 424	7.82	111.8	72.2	39.6	
Junc 425	15.65	111.8	71.8	40.0	
Junc 427	15.65	111.8	72.0	39.8	
Junc 428	0.00	111.8	72.3	39.5	
Junc 430	15.65	111.8	71.9	39.9	
Junc 431	7.83	111.8	72.7	39.1	
Junc 433	15.65	111.8	72.0	39.7	
Junc 434	7.83	111.8	72.9	38.9	
Junc 436	15.65	111.8	71.6	40.1	
Junc 437	15.65	111.8	72.7	39.1	
Junc 439	15.65	111.8	71.7	40.0	
Junc 440	15.65	111.8	71.5	40.3	
Junc 442	15.65	111.8	71.7	40.1	
Junc 443	7.82	111.8	71.9	39.9	
Junc 445	15.65	111.8	72.0	39.8	
Junc 446	15.65	111.8	71.8	40.0	
Junc 448	15.65	111.8	72.3	39.4	
Junc 450	15.65	111.8	72.8	38.9	
Junc 452	15.65	111.8	72.8	39.0	
Junc 454	15.65	111.8	72.6	39.1	
Junc 456	15.65	111.8	72.6	39.1	
Junc 457	7.83	111.8	72.7	39.1	
Junc 459	15.65	111.8	72.7	39.0	
Junc 460	15.65	111.8	72.5	39.3	
Junc 462	15.65	111.8	72.7	39.1	
Junc 463	15.65	111.8	72.2	39.6	
Junc 465	15.65	111.8	72.6	39.1	
Junc 466	15.65	111.8	72.7	39.1	
Junc 469	15.65	111.8	72.2	39.5	
Junc 471	15.65	111.8	72.0	39.7	
Junc 473	15.65	111.8	72.0	39.8	
Junc 474	15.65	111.8	72.5	39.3	
Junc 476	15.65	111.8	72.2	39.6	
Junc 477	15.65	111.8	71.6	40.2	
Junc 479	10.11	111.4	73.0	38.3	
Junc 480	10.11	110.9	71.7	39.1	
Junc 482	10.11	111.0	72.2	38.8	
Junc 483	10.11	111.4	73.0	38.3	
Junc 485	10.11	111.1	72.4	38.6	
Junc 486	10.11	111.1	72.0	39.0	
Junc 488	10.11	111.1	72.4	38.6	
Junc 490	5.05	111.1	72.5	38.6	
Junc 491	10.11	111.1	72.6	38.4	
Junc 493	5.05	111.1	72.9	38.2	
Junc 494	10.11	111.1	72.9	38.1	
Junc 496	5.05	111.1	72.9	38.2	
Junc 497	10.11	111.1	73.1	38.0	
Junc 499	10.11	111.1	73.2	37.8	
Junc 500	5.05	111.1	73.0	38.1	
Junc 502	10.11	111.1	73.2	37.8	
Junc 503	5.05	111.2	73.2	37.9	
Junc 505	10.11	111.1	73.1	37.9	
Junc 506	5.05	111.2	73.2	37.9	
Junc 508	10.11	111.2	73.8	37.4	
Junc 509	10.11	111.2	73.7	37.4	
Junc 511	10.18	111.3	73.3	37.9	
Junc 512	10.11	111.1	72.1	38.9	
Junc 514	10.11	111.0	72.6	38.3	
Junc 515	10.11	111.1	72.3	38.7	

Node Results

Daily maximum water flow

Emergency case 1

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 517	10.11	111.1	72.7	38.3	
Junc 518	10.11	111.1	72.3	38.7	
Junc 520	10.11	111.1	72.6	38.4	
Junc 522	10.11	111.1	72.8	38.2	
Junc 524	10.11	111.2	72.9	38.1	
Junc 526	10.11	111.1	72.9	38.2	
Junc 527	10.11	111.1	72.5	38.5	
Junc 529	10.11	111.2	73.2	37.9	
Junc 530	10.11	111.2	73.0	38.2	
Junc 532	10.11	111.2	73.4	37.8	
Junc 534	10.11	111.3	73.0	38.2	
Junc 536	10.11	111.3	73.4	37.8	
Junc 537	10.11	111.2	73.2	37.9	
Junc 539	10.11	111.3	73.4	37.8	
Junc 540	10.11	111.2	73.0	38.1	
Junc 542	10.11	111.0	72.2	38.8	
Junc 543	10.11	111.0	71.7	39.3	
Junc 546	10.11	111.0	71.7	39.3	
Junc 547	10.11	111.1	72.4	38.6	
Junc 549	10.11	111.1	72.4	38.6	
Junc 550	10.11	111.0	72.0	39.0	
Junc 552	18.08	110.6	72.5	38.0	
Junc 554	18.08	110.6	72.5	38.1	
Junc 556	18.08	109.3	73.5	35.7	
Junc 557	18.08	109.3	73.5	35.7	
Junc 559	467.92	110.5	73.5	37.0	
Junc 560	18.08	110.5	74.5	36.0	火点(280m3)
Junc 562	18.08	110.4	73.5	36.8	
Junc 564	18.08	110.4	73.5	36.7	
Junc 565	18.08	110.1	72.6	37.4	
Junc 567	18.08	110.3	73.5	36.7	
Junc 568	18.08	110.0	72.6	37.3	
Junc 570	18.08	109.7	72.6	37.0	
Junc 572	18.08	110.6	72.6	37.9	
Junc 573	18.08	110.5	74.5	36.0	
Junc 575	18.08	110.6	72.9	37.7	
Junc 576	18.08	110.6	72.5	38.0	
Junc 578	18.08	110.6	73.1	37.4	
Junc 579	18.08	110.6	72.5	38.0	
Junc 581	18.08	110.6	73.6	36.9	
Junc 582	18.08	110.5	73.2	37.3	
Junc 584	18.08	110.6	73.2	37.3	
Junc 585	18.08	110.5	72.9	37.5	
Junc 587	18.08	110.6	72.8	37.7	
Junc 588	18.08	110.5	73.3	37.2	
Junc 590	18.08	110.6	72.7	37.8	
Junc 591	18.08	110.5	73.3	37.2	
Junc 593	18.08	110.6	72.7	37.8	
Junc 594	18.08	110.5	73.3	37.2	
Junc 596	18.08	110.6	73.5	37.1	
Junc 597	18.08	110.5	73.5	37.0	
Junc 600	18.08	110.6	73.3	37.3	
Junc 601	18.08	110.6	72.5	38.0	
Junc 603	18.08	110.6	73.4	37.2	
Junc 604	18.08	110.6	72.5	38.0	
Junc 606	18.08	110.6	73.5	37.0	
Junc 607	18.08	110.6	73.0	37.5	
Junc 609	18.08	110.5	72.7	37.7	
Junc 611	18.08	110.5	72.7	37.7	
Junc 613	18.08	110.5	72.7	37.7	
Junc 615	18.08	110.5	72.9	37.5	
Junc 617	18.08	110.5	72.7	37.7	

Node Results

Daily maximum water flow

Emergency case 1

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 619	18.08	110.5	72.8	37.6	
Junc 621	18.08	110.5	73.3	37.2	
Junc 623	18.08	110.5	73.4	37.1	
Junc 625	18.08	110.5	73.4	37.1	
Junc 627	18.08	110.5	73.5	37.0	
Junc 629	18.08	110.5	73.5	37.0	
Junc 631	18.08	110.6	71.7	38.8	
Junc 632	18.08	110.4	72.6	37.7	
Junc 634	18.08	110.4	72.6	37.7	
Junc 635	18.08	110.3	72.3	38.0	
Junc 637	18.08	110.4	72.6	37.7	
Junc 638	18.08	110.3	73.0	37.2	
Junc 640	18.08	110.4	73.1	37.2	
Junc 641	18.08	110.4	73.8	36.5	
Junc 643	18.08	110.6	72.5	38.1	
Junc 644	18.08	110.6	72.6	37.9	
Junc 648	18.08	110.5	72.6	37.8	
Junc 650	18.08	110.6	72.0	38.6	
Junc 652	18.08	110.5	72.1	38.4	
Junc 654	18.08	110.5	72.8	37.7	
Junc 655	18.08	110.5	72.1	38.3	
Junc 657	18.08	110.6	72.5	38.1	
Junc 658	18.08	110.6	71.7	38.8	
Junc 660	18.08	110.6	72.2	38.4	
Junc 661	18.08	110.5	72.7	37.7	
Junc 663	18.08	110.5	72.1	38.3	
Junc 664	18.08	110.6	71.8	38.7	
Junc 667	18.08	110.6	71.7	38.9	
Junc 668	18.08	110.5	72.1	38.3	
Junc 671	18.08	110.6	72.1	38.4	
Junc 672	18.08	110.6	72.7	37.8	
Junc 674	18.08	110.6	72.5	38.1	
Junc 675	18.08	110.6	73.2	37.4	
Junc 677	18.08	110.5	72.1	38.3	
Junc 678	18.08	110.6	72.2	38.3	
Junc 680	18.08	110.6	72.5	37.9	
Junc 681	18.08	110.6	72.8	37.6	
Junc 683	18.08	110.6	71.5	39.0	
Junc 685	18.08	110.6	71.7	38.9	
Junc 688	18.08	110.6	71.7	38.8	
Junc 689	18.08	110.5	72.1	38.3	
Junc 691	18.08	110.6	72.2	38.3	
Junc 692	18.08	110.6	71.7	38.8	
Junc 694	18.08	110.6	71.9	38.7	
Junc 695	18.08	110.6	72.2	38.3	
Junc 697	18.08	110.6	72.5	38.1	
Junc 698	18.08	110.6	72.1	38.4	
Junc 700	18.08	110.6	72.1	38.4	
Junc 702	18.08	110.6	73.6	36.9	
Junc 703	18.08	110.5	72.8	37.6	
Junc 705	18.08	110.6	72.9	37.7	
Junc 706	18.08	110.5	72.0	38.4	
Junc 708	18.08	110.5	72.6	37.9	
Junc 709	18.08	110.6	73.2	37.4	
Junc 711	18.08	110.6	73.3	37.2	
Junc 712	18.08	110.5	72.6	37.9	
Junc 714	18.08	110.6	73.5	37.0	
Junc 716	18.08	110.6	73.5	37.0	
Junc 717	18.08	110.5	72.6	37.9	
Junc 719	18.08	110.6	73.5	37.0	
Junc 720	18.08	110.5	72.8	37.7	
Junc 722	18.08	110.6	72.0	38.6	

Node Results

Daily maximum water flow

Emergency case 1

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 723	18.08	110.5	71.9	38.5	
Junc 725	18.08	110.5	72.5	37.9	
Junc 729	23.37	112.5	73.3	39.1	
Junc 730	23.37	112.2	72.6	39.5	BPS No.7
Junc 732	23.37	112.8	72.9	39.8	
Junc 734	23.37	113.1	71.6	41.5	
Junc 737	23.37	112.5	73.1	39.3	
Junc 739	23.37	112.5	72.7	39.7	
Junc 740	23.37	112.6	72.7	39.8	
Junc 742	23.37	112.5	72.7	39.8	
Junc 743	23.37	112.6	72.7	39.9	
Junc 745	23.37	112.5	72.7	39.7	
Junc 746	23.37	112.6	72.7	39.8	
Junc 748	23.37	112.5	73.1	39.3	
Junc 749	23.37	112.4	73.1	39.2	
Junc 751	23.37	112.5	73.5	38.9	
Junc 752	23.37	112.4	73.5	38.8	
Junc 754	23.37	112.5	73.3	39.1	
Junc 755	23.37	112.3	73.3	38.9	
Junc 757	23.37	112.5	73.5	38.9	
Junc 758	23.37	112.4	73.5	38.7	
Junc 760	23.37	112.5	73.1	39.3	
Junc 761	23.37	112.4	73.1	39.2	
Junc 763	23.37	112.5	73.5	38.9	
Junc 764	23.37	112.4	73.5	38.8	
Junc 766	23.37	112.6	72.7	39.8	
Junc 767	23.37	112.6	72.7	39.9	
Junc 769	23.37	112.6	72.7	39.8	
Junc 770	23.37	112.6	72.7	39.8	
Junc 772	23.37	112.5	72.8	39.6	
Junc 774	23.37	112.4	71.2	41.1	
Junc 776	23.37	112.4	71.3	41.0	
Junc 778	23.37	112.4	71.2	41.1	
Junc 780	23.37	112.2	71.2	40.9	
Junc 782	23.37	112.2	71.2	41.0	
Junc 784	23.37	112.4	71.2	41.1	
Junc 785	23.37	112.2	71.2	41.0	
Junc 787	23.37	112.2	71.2	41.0	
Junc 789	23.37	112.2	71.3	40.9	
Junc 791	11.69	112.8	71.8	40.9	
Junc 792	23.37	112.5	71.9	40.5	
Junc 794	23.37	112.4	71.9	40.5	
Junc 795	23.37	112.6	72.8	39.7	
Junc 797	11.69	112.8	72.2	40.5	
Junc 798	23.37	112.4	72.5	39.9	
Junc 800	23.37	112.5	72.8	39.6	
Junc 802	23.37	112.5	72.8	39.6	
Junc 804	23.37	113.1	71.6	41.4	
Junc 805	23.37	112.8	72.9	39.8	
Junc 807	23.37	113.0	70.5	42.4	
Junc 808	23.37	113.1	72.4	40.5	
Junc 810	23.37	113.0	71.0	41.9	
Junc 811	23.37	113.0	72.4	40.4	
Junc 813	23.37	112.9	70.8	42.0	
Junc 814	23.37	112.9	72.4	40.4	
Junc 816	23.37	112.9	72.4	40.4	
Junc 817	23.37	112.9	70.7	42.1	
Junc 819	23.37	112.9	72.4	40.3	
Junc 820	23.37	112.9	71.0	41.8	
Junc 822	23.37	112.7	72.2	40.4	
Junc 824	23.37	113.0	71.0	42.0	
Junc 826	23.37	113.1	71.6	41.4	

Node Results

Daily maximum water flow

Emergency case 1

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 827	23.37	113.0	72.0	41.0	
Junc 829	23.37	113.1	71.6	41.4	
Junc 830	23.37	113.0	72.0	41.0	
Junc 832	23.37	113.1	71.6	41.4	
Junc 833	23.37	113.0	72.0	41.0	
Junc 835	23.37	113.0	71.0	42.0	
Junc 836	23.37	113.1	71.6	41.4	
Junc 838	23.37	112.4	71.2	41.2	
Junc 840	23.37	112.5	71.3	41.1	
Junc 842	23.37	112.3	71.9	40.4	
Junc 844	23.37	112.4	72.5	39.9	
Junc 845	23.37	112.5	72.5	39.9	
Junc 847	23.37	112.5	72.8	39.6	
Junc 848	23.37	112.5	72.8	39.6	
Junc 850	23.37	112.4	72.8	39.5	
Junc 852	23.37	112.3	72.8	39.4	
Junc 854	23.37	112.3	71.3	41.0	
Junc 859	23.37	113.0	71.4	41.5	
Junc 861	23.56	113.7	71.8	41.8	
Junc 862	23.37	113.3	73.1	40.1	
Junc 864	23.37	113.8	72.7	41.0	
Junc 865	23.37	113.6	72.9	40.7	
Junc 867	23.37	113.5	71.4	42.1	
Junc 869	5.93	113.8	72.4	41.3	
Junc 871	23.37	113.1	72.0	41.0	
Junc 872	23.37	113.0	72.0	41.0	
Junc 876	23.37	113.5	71.4	42.1	
Junc 877	23.37	113.1	71.4	41.6	
Junc 879	23.37	113.5	71.4	42.1	
Junc 880	23.37	113.1	72.0	41.0	
Junc 883	23.37	113.6	71.4	42.1	
Junc 884	23.37	113.4	71.4	41.9	
Junc 886	23.37	113.3	72.0	41.2	
Junc 889	23.37	113.6	72.9	40.7	
Junc 890	23.37	113.4	73.4	39.9	
Junc 892	23.37	113.4	72.3	41.1	
Junc 893	23.37	113.7	72.9	40.7	
Junc 895	23.37	113.7	72.9	40.7	
Junc 896	23.37	113.5	71.9	41.5	
Junc 898	23.37	113.4	71.6	41.7	
Junc 900	23.37	113.3	71.9	41.3	
Junc 902	23.37	113.3	72.6	40.6	
Junc 904	5.93	113.8	72.4	41.3	
Junc 905	23.37	113.6	71.4	42.1	
Junc 907	23.37	113.5	71.4	42.1	
Junc 908	5.93	113.8	72.4	41.3	
Junc 910	23.37	113.5	71.4	42.1	
Junc 912	5.93	113.8	72.4	41.3	
Junc 913	23.37	113.6	71.6	42.0	
Junc 915	23.37	113.7	71.8	41.8	
Junc 916	23.37	113.6	71.2	42.3	
Junc 918	18.08	110.6	71.7	38.8	
Junc 929	5.93	114.0	71.4	42.5	
Junc 1228	5.93	113.8	72.6	41.1	
Junc 1267	5.93	113.8	72.8	41.0	
Junc 1273	5.93	113.8	73.0	40.8	
Junc 1500	5.93	113.0	73.6	39.3	
Junc 1505	5.93	113.0	73.5	39.4	
Junc 1510	5.93	112.9	73.7	39.2	
Junc 1515	5.93	112.9	73.4	39.5	
Junc 1520	5.93	112.9	73.3	39.5	
Junc 1525	5.93	112.8	73.2	39.6	

Node Results

Daily maximum water flow

Emergency case 1

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 1530	5.93	112.8	73.3	39.4	
Junc 1546	5.93	112.7	72.4	40.2	
Junc 1551	5.93	112.7	73.3	39.3	
Junc 1556	5.93	112.6	72.6	39.9	
Junc 1570	5.93	112.5	72.0	40.5	
Junc 1636	15.65	112.1	72.1	39.9	
Junc 1641	15.65	112.1	71.7	40.3	
Junc 1646	15.65	112.1	71.1	40.9	
Junc 1651	15.65	112.1	71.1	40.9	
Junc 1656	15.65	111.8	71.4	40.3	
Junc 1661	15.65	111.8	71.8	40.0	
Junc 1666	15.65	111.8	71.5	40.2	
Junc 1671	15.65	111.8	71.9	39.9	
Junc 1676	15.65	111.8	71.8	40.0	
Junc 1681	15.65	111.8	71.5	40.2	
Junc 1797	15.65	111.8	72.1	39.7	
Junc 1914	15.65	111.8	71.5	40.3	
Junc 1919	15.65	111.8	71.7	40.1	
Junc 1924	15.65	111.8	72.0	39.8	
Junc 1929	15.65	111.8	72.3	39.4	
Junc 1988	18.08	110.6	72.0	38.4	
Junc 1993	18.08	110.6	72.6	37.9	
Junc 1998	18.08	110.6	72.6	37.9	
Junc 2003	18.08	110.6	72.6	37.9	
Junc 2008	9.04	110.6	72.2	38.3	
Junc 2013	9.04	110.6	72.6	37.9	
Junc 2018	9.04	110.6	72.7	37.8	
Junc 2023	9.04	110.6	72.7	37.8	
Junc 2028	9.04	110.6	72.6	37.9	
Junc 2033	9.04	110.6	72.1	38.4	
Junc 2038	18.08	110.6	71.5	39.0	
Junc 2043	18.08	110.6	71.5	39.0	
Junc 2048	18.08	110.6	71.5	39.1	
Junc 2233	18.08	110.6	72.0	38.6	
Junc 2238	18.08	110.6	72.0	38.6	
Junc 2243	10.11	111.1	72.1	38.9	
Junc 2248	10.11	111.1	72.1	38.9	
Junc 2253	10.11	111.1	72.4	38.6	
Junc 2258	10.11	111.1	72.7	38.3	
Junc 2263	10.11	111.1	72.7	38.3	
Junc 2268	10.11	111.1	72.7	38.3	
Junc 2273	10.11	111.1	72.7	38.4	
Junc 2278	10.11	111.2	72.8	38.3	
Junc 2283	10.11	111.2	72.8	38.3	
Junc 2291	5.05	111.2	73.2	38.0	
Junc 2326	10.11	111.1	72.0	39.0	
Junc 2331	10.11	111.1	72.0	39.0	
Junc 2342	18.08	110.5	72.1	38.4	
Junc 2347	18.08	110.5	72.1	38.4	
Junc 2352	18.08	110.5	72.6	37.8	
Junc 2357	18.08	110.5	72.4	38.1	
Junc 2362	18.08	110.5	72.4	38.0	
Junc 2367	18.08	110.5	72.4	38.0	
Junc 2372	18.08	110.5	72.7	37.8	
Junc 2377	18.08	110.5	72.7	37.7	
Junc 2382	18.08	110.5	72.9	37.6	
Junc 2387	9.04	110.5	73.0	37.5	
Junc 2404	18.08	110.5	73.5	36.9	
Junc 2409	18.08	110.4	73.5	36.8	
Junc 2414	18.08	110.4	73.5	36.8	
Junc 2494	5.93	112.5	71.7	40.8	
Junc 2497	5.93	112.5	71.6	40.8	

Node Results

Daily maximum water flow

Emergency case 1

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 2500	15.65	111.8	72.6	39.1	
Junc 2503	15.65	111.9	71.6	40.2	
Junc 2506	18.08	110.4	73.2	37.2	
Junc 2509	18.08	110.4	72.6	37.7	
Junc 2512	18.08	110.5	73.3	37.2	
Junc 2515	10.11	111.1	72.4	38.6	
Junc 2521	5.93	113.1	72.7	40.3	
Junc 2524	23.37	113.2	72.4	40.6	
Junc 2527	23.37	113.0	70.9	42.0	
Junc 2530	5.93	114.3	70.5	43.7	
Junc 2533	5.93	114.0	70.1	43.8	
Junc 2536	5.93	114.0	70.1	43.8	
Junc 2541	5.93	114.0	71.1	42.8	
Junc 2544	5.93	114.3	70.4	43.8	
Junc 2548	5.93	112.6	72.7	39.9	
Junc 2551	5.93	112.6	72.7	39.8	
Junc 2554	5.93	114.0	71.1	42.8	
Junc 2557	5.93	113.8	73.0	40.8	
Junc 2561	23.37	113.8	72.9	40.8	
Junc 2568	23.37	113.2	72.4	40.6	
Junc 2571	23.37	113.0	70.9	42.0	
Junc 2580	6.53	113.1	73.3	39.7	
Junc 2586	5.93	113.1	73.2	39.8	
Junc 2589	5.93	113.1	73.3	39.7	
Junc 2593	5.93	113.0	73.6	39.3	
Junc 2597	5.93	112.6	73.0	39.6	
Junc 2602	5.93	112.7	72.4	40.2	
Junc 2606	5.93	112.7	73.0	39.5	
Junc 2609	5.93	112.4	72.2	40.1	
Junc 2612	5.93	112.5	72.1	40.3	
Junc 2616	5.93	112.2	72.2	39.9	
Junc 2620	5.93	112.3	72.5	39.8	
Junc 2623	5.93	112.3	72.7	39.5	
Junc 2625	5.93	112.3	73.6	38.6	
Junc 2629	15.65	111.9	71.5	40.3	
Junc 2632	15.65	112.0	71.6	40.4	
Junc 2636	15.65	111.8	71.4	40.3	
Junc 2640	15.65	111.8	72.6	39.1	
Junc 2642	15.65	111.8	72.7	39.1	
Junc 2646	15.65	111.8	72.6	39.1	
Junc 2650	15.65	111.8	72.6	39.1	
Junc 2653	15.65	111.8	72.2	39.6	
Junc 2666	15.65	111.8	72.7	39.0	
Junc 2671	15.65	111.8	72.2	39.6	
Junc 2675	15.65	111.8	72.0	39.7	
Junc 2677	15.65	111.8	72.0	39.7	
Junc 2680	15.65	111.8	72.0	39.7	
Junc 2683	18.08	110.6	73.2	37.4	
Junc 2686	18.08	110.5	71.8	38.6	
Junc 2688	18.08	110.6	72.5	38.0	
Junc 2693	18.08	110.5	74.5	36.0	
Junc 2697	18.08	110.6	72.5	38.0	
Junc 2700	18.08	110.5	73.5	36.9	
Junc 2703	18.08	110.5	73.5	37.0	
Junc 2708	18.08	110.5	73.5	36.9	
Junc 2711	18.08	110.5	73.5	36.9	
Junc 2718	18.08	109.6	72.6	36.9	
Junc 2726	10.11	111.1	72.9	38.1	
Junc 2736	10.11	111.4	73.0	38.3	
Junc 2738	10.11	111.4	73.0	38.3	
Junc 2742	10.11	111.3	73.3	37.9	
Junc 2746	10.11	111.2	73.8	37.4	

Node Results

Daily maximum water flow

Emergency case 1

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 2750	10.11	111.1	72.4	38.6	
Junc 2753	5.07	111.1	72.4	38.6	
Junc 2755	10.11	111.1	72.4	38.6	
Junc 2759	10.11	111.0	72.2	38.8	
Junc 2762	5.07	111.0	72.2	38.8	
Junc 2764	10.11	111.1	72.4	38.6	
Junc 2769	5.93	112.4	72.4	40.0	
Junc 2774	18.08	110.4	73.8	36.5	
Junc 2779	18.08	110.4	73.8	36.5	
Junc 2784	18.08	110.4	73.8	36.5	
Junc 2789	18.08	110.5	73.8	36.6	
Junc 2794	18.08	110.6	72.0	38.5	
Junc 2823	0.00	113.1	73.2	39.8	
Junc 1	0.00	113.4	72.6	40.8	
Junc 4	11.69	112.4	71.8	40.5	
Junc 7	11.69	112.4	72.2	40.1	
Junc 10	7.82	111.9	71.0	40.8	
Junc 13	7.83	111.9	71.0	40.9	
Junc 14	7.82	111.9	71.2	40.6	
Junc 15	7.82	111.9	71.2	40.6	
Junc 16	0.00	111.9	71.0	40.8	
Junc 17	0.00	112.0	71.6	40.4	
Junc 20	0.00	111.8	72.0	39.8	
Junc 23	0.00	111.8	72.0	39.8	
Junc 26	0.00	111.8	72.2	39.6	
Junc 29	0.00	111.8	72.2	39.6	
Junc 32	0.00	111.8	72.2	39.6	
Junc 35	7.82	111.9	70.4	41.4	
Junc 38	7.82	111.9	70.8	41.0	
Junc 41	15.65	111.9	70.8	41.0	
Junc 44	0.00	111.9	71.5	40.3	
Junc 47	0.00	111.9	70.8	41.0	
Junc 50	7.83	111.9	71.4	40.4	
Junc 53	7.82	111.9	70.8	41.0	
Junc 56	7.93	111.9	70.8	40.9	
Junc 59	7.93	111.9	70.8	40.9	
Junc 62	7.83	111.84	71.9	39.86	
Junc 68	7.83	111.84	72.17	39.59	
Junc 71	15.65	111.84	72.29	39.47	
Junc 74	15.65	111.84	72.29	39.47	
Junc 77	7.82	111.83	72.68	39.07	
Junc 80	7.82	111.83	72.87	38.88	
Junc 83	15.65	111.83	72.67	39.08	
Junc 86	7.82	111.83	72.71	39.05	
Junc 89	5.07	111.18	73.17	37.94	
Junc 92	5.07	111.17	73.16	37.93	
Junc 95	5.07	111.15	73.19	37.89	
Junc 98	5.07	111.14	72.97	38.09	
Junc 101	5.07	111.12	72.89	38.16	
Junc 104	5.07	111.12	72.85	38.19	
Junc 107	5.07	111.11	72.46	38.57	
Junc 109	5.05	111.05	72.39	38.58	
Junc 112	5.05	111.03	72.16	38.79	
Junc 114	0	110.59	72.11	38.4	
Junc 115	9.04	110.57	72.2	38.3	
Junc 117	9.04	110.57	72.59	37.9	
Junc 118	9.04	110.56	72.71	37.77	
Junc 121	0	110.56	72.67	37.81	
Junc 122	9.04	110.56	72.74	37.74	
Junc 124	9.04	110.56	72.6	37.88	
Junc 126	9.04	110.56	72.13	38.36	
Junc 128	0	110.57	71.95	38.55	

Node Results

Daily maximum water flow

Emergency case 1

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 129	0	110.57	73.23	37.27	
Junc 130	0	110.54	72.63	37.83	
Junc 132	0	110.52	72.7	37.75	
Junc 135	0	110.51	73.35	37.09	
Junc 138	9.04	110.51	72.99	37.45	
Junc 141	0	110.51	73.35	37.09	
Junc 65	0	111.85	71.42	40.35	
Resvr 727	-10224.67	120.55	120.55	0	

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
7	5	6	50	106.1	110	5.93	0.03	0.07	Open
17	480	554	300	172.6	110	3198	0.52	1.39	Open
26	24	25	100	175.7	110	5.93	0.01	0	Open
32	30	31	50	202.1	110	10.37	0.06	0.21	Open
38	36	37	100	202.0	110	-19.8	0.03	0.02	Open
41	39	40	50	202.1	110	6.24	0.04	0.08	Open
47	45	46	50	202.0	110	2.44	0.01	0.01	Open
50	48	49	50	202.3	110	-3.66	0.02	0.03	Open
53	51	52	50	201.9	110	2.5	0.01	0.02	Open
56	54	55	100	201.9	110	-8.94	0.01	0.01	Open
59	57	58	50	61.5	110	5.93	0.03	0.07	Open
65	63	64	50	142.4	110	11.55	0.07	0.26	Open
68	66	67	50	201.7	110	-5.05	0.03	0.06	Open
71	69	70	50	201.7	110	-3.75	0.02	0.03	Open
74	72	73	50	201.6	110	-2.84	0.02	0.02	Open
77	75	76	100	201.6	110	-8.76	0.01	0.01	Open
80	78	79	50	201.5	110	-2.57	0.02	0.02	Open
83	81	82	50	201.5	110	-3.75	0.02	0.03	Open
86	84	85	50	201.5	110	-4.6	0.03	0.05	Open
95	93	94	50	74.1	110	20.54	0.12	0.75	Open
98	96	97	100	201.4	110	-56.76	0.08	0.17	Open
101	99	100	50	201.3	110	-14.87	0.09	0.41	Open
104	102	103	50	201.3	110	-20.19	0.12	0.72	Open
107	105	106	50	201.3	110	-24.6	0.15	1.04	Open
112	110	111	50	207.2	110	28.96	0.17	1.41	Open
121	119	120	50	210.1	110	-28.41	0.17	1.36	Open
126	111	125	50	216.0	110	5.93	0.03	0.07	Open
135	133	134	50	210.2	110	18.51	0.11	0.62	Open
138	136	137	50	209.9	110	15.12	0.09	0.42	Open
141	139	140	50	209.4	110	10.29	0.06	0.21	Open
144	142	143	50	175.0	110	5.93	0.03	0.07	Open
146	145	116	50	201.5	110	-5.93	0.03	0.07	Open
149	147	148	50	203.8	110	-5.93	0.03	0.07	Open
152	150	151	50	199.2	110	-5.93	0.03	0.07	Open
155	153	154	50	129.5	110	-5.93	0.03	0.07	Open
158	156	157	50	96.2	110	5.93	0.03	0.07	Open
161	159	160	50	190.0	110	5.93	0.03	0.07	Open
164	162	163	50	150.2	110	-21.38	0.13	0.8	Open
169	167	168	50	50.4	110	27.64	0.16	1.29	Open
183	181	182	50	234.7	110	20.53	0.12	0.75	Open
189	187	188	50	108.1	110	-13.2	0.08	0.33	Open
218	216	217	50	214.7	110	6.58	0.04	0.09	Open
224	222	223	50	180.5	110	8.69	0.05	0.15	Open
234	233	193	50	209.5	110	-4.56	0.03	0.05	Open
237	235	236	50	209.1	110	5.74	0.03	0.07	Open
239	235	238	50	161.0	110	5.93	0.03	0.07	Open
245	243	244	50	208.2	110	-8.23	0.05	0.14	Open
253	251	252	50	206.7	110	-10.59	0.06	0.22	Open
256	254	255	50	206.1	110	-10.48	0.06	0.21	Open
265	263	264	50	98.8	110	2.19	0.01	0.01	Open
279	17	278	250	208.2	110	991.28	0.23	0.39	Open
289	287	288	50	197.3	110	15.65	0.09	0.45	Open
292	290	291	50	127.4	110	15.65	0.09	0.45	Open
294	281	293	50	106.6	110	15.65	0.09	0.45	Open
303	10	302	50	100.5	110	15.65	0.09	0.45	Open
306	304	305	50	94.2	110	15.65	0.09	0.45	Open
309	307	308	50	88.0	110	15.65	0.09	0.45	Open
312	310	311	50	101.2	110	13.98	0.08	0.37	Open
315	313	314	50	102.4	110	13.47	0.08	0.34	Open
318	14	317	100	103.1	110	83.01	0.12	0.34	Open
324	322	323	50	100.6	110	9.94	0.06	0.19	Open
327	325	326	50	100.2	110	9.7	0.06	0.19	Open
333	331	332	50	127.9	110	15.65	0.09	0.45	Open
359	357	358	50	156.1	110	10.44	0.06	0.21	Open

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
361	358	360	50	143.8	110	15.65	0.09	0.45	Open
367	35	366	50	210.8	110	9.04	0.05	0.16	Open
371	365	370	50	201.7	110	-10.4	0.06	0.21	Open
374	372	373	50	201.7	110	-9.27	0.05	0.17	Open
376	16	375	100	208.0	110	57.14	0.08	0.17	Open
378	38	377	50	211.1	110	8.55	0.05	0.15	Open
381	41	380	100	210.9	110	52.23	0.08	0.14	Open
384	382	383	50	209.2	110	6.52	0.04	0.09	Open
387	385	400	50	207.3	110	-5.24	0.03	0.06	Open
390	388	389	50	206.9	110	4.31	0.03	0.04	Open
393	391	392	50	207.0	110	-4.11	0.02	0.03	Open
396	59	395	50	206.1	110	3.63	0.02	0.03	Open
398	13	397	50	203.1	110	6.75	0.04	0.1	Open
401	399	50	50	203.1	110	5.01	0.03	0.05	Open
403	53	402	50	202.1	110	-4.5	0.03	0.04	Open
406	15	405	100	101.2	110	42.53	0.06	0.1	Open
411	409	410	50	101.2	110	-6.87	0.04	0.1	Open
414	412	413	50	101.2	110	10.26	0.06	0.21	Open
417	415	416	50	202.7	110	4.63	0.03	0.05	Open
420	418	62	50	100.4	110	-7.86	0.05	0.13	Open
426	68	425	50	202.8	110	1.63	0.01	0.01	Open
429	20	71	100	203.3	110	9.51	0.01	0.01	Open
432	430	431	50	203.7	110	-1.54	0.01	0.01	Open
435	433	434	50	204.0	110	-0.75	0	0	Open
438	436	437	50	156.6	110	-15.65	0.09	0.45	Open
451	450	77	50	104.2	110	-11.96	0.07	0.27	Open
453	452	80	50	88.6	110	-12.94	0.08	0.32	Open
455	454	83	50	71.3	110	-14.53	0.09	0.39	Open
458	456	86	50	52.8	110	-17.79	0.1	0.57	Open
467	465	466	50	108.3	110	-1.43	0.01	0.01	Open
468	463	460	50	107.9	110	1.52	0.01	0.01	Open
470	460	469	50	125.4	110	15.65	0.09	0.45	Open
2807	2738	480	100	540.3	110	150.14	0.22	1.02	Open
492	107	491	100	177.1	110	-17.98	0.03	0.02	Open
495	104	494	50	180.1	110	2.66	0.02	0.02	Open
498	101	497	50	183.0	110	4.59	0.03	0.05	Open
501	499	98	50	185.5	110	-6.39	0.04	0.09	Open
504	502	95	100	182.9	110	-54.9	0.08	0.16	Open
507	505	92	50	178.4	110	-10.11	0.06	0.2	Open
510	508	509	50	168.3	110	10.11	0.06	0.2	Open
528	526	527	50	90.2	110	3.78	0.02	0.03	Open
533	506	532	50	181.9	110	-10.46	0.06	0.21	Open
535	532	534	50	174.0	110	-14.66	0.09	0.4	Open
538	536	537	50	99.5	110	10.11	0.06	0.2	Open
558	556	557	50	39.2	110	18.08	0.11	0.59	Open
566	564	565	50	179.0	110	26.33	0.16	1.18	Open
569	567	568	50	178.2	110	36.5	0.22	2.17	Open
571	556	570	50	177.9	110	-36.16	0.21	2.13	Open
577	575	576	50	185.0	110	12.33	0.07	0.29	Open
580	578	579	50	184.6	110	11.77	0.07	0.27	Open
583	581	582	50	186.2	110	11.12	0.07	0.24	Open
586	129	585	100	182.9	110	65.78	0.1	0.22	Open
589	587	588	50	182.8	110	9.92	0.06	0.19	Open
592	590	591	50	182.7	110	9.71	0.06	0.19	Open
595	593	594	50	182.7	110	9.8	0.06	0.19	Open
598	596	597	50	186.2	110	11.27	0.07	0.25	Open
602	600	601	50	185.0	110	10.98	0.06	0.23	Open
605	603	604	100	185.5	110	61.64	0.09	0.2	Open
608	606	607	50	185.9	110	10.74	0.06	0.22	Open
624	585	141	100	175.5	110	42.64	0.06	0.1	Open
626	588	625	50	174.2	110	6.41	0.04	0.09	Open
628	591	627	50	173.6	110	6.25	0.04	0.08	Open
630	594	629	50	173.5	110	6.15	0.04	0.08	Open
645	643	644	50	183.8	110	12.86	0.08	0.31	Open

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
699	697	698	50	120.3	110	18.08	0.11	0.59	Open
701	697	700	50	119.3	110	18.08	0.11	0.59	Open
715	714	672	100	124.6	110	42.03	0.06	0.1	Open
724	128	723	50	54.0	110	18.08	0.11	0.59	Open
726	725	680	50	53.5	110	-18.08	0.11	0.59	Open
728	727	11	450	2552.4	110	10224.67	0.74	1.66	Open
731	729	730	50	239.3	110	23.37	0.14	0.95	Open
741	739	740	50	326.7	110	-12.53	0.07	0.3	Open
744	742	743	50	325.7	110	-12.08	0.07	0.28	Open
747	745	746	50	327.7	110	-13.28	0.08	0.33	Open
750	748	749	50	120.2	110	23.37	0.14	0.95	Open
753	751	752	50	120.6	110	23.37	0.14	0.95	Open
756	754	755	50	128.2	110	23.37	0.14	0.95	Open
759	757	758	50	123.0	110	23.37	0.14	0.95	Open
762	760	761	50	90.0	110	23.37	0.14	0.95	Open
765	763	764	50	71.8	110	23.37	0.14	0.95	Open
768	766	767	50	88.2	110	-23.37	0.14	0.95	Open
771	769	770	50	42.0	110	23.37	0.14	0.95	Open
773	739	772	50	127.6	110	-10.84	0.06	0.23	Open
777	774	776	100	38.7	110	56.46	0.08	0.17	Open
781	778	780	50	178.9	110	23.37	0.14	0.95	Open
783	778	782	50	145.9	110	23.37	0.14	0.95	Open
786	784	785	50	160.0	110	23.37	0.14	0.95	Open
788	774	787	50	166.6	110	23.37	0.14	0.95	Open
799	7	798	50	84.7	110	-11.69	0.07	0.26	Open
803	802	745	50	123.8	110	10.09	0.06	0.2	Open
809	807	808	50	191.4	110	-12.64	0.07	0.3	Open
812	810	811	50	190.5	110	-3.84	0.02	0.03	Open
815	813	814	50	189.2	110	5.8	0.03	0.07	Open
818	816	817	50	188.2	110	-7.88	0.05	0.13	Open
821	819	820	50	189.0	110	-8.59	0.05	0.15	Open
823	797	822	50	89.4	110	23.37	0.14	0.95	Open
828	826	827	50	184.9	110	15.64	0.09	0.45	Open
831	829	830	50	194.6	110	15.14	0.09	0.42	Open
834	832	833	50	205.0	110	15.12	0.09	0.42	Open
837	835	836	50	215.1	110	-15.32	0.09	0.43	Open
839	784	838	50	251.9	110	-12.36	0.07	0.29	Open
841	776	840	50	214.8	110	-13.66	0.08	0.35	Open
843	842	792	50	132.0	110	-23.37	0.14	0.95	Open
846	844	845	50	46.6	110	-23.37	0.14	0.95	Open
849	847	848	50	49.5	110	23.37	0.14	0.95	Open
851	802	850	50	59.9	110	23.37	0.14	0.95	Open
853	852	772	50	231.9	110	-23.37	0.14	0.95	Open
855	776	854	50	33.4	110	23.37	0.14	0.95	Open
860	824	859	50	64.7	110	23.37	0.14	0.95	Open
878	876	877	50	174.5	110	37.91	0.22	2.32	Open
881	879	880	50	367.0	110	28.16	0.17	1.34	Open
882	872	877	50	189.9	110	-14.53	0.09	0.39	Open
885	883	884	50	199.2	110	23.37	0.14	0.95	Open
888	865	862	50	203.4	110	30.82	0.18	1.58	Open
891	889	890	50	202.8	110	28.42	0.17	1.36	Open
894	892	893	50	202.2	110	-27.16	0.16	1.25	Open
897	895	896	50	201.7	110	27.15	0.16	1.25	Open
899	896	898	50	97.3	110	23.37	0.14	0.95	Open
901	892	900	50	94.9	110	23.37	0.14	0.95	Open
903	890	902	50	81.4	110	23.37	0.14	0.95	Open
906	904	905	50	207.1	110	24	0.14	1	Open
909	907	908	50	205.3	110	-25.84	0.15	1.14	Open
911	869	910	50	204.1	110	26.23	0.15	1.17	Open
914	912	913	50	203.7	110	20.63	0.12	0.75	Open
917	915	916	50	107.6	110	23.37	0.14	0.95	Open
919	21	110	100	12.3	110	75.17	0.11	0.28	Open
933	929	123	50	84.5	110	5.93	0.03	0.07	Open
935	929	119	100	41.4	110	-11.87	0.02	0.01	Open

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
938	119	148	100	2.4	110	10.61	0.02	0.01	Open
941	148	116	100	37.3	110	-1.25	0	0	Open
944	116	142	100	45.9	110	-19.05	0.03	0.02	Open
947	142	113	100	6.5	110	-30.92	0.05	0.05	Open
950	113	111	100	44.4	110	-42.79	0.06	0.1	Open
951	111	108	100	7.4	110	-25.7	0.04	0.04	Open
953	11	21	450	1204.5	110	10224.67	0.74	1.66	Open
962	106	103	150	38.4	110	664	0.43	2.21	Open
965	103	100	150	47.6	110	637.88	0.42	2.05	Open
968	100	97	150	47.7	110	617.07	0.4	1.93	Open
971	97	91	150	50.3	110	554.38	0.36	1.58	Open
974	91	88	150	74.8	110	531.32	0.35	1.46	Open
977	88	85	150	52.3	110	530.12	0.35	1.46	Open
980	85	82	150	51.6	110	519.59	0.34	1.4	Open
983	82	79	150	50.4	110	509.9	0.33	1.36	Open
986	79	76	150	49.7	110	501.4	0.33	1.32	Open
989	76	73	150	103.1	110	486.71	0.32	1.24	Open
992	73	70	150	49.0	110	477.94	0.31	1.2	Open
995	70	67	150	47.5	110	468.25	0.31	1.16	Open
998	67	61	150	88.8	110	457.27	0.3	1.11	Open
1001	61	55	150	243.4	110	423.2	0.28	0.96	Open
1004	55	51	150	49.0	110	408.33	0.27	0.9	Open
1007	51	49	150	47.1	110	399.9	0.26	0.86	Open
1010	49	45	150	53.5	110	390.31	0.26	0.83	Open
1013	45	37	150	46.3	110	381.93	0.25	0.79	Open
1016	37	39	150	51.7	110	356.2	0.23	0.7	Open
1019	39	34	150	53.5	110	344.02	0.23	0.65	Open
1022	27	43	50	84.5	110	19.64	0.12	0.69	Open
1023	43	28	50	117.7	110	-1.24	0.01	0	Open
1028	34	30	150	49.6	110	332.15	0.22	0.61	Open
1029	30	27	150	47.6	110	315.85	0.21	0.56	Open
1037	105	102	100	34.3	110	112.69	0.17	0.6	Open
1040	133	136	150	35.6	110	465.82	0.31	1.15	Open
1043	136	139	150	44.4	110	444.76	0.29	1.05	Open
1046	102	99	100	47.0	110	126.94	0.19	0.74	Open
1049	99	96	100	51.1	110	135.88	0.2	0.84	Open
1055	18	127	400	178.1	110	6156	0.57	1.15	Open
1058	96	90	100	50.3	110	186.71	0.28	1.52	Open
1064	151	154	150	34.9	110	489.85	0.32	1.26	Open
1067	154	156	150	37.6	110	477.98	0.31	1.2	Open
1070	90	87	100	73.3	110	171.42	0.25	1.3	Open
1073	156	159	150	50.8	110	466.11	0.31	1.15	Open
1076	87	84	100	51.1	110	175.37	0.26	1.35	Open
1079	84	81	100	52.0	110	174.03	0.26	1.34	Open
1082	159	163	150	49.8	110	454.25	0.3	1.1	Open
1085	163	165	150	54.1	110	426.93	0.28	0.98	Open
1088	81	78	100	49.9	110	171.85	0.25	1.3	Open
1091	127	131	400	323.3	110	6090.94	0.56	1.13	Open
1094	78	75	100	50.3	110	168.48	0.25	1.26	Open
1097	131	170	400	8.5	110	6085	0.56	1.13	Open
1100	170	178	150	5.7	110	-396.94	0.26	0.85	Open
1103	1	5	100	99.6	110	184.34	0.27	1.49	Open
1106	75	72	100	101.1	110	171.31	0.25	1.3	Open
1109	72	69	100	49.1	110	168.21	0.25	1.25	Open
1112	5	181	100	51.5	110	172.48	0.25	1.31	Open
1113	181	179	100	49.0	110	146.01	0.22	0.96	Open
1118	69	66	100	48.9	110	166.03	0.24	1.22	Open
1121	66	63	100	45.6	110	165.15	0.24	1.21	Open
1124	179	195	100	48.5	110	120.73	0.18	0.68	Open
1130	63	60	100	43.7	110	147.66	0.22	0.98	Open
1136	202	204	100	53.1	110	173.29	0.26	1.32	Open
1139	60	57	100	105.3	110	149.69	0.22	1.01	Open
1142	204	208	100	47.4	110	157.51	0.23	1.11	Open
1145	208	210	100	45.2	110	145.06	0.21	0.95	Open

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
1148	210	214	100	39.7	110	135.71	0.2	0.84	Open
1151	57	54	100	135.6	110	137.83	0.2	0.87	Open
1154	54	52	100	50.9	110	140.83	0.21	0.9	Open
1157	214	222	100	55.5	110	136.6	0.2	0.85	Open
1160	222	220	100	49.8	110	121.98	0.18	0.69	Open
1163	52	48	100	50.9	110	137.4	0.2	0.86	Open
1166	48	46	100	49.1	110	135.12	0.2	0.84	Open
1169	220	227	100	49.7	110	121.01	0.18	0.68	Open
1172	227	231	100	46.4	110	118.79	0.18	0.66	Open
1175	46	36	100	48.5	110	131.63	0.19	0.8	Open
1178	36	40	100	50.0	110	145.49	0.21	0.96	Open
1181	231	233	100	53.0	110	127.32	0.19	0.75	Open
1184	233	236	100	53.0	110	125.95	0.19	0.73	Open
1187	40	33	100	54.4	110	145.81	0.21	0.96	Open
1190	33	31	100	47.6	110	133.94	0.2	0.82	Open
1193	236	241	100	48.7	110	125.76	0.19	0.73	Open
1196	241	243	100	46.5	110	126.81	0.19	0.74	Open
1199	31	28	100	47.6	110	138.38	0.2	0.87	Open
1202	28	42	100	50.2	110	131.2	0.19	0.79	Open
1205	243	246	100	49.9	110	129.11	0.19	0.77	Open
1206	246	190	100	52.4	110	132.93	0.2	0.81	Open
1210	42	22	100	53.8	110	134.28	0.2	0.83	Open
1211	22	19	150	7.0	110	412.69	0.27	0.92	Open
1213	190	251	100	41.0	110	160.32	0.24	1.15	Open
1216	251	254	100	35.1	110	164.98	0.24	1.21	Open
1219	254	258	100	39.0	110	169.53	0.25	1.27	Open
1222	258	264	100	37.8	110	156.13	0.23	1.09	Open
1225	264	266	100	39.7	110	152.39	0.22	1.04	Open
1226	266	249	100	37.9	110	140.52	0.21	0.9	Open
2819	178	165	150	52.3	110	-402.87	0.26	0.88	Open
1230	1228	151	150	52.2	110	501.71	0.33	1.32	Open
1232	1228	127	150	5.4	110	-59.13	0.04	0.02	Open
1233	139	1228	150	51.4	110	428.54	0.28	0.98	Open
1235	60	64	100	99.9	110	-33.75	0.05	0.06	Open
1236	64	61	100	101.9	110	-28.14	0.04	0.05	Open
1244	134	137	100	31.6	110	12.36	0.02	0.01	Open
1247	137	140	100	47.1	110	21.55	0.03	0.03	Open
1251	889	865	100	51.8	110	54.19	0.08	0.15	Open
1254	893	889	100	48.2	110	105.98	0.16	0.53	Open
1257	895	893	100	33.8	110	156.51	0.23	1.1	Open
1259	864	912	100	13.1	110	120.43	0.18	0.67	Open
1262	912	904	100	45.7	110	93.87	0.14	0.43	Open
1265	904	908	100	50.4	110	63.93	0.09	0.21	Open
1266	908	869	100	35.6	110	32.16	0.05	0.06	Open
1270	108	1267	300	215.7	110	2630.71	0.43	0.97	Open
1274	140	1273	100	52.9	110	25.9	0.04	0.04	Open
1275	1273	1228	100	208.8	110	19.97	0.03	0.02	Open
1278	910	867	100	9.0	110	46.75	0.07	0.12	Open
1281	876	910	100	25.6	110	43.89	0.06	0.1	Open
1284	907	876	100	8.7	110	105.18	0.15	0.52	Open
1287	879	907	100	26.4	110	102.71	0.15	0.5	Open
1290	905	879	100	23.8	110	154.24	0.23	1.07	Open
1293	883	905	100	12.3	110	153.61	0.23	1.06	Open
1295	861	913	100	9.4	110	203.1	0.3	1.78	Open
1296	913	883	100	34.3	110	200.36	0.3	1.73	Open
1298	861	915	250	5.0	110	1779.75	0.42	1.14	Open
2815	915	896	250	176.7	110	1752.24	0.41	1.11	Open
1301	861	734	100	207.4	110	241.88	0.36	2.46	Open
1302	1267	864	300	12.1	110	2641.73	0.43	0.98	Open
1303	864	861	300	201.1	110	2248.29	0.37	0.72	Open
1305	734	826	100	37.0	110	112.05	0.17	0.59	Open
1308	826	829	100	36.1	110	73.04	0.11	0.27	Open
1311	829	832	100	34.6	110	34.53	0.05	0.07	Open
1314	832	836	100	33.7	110	-3.96	0.01	0	Open

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
1317	836	804	100	39.0	110	-42.66	0.06	0.1	Open
1322	734	871	100	174.4	110	106.45	0.16	0.54	Open
1323	871	827	100	37.2	110	79.03	0.12	0.31	Open
1325	827	830	100	34.9	110	71.29	0.11	0.26	Open
1328	830	833	100	31.7	110	63.06	0.09	0.2	Open
1331	833	835	100	41.7	110	54.8	0.08	0.16	Open
1338	871	880	50	76.8	110	4.06	0.02	0.04	Open
1339	880	872	50	40.6	110	8.84	0.05	0.16	Open
1340	835	824	100	31.9	110	46.75	0.07	0.12	Open
1345	808	811	100	58.2	110	182.5	0.27	1.46	Open
1348	811	814	100	47.1	110	155.28	0.23	1.08	Open
1351	814	816	100	34.1	110	137.71	0.2	0.87	Open
1354	816	819	100	37.7	110	122.22	0.18	0.69	Open
1355	819	805	100	202.1	110	107.44	0.16	0.55	Open
1357	805	732	100	194.7	110	-57.02	0.08	0.17	Open
1363	817	820	250	37.8	110	1233.43	0.29	0.58	Open
1366	813	817	250	31.8	110	1264.69	0.3	0.61	Open
1369	810	813	250	48.9	110	1293.86	0.31	0.63	Open
1372	807	810	250	50.9	110	1313.4	0.31	0.65	Open
1374	820	791	250	109.0	110	1201.47	0.28	0.55	Open
1376	791	797	250	35.8	110	1189.78	0.28	0.54	Open
1377	797	732	250	51.2	110	1154.72	0.27	0.51	Open
1379	4	794	50	84.2	110	-11.69	0.07	0.26	Open
1380	794	792	50	36.6	110	-25.3	0.15	1.1	Open
1382	794	798	50	35.6	110	-9.76	0.06	0.19	Open
1383	798	795	50	51.2	110	-44.82	0.26	3.17	Open
1385	732	795	150	87.3	110	652.02	0.43	2.14	Open
1387	795	800	150	34.7	110	583.82	0.38	1.74	Open
1390	800	845	150	49.5	110	399.27	0.26	0.86	Open
1395	840	838	150	41.2	110	243.45	0.16	0.34	Open
1396	838	774	150	212.8	110	207.72	0.14	0.26	Open
1398	800	847	100	4.7	110	161.18	0.24	1.16	Open
1400	845	792	150	37.2	110	352.53	0.23	0.68	Open
1401	792	840	150	34.4	110	280.48	0.18	0.45	Open
1402	847	802	100	48.6	110	114.43	0.17	0.61	Open
1403	802	772	100	52.5	110	57.59	0.08	0.17	Open
1408	732	743	150	150.1	110	422.3	0.28	0.96	Open
1411	743	767	150	2.6	110	386.86	0.25	0.81	Open
1414	767	769	150	36.6	110	340.11	0.22	0.64	Open
1416	769	737	150	197.7	110	293.36	0.19	0.49	Open
1419	737	760	150	36.6	110	327.23	0.21	0.6	Open
1422	760	748	150	12.4	110	280.48	0.18	0.45	Open
1425	748	763	150	23.2	110	233.73	0.15	0.32	Open
1428	763	751	150	25.4	110	186.99	0.12	0.21	Open
1431	751	754	150	47.5	110	140.24	0.09	0.12	Open
1434	754	757	150	49.3	110	93.49	0.06	0.06	Open
1435	757	729	150	38.6	110	46.75	0.03	0.02	Open
1436	165	167	50	154.1	110	18.12	0.11	0.59	Open
1437	167	162	50	52.7	110	-15.45	0.09	0.44	Open
1438	1	168	100	156.7	110	107.11	0.16	0.54	Open
1442	184	171	50	100.7	110	3.17	0.02	0.02	Open
1444	184	187	50	42.8	110	-1.33	0.01	0	Open
1445	187	185	50	31.7	110	5.93	0.03	0.08	Open
1450	188	192	100	43.4	110	103.75	0.15	0.51	Open
1451	192	184	50	110.1	110	7.77	0.05	0.12	Open
1453	192	196	100	47.5	110	90.04	0.13	0.39	Open
1456	196	198	100	43.8	110	84.25	0.12	0.35	Open
1459	198	201	100	55.6	110	107.88	0.16	0.55	Open
1463	746	805	100	182.7	110	-141.09	0.21	0.91	Open
1466	740	746	100	47.8	110	-104.44	0.15	0.52	Open
1468	737	742	100	182.3	110	-57.24	0.08	0.17	Open
1469	742	740	100	48.3	110	-68.54	0.1	0.24	Open
1471	201	205	100	48.9	110	105.97	0.16	0.53	Open
1474	205	207	100	49.2	110	101.69	0.15	0.49	Open

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
1477	207	211	100	47.5	110	92.59	0.14	0.41	Open
1480	211	213	100	35.8	110	80.88	0.12	0.32	Open
1483	213	216	50	55.2	110	22.78	0.13	0.9	Open
1498	182	171	50	23.5	110	33.95	0.2	1.89	Open
1501	171	1500	100	49.3	110	31.19	0.05	0.06	Open
1503	195	1500	50	214.1	110	19.28	0.11	0.66	Open
1504	1500	196	50	211.3	110	0.14	0	0	Open
1506	1500	1505	100	43.7	110	44.39	0.07	0.11	Open
1508	198	1505	100	211.8	110	-29.56	0.04	0.05	Open
1511	1505	1510	200	52.8	110	720.35	0.27	0.63	Open
1513	201	1510	50	212.3	110	-4.02	0.02	0.04	Open
1514	1510	202	50	213.3	110	-14.05	0.08	0.37	Open
1516	1510	1515	200	50.4	110	724.44	0.27	0.64	Open
1518	204	1515	50	212.9	110	9.85	0.06	0.19	Open
1519	1515	205	50	212.8	110	1.66	0.01	0.01	Open
1521	1515	1520	200	47.8	110	726.69	0.27	0.64	Open
1523	207	1520	50	213.3	110	3.17	0.02	0.02	Open
1524	1520	208	50	212.4	110	-6.51	0.04	0.09	Open
1526	1520	1525	200	46.0	110	730.44	0.27	0.65	Open
1528	210	1525	50	212.0	110	3.42	0.02	0.03	Open
1529	1525	211	50	213.8	110	-5.78	0.03	0.07	Open
1531	1525	1530	200	41.3	110	733.7	0.27	0.66	Open
1533	213	1530	100	214.2	110	52.16	0.08	0.14	Open
1534	1530	214	100	211.7	110	6.83	0.01	0	Open
1541	1530	217	200	53.6	110	773.1	0.28	0.72	Open
1544	217	219	200	49.5	110	773.75	0.29	0.72	Open
1547	219	1546	200	48.7	110	775.89	0.29	0.73	Open
1549	227	1546	50	210.4	110	-3.72	0.02	0.03	Open
1552	1546	1551	200	48.9	110	760.3	0.28	0.7	Open
1555	1551	231	100	210.0	110	14.46	0.02	0.01	Open
1559	240	1556	50	178.0	110	-5.93	0.03	0.07	Open
1560	1556	241	50	208.6	110	6.99	0.04	0.1	Open
1562	1551	193	200	50.1	110	733.97	0.27	0.66	Open
1565	193	235	200	53.7	110	717.54	0.26	0.63	Open
1566	235	1556	200	48.7	110	699.93	0.26	0.6	Open
1568	1556	244	200	47.5	110	681.08	0.25	0.57	Open
1571	244	1570	200	50.8	110	666.91	0.25	0.55	Open
1573	246	1570	50	207.8	110	-9.76	0.06	0.19	Open
1576	1570	175	200	50.7	110	651.22	0.24	0.53	Open
1582	175	252	100	40.5	110	178.48	0.26	1.4	Open
1585	252	255	100	37.1	110	161.95	0.24	1.17	Open
1588	255	257	100	39.6	110	145.53	0.21	0.96	Open
1594	257	260	50	106.3	110	18.8	0.11	0.63	Open
1595	260	258	50	99.2	110	-7.47	0.04	0.11	Open
1597	260	263	50	39.2	110	20.33	0.12	0.73	Open
1609	19	24	400	227.8	110	6199.27	0.57	1.17	Open
1610	24	176	400	2.6	110	6187.4	0.57	1.16	Open
1612	261	249	100	98.0	110	109.27	0.16	0.56	Open
1613	249	176	100	5.7	110	243.86	0.36	2.49	Open
1615	176	274	400	10.6	110	6425.33	0.59	1.25	Open
1616	274	12	300	241.3	110	3921.65	0.64	2.03	Open
1618	274	280	300	5.2	110	2488.04	0.41	0.87	Open
1623	2	283	50	202.8	110	15.65	0.09	0.45	Open
1625	280	2	100	7.6	110	185.75	0.27	1.51	Open
1628	2	287	100	33.2	110	135.33	0.2	0.84	Open
1631	287	290	100	37.0	110	88.57	0.13	0.38	Open
1632	290	281	100	40.6	110	43.95	0.06	0.1	Open
1634	280	9	300	106.9	110	2286.64	0.37	0.75	Open
1638	1636	9	100	7.3	110	-64.59	0.1	0.21	Open
1639	2	1636	50	106.9	110	19.13	0.11	0.65	Open
1640	1636	3	50	75.7	110	15.65	0.09	0.45	Open
1643	1641	1636	100	33.9	110	-52.43	0.08	0.14	Open
1644	287	1641	50	106.6	110	15.46	0.09	0.44	Open
1645	1641	295	50	12.4	110	15.65	0.09	0.45	Open

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
1648	1646	1641	100	37.0	110	-36.6	0.05	0.07	Open
1649	290	1646	50	106.3	110	13.33	0.08	0.34	Open
1650	1646	297	50	42.2	110	15.65	0.09	0.45	Open
1653	1651	1646	100	40.0	110	-18.64	0.03	0.02	Open
1654	281	1651	50	105.9	110	12.65	0.07	0.3	Open
1655	1651	299	50	101.1	110	15.65	0.09	0.45	Open
1659	319	1656	50	101.7	110	11.32	0.07	0.25	Open
1660	1656	320	50	21.8	110	15.65	0.09	0.45	Open
1662	8	1661	100	33.0	110	-10.65	0.02	0.01	Open
1664	328	1661	50	102.1	110	10.05	0.06	0.2	Open
1665	1661	329	50	21.5	110	15.65	0.09	0.45	Open
1667	8	1666	100	38.5	110	-4.99	0.01	0	Open
1669	23	1666	100	103.9	110	68.17	0.1	0.24	Open
1670	1666	335	50	52.5	110	15.65	0.09	0.45	Open
1672	1666	1671	100	43.9	110	31.89	0.05	0.06	Open
1674	337	1671	50	104.4	110	10.58	0.06	0.22	Open
1675	1671	338	50	47.8	110	15.65	0.09	0.45	Open
1677	1671	1676	100	39.3	110	11.17	0.02	0.01	Open
1679	340	1676	50	105.5	110	9.89	0.06	0.19	Open
1680	1676	341	50	59.3	110	15.65	0.09	0.45	Open
1682	1676	1681	100	39.9	110	-10.23	0.02	0.01	Open
1684	343	1681	50	105.1	110	9.94	0.06	0.19	Open
1685	1681	344	50	66.1	110	15.65	0.09	0.45	Open
1694	314	311	100	34.5	110	1.66	0	0	Open
1696	1656	317	100	39.6	110	-63.52	0.09	0.21	Open
1697	317	314	100	28.5	110	3.84	0.01	0	Open
1700	323	1656	100	35.8	110	-43.56	0.06	0.1	Open
1702	1661	326	100	41.6	110	-31.9	0.05	0.06	Open
1703	326	323	100	41.7	110	-37.85	0.06	0.08	Open
1705	9	277	300	103.7	110	2206.4	0.36	0.7	Open
1711	370	373	100	41.4	110	85.09	0.13	0.35	Open
1717	373	16	100	42.6	110	60.18	0.09	0.19	Open
1723	304	307	100	35.6	110	92.36	0.14	0.41	Open
1744	316	404	250	2.9	110	621.71	0.15	0.16	Open
1747	404	334	250	244.1	110	525.27	0.12	0.12	Open
1780	334	427	250	5.5	110	360.8	0.09	0.06	Open
1783	427	285	250	172.5	110	283.03	0.07	0.04	Open
1799	1797	477	100	39.0	110	33.26	0.05	0.06	Open
1800	466	1797	50	104.4	110	1.01	0.01	0	Open
1801	1797	471	50	83.5	110	15.65	0.09	0.45	Open
1806	285	476	250	3.2	110	167.56	0.04	0.01	Open
1809	473	477	50	59.1	110	-15.65	0.09	0.45	Open
1810	477	474	50	103.7	110	1.97	0.01	0.01	Open
1812	26	459	250	101.6	110	47.46	0.01	0	Open
1818	466	474	100	36.4	110	43.45	0.06	0.1	Open
1819	474	460	100	2.9	110	29.77	0.04	0.05	Open
1822	465	463	100	39.3	110	34.67	0.05	0.07	Open
1830	457	437	100	42.3	110	15.41	0.02	0.02	Open
1833	437	434	100	41.6	110	-15.88	0.02	0.02	Open
1836	434	431	100	40.6	110	-24.45	0.04	0.04	Open
1842	462	428	250	176.1	110	-236.57	0.06	0.03	Open
1843	428	349	250	4.7	110	-271.39	0.06	0.04	Open
1849	459	462	250	108.6	110	-46.36	0.01	0	Open
1850	462	457	100	5.5	110	23.03	0.03	0.03	Open
1858	446	443	100	40.5	110	-29.2	0.04	0.05	Open
1861	443	439	100	47.7	110	-43.82	0.06	0.1	Open
1864	439	346	100	40.6	110	-65.52	0.1	0.22	Open
1876	392	388	100	36.4	110	-36.28	0.05	0.07	Open
1879	388	400	100	36.8	110	-48.41	0.07	0.12	Open
1892	375	379	250	6.4	110	-517.63	0.12	0.12	Open
1903	405	413	50	41.3	110	16.33	0.1	0.49	Open
1906	413	409	50	36.9	110	10.94	0.06	0.23	Open
1909	409	418	50	37.3	110	2.16	0.01	0.01	Open
1910	418	407	50	101.8	110	-5.63	0.03	0.07	Open

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
1913	348	346	150	95.0	110	-98.85	0.06	0.06	Open
1915	348	1914	100	38.1	110	72.49	0.11	0.26	Open
1917	439	1914	50	94.4	110	6.05	0.04	0.08	Open
1918	1914	440	50	98.0	110	8.57	0.05	0.15	Open
1920	1914	1919	100	44.2	110	54.33	0.08	0.15	Open
1922	442	1919	50	78.9	110	-10.76	0.06	0.23	Open
1923	1919	443	50	95.8	110	-6.8	0.04	0.1	Open
1925	1919	1924	100	37.8	110	34.72	0.05	0.07	Open
1927	445	1924	50	61.5	110	-12.53	0.07	0.3	Open
1928	1924	446	50	95.2	110	-7.04	0.04	0.1	Open
1930	1924	1929	100	39.2	110	13.59	0.02	0.01	Open
1932	448	1929	50	44.9	110	-14.97	0.09	0.42	Open
1933	1929	424	50	95.1	110	-7.18	0.04	0.11	Open
1935	44	351	150	211.4	110	195.11	0.13	0.23	Open
1938	351	362	150	41.4	110	137.72	0.09	0.12	Open
1941	362	366	150	35.8	110	106.43	0.07	0.07	Open
1944	366	377	150	36.8	110	99.82	0.07	0.07	Open
1947	377	380	150	33.7	110	92.72	0.06	0.06	Open
1950	380	354	150	8.4	110	129.31	0.08	0.11	Open
1953	354	383	150	35.6	110	77.16	0.05	0.04	Open
1956	383	385	150	34.9	110	68.04	0.04	0.03	Open
1959	385	389	150	34.9	110	57.63	0.04	0.02	Open
1962	389	391	150	36.6	110	46.3	0.03	0.02	Open
1965	391	395	150	26.6	110	34.76	0.02	0.01	Open
1968	351	357	100	9.8	110	41.74	0.06	0.09	Open
1969	357	352	50	107.1	110	15.65	0.09	0.45	Open
1971	354	358	50	9.8	110	36.5	0.22	2.16	Open
1972	358	355	50	159.1	110	15.65	0.09	0.45	Open
1974	114	678	150	179.4	110	159.82	0.1	0.16	Open
1978	680	121	150	178.1	110	-59.09	0.04	0.03	Open
1981	695	678	100	41.9	110	-23.92	0.04	0.03	Open
1984	691	695	100	40.5	110	-12.84	0.02	0.01	Open
1989	678	1988	150	44.0	110	117.82	0.08	0.09	Open
1992	1988	706	50	55.2	110	18.08	0.11	0.59	Open
1994	1988	1993	150	39.2	110	88.64	0.06	0.05	Open
1996	708	1993	50	79.8	110	-18.08	0.11	0.59	Open
1999	1993	1998	150	40.9	110	58.08	0.04	0.02	Open
2000	1998	680	150	41.3	110	26.2	0.02	0.01	Open
2002	1998	712	50	59.5	110	18.08	0.11	0.59	Open
2005	2003	717	50	30.5	110	18.08	0.11	0.59	Open
2006	680	2003	100	43.4	110	49.13	0.07	0.13	Open
2007	2003	681	100	33.6	110	18.08	0.03	0.02	Open
2009	705	2008	50	125.7	110	8.62	0.05	0.15	Open
2010	115	1988	50	177.8	110	6.98	0.04	0.1	Open
2014	2008	2013	200	36.3	110	202.91	0.07	0.06	Open
2016	1993	117	50	178.2	110	-5.6	0.03	0.07	Open
2017	2013	709	50	125.4	110	-3.6	0.02	0.03	Open
2019	2013	2018	200	43.0	110	197.47	0.07	0.06	Open
2021	711	2018	50	125.0	110	-4.42	0.03	0.04	Open
2022	118	1998	50	177.8	110	4.27	0.03	0.04	Open
2024	2018	2023	200	85.0	110	184	0.07	0.05	Open
2026	716	2023	50	124.1	110	-6.11	0.04	0.08	Open
2027	122	2003	50	176.5	110	5.11	0.03	0.06	Open
2029	2023	2028	200	40.4	110	168.86	0.06	0.04	Open
2031	702	2028	50	123.7	110	-5.45	0.03	0.06	Open
2032	124	703	50	153.2	110	18.08	0.11	0.59	Open
2034	2028	2033	200	38.3	110	154.36	0.06	0.04	Open
2036	719	2033	50	123.3	110	-4.38	0.03	0.04	Open
2037	126	720	50	101.9	110	18.08	0.11	0.59	Open
2039	688	2038	50	128.8	110	10.26	0.06	0.21	Open
2040	2038	689	50	171.0	110	18.08	0.11	0.59	Open
2042	2038	683	100	34.8	110	25.97	0.04	0.04	Open
2045	2043	2038	100	41.6	110	51.87	0.08	0.14	Open
2046	691	2043	50	182.9	110	-5.24	0.03	0.06	Open

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
2047	2043	692	50	127.9	110	-10.52	0.06	0.22	Open
2049	671	2048	100	43.8	110	78.2	0.12	0.3	Open
2050	2048	2043	100	38.7	110	64.67	0.1	0.21	Open
2051	694	2048	50	127.1	110	11.55	0.07	0.26	Open
2052	2048	695	50	183.9	110	7	0.04	0.1	Open
2054	677	683	50	181.0	110	-18.08	0.11	0.59	Open
2055	683	685	50	129.5	110	-10.19	0.06	0.2	Open
2057	2033	722	200	40.5	110	140.94	0.05	0.03	Open
2063	554	674	200	6.1	110	850.49	0.31	0.86	Open
2064	674	697	200	4.8	110	592.79	0.22	0.44	Open
2066	12	483	300	111.3	110	3906	0.64	2.01	Open
2072	479	482	300	407.0	110	2668.93	0.44	0.99	Open
2073	482	480	300	109.6	110	3057.97	0.5	1.28	Open
2075	554	643	300	4.5	110	1308.37	0.21	0.26	Open
2078	643	575	300	37.5	110	1277.43	0.21	0.25	Open
2081	674	705	100	42.7	110	124.78	0.18	0.72	Open
2084	705	709	100	38.0	110	98.08	0.14	0.46	Open
2087	575	578	300	38.9	110	1247.02	0.2	0.24	Open
2090	709	711	100	39.0	110	76.41	0.11	0.29	Open
2093	578	600	300	38.8	110	1217.17	0.2	0.23	Open
2096	711	714	100	42.9	110	62.75	0.09	0.2	Open
2099	600	603	300	44.4	110	1188.1	0.19	0.22	Open
2102	714	716	100	43.6	110	2.64	0	0	Open
2105	603	606	300	42.9	110	1108.39	0.18	0.2	Open
2108	716	702	100	39.7	110	-9.33	0.01	0.01	Open
2111	606	581	300	38.8	110	1079.57	0.18	0.19	Open
2114	702	719	100	40.5	110	-21.96	0.03	0.03	Open
2117	581	596	300	39.0	110	1050.37	0.17	0.18	Open
2120	596	584	300	41.4	110	1021.02	0.17	0.17	Open
2123	722	675	200	123.0	110	36.38	0.01	0	Open
2124	675	584	200	7.1	110	-53.51	0.02	0.01	Open
2126	584	552	300	168.2	110	811.1	0.13	0.11	Open
2129	587	590	100	39.3	110	44.54	0.07	0.11	Open
2132	590	593	100	40.5	110	16.75	0.02	0.02	Open
2133	593	2688	100	45.2	110	-11.13	0.02	0.01	Open
2135	552	631	100	35.2	110	51.34	0.08	0.14	Open
2136	631	918	100	14.5	110	18.08	0.03	0.02	Open
2138	674	694	100	44.6	110	114.84	0.17	0.62	Open
2141	694	692	100	37.3	110	85.2	0.13	0.36	Open
2144	692	688	100	41.9	110	56.61	0.08	0.17	Open
2145	688	685	100	33.3	110	28.27	0.04	0.05	Open
2148	667	658	100	40.4	110	28.73	0.04	0.05	Open
2151	664	667	100	35.9	110	57.59	0.08	0.17	Open
2153	657	660	100	10.1	110	117.37	0.17	0.64	Open
2154	660	664	100	36.3	110	86.95	0.13	0.37	Open
2156	554	657	250	5.4	110	1021.07	0.24	0.41	Open
2160	546	543	100	36.8	110	2.47	0	0	Open
2162	542	550	100	39.7	110	7.07	0.01	0	Open
2163	550	546	100	37.8	110	4.87	0.01	0	Open
2165	482	542	200	4.6	110	-399.15	0.15	0.21	Open
2169	511	483	200	178.6	110	-811.08	0.3	0.79	Open
2174	536	539	100	6.5	110	153.17	0.23	1.05	Open
2177	539	532	100	43.4	110	130.39	0.19	0.78	Open
2183	543	512	50	176.6	110	-7.64	0.05	0.12	Open
2187	650	658	50	176.9	110	-10.65	0.06	0.22	Open
2189	657	572	250	178.3	110	885.61	0.21	0.31	Open
2192	572	644	100	4.5	110	58.53	0.09	0.18	Open
2195	644	576	100	37.3	110	53.31	0.08	0.15	Open
2198	576	579	100	40.6	110	47.56	0.07	0.12	Open
2201	579	601	100	34.7	110	41.25	0.06	0.09	Open
2204	601	604	100	42.1	110	34.16	0.05	0.07	Open
2207	604	607	100	46.5	110	77.71	0.11	0.3	Open
2210	607	582	100	40.3	110	70.37	0.1	0.25	Open
2213	582	597	100	38.8	110	63.41	0.09	0.21	Open

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
2216	597	585	100	42.0	110	48.65	0.07	0.13	Open
2219	585	588	100	42.3	110	53.71	0.08	0.15	Open
2222	588	591	100	33.2	110	39.14	0.06	0.08	Open
2225	591	594	100	36.5	110	24.53	0.04	0.04	Open
2226	594	573	100	42.2	110	10.1	0.01	0.01	Open
2231	573	560	250	2.4	110	-488.76	0.12	0.11	Open
2235	2233	664	50	177.8	110	-11.28	0.07	0.25	Open
2239	2233	2238	100	35.7	110	36.11	0.05	0.07	Open
2240	2238	650	100	44.3	110	18.1	0.03	0.02	Open
2241	667	2238	50	177.4	110	10.78	0.06	0.23	Open
2245	2243	512	100	37.2	110	10.86	0.02	0.01	Open
2246	546	2243	50	176.2	110	-7.71	0.05	0.12	Open
2250	2248	2243	100	38.8	110	21.7	0.03	0.03	Open
2252	2248	550	50	175.7	110	7.92	0.05	0.13	Open
2255	2253	2248	100	37.6	110	32.33	0.05	0.06	Open
2260	2258	2253	100	35.4	110	77.88	0.11	0.3	Open
2261	514	2258	50	174.9	110	-6.74	0.04	0.09	Open
2262	2258	515	50	184.1	110	-7.87	0.05	0.13	Open
2265	2263	2258	100	41.2	110	86.86	0.13	0.37	Open
2266	517	2263	50	174.4	110	-5.31	0.03	0.06	Open
2267	2263	518	50	183.7	110	-7.2	0.04	0.11	Open
2270	2268	2263	100	40.4	110	95.08	0.14	0.44	Open
2271	520	2268	100	174.6	110	-21	0.03	0.03	Open
2272	2268	490	100	184.4	110	-37.62	0.06	0.08	Open
2274	526	2273	100	34.2	110	94.85	0.14	0.43	Open
2275	2273	2268	100	48.8	110	88.57	0.13	0.38	Open
2276	522	2273	50	174.6	110	-1.19	0.01	0	Open
2277	2273	493	50	183.1	110	-5.02	0.03	0.06	Open
2280	2278	526	100	36.7	110	105.76	0.16	0.53	Open
2281	524	2278	50	174.6	110	4.63	0.03	0.05	Open
2282	2278	500	50	182.5	110	2.96	0.02	0.02	Open
2284	532	2283	100	51.0	110	124.48	0.18	0.72	Open
2285	2283	2278	100	51.2	110	114.2	0.17	0.61	Open
2286	529	2283	100	182.2	110	-44.19	0.07	0.11	Open
2287	2283	530	100	174.3	110	-44.02	0.06	0.1	Open
2290	508	511	200	182.4	110	-621.93	0.23	0.48	Open
2294	539	2291	50	182.8	110	12.66	0.07	0.3	Open
2295	89	540	50	80.5	110	10.11	0.06	0.2	Open
2298	506	2291	200	50.1	110	-517.3	0.19	0.34	Open
2301	529	506	200	48.3	110	-522.71	0.19	0.35	Open
2304	503	529	200	5.8	110	-556.79	0.21	0.39	Open
2307	500	503	200	46.7	110	-473.8	0.17	0.29	Open
2310	496	500	200	37.3	110	-471.71	0.17	0.29	Open
2313	493	496	200	35.0	110	-460.33	0.17	0.28	Open
2316	490	493	200	53.9	110	-450.26	0.17	0.27	Open
2319	518	490	200	42.5	110	-477.05	0.18	0.3	Open
2322	515	518	200	41.4	110	-459.73	0.17	0.28	Open
2325	485	515	200	34.3	110	-441.75	0.16	0.26	Open
2327	549	2326	50	174.3	110	-3.55	0.02	0.03	Open
2328	2326	2248	50	183.8	110	7.4	0.04	0.11	Open
2329	485	2326	100	36.2	110	59.45	0.09	0.18	Open
2332	2326	2331	100	40.3	110	38.38	0.06	0.08	Open
2333	2331	486	100	36.4	110	18.95	0.03	0.02	Open
2334	2243	2331	50	183.2	110	-6.99	0.04	0.1	Open
2335	2331	547	50	175.1	110	2.33	0.01	0.01	Open
2337	512	486	50	182.6	110	-6.89	0.04	0.1	Open
2338	486	488	50	175.5	110	1.94	0.01	0.01	Open
2340	655	652	50	176.2	110	-10.05	0.06	0.2	Open
2341	652	650	50	182.2	110	-10.67	0.06	0.22	Open
2343	2238	2342	50	181.7	110	10.71	0.06	0.22	Open
2344	2342	668	50	177.1	110	10.11	0.06	0.2	Open
2346	2342	652	100	40.2	110	17.46	0.03	0.02	Open
2349	2347	2342	100	39.5	110	34.94	0.05	0.07	Open
2350	663	2347	50	178.0	110	-10.4	0.06	0.21	Open

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
2351	2347	2233	50	181.2	110	-10.71	0.06	0.22	Open
2353	648	2352	100	10.1	110	71.02	0.1	0.25	Open
2354	2352	2347	100	36.0	110	52.71	0.08	0.15	Open
2356	2352	661	50	178.8	110	10.96	0.06	0.23	Open
2361	2357	609	50	175.0	110	9.03	0.05	0.16	Open
2363	2357	2362	100	43.8	110	46.98	0.07	0.12	Open
2366	2362	611	50	175.4	110	8.14	0.05	0.13	Open
2368	2362	2367	100	41.4	110	20.76	0.03	0.03	Open
2371	2367	613	50	176.2	110	7.91	0.05	0.13	Open
2373	2367	132	100	45.1	110	-5.23	0.01	0	Open
2376	132	615	100	177.0	110	48.52	0.07	0.13	Open
2378	2372	623	250	182.4	110	382.52	0.09	0.07	Open
2381	2377	617	50	177.6	110	6.45	0.04	0.09	Open
2383	2377	2382	100	43.6	110	30.5	0.04	0.05	Open
2386	2382	619	50	178.2	110	5.94	0.03	0.07	Open
2388	2382	138	100	42.9	110	6.49	0.01	0	Open
2390	597	2387	50	176.7	110	7.95	0.05	0.13	Open
2391	138	621	50	179.3	110	5.87	0.03	0.07	Open
2396	625	627	100	38.0	110	31.04	0.05	0.05	Open
2399	627	629	100	38.0	110	19.21	0.03	0.02	Open
2402	629	2703	100	45.0	110	7.28	0.01	0	Open
2405	559	2404	100	36.2	110	167.3	0.25	1.24	Open
2408	2404	632	50	181.0	110	12.46	0.07	0.3	Open
2410	2404	2409	100	37.7	110	142.33	0.21	0.92	Open
2412	634	2409	50	180.7	110	-9.12	0.05	0.17	Open
2415	2409	2414	100	40.5	110	118.21	0.17	0.65	Open
2416	2414	562	100	38.6	110	97.58	0.14	0.46	Open
2417	637	2414	50	180.3	110	-5.6	0.03	0.07	Open
2423	562	564	100	77.3	110	98.98	0.15	0.47	Open
2426	564	567	100	44.6	110	54.58	0.08	0.16	Open
2430	623	559	250	162.6	110	319.53	0.08	0.05	Open
2435	572	648	250	180.7	110	738.92	0.17	0.22	Open
2442	634	637	100	36.9	110	67.39	0.1	0.23	Open
2445	632	634	100	38.4	110	76.35	0.11	0.29	Open
2451	619	621	100	41.4	110	-5.04	0.01	0	Open
2454	617	619	100	40.0	110	7.11	0.01	0	Open
2457	615	617	100	41.3	110	18.74	0.03	0.02	Open
2460	613	615	100	43.0	110	-11.7	0.02	0.01	Open
2463	611	613	100	39.5	110	-1.53	0	0	Open
2466	609	611	100	41.2	110	8.41	0.01	0	Open
2468	130	654	100	174.9	110	66.35	0.1	0.22	Open
2469	654	609	100	35.7	110	17.46	0.03	0.02	Open
2471	654	661	100	10.1	110	30.81	0.05	0.05	Open
2474	661	663	100	37.5	110	23.69	0.03	0.03	Open
2477	663	668	100	37.7	110	16	0.02	0.02	Open
2478	668	655	100	40.6	110	8.03	0.01	0	Open
2481	547	488	100	30.3	110	8.17	0.01	0	Open
2484	549	547	100	42.1	110	15.95	0.02	0.02	Open
2486	90	93	50	108.4	110	9.36	0.06	0.17	Open
2487	93	91	50	93.0	110	-17.12	0.1	0.53	Open
2489	87	94	50	108.7	110	-9.88	0.06	0.19	Open
2490	94	88	50	92.7	110	4.73	0.03	0.05	Open
2492	219	223	50	80.3	110	2.2	0.01	0.01	Open
2493	223	220	50	130.5	110	4.96	0.03	0.05	Open
2495	27	2494	150	102.0	110	290.28	0.19	0.48	Open
2496	2494	22	150	202.2	110	284.35	0.19	0.46	Open
2498	42	2497	50	117.3	110	-9.01	0.05	0.16	Open
2499	2497	43	50	48.8	110	-14.95	0.09	0.41	Open
2501	1929	2500	100	33.3	110	-9.85	0.01	0.01	Open
2502	2500	74	100	94.6	110	-44.47	0.07	0.11	Open
2504	395	2503	150	33.2	110	22.74	0.01	0	Open
2505	2503	348	150	109.4	110	-10.7	0.01	0	Open
2507	559	2506	100	181.4	110	100.05	0.15	0.48	Open
2508	2506	632	100	34.9	110	81.97	0.12	0.33	Open

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
2510	637	2509	100	41.0	110	54.91	0.08	0.16	Open
2511	2509	562	100	179.9	110	-8.82	0.01	0.01	Open
2513	621	2512	100	45.7	110	-17.25	0.03	0.02	Open
2514	2512	135	100	180.0	110	-35.33	0.05	0.07	Open
2516	485	2515	100	173.8	110	32.63	0.05	0.06	Open
2517	2515	549	100	36.1	110	22.52	0.03	0.03	Open
2522	168	2521	100	269.6	110	128.82	0.19	0.76	Open
2523	2521	188	100	150.7	110	122.88	0.18	0.7	Open
2525	804	2524	250	63.0	110	-1417.94	0.33	0.75	Open
2528	804	2527	250	129.1	110	1351.91	0.32	0.69	Open
2531	120	2530	100	57.3	110	5.93	0.01	0	Open
2534	113	2533	50	104.9	110	5.93	0.03	0.07	Open
2537	116	2536	50	105.3	110	5.93	0.03	0.07	Open
2540	110	120	100	134.5	110	40.28	0.06	0.09	Open
2542	18	2541	100	5.8	110	70.54	0.1	0.25	Open
2543	2541	105	100	46.0	110	94.02	0.14	0.43	Open
2545	21	2544	150	6.4	110	729.88	0.48	2.64	Open
2546	2544	106	150	42.4	110	694.53	0.45	2.4	Open
2547	2541	2544	50	201.2	110	-29.41	0.17	1.45	Open
2550	2548	34	50	65.6	110	-5.93	0.03	0.07	Open
2552	33	2551	50	79.7	110	5.93	0.03	0.07	Open
2555	18	2554	150	5.4	110	518.87	0.34	1.4	Open
2556	2554	133	150	47.1	110	490.27	0.32	1.26	Open
2558	134	2557	100	45.6	110	0.22	0	0	Open
2559	2557	1267	100	5.4	110	16.96	0.02	0.02	Open
2560	2554	2557	50	210.6	110	22.67	0.13	0.9	Open
2562	864	2561	100	7.0	110	249.64	0.37	2.6	Open
2563	2561	895	100	41.5	110	207.03	0.31	1.84	Open
2564	2561	915	50	201.2	110	19.23	0.11	0.66	Open
2566	867	886	50	285.1	110	23.37	0.14	0.95	Open
2567	2524	862	250	143.1	110	-1702.16	0.4	1.05	Open
2569	2524	2568	100	5.4	110	260.85	0.38	2.82	Open
2570	2568	808	100	48.5	110	218.51	0.32	2.04	Open
2572	2527	2571	250	4.9	110	1328.53	0.31	0.66	Open
2573	2571	807	250	50.0	110	1324.13	0.31	0.66	Open
2574	2568	2571	50	192.0	110	18.97	0.11	0.64	Open
2575	776	789	50	155.8	110	23.37	0.14	0.95	Open
2578	179	182	50	191.0	110	19.35	0.11	0.67	Open
2581	170	2580	400	284.2	110	6184.56	0.57	1.16	Open
2582	2580	19	400	742.0	110	5376.81	0.5	0.9	Open
2826	195	2823	100	41.2	110	95.52	0.14	0.44	Open
2824	2586	2823	200	5.0	110	-729.25	0.27	0.65	Open
2590	2586	2589	50	3.7	110	23.71	0.14	0.97	Open
2594	1505	2593	200	9.4	110	-711.45	0.26	0.62	Open
2595	2593	2586	200	199.4	110	-699.61	0.26	0.6	Open
2599	2597	193	50	126.4	110	-5.93	0.03	0.07	Open
2600	219	216	50	266.9	110	-10.27	0.06	0.21	Open
2604	2602	1546	50	169.4	110	-5.93	0.03	0.07	Open
2607	1551	2606	50	168.0	110	5.93	0.03	0.07	Open
2822	190	19	200	5.7	110	415.7	0.15	0.23	Open
2613	175	2612	200	6.0	110	466.82	0.17	0.28	Open
2614	2612	2609	200	193.8	110	449.42	0.17	0.26	Open
2617	266	2616	50	42.7	110	5.93	0.03	0.07	Open
2619	263	261	50	75.1	110	12.2	0.07	0.28	Open
2621	257	2620	100	39.2	110	120.8	0.18	0.68	Open
2624	2620	2623	50	35.9	110	5.93	0.03	0.07	Open
2626	2620	2625	50	37.7	110	5.93	0.03	0.07	Open
2628	261	2620	100	179.6	110	-103	0.15	0.51	Open
2631	2629	278	100	8.0	110	-54.68	0.08	0.16	Open
2633	17	2632	100	5.8	110	140.97	0.21	0.9	Open
2634	2632	370	100	78.3	110	111.13	0.16	0.58	Open
2635	2629	2632	50	202.8	110	-14.19	0.08	0.38	Open
2637	362	2636	50	149.7	110	15.65	0.09	0.45	Open
2639	405	56	100	101.3	110	10.55	0.02	0.01	Open

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
2641	2500	2640	50	29.9	110	18.98	0.11	0.65	Open
2643	462	2642	100	4.9	110	92.54	0.14	0.41	Open
2644	2642	465	100	36.8	110	63.4	0.09	0.21	Open
2649	465	2646	50	41.6	110	14.51	0.09	0.39	Open
2651	2646	2650	50	40.2	110	0.72	0	0	Open
2652	2650	2642	50	58.0	110	-14.93	0.09	0.41	Open
2654	463	2653	50	24.0	110	17.5	0.1	0.55	Open
2655	2653	2646	50	43.4	110	1.85	0.01	0.01	Open
2656	456	454	50	45.4	110	2.14	0.01	0.01	Open
2657	454	452	50	42.4	110	1.02	0.01	0	Open
2659	452	450	50	39.3	110	-1.69	0.01	0.01	Open
2660	450	2640	50	53.3	110	-5.37	0.03	0.06	Open
2661	2640	448	50	38.7	110	-2.04	0.01	0.01	Open
2662	448	445	50	41.9	110	-2.72	0.02	0.02	Open
2663	445	442	50	42.9	110	-5.84	0.03	0.07	Open
2664	442	440	50	45.4	110	-10.72	0.06	0.22	Open
2665	440	2503	50	42.7	110	-17.8	0.1	0.57	Open
2667	459	2666	100	5.8	110	78.18	0.12	0.3	Open
2668	2666	466	100	36.6	110	61.54	0.09	0.19	Open
2669	2642	2666	50	108.6	110	-1.44	0.01	0	Open
2670	457	32	50	206.6	110	-0.21	0	0	Open
2672	476	2671	100	4.1	110	95.28	0.14	0.44	Open
2673	2671	1797	100	36.4	110	63.55	0.09	0.21	Open
2674	2666	2671	50	105.1	110	-0.44	0	0	Open
2676	2671	2675	50	108.9	110	15.65	0.09	0.45	Open
2678	1681	2677	100	41.3	110	-31.59	0.05	0.06	Open
2679	2677	29	100	105.9	110	-62.88	0.09	0.2	Open
2681	2677	2680	50	35.9	110	15.65	0.09	0.45	Open
2684	719	2683	100	35.2	110	-35.65	0.05	0.07	Open
2685	2683	675	100	4.7	110	-71.81	0.11	0.26	Open
2687	2683	2686	50	112.5	110	18.08	0.11	0.59	Open
2690	2688	552	250	4.9	110	-741.68	0.17	0.23	Open
2694	560	2693	250	7.2	110	-676.31	0.16	0.19	Open
2695	2693	2688	250	172.9	110	-685.53	0.16	0.19	Open
2698	2688	2697	50	5.3	110	26.94	0.16	1.23	Open
2702	2700	573	250	11.2	110	-480.78	0.11	0.1	Open
2704	559	2703	250	6.2	110	-415.74	0.1	0.08	Open
2705	2703	2700	250	162.8	110	-416.87	0.1	0.08	Open
2709	2703	2708	50	162.9	110	-4.93	0.03	0.05	Open
2710	2708	2700	50	4.3	110	-23.01	0.14	0.92	Open
2712	2700	2711	50	5.0	110	22.82	0.13	0.91	Open
2713	2711	2703	50	163.0	110	4.74	0.03	0.05	Open
2714	2693	2697	50	172.9	110	-8.86	0.05	0.16	Open
2715	2509	565	50	75.3	110	45.66	0.27	3.28	Open
2716	565	568	50	40.6	110	53.9	0.32	4.46	Open
2717	568	570	50	33.4	110	72.32	0.43	7.68	Open
2719	570	2718	50	185.4	110	18.08	0.11	0.59	Open
2720	2372	648	250	171.6	110	-509.38	0.12	0.11	Open
2721	502	499	100	46.8	110	44.79	0.07	0.11	Open
2722	499	497	100	40.1	110	41.06	0.06	0.09	Open
2723	497	494	100	34.0	110	35.54	0.05	0.07	Open
2724	494	491	100	51.4	110	28.09	0.04	0.05	Open
2727	526	2726	50	174.9	110	-2.98	0.02	0.02	Open
2728	542	514	100	38.3	110	-102.02	0.15	0.5	Open
2729	514	517	100	39.3	110	-105.39	0.16	0.53	Open
2730	517	520	100	41.2	110	-110.2	0.16	0.57	Open
2731	520	522	100	48.0	110	-99.31	0.15	0.47	Open
2732	522	2726	100	34.5	110	-108.24	0.16	0.55	Open
2733	2726	524	100	35.2	110	-121.34	0.18	0.68	Open
2734	524	530	100	48.8	110	-136.08	0.2	0.85	Open
2735	530	534	100	55.9	110	-190.22	0.28	1.57	Open
2737	534	2736	100	69.8	110	-214.99	0.32	1.98	Open
2739	483	2738	300	4.4	110	3084.81	0.51	1.3	Open
2740	2738	479	300	4.1	110	2679.05	0.44	1	Open

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
2741	2736	2738	100	4.5	110	-245.5	0.36	2.53	Open
2743	511	2742	100	3.3	110	178.97	0.26	1.41	Open
2744	2742	536	100	28.7	110	173.39	0.26	1.33	Open
2745	2736	2742	50	174.3	110	20.4	0.12	0.74	Open
2747	2291	2746	200	48.5	110	-509.69	0.19	0.33	Open
2748	2746	508	200	3.1	110	-503.94	0.19	0.33	Open
2749	2742	2746	50	182.4	110	15.87	0.09	0.46	Open
2751	2253	2750	200	5.8	110	-309.22	0.11	0.13	Open
2754	2750	2753	50	5.4	110	-2.94	0.02	0.02	Open
2756	2750	2755	200	170.8	110	-313.32	0.12	0.14	Open
2757	2755	485	200	7.8	110	-339.56	0.13	0.16	Open
2758	2753	2755	50	176.6	110	-8.01	0.05	0.13	Open
2760	542	2759	200	4.8	110	-314.31	0.12	0.14	Open
2763	2759	2762	50	5.4	110	-3.07	0.02	0.02	Open
2765	2759	2764	200	164.9	110	-318.15	0.12	0.14	Open
2766	2764	2253	200	5.5	110	-344.65	0.13	0.16	Open
2767	2762	2764	50	170.1	110	-8.14	0.05	0.13	Open
2768	2589	2593	50	203.0	110	17.78	0.1	0.57	Open
2770	2609	2769	50	6.5	110	-5.53	0.03	0.07	Open
2771	2769	2612	50	200.5	110	-11.46	0.07	0.25	Open
2772	774	784	100	35.9	110	104.51	0.15	0.52	Open
2773	784	778	100	35.7	110	70.12	0.1	0.25	Open
2775	640	2774	50	60.4	110	-18.08	0.11	0.59	Open
2776	2774	641	50	74.1	110	18.08	0.11	0.59	Open
2777	562	2774	100	183.1	110	-28.3	0.04	0.05	Open
2780	2774	2779	100	39.3	110	-82.54	0.12	0.34	Open
2782	2414	2779	50	182.7	110	-3.05	0.02	0.02	Open
2783	2779	638	50	103.1	110	18.08	0.11	0.59	Open
2785	2779	2784	100	38.4	110	-121.75	0.18	0.69	Open
2787	2409	2784	50	182.3	110	-3.09	0.02	0.02	Open
2788	2784	635	50	146.2	110	18.08	0.11	0.59	Open
2790	2784	2789	100	37.0	110	-161	0.24	1.16	Open
2791	2789	560	100	37.2	110	-169.47	0.25	1.27	Open
2792	631	2789	50	184.0	110	15.18	0.09	0.43	Open
2793	2789	2404	50	182.0	110	5.57	0.03	0.07	Open
2795	572	2794	100	10.1	110	70.08	0.1	0.25	Open
2796	2794	2233	100	35.2	110	53.62	0.08	0.15	Open
2797	660	2794	50	178.2	110	12.35	0.07	0.29	Open
2798	2794	2352	50	180.8	110	10.73	0.06	0.22	Open
2800	21	108	450	207.5	110	9413.69	0.69	1.42	Open
2801	108	18	400	9.0	110	6751.35	0.62	1.37	Open
2803	697	671	200	121.3	110	538.55	0.2	0.37	Open
2804	671	2008	200	42.9	110	203.33	0.07	0.06	Open
2816	896	892	250	34.9	110	1732.64	0.41	1.09	Open
2813	892	890	250	45.8	110	1713.05	0.4	1.06	Open
2810	890	862	250	51.6	110	1694.72	0.4	1.04	Open
2821	2609	190	200	7.6	110	449.02	0.17	0.26	Open
2825	2823	2580	200	5.7	110	-827	0.3	0.82	Open
2828	60	2580	100	6.4	110	25.79	0.04	0.04	Open
2827	2823	202	100	51.4	110	193.27	0.28	1.62	Open
1	170	1	100	6.0	110	291.45	0.43	3.47	Open
2	301	10	100	5.4	110	139.29	0.21	0.88	Open
3	301	316	250	183.2	110	812.69	0.19	0.27	Open
4	10	304	100	43.2	110	115.83	0.17	0.63	Open
5	307	310	100	36.6	110	61.07	0.09	0.19	Open
6	310	313	100	37.2	110	31.44	0.05	0.06	Open
9	316	14	100	4.6	110	183.15	0.27	1.47	Open
10	313	14	100	30.6	110	2.32	0	0	Open
11	301	16	100	4.3	110	98.69	0.15	0.47	Open
12	16	13	100	43.4	110	101.73	0.15	0.49	Open
13	13	399	100	39.0	110	87.15	0.13	0.37	Open
14	399	402	100	34.0	110	66.5	0.1	0.22	Open
15	402	415	100	41.1	110	46.35	0.07	0.12	Open
16	415	15	100	28.7	110	26.08	0.04	0.04	Open

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
18	15	404	100	5.2	110	-88.61	0.13	0.38	Open
19	277	301	250	167.7	110	1058.51	0.25	0.44	Open
20	17	277	250	3.4	110	-1132.25	0.27	0.49	Open
21	15	412	100	43.5	110	64.34	0.09	0.21	Open
22	412	410	100	39.5	110	38.43	0.06	0.49	Open
23	410	407	100	40.9	110	15.92	0.02	0.08	Open
24	407	422	100	40.3	110	-5.35	0.01	0.01	Open
25	422	425	100	43.2	110	-18.56	0.03	0.02	Open
27	425	20	100	42.4	110	-32.58	0.05	0.06	Open
28	20	427	100	4.9	110	-62.13	0.09	0.2	Open
29	14	319	100	41.4	110	94.65	0.14	0.43	Open
30	319	322	100	40.1	110	67.67	0.1	0.23	Open
31	322	325	100	44.0	110	42.09	0.06	0.1	Open
33	325	328	100	43.2	110	16.75	0.02	0.02	Open
34	328	331	100	35.3	110	-8.95	0.01	0.01	Open
35	331	23	100	42.9	110	-40.24	0.06	0.09	Open
36	23	334	100	5.5	110	-148.82	0.22	1	Open
37	26	476	250	4.1	110	-56.63	0.01	0	Open
39	29	285	100	3.9	110	-99.82	0.15	0.48	Open
40	32	26	100	3.4	110	-9.17	0.01	0.01	Open
42	23	337	100	46.6	110	40.41	0.06	0.09	Open
43	337	340	100	43.7	110	14.18	0.02	0.06	Open
44	340	343	100	44.0	110	-11.35	0.02	0.01	Open
45	343	29	100	44.3	110	-36.94	0.05	0.08	Open
46	20	430	100	47.4	110	20.05	0.03	0.12	Open
48	430	433	100	42.2	110	5.94	0.01	0.01	Open
49	433	32	100	82.8	110	-8.96	0.01	0.01	Open
51	278	44	250	4.9	110	265.7	0.06	0.03	Open
52	44	35	100	86.2	110	70.59	0.1	0.25	Open
54	35	38	100	38.0	110	53.73	0.08	0.15	Open
55	38	41	100	35.3	110	37.36	0.06	0.08	Open
57	41	379	100	5.0	110	-106.33	0.16	0.54	Open
58	278	363	250	45.0	110	655.25	0.15	0.18	Open
60	363	379	250	114.0	110	639.61	0.15	0.17	Open
61	2629	365	100	79.5	110	53.23	0.08	0.15	Open
62	365	372	100	39.9	110	55.8	0.08	0.16	Open
63	372	47	100	40.5	110	57.24	0.08	0.17	Open
64	375	394	250	185.3	110	559.12	0.13	0.13	Open
66	41	382	100	48.9	110	75.82	0.11	0.29	Open
67	382	400	100	38.5	110	61.47	0.09	0.19	Open
69	392	59	100	31.5	110	16.52	0.02	0.02	Open
72	47	397	100	42.9	110	57.24	0.08	0.17	Open
73	397	50	100	38.0	110	56.16	0.08	0.16	Open
75	50	53	100	36.8	110	53.34	0.08	0.15	Open
76	53	416	100	40.4	110	50.02	0.07	0.13	Open
78	416	56	100	26.9	110	39	0.06	0.08	Open
79	56	394	100	5.5	110	-6.75	0.01	0	Open
81	422	421	50	202.8	110	-2.44	0.01	0.01	Open
82	59	346	100	37.6	110	4.96	0.01	0	Open
84	446	424	100	42.5	110	6.52	0.01	0	Open
85	424	74	100	36.8	110	-8.48	0.01	0	Open
87	74	349	100	7.3	110	-105.93	0.16	0.53	Open
88	56	62	100	126.6	110	48.37	0.07	0.12	Open
89	62	421	100	41.3	110	32.68	0.05	0.06	Open
90	421	68	100	41.3	110	14.6	0.02	0.01	Open
91	68	71	100	42.4	110	5.14	0.01	0	Open
92	71	428	100	6.0	110	-34.82	0.05	0.07	Open
93	71	431	100	48.2	110	33.82	0.05	0.06	Open
94	462	86	100	5.9	110	59	0.09	0.18	Open
96	74	77	100	52.9	110	37.33	0.06	0.08	Open
97	77	80	100	40.8	110	17.54	0.03	0.02	Open
99	80	83	100	41.3	110	-3.22	0	0	Open
100	83	86	100	43.3	110	-33.39	0.05	0.06	Open
102	527	496	50	93.1	110	-6.33	0.04	0.08	Open

Link Results

Daily maximum water flow

Emergency case 1

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
103	508	89	100	53.8	110	97.77	0.14	0.46	Open
105	89	92	100	50.6	110	82.59	0.12	0.34	Open
106	92	95	100	58.2	110	67.41	0.1	0.23	Open
108	95	503	100	5.0	110	-77.94	0.11	0.3	Open
109	95	98	100	50.3	110	85.38	0.13	0.36	Open
110	98	101	100	40.6	110	73.93	0.11	0.27	Open
111	101	104	100	37.2	110	64.27	0.09	0.21	Open
113	104	107	100	53.7	110	56.54	0.08	0.17	Open
114	107	490	100	4.2	110	69.45	0.1	0.24	Open
115	2755	109	50	172.1	110	8.12	0.05	0.13	Open
116	109	2750	50	6.2	110	3.07	0.02	0.02	Open
117	2764	112	50	165.6	110	8.25	0.05	0.14	Open
118	112	2759	50	5.6	110	3.21	0.02	0.02	Open
119	671	114	150	6.6	110	238.94	0.16	0.33	Open
120	114	115	100	46.4	110	79.11	0.12	0.31	Open
122	115	117	100	39.5	110	63.1	0.09	0.2	Open
123	117	118	100	46.0	110	48.45	0.07	0.12	Open
124	118	121	100	43.7	110	35.14	0.05	0.07	Open
125	121	672	150	7.5	110	-23.95	0.02	0	Open
127	121	122	100	47.9	110	0	0	0	Open
128	122	124	100	43.7	110	-14.16	0.02	0.01	Open
129	124	126	100	41.4	110	-41.28	0.06	0.09	Open
130	126	128	100	43.3	110	-68.4	0.1	0.24	Open
131	128	722	100	7.5	110	-86.48	0.13	0.37	Open
132	584	129	100	4.3	110	138.32	0.2	0.87	Open
133	129	587	100	42.4	110	72.55	0.11	0.26	Open
134	648	130	100	5.1	110	140.44	0.21	0.9	Open
136	130	2357	100	41.1	110	74.09	0.11	0.27	Open
137	2372	132	100	4.8	110	108.78	0.16	0.56	Open
139	132	2377	100	47.7	110	55.03	0.08	0.16	Open
140	138	135	100	48.6	110	-8.42	0.01	0	Open
142	623	135	100	3.8	110	43.75	0.06	0.1	Open
143	2387	623	50	48.2	110	-1.09	0.01	0	Open
145	623	141	100	5.2	110	0.08	0	0	Open
147	141	625	100	41.6	110	42.71	0.06	0.1	Open
8	65	349	250	208.3	110	377.32	0.09	0.06	Open
148	65	394	250	37.7	110	-552.37	0.13	0.13	Open
150	65	346	150	8.4	110	175.06	0.11	0.19	Open

Node Results

Daily maximum water flow

Emergency case 2

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 2	15.65	112.1	72.4	39.7	
Junc 3	15.65	112.0	71.9	40.0	
Junc 5	5.93	113.3	72.9	40.3	
Junc 6	5.93	113.3	72.9	40.3	
Junc 8	15.65	111.7	71.9	39.7	
Junc 9	15.65	112.0	72.1	39.8	
Junc 11	0.00	116.3	72.9	43.3	
Junc 12	15.65	111.8	73.6	38.1	
Junc 18	5.93	114.0	71.1	42.8	
Junc 19	5.93	112.4	72.0	40.3	
Junc 21	5.93	114.3	70.5	43.8	
Junc 22	5.93	112.4	71.7	40.7	
Junc 24	5.93	112.2	72.3	39.8	
Junc 25	5.93	112.2	72.1	40.0	
Junc 27	5.93	112.6	71.5	41.0	
Junc 28	5.93	112.5	71.6	40.8	
Junc 30	5.93	112.6	72.3	40.2	
Junc 31	5.93	112.6	72.4	40.1	
Junc 33	5.93	112.6	72.7	39.8	
Junc 34	5.93	112.6	72.7	39.9	
Junc 36	5.93	112.7	72.5	40.1	
Junc 37	5.93	112.7	72.4	40.3	
Junc 39	5.93	112.7	72.8	39.8	
Junc 40	5.93	112.7	72.9	39.7	
Junc 42	5.93	112.5	71.6	40.8	
Junc 43	5.93	112.5	71.5	40.9	
Junc 45	5.93	112.8	71.8	40.9	
Junc 46	5.93	112.7	71.9	40.8	
Junc 48	5.93	112.8	72.2	40.5	
Junc 49	5.93	112.8	72.2	40.5	
Junc 51	5.93	112.8	72.3	40.4	
Junc 52	5.93	112.8	72.3	40.4	
Junc 54	5.93	112.9	72.9	39.9	
Junc 55	5.93	112.9	72.9	39.9	
Junc 57	5.93	113.0	73.2	39.7	
Junc 58	5.93	113.0	73.2	39.7	
Junc 60	5.93	113.1	73.4	39.6	
Junc 61	5.93	113.1	72.9	40.1	
Junc 63	5.93	113.1	73.3	39.8	
Junc 64	5.93	113.1	72.9	40.1	
Junc 66	5.93	113.2	73.0	40.2	
Junc 67	5.93	113.2	72.9	40.3	
Junc 69	5.93	113.3	73.3	39.9	
Junc 70	5.93	113.3	73.3	39.9	
Junc 72	5.93	113.3	72.8	40.4	
Junc 73	5.93	113.3	72.6	40.7	
Junc 75	5.93	113.5	72.8	40.6	
Junc 76	5.93	113.5	72.5	40.9	
Junc 78	5.93	113.5	72.6	40.9	
Junc 79	5.93	113.5	72.1	41.4	
Junc 81	5.93	113.6	72.7	40.8	
Junc 82	5.93	113.6	72.3	41.2	
Junc 84	5.93	113.7	72.7	40.8	
Junc 85	5.93	113.7	72.6	41.0	
Junc 87	5.93	113.7	72.6	41.0	
Junc 88	5.93	113.7	72.4	41.3	
Junc 90	5.93	113.8	72.4	41.3	
Junc 91	5.93	113.8	72.0	41.8	
Junc 93	5.93	113.8	72.0	41.8	
Junc 94	5.93	113.7	72.4	41.3	
Junc 96	5.93	113.9	72.0	41.8	
Junc 97	5.93	113.9	72.0	41.9	

Node Results

Daily maximum water flow

Emergency case 2

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 99	5.93	113.9	71.8	42.1	
Junc 100	5.93	114.0	70.4	43.5	
Junc 102	5.93	114.0	71.4	42.4	
Junc 103	5.93	114.1	70.4	43.6	
Junc 105	5.93	114.0	71.2	42.7	
Junc 106	5.93	114.2	70.4	43.7	
Junc 108	5.93	114.0	71.3	42.6	
Junc 110	5.93	114.3	70.5	43.7	
Junc 111	5.93	114.0	71.4	42.5	
Junc 113	5.93	114.0	71.4	42.5	
Junc 116	5.93	114.0	71.4	42.5	
Junc 119	5.93	114.0	71.4	42.5	
Junc 120	5.93	114.3	70.5	43.7	
Junc 123	5.93	114.0	71.4	42.5	
Junc 125	5.93	114.0	72.7	41.2	
Junc 127	5.93	113.8	72.2	41.6	
Junc 131	5.93	113.4	72.8	40.6	
Junc 133	5.93	113.9	71.5	42.3	
Junc 134	5.93	113.8	73.0	40.8	
Junc 136	5.93	113.9	71.8	42.0	
Junc 137	5.93	113.8	73.0	40.8	
Junc 139	5.93	113.9	72.2	41.5	
Junc 140	5.93	113.8	73.0	40.8	
Junc 142	5.93	114.0	71.4	42.5	
Junc 143	5.93	114.0	72.6	41.3	
Junc 145	5.93	114.0	72.6	41.3	
Junc 147	5.93	114.0	72.6	41.3	
Junc 148	5.93	114.0	71.4	42.5	
Junc 150	5.93	113.7	73.0	40.7	
Junc 151	5.93	113.7	72.5	41.2	
Junc 153	5.93	113.7	72.6	41.0	
Junc 154	5.93	113.7	72.6	41.1	
Junc 156	5.93	113.6	73.0	40.6	
Junc 157	5.93	113.6	73.0	40.6	
Junc 159	5.93	113.6	73.4	40.1	
Junc 160	5.93	113.6	73.4	40.1	
Junc 162	5.93	113.4	72.5	40.8	
Junc 163	5.93	113.5	72.5	40.9	
Junc 165	5.93	113.5	72.7	40.7	
Junc 167	5.93	113.4	72.4	40.9	
Junc 168	5.93	113.3	72.6	40.7	
Junc 170	5.93	113.4	72.8	40.5	
Junc 171	5.93	113.0	73.6	39.3	
Junc 175	5.93	112.5	72.3	40.1	
Junc 176	5.93	112.2	72.3	39.8	
Junc 178	5.93	113.4	72.6	40.8	
Junc 179	5.93	113.1	73.3	39.8	
Junc 181	5.93	113.2	72.6	40.5	
Junc 182	5.93	113.0	73.6	39.3	
Junc 184	5.93	113.0	73.6	39.3	
Junc 185	5.93	113.0	73.6	39.3	
Junc 187	5.93	113.0	73.6	39.3	
Junc 188	5.93	113.0	72.7	40.2	
Junc 190	5.93	112.4	72.2	40.2	
Junc 192	5.93	113.0	72.7	40.2	
Junc 193	5.93	112.6	73.1	39.5	
Junc 195	5.93	113.1	73.2	39.8	
Junc 196	5.93	113.0	72.7	40.2	
Junc 198	5.93	113.0	73.3	39.6	
Junc 201	5.93	112.9	73.1	39.7	
Junc 202	5.93	113.0	73.6	39.4	
Junc 204	5.93	112.9	73.5	39.4	

Node Results

Daily maximum water flow

Emergency case 2

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 205	5.93	112.9	73.5	39.3	
Junc 207	5.93	112.9	73.3	39.5	
Junc 208	5.93	112.9	73.4	39.4	
Junc 210	5.93	112.8	73.2	39.6	
Junc 211	5.93	112.9	73.5	39.2	
Junc 213	5.93	112.8	73.3	39.5	
Junc 214	5.93	112.8	73.0	39.7	
Junc 216	5.93	112.8	73.3	39.4	
Junc 217	5.93	112.8	73.3	39.4	
Junc 219	5.93	112.7	72.8	39.9	
Junc 220	5.93	112.7	72.4	40.2	
Junc 222	5.93	112.8	72.7	40.0	
Junc 223	5.93	112.7	72.8	39.9	
Junc 227	5.93	112.7	72.0	40.7	
Junc 231	5.93	112.7	73.2	39.4	
Junc 233	5.93	112.6	73.1	39.5	
Junc 235	5.93	112.6	73.1	39.5	
Junc 236	5.93	112.6	72.9	39.6	
Junc 238	5.93	112.6	73.0	39.5	
Junc 240	5.93	112.6	72.9	39.6	
Junc 241	5.93	112.6	72.5	40.0	
Junc 243	5.93	112.5	71.6	40.8	
Junc 244	5.93	112.5	71.7	40.8	
Junc 246	5.93	112.5	71.7	40.7	
Junc 249	5.93	112.2	72.3	39.8	
Junc 251	5.93	112.4	72.3	40.0	
Junc 252	5.93	112.4	72.2	40.2	
Junc 254	5.93	112.3	72.6	39.6	
Junc 255	5.93	112.4	72.2	40.2	
Junc 257	5.93	112.4	72.2	40.1	
Junc 258	5.93	112.3	72.2	40.1	
Junc 260	5.93	112.3	72.2	40.0	
Junc 261	5.93	112.2	72.4	39.7	
Junc 263	5.93	112.3	72.0	40.2	
Junc 264	5.93	112.3	72.1	40.1	
Junc 266	5.93	112.2	72.2	39.9	
Junc 274	15.65	112.2	72.4	39.7	
Junc 277	15.65	111.9	71.6	40.3	
Junc 278	15.65	111.8	71.5	40.2	
Junc 280	15.65	112.1	72.4	39.7	
Junc 281	15.65	112.1	71.5	40.5	
Junc 283	15.65	112.0	73.1	38.9	
Junc 285	15.65	111.7	72.2	39.5	
Junc 287	15.65	112.1	71.5	40.5	
Junc 288	15.65	112.0	72.8	39.1	
Junc 290	15.65	112.1	71.5	40.5	
Junc 291	15.65	112.0	71.8	40.1	
Junc 293	15.65	112.0	72.0	40.0	
Junc 295	15.65	112.0	71.8	40.2	
Junc 297	15.65	112.0	71.1	40.9	
Junc 299	15.65	112.0	71.4	40.5	
Junc 301	7.83	111.8	71.0	40.7	
Junc 302	15.65	111.8	70.7	41.1	
Junc 304	7.82	111.8	71.0	40.8	
Junc 305	15.65	111.8	71.0	40.7	
Junc 307	15.65	111.8	70.9	40.8	
Junc 308	15.65	111.7	70.6	41.0	
Junc 310	15.65	111.8	71.2	40.5	
Junc 311	15.65	111.7	70.6	41.1	
Junc 313	15.65	111.8	71.2	40.5	
Junc 314	15.65	111.7	70.9	40.7	
Junc 316	7.83	111.8	71.2	40.5	

Node Results

Daily maximum water flow

Emergency case 2

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 317	15.65	111.7	71.0	40.6	
Junc 319	15.65	111.7	71.3	40.4	
Junc 320	15.65	111.7	71.4	40.2	
Junc 322	15.65	111.7	71.4	40.3	
Junc 323	15.65	111.7	71.5	40.2	
Junc 325	15.65	111.7	71.4	40.2	
Junc 326	15.65	111.7	71.6	40.1	
Junc 328	15.65	111.7	71.7	40.0	
Junc 329	15.65	111.7	71.8	39.9	
Junc 331	15.65	111.7	71.8	39.9	
Junc 332	15.65	111.7	71.9	39.7	
Junc 334	15.65	111.7	72.0	39.7	
Junc 335	15.65	111.7	71.5	40.1	
Junc 337	15.65	111.7	71.9	39.7	
Junc 338	15.65	111.7	71.9	39.7	
Junc 340	15.65	111.7	72.0	39.6	
Junc 341	15.65	111.7	71.8	39.8	
Junc 343	15.65	111.7	71.8	39.8	
Junc 344	15.65	111.7	71.5	40.1	
Junc 346	15.65	111.7	71.4	40.2	
Junc 348	15.65	111.7	71.6	40.0	
Junc 349	0.00	111.7	72.3	39.4	
Junc 351	15.65	111.7	71.5	40.1	
Junc 352	15.65	111.7	71.5	40.1	
Junc 354	15.65	111.7	71.3	40.3	
Junc 355	15.65	111.6	70.8	40.7	
Junc 357	15.65	111.7	71.5	40.1	
Junc 358	15.65	111.7	71.3	40.3	
Junc 360	15.65	111.6	70.9	40.7	
Junc 362	15.65	111.7	71.3	40.3	
Junc 363	15.65	111.8	71.0	40.7	
Junc 365	7.83	111.8	70.4	41.3	
Junc 366	15.65	111.7	70.7	40.9	
Junc 370	15.65	111.9	71.6	40.1	
Junc 372	7.83	111.8	70.8	40.9	
Junc 373	15.65	111.8	71.4	40.4	
Junc 375	15.65	111.8	70.8	40.9	
Junc 377	15.65	111.7	70.8	40.8	
Junc 379	15.65	111.8	70.8	40.9	
Junc 380	15.65	111.7	71.3	40.3	
Junc 382	7.82	111.7	70.8	40.9	
Junc 383	15.65	111.7	71.0	40.6	
Junc 385	15.65	111.7	70.8	40.8	
Junc 388	7.83	111.7	70.8	40.9	
Junc 389	15.65	111.7	71.0	40.6	
Junc 391	15.65	111.6	70.9	40.7	
Junc 392	15.65	111.7	70.9	40.7	
Junc 394	0.00	111.7	70.8	40.8	
Junc 395	15.65	111.6	70.9	40.7	
Junc 397	7.83	111.8	70.8	40.9	
Junc 399	15.65	111.8	70.9	40.8	
Junc 400	7.82	111.7	71.4	40.3	
Junc 402	15.65	111.8	71.2	40.5	
Junc 404	7.83	111.8	71.2	40.5	
Junc 405	15.65	111.7	71.1	40.6	
Junc 407	15.65	111.7	71.4	40.2	
Junc 409	15.65	111.7	71.2	40.4	
Junc 410	15.65	111.7	71.4	40.3	
Junc 412	15.65	111.8	71.3	40.4	
Junc 413	15.65	111.7	71.1	40.5	
Junc 415	15.65	111.8	71.2	40.5	
Junc 416	15.65	111.7	70.9	40.7	

Node Results

Daily maximum water flow

Emergency case 2

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 418	15.65	111.7	71.5	40.2	
Junc 421	15.65	111.7	71.8	39.9	
Junc 422	15.65	111.7	71.7	40.0	
Junc 424	7.82	111.7	72.2	39.5	
Junc 425	15.65	111.7	71.8	39.9	
Junc 427	15.65	111.7	72.0	39.7	
Junc 428	0.00	111.7	72.3	39.4	
Junc 430	15.65	111.7	71.9	39.7	
Junc 431	7.83	111.7	72.7	39.0	
Junc 433	15.65	111.7	72.0	39.6	
Junc 434	7.83	111.7	72.9	38.8	
Junc 436	15.65	111.6	71.6	40.0	
Junc 437	15.65	111.7	72.7	39.0	
Junc 439	15.65	111.7	71.7	39.9	
Junc 440	15.65	111.6	71.5	40.1	
Junc 442	15.65	111.6	71.7	39.9	
Junc 443	7.82	111.7	71.9	39.7	
Junc 445	15.65	111.6	72.0	39.6	
Junc 446	15.65	111.7	71.8	39.8	
Junc 448	15.65	111.7	72.3	39.3	
Junc 450	15.65	111.7	72.8	38.7	
Junc 452	15.65	111.7	72.8	38.8	
Junc 454	15.65	111.7	72.6	39.0	
Junc 456	15.65	111.7	72.6	39.0	
Junc 457	7.83	111.7	72.7	38.9	
Junc 459	15.65	111.7	72.7	38.9	
Junc 460	15.65	111.7	72.5	39.1	
Junc 462	15.65	111.7	72.7	38.9	
Junc 463	15.65	111.7	72.2	39.5	
Junc 465	15.65	111.7	72.6	39.0	
Junc 466	15.65	111.7	72.7	39.0	
Junc 469	15.65	111.6	72.2	39.4	
Junc 471	15.65	111.7	72.0	39.6	
Junc 473	15.65	111.7	72.0	39.6	
Junc 474	15.65	111.7	72.5	39.1	
Junc 476	15.65	111.7	72.2	39.5	
Junc 477	15.65	111.7	71.6	40.0	
Junc 479	10.11	111.6	73.0	38.5	
Junc 480	10.11	111.2	71.7	39.4	
Junc 482	10.11	111.3	72.2	39.0	
Junc 483	10.11	111.6	73.0	38.5	
Junc 485	10.11	111.3	72.4	38.8	
Junc 486	10.11	111.3	72.0	39.2	
Junc 488	10.11	111.3	72.4	38.8	
Junc 490	5.05	111.3	72.5	38.8	
Junc 491	10.11	111.3	72.6	38.6	
Junc 493	5.05	111.3	72.9	38.4	
Junc 494	10.11	111.3	72.9	38.3	
Junc 496	5.05	111.3	72.9	38.4	
Junc 497	10.11	111.3	73.1	38.2	
Junc 499	10.11	111.3	73.2	38.0	
Junc 500	5.05	111.3	73.0	38.3	
Junc 502	10.11	111.3	73.2	38.0	
Junc 503	5.05	111.4	73.2	38.1	
Junc 505	10.11	111.3	73.1	38.1	
Junc 506	5.05	111.4	73.2	38.1	
Junc 508	10.11	111.4	73.8	37.6	
Junc 509	10.11	111.4	73.7	37.6	
Junc 511	10.18	111.5	73.3	38.1	
Junc 512	10.11	111.3	72.1	39.1	
Junc 514	10.11	111.3	72.6	38.6	
Junc 515	10.11	111.3	72.3	38.9	

Node Results

Daily maximum water flow

Emergency case 2

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 517	10.11	111.3	72.7	38.5	
Junc 518	10.11	111.3	72.3	38.9	
Junc 520	10.11	111.3	72.6	38.6	
Junc 522	10.11	111.3	72.8	38.4	
Junc 524	10.11	111.4	72.9	38.3	
Junc 526	10.11	111.3	72.9	38.4	
Junc 527	10.11	111.3	72.5	38.7	
Junc 529	10.11	111.4	73.2	38.1	
Junc 530	10.11	111.4	73.0	38.4	
Junc 532	10.11	111.4	73.4	38.0	
Junc 534	10.11	111.5	73.0	38.3	
Junc 536	10.11	111.4	73.4	38.0	
Junc 537	10.11	111.4	73.2	38.1	
Junc 539	10.11	111.4	73.4	38.0	
Junc 540	10.11	111.4	73.0	38.3	
Junc 542	10.11	111.3	72.2	39.0	
Junc 543	10.11	111.3	71.7	39.5	
Junc 546	10.11	111.3	71.7	39.5	
Junc 547	10.11	111.3	72.4	38.8	
Junc 549	10.11	111.3	72.4	38.8	
Junc 550	10.11	111.3	72.0	39.2	
Junc 552	18.08	110.9	72.5	38.3	
Junc 554	18.08	111.0	72.5	38.4	
Junc 556	18.08	109.7	73.5	36.1	
Junc 557	18.08	109.7	73.5	36.1	
Junc 559	17.92	110.9	73.5	37.4	
Junc 560	18.08	110.9	74.5	36.3	
Junc 562	18.08	110.8	73.5	37.2	
Junc 564	18.08	110.7	73.5	37.1	
Junc 565	18.08	110.5	72.6	37.8	
Junc 567	18.08	110.7	73.5	37.1	
Junc 568	18.08	110.3	72.6	37.6	
Junc 570	18.08	110.1	72.6	37.4	
Junc 572	18.08	110.9	72.6	38.2	
Junc 573	18.08	110.9	74.5	36.3	
Junc 575	18.08	111.0	72.9	38.0	
Junc 576	18.08	110.9	72.5	38.4	
Junc 578	18.08	111.0	73.1	37.7	
Junc 579	18.08	110.9	72.5	38.4	
Junc 581	18.08	110.9	73.6	37.3	
Junc 582	18.08	110.9	73.2	37.6	
Junc 584	18.08	110.9	73.2	37.6	
Junc 585	18.08	110.9	72.9	37.9	
Junc 587	18.08	110.9	72.8	38.1	
Junc 588	18.08	110.9	73.3	37.6	
Junc 590	18.08	110.9	72.7	38.1	
Junc 591	18.08	110.9	73.3	37.6	
Junc 593	18.08	110.9	72.7	38.2	
Junc 594	18.08	110.9	73.3	37.6	
Junc 596	18.08	110.9	73.5	37.4	
Junc 597	18.08	110.9	73.5	37.4	
Junc 600	18.08	111.0	73.3	37.6	
Junc 601	18.08	110.9	72.5	38.4	
Junc 603	18.08	110.9	73.4	37.5	
Junc 604	18.08	110.9	72.5	38.4	
Junc 606	18.08	110.9	73.5	37.4	
Junc 607	18.08	110.9	73.0	37.8	
Junc 609	18.08	110.9	72.7	38.1	
Junc 611	18.08	110.9	72.7	38.1	
Junc 613	18.08	110.9	72.7	38.1	
Junc 615	18.08	110.9	72.9	37.9	
Junc 617	18.08	110.9	72.7	38.1	

Node Results

Daily maximum water flow

Emergency case 2

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 619	18.08	110.9	72.8	38.0	
Junc 621	18.08	110.9	73.3	37.5	
Junc 623	18.08	110.9	73.4	37.5	
Junc 625	18.08	110.9	73.4	37.4	
Junc 627	18.08	110.9	73.5	37.4	
Junc 629	18.08	110.9	73.5	37.4	
Junc 631	18.08	110.9	71.7	39.1	
Junc 632	18.08	110.8	72.6	38.1	
Junc 634	18.08	110.8	72.6	38.1	
Junc 635	18.08	110.7	72.3	38.4	
Junc 637	18.08	110.8	72.6	38.1	
Junc 638	18.08	110.7	73.0	37.6	
Junc 640	18.08	110.7	73.1	37.5	
Junc 641	18.08	110.7	73.8	36.8	
Junc 643	18.08	111.0	72.5	38.4	
Junc 644	18.08	110.9	72.6	38.2	
Junc 648	18.08	110.9	72.6	38.2	
Junc 650	18.08	110.9	72.0	38.9	
Junc 652	18.08	110.9	72.1	38.7	
Junc 654	18.08	110.9	72.8	38.0	
Junc 655	18.08	110.9	72.1	38.7	
Junc 657	18.08	111.0	72.5	38.4	
Junc 658	18.08	110.9	71.7	39.2	
Junc 660	18.08	111.0	72.2	38.7	
Junc 661	18.08	110.9	72.7	38.1	
Junc 663	18.08	110.9	72.1	38.7	
Junc 664	18.08	111.0	71.8	39.0	
Junc 667	18.08	111.0	71.7	39.2	
Junc 668	18.08	110.9	72.1	38.7	
Junc 671	18.08	110.9	72.1	38.7	
Junc 672	18.08	110.9	72.7	38.2	
Junc 674	18.08	111.0	72.5	38.4	
Junc 675	18.08	110.9	73.2	37.7	
Junc 677	18.08	110.8	72.1	38.6	
Junc 678	18.08	110.9	72.2	38.6	
Junc 680	18.08	110.9	72.5	38.3	
Junc 681	18.08	110.9	72.8	38.0	
Junc 683	18.08	110.9	71.5	39.4	
Junc 685	18.08	110.9	71.7	39.2	
Junc 688	18.08	110.9	71.7	39.2	
Junc 689	18.08	110.8	72.1	38.6	
Junc 691	18.08	110.9	72.2	38.6	
Junc 692	18.08	110.9	71.7	39.1	
Junc 694	18.08	110.9	71.9	39.0	
Junc 695	18.08	110.9	72.2	38.6	
Junc 697	18.08	111.0	72.5	38.4	
Junc 698	18.08	110.9	72.1	38.7	
Junc 700	18.08	110.9	72.1	38.7	
Junc 702	18.08	110.9	73.6	37.3	
Junc 703	18.08	110.8	72.8	37.9	
Junc 705	18.08	110.9	72.9	38.0	
Junc 706	18.08	110.9	72.0	38.7	
Junc 708	18.08	110.9	72.6	38.2	
Junc 709	18.08	110.9	73.2	37.7	
Junc 711	18.08	110.9	73.3	37.5	
Junc 712	18.08	110.9	72.6	38.2	
Junc 714	18.08	110.9	73.5	37.4	
Junc 716	18.08	110.9	73.5	37.3	
Junc 717	18.08	110.9	72.6	38.2	
Junc 719	18.08	110.9	73.5	37.4	
Junc 720	18.08	110.8	72.8	38.0	
Junc 722	18.08	110.9	72.0	38.9	

Node Results

Daily maximum water flow

Emergency case 2

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 723	18.08	110.9	71.9	38.9	
Junc 725	18.08	110.9	72.5	38.2	
Junc 729	23.37	112.5	73.3	39.1	
Junc 730	23.37	112.2	72.6	39.5	BPS No.7
Junc 732	23.37	112.8	72.9	39.8	
Junc 734	23.37	113.1	71.6	41.5	
Junc 737	23.37	112.5	73.1	39.3	
Junc 739	23.37	112.5	72.7	39.7	
Junc 740	23.37	112.6	72.7	39.8	
Junc 742	23.37	112.5	72.7	39.8	
Junc 743	23.37	112.6	72.7	39.9	
Junc 745	23.37	112.5	72.7	39.7	
Junc 746	23.37	112.6	72.7	39.8	
Junc 748	23.37	112.5	73.1	39.3	
Junc 749	23.37	112.4	73.1	39.2	
Junc 751	23.37	112.5	73.5	38.9	
Junc 752	23.37	112.4	73.5	38.8	
Junc 754	23.37	112.5	73.3	39.1	
Junc 755	23.37	112.3	73.3	38.9	
Junc 757	23.37	112.5	73.5	38.9	
Junc 758	23.37	112.4	73.5	38.7	
Junc 760	23.37	112.5	73.1	39.3	
Junc 761	23.37	112.4	73.1	39.2	
Junc 763	23.37	112.5	73.5	38.9	
Junc 764	23.37	112.4	73.5	38.8	
Junc 766	23.37	112.6	72.7	39.8	
Junc 767	23.37	112.6	72.7	39.9	
Junc 769	23.37	112.6	72.7	39.8	
Junc 770	23.37	112.6	72.7	39.8	
Junc 772	23.37	112.5	72.8	39.6	
Junc 774	23.37	112.4	71.2	41.1	
Junc 776	23.37	112.4	71.3	41.0	
Junc 778	23.37	112.4	71.2	41.1	
Junc 780	23.37	112.2	71.2	40.9	
Junc 782	23.37	112.2	71.2	41.0	
Junc 784	23.37	112.4	71.2	41.1	
Junc 785	23.37	112.2	71.2	41.0	
Junc 787	23.37	112.2	71.2	41.0	
Junc 789	23.37	112.2	71.3	40.9	
Junc 791	11.69	112.8	71.8	40.9	
Junc 792	23.37	112.5	71.9	40.5	
Junc 794	23.37	112.4	71.9	40.5	
Junc 795	23.37	112.6	72.8	39.7	
Junc 797	11.69	112.8	72.2	40.5	
Junc 798	23.37	112.4	72.5	39.9	
Junc 800	23.37	112.5	72.8	39.6	
Junc 802	23.37	112.5	72.8	39.6	
Junc 804	23.37	113.1	71.6	41.4	
Junc 805	23.37	112.8	72.9	39.8	
Junc 807	23.37	113.0	70.5	42.4	
Junc 808	23.37	113.1	72.4	40.5	
Junc 810	23.37	113.0	71.0	41.9	
Junc 811	23.37	113.0	72.4	40.4	
Junc 813	23.37	112.9	70.8	42.0	
Junc 814	23.37	112.9	72.4	40.4	
Junc 816	23.37	112.9	72.4	40.4	
Junc 817	23.37	112.9	70.7	42.1	
Junc 819	23.37	112.9	72.4	40.3	
Junc 820	23.37	112.9	71.0	41.8	
Junc 822	23.37	112.7	72.2	40.4	
Junc 824	23.37	113.0	71.0	42.0	
Junc 826	23.37	113.1	71.6	41.4	

Node Results

Daily maximum water flow

Emergency case 2

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 827	23.37	113.0	72.0	41.0	
Junc 829	23.37	113.1	71.6	41.4	
Junc 830	23.37	113.0	72.0	41.0	
Junc 832	23.37	113.1	71.6	41.4	
Junc 833	23.37	113.0	72.0	41.0	
Junc 835	23.37	113.0	71.0	42.0	
Junc 836	23.37	113.1	71.6	41.4	
Junc 838	23.37	112.4	71.2	41.2	
Junc 840	23.37	112.5	71.3	41.1	
Junc 842	23.37	112.3	71.9	40.4	
Junc 844	23.37	112.4	72.5	39.9	
Junc 845	23.37	112.5	72.5	39.9	
Junc 847	23.37	112.5	72.8	39.6	
Junc 848	23.37	112.5	72.8	39.6	
Junc 850	23.37	112.4	72.8	39.5	
Junc 852	23.37	112.3	72.8	39.4	
Junc 854	23.37	112.3	71.3	41.0	
Junc 859	23.37	113.0	71.4	41.5	
Junc 861	23.56	113.7	71.8	41.8	
Junc 862	23.37	113.3	73.1	40.1	
Junc 864	23.37	113.8	72.7	41.0	
Junc 865	23.37	113.6	72.9	40.7	
Junc 867	23.37	113.5	71.4	42.1	
Junc 869	5.93	113.8	72.4	41.3	
Junc 871	23.37	113.1	72.0	41.0	
Junc 872	23.37	113.0	72.0	41.0	
Junc 876	23.37	113.5	71.4	42.1	
Junc 877	23.37	113.1	71.4	41.6	
Junc 879	23.37	113.5	71.4	42.1	
Junc 880	23.37	113.1	72.0	41.0	
Junc 883	23.37	113.6	71.4	42.1	
Junc 884	23.37	113.4	71.4	41.9	
Junc 886	23.37	113.3	72.0	41.2	
Junc 889	23.37	113.6	72.9	40.7	
Junc 890	23.37	113.4	73.4	39.9	
Junc 892	23.37	113.4	72.3	41.1	
Junc 893	23.37	113.7	72.9	40.7	
Junc 895	23.37	113.7	72.9	40.7	
Junc 896	23.37	113.5	71.9	41.5	
Junc 898	23.37	113.4	71.6	41.7	
Junc 900	23.37	113.3	71.9	41.3	
Junc 902	23.37	113.3	72.6	40.6	
Junc 904	5.93	113.8	72.4	41.3	
Junc 905	23.37	113.6	71.4	42.1	
Junc 907	23.37	113.5	71.4	42.1	
Junc 908	5.93	113.8	72.4	41.3	
Junc 910	23.37	113.5	71.4	42.1	
Junc 912	5.93	113.8	72.4	41.3	
Junc 913	23.37	113.6	71.6	42.0	
Junc 915	23.37	113.7	71.8	41.8	
Junc 916	23.37	113.6	71.2	42.3	
Junc 918	18.08	110.9	71.7	39.1	
Junc 929	5.93	114.0	71.4	42.5	
Junc 1228	5.93	113.8	72.6	41.1	
Junc 1267	5.93	113.8	72.8	41.0	
Junc 1273	5.93	113.8	73.0	40.8	
Junc 1500	5.93	113.0	73.6	39.3	
Junc 1505	5.93	113.0	73.5	39.4	
Junc 1510	5.93	112.9	73.7	39.2	
Junc 1515	5.93	112.9	73.4	39.5	
Junc 1520	5.93	112.9	73.3	39.5	
Junc 1525	5.93	112.8	73.2	39.6	

Node Results

Daily maximum water flow

Emergency case 2

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 1530	5.93	112.8	73.3	39.4	
Junc 1546	5.93	112.7	72.4	40.2	
Junc 1551	5.93	112.7	73.3	39.3	
Junc 1556	5.93	112.6	72.6	39.9	
Junc 1570	5.93	112.5	72.0	40.5	
Junc 1636	15.65	112.0	72.1	39.8	
Junc 1641	15.65	112.0	71.7	40.3	
Junc 1646	15.65	112.0	71.1	40.9	
Junc 1651	15.65	112.0	71.1	40.9	
Junc 1656	15.65	111.7	71.4	40.2	
Junc 1661	15.65	111.7	71.8	39.9	
Junc 1666	15.65	111.7	71.5	40.1	
Junc 1671	15.65	111.7	71.9	39.7	
Junc 1676	15.65	111.7	71.8	39.9	
Junc 1681	15.65	111.7	71.5	40.1	
Junc 1797	15.65	111.7	72.1	39.6	
Junc 1914	15.65	111.7	71.5	40.1	
Junc 1919	15.65	111.7	71.7	39.9	
Junc 1924	15.65	111.7	72.0	39.6	
Junc 1929	15.65	111.7	72.3	39.3	
Junc 1988	18.08	110.9	72.0	38.8	
Junc 1993	18.08	110.9	72.6	38.3	
Junc 1998	18.08	110.9	72.6	38.3	
Junc 2003	18.08	110.9	72.6	38.2	
Junc 2008	9.04	110.9	72.2	38.7	
Junc 2013	9.04	110.9	72.6	38.3	
Junc 2018	9.04	110.9	72.7	38.1	
Junc 2023	9.04	110.9	72.7	38.1	
Junc 2028	9.04	110.9	72.6	38.2	
Junc 2033	9.04	110.9	72.1	38.7	
Junc 2038	18.08	110.9	71.5	39.4	
Junc 2043	18.08	110.9	71.5	39.4	
Junc 2048	18.08	110.9	71.5	39.4	
Junc 2233	18.08	110.9	72.0	38.9	
Junc 2238	18.08	110.9	72.0	38.9	
Junc 2243	10.11	111.3	72.1	39.1	
Junc 2248	10.11	111.3	72.1	39.1	
Junc 2253	10.11	111.3	72.4	38.8	
Junc 2258	10.11	111.3	72.7	38.5	
Junc 2263	10.11	111.3	72.7	38.5	
Junc 2268	10.11	111.3	72.7	38.6	
Junc 2273	10.11	111.3	72.7	38.6	
Junc 2278	10.11	111.3	72.8	38.5	
Junc 2283	10.11	111.4	72.8	38.5	
Junc 2291	5.05	111.4	73.2	38.1	
Junc 2326	10.11	111.3	72.0	39.2	
Junc 2331	10.11	111.3	72.0	39.2	
Junc 2342	18.08	110.9	72.1	38.7	
Junc 2347	18.08	110.9	72.1	38.7	
Junc 2352	18.08	110.9	72.6	38.2	
Junc 2357	18.08	110.9	72.4	38.5	
Junc 2362	18.08	110.9	72.4	38.4	
Junc 2367	18.08	110.9	72.4	38.4	
Junc 2372	18.08	110.9	72.7	38.1	
Junc 2377	18.08	110.9	72.7	38.1	
Junc 2382	18.08	110.9	72.9	37.9	
Junc 2387	9.04	110.9	73.0	37.8	
Junc 2404	18.08	110.8	73.5	37.2	
Junc 2409	18.08	110.8	73.5	37.2	
Junc 2414	18.08	110.8	73.5	37.2	
Junc 2494	5.93	112.5	71.7	40.8	
Junc 2497	5.93	112.5	71.6	40.8	

Node Results

Daily maximum water flow

Emergency case 2

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 2500	15.65	111.7	72.6	39.0	
Junc 2503	465.65	111.6	71.6	40.0	
Junc 2506	18.08	110.8	73.2	37.5	
Junc 2509	18.08	110.8	72.6	38.1	火点(280m3)
Junc 2512	18.08	110.9	73.3	37.5	
Junc 2515	10.11	111.3	72.4	38.8	
Junc 2521	5.93	113.1	72.7	40.3	
Junc 2524	23.37	113.2	72.4	40.6	
Junc 2527	23.37	113.0	70.9	42.0	
Junc 2530	5.93	114.3	70.5	43.7	
Junc 2533	5.93	114.0	70.1	43.8	
Junc 2536	5.93	114.0	70.1	43.8	
Junc 2541	5.93	114.0	71.1	42.8	
Junc 2544	5.93	114.3	70.4	43.8	
Junc 2548	5.93	112.6	72.7	39.9	
Junc 2551	5.93	112.6	72.7	39.8	
Junc 2554	5.93	114.0	71.1	42.8	
Junc 2557	5.93	113.8	73.0	40.8	
Junc 2561	23.37	113.8	72.9	40.8	
Junc 2568	23.37	113.2	72.4	40.6	
Junc 2571	23.37	113.0	70.9	42.0	
Junc 2580	6.53	113.1	73.3	39.7	
Junc 2586	5.93	113.1	73.2	39.8	
Junc 2589	5.93	113.1	73.3	39.7	
Junc 2593	5.93	113.0	73.6	39.3	
Junc 2597	5.93	112.6	73.0	39.6	
Junc 2602	5.93	112.7	72.4	40.2	
Junc 2606	5.93	112.7	73.0	39.5	
Junc 2609	5.93	112.4	72.2	40.1	
Junc 2612	5.93	112.5	72.1	40.3	
Junc 2616	5.93	112.2	72.2	39.9	
Junc 2620	5.93	112.3	72.5	39.8	
Junc 2623	5.93	112.3	72.7	39.5	
Junc 2625	5.93	112.3	73.6	38.6	
Junc 2629	15.65	111.8	71.5	40.2	
Junc 2632	15.65	111.9	71.6	40.3	
Junc 2636	15.65	111.6	71.4	40.2	
Junc 2640	15.65	111.7	72.6	39.0	
Junc 2642	15.65	111.7	72.7	38.9	
Junc 2646	15.65	111.7	72.6	39.0	
Junc 2650	15.65	111.7	72.6	39.0	
Junc 2653	15.65	111.7	72.2	39.5	
Junc 2666	15.65	111.7	72.7	38.9	
Junc 2671	15.65	111.7	72.2	39.4	
Junc 2675	15.65	111.7	72.0	39.6	
Junc 2677	15.65	111.7	72.0	39.6	
Junc 2680	15.65	111.7	72.0	39.6	
Junc 2683	18.08	110.9	73.2	37.7	
Junc 2686	18.08	110.9	71.8	39.0	
Junc 2688	18.08	110.9	72.5	38.3	
Junc 2693	18.08	110.9	74.5	36.3	
Junc 2697	18.08	110.9	72.5	38.3	
Junc 2700	18.08	110.9	73.5	37.3	
Junc 2703	18.08	110.9	73.5	37.4	
Junc 2708	18.08	110.9	73.5	37.3	
Junc 2711	18.08	110.9	73.5	37.3	
Junc 2718	18.08	110.0	72.6	37.3	
Junc 2726	10.11	111.3	72.9	38.3	
Junc 2736	10.11	111.6	73.0	38.5	
Junc 2738	10.11	111.6	73.0	38.5	
Junc 2742	10.11	111.5	73.3	38.1	
Junc 2746	10.11	111.4	73.8	37.6	

Node Results

Daily maximum water flow

Emergency case 2

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 2750	10.11	111.3	72.4	38.8	
Junc 2753	5.07	111.3	72.4	38.8	
Junc 2755	10.11	111.3	72.4	38.8	
Junc 2759	10.11	111.3	72.2	39.0	
Junc 2762	5.07	111.3	72.2	39.0	
Junc 2764	10.11	111.3	72.4	38.8	
Junc 2769	5.93	112.4	72.4	40.0	
Junc 2774	18.08	110.8	73.8	36.9	
Junc 2779	18.08	110.8	73.8	36.9	
Junc 2784	18.08	110.8	73.8	36.9	
Junc 2789	18.08	110.9	73.8	37.0	
Junc 2794	18.08	110.9	72.0	38.8	
Junc 2823	0.00	113.1	73.2	39.8	
Junc 1	0.00	113.4	72.6	40.8	
Junc 4	11.69	112.4	71.8	40.5	
Junc 7	11.69	112.4	72.2	40.1	
Junc 10	7.82	111.8	71.0	40.7	
Junc 13	7.83	111.8	71.0	40.8	
Junc 14	7.82	111.8	71.2	40.5	
Junc 15	7.82	111.8	71.2	40.5	
Junc 16	0.00	111.8	71.0	40.7	
Junc 17	0.00	111.9	71.6	40.3	
Junc 20	0.00	111.7	72.0	39.7	
Junc 23	0.00	111.7	72.0	39.7	
Junc 26	0.00	111.7	72.2	39.5	
Junc 29	0.00	111.7	72.2	39.4	
Junc 32	0.00	111.7	72.2	39.5	
Junc 35	7.82	111.8	70.4	41.3	
Junc 38	7.82	111.8	70.8	40.9	
Junc 41	15.65	111.8	70.8	40.9	
Junc 44	0.00	111.8	71.5	40.2	
Junc 47	0.00	111.8	70.8	40.9	
Junc 50	7.83	111.8	71.4	40.3	
Junc 53	7.82	111.8	70.8	40.9	
Junc 56	7.93	111.7	70.8	40.8	
Junc 59	7.93	111.7	70.8	40.8	
Junc 62	7.83	111.72	71.9	39.74	
Junc 68	7.83	111.72	72.17	39.47	
Junc 71	15.65	111.72	72.29	39.35	
Junc 74	15.65	111.71	72.29	39.34	
Junc 77	7.82	111.7	72.68	38.95	
Junc 80	7.82	111.7	72.87	38.76	
Junc 83	15.65	111.71	72.67	38.96	
Junc 86	7.82	111.71	72.71	38.92	
Junc 89	5.07	111.37	73.17	38.13	
Junc 92	5.07	111.36	73.16	38.12	
Junc 95	5.07	111.35	73.19	38.08	
Junc 98	5.07	111.34	72.97	38.29	
Junc 101	5.07	111.33	72.89	38.36	
Junc 104	5.07	111.32	72.85	38.39	
Junc 107	5.07	111.31	72.46	38.78	
Junc 109	5.05	111.27	72.39	38.81	
Junc 112	5.05	111.26	72.16	39.02	
Junc 114	0	110.93	72.11	38.74	
Junc 115	9.04	110.91	72.2	38.63	
Junc 117	9.04	110.91	72.59	38.24	
Junc 118	9.04	110.9	72.71	38.11	
Junc 121	0	110.9	72.67	38.15	
Junc 122	9.04	110.9	72.74	38.08	
Junc 124	9.04	110.9	72.6	38.22	
Junc 126	9.04	110.9	72.13	38.7	
Junc 128	0	110.92	71.95	38.89	

Node Results

Daily maximum water flow

Emergency case 2

Node ID	Demand (m ³ /day)	Head (m)	Elevation (m)	Pressure (m)	Rem.
Junc 129	0	110.92	73.23	37.61	
Junc 130	0	110.9	72.63	38.19	
Junc 132	0	110.89	72.7	38.12	
Junc 135	0	110.89	73.35	37.46	
Junc 138	9.04	110.89	72.99	37.82	
Junc 141	0	110.89	73.35	37.47	
Junc 65	0	111.73	71.42	40.22	
Resvr 727	-10224.67	120.55	120.55	0	

Link Results

Daily maximum water flow

Emergency case 2

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	Velocity (m/s)	Headloss (m/km)	status
7	5	6	50	106.0984	110	6	0.03	0.07	Open
17	480	554	300	172.5979	110	2748	0.45	1.05	Open
26	24	25	100	175.7382	110	6	0.01	0.00	Open
32	30	31	50	202.1393	110	10	0.06	0.21	Open
38	36	37	100	202.0378	110	-20	0.03	0.02	Open
41	39	40	50	202.0665	110	6	0.04	0.08	Open
47	45	46	50	202.004	110	2	0.01	0.01	Open
50	48	49	50	202.254	110	-4	0.02	0.03	Open
53	51	52	50	201.9365	110	3	0.01	0.02	Open
56	54	55	100	201.9159	110	-9	0.01	0.01	Open
59	57	58	50	61.50321	110	6	0.03	0.07	Open
65	63	64	50	142.4084	110	12	0.07	0.26	Open
68	66	67	50	201.689	110	-5	0.03	0.06	Open
71	69	70	50	201.6611	110	-4	0.02	0.03	Open
74	72	73	50	201.63	110	-3	0.02	0.02	Open
77	75	76	100	201.5571	110	-9	0.01	0.01	Open
80	78	79	50	201.5241	110	-3	0.02	0.02	Open
83	81	82	50	201.4915	110	-4	0.02	0.03	Open
86	84	85	50	201.4574	110	-5	0.03	0.05	Open
95	93	94	50	74.0842	110	21	0.12	0.75	Open
98	96	97	100	201.3566	110	-57	0.08	0.17	Open
101	99	100	50	201.3125	110	-15	0.09	0.41	Open
104	102	103	50	201.2793	110	-20	0.12	0.72	Open
107	105	106	50	201.2892	110	-25	0.15	1.04	Open
112	110	111	50	207.1883	110	29	0.17	1.41	Open
121	119	120	50	210.0528	110	-28	0.17	1.36	Open
126	111	125	50	216.0442	110	6	0.03	0.07	Open
135	133	134	50	210.1564	110	19	0.11	0.62	Open
138	136	137	50	209.8545	110	15	0.09	0.42	Open
141	139	140	50	209.3595	110	10	0.06	0.21	Open
144	142	143	50	175.0428	110	6	0.03	0.07	Open
146	145	116	50	201.5246	110	-6	0.03	0.07	Open
149	147	148	50	203.7773	110	-6	0.03	0.07	Open
152	150	151	50	199.1591	110	-6	0.03	0.07	Open
155	153	154	50	129.4953	110	-6	0.03	0.07	Open
158	156	157	50	96.16862	110	6	0.03	0.07	Open
161	159	160	50	189.9838	110	6	0.03	0.07	Open
164	162	163	50	150.2137	110	-21	0.13	0.80	Open
169	167	168	50	50.41301	110	28	0.16	1.29	Open
183	181	182	50	234.6643	110	21	0.12	0.75	Open
189	187	188	50	108.1472	110	-13	0.08	0.33	Open
218	216	217	50	214.7148	110	7	0.04	0.09	Open
224	222	223	50	180.4515	110	9	0.05	0.15	Open
234	233	193	50	209.5187	110	-5	0.03	0.05	Open
237	235	236	50	209.054	110	6	0.03	0.07	Open
239	235	238	50	161.0033	110	6	0.03	0.07	Open
245	243	244	50	208.2261	110	-8	0.05	0.14	Open
253	251	252	50	206.7048	110	-11	0.06	0.22	Open
256	254	255	50	206.1193	110	-10	0.06	0.21	Open
265	263	264	50	98.81564	110	2	0.01	0.01	Open
279	17	278	250	208.22	110	1237	0.29	0.58	Open
289	287	288	50	197.3031	110	16	0.09	0.45	Open
292	290	291	50	127.4321	110	16	0.09	0.45	Open
294	281	293	50	106.5844	110	16	0.09	0.45	Open
303	10	302	50	100.47	110	16	0.09	0.45	Open
306	304	305	50	94.22	110	16	0.09	0.45	Open
309	307	308	50	87.97	110	16	0.09	0.45	Open
312	310	311	50	101.18	110	15	0.09	0.43	Open
315	313	314	50	102.4	110	14	0.08	0.39	Open
318	14	317	100	103.06	110	88	0.13	0.38	Open
324	322	323	50	100.6	110	10	0.06	0.20	Open
327	325	326	50	100.21	110	10	0.06	0.19	Open
333	331	332	50	127.92	110	16	0.09	0.45	Open
359	357	358	50	156.0904	110	14	0.08	0.35	Open

Link Results

Daily maximum water flow

Emergency case 2

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	Velocity (m/s)	Headloss (m/km)	status
361	358	360	50	143.8232	110	16	0.09	0.45	Open
367	35	366	50	210.84	110	14	0.08	0.38	Open
371	365	370	50	201.7	110	-13	0.08	0.34	Open
374	372	373	50	201.68	110	-12	0.07	0.28	Open
376	16	375	100	208.01	110	78	0.12	0.30	Open
378	38	377	50	211.09	110	14	0.08	0.37	Open
381	41	380	100	210.88	110	89	0.13	0.39	Open
384	382	383	50	209.17	110	13	0.08	0.34	Open
387	385	400	50	207.27	110	-13	0.08	0.32	Open
390	388	389	50	206.85	110	13	0.08	0.34	Open
393	391	392	50	207.04	110	-14	0.08	0.36	Open
396	59	395	50	206.09	110	15	0.09	0.40	Open
398	13	397	50	203.09	110	9	0.06	0.18	Open
401	399	50	50	203.08	110	8	0.05	0.13	Open
403	53	402	50	202.07	110	-8	0.04	0.12	Open
406	15	405	100	101.15	110	67	0.10	0.23	Open
411	409	410	50	101.15	110	-8	0.05	0.12	Open
414	412	413	50	101.24	110	12	0.07	0.29	Open
417	415	416	50	202.68	110	8	0.05	0.13	Open
420	418	62	50	100.43	110	-6	0.03	0.07	Open
426	68	425	50	202.77	110	-3	0.02	0.02	Open
429	20	71	100	203.31	110	26	0.04	0.04	Open
432	430	431	50	203.72	110	2	0.01	0.01	Open
435	433	434	50	204.02	110	2	0.01	0.01	Open
438	436	437	50	156.61	110	-16	0.09	0.45	Open
451	450	77	50	104.17	110	-15	0.09	0.42	Open
453	452	80	50	88.56	110	-16	0.09	0.45	Open
455	454	83	50	71.27	110	-17	0.10	0.52	Open
458	456	86	50	52.81	110	-21	0.12	0.76	Open
467	465	466	50	108.2752	110	-2	0.01	0.01	Open
468	463	460	50	107.9342	110	1	0.01	0.00	Open
470	460	469	50	125.3886	110	16	0.09	0.45	Open
2807	2738	480	100	540.3	110	131	0.19	0.79	Open
492	107	491	100	177.14	110	-12	0.02	0.01	Open
495	104	494	50	180.12	110	3	0.02	0.02	Open
498	101	497	50	183	110	4	0.03	0.04	Open
501	499	98	50	185.47	110	-6	0.03	0.07	Open
504	502	95	100	182.86	110	-50	0.07	0.13	Open
507	505	92	50	178.43	110	-10	0.06	0.20	Open
510	508	509	50	168.3147	110	10	0.06	0.20	Open
528	526	527	50	90.22681	110	4	0.02	0.03	Open
533	506	532	50	181.9236	110	-9	0.05	0.17	Open
535	532	534	50	173.9952	110	-13	0.08	0.33	Open
538	536	537	50	99.52379	110	10	0.06	0.20	Open
558	556	557	50	39.18852	110	18	0.11	0.59	Open
566	564	565	50	178.9625	110	26	0.16	1.18	Open
569	567	568	50	178.2393	110	36	0.22	2.16	Open
571	556	570	50	177.9245	110	-36	0.21	2.13	Open
577	575	576	50	184.9769	110	10	0.06	0.21	Open
580	578	579	50	184.6001	110	10	0.06	0.19	Open
583	581	582	50	186.1743	110	9	0.05	0.16	Open
586	129	585	100	182.92	110	48	0.07	0.12	Open
589	587	588	50	182.8	110	7	0.04	0.10	Open
592	590	591	50	182.7	110	7	0.04	0.09	Open
595	593	594	50	182.69	110	7	0.04	0.09	Open
598	596	597	50	186.2062	110	9	0.05	0.15	Open
602	600	601	50	185.0018	110	9	0.05	0.17	Open
605	603	604	100	185.5142	110	51	0.08	0.14	Open
608	606	607	50	185.9472	110	9	0.05	0.15	Open
624	585	141	100	175.45	110	23	0.03	0.03	Open
626	588	625	50	174.16	110	3	0.02	0.03	Open
628	591	627	50	173.61	110	3	0.02	0.02	Open
630	594	629	50	173.47	110	3	0.02	0.02	Open
645	643	644	50	183.7523	110	11	0.06	0.22	Open

Link Results

Daily maximum water flow

Emergency case 2

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	Velocity (m/s)	Headloss (m/km)	status
699	697	698	50	120.3404	110	18	0.11	0.59	Open
701	697	700	50	119.3169	110	18	0.11	0.59	Open
715	714	672	100	124.5511	110	44	0.07	0.11	Open
724	128	723	50	53.98	110	18	0.11	0.59	Open
726	725	680	50	53.50604	110	-18	0.11	0.59	Open
728	727	11	450	2552.434	110	10225	0.74	1.66	Open
731	729	730	50	239.2968	110	23	0.14	0.95	Open
741	739	740	50	326.6955	110	-13	0.07	0.30	Open
744	742	743	50	325.6873	110	-12	0.07	0.28	Open
747	745	746	50	327.7056	110	-13	0.08	0.33	Open
750	748	749	50	120.168	110	23	0.14	0.95	Open
753	751	752	50	120.558	110	23	0.14	0.95	Open
756	754	755	50	128.1759	110	23	0.14	0.95	Open
759	757	758	50	123.0074	110	23	0.14	0.95	Open
762	760	761	50	90.00948	110	23	0.14	0.95	Open
765	763	764	50	71.77106	110	23	0.14	0.95	Open
768	766	767	50	88.18497	110	-23	0.14	0.95	Open
771	769	770	50	42.04655	110	23	0.14	0.95	Open
773	739	772	50	127.6279	110	-11	0.06	0.23	Open
777	774	776	100	38.73689	110	56	0.08	0.17	Open
781	778	780	50	178.8952	110	23	0.14	0.95	Open
783	778	782	50	145.8514	110	23	0.14	0.95	Open
786	784	785	50	160.0354	110	23	0.14	0.95	Open
788	774	787	50	166.6417	110	23	0.14	0.95	Open
799	7	798	50	84.68	110	-12	0.07	0.26	Open
803	802	745	50	123.8352	110	10	0.06	0.20	Open
809	807	808	50	191.3984	110	-13	0.07	0.30	Open
812	810	811	50	190.5292	110	-4	0.02	0.03	Open
815	813	814	50	189.1747	110	6	0.03	0.07	Open
818	816	817	50	188.1528	110	-8	0.05	0.13	Open
821	819	820	50	189.0413	110	-9	0.05	0.15	Open
823	797	822	50	89.38542	110	23	0.14	0.95	Open
828	826	827	50	184.901	110	16	0.09	0.45	Open
831	829	830	50	194.6487	110	15	0.09	0.42	Open
834	832	833	50	204.9996	110	15	0.09	0.42	Open
837	835	836	50	215.0858	110	-15	0.09	0.43	Open
839	784	838	50	251.8728	110	-12	0.07	0.29	Open
841	776	840	50	214.8456	110	-14	0.08	0.35	Open
843	842	792	50	132.0392	110	-23	0.14	0.95	Open
846	844	845	50	46.59713	110	-23	0.14	0.95	Open
849	847	848	50	49.47055	110	23	0.14	0.95	Open
851	802	850	50	59.90428	110	23	0.14	0.95	Open
853	852	772	50	231.8778	110	-23	0.14	0.95	Open
855	776	854	50	33.43154	110	23	0.14	0.95	Open
860	824	859	50	64.71265	110	23	0.14	0.95	Open
878	876	877	50	174.4757	110	38	0.22	2.32	Open
881	879	880	50	367.0365	110	28	0.17	1.34	Open
882	872	877	50	189.9289	110	-15	0.09	0.39	Open
885	883	884	50	199.1723	110	23	0.14	0.95	Open
888	865	862	50	203.4244	110	31	0.18	1.58	Open
891	889	890	50	202.7608	110	28	0.17	1.36	Open
894	892	893	50	202.1587	110	-27	0.16	1.25	Open
897	895	896	50	201.7159	110	27	0.16	1.25	Open
899	896	898	50	97.27475	110	23	0.14	0.95	Open
901	892	900	50	94.85202	110	23	0.14	0.95	Open
903	890	902	50	81.43193	110	23	0.14	0.95	Open
906	904	905	50	207.0536	110	24	0.14	1.00	Open
909	907	908	50	205.3147	110	-26	0.15	1.14	Open
911	869	910	50	204.1097	110	26	0.15	1.17	Open
914	912	913	50	203.6983	110	21	0.12	0.75	Open
917	915	916	50	107.613	110	23	0.14	0.95	Open
919	21	110	100	12.34333	110	75	0.11	0.28	Open
933	929	123	50	84.50051	110	6	0.03	0.07	Open
935	929	119	100	41.35065	110	-12	0.02	0.01	Open

Link Results

Daily maximum water flow

Emergency case 2

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	Velocity (m/s)	Headloss (m/km)	status
938	119	148	100	2.365724	110	11	0.02	0.01	Open
941	148	116	100	37.27906	110	-1	0.00	0.00	Open
944	116	142	100	45.89769	110	-19	0.03	0.02	Open
947	142	113	100	6.497588	110	-31	0.05	0.05	Open
950	113	111	100	44.44495	110	-43	0.06	0.10	Open
951	111	108	100	7.400529	110	-26	0.04	0.04	Open
953	11	21	450	1204.524	110	10225	0.74	1.66	Open
962	106	103	150	38.35795	110	664	0.43	2.21	Open
965	103	100	150	47.63215	110	638	0.42	2.05	Open
968	100	97	150	47.66189	110	617	0.40	1.93	Open
971	97	91	150	50.27346	110	554	0.36	1.58	Open
974	91	88	150	74.76477	110	531	0.35	1.46	Open
977	88	85	150	52.25447	110	530	0.35	1.46	Open
980	85	82	150	51.56445	110	520	0.34	1.40	Open
983	82	79	150	50.36271	110	510	0.33	1.36	Open
986	79	76	150	49.70241	110	501	0.33	1.32	Open
989	76	73	150	103.0993	110	487	0.32	1.24	Open
992	73	70	150	49.01242	110	478	0.31	1.20	Open
995	70	67	150	47.54319	110	468	0.31	1.16	Open
998	67	61	150	88.78042	110	457	0.30	1.11	Open
1001	61	55	150	243.415	110	423	0.28	0.96	Open
1004	55	51	150	48.95314	110	408	0.27	0.90	Open
1007	51	49	150	47.06135	110	400	0.26	0.86	Open
1010	49	45	150	53.54572	110	390	0.26	0.83	Open
1013	45	37	150	46.25245	110	382	0.25	0.79	Open
1016	37	39	150	51.71339	110	356	0.23	0.70	Open
1019	39	34	150	53.54578	110	344	0.23	0.65	Open
1022	27	43	50	84.46198	110	20	0.12	0.69	Open
1023	43	28	50	117.7085	110	-1	0.01	0.00	Open
1028	34	30	150	49.64329	110	332	0.22	0.61	Open
1029	30	27	150	47.63261	110	316	0.21	0.56	Open
1037	105	102	100	34.30542	110	113	0.17	0.60	Open
1040	133	136	150	35.62431	110	466	0.31	1.15	Open
1043	136	139	150	44.42242	110	445	0.29	1.05	Open
1046	102	99	100	46.97173	110	127	0.19	0.74	Open
1049	99	96	100	51.08431	110	136	0.20	0.84	Open
1055	18	127	400	178.1493	110	6156	0.57	1.15	Open
1058	96	90	100	50.33357	110	187	0.28	1.52	Open
1064	151	154	150	34.9117	110	490	0.32	1.26	Open
1067	154	156	150	37.55282	110	478	0.31	1.20	Open
1070	90	87	100	73.29335	110	171	0.25	1.30	Open
1073	156	159	150	50.83194	110	466	0.31	1.15	Open
1076	87	84	100	51.08438	110	175	0.26	1.35	Open
1079	84	81	100	52.04317	110	174	0.26	1.34	Open
1082	159	163	150	49.80002	110	454	0.30	1.10	Open
1085	163	165	150	54.07485	110	427	0.28	0.98	Open
1088	81	78	100	49.88443	110	172	0.25	1.30	Open
1091	127	131	400	323.2937	110	6091	0.56	1.13	Open
1094	78	75	100	50.27337	110	168	0.25	1.26	Open
1097	131	170	400	8.459619	110	6085	0.56	1.13	Open
1100	170	178	150	5.680818	110	-397	0.26	0.85	Open
1103	1	5	100	99.59	110	184	0.27	1.49	Open
1106	75	72	100	101.0865	110	171	0.25	1.30	Open
1109	72	69	100	49.13374	110	168	0.25	1.25	Open
1112	5	181	100	51.50449	110	172	0.25	1.31	Open
1113	181	179	100	49.01874	110	146	0.22	0.96	Open
1118	69	66	100	48.86238	110	166	0.24	1.22	Open
1121	66	63	100	45.62119	110	165	0.24	1.21	Open
1124	179	195	100	48.50016	110	121	0.18	0.68	Open
1130	63	60	100	43.67045	110	148	0.22	0.98	Open
1136	202	204	100	53.06761	110	173	0.26	1.32	Open
1139	60	57	100	105.2596	110	150	0.22	1.01	Open
1142	204	208	100	47.41768	110	158	0.23	1.11	Open
1145	208	210	100	45.20555	110	145	0.21	0.95	Open

Link Results

Daily maximum water flow

Emergency case 2

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
1148	210	214	100	39.73946	110	136	0.20	0.84	Open
1151	57	54	100	135.6035	110	138	0.20	0.87	Open
1154	54	52	100	50.93389	110	141	0.21	0.90	Open
1157	214	222	100	55.51571	110	137	0.20	0.85	Open
1160	222	220	100	49.80029	110	122	0.18	0.69	Open
1163	52	48	100	50.87361	110	137	0.20	0.86	Open
1166	48	46	100	49.07363	110	135	0.20	0.84	Open
1169	220	227	100	49.70226	110	121	0.18	0.68	Open
1172	227	231	100	46.43486	110	119	0.18	0.66	Open
1175	46	36	100	48.53395	110	132	0.19	0.80	Open
1178	36	40	100	50.00229	110	145	0.21	0.96	Open
1181	231	233	100	53.01873	110	127	0.19	0.75	Open
1184	233	236	100	52.96972	110	126	0.19	0.73	Open
1187	40	33	100	54.38628	110	146	0.21	0.96	Open
1190	33	31	100	47.57217	110	134	0.20	0.82	Open
1193	236	241	100	48.74393	110	126	0.19	0.73	Open
1196	241	243	100	46.53299	110	127	0.19	0.74	Open
1199	31	28	100	47.63249	110	138	0.20	0.87	Open
1202	28	42	100	50.24358	110	131	0.19	0.79	Open
1205	243	246	100	49.9475	110	129	0.19	0.77	Open
1206	246	190	100	52.40318	110	133	0.20	0.81	Open
1210	42	22	100	53.79568	110	134	0.20	0.83	Open
1211	22	19	150	7.011649	110	413	0.27	0.92	Open
1213	190	251	100	40.98961	110	160	0.24	1.15	Open
1216	251	254	100	35.05636	110	165	0.24	1.21	Open
1219	254	258	100	39.04872	110	170	0.25	1.27	Open
1222	258	264	100	37.7588	110	156	0.23	1.09	Open
1225	264	266	100	39.70902	110	152	0.22	1.04	Open
1226	266	249	100	37.86075	110	141	0.21	0.90	Open
2819	178	165	150	52.25	110	-403	0.26	0.88	Open
1230	1228	151	150	52.1773	110	502	0.33	1.32	Open
1232	1228	127	150	5.412741	110	-59	0.04	0.02	Open
1233	139	1228	150	51.42782	110	429	0.28	0.98	Open
1235	60	64	100	99.869	110	-34	0.05	0.06	Open
1236	64	61	100	101.8766	110	-28	0.04	0.05	Open
1244	134	137	100	31.63456	110	12	0.02	0.01	Open
1247	137	140	100	47.13905	110	22	0.03	0.03	Open
1251	889	865	100	51.84053	110	54	0.08	0.15	Open
1254	893	889	100	48.19635	110	106	0.16	0.53	Open
1257	895	893	100	33.83206	110	157	0.23	1.10	Open
1259	864	912	100	13.0702	110	120	0.18	0.67	Open
1262	912	904	100	45.72769	110	94	0.14	0.43	Open
1265	904	908	100	50.37509	110	64	0.09	0.21	Open
1266	908	869	100	35.56334	110	32	0.05	0.06	Open
1270	108	1267	300	215.6773	110	2631	0.43	0.97	Open
1274	140	1273	100	52.85701	110	26	0.04	0.04	Open
1275	1273	1228	100	208.8287	110	20	0.03	0.02	Open
1278	910	867	100	9.040475	110	47	0.07	0.12	Open
1281	876	910	100	25.62627	110	44	0.06	0.10	Open
1284	907	876	100	8.702144	110	105	0.15	0.52	Open
1287	879	907	100	26.38546	110	103	0.15	0.50	Open
1290	905	879	100	23.81986	110	154	0.23	1.07	Open
1293	883	905	100	12.31577	110	154	0.23	1.06	Open
1295	861	913	100	9.366191	110	203	0.30	1.78	Open
1296	913	883	100	34.27034	110	200	0.30	1.73	Open
1298	861	915	250	5.039258	110	1780	0.42	1.14	Open
2815	915	896	250	176.7271	110	1752	0.41	1.11	Open
1301	861	734	100	207.3975	110	242	0.36	2.46	Open
1302	1267	864	300	12.05897	110	2642	0.43	0.98	Open
1303	864	861	300	201.091	110	2248	0.37	0.72	Open
1305	734	826	100	37.0489	110	112	0.17	0.59	Open
1308	826	829	100	36.14144	110	73	0.11	0.27	Open
1311	829	832	100	34.5565	110	35	0.05	0.07	Open
1314	832	836	100	33.69857	110	-4	0.01	0.00	Open

Link Results

Daily maximum water flow

Emergency case 2

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	Velocity (m/s)	Headloss (m/km)	status
1317	836	804	100	38.96665	110	-43	0.06	0.10	Open
1322	734	871	100	174.4152	110	106	0.16	0.54	Open
1323	871	827	100	37.2162	110	79	0.12	0.31	Open
1325	827	830	100	34.86657	110	71	0.11	0.26	Open
1328	830	833	100	31.73356	110	63	0.09	0.20	Open
1331	833	835	100	41.67223	110	55	0.08	0.16	Open
1338	871	880	50	76.78485	110	4	0.02	0.04	Open
1339	880	872	50	40.58479	110	9	0.05	0.16	Open
1340	835	824	100	31.89757	110	47	0.07	0.12	Open
1345	808	811	100	58.18576	110	183	0.27	1.46	Open
1348	811	814	100	47.07088	110	155	0.23	1.08	Open
1351	814	816	100	34.12285	110	138	0.20	0.87	Open
1354	816	819	100	37.69956	110	122	0.18	0.69	Open
1355	819	805	100	202.1376	110	107	0.16	0.55	Open
1357	805	732	100	194.672	110	-57	0.08	0.17	Open
1363	817	820	250	37.84044	110	1233	0.29	0.58	Open
1366	813	817	250	31.82295	110	1265	0.30	0.61	Open
1369	810	813	250	48.91875	110	1294	0.31	0.63	Open
1372	807	810	250	50.89928	110	1313	0.31	0.65	Open
1374	820	791	250	109.0219	110	1201	0.28	0.55	Open
1376	791	797	250	35.8438	110	1190	0.28	0.54	Open
1377	797	732	250	51.18458	110	1155	0.27	0.51	Open
1379	4	794	50	84.23	110	-12	0.07	0.26	Open
1380	794	792	50	36.6485	110	-25	0.15	1.10	Open
1382	794	798	50	35.55331	110	-10	0.06	0.19	Open
1383	798	795	50	51.18206	110	-45	0.26	3.17	Open
1385	732	795	150	87.32671	110	652	0.43	2.14	Open
1387	795	800	150	34.68498	110	584	0.38	1.74	Open
1390	800	845	150	49.45623	110	399	0.26	0.86	Open
1395	840	838	150	41.20134	110	243	0.16	0.34	Open
1396	838	774	150	212.7868	110	208	0.14	0.26	Open
1398	800	847	100	4.742192	110	161	0.24	1.16	Open
1400	845	792	150	37.1904	110	353	0.23	0.68	Open
1401	792	840	150	34.40169	110	280	0.18	0.45	Open
1402	847	802	100	48.5853	110	114	0.17	0.61	Open
1403	802	772	100	52.54798	110	58	0.08	0.17	Open
1408	732	743	150	150.1486	110	422	0.28	0.96	Open
1411	743	767	150	2.641327	110	387	0.25	0.81	Open
1414	767	769	150	36.61984	110	340	0.22	0.64	Open
1416	769	737	150	197.728	110	293	0.19	0.49	Open
1419	737	760	150	36.5585	110	327	0.21	0.60	Open
1422	760	748	150	12.42127	110	280	0.18	0.45	Open
1425	748	763	150	23.17769	110	234	0.15	0.32	Open
1428	763	751	150	25.42569	110	187	0.12	0.21	Open
1431	751	754	150	47.51929	110	140	0.09	0.12	Open
1434	754	757	150	49.29874	110	93	0.06	0.06	Open
1435	757	729	150	38.6386	110	47	0.03	0.02	Open
1436	165	167	50	154.1326	110	18	0.11	0.59	Open
1437	167	162	50	52.73353	110	-15	0.09	0.44	Open
1438	1	168	100	156.69	110	107	0.16	0.54	Open
1442	184	171	50	100.6883	110	3	0.02	0.02	Open
1444	184	187	50	42.75441	110	-1	0.01	0.00	Open
1445	187	185	50	31.72812	110	6	0.03	0.08	Open
1450	188	192	100	43.36431	110	104	0.15	0.51	Open
1451	192	184	50	110.1446	110	8	0.05	0.12	Open
1453	192	196	100	47.46709	110	90	0.13	0.39	Open
1456	196	198	100	43.76514	110	84	0.12	0.35	Open
1459	198	201	100	55.58617	110	108	0.16	0.55	Open
1463	746	805	100	182.6751	110	-141	0.21	0.91	Open
1466	740	746	100	47.84637	110	-104	0.15	0.52	Open
1468	737	742	100	182.2942	110	-57	0.08	0.17	Open
1469	742	740	100	48.32563	110	-69	0.10	0.24	Open
1471	201	205	100	48.85742	110	106	0.16	0.53	Open
1474	205	207	100	49.1735	110	102	0.15	0.49	Open

Link Results

Daily maximum water flow

Emergency case 2

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	Velocity (m/s)	Headloss (m/km)	status
1477	207	211	100	47.47377	110	93	0.14	0.41	Open
1480	211	213	100	35.77917	110	81	0.12	0.32	Open
1483	213	216	50	55.2136	110	23	0.13	0.90	Open
1498	182	171	50	23.54233	110	34	0.20	1.89	Open
1501	171	1500	100	49.3281	110	31	0.05	0.06	Open
1503	195	1500	50	214.117	110	19	0.11	0.66	Open
1504	1500	196	50	211.3266	110	0	0.00	0.00	Open
1506	1500	1505	100	43.69409	110	44	0.07	0.11	Open
1508	198	1505	100	211.7665	110	-30	0.04	0.05	Open
1511	1505	1510	200	52.84167	110	720	0.27	0.63	Open
1513	201	1510	50	212.3097	110	-4	0.02	0.04	Open
1514	1510	202	50	213.305	110	-14	0.08	0.37	Open
1516	1510	1515	200	50.39909	110	724	0.27	0.64	Open
1518	204	1515	50	212.8503	110	10	0.06	0.19	Open
1519	1515	205	50	212.807	110	2	0.01	0.01	Open
1521	1515	1520	200	47.80696	110	727	0.27	0.64	Open
1523	207	1520	50	213.2977	110	3	0.02	0.02	Open
1524	1520	208	50	212.4393	110	-7	0.04	0.09	Open
1526	1520	1525	200	46.03698	110	730	0.27	0.65	Open
1528	210	1525	50	212.0469	110	3	0.02	0.03	Open
1529	1525	211	50	213.7805	110	-6	0.03	0.07	Open
1531	1525	1530	200	41.2515	110	734	0.27	0.66	Open
1533	213	1530	100	214.1773	110	52	0.08	0.14	Open
1534	1530	214	100	211.7076	110	7	0.01	0.00	Open
1541	1530	217	200	53.61286	110	773	0.28	0.72	Open
1544	217	219	200	49.4717	110	774	0.29	0.72	Open
1547	219	1546	200	48.69424	110	776	0.29	0.73	Open
1549	227	1546	50	210.3715	110	-4	0.02	0.03	Open
1552	1546	1551	200	48.8539	110	760	0.28	0.70	Open
1555	1551	231	100	209.962	110	14	0.02	0.01	Open
1559	240	1556	50	177.9887	110	-6	0.03	0.07	Open
1560	1556	241	50	208.6354	110	7	0.04	0.10	Open
1562	1551	193	200	50.06439	110	734	0.27	0.66	Open
1565	193	235	200	53.70512	110	718	0.26	0.63	Open
1566	235	1556	200	48.65441	110	700	0.26	0.60	Open
1568	1556	244	200	47.51777	110	681	0.25	0.57	Open
1571	244	1570	200	50.76811	110	667	0.25	0.55	Open
1573	246	1570	50	207.7937	110	-10	0.06	0.19	Open
1576	1570	175	200	50.6553	110	651	0.24	0.53	Open
1582	175	252	100	40.52388	110	178	0.26	1.40	Open
1585	252	255	100	37.09919	110	162	0.24	1.17	Open
1588	255	257	100	39.64132	110	146	0.21	0.96	Open
1594	257	260	50	106.2908	110	19	0.11	0.63	Open
1595	260	258	50	99.20279	110	-7	0.04	0.11	Open
1597	260	263	50	39.15739	110	20	0.12	0.73	Open
1609	19	24	400	227.8174	110	6199	0.57	1.17	Open
1610	24	176	400	2.607947	110	6187	0.57	1.16	Open
1612	261	249	100	97.99702	110	109	0.16	0.56	Open
1613	249	176	100	5.679567	110	244	0.36	2.49	Open
1615	176	274	400	10.62868	110	6425	0.59	1.25	Open
1616	274	12	300	241.3471	110	3472	0.57	1.62	Open
1618	274	280	300	5.187638	110	2938	0.48	1.19	Open
1623	2	283	50	202.7976	110	16	0.09	0.45	Open
1625	280	2	100	7.597357	110	200	0.29	1.73	Open
1628	2	287	100	33.1659	110	146	0.22	0.96	Open
1631	287	290	100	37.03761	110	96	0.14	0.44	Open
1632	290	281	100	40.57726	110	47	0.07	0.12	Open
1634	280	9	300	106.912	110	2722	0.45	1.03	Open
1638	1636	9	100	7.345857	110	-50	0.07	0.13	Open
1639	2	1636	50	106.852	110	23	0.14	0.92	Open
1640	1636	3	50	75.66424	110	16	0.09	0.45	Open
1643	1641	1636	100	33.8708	110	-42	0.06	0.10	Open
1644	287	1641	50	106.5742	110	19	0.11	0.65	Open
1645	1641	295	50	12.41447	110	16	0.09	0.45	Open

Link Results

Daily maximum water flow

Emergency case 2

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	Velocity (m/s)	Headloss (m/km)	status
1648	1646	1641	100	36.95253	110	-30	0.04	0.05	Open
1649	290	1646	50	106.2703	110	17	0.10	0.52	Open
1650	1646	297	50	42.19458	110	16	0.09	0.45	Open
1653	1651	1646	100	39.99221	110	-15	0.02	0.01	Open
1654	281	1651	50	105.9417	110	16	0.10	0.48	Open
1655	1651	299	50	101.07	110	16	0.09	0.45	Open
1659	319	1656	50	101.68	110	12	0.07	0.27	Open
1660	1656	320	50	21.78715	110	16	0.09	0.45	Open
1662	8	1661	100	32.9871	110	-19	0.03	0.02	Open
1664	328	1661	50	102.05	110	10	0.06	0.20	Open
1665	1661	329	50	21.45035	110	16	0.09	0.45	Open
1667	8	1666	100	38.49573	110	3	0.00	0.00	Open
1669	23	1666	100	103.91	110	67	0.10	0.23	Open
1670	1666	335	50	52.49397	110	16	0.09	0.45	Open
1672	1666	1671	100	43.85108	110	39	0.06	0.08	Open
1674	337	1671	50	104.44	110	10	0.06	0.21	Open
1675	1671	338	50	47.83214	110	16	0.09	0.45	Open
1677	1671	1676	100	39.32998	110	18	0.03	0.02	Open
1679	340	1676	50	105.53	110	9	0.05	0.17	Open
1680	1676	341	50	59.27741	110	16	0.09	0.45	Open
1682	1676	1681	100	39.89175	110	-4	0.01	0.00	Open
1684	343	1681	50	105.05	110	9	0.05	0.17	Open
1685	1681	344	50	66.07527	110	16	0.09	0.45	Open
1694	314	311	100	34.4734	110	0	0.00	0.00	Open
1696	1656	317	100	39.57494	110	-71	0.10	0.25	Open
1697	317	314	100	28.49198	110	2	0.00	0.00	Open
1700	323	1656	100	35.79039	110	-52	0.08	0.14	Open
1702	1661	326	100	41.59773	110	-40	0.06	0.09	Open
1703	326	323	100	41.69006	110	-46	0.07	0.11	Open
1705	9	277	300	103.7025	110	2656	0.43	0.99	Open
1711	370	373	100	41.39	110	101	0.15	0.48	Open
1717	373	16	100	42.6	110	73	0.11	0.27	Open
1723	304	307	100	35.58	110	106	0.16	0.54	Open
1744	316	404	250	2.89811	110	760	0.18	0.23	Open
1747	404	334	250	244.07	110	636	0.15	0.17	Open
1780	334	427	250	5.490046	110	478	0.11	0.10	Open
1783	427	285	250	172.47	110	374	0.09	0.06	Open
1799	1797	477	100	38.981	110	34	0.05	0.06	Open
1800	466	1797	50	104.4316	110	0	0.00	0.00	Open
1801	1797	471	50	83.51673	110	16	0.09	0.45	Open
1806	285	476	250	3.208657	110	270	0.06	0.03	Open
1809	473	477	50	59.12931	110	-16	0.09	0.45	Open
1810	477	474	50	103.667	110	2	0.01	0.01	Open
1812	26	459	250	101.63	110	144	0.03	0.01	Open
1818	466	474	100	36.44257	110	44	0.06	0.10	Open
1819	474	460	100	2.878458	110	30	0.04	0.05	Open
1822	465	463	100	39.29537	110	34	0.05	0.07	Open
1830	457	437	100	42.29	110	18	0.03	0.02	Open
1833	437	434	100	41.62	110	-13	0.02	0.01	Open
1836	434	431	100	40.56	110	-19	0.03	0.02	Open
1842	462	428	250	176.13	110	-157	0.04	0.01	Open
1843	428	349	250	4.740895	110	-158	0.04	0.01	Open
1849	459	462	250	108.6389	110	52	0.01	0.00	Open
1850	462	457	100	5.54	110	23	0.03	0.03	Open
1858	446	443	100	40.54	110	-16	0.02	0.02	Open
1861	443	439	100	47.67	110	-38	0.06	0.08	Open
1864	439	346	100	40.62	110	-68	0.10	0.24	Open
1876	392	388	100	36.38	110	-37	0.06	0.08	Open
1879	388	400	100	36.77	110	-59	0.09	0.18	Open
1892	375	379	250	6.385897	110	-606	0.14	0.15	Open
1903	405	413	50	41.33667	110	15	0.09	0.43	Open
1906	413	409	50	36.87727	110	12	0.07	0.27	Open
1909	409	418	50	37.27863	110	4	0.02	0.04	Open
1910	418	407	50	101.83	110	-6	0.03	0.07	Open

Link Results

Daily maximum water flow

Emergency case 2

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
1913	348	346	150	94.95	110	-296	0.19	0.50	Open
1915	348	1914	100	38.11254	110	20	0.03	0.02	Open
1917	439	1914	50	94.43	110	15	0.09	0.41	Open
1918	1914	440	50	97.96259	110	14	0.08	0.39	Open
1920	1914	1919	100	44.24385	110	5	0.01	0.00	Open
1922	442	1919	50	78.94688	110	-15	0.09	0.41	Open
1923	1919	443	50	95.81	110	-14	0.08	0.36	Open
1925	1919	1924	100	37.7569	110	-12	0.02	0.01	Open
1927	445	1924	50	61.50648	110	-15	0.09	0.42	Open
1928	1924	446	50	95.19	110	-14	0.08	0.35	Open
1930	1924	1929	100	39.18835	110	-29	0.04	0.05	Open
1932	448	1929	50	44.88782	110	-16	0.09	0.47	Open
1933	1929	424	50	95.12	110	-13	0.08	0.34	Open
1935	44	351	150	211.36	110	278	0.18	0.44	Open
1938	351	362	150	41.44432	110	218	0.14	0.28	Open
1941	362	366	150	35.79474	110	187	0.12	0.21	Open
1944	366	377	150	36.76721	110	185	0.12	0.21	Open
1947	377	380	150	33.66896	110	184	0.12	0.20	Open
1950	380	354	150	8.431973	110	257	0.17	0.38	Open
1953	354	383	150	35.59359	110	208	0.14	0.26	Open
1956	383	385	150	34.85503	110	206	0.13	0.25	Open
1959	385	389	150	34.93612	110	203	0.13	0.25	Open
1962	389	391	150	36.57451	110	201	0.13	0.24	Open
1965	391	395	150	26.62157	110	199	0.13	0.24	Open
1968	351	357	100	9.80654	110	45	0.07	0.11	Open
1969	357	352	50	107.15	110	16	0.09	0.45	Open
1971	354	358	50	9.843527	110	33	0.20	1.84	Open
1972	358	355	50	159.117	110	16	0.09	0.45	Open
1974	114	678	150	179.43	110	155	0.10	0.15	Open
1978	680	121	150	178.11	110	-65	0.04	0.03	Open
1981	695	678	100	41.85927	110	-25	0.04	0.04	Open
1984	691	695	100	40.53097	110	-14	0.02	0.01	Open
1989	678	1988	150	43.98024	110	112	0.07	0.08	Open
1992	1988	706	50	55.1855	110	18	0.11	0.59	Open
1994	1988	1993	150	39.23639	110	83	0.05	0.05	Open
1996	708	1993	50	79.7736	110	-18	0.11	0.59	Open
1999	1993	1998	150	40.90862	110	52	0.03	0.02	Open
2000	1998	680	150	41.31498	110	20	0.01	0.00	Open
2002	1998	712	50	59.453	110	18	0.11	0.59	Open
2005	2003	717	50	30.45708	110	18	0.11	0.59	Open
2006	680	2003	100	43.43105	110	49	0.07	0.13	Open
2007	2003	681	100	33.62561	110	18	0.03	0.02	Open
2009	705	2008	50	125.7131	110	7	0.04	0.11	Open
2010	115	1988	50	177.77	110	7	0.04	0.10	Open
2014	2008	2013	200	36.329	110	146	0.05	0.03	Open
2016	1993	117	50	178.24	110	-6	0.03	0.07	Open
2017	2013	709	50	125.3643	110	-2	0.01	0.01	Open
2019	2013	2018	200	43.03944	110	139	0.05	0.03	Open
2021	711	2018	50	124.9703	110	-5	0.03	0.05	Open
2022	118	1998	50	177.76	110	4	0.03	0.04	Open
2024	2018	2023	200	85.00068	110	125	0.05	0.02	Open
2026	716	2023	50	124.1179	110	-6	0.04	0.09	Open
2027	122	2003	50	176.5	110	5	0.03	0.06	Open
2029	2023	2028	200	40.37641	110	110	0.04	0.02	Open
2031	702	2028	50	123.734	110	-6	0.03	0.07	Open
2032	124	703	50	153.19	110	18	0.11	0.59	Open
2034	2028	2033	200	38.28515	110	95	0.03	0.02	Open
2036	719	2033	50	123.3455	110	-5	0.03	0.05	Open
2037	126	720	50	101.94	110	18	0.11	0.59	Open
2039	688	2038	50	128.7502	110	9	0.05	0.17	Open
2040	2038	689	50	171.0225	110	18	0.11	0.59	Open
2042	2038	683	100	34.83958	110	27	0.04	0.04	Open
2045	2043	2038	100	41.60811	110	54	0.08	0.15	Open
2046	691	2043	50	182.9465	110	-4	0.03	0.04	Open

Link Results

Daily maximum water flow

Emergency case 2

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	Velocity (m/s)	Headloss (m/km)	status
2047	2043	692	50	127.8715	110	-9	0.06	0.18	Open
2049	671	2048	100	43.82837	110	81	0.12	0.32	Open
2050	2048	2043	100	38.65293	110	67	0.10	0.23	Open
2051	694	2048	50	127.0613	110	10	0.06	0.21	Open
2052	2048	695	50	183.9331	110	6	0.04	0.09	Open
2054	677	683	50	180.981	110	-18	0.11	0.59	Open
2055	683	685	50	129.4924	110	-9	0.05	0.17	Open
2057	2033	722	200	40.47505	110	81	0.03	0.01	Open
2063	554	674	200	6.116411	110	773	0.28	0.72	Open
2064	674	697	200	4.843114	110	532	0.20	0.36	Open
2066	12	483	300	111.2852	110	3456	0.57	1.60	Open
2072	479	482	300	407.0148	110	2342	0.38	0.78	Open
2073	482	480	300	109.5582	110	2627	0.43	0.97	Open
2075	554	643	300	4.535173	110	1110	0.18	0.19	Open
2078	643	575	300	37.5175	110	1082	0.18	0.19	Open
2081	674	705	100	42.72605	110	112	0.17	0.59	Open
2084	705	709	100	38.04515	110	87	0.13	0.37	Open
2087	575	578	300	38.9279	110	1053	0.17	0.18	Open
2090	709	711	100	38.98263	110	67	0.10	0.23	Open
2093	578	600	300	38.81452	110	1025	0.17	0.17	Open
2096	711	714	100	42.86211	110	54	0.08	0.15	Open
2099	600	603	300	44.44752	110	998	0.16	0.16	Open
2102	714	716	100	43.62681	110	-9	0.01	0.01	Open
2105	603	606	300	42.94618	110	929	0.15	0.14	Open
2108	716	702	100	39.69132	110	-20	0.03	0.03	Open
2111	606	581	300	38.75537	110	902	0.15	0.13	Open
2114	702	719	100	40.54007	110	-33	0.05	0.06	Open
2117	581	596	300	39.00662	110	875	0.14	0.13	Open
2120	596	584	300	41.41973	110	848	0.14	0.12	Open
2123	722	675	200	122.9518	110	-31	0.01	0.00	Open
2124	675	584	200	7.120459	110	-131	0.05	0.03	Open
2126	584	552	300	168.22	110	594	0.10	0.06	Open
2129	587	590	100	39.28	110	32	0.05	0.06	Open
2132	590	593	100	40.54	110	7	0.01	0.00	Open
2133	593	2688	100	45.17	110	-18	0.03	0.02	Open
2135	552	631	100	35.21336	110	49	0.07	0.13	Open
2136	631	918	100	14.54781	110	18	0.03	0.02	Open
2138	674	694	100	44.64054	110	111	0.16	0.58	Open
2141	694	692	100	37.34017	110	82	0.12	0.33	Open
2144	692	688	100	41.87806	110	55	0.08	0.16	Open
2145	688	685	100	33.33398	110	27	0.04	0.04	Open
2148	667	658	100	40.42123	110	26	0.04	0.04	Open
2151	664	667	100	35.90037	110	53	0.08	0.15	Open
2153	657	660	100	10.11895	110	108	0.16	0.55	Open
2154	660	664	100	36.34413	110	80	0.12	0.32	Open
2156	554	657	250	5.365212	110	847	0.20	0.29	Open
2160	546	543	100	36.83812	110	4	0.01	0.00	Open
2162	542	550	100	39.72177	110	13	0.02	0.01	Open
2163	550	546	100	37.82124	110	9	0.01	0.01	Open
2165	482	542	200	4.591173	110	-295	0.11	0.12	Open
2169	511	483	200	178.6236	110	-731	0.27	0.65	Open
2174	536	539	100	6.461739	110	137	0.20	0.86	Open
2177	539	532	100	43.42472	110	116	0.17	0.63	Open
2183	543	512	50	176.6431	110	-6	0.03	0.07	Open
2187	650	658	50	176.8922	110	-8	0.05	0.14	Open
2189	657	572	250	178.3378	110	720	0.17	0.21	Open
2192	572	644	100	4.535304	110	60	0.09	0.18	Open
2195	644	576	100	37.31059	110	52	0.08	0.14	Open
2198	576	579	100	40.59316	110	44	0.07	0.11	Open
2201	579	601	100	34.68045	110	36	0.05	0.07	Open
2204	601	604	100	42.10464	110	27	0.04	0.04	Open
2207	604	607	100	46.4668	110	60	0.09	0.19	Open
2210	607	582	100	40.30271	110	51	0.08	0.14	Open
2213	582	597	100	38.75214	110	42	0.06	0.10	Open

Link Results

Daily maximum water flow

Emergency case 2

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	Velocity (m/s)	Headloss (m/km)	status
2216	597	585	100	41.99482	110	28	0.04	0.04	Open
2219	585	588	100	42.32445	110	35	0.05	0.07	Open
2222	588	591	100	33.20568	110	20	0.03	0.03	Open
2225	591	594	100	36.52161	110	6	0.01	0.00	Open
2226	594	573	100	42.22192	110	-9	0.01	0.01	Open
2231	573	560	250	2.388596	110	-272	0.06	0.04	Open
2235	2233	664	50	177.805	110	-9	0.05	0.16	Open
2239	2233	2238	100	35.71692	110	36	0.05	0.07	Open
2240	2238	650	100	44.28321	110	18	0.03	0.02	Open
2241	667	2238	50	177.3859	110	9	0.05	0.15	Open
2245	2243	512	100	37.17732	110	11	0.02	0.01	Open
2246	546	2243	50	176.163	110	-6	0.03	0.07	Open
2250	2248	2243	100	38.80078	110	21	0.03	0.03	Open
2252	2248	550	50	175.6749	110	6	0.04	0.08	Open
2255	2253	2248	100	37.59618	110	31	0.05	0.06	Open
2260	2258	2253	100	35.4183	110	63	0.09	0.20	Open
2261	514	2258	50	174.8573	110	-5	0.03	0.06	Open
2262	2258	515	50	184.056	110	-7	0.04	0.09	Open
2265	2263	2258	100	41.20342	110	72	0.11	0.26	Open
2266	517	2263	50	174.4169	110	-4	0.02	0.04	Open
2267	2263	518	50	183.7397	110	-6	0.04	0.08	Open
2270	2268	2263	100	40.43885	110	80	0.12	0.32	Open
2271	520	2268	100	174.5751	110	-17	0.03	0.02	Open
2272	2268	490	100	184.42	110	-32	0.05	0.06	Open
2274	526	2273	100	34.19849	110	81	0.12	0.33	Open
2275	2273	2268	100	48.81801	110	75	0.11	0.28	Open
2276	522	2273	50	174.6157	110	-1	0.00	0.00	Open
2277	2273	493	50	183.0568	110	-4	0.03	0.04	Open
2280	2278	526	100	36.69041	110	93	0.14	0.41	Open
2281	524	2278	50	174.578	110	4	0.02	0.04	Open
2282	2278	500	50	182.5168	110	2	0.01	0.01	Open
2284	532	2283	100	50.96919	110	110	0.16	0.57	Open
2285	2283	2278	100	51.20798	110	101	0.15	0.49	Open
2286	529	2283	100	182.1571	110	-39	0.06	0.08	Open
2287	2283	530	100	174.332	110	-40	0.06	0.09	Open
2290	508	511	200	182.3665	110	-557	0.21	0.39	Open
2294	539	2291	50	182.77	110	11	0.07	0.24	Open
2295	89	540	50	80.48	110	10	0.06	0.20	Open
2298	506	2291	200	50.09	110	-459	0.17	0.27	Open
2301	529	506	200	48.27987	110	-463	0.17	0.28	Open
2304	503	529	200	5.800203	110	-491	0.18	0.31	Open
2307	500	503	200	46.69591	110	-414	0.15	0.23	Open
2310	496	500	200	37.27923	110	-411	0.15	0.22	Open
2313	493	496	200	35.04075	110	-400	0.15	0.21	Open
2316	490	493	200	53.89	110	-390	0.14	0.20	Open
2319	518	490	200	42.54	110	-408	0.15	0.22	Open
2322	515	518	200	41.44969	110	-391	0.14	0.20	Open
2325	485	515	200	34.27843	110	-375	0.14	0.19	Open
2327	549	2326	50	174.3407	110	-4	0.02	0.03	Open
2328	2326	2248	50	183.7762	110	6	0.03	0.07	Open
2329	485	2326	100	36.24177	110	55	0.08	0.16	Open
2332	2326	2331	100	40.33613	110	36	0.05	0.07	Open
2333	2331	486	100	36.37125	110	18	0.03	0.02	Open
2334	2243	2331	50	183.1677	110	-5	0.03	0.06	Open
2335	2331	547	50	175.0554	110	3	0.02	0.02	Open
2337	512	486	50	182.6166	110	-5	0.03	0.06	Open
2338	486	488	50	175.5375	110	2	0.01	0.01	Open
2340	655	652	50	176.1984	110	-9	0.05	0.16	Open
2341	652	650	50	182.1682	110	-8	0.05	0.15	Open
2343	2238	2342	50	181.7183	110	9	0.05	0.15	Open
2344	2342	668	50	177.1165	110	9	0.05	0.16	Open
2346	2342	652	100	40.18162	110	18	0.03	0.02	Open
2349	2347	2342	100	39.5458	110	37	0.05	0.08	Open
2350	663	2347	50	177.9829	110	-9	0.05	0.17	Open

Link Results

Daily maximum water flow

Emergency case 2

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	Velocity (m/s)	Headloss (m/km)	status
2351	2347	2233	50	181.2221	110	-8	0.05	0.14	Open
2353	648	2352	100	10.11911	110	75	0.11	0.28	Open
2354	2352	2347	100	36.0419	110	56	0.08	0.16	Open
2356	2352	661	50	178.8215	110	10	0.06	0.19	Open
2361	2357	609	50	174.97	110	9	0.05	0.15	Open
2363	2357	2362	100	43.75	110	33	0.05	0.06	Open
2366	2362	611	50	175.44	110	8	0.05	0.13	Open
2368	2362	2367	100	41.42	110	7	0.01	0.00	Open
2371	2367	613	50	176.17	110	8	0.05	0.13	Open
2373	2367	132	100	45.07	110	-19	0.03	0.02	Open
2376	132	615	100	177.03	110	49	0.07	0.13	Open
2378	2372	623	250	182.43	110	231	0.05	0.03	Open
2381	2377	617	50	177.58	110	7	0.04	0.10	Open
2383	2377	2382	100	43.55	110	16	0.02	0.02	Open
2386	2382	619	50	178.17	110	7	0.04	0.10	Open
2388	2382	138	100	42.85	110	-9	0.01	0.01	Open
2390	597	2387	50	176.66	110	5	0.03	0.05	Open
2391	138	621	50	179.26	110	7	0.04	0.10	Open
2396	625	627	100	38.02	110	13	0.02	0.01	Open
2399	627	629	100	38.03	110	-2	0.00	0.00	Open
2402	629	2703	100	45.02	110	-17	0.02	0.02	Open
2405	559	2404	100	36.15286	110	172	0.25	1.31	Open
2408	2404	632	50	181.0445	110	13	0.07	0.30	Open
2410	2404	2409	100	37.70093	110	145	0.21	0.95	Open
2412	634	2409	50	180.6681	110	-9	0.05	0.16	Open
2415	2409	2414	100	40.46321	110	119	0.18	0.66	Open
2416	2414	562	100	38.56031	110	98	0.14	0.46	Open
2417	637	2414	50	180.3083	110	-5	0.03	0.06	Open
2423	562	564	100	77.31975	110	99	0.15	0.47	Open
2426	564	567	100	44.57381	110	55	0.08	0.16	Open
2430	623	559	250	162.57	110	136	0.03	0.01	Open
2435	572	648	250	180.6799	110	572	0.13	0.14	Open
2442	634	637	100	36.91623	110	69	0.10	0.24	Open
2445	632	634	100	38.41912	110	78	0.11	0.30	Open
2451	619	621	100	41.35819	110	-13	0.02	0.01	Open
2454	617	619	100	40.03422	110	-2	0.00	0.00	Open
2457	615	617	100	41.27147	110	9	0.01	0.01	Open
2460	613	615	100	43.02887	110	-22	0.03	0.03	Open
2463	611	613	100	39.51403	110	-12	0.02	0.01	Open
2466	609	611	100	41.18474	110	-2	0.00	0.00	Open
2468	130	654	100	174.93	110	61	0.09	0.19	Open
2469	654	609	100	35.69366	110	7	0.01	0.00	Open
2471	654	661	100	10.12069	110	35	0.05	0.07	Open
2474	661	663	100	37.51176	110	27	0.04	0.04	Open
2477	663	668	100	37.67319	110	18	0.03	0.02	Open
2478	668	655	100	40.55526	110	9	0.01	0.01	Open
2481	547	488	100	30.28803	110	8	0.01	0.00	Open
2484	549	547	100	42.12482	110	15	0.02	0.01	Open
2486	90	93	50	108.3649	110	9	0.06	0.17	Open
2487	93	91	50	93.02537	110	-17	0.10	0.53	Open
2489	87	94	50	108.7487	110	-10	0.06	0.19	Open
2490	94	88	50	92.67732	110	5	0.03	0.05	Open
2492	219	223	50	80.33154	110	2	0.01	0.01	Open
2493	223	220	50	130.461	110	5	0.03	0.05	Open
2495	27	2494	150	101.9973	110	290	0.19	0.48	Open
2496	2494	22	150	202.2328	110	284	0.19	0.46	Open
2498	42	2497	50	117.3478	110	-9	0.05	0.16	Open
2499	2497	43	50	48.78412	110	-15	0.09	0.41	Open
2501	1929	2500	100	33.32177	110	-47	0.07	0.12	Open
2502	2500	74	100	94.58	110	-81	0.12	0.33	Open
2504	395	2503	150	33.15487	110	198	0.13	0.24	Open
2505	2503	348	150	109.3743	110	-261	0.17	0.39	Open
2507	559	2506	100	181.4001	110	102	0.15	0.49	Open
2508	2506	632	100	34.85185	110	84	0.12	0.34	Open

Link Results

Daily maximum water flow

Emergency case 2

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	Velocity (m/s)	Headloss (m/km)	status
2510	637	2509	100	40.99197	110	56	0.08	0.17	Open
2511	2509	562	100	179.8905	110	-7	0.01	0.00	Open
2513	621	2512	100	45.67699	110	-25	0.04	0.04	Open
2514	2512	135	100	180.03	110	-43	0.06	0.10	Open
2516	485	2515	100	173.7513	110	32	0.05	0.06	Open
2517	2515	549	100	36.11976	110	22	0.03	0.03	Open
2522	168	2521	100	269.5978	110	129	0.19	0.76	Open
2523	2521	188	100	150.7094	110	123	0.18	0.70	Open
2525	804	2524	250	63.02674	110	-1418	0.33	0.75	Open
2528	804	2527	250	129.0942	110	1352	0.32	0.69	Open
2531	120	2530	100	57.33563	110	6	0.01	0.00	Open
2534	113	2533	50	104.9338	110	6	0.03	0.07	Open
2537	116	2536	50	105.2879	110	6	0.03	0.07	Open
2540	110	120	100	134.4962	110	40	0.06	0.09	Open
2542	18	2541	100	5.764308	110	71	0.10	0.25	Open
2543	2541	105	100	45.98958	110	94	0.14	0.43	Open
2545	21	2544	150	6.432149	110	730	0.48	2.64	Open
2546	2544	106	150	42.37463	110	695	0.45	2.40	Open
2547	2541	2544	50	201.2263	110	-29	0.17	1.45	Open
2550	2548	34	50	65.60773	110	-6	0.03	0.07	Open
2552	33	2551	50	79.68444	110	6	0.03	0.07	Open
2555	18	2554	150	5.422363	110	519	0.34	1.40	Open
2556	2554	133	150	47.05786	110	490	0.32	1.26	Open
2558	134	2557	100	45.56575	110	0	0.00	0.00	Open
2559	2557	1267	100	5.4001	110	17	0.02	0.02	Open
2560	2554	2557	50	210.6289	110	23	0.13	0.90	Open
2562	864	2561	100	6.999989	110	250	0.37	2.60	Open
2563	2561	895	100	41.47759	110	207	0.31	1.84	Open
2564	2561	915	50	201.1866	110	19	0.11	0.66	Open
2566	867	886	50	285.1163	110	23	0.14	0.95	Open
2567	2524	862	250	143.1453	110	-1702	0.40	1.05	Open
2569	2524	2568	100	5.384829	110	261	0.38	2.82	Open
2570	2568	808	100	48.471	110	219	0.32	2.04	Open
2572	2527	2571	250	4.943583	110	1329	0.31	0.66	Open
2573	2571	807	250	50.03543	110	1324	0.31	0.66	Open
2574	2568	2571	50	192.0298	110	19	0.11	0.64	Open
2575	776	789	50	155.7935	110	23	0.14	0.95	Open
2578	179	182	50	191.0042	110	19	0.11	0.67	Open
2581	170	2580	400	284.2098	110	6185	0.57	1.16	Open
2582	2580	19	400	741.9614	110	5377	0.50	0.90	Open
2826	195	2823	100	41.18	110	96	0.14	0.44	Open
2824	2586	2823	200	4.95	110	-729	0.27	0.65	Open
2590	2586	2589	50	3.730913	110	24	0.14	0.97	Open
2594	1505	2593	200	9.444146	110	-711	0.26	0.62	Open
2595	2593	2586	200	199.3527	110	-700	0.26	0.60	Open
2599	2597	193	50	126.3525	110	-6	0.03	0.07	Open
2600	219	216	50	266.9338	110	-10	0.06	0.21	Open
2604	2602	1546	50	169.3904	110	-6	0.03	0.07	Open
2607	1551	2606	50	168	110	6	0.03	0.07	Open
2822	190	19	200	5.68	110	416	0.15	0.23	Open
2613	175	2612	200	6.001835	110	467	0.17	0.28	Open
2614	2612	2609	200	193.8018	110	449	0.17	0.26	Open
2617	266	2616	50	42.72055	110	6	0.03	0.07	Open
2619	263	261	50	75.10243	110	12	0.07	0.28	Open
2621	257	2620	100	39.22196	110	121	0.18	0.68	Open
2624	2620	2623	50	35.85931	110	6	0.03	0.07	Open
2626	2620	2625	50	37.65272	110	6	0.03	0.07	Open
2628	261	2620	100	179.5791	110	-103	0.15	0.51	Open
2631	2629	278	100	7.99	110	-55	0.08	0.16	Open
2633	17	2632	100	5.78	110	163	0.24	1.18	Open
2634	2632	370	100	78.26	110	130	0.19	0.77	Open
2635	2629	2632	50	202.8	110	-18	0.10	0.57	Open
2637	362	2636	50	149.7097	110	16	0.09	0.45	Open
2639	405	56	100	101.28	110	36	0.05	0.07	Open

Link Results

Daily maximum water flow

Emergency case 2

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	Velocity (m/s)	Headloss (m/km)	status
2641	2500	2640	50	29.86566	110	19	0.11	0.63	Open
2643	462	2642	100	4.88735	110	92	0.14	0.41	Open
2644	2642	465	100	36.7971	110	63	0.09	0.20	Open
2649	465	2646	50	41.64459	110	15	0.09	0.39	Open
2651	2646	2650	50	40.20138	110	1	0.00	0.00	Open
2652	2650	2642	50	57.98918	110	-15	0.09	0.41	Open
2654	463	2653	50	24.01717	110	18	0.10	0.56	Open
2655	2653	2646	50	43.35425	110	2	0.01	0.01	Open
2656	456	454	50	45.41348	110	5	0.03	0.06	Open
2657	454	452	50	42.41202	110	6	0.04	0.09	Open
2659	452	450	50	39.30777	110	6	0.04	0.09	Open
2660	450	2640	50	53.31772	110	6	0.03	0.07	Open
2661	2640	448	50	38.73902	110	9	0.05	0.16	Open
2662	448	445	50	41.86379	110	9	0.05	0.17	Open
2663	445	442	50	42.90771	110	9	0.05	0.15	Open
2664	442	440	50	45.35033	110	8	0.05	0.13	Open
2665	440	2503	50	42.65421	110	7	0.04	0.09	Open
2667	459	2666	100	5.757563	110	76	0.11	0.29	Open
2668	2666	466	100	36.60482	110	61	0.09	0.19	Open
2669	2642	2666	50	108.5947	110	-1	0.01	0.00	Open
2670	457	32	50	206.56	110	-3	0.02	0.01	Open
2672	476	2671	100	4.115414	110	98	0.15	0.47	Open
2673	2671	1797	100	36.36583	110	65	0.10	0.22	Open
2674	2666	2671	50	105.1091	110	-2	0.01	0.01	Open
2676	2671	2675	50	108.8943	110	16	0.09	0.45	Open
2678	1681	2677	100	41.30866	110	-26	0.04	0.04	Open
2679	2677	29	100	105.9	110	-58	0.09	0.17	Open
2681	2677	2680	50	35.93795	110	16	0.09	0.45	Open
2684	719	2683	100	35.24102	110	-46	0.07	0.11	Open
2685	2683	675	100	4.655246	110	-82	0.12	0.33	Open
2687	2683	2686	50	112.4522	110	18	0.11	0.59	Open
2690	2688	552	250	4.87	110	-527	0.12	0.12	Open
2694	560	2693	250	7.245702	110	-455	0.11	0.09	Open
2695	2693	2688	250	172.9	110	-468	0.11	0.10	Open
2698	2688	2697	50	5.25	110	24	0.14	0.97	Open
2702	2700	573	250	11.17579	110	-245	0.06	0.03	Open
2704	559	2703	250	6.19	110	-156	0.04	0.01	Open
2705	2703	2700	250	162.78	110	-190	0.04	0.02	Open
2709	2703	2708	50	162.85	110	-1	0.00	0.00	Open
2710	2708	2700	50	4.313197	110	-19	0.11	0.63	Open
2712	2700	2711	50	5.042188	110	18	0.11	0.59	Open
2713	2711	2703	50	163.03	110	0	0.00	0.00	Open
2714	2693	2697	50	172.9	110	-6	0.03	0.07	Open
2715	2509	565	50	75.34689	110	46	0.27	3.28	Open
2716	565	568	50	40.64275	110	54	0.32	4.46	Open
2717	568	570	50	33.36614	110	72	0.43	7.68	Open
2719	570	2718	50	185.404	110	18	0.11	0.59	Open
2720	2372	648	250	171.63	110	-358	0.08	0.06	Open
2721	502	499	100	46.75841	110	39	0.06	0.09	Open
2722	499	497	100	40.11815	110	35	0.05	0.07	Open
2723	497	494	100	33.98141	110	29	0.04	0.05	Open
2724	494	491	100	51.42554	110	22	0.03	0.03	Open
2727	526	2726	50	174.9181	110	-3	0.02	0.02	Open
2728	542	514	100	38.3456	110	-80	0.12	0.32	Open
2729	514	517	100	39.29931	110	-85	0.13	0.35	Open
2730	517	520	100	41.21595	110	-91	0.13	0.40	Open
2731	520	522	100	47.99207	110	-84	0.12	0.35	Open
2732	522	2726	100	34.49714	110	-93	0.14	0.42	Open
2733	2726	524	100	35.18749	110	-106	0.16	0.54	Open
2734	524	530	100	48.8009	110	-121	0.18	0.68	Open
2735	530	534	100	55.85275	110	-170	0.25	1.28	Open
2737	534	2736	100	69.78711	110	-194	0.29	1.63	Open
2739	483	2738	300	4.358106	110	2715	0.44	1.03	Open
2740	2738	479	300	4.069117	110	2352	0.39	0.79	Open

Link Results

Daily maximum water flow

Emergency case 2

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	Velocity (m/s)	Headloss (m/km)	status
2741	2736	2738	100	4.508611	110	-222	0.33	2.10	Open
2743	511	2742	100	3.281282	110	163	0.24	1.19	Open
2744	2742	536	100	28.73019	110	158	0.23	1.11	Open
2745	2736	2742	50	174.3288	110	18	0.11	0.61	Open
2747	2291	2746	200	48.47	110	-452	0.17	0.27	Open
2748	2746	508	200	3.148191	110	-448	0.17	0.26	Open
2749	2742	2746	50	182.3779	110	14	0.08	0.38	Open
2751	2253	2750	200	5.762447	110	-247	0.09	0.09	Open
2754	2750	2753	50	5.4077	110	-1	0.01	0.01	Open
2756	2750	2755	200	170.8046	110	-254	0.09	0.09	Open
2757	2755	485	200	7.75631	110	-277	0.10	0.11	Open
2758	2753	2755	50	176.6321	110	-7	0.04	0.09	Open
2760	542	2759	200	4.811436	110	-238	0.09	0.08	Open
2763	2759	2762	50	5.399654	110	-1	0.01	0.01	Open
2765	2759	2764	200	164.8606	110	-246	0.09	0.09	Open
2766	2764	2253	200	5.478996	110	-268	0.10	0.10	Open
2767	2762	2764	50	170.1455	110	-6	0.04	0.08	Open
2768	2589	2593	50	202.9695	110	18	0.10	0.57	Open
2770	2609	2769	50	6.462192	110	-6	0.03	0.07	Open
2771	2769	2612	50	200.4644	110	-11	0.07	0.25	Open
2772	774	784	100	35.94621	110	105	0.15	0.52	Open
2773	784	778	100	35.70523	110	70	0.10	0.25	Open
2775	640	2774	50	60.36753	110	-18	0.11	0.59	Open
2776	2774	641	50	74.11491	110	18	0.11	0.59	Open
2777	562	2774	100	183.1152	110	-26	0.04	0.04	Open
2780	2774	2779	100	39.26435	110	-81	0.12	0.32	Open
2782	2414	2779	50	182.7465	110	-2	0.01	0.01	Open
2783	2779	638	50	103.0518	110	18	0.11	0.59	Open
2785	2779	2784	100	38.41932	110	-119	0.18	0.66	Open
2787	2409	2784	50	182.3456	110	-1	0.01	0.00	Open
2788	2784	635	50	146.2469	110	18	0.11	0.59	Open
2790	2784	2789	100	36.97663	110	-157	0.23	1.10	Open
2791	2789	560	100	37.15708	110	-165	0.24	1.22	Open
2792	631	2789	50	184.0249	110	13	0.08	0.32	Open
2793	2789	2404	50	181.9823	110	4	0.02	0.03	Open
2795	572	2794	100	10.11937	110	70	0.10	0.25	Open
2796	2794	2233	100	35.18443	110	54	0.08	0.15	Open
2797	660	2794	50	178.2189	110	10	0.06	0.20	Open
2798	2794	2352	50	180.7999	110	8	0.05	0.14	Open
2800	21	108	450	207.4658	110	9414	0.69	1.42	Open
2801	108	18	400	8.96255	110	6751	0.62	1.37	Open
2803	697	671	200	121.2878	110	478	0.18	0.30	Open
2804	671	2008	200	42.9192	110	148	0.05	0.03	Open
2816	896	892	250	34.86	110	1733	0.41	1.09	Open
2813	892	890	250	45.75	110	1713	0.40	1.06	Open
2810	890	862	250	51.64	110	1695	0.40	1.04	Open
2821	2609	190	200	7.55	110	449	0.17	0.26	Open
2825	2823	2580	200	5.67	110	-827	0.30	0.82	Open
2828	60	2580	100	6.39	110	26	0.04	0.04	Open
2827	2823	202	100	51.44	110	193	0.28	1.62	Open
1	170	1	100	5.97	110	291	0.43	3.47	Open
2	301	10	100	5.41	110	153	0.23	1.06	Open
3	301	316	250	183.22	110	955	0.23	0.36	Open
4	10	304	100	43.21	110	130	0.19	0.78	Open
5	307	310	100	36.63	110	75	0.11	0.28	Open
6	310	313	100	37.16	110	44	0.07	0.11	Open
9	316	14	100	4.64	110	188	0.28	1.53	Open
10	313	14	100	30.57	110	14	0.02	0.01	Open
11	301	16	100	4.3	110	125	0.18	0.72	Open
12	16	13	100	43.35	110	119	0.18	0.66	Open
13	13	399	100	38.97	110	102	0.15	0.50	Open
14	399	402	100	34.03	110	79	0.12	0.31	Open
15	402	415	100	41.12	110	55	0.08	0.16	Open
16	415	15	100	28.72	110	32	0.05	0.06	Open

Link Results

Daily maximum water flow

Emergency case 2

Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	Velocity (m/s)	Headloss (m/km)	status
18	15	404	100	5.19	110	-116	0.17	0.63	Open
19	277	301	250	167.65	110	1241	0.29	0.59	Open
20	17	277	250	3.37	110	-1400	0.33	0.73	Open
21	15	412	100	43.52	110	73	0.11	0.27	Open
22	412	410	100	39.53	110	45	0.07	0.67	Open
23	410	407	100	40.87	110	22	0.03	0.15	Open
24	407	422	100	40.33	110	0	0.00	0.00	Open
25	422	425	100	43.21	110	-18	0.03	0.02	Open
27	425	20	100	42.44	110	-37	0.05	0.07	Open
28	20	427	100	4.85	110	-88	0.13	0.38	Open
29	14	319	100	41.42	110	106	0.16	0.53	Open
30	319	322	100	40.06	110	78	0.12	0.30	Open
31	322	325	100	44.03	110	52	0.08	0.14	Open
33	325	328	100	43.22	110	27	0.04	0.04	Open
34	328	331	100	35.32	110	1	0.00	0.00	Open
35	331	23	100	42.9	110	-30	0.04	0.05	Open
36	23	334	100	5.49	110	-142	0.21	0.92	Open
37	26	476	250	4.1	110	-156	0.04	0.01	Open
39	29	285	100	3.89	110	-88	0.13	0.38	Open
40	32	26	100	3.36	110	-12	0.02	0.01	Open
42	23	337	100	46.6	110	45	0.07	0.11	Open
43	337	340	100	43.74	110	19	0.03	0.12	Open
44	340	343	100	44.03	110	-5	0.01	0.00	Open
45	343	29	100	44.26	110	-30	0.04	0.05	Open
46	20	430	100	47.38	110	25	0.04	0.19	Open
48	430	433	100	42.16	110	8	0.01	0.02	Open
49	433	32	100	82.82	110	-9	0.01	0.01	Open
51	278	44	250	4.89	110	367	0.09	0.06	Open
52	44	35	100	86.17	110	89	0.13	0.38	Open
54	35	38	100	37.96	110	67	0.10	0.23	Open
55	38	41	100	35.31	110	45	0.07	0.11	Open
57	41	379	100	4.97	110	-161	0.24	1.15	Open
58	278	363	250	44.97	110	798.49	0.19	0.26	Open
60	363	379	250	114.03	110	782.84	0.18	0.25	Open
61	2629	365	100	79.5	110	57.44	0.08	0.17	Open
62	365	372	100	39.92	110	63.04	0.09	0.2	Open
63	372	47	100	40.54	110	67.33	0.1	0.23	Open
64	375	394	250	185.28	110	669.04	0.16	0.19	Open
66	41	382	100	48.85	110	100.75	0.15	0.49	Open
67	382	400	100	38.5	110	79.57	0.12	0.31	Open
69	392	59	100	31.53	110	7.87	0.01	0	Open
72	47	397	100	42.92	110	67.33	0.1	0.23	Open
73	397	50	100	38	110	68.91	0.1	0.24	Open
75	50	53	100	36.79	110	68.93	0.1	0.24	Open
76	53	416	100	40.36	110	68.7	0.1	0.24	Open
78	416	56	100	26.9	110	61.14	0.09	0.19	Open
79	56	394	100	5.5	110	43.44	0.06	0.1	Open
81	422	421	50	202.76	110	2.36	0.01	0.01	Open
82	59	346	100	37.57	110	-14.65	0.02	0.01	Open
84	446	424	100	42.47	110	-13.34	0.02	0.01	Open
85	424	74	100	36.78	110	-34.61	0.05	0.07	Open
87	74	349	100	7.33	110	-159.81	0.24	1.14	Open
88	56	62	100	126.62	110	45.97	0.07	0.11	Open
89	62	421	100	41.25	110	32.35	0.05	0.06	Open
90	421	68	100	41.28	110	19.06	0.03	0.02	Open
91	68	71	100	42.43	110	14.32	0.02	0.01	Open
92	71	428	100	6.04	110	-0.61	0	0	Open
93	71	431	100	48.16	110	25.71	0.04	0.04	Open
94	462	86	100	5.9	110	79.32	0.12	0.31	Open
96	74	77	100	52.94	110	28.16	0.04	0.05	Open
97	77	80	100	40.76	110	5.33	0.01	0	Open
99	80	83	100	41.33	110	-18.14	0.03	0.02	Open
100	83	86	100	43.26	110	-50.7	0.07	0.14	Open
102	527	496	50	93.08	110	-6.19	0.04	0.08	Open

Link Results

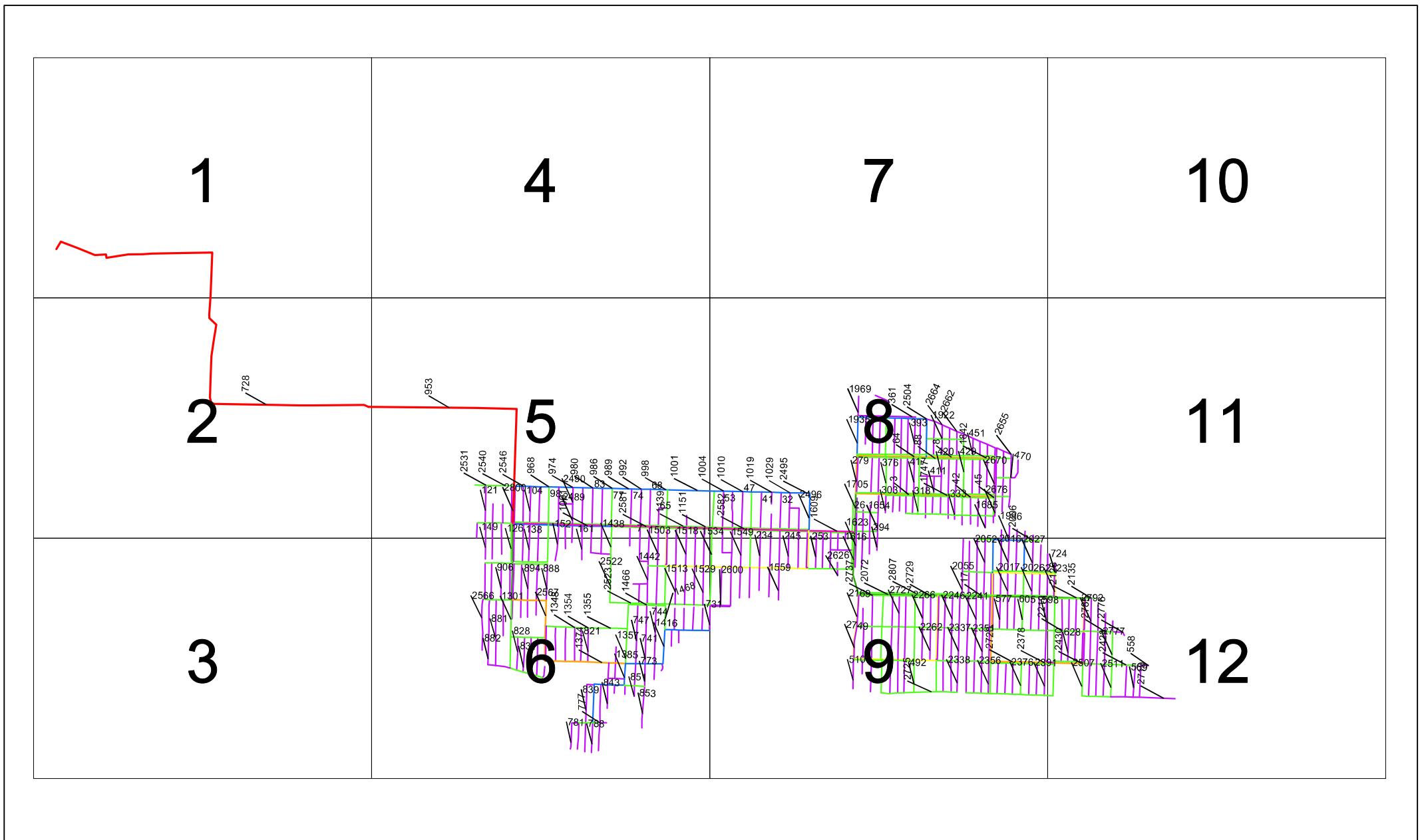
Daily maximum water flow

Emergency case 2

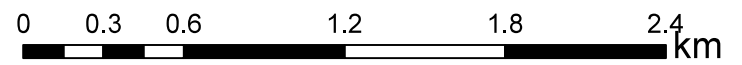
Pipe ID	Start Node	End Node	Diameter (mm)	Length (m)	Roughness	Flow (m ³ /day)	VelocityUnit (m/s)	Headloss (m/km)	status
103	508	89	100	53.78	110	88.32	0.13	0.38	Open
105	89	92	100	50.62	110	73.14	0.11	0.27	Open
106	92	95	100	58.18	110	57.96	0.09	0.17	Open
108	95	503	100	5.04	110	-72.28	0.11	0.26	Open
109	95	98	100	50.26	110	75.62	0.11	0.29	Open
110	98	101	100	40.61	110	64.72	0.1	0.21	Open
111	101	104	100	37.18	110	55.34	0.08	0.16	Open
113	104	107	100	53.69	110	47.49	0.07	0.12	Open
114	107	490	100	4.22	110	54.34	0.08	0.15	Open
115	2755	109	50	172.1	110	6.6	0.04	0.09	Open
116	109	2750	50	6.21	110	1.55	0.01	0.01	Open
117	2764	112	50	165.62	110	6.39	0.04	0.09	Open
118	112	2759	50	5.63	110	1.34	0.01	0	Open
119	671	114	150	6.58	110	230.77	0.15	0.31	Open
120	114	115	100	46.38	110	75.55	0.11	0.28	Open
122	115	117	100	39.45	110	59.68	0.09	0.18	Open
123	117	118	100	45.99	110	45.07	0.07	0.11	Open
124	118	121	100	43.7	110	31.64	0.05	0.06	Open
125	121	672	150	7.45	110	-26.08	0.02	0	Open
127	121	122	100	47.92	110	-7.1	0.01	0	Open
128	122	124	100	43.68	110	-21.51	0.03	0.03	Open
129	124	126	100	41.38	110	-48.63	0.07	0.13	Open
130	126	128	100	43.31	110	-75.75	0.11	0.29	Open
131	128	722	100	7.48	110	-93.83	0.14	0.43	Open
132	584	129	100	4.32	110	104.85	0.15	0.52	Open
133	129	587	100	42.44	110	56.86	0.08	0.17	Open
134	648	130	100	5.08	110	120.52	0.18	0.68	Open
136	130	2357	100	41.11	110	59.61	0.09	0.18	Open
137	2372	132	100	4.83	110	109.03	0.16	0.56	Open
139	132	2377	100	47.73	110	40.76	0.06	0.09	Open
140	138	135	100	48.58	110	-25.32	0.04	0.04	Open
142	623	135	100	3.77	110	67.97	0.1	0.23	Open
143	2387	623	50	48.17	110	-4.19	0.02	0.04	Open
145	623	141	100	5.23	110	5.26	0.01	0	Open
147	141	625	100	41.61	110	27.9	0.04	0.04	Open
8	65	349	250	208.27	110	317.67	0.07	0.05	Open
148	65	394	250	37.67	110	-712.48	0.17	0.21	Open
150	65	346	150	8.39	110	394.81	0.26	0.84	Open

(4) Distribution pipe network model

The followings show distribution pipe network model which has nodes and link (pipe number).

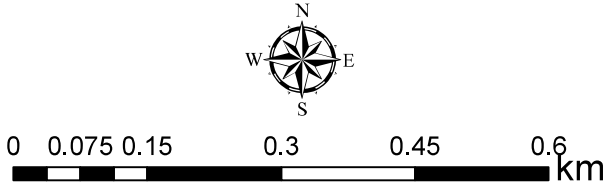


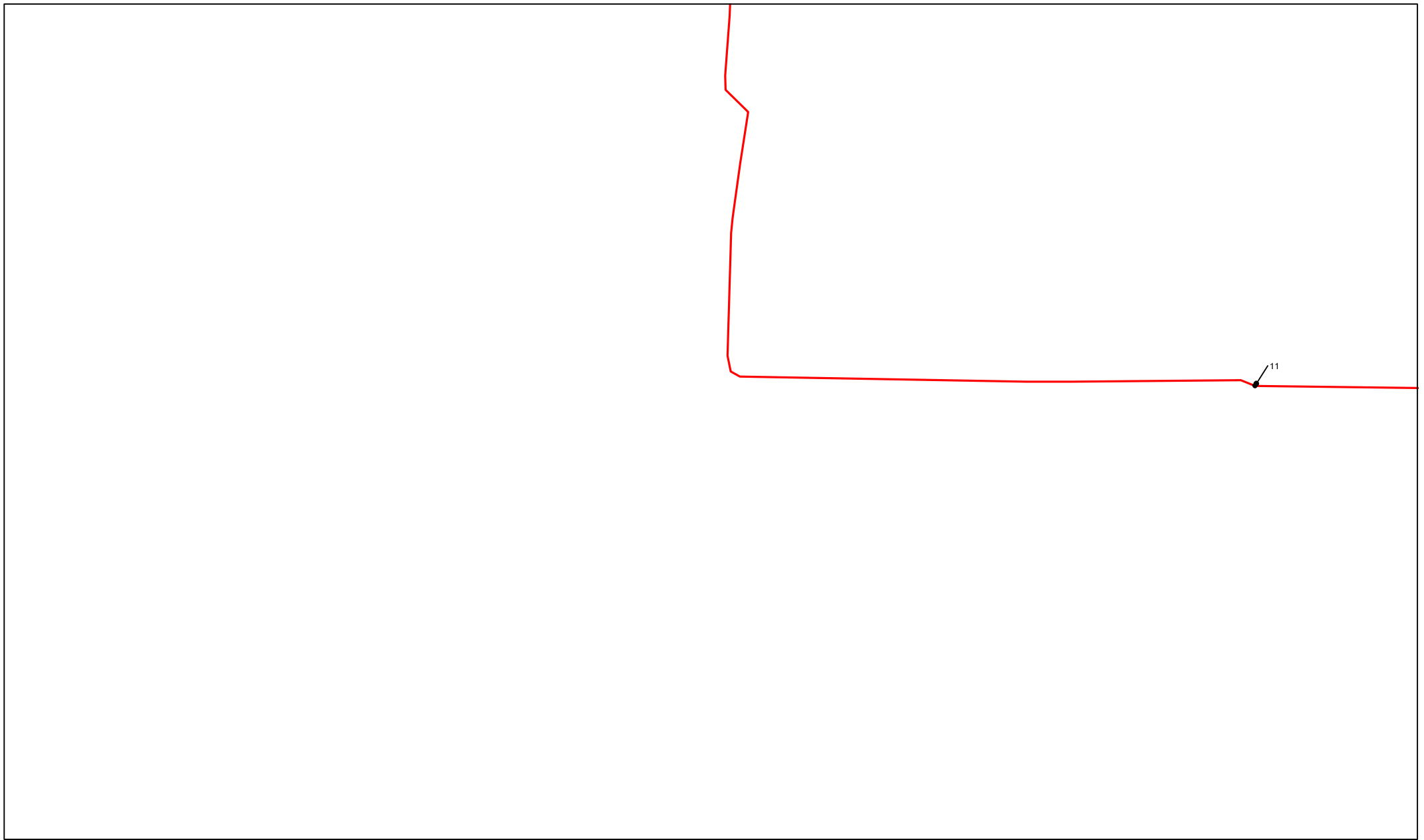
Distribution pipe network model



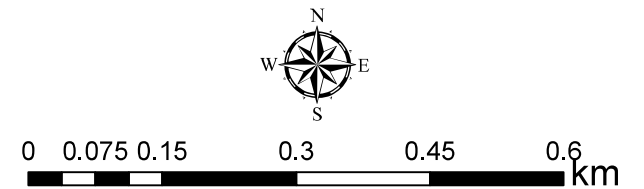


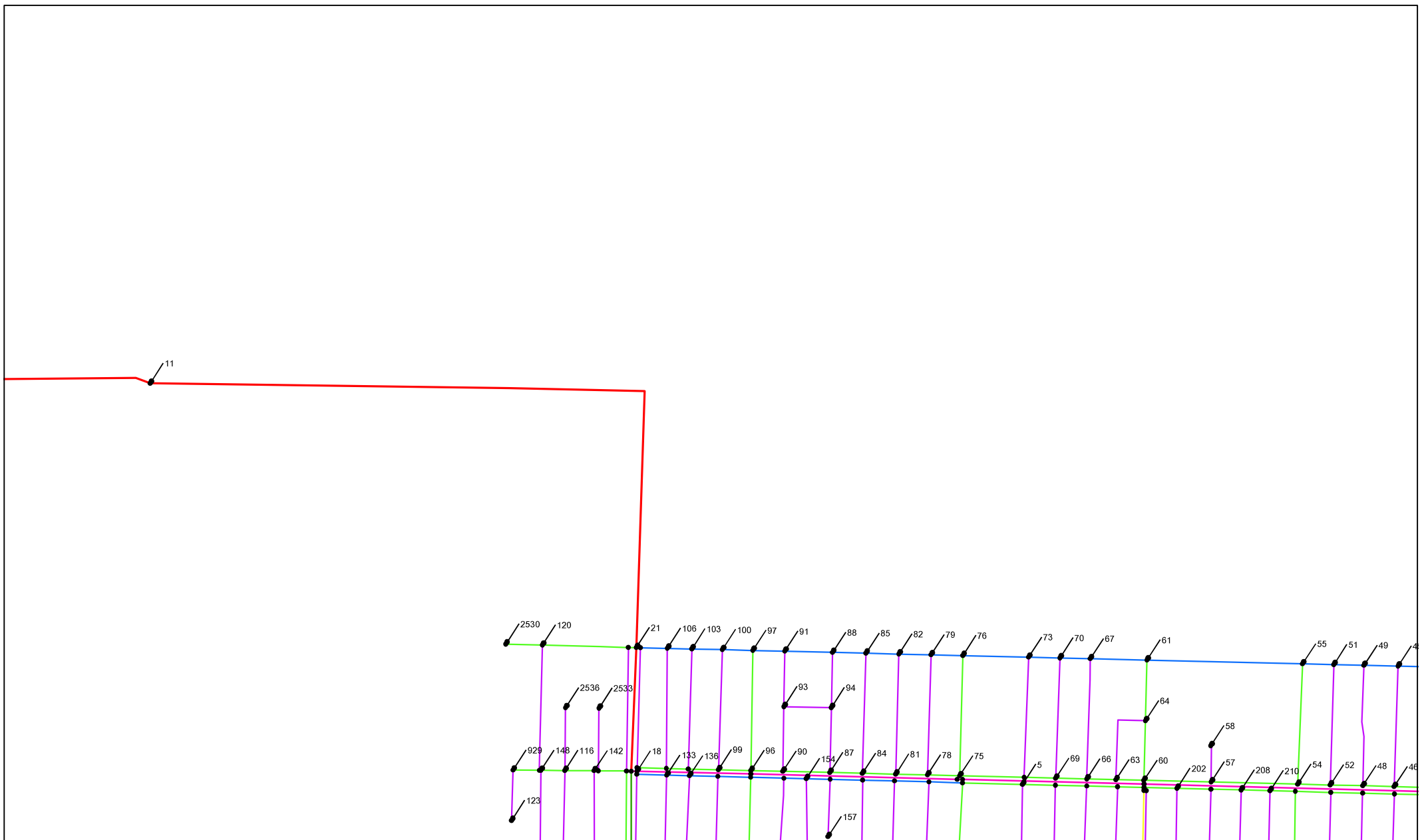
Distribution pipe network model node area 1



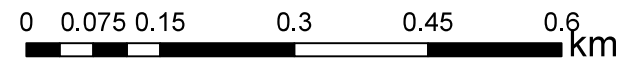


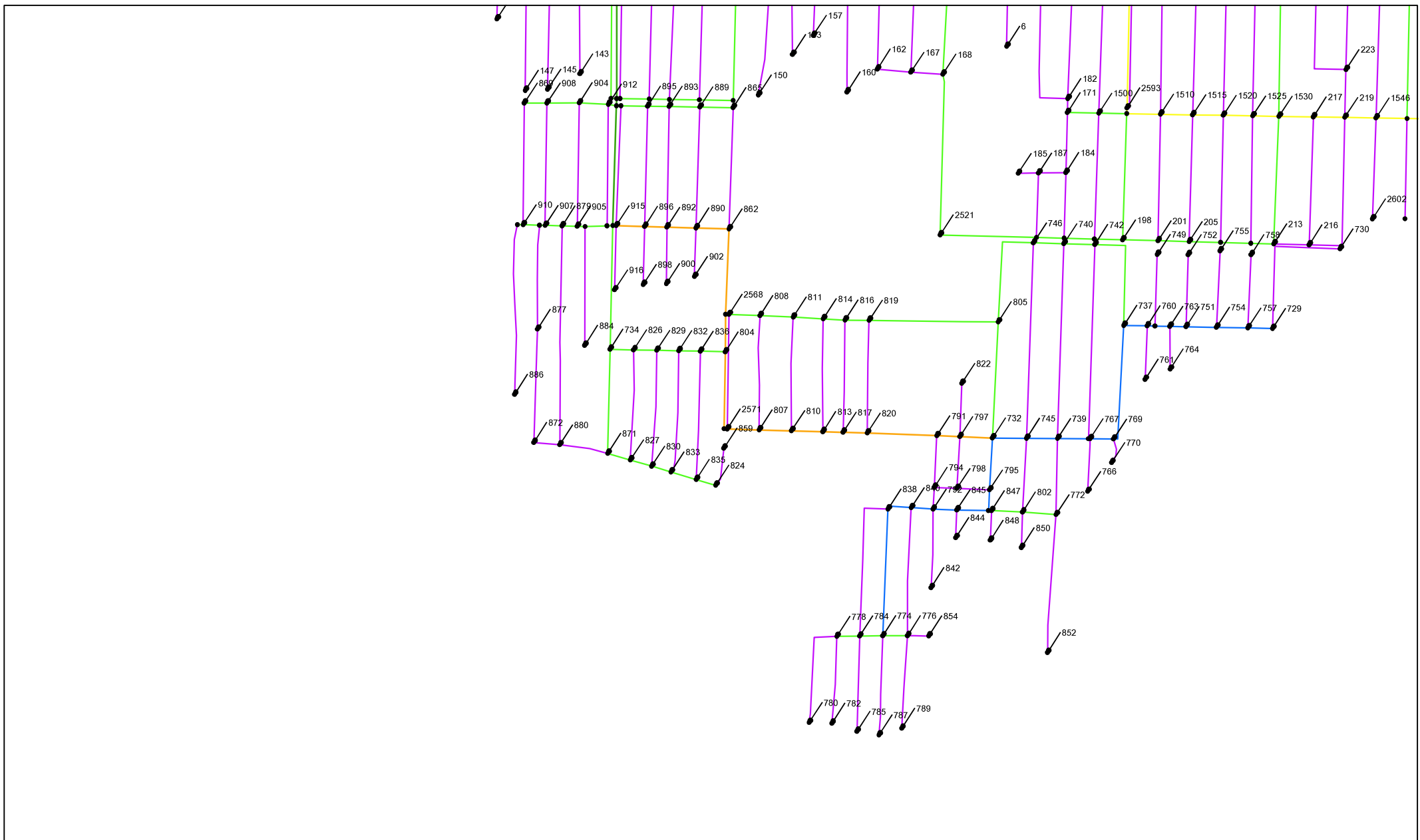
Distribution pipe network model node area 2



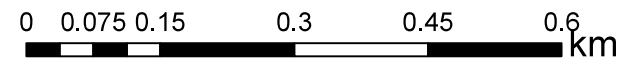


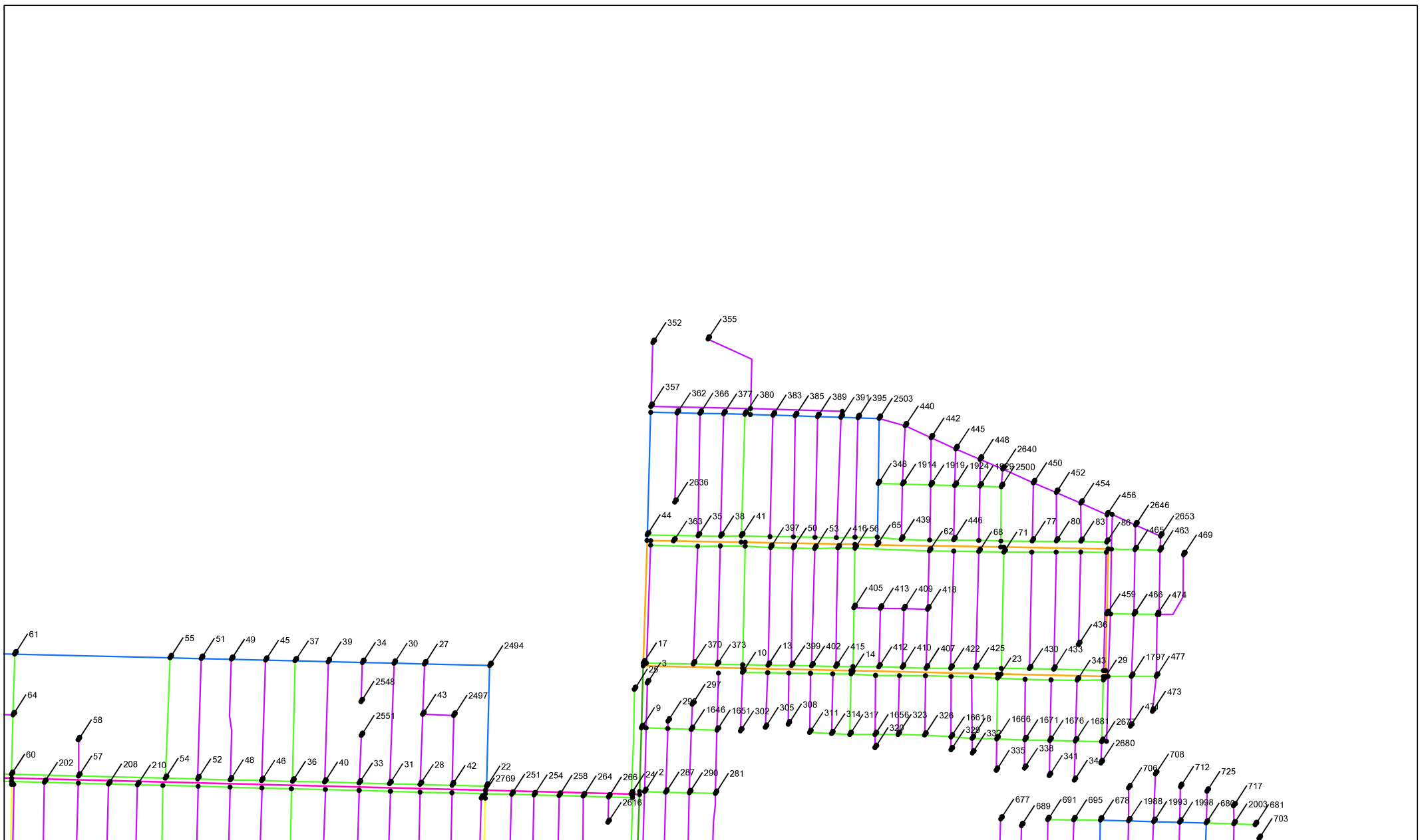
Distribution pipe network model node area 5



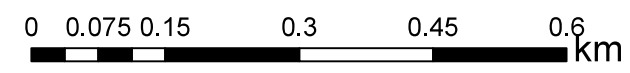


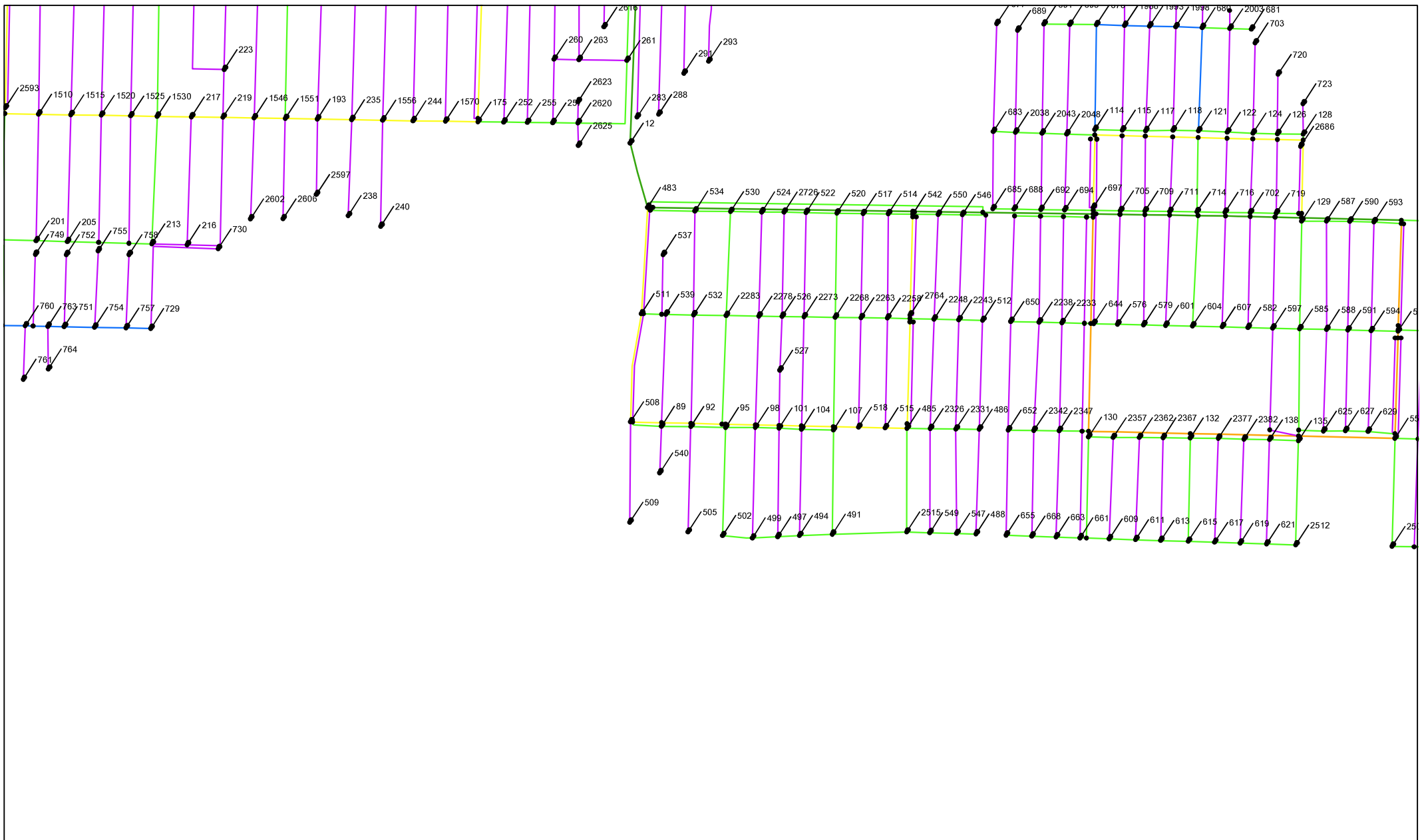
Distribution pipe network model node area 6



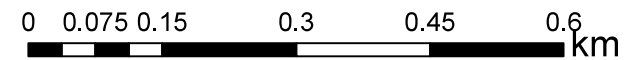


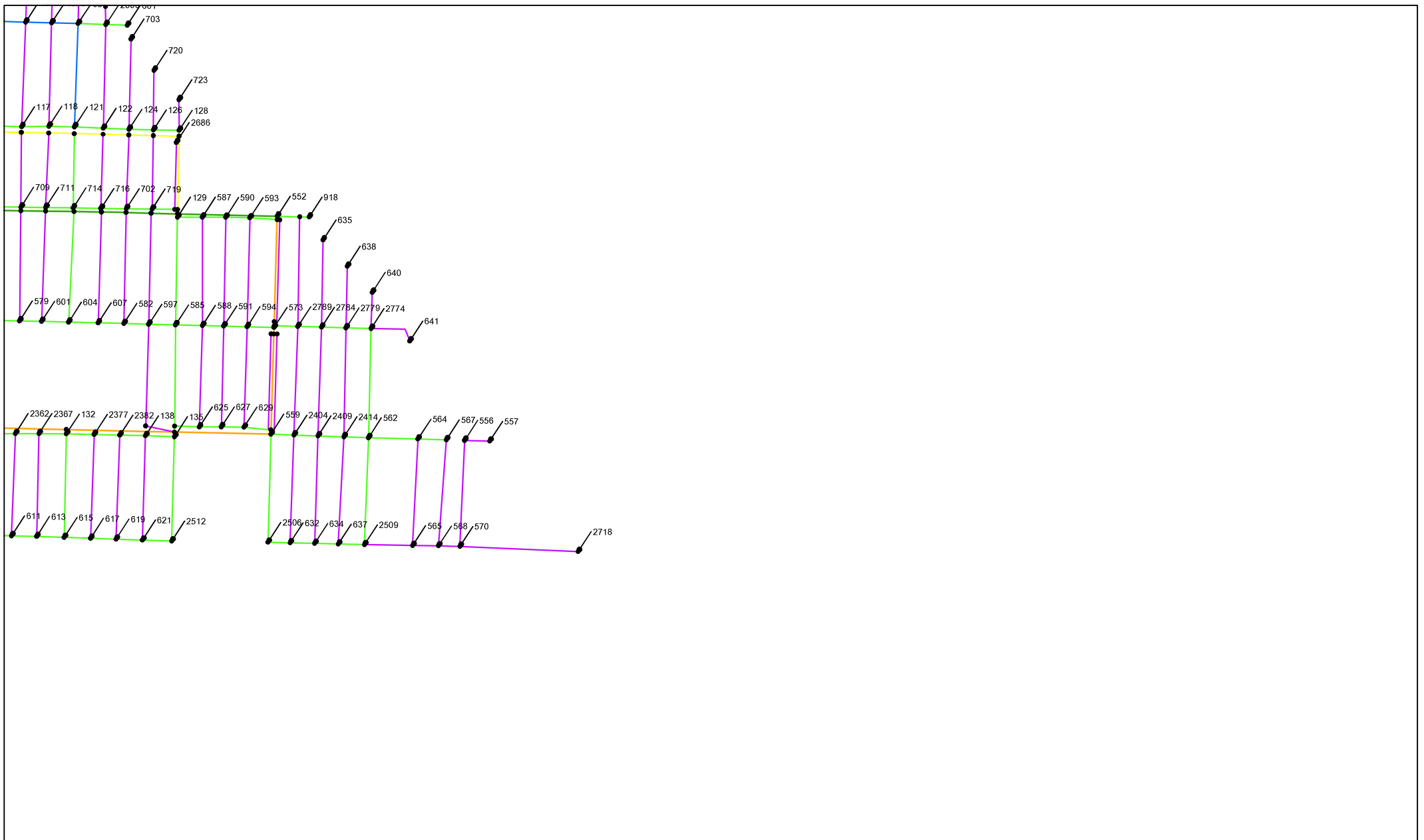
Distribution pipe network model node area 8



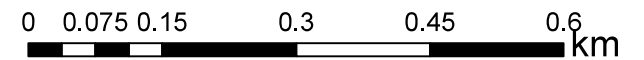
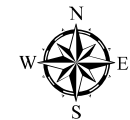


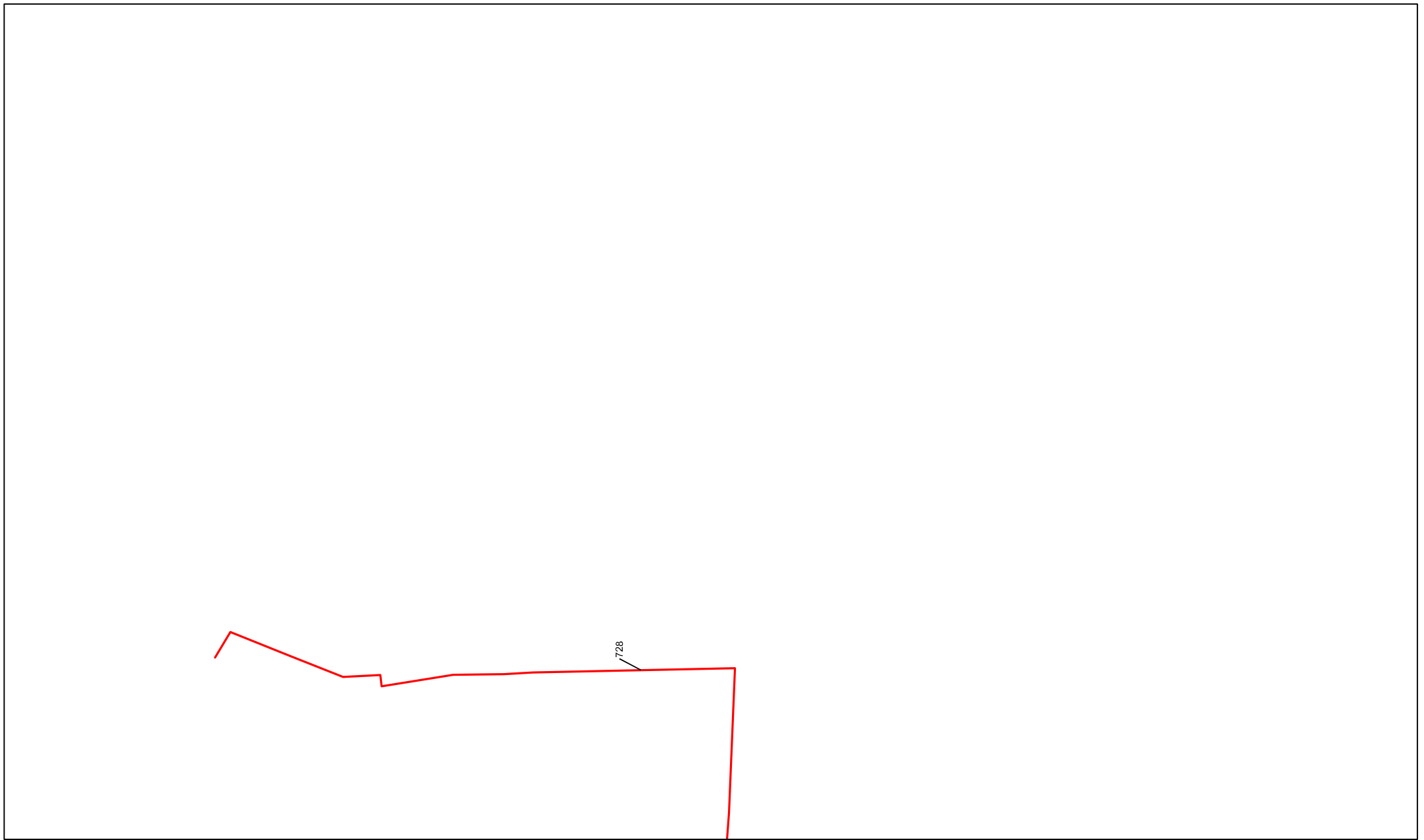
Distribution pipe network model node area 9



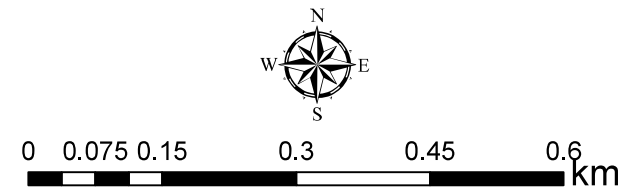


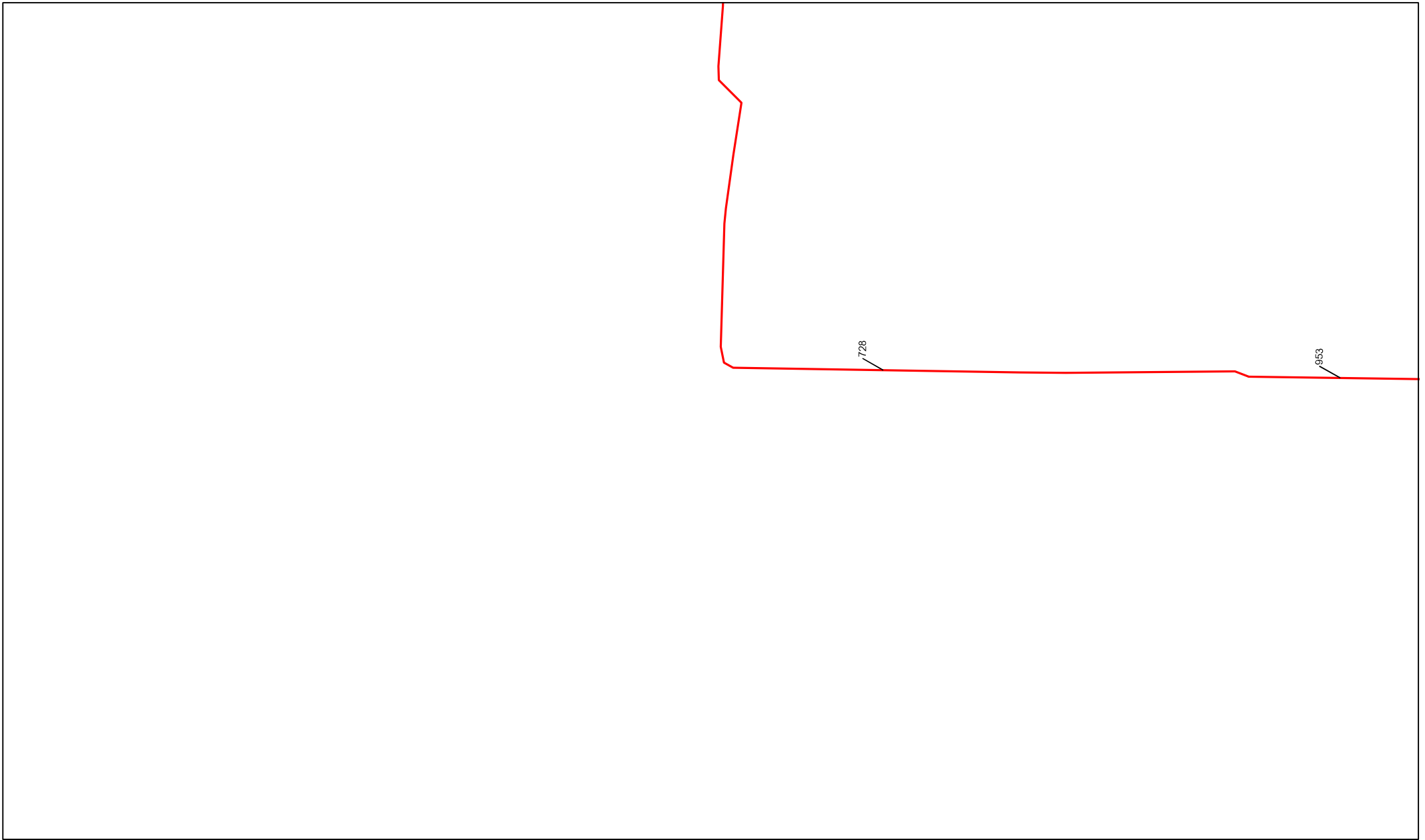
Distribution pipe network model node area 12



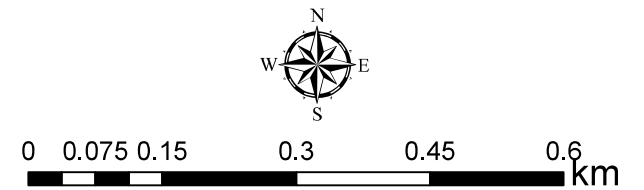


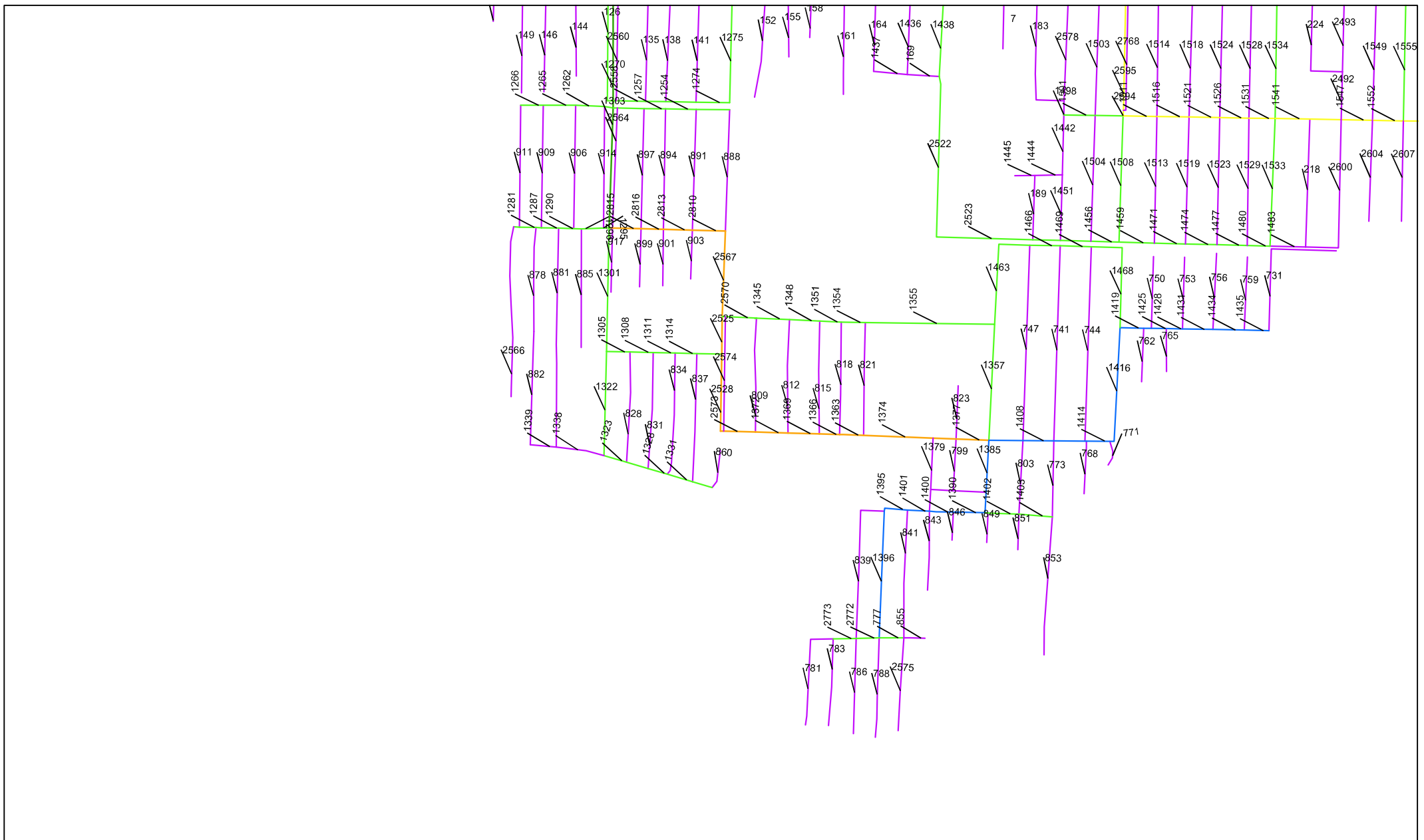
Distribution pipe network model link area 1



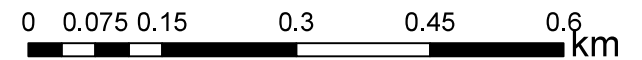


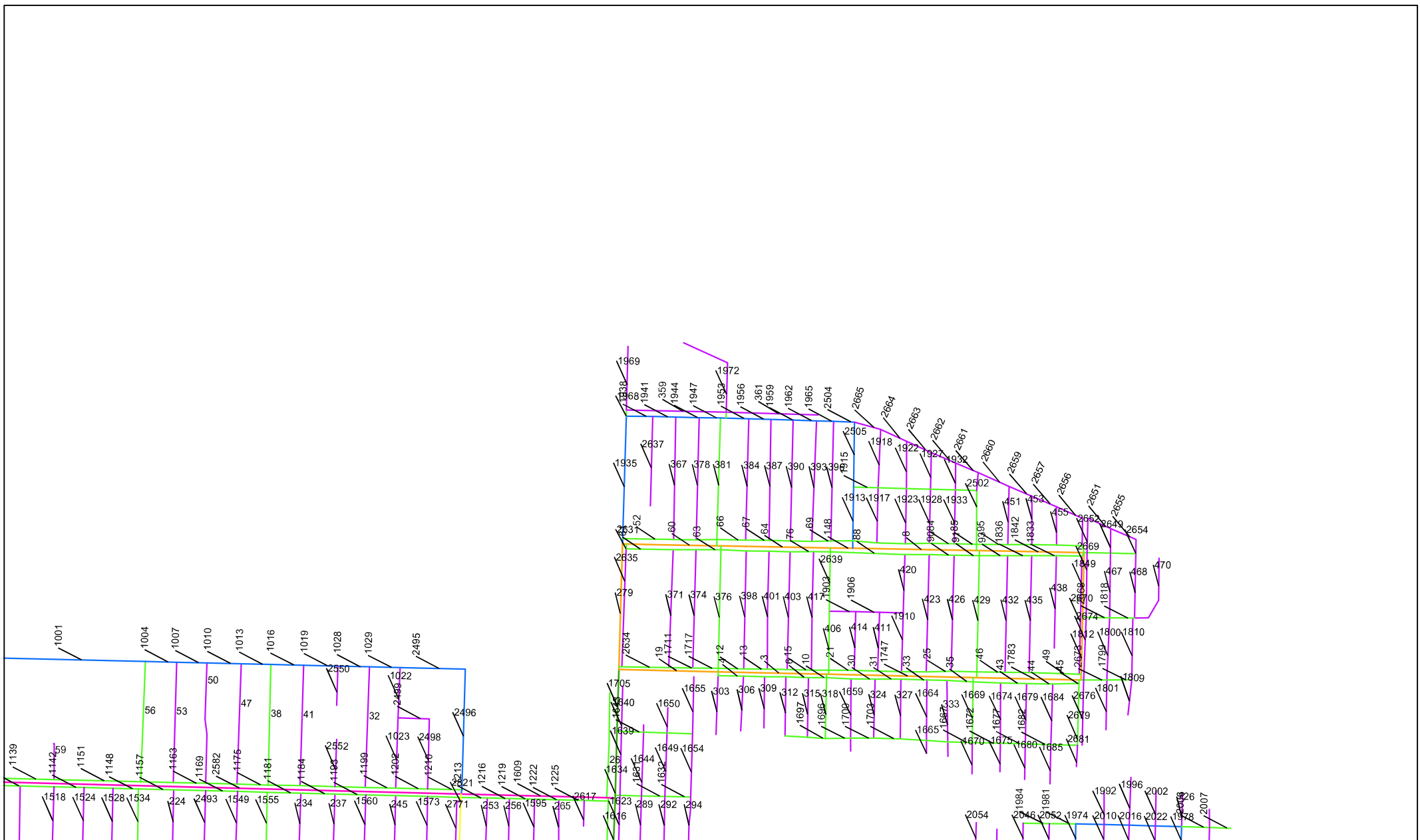
Distribution pipe network model link area 2



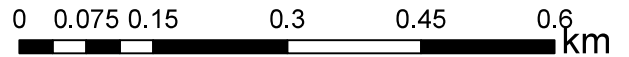


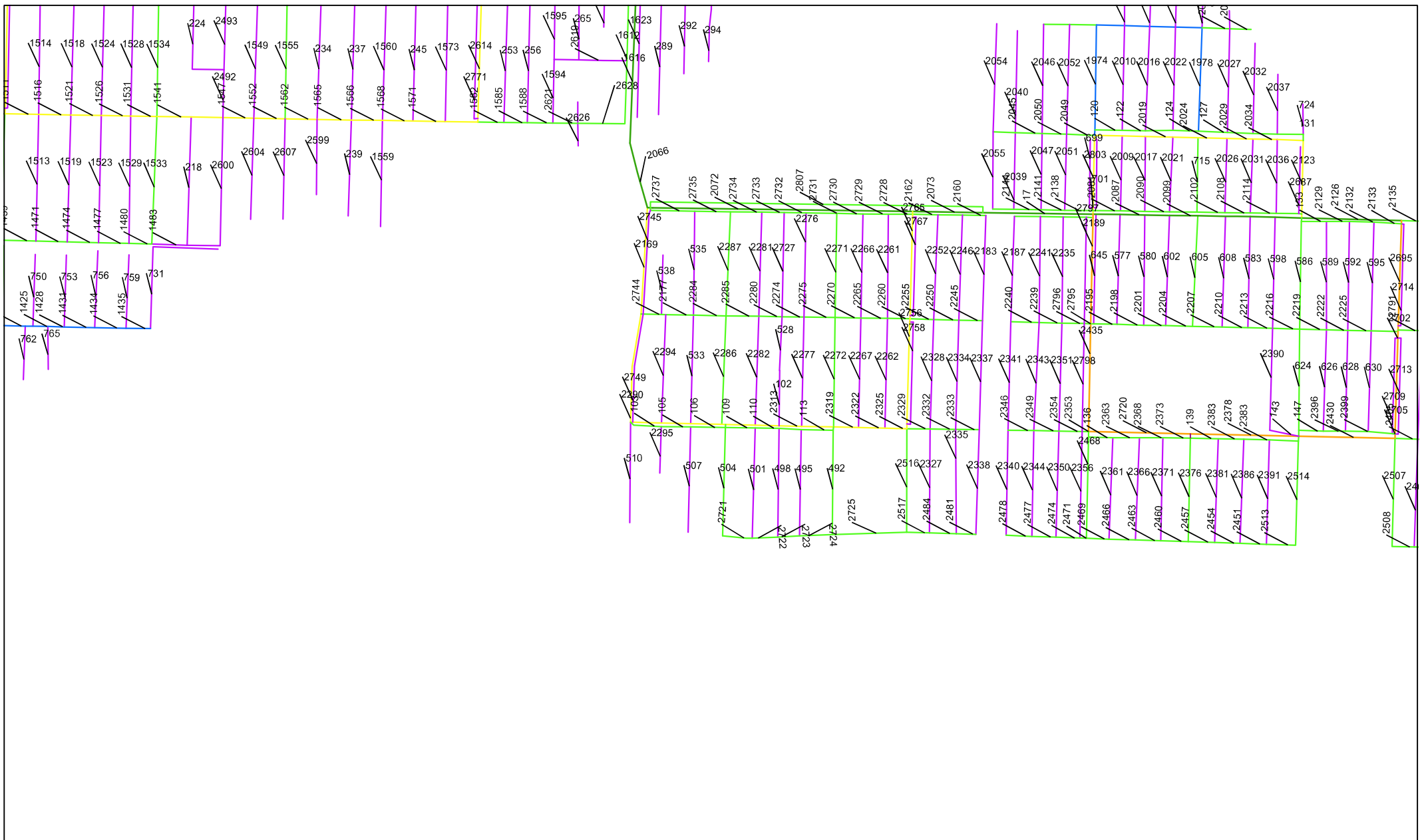
Distribution pipe network model link area 6



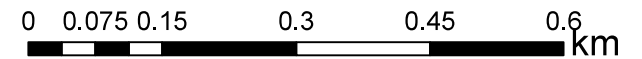
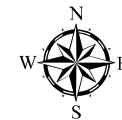


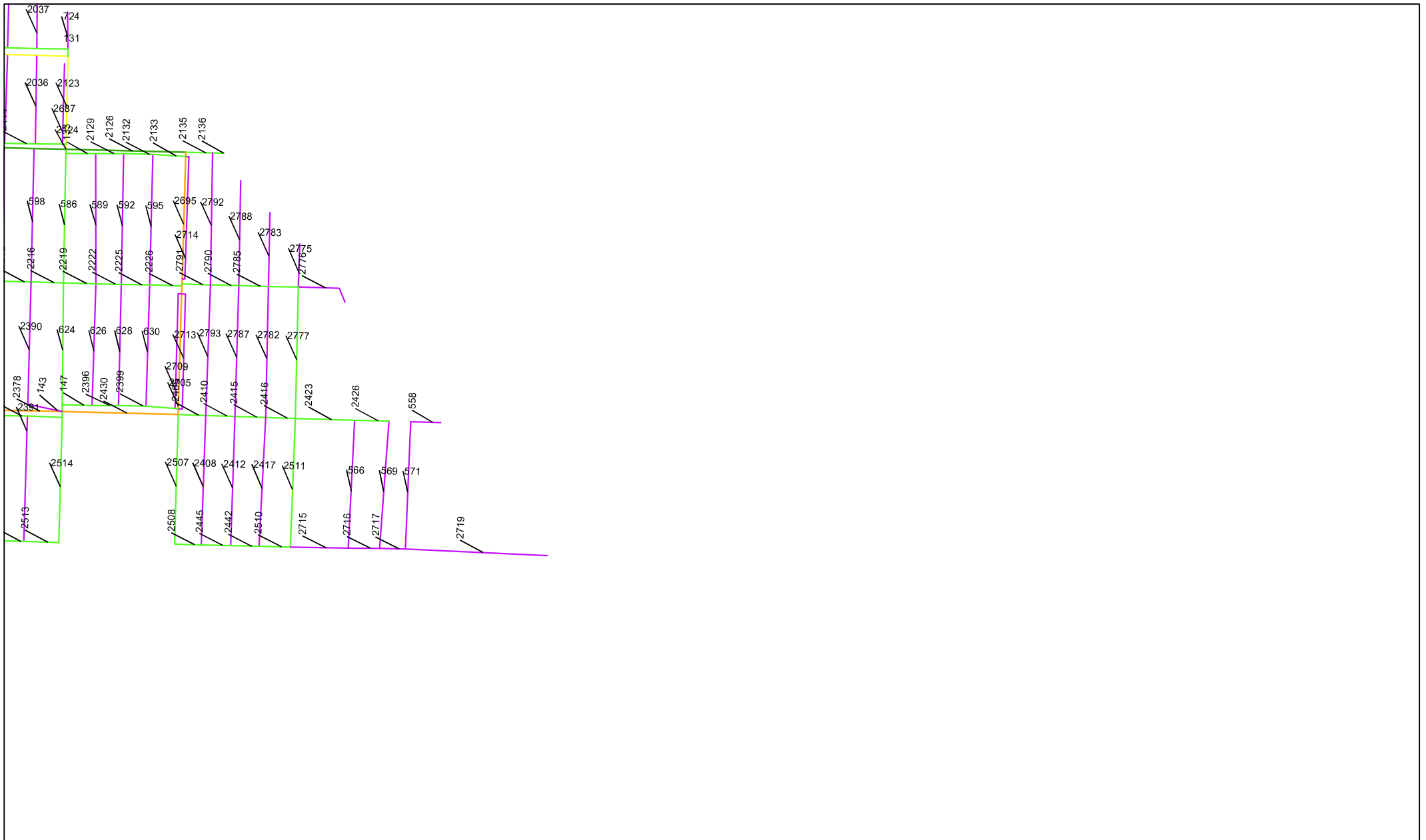
Distribution pipe network model link area 8



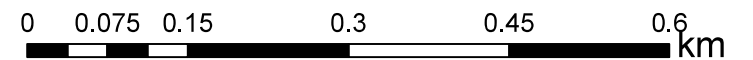
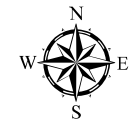


Distribution pipe network model link area 9





Distribution pipe network model link area 12

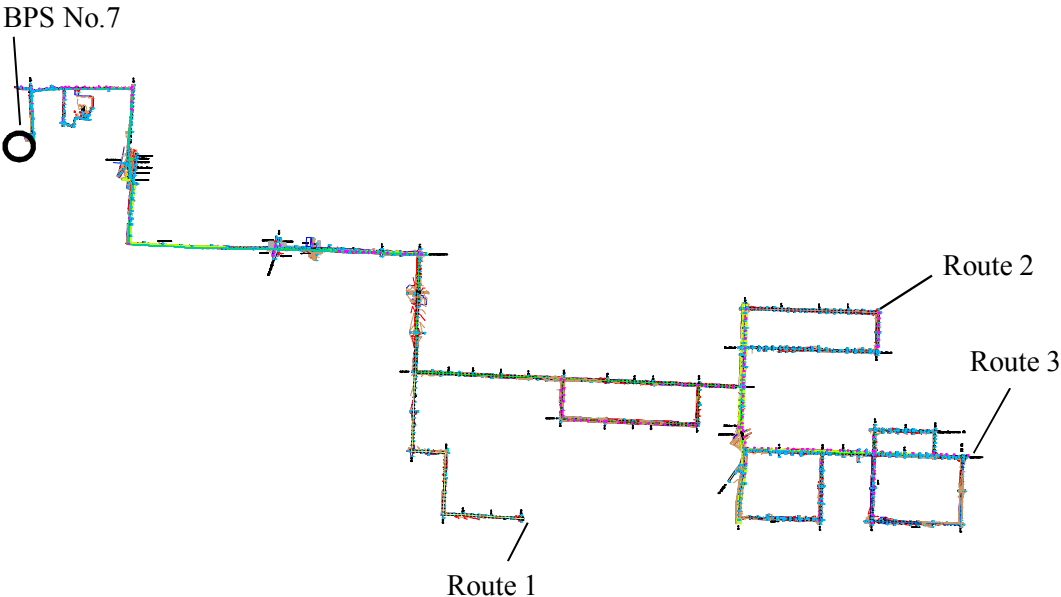


6 - 12 . Study on water hammer countermeasure

(1) Confirmation of existence of water hammer

The distribution method to Pyi Gyi Tagon TS as the planned water supply area is pressure supply system by distribution pump in BPS No.7 and existence of water hammer at the time of breakoff of pump equipment shall be confirmed. If water hammer is confirmed, countermeasure shall be considered.

Based on pump capacity and three (3) distribution main pipeline routes in the planned water supply area, pressure gradient lines are charted as shown below. Three (3) distribution main pipeline routes are shown below.



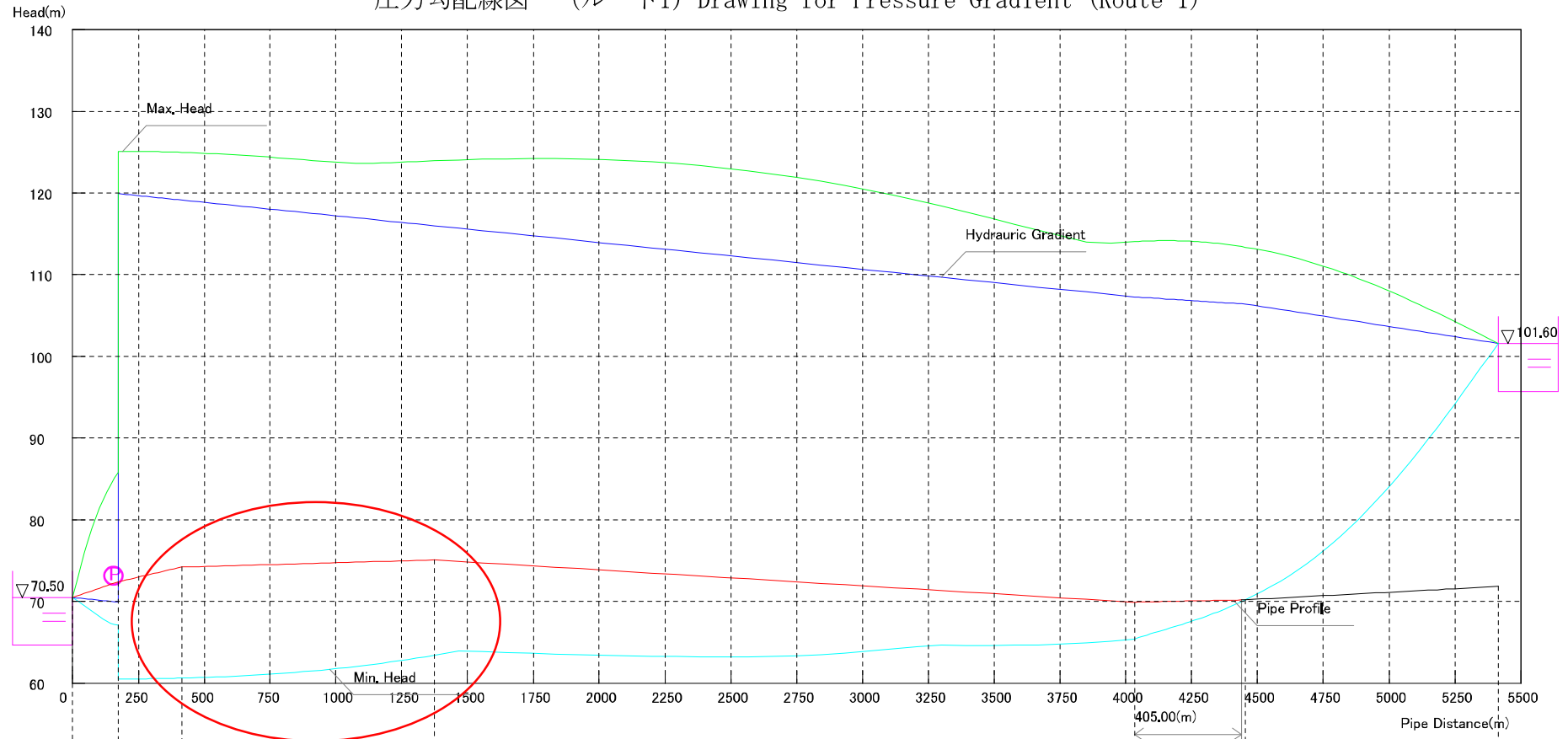
Route 1: Pipeline from BPS No.7 to the point of “Route 1”

Route 2: Pipeline from BPS No.7 to the point of “Route 2”

Route 3: Pipeline from BPS No.7 to the point of “Route 3”

The followings are drawings of pressure gradient. In the drawings, negative pressure of 10 m is indicated at the location marked by red circle and water hammer by water column separation occurs.

圧力勾配線図 (ルート1) Drawing for Pressure Gradient (Route 1)



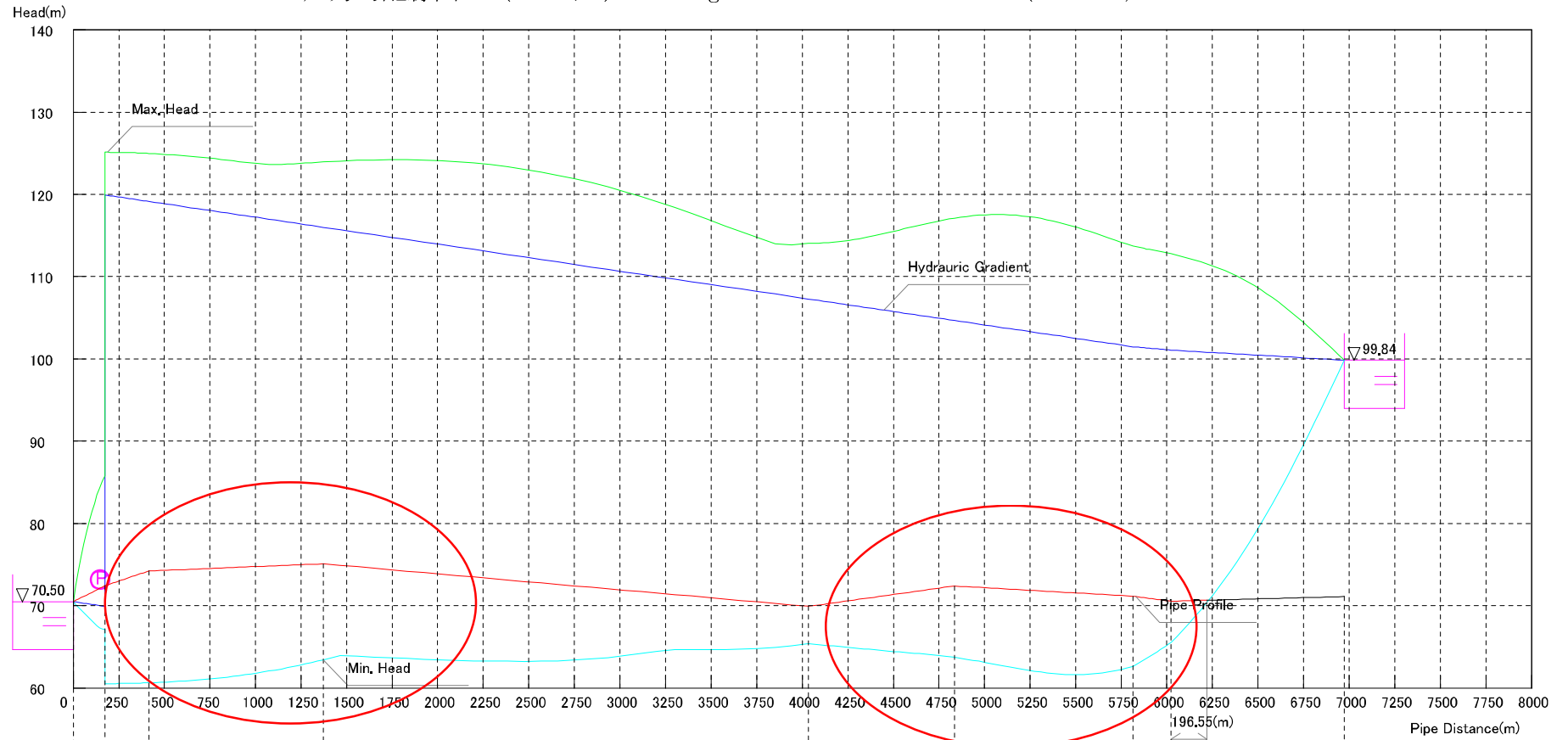
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Paper Size: A3

Ground Level(m)							
Length in Pipe(m)							
Node							
Node Level(m)	P1	P2	P3	P4	P5	P6	P7
Additional Length(m)	0.00	72.60	74.50	76.50	78.50	80.50	82.50
Pipe	P1	P2	P3	P4	P5	P6	P7
Pipe Length(m)	1000	1000	1000	1000	1000	1000	1000
Pipe Diameter(m)	100	100	100	100	100	100	100
Pressure(m)	70.50	70.50	70.50	70.50	70.50	70.50	70.50
Length in Pipe(m)	0	1000	2000	3000	4000	4500	5500

圧力勾配線図 (ルート2) Drawing for Pressure Gradient (Route 2)



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Paper Size: A3

Ground Level(m)

Length in Pipe(m)

Node

Node Level(m)

Additional Length(m)

Pipe

Pipe Length(m)

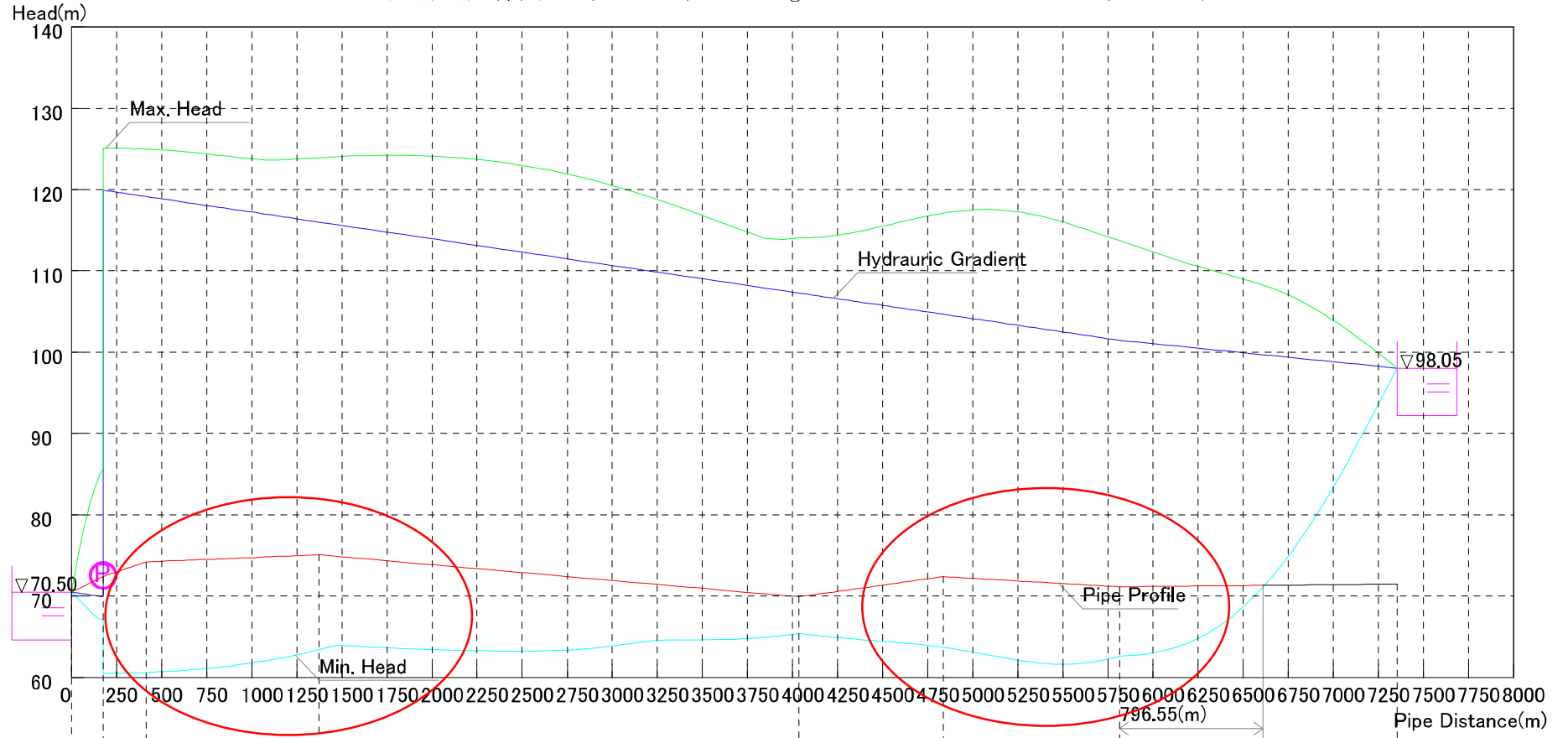
Pipe Diameter(m)

Pressure(m)

Length in Pipe(m)

Node	Node Level(m)	Additional Length(m)	Pipe	Pipe Length(m)	Pipe Diameter(m)	Pressure(m)	Length in Pipe(m)
P1	70.50						
P2	70.50		P1	700	100	100	700
P3	70.50		P2	700	100	100	700
P4	70.50		P3	700	100	100	700
P5	70.50		P4	700	100	100	700
P6	70.50		P5	700	100	100	700
P7	70.50		P6	700	100	100	700
P8	70.50		P7	700	100	100	700
P9	70.50		P8	700	100	100	700
P10	70.50		P9	700	100	100	700
P11	70.50		P10	700	100	100	700

圧力勾配線図 (ルート3) Drawing for Pressure Gradient (Route 3)



Ground Level(m)	Length in Pipe(m)	Node	Node Level(m)	Additional Length(m)	Pipe	Pipe Length(m)	Pipe Diameter(m)	Pressure(m)	Length in Pipe(m)
		P1	70.90	0.00			0.00	0.00	
		P2	72.43	73.90	P1	173.9	0.00	0.00	73.9
		P3	74.22	113.90	P2	240	0.00	0.00	113.90
		P4	76.00	1373.90	P3	960	0.00	0.00	1373.90
		P5	81.82	4033.90	P4	2690	0.00	0.00	4033.90
		P6	72.40	4633.90	P5	900	0.00	0.00	4633.90
		P9	71.10	5013.90	P6	960	0.00	0.00	5013.90
		P12	71.48	7333.90	P9	1590	0.00	0.00	7333.90

(2) Study on measures against the water hammer phenomenon

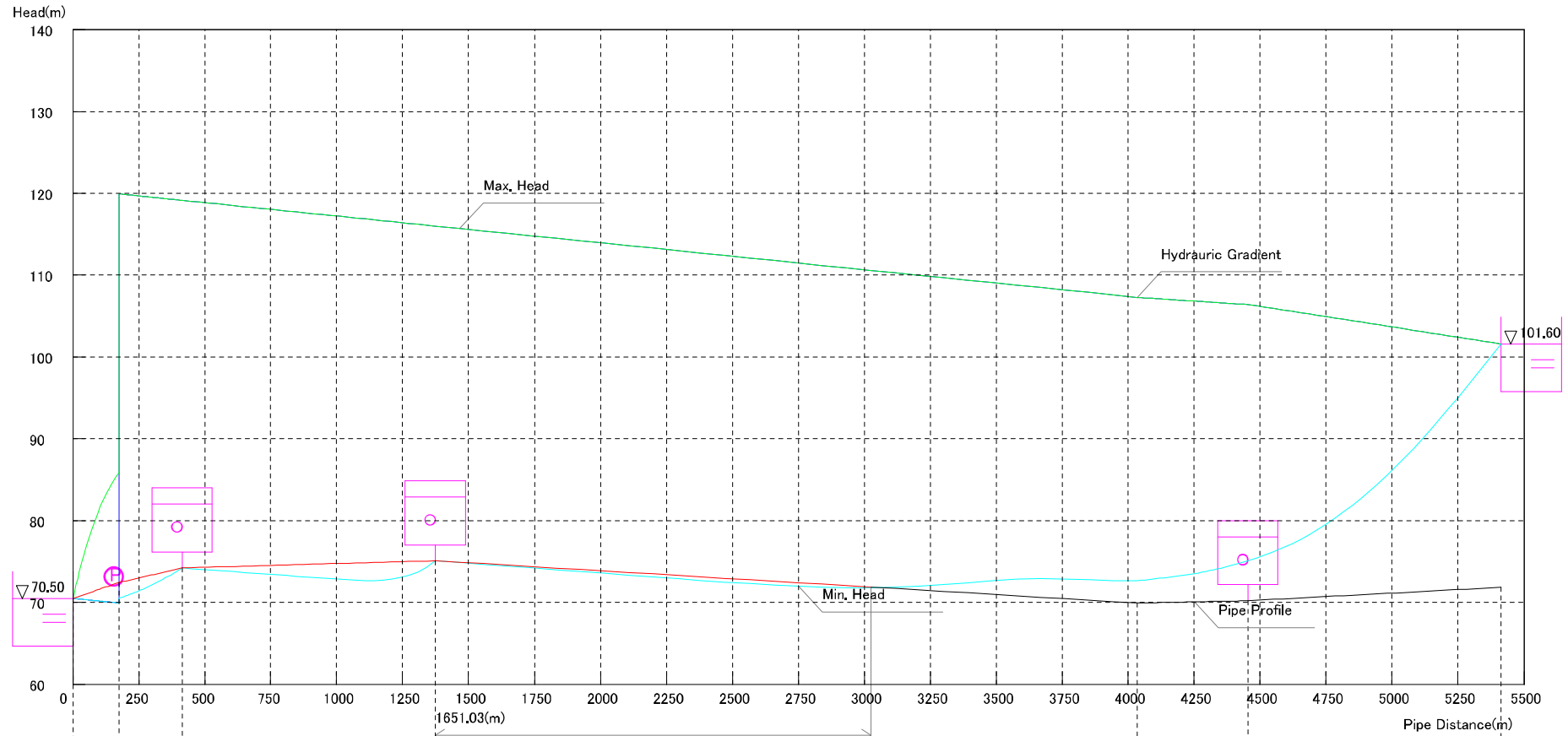
Measures to mitigate water hammer phenomenon include installation of flywheel, surge tank, air chamber, etc. However, it was decided to install several air valves with the function of intake and exhaust to inhibit the water hammer phenomenon in this study.

The reason is that the negative pressure obtained from the results was small. Moreover, the terrain of the planned service area is relatively flat with elevation ranging 70 to 75 m, therefore, large back pressure due to difference in elevation is not anticipated.

To ensure space for installing flywheel, the construction cost of the entire pumping station will increase because the pumping station site area will increase. Moreover, the working costs inclusive of materials for flywheel as well as surge tank will increase. On the other hand, since measures against large water hammer pressure are considered unnecessary, the measure using air valves was adopted.

The results are shown on the next page.

圧力勾配線図 水撃対策用空気弁あり (ルート1) Drawing for Pressure Gradient, with air valve for prevention of water hammer (Route 1)

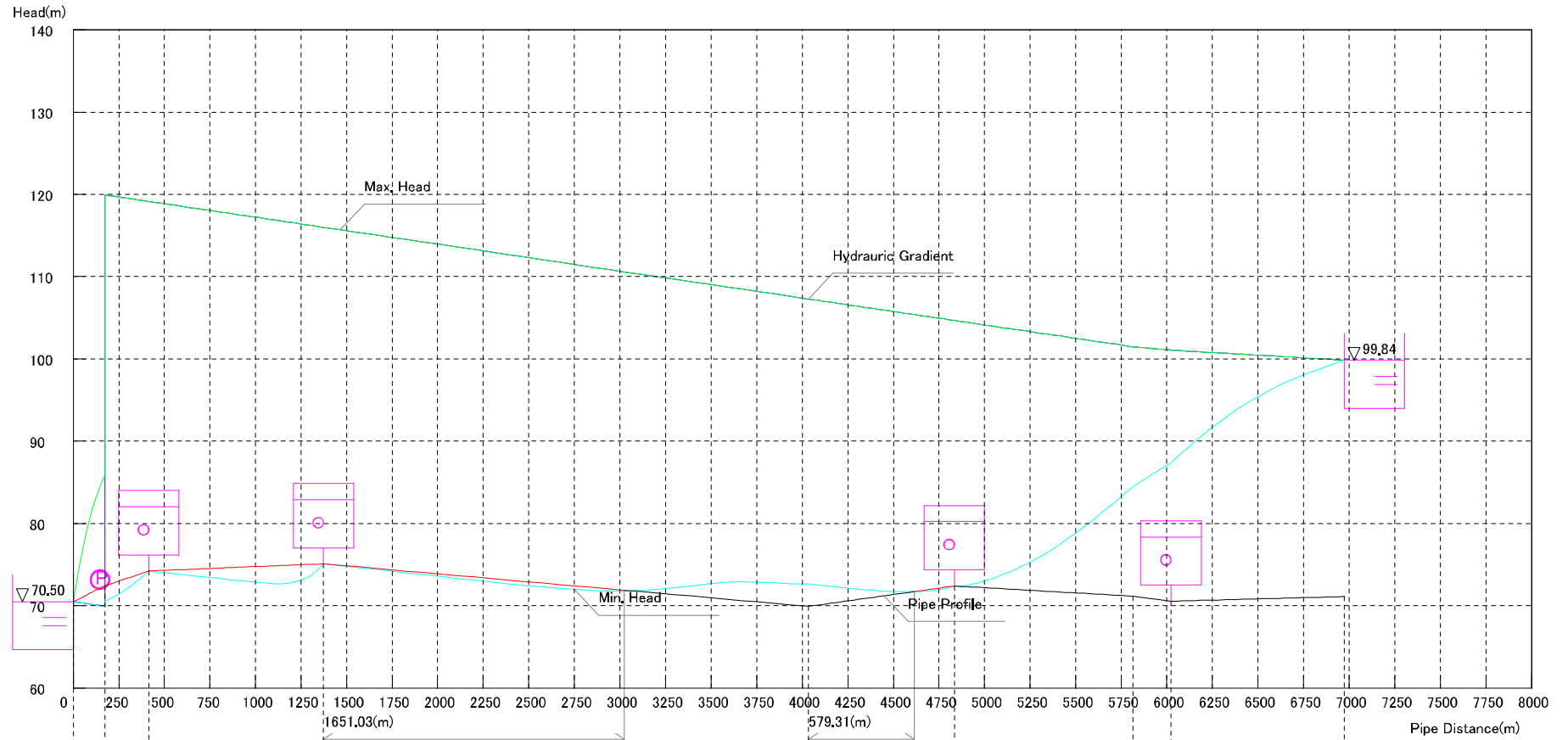


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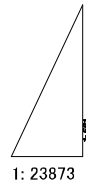
Paper Size: A3

Node	Node Level(m)	Additional Length(m)	Pipe Length(m)	Pipe Diameter(m)	Pressure(m)	Length in Pipe(m)
N1	70.50	0.00	0.00	0.00	0.00	0.00
N2	77.4	77.4	24.00	0.00	0.00	24.00
N3	77.4	0.00	0.00	0.00	0.00	0.00
N4	80.0	22.6	0.00	0.00	0.00	22.60
N5	80.0	0.00	0.00	0.00	0.00	0.00
N6	74.0	0.00	0.00	0.00	0.00	0.00
N7	101.60	27.6	0.00	0.00	0.00	27.60

圧力勾配線図 水撃対策用空気弁あり (ルート2) Drawing for Pressure Gradient, with air valve for prevention of water hammer (Route 2)



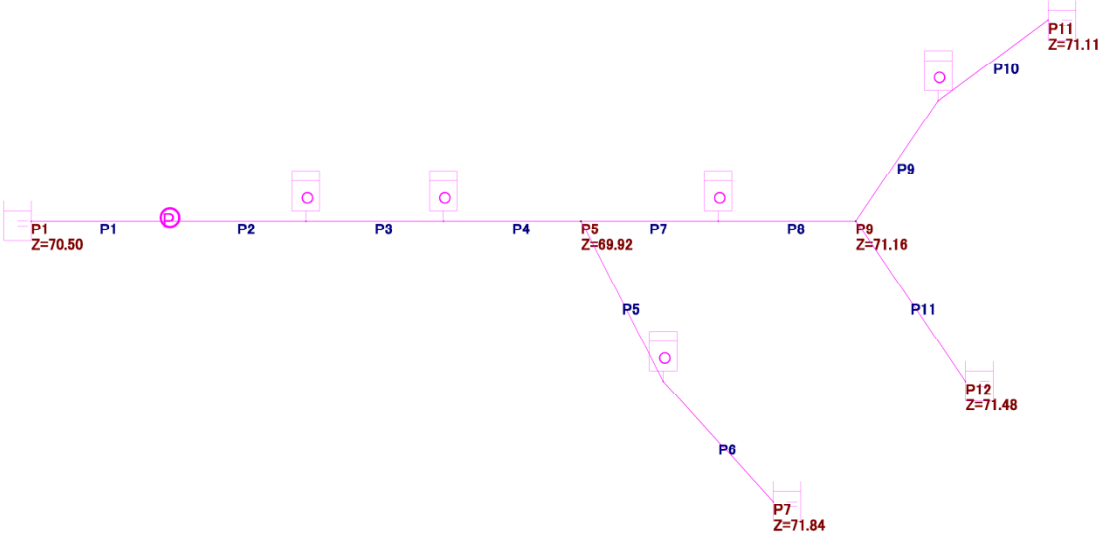
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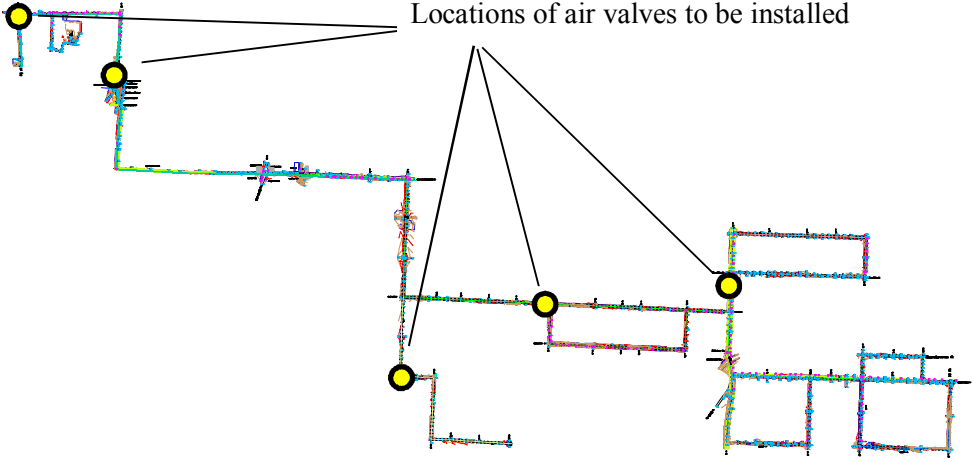
Paper Size: A3

Node	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11
Node Level(m)	70.50	74.8	74.22	70.0	68.8	70.0	71.6	71.0	71.5	71.1	
Additional Length(m)	0.00	13.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pipe	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11
Pipe Length(m)	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00
Pipe Diameter(m)	100	100	100	100	100	100	100	100	100	100	100
Pressure(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Length in Pipe(m)	0	13	26	39	52	65	78	91	104	117	130

Based on the result of analysis, locations of air valves to be installed for prevention of water hammer are shown in the drawings of analysis model and distribution pipe route.



Analysis model drawing (with air valve)



Location map of air valves in distribution pipe network for prevention of water hammer

6 - 13 . Reference Information on Consideration of Level of Connection Fee

Level of typical connection fee provided by MCDC was studied by comparing to the data of other local cities in Myanmar, other lower developing countries, average household income level and the benchmark of the World Bank.

(1) Comparison of connection fee and ratio to unit tariff rate per m³

- **Level of connection fee** in other 4 cities in Myanmar range from 6,700 to 27,900 Kyat, which are equivalent to 1/20 – 1/5 of the connection fee of Mandalay City
- **Ratio of connection fee to water tariff per m³** in other 4 cities ranges from 76:1 to 167:1, which are equivalent to about 1/32 – 1/15 of that of Mandalay City
- The appropriate level of connection fee of Mandalay City ranges from 4,180 to 9,185 Kyat, applying the range of the ratio in the other 4 cities as a guide

City	Connection fee for domestic (Kyat) ^{*1}	Ratio to unit tariff rate for domestic per m ³ ^{*2}
Mandalay (MCDC)	134,622	2,447 : 1
Yangon (YCDC)	6,700-27,900	76 : 1 ^{*3}
Magway	22,600	113 : 1
Mawlamyaine	25,000	167 : 1
Monywa	10,000	125 : 1 ^{*4}

*1 --- The information source of other cities is based on “UNICEF-JICA Urban WASH Sector Survey”.

*2 --- Formula: Connection fee / Unit tariff rate for domestic

*3 --- The connection fee of 3/4” size as the most popular size is applied.

*4 --- It is calculated by dividing monthly flat rate by monthly average consumption volume.

Source: Data from JICA Water Sector Survey

(2) Comparison of ratio of connection fee to GNI per capita

- **Ratio of connection fee to Gross National Income (GNI) per capita** of the available data from other developing countries ranges from 2% to 4%.
- This ratio in case of Mandalay is estimated at 12%, which seems to be relatively higher value.
- If 4% is applied as a benchmark to the case of Mandalay City, the appropriate level of connection fee is 5,385 Kyat.
- Ratio of connection fee to GNI per capita in 5 cities is shown below.

Country	Connection fee for domestic (Kyat) ^{*1}	GNI per capita (US\$, Year)	Ratio to GNI per capita (%)
Mandalay (MCDC)	134,622	1,144 (2011)	12.3%
Yangon (YCDC)	6,700-27,900	1,144 (2011)	6.1%
India (20 utilities average)	36,251	1,514 (2011)	2.5%
Vietnam (67 utilities average)	33,450	1,343 (2011)	2.6%
Bangladesh (12 utilities average)	18,430	764 (2011)	2.5%

Country	Connection fee for domestic (Kyat) *1	GNI per capita (US\$, Year)	Ratio to GNI per capita (%)
Uganda (NWSC)	18,126	558 (2011)	3.4%

[Note]

* The connection fee of Mandalay City and Yangon City is calculated by converting from US\$ to Myanmar Kyat.

*Exchange rate: 1 US\$=953.99 Kyat, 1 VND=0.00005 US\$,

1 BDT=0.01266US\$ (<http://www.oanda.com>)

Source (connection fee):

India --- ADB (2007): Benchmarking and Data Book of Water Utilities in India

Vietnam --- WB (2002): Benchmarking the Urban Water Sector Vietnam

Bangladesh --- WSP (2009): Benchmarking for Improving Water Supply Delivery

Uganda --- Promoting justice in Uganda's urban project (2009)

Source (GNI)

<https://data.un.org/CountryProfile.aspx?crName=Uganda>

(3) Comparison of ratio of connection fee to monthly household income

- **Ratio of connection fee to average household income per month** in other 3 cities range from 3 to 8 %.
- In case of Mandalay City, the amount of connection fee is about 43% of the average monthly household income, which is relatively higher.
- If the ratio of other 3 cities is applied to the case of Mandalay City, the appropriate level of connection fee ranges from 8,695 to 25,773 Kyat.

City	Ratio to monthly household income (%)	Ratio to monthly household income of the lower 20% income class
Mandalay (MCDC)	43.3%	153.8%
Yangon (YCDC)	2.8%*1	—
Mawlamyaine	8.3%	—
Monywa	4.0%	—

*1 --- The connection fee of 3/4" size as a most popular size is applied

- The general connection fee of MCDC (134,622 Kyat) is equivalent to 154% and 43% of the monthly household income considering the income of the lower 20% class and the overall average income in Pyi Gyi Tagon TS, respectively.
- For the lower income class, the appropriate level of connection fee may range from 2,450 to 7,263 Kyat, if the ratio in the 3 cities is applied as a guide.

(4) The benchmark of World Bank

World Bank proposed a benchmark that the maximum level of new connection fee should be less than 5% of monthly household income⁶, and mentions that it is widely accepted in general⁷. If this

⁶ Tynan & Kingdom (2002) "Effective water service provision: performance targets for a well-run utility", World Bank, Washington DC

⁷ Richard Franceys & Esther Gerlach (2006) "Charging to enter the water shop?", Centre for Water Science Cranfield University

benchmark is applied to Pyi Gyi Tagon TS, the maximum level of connection fee is estimated as 12,500 - 15,525 Kyat.

(5) Remarks and recommendations

Considering the abovementioned discussion from item (1) to (4), it could be fair to say that the current level of connection fee of MCDC is relatively high, especially, if the affordability of the lower income household is taken into account. The current connection fee presumably is thought as a high burden for potential new customers. It could be considered as a discouraging factor for potential new customers who intend to get connected to piped water supply services of MCDC.

Hence, it is appropriate that MCDC take the following measures; (1) to reduce connection fee for new customer, or (2) to adopt other subsidy options to eliminate the financial burden on potential new customers.

As mentioned in the main report, MCDC already agreed to the policy that only registration fee will be collected from the new customer in the case of implementation of this Project for house connection to new networks.