

## **ANNEX**

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## **Annex 1 Design Calculation Sheet**

## **Annex 1.1 Alternative for Transmission System**

## Annex 1 Design Calculation Sheet

### Annex 1.1 Alternative for Transmission System (From the Sources to Hlawga Terminal Reservoir)

	Route		Planned flow rates (Q)			Flow factor (C)	Pipe (m)	Elevation/Head			Head loss (dH) (m)	Diameter (D)			Hydro grad. (dH/L) (0/00)	Velocity (V)		Trans. method
	From	To	Daily (m3/day)	Hourly (m3/hr)	(m3/s)			H1 (ft)	Pump head (m)	H2 (ft)		Calculated (m)	inch	Nominal (mm)		Cal. (m/s)	Nominal (m/s)	
<b>1) Proposed Pipeline From Ngamoeyeik to Hlawga Water Treatment Plant</b>																		
	Ngamoeyeik	Hlawga																
Case 1			60 m pump head and one line without existing line															
	Ngamoeyeik	Terminal Res	411,000	17,125	4.8	120	45000	81	60	197	45	71.0	1.79	70	1800	1.6	1.9	1.9 Pump
Case 2			60 m pump head and one line with existing line															
	Ngamoeyeik	Existing line	411,000	17,125	4.8	120	30000	81	60	197	123	47.3	1.79	70	1800	1.6	1.9	1.9
		Existing line portion	224,000	9,333	2.6	120	9000	123			76	14.2		56	1422	1.6		
		Duplication of existing line	187,000	7,792	2.2	121	9000	123			76	14.22	1.32	52	1350	1.6		
		End of existing pipe to TR	411,000	17,125	4.8	121	6000	76			45	9.5	1.78	70	1800	1.6		
Case 3		56 inch x 1	411,000	17,125	4.8	120	45000	81	220	721	45	231.0	1.41	56	1500	5.1	3	2.7 Pump
Case 4		56 inch x 2	205,500	8,563	2.4	120	45000	81	50	164	45	61.0	1.42	56	1500	1.4	1.5	1.3 Pump
<b>2) Proposed Pipeline From Hlaing Water Treatment Plant to Hlawga Terminal Reservoir</b>																		
	Hlaing intake	Hlawga	984000	41000	11.4													
			(Maximum river water source)															
Case 1		1 line	1,000,000	41,667	11.6	120	36000	30	60	197	37	57.9	2.5	98	2600	1.6	2.4	2.2 Pump
Case 2		2 lines	500,000	20,833	5.8	120	36000	30	60	197	37	57.9	1.92	76	2000	1.6	2	1.8 Pump
Case 3		3 lines	333,333	13,889	3.9	120	36000	30	60	197	37	57.9	1.65	65	1650	1.6	1.8	1.8 Pump
Case 4		4 lines	250,000	10,417	2.9	120	36000	30	60	197	37	57.9	1.48	58	1500	1.6	1.7	1.6 Pump

## **Annex 1.2 Design for Transmission System**

## Annex 1.2 Design for Transmission System (From Terminal Reservoir to Service Reservoirs)

	Service Reservoir		Planned flow rates (Q)			Flow factor	Distance m	Elevation/Head			Head loss m	Diameter (D)		H loss per m/km	Velocity (V)		Trans. method		
	From	To	Daily (m3/day)	Hourly (m3/hr)	(m3/s)			H1 ft	Pump head m	H2 ft		Calculated m	Nominal inch		mm	inch		Cal. m/s	Nominal m/s
<b>1) Existing Transmission</b>																			
<b>1) -1 Existing pipelines</b>																			
Case 1 Imaginary one line																			
	Terminal Res.	Kokine	451,000	18,792	5.22	85	20000	25	60	197	140	24.9	2.22	87	-	-	1.2	1.3	Pump
Case 2 existing actual lines																			
	Pipe 1(to Yegu)	Existing 66'	227,232	9,468	2.63	110	16000	25	64	210	190	13.7	1.676	66	-	-	0.9	1.2	Pump
	Pipe 2(to Kokine)	Existing 56'	155,520	6,480	1.8	85	19000	25	64	210	140	28.9	1.422	56	-	-	1.5	1.1	Pump
	Pipe 3(to Kokine)	Existing 42'	72,576	3,024	0.84	85	19000	25	64	210	140	28.9	1.067	42	-	-	1.5	0.9	Pump
		total	455,328																
	Kokine Res.	Central Res.	59,000	2,448	0.68	85	2400	140	0	0	132	2.4	1.067	42	-	-	1.0	0.8	
<b>1)-2 Proposed pipelines for strengthening existing transmission</b>																			
	near Yankin Center	Kokine	251,000	10,440	2.9	120	1200	146	0	0	140	1.8	1.422	56	1500	59.1	1.5	1.8	1.6 -
	Kokine Res	Central Res	90,000	3,744	1.04	120	2400	140			132	2.4	1.092	43	1100	43.3	1.0	1.1	1.1 -
<b>2) Proposed Pipelines</b>																			
Alt1,4	Terminal Res	Hlawga	554,000	23,083	6	120	500	25	38	125	145	1.4	1.78	70	1800	70.9	2.8	2.6	2.5 Pump
Alt4	Hlawga	Central North	34,000	1,417	0.4	120	6300	145	0	0	130	4.6	0.81	32	900	35.4	0.7	0.8	0.6 Gravity
Alt1,2	Hlawga	East North	195,000	8,125	2.3	120	13000	145	0	0	74	21.7	1.33	52	1350	53.1	1.7	1.6	1.6 Gravity
Alt2	East North	East Central	133,000	5,542	1.5	120	7300	74	0	0	40	10.4	1.19	47	1200	47.2	1.4	1.4	1.4 Gravity
	Terminal Res	Central West	762,000	31,750	8.8	120	7500	25	50	164	140	14.9	2.16	85	2200	86.6	2	2.4	2.3 Pump
Alt3	Central West	DT East	471,000	19,625	5.5	120	12500	140	0	0	63	23.5	1.82	72	1800	70.9	1.9	2.1	2.1 Gravity
Alt3	DT East	East South	145,000	6,042	1.7	120	5000	63	0	0	35	8.5	1.19	47	1200	47.2	1.7	1.5	1.5 Gravity
	West North branch	West North	50,000	2,083	0.6	120	9800	161	0	0	35	38.4	0.67	26	700	27.6	2.4	2.3	2.4 Branch fr
	Terminal Res	Central West	812,000	33,833	9.4	120	7500	25	50	164	140	14.9	2.21	87	2200	86.6	2	2.5	2.5 Pump

$$H = 10.666 C^{-1.85} D^{-4.87} Q^{1.85} \cdot L$$

$$D = 1.626 C^{-0.38} Q^{0.38} H^{-0.205} L^{0.205}$$

$$Q = 0.2782 H^{0.54} L^{-0.54} D^{2.632} C$$

H(m)	Q(m <sup>3</sup> /sec)	C
D(m)	L(m)	

WTP and Terminal Reservoir at Hlawga Reservoir outlet				
In	Loss	Out	Terminal Res.	
ft	ft	ft	terminal reservoir	
45	20	25	low water	depth 4 m
		37	high water	

### **Annex 1.3 Alternatives for Transmission Routes and Conveyance Method**

### Annex 1.3 Alternatives for Transmission Routes and Conveyance Method

	Route		Planned flow rates (Q)			Flow factor (C)	Pipe length (L) m	Elevation/Head				Head loss (dH) m	Diameter (D)			Hydro grad. (dH/L) 0/00	Velocity (V)		Trans. method
	From	To	Daily (m3/day)	Hourly (m3/hr)	(m3/s)			H1 ft	Pump head m	H2 ft	H2 ft		Calculated m	Nominal inch	Nominal mm		Cal. m/s	Nominal m/s	
<b>1) Terminal Reservoir to Hlawga and East North Reservoir</b>																			
Case 1: Pumping up total water amount for Hlawga, East North and East Central Zones to Hlawaga Reservoir and then gravity flow																			
Terminal Res	Hlawga	554,000	23,083	6.4	120	500	25	38	125	145	1.4	1.78	70	1800	2.8	2.6	2.5	Pump	
Hlawga	East North	195,000	8,125	2.3	120	13000	145	0	0	40	32.0	1.23	48	1300	2.5	1.9	1.7	Gravity	
Case 2: Pumping up water amount for North and East Basin Zones separately																			
Terminal Res	Hlawga	359,000	14,958	4.2	120	500	25	38	125	145	1.4	1.51	59	1500	2.8	2.3	2.4	Pump	
Terminal Res	East North	195,000	8,125	2.3	120	13000	30	38	125	40	35.0	1.21	48	1300	2.7	2	1.7	Gravity	
<b>2) Hlawga to East North and East Central Reservoir</b>																			
Case 1: Gravity flow from Hlawga to East North and East Central Reservoir																			
Hlawga	East North	195,000	8,125	2.3	120	13000	145	0	0	74	21.7	1.33	52	1350	1.7	1.6	1.6	Gravity	
East North	East Central	133,000	5,542	1.5	120	7300	74	0	0	40	10.4	1.19	47	1200	1.4	1.4	1.4	Gravity	
Case 2: Gravity flow from North to East North Reservoir and Pumping up from East North to East Central Reservoir																			
Hlawga	East North	195,000	8,125	2.3	120	13000	145	0	0	40	32.0	1.23	48	1350	2.5	1.9	1.6	Gravity	
East North	East Central	133,000	5,542	1.5	120	7300	40	20	66	40	20.0	1.04	41	1100	2.7	1.8	1.6	Pump	
<b>3) Central West Reservoir to Downtown East and East South Reservoir</b>																			
Case 1: Gravity flow to Downtown East and Pumping up from Downtown East to East South Reservoir																			
Central West	DT East	471,000	19,625	5.5	120	12500	140	0	0	63	23.5	1.82	72	1800	1.9	2.1	2.1	Gravity	
DT East	East South	145,000	6,042	1.7	120	5000	63	0	0	35	8.5	1.19	47	1200	1.7	1.5	1.5	Gravity	
Case 2: Gravity flow to Downtown East and East South Reservoir																			
New Central	DT East	471,000	19,625	5.5	120	12500	140	0	0	40	30.5	1.72	68	1700	2.4	2.3	2.4	Gravity	
DT East	EB South	145,000	6,042	1.7	120	5000	25	17	56	35	14.0	1.07	42	1100	2.8	1.9	1.8	Pump	
<b>4) Terminal Reservoir to Central North Reservoir</b>																			
Case 1: Gravity flow from Hlawga to Central North Reservoir																			
Terminal Res	Hlawga	554,000	23,083	6.4	120	500	25	38	125	145	1.4	1.78	70	1800	2.8	2.6	2.5	Pump	
Hlawga	Central North	34,000	1,417	0.4	120	6300	145	0	0	130	4.6	0.81	32	900	0.7	0.8	0.6	Gravity	
Case 2: Pumping up from Terminal Reservoir to Hlawga and Central North Reservoir separately																			
Terminal Res	Central North	34,000	1,417	0.4	120	6800	25	50	164	130	18.0	0.62	24	700	2.6	1.3	1	Pump	
Terminal Res	Hlawga	520,000	21,667	6.0	120	500	25	38	125	145	1.4	1.74	69	1800	2.8	2.5	2.4	Pump	



## **Annex 2 Proposed Distribution Mains**

## Annex 2 Proposed Distribution Mains

Pipe No	Block		Township		Length (m)	Dia (mm)
	No.	Name	No.	Name		
N0101	1	Downtown	1	Ahlone	30.7	900
N0101	1	Downtown	1	Ahlone	301.4	600
N0101001	1	Downtown	1	Ahlone	438.8	800
N0101001	1	Downtown	1	Ahlone	307.3	800
N0102	1	Downtown	2	Bahan	68.8	500
N0102001	1	Downtown	2	Bahan	1379.2	1300
N0102002	1	Downtown	2	Bahan	387.3	600
N0102002	1	Downtown	2	Bahan	166.5	600
N0102002	1	Downtown	2	Bahan	175.1	500
N0102002	1	Downtown	2	Bahan	435.9	500
N0102002	1	Downtown	2	Bahan	180.4	600
N0102003	1	Downtown	2	Bahan	884.8	1300
N0102003	1	Downtown	2	Bahan	120.1	1300
N0102003	1	Downtown	2	Bahan	206.8	1300
N0102003	1	Downtown	2	Bahan	343	1300
N0102005	1	Downtown	2	Bahan	467.1	600
N0102005	1	Downtown	2	Bahan	613.3	600
N0102006	1	Downtown	2	Bahan	797.4	500
N0102010	1	Downtown	2	Bahan	1082	500
N0104001	1	Downtown	4	Dagon	296.9	1000
N0104002	1	Downtown	4	Dagon	359	1000
N0104003	1	Downtown	4	Dagon	148.2	600
N0104003	1	Downtown	4	Dagon	1112.4	600
N0104004	1	Downtown	4	Dagon	819.9	800
N0104004	1	Downtown	4	Dagon	237.4	800
N0104004	1	Downtown	4	Dagon	447.4	800
N0104004	1	Downtown	4	Dagon	334.5	800
N0104004	1	Downtown	4	Dagon	485.8	800
N0114003	1	Downtown	14	Kamayut	660.2	700
N0114001	1	Downtown	14	Kamayut	26.5	500
N0114001	1	Downtown	14	Kamayut	361	1300
N0114002	1	Downtown	14	Kamayut	1223.6	1000
N0114003	1	Downtown	14	Kamayut	952.4	700
N0114004	1	Downtown	14	Kamayut	496.2	500
N0114004	1	Downtown	14	Kamayut	425.1	500
N0114004	1	Downtown	14	Kamayut	678	500
N0117001	1	Downtown	17	Lanmadaw	344.8	800
N0121001	1	Downtown	21	Mingalartaungnyunt	1524.1	800
N0125001	1	Downtown	25	Sanchaung	133	1400
N0125001	1	Downtown	25	Sanchaung	512	1400
N0125003	1	Downtown	25	Sanchaung	422.7	700
N0125003	1	Downtown	25	Sanchaung	416.7	700
N0125003	1	Downtown	25	Sanchaung	401.7	700
N0125003	1	Downtown	25	Sanchaung	492.2	700
N0133001	1	Downtown	33	Yankin	813.9	500
N0133039	1	Downtown	33	Yankin	42	900
N0211024	2	Downtown East	11	Hlaing	874.2	400
N0229001	2	Downtown East	29	South Okkalapa	398	500
N0229001	2	Downtown East	29	South Okkalapa	648.6	500
N0229001	2	Downtown East	29	South Okkalapa	786.8	800
N0229002	2	Downtown East	29	South Okkalapa	600.5	500
N0229004	2	Downtown East	29	South Okkalapa	874.5	500

Pipe No	Block No. Name	Township No. Name	Length (m)	Dia (mm)
N0229008	2 Downtown East	29 South Okkalapa	1132.2	500
N0229009	2 Downtown East	29 South Okkalapa	693.1	600
N0229009	2 Downtown East	29 South Okkalapa	612.8	600
N0229010	2 Downtown East	29 South Okkalapa	858.9	500
N0229011	2 Downtown East	29 South Okkalapa	155.2	800
N0229012	2 Downtown East	29 South Okkalapa	774.4	800
N0229012	2 Downtown East	29 South Okkalapa	575.6	1200
N0229013	2 Downtown East	29 South Okkalapa	587.2	1200
N0229014	2 Downtown East	29 South Okkalapa	828.1	900
N0229014	2 Downtown East	29 South Okkalapa	590.1	1350
N0229025	2 Downtown East	29 South Okkalapa	795.3	800
N0232001	2 Downtown East	32 Thingangyun	138.4	1300
N0232001	2 Downtown East	32 Thingangyun	227.9	1300
N0232001	2 Downtown East	32 Thingangyun	343.1	600
N0232001	2 Downtown East	32 Thingangyun	644.8	1350
N0232002	2 Downtown East	32 Thingangyun	877.2	400
N0232005	2 Downtown East	32 Thingangyun	730.3	800
N0232006	2 Downtown East	32 Thingangyun	722.5	600
N0232007	2 Downtown East	32 Thingangyun	522.3	600
N0232007	2 Downtown East	32 Thingangyun	901	500
N0232008	2 Downtown East	32 Thingangyun	809.5	700
N0232008	2 Downtown East	32 Thingangyun	602.3	700
N0232009	2 Downtown East	32 Thingangyun	758.1	800
N0232009	2 Downtown East	32 Thingangyun	760.1	800
N0232009	2 Downtown East	32 Thingangyun	1215.4	800
N0232010	2 Downtown East	32 Thingangyun	475.7	800
N0232010	2 Downtown East	32 Thingangyun	702.1	600
N0232010	2 Downtown East	32 Thingangyun	1158.7	600
N0232011	2 Downtown East	32 Thingangyun	703.3	1000
N0232011	2 Downtown East	32 Thingangyun	238.8	1000
N0232012	2 Downtown East	32 Thingangyun	572.6	600
N0232012	2 Downtown East	32 Thingangyun	651.8	600
N0232012	2 Downtown East	32 Thingangyun	425.2	600
N0232013	2 Downtown East	32 Thingangyun	421	500
N0232013	2 Downtown East	32 Thingangyun	340.9	500
N0232014	2 Downtown East	32 Thingangyun	1349.5	400
N0232014	2 Downtown East	32 Thingangyun	547.7	400
N0232015	2 Downtown East	32 Thingangyun	599.4	500
N0232016	2 Downtown East	32 Thingangyun	851.4	400
N0232020	2 Downtown East	32 Thingangyun	262.8	1350
N0232021	2 Downtown East	32 Thingangyun	587.3	600
N0232022	2 Downtown East	32 Thingangyun	509.6	600
N0232022	2 Downtown East	32 Thingangyun	497.5	200
N0233001	2 Downtown East	33 Yankin	1184.8	800
N0233021	2 Downtown East	33 Yankin	1163.9	600
N0310007	3 Central West	10 Dawbon	820.4	1000
N0310007	3 Central West	10 Dawbon	947.2	1000
N0311002	3 Central West	11 Hlaing	51	1000
N0311002	3 Central West	11 Hlaing	281.9	700
N0311004	3 Central West	11 Hlaing	1436.2	400

Pipe No	No.	Block Name	No.	Township Name	Length (m)	Dia (mm)
N0311005	3	Central West	11	Hlaing	1496.1	400
N0311008	3	Central West	11	Hlaing	1027	800
N0311008	3	Central West	11	Hlaing	876.5	500
N0311008	3	Central West	11	Hlaing	1087.5	700
N0311011	3	Central West	11	Hlaing	1464.3	600
N0311015	3	Central West	11	Hlaing	901.2	600
N0311019	3	Central West	11	Hlaing	768.6	500
N0313004	3	Central West	13	Insein	1380.6	700
N0313004	3	Central West	13	Insein	633.9	800
N0313005	3	Central West	13	Insein	581.5	700
N0313005	3	Central West	13	Insein	1057.1	400
N0313006	3	Central West	13	Insein	922.8	1200
N0313006	3	Central West	13	Insein	1547.7	700
N0313007	3	Central West	13	Insein	1830.5	400
N0313009	3	Central West	13	Insein	2193.1	400
N0313009	3	Central West	13	Insein	1115.3	400
N0313010	3	Central West	13	Insein	922.6	800
N0313010	3	Central West	13	Insein	1067.6	800
N0313011	3	Central West	13	Insein	986.7	500
N0313011	3	Central West	13	Insein	1101.6	800
N0313021	3	Central West	13	Insein	696.3	800
N0313022	3	Central West	13	Insein	1421.4	500
N0313025	3	Central West	13	Insein	724	1200
N0313025	3	Central West	13	Insein	1894.6	1200
N0313025	3	Central West	13	Insein	772.7	1000
N0319001	3	Central West	19	Mayangone	1388.1	400
N0319008	3	Central West	19	Mayangone	3357.8	350
N0319010	3	Central West	19	Mayangone	312.7	1000
N0319010	3	Central West	19	Mayangone	441.9	800
N0319011	3	Central West	19	Mayangone	1266.2	800
N0319011	3	Central West	19	Mayangone	435.5	700
N0319011	3	Central West	19	Mayangone	1278.6	500
N0319011	3	Central West	19	Mayangone	953	400
N0319011	3	Central West	19	Mayangone	1107.3	700
N0319033	3	Central West	19	Mayangone	656.9	700
N0319044	3	Central West	19	Mayangone	198.6	800
N0320001	3	Central West	20	Mingalardon	1522.8	1000
N0320001	3	Central West	20	Mingalardon	485.8	1200
N0320002	3	Central West	20	Mingalardon	577.9	400
N0320002	3	Central West	20	Mingalardon	745.5	400
N0320004	3	Central West	20	Mingalardon	754.3	1000
N0320004	3	Central West	20	Mingalardon	1157	1000
N0320009	3	Central West	20	Mingalardon	1505.6	1000
N0320027	3	Central West	20	Mingalardon	923.7	1300
N0320027	3	Central West	20	Mingalardon	1283.4	1300
N0322023	3	Central West	22	North Okkalapa	145.9	800
N0420021	4	Hlawga	20	Mingalardon	1288.1	1000
N0420021	4	Hlawga	20	Mingalardon	2515.5	1400
N0420021	4	Hlawga	20	Mingalardon	2322	1100
N0420021	4	Hlawga	20	Mingalardon	358.5	1500

Pipe No	Block		Township		Length (m)	Dia (mm)
	No.	Name	No.	Name		
N0420022	4	Hlawga	20	Mingalardon	1405.4	1000
N0420023	4	Hlawga	20	Mingalardon	2465.3	1000
N0420024	4	Hlawga	20	Mingalardon	2047.3	200
N0420024	4	Hlawga	20	Mingalardon	2053.9	1200
N0420024	4	Hlawga	20	Mingalardon	1266.7	1300
N0420025	4	Hlawga	20	Mingalardon	1006.8	1300
N0420026	4	Hlawga	20	Mingalardon	2228.3	200
N0420028	4	Hlawga	20	Mingalardon	2454.8	200
N0420028	4	Hlawga	20	Mingalardon	1639.4	200
N0420029	4	Hlawga	20	Mingalardon	1052.3	600
N0420034	4	Hlawga	20	Mingalardon	2026.5	400
N0422002	4	Hlawga	20	Mingalardon	73.3	900
N0422002	4	Hlawga	20	Mingalardon	1030.1	1200
N0422003	4	Hlawga	20	Mingalardon	1518.6	1000
N0422005	4	Hlawga	20	Mingalardon	778.2	900
N0422008	4	Hlawga	20	Mingalardon	1061.8	900
N0422016	4	Hlawga	20	Mingalardon	1411.6	900
N0428001	4	Hlawga	28	Shwepyitha	1294.3	1100
N0428002	4	Hlawga	28	Shwepyitha	2377	500
N0428002	4	Hlawga	28	Shwepyitha	1435.6	600
N0428002	4	Hlawga	28	Shwepyitha	1434.2	800
N0428002	4	Hlawga	28	Shwepyitha	2353.6	500
N0428003	4	Hlawga	28	Shwepyitha	1091.1	800
N0428004	4	Hlawga	28	Shwepyitha	1822	500
N0428005	4	Hlawga	28	Shwepyitha	2067.2	500
N0428006	4	Hlawga	28	Shwepyitha	1837.8	500
N0428007	4	Hlawga	28	Shwepyitha	787.7	500
N0428008	4	Hlawga	28	Shwepyitha	851.9	500
N0428009	4	Hlawga	28	Shwepyitha	1949.4	500
N0428010	4	Hlawga	28	Shwepyitha	1872.8	500
N0428011	4	Hlawga	28	Shwepyitha	2934.8	500
N0520051	5	Central North	20	Mingalardon	1051.5	400
N0520051	5	Central North	20	Mingalardon	1209.9	700
N0520051	5	Central North	20	Mingalardon	308.1	900
N0520053	5	Central North	20	Mingalardon	1006.9	400
N0520053	5	Central North	20	Mingalardon	779.1	500
N0631004	6	East South	31	Thaketa	668	600
N0631011	6	East South	31	Thaketa	845.7	900
N0631012	6	East South	31	Thaketa	998.3	900
N0631014	6	East South	31	Thaketa	905.6	500
N0631014	6	East South	31	Thaketa	281.5	400
N0631014	6	East South	31	Thaketa	282.7	600
N0631015	6	East South	31	Thaketa	1144.4	400
N0631016	6	East South	31	Thaketa	36.9	1300
N0631016	6	East South	31	Thaketa	172.4	600
N0631017	6	East South	31	Thaketa	234	600
N0631021	6	East South	31	Thaketa	1375.9	900
N0631021	6	East South	31	Thaketa	1028	1100
N0631021	6	East South	31	Thaketa	253.1	1300
N0631023	6	East South	31	Thaketa	446.2	700

Pipe No	Block		Township		Length (m)	Dia (mm)
	No.	Name	No.	Name		
N0631024	6	East South	31	Thaketa	363.7	700
N0631024	6	East South	31	Thaketa	286.6	600
N0631032	6	East South	31	Thaketa	414.6	600
N0631032	6	East South	31	Thaketa	603.9	600
N0631041	6	East South	31	Thaketa	341	400
N0631052	6	East South	31	Thaketa	565.4	500
N0631052	6	East South	31	Thaketa	262.9	500
N0707	7	East Central	7	Dagon Myothit Seikkan	231.4	1000
N0707	7	East Central	7	Dagon Myothit Seikkan	1037.2	800
N0707	7	East Central	7	Dagon Myothit Seikkan	1398.8	300
N0707	7	East Central	7	Dagon Myothit Seikkan	1222.4	600
N0707	7	East Central	7	Dagon Myothit Seikkan	1159.4	200
N0707	7	East Central	7	Dagon Myothit Seikkan	1198.9	200
N0707	7	East Central	7	Dagon Myothit Seikkan	1128.6	300
N0707	7	East Central	7	Dagon Myothit Seikkan	1182.6	300
N0707	7	East Central	7	Dagon Myothit Seikkan	1220.6	200
N0707	7	East Central	7	Dagon Myothit Seikkan	1239.4	200
N0707	7	East Central	7	Dagon Myothit Seikkan	1206.1	300
N0707	7	East Central	7	Dagon Myothit Seikkan	1121.4	200
N0707	7	East Central	7	Dagon Myothit Seikkan	1458.7	200
N0707	7	East Central	7	Dagon Myothit Seikkan	1158.4	300
N0707	7	East Central	7	Dagon Myothit Seikkan	1429.3	300
N0707	7	East Central	7	Dagon Myothit Seikkan	1138.3	300
N0707	7	East Central	7	Dagon Myothit Seikkan	943.7	300
N0707	7	East Central	7	Dagon Myothit Seikkan	1144.9	300
N0707	7	East Central	7	Dagon Myothit Seikkan	1031.8	300
N0707	7	East Central	7	Dagon Myothit Seikkan	1381.7	300
N0707	7	East Central	7	Dagon Myothit Seikkan	551.6	300
N0707	7	East Central	7	Dagon Myothit Seikkan	866.7	300
N0707	7	East Central	7	Dagon Myothit Seikkan	989.1	300
N0707	7	East Central	7	Dagon Myothit Seikkan	1093.1	300
N0707	7	East Central	7	Dagon Myothit Seikkan	576.9	300
N0707	7	East Central	7	Dagon Myothit Seikkan	715.8	300
N0708	7	East Central	8	Dagon Myothit South	821.8	700
N0708	7	East Central	8	Dagon Myothit South	788.3	1000
N0708	7	East Central	8	Dagon Myothit South	1400.8	400
N0708	7	East Central	8	Dagon Myothit South	1875.2	500
N0708	7	East Central	8	Dagon Myothit South	1320.4	300
N0708	7	East Central	8	Dagon Myothit South	1646.6	300
N0708	7	East Central	8	Dagon Myothit South	1084.4	300
N0708	7	East Central	8	Dagon Myothit South	1058.5	300
N0708	7	East Central	8	Dagon Myothit South	787.2	400
N0708	7	East Central	8	Dagon Myothit South	772.8	1000
N0708	7	East Central	8	Dagon Myothit South	901.5	1000
N0708	7	East Central	8	Dagon Myothit South	849.9	300
N0708	7	East Central	8	Dagon Myothit South	1002.3	300
N0708	7	East Central	8	Dagon Myothit South	1355	400
N0708	7	East Central	8	Dagon Myothit South	1070.7	200
N0708	7	East Central	8	Dagon Myothit South	1130	200
N0708	7	East Central	8	Dagon Myothit South	679.6	200

Pipe No	Block		Township		Length (m)	Dia (mm)
	No.	Name	No.	Name		
N0708	7	East Central	8	Dagon Myothit South	641.6	200
N0708	7	East Central	8	Dagon Myothit South	852.6	800
N0708	7	East Central	8	Dagon Myothit South	841.3	400
N0708	7	East Central	8	Dagon Myothit South	755.4	300
N0708	7	East Central	8	Dagon Myothit South	783.4	400
N0805001	8	East North	5	Dagon Myothit East	1713.8	600
N0805001	8	East North	5	Dagon Myothit East	1816.9	300
N0805001	8	East North	5	Dagon Myothit East	1679.7	900
N0805001	8	East North	5	Dagon Myothit East	896.4	900
N0805003	8	East North	5	Dagon Myothit East	2661.5	300
N0805003	8	East North	5	Dagon Myothit East	2716.1	400
N0805003	8	East North	5	Dagon Myothit East	998.6	300
N0805004	8	East North	5	Dagon Myothit East	2830.2	400
N0806001	8	East North	6	Dagon Myothit North	1883	500
N0806001	8	East North	6	Dagon Myothit North	1237.9	600
N0806003	8	East North	6	Dagon Myothit North	2444.5	300
N0806004	8	East North	6	Dagon Myothit North	2028.4	600
N0806004	8	East North	6	Dagon Myothit North	917.4	600
N0806004	8	East North	6	Dagon Myothit North	1272.4	400
N0806005	8	East North	6	Dagon Myothit North	879.2	300
N0806007	8	East North	6	Dagon Myothit North	2008	600
N0909001	9	West South	9	Dala	875.7	400
N0909002	9	West South	9	Dala	501.1	300
N0909004	9	West South	9	Dala	379.4	500
N1112002	11	West North	12	Hlaingthaya	1795.5	400
N1112001	11	West North	12	Hlaingthaya	1561.4	400
N1112001	11	West North	12	Hlaingthaya	1647.3	900
N1112001	11	West North	12	Hlaingthaya	1739.4	800
N1112001	11	West North	12	Hlaingthaya	264.2	1100
N1112003	11	West North	12	Hlaingthaya	1607.8	400
N1112004	11	West North	12	Hlaingthaya	1144.6	500
N1112005	11	West North	12	Hlaingthaya	2352.5	500
N1112005	11	West North	12	Hlaingthaya	1247.7	700
N1112006	11	West North	12	Hlaingthaya	875.6	700
N1112006	11	West North	12	Hlaingthaya	1224.2	900
N1112008	11	West North	12	Hlaingthaya	1380.2	500
N1112008	11	West North	12	Hlaingthaya	2324.1	500
N1112009	11	West North	12	Hlaingthaya	2478.3	500
N1112010	11	West North	12	Hlaingthaya	1757.7	700
N1112011	11	West North	12	Hlaingthaya	686.3	700
N1112012	11	West North	12	Hlaingthaya	1215.2	700
N1112013	11	West North	12	Hlaingthaya	1071	700

### **Annex 3 Network Data on Existing and Proposed Pipeline**



### **Annex 3.1 Node Data**

Node ID	Area Code	Asset ID	X (m)	Y (m)	Elevation (m AD)	Total Demand
YBN06001	EBSouth	N2020	-2119	8196	10.67	0
YD01001	01Ahlone	Ahlone	-9810	6956	6.1	0
YD01002	01Ahlone	Ahlone	-9064	5663	5.49	0
YD01003	01Ahlone	Ahlone	-9735	6798	7.62	181
YD01004	01Ahlone	Ahlone	-9659	6638	7.32	0
YD01005	01Ahlone	Ahlone	-9564	6438	6.1	0
YD01006	01Ahlone	Ahlone	-9483	6269	6.1	2190
YD01007	01Ahlone	Ahlone	-9287	5978	6.1	0
YD01021	01Ahlone	Ahlone	-10117	6755	3.66	1285
YD01022	01Ahlone	Ahlone	-9867	6937	3.66	2692
YD01023	01Ahlone	Ahlone	-9854	6514	4.57	1484
YD01025	01Ahlone	Ahlone	-9967	6277	4.57	0
YD01026	01Ahlone	Ahlone	-9670	5738	5.49	3275
YD01031	01Ahlone	Ahlone	-9773	6586	4.57	0
YD01032	01Ahlone	Ahlone	-9692	6383	6.1	525
YD01033	01Ahlone	Ahlone	-9654	6186	5.49	0
YD01034	01Ahlone	Ahlone	-9545	5792	5.49	0
YD01035	01Ahlone	Ahlone	-9332	5501	4.57	3185
YD01036	01Ahlone	Ahlone	-8934	5232	4.57	2859
YD01041	01Ahlone	Ahlone	-9266	6499	15.24	0
YD01042	01Ahlone	Ahlone	-9203	6408	15.24	0
YD01043	01Ahlone	Ahlone	-9041	6151	15.24	561
YD01044	01Ahlone	Ahlone	-8827	5855	15.24	0
YD02001	01Bahan	Bahan	-6622	9253	35.97	651
YD02002	01Bahan	Bahan	-6637	9695	18.29	0
YD02003	01Bahan	Bahan	-6775	10137	18.29	0
YD02004	01Bahan	Bahan	-7393	10393	18.29	932
YD02005	01Bahan	Bahan	-7559	10340	17.68	0
YD02006	01Bahan	Bahan	-6680	9013	35.97	0
YD02011	01Bahan	Bahan	-7175	9679	18.29	0
YD02012	01Bahan	Bahan	-7452	9615	17.68	933
YD02013	01Bahan	Bahan	-7435	9137	21.34	0
YD02015	01Bahan	Bahan	-7424	9719	16.76	0
YD02021	01Bahan	Bahan	-6543	9200	35.97	0
YD02022	01Bahan	Bahan	-6277	9516	22.86	0
YD02023	01Bahan	Bahan	-6723	10159	18.29	0
YD02024	01Bahan	Bahan	-6486	10171	18.29	0
YD02025	01Bahan	Bahan	-6374	10167	18.29	0
YD02026	01Bahan	Bahan	-8244	9652	15.24	0
YD02027	01Bahan	Bahan	-6150	10148	13.72	1875
YD02028	01Bahan	Bahan	-5675	10242	7.62	0
YD02030	01Bahan	Bahan	-4960	8790	7.32	0
YD02031	01Bahan	Bahan	-5992	8752	13.72	2615
YD02032	01Bahan	Bahan	-5429	8885	12.19	1715
YD02033	01Bahan	Bahan	-5226	8869	7.62	0
YD02034	01Bahan	Bahan	-5231	9141	9.14	1661
YD02035	01Bahan	Bahan	-5804	9831	10.67	0
YD02036	01Bahan	Bahan	-5611	9622	9.14	1801
YD02037	01Bahan	Bahan	-5853	9023	22.86	0
YD02041	01Bahan	Bahan	-7347	8432	22.86	0
YD02042	01Bahan	Bahan	-7581	8054	21.95	820
YD02043	01Bahan	Bahan	-7811	7830	16.76	0
YD02044	01Bahan	Bahan	-6981	8073	22.86	1565
YD02051	01Bahan	Bahan	-6877	7476	14.63	1683
YD02052	01Bahan	Bahan	-6340	7596	14.63	2706
YD02053	01Bahan	Bahan	-6052	7716	15.24	0
YD02055	01Bahan	Bahan	-5567	7818	15.24	1972
YD02056	01Bahan	N0102	-6572	7947	15.24	0
YD02057	01Bahan	Bahan	-5819	8325	22.86	1404
YD02058	01Bahan	Bahan	-4998	8697	9.14	0

Node ID	Area Code	Asset ID	X (m)	Y (m)	Elevation (m AD)	Total Demand
YD02059	01Bahan	Bahan	-5099	8208	13.11	0
YD02061	01Bahan	Bahan	-6779	7199	15.24	0
YD02062	01Bahan	Bahan	-5479	7633	12.8	0
YD02065	01Bahan	Bahan	-6845	7242	16.76	0
YD02066	01Bahan	Bahan	-5306	7831	13.72	0
YD03001	01Botataung	Botataung	-4362	4647	3.96	2225
YD03002	01Botataung	Botataung	-4079	4635	3.35	0
YD03004	01Botataung	Botataung	-3871	4673	4.57	0
YD03005	01Botataung	Botataung	-3264	4358	3.35	0
YD03006	01Botataung	Botataung	-4079	4361	3.96	9396
YD03007	01Botataung	Botataung	-4076	4137	3.35	2817
YD03008	01Botataung	Botataung	-3421	4075	3.35	0
YD03009	01Botataung	Botataung	-3150	4060	3.35	0
YD03011	01Botataung	Botataung	-5336	4973	3.96	0
YD03012	01Botataung	Botataung	-5339	4696	3.66	0
YD03013	01Botataung	Botataung	-5056	4687	3.66	742
YD03014	01Botataung	Botataung	-4737	4672	3.66	0
YD03021	01Botataung	Botataung	-5579	5234	6.1	1731
YD03022	01Botataung	Botataung	-5591	4982	5.18	1978
YD03023	01Botataung	Botataung	-5603	4705	3.96	742
YD03024	01Botataung	Botataung	-5616	4386	3.35	247
YD03025	01Botataung	Botataung	-5628	4131	3.05	32
YD03031	01Botataung	Botataung	-5379	4128	3.35	0
YD03032	01Botataung	Botataung	-5364	4370	3.35	1731
YD03033	01Botataung	Botataung	-5078	4364	3.35	0
YD03034	01Botataung	Botataung	-4746	4364	3.05	1236
YD03035	01Botataung	Botataung	-4509	4355	3.66	0
YD03036	01Botataung	Botataung	-4355	4349	3.66	0
YD03037	01Botataung	Botataung	-4749	4161	3.35	5
YD03038	01Botataung	Botataung	-4515	4158	3.35	0
YD03039	01Botataung	Botataung	-4355	4155	3.35	0
YD04001	01Dagon	Dagon	-8550	7736	12.19	1733
YD04002	01Dagon	Dagon	-8273	6814	18.29	0
YD04003	01Dagon	Dagon	-9251	7223	9.75	2986
YD04004	01Dagon	Dagon	-9052	6590	12.19	0
YD04005	01Dagon	Dagon	-8479	6755	15.85	6947
YD04006	01Dagon	Dagon	-8232	6673	17.37	9529
YD04007	01Dagon	Dagon	-8192	6532	17.37	0
YD04011	01Dagon	Dagon	-7115	7134	32	0
YD04012	01Dagon	Dagon	-7167	7020	28.96	0
YD04013	01Dagon	Dagon	-7155	6959	27.43	5164
YD04014	01Dagon	Dagon	-7004	6467	25.91	0
YD04015	01Dagon	Dagon	-6857	5975	16.15	4303
YD04016	01Dagon	Dagon	-6860	5570	12.19	0
YD04021	01Dagon	Dagon	-7493	7042	25.91	0
YD04022	01Dagon	Dagon	-7813	6953	24.38	0
YD04023	01Dagon	Dagon	-7444	5926	17.68	0
YD04024	01Dagon	Dagon	-7438	5816	16.76	1721
YD04025	01Dagon	Dagon	-7240	5821	16.76	0
YD04027	01Dagon	Dagon	-7658	6830	22.86	0
YD09001		9 N0909001	-6377	3099	3.05	1148
YD09002		9 09N09002	-6824	3093	3.05	902
YD09003		9 N0909003	-7139	2821	3.05	0
YD09004		9 N0909004	-7390	2735	3.05	4552
YD09005		9 N0909005	-8204	2922	3.05	2132
YD09006		9 N0909006	-9274	3130	3.05	2788
YD09007	Dale	Dale	-13327	1496		0
YD09008	Dale	Dale	-16904	-1353		0
YD09009	Dale	Dale	-18332	-2472		0
YD09010	Dale	Dale	-18531	-4301		0

Node ID	Area Code	Asset ID	X (m)	Y (m)	Elevation (m AD)	Total Demand
YD09011	Dale	Dale	-18666	-5500		0
YD11001	03Hlaing	Hlaing	-10068	14185	7.62	0
YD11002	03Hlaing	Hlaing	-10012	14022	7.62	10149
YD11003	03Hlaing	Hlaing	-9969	13696	7.62	0
YD11004	03Hlaing	Hlaing	-9757	12555	7.92	0
YD11005	03Hlaing	Hlaing	-9650	12023	7.01	0
YD11006	03Hlaing	Hlaing	-9625	11940	7.01	0
YD11007	03Hlaing	Hlaing	-9585	11768	6.1	0
YD11011	03Hlaing	Hlaing	-10063	14027	6.71	0
YD11012	03Hlaing	Hlaing	-10019	13794	7.01	0
YD11013	03Hlaing	Hlaing	-9948	13250	7.92	0
YD11014	03Hlaing	Hlaing	-9841	12733	7.62	0
YD11015	03Hlaing	Hlaing	-9816	12592	7.62	8947
YD11016	03Hlaing	Hlaing	-9800	12540	7.62	0
YD11017	03Hlaing	Hlaing	-9696	12017	7.01	0
YD11018	03Hlaing	Hlaing	-9631	11758	6.1	0
YD11019	03Hlaing	Hlaing	-9625	11725	6.1	5339
YD11020	03Hlaing	Hlaing	-9613	11669	6.1	0
YD11021	03Hlaing	Hlaing	-9816	12619	7.62	0
YD11022	03Hlaing	Hlaing	-10456	12509	4.57	1880
YD11023	03Hlaing	Hlaing	-10874	12407	3.66	0
YD11024	03Hlaing	Hlaing	-11237	12303	3.05	1880
YD11026	03Hlaing	Hlaing	-10898	11642	3.05	2556
YD11031	03Hlaing	Hlaing	-10274	11694	4.57	0
YD11041	03Hlaing	Hlaing	-10363	13761	6.1	0
YD11042	03Hlaing	Hlaing	-10098	12807	6.1	0
YD11043	03Hlaing	Hlaing	-10052	12601	7.62	0
YD11044	03Hlaing	Hlaing	-10012	12506	7.62	0
YD11045	03Hlaing	Hlaing	-10028	11992	7.62	0
YD11046	03Hlaing	Hlaing	-9985	11793	6.1	0
YD11047	03Hlaing	Hlaing	-9929	11660	4.57	0
YD11048	03Hlaing	Hlaing	-9345	12097	6.1	0
YD11051	03Hlaing	Hlaing	-8886	11937	7.62	0
YD11052	03Hlaing	Hlaing	-8807	12287	10.67	0
YD11053	03Hlaing	Hlaing	-9099	11953	6.1	0
YD11054	03Hlaing	Hlaing	-8954	12282	9.14	0
YD13001	03Insein	Insein	-10148	18125	24.38	3689
YD13002	03Insein	Insein	-10264	17824	21.34	0
YD13003	03Insein	Insein	-10033	17621	22.86	0
YD13004	03Insein	Insein	-10159	17406	21.34	4270
YD13005	03Insein	Insein	-10528	17597	15.24	0
YD13006	03Insein	Insein	-10376	17928	22.86	0
YD13007	03Insein	Insein	-10568	17609	15.24	0
YD13008	03Insein	Insein	-10261	17421	19.81	0
YD13009	03Insein	Insein	-10190	16843	16.76	0
YD13010	03Insein	Insein	-10242	16610	13.72	0
YD13021	03Insein	Insein	-10663	17895	15.24	0
YD13022	03Insein	Insein	-10915	17675	13.72	2266
YD14002	01Kamayut	Kamayut	-7754	10317	18.29	2475
YD14003	01Kamayut	Kamayut	-8333	10500	22.86	5925
YD14004	01Kamayut	Kamayut	-9314	10539	14.63	0
YD14005	01Kamayut	Kamayut	-9765	10273	7.62	4998
YD14006	01Kamayut	Kamayut	-10218	9786	5.49	2534
YD14007	01Kamayut	Kamayut	-10489	9936	3.05	0
YD14008	01Kamayut	Kamayut	-9905	10788	5.49	1142
YD14011	01Kamayut	Kamayut	-9501	11407	8.53	0
YD14012	01Kamayut	Kamayut	-9311	10730	12.19	3570
YD14013	01Kamayut	Kamayut	-9249	10660	14.63	0
YD14014	01Kamayut	Kamayut	-8988	11562	6.1	0
YD14021	01Kamayut	Kamayut	-9542	11395	8.53	1955

Node ID	Area Code	Asset ID	X (m)	Y (m)	Elevation (m AD)	Total Demand
YD14022	01Kamayut	Kamayut	-9305	10579	14.63	0
YD14023	01Kamayut	Kamayut	-9118	9909	21.34	2427
YD14024	01Kamayut	Kamayut	-8933	9177	20.73	0
YD14031	01Kamayut	Kamayut	-8491	9644	16.76	5926
YD14032	01Kamayut	Kamayut	-8036	8998	24.38	3127
YD14033	01Kamayut	Kamayut	-8337	10739	24.38	0
YD14034	01Kamayut	Kamayut	-7809	9764	15.24	2475
YD15001	01Kyauktada	Kyauktada	-5915	5243	6.71	1507
YD15002	01Kyauktada	Kyauktada	-5918	4989	6.4	1507
YD15003	01Kyauktada	Kyauktada	-5921	4720	4.57	1507
YD15004	01Kyauktada	Kyauktada	-5931	4401	3.96	1507
YD15005	01Kyauktada	Kyauktada	-5940	4173	3.05	2023
YD15011	01Kyauktada	Kyauktada	-6241	5261	6.71	2056
YD15012	01Kyauktada	Kyauktada	-6244	4996	5.18	2073
YD15013	01Kyauktada	Kyauktada	-6247	4723	3.96	1915
YD15014	01Kyauktada	Kyauktada	-6247	4426	3.66	1601
YD15015	01Kyauktada	Kyauktada	-6247	4270	3.35	0
YD15016	01Kyauktada	Kyauktada	-6241	4373	3.66	0
YD16001	01Kyeemyindaing	Kyeemyindaing	-9839	8652	12.8	0
YD16002	01Kyeemyindaing	Kyeemyindaing	-9837	9502	13.72	0
YD16003	01Kyeemyindaing	Kyeemyindaing	-9668	9394	15.24	0
YD16011	01Kyeemyindaing	Kyeemyindaing	-10285	8655	8.23	1616
YD16012	01Kyeemyindaing	Kyeemyindaing	-10283	9175	7.92	559
YD16013	01Kyeemyindaing	Kyeemyindaing	-10280	9724	5.49	1001
YD16014	01Kyeemyindaing	Kyeemyindaing	-9887	9196	12.19	1131
YD16015	01Kyeemyindaing	Kyeemyindaing	-9884	8653	12.19	2901
YD16016	01Kyeemyindaing	Kyeemyindaing	-9884	8370	12.19	999
YD16017	01Kyeemyindaing	Kyeemyindaing	-9877	8019	12.19	2415
YD16018	01Kyeemyindaing	Kyeemyindaing	-9859	7456	6.1	1614
YD16019	01Kyeemyindaing	Kyeemyindaing	-9834	7034	7.62	1619
YD16021	01Kyeemyindaing	Kyeemyindaing	-10269	8382	8.53	1001
YD16022	01Kyeemyindaing	Kyeemyindaing	-10243	8019	7.62	445
YD16023	01Kyeemyindaing	Kyeemyindaing	-10228	7456	4.57	2176
YD16024	01Kyeemyindaing	Kyeemyindaing	-10172	7006	3.66	0
YD17001	01Lanmadaw	Lanmadaw	-8388	5053	3.96	625
YD17011	01Lanmadaw	Lanmadaw	-7786	4763	3.66	859
YD17012	01Lanmadaw	Lanmadaw	-8135	4778	3.66	0
YD17013	01Lanmadaw	Lanmadaw	-8388	4829	3.66	0
YD17014	01Lanmadaw	Lanmadaw	-8673	5043	4.57	0
YD17015	01Lanmadaw	Lanmadaw	-8656	5338	7.62	703
YD17021	01Lanmadaw	Lanmadaw	-7922	5619	12.8	4997
YD17022	01Lanmadaw	Lanmadaw	-8347	5616	14.02	0
YD17023	01Lanmadaw	Lanmadaw	-8628	5619	14.63	2889
YD17024	01Lanmadaw	Lanmadaw	-7802	5313	10.06	573
YD17025	01Lanmadaw	Lanmadaw	-8141	5323	11.28	521
YD17026	01Lanmadaw	Lanmadaw	-8378	5331	11.28	0
YD17027	01Lanmadaw	Lanmadaw	-7794	5043	4.57	729
YD17028	01Lanmadaw	Lanmadaw	-8141	5045	3.66	1250
YD17029	01Lanmadaw	Lanmadaw	-8396	5038	3.96	0
YD17031	01Lanmadaw	Lanmadaw	-7781	4582	3.35	0
YD17033	01Lanmadaw	Lanmadaw	-8926	6017	15.24	0
YD18001	01Latha	Latha	-7147	5020	4.57	1490
YD18002	01Latha	Latha	-7468	5035	4.88	2479
YD18003	01Latha	Latha	-7465	5300	7.92	3972
YD18004	01Latha	Latha	-7458	5446	22.86	1988
YD18005	01Latha	Latha	-7478	4753	3.96	1490
YD18006	01Latha	Latha	-7147	4747	3.96	1490
YD18007	01Latha	Latha	-7142	4467	3.35	0
YD18008	01Latha	Latha	-7478	4480	3.35	0
YD19011	03Mayangon	Mayangon	-6551	14166	15.24	7546

Node ID	Area Code	Asset ID	X (m)	Y (m)	Elevation (m AD)	Total Demand
YD19012		3 N0319012	-6677	14754	16.76	0
YD19013	03Mayangon	Mayangon	-6988	14935	21.34	0
YD19014	03Mayangon	Mayangon	-7302	15113	19.81	0
YD19015	03Mayangon	Mayangon	-7314	14990	15.24	2711
YD19016	03Mayangon	Mayangon	-7418	15055	15.24	0
YD19017	03Mayangon	Mayangon	-6268	13661	7.62	0
YD19021	03Mayangon	Mayangon	-8248	14787	22.86	0
YD19022	03Mayangon	Mayangon	-8554	14931	13.72	5632
YD19023	03Mayangon	Mayangon	-9414	14870	9.14	0
YD19024	03Mayangon	Mayangom	-10146	14489	7.62	0
YD19025	03Mayangon	Mayangon	-10072	14507	7.62	0
YD19026	03Mayangon	Mayangon	-9555	14796	7.62	0
YD19031	03Mayangon	Mayangon	-8042	14563	22.86	0
YD19032	03Mayangon	Mayangon	-8122	14120	15.24	0
YD19033	03Mayangon	Mayangon	-8214	13566	16.76	2711
YD19036	03Mayangon	Mayangon	-8085	13572	18.29	0
YD19037	03Mayangon	Mayangon	-8091	13935	21.34	0
YD19038	03Mayangon	Mayangon	-8257	14181	15.24	0
YD19041	03Mayangon	Mayangon	-6375	13062	7.62	13753
YD19042	03Mayangon	Mayangon	-6523	13172	13.72	0
YD19043	03Mayangon	Mayangon	-7409	13437	19.81	2709
YD19044	03Mayangon	Mayangon	-7562	13621	21.34	0
YD19045	03Mayangon	Mayangon	-7876	13572	21.34	6876
YD19046	03Mayangon	Mayangon	-7808	13105	16.76	0
YD19047	03Mayangon	Mayangon	-8054	12760	18.29	0
YD19048	03Mayangon	Mayangon	-7697	14636	22.86	0
YD19049	03Mayangon	Mayangon	-7507	13812	15.24	0
YD21001	01Mingalartaungnyunt	Mingalartaungnyunt	-6503	7002	13.72	3280
YD21002	01Mingalartaungnyunt	Mingalartaungnyunt	-5873	6726	12.19	2390
YD21003	01Mingalartaungnyunt	Mingalartaungnyunt	-5882	6385	9.75	0
YD21004	01Mingalartaungnyunt	Mingalartaungnyunt	-5876	6323	9.75	967
YD21005	01Mingalartaungnyunt	Mingalartaungnyunt	-5892	6126	9.75	1521
YD21006	01Mingalartaungnyunt	Mingalartaungnyunt	-5888	6065	9.75	2607
YD21007	01Mingalartaungnyunt	Mingalartaungnyunt	-5898	5714	7.62	3178
YD21008	01Mingalartaungnyunt	Mingalartaungnyunt	-6113	5865	7.62	0
YD21011	01Mingalartaungnyunt	Mingalartaungnyunt	-5356	6762	10.67	0
YD21012	01Mingalartaungnyunt	Mingalartaungnyunt	-5319	6307	5.49	3150
YD21013	01Mingalartaungnyunt	Mingalartaungnyunt	-5338	6042	4.57	388
YD21014	01Mingalartaungnyunt	Mingalartaungnyunt	-5329	5698	4.57	388
YD21021	01Mingalartaungnyunt	Mingalartaungnyunt	-4972	6294	7.62	0
YD21022	01Mingalartaungnyunt	Mingalartaungnyunt	-4661	6270	7.62	4345
YD21023	01Mingalartaungnyunt	Mingalartaungnyunt	-4468	6562	6.1	0
YD21024	01Mingalartaungnyunt	Mingalartaungnyunt	-4735	6091	5.49	2831
YD21025	01Mingalartaungnyunt	Mingalartaungnyunt	-4426	6022	3.05	2107
YD21026	01Mingalartaungnyunt	Mingalartaungnyunt	-3375	7689	4.57	3519
YD21028	01Mingalartaungnyunt	Mingalartaungnyunt	-3507	6754	5.49	2120
YD21031	01Mingalartaungnyunt	Mingalartaungnyunt	-4603	5651	3.05	2699
YD21041	01Mingalartaungnyunt	Mingalartaungnyunt	-4403	5984	3.05	0
YD21042	01Mingalartaungnyunt	Mingalartaungnyunt	-3579	6510	4.57	0
YD21043	01Mingalartaungnyunt	Mingalartaungnyunt	-3401	7009	3.05	0
YD21044	01Mingalartaungnyunt	Mingalartaungnyunt	-3332	7588	4.57	0
YD22001	03North Okkalappa	North Okkalappa	-7462	19665	5.18	0
YD22002	03North Okkalappa	North Okkalappa	-7499	19833	6.1	0
YD22003	03North Okkalappa	North Okkalappa	-7087	19965	3.66	0
YD22004	03North Okkalappa	North Okkalappa	-6220	20451	3.66	0
YD22005	03North Okkalappa	North Okkalappa	-5865	20661	3.05	0
YD22006	03North Okkalappa	North Okkalappa	-4904	20912	3.05	0
YD22007	03North Okkalappa	North Okkalappa	-4787	20162	3.05	0
YD22008	03North Okkalappa	North Okkalappa	-5648	19946	3.05	0
YD22009	03North Okkalappa	North Okkalappa	-5986	19854	4.57	0

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YD22010	03North Okkalappa	North Okkalappa	-6755	19159	3.35	0
YD22011	03North Okkalappa	North Okkalappa	-6902	19172	3.66	0
YD22012	03North Okkalappa	North Okkalappa	-7314	19153	5.79	0
YD22013	03North Okkalappa	North Okkalappa	-7056	18384	3.05	0
YD22014	03North Okkalappa	North Okkalappa	-6736	18464	3.05	0
YD22015	03North Okkalappa	North Okkalappa	-5999	19092	3.05	0
YD22016	03North Okkalappa	North Okkalappa	-5562	18932	3.05	0
YD22017	03North Okkalappa	North Okkalappa	-4843	19540	3.05	0
YD22018	03North Okkalappa	North Okkalappa	-6459	17935	3.05	0
YD22019	03North Okkalappa	North Okkalappa	-6250	17726	3.05	0
YD22020	03North Okkalappa	North Okkalappa	-6060	17535	3.05	0
YD22021	03North Okkalappa	North Okkalappa	-6797	17486	3.05	0
YD22022	03North Okkalappa	North Okkalappa	-6699	17007	3.66	0
YD22023	03North Okkalappa	North Okkalappa	-6373	15617	3.05	0
YD22024	03North Okkalappa	North Okkalappa	-6656	16644	4.57	0
YD22025	03North Okkalappa	North Okkalappa	-6299	15648	3.05	0
YD22026	03North Okkalappa	North Okkalappa	-6201	15980	3.05	0
YD22027	03North Okkalappa	North Okkalappa	-6207	16054	3.05	0
YD22028	03North Okkalappa	North Okkalappa	-6207	16318	3.05	0
YD22029	03North Okkalappa	North Okkalappa	-6140	15715	3.05	0
YD22030	03North Okkalappa	North Okkalappa	-5931	16466	3.05	0
YD22031	03North Okkalappa	North okkalappa	-6327	15777	3.05	0
YD22032	03North Okkalappa	North Okkalappa	-6262	15500	3.05	0
YD22041	03North Okkalappa	North Okkalappa	-6600	19609	3.66	0
YD22042	03North Okkalappa	North Okkalappa	-6632	18160	3.05	0
YD23001	01Pabedan	Pabedan	-6712	5269	8.23	1965
YD23002	01Pabedan	Pabedan	-6526	5271	7.01	2683
YD23003	01Pabedan	Pabedan	-6526	5005	5.49	5049
YD23004	01Pabedan	Pabedan	-6526	4730	4.57	2683
YD23005	01Pabedan	Pabedan	-6538	4439	3.66	0
YD23006	01Pabedan	Pabedan	-6538	4364	3.35	1331
YD23007	01Pabedan	Pabedan	-6867	5280	9.75	1762
YD23008	01Pabedan	Pabedan	-6860	5015	5.18	1516
YD23009	01Pabedan	Pabedan	-6857	4742	3.96	3234
YD23011	01Pabedan	Pabedan	-6860	4436	3.66	0
YD24001	01Pazundaung	Pazundaung	-5027	5224	4.57	3955
YD24002	01Pazundaung	Pazundaung	-5039	4970	3.96	1478
YD24003	01Pazundaung	Pazundaung	-4734	4952	3.96	0
YD24004	01Pazundaung	Pazundaung	-4731	5231	5.49	0
YD24005	01Pazundaung	Pazundaung	-4682	5290	5.49	1183
YD24006	01Pazundaung	Pazundaung	-4368	4930	4.57	0
YD24007	01Pazundaung	Pazundaung	-4341	4958	4.57	1442
YD25001	01Sanchaung	Sanchaung	-8619	8031	12.19	4611
YD25002	01Sanchaung	Sanchaung	-9430	8026	12.19	1979
YD25003	01Sanchaung	Sanchaung	-9837	8022	12.19	0
YD25004	01Sanchaung	Sanchaung	-9037	8028	12.19	1455
YD25011	01Sanchaung	Sanchaung	-8755	8573	22.86	7112
YD25012	01Sanchaung	Sanchaung	-8865	8990	21.34	0
YD25017	01Sanchaung	Sanchaung	-9449	8615	14.63	1177
YD25018	01Sanchaung	Sanchaung	-9149	8551	15.24	1614
YD25021	01Sanchaung	Sanchaung	-9393	7646	10.06	4323
YD25031	01Sanchaung	Sanchaung	-9558	9326	16.76	1999
YD25032	01Sanchaung	Sanchung	-9231	9167	18.29	2055
YD25033	01Sanchaung	Sanchaung	-9332	7463	9.75	1733
YD25035	01Sanchaung	Sanchaung	-9758	8661	12.8	2616
YD29001	02South Okkalappa	South Okkalappa	-5324	13486	3.05	4256
YD29002	02South Okkalappa	South Okkalappa	-4802	13812	3.05	4625
YD29003	02South Okkalappa	South Okkalappa	-4243	14335	3.05	3851
YD29004	02South Okkalappa	South Okkalappa	-3794	13886	3.05	3852
YD29005	02South Okkalappa	South Okkalappa	-3339	13418	3.05	3436

Node ID	Area Code	Asset ID	X (m)	Y (m)	Elevation (m AD)	Total Demand
YD29006	02South Okkalappa	South Okkalappa	-2767	13123	3.05	3435
YD29007	02South Okkalappa	South Okkalappa	-2189	12957	3.66	3435
YD29008	02South Okkalappa	South Okkalappa	-1826	12754	3.05	0
YD29009	02South Okkalappa	South Okkalappa	-3247	12625	3.05	8880
YD29010	02South Okkalappa	South Okkalappa	-2626	12010	7.62	5706
YD29011	02South Okkalappa	South Okkalappa	-4458	13320	3.05	4624
YD29012	02South Okkalappa	South Okkalappa	-4366	13203	3.05	4256
YD29013	02South Okkalappa	South Okkalappa	-4027	12742	3.35	4255
YD29014	02South Okkalappa	South Okkalappa	-3726	12244	3.35	12380
YD29015	02South Okkalappa	South Okkalappa	-3431	11745	6.1	4027
YD29021	02South Okkalappa	South Okkalappa	-5098	12988	3.05	4255
YD29022	02South Okkalappa	South Okkalappa	-4999	12785	3.05	4325
YD29023	02South Okkalappa	South Okkalappa	-4686	12268	3.35	0
YD29024	02South Okkalappa	South Okkalappa	-4637	12207	3.05	4327
YD29025	02South Okkalappa	South Okkalappa	-4464	11899	3.05	12820
YD29026	02South Okkalappa	South Okkalappa	-4206	11475	4.57	0
YD30001	01Tamwe	Tamwe	-4637	9316	7.62	0
YD30003	01Tamwe	Tamwe	-4359	8763	5.18	0
YD30005	01Tamwe	Tamwe	-4125	8585	4.57	0
YD30006	01Tamwe	Tamwe	-3954	8448	4.57	2016
YD30007	01Tamwe	Tamwe	-3797	8316	4.57	2607
YD30008	01Tamwe	Tamwe	-4487	8784	5.49	0
YD30011	01Tamwe	Tamwe	-3917	8578	3.35	13603
YD30012	01Tamwe	Tamwe	-3972	9381	3.05	0
YD30021	01Tamwe	Tamwe	-4788	9203	9.14	2528
YD30022	01Tamwe	Tamwe	-4784	9172	9.14	0
YD30023	01Tamwe	Tamwe	-4918	8856	7.01	0
YD30024	01Tamwe	Tamwe	-4798	9117	7.62	0
YD30025	01Tamwe	Tamwe	-4479	8979	6.1	0
YD30026	01Tamwe	Tamwe	-4760	9808	7.62	1335
YD30027	01Tamwe	Tamwe	-4763	10172	9.14	0
YD30031	01Tamwe	Tamwe	-4320	8702	5.18	0
YD30032	01Tamwe	Tamwe	-4743	8698	6.1	0
YD30033	01Tamwe	Tamwe	-4377	8315	7.62	1676
YD30034	01Tamwe	Tamwe	-3888	8287	3.05	0
YD30036	01Tamwe	Tamwe	-4254	8307	6.1	0
YD30037	01Tamwe	Tamwe	-4055	8303	4.57	0
YD30041	01Tamwe	Tamwe	-4246	7930	6.1	0
YD30042	01Tamwe	Tamwe	-4055	7929	3.66	1363
YD30043	01Tamwe	Tamwe	-3905	7953	3.05	0
YD30044	01Tamwe	Tamwe	-4407	8152	7.62	1363
YD30051	01Tamwe	Tamwe	-4703	7509	7.62	1278
YD30052	01Tamwe	Tamwe	-4837	7092	11.58	57
YD30053	01Tamwe	Tamwe	-4983	7514	12.19	0
YD30054	01Tamwe	Tamwe	-4869	7912	9.14	28
YD30055	01Tamwe	Tamwe	-4490	7304	7.62	0
YD30056	01Tamwe	Tamwe	-4596	7080	7.62	2528
YD30061	01Tamwe	Tamwe	-4480	7852	7.62	909
YD30062	01Tamwe	Tamwe	-4424	7639	6.71	0
YD30063	01Tamwe	Tamwe	-4332	7457	6.1	852
YD30064	01Tamwe	Tamwe	-4278	7219	6.1	1676
YD30065	01Tamwe	Tamwe	-4209	7838	6.1	2641
YD30066	01Tamwe	Tamwe	-4184	7743	5.49	0
YD30067	01Tamwe	Tamwe	-4156	7500	5.49	0
YD30068	01Tamwe	Tamwe	-4123	7288	4.57	0
YD30069	01Tamwe	Tamwe	-3920	7732	3.66	0
YD30070	01Tamwe	Tamwe	-3928	7512	3.05	1999
YD30071	01Tamwe	Tamwe	-3948	7374	4.57	0
YD30072	01Tamwe	Tamwe	-4051	7732	4.27	0
YD30073	01Tamwe	Tamwe	-4049	7506	3.66	0



Node ID	Area Code	Asset ID	X (m)	Y (m)	Elevation (m AD)	Total Demand
YD30074	01Tamwe	Tamwe	-4025	7336	4.57	0
YD31001	06Thaketa	Thaketa	-2854	8427	4.57	0
YD31002	06Thaketa	Thaketa	-2650	8407	5.49	0
YD31003	06Thaketa	Thaketa	-2504	8087	4.57	0
YD31004	06Thaketa	Thaketa	-2421	7966	4.57	2026
YD31011	06Thaketa	Thaketa	-2176	7448	3.66	7725
YD31012	06Thaketa	Thaketa	-2270	7229	4.57	5579
YD31013	06Thaketa	Thaketa	-2401	6937	4.57	4966
YD31014	06Thaketa	Thaketa	-2615	6455	3.66	11158
YD31021	06Thaketa	Thaketa	-1636	8029	4.57	0
YD31022	06Thaketa	Thaketa	-1075	7999	4.57	7725
YD31023	06Thaketa	Thaketa	-321	8157	4.57	5518
YD31024	06Thaketa	Thaketa	87	8320	4.57	0
YD31025	06Thaketa	Thaketa	-1814	8071	4.57	5978
YD31026	06Thaketa	Thaketa	-1936	8433	4.57	5977
YD31027	06Thaketa	Thaketa	-2155	8489	5.49	0
YD31028	06Thaketa	Thaketa	-1105	8045	4.27	0
YD31031	06Thaketa	Thaketa	-1172	7382	4.57	7173
YD31032	06Thaketa	Thaketa	-1427	6816	4.57	6805
YD31033	06Thaketa	Thaketa	-1809	6063	4.57	9381
YD31034	06Thaketa	Thaketa	-2257	5140	3.05	2989
YD31041	06Thaketa	Thaketa	511	8274	4.57	0
YD31042	06Thaketa	Thaketa	368	8024	3.66	0
YD31043	06Thaketa	Thaketa	246	7744	3.66	2391
YD31044	06Thaketa	Thaketa	82	7382	3.66	0
YD31045	06Thaketa	Thaketa	-66	6990	3.05	0
YD31046	06Thaketa	Thaketa	-153	6765	3.05	0
YD31047	06Thaketa	Thaketa	648	8636	4.57	5794
YD31048	06Thaketa	Thaketa	57	8901	3.66	3403
YD31049	06Thaketa	Thaketa	740	8458	4.57	2391
YD31051	06Thaketa	Thaketa	-162	7908	3.05	0
YD31052	06Thaketa	Thaketa	-1065	6628	3.05	2575
YD31053	06Thaketa	Thaketa	-432	6593	3.05	2575
YD31054	06Thaketa	Thaketa	-264	7072	3.05	0
YD31055	06Thaketa	Thaketa	-845	7276	3.05	0
YD31056	06Thaketa	Thaketa	6	7852	3.05	0
YD32011	02Thingangyun	Thingangyun	-3006	10713	6.1	947
YD32012	02Thingangyun	Thingangyun	-2447	11127	5.49	5756
YD32021	02Thingangyun	Thingangyun	-1294	12285	3.05	2465
YD32022	02Thingangyun	Thingangyun	-1685	11869	3.66	3773
YD32023	02Thingangyun	Thingangyun	-2046	11527	4.57	6728
YD33001	02Yankin	Yankin	-5951	13200	6.1	0
YD33007	02Yankin	Yankin	-6132	12438	7.62	17156
YD33008	02Yankin	Yankin	-5662	13289	7.62	3393
YD33021	02Yankin	Yankin	-6156	11626	7.62	7071
YD33022	02Yankin	Yankin	-6009	11622	9.14	0
YD33024	02Yankin	Yankin	-5901	11589	9.14	2503
YD33025	02Yankin	Yankin	-5394	11825	9.14	3403
YD33026	02Yankin	Yankin	-5074	11985	3.05	3395
YD33027	02Yankin	Yankin	-4954	11681	4.57	5897
YD33028	02Yankin	Yankin	-5108	11872	3.05	0
YD33029	02Yankin	Yankin	-5385	11764	9.14	0
YD33030	02Yankin	Yankin	-5836	11582	10.67	0
YD33031	02Yankin	Yankin	-5886	11572	9.14	0
YD33033	01Yankin	Yankin	-5855	11469	10.67	3840
YD33034	01Yankin	Yankin	-5545	11592	12.19	1240
YD33035	01Yankin	Yankin	-5379	11180	12.19	0
YD33036	01Yankin	Yankin	-5468	11158	11.28	0
YD33037	01Yankin	Yankin	-5532	11330	12.19	0
YD33038	01Yankin	Yankin	-5806	11069	11.28	3159

Node ID	Area Code	Asset ID	X (m)	Y (m)	Elevation (m AD)	Total Demand	
YD33039	01Yankin	Yankin	-6098	10949	9.14	365	
YD33040	01Yankin	Yankin	-5791	11010	10.67	243	
YD33041	01Yankin	Yankin	-5434	11106	10.67	1239	
YD33042	01Yankin	Yankin	-5299	11044	15.24	2455	
YD33045	02Yankin	Yankin	-6168	11449	9.14	0	
YD33047	02Yankin	Yankin	-6002	11500	9.14	0	
YD33051	01Yankin		-6101	10991	9.14	0	
YD33052	01Yankin	Yankin	-5424	10294	9.14	0	
YD33054	01Yankin	Yankin	-5947	10162	10.67	1608	
YD33055	01Yankin	Yankin	-5323	10380	7.62	5128	
YD33057	01Yankin	Yankin	-5234	10226	9.14	0	
YDN01002		1	1002	-6525	8750	27.43	0
YDN01003		1	1003	-6698	8405	21.34	1243
YDN01004		1	1004	-6515	8112	15.24	1618
YDN01005		1	1005	-6565	7878	15.24	1736
YDN01006		1	1006	-6568	9048	35.05	0
YDN01052		1	1052	-6603	8270	18.29	1372
YDN0114001		1 N02001		-9238	9192	18.29	0
YDN02001		2 N02001		-3639	11480	12.19	0
YDN03001	03NewCentral	N2020		-9697	20111	42.67	0
YDN04001	04North	N2020		-9713	26695	44.2	0
YDN05001		8 N0805001		-700	18218	3.05	1370
YDN05003		8 N0805003		763	19106	3.05	4105
YDN05004		8 N0805004		-502	21448	3.05	575
YDN05005		8 N0805005		2152	21339	3.05	5390
YDN05006		8 N0805006		1184	18201	3.05	530
YDN05007		8 N0805007		747	17122	3.05	1060
YDN06001		8 N0806001		-1657	16389	3.05	4234
YDN06003		8 N0806003		-2638	15379	3.05	10069
YDN06004		8 N0806004		-2215	17494	3.05	3539
YDN06005		8 N0806005		-4032	16591	3.05	4426
YDN06006		8 N0806006		-3299	19397	3.05	5136
YDN06007		8 N0806007		-2669	18291	3.05	6372
YDN06008		8 N0806008		-4451	17364	3.05	4371
YDN07002		7	7002	3126	12986	3.05	2491
YDN07003		7	7003	2979	11959	3.05	1444
YDN07005		7	7005	2637	10785	3.05	1701
YDN07007		7	7007	2295	9636	3.05	730
YDN07008		7	7008	3713	10443	3.05	408
YDN07009		7	7009	4837	10076	3.05	238
YDN07010		7	7010	4079	11592	3.05	335
YDN07011		7	7011	5155	11274	3.05	448
YDN07012		7	7012	4397	12986	3.05	92
YDN07013		7	7013	5497	12692	3.05	385
YDN07014		7	7014	6597	12375	3.05	3899
YDN07015		7	7015	6279	11030	3.05	119
YDN07016		7	7016	5741	13695	3.05	151
YDN07017		7	7017	5864	14233	3.05	184
YDN07018		7	7018	5008	14355	3.05	0
YDN07019		7	7019	4666	13890	3.05	330
YDN07020		7	7020	4079	14282	3.05	0
YDN07021		7	7021	3940	15131	3.05	2299
YDN07022		7	7022	2026	12937	3.05	2299
YDN07023		7	7023	1440	12252	3.05	56527
YDN07024		7	7024	1977	14017	3.05	1187
YDN07025		7	7025	1391	13401	3.05	3931
YDN07026		7	7026	3062	14098	3.05	2476
YDN07027		7	7027	3088	15802	3.05	2393
YDN07028		7	7028	3737	16653	3.05	0
YDN07029		7	7029	4617	15944	3.05	2495

Node ID	Area Code	Asset ID	X (m)	Y (m)	Elevation (m AD)	Total Demand
YDN07030		7 7030	5155	15528	3.05	2318
YDN07031		7 7031	5644	15113	3.05	0
YDN07032		7 7032	1174	14616	3.05	1257
YDN07033		7 7033	3694	13543	3.05	1251
YDN07034		7 7034	2541	13514	3.05	1206
YDN07035		7 7035	3418	9259	3.05	252
YDN07dammy		7 07dammy	3076	13341	10.67	0
YDN09001		9 N0909010	-6285	2189	3.05	8903
YDN09002		9 N0909002	-9532	3075	3.05	0
YDN10001	Dawbon	Dawbon	-3165	8136	4.57	0
YDN11001	03Kamayut	Kamayut	-9529	11506	8.53	0
YDN11002	03Kamayut	Kamayut	-9566	11480	8.53	0
YDN11003		3 N0311003	-8976	11604	6.1	0
YDN11004		3 N0311004	-10340	13988	6.1	1804
YDN11005		3 N0311005	-11724	13714	3.05	7217
YDN11008		3 N0311008	-9197	13889	6.1	0
YDN12001		11 N1112001	-17239	18598	3.05	7367
YDN12002		11 N1112002	-18678	19174	3.05	0
YDN12003		11 N1112003	-19398	17529	3.05	1536
YDN12004		11 N1112004	-19974	16028	3.05	1823
YDN12005		11 N1112005	-18884	15679	3.05	0
YDN12006		11 N1112006	-17650	15864	3.05	6295
YDN12007		11 N1112007	-17814	17077	3.05	7047
YDN12008		11 N1112008	-16786	16008	3.05	6268
YDN12009		11 N1112009	-16786	14651	3.05	13927
YDN12010		11 N1112010	-14401	13993	3.05	17339
YDN12011		11 N1112011	-14586	15637	3.05	6004
YDN12012		11 N1112012	-14483	16316	3.05	3101
YDN12013		11 N1112013	-15593	16809	3.05	3743
YDN12014		11 N1112014	-15655	17879	3.05	6387
YDN13004		3 N0313004	-11451	19290	6.1	6008
YDN13005		3 N0313005	-12774	19331	4.57	13756
YDN13006		3 N0313006	-11874	18818	6.1	5429
YDN13007		3 N0313007	-12921	18768	4.57	3953
YDN13008		3 N0313008	-12782	20387	3.66	6061
YDN13009		3 N0313009	-12839	17036	3.05	9592
YDN13010		3 N0313010	-11775	17371	4.57	4374
YDN13011		3 N0313011	-10948	15394	7.62	7758
YDN13012		3 N0313012	-11876	15074	3.05	6990
YDN13013		3 N0313013	-11411	16367	4.57	4216
YDN13025		3 N0313025	-9672	15598	7.62	15517
YDN19003	03Mayangon	N0319003	-7997	14825	25.91	6697
YDN19008		3 N0313021	-7141	17417	7.62	22017
YDN19010		3 N0319010	-7743	15007	21.34	0
YDN19015		3 N0313022	-7045	16728	7.62	11955
YDN19016		3 N0313023	-6381	15471	3.05	4038
YDN19017		3 N0313024	-5990	14636	3.05	4040
YDN20001		3 N0313003	-10180	19987	9.14	1732
YDN20002		3 N0320002	-8615	21476	9.14	1732
YDN20003		3 N0320003	-8873	21993	9.14	3464
YDN20004		3 N0320004	-7835	19834	10.06	796
YDN20007		3 N0320007	-7551	19135	9.14	9489
YDN20009		3 N0320009	-8402	20762	9.14	1732
YDN20021		4 N0420021	-9555	26316	12.19	6219
YDN20022		4 N0420022	-9718	25054	12.19	8327
YDN20023		4 N0420023	-9571	23691	7.62	2625
YDN20024		4 N0420024	-7235	25735	9.14	8055
YDN20025		4 N0420025	-6870	22498	6.1	5960
YDN20026		4 N0420026	-7432	27766	12.19	5229
YDN20027		3 N0313015	-9644	18861	30.48	1733

Node ID	Area Code	Asset ID	X (m)	Y (m)	Elevation (m AD)	Total Demand
YDN20028		4 N0420028	-9265	30065	15.24	0
YDN20029		4 N0420029	-9428	27655	12.19	6219
YDN20030		4 N0420028	-7636	29963	12.19	1571
YDN20031		4 N0420031	-7106	23698	9.14	0
YDN20051		5 N0520051	-8931	32841	18.29	5186
YDN20052		5 N0520052	-8683	31861	12.19	3895
YDN20053		5 N0520053	-8760	34023	15.24	5746
YDN20054		5 N0520054	-7939	34605	10.67	6369
YDN20055		5 N0520055	-9291	34588	18.29	7423
YDN22001		3 N0322001	-7389	18331	3.05	8065
YDN22002		4 N0422002	-5861	20734	4.57	55157
YDN22003		4 N0422003	-4912	22000	4.57	75533
YDN22011		4 N0422011	-6383	21622	6.1	15756
YDN28001		4 N0428001	-11857	26445	4.57	629
YDN28002		4 N0428002	-12777	25495	9.14	1491
YDN28003		4 N0428003	-13069	26899	6.1	1958
YDN28004		4 N0428004	-13147	27986	5.49	4294
YDN28005		4 N0428005	-13912	30125	4.57	485
YDN28006		4 N0428006	-15864	29610	3.05	5516
YDN28007		4 N0428007	-15692	27877	3.05	0
YDN28008		4 N0428008	-14927	27690	3.05	4366
YDN28009		4 N0428009	-15130	26862	3.05	4187
YDN28010		4 N0428010	-15021	25005	3.05	6486
YDN28011		4 N0428011	-15176	23225	3.05	12750
YDN28012		4 N0428012	-12386	24137	9.14	13099
YDN31011		6 N0631011	-1956	7075	3.05	0
YDN31012		6 N0631012	-2332	6317	3.05	0
YDN31013		6 N0631013	-2752	5412	3.05	0
YDN31014		6 N0631014	206	6919	3.05	2393
YDN31015		6 N0631015	659	7967	3.05	2391
YDN31016		6 N0631016	-1647	8065	4.57	0
YDN31017		6 N0631017	406	8483	3.05	0
YDN31052		6 N0631052	-2901	5618	3.05	13784
YDN32001		2 N32001	-3131	10894	3.05	7400
YDN32003		2 N32003	-3987	10709	4.57	7124
YDN32005		2 N32005	-3185	10555	4.57	7539
YDN32006		2 N32006	-3653	9994	4.57	3584
YDN32007		2 N32007	-3103	9527	4.57	8667
YDN32008		2 N32008	-2681	9218	3.05	6655
YDN32009		2 N32009	-2506	10144	3.05	3826
YDN32010		2 N32010	-2109	10792	3.05	5510
YDN32011		2 N32011	-1667	11337	3.05	7357
YDN32012		2 N32012	-944	12005	3.05	0
YDN32013		2 N32013	-913	12344	3.05	7426
YDN32014		2 N32014	-952	10846	3.05	3838
YDN32015		2 N32015	-1036	10308	3.05	0
YDN32016		2 N32016	-1417	9845	3.05	16307
YDN32017		2 N02017	-1960	9585	3.05	6235
YDN32018		2 N32018	-1270	11854	3.05	5147
YDN32019		2 N32019	-913	9159	3.05	5583
YDN32020		2 N0232020	-3339	11499	3.05	4121
YDN33025	02Yankin	N33025	-6268	12387	6.1	3791
YDN33051		2 N0233051	-6072	13206	6.1	3985
YPDowntownIn	Hlawga	Hlawga1	-10422	26488	10	0
YPDowntownOut	61Mingalardon	Mingalardon	-10420	26446		0
YPGyobyu	53Gyobyu	Gyobyu	-18215	70852	42.67	0
YPHlawga2In	55Hlawga	Hlawga	-10413	26349	10	0
YPHlawga2Out	55Hlawga	Hlawga2	-10391	26279	10	0
YSTerminal	55TerminalRes	N2020	-11181	26693	15.3	0
YT00003	53Gyobyu	Gyobyu	-18958	70698	42.67	0

Node ID	Area Code	Asset ID	X (m)	Y (m)	Elevation (m AD)	Total Demand
YT00004	53Gyobyu	Gyobyu	-18384	70690	57.61	0
YT00005	53Gyobyu	Gyobyu	-19885	70865	42.67	0
YT00007	53Gyobyu	Gyobyu	-22286	68434	30.48	0
YT00008	53Gyobyu	Gyobyu	-22028	60978	21.34	0
YT00009	53Gyobyu	Gyobyu	-17445	52567	16.92	0
YT00010	53Gyobyu	Gyobyu	-15617	46759	24.69	0
YT00021	54Pyugyi	Pyugyi	-18208	56907	20.73	0
YT00022	54Pyugyi	Pyugyi	-18285	56636	20.57	0
YT00023	54Pyugyi	Pyugyi	-17175	52538	16.92	0
YT00024	54Pyugyi	Pyugyi	-12349	32078	11.28	0
YT00025	54Pyugyi	Pyugyi	-16783	50026	17.98	0
YT02001	61Bahan	42 Yegu-Kokine	-6770	10194	18.29	0
YT02002	61Bahan	42 Yegu-Kokine	-6562	9570	18.29	0
YT02003	61Bahan	42 Yegu-Kokine	-6603	9199	35.97	0
YT02011	01Bahan	41 Yegu-West City	-6012	10199	10.67	0
YT02012	01Bahan	42 Yegu-West City	-5962	10135	10.67	1865
YT02021	61Bahan	56 Yegu-Kokine	-6092	10189	13.72	0
YT02022	61Bahan	56 Yegu-Kokine	-6127	10087	15.24	0
YT02023	61Bahan	56 Yegu-Kokine	-6352	9386	30.48	0
YT02024	61Bahan	56 Yegu-Kokine	-6583	9184	35.97	0
YT02031	01Bahan	42 Kokine-East City	-7399	8614	18.29	649
YT02032	01Bahan	42 Kokine-East City	-7397	8411	22.86	0
YT02033	01Bahan	42 Kokine-East City	-7713	8288	16.76	1843
YT02034	01Bahan	42 Kokine-East City	-8020	8105	16.76	0
YT02041	61Bahan	42 Kokine-Central City	-6606	9051	39.01	0
YT02042	61Bahan	42 Kokine-Central City	-6733	8409	21.34	0
YT02043	61Bahan	42 kokine-Central City	-6641	8269	18.29	0
YT02044	61Bahan	42 Kokine-Central City	-6566	8082	15.24	0
YT02045	61Bahan	42 Kokine-Central City	-6772	7893	15.24	0
YT02046	61Bahan	42 kokine-Central City	-6772	7557	14.63	0
YT02047	61Bahan	42 Kokine-Central City	-6920	7507	14.94	0
YT13001	61Insein	Hlawga01	-11534	22563	9.14	0
YT13002	61Insein	Hlawga01	-11563	22393	9.14	0
YT13003	61Insein	Hlawga01	-11492	20442	9.14	0
YT13004	61Insein	Hlawga01	-11037	19788	10.67	0
YT13005	61Insein	Hlawga01	-10519	19233	12.19	0
YT13006	61Insein	Hlawga01	-10276	18316	22.86	0
YT13007	61Insein	Hlawga01	-9565	17277	22.86	0
YT13008	61Insein	Hlawga01	-8981	16643	22.86	0
YT19001	61Mayangon	Hlawga01	-8535	16237	15.24	0
YT19002	61Mayangon	Hlawga02	-8318	15814	28.96	0
YT19003	61Mayangon	Hlawga01	-7981	14902	25.91	0
YT19005	61Mayangon	Hlawga01	-6684	14849	16.76	0
YT19006	61Mayangon	Hlawga01	-6505	14868	13.72	0
YT19007	61Mayangon	Hlawga01	-6206	13671	7.62	0
YT19009	61Mayangon	Hlawga01	-7770	15056	21.34	0
YT19011	61Mayangon	Hlawga02	-7022	17418	7.62	0
YT19012	61Mayangon	Hlawga02	-6625	15309	7.62	0
YT19021	61Mayangon	Gyobyu	-7707	20021	10.06	0
YT19022	61Mayangon	Gyobyu	-7575	19639	7.62	0
YT19023	61Mayangon	Gyobyu	-6890	16937	7.62	0
YT19024	61Mayangon	Gyobyu	-6555	15331	7.62	0
YT19031	61Mayangon	Gyobyu	-6080	13440	6.1	0
YT19032	61Mayangon	Gyobyu	-6078	13420	6.1	0
YT19033	61Mayangon	Gyobyu	-6078	13344	6.1	0
YT19034	61Mayangon	Gyobyu	-6100	13405	6.1	0
YT19035	61Mayangon	Hlawga02	-6101	13324	6.1	0
YT19036	61Mayangon	Hlawga02	-6124	13377	6.1	0
YT19037	61Mayangon	Hlawga02	-6128	13324	6.1	0
YT19039	61Yegu	Yegu	-6139	13299	6.1	0

Node ID	Area Code	Asset ID	X (m)	Y (m)	Elevation (m AD)	Total Demand
YT19051	61Mayangon	56 Yegu-Kokine	-6080	13222	6.1	0
YT20001	53Mingalardon	Gyobyu	-11271	38408	9.14	0
YT20002	53Mingalardon	Gyobyu	-9783	36074	15.24	0
YT20003	53Mingalardon	Gyobyu	-9345	35082	19.81	0
YT20004	53Mingalardon	Gyobyu	-8888	33984	18.29	0
YT20005	53Mingalardon	Gyobyu	-8187	32366	19.81	0
YT20006	53Mingalardon	Gyobyu	-8433	27296	21.34	0
YT20007	53Mingalardon	Gyobyu	-8549	26333	12.19	0
YT20008	61Mingalardon	Gyobyu	-8988	24838	11.58	0
YT20009	61Mingalardon	Gyobyu	-9046	23919	7.62	0
YT20010	61Mingalardon	Gyobyu	-8915	23073	9.14	0
YT20011	61Mingalardon	Gyobyu	-8621	22052	12.19	0
YT20012	61Mingalardon	Gyobyu	-8388	21526	12.19	0
YT20013	61Mingalardon	Gyobyu	-7965	20534	9.14	0
YT20015	61Mingalardon	Hlawga02	-10179	25565	16.76	0
YT20016	61Mingalardon	Hlawga02	-9943	23921	13.72	0
YT20017	61Mingalardon	Hlawga02	-9782	22797	12.19	0
YT20018	61Mingalardon	Hlawga02	-8913	22617	12.19	0
YT20019	61Mingalardon	Hlawga02	-8714	22032	12.19	0
YT20020	61Mingalardon	Hlawga02	-8526	21502	9.14	0
YT20021	61Mingalardon	Hlawga02	-8063	20482	9.14	0
YT20022	61Mingalardon	Hlawga02	-7779	19991	10.06	0
YT20023	61Mingalardon	Hlawga02	-7468	19140	9.14	0
YT20031	53Mingalardon	Gyobyu	-8215	31786	19.81	0
YT20032	53Mingalardon	Gyobyu	-8303	29968	15.24	0
YT20033	53Mingalardon	Gyobyu	-8323	29556	18.29	0
YT20034	53Mingalardon	Gyobyu	-8410	27767	21.34	0
YT20035	61Mingalardon	Gyobyu	-8735	25700		0
YT20042	61Mingalardon	Mingalardon	-10385	26252	14.02	0
YT21001	01Mingalartaungnyunt	42 Yegu-West City	-4586	6778	6.1	0
YT21002	01Mingalartaungnyunt	42 Yegu-West City	-5289	6320	5.49	0
YT21003	01Mingalartaungnyunt	Mingalartaungnyunt	-4992	6545	8.23	0
YT21004	01Mingalartaungnyunt	Mingalartaungnyunt	-5297	6046	4.57	0
YT21006	01Mingalartaungnyunt	Mingalartaungnyunt	-5305	5720	4.57	0
YT24001	01Pazundaung	42 Yegu-West City	-5318	5230	4.57	0
YT25001	01Sanchaung	42 Kokine-East City	-8129	8028	16.76	0
YT28001	61Mingalardon	Hlawga02	-10418	26364	13.72	0
YT28002	61Schwepyitha	Hlawga01	-10472	26371	9.75	0
YT28003	61Schwepyitha	Hlawga01	-10664	25833	9.75	0
YT28004	61Schwepyitha	Hlawga01	-10983	25025	7.62	0
YT28005	61Schwepyitha	Hlawga01	-11437	23542	12.19	0
YT30001	01Tamwe	42 Yegu-West City	-5322	9316	8.53	0
YT30002	01Tamwe	42 Yegu-West City	-4935	8824	7.01	0
YT30003	01Tamwe	42 Yegu-West City	-4817	8337	11.28	0
YT30004	01Tamwe	42 Yegu-West City	-4529	7926	7.62	0
YT30005	01Tamwe	42 Yegu-West City	-5162	7842	13.11	0
YT30006	01Tamwe	42 Yegu-West City	-4300	7195	6.1	0
YT30007	01Tamwe	Tamwe	-5229	9197	9.14	0
YT30008	01Tamwe	Tamwe	-4711	8180	9.75	0
YT30009	01Tamwe	Tamwe	-4432	6985	6.1	0
YT33001	61Yankin	42 Yegu-Kokine	-6491	12585	7.62	0
YT33002	61Yankin	42 Yegu-kokine	-6695	11328	13.72	0
YT33010	61Yankin	42 Yegu-West City	-6298	12851	4.57	0
YT33011	61Yankin	42 Yegu-West City	-6390	12611	7.62	0
YT33012	61Yankin	42 Yegu-West City	-6129	11490	7.62	0
YT33013	61Yankin	42 Yegu-West City	-6163	10974	9.14	0
YT33014	61Yankin	42 Yegu-West City	-6125	10341	10.67	0
YT33021	61Yankin	56 Yegu-Kokine	-6346	12596	9.14	0
YT33022	61Yankin	56 Yegu-Kokine	-6087	11499	7.62	0
YT33023	61Yankin	56 Yegu-Kokine	-6123	10983	9.14	0

Node ID	Area Code	Asset ID	X (m)	Y (m)	Elevation (m AD)	Total Demand
YT33024	61Yankin	56 Yegu-Kokine	-6068	10361	10.67	0
YT33025	61Yankin	56 Yegu-Kokine	-6281	12386	6.1	0
YT33026	61Yankin	56 Yegu-Kokine	-6086	11644	7.62	0
YT33051	61Yankin	42 Yegu-Kokine	-6293	12991	3.05	0
YT33053	61Yankin	56 Yegu-Kokine	-6207	12933	3.66	0
YT33054	61Yankin	56 Yegu-kokine	-6224	12897	3.66	0
YT33055	61Yankin	56 Yegu-Kokine	-6097	11130	9.14	0
YTB02001	61TRSM	N2020	-4289	11454	9.14	0
YTB03001		61	-9585	20106		0
YTB03011		3	-10665	26434		0
YTB03012		3	-10364	26438		0
YTB04001		61 NT04001	-9773	26653	44.2	0
YTB05001		61 N2020	-9808	26685	18.29	0
YTB05002		61 NT05001	-9236	32460	33.53	0
YTB06011			-2375	8148	10.67	0
YTB07001		61 NT07001	3018	13187	10.67	0
YTB08001		61 NT08001	-1943	18008	12.19	0
YTB11Res			-17312	18958	10.67	0
YTB20001		61 N2020	-11115	26731	15.3	0
YTB20012		61 N2020	-10440	26215	9.14	0
YTBGyobyu001			-10661	26419	10	0
YTBGyobyu005			-10989	26546	15.3	0
YTDammy			-6813	6991	40.23	0
YTH00003	52Hlaing System	N2020	-22846	48679	11.28	0
YTH00004	52Hlaing System	N2020	-21129	41902	9.75	0
YTH00005	52Hlaing System	N2020	-14579	34215	6.4	0
YTH0001			-26250	51463	16.5	0
YTH00015	52Hlaing System	HlaingSys001	-31793	53152	6.1	0
YTH28001	52Hlaing System	N2020	-12997	31417	9.14	0
YTH28002	52Hlaing System	N2020	-12410	27487	9.14	0
YTH28003	52Hlaing System	N2020	-11502	26915	15.3	0
YTN00005	51Ngamoe system	N2020	-7057	68358	27.43	0
YTN00006	51Ngamoe system	N2020	-4219	66384	6.71	0
YTN00007	51Ngamoe system	N2020	-3940	63820	15.24	0
YTN00008	51Ngamoe system	N2020	-5055	62483	15.24	0
YTN00009	51Ngamoe system	N2020	-4999	60421	30.48	0
YTN00010	51Ngamoe system	N2020	-6226	59306	21.34	0
YTN00011	Ngamoe system	N2020	-6197	42520	6.1	0
YTN01001		61 N2020	-6579	9126	42.67	0
YTN01071			-6869	7015	40	0
YTN05001	05FarNorth	N0505001	-9462	32610	33.5	0
YTN08001		8 ND08001	-1708	17971	12.19	0
YTN11Resdammy			-16992	19030	10.67	0
YTN19011		3 N0319011	-10765	14999	6.1	0
YTN20001	51Ngamoe system	N2020	-6224	34509	4.57	0
YTN20002	51Ngamoe system	N2020	-8108	32316	19.81	0
YTN20003	Ngamoe system	N2020	-10475	32329	15.24	0
YTWNSouth Branch	TRSM	NTRSM	-10536	22956	18.29	0

## **Annex 3.2 Pipe Data**



From Node ID	To Node ID	Suffix	Asset ID	Length (m)	Diameter (mm)	Roughness Type	Hazen Williams	Material	Year
YD01001	YD01003	1 Alone		174.7	457	HW	85	CI	1915
YD01001	YD01003	2 Alone		174.7	152	HW	75	CI	1915
YD01001	YD01022	1 Alone		59.5	152	HW	75	CI	1915
YD01002	YD17015	1 Alone		522.1	305	HW	81	CI	1915
YD01003	YD01004	1 Alone		177.7	457	HW	85	CI	1915
YD01003	YD01004	2 Alone		177.7	152	HW	75	CI	1915
YD01003	YD01031	1 Alone		223.7	152	HW	75	CI	1915
YD01004	YD01005	1 Alone		221.2	457	HW	85	CI	1915
YD01004	YD01005	2 Alone		221.2	152	HW	75	CI	1915
YD01004	YD01031	1 Alone		125.2	152	HW	75	CI	1915
YD01005	YD01006	1 Alone		187.5	457	HW	85	CI	1915
YD01005	YD01006	2 Alone		187.5	152	HW	75	CI	1915
YD01005	YD01025	1 N0101001		438.8	800	HW	120		
YD01005	YD01032	1 Alone		139.4	152	HW	75	CI	1915
YD01005	YD01041	1 Alone		310.4	152	HW	75	CI	1915
YD01006	YD01007	1 Alone		351.4	457	HW	85	CI	1915
YD01006	YD01007	2 Alone		351.7	152	HW	75	CI	1915
YD01006	YD01033	1 Alone		190.2	152	HW	75	CI	1915
YD01006	YD01042	1 Alone		312.3	152	HW	75	CI	1915
YD01007	YD01002	1 Alone		385.4	457	HW	85	CI	1915
YD01007	YD01002	2 Alone		385.4	152	HW	75	CI	1915
YD01007	YD01034	1 Alone		318.4	152	HW	75	CI	1915
YD01007	YD01043	1 Alone		300.9	152	HW	75	CI	1915
YD01022	YD01021	1 Alone		321.7	152	HW	75	CI	1915
YD01022	YD01023	1 Alone		428.8	152	HW	75	CI	1915
YD01023	YD01025	1 Alone		369.3	152	HW	75	CI	1915
YD01025	YD01026	1 Alone		621.6	152	HW	75	CI	1915
YD01026	YD01034	1 Alone		154.1	152	HW	75	CI	1915
YD01031	YD01032	1 Alone		219.1	152	HW	75	CI	1915
YD01032	YD01033	1 Alone		200.7	152	HW	75	CI	1915
YD01033	YD01034	1 Alone		413.6	152	HW	75	CI	1915
YD01034	YD01035	1 Alone		383.1	152	HW	75	CI	1915
YD01035	YD01002	1 Alone		313.2	152	HW	75	CI	1915
YD01035	YD01036	1 Alone		480	152	HW	75	CI	1915
YD01041	YD01005	2 N0101001		307.3	800	HW	120		
YD01041	YD01042	1 Alone		110.2	152	HW	75	CI	1915
YD01042	YD01043	1 Alone		303.8	152	HW	75	CI	1915
YD01043	YD01044	1 Alone		365.1	152	HW	75	AC	1915
YD01044	YD01002	1 Alone		306.9	152	HW	75	CI	1915
YD01044	YD17015	1 Alone		574.2	152	HW	75	CI	1915
YD02001	YD02002	2 Bahan		455.1	305	HW	83	DI	1928
YD02002	YD02003	1 N0102005		467.1	600	HW	120		
YD02002	YD02003	2 Bahan		463.9	305	HW	83	DI	1928
YD02002	YD02011	1 Bahan		555.6	203	HW	80	CI	1940
YD02002	YD02012	1 Bahan		825.9	152	HW	80	CI	1940
YD02003	YD02004	1 Bahan		707.7	305	HW	83	DI	1928
YD02003	YD02004	3 Bahan		761.1	305	HW	83	DI	1928
YD02003	YD02023	1 Bahan		56.6	254	HW	93	DI	1965
YD02003	YD14002	1 N0102010		1082	500	HW	120		
YD02004	YD02005	1 Bahan		174	305	HW	83	DI	1928
YD02005	YD14002	1 Bahan		205.6	305	HW	83	DI	1928
YD02006	YT02031	1		888.3	1067	HW	88	CI	1904
YD02006	YT02031	2 N0102003		884.8	1300	HW	120		
YD02012	YD02013	1 Bahan		604.3	152	HW	80	CI	1940
YD02015	YD02012	1 Bahan		108.1	152	HW	80	CI	1940
YD02021	YD02022	1 Bahan		427.9	203	HW	80	CI	1940
YD02021	YDN01Kokinedammy	1		156.7	203	HW	120		
YD02023	YD02024	1 Bahan		263.7	254	HW	93	DI	1965
YD02023	YD02024	2 Bahan		267.4	152	HW	80	DI	1940
YD02026	YD33054	2 Bahan		612.3	152	HW	80	CI	1940
YD02027	YD02025	1 Bahan		224.7	152	HW	80	DI	1940
YD02027	YT02012	2 Bahan		188.3	305	HW	86	DI	1940
YD02028	YD33054	2 Bahan		283.5	305	HW	86	DI	1940
YD02031	YD02032	1 Bahan		577.9	152	HW	87	GI	1965
YD02031	YDN01052	2 Bahan		798.5	152	HW	87	GI	1965
YD02032	YD02033	1 Bahan		203.5	152	HW	87	GI	1965
YD02032	YD02034	1 Bahan		323.9	152	HW	80	CI	1940
YD02034	YD02030	1 Bahan		446.4	152	HW	82		1950
YD02034	YD02035	1 Bahan		897.6	152	HW	82		1950
YD02034	YD02037	1 Bahan		656.9	152	HW	82		1950
YD02034	YD30022	1 Bahan		494.1	152	HW	82		1950
YD02035	YD02036	1 Bahan		328.7	152	HW	82		1950
YD02041	YT02042	2 Bahan		614.2	152	HW	80	CI	1940

From Node ID	To Node ID	Suffix	Asset ID	Length (m)	Diameter (mm)	Roughness Type	Hazen Williams	Material	Year
YD02042	YD02043	1	Bahan	332.9	152	HW	80	CI	1940
YD02042	YT02033	2	Bahan	268.9	152	HW	80	CI	1940
YD02043	YT02034	2	Bahan	345.7	152	HW	80	CI	1940
YD02044	YD02042	1	Bahan	634.7	152	HW	80	CI	1940
YD02044	YDN01052	2	Bahan	434.3	152	HW	80	CI	1940
YD02051	YD02052	1	Bahan	549.9	686	HW	87		1915
YD02051	YD02065	1	Bahan	236.6	686	HW	87		1915
YD02052	YD02053	1	Bahan	315.9	686	HW	87		1915
YD02052	YD02061	1	Bahan	740.9	152	HW	80	CI	1940
YD02052	YD02062	1	Bahan	923.7	152	HW	80	DI	1940
YD02053	YD02055	1	Bahan	531.4	686	HW	87		1915
YD02055	YD02066	1	Bahan	261.1	686	HW	87		1915
YD02056	YD02052	1	Bahan	494.8	152	HW	80	CI	1940
YD02056	YD02057	1	Bahan	1094.5	229	HW	80	CI	1940
YD02056	YDN01005	1	N0102	68.8	500	HW	120		
YD02056	YDN01052	2	Bahan	344.4	152	HW	80	DI	1940
YD02057	YD02053	1	Bahan	784	152	HW	80	RC	1940
YD02057	YD02058	1	Bahan	1015.9	152	HW	80	CI	1940
YD02062	YD02066	1	Bahan	268.2	152	HW	80	CI	1940
YD02065	YD21001	1	Dagon	423.2	686	HW	87	CI	1915
YD02066	YD02059	1	Bahan	453.5	152	HW	80	CI	1940
YD03001	YD03002	1	Botataung	283.3	305	HW	81	CI	1915
YD03001	YD03036	1	Botataung	298.4	305	HW	81	CI	1915
YD03002	YD03004	1	Botataung	251.6	305	HW	81	CI	1915
YD03004	YD03005	1	Botataung	684.5	305	HW	81	CI	1915
YD03006	YD03002	1	Botataung	273.6	305	HW	81	CI	1915
YD03006	YD03036	1	Botataung	276.8	305	HW	81	CI	1915
YD03007	YD03006	1	Botataung	224.4	305	HW	81	CI	1915
YD03007	YD03039	1	Botataung	280.2	305	HW	81	CI	1915
YD03008	YD03007	1	Botataung	657.8	305	HW	81	CI	1915
YD03009	YD03008	1	Botataung	271	203	HW	80	CI	1940
YD03011	YD03022	1	Botataung	255.2	305	HW	81	CI	1915
YD03011	YD24002	1	Botataung	297.3	305	HW	81	CI	1915
YD03011	YT24001	1	Botataung	258.2	305	HW	81	CI	1915
YD03012	YD03011	1	Botataung	276.7	305	HW	81	CI	1915
YD03012	YD03013	1	Botataung	283	305	HW	81	CI	1915
YD03012	YD03023	1	Botataung	264.4	305	HW	81	CI	1915
YD03013	YD03014	1	Botataung	320.2	305	HW	81	CI	1915
YD03013	YD03033	1	Botataung	323.4	305	HW	81	CI	1915
YD03014	YD03001	1	Botataung	375.8	305	HW	81	CI	1915
YD03014	YD03034	1	Botataung	307.5	305	HW	81	CI	1915
YD03021	YD03022	1	Botataung	252.4	305	HW	81	CI	1915
YD03021	YD15001	1	Botataung	336.3	229	HW	75	CI	1915
YD03021	YT24001	1	Botataung	260.9	432	HW	84	CI	1915
YD03021	YT24001	3	Botataung	260.9	914	HW	89	CI	1915
YD03022	YD03023	1	Botataung	276.9	305	HW	81	CI	1915
YD03022	YD15002	1	Botataung	327.1	305	HW	81	CI	1915
YD03024	YD03023	1	Botataung	319.9	305	HW	81	CI	1915
YD03024	YD03025	1	Botataung	255.5	305	HW	81	CI	1915
YD03024	YD15004	1	Botataung	315.4	305	HW	81	CI	1915
YD03025	YD15005	1	Botataung	314.9	305	HW	81	CI	1915
YD03031	YD03025	1	Botataung	249.1	305	HW	81	CI	1915
YD03032	YD03012	1	Botataung	326.7	305	HW	81	CI	1915
YD03032	YD03024	1	Botataung	252.6	305	HW	81	CI	1915
YD03032	YD03031	1	Botataung	243.3	305	HW	81	CI	1915
YD03033	YD03032	1	Botataung	286	305	HW	81	CI	1915
YD03034	YD03033	1	Botataung	332.1	305	HW	81	CI	1915
YD03034	YD03037	1	Botataung	202.9	152	HW	75	CI	1915
YD03035	YD03034	1	Botataung	236.8	305	HW	81	CI	1915
YD03035	YD03038	1	Botataung	196.8	305	HW	81	CI	1915
YD03036	YD03035	1	Botataung	153.9	305	HW	81	CI	1915
YD03038	YD03037	1	Botataung	233.7	305	HW	81	CI	1915
YD03039	YD03036	1	Botataung	193.7	305	HW	81	CI	1915
YD03039	YD03038	1	Botataung	159.9	305	HW	81	CI	1915
YD04001	YD04002	1	Dagon	962.6	610	HW	86	CI	1915
YD04001	YD04003	1	Dagon	869.4	229	HW	75	CI	1915
YD04002	YD04004	1	N0104004	819.9	800	HW	120		
YD04002	YD04006	1	Dagon	146.6	381	HW	83	CI	1915
YD04002	YD04006	2	N0104003	148.2	600	HW	120		
YD04003	YD04004	1	Dagon	663.9	229	HW	75	CI	1915
YD04004	YD01041	1	Dagon	232.8	152	HW	80	DI	1940
YD04004	YD01041	2	N0104004	237.4	800	HW	120		
YD04004	YD04005	1	Dagon	595.9	305	HW	86	CI	1940

From Node ID	To Node ID	Suffix	Asset ID	Length (m)	Diameter (mm)	Roughness Type	Hazen Williams	Material	Year
YD04004	YD17033	1	Dagon	586.7	229	HW	82	CI	1950
YD04005	YD04002	1	Dagon	214.5	381	HW	83	CI	1915
YD04006	YD04007	1	Dagon	147	229	HW	82	CI	1950
YD04006	YD17021	1	N0104003	1112.4	600	HW	120		
YD04007	YD17021	1	Dagon	952.3	229	HW	82	CI	1950
YD04011	YD04012	1	Dagon	127.4	686	HW	87	CI	1915
YD04011	YD04021	1	Dagon	389.2	229	HW	82	CI	1950
YD04012	YD04013	1	Dagon	62.6	686	HW	87	CI	1915
YD04013	YD04014	1	Dagon	514.3	686	HW	87	CI	1915
YD04013	YD04021	1	N0104004	447.4	800	HW	120		
YD04014	YD04015	1	Dagon	513.4	686	HW	87	CI	1915
YD04014	YD04027	1	Dagon	747.3	305	HW	86	CI	1940
YD04015	YD04016	1	Dagon	405.7	686	HW	87	CI	1915
YD04016	YD23007	1	Pabedan	290	686	HW	87	CI	1915
YD04021	YD04022	1	Dagon	331.9	229	HW	82	CI	1950
YD04021	YD04022	2	N0104004	334.5	800	HW	120		
YD04022	YD04002	1	Dagon	480.4	229	HW	82	CI	1950
YD04022	YD04002	2	N0104004	485.8	800	HW	120		
YD04022	YD04023	1	Dagon	1093.1	229	HW	82	CI	1950
YD04023	YD04024	1	Dagon	110.8	229	HW	82	CI	1950
YD04024	YD04025	1	Dagon	198.2	229	HW	82	CI	1950
YD04024	YD18004	1	Dagon	370.5	229	HW	82	CI	1950
YD09002	YD09001	1	Dale	446.7	152	HW	125		1995
YD09003	YD09002	1	Dale	416.4	152	HW	125		1995
YD09004	YD09003	1		265.1	152	HW	125		1995
YD09005	YD09004	1		834.7	406	HW	125		1995
YD09006	YD09005	1		1090.8	406	HW	125		1995
YD09007	YDN09002	1	Dale	4227.5	406	HW	125		1995
YD09008	YD09007	1	Dale	4573	406	HW	125		1995
YD09009	YD09008	1	Dale	1814.5	610	HW	125		1995
YD09010	YD09009	1	Dale	1839.6	508	HW	125		1995
YD09011	YD09010	1	Dale	1206.4	305	HW	120		1995
YD11001	YD11002	1	03Hlaing	172.1	508	HW	114	CI	1990
YD11001	YD11011	1	03Hlaing	177.7	203	HW	115	CI	1996
YD11002	YD11003	1	03Hlaing	329.3	457	HW	114	CI	1990
YD11003	YD11004	1	03Hlaing	1163	457	HW	114	CI	1990
YD11004	YD11005	1	03Hlaing	542.6	457	HW	114	CI	1990
YD11005	YD11006	1	03Hlaing	86.6	457	HW	114	CI	1990
YD11005	YD11048	1	03Hlaing	317.6	152	HW	115	UPVC	1996
YD11006	YD11007	1	03Hlaing	176.8	457	HW	114	CI	1990
YD11007	YD11046	1	03Hlaing	403.6	305	HW	110	CI	1990
YD11007	YDN11001	1	03Hlaing	267.7	254	HW	110	CI	1990
YD11011	YD11002	1	N0311002	51	1000	HW	120		
YD11011	YD11012	1	03Hlaing	237.8	203	HW	115	CI	1996
YD11011	YD11015	1	N0311011	1464.3	600	HW	120		
YD11012	YD11013	1	03Hlaing	549	203	HW	115	CI	1996
YD11012	YD11041	1	03Hlaing	345.4	152	HW	115		1996
YD11013	YD11014	1	03Hlaing	528.8	152	HW	115		1996
YD11014	YD11021	1	03Hlaing	116.4	152	HW	115		1996
YD11014	YD11042	1	03Hlaing	268.4	152	HW	115		1996
YD11015	YD11016	1	03Hlaing	54.5	152	HW	115		1996
YD11015	YD11019	1	N0311015	901.2	600	HW	120		
YD11015	YD11022	1	03Hlaing	645	152	HW	137		2000
YD11016	YD11017	1	03Hlaing	533.1	152	HW	112		1995
YD11016	YD11044	1	03Hlaing	214.6	152	HW	115		1996
YD11017	YD11018	1	03Hlaing	266.3	152	HW	115		1996
YD11017	YD11045	1	03Hlaing	332.8	152	HW	115		1996
YD11018	YD11019	1	03Hlaing	34.4	152	HW	115		1996
YD11019	YD11020	1	03Hlaing	56.7	152	HW	115		1996
YD11019	YD11031	1	03Hlaing	653.6	152	HW	137		2000
YD11019	YD11051	1	N0311019	768.6	500	HW	120		
YD11020	YDN11002	1	03Hlaing	195.2	152	HW	104	CI	1990
YD11021	YD11015	1	03Hlaing	27.7	152	HW	115		1996
YD11021	YD11043	1	03Hlaing	237.1	152	HW	115		1996
YD11022	YD11023	1	03Hlaing	430.2	152	HW	137		2000
YD11023	YD11024	1	03Hlaing	377.5	152	HW	137		2000
YD11024	YD11026	1	N0211024	874.2	400	HW	120		
YD11031	YD11026	1	03Hlaing	628.1	152	HW	137		2000
YD11047	YD11020	1	03Hlaing	316.7	152	HW	115		1996
YD11051	YD11052	1	03Hlaing	359.5	203	HW	104	CI	1990
YD11051	YD11053	1	03Hlaing	213.2	152	HW	104		1990
YD11052	YD11054	1	03Hlaing	148.1	152	HW	104		1990
YD13001	YD13002	1	03Insein	324	152	HW	104	GI	1990

From Node ID	To Node ID	Suffix	Asset ID	Length (m)	Diameter (mm)	Roughness Type	Hazen Williams	Material	Year
YD13001	YD13004	1	N0313025	724	1200	HW	120		
YD13001	YD13006	1	03Insein	309.7	152	HW	104	GI	1990
YD13001	YD13022	1	N0313006	922.8	1200	HW	120		
YD13002	YD13003	1	03Insein	307.2	152	HW	104	GI	1990
YD13003	YD13004	1	03Insein	249.4	152	HW	104	GI	1990
YD13004	YD13005	1	03Insein	429.5	152	HW	104	GI	1990
YD13004	YDN13025	1	N0313025	1894.6	1200	HW	120		
YD13004	YDN19008	1	N0319008	3357.8	350	HW	120		
YD13005	YD13001	1	03Insein	653.4	152	HW	127	GI	1999
YD13006	YD13007	1	03Insein	372.7	152	HW	104	GI	1990
YD13006	YD13021	1	03Insein	289.5	152	HW	127	GI	1999
YD13007	YD13008	1	03Insein	374.2	152	HW	104	GI	1990
YD13008	YD13009	1	03Insein	583	152	HW	104	GI	1990
YD13009	YD13010	1	03Insein	243.7	152	HW	104	GI	1990
YD13021	YD13022	1	03Insein	364.5	152	HW	127	GI	1999
YD13022	YDN13010	1	N0313010	922.6	800	HW	120		
YD14002	YD14003	1	Kamayut	623.2	305	HW	93	CI	1965
YD14002	YD14034	1	Kamayut	591.8	152	HW	87	CI	1965
YD14003	YD14004	1	Kamayut	982.2	305	HW	93	CI	1965
YD14003	YD14031	1	Kamayut	876.7	152	HW	87	CI	1965
YD14003	YD14033	1	Kamayut	238.4	152	HW	87	CI	1965
YD14004	YD14005	1	Kamayut	590	305	HW	93	CI	1965
YD14005	YD14006	1	Kamayut	667.3	305	HW	93	CI	1965
YD14005	YD14008	1	Kamayut	533.3	152	HW	87	GI	1965
YD14006	YD14007	1	Kamayut	309.7	152	HW	87	CI	1965
YD14006	YD16013	1	Kyeemyindaing	87.1	229	HW	75	CI	1915
YD14011	YD14012	1	Kamayut	703	254	HW	93	CI	1965
YD14012	YD14013	1	Kamayut	189.8	152	HW	87	CI	1965
YD14013	YD14014	1	Kamayut	939.9	152	HW	87	CI	1965
YD14021	YD14004	1	Kamayut	891.1	152	HW	87	C	1965
YD14021	YD14022	1	Kamayut	850.2	152	HW	87	CI	1965
YD14022	YD14004	1	Kamayut	41	350	HW	120		
YD14022	YD14014	1	Kamayut	1071.4	152	HW	87	CI	1965
YD14022	YD14023	1	Kamayut	695.9	152	HW	87	CI	1965
YD14023	YD14004	1	N0114003	660.2	700	HW	120		
YD14023	YD14024	1	Kamayut	754.7	152	HW	87	CI	1965
YD14031	YD14032	1	Kamayut	795.4	152	HW	87	CI	1965
YD14032	YT02033	1	Bahan	788.4	152	HW	80	CI	1940
YD14034	YD14032	1	Kamayut	884.6	152	HW	87	CI	1965
YD15001	YD15002	1	Kyauktada	253.5	686	HW	87	CI	1915
YD15001	YD15002	2	Kyauktada	253.5	305	HW	81	CI	1915
YD15001	YD15011	1	Kyauktada	326.1	914	HW	89	CI	1915
YD15001	YD15011	2	Kyauktada	326.1	229	HW	75	CI	1915
YD15001	YT24001	2	Kyauktada	597.3	914	HW	89	CI	1915
YD15002	YD15003	2	Kyauktada	269.1	305	HW	81	CI	1915
YD15002	YD15012	1	Kyauktada	325.6	305	HW	81	CI	1915
YD15003	YD03023	1	Botataung	318.2	305	HW	81	CI	1915
YD15003	YD15002	1	Kyauktada	269.1	686	HW	87	CI	1915
YD15003	YD15004	1	Kyauktada	319.3	686	HW	87	CI	1915
YD15003	YD15004	2	Kyauktada	319.3	305	HW	81	CI	1915
YD15003	YD15013	1	Kyauktada	325.6	305	HW	81	CI	1915
YD15004	YD15005	1	Kyauktada	228.6	686	HW	87	CI	1915
YD15004	YD15005	2	Kyauktada	228.6	305	HW	81	CI	1915
YD15004	YD15005	3	Kyauktada	228.6	203	HW	75	CI	1915
YD15004	YD15014	1	Kyauktada	317.2	305	HW	81	CI	1915
YD15011	YD15012	1	Kyauktada	266	305	HW	81	CI	1915
YD15011	YD15012	2	Kyauktada	266	305	HW	81	CI	1915
YD15011	YD23002	1	Kyauktada	285	914	HW	89	CI	1915
YD15011	YD23002	2	Kyauktada	285	229	HW	75	CI	1915
YD15012	YD15013	1	Kyauktada	272.2	305	HW	81	CI	1915
YD15012	YD15013	2	Kyauktada	272.2	305	HW	81	CI	1915
YD15012	YD23003	1	Kyauktada	281.9	279	HW	81	CI	1915
YD15013	YD15014	1	Kyauktada	297.2	305	HW	81	CI	1915
YD15013	YD23004	1	Kyauktada	278.7	305	HW	81	CI	1915
YD15014	YD23005	1	Kyauktada	291.4	305	HW	81	CI	1915
YD15015	YD15005	1	Kyauktada	321.8	305	HW	81	CI	1915
YD15015	YD23006	1	Kyauktada	305.9	305	HW	81	CI	1915
YD15016	YD15015	1	Kyauktada	103.2	305	HW	81	CI	1915
YD16001	YD25003	1	Kyeemyindaing	630.7	457	HW	85	CI	1915
YD16002	YD16001	1	Kyeemyindaing	849.3	457	HW	85	CI	1915
YD16002	YD16013	1	N0114004	496.2	500	HW	120		
YD16003	YD16002	1	Kyeemyindaing	200	457	HW	85	CI	1915
YD16011	YD16015	1	Kyeemyindaing	401.2	229	HW	75	CI	1915

From Node ID	To Node ID	Suffix	Asset ID	Length (m)	Diameter (mm)	Roughness Type	Hazen Williams	Material	Year
YD16011	YD16021	1	Kyeemyindaing	280.6	152	HW	75	CI	1915
YD16012	YD16011	1	Kyeemyindaing	520.9	229	HW	75	CI	1915
YD16012	YD16011	2	Kyeemyindaing	520.9	152	HW	75	CI	1915
YD16012	YD16014	1	Kyeemyindaing	396.4	152	HW	75	CI	1915
YD16012	YD16014	2	Kyeemyindaing	396.4	152	HW	75	CI	1915
YD16013	YD16012	1	Kyeemyindaing	549	229	HW	75	CI	1915
YD16013	YD16012	2	Kyeemyindaing	549	152	HW	75	CI	1915
YD16014	YD16015	1	Kyeemyindaing	543.1	152	HW	75	CI	1915
YD16015	YD16001	1	Kyeemyindaing	44.8	229	HW	75	CI	1915
YD16015	YD16011	2	Kyeemyindaing	401.2	152	HW	75	CI	1915
YD16015	YD16016	1	Kyeemyindaing	282.7	152	HW	75	CI	1915
YD16016	YD16017	1	Kyeemyindaing	350.5	152	HW	75	CI	1915
YD16017	YD16018	1	Kyeemyindaing	564.4	152	HW	75	CI	1915
YD16017	YD16022	1	Kyeemyindaing	366.1	152	HW	75	CI	1915
YD16018	YD16019	1	Kyeemyindaing	423.1	152	HW	75	CI	1915
YD16018	YD16023	1	Kyeemyindaing	369.2	152	HW	75	CI	1915
YD16018	YD25033	1	Sanchaung	526.6	152	HW	75	CI	1915
YD16019	YD01001	1	Kyeemyindaing	81.6	152	HW	75	CI	1915
YD16021	YD16016	1	Kyeemyindaing	385.1	152	HW	75	CI	1915
YD16021	YD16022	1	Kyeemyindaing	386.8	152	HW	75	CI	1915
YD16022	YD16023	1	Kyeemyindaing	564.4	152	HW	75	CI	1915
YD16023	YD16024	1	Kyeemyindaing	454.1	152	HW	75	CI	1915
YD16024	YD01021	1	Alone	255.9	152	HW	75	CI	1915
YD16024	YD16019	1	Kyeemyindaing	339.1	152	HW	75	CI	1915
YD17001	YD17013	1	Lanmadaw	224.4	229	HW	75	CI	1915
YD17011	YD17012	1	Lanmadaw	349.6	305	HW	81	CI	1915
YD17011	YD17031	1	Lanmadaw	181.2	229	HW	75	CI	1915
YD17012	YD17013	1	Lanmadaw	257.4	305	HW	81	CI	1915
YD17013	YD17014	1	Lanmadaw	356.8	305	HW	81	CI	1915
YD17014	YD17015	1	Lanmadaw	295.9	305	HW	81	CI	1915
YD17021	YD17022	1	Lanmadaw	425.3	229	HW	75	CI	1915
YD17021	YD17024	1	N0117001	344.8	800	HW	120		
YD17022	YD17023	1	Lanmadaw	280.4	229	HW	75	CI	1915
YD17022	YD17026	1	Lanmadaw	287.1	152	HW	75	CI	1915
YD17023	YD17015	1	Lanmadaw	281.7	686	HW	87	CI	1915
YD17024	YD17025	1	Lanmadaw	339.2	229	HW	75	CI	1915
YD17025	YD17012	1	Lanmadaw	545.1	229	HW	75	CI	1915
YD17025	YD17026	1	Lanmadaw	237.2	229	HW	75	CI	1915
YD17026	YD17001	1	Lanmadaw	277.7	152	HW	75	CI	1915
YD17026	YD17015	1	Lanmadaw	277.7	229	HW	75	CI	1915
YD17027	YD17011	1	Lanmadaw	280.2	229	HW	75	CI	1915
YD17027	YD17028	1	Lanmadaw	346.7	279	HW	81	CI	1915
YD17028	YD17029	1	Lanmadaw	254.9	279	HW	81	CI	1915
YD17029	YD17014	1	Lanmadaw	277.5	152	HW	75	CI	1915
YD17031	YD17012	1	Lanmadaw	404.6	305	HW	81	CI	1915
YD18001	YD18002	1	Latha	321.6	279	HW	81	CI	1915
YD18001	YD18006	1	Latha	272.7	229	HW	75	CI	1915
YD18002	YD17001	1	Lanmadaw	920.2	686	HW	87	CI	1915
YD18002	YD17027	1	Lanmadaw	326.3	279	HW	81	CI	1915
YD18002	YD18005	1	Latha	283.1	229	HW	75	CI	1915
YD18003	YD17024	1	Lanmadaw	336.8	229	HW	75	CI	1915
YD18003	YD18002	1	Latha	264.9	229	HW	75	CI	1915
YD18004	YD17021	1	Lanmadaw	505.1	229	HW	75	CI	1915
YD18004	YD18003	1	Latha	145.6	229	HW	75	CI	1915
YD18005	YD17011	1	Lanmadaw	308	305	HW	81	CI	1915
YD18005	YD18008	1	Latha	272.7	229	HW	75	CI	1915
YD18006	YD18005	1	Latha	331.4	305	HW	81	CI	1915
YD18006	YD18007	1	Latha	280.4	229	HW	75	CI	1915
YD18007	YD18008	1	Latha	336.7	305	HW	81	CI	1915
YD18008	YD17031	1	Lanmadaw	322.1	305	HW	81	CI	1915
YD19011	YD19012	1	03Mayangone	601.8	203	HW	87	CI	1965
YD19011	YD19012	2	03Mayangone	601.8	152	HW	104	CI	1990
YD19012	YD19013	1	03Mayangone	359.3	203	HW	87	CI	1965
YD19012	YD19013	2	03Mayangone	359.3	152	HW	104	CI	1990
YD19013	YD19014	1	03Mayangone	360.8	152	HW	104	CI	1990
YD19014	YD19015	1	03Mayangone	137.6	152	HW	104	CI	1990
YD19015	YD19011	1	N0319011	1266.2	800	HW	120		
YD19016	YDN19010	2	03Mayangone	394.1	152	HW	104		1990
YD19017	YD19011	1	03Mayangone	719.3	203	HW	87	CI	1965
YD19017	YD19011	2	03Mayangone	721.4	152	HW	104	CI	1990
YD19021	YD19022	1	03Mayangone	341.6	686	HW	117	DI	1990
YD19021	YDN19003	2	03Mayangone	254.2	686	HW	117	DI	1990
YD19022	YD19023	1	03Mayangone	881.3	686	HW	117	DI	1990

From Node ID	To Node ID	Suffix	Asset ID	Length (m)	Diameter (mm)	Roughness Type	Hazen Williams	Material	Year
YD19023	YD19024	1	03Mayangone	853.1	686	HW	117	DI	1990
YD19023	YDN11008	1	N0311008	1027	800	HW	120		
YD19024	YD19025	1	03Mayangone	76.1	152	HW	104		1990
YD19025	YD19026	1	03Mayangone	618	152	HW	104	CI	1990
YD19031	YD19032	1	03Mayangone	450	305	HW	110	GI	1990
YD19031	YD19037	1	03Mayangone	639.9	152	HW	104	CI	1990
YD19031	YDN19003	2	03Mayangone	266.2	305	HW	110		1990
YD19032	YD19033	1	03Mayangone	561.2	305	HW	110	GI	1990
YD19032	YD19038	1	03Mayangone	148.6	152	HW	104	CI	1990
YD19033	YD19036	1	03Mayangone	129.3	152	HW	104	CI	1990
YD19033	YD19044	1	N0319033	656.9	700	HW	120		
YD19041	YD19042	1	03Mayangone	184.5	305	HW	110	GI	1990
YD19041	YD19042	2	03Mayangone	184.5	203	HW	87	CI	1965
YD19042	YD19043	1	03Mayangone	929.5	305	HW	110	GI	1990
YD19042	YD19043	2	03Mayangone	928	203	HW	87	CI	1965
YD19042	YD19049	1	03Mayangone	1277.7	152	HW	104	CI	1990
YD19043	YD19044	1	03Mayangone	240.2	305	HW	110	GI	1990
YD19044	YD19045	1	03Mayangone	317.2	203	HW	87	CI	1965
YD19044	YD19049	1	N0319044	198.6	800	HW	120		
YD19045	YD19046	1	03Mayangone	472.7	203	HW	87	CI	1965
YD19046	YD19047	1	03Mayangone	471	203	HW	87	CI	1965
YD19049	YD19048	1	03Mayangone	873.2	152	HW	104	CI	1990
YD21001	YD21002	1		688.4	686	HW	87	CI	1915
YD21001	YD21007	1	N0121001	1524.1	800	HW	120		
YD21003	YD21002	1	Mingalartaungnyunt	341.5	686	HW	87	CI	1915
YD21003	YD21004	1	Mingalartaungnyunt	61.7	686	HW	87	CI	1915
YD21003	YT21002	1	Mingalartaungnyunt	618.3	686	HW	87	CI	1915
YD21004	YD21005	1	Mingalartaungnyunt	197.3	686	HW	87	CI	1915
YD21004	YD21012	1	Mingalartaungnyunt	557.1	305	HW	86	CI	1940
YD21005	YD21006	1	Mingalartaungnyunt	61.6	686	HW	87	CI	1915
YD21005	YD21011	1	Mingalartaungnyunt	851.8	305	HW	86	CI	1940
YD21006	YD21008	1	Mingalartaungnyunt	322.9	305	HW	86	CI	1940
YD21006	YD21013	1	Mingalartaungnyunt	551.2	305	HW	86	CI	1940
YD21007	YD15001	1	Mingalartaungnyunt	471.8	686	HW	87	CI	1915
YD21007	YD21006	1	Mingalartaungnyunt	350.7	686	HW	87	CI	1915
YD21007	YD21014	1	Mingalartaungnyunt	569.3	305	HW	86	CI	1940
YD21012	YD21013	1	Mingalartaungnyunt	265	305	HW	86	CI	1940
YD21013	YD21014	1	Mingalartaungnyunt	345.6	305	HW	86	CI	1940
YD21013	YT21004	2	Mingalartaungnyunt	41.2	305	HW	86		1940
YD21021	YT21002	1	Mingalartaungnyunt	318.5	305	HW	86	CI	1940
YD21021	YT21003	1	Mingalartaungnyunt	251.1	305	HW	86	CI	1940
YD21022	YD21021	1	Mingalartaungnyunt	311.6	305	HW	86	CI	1940
YD21022	YD21024	1	Mingalartaungnyunt	193	305	HW	86	CI	1940
YD21023	YD21022	1	Mingalartaungnyunt	359.9	305	HW	86	CI	1940
YD21023	YD21025	1	Mingalartaungnyunt	544.6	254	HW	86	CI	1940
YD21023	YT21001	1	Mingalartaungnyunt	246.6	152	HW	80	CI	1940
YD21024	YT21004	1	Mingalartaungnyunt	567.6	229	HW	80	CI	1940
YD21024	YT21006	1	Mingalartaungnyunt	753.3	305	HW	86	CI	1940
YD21025	YD21031	1	Mingalartaungnyunt	411.2	305	HW	86	CI	1940
YD21026	YD21028	1	Mingalartaungnyunt	951.3	305	HW	86	CI	1940
YD21028	YD21025	1	Mingalartaungnyunt	1211.9	305	HW	86	CI	1940
YD21031	YD24001	1	Pazundaung	601.8	305	HW	81	CI	1915
YD21031	YD24005	1	Pazundaung	370	305	HW	81	CI	1915
YD21031	YD24005	2	Pazundaung	370	254	HW	81	CI	1915
YD21041	YD21031	1	Pazundaung	388.3	152	HW	75	CI	1915
YD21042	YD21041	1	Pazundaung	995.4	152	HW	75	CI	1915
YD21043	YD21042	1	Pazundaung	536.3	152	HW	75	CI	1915
YD21044	YD21043	1	Pazundaung	582.8	152	HW	75	CI	1915
YD22001	YD22002	1	03North Okkalapa	171.8	305	HW	93	CI	1965
YD22001	YD22012	1	03North Okkalapa	533.2	305	HW	93	CI	1965
YD22002	YD22003	1	03North Okkalapa	432.7	305	HW	93	CI	1965
YD22003	YD22004	1	03North Okkalapa	996.6	305	HW	93	CI	1965
YD22003	YD22011	1	03North Okkalapa	821.8	152	HW	87		1965
YD22004	YD22005	1	03North Okkalapa	414.6	305	HW	93	CI	1965
YD22004	YD22009	1	03North Okkalapa	640.8	203	HW	87	CI	1965
YD22005	YD22006	1	03North Okkalapa	993.4	305	HW	93	CI	1965
YD22005	YD22008	1	03North Okkalapa	746.6	152	HW	87		1965
YD22005	YD22008	2	N0422005	778.2	900	HW	120		
YD22008	YD22007	1	03North Okkalapa	887.2	152	HW	87		1965
YD22008	YD22016	1	03North Okkalapa	1032.6	152	HW	87		1965
YD22008	YD22016	2	N0422008	1061.8	900	HW	120		
YD22009	YD22008	1	03North Okkalapa	350.5	152	HW	87		1965
YD22009	YD22015	1	03North Okkalapa	777.6	203	HW	87	CI	1965

From Node ID	To Node ID	Suffix	Asset ID	Length (m)	Diameter (mm)	Roughness Type	Hazen Williams	Material	Year
YD22010	YD22012	2	03North Okkalapa	559.5	152	HW	87	DI	1965
YD22010	YD22014	1	03North Okkalapa	695.3	152	HW	87		1965
YD22010	YD22015	1	03North Okkalapa	769.8	152	HW	87	DI	1965
YD22010	YD22041	1	03North Okkalapa	484.6	152	HW	87		1965
YD22012	YD22011	1	03North Okkalapa	412.3	203	HW	87	CI	1965
YD22014	YD22013	1	03North Okkalapa	329.5	203	HW	87	CI	1965
YD22014	YD22042	1	03North Okkalapa	321.8	152	HW	87		1965
YD22015	YD22014	1	03North Okkalapa	1031.6	203	HW	87	CI	1965
YD22015	YD22016	1	03North Okkalapa	464.9	152	HW	87	DI	1965
YD22015	YD22016	2	03North Okkalapa	464.9	203	HW	87	CI	1965
YD22016	YD22017	1	03North Okkalapa	1078.5	203	HW	87	CI	1965
YD22016	YD22018	1	03North Okkalapa	1361.6	203	HW	87	CI	1965
YD22016	YD22018	2	N0422016	1411.6	900	HW	120		
YD22018	YD22019	1	03North Okkalapa	296	152	HW	87		1965
YD22018	YD22021	1	03North Okkalapa	622.6	254	HW	93	CI	1965
YD22019	YD22020	1	03North Okkalapa	269.6	152	HW	87		1965
YD22021	YD22019	1	03North Okkalapa	627.6	152	HW	87		1965
YD22021	YD22022	1	03North Okkalapa	489.5	305	HW	93	CI	1965
YD22023	YD22024	1	03North Okkalapa	1065.2	152	HW	87		1965
YD22023	YD22025	1	03North Okkalapa	79.9	152	HW	87		1965
YD22025	YD22031	1	03North Okkalapa	132.1	152	HW	87		1965
YD22025	YD22032	1	03North Okkalapa	152.2	152	HW	87		1965
YD22026	YD22027	1	03North Okkalapa	74	203	HW	87	CI	1965
YD22026	YD22029	1	03North Okkalapa	273.5	203	HW	87	CI	1965
YD22027	YD22028	1	03North Okkalapa	288.1	203	HW	87	CI	1965
YD22027	YD22030	1	03North Okkalapa	643.5	203	HW	87	CI	1965
YD22031	YD22026	1	03North Okkalapa	356.6	203	HW	87	CI	1965
YD23001	YD23007	1	Pabedan	155.8	229	HW	75	CI	1915
YD23001	YD23008	1	Pabedan	395.1	686	HW	87	CI	1915
YD23002	YD23001	1	Pabedan	186.4	914	HW	89	CI	1915
YD23002	YD23001	2	Pabedan	186.4	229	HW	75	CI	1915
YD23002	YD23003	1	Pabedan	266	305	HW	81	CI	1915
YD23002	YD23003	2	Pabedan	266	305	HW	81	CI	1915
YD23003	YD23004	1	Pabedan	275.3	305	HW	81	CI	1915
YD23003	YD23004	2	Pabedan	275.3	305	HW	81	CI	1915
YD23003	YD23004	3	Pabedan	275.3	305	HW	81	CI	1915
YD23003	YD23008	1	Pabedan	334.4	279	HW	81	CI	1915
YD23004	YD23005	1	Pabedan	291.3	305	HW	81	CI	1915
YD23004	YD23005	2	Pabedan	291.3	305	HW	81	CI	1915
YD23004	YD23005	3	Pabedan	291.3	305	HW	81	CI	1915
YD23004	YD23009	1	Pabedan	331.9	305	HW	81	CI	1915
YD23005	YD23011	1	Pabedan	322.4	305	HW	81	CI	1915
YD23006	YD23005	1	Pabedan	75.1	305	HW	81	CI	1915
YD23006	YD23011	1	Pabedan	330.3	305	HW	81	CI	1915
YD23007	YD18003	1	Latha	598.2	229	HW	75	CI	1915
YD23007	YD23008	1	Pabedan	265.1	305	HW	81	CI	1915
YD23007	YD23008	2	Pabedan	265.1	686	HW	87	CI	1915
YD23008	YD18001	1	Latha	287	279	HW	81	CI	1915
YD23008	YD18002	1	Latha	608.5	686	HW	87	CI	1915
YD23008	YD23009	1	Pabedan	272.7	305	HW	81	CI	1915
YD23008	YD23009	2	Pabedan	272.7	686	HW	87	CI	1915
YD23009	YD18006	1	Latha	289.6	305	HW	81	CI	1915
YD23011	YD18007	1	Latha	283	305	HW	81	CI	1915
YD24001	YD24002	1	Pazundaung	254.7	305	HW	81	CI	1915
YD24001	YT24001	1	Pazundaung	291	432	HW	84	CI	1915
YD24002	YD03013	1	Pazundaung	283.6	305	HW	81	CI	1915
YD24002	YD24003	1	Pazundaung	305	305	HW	81	CI	1915
YD24003	YD03014	1	Pazundaung	280	254	HW	81	CI	1915
YD24003	YD24006	1	Pazundaung	366.6	305	HW	81	CI	1915
YD24004	YD24001	1	Pazundaung	306.8	432	HW	84	CI	1915
YD24004	YD24003	1	Pazundaung	279.8	254	HW	81	CI	1915
YD24005	YD24004	1	Pazundaung	76.4	432	HW	84	CI	1915
YD24005	YD24007	1	Pazundaung	476.2	305	HW	81	CI	1915
YD24006	YD03001	1	Pazundaung	282.9	305	HW	81	CI	1915
YD24006	YD24007	1	Pazundaung	39.1	305	HW	81	CI	1915
YD24007	YD03004	1	Pazundaung	550.6	305	HW	81	CI	1915
YD25001	YD04001	1	Sanchaung	302.5	229	HW	75	CI	1915
YD25001	YD25004	1	Sanchaung	418.1	762	HW	88	CI	1915
YD25001	YD25004	2	N0125003	422.7	700	HW	120		
YD25001	YD25011	1	Sanchaung	558.7	229	HW	75	CI	1915
YD25002	YD25003	1	Sanchaung	406.3	406	HW	84	CI	1915
YD25002	YD25003	2	N0125003	416.7	700	HW	120		
YD25002	YD25021	1	Sanchaung	382.2	229	HW	75	CI	1915

From Node ID	To Node ID	Suffix	Asset ID	Length (m)	Diameter (mm)	Roughness Type	Hazen Williams	Material	Year
YD25003	YD01001	1	Sanchaung	1066.3	457	HW	85	CI	1915
YD25003	YD16017	1	Kyeemyindaing	40.8	152	HW	75	CI	1915
YD25004	YD25002	1	Sanchaung	393.7	762	HW	88	CI	1915
YD25004	YD25002	2	N0125003	401.7	700	HW	120		
YD25011	YD25012	1	Sanchaung	432	229	HW	75	CI	1915
YD25012	YD14023	1	N0114003	952.4	700	HW	120		
YD25012	YD25032	1	Sanchaung	406.2	152	HW	76	CI	1920
YD25012	YDN0114001	1	N0114004	425.1	500	HW	120		
YD25017	YD25002	1	Sanchaung	589.2	229	HW	75	CI	1915
YD25017	YD25018	1	Sanchaung	306.6	152	HW	76	CI	1920
YD25017	YD25035	1	Sanchaung	333.7	152	HW	76	CI	1920
YD25018	YD25004	1	Sanchaung	566.5	152	HW	76	CI	1920
YD25018	YD25011	1	Sanchaung	395.3	152	HW	76	CI	1920
YD25021	YD25033	1	Sanchaung	192.1	229	HW	75	CI	1915
YD25032	YD25018	1	Sanchaung	623.9	152	HW	76	CI	1920
YD25032	YD25031	1	Sanchaung	364.4	152	HW	76	CI	1920
YD25033	YD04003	1	Sanchaung	253.5	229	HW	75	CI	1915
YD29001	YD29021	1	South Okkalapa	547.6	152	HW	87	CI	1965
YD29001	YD29021	2	South Okkalapa	550.7	152	HW	87	CI	1965
YD29001	YD33008	1	N0229001	398	500	HW	120		
YD29001	YD33008	2	South Okkalapa	391.1	305	HW	93	CI	1965
YD29002	YD29001	1	N0229001	648.6	500	HW	120		
YD29002	YD29001	2	South Okkalapa	615.1	305	HW	93	CI	1965
YD29002	YD29003	1	South Okkalapa	765.9	305	HW	93	CI	1965
YD29003	YD29004	1	South Okkalapa	635	305	HW	93	CI	1965
YD29004	YD29005	1	South Okkalapa	652.4	305	HW	93	CI	1965
YD29005	YD29006	1	South Okkalapa	651.1	305	HW	93	CI	1965
YD29005	YD29013	1	South Okkalapa	965.3	152	HW	87	CI	1965
YD29006	YD29007	1	South Okkalapa	603.2	305	HW	93	CI	1965
YD29006	YD29009	1	South Okkalapa	692.4	152	HW	87	CI	1965
YD29007	YD29008	1	South Okkalapa	415.8	305	HW	93	CI	1965
YD29008	YD32021	1	Thingangyun	713.7	305	HW	100		1965
YD29009	YD29006	2	N0229009	693.1	600	HW	120		
YD29009	YD29014	1	South Okkalapa	612.8	152	HW	87	CI	1965
YD29010	YD29008	1	N0229008	1132.2	500	HW	120		
YD29010	YD29008	2	South Okkalapa	1105.8	152	HW	87	CI	1965
YD29011	YD29002	1	N0229002	600.5	500	HW	120		
YD29011	YD29002	2	South Okkalapa	600.5	305	HW	93	CI	1965
YD29011	YD29004	1	N0229004	874.5	500	HW	120		
YD29011	YD29004	2	South Okkalapa	872.4	152	HW	87	CI	1965
YD29012	YD29011	1	N0229011	155.2	800	HW	120		
YD29012	YD29011	2	South Okkalapa	148.9	305	HW	93	CI	1965
YD29012	YD29022	1	N0229012	774.4	800	HW	120		
YD29012	YD29022	2	South Okkalapa	759.3	152	HW	87	CI	1965
YD29013	YD29012	1	N0229012	575.6	1200	HW	120		
YD29013	YD29012	2	South Okkalapa	572	305	HW	93	CI	1965
YD29013	YD29014	1	South Okkalapa	582.1	305	HW	93	CI	1965
YD29014	YD29009	2	N0229009	612.8	600	HW	120		
YD29014	YD29013	2	N0229013	587.2	1200	HW	120		
YD29014	YD29015	1	South Okkalapa	583.2	305	HW	93	CI	1965
YD29014	YD29025	1	South Okkalapa	835.5	254	HW	93	CI	1965
YD29014	YD29025	2	N0229014	828.1	900	HW	120		
YD29015	YD29010	1	N0229010	858.9	500	HW	120		
YD29015	YD29010	2	South Okkalapa	847.9	152	HW	87	CI	1965
YD29015	YD29014	2	N0229014	590.1	1350	HW	120		
YD29015	YD29026	1	South Okkalapa	820.4	152	HW	87	CI	1965
YD29021	YD29022	1	South Okkalapa	225.6	152	HW	87	CI	1965
YD29021	YD29022	2	South Okkalapa	231.7	152	HW	87	CI	1965
YD29022	YD29001	1	N0229001	786.8	800	HW	120		
YD29022	YD29023	1	South Okkalapa	604.4	152	HW	87	CI	1965
YD29022	YD29023	2	South Okkalapa	610.3	152	HW	87	CI	1965
YD29022	YD33007	1	N0233001	1184.8	800	HW	120		
YD29023	YD29024	1	South Okkalapa	78.8	152	HW	87	CI	1965
YD29024	YD29025	1	South Okkalapa	352.5	152	HW	87	CI	1965
YD29025	YD33026	1	N0229025	795.3	800	HW	120		
YD30001	YT30001	2	Tamwe	685.7	305	HW	86	CI	1940
YD30003	YD30005	1	Tamwe	294.4	457	HW	90	CI	1940
YD30005	YD30006	1	Tamwe	219.3	457	HW	90	CI	1940
YD30005	YD30011	1	Tamwe	208.1	152	HW	75	CI	1915
YD30006	YD30007	1	Tamwe	204.9	457	HW	90	CI	1940
YD30006	YD30011	1	Tamwe	137.1	152	HW	75	CI	1915
YD30007	YD21026	1	Mingalartaungnyunt	797.1	305	HW	86	CI	1940
YD30008	YD30003	1	Tamwe	130.1	457	HW	90	CI	1940



From Node ID	To Node ID	Suffix	Asset ID	Length (m)	Diameter (mm)	Roughness Type	Hazen Williams	Material	Year
YD30008	YT30002	2	Tamwe	449.5	457	HW	90	CI	1940
YD30011	YD30012	1	Tamwe	832.7	305	HW	86	CI	1940
YD30021	YT30007	2	Tamwe	441.3	152	HW	75	CI	1915
YD30022	YD30024	1	Tamwe	56.7	152	HW	75	CI	1915
YD30022	YD30026	1	Tamwe	641.1	152	HW	75	CI	1915
YD30023	YD02034	1	Tamwe	491.3	152	HW	75	CI	1915
YD30024	YD30023	1	Tamwe	287.5	152	HW	75	CI	1915
YD30024	YD30025	1	Tamwe	352.1	152	HW	75	CI	1915
YD30025	YD30008	1	Tamwe	195.2	152	HW	75	CI	1915
YD30025	YD30031	1	Tamwe	337.4	152	HW	75	CI	1915
YD30026	YD30027	1	Tamwe	364.3	305	HW	81	CI	1915
YD30031	YD30032	1	Tamwe	423.8	152	HW	75	CI	1915
YD30031	YD30033	1	Tamwe	391.3	152	HW	75	CI	1915
YD30033	YD30036	1	Tamwe	122.5	152	HW	75	CI	1915
YD30033	YD30044	2	Tamwe	165.5	152	HW	75	CI	1915
YD30033	YT30004	1	Tamwe	417.4	152	HW	75	CI	1915
YD30034	YD30043	1	Tamwe	333.6	152	HW	75	CI	1915
YD30036	YD30037	1	Tamwe	199.7	152	HW	75	CI	1915
YD30036	YD30041	1	Tamwe	376.7	152	HW	75	CI	1915
YD30037	YD30034	1	Tamwe	167.8	152	HW	75	CI	1915
YD30037	YD30042	1	Tamwe	373.6	152	HW	75	CI	1915
YD30041	YD30042	1	Tamwe	191.5	229	HW	75	CI	1915
YD30041	YD30065	1	Tamwe	99.2	152	HW	75	CI	1915
YD30041	YT30004	2	Tamwe	282.6	229	HW	75	CI	1915
YD30042	YD30043	1	Tamwe	151.9	229	HW	75	CI	1915
YD30042	YD30072	1	Tamwe	196.9	152	HW	75	CI	1915
YD30043	YD30069	1	Tamwe	221.5	152	HW	75	CI	1915
YD30044	YD30041	1	Tamwe	274.2	152	HW	75	CI	1915
YD30044	YT30004	1	Tamwe	257.5	152	HW	75	CI	1915
YD30051	YD30052	1	Tamwe	440.5	229	HW	75	CI	1915
YD30051	YD30055	1	Tamwe	340.8	152	HW	75	CI	1915
YD30051	YT30004	2	Tamwe	461.3	229	HW	75	CI	1915
YD30052	YD30053	1	Tamwe	471.5	152	HW	75	CI	1915
YD30052	YT21001	2	Tamwe	401.8	152	HW	75	CI	1915
YD30053	YD02062	1	Tamwe	532.1	152	HW	75	CI	1915
YD30054	YD30053	1	Tamwe	415.5	152	HW	75	CI	1915
YD30054	YT30008	2	Tamwe	312	152	HW	75	CI	1915
YD30055	YD30056	1	Tamwe	247.9	152	HW	75	CI	1915
YD30055	YT30006	1	Tamwe	219.4	152	HW	75	CI	1915
YD30056	YT30009	1	Tamwe	190.2	152	HW	75	CI	1915
YD30061	YD30062	1	Tamwe	220.2	152	HW	75	CI	1915
YD30061	YD30065	1	Tamwe	274.7	152	HW	75	CI	1915
YD30061	YT30004	2	Tamwe	100.2	152	HW	75	CI	1915
YD30062	YD30063	1	Tamwe	203.9	152	HW	75	CI	1915
YD30062	YD30066	1	Tamwe	261.9	152	HW	75	CI	1915
YD30063	YD30064	1	Tamwe	248.6	152	HW	75	CI	1915
YD30063	YD30067	1	Tamwe	183.5	152	HW	75	CI	1915
YD30064	YT30006	1	Tamwe	32.6	152	HW	75	CI	1915
YD30065	YD30066	1	Tamwe	101.5	152	HW	75	CI	1915
YD30066	YD30067	1	Tamwe	244.1	152	HW	75	CI	1915
YD30066	YD30072	1	Tamwe	152	152	HW	75	CI	1915
YD30067	YD30068	1	Tamwe	214.4	152	HW	75	CI	1915
YD30067	YD30073	1	Tamwe	107.4	152	HW	75	CI	1915
YD30068	YD30064	1	Tamwe	169.6	152	HW	75	CI	1915
YD30069	YD30070	1	Tamwe	220.2	152	HW	75	CI	1915
YD30070	YD30071	1	Tamwe	140.1	152	HW	75	CI	1915
YD30071	YD30074	1	Tamwe	85.6	152	HW	75	CI	1915
YD30072	YD30069	1	Tamwe	131.3	152	HW	75	CI	1915
YD30072	YD30073	1	Tamwe	226.6	152	HW	75	CI	1915
YD30073	YD30070	1	Tamwe	121.1	152	HW	75	CI	1915
YD30073	YD30074	1	Tamwe	171.8	152	HW	75	CI	1915
YD30074	YD30068	1	Tamwe	109.4	152	HW	75	CI	1915
YD31001	YD31002	1	Thaketa	204.9	305	HW	93	CI	1965
YD31002	YD31003	1	Thaketa	382.6	305	HW	93	CI	1965
YD31003	YD31004	1	Thaketa	10	305	HW	100		
YD31004	YD31011	1	Thaketa	580.9	305	HW	93	CI	1965
YD31004	YD31021	1	Thaketa	853.3	305	HW	93	CI	1965
YD31011	YD31012	1	Thaketa	239	305	HW	93	CI	1965
YD31012	YD31013	1	Thaketa	319.9	305	HW	93	CI	1965
YD31012	YDN31011	1	Thaketa	350	203	HW	87	CI	1965
YD31013	YD31014	1	Thaketa	526.9	254	HW	93		1965
YD31014	YDN31012	1	Thaketa	314.7	203	HW	87	CI	1965
YD31014	YDN31052	1	N0631014	905.6	500	HW	120		

From Node ID	To Node ID	Suffix	Asset ID	Length (m)	Diameter (mm)	Roughness Type	Hazen Williams	Material	Year
YD31021	YD31022	1	Thaketa	561.6	305	HW	93	CI	1965
YD31021	YD31023	1	N0631021	1375.9	900	HW	120		
YD31021	YDN31011	1	N0631021	1028	1100	HW	120		
YD31022	YD31023	1	Thaketa	789.6	305	HW	93	CI	1965
YD31022	YD31031	1	Thaketa	648.1	305	HW	93	CI	1965
YD31023	YD31024	1	Thaketa	439.4	305	HW	93	CI	1965
YD31023	YD31024	2	Thaketa	439.4	152	HW	87	CI	1965
YD31023	YD31024	3	N0631023	446.2	700	HW	120		
YD31023	YD31051	1	Thaketa	295.1	152	HW	87	CI	1965
YD31024	YD31047	1	Thaketa	687.4	152	HW	87	CI	1965
YD31024	YD31048	1	Thaketa	587.8	152	HW	87	CI	1965
YD31024	YD31056	1	Thaketa	487.2	152	HW	87	CI	1965
YD31024	YDN31017	2	N0631024	363.7	700	HW	120		
YD31025	YD31004	1	N0631004	668	600	HW	120		
YD31025	YD31004	2	Thaketa	700.7	203	HW	87	CI	1965
YD31025	YD31026	1	Thaketa	382	305	HW	93	CI	1965
YD31026	YD31027	1	Thaketa	226.3	254	HW	93	CI	1965
YD31028	YD31023	1	Thaketa	802.7	152	HW	87	CI	1965
YD31031	YD31032	1	Thaketa	620.5	305	HW	93	CI	1965
YD31031	YD31055	1	Thaketa	343.4	152	HW	87	CI	1965
YD31032	YD31033	1	Thaketa	844.9	305	HW	93	CI	1965
YD31032	YD31052	1	Thaketa	408	152	HW	87	CI	1965
YD31032	YD31052	2	N0631032	414.6	600	HW	120		
YD31033	YD31034	1	Thaketa	1025.8	305	HW	93	CI	1965
YD31041	YD31042	1	Thaketa	287.7	203	HW	87	CI	1965
YD31041	YD31049	1	Thaketa	294.2	152	HW	87	CI	1965
YD31041	YDN31015	1	N0631041	341	400	HW	120		
YD31042	YD31043	1	Thaketa	315.6	203	HW	87	CI	1965
YD31043	YD31044	1	Thaketa	396.9	203	HW	87	CI	1965
YD31044	YD31045	1	Thaketa	419.7	203	HW	87	CI	1965
YD31045	YD31046	1	Thaketa	240.5	203	HW	87	CI	1965
YD31045	YDN31014	1	N0631014	281.5	400	HW	120		
YD31045	YDN31014	2	N0631014	282.7	600	HW	120		
YD31047	YD31049	1	Thaketa	200.4	152	HW	87	CI	1965
YD31048	YD31047	1	Thaketa	821.2	152	HW	87	CI	1965
YD31051	YD31043	1	Thaketa	439.4	152	HW	87	CI	1965
YD31052	YD31053	1	Thaketa	694.2	152	HW	87	CI	1965
YD31053	YD31054	1	Thaketa	507.8	152	HW	87	CI	1965
YD31054	YD31045	1	Thaketa	214.6	152	HW	87	CI	1965
YD31055	YD31054	1	Thaketa	615.9	152	HW	87	CI	1965
YD31056	YD31054	1	Thaketa	825.3	152	HW	87	CI	1965
YD32011	YD29015	1	Thingangyun	1115.9	203	HW	100	CI	1965
YD32011	YD32012	1	Thingangyun	701.4	203	HW	100		1965
YD32011	YD32012	2	N0232011	703.3	1000	HW	120		
YD32011	YDN32005	1	N0232011	238.8	1000	HW	120		
YD32011	YDN32009	1	N0232009	758.1	800	HW	120		
YD32012	YD32023	1	Thingangyun	566.1	203	HW	100		1965
YD32012	YD32023	2	N0232012	572.6	600	HW	120		
YD32021	YDN32013	1	N0232013	421	500	HW	120		
YD32022	YD32021	1	N0232021	587.3	600	HW	120		
YD32022	YD32021	2	Thingangyun	571.2	203	HW	100		1965
YD32023	YD32022	1	N0232022	509.6	600	HW	120		
YD32023	YD32022	2	N0232022	497.5	200	HW	120		
YD33001	YD33008	1	Yankin	304	305	HW	86	DI	1940
YD33001	YDN33051	2	Yankin	174	305	HW	86	DI	1940
YD33007	YDN33025	2	Yankin	144.5	152	HW	80	CI	1940
YD33021	YD33022	1	Yankin	146.9	305	HW	86	DI	1940
YD33021	YD33024	1	Yankin	327.9	305	HW	86	DI	1940
YD33021	YD33045	1	Yankin	176.8	305	HW	86	DI	1940
YD33022	YD33047	1	Yankin	123.1	305	HW	86	DI	1940
YD33024	YD33025	1	Yankin	559.9	305	HW	86	DI	1940
YD33025	YD33026	1	Yankin	357.5	305	HW	86	DI	1940
YD33026	YD29024	1	South Okkalapa	490.6	305	HW	93	CI	1965
YD33026	YD33021	1	N0233021	1163.9	600	HW	120		
YD33026	YD33027	1	Yankin	327.3	305	HW	86	DI	1940
YD33027	YD29025	1	South Okkalapa	536.5	254	HW	93	CI	1965
YD33029	YD33028	1	Yankin	296.9	254	HW	86	DI	1940
YD33030	YD33029	1	Yankin	498.9	254	HW	86	DI	1940
YD33034	YD33033	1	Yankin	334	152	HW	80	CI	1940
YD33035	YD33034	1	Yankin	444.3	152	HW	80	CI	1940
YD33036	YD33035	1	Yankin	91.7	152	HW	80	CI	1940
YD33036	YD33037	1	Yankin	183.9	152	HW	80	CI	1940
YD33038	YD33036	1	Yankin	349.8	152	HW	80	DI	1940

From Node ID	To Node ID	Suffix	Asset ID	Length (m)	Diameter (mm)	Roughness Type	Hazen Williams	Material	Year
YD33038	YD33051	2	Yankin	304.8	152	HW	80	CI	1940
YD33039	YD33040	1	Yankin	313.6	152	HW	80	CI	1940
YD33039	YD33051	1	N0133039	42	500	HW	120		
YD33040	YD33041	1	Yankin	369.2	152	HW	80	CI	1940
YD33041	YD33042	1	Yankin	148.6	152	HW	80	CI	1940
YD33045	YD33031	1	Yankin	307.4	152	HW	80	CI	1940
YD33047	YD33030	1	Yankin	185.1	102	HW	80	CI	1940
YD33054	YD33039	1	N0133001	813.9	500	HW	120		
YD33054	YD33052	1	Yankin	541.7	152	HW	80	CI	1940
YD33054	YD33055	1	Yankin	664.8	102	HW	80	CI	1940
YD33054	YD33057	1	Yankin	729.1	102	HW	80	CI	1940
YDCentraldammy	YD04013	1	N0104002	359	1000	HW	120		
YDCentraldammy	YD21001	1	N0104001	296.9	1000	HW	120		
YDN01002	YDN01003	1	N0102002	387.3	600	HW	120		
YDN01003	YDN01052	1	N0102002	166.5	600	HW	120		
YDN01004	YD02056	1	N0102002	175.1	500	HW	120		
YDN01005	YD02052	1	N0102002	435.9	500	HW	120		
YDN01006	YD02006	1		121.4	1067	HW	120		
YDN01006	YD02006	2	N0102003	120.1	1300	HW	120		
YDN01006	YDN01002	1	N0101	301.4	600	HW	120		
YDN01052	YDN01004	1	N0102002	180.4	600	HW	120		
YDN0114001	YD16002	1	N0114004	678	500	HW	120		
YDN0114001	YD25032	1	N0114001	26.5	500	HW	120		
YDN01Kokinedammy	YD02001	2	Bahan	109.9	305	HW	83	DI	1928
YDN01Kokinedammy	YD02002	1	N0102005	559.2	600	HW	120		
YDN01Kokinedammy	YDN01006	1		180	1067	HW	120		
YDN01Kokinedammy	YT30007	1	N0102001	1550	1300	HW	120		
YDN05001	YDN05003	1	N0805001	1713.8	600	HW	120		
YDN05001	YDN05007	1	N0805001	1816.9	300	HW	120		
YDN05001	YDN06004	1	N0805001	1679.7	900	HW	120		
YDN05003	YDN05004	1	N0805003	2661.5	300	HW	120		
YDN05003	YDN05005	1	N0805003	2716.1	400	HW	120		
YDN05003	YDN05006	1	N0805003	998.6	300	HW	120		
YDN05005	YDN05004	1	N0805004	2830.2	400	HW	120		
YDN05EBNorthDammy	YDN05001	1	N0805001	896.4	900	HW	120		
YDN06001	YDN06003	1	N0806001	1883	500	HW	120		
YDN06003	YDN06005	1	N0806003	2444.5	300	HW	120		
YDN06004	YDN06001	1	N0806001	1237.9	600	HW	120		
YDN06004	YDN06005	1	N0806004	2028.4	600	HW	120		
YDN06004	YDN06007	1	N0806004	917.4	600	HW	120		
YDN06005	YDN06008	1	N0806005	879.2	300	HW	120		
YDN06007	YDN06006	1	N0806004	1272.4	400	HW	120		
YDN06007	YDN06008	1	N0806007	2008	600	HW	120		
YDN07001	YDN07002	1	N0707	278.7	1000	HW	120		
YDN07002	YDN07003	1	N0707	1037.2	800	HW	120		
YDN07002	YDN07012	1	N0707	1398.8	300	HW	120		
YDN07002	YDN07033	1	N0708	821.8	700	HW	120		
YDN07002	YDN07034	1	N0708	788.3	1000	HW	120		
YDN07003	YDN07005	1	N0707	1222.4	600	HW	120		
YDN07003	YDN07010	1	N0707	1159.4	200	HW	120		
YDN07003	YDN07022	1	N0708	1400.8	400	HW	120		
YDN07003	YDN07023	1	N0708	1875.2	500	HW	120		
YDN07005	YDN07007	1	N0707	1198.9	200	HW	120		
YDN07005	YDN07008	1	N0707	1128.6	300	HW	120		
YDN07008	YDN07009	1	N0707	1182.6	300	HW	120		
YDN07008	YDN07035	1	N0707	1220.6	200	HW	120		
YDN07009	YDN07011	1	N0707	1239.4	200	HW	120		
YDN07010	YDN07008	1	N0707	1206.1	300	HW	120		
YDN07010	YDN07011	1	N0707	1121.4	200	HW	120		
YDN07011	YDN07013	1	N0707	1458.7	200	HW	120		
YDN07011	YDN07015	1	N0707	1158.4	300	HW	120		
YDN07012	YDN07010	1	N0707	1429.3	300	HW	120		
YDN07012	YDN07013	1	N0707	1138.3	300	HW	120		
YDN07012	YDN07019	1	N0707	943.7	300	HW	120		
YDN07013	YDN07014	1	N0707	1144.9	300	HW	120		
YDN07013	YDN07016	1	N0707	1031.8	300	HW	120		
YDN07015	YDN07014	1	N0707	1381.7	300	HW	120		
YDN07016	YDN07017	1	N0707	551.6	300	HW	120		
YDN07018	YDN07017	1	N0707	866.7	300	HW	120		
YDN07018	YDN07021	1	N0708	1320.4	300	HW	120		
YDN07018	YDN07031	1	N0707	989.1	300	HW	120		
YDN07019	YDN07016	1	N0707	1093.1	300	HW	120		
YDN07019	YDN07018	1	N0707	576.9	300	HW	120		

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YDN07020	YDN07019	1	N0707	715.8	300	HW	120		
YDN07020	YDN07030	1	N0708	1646.6	300	HW	120		
YDN07021	YDN07027	1	N0708	1084.4	300	HW	120		
YDN07021	YDN07029	1	N0708	1058.5	300	HW	120		
YDN07022	YDN07025	1	N0708	787.2	400	HW	120		
YDN07022	YDN07034	1	N0708	772.8	1000	HW	120		
YDN07023	YDN07022	1	N0708	901.5	1000	HW	120		
YDN07024	YDN07025	1	N0708	849.9	300	HW	120		
YDN07024	YDN07032	1	N0708	1002.3	300	HW	120		
YDN07026	YDN07021	1	N0708	1355	400	HW	120		
YDN07027	YDN07028	1	N0708	1070.7	200	HW	120		
YDN07029	YDN07028	1	N0708	1130	200	HW	120		
YDN07030	YDN07029	1	N0708	679.6	200	HW	120		
YDN07031	YDN07030	1	N0708	641.6	200	HW	120		
YDN07033	YDN07020	1	N0708	852.6	800	HW	120		
YDN07033	YDN07026	1	N0708	841.3	400	HW	120		
YDN07034	YDN07024	1	N0708	755.4	300	HW	120		
YDN07034	YDN07026	1	N0708	783.4	400	HW	120		
YDN10001	YD31001	1	Dawbon	457.9	305	HW	88		1950
YDN11003	YD11051	1	03Hlaing	344.4	203	HW	104	CI	1990
YDN11004	YD11011	1	N0311002	281.9	700	HW	120		
YDN11004	YDN11005	1	N0311004	1435.2	400	HW	120		
YDN11005	YD11024	1	N0311005	1496.1	400	HW	120		
YDN11008	YD11011	1	N0311008	876.5	500	HW	120		
YDN11008	YD19033	1	N0311008	1087.5	700	HW	120		
YDN12001	YDN12002	1	N1112001	1561.4	400	HW	120		
YDN12001	YDN12007	1	N1112001	1647.3	900	HW	120		
YDN12001	YDN12014	1	N1112001	1739.4	800	HW	120		
YDN12002	YDN12003	1	N1112002	1795.5	400	HW	120		
YDN12003	YDN12004	1	N1112003	1607.8	400	HW	120		
YDN12005	YDN12004	1	N1112004	1144.6	500	HW	120		
YDN12005	YDN12009	1	N1112005	2352.5	500	HW	120		
YDN12006	YDN12005	1	N1112005	1247.7	700	HW	120		
YDN12006	YDN12008	1	N1112006	875.6	700	HW	120		
YDN12007	YDN12006	1	N1112006	1224.2	900	HW	120		
YDN12008	YDN12009	1	N1112008	1380.2	500	HW	120		
YDN12008	YDN12012	1	N1112008	2324.1	500	HW	120		
YDN12009	YDN12010	1	N1112009	2478.3	500	HW	120		
YDN12011	YDN12010	1	N1112010	1757.7	700	HW	120		
YDN12012	YDN12011	1	N1112011	686.3	700	HW	120		
YDN12013	YDN12012	1	N1112012	1215.2	700	HW	120		
YDN12014	YDN12013	1	N1112013	1071	700	HW	120		
YDN13004	YDN13005	1	N0313004	1380.6	700	HW	120		
YDN13004	YDN13006	1	N0313004	633.9	800	HW	120		
YDN13005	YDN13007	1	N0313005	581.5	700	HW	120		
YDN13005	YDN13008	1	N0313005	1057.1	400	HW	120		
YDN13006	YDN13010	1	N0313006	1547.7	700	HW	120		
YDN13007	YDN13009	1	N0313007	1830.5	400	HW	120		
YDN13009	YDN13012	1	N0313009	2193.1	400	HW	120		
YDN13010	YDN13009	1	N0313009	1115.3	400	HW	120		
YDN13010	YDN13013	1	N0313010	1067.6	800	HW	120		
YDN13011	YDN13012	1	N0313011	986.7	500	HW	120		
YDN13011	YTN19011	1	N0319011	435.5	700	HW	120		
YDN13012	YDN11005	1	N0319001	1388.1	400	HW	120		
YDN13013	YDN13011	1	N0313011	1101.6	800	HW	120		
YDN13025	YD19023	1	N0313025	772.7	1000	HW	120		
YDN13025	YTN19011	1	N0319011	1278.6	500	HW	120		
YDN19003	YDN19010	1	N0319010	312.7	1000	HW	120		
YDN19008	YDN19015	1	N0313021	696.3	800	HW	120		
YDN19010	YD19015	1	N0319010	441.9	800	HW	120		
YDN19015	YDN19016	1	N0313022	1421.4	500	HW	120		
YDN19016	YD22023	1	N0322023	145.9	800	HW	120		
YDN19016	YDN19017	1	N0319011	953	400	HW	120		
YDN20001	YDN13004	1	N0320001	1522.8	1000	HW	120		
YDN20002	YDN20003	1	N0320002	577.9	400	HW	120		
YDN20004	YDN20007	1	N0320004	754.3	1000	HW	120		
YDN20007	YDN22001	1	N0310007	820.4	1000	HW	120		
YDN20009	YDN20002	1	N0320002	745.5	400	HW	120		
YDN20009	YDN20004	1	N0320004	1157	1000	HW	120		
YDN20021	YDN20022	1	N0420021	1288.1	1000	HW	120		
YDN20021	YDN20024	1	N0420021	2515.5	1400	HW	120		
YDN20022	YDN20023	1	N0420022	1405.4	1000	HW	120		
YDN20023	YDN20031	1	N0420023	2465.3	1000	HW	120		

From Node ID	To Node ID	Suffix	Asset ID	Length (m)	Diameter (mm)	Roughness Type	Hazen Williams	Material	Year
YDN20024	YDN20026		1 N0420024	2047.3	200	HW	120		
YDN20024	YDN20031		1 N0420024	2053.9	1200	HW	120		
YDN20025	YDN22011		1 N0420025	1006.8	1300	HW	120		
YDN20026	YDN20029		1 N0420034	2026.5	400	HW	120		
YDN20026	YDN20030		1 N0420026	2228.3	200	HW	120		
YDN20027	YD13001		1 N0320027	923.7	1300	HW	120		
YDN20028	YDN20029		1 N0420028	2454.8	200	HW	120		
YDN20029	YDNCBHlawgadamm		1 N0420029	1052.3	600	HW	120		
YDN20030	YDN20028		1 N0420028	1639.4	200	HW	120		
YDN20031	YDN20025		1 N0420024	1266.7	1300	HW	120		
YDN20051	YDN20052		1 N0520051	1051.5	400	HW	120		
YDN20051	YDN20053		1 N0520051	1209.9	700	HW	120		
YDN20053	YDN20054		1 N0520053	1006.9	400	HW	120		
YDN20053	YDN20055		1 N0520053	779.1	500	HW	120		
YDN20NewCentralDan	YDN20001		1 N0320001	485.8	1200	HW	120		
YDN20NewCentralDan	YDN20009		1 N0320009	1505.6	1000	HW	120		
YDN20NewCentralDan	YDN20027		1 N0320027	1283.4	1300	HW	120		
YDN22001	YDN19008		1 N0310007	947.2	1000	HW	120		
YDN22002	YD22005		1 N0422002	73.3	900	HW	120		
YDN22011	YDN22002		1 N0422002	1030.1	1200	HW	120		
YDN22011	YDN22003		1 N0422003	1518.6	1000	HW	120		
YDN28001	YDN28003		1 N0428001	1294.3	1100	HW	120		
YDN28002	YDN28010		1 N0428002	2377	500	HW	120		
YDN28002	YDN28012		1 N0428002	1435.6	600	HW	120		
YDN28003	YDN28002		1 N0428002	1434.2	800	HW	120		
YDN28003	YDN28004		1 N0428003	1091.1	800	HW	120		
YDN28004	YDN28005		1 N0428002	2353.6	500	HW	120		
YDN28004	YDN28008		1 N0428004	1822	500	HW	120		
YDN28005	YDN28006		1 N0428005	2067.2	500	HW	120		
YDN28007	YDN28006		1 N0428006	1837.8	500	HW	120		
YDN28008	YDN28007		1 N0428007	787.7	500	HW	120		
YDN28008	YDN28009		1 N0428008	851.9	500	HW	120		
YDN28010	YDN28009		1 N0428009	1949.4	500	HW	120		
YDN28010	YDN28011		1 N0428010	1872.8	500	HW	120		
YDN28012	YDN28011		1 N0428011	2934.8	500	HW	120		
YDN29ResDammy	YDN32020		1 N0232001	138.4	1300	HW	120		
YDN31011	YD31032		1 Thaketa	588.7	203	HW	87	CI	1965
YDN31011	YD31032		2 N0631032	603.9	600	HW	120		
YDN31011	YDN31012		1 N0631011	845.7	900	HW	120		
YDN31012	YD31033		1 Thaketa	581.6	203	HW	87	CI	1965
YDN31012	YDN31013		1 N0631012	998.3	900	HW	120		
YDN31013	YD31034		1 N0631052	565.4	500	HW	120		
YDN31015	YDN31014		1 N0631015	1144.4	400	HW	120		
YDN31016	YD31021		1 N0631016	36.9	1300	HW	120		
YDN31016	YD31025		1 N0631016	172.4	600	HW	120		
YDN31016	YD31025		2 Thaketa	167.6	203	HW	87	CI	1965
YDN31016	YD31028		1 Thaketa	541.8	203	HW	87	CI	1965
YDN31017	YD31041		1 N0631017	234	600	HW	120		
YDN31017	YD31047		1 N0631024	286.6	600	HW	120		
YDN31052	YDN31013		1 N0631052	262.9	500	HW	120		
YDN31EBSouthRes	YDN31016		1 N0631021	374.5	1300	HW	120		
YDN32001	YD32011		1 N0232001	227.9	1300	HW	120		
YDN32001	YDN32003		1 N0232002	877.2	400	HW	120		
YDN32001	YDN32005		1 N0232001	343.1	600	HW	120		
YDN32005	YDN32006		1 N0232005	730.3	800	HW	120		
YDN32006	YDN32007		1 N0232006	722.5	600	HW	120		
YDN32007	YDN32008		1 N0232007	522.3	600	HW	120		
YDN32007	YDN32009		1 N0232007	901	500	HW	120		
YDN32008	YDN32017		1 N0232008	809.5	700	HW	120		
YDN32009	YDN32010		1 N0232009	760.1	800	HW	120		
YDN32010	YD32012		1 N0232010	475.7	800	HW	120		
YDN32010	YDN32011		1 N0232010	702.1	600	HW	120		
YDN32010	YDN32014		1 N0232010	1158.7	600	HW	120		
YDN32010	YDN32017		1 N0232009	1215.4	800	HW	120		
YDN32011	YDN32018		1 N0232012	651.8	600	HW	120		
YDN32012	YDN32013		1 N0232013	340.9	500	HW	120		
YDN32012	YDN32014		1 N0232014	1349.5	400	HW	120		
YDN32015	YDN32014		2 N0232014	547.7	400	HW	120		
YDN32016	YDN32015		1 N0232015	599.4	500	HW	120		
YDN32016	YDN32019		1 N0232016	851.4	400	HW	120		
YDN32017	YDN32016		1 N0232008	602.3	700	HW	120		
YDN32018	YDN32012		1 N0232012	425.2	600	HW	120		
YDN32020	YD29015		1 N0232020	262.8	1350	HW	120		

From Node ID	To Node ID	Suffix	Asset ID	Length (m)	Diameter (mm)	Roughness Type	Hazen Williams	Material	Year
YDN32020	YDN32001	1	N0232001	644.8	1350	HW	120		
YDNCBHlawgadummy	YDN20021	1	N0420021	358.5	1500	HW	120		
YDNCBHlawgadummy	YDN28001	1	N0420021	2275.9	1100	HW	120		
YDNFNorth	YDN20051	1	N0520051	308.1	900	HW	120		
YDPDale01	YD09011	1	Dale	436.3	305	HW	120		
YI00Gyobyu	YPGyobyu	1	Gyobyu	400	1422	HW	100		1962
YI00Pyugyi	YT00021	1	Pyugyi	152.3	1676	HW	119	PRC	1988
YIHlawga	YPDowntownIn	1		54.3	1000	HW	100		
YINgamo	YTN00005	1	NYT2020	1503.9	1778	HW	120		
YPDowntownIn	YPdowntownOut	1	NYT2020	42.9	1676	HW	85		1988
YPDowntownIn	YPdowntownOut	2	NYT2020	42.9	1676	HW	85		
YPGyobyu	YT00004	1	Gyobyu	350	1422	HW	88	ST	1940
YPHlawga2In	YPHlawga2Out	1	Hlawga2	73.4	1067	HW	85		1988
YPHlawga2Out	YT20042	1	Hlawga2	28	1067	HW	88	CI	1904
YSTerminal	YTB20001	1	NYT2020	75.8	1880	HW	120		
YSTerminal	YTB20001	2	NYT2020	75.8	1880	HW	120		
YT00003	YT00005	1	Gyobyu	941.6	1422	HW	88	ST	1940
YT00004	YT00003	1	Gyobyu	574.6	1422	HW	88	ST	1940
YT00005	YT00007	1	Gyobyu	3416.8	1422	HW	88	ST	1940
YT00007	YT00008	1	Gyobyu	7460	1422	HW	88	ST	1940
YT00008	YT00009	1	Gyobyu	9605.6	1422	HW	88	ST	1940
YT00009	YT00010	1	Gyobyu	6090.2	1422	HW	88	ST	1940
YT00010	YT20001	1	Gyobyu	9414.1	1422	HW	88	ST	1940
YT00021	YT00022	1	Pyugyi	282.1	1676	HW	100		1988
YT00022	YT00023	1	Pyugyi	4245.7	1676	HW	119	PRC	1988
YT00023	YT00025	1	Pyugyi	2542.7	1676	HW	119	PRC	1988
YT00025	YT00024	1	Pyugyi	19045.3	1676	HW	119	PRC	1988
YT02001	YT02002	1	Hlawga1	657.4	1067	HW	88	CI	1904
YT02002	YT02003	1	Hlawga1	379.5	1067	HW	88	CI	1904
YT02003	YTN01001	1		10	1067	HW	120		
YT02011	YT02021	1		10	686	HW	88		1940
YT02012	YD33054	1	N0101	30.7	500	HW	120		
YT02012	YT30001	1	Hlawga1	1039.7	1067	HW	88	CI	1904
YT02021	YT02022	1	Gyobyu	108	1422	HW	88	ST	1940
YT02021	YT02024	1	NYT01001	1154.3	1499	HW	120		
YT02022	YT02023	1	Gyobyu	738.5	1422	HW	88	ST	1940
YT02023	YT02024	1	Gyobyu	312.4	1422	HW	88	ST	1940
YT02024	YTN01001	1		57.6	1422	HW	120		
YT02024	YTN01001	2	NYT01002	59.4	1422	HW	120		
YT02031	YT02032	1	Hlawga1	203.4	1067	HW	88	CI	1904
YT02031	YT02032	2	N0102003	206.8	1300	HW	120		
YT02032	YT02033	1	Hlawga1	341.9	1067	HW	88	CI	1904
YT02032	YT02033	2	N0102003	343	1300	HW	120		
YT02033	YD14032	2	N0102006	797.4	500	HW	120		
YT02033	YT02034	1	Hlawga1	360.9	1067	HW	88	CI	1904
YT02033	YT02034	2	N0114001	361	1300	HW	120		
YT02034	YD25012	1	N0114002	1223.6	1000	HW	120		
YT02034	YT25001	1	Hlawga1	133.5	1067	HW	88	CI	1904
YT02034	YT25001	2	N0125001	133	1400	HW	120		
YT02041	YT02042	1	Hlawga1	689	1067	HW	88	CI	1904
YT02041	YTN01071	1	NYT01004	2315.7	1092	HW	120		
YT02042	YT02043	1	Hlawga1	168.3	1067	HW	88	CI	1904
YT02043	YT02044	1	Hlawga1	204.1	1067	HW	88	CI	1904
YT02044	YT02045	1	Hlawga1	282.5	1067	HW	88	CI	1904
YT02045	YT02046	1	Hlawga1	336.5	1067	HW	88	CI	1904
YT02046	YT02047	1	Hlawga1	155.5	1067	HW	88	CI	1904
YT02047	YTN01071	1		517.9	1067	HW	85	CI	
YT13001	YT13002	1	Hlawga1	172.4	1676	HW	119	PRC	1988
YT13002	YT13003	1	Hlawga1	1958.3	1676	HW	119	PRC	1988
YT13003	YT13004	1	Hlawga1	804.9	1676	HW	119	PRC	1988
YT13004	YT13005	1	Hlawga1	758.9	1676	HW	119	PRC	1988
YT13005	YT13006	1	Hlawga1	948.2	1676	HW	119	PRC	1988
YT13006	YT13007	1	Hlawga1	1322	1676	HW	119	PRC	1988
YT13007	YT13008	1	Hlawga1	875.2	1676	HW	119	PRC	1988
YT13008	YT19001	1	Hlawga1	603.3	1676	HW	119	PRC	1988
YT19001	YT19002	1	Hlawga1	492.7	1676	HW	119	PRC	1988
YT19002	YT19003	1	Hlawga1	995.3	1676	HW	119	PRC	1988
YT19003	YT19009	1	Hlawga1	261.1	1676	HW	119	PRC	1988
YT19005	YT19006	1	Hlawga1	181.2	1676	HW	119	PRC	1988
YT19006	YT19007	1	Hlawga1	1235.4	1676	HW	119	PRC	1988
YT19007	YT19036	1	Hlawga1	308.1	1676	HW	119	PRC	1988
YT19009	YT19005	1		1172.4	1676	HW	119	GRC	1988
YT19011	YT19012	1	Hlawga2	2157.4	1067	HW	88	CI	1904

From Node ID	To Node ID	Suffix	Asset ID	Length (m)	Diameter (mm)	Roughness Type	Hazen Williams	Material	Year
YT19012	YT19034	1	Hlawga2	2014.2	1067	HW	88	CI	1904
YT19021	YT19022	1	Gyobyu	404.8	1422	HW	88	ST	1940
YT19022	YT19023	1	Gyobyu	2794.6	1422	HW	88	ST	1940
YT19023	YT19024	1	Gyobyu	1653.8	1422	HW	88	ST	1940
YT19024	YT19031	1	Gyobyu	2004	1422	HW	88	ST	1940
YT19031	YT19032	1		20.1	1422	HW	96	ST	1940
YT19032	YT19033	1		50	1422	HW	88	ST	1940
YT19032	YT19034	1		10	610	HW	90		1940
YT19033	YT19051	1	Gyobyu	122.6	1422	HW	88	ST	1940
YT19034	YT19035	1		80.6	1067	HW	88		1904
YT19034	YT19036	1		36.1	610	HW	90		1988
YT19035	YT19033	1		29.9	1422	HW	90		1940
YT19035	YT33010	1	Hlawga1	515.6	1067	HW	88	CI	1904
YT19036	YT19037	1	Hlawga1	54.1	1067	HW	88	CI	1904
YT19037	YT19035	1		10	1422	HW	90		1904
YT19037	YT19039	1		27.3	1067	HW	88	CI	1904
YT19039	YT33051	1	Hlawga1	344.3	1067	HW	88	CI	1904
YT19051	YT33053	1	Gyobyu	315.4	1422	HW	88	ST	1940
YT20001	YT20002	1	Gyobyu	2767.9	1422	HW	88	ST	1940
YT20002	YT20003	1	Gyobyu	1084.2	1422	HW	88	ST	1940
YT20003	YT20004	1	Gyobyu	1189	1422	HW	88	ST	1940
YT20004	YT20005	1	Gyobyu	1763.2	1422	HW	88	ST	1940
YT20005	YT20031	1	Gyobyu	580.4	1422	HW	88	ST	1940
YT20006	YT20007	1	Gyobyu	969.9	1422	HW	88	ST	1940
YT20007	YTBGyobyu001	1	NYT2020	2113.5	1422	HW	120		
YT20008	YT20009	1	Gyobyu	920.9	1422	HW	88	ST	1940
YT20009	YT20010	1	Gyobyu	862.4	1422	HW	88	ST	1940
YT20010	YT20011	1	Gyobyu	1062.3	1422	HW	88	ST	1940
YT20011	YT20012	1	Gyobyu	574.7	1422	HW	88	ST	1940
YT20012	YT20013	1	Gyobyu	1078.4	1422	HW	88	ST	1940
YT20013	YT19021	1	Gyobyu	574.4	1422	HW	88	ST	1940
YT20015	YT20016	1	Hlawga2	1660.8	1067	HW	88	CI	1904
YT20016	YT20017	1	Hlawga2	1135.7	1067	HW	88	CI	1904
YT20017	YT20018	1	Hlawga2	887.9	1067	HW	88	CI	1904
YT20018	YT20019	1	Hlawga2	618.5	1067	HW	88	CI	1904
YT20019	YT20020	1	Hlawga2	561.8	1067	HW	88	CI	1904
YT20020	YT20021	1	Hlawga2	1120.4	1067	HW	88	CI	1904
YT20021	YT20022	1	Hlawga2	567.1	1067	HW	88	CI	1904
YT20022	YT20023	1	Hlawga2	905.7	1067	HW	88	CI	1904
YT20023	YT19011	1	Hlawga2	1783.3	1067	HW	88	CI	1904
YT20031	YT20032	1	Gyobyu	1820.2	1422	HW	88	ST	1940
YT20032	YT20033	1	Gyobyu	412.8	1422	HW	88	ST	1940
YT20033	YT20034	1	Gyobyu	1791.5	1422	HW	88	ST	1940
YT20034	YT20006	1	Gyobyu	471.1	1422	HW	88	ST	1940
YT20035	YT20008	1	Gyobyu	898.4	1422	HW	88	ST	1940
YT20042	YT20015	1	Hlawga2	716.9	1067	HW	88	CI	1904
YT21001	YT21003	1	Hlawga1	477.4	1067	HW	88	CI	1904
YT21002	YT21004	1	Hlawga1	274.7	1067	HW	88	CI	1904
YT21002	YT21004	2		274.7	432	HW	83	CI	1904
YT21003	YT21002	1	Hlawga1	372.5	1067	HW	88	CI	1904
YT21004	YT21006	1	Hlawga1	326.1	1067	HW	88	CI	1904
YT21004	YT21006	2		326.1	432	HW	83	CI	1904
YT21006	YT24001	1	Hlawga1	489.3	1067	HW	88	CI	1904
YT21006	YT24001	2		489.3	432	HW	83	CI	1904
YT25001	YD04001	1	Dagon	512.2	610	HW	86	ST	1915
YT25001	YD04001	2	N0125001	512	1400	HW	120		
YT25001	YD25001	1	N0125003	492.2	700	HW	120		
YT25001	YD25001	2	Sanchaung	489.6	762	HW	88	CI	1915
YT28001	YPHlawga2ln	2	Hlawga2	20	1676	HW	100	CI	1904
YT28002	YT20035	1	NYT2020	1862.2	1422	HW	120		
YT28002	YT28001	1		55	1422	HW	120		
YT28002	YT28003	1	Hlawga1	570.9	1676	HW	119	PRC	1988
YT28003	YT28004	1	Hlawga1	868.3	1676	HW	119	PRC	1988
YT28004	YT28005	1	Hlawga1	1557	1676	HW	119	PRC	1988
YT28005	YT13001	1	Hlawga1	983.7	1676	HW	119	PRC	1988
YT30001	YT30007	1	Hlawga1	150.7	1067	HW	88	CI	1904
YT30002	YT30003	1	Hlawga1	507.4	1067	HW	88	CI	1904
YT30003	YT30005	1	Hlawga1	606.6	1067	HW	90	CI	1915
YT30003	YT30008	1	Hlawga1	191.9	1067	HW	90	CI	1915
YT30004	YT30006	1	Hlawga1	779.8	1067	HW	88	CI	1904
YT30006	YT30009	1	Hlawga1	248.9	1067	HW	88	CI	1904
YT30007	YT30002	1	Hlawga1	475	1067	HW	88	CI	1904
YT30008	YT30004	1	Hlawga1	314.6	1067	HW	88	CI	1904

From Node ID	To Node ID	Suffix	Asset ID	Length (m)	Diameter (mm)	Roughness Type	Hazen Williams	Material	Year
YT30009	YT21001	1	Hlawga1	257.9	1067	HW	88	CI	19
YT33001	YT33002	1	Hlawga1	1313.2	1067	HW	88	CI	19
YT33002	YT02001	1	Hlawga1	1143.9	1067	HW	88	CI	19
YT33010	YT33011	1	Hlawga1	277.3	1067	HW	88	CI	19
YT33011	YT33012	1	Hlawga1	1159.6	1067	HW	88	CI	19
YT33012	YT33013	1	Hlawga1	518.6	1067	HW	88	CI	19
YT33013	YT33014	1	Hlawga1	636	1067	HW	88	CI	19
YT33014	YT02011	1	Hlawga1	182	1067	HW	88	CI	19
YT33021	YT33025	1	Gyobyu	220.4	1422	HW	88	ST	19
YT33022	YT33055	1	Gyobyu	369.1	1422	HW	88	ST	19
YT33023	YT33024	1	Gyobyu	626.1	1422	HW	88	ST	19
YT33024	YT02021	1	Gyobyu	174.9	1422	HW	88	ST	19
YT33025	YT33026	1	Gyobyu	771.1	1422	HW	88	ST	19
YT33026	YT33022	1	Gyobyu	145.3	1422	HW	88	ST	19
YT33051	YT33001	1	Hlawga1	476.4	1067	HW	88	CI	19
YT33053	YT33054	1	Gyobyu	39.8	1422	HW	88	ST	19
YT33054	YT33021	1	Gyobyu	324.5	1422	HW	88	ST	19
YT33055	YT33023	1	Gyobyu	175	1422	HW	88	ST	19
YTB02001	YDN02001	1	P02001	650.4	1801	HW	120		
YTB02001	YTB06011	1		4052.7	1199	HW	120		
YTB03001	YDN03001	1		112.3	2200	HW	120		
YTB03001	YTB02001	1	NYT2020	11799	1801	HW	120		
YTB03011	YTB03012	1	NYT2020	301.5	2200	HW	120		
YTB03012	YTB05001	1	NYT2020	607.7	2200	HW	120		
YTB04001	YDN04001	1		73.6	1778	HW	120		
YTB04001	YTB08001	1	NYT2020	12709.7	1346	HW	120		
YTB05001	YTB04001	1		47.8	1801	HW	120		
YTB05001	YTB05002	1	NYT2020	6075.3	899	HW	120		
YTB05002	YTN05001	1		271.7	899	HW	120		
YTB06011	YBN06001	1		260.7	1199	HW	120		
YTB07001	YDN07dammy	1		164.7	1193	HW	120		
YTB08001	YTB07001	1	NYT2020	7103.9	1194	HW	120		
YTB08001	YTN08001	1		237.7	1346	HW	120		
YTB11Res	YTN11Resdammy	1	YTN	327.9	900	HW	120		
YTB20002	YTB03011	1	NYT2020	348.7	2200	HW	120		
YTB20011	YT28002	1	NYT2020	563.4	2700	HW	120		20
YTB20012	YTWNSouth Branch	1	NYT2020	3264.2	2200	HW	120		
YTBGyobyu001	YTBGyobyu005	1	NYT2020	351.7	1422	HW	120		
YTH00003	YTH00004	1	NYTOH004	6990.4	2000	HW	120		
YTH00003	YTH00004	2		6995.2	2500	HW	120		
YTH00004	YTH00005	1	NYTOH005	10099.9	2000	HW	120		
YTH00004	YTH00005	2		10103.1	2000	HW	120		
YTH00005	YTH28001	1	NYTOh006	3213.9	2000	HW	120		
YTH00005	YTH28001	2		3217.9	2000	HW	120		
YTH00015	YTH0001	1	NYTOH001	5795.1	2500	HW	120		
YTH00015	YTH0001	2		5798.2	2500	HW	120		
YTH28001	YTH28002	1	NYTOH007	3973.9	2000	HW	120		
YTH28001	YTH28002	2		3975.9	2000	HW	120		
YTH28002	YTH28003	1	NYTOH008	1072.8	2000	HW	120		
YTH28002	YTH28003	2		1074.9	2000	HW	120		
YTH28003	YSTerminal	1	NYTOH009	390.7	2000	HW	120		
YTH28003	YSTerminal	2		392.7	2000	HW	120		
YTHIntake	YTH00015	1	NYTOHWTP02	230.7	3000	HW	120		
YTN00005	YTN00006	1	NYTON001	3457.7	1778	HW	120		
YTN00006	YTN00007	1	NYTON002	2578.6	1778	HW	120		
YTN00007	YTN00008	1	NYTON003	1741.2	1778	HW	120		
YTN00008	YTN00009	1	NYTON004	2062.7	1778	HW	120		
YTN00009	YTN00010	1	NYTON005	1657.2	1778	HW	120		
YTN00010	YTN00011	1	NYTON006	16785.6	1778	HW	120		
YTN00010	YTN00011	2	NYTON006	16785.6	1778	HW	120		
YTN00011	YTN20001	1	NYTON007	8011.6	1422	HW	120		
YTN00011	YTN20001	2		8024.1	1100	HW	110	DI	
YTN01001	YT02041	1		80.2	1067	HW	120		
YTN01001	YT02041	2	NYT01003	82.1	1346	HW	120		
YTN01071	YTDammy	1		60.6	1092	HW	120		
YTN19011	YDN11004	1	N0319011	1107.3	700	HW	120		
YTN20001	YTN20002	1	NYTON008	2912	1422	HW	120		
YTN20001	YTN20002	2		2931	1100	HW	110	DI	
YTN20002	YTN20003	1	NYTON009	2366.8	1422	HW	120	DI	
YTN20002	YTN20003	2		2368.6	1100	HW	110		
YTR02001	YTB20012	1	NYT2020	673.3	2700	HW	120		
YTSSouthdammy	YD09002	1	N0909002	501.1	300	HW	120		
YTSSouthdammy	YD09004	1	N0909004	379.4	500	HW	120		



From Node ID	To Node ID	Suffix	Asset ID	Length (m)	Diameter (mm)	Roughness Type	Hazen Williams	Material	Year
YTSSouthdammy	YDN09001	1	N0909001	875.7	400	HW	120		
YTSWBNorthDammy	YDN12001	1	N1112001	264.2	1100	HW	120		
YTWNSouth Branch	YTB03001	1	NYT2020	3085.7	2200	HW	120		
YTWNSouth Branch	YTB11Res	1	NYtB11Res	9605.5	700	HW	120		
YTWTPHlaing	YTH00003	1	NYTOH002	4099.8	2000	HW	120		
YTWTPHlaing	YTH00003	2		4105.2	2000	HW	120		