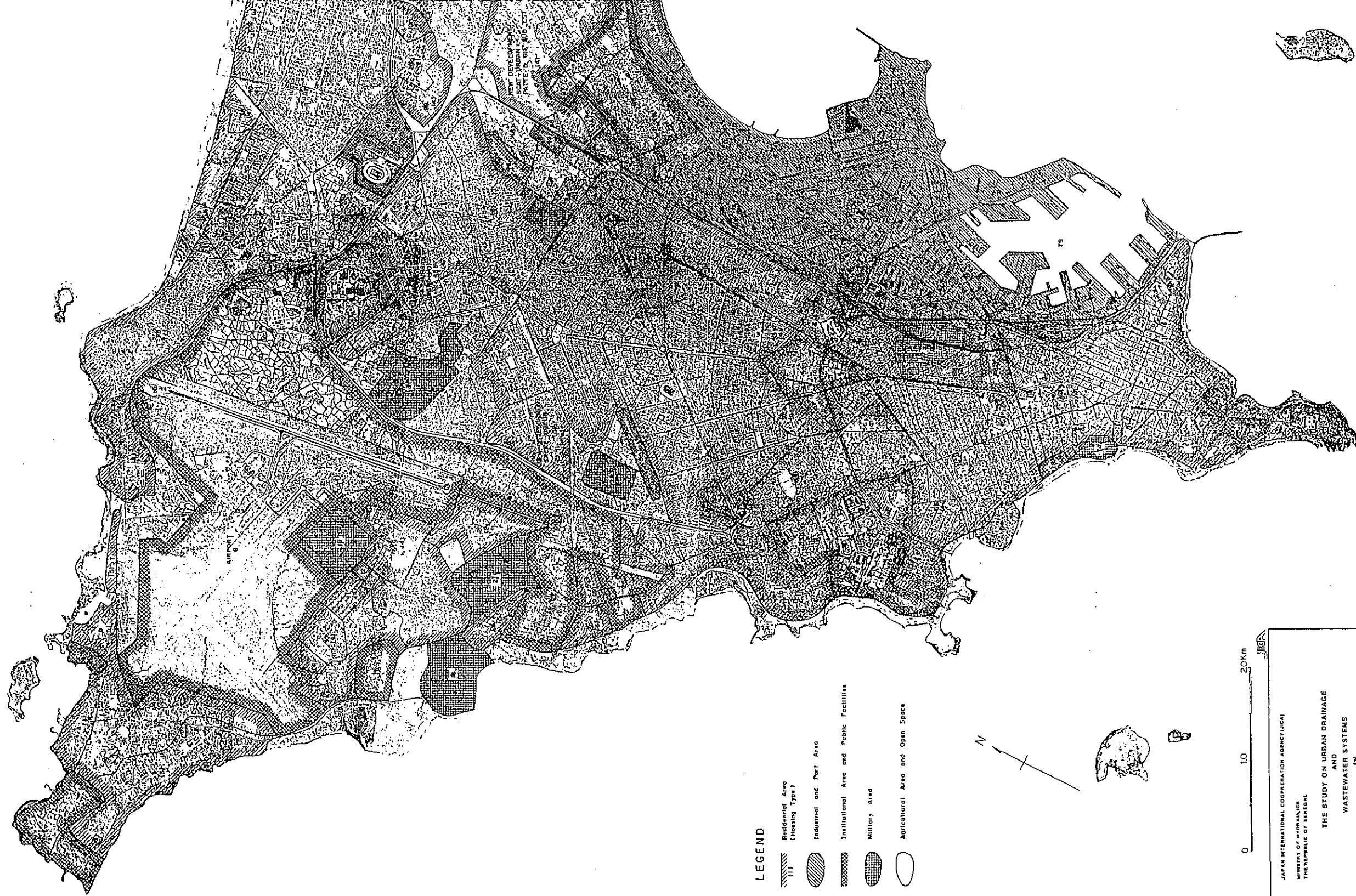
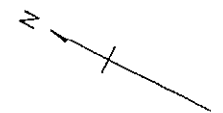


SYSTEME D'ASSAINISSEMENT DES EAUX USEES



LEGEND

- Residential Area (Housing Type 1)
- Industrial and Port Area
- Institutional Area and Public Facilities
- Military Area
- Agricultural Area and Open Space



0 10 20 Km

JICA

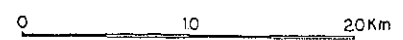
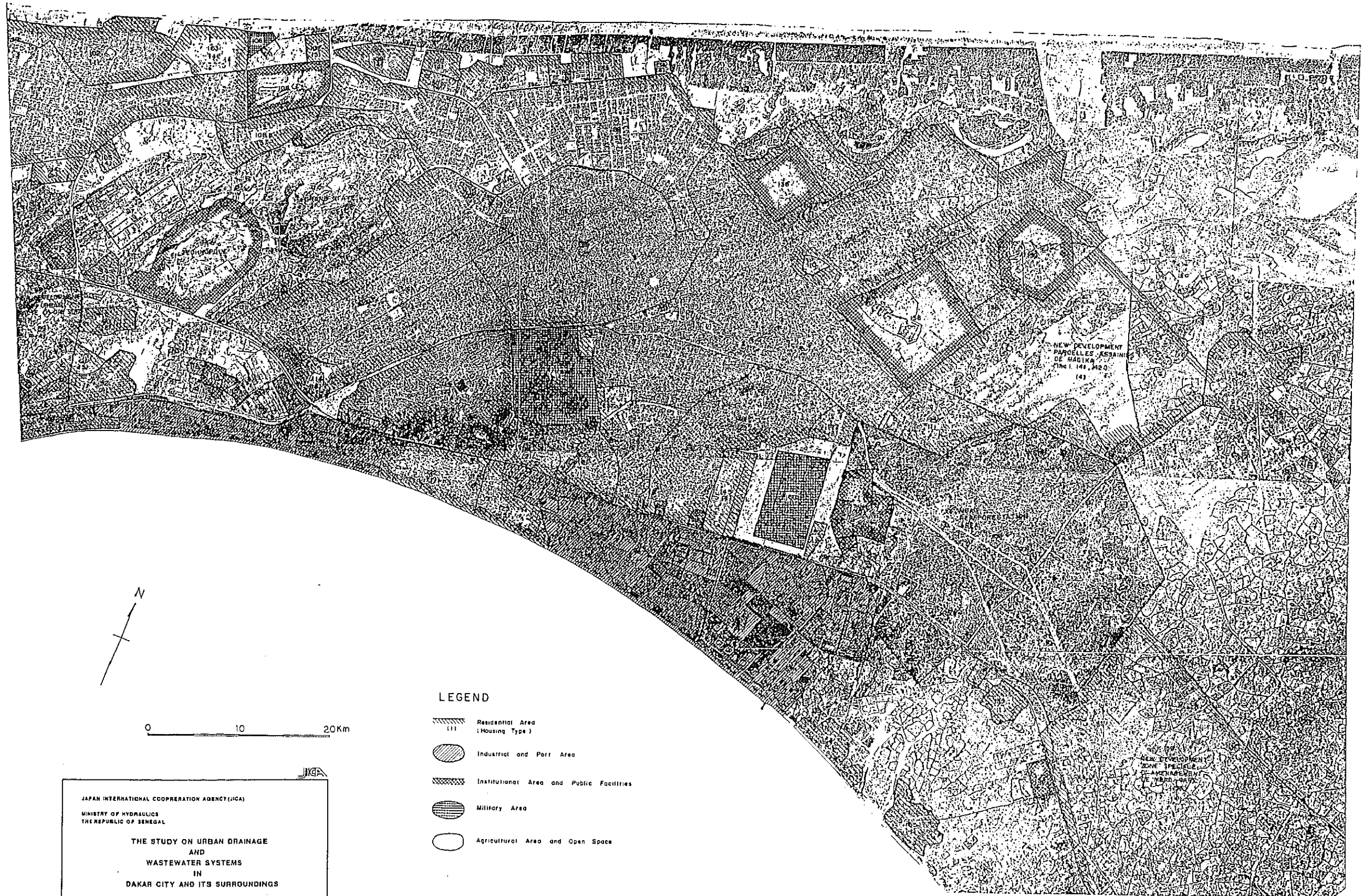
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
 MINISTRY OF ECONOMY, TRADE AND INDUSTRY
 THE REPUBLIC OF SENEGAL

THE STUDY ON URBAN DRAINAGE
 AND
 WASTEWATER SYSTEMS
 IN
 DAKAR CITY AND ITS SURROUNDINGS






LAND USE PLAN (2010) (1/2)
 84-1113,700

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 14-3-1-1010 NISHI
 TOKYO ENGINEERING CONSULTANTS CO., LTD., TOKYO

1984



LEGEND

-  Residential Area (Housing Type)
-  Industrial and Port Area
-  Institutional Area and Public Facilities
-  Military Area
-  Agricultural Area and Open Space

JICA
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
 MINISTRY OF HYDRAULICS
 THE REPUBLIC OF SENEGAL

 THE STUDY ON URBAN DRAINAGE
 AND
 WASTEWATER SYSTEMS
 IN
 DAKAR CITY AND ITS SURROUNDINGS

LAND USE PLAN (2010) (2/2)
 3-1/13.700

 PACIFIC CONSULTANTS INTERNATIONAL, TOKYO 1994
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NEW DEVELOPMENT
 SCHEMATIC PLAN
 PART 1 OF 2

JICA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
 MINISTRY OF FINANCE
 THE REPUBLIC OF JAPAN

THE STUDY ON URBAN DRAINAGE
 AND
 WASTEWATER SYSTEMS
 IN
 DAKAR CITY AND ITS SURROUNDINGS

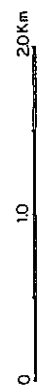
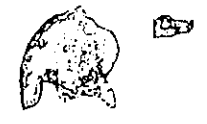
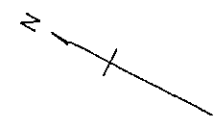
GENERAL PLAN OF SEWERAGE
 SYSTEM (1/2)

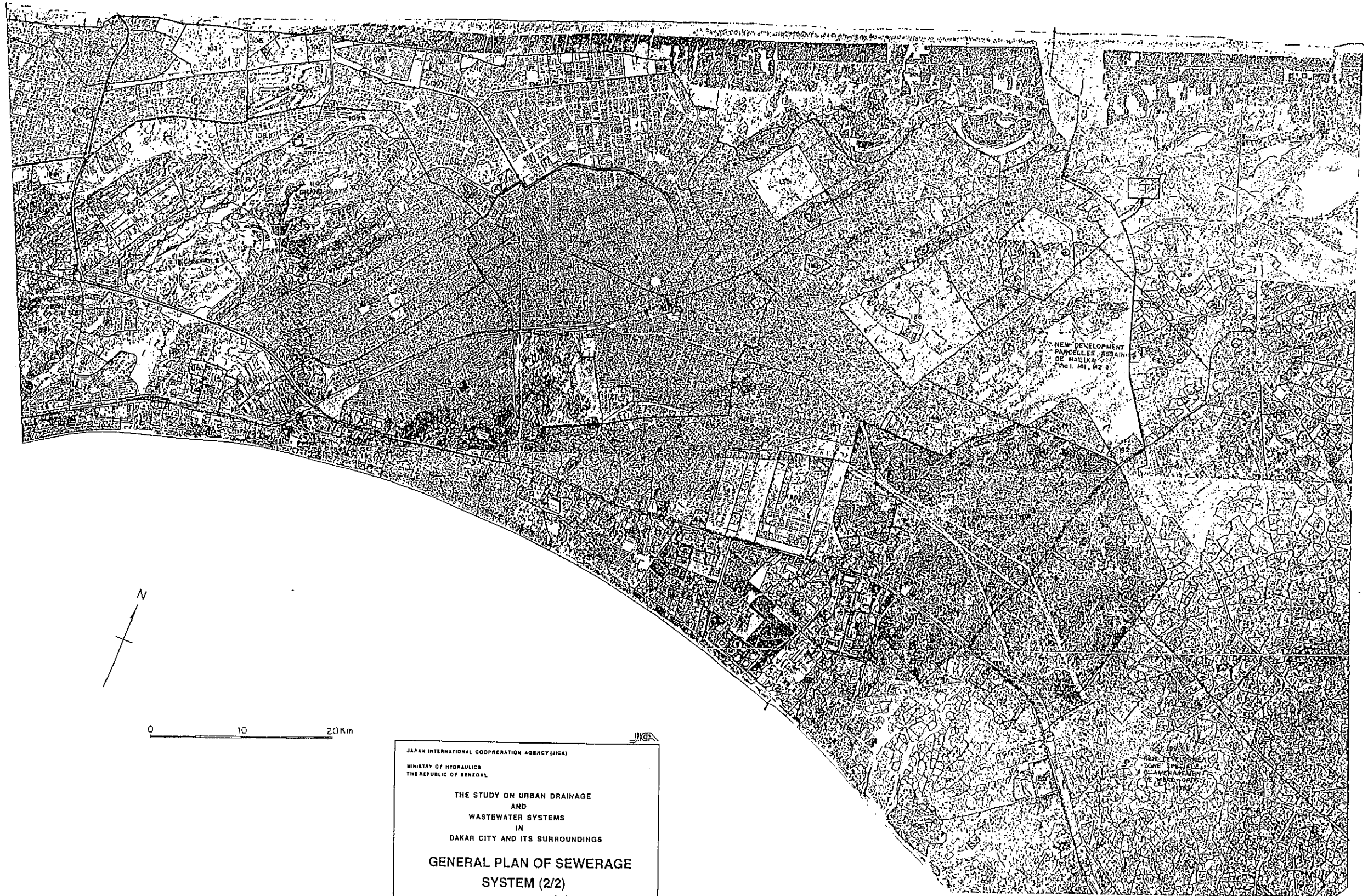
8-1118,788

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MINISTRY OF HYDRAULICS
THE REPUBLIC OF SENEGAL

THE STUDY ON URBAN DRAINAGE
AND
WASTEWATER SYSTEMS
IN
DAKAR CITY AND ITS SURROUNDINGS

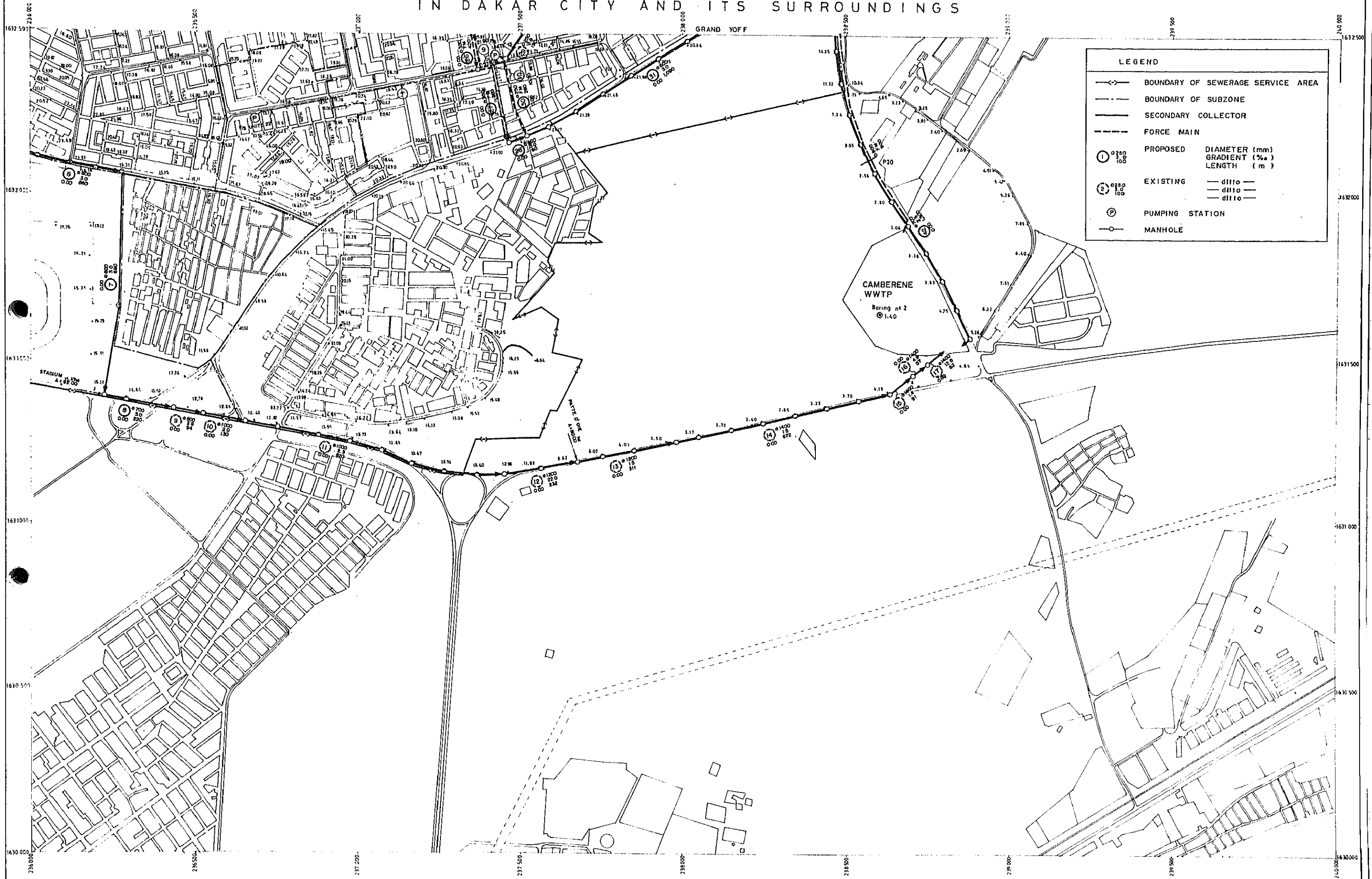
GENERAL PLAN OF SEWERAGE
SYSTEM (2/2)

Scale 1:75,000

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THE STUDY ON URBAN DRAINAGE AND WASTEWATER SYSTEMS IN DAKAR CITY AND ITS SURROUNDINGS



LEGEND	
	BOUNDARY OF SEWERAGE SERVICE AREA
	BOUNDARY OF SUBZONE
	SECONDARY COLLECTOR
	FORCE MAIN
	PROPOSED DIAMETER (mm) GRADIENT (%) LENGTH (m)
	EXISTING DIAMETER (mm) GRADIENT (%) LENGTH (m)
	PUMPING STATION
	MANHOLE

THE STUDY ON URBAN DRAINAGE AND WASTEWATER SYSTEMS IN DAKAR CITY AND ITS SURROUNDINGS

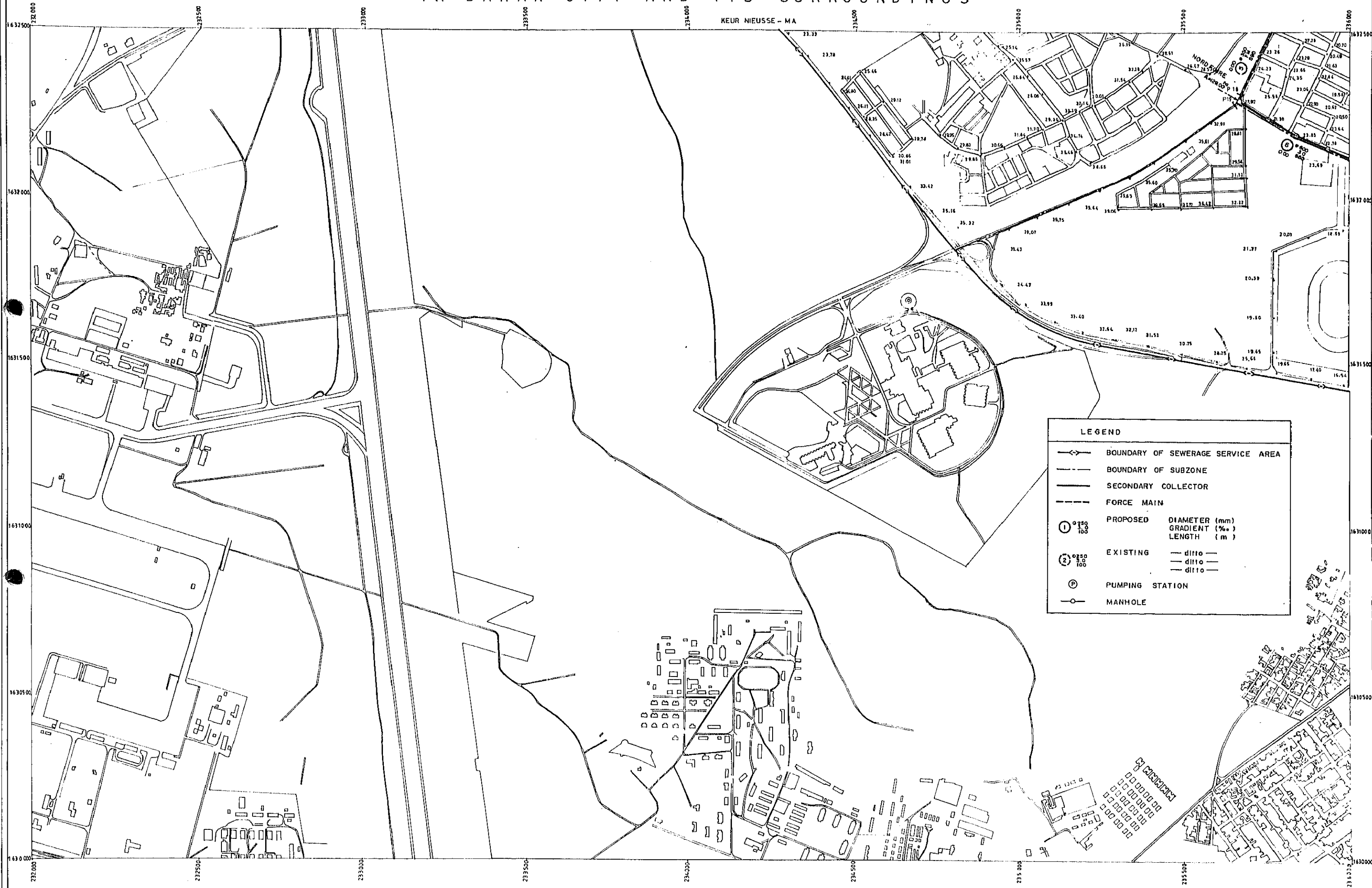
PARCELLES ASSAINIÉES - CAMBÉRENE



LEGEND	
	BOUNDARY OF SEWERAGE SERVICE AREA
	BOUNDARY OF SUBZONE
	SECONDARY COLLECTOR
	FORCE MAIN
	PROPOSED DIAMETER (mm)
	GRADIENT (%)
	LENGTH (m)
	EXISTING — ditto —
	— ditto —
	PUMPING STATION
	MANHOLE

THE STUDY ON URBAN DRAINAGE AND WASTEWATER SYSTEMS IN DAKAR CITY AND ITS SURROUNDINGS

KEUR NIEUSSE - MA



LEGEND	
—○—	BOUNDARY OF SEWERAGE SERVICE AREA
— — —	BOUNDARY OF SUBZONE
— — — — —	SECONDARY COLLECTOR
— — — — —	FORCE MAIN
① $\frac{0.250}{100}$	PROPOSED DIAMETER (mm) GRADIENT (%) LENGTH (m)
② $\frac{0.250}{100}$	EXISTING — ditto — — ditto — — ditto —
Ⓟ	PUMPING STATION
○	MANHOLE

4	2
③	1

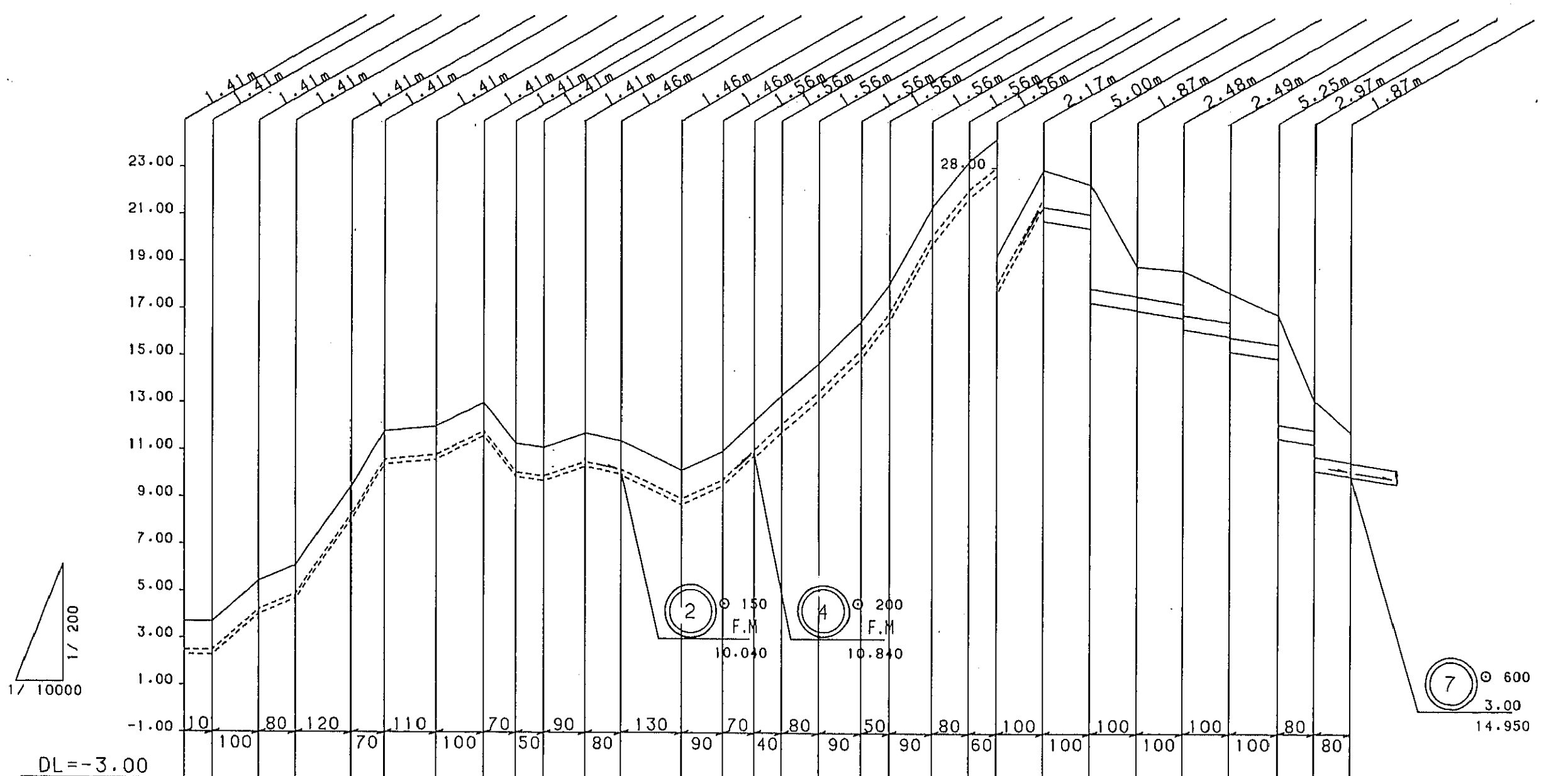
THE STUDY ON URBAN DRAINAGE AND WASTEWATER SYSTEMS IN DAKAR CITY AND ITS SURROUNDINGS

YOFF - PARCELLES ASSAINIES

LEGEND	
—<>—	BOUNDARY OF SEWERAGE SERVICE AREA
- - -	BOUNDARY OF SUBZONE
—	SECONDARY COLLECTOR
- - -	FORCE MAIN
① $\frac{0.250}{100}$	PROPOSED DIAMETER (mm) GRADIENT (%) LENGTH (m)
② $\frac{0.250}{100}$	EXISTING — ditto — — ditto — — ditto —
Ⓟ	PUMPING STATION
○	MANHOLE

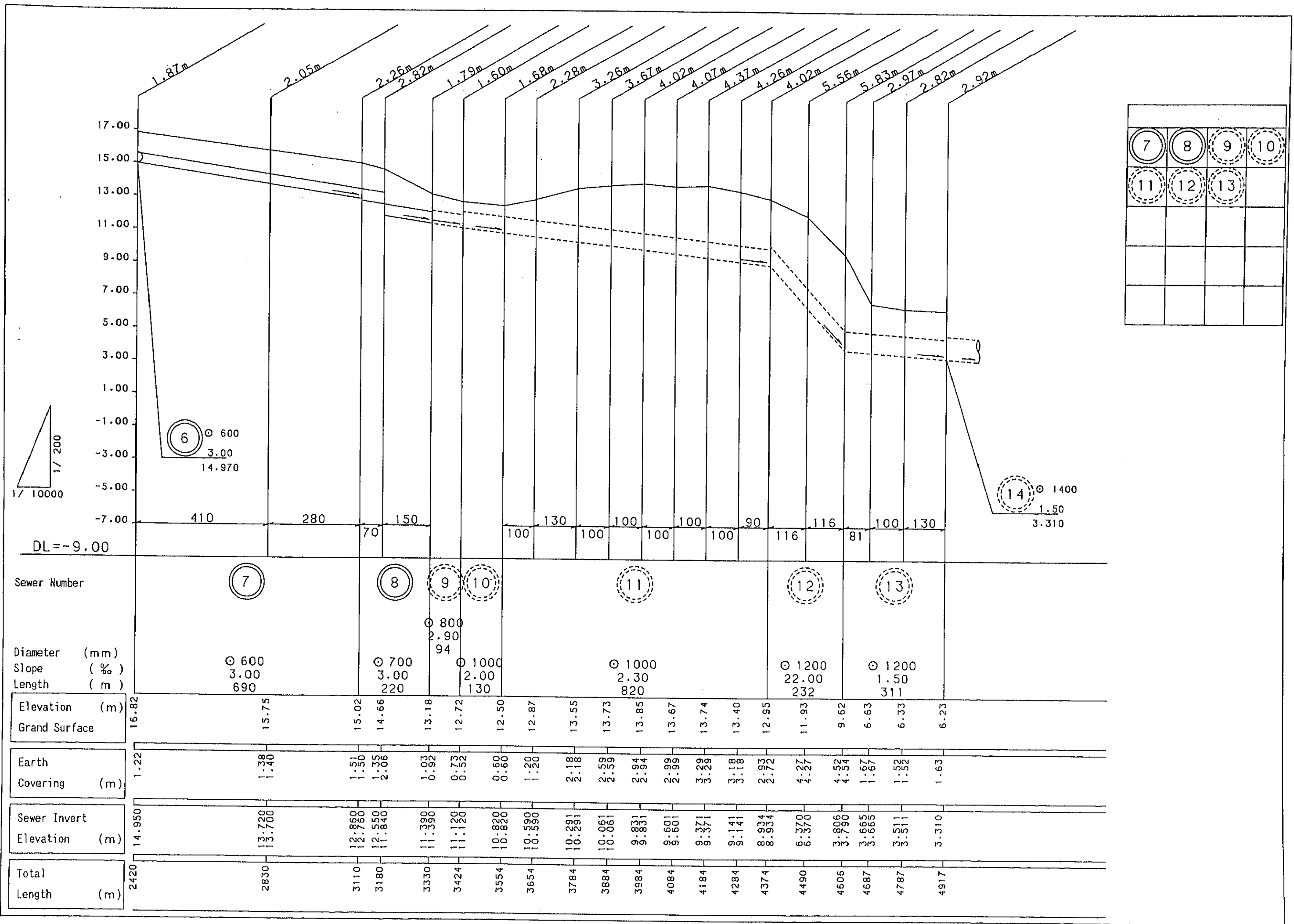


④	2
3	1



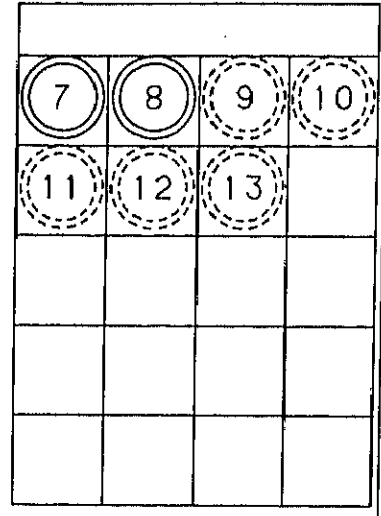
1	3	5	6

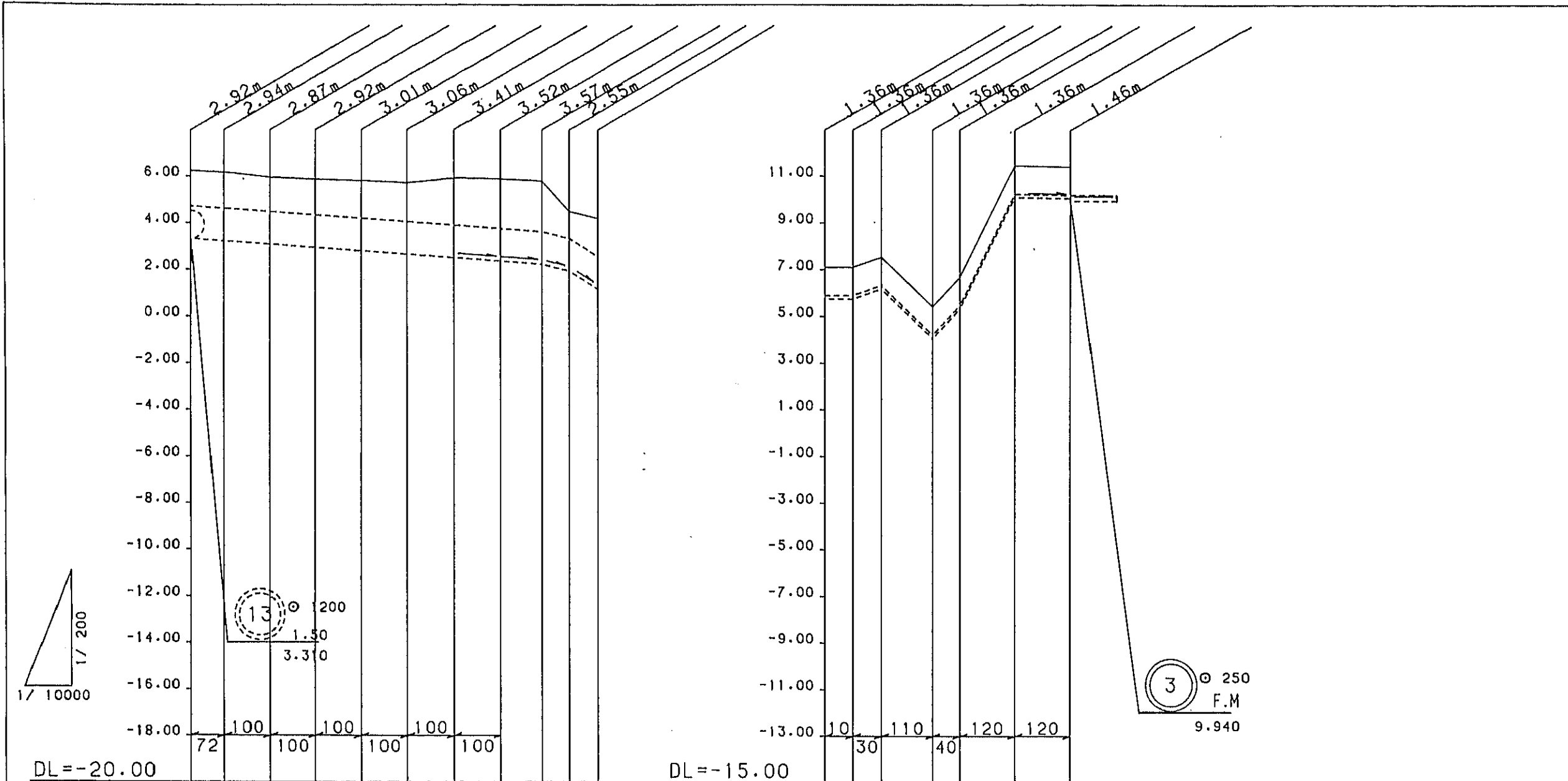
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Sewer Number	1										3				5				6													
Diameter (mm)	Ø 200										Ø 250				Ø 350				Ø 600													
Slope (%)	F.M										F.M				F.M				3.00													
Length (m)	880										290				590				660													
Elevation (m)	3.70	3.70	5.44	6.09	9.43	11.79	12.00	13.01	11.28	11.11	11.73	11.40	10.16	10.98	12.25	13.35	14.71	16.48	18.07	21.31	23.26	24.23	27.92	27.30	23.85	23.69	22.76	21.82	18.18	16.82		
Grand Surface	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20	1:20			
Earth Covering (m)	2.290	2.290	4.030	4.680	8.020	10.380	10.590	11.600	9.870	9.700	10.320	9.990	8.700	9.520	10.790	11.787	13.147	14.917	16.507	18.747	21.697	22.667	26.357	25.750	25.450	22.000	21.680	20.910	19.970	16.570	15.330	14.970
Sewer Invert Elevation (m)	0	10	110	190	310	380	490	590	660	710	800	880	1010	1100	1170	1210	1290	1380	1430	1520	1600	1660	1760	1860	1960	2060	2160	2260	2340	2420		
Total Length (m)																																



DL = -9.00

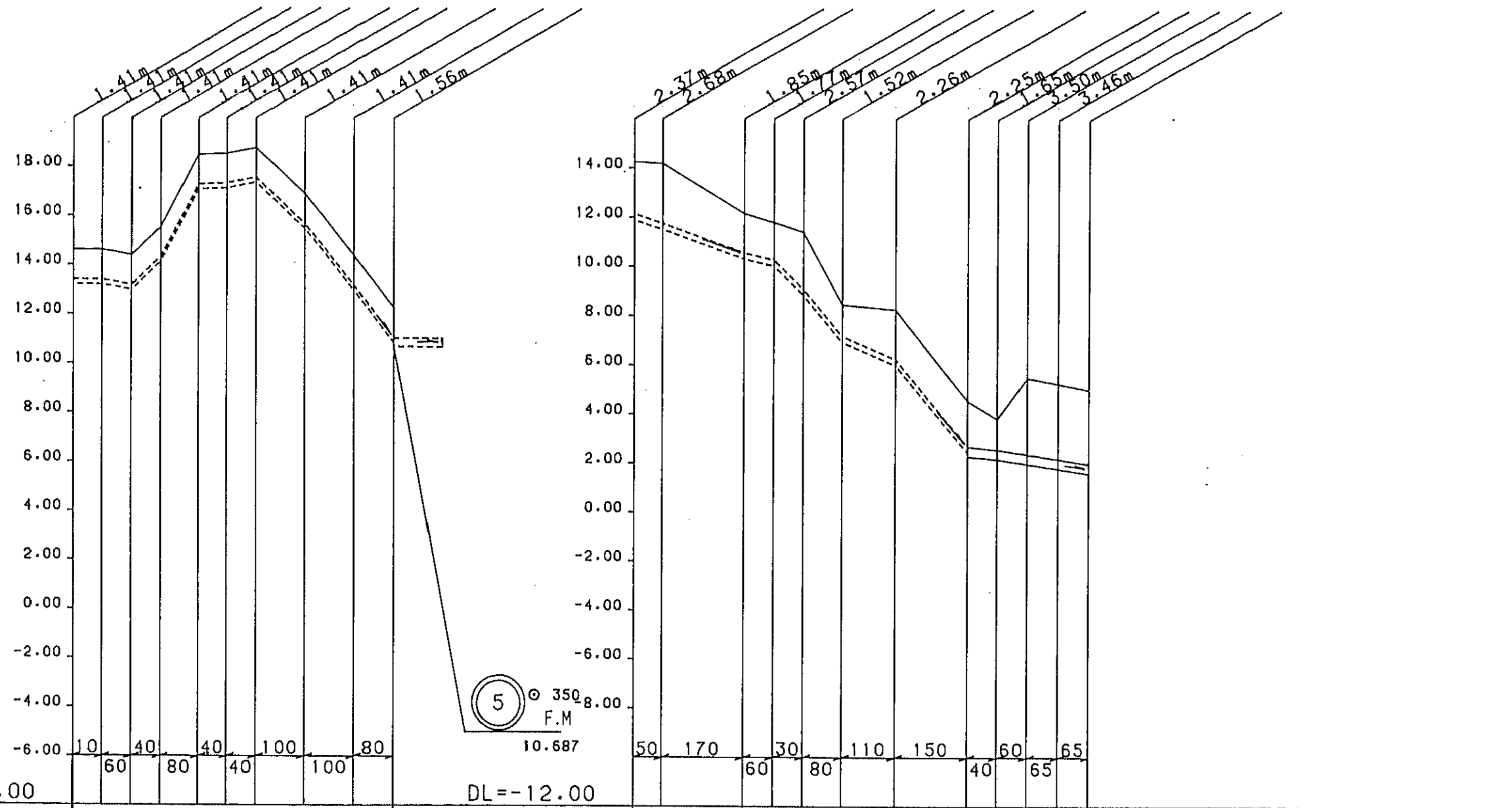
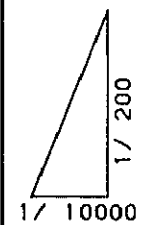
Sewer Number	7		8		9	10	11					12	13										
Diameter (mm)	Ø 600		Ø 700		Ø 800	Ø 1000	Ø 1000					Ø 1200	Ø 1200										
Slope (%)	3.00		3.00		2.90	2.00	2.30					22.00	1.50										
Length (m)	690		220		94	130	820					232	311										
Elevation (m)	16.82		15.75		15.02	14.66	13.18	12.72	12.50	12.87	13.55	13.73	13.85	13.67	13.74	13.40	12.95	11.93	9.62	6.63	6.33	6.23	
Grand Surface	1.22		1.38		1.51	1.35	0.92	0.73	0.60	1.20	2.18	2.59	2.94	2.99	3.29	3.18	2.93	4.27	4.52	1.67	1.52	1.63	
Earth Covering (m)	14.950		13.720		12.860	12.550	11.390	11.120	10.820	10.590	10.291	10.061	9.831	9.601	9.371	9.141	8.934	8.370	3.906	3.790	3.665	3.511	3.310
Sewer Invert Elevation (m)	2420		2830		3110	3180	3330	3424	3554	3654	3784	3884	3984	4084	4184	4284	4374	4490	4606	4687	4787	4917	
Total Length (m)																							





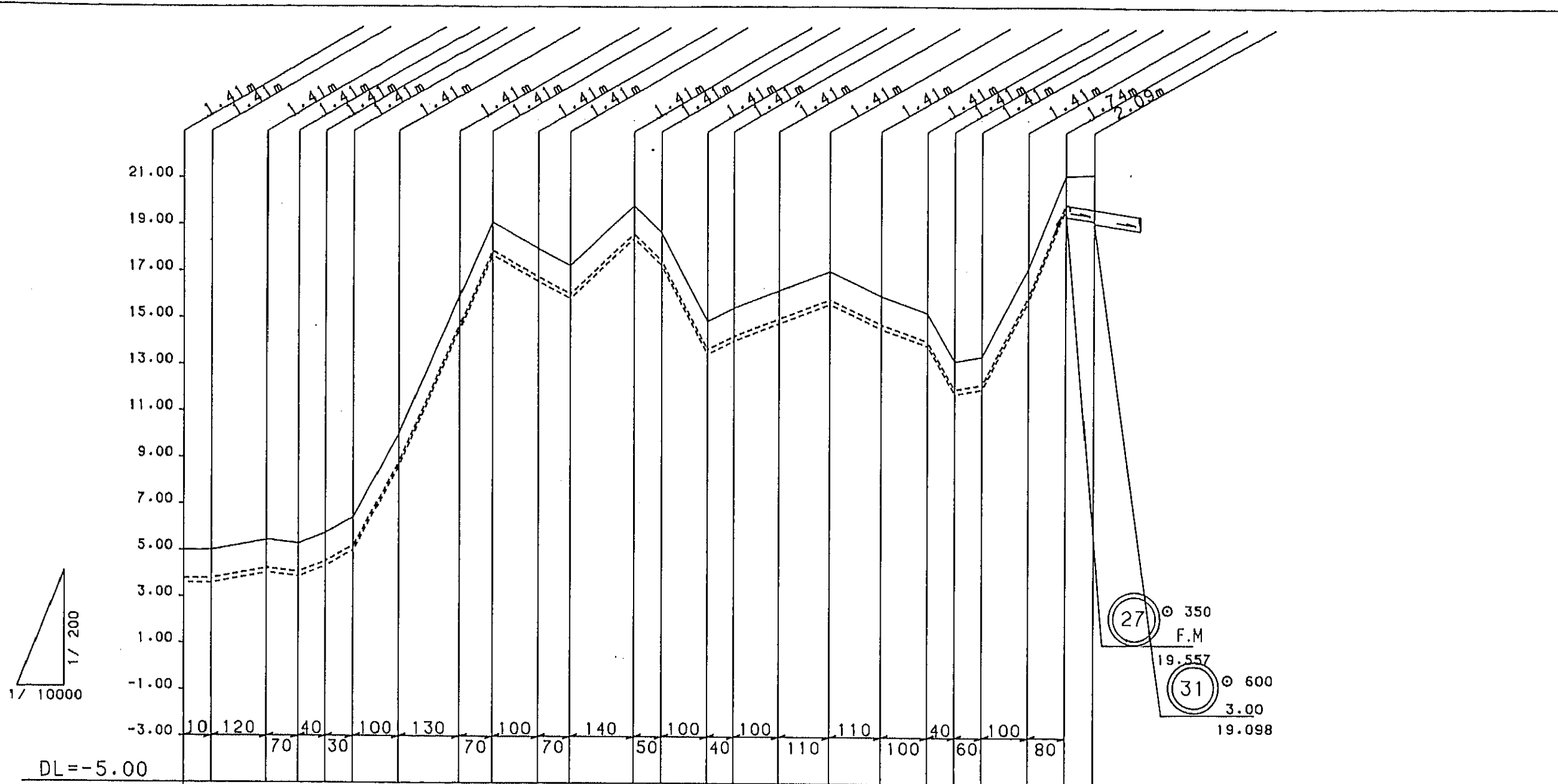
2	14	15	16
17			

DL=-20.00	DL=-15.00		
Sewer Number	14	15	17
Diameter (mm)	1400	1400	1400
Slope (%)	1.50	.40	12.60
Length (m)	672	91	62
Elevation (m)	6.23	5.78	4.48
Grand Surface	6.23	5.78	4.48
Earth Covering (m)	1.41	2.01	1.59
Sewer Invert Elevation (m)	3.310	2.340	1.150
Total Length (m)	4917	5680	5737

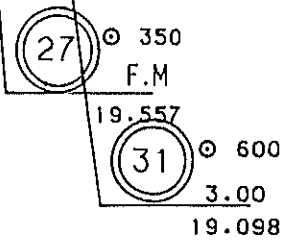


4	18	19	20

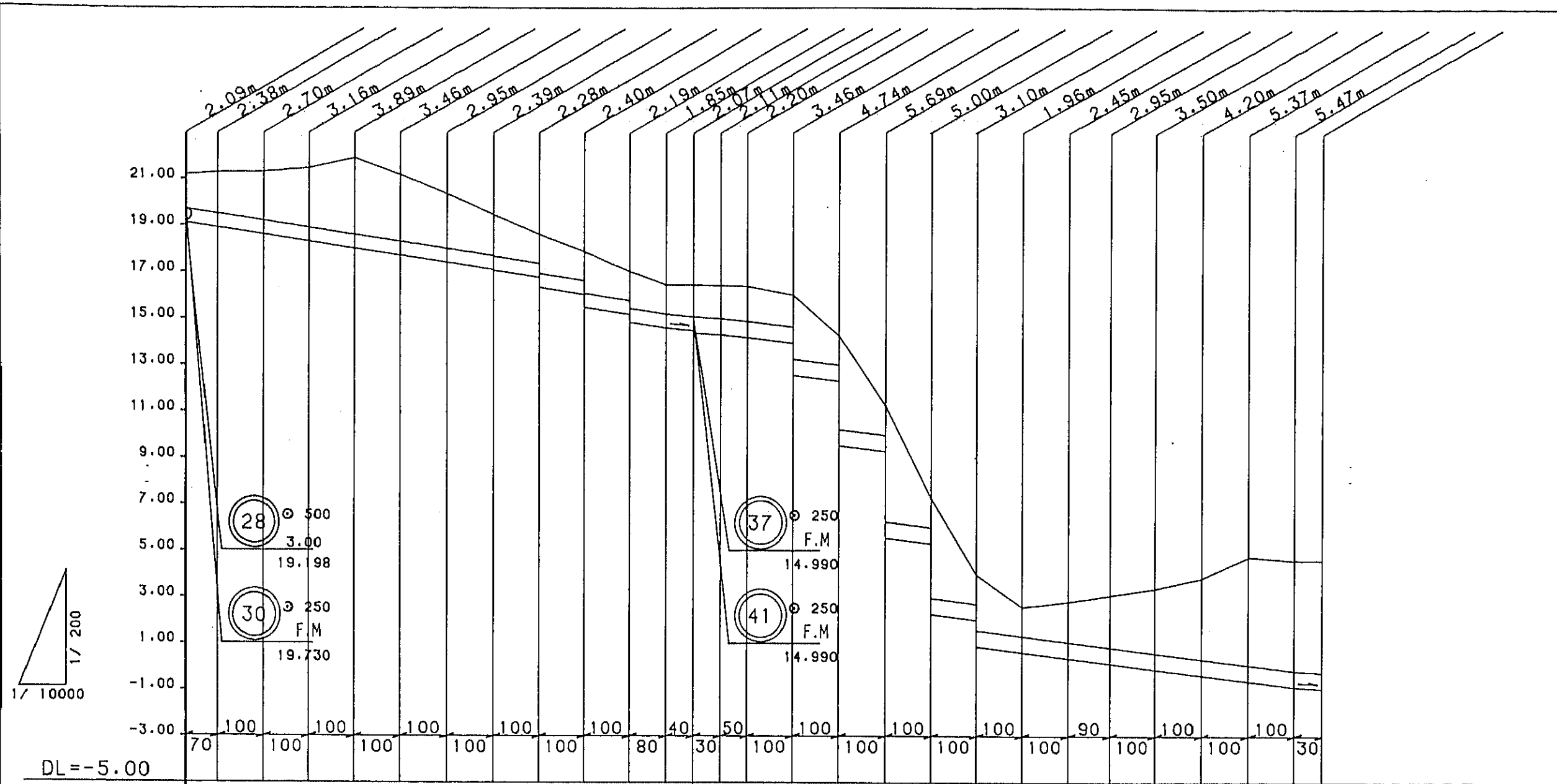
Sewer Number	4										18		19		20							
Diameter (mm)	Ø 200										Ø 250		Ø 250		Ø 400							
Slope (%)	F.M										5.00		5.00		3.00							
Length (m)	550										220		430		230							
Elevation (m)	14.60	14.60	14.38	15.52	18.48	18.52	18.75	16.88	14.36	12.25	14.25	14.17	12.13	11.76	11.36	8.41	8.22	4.53	3.81	5.48	5.24	5.00
Grand Surface	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	2.09	2.40	1.57	1.49	2.29	1.24	1.98	1.82	1.22	3.07	3.02	2.98
Earth Covering (m)	13.190	13.190	12.970	14.110	17.070	17.110	17.340	15.470	12.950	10.840	11.880	11.490	10.280	9.990	8.790	6.890	5.960	2.430	2.160	1.980	1.785	1.590
Sewer Invert Elevation (m)	0	10	70	110	190	230	270	370	470	550	0	50	220	280	310	390	500	650	690	750	815	880
Total Length (m)	0	10	70	110	190	230	270	370	470	550	0	50	220	280	310	390	500	650	690	750	815	880



(21)	(28)		

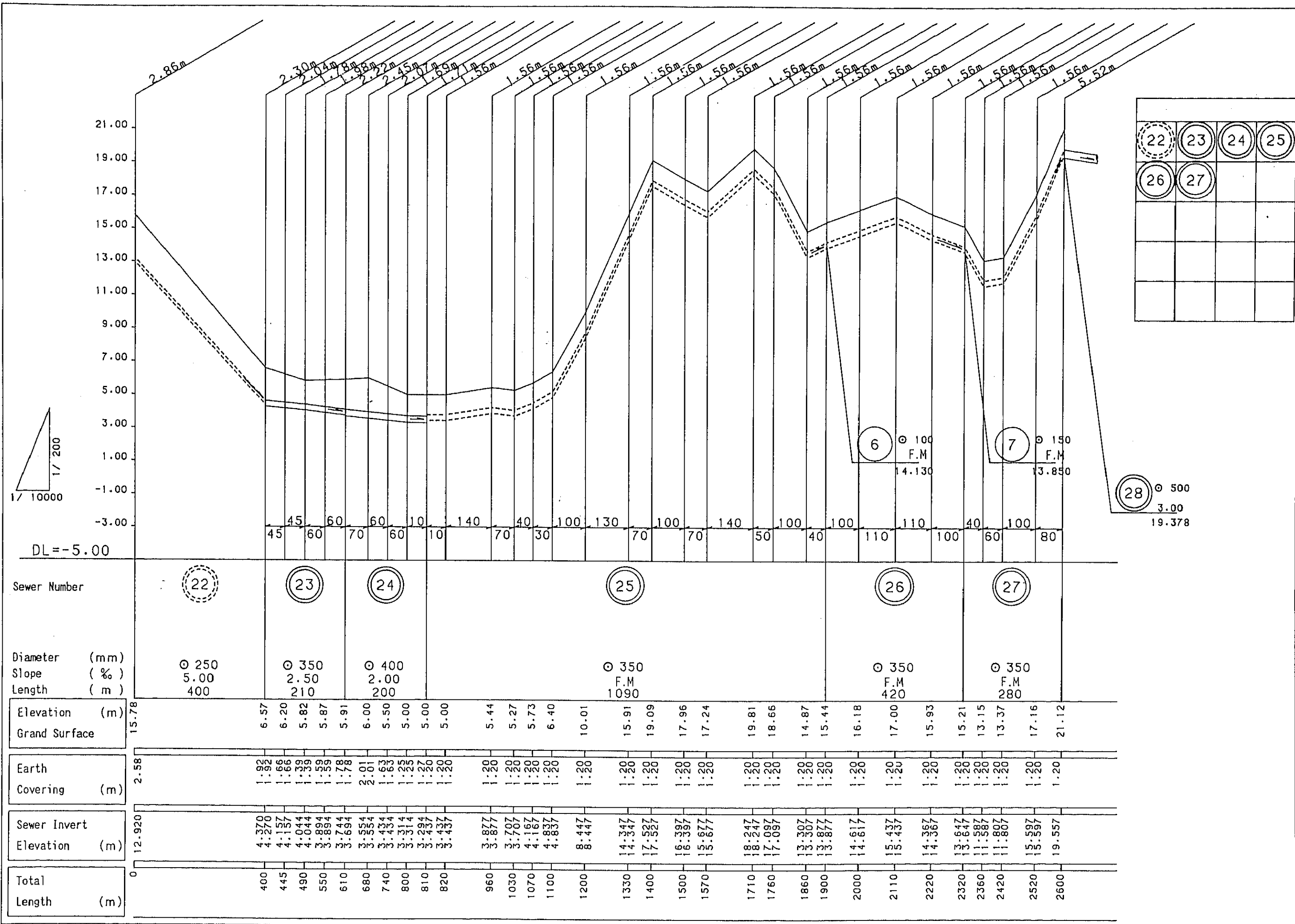


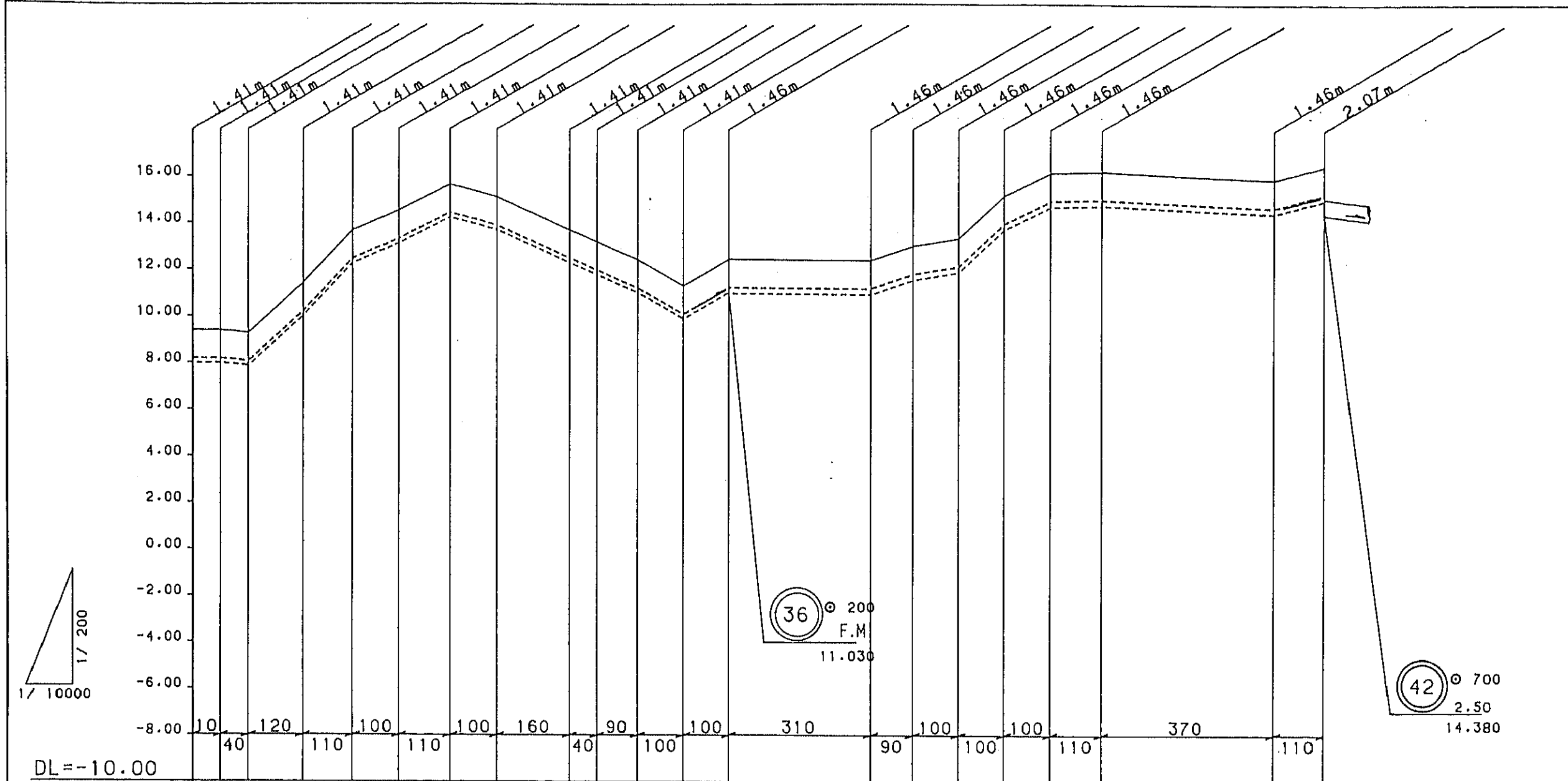
DL = -5.00	10	120	40	100	130	70	70	140	50	100	40	110	100	40	100	80										
Sewer Number	(21)															(28)										
Diameter (mm)	Ø 200															Ø 500										
Slope (%)	F.M															3.00										
Length (m)	1770															60.00										
Elevation (m)	5.00	5.00	5.44	5.27	5.73	6.40	10.01	15.91	19.09	17.96	17.24	19.81	18.66	14.87	15.44	16.18	17.00	15.93	15.21	13.15	13.37	17.16	21.12	21.19		
Grand Surface	5.00	5.00	5.44	5.27	5.73	6.40	10.01	15.91	19.09	17.96	17.24	19.81	18.66	14.87	15.44	16.18	17.00	15.93	15.21	13.15	13.37	17.16	21.12	21.19		
Earth Covering (m)	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.45	
Sewer Invert Elevation (m)	3.590	3.590	4.030	3.860	4.320	4.990	8.600	14.500	14.500	17.680	16.550	15.830	18.400	17.250	13.460	14.030	14.770	15.590	14.520	13.800	13.800	11.740	11.960	15.750	19.710	19.378
Total Length (m)	0	10	130	200	240	270	370	500	570	670	740	880	930	1030	1070	1170	1280	1390	1490	1530	1590	1690	1770	1830		



(31)	(42)		

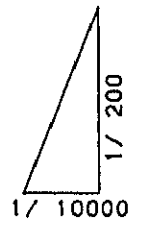
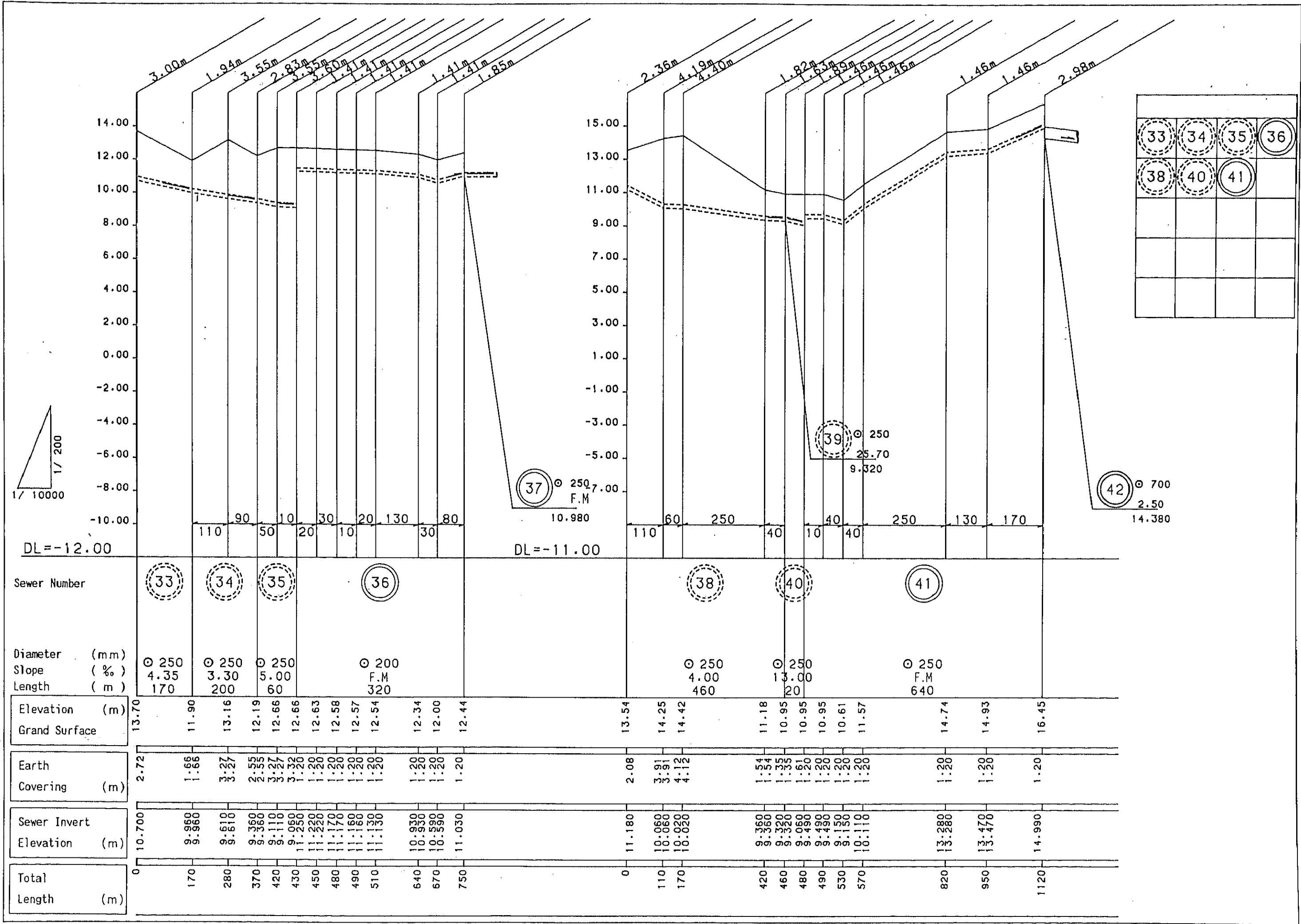
DL = -5.00																														
Sewer Number	(31)															(42)														
Diameter (mm)	Ø 600															Ø 700														
Slope (%)	3.00															2.50														
Length (m)	1090															1300														
Elevation (m)	21.19	21.27	21.29	21.45	21.88	21.15	20.34	19.45	18.61	17.88	17.03	16.45	16.45	16.42	16.38	16.00	14.25	11.22	7.24	3.95	2.56	2.80	3.08	3.38	3.83	4.75	4.60	4.60		
Grand Surface																														
Earth Covering (m)	1.44	1.73	2.05	2.51	3.24	2.81	2.30	1.74	1.20	1.75	1.54	1.20	1.32	1.36	1.44	1.31	3.98	4.93	4.24	2.34	1.20	1.69	2.20	2.75	3.45	4.62	4.72	4.79		
Sewer Invert Elevation (m)	19.098	18.888	18.588	18.288	17.988	17.688	17.388	17.088	16.788	16.488	16.188	15.888	15.588	15.288	14.988	14.688	14.388	14.088	13.788	13.488	13.188	12.888	12.588	12.288	11.988	11.688	11.388	11.088	10.788	
Total Length (m)	1830	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2880	2920	2950	3000	3100	3200	3300	3400	3500	3600	3700	3790	3890	3990	4090	4190	4220		





32	37		

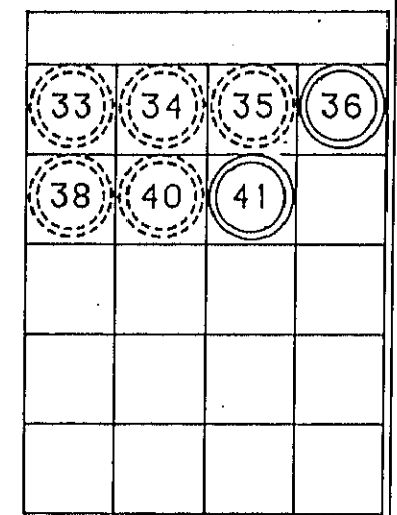
Sewer Number	32										37													
Diameter (mm)	Ø 200										Ø 250													
Slope (%)	F.M										F.M													
Length (m)	1080										1290													
Elevation (m)	9.38	9.38	9.26	11.40	13.66	14.50	15.62	15.09	13.69	13.18	12.42	11.30	12.44		12.37	12.98	13.31	15.14	16.13	16.20		15.88	16.45	
Grand Surface	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	
Earth Covering (m)	7.970	7.970	7.850	9.990	12.250	13.090	14.210	13.680	12.280	11.770	11.010	9.890	11.030		10.910	11.520	11.850	13.680	14.670	14.740		14.420	14.990	
Sewer Invert Elevation (m)	0	10	50	170	280	380	490	590	750	790	880	980	1080		1390	1480	1580	1680	1780	1890		2260	2370	
Total Length (m)																								

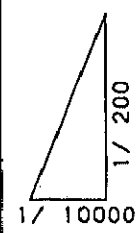


DL = -12.00

DL = -11.00

Sewer Number	33	34	35	36	38	40	41	42																				
Diameter (mm)	250	250	250	200	250	250	250	700																				
Slope (%)	4.35	3.30	5.00	F.M	4.00	13.00	F.M	2.50																				
Length (m)	170	200	60	320	460	20	640	14.380																				
Elevation (m) Grand Surface	13.70	11.90	13.16	12.19	12.66	12.66	12.63	12.58	12.57	12.54	12.34	12.00	12.44	13.54	14.25	14.42	11.18	10.95	10.95	10.95	10.61	11.57	14.74	14.93	16.45			
Earth Covering (m)	2.72	1.66	3.27	2.55	3.27	3.22	1.20	1.20	1.20	1.20	1.20	1.20	1.20	2.08	3.91	4.12	1.54	1.35	1.61	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	
Sewer Invert Elevation (m)	10.700	9.960	9.610	9.360	9.110	9.050	11.220	11.170	11.160	11.130	10.930	10.930	10.590	11.030	11.180	10.060	10.020	9.360	9.320	9.060	9.990	9.490	9.150	9.150	10.110	13.280	13.470	14.990
Total Length (m)	0	170	280	370	420	430	450	480	490	510	640	670	750	0	110	170	420	460	480	490	530	570	820	950	1120			





14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00

2.28m
1.63m

40
250
13.00
9.320

DL = -12.00

Sewer Number

39

Diameter (mm)
Slope (%)
Length (m)

250
25.70
80

Elevation (m)
Grand Surface

13.66
10.95

Earth Covering (m)

2.00
1.35

Sewer Invert Elevation (m)

11.380
9.320

Total Length (m)

0
80

39			