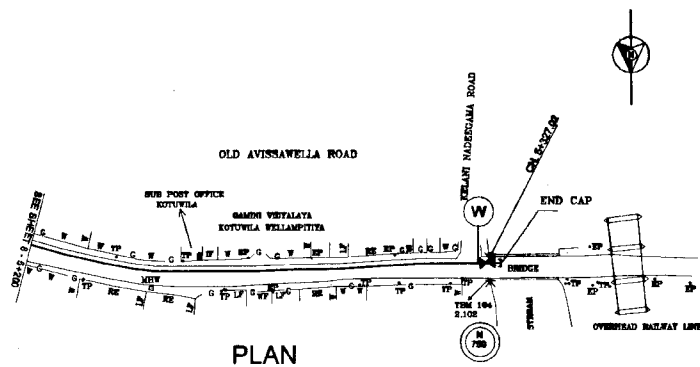


GROUND LEVEL (m)	2.31	2.28	2.19	2.28	2.48	1.90
INVERT LEVELS (m)	0.82	0.80	0.78	0.76	0.74	0.73
PIPE DETAILS	160 PVC (TYPE 1000)					
DISTANCE (m)	5200	5225	5250	5275	5300	5325
REMARKS	TYPE C BEDDING					
HORIZONTAL ANGLE (°)						

LONGITUDINAL SECTION




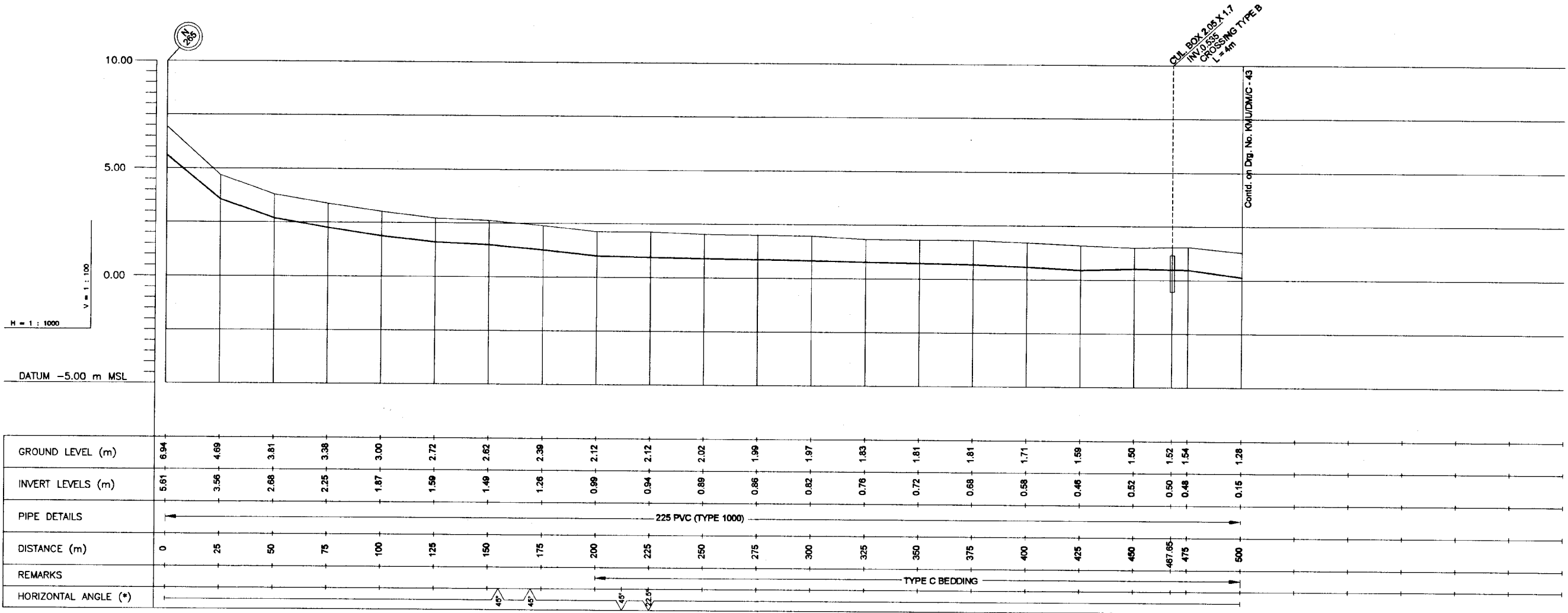
PLAN

NOTE

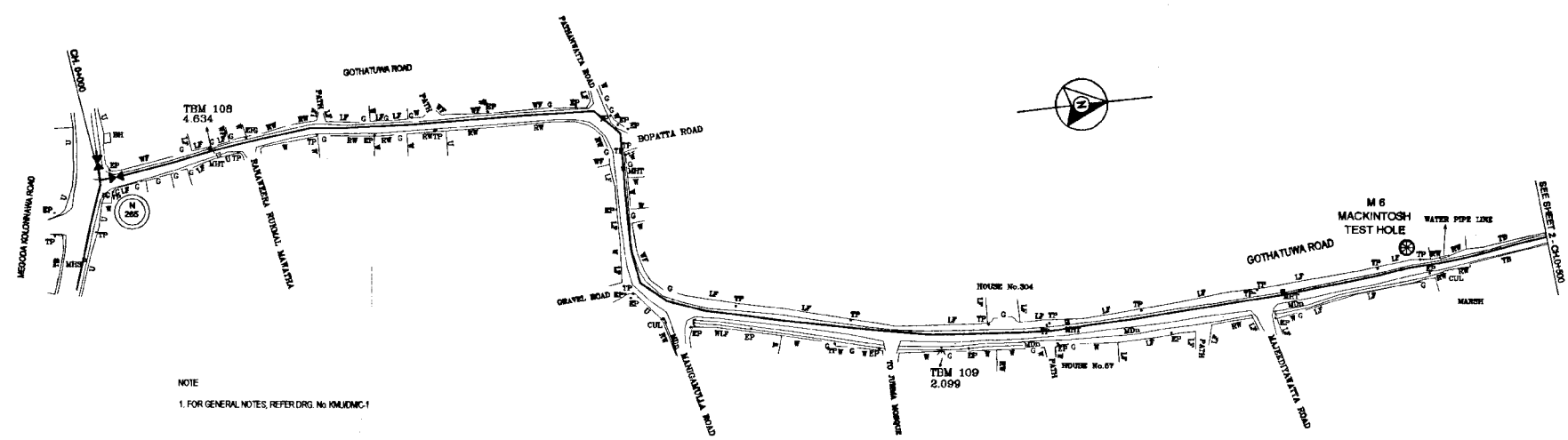
- FOR GENERAL NOTES, REFER DRG No. KMU/DM/C-1
1. 20 TRANSMISSION MAIN (Ø 150), 800mm Ø ELITE HOUSE TRANSMISSION MAIN SMALL DIAMETER PVC DISTRIBUTION PIPES, TELECOMMUNICATION CABLES AND OIL PIPE LINES ALREADY EXIST ON OLD AVISSAWELLA ROAD.
- CONTRACTOR SHALL REFER DRAWINGS G-OP & DRP-04 TO G-OP & DRP-027 OF ELITE HOUSE WATER SUPPLY AUGMENTATION PROJECT FOR DETAILS OF 800mm DIA. Ø ELITE HOUSE TRANSMISSION MAIN & THE LOCATION OF PIPE LINES.

DO NOT SCALE

 <p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM</p> <p>NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>	SUB PROJECT: KOTIKAWATTA MULLERYAWA TITLE: OLD AVISSAWELLA ROAD		SHEET 9 OF 9 <b>JAN 2001</b>
	DESIGNED: <i>[Signature]</i>	DRAWN: <i>[Signature]</i>	DATE: <b>JAN 2001</b>
	CHECKED: <i>[Signature]</i>	PAI (NWS&D) NUMBER: <i>[Signature]</i>	CONTRACT NO: <b>NRW/CW</b>
	DV. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	A.O.M (PAI) NUMBER: <b>R.D.A. 3</b> D.O.M (PAI) NUMBER: <i>[Signature]</i>	DRG. NO: <b>KMU/DM/C-41</b>




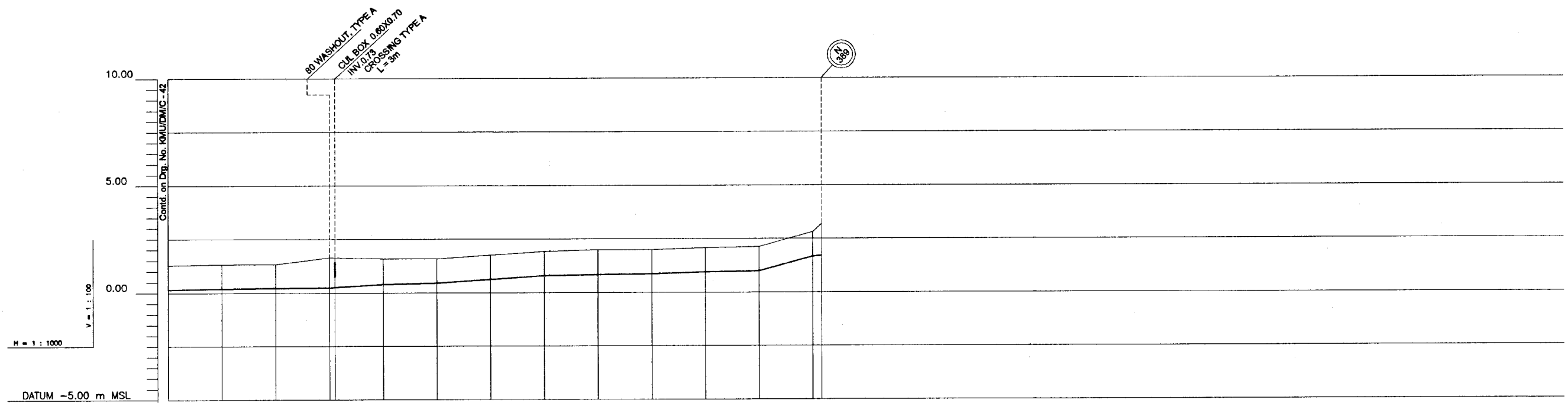
LONGITUDINAL SECTION



PLAN

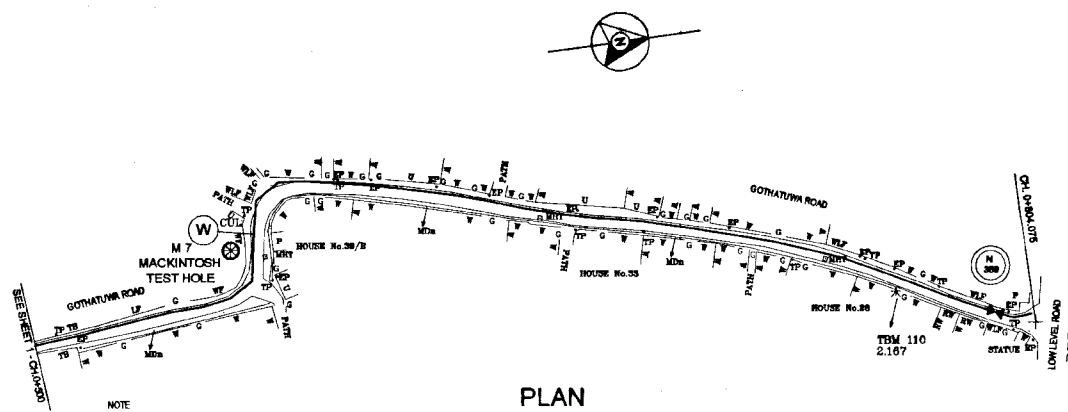
NOTE  
1. FOR GENERAL NOTES, REFER DRG. No. KMJ/DM/C-1

 <b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA		SUB PROJECT: <b>KOTIKAWATTA          MULLERYAWA</b>	TITLE: <b>GOTHAUWA ROAD</b>	
<b>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)</b> STUDY TEAM NIHON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN		DESIGNED: <i>W.A.S.</i> CHECKED: <i>W.A.S.</i> D.V. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	DRAWN: <i>[Signature]</i> P.W. DRAWINGS INCHARGE: <i>[Signature]</i> A.S.M. (P.W.) INCHARGE: <i>[Signature]</i> D.S.M. (P.W.) INCHARGE: <i>[Signature]</i>	DATE: <b>JAN 2001</b> CONTRACT NO.: <b>NRW / CW</b> DRG. No.: <b>KMU / DM / C - 42</b>



GROUND LEVEL (m)	1.28	1.33	1.33	1.64	1.59	1.59	1.75	1.92	1.99	1.99	2.07	2.12	2.80	3.19	
INVERT LEVELS (m)	0.15	0.20	0.22	0.24	0.40	0.45	0.62	0.79	0.83	0.86	0.94	0.99	1.67	1.70	
PIPE DETAILS	225 PVC (TYPE 1000)														
DISTANCE (m)	500	525	550	577.82	600	625	660	675	700	725	750	775	800	804.07	825
REMARKS	TYPE C BEDDING														
HORIZONTAL ANGLE (°)															

LONGITUDINAL SECTION

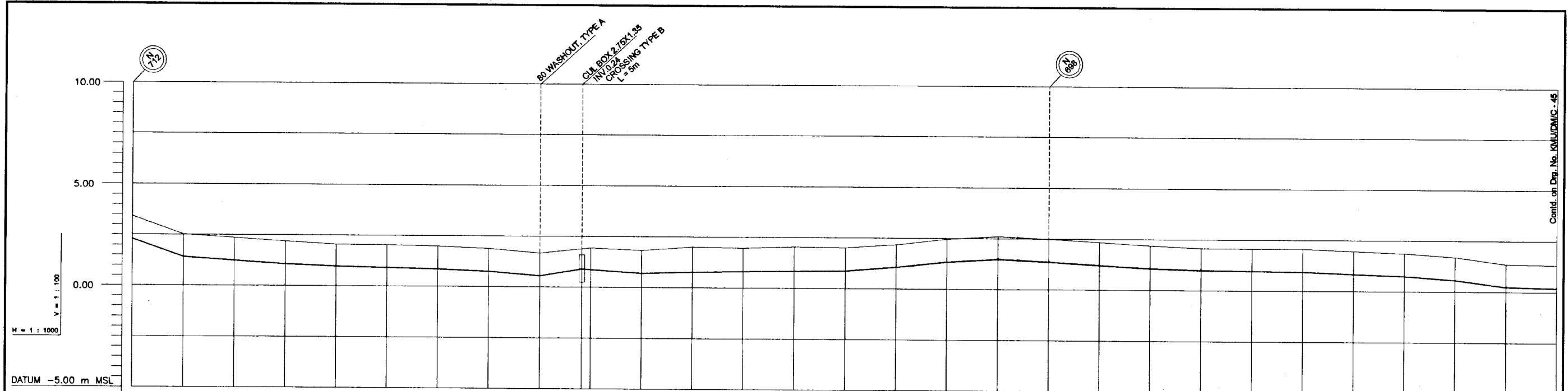


PLAN

DO NOT SCALE

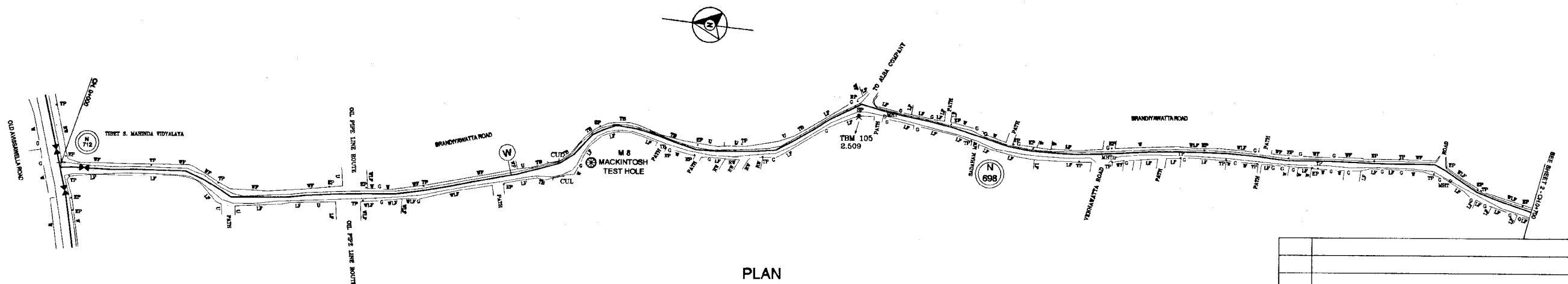
<p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM</p> <p>NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>	SUB PROJECT: KOTIKAWATTA MULLERIYAWA		TITLE: GOTHATUWA ROAD	
	DESIGNED: <i>[Signature]</i>		DATE: JAN 2001	
	CHECKED: <i>[Signature]</i>		CONTRACT No: NRW / CW	
	DT. TEAM LEADER: <i>[Signature]</i>		DIR. No: KMU / DM / C - 43	

Contd. on Dwg. No. KMU/DM/C-45



GROUND LEVEL (m)	3.42	2.52	2.37	2.20	2.06	2.04	1.99	1.88	1.68	1.89	1.93	1.83	2.02	1.97	2.03	2.00	2.19	2.46	2.60	2.49	2.34	2.20	2.09	2.06	2.07	1.97	1.88	1.70	1.37	1.32			
INVERT LEVELS (m)	2.29	1.40	1.24	1.07	0.97	0.91	0.86	0.75	0.55	0.90	1.93	0.70	0.77	0.81	0.84	0.87	1.06	1.33	1.47	1.38	1.21	1.07	1.00	0.97	0.94	0.84	0.75	0.57	0.24	0.19			
PIPE DETAILS	225 PVC (TYPE 1000)																																
DISTANCE (m)	0	25	50	75	100	125	150	175	200	220.71	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700			
REMARKS	TYPE C BEDDING											TYPE C BEDDING																					
HORIZONTAL ANGLE(°)			22.5°		45°					22.5°	22.5°	22.5°	1.25°		22.5°		45°												22.5°				


LONGITUDINAL SECTION

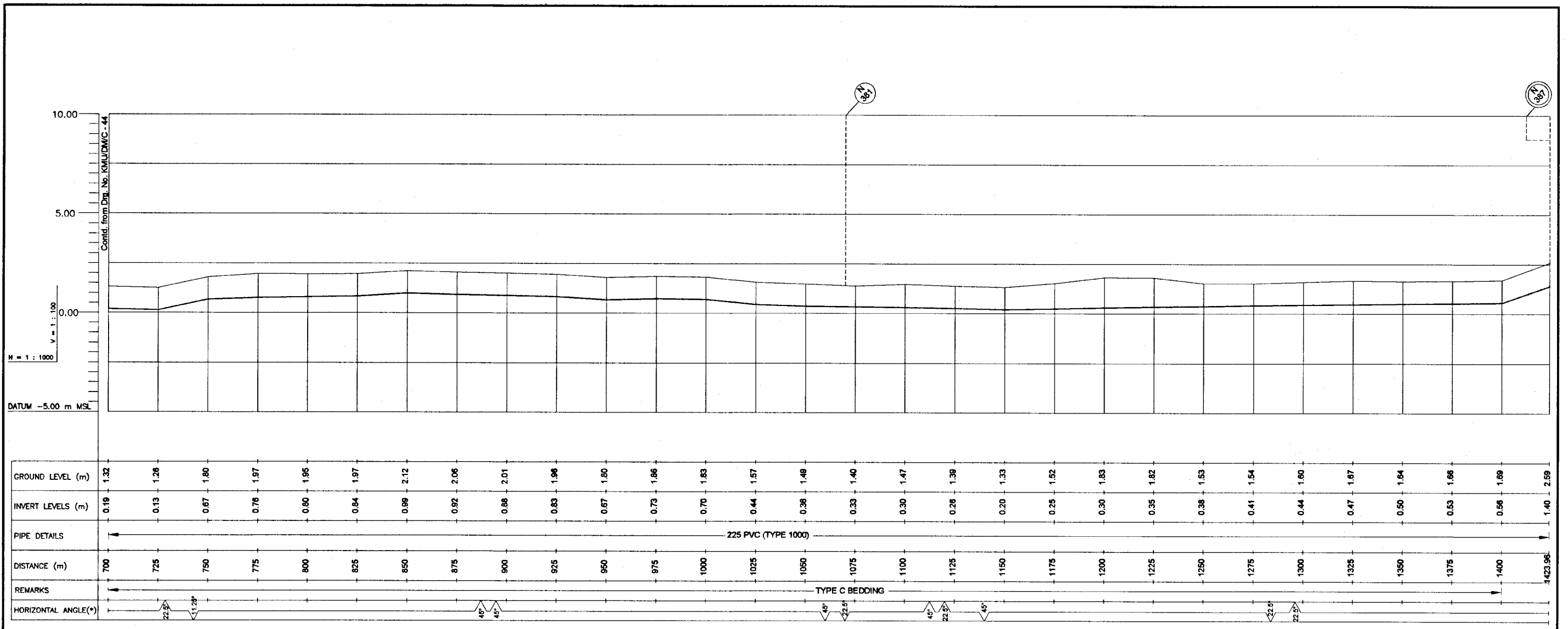


PLAN

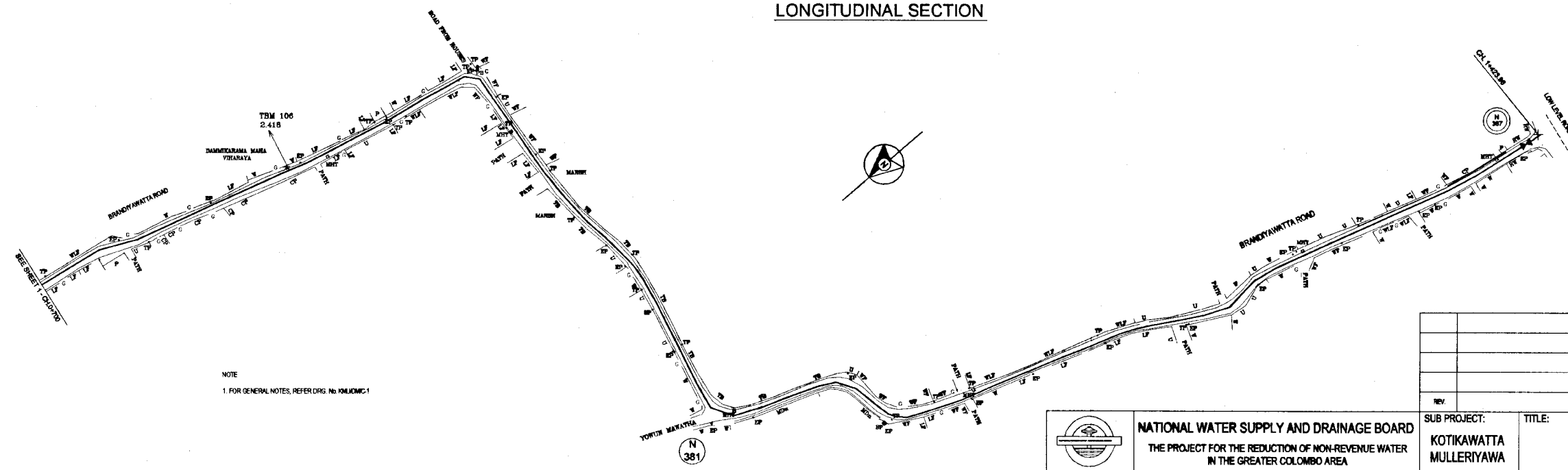
NOTE  
1. FOR GENERAL NOTES, REFER DRG. No. KMU/DM/C-1

**DO NOT SCALE**

 <b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: <b>KOTIKAWATTA          MULLERIYAWA</b>	TITLE: <b>BRANDIYAWATTA ROAD</b>
	SHEET 1 OF 2	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM NIHON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN	DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> CIV. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	DRAWN: <i>[Signature]</i> PAI (NEWS&PS) INCHG: <i>[Signature]</i> A.S.M (P&D) INCHG: <i>[Signature]</i> D.O.M (P&D) INCHG: <i>[Signature]</i>
	DATE: <b>JAN 2001</b> CONTRACT: <b>NRW / CW</b> DRG. NO.: <b>KMU / DM / C - 44</b>	




LONGITUDINAL SECTION



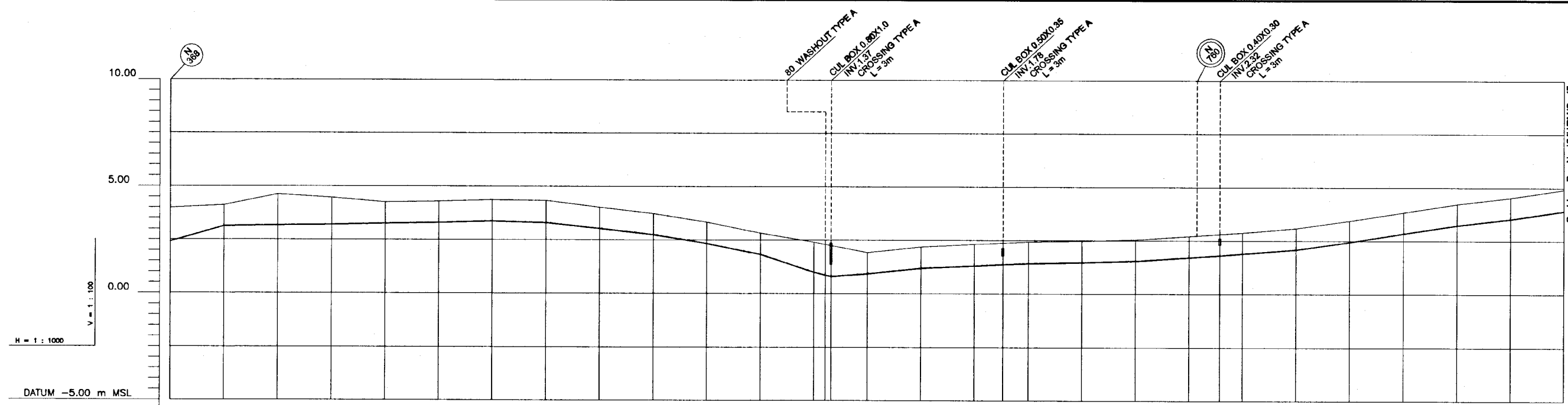
PLAN

NOTE  
1. FOR GENERAL NOTES, REFER DRG. No. KWJ/DM/C-1

DO NOT SCALE

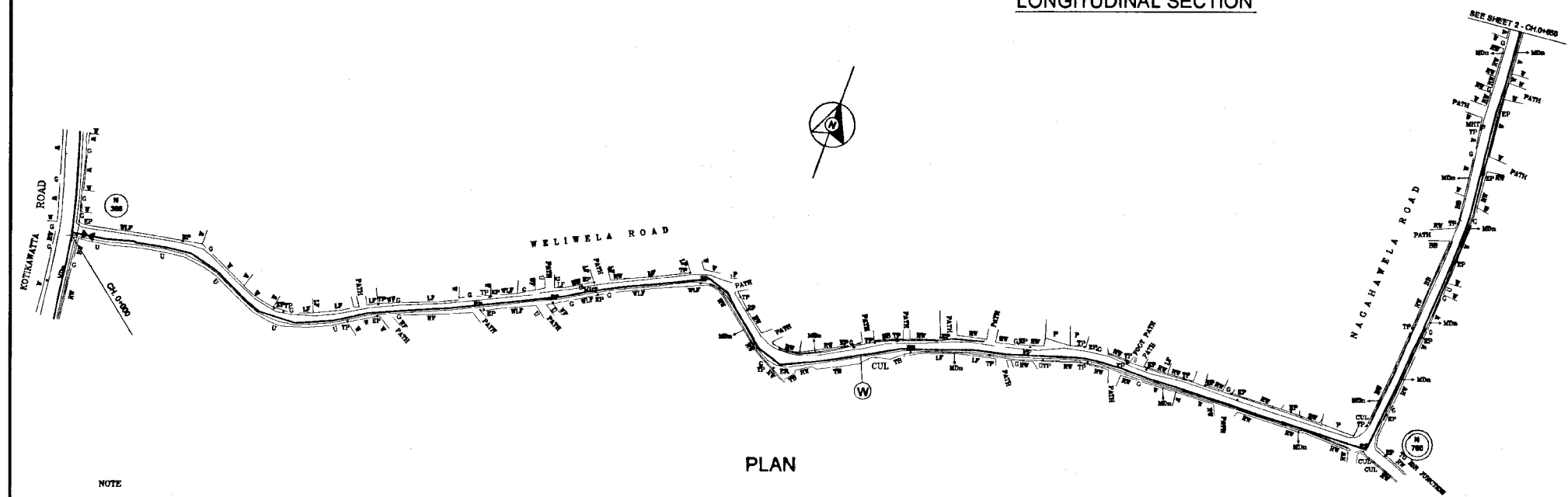
 <b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: <b>KOTIKAWATTA          MULLERIYAWA</b>	TITLE: <b>BRANDIYAWATTA ROAD</b>
	SHEET 2 OF 2 <b>JAN 2001</b>	
DESIGNED: <i>soseika</i>	DRAWN: <i>soseika</i>	DATE: <b>JAN 2001</b>
CHECKED: <i>soseika</i>	PM (NINON SUDO): <i>[Signature]</i>	CONTRACTOR: <b>NRW / CW</b>
DT. TEAM LEADER: <i>[Signature]</i>	A.G.M (PW) NUMBER: <b>R.D.R. J.</b>	DRG. NO.: <b>KWJ/DM/C-45</b>
TEAM LEADER: <i>[Signature]</i>	D.G.M (PW) NUMBER: <b>[Signature]</b>	

Contd. on Drg. No. KMUDM/C-47



GROUND LEVEL (m)	3.98	4.12	4.62	4.47	4.25	4.30	4.37	4.34	4.02	3.74	3.33	2.83	2.40	2.26	1.93	2.19	2.31	2.38	2.44	2.47	2.54	2.71	2.81	2.89	3.09	3.45	3.85	4.24	4.53	4.91			
INVERT LEVELS (m)	2.40	3.12	3.16	3.20	3.25	3.30	3.37	3.30	3.02	2.74	2.33	1.83	1.00	0.80	0.93	1.19	1.31	1.38	1.42	1.47	1.54	1.71	1.81	1.89	2.09	2.45	2.85	3.24	3.53	3.91			
PIPE DETAILS	110 PVC (TYPE 1000)																																
DISTANCE (m)	0	25	50	75	100	125	150	175	200	225	250	275	300	308.02	325	350	375	388.25	400	425	450	475	489.35	500	525	550	575	600	625	650			
REMARKS	TYPE C BEDDING																																
HORIZONTAL ANGLE (*)		22.5	22.5	22.5						45	22.5	45											90										


LONGITUDINAL SECTION

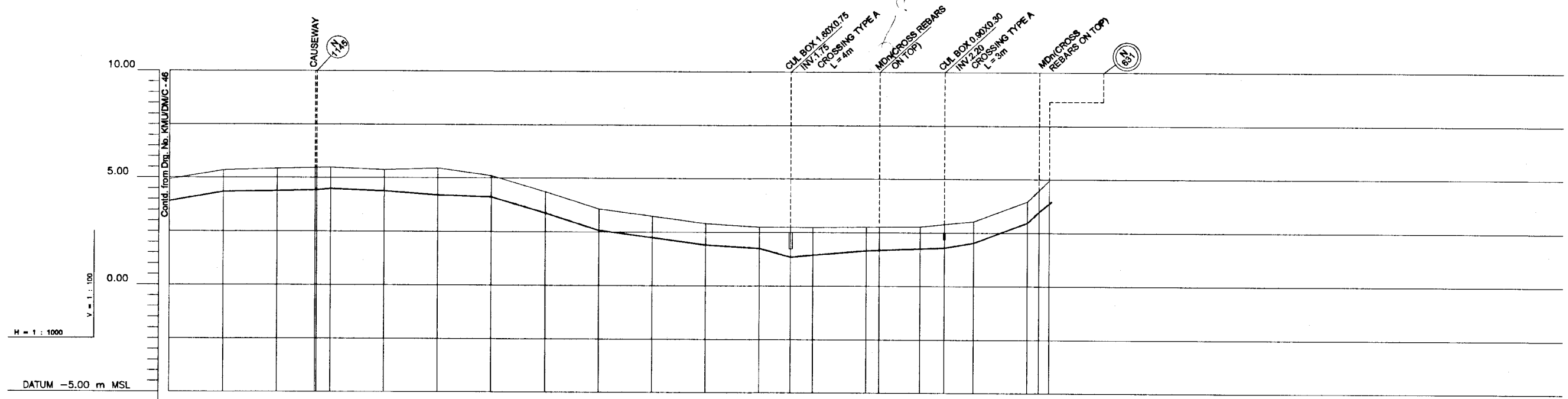


PLAN

NOTE  
1. FOR GENERAL NOTES, REFER DRG. No. KMU/DM/C-1

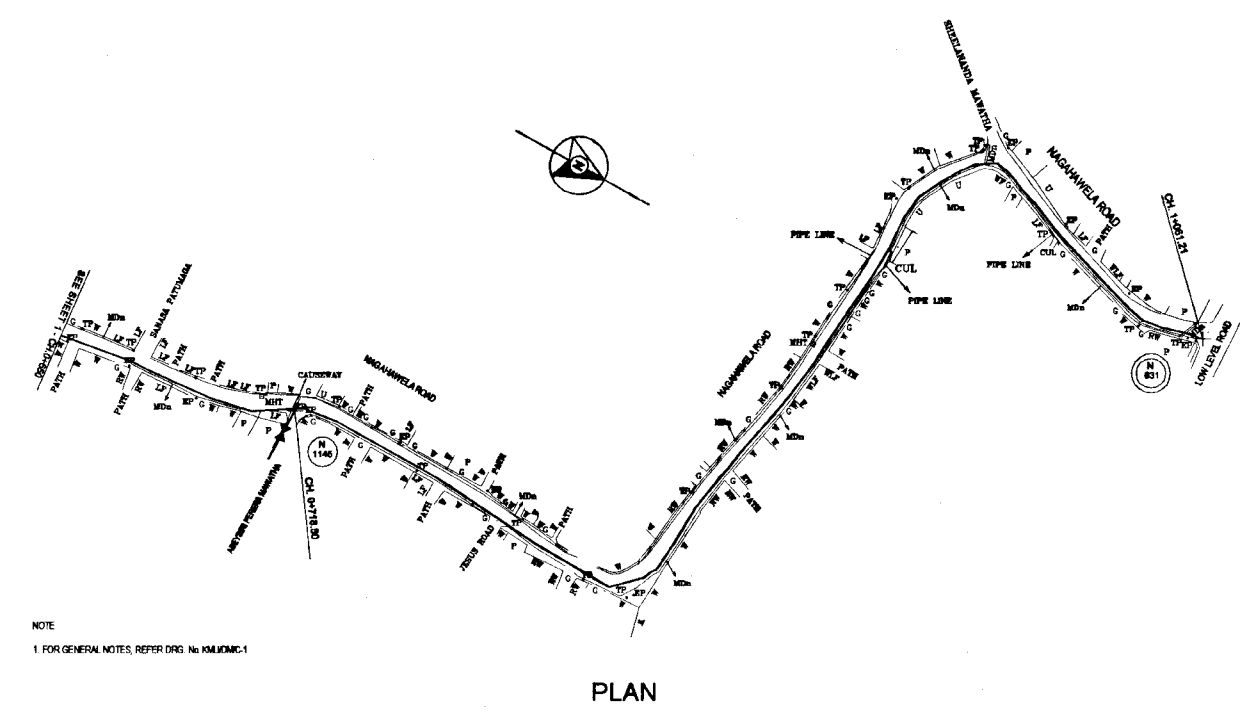
DO NOT SCALE

 <b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: <b>KOTIKAWATTA          MULLERIYAWA</b>	TITLE: <b>WELIWELA ROAD AND NAGAHAWELA ROAD</b>
	SHEET 1 OF 2	
DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> CIV. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	DRAWN: <i>[Signature]</i> P.E. (BY/WORKS) NUMBER: <i>[Signature]</i> A.S.M. (P.W.) NUMBER: <i>[Signature]</i> D.S.M. (P.W.) NUMBER: <i>[Signature]</i>	DATE: <b>JAN 2001</b> CONTRACT NO: <b>NRW / CW</b> DRG. No: <b>KMU / DM / C - 46</b>



GROUND LEVEL (m)	4.91	5.34	5.42	5.48	5.48	5.38	5.46	5.11	4.38	3.98	3.25	2.92	2.76	2.75	2.74	2.78	2.77	2.78	2.90	3.04	3.98	4.50	4.96	
INVERT LEVELS (m)	3.91	4.34	4.38	4.42	4.46	4.38	4.20	4.11	3.38	2.58	2.25	1.92	1.76	1.35	1.45	1.88	1.78	1.80	2.04	2.98	3.50	3.96		
PIPE DETAILS	110 PVC (TYPE 1000)																							
DISTANCE (m)	650	675	700	716.55	725	750	775	800	825	850	875	900	925	939.55	950	975	990.97	1000	1011.38	1025	1050	1055.41	1061.21	1075
REMARKS																								
HORIZONTAL ANGLE (*)			22.5°	22.5°			45°	45°				22.5°	22.5°	45°				22.5°						

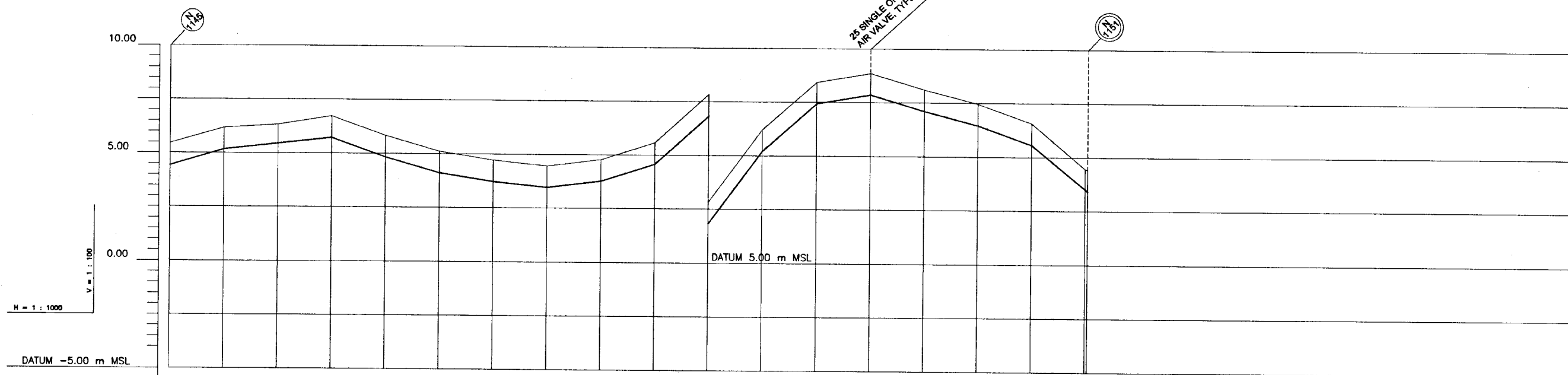
LONGITUDINAL SECTION



PLAN

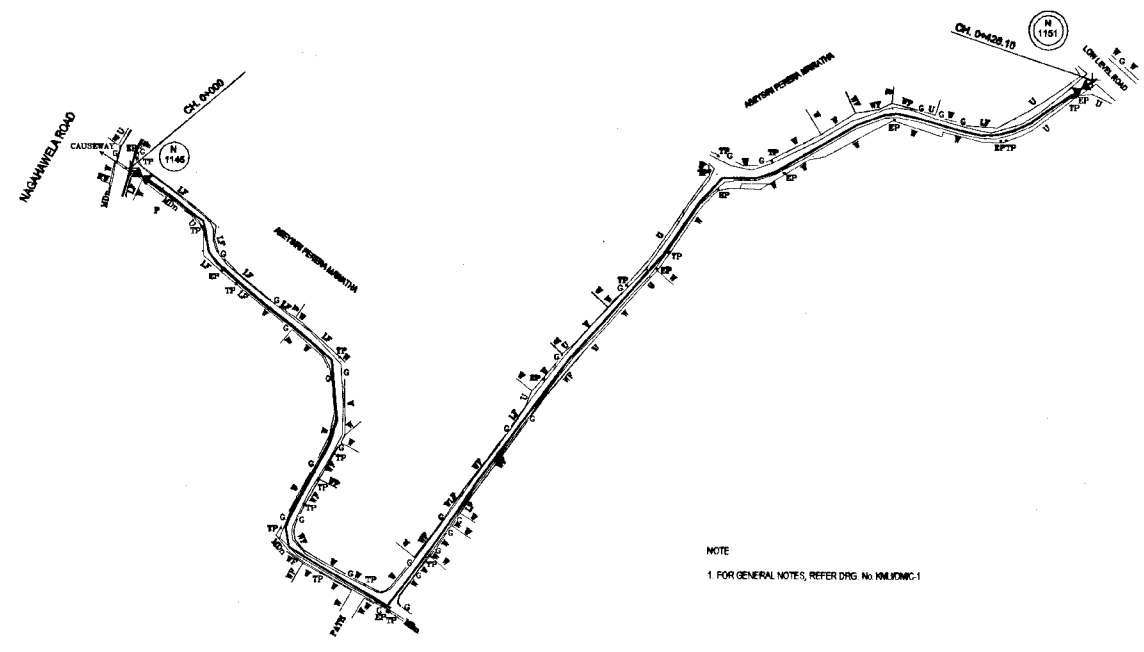
DO NOT SCALE

<p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	<p>SUB PROJECT: KOTIKAWATTA MULLERIYAWA</p>	<p>TITLE: WELWELA ROAD AND NAGAHAWELA ROAD</p>
	<p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM</p>	<p>DESIGNED: <i>W. S. S. S.</i> CHECKED: <i>W. S. S. S.</i> DY. TEAM LEADER: <i>W. S. S. S.</i> TEAM LEADER: <i>W. S. S. S.</i></p>



GROUND LEVEL (m)	5.46	6.17	6.32	6.72	5.83	5.11	4.72	4.47	4.78	5.58	7.83	11.22	13.43	13.86	13.11	12.46	11.57	8.42
INVERT LEVELS (m)	4.42	5.17	5.32	5.72	4.83	4.11	3.72	3.47	3.78	4.58	6.83	10.22	12.43	12.86	12.11	11.46	10.57	8.42
PIPE DETAILS	110 PVC (TYPE 1000)																	
DISTANCE (m)	0	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425
REMARKS																		
HORIZONTAL ANGLE (°)	22.5°	45°	45°	45°	22.5°	45°	45°	90°	45°	22.5°	45°	22.5°	45°	22.5°	45°	22.5°	22.5°	


LONGITUDINAL SECTION



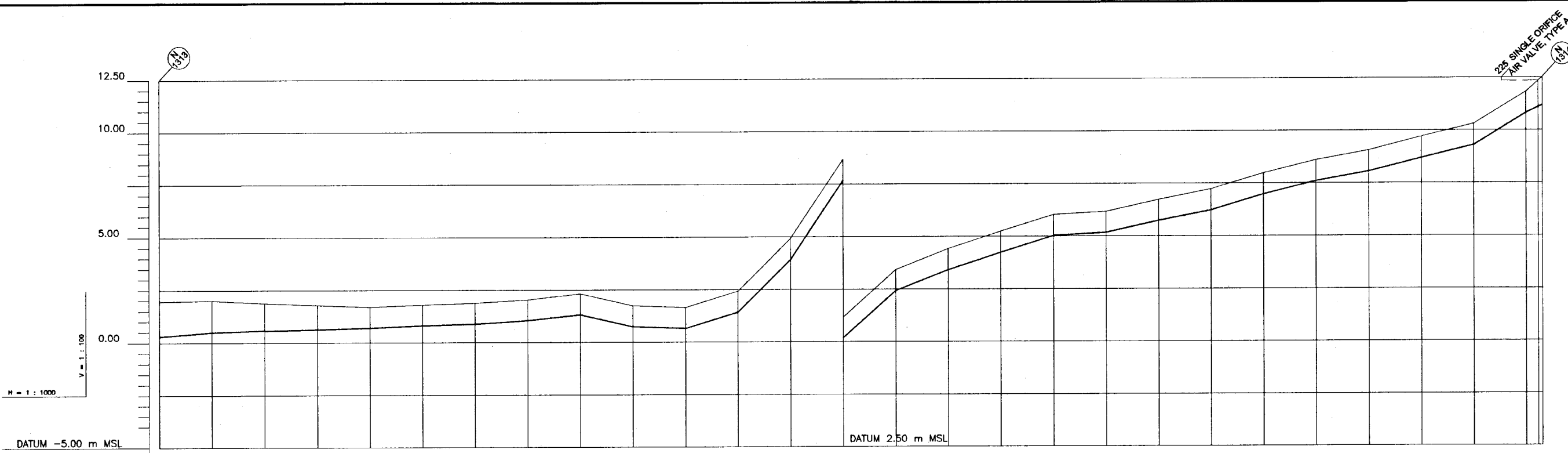
PLAN

NOTE  
1 FOR GENERAL NOTES, REFER DRG. NO. KMJ/DM/C-1

DO NOT SCALE

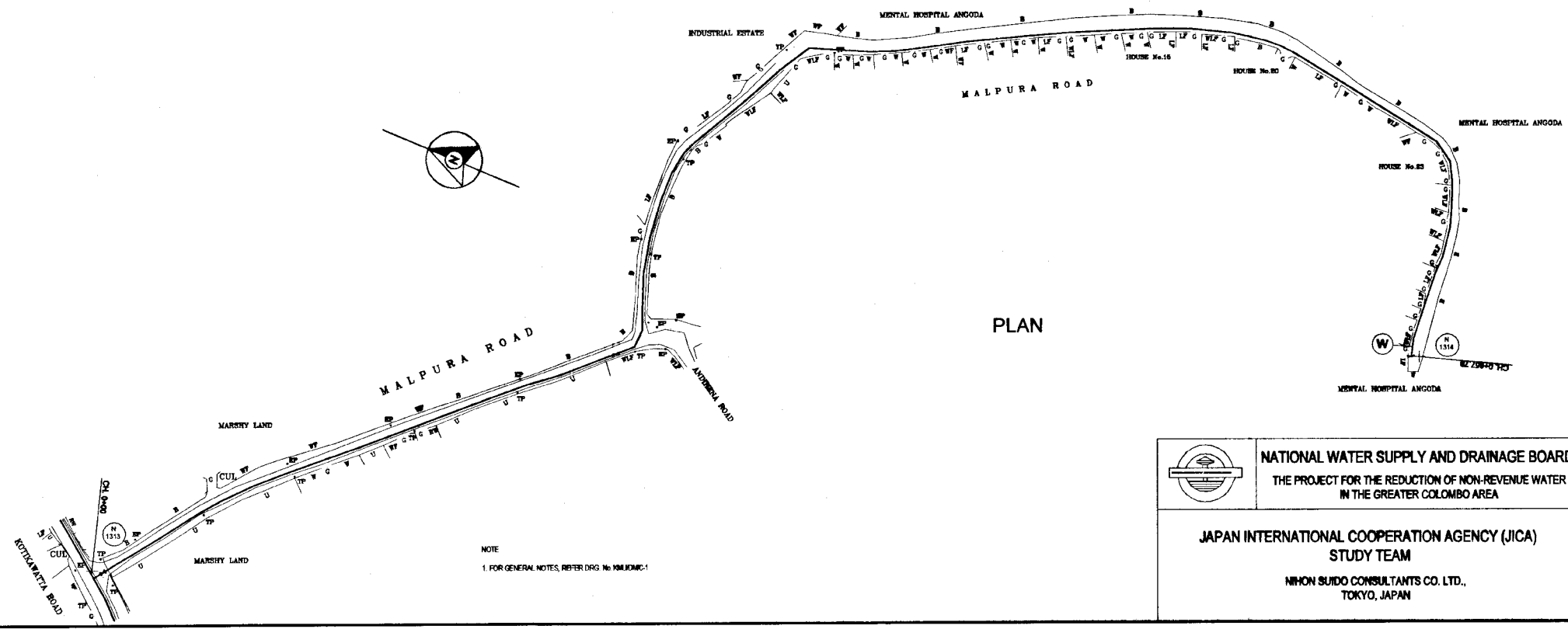
 NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: <b>KOTIKAWATTA          MULLERIYAWA</b>	TITLE: <b>ABEYSIRI PERERA MAWATHA</b>
	DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> DIV. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	DRAWN: <i>[Signature]</i> P.W. (PWS&P) INCHARGE: <i>[Signature]</i> A.B.M (P.W.) INCHARGE: <i>[Signature]</i> D.O.M (P.W.) INCHARGE: <i>[Signature]</i>





GROUND LEVEL (m)	1.96	2.00	1.87	1.77	1.69	1.80	1.88	2.04	2.31	1.74	1.65	2.43	4.93	8.68	10.93	11.91	12.73	13.53	13.86	14.23	14.73	15.49	16.11	16.56	17.20	17.80	18.32	19.32	20.03			
INVERT LEVELS (m)	0.30	0.50	0.58	0.62	0.69	0.80	0.88	1.04	1.31	0.74	0.65	1.43	3.93	7.68	9.93	10.91	11.73	12.53	12.86	13.23	13.73	14.49	15.11	15.56	16.20	16.80	17.32	18.70	19.32			
PIPE DETAILS	110 PVC (TYPE 1000)																															
DISTANCE (m)	0	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	657.7				
REMARKS	TYPE C BEDDING																															
HORIZONTAL ANGLE (°)																22.5																

LONGITUDINAL SECTION

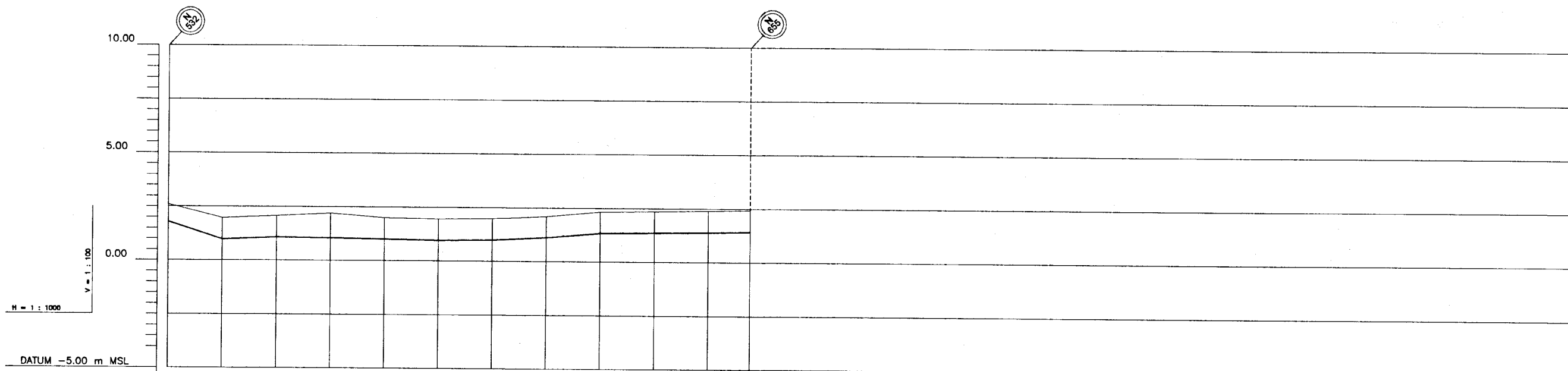


PLAN

DO NOT SCALE

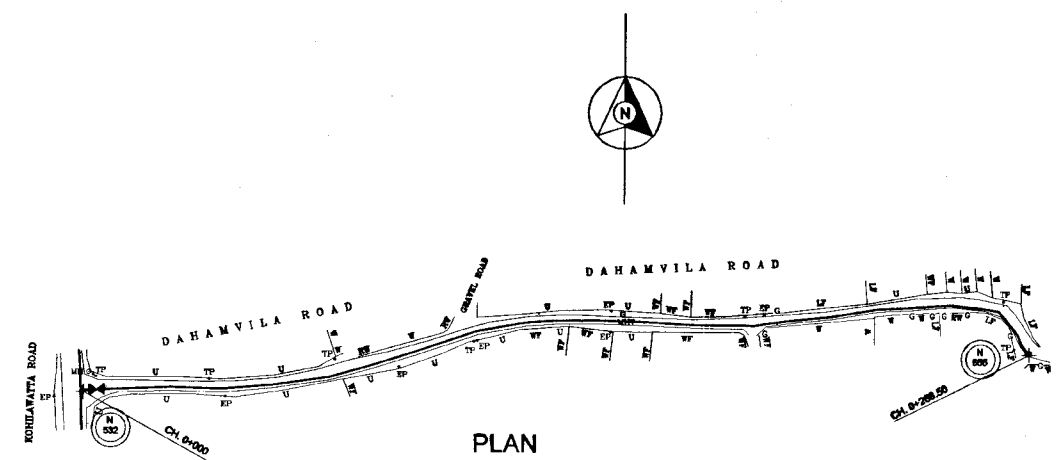
<p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	<p>SUB PROJECT: KOTIKAWATTA MULLERIYAWA</p>	<p>TITLE: MALPURA ROAD</p>
	<p>DESIGNED: <i>[Signature]</i></p>	<p>DATE: <b>JAN 2001</b></p>
<p>CHECKED: <i>[Signature]</i></p>	<p>CONTRACT NO: <b>NRW/CW</b></p>	
<p>DR. TEAM LEADER: <i>[Signature]</i></p>	<p>D.G.M (P&amp;I) MNRD: <i>[Signature]</i></p>	<p>DRAWN BY: <i>[Signature]</i></p>
<p>TEAM LEADER: <i>[Signature]</i></p>	<p>D.G.M (P&amp;I) MNRD: <i>[Signature]</i></p>	<p>DATE: <b>JAN 2001</b></p>
<p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM NIHON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>		<p>KMU/DM/C-49</p>

NOTE  
1. FOR GENERAL NOTES, REFER TO: No. KM/JM/C-1



GROUND LEVEL (m)	2.67	1.98	2.08	2.20	2.00	1.97	1.98	2.11	2.33	2.36	2.40	2.42
INVERT LEVELS (m)	1.79	0.98	1.08	1.04	1.00	0.98	0.98	1.11	1.33	1.38	1.38	1.42
PIPE DETAILS	110 pvc (type 1000)											
DISTANCE (m)	0	25	50	75	100	125	150	175	200	225	250	269.5
REMARKS	TYPE C BEDDING											
HORIZONTAL ANGLE (°)	45° 22.5'											


LONGITUDINAL SECTION

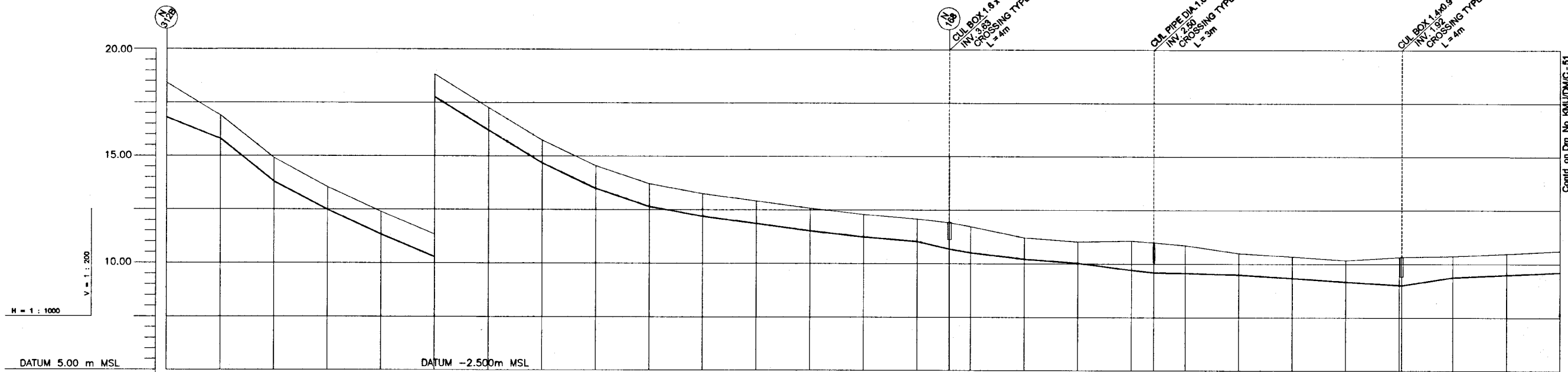


PLAN

NOTE  
1. FOR GENERAL NOTES, REFER TO: No. KMUDMC-1

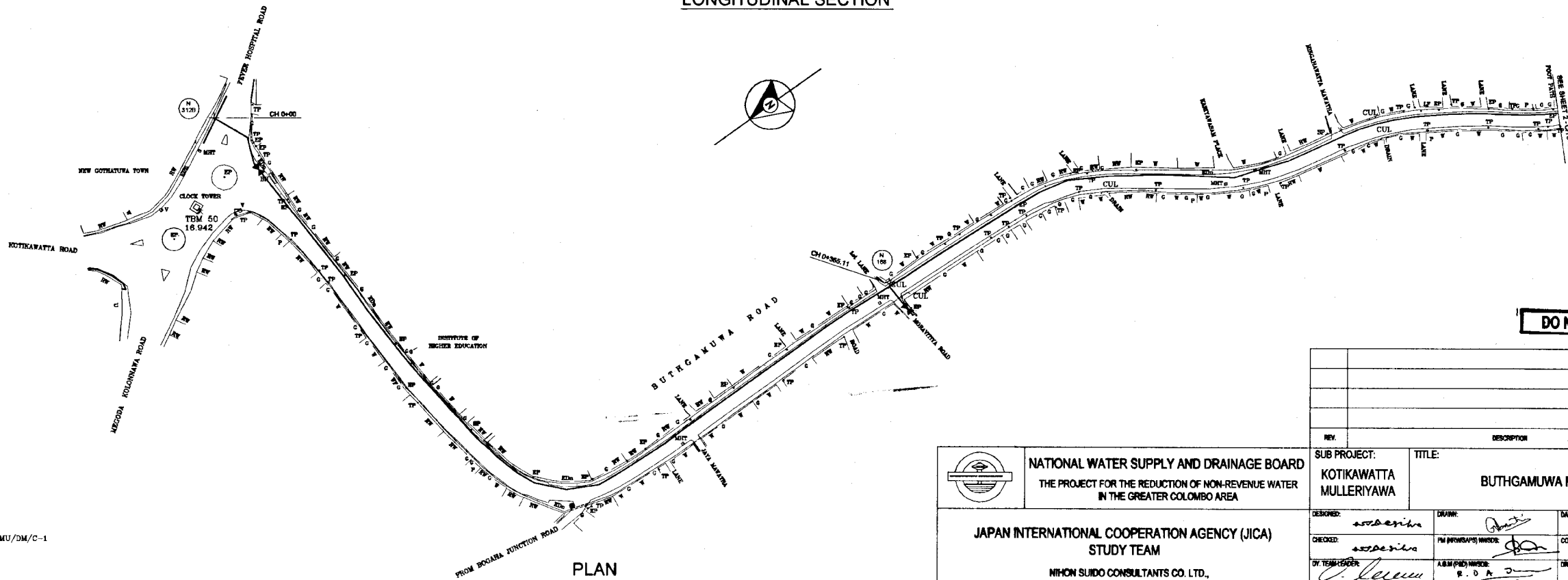
DO NOT SCALE

 NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: KOTIKAWATTA MULLERIYAWA	TITLE: DAHAMVILA ROAD
	DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> CIV. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	DATE: <b>JAN 2001</b> CONTRACT No: <b>NRW / CW</b> DRAWING No: <b>KMU / DM / C - 50</b>
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM NIPPON KAIYO CONSULTANTS CO. LTD., TOKYO, JAPAN		



GROUND LEVEL (m)	18.42	16.89	14.90	13.55	12.30	11.33	10.27	9.78	8.24	7.08	6.21	5.75	5.41	5.08	4.79	4.58	4.41	4.23	3.70	3.52	3.57	3.48	3.35	2.99	2.83	2.66	2.81	2.87	2.96	3.10			
INVERT LEVELS (m)	16.80	15.80	13.80	12.49	11.33	10.27	8.70	7.18	6.00	5.15	4.68	4.35	4.02	3.73	3.52	3.17	3.00	2.70	2.52	2.20	2.09	2.05	1.98	1.83	1.66	1.51	1.87	1.98	2.10				
PIPE DETAILS	160 PVC (TYPE 1000)															110 PVC (TYPE 1000)																	
DISTANCE (m)	0	25	50	75	100	125	150	175	200	225	250	275	300	325	350	366.99	375	400	425	450	460.44	475	500	525	550	576.07	600	625	660				
REMARKS																																	
HORIZONTAL ANGLE (°)	45	22.5																															

LONGITUDINAL SECTION



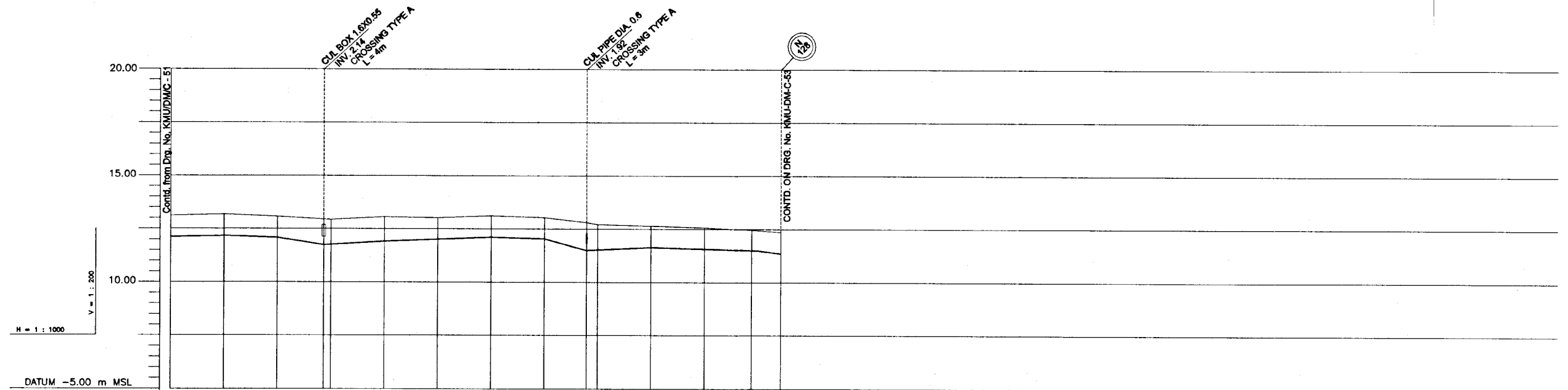
PLAN

NOTE  
1. FOR GENERAL NOTES, REFER DRG. No. KMU/DM/C-1

DO NOT SCALE

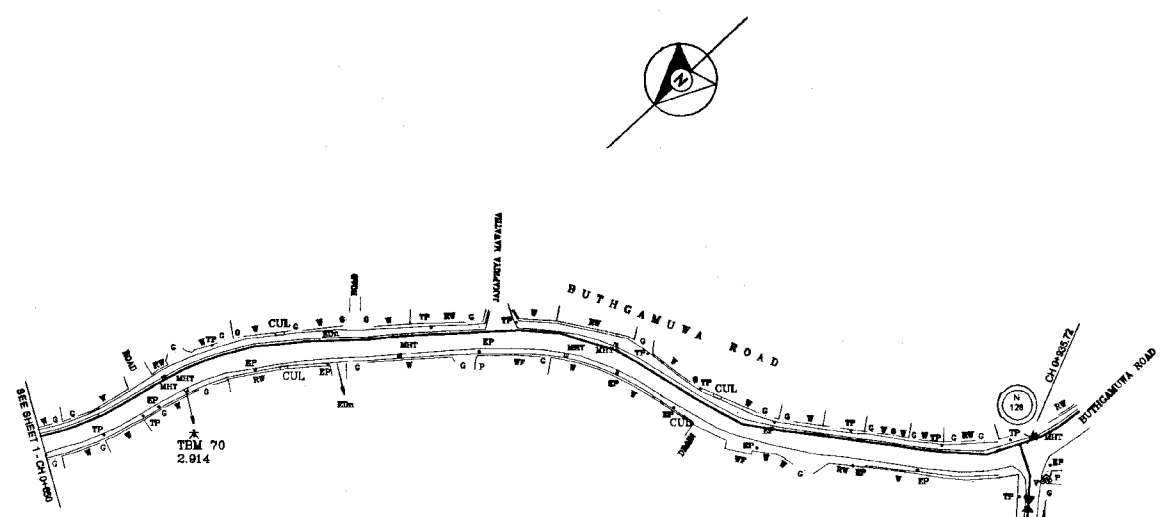
<p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	<p>SUB PROJECT: KOTIKAWATTA MULLERIYAWA</p>	<p>TITLE: BUTHGAMUWA ROAD</p>
	<p>DESIGNED: <i>aspen</i></p> <p>CHECKED: <i>aspen</i></p> <p>BY TEAM LEADER: <i>[Signature]</i></p> <p>TEAM LEADER: <i>[Signature]</i></p>	<p>DRAWN: <i>[Signature]</i></p> <p>IN CHARGE: <i>[Signature]</i></p> <p>A.S.M (PUB) NUMBER: <i>R. D. A. J.</i></p> <p>D.S.M (PUB) NUMBER: <i>[Signature]</i></p>

Contd. on Drg. No. KMUDM/C-51



GROUND LEVEL (m)	3.10	3.16	3.07	2.94	3.05	3.01	3.11	3.03	2.94	2.64	2.57	2.57	2.36		
INVERT LEVELS (m)	2.10	2.16	2.07	1.73	1.09	2.01	2.11	2.03	1.50	1.64	1.57	1.50	1.36		
PIPE DETAILS	110 PVC (TYPE 1000)														
DISTANCE (m)	650	675	700	721.68	725	760	775	800	825	844.6	850	875	900	925	935.72
REMARKS															
HORIZONTAL ANGLE (°)															


LONGITUDINAL SECTION

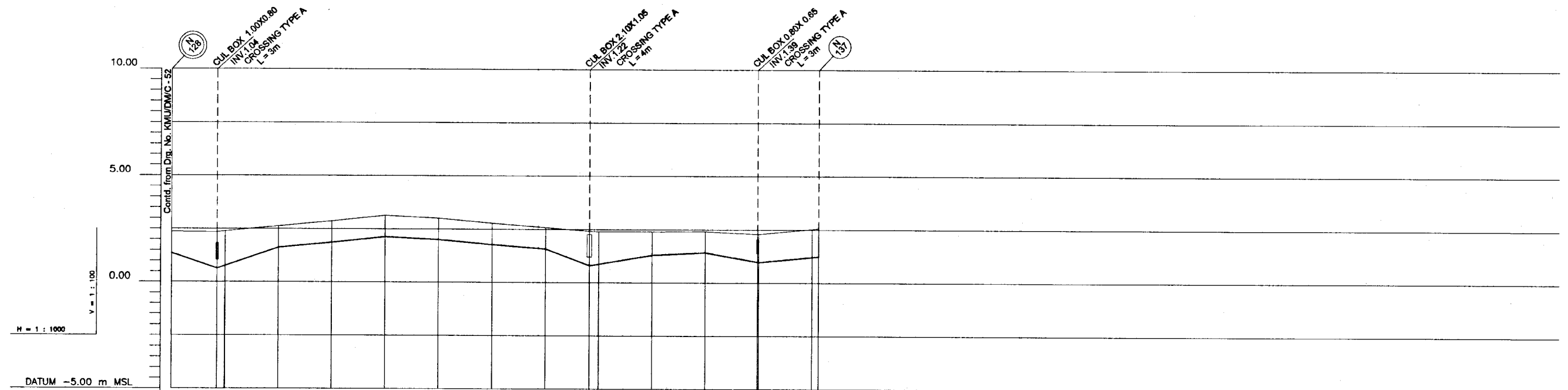


PLAN

NOTE  
1. FOR GENERAL NOTES, REFER DRG. No. KMU/DM/C-1

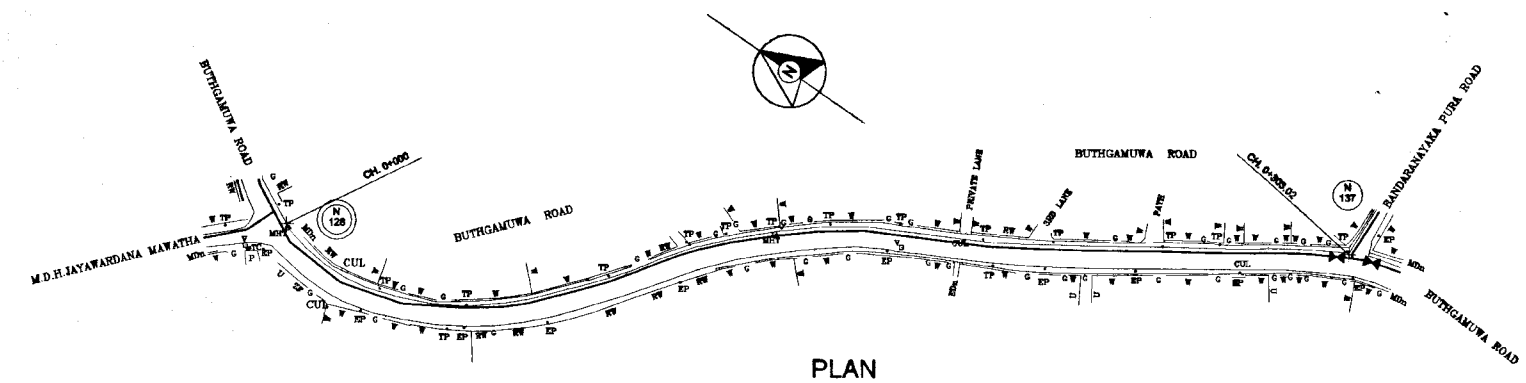
DO NOT SCALE

 NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: KOTIKAWATTA MULLERIYAWA	TITLE: BUTHGAMUWA ROAD
	SHEET 2 OF 2 <b>JAN 2001</b>	
DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> DR. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	DRAWN: <i>[Signature]</i> P.M. (PROVISION) NUMBER: <i>[Signature]</i> A.G.M. (PRO) NUMBER: <i>[Signature]</i> D.G.M. (PRO) NUMBER: <i>[Signature]</i>	CONTRACT NO.: NRW / CW DRG. No.: KMU / DM / C - 52



GROUND LEVEL (m)	2.36	2.35	2.63	2.86	3.13	3.00	2.78	2.58	2.42	2.40	2.42	2.30	2.57	
INVERT LEVELS (m)	1.36	0.63	1.63	1.86	2.13	2.00	1.78	1.58	0.80	1.30	1.42	0.86	1.24	
PIPE DETAILS	110 PVC (TYPE 1000)													
DISTANCE (m)	0	21.4	50	75	100	125	150	175	195.62	200	225	250	274.5	300.02
REMARKS	TYPE C BEDDING													
HORIZONTAL ANGLE (°)	22.8	22.8	22.8											

LONGITUDINAL SECTION



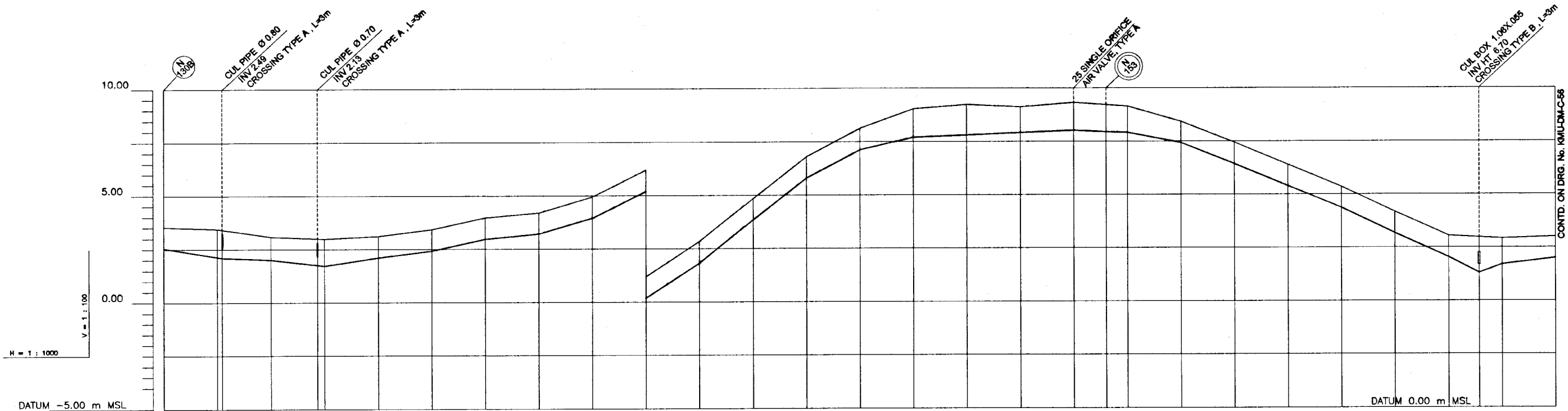
PLAN

NOTE  
1. FOR GENERAL NOTES, REFER DRG. No. KMU/DM/C-1

DO NOT SCALE

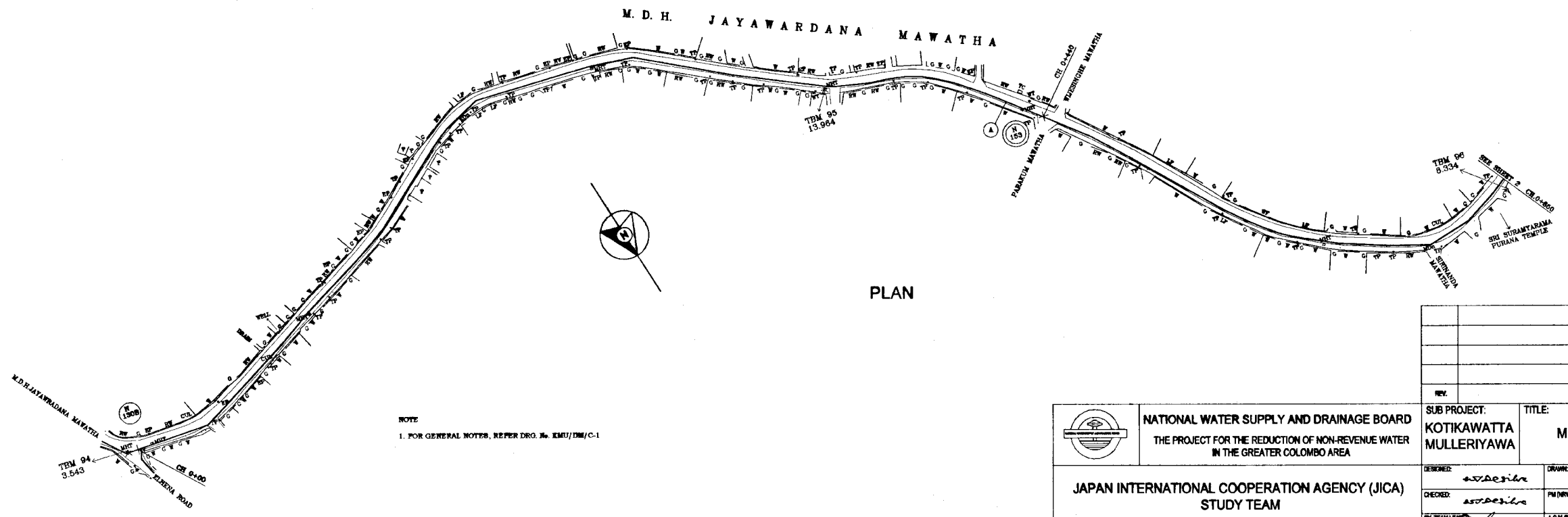
<p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	<p>SUB PROJECT: KOTIKAWATTA MULLERIYAWA</p>	<p>TITLE: BUTHGAMUWA ROAD</p>
	<p>DESIGNED: <i>[Signature]</i></p> <p>CHECKED: <i>[Signature]</i></p> <p>DT. TEAM LEADER: <i>[Signature]</i></p> <p>TEAM LEADER: <i>[Signature]</i></p>	<p>DATE: <b>JAN 2001</b></p> <p>CONTRACT No: <b>NRW / CW</b></p> <p>DRW. No: <b>KMU / DM / C - 53</b></p>





GROUND LEVEL (m)	3.57	3.41	3.07	2.98	3.11	3.42	3.97	4.20	4.94	6.20	7.83	9.84	11.80	13.12	14.02	14.22	14.10	14.30	14.20	14.13	13.42	12.44	11.39	10.38	9.16	8.04	7.97	7.91	7.99			
INVERT LEVELS (m)	2.55	2.10	2.00	1.73	2.11	2.42	2.97	3.20	3.94	5.20	6.38	8.84	10.80	12.12	12.70	12.80	12.90	13.00	12.94	12.80	12.42	11.44	10.39	9.38	8.16	7.04	6.30	6.70	6.99			
PIPE DETAILS	110mm PVC (TYPE 1000)																															
DISTANCE (m)	0	25	50	71.7	100	125	150	175	200	225	250	275	300	325	350	375	400	425	440	450	475	500	525	550	575	600	614.3	625	650			
REMARKS																																
HORIZONTAL ANGLE (°)	22.5°																															

LONGITUDINAL SECTION

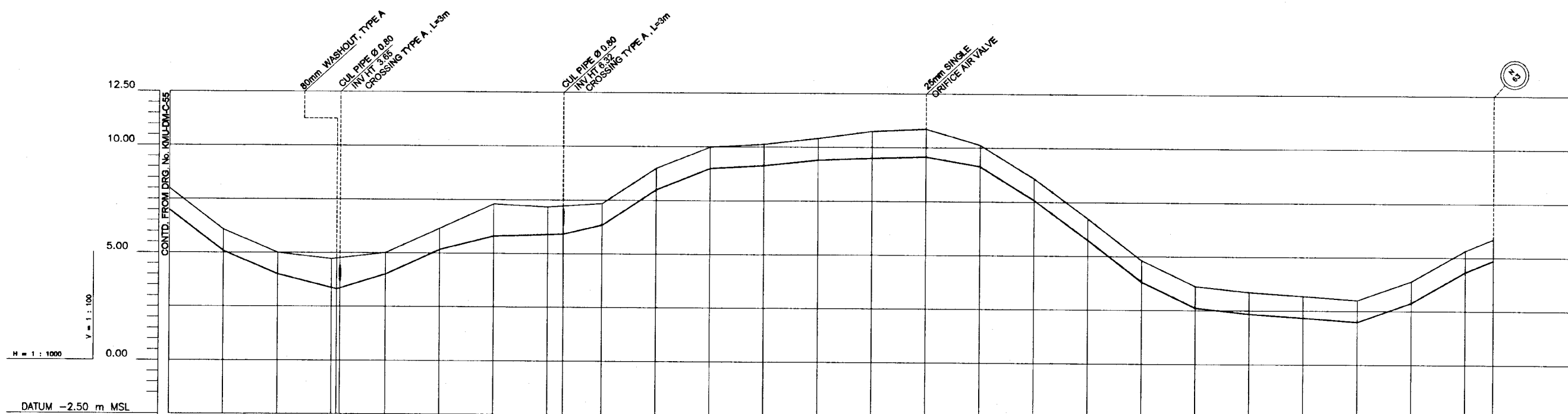


PLAN

DO NOT SCALE

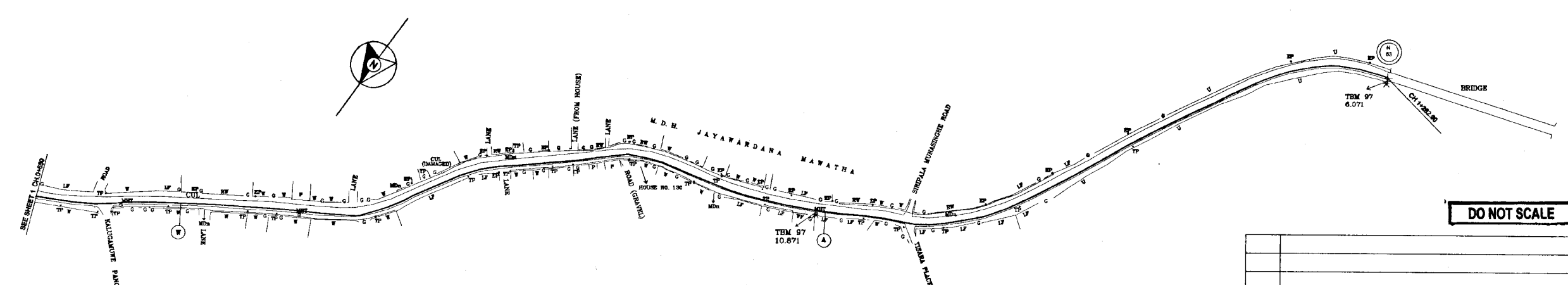
NOTE  
1. FOR GENERAL NOTES, REFER DRG. No. KMU/DM/C-1

<p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	<p>SUB PROJECT: KOTIKAWATTA MULLERIYAWA</p>	<p>TITLE: M.D.H. JAYAWARDANA MAWATHA</p>
	<p>DESIGNED: <i>[Signature]</i></p>	<p>DRAWN: <i>[Signature]</i></p>
<p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM</p>	<p>CHECKED: <i>[Signature]</i></p>	<p>CONTRACTING: NRW / CW</p>
<p>NIHON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>	<p>DR. TEAM LEADER: <i>[Signature]</i></p>	<p>DRG. No.: KMU/DM/C-55</p>



GROUND LEVEL (m)	7.99	6.08	4.99	4.72	5.01	6.16	7.30	7.17	7.22	7.34	8.99	9.99	10.13	10.42	10.75	10.87	10.13	8.59	6.75	4.81	3.81	3.34	3.17	2.99	3.88	5.32	5.86	
INVERT LEVELS (m)	6.99	5.08	3.99	3.30	4.01	5.16	5.80	5.88	5.92	6.34	7.99	8.99	9.13	9.40	9.50	9.57	9.13	7.56	5.75	3.81	2.81	2.34	2.17	1.99	2.88	4.32	4.86	
PIPE DETAILS	110 PVC (TYPE 1000)																											
DISTANCE (m)	660	675	700	725	750	775	800	825	832.2	850	875	900	925	950	975	1000	1025	1050	1075	1100	1125	1150	1175	1200	1225	1250	1262.8	
REMARKS																												
HORIZONTAL ANGLE (°)																												

LONGITUDINAL SECTION

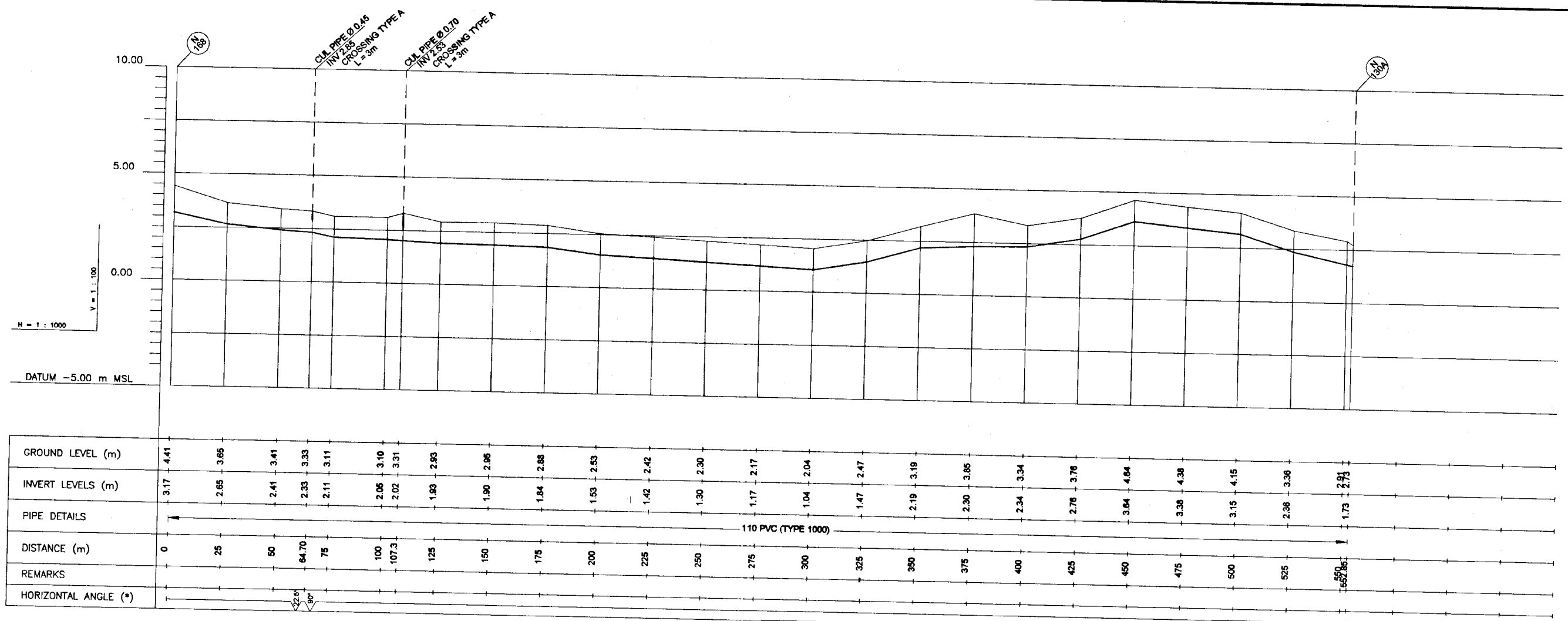


PLAN

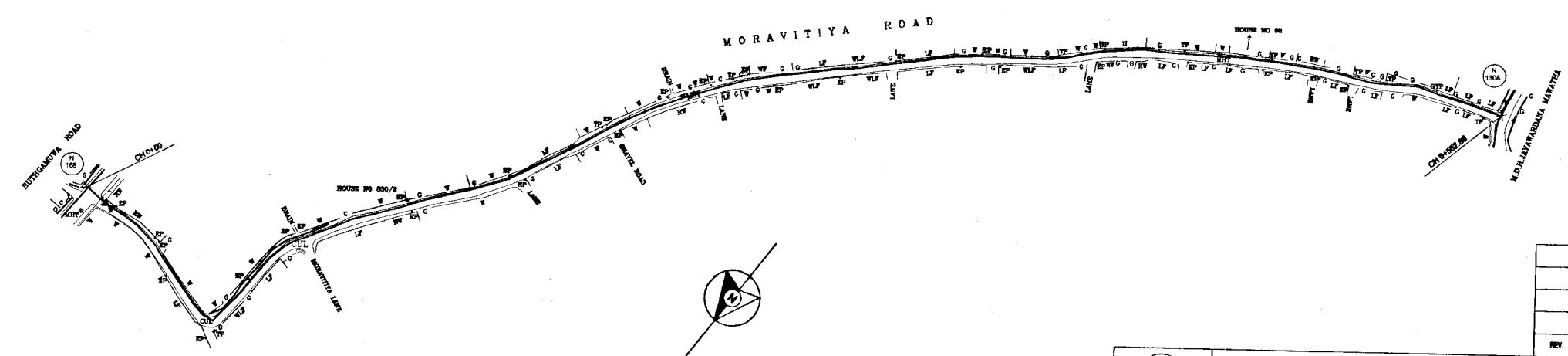
NOTE  
1. FOR GENERAL NOTES, REFER DRG. NO. KMU/DM/C-1

<p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	SUB PROJECT: KOTIKAWATTA MULLERIYAWA		TITLE: M.D.H. JAYAWARDANA MAWATHA	
	DESIGNER: <i>aswath</i>		DATE: JAN 2001	
CHECKED: <i>aswath</i>		PM (NWS&D) INCHARGE: <i>[Signature]</i>		CONTRACT NO.: NRW / CW
DT. TEAM LEADER: <i>[Signature]</i>		A.S.M (P&I) INCHARGE: <i>[Signature]</i>		DRG. NO.: KMU/DM/C-56
TEAM LEADER: <i>[Signature]</i>		D.S.M (P&I) INCHARGE: <i>[Signature]</i>		





LONGITUDINAL SECTION

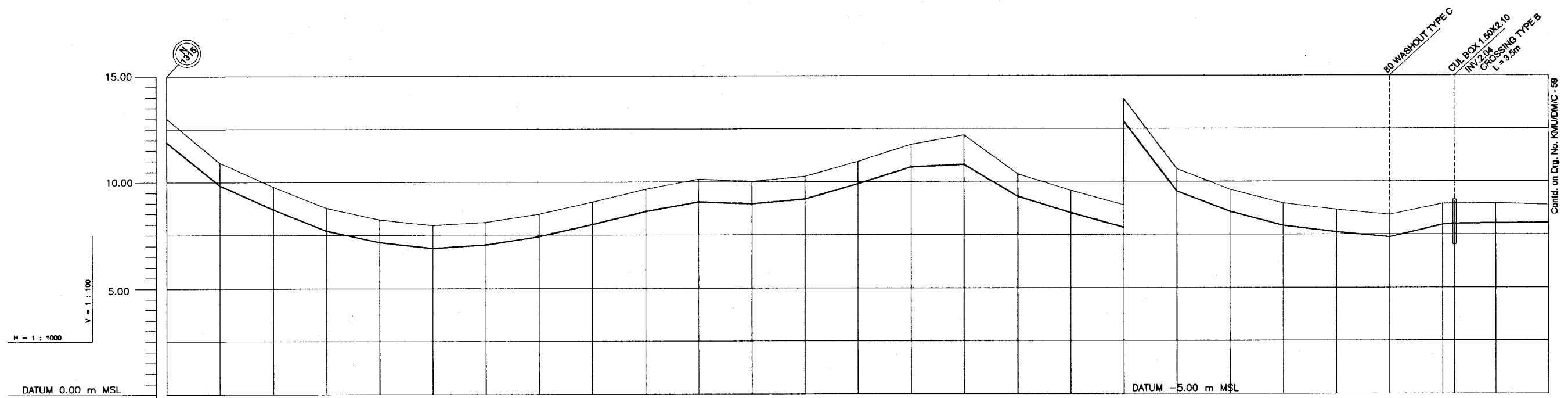


PLAN

NOTE  
1. FOR GENERAL NOTES, REFER DRG. No. KMU/DM/C-1

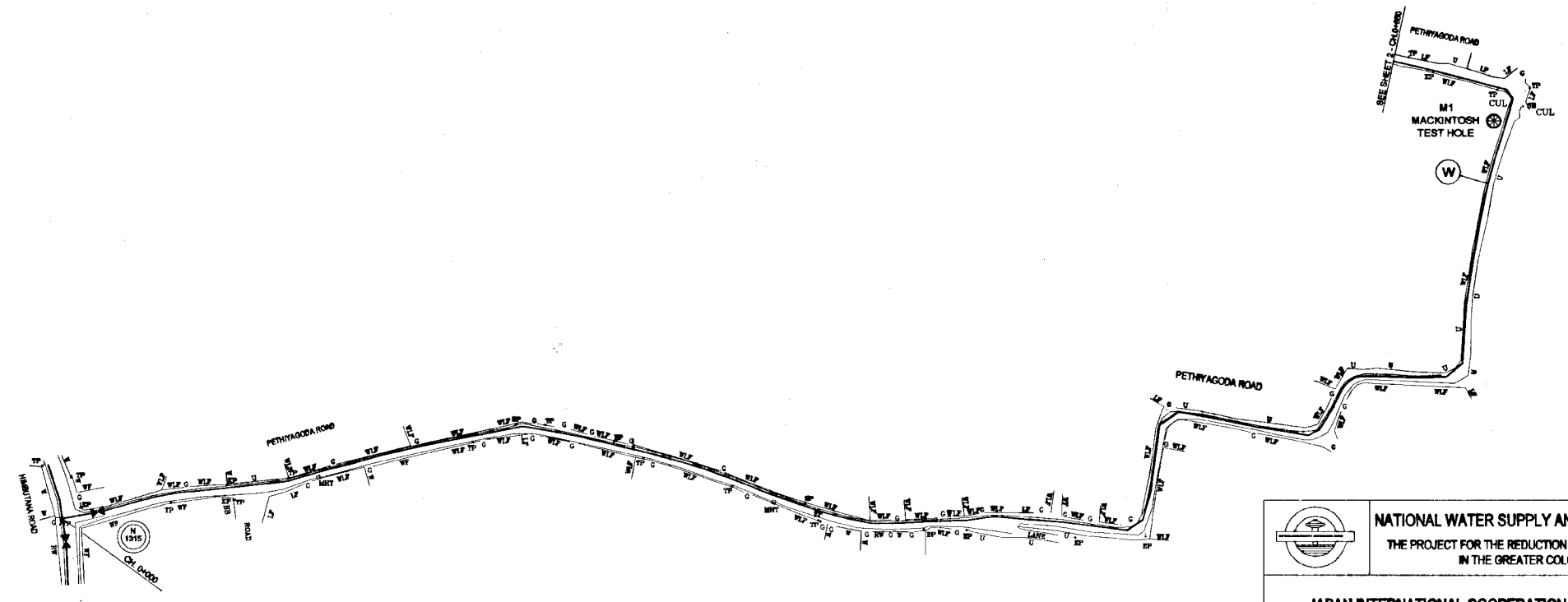
DO NOT SCALE

<p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	SUB PROJECT:	TITLE:
	KOTIKAWATTA MULLERIYAWA	MORAVITIYA ROAD
<p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM</p> <p>NIHON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>	DESIGNED:	DATE:
	CHECKED:	JAN 2001
	DT. TEAM LEADER:	CONTRACT No.:
	TEAM LEADER:	NRW / CW
	D.G.M (P&I) INCHARGE:	DRG. No.:
		KMU / DM / C-57



GROUND LEVEL (m)	13.01	10.91	9.77	8.77	8.23	7.95	8.11	8.50	9.06	9.66	10.12	10.02	10.25	10.96	11.77	12.20	10.36	9.56	8.89	5.80	4.63	3.97	3.66	3.42	3.95	3.95	3.97	3.88				
INVERT LEVELS (m)	11.88	9.85	8.71	7.71	7.17	6.89	7.05	7.44	8.00	8.60	8.90	8.96	9.18	9.90	10.70	10.80	9.30	8.52	7.63	4.54	3.57	2.91	2.60	2.36	2.95	3.00	3.02	3.04				
PIPE DETAILS	160 PVC (TYPE 1000)																															
DISTANCE (m)	0	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	605.56	625	650				
REMARKS																																
HORIZONTAL ANGLE (°)	<div style="display: flex; justify-content: space-between;"> <span>22.5°</span> <span>45°</span> <span>45°</span> <span>45°</span> <span>22.5°</span> <span>45°</span> <span>45°</span> </div>																															

LONGITUDINAL SECTION

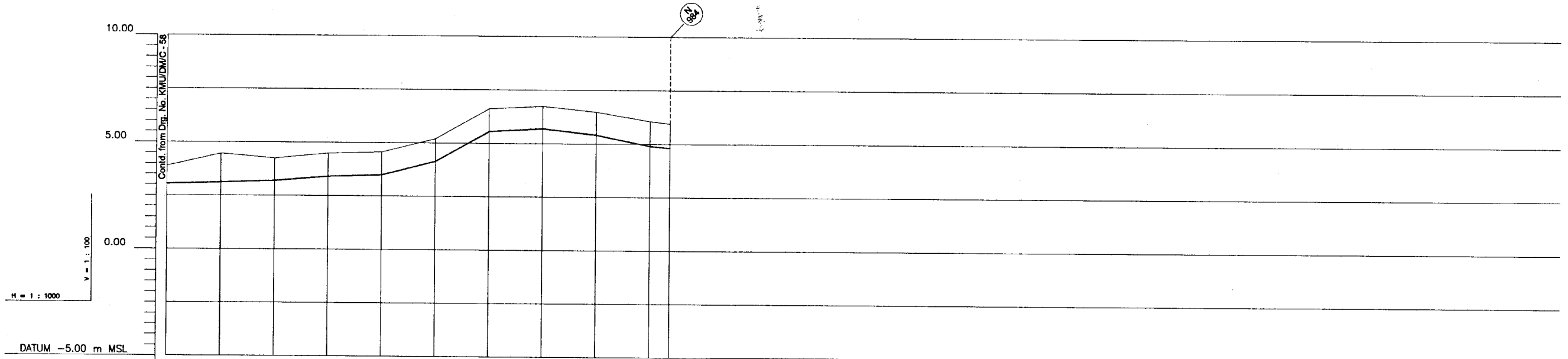


PLAN

DO NOT SCALE

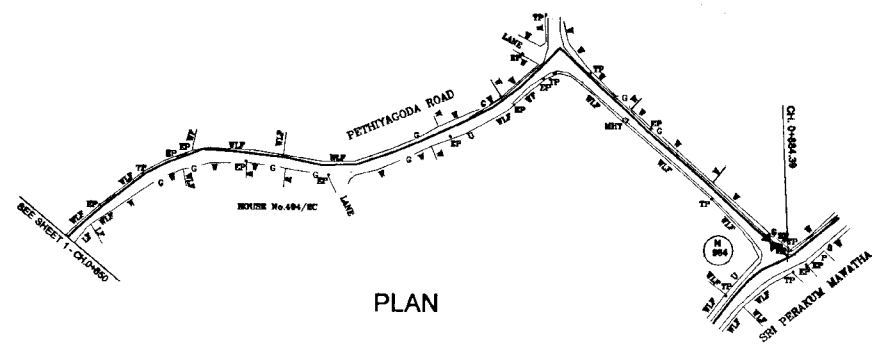
		<b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	
<b>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)</b> STUDY TEAM NIPON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN		SUB PROJECT: <b>KOTIKAWATTA          MULLERIYAWA</b>	TITLE: <b>PETHIYAGODA ROAD</b>
DESIGNED: <i>[Signature]</i>	DRAWN: <i>[Signature]</i>	DATE: <b>JAN 2001</b>	SHEET 1 OF 2
CHECKED: <i>[Signature]</i>	PM (NWS&D) INCHARGE: <i>[Signature]</i>	CONTRACT NO: <b>NRW / CW</b>	
DT. TEAM LEADER: <i>[Signature]</i>	A.G.M. (P&I) INCHARGE: <i>[Signature]</i>	ORG. NO: <b>KMU / DM / C - 58</b>	
TEAM LEADER: <i>[Signature]</i>	D.G.M. (P&I) INCHARGE: <i>[Signature]</i>		

NOTE  
1. FOR GENERAL NOTES REFER TO DRAWING



GROUND LEVEL (m)	3.88	4.46	4.25	4.49	4.55	5.20	6.61	6.74	6.47	6.05	5.94
INVERT LEVELS (m)	3.04	3.10	3.19	3.40	3.49	4.14	5.55	5.68	5.41	4.90	4.61
PIPE DETAILS	160 PVC (TYPE 1000)										
DISTANCE (m)	650	675	700	725	750	775	800	825	850	875	884.39
REMARKS											
HORIZONTAL ANGLE (°)		22	22.5			90					


LONGITUDINAL SECTION

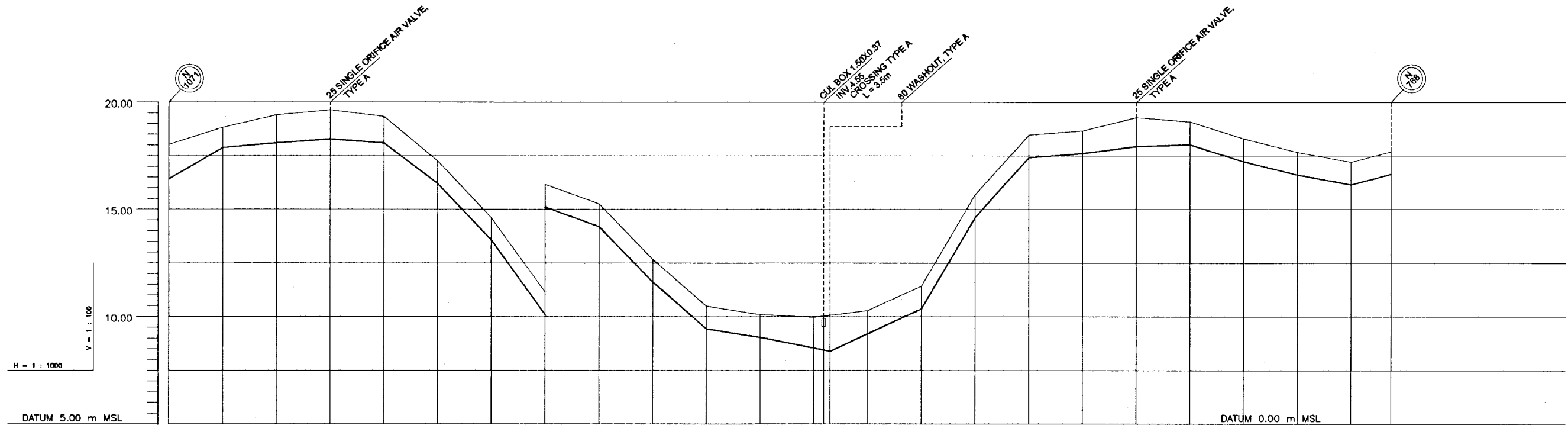


PLAN

NOTE  
1. FOR GENERAL NOTES, REFER DRG. No. KMU/DM/C-1

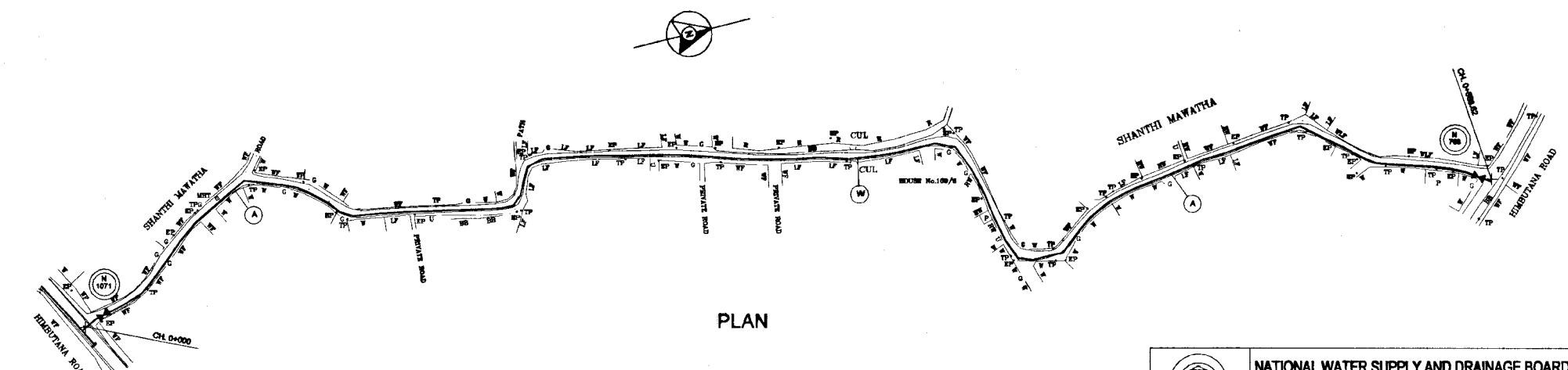
DO NOT SCALE

 NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: <b>KOTIKAWATTA          MULLERIYAWA</b>	TITLE: <b>PETHIYAGODA ROAD</b>	SHEET 2 OF 2
	DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> DT. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	DRAWN: <i>[Signature]</i> PM (REVISIONS) INCHARGE: <i>[Signature]</i> A.S.M (P&I) INCHARGE: <i>[Signature]</i> D.G.M (P&I) INCHARGE: <i>[Signature]</i>	DATE: <b>JAN 2001</b> CONTRACT NO: <b>NRW / CW</b> DRG. NO: <b>KMU / DM / C - 59</b>



GROUND LEVEL (m)	16.03	18.84	19.40	19.84	19.34	17.27	14.62	11.16	10.26	7.88	5.48	5.10	4.97	4.97	5.27	6.42	10.89	13.46	13.68	14.30	14.09	13.30	12.68	12.21	12.70										
INVERT LEVELS (m)	16.42	17.78	18.10	18.28	18.10	18.21	17.27	13.56	14.62	10.10	9.20	6.62	4.43	5.48	4.04	3.39	4.21	5.38	9.63	12.42	13.46	12.82	13.68	12.94	14.09	13.03	14.09	12.24	13.30	11.62	12.68	11.15	12.21	11.84	12.70
PIPE DETAILS	160 PVC (TYPE 1000)																																		
DISTANCE (m)	0	25	50	75	100	125	150	175	200	225	250	275	300	304.50	325	350	375	400	425	450	475	500	525	550	588.62										
REMARKS																																			
HORIZONTAL ANGLE (°)																																			

LONGITUDINAL SECTION

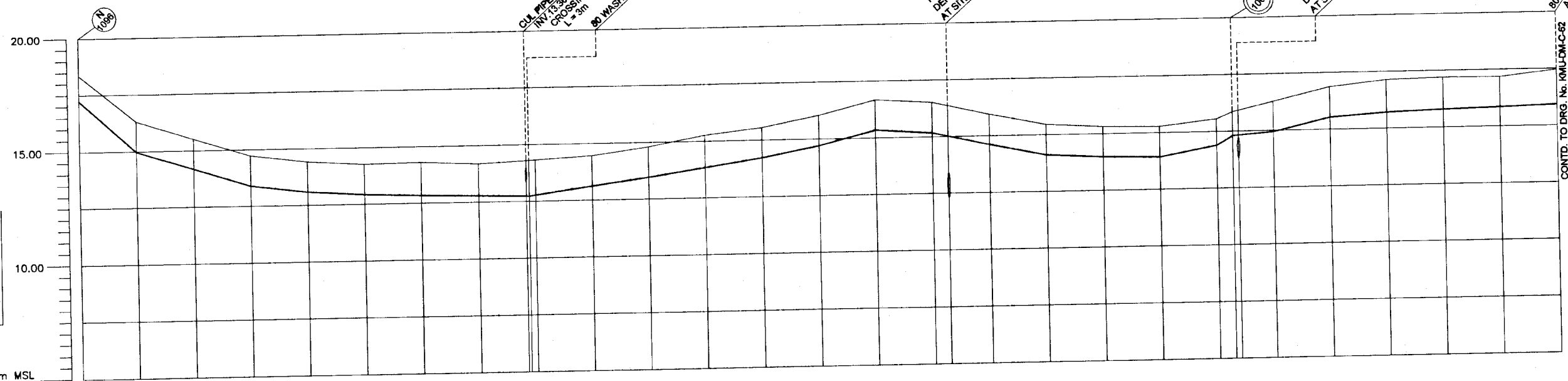


PLAN

DO NOT SCALE

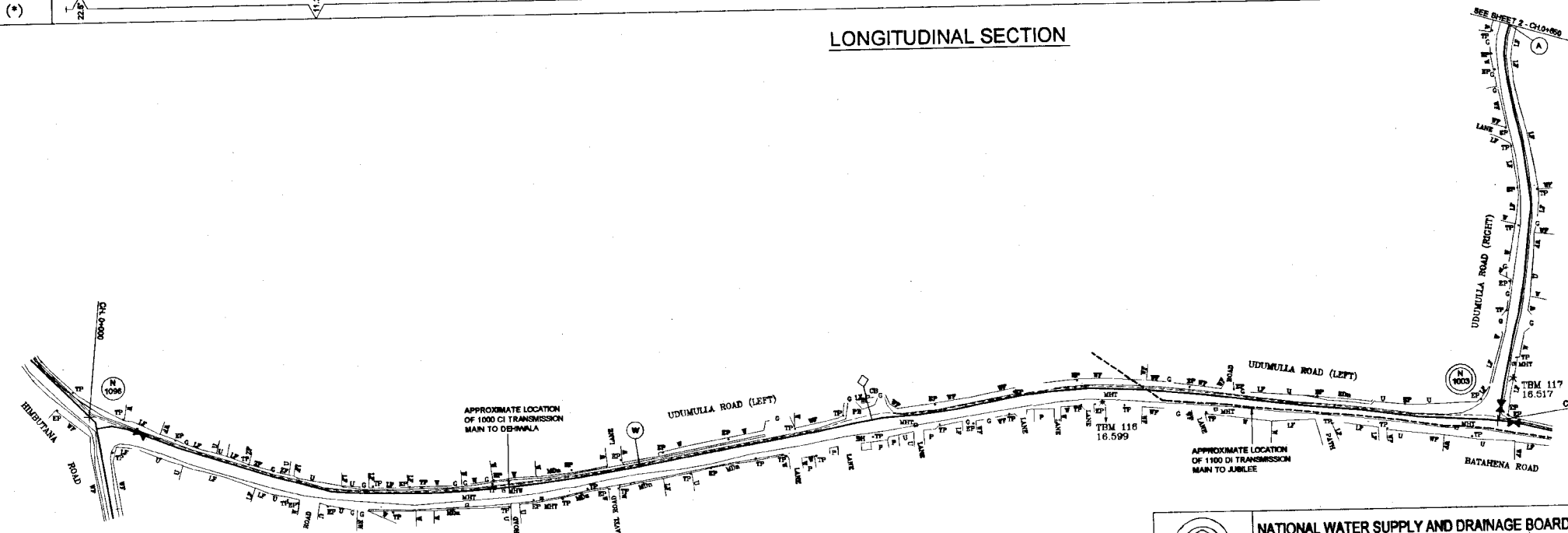
NOTE  
1. FOR GENERAL NOTES, REFER DRG. No. KMU/DM/C-1

<p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	<p>SUB PROJECT: KOTIKAWATTA MULLERIYAWA</p>	<p>TITLE: SHANTHI MAWATHA</p>
	<p>DESIGNED: <i>[Signature]</i></p>	<p>DRAWN: <i>[Signature]</i></p>
<p>CHECKED: <i>[Signature]</i></p>	<p>PAI APPROVALS HANDLER: <i>[Signature]</i></p>	<p>CONTRACT No: <b>NRW / CW</b></p>
<p>BY TEAM LEADER: <i>[Signature]</i></p>	<p>A.S.M (P&amp;I) HANDLER: <i>[Signature]</i></p>	<p>DRG. No: <b>KMU / DM / C - 60</b></p>
<p>TEAM LEADER: <i>[Signature]</i></p>	<p>C.A.M (P&amp;I) HANDLER: <i>[Signature]</i></p>	



GROUND LEVEL (m)	18.36	16.31	15.51	14.73	14.42	14.26	14.30	14.20	14.31	14.33	14.46	14.80	15.27	15.56	16.03	16.67	16.50	15.95	15.45	15.31	15.26	15.56	15.86	16.27	16.86	17.13	17.18	17.17	17.45
INVERT LEVELS (m)	17.23	14.98	14.18	13.40	13.09	12.93	12.85	12.79	12.73	14.33	13.13	13.47	13.86	14.23	14.70	15.34	15.17	14.62	14.12	13.98	13.83	14.40	14.80	14.94	14.53	15.70	15.78	15.84	15.92
PIPE DETAILS																	300 DI												
DISTANCE (m)	0	25	50	75	100	125	150	175	195.89	200	225	250	275	300	325	350	375	400	425	450	475	500	507.17	525	550	575	600	625	650
REMARKS																	SEE SHEET 2-CH14-888												
HORIZONTAL ANGLE (°)	22																11												

LONGITUDINAL SECTION

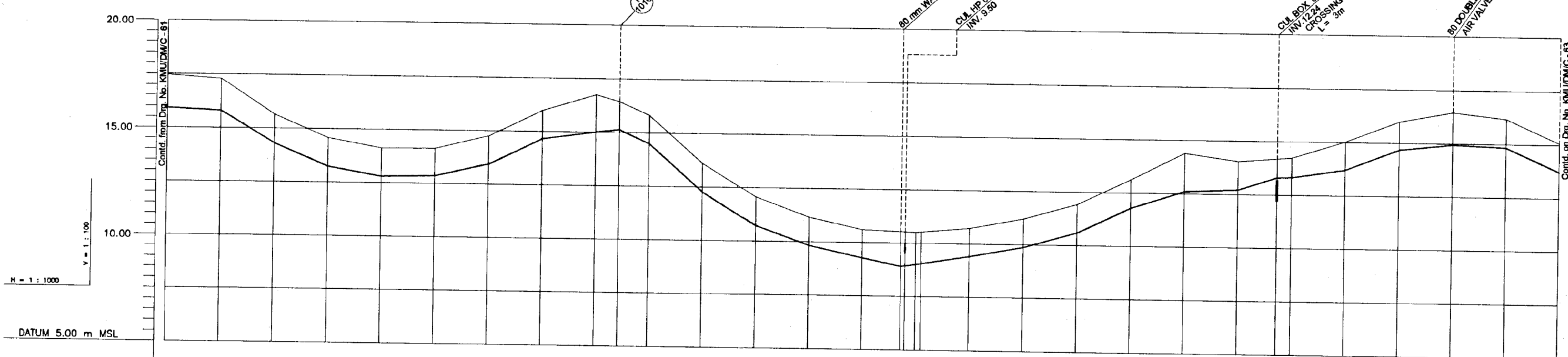


PLAN

DO NOT SCALE

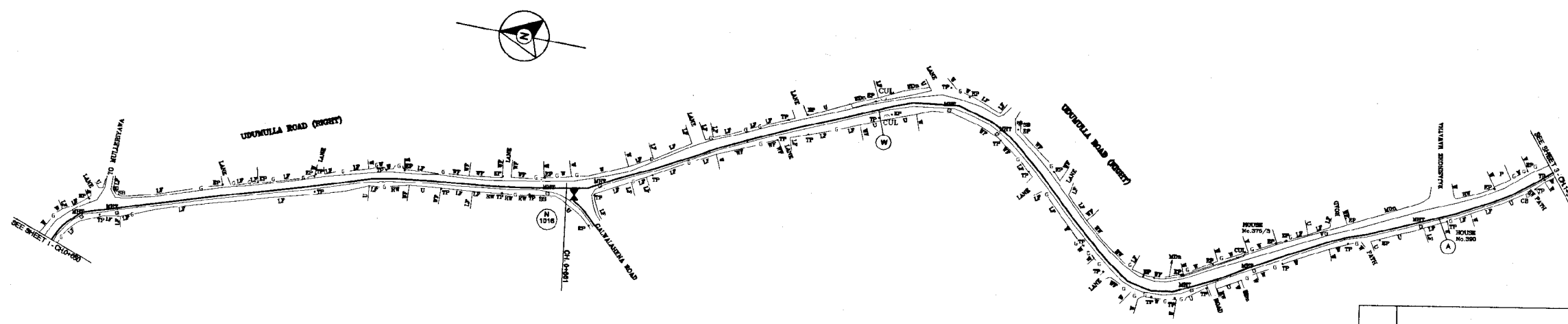
NOTE  
1. FOR GENERAL NOTES, REFER DRG. No. KMU/DM/C-1

<p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	<p>SUB PROJECT: KOTIKAWATTA MULLERIYAWA</p>	<p>TITLE: UDUMULLA ROAD</p>
	<p>DESIGNED: <i>[Signature]</i></p>	<p>DATE: <b>JAN 2001</b></p>
<p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM</p>	<p>CHECKED: <i>[Signature]</i></p>	<p>CONTRACT NO: NRW / CW</p>
<p>NIHON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>	<p>BY TEAM LEADER: <i>[Signature]</i></p>	<p>DRG. NO: KMU / DM / C - 61</p>



GROUND LEVEL (m)	17.45	17.29	15.64	14.57	14.12	14.13	14.76	15.99	16.74	16.45	15.82	13.60	12.07	11.16	10.61	10.51	10.74	11.21	11.93	13.13	14.38	14.04	14.19	14.24	15.03	16.00	16.47	16.18	15.06				
INVERT LEVELS (m)	15.92	15.80	14.31	13.24	12.79	12.85	13.43	14.66	15.00	15.12	14.49	12.27	10.74	9.83	9.28	8.90	9.00	9.41	9.88	10.60	11.80	12.80	12.71	13.30	13.32	13.70	14.67	14.94	14.85	13.73			
PIPE DETAILS	300 DI																																
DISTANCE (m)	650	675	700	725	750	775	800	825	850	881	875	900	925	950	975	1000	1025	1050	1075	1100	1125	1150	1168.16	1175	1200	1225	1250	1275	1300				
REMARKS																																	
HORIZONTAL ANGLE (*)	22.5															11.75	22.5	11.25			22.5	21.5	21.5										


LONGITUDINAL SECTION

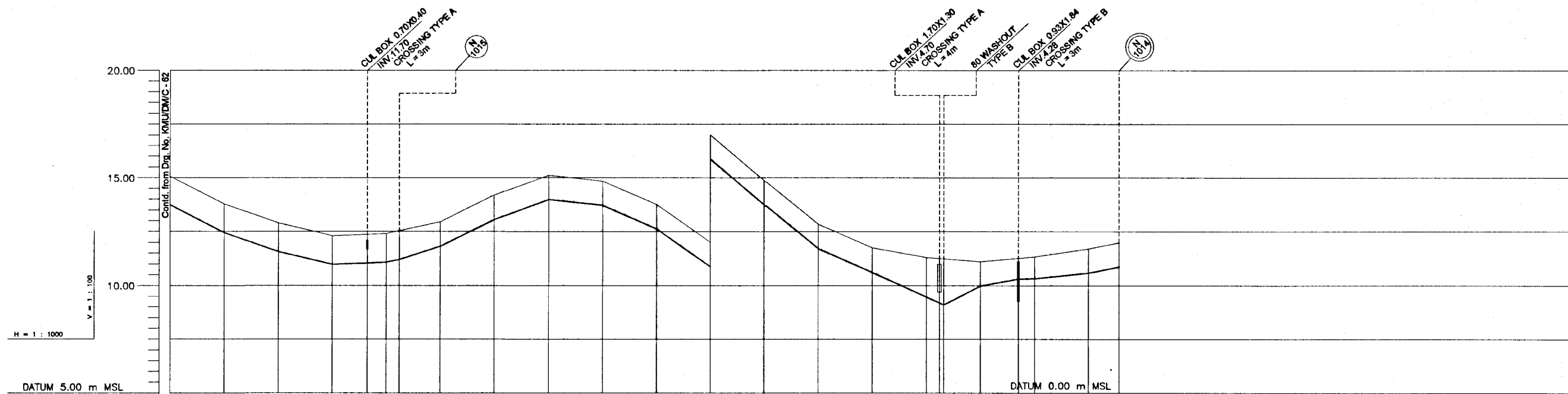


PLAN

NOTE  
1. FOR GENERAL NOTES, REFER DRG. No. KMU/DM/C-1

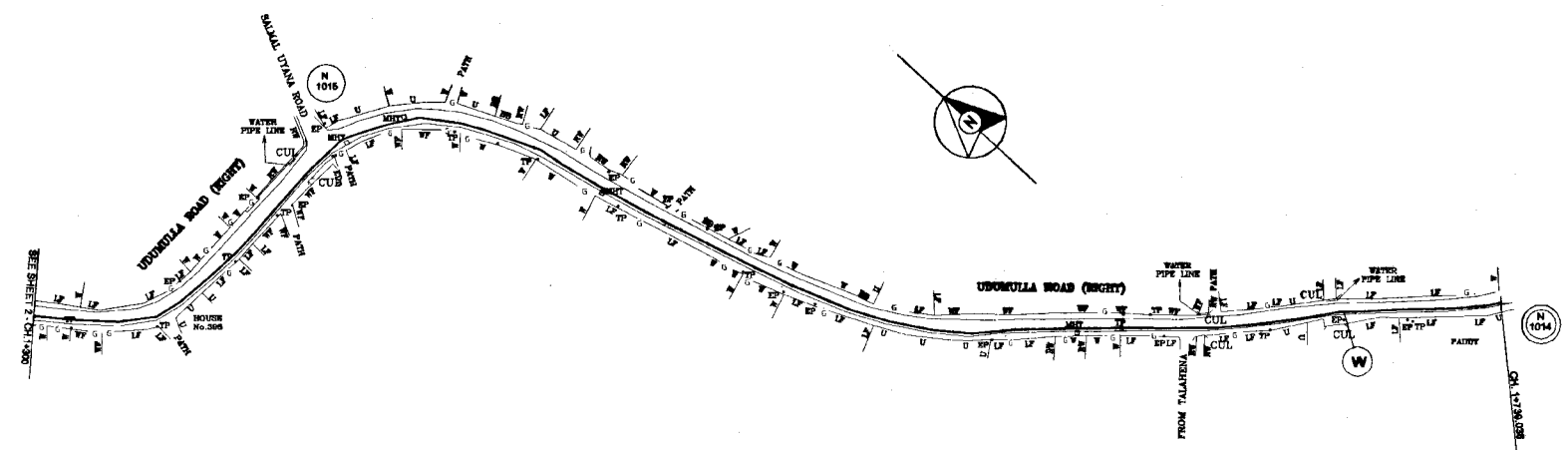
DO NOT SCALE

 <b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: <b>KOTKAWATTA          MULLERIYAWA</b>	TITLE: <b>UDUMULLA ROAD</b>
	DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> BY TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	DRAWN: <i>[Signature]</i> IN CHARGE: <i>[Signature]</i> A.S.M (P&I) INCHG: <i>[Signature]</i> D.O.M (P&I) INCHG: <i>[Signature]</i>



GROUND LEVEL (m)	15.06	13.76	12.90	12.31	12.37	12.41	12.54	12.96	14.19	15.11	14.84	13.76	12.01	9.87	7.84	6.75	6.30	6.25	6.11	6.27	6.33	6.72	7.00		
INVERT LEVELS (m)	13.73	12.45	11.57	10.98	11.04	11.08	11.21	11.82	13.08	13.98	13.71	12.63	10.88	8.74	6.71	5.62	4.10	4.98	5.30	5.32	5.59	5.87			
PIPE DETAILS	300 DI											225 PVC (TYPE 1000)													
DISTANCE (m)	1300	1325	1350	1375	1391.19	1400	1408	1425	1450	1475	1500	1525	1550	1575	1600	1625	1650	1656.13	1675	1682.67	1700	1725	1738.04		
REMARKS																									
HORIZONTAL ANGLE (°)																									


LONGITUDINAL SECTION



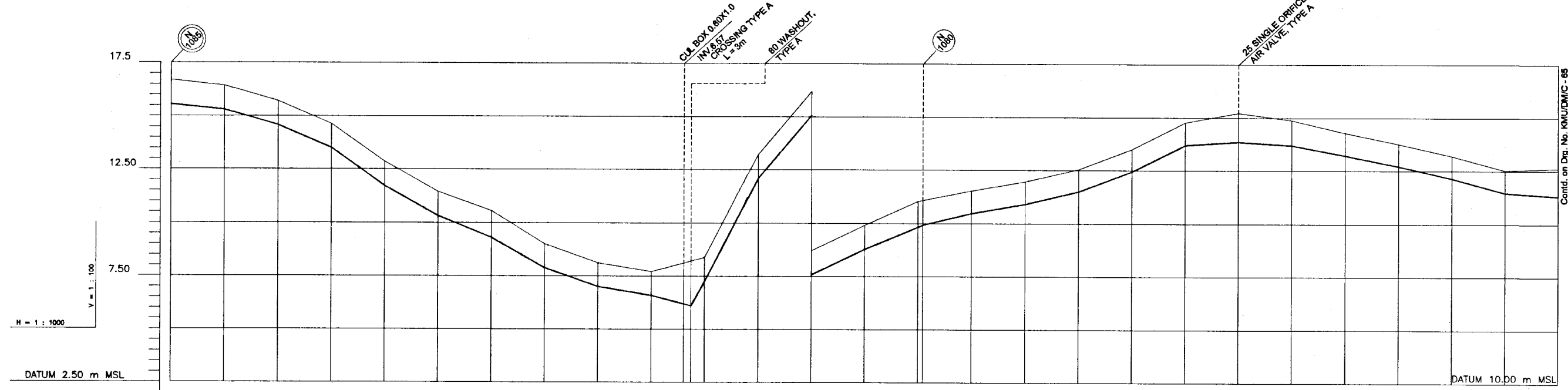
PLAN

NOTE  
1. FOR GENERAL NOTES, REFER DRG. No. KMU/DM/C-1

DO NOT SCALE

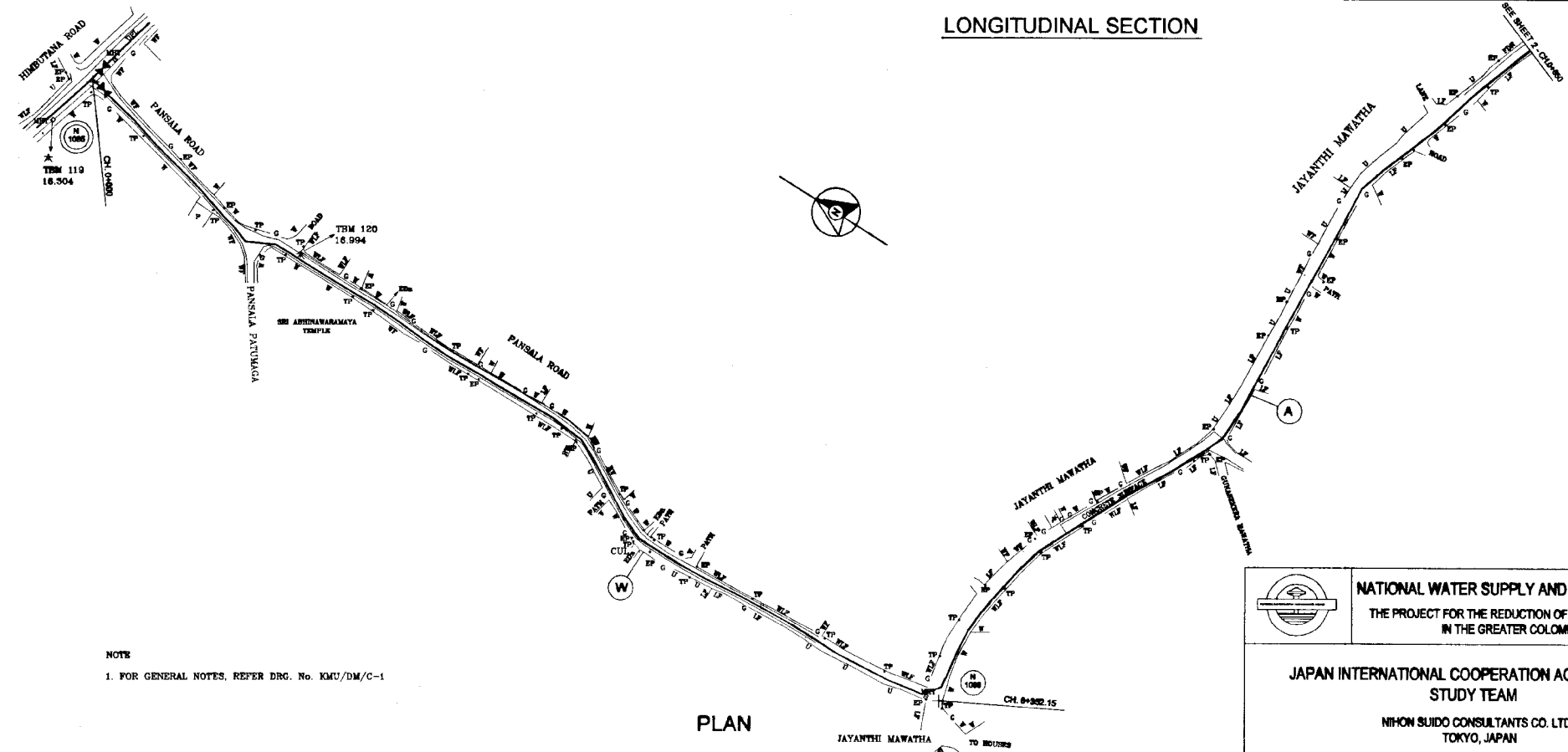
 <b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: <b>KOTIKAWATTA          MULLERIYAWA</b>	TITLE: <b>UDUMULLA ROAD</b>
	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM NIPPON KAIYO CONSULTANTS CO. LTD., TOKYO, JAPAN	CHECKED: <i>[Signature]</i> DR. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>

Contd. on Dwg. No. KMU/DM/C-65



GROUND LEVEL (m)	16.69	16.43	15.71	14.84	12.85	11.45	10.56	9.00	8.12	7.71	8.13	8.39	13.22	16.21	17.41	18.56	19.04	19.47	20.05	21.01	22.28	22.72	22.40	21.79	21.28	20.71	20.03	20.12				
INVERT LEVELS (m)	15.56	15.30	14.58	13.51	11.72	10.32	9.30	7.87	7.00	6.58	6.10	7.26	12.09	15.08	16.28	17.42	17.98	18.41	19.00	19.95	21.20	21.36	21.20	20.73	20.22	19.65	18.97	18.80				
PIPE DETAILS	225 PVC (TYPE 1000)															160 PVC (TYPE 1000)																
DISTANCE (m)	0	25	50	75	100	125	150	175	200	225	240.35	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650				
REMARKS																																
HORIZONTAL ANGLE (°)																																


LONGITUDINAL SECTION



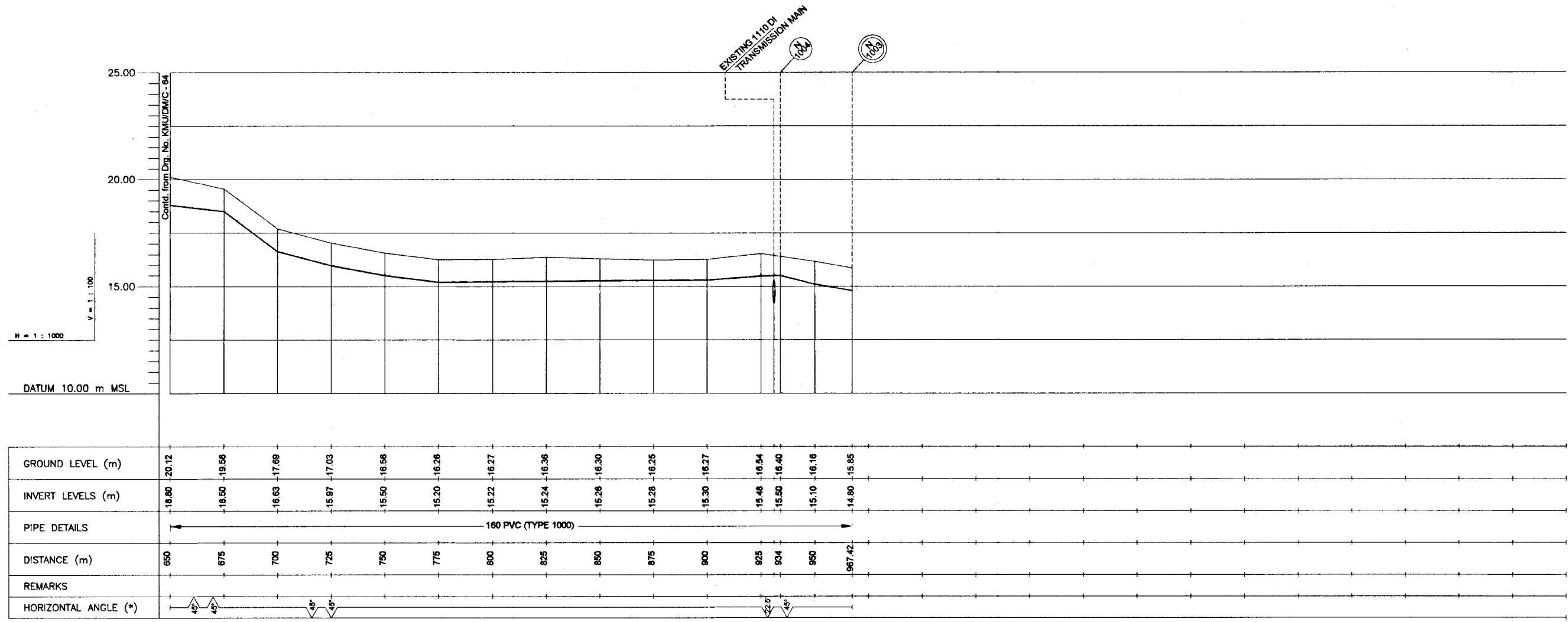
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NOTE  
1. FOR GENERAL NOTES, REFER DRG. No. KMU/DM/C-1

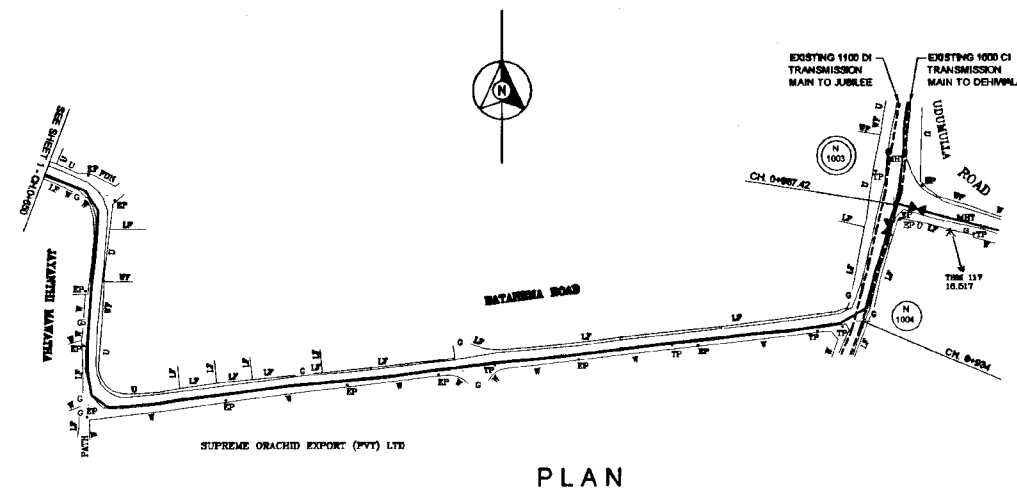
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 <b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: <b>KOTIKAWATTA          MULLERIYAWA</b>	TITLE: <b>PANSALA ROAD, JAYANTHI MAWATHA          AND BATAHENA ROAD</b>	SHEET 1 OF 2 <b>JAN 2001</b>
	DESIGNED: <i>swanda</i>	DRAWN: <i>swanda</i>	DATE:
	CHECKED: <i>swanda</i>	IN CHARGE: <i>swanda</i>	CONTRACT No.: <b>NRW / CW</b>
	TEAM LEADER: <i>swanda</i>	D.G.M (P) NO. 1: <i>swanda</i> D.G.M (P) NO. 2: <i>swanda</i>	D.R.G. No.: <b>KMU/DM/C-64</b>






LONGITUDINAL SECTION

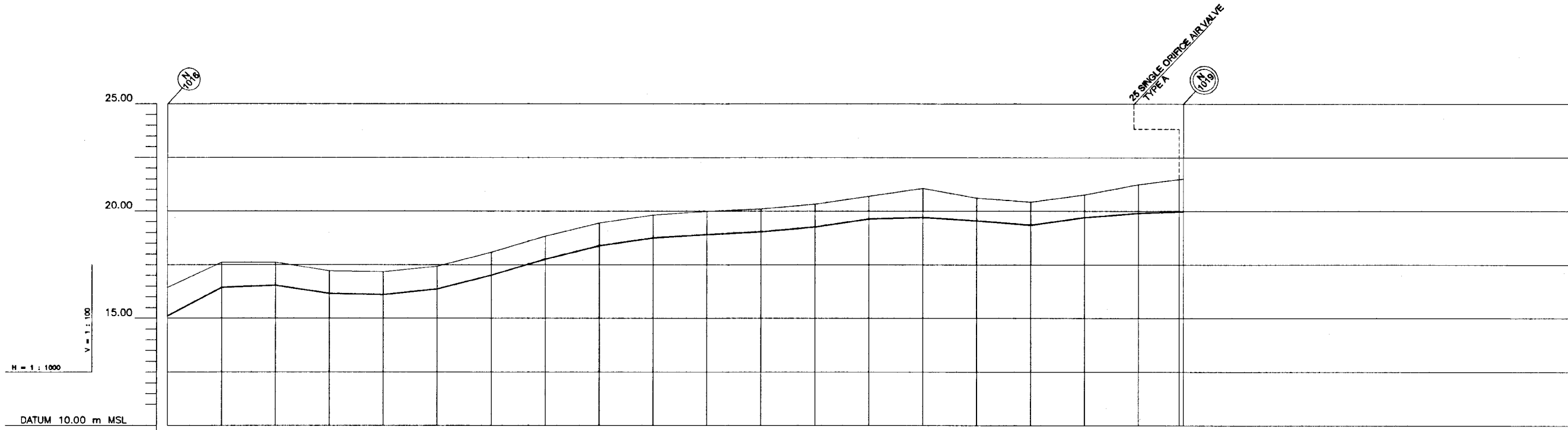


PLAN

NOTE  
1. FOR GENERAL NOTES, REFER DRG. No. KMU/DM/C-1

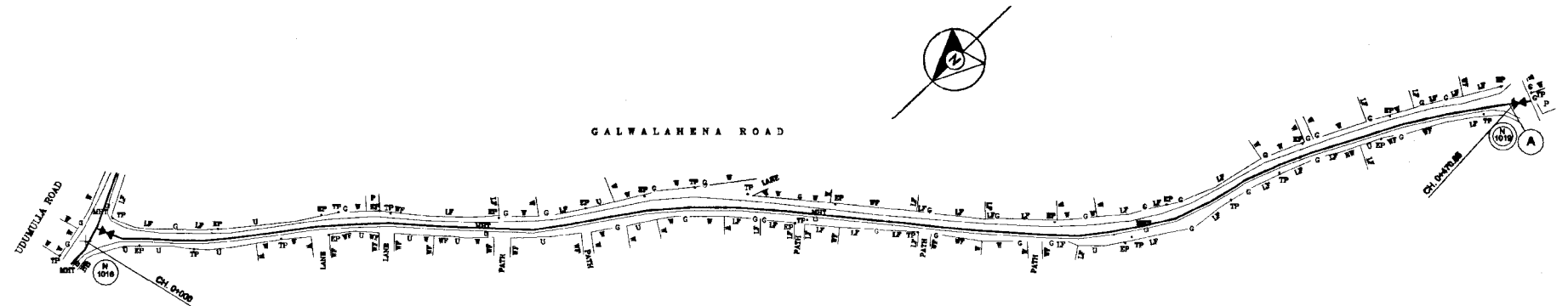
DO NOT SCALE

 <b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: <b>KOTIKAWATTA          MULLERYAWA</b>	TITLE: <b>PANSALA ROAD, JAYANTHI MAWATHA          AND BATAHENA ROAD</b>
	DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> BY TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	DRAWN: <i>[Signature]</i> IN CHARGE: <i>[Signature]</i> A.G.M (P&D) INCH: <i>[Signature]</i> S.G.M (P&D) INCH: <i>[Signature]</i>




GROUND LEVEL (m)	15.12	16.45	17.61	17.23	17.17	17.43	18.09	18.54	19.45	19.52	19.98	20.10	20.33	20.89	21.08	20.81	20.42	20.78	21.24	21.50			
INVERT LEVELS (m)	15.12	16.45	16.55	16.17	16.11	16.37	17.03	17.78	18.39	18.76	18.92	19.04	19.27	19.63	19.70	19.55	19.38	19.70	19.90	19.97			
PIPE DETAILS	100 PVC (TYPE 1000)																						
DISTANCE (m)	0	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	470.85			
REMARKS																							
HORIZONTAL ANGLE (°)	-22.5							-1.25									-2.5						

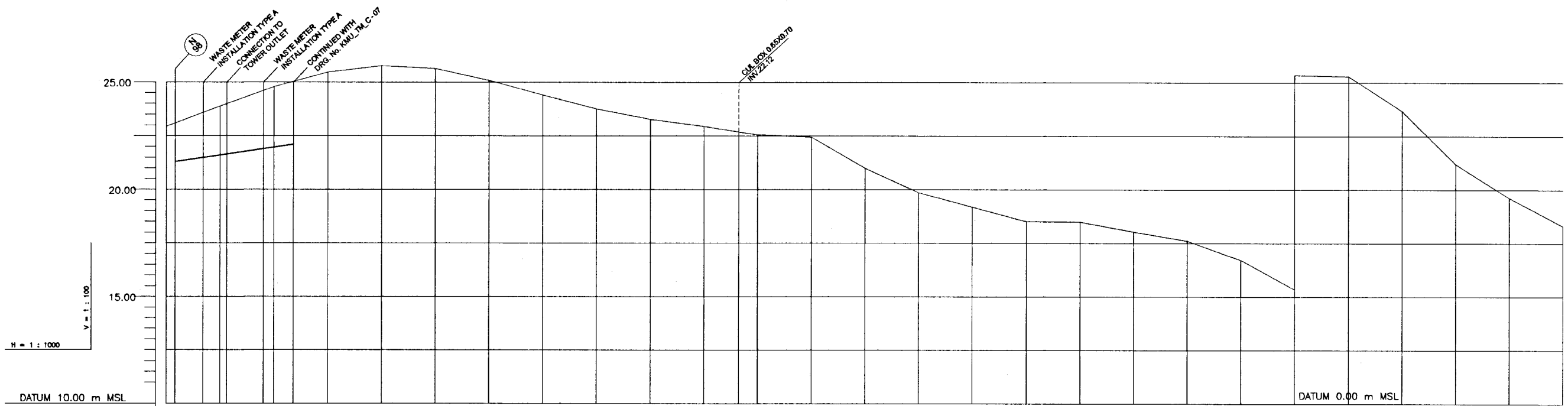
LONGITUDINAL SECTION



PLAN

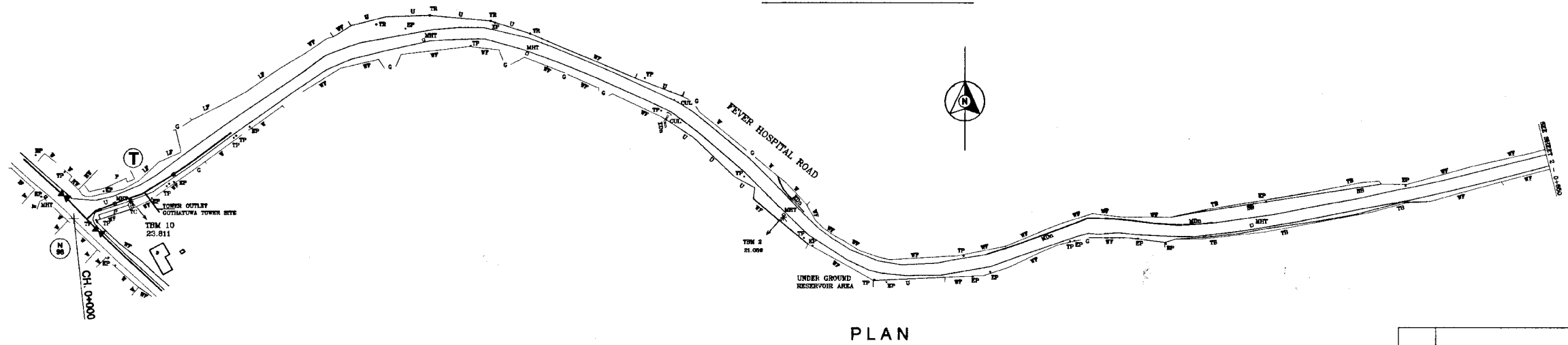
NOTE  
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 <b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: <b>KOTIKAWATTA MULLERIYAWA</b>		TITLE: <b>GALWALAHENA ROAD</b>
	DESIGNED: <i>[Signature]</i>	DRAWN: <i>[Signature]</i>	DATE: <b>JAN 2001</b>
<b>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)</b> STUDY TEAM NIPPON KAIYO CONSULTANTS CO. LTD., TOKYO, JAPAN		CHECKED: <i>[Signature]</i>	CONTRACT No: <b>NRW / CW</b>
		DR. TEAM LEADER: <i>[Signature]</i>	DRG. No: <b>KMU / DM / C - 06</b>
		TEAM MEMBER: <i>[Signature]</i>	




GROUND LEVEL (m)	22.95	22.95	23.86	24.78	25.48	25.77	25.65	25.08	24.40	23.76	23.27	22.95	22.70	22.56	22.44	21.00	19.85	19.18	18.50	18.49	18.04	17.82	16.72	15.35	15.29	13.86	11.20	9.82	8.31		
INVERT LEVELS (m)	21.30			22.10																											
PIPE DETAILS	500 DN																														
DISTANCE (m)	0	4	17	23	45	59	75	100	125	150	175	200	225	250	266.32	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650
REMARKS																															
HORIZONTAL ANGLE (°)	22.5																														

LONGITUDINAL SECTION



PLAN

NOTE  
1. FOR GENERAL NOTES, REFER DRG. NO. KMU/DM/C-1

 <b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: <b>KOTIKAWATTA          MULLERIYAWA</b>	TITLE: <b>FEVER HOSPITAL ROAD</b>
	DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> CIV. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	DRAWN: <i>[Signature]</i> PM (APPROVAL) NUMBER: <i>[Signature]</i> A.S.M (PMD) NUMBER: <i>[Signature]</i> D.S.M (PMD) NUMBER: <i>[Signature]</i>

SYMBOLS USED FOR JUNCTION DETAILS		
NOTATION	SIZE	DESCRIPTION
<b>PVC PIPE &amp; FITTINGS</b>		
	d	PVC PUSH-FIT SOCKET & SPIGOT PIPE
	d1 - d2 - d3	ALL PUSH-FIT SOCKET TEE
	d1 - d2 - d3	FLANGED PUSH-FIT SOCKET TEE
	d1 - d2	REDUCER (PUSH-FIT SOCKET ON LARGE DIAMETER)
	d1 - d2	REDUCER (PUSH-FIT SOCKET ON SMALL DIAMETER)
	d	BELL ENDED SLEEVE JOINT (BESJ)
	d x angle	DOUBLE PUSH-FIT SOCKET BEND
	d	PVC END CAP (SOLVENT CEMENT TYPE)
<b>VALVES AND COUPLINGS</b>		
	d GV	DOUBLE FLANGE GATE VALVE
	d	FLEXIBLE COUPLING (VJ COUPLING OR SIMILAR)
	d	FLANGED ADAPTOR (VJFA OR SIMILAR)
<b>DI PIPES AND FITTINGS</b>		
	d	D1 SOCKET & SPIGOT PIPE
	d1 - d2 - d3	ALL SOCKET TEE
	d1 - d2 - d3	FLANGED ON SOCKET TEE
	d1 - d2 - d3	ALL FLANGED TEE
	d1 - d2	SOCKET TAPER
	d1 - d2	FLANGED TAPER

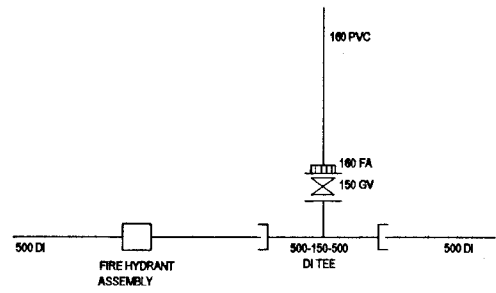
List of Junctions			
No.	Identification No.	Junction / Interconnection	Remarks
2	N 22		
3	N 63	Interconnection	to existing 90 mm PVC
4	N 86	Junction	
5	N 98	Interconnection	to existing 160 mm PVC
6	N 128	Interconnection	to existing 110 mm PVC
7	N 130	Junction	
8	N 137	Junction	
9	N 142	Interconnection	connect to existing 50 mm PVC
10	N 153	Interconnection	connect to existing 90 mm PVC
11	N 168	Junction	
12	N 170	Junction	
13	N 177	Junction	
15	N 183	Interconnection	connect to existing 90 mm PVC
14	N 199	Junction	
16	N 265	Interconnection	connect to existing 160 mm PVC
17	N 297	Interconnection	connect to existing 110 mm PVC
18	N 312	Interconnection	connect to existing 160 mm PVC
19	N 354	Interconnection	connect to existing 160 mm PVC
20	N 368	Junction	
21	N 373	Junction	
22	N 387	Interconnection	connect to existing 90 mm PVC
23	N 389	Interconnection	connect to existing 90 mm PVC
26	N 397	Interconnection	connect to existing 110 mm PVC
24	N 407	Interconnection	connect to existing 110 mm PVC
25	N 500	Interconnection	connect to existing 160 mm PVC
27	N 532	Interconnection	connect to existing 110 mm PVC
29	N 601	Interconnection	connect to existing 90 mm PVC
51	N 631	Interconnection	connect to existing 110 mm PVC
30	N 655	Interconnection	connect to existing 63 mm PVC
31	N 679	Interconnection	connect to existing 160 mm PVC
28	N 698	Interconnection	connect to existing 90 mm PVC
32	N 712	Interconnection	connect to existing 160 mm PVC
33	N 750	Interconnection	connect to existing 160 mm PVC
1	N 760	Interconnection	to existing 90 mm PVC
35	N 765	Interconnection	connect to existing 63 mm PVC
36	N 768	Interconnection	connect to existing 225 mm PVC
37	N 823	Junction	
38	N 834	Junction	
39	N 837	Interconnection	connect to existing 160 mm PVC
40	N 846	Interconnection	connect to existing 90 mm PVC
41	N 855	Interconnection	connect to existing 160 mm PVC
42	N 888	Junction	
43	N 892	Interconnection	connect to existing 110 mm PVC
44	N 931	Interconnection	connect to existing 90 mm PVC
45	N 984	Junction	
46	N 1003	Interconnection	connect to existing 90 mm PVC
47	N 1014	Interconnection	connect to existing 90 mm PVC
48	N 1015	Junction	
49	N 1016	Junction	
50	N 1019	Interconnection	connect to existing 63 mm PVC
52	N 1071	Interconnection	connect to existing 160 mm PVC
53	N 1085	Interconnection	connect to existing 160 mm PVC
55	N 1096	Junction	
56	N 1127	Interconnection	connect to existing 110 mm PVC
57	N 1137	Interconnection	connect to existing 90 mm PVC
34	N 1145	Junction	
58	N 1151	Interconnection	connect to existing 110 mm PVC
59	N 1215	Interconnection	connect to existing 160 mm PVC
60	N 1227	Interconnection	connect to existing 225 mm PVC
61	N 1313	Junction	
62	N 1314	Junction	
54	N 1315	Interconnection	connect to existing 160 mm PVC
63	Junction - T		Connect to Water Tower
64	Disconnecting at Existing Sump		

**NOTE :**

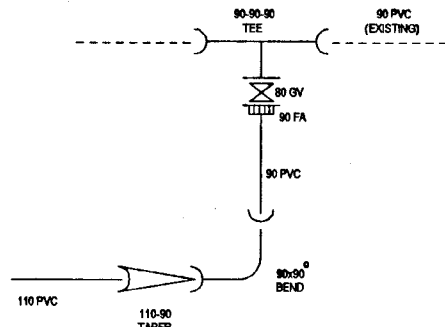
1. ALL DI PIPES AND FITTINGS ARE DENOTED WITH NOMINAL DIAMETERS SUCH AS 50, 80, 100, 150, 200, 300 ETC.
2. ALL PVC PIPES AND FITTINGS ARE DENOTED WITH EXTERNAL DIAMETERS SUCH AS 63, 90, 110, 160 & 225.
3. FLANGED ADAPTORS AND FLEXIBLE COUPLINGS ON PVC PIPES ARE DENOTED WITH TYPICAL PVC EXTERNAL PIPE DIAMETERS SUCH AS 63, 90, 110, 160 & 225.
4. FLANGED ADAPTORS AND FLEXIBLE COUPLINGS ON DI PIPES ARE DENOTED WITH TYPICAL NOMINAL DIAMETERS SUCH AS 50, 80, 100, 150, 200, 300 ETC.
5. ALL GATE VALVES ARE DENOTED WITH NOMINAL DIAMETERS.

**DO NOT SCALE**

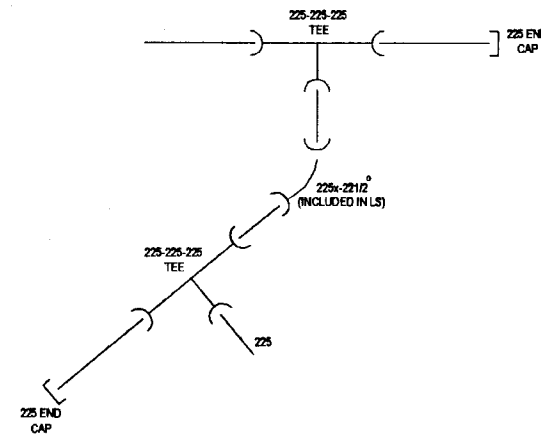
	<b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA		SUB PROJECT: <b>KOTIKAWATTA          MULLERIYAWA</b>	TITLE: <b>JUNCTIONS KEY</b>
	<b>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)</b> STUDY TEAM NIHO SUITO CONSULTANTS CO. LTD., TOKYO, JAPAN		DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> CIV. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	DRAWN: <i>[Signature]</i> P.M. (NRWS/SP) INCHARGE: <i>[Signature]</i> A.Q.M. (P.W.) INCHARGE: <i>[Signature]</i> D.Q.M. (P.W.) INCHARGE: <i>[Signature]</i>



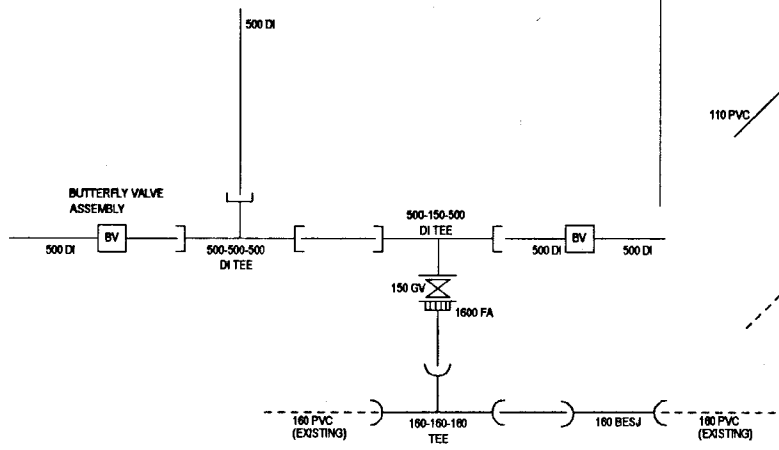
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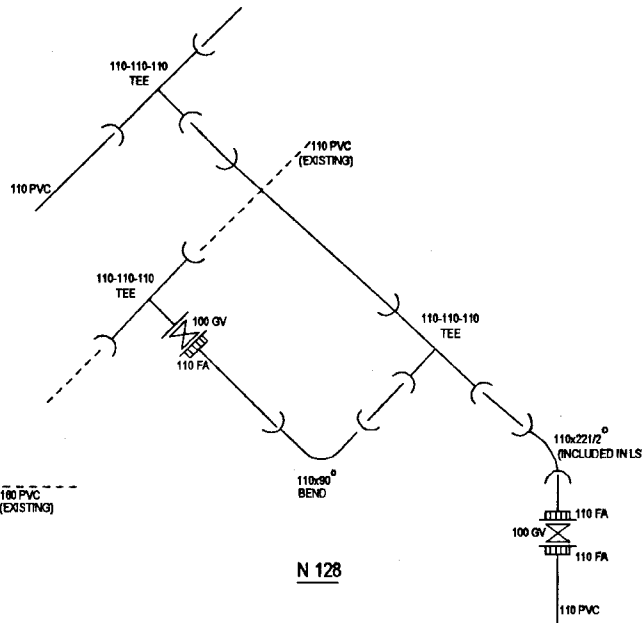
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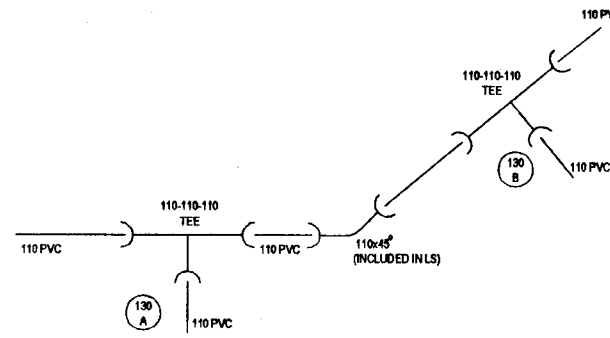
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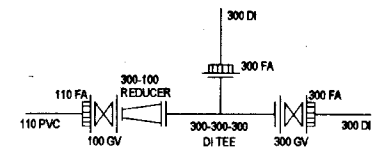
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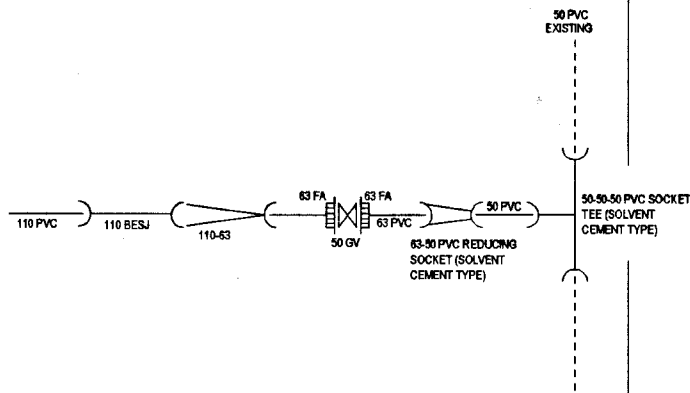
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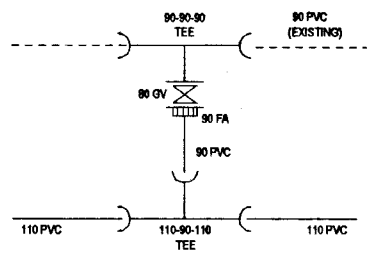
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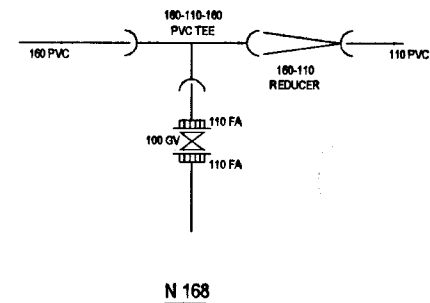
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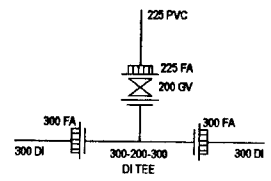
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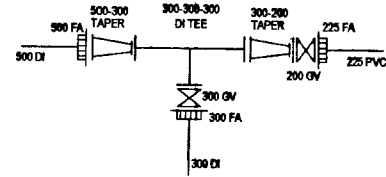
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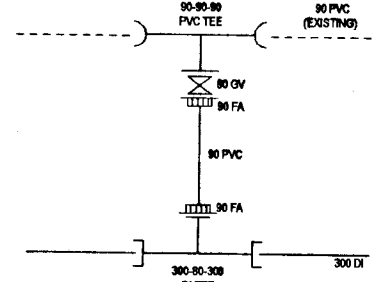
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	<p>DESIGNED: <i>[Signature]</i></p> <p>CHECKED: <i>[Signature]</i></p> <p>D.V. TEAM LEADER: <i>[Signature]</i></p>	<p>DRAWN: <i>[Signature]</i></p> <p>A.G.M. (P.W.D.) MEMBER: <i>[Signature]</i></p> <p>D.G.M. (P.W.D.) MEMBER: <i>[Signature]</i></p>	<p>REV.:</p> <p>DESCRIPTION:</p>
	<p>REV. DESCRIPTION</p>		



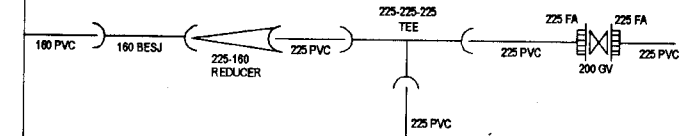
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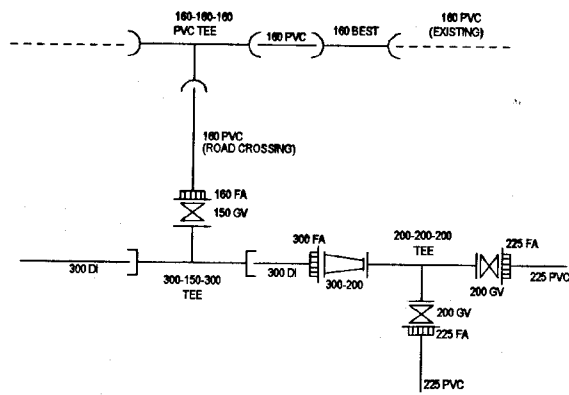
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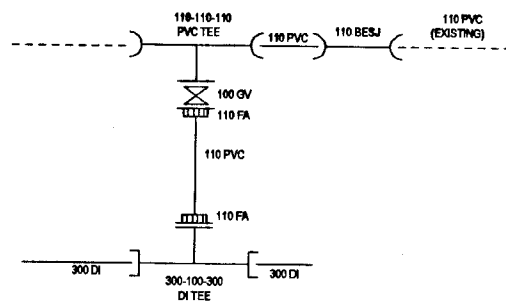
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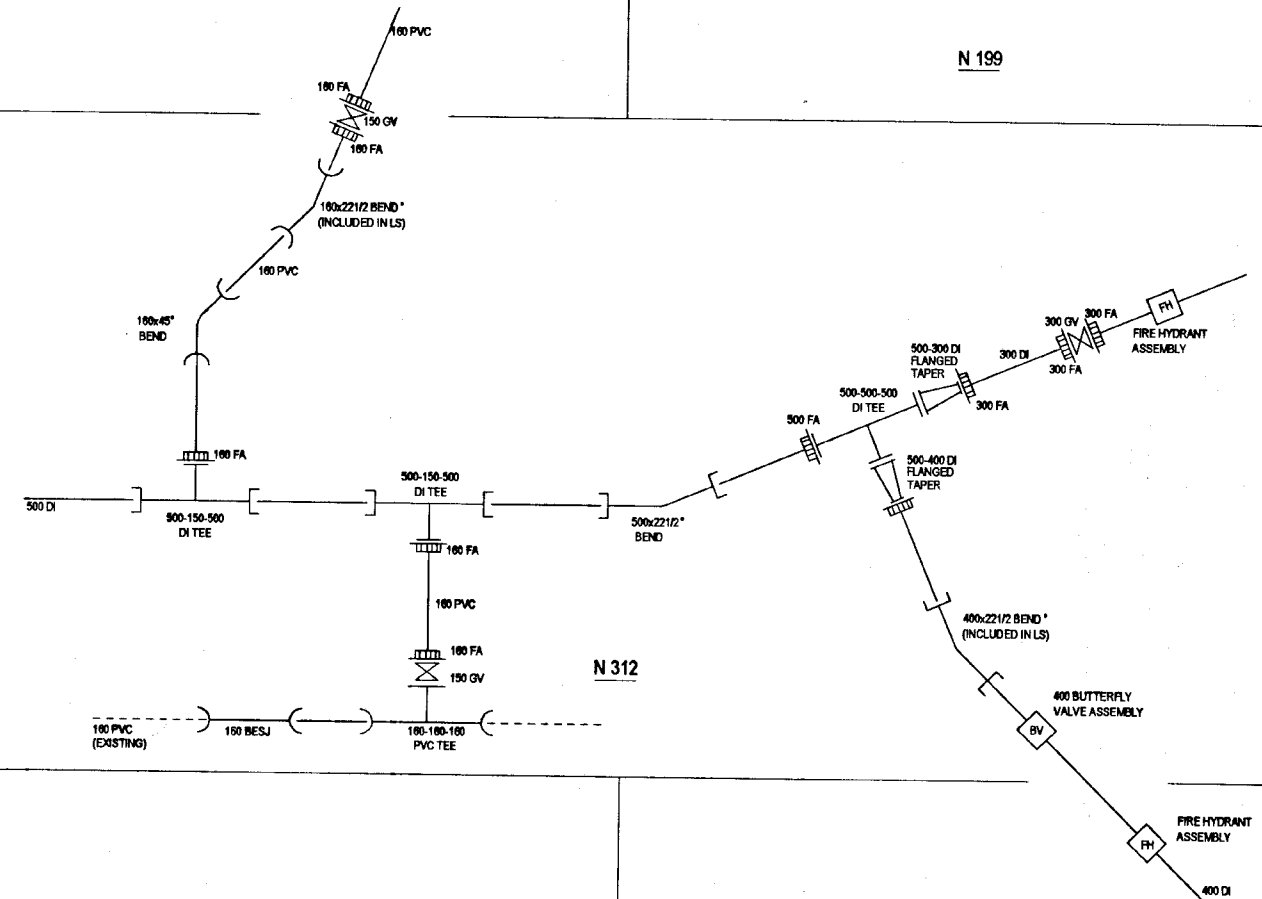
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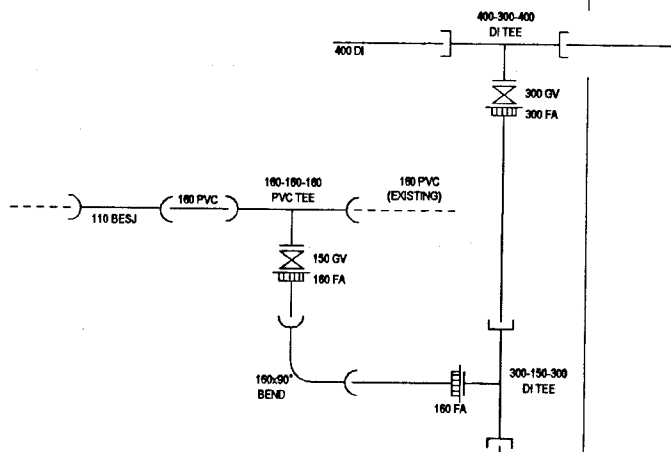
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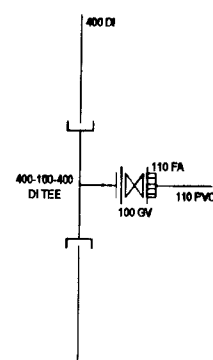
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N 312



N 354




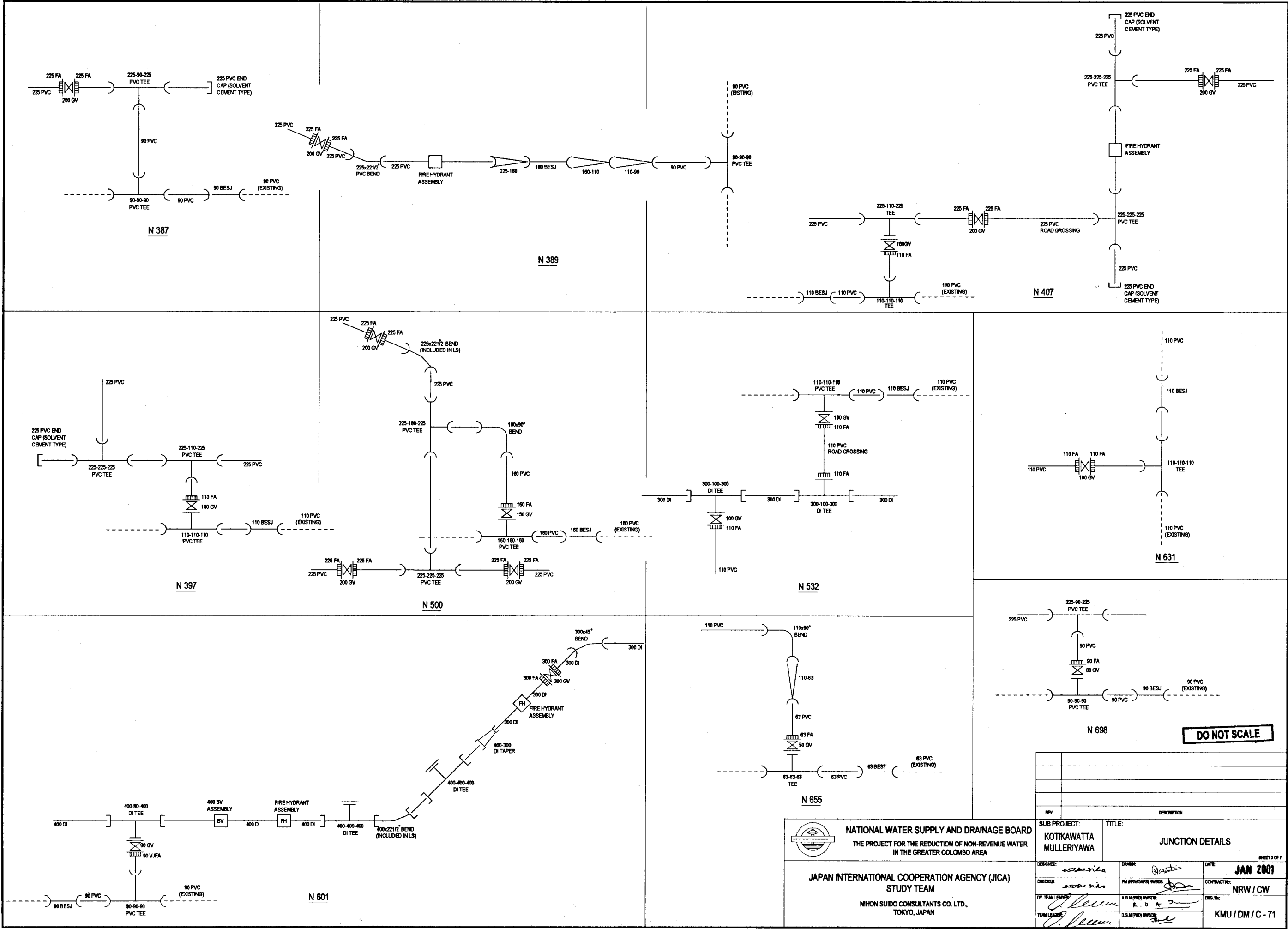
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N 373

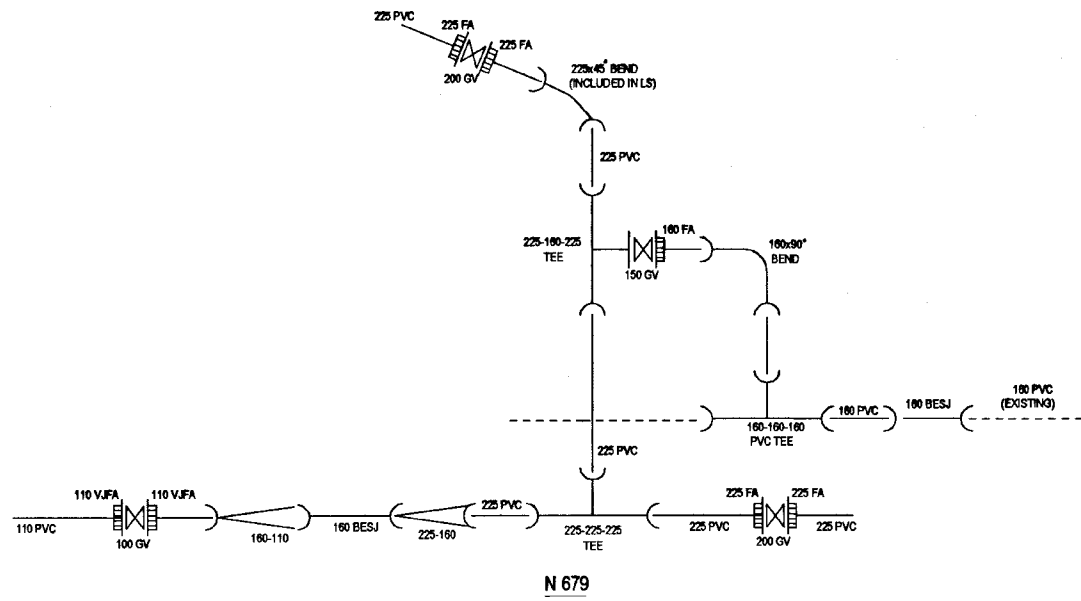
DO NOT SCALE

		<b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA		SUB PROJECT: <b>KOTIKAWATTA MULLERIYAWA</b>	TITLE: <b>JUNCTION DETAILS</b>
<b>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)</b> STUDY TEAM NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN				DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> DR. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	DATE: <b>JAN 2001</b> CONTRACT NO: <b>NRW / CW</b> DRG. NO: <b>KMU / DM / C - 70</b>
REV.		DESCRIPTION			
1		1			
2		2			
3		3			

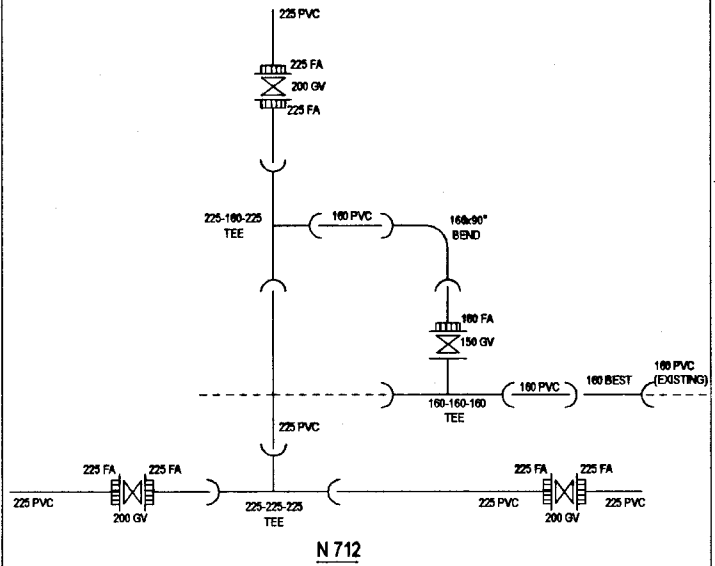


**DO NOT SCALE**

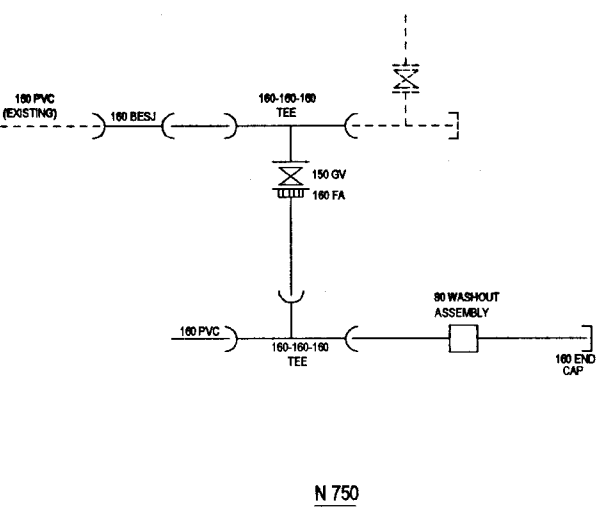
 <b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA		SUB PROJECT: <b>KOTIKAWATTA MULLERIYAWA</b>	TITLE: <b>JUNCTION DETAILS</b>
<b>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)</b> STUDY TEAM NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN		SHEETS OF 7 DATE: <b>JAN 2001</b>	CONTRACT NO: <b>NRW / CW</b>
DESIGNED: <i>[Signature]</i>	DRAWN: <i>[Signature]</i>	CHECKED: <i>[Signature]</i>	D.S.M (PMD) INCHG: <i>[Signature]</i>
DT. TEAM LEADER: <i>[Signature]</i>	A.S.M (PMD) INCHG: <b>R. D. A. J.</b>	D.S.M (PMD) INCHG: <i>[Signature]</i>	D.S.M (PMD) INCHG: <b>KMU/DM/C-71</b>



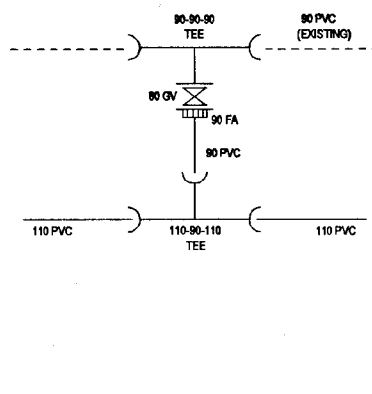
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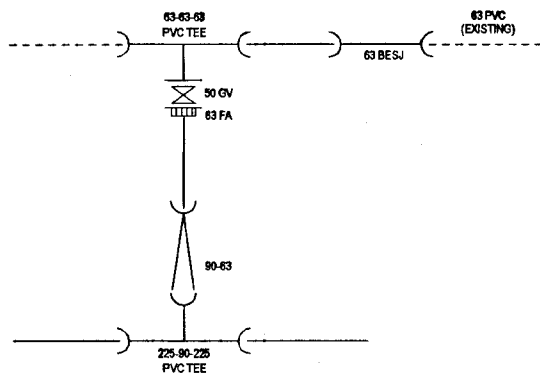
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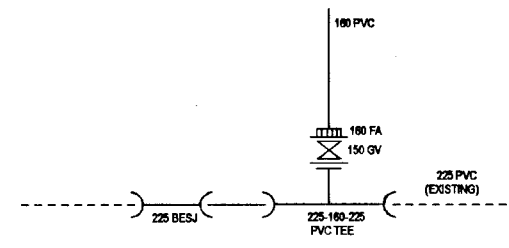
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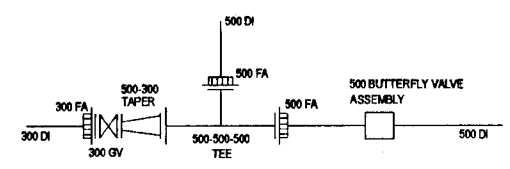
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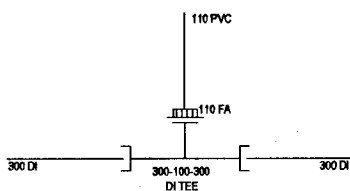
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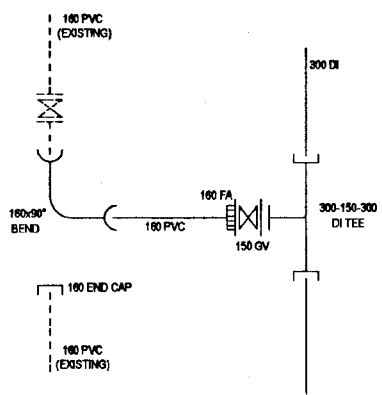
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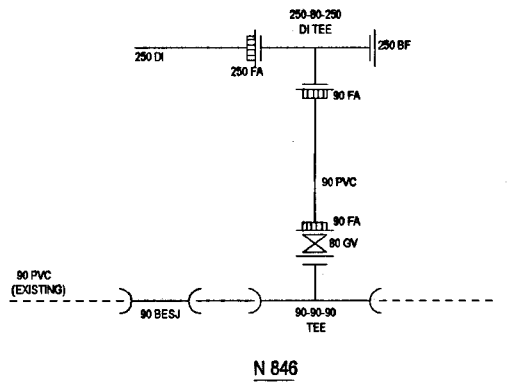
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N 834




N 837

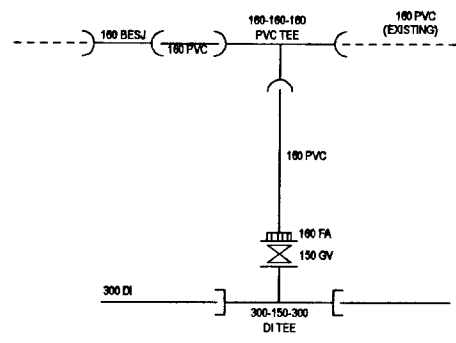


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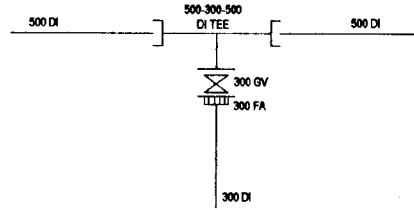
**DO NOT SCALE**

 <p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	<p>SUB PROJECT: KOTKAWATTA MULLERIYAWA</p>		<p>TITLE: JUNCTION DETAILS</p>	
	<p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM NIHON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>			
DESIGNED: <i>[Signature]</i>	DRAWN: <i>[Signature]</i>	DATE: JAN 2001		
CHECKED: <i>[Signature]</i>	PA (NWS&D) MANAGER: <i>[Signature]</i>	CONTRACT NO: NRW / CW		
DR. TEAM LEADER: <i>[Signature]</i>	A.S.M (P&I) MANAGER: <i>[Signature]</i>	DRG. NO: KMJ / DM / C - 72		
TEAM LEADER: <i>[Signature]</i>	D.S.M (P&I) MANAGER: <i>[Signature]</i>			

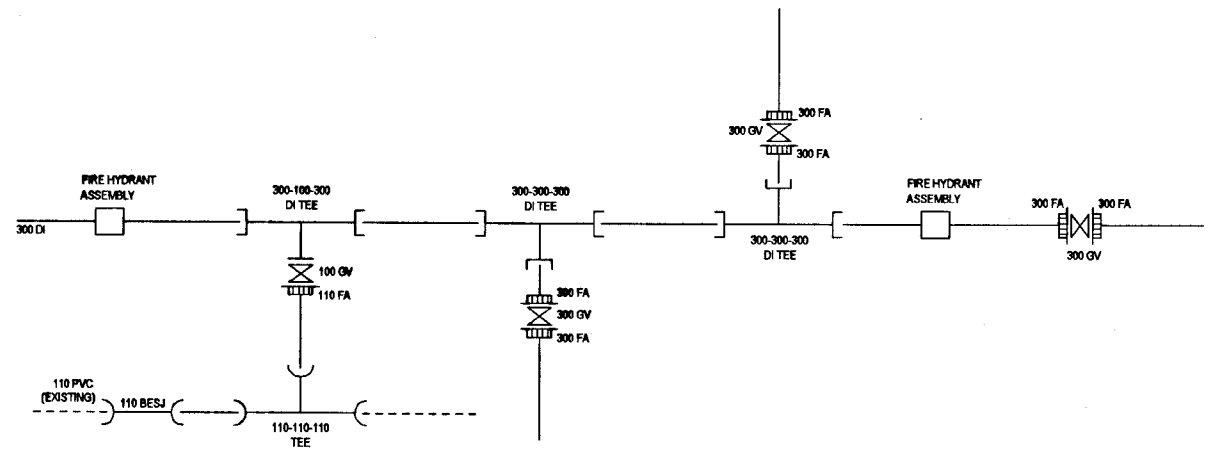




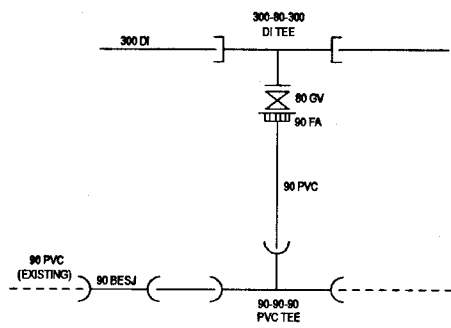
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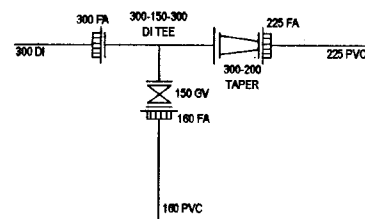
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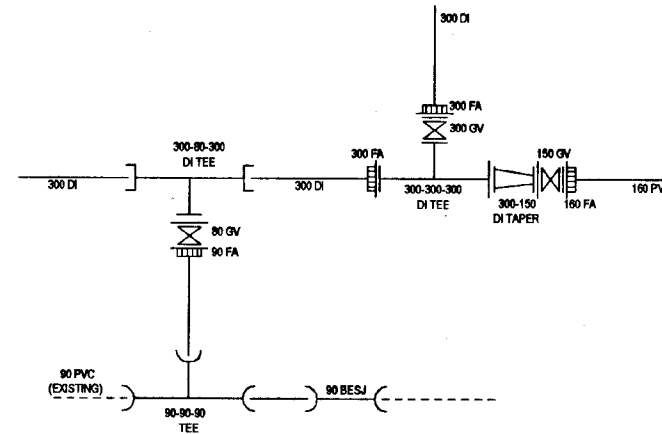
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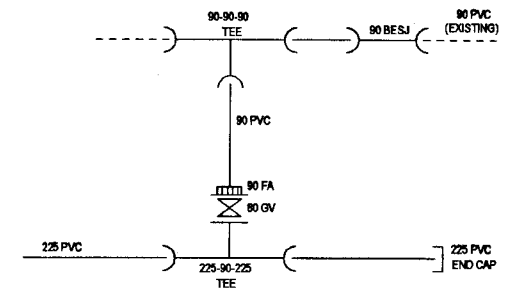
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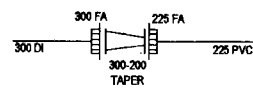
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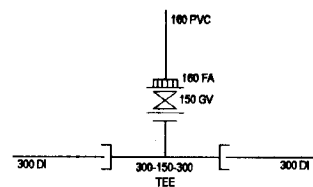
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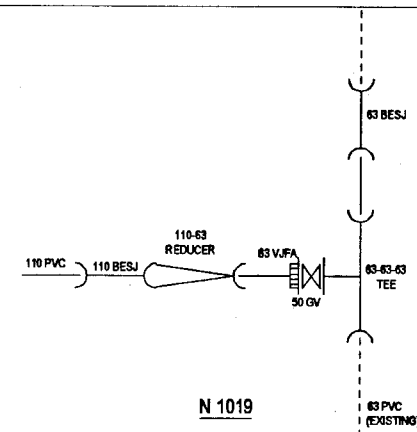
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N 1015




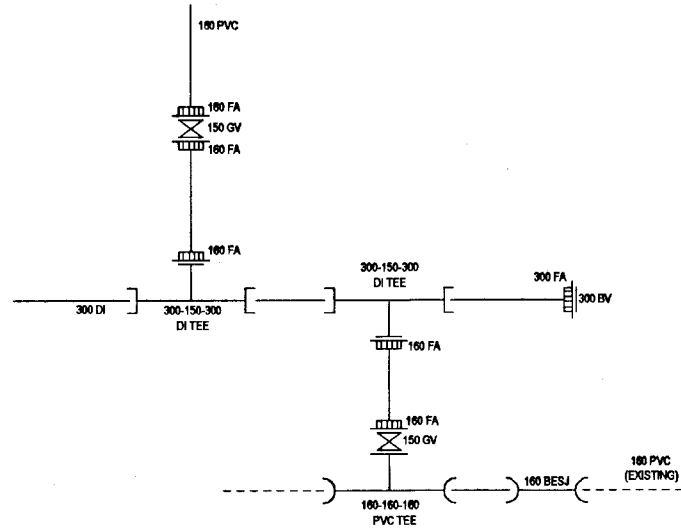
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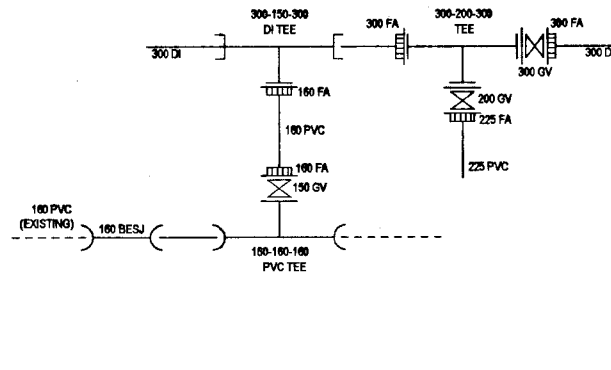
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**DO NOT SCALE**

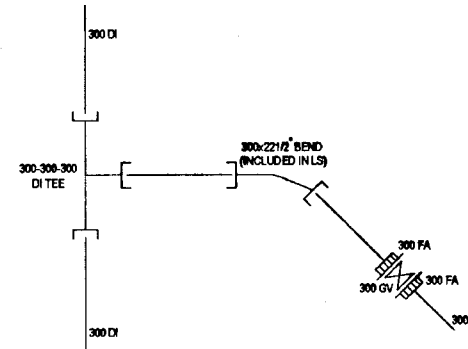
 <b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA		SUB PROJECT: <b>KOTIKAWATTA          MULLERIYAWA</b>	TITLE: <b>JUNCTION DETAILS</b>
DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> DT. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	DRAWN: <i>[Signature]</i> I.G.M (P.W.) NUMBER: <i>[Signature]</i> I.G.M (P.W.) NUMBER: <i>[Signature]</i> I.G.M (P.W.) NUMBER: <i>[Signature]</i>	DATE: <b>JAN 2001</b>	SHEET 6 OF 7 CONTRACT No: <b>NRW / CW</b> DRG. No: <b>KMU / DM / C - 73</b>



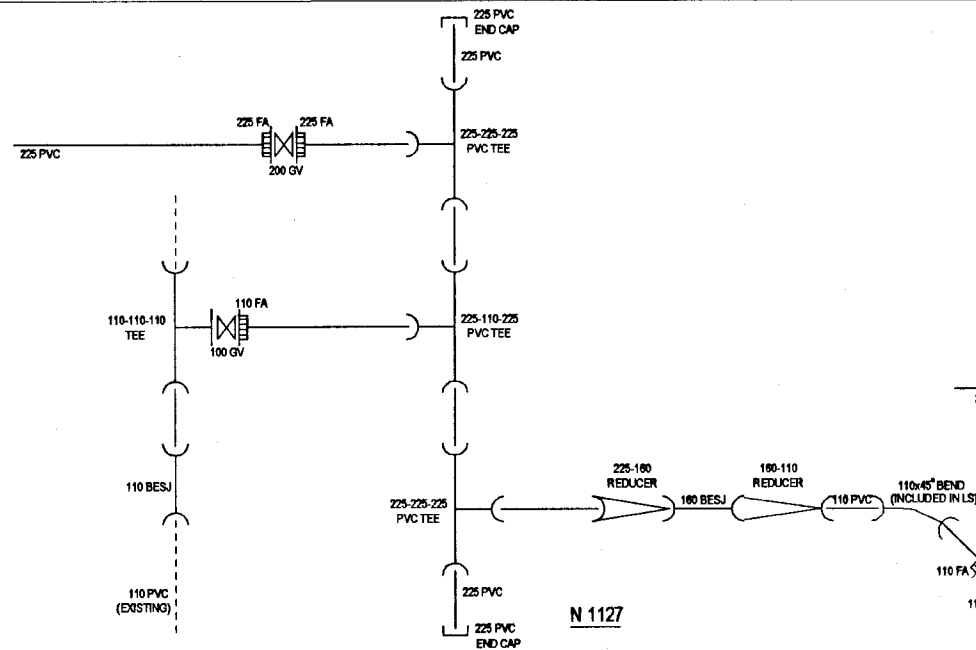
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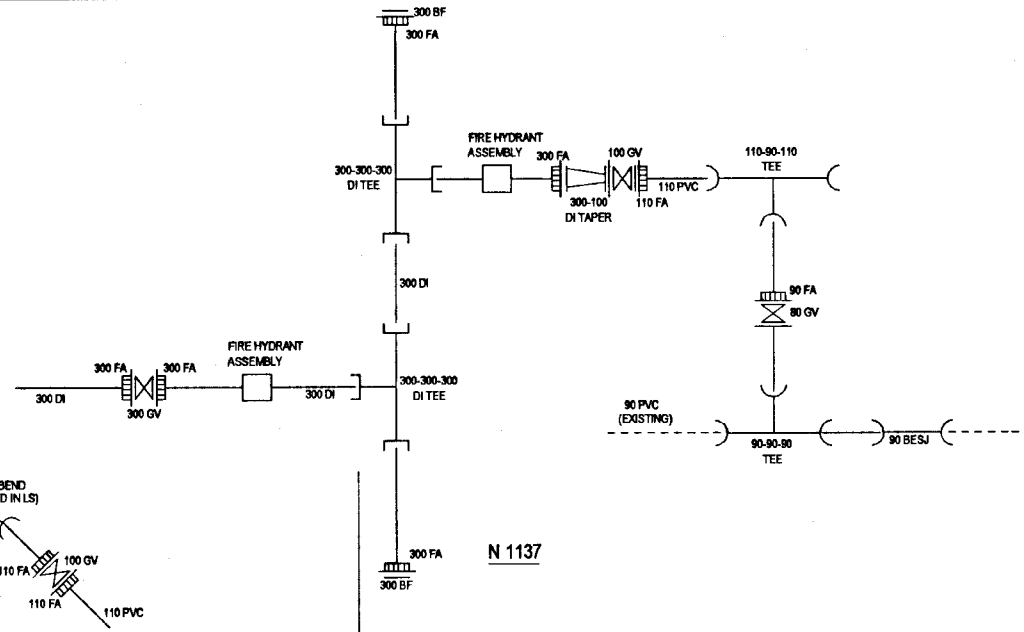
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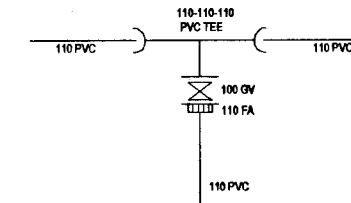
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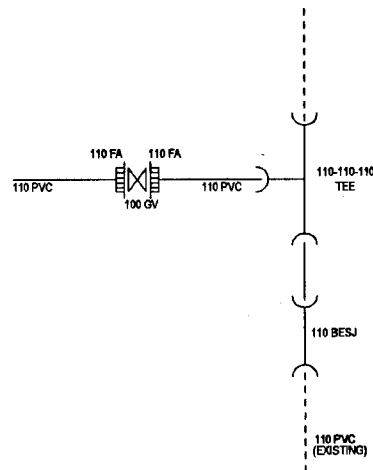
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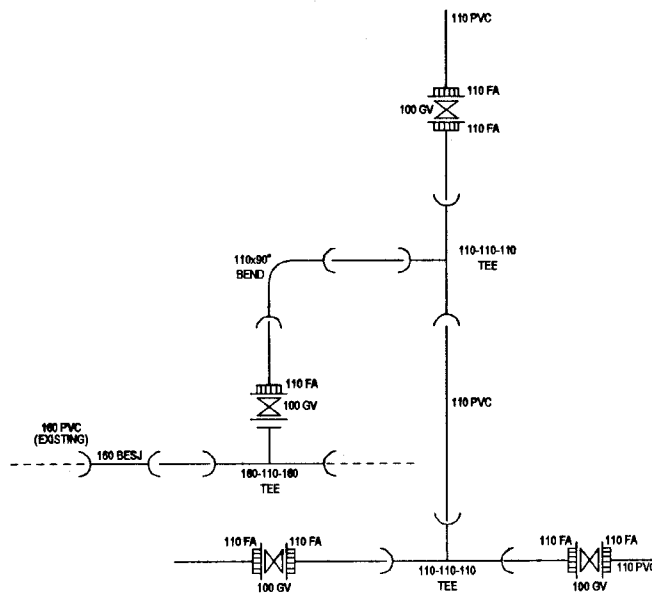
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N 1145




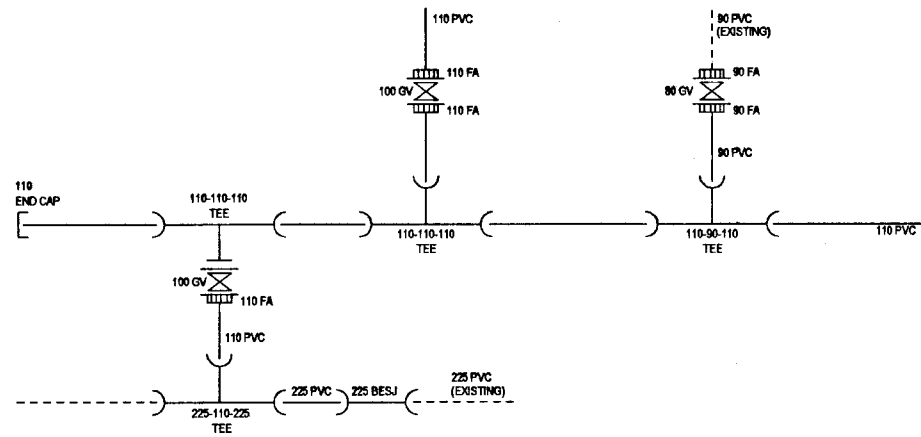
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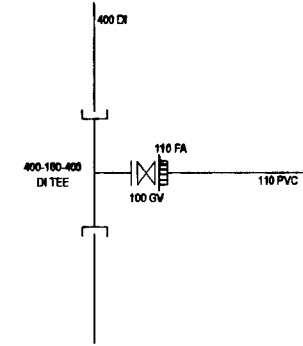
N 1215

**DO NOT SCALE**

 <p><b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p> <p><b>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)</b> STUDY TEAM</p> <p><b>NIHON SUIDO CONSULTANTS CO. LTD.,</b> TOKYO, JAPAN</p>	<p>SUB PROJECT: <b>KOTIKAWATTA MULLERIYAWA</b></p>	<p>TITLE: <b>JUNCTION DETAILS</b></p>	<p>DATE: <b>JAN 2001</b></p>	
	<p>DESIGNED: <i>[Signature]</i></p>	<p>DRAWN: <i>[Signature]</i></p>	<p>CONTRACT NO: <b>NRW/CW</b></p>	<p>SHEET 4 OF 7</p>
	<p>CHECKED: <i>[Signature]</i></p>	<p>PA (NRW/SAPS) NUMBER: <i>[Signature]</i></p>	<p>DRG. NO.:</p>	<p><b>KMU/DM/C-74</b></p>
	<p>GV. TEAM LEADER: <i>[Signature]</i></p>	<p>A.O.M (PEZ) NUMBER: <i>[Signature]</i></p>	<p>DRG. No.:</p>	
<p>TEAM LEADER: <i>[Signature]</i></p>	<p>D.O.M (PEZ) NUMBER: <i>[Signature]</i></p>			



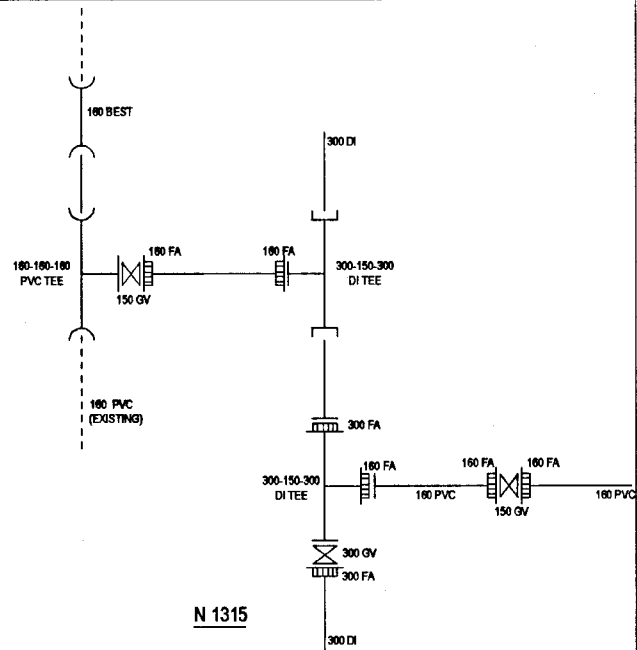
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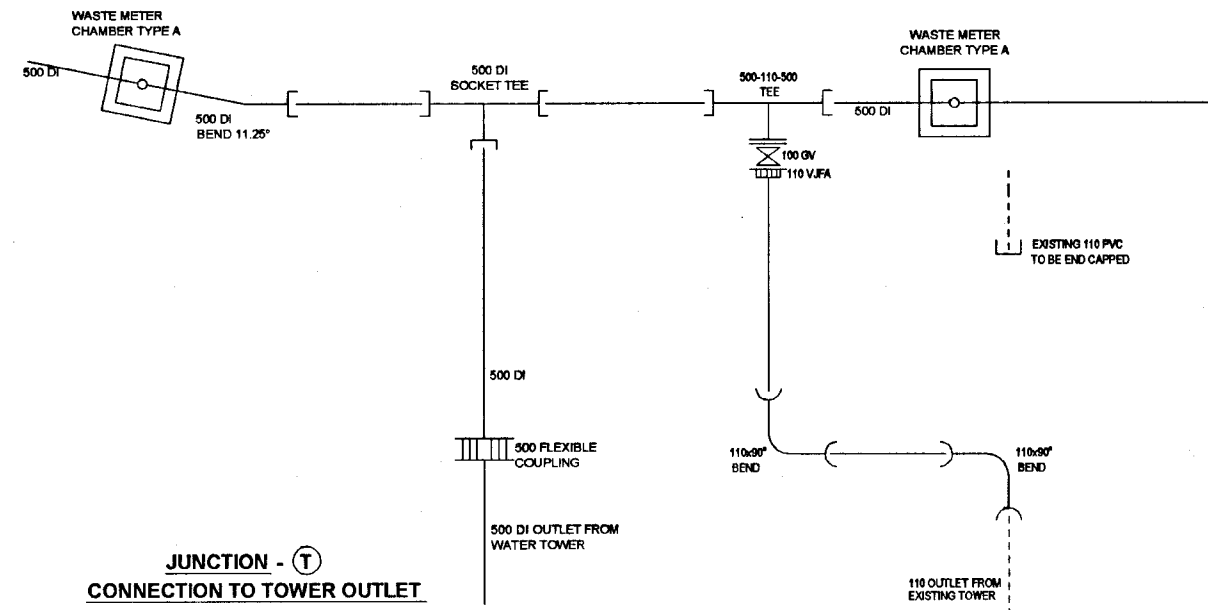
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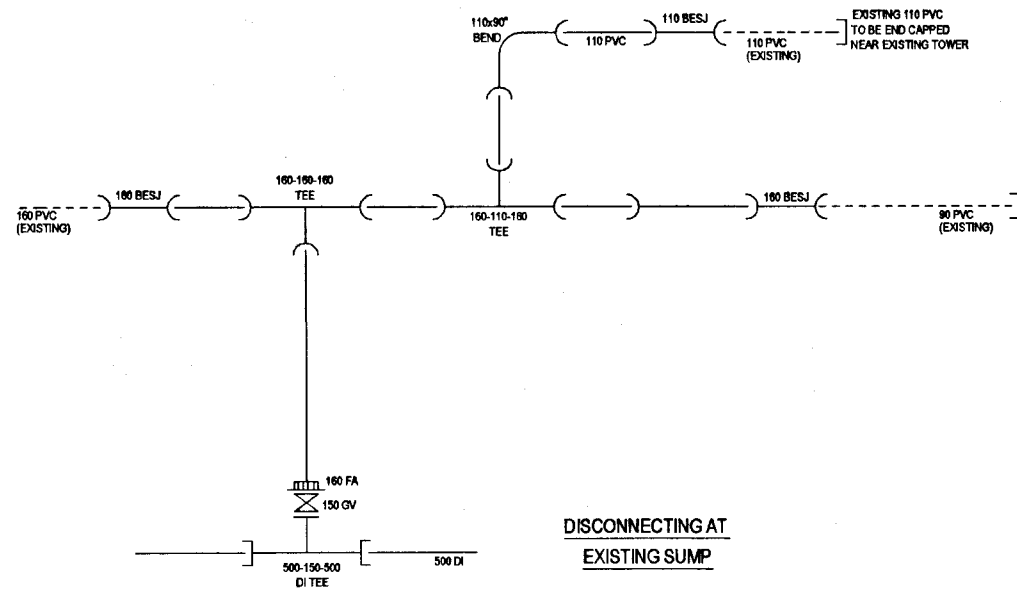
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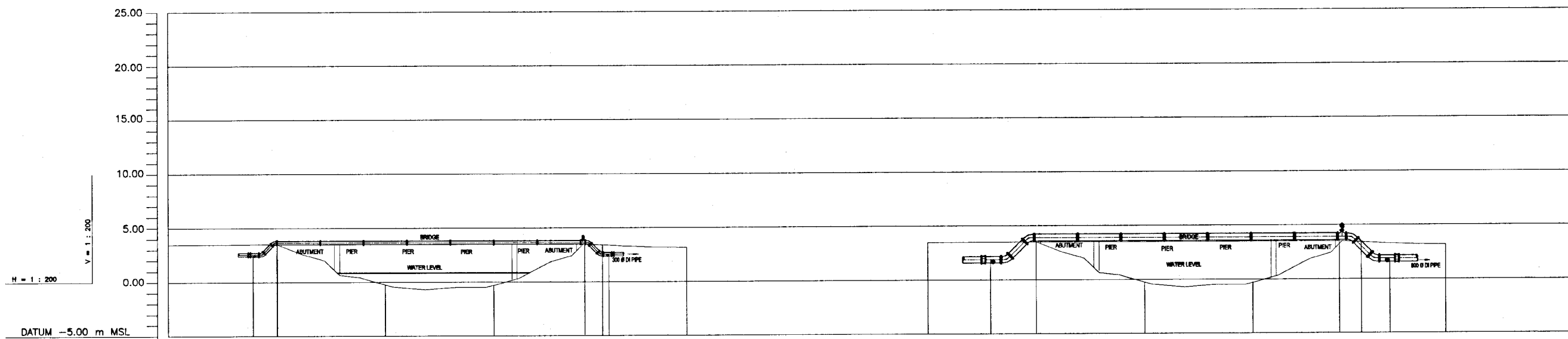
JUNCTION - T  
CONNECTION TO TOWER OUTLET



DISCONNECTING AT  
EXISTING SUMP

DO NOT SCALE

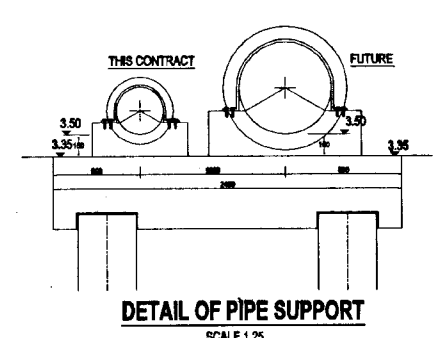
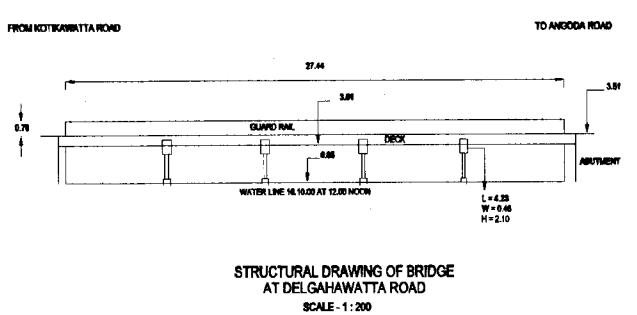
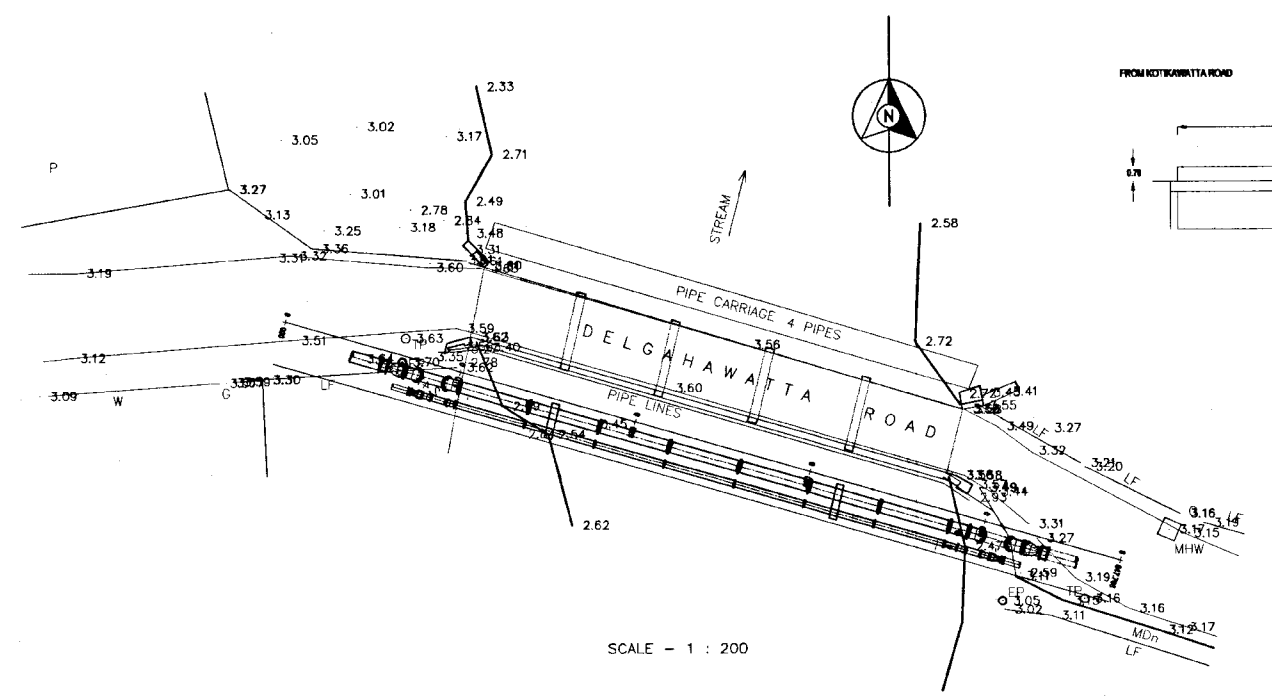
	<b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA		SUB PROJECT: <b>KOTIKAWATTA MULLERIYAWA</b>		TITLE: <b>JUNCTION DETAILS</b>	
	<b>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)</b> STUDY TEAM NIKON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN		DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> DV. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>		DATE: <b>JAN 2001</b> CONTRACT NO: <b>NRW/CW</b> DRG. NO: <b>KMU/DM/C-75</b>	



GROUND LEVEL (m)	3.47	3.51	-0.23	-0.23	3.60	3.42	3.18	3.47	3.51	-0.23	-0.23	3.42	3.18		
INVERT LEVELS (m)		1.70	3.50		3.60	1.80	3.42		1.70	3.50		3.60	1.80		
PIPE DETAILS		300 DI							300 DI						
DISTANCE (m)	0	7.82	10	20	30	40	47.768	0	5.80	10	20	30	40	42.63	47.768
SLOPE															
HORIZONTAL ANGLE (°)															

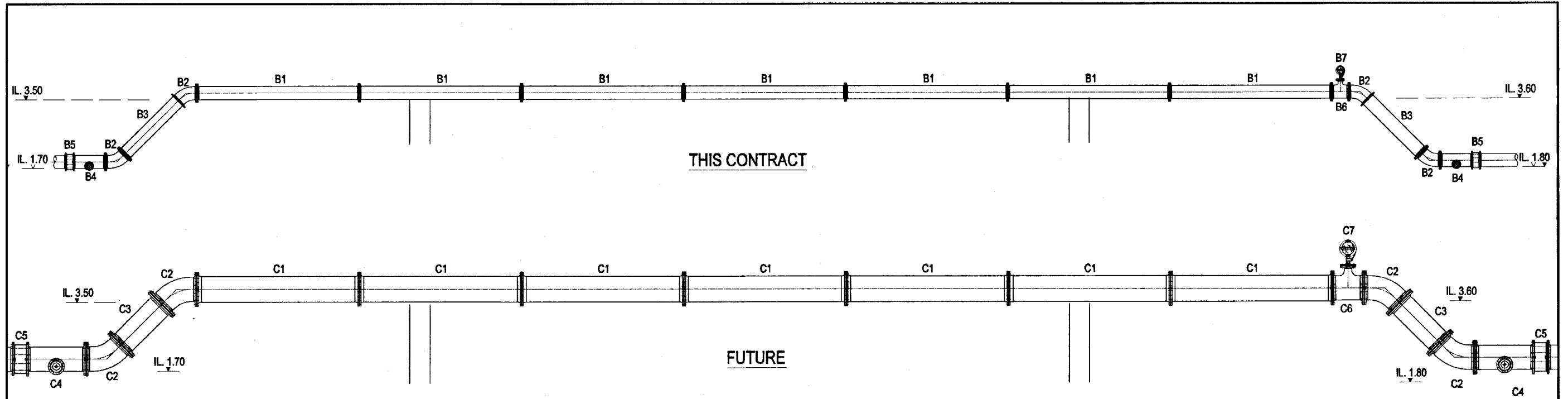
**THIS CONTRACT**

**FUTURE**



**DO NOT SCALE**

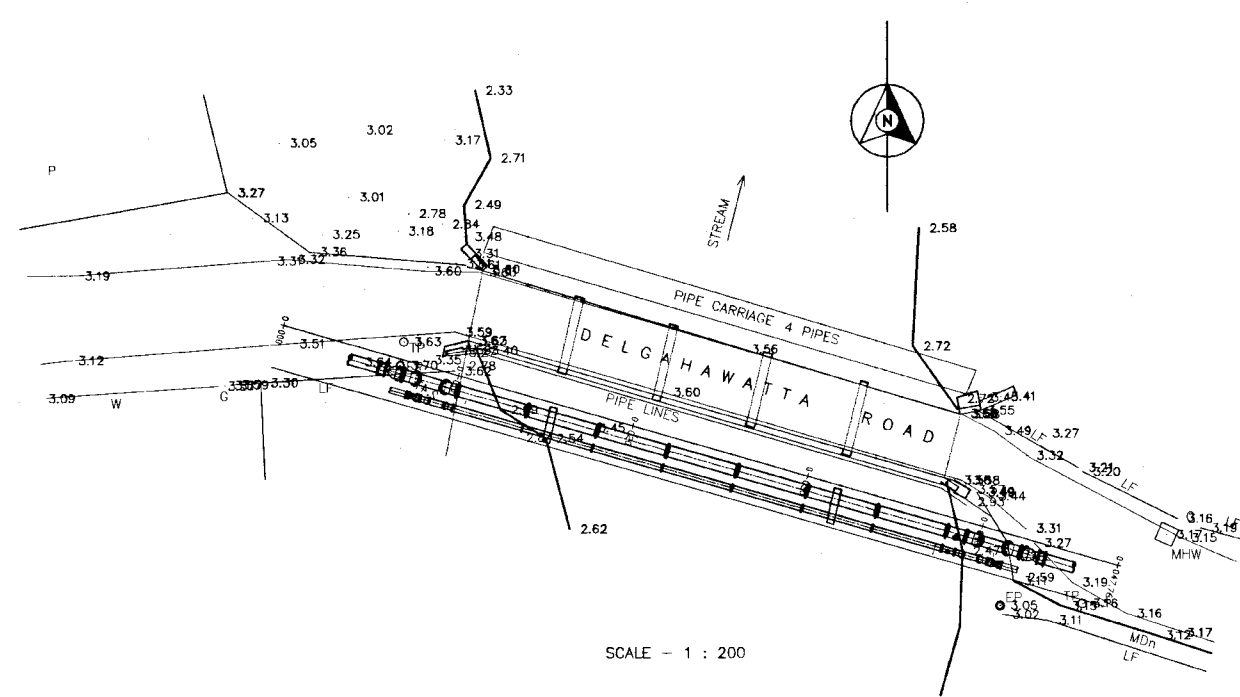
<p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM</p> <p>NIHON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>	<p>SUB PROJECT: KOTIKAWATTA MULLERIYAWA</p>	<p>TITLE: CANAL CROSSING AT DELGAHAWATTA ROAD BRIDGE - GENERAL ARRANGEMENT</p>	
	<p>DESIGNED: <i>[Signature]</i></p>	<p>DRAWN: <i>[Signature]</i></p>	<p>DATE: <b>JAN 2001</b></p>
	<p>CHECKED: <i>[Signature]</i></p>	<p>PI (NRWS&amp;P) INCHG: <i>[Signature]</i></p>	<p>CONTRACT NO: <b>NRW / CW</b></p>
	<p>DT. TEAM LEADER: <i>[Signature]</i></p>	<p>A.M. (PI) INCHG: <i>[Signature]</i></p>	<p>DRG. NO: <b>KMU / DM / C - 76</b></p>



THIS CONTRACT


FUTURE

PIPING SCHEDULE					REMARKS
PIPE No.	ND mm	DESCRIPTION	LENGTH m	QTY.	
B1	300	DVF PIPE PIECE	4	7	TO BE LAID UNDER THIS CONTRACT
B2	300	45° FLANGED BEND	-	4	
B3	300	DVF PIP	2	2	
B4	300	300x80 WASHOUT TEE	-	2	
B5	300	COUPLING	-	2	
B6	300	300x80 FLANGED TEE	-	1	
B7	300	80 AIR VALVE	-	1	
C1	600	DVF PIPE PIECE	4	7	TO BE LAID BY NWSDB AT A LATER DATE
C2	600	45° FLANGED BEND	-	4	
C3	600	DVF PIPE	1.5	2	
C4	600	600x100 WASHOUT TEE	-	2	
C5	600	COUPLING	-	2	
C6	600	600x100 FLANGED TEE	-	1	
C7	600	100 AIR VALVE	-	1	

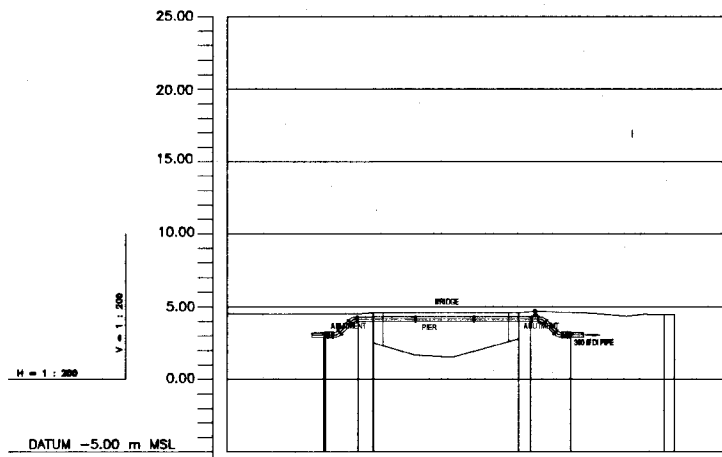


SCALE - 1 : 200

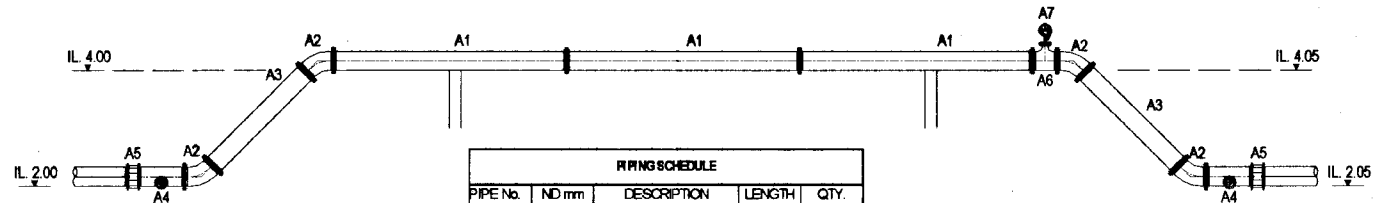
DO NOT SCALE

 <p><b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	<p>SUB PROJECT: <b>KOTIKAWATTA MULLERIYAWA</b></p>	<p>TITLE: <b>CANAL CROSSING AT DELGAHAWATTA ROAD BRIDGE - PIPING</b></p>
	<p>DESIGNED: <i>[Signature]</i></p> <p>CHECKED: <i>[Signature]</i></p> <p>BY TEAM LEADER: <i>[Signature]</i></p>	<p>DATE: <b>JAN 2001</b></p> <p>CONTRACT No: <b>NRW / CW</b></p>

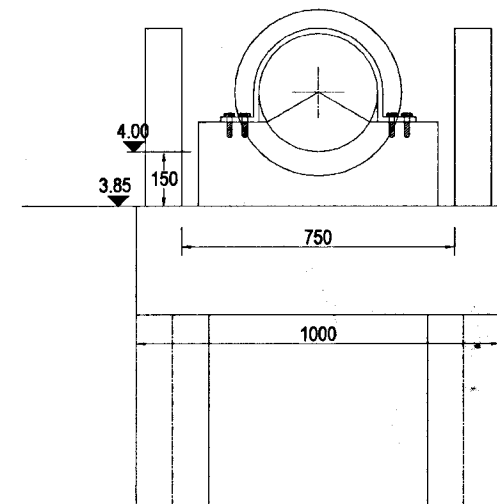
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
STUDY TEAM  
NIHON SUDO CONSULTANTS CO. LTD.,  
TOKYO, JAPAN



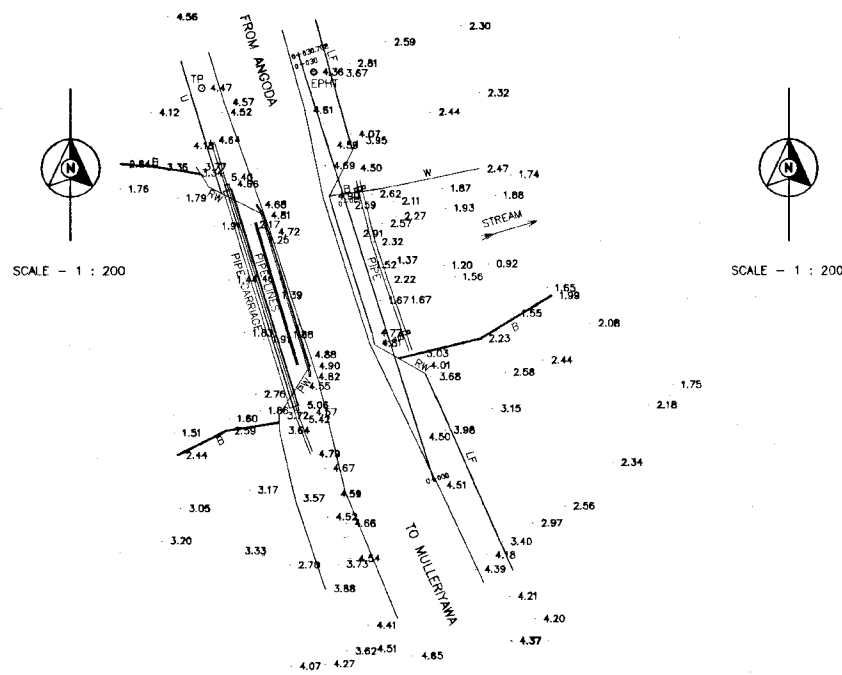
GROUND LEVEL (m)	4.51	2.80	2.80	4.45
INVERT LEVELS (m)	2.00	1.00	4.05	2.05
PIPE DETAILS	300 DI			
DISTANCE (m)	0	10	20	30
SLOPE	1:200			
HORIZONTAL ANGLE (°)				



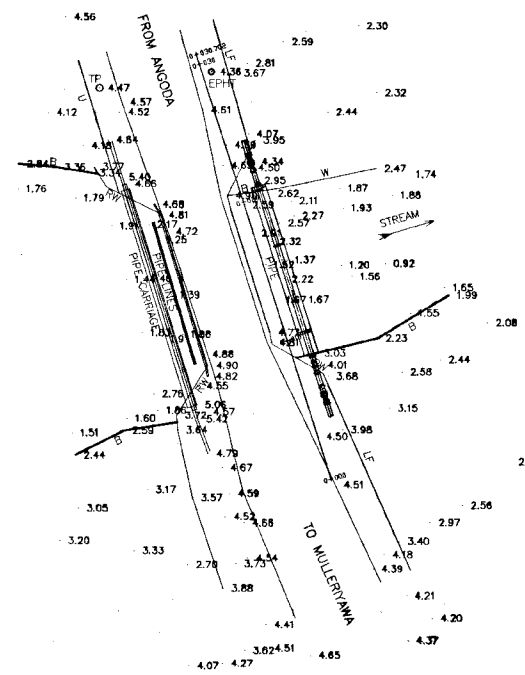
PIPING SCHEDULE				
PIPE No.	ND mm	DESCRIPTION	LENGTH m	QTY.
A1	300	D/F PIPE	4	3
A2	300	45° FLANGED BEND	-	4
A3	300	D/F PIPE	2	2
A4	300	300x80 WASH-OUT TEE	-	2
A5	300	COUPLING	-	2
A6	300	300x80 FLANGED TEE	-	1
A7	300	80 AIR VALVE	-	1



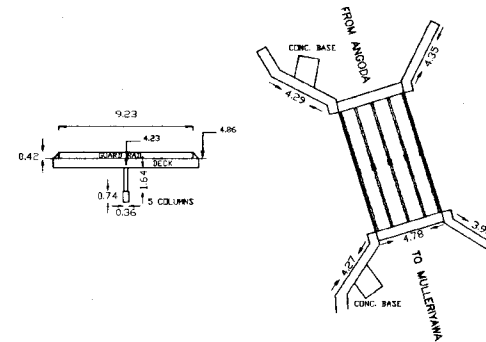
DETAIL OF PIPE SUPPORT  
SCALE 1-10



EXISTING PIPE LINE




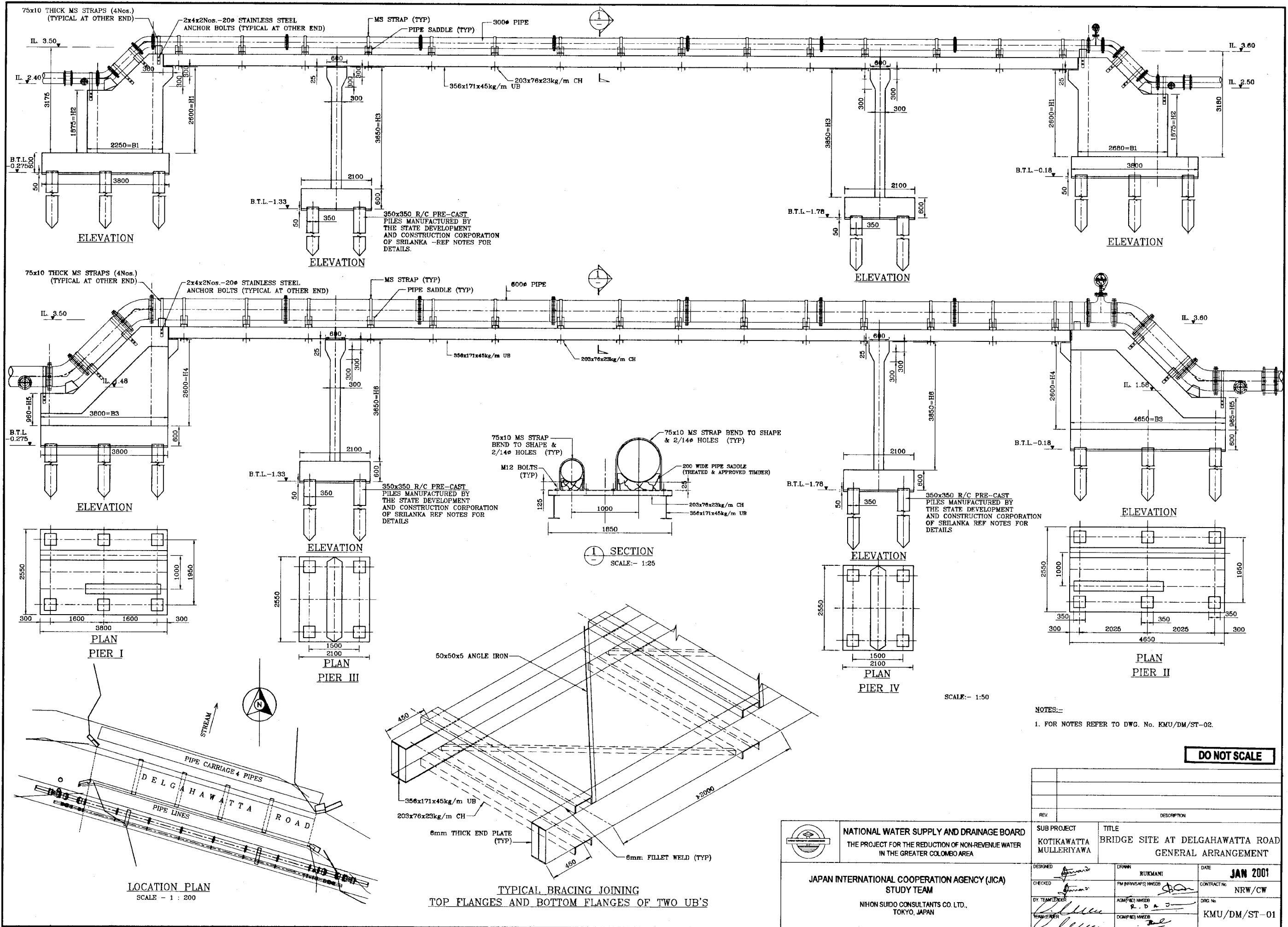
PROPOSED PIPE LINE



STRUCTURAL DRAWING OF BRIDGE AT  
ANGODA ROAD  
SCALE - 1 : 200


DO NOT SCALE

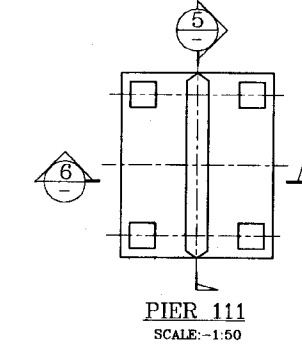
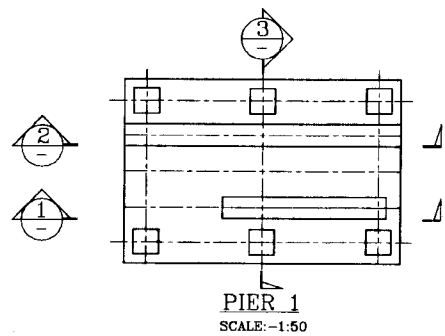
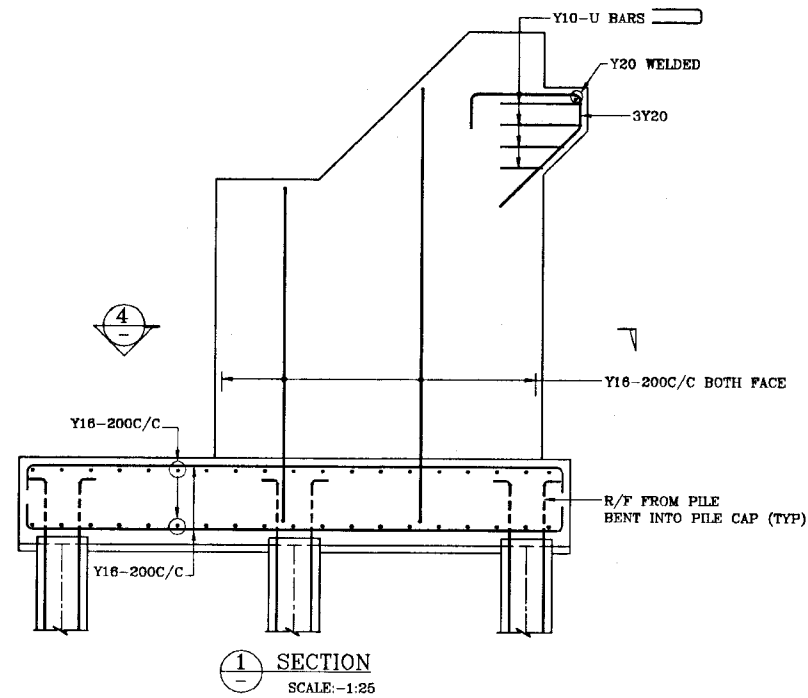
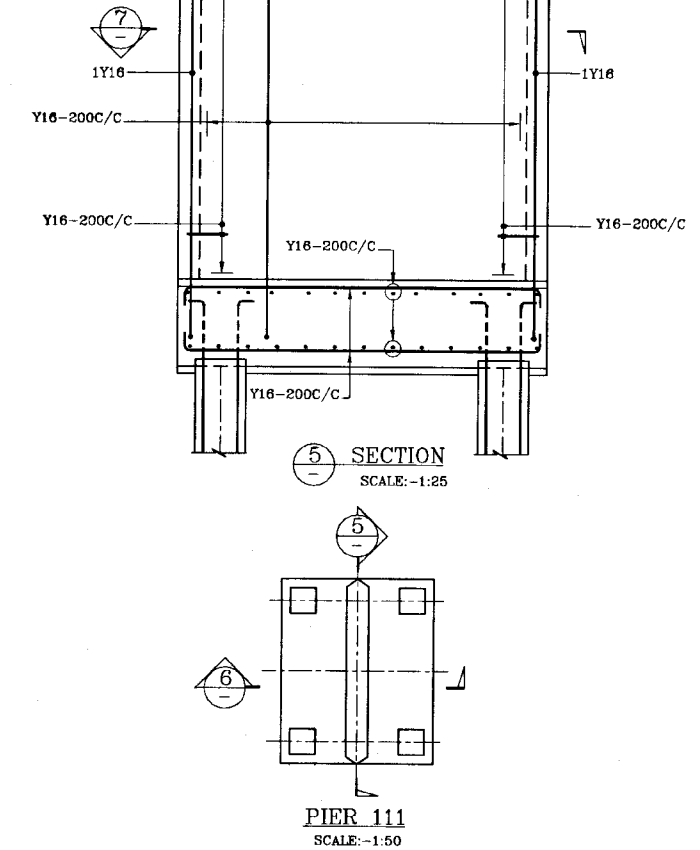
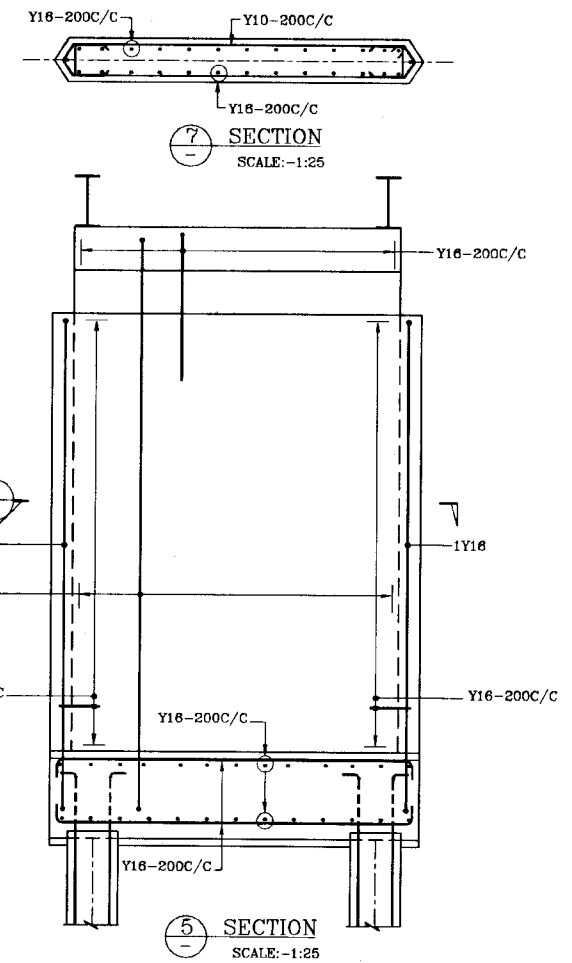
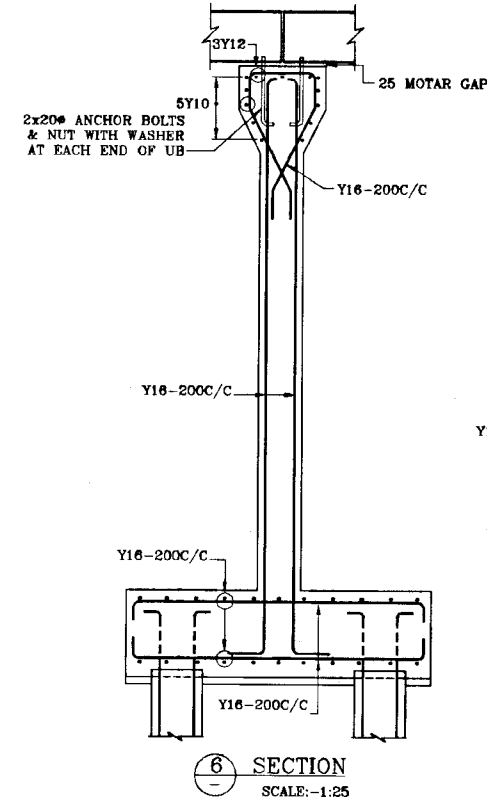
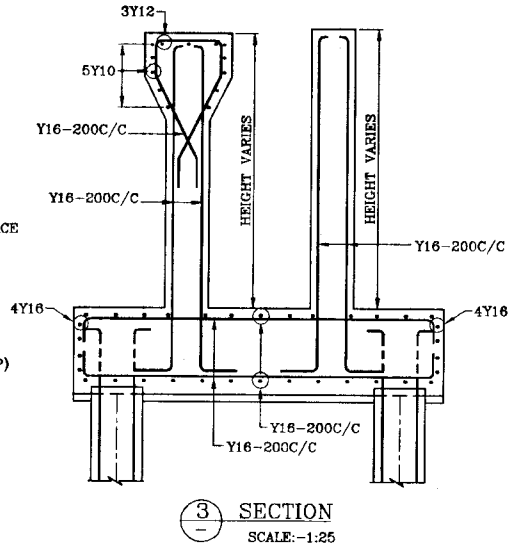
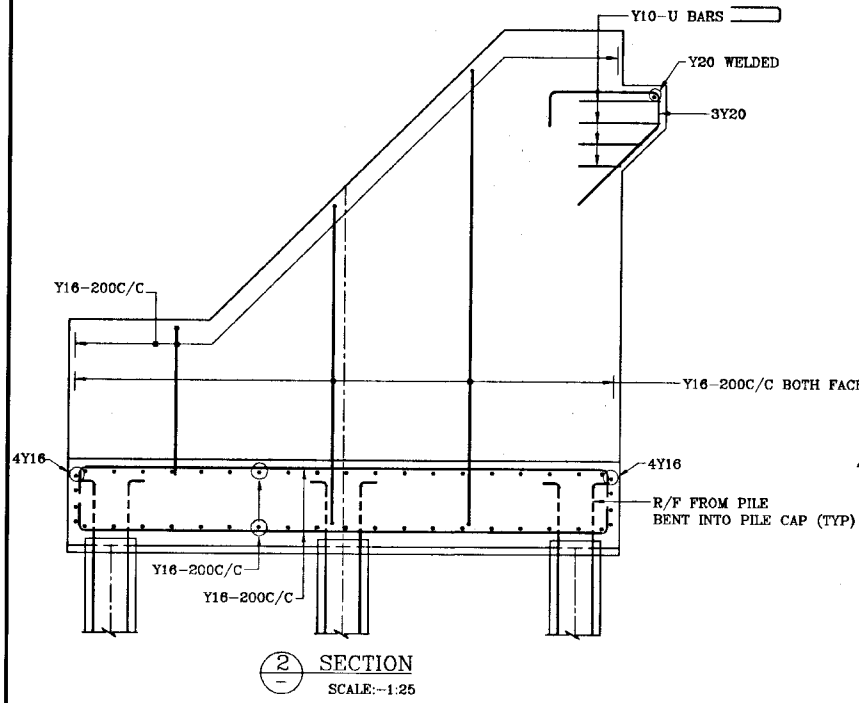
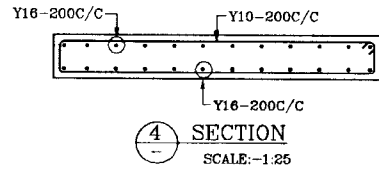
 <p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	SUB PROJECT:		TITLE:	
	KOTIKAWATTA MULLERIYAWA		CANAL CROSSING AT ANGODA ROAD BRIDGE - GENERAL ARRANGEMENT AND PIPING	
DESIGNED:	DATE:	DATE:	JAN 2001	
CHECKED:	BY (PROVISED) NUMBER:	CONTRACT NO.:	NRW/CW	
BY (TEAM LEADER):	A.S.H (PROV) NUMBER:	DRG. NO.:	KMU/DM/C-78	
TEAM LEADER:	D.S.H (PROV) NUMBER:			



NOTES:-  
 1. FOR NOTES REFER TO DWG. No. KMU/DM/ST-02.


**DO NOT SCALE**

 <b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA		SUB PROJECT <b>KOTIKAWATTA MULLERIYAWA</b>		TITLE <b>BRIDGE SITE AT DELGAHAWATTA ROAD GENERAL ARRANGEMENT</b>	
DESIGNED	<i>[Signature]</i>	DRAWN	<b>RUKMANI</b>	DATE	<b>JAN 2001</b>
CHECKED	<i>[Signature]</i>	PM (PROVINCIAL) INCHARGE	<i>[Signature]</i>	CONTRACTING	<b>NRW/CW</b>
BY TEAM LEADER	<i>[Signature]</i>	ACCOMPANYING INCHARGE	<b>R. D. A. J.</b>	DRG. No.	<b>KMU/DM/ST-01</b>
TEAM MEMBER	<i>[Signature]</i>	DEVELOPING INCHARGE	<i>[Signature]</i>		
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN					

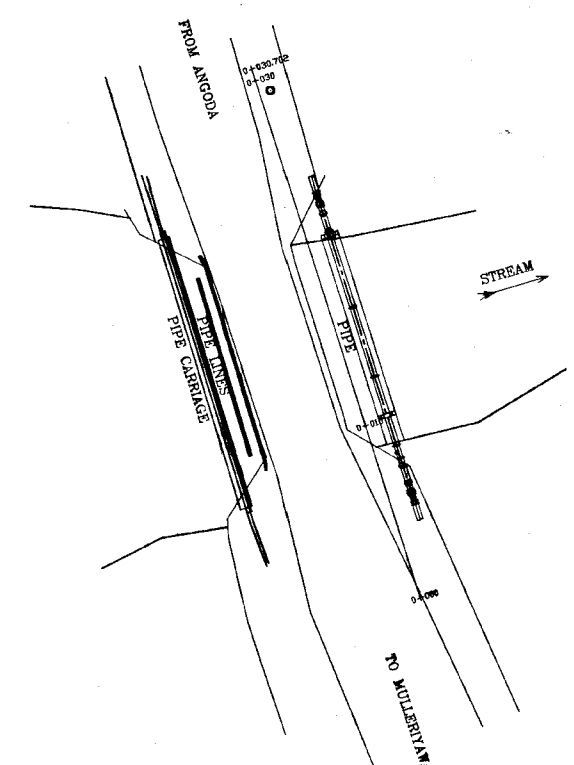
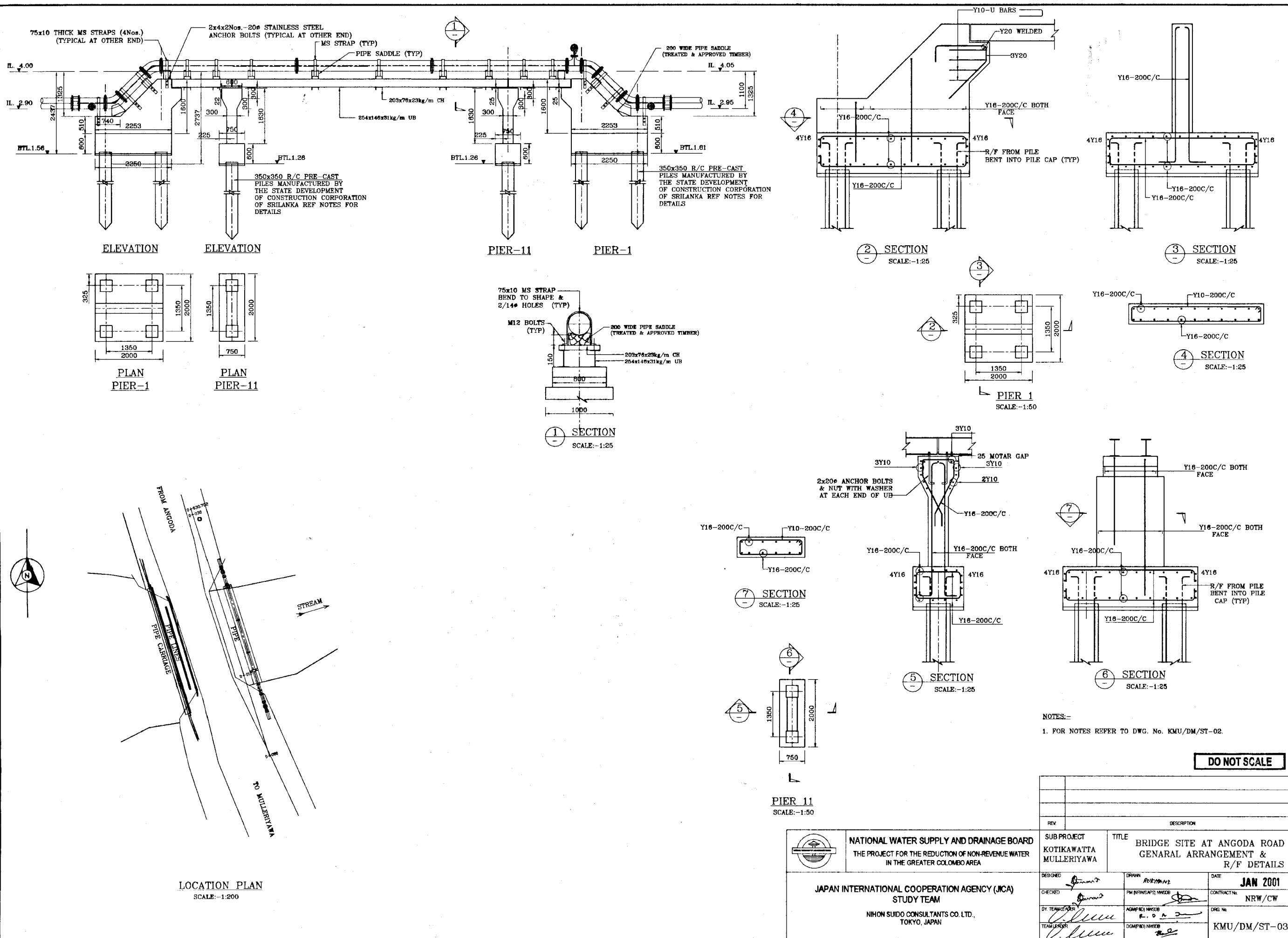


- NOTES:-
- Refer to Standard Drawings for general notes and standard details.
  - Structural concrete shall be as follows.
    - In-situ structural concrete - grade 25.
    - Pre-cast rc piles - grade 40.
  - Structural steel shall be grade 43 A and shall be hot dip galvanized after fabrication.
  - The safe working load of 350 x 350 pre-cast rc friction bearing piles shall be
    - 200 kN in direct vertical load (compression) and
    - 75 kN in direct vertical upward (tension)
  - At least one separate test pile (3.0 times working load) and a working pile (1.5 times working load) shall be tested at each bridge location.

**DO NOT SCALE**

	<b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA		SUB PROJECT KOTIKAWATTA MULLERIYAWA	TITLE BRIDGE SITE AT DELGAHAWATTA ROAD R/F DETAILS
	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN		DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> DT. TEAM LEADER: <i>[Signature]</i> TEAM MEMBER: <i>[Signature]</i>	DRAWN: RUKMANTI PM (NWS&D) MNSDB: <i>[Signature]</i> AGM (P) MNSDB: <i>[Signature]</i> DGM (P) MNSDB: <i>[Signature]</i>






LOCATION PLAN  
SCALE: 1:200

**DO NOT SCALE**

NOTES:-  
1. FOR NOTES REFER TO DWG. No. KMU/DM/ST-02.

 <b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA		SUB PROJECT KOTIKAWATTA MULLERIYAWA	TITLE BRIDGE SITE AT ANGODA ROAD GENERAL ARRANGEMENT & R/F DETAILS
		DESIGNED <i>[Signature]</i>	DRAWN <i>[Signature]</i>
<b>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)</b> STUDY TEAM NIPPON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN		CHECKED <i>[Signature]</i>	CONTRACT No. NRW/CW
		DY. TEAM LEADER <i>[Signature]</i>	ORG. No. KMU/DM/ST-03

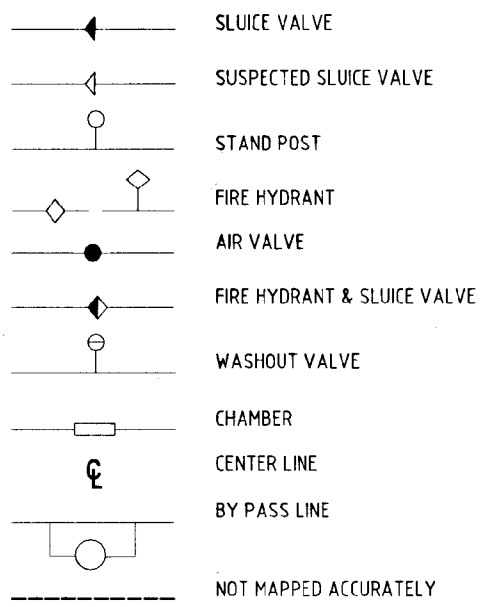
REV	DESCRIPTION

LEGEND  
 REHABILITATION



Rehabilitation of Medium & Large Dia. Pipe Network in CMC area Scraping and lining		
Contract No.	Drawing No	Name
NRWCW	RML/DM/RH/01	Mattakkuliya Centre Road
NRWCW	RML/DM/RH/02	Authmawatha Road
NRWCW	RML/DM/RH/03	Authmawatha Road
NRWCW	RML/DM/RH/04	Authmawatha Road
NRWCW	RML/DM/RH/05	St. Andrew's Road
NRWCW	RML/DM/RH/06	Muthuwella Mawatha
NRWCW	RML/DM/RH/07	Muthuwella Mawatha
NRWCW	RML/DM/RH/08	Ellie House Road
NRWCW	RML/DM/RH/09	Lawer St. Andrew's Place
NRWCW	RML/DM/RH/10	Collage Street
NRWCW	RML/DM/RH/11	Kotahena Street
NRWCW	RML/DM/RH/12	George R. De Silva Mawatha
NRWCW	RML/DM/RH/13	George R. De Silva Mawatha
NRWCW	RML/DM/RH/14	Sumanatissa Mawatha
NRWCW	RML/DM/RH/15	Sangaraja Mawatha
NRWCW	RML/DM/RH/16	Panchikawatta Road
NRWCW	RML/DM/RH/17	Grandpass Road
NRWCW	RML/DM/RH/18	Grandpass Road
NRWCW	RML/DM/RH/19	Galle Road
NRWCW	RML/DM/RH/20	Galle Road
NRWCW	RML/DM/RH/21	Galle Road
NRWCW	RML/DM/RH/22	Galle Road
NRWCW	RML/DM/RH/23	Galle Road
NRWCW	RML/DM/RH/24	Galle Road
NRWCW	RML/DM/RH/25	Galle Road
NRWCW	RML/DM/RH/26	Quarry Road
NRWCW	RML/DM/RH/27	Allan Mawatha
NRWCW	RML/DM/RH/28	Union Place
NRWCW	RML/DM/RH/29	Union Place
NRWCW	RML/DM/RH/30	Foster Lane
NRWCW	RML/DM/RH/31	Bridge Street
NRWCW	RML/DM/RH/32	Sir Macan Marker Street
NRWCW	RML/DM/RH/33	Dharmapala Mawatha
NRWCW	RML/DM/RH/34	Dharmapala Mawatha
NRWCW	RML/DM/RH/35	Dharmapala Mawatha
NRWCW	RML/DM/RH/36	Elvitigala Mawatha
NRWCW	RML/DM/RH/37	Elvitigala Mawatha
NRWCW	RML/DM/RH/38	Kirillapone Avenue
NRWCW	RML/DM/RH/39	Kirillapone Avenue
NRWCW	RML/DM/RH/40	High Level Road
NRWCW	RML/DM/RH/41	Dickman's Road
NRWCW	RML/DM/RH/42	Dickman's Road
NRWCW	RML/DM/RH/43	Kumarathunga Munidasa Mawatha
NRWCW	RML/DM/RH/44	Serpentine Road
NRWCW	RML/DM/RH/45	Havelock Road
NRWCW	RML/DM/RH/46	Havelock Road
NRWCW	RML/DM/RH/47	Havelock Road
NRWCW	RML/DM/RH/48	Havelock Road
NRWCW	RML/DM/RH/49	Havelock Road
NRWCW	RML/DM/RH/50	Sea Street
NRWCW	RML/DM/RH/51	St. Anthony's Mawatha
NRWCW	RML/DM/RH/52	Sri Ramanathan Mawatha


LEGEND

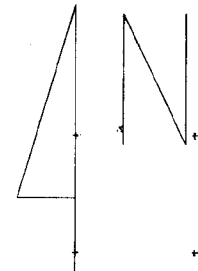


Notes:

1. Plan of the existing distribution main and the junction details extract from the 1:1000 Drawings of the NWS&DB and the details at the junction should be verified at site.
2. Longitudinal section produced from the spot levels given in the 1:1000 Drgs and pipe diameters for existing pipes are inches and levels are in meters.
3. All the accessories on the mains and valves immediately on Branch pipes proposed for scraping and lining should be replaced with new accessories as per Standard Drawing No STD/C-10.
4. The shop drawings of the proposed main to be produced after a utility tracing. (Utilities like Telecom Cables, Electrical Cables, Sewer Lines, Storm Water Pipes /Drains etc. to avoid damage to them)
5. For standard details refer Standard Drgs. STD/C/01-10
6. All existing pipes proposed for rehabilitation are cast iron pipes.
7. The each of ten random sample pipes investigated shows that existing Medium and Large Diameter pipes are at a depth range of 0.55-1.35m and the existing small diameter pipes are at a depth range of 0.5-1.3m
8. The minimum size of the by-pass should be of 200 mm in Dia. wherever possible.
9. Cross reference to be made for Drawing Nos. Starting from RML/DM/RF, RML/DM/RF, RS/DM/RF and RS/DM/RF.
10. Scraping and Lining to be carried out for the sections given and Valve locations and tight bends and tees to be used as entry points of lining. The lining of the removed pieces to be carried out above ground and fix it backs with necessary coupling.

DO NOT SCALE

 <p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD          THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER          IN THE GREATER COLOMBO AREA</p>	SUB PROJECT: GENERAL TITLE: KEY PLAN REHABILITATION OF MEDIUM & LARGE DIAMETER PIPES	
	DESIGNED: <i>Dr. M. S. Jayasinghe</i> CHECKED: <i>M. S. Jayasinghe</i> DR. TEAM LEADER: <i>M. S. Jayasinghe</i> TEAM LEADER: <i>M. S. Jayasinghe</i>	DRAWN: THARANGA PM (NRWS&D) IN-CHARGE: <i>[Signature]</i> A.G.M. (P&I) IN-CHARGE: R. D. A. J. D.G.M. (P&I) IN-CHARGE: <i>[Signature]</i>



**LEGEND**

— PROPOSED PIPE REINFORCEMENT



Reinforcement of Medium & Large Dia. Pipe Network in CMC area		
Contract No.	Drawing No	Name
NRW/CW	RML/DM/RF/01	Dematagoda Road
NRW/CW	RML/DM/RF/02	Dematagoda Road/Reservoir road
NRW/CW	RML/DM/RF/03	School Lane
NRW/CW	RML/DM/RF/04	Prince Of Wales Avenue
NRW/CW	RML/DM/RF/05	Prince Of Wales Avenue
NRW/CW	RML/DM/RF/06	Sir Jeims Peiris Mawatha/Nawam Mawatha
NRW/CW	RML/DM/RF/07	R. A De Mell Mawatha/ Perahara Mawatha
NRW/CW	RML/DM/RF/08	Aiwis Place
NRW/CW	RML/DM/RF/09	Mart Road/Sri Nigrodharama Mawatha
NRW/CW	RML/DM/RF/10	Saranapala Himi Mawatha
NRW/CW	RML/DM/RF/11	Saranapala Himi Mawatha
NRW/CW	RML/DM/RF/12	Stace Road
NRW/CW	RML/DM/RF/13	Stace Road
NRW/CW	RML/DM/RF/14	Ward Place
NRW/CW	RML/DM/RF/15	Ward Place
NRW/CW	RML/DM/RF/16	Ward Place
NRW/CW	RML/DM/RF/17	Bloemandhal Road
NRW/CW	RML/DM/RF/18	Port Access Road
NRW/CW	RML/DM/RF/19	Port Access Road
NRW/CW	RML/DM/RF/20	Thimbirigasyaya Road
NRW/CW	RML/DM/RF/21	Mahakumarage Mawatha

**LEGEND**

- SLUICE VALVE
- SUSPECTED SLUICE VALVE
- STAND POST
- FIRE HYDRANT
- AIR VALVE
- FIRE HYDRANT & SLUICE VALVE
- WASHOUT VALVE
- CHAMBER
- CENTER LINE
- BY PASS LINE
- NOT MAPPED ACCURATELY

**Notes:**

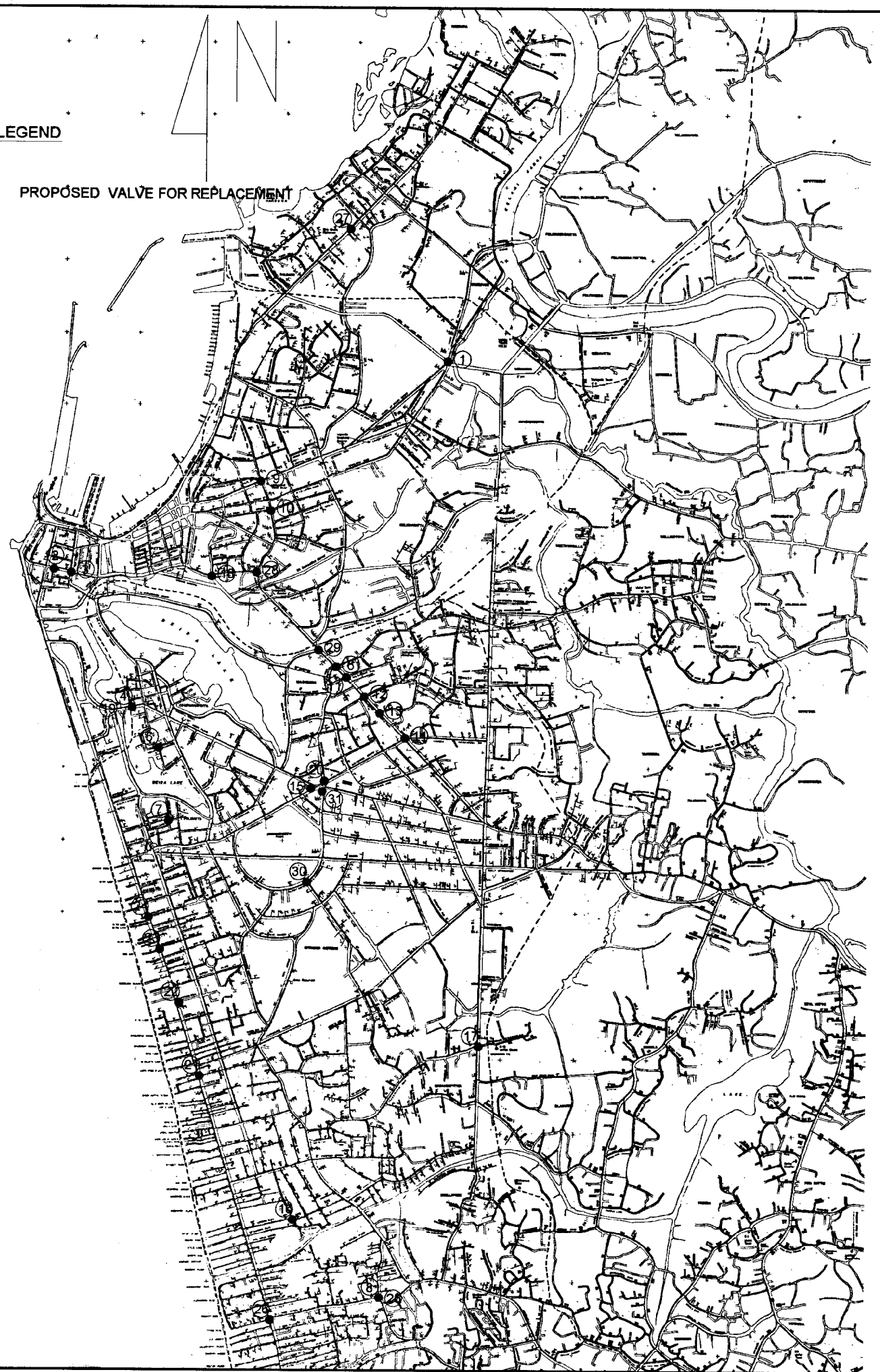
1. Plan of existing distribution main and the junction details extract from the 1:1000 Drawings of the NWS&DB and the details at the junction should be verified at site.
2. Longitudinal section produced from the spot level given in the 1:1000 Drgs and pipe diameters for the proposed pipe lines are in mms and existing pipes are inches and levels are in meters. (The Port Access Road and Pipe Crossings at Stace Road & Navam Mawatha Bridge are based on topographic survey.)
3. All the interconnections and accessories on the proposed main should be as per the given drawing details and Standard Drawings. STD/C-10
4. When new pipe connecting to the existing main please refer the connection detail given in Drawing No. STD/C-10.
5. The shop drawings of the proposed main to be produced after a topographic survey and utility tracing. (Utilities like Telecom Cables, Electrical Cables, Sewer Lines, Storm Water Pipes /Drains etc. to avoid damage to them )
6. For Standard Drgs. Please refer STD/C-01 to 11.
7. All existing pipes connecting to the reinforcement pipes are cast iron pipes except mains laid under Base Line Project and Steel main at Walls Lane.
8. All the proposed mains to be DI Pipes and Fittings except pipe bridge crossings.
9. The each of ten random sample pipes investigated shows that existing Medium and Large Diameter pipes are at a depth range of 0.55-1.35m and the existing small diameter pipes are at a depth range of 0.5-1.3m
10. Cross reference to be made for Drawing Nos. Starting from RML/DM/RH, RML/DM/RF RS/DM/RP and RS/DM/RH.
11. Bends to be protected using thrust blocks as per Standard Drawings. STD/C-08
12. Commissioning of the Reinforcement Mains to be Carried out in steps by Closing the Tapping Off from Transmission Main to the Existing System. This Process to be Carried out When the Rehabilitation of the Two Reservoirs (Maligakanda and Ellie House) Yard Piping are in Operation.

DO NOT SCALE


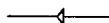




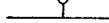



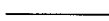
<p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	<p>SUB PROJECT: GENERAL</p>	<p>TITLE: KEY PLAN REINFORCEMENT OF MEDIUM &amp; LARGE DIAMETER PIPES</p>
	<p>DESIGNED: <i>[Signature]</i></p> <p>CHECKED: <i>[Signature]</i></p> <p>BY TEAM LEADER: <i>[Signature]</i></p> <p>TEAM LEADER: <i>[Signature]</i></p>	<p>DATE: JAN. 2021</p> <p>CONTRACT No: NRW / CW</p> <p>DRG. No: RML/DM/G - 02</p>

**LEGEND**

PROPOSED VALVE FOR REPLACEMENT



**LEGEND**

-  SLUICE VALVE
-  SUSPECTED SLUICE VALVE
-  STAND POST
-  FIRE HYDRANT
-  AIR VALVE
-  FIRE HYDRANT & SLUICE VALVE
-  WASHOUT VALVE
-  CHAMBER
-  CENTER LINE
-  BY PASS LINE
-  NOT MAPPED ACCURATELY


**Medium / Large diameter Valves-Recommended to be replaced in CMC**

Serial No	Name of the Junction	Size of Valve	Drawing No.
01	Prince of Wales Avenue/ St. Joseph's Street	10"	
02	Chatham Street / Hospital Street	10"	
03	Chatham Street / York Street (1) Along York Street (2) Along Chatham Street	10"	RML/DM/VR-01
04	Justice Akbar Mawatha/ Masjidul Jamia Road	10"	
05	Wekanda Road / Vithanage Road	10"	
06	Maradana Road/ Vajiragnana Mawatha	10"	
07	Muhandirange Mawatha/ Hudson Road	10"	
08	W.A.Silva Mawatha / Havelock Road	10"	
09	Mahavidyala Mawatha / Central Road	12"	
10	Old Moor Street/ Hultsdorf Street	12"	
11	Maligakanda Road / Maradana Road	12"	
12	Anada Mawatha / Maradana Road	12"	
13	Temple Road / Maradana Road	12", 12"	RML/DM/VR-02
14	Punchiborella Junction	12"	
15	Deans Road/ Dharmapala Mawatha	12"	
16	Leyards Road/ Lorenze Road	12"	
17	Thimbrigasyaya Road/ E.D.Dabare Mawatha	12"	
18	Olcott Mawatha/Saunders Place	12"	
19	Justice Akbar Mawatha/ Masjidul Jamia Road	12"	
20	Dharmapala Mawatha/ Union Place	12"	RML/DM/VR-03
21	Lauris Road / Galle Road	15"	
22	Bagathale Road / Galle Road	15"	
23	Walukarama Road / Galle Road	15"	RML/DM/VR-04
24	Collpity Lane / Galle Road	15"	
25	W.A.Silva Mawatha / Havelock Road	15", 15"	
26	W.A.Silva Mawatha/ Galle Road	15"	
27	Aluthmawatha Road/ St. James Street	20", 20"	
28	St. Sebastian Hill / Hultsdorf Street	27"	
29	Panchikawatta Road / Darly Road	27"	RML/DM/VR-05
30	C.W.W.Kannangara Mawatha/ Independence Avenue	30"	
31	Lipton Roundabout	30"	

**NOTE:**

1. PLEASE REFER JUNCTION DETAILS ACCORDING TO THE SERIAL NUMBER.
2. REFER THE STANDARD VALVE DETAIL GIVEN IN STD/C-02.

DO NOT SCALE

 <b>NATIONAL WATER SUPPLY AND DRAINAGE BOARD</b> THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT:	TITLE:	
	GENERAL	KEY PLAN REPLACEMENT OF MEDIUM & LARGE DIAMETER VALVES	
<b>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)</b> STUDY TEAM  NIPPON KAIWA CONSULTANTS CO. LTD., TOKYO, JAPAN	DESIGNED:	DRAWN:	DATE:
	CHECKED:	IN CHARGE (NWS&D) INCHARGE:	CONTRACT No.:
	BY TEAM LEADER:	A.S.M (P&D) INCHARGE:	SCALE:
	TEAM LEADER:	D.S.M (P&D) INCHARGE:	RML/DM/G-03