





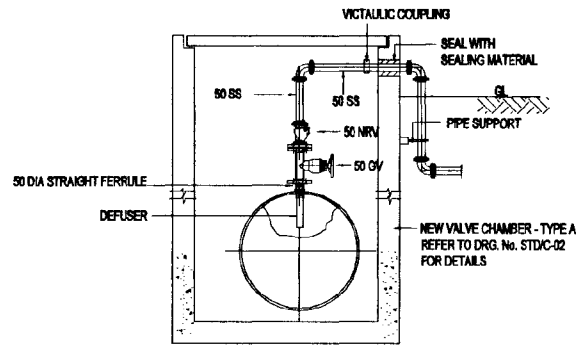
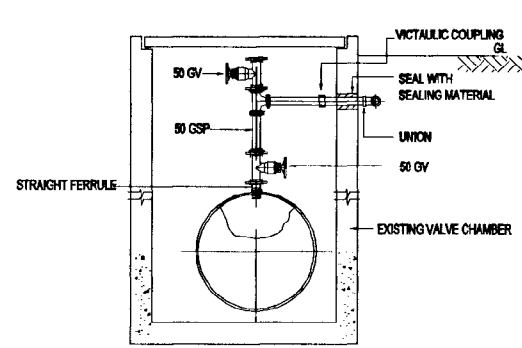
 NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA		SUB PROJECT: ELLIE HOUSE RESERVOIR		TITLE: VALVE HOUSE VENTILATION & DRAINAGE & CRANE DETAIL	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM NIPPON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN		DESIGNED: 	DRAWN: 	DATE: JAN. 2011	CONTRACT No.: NRW / CW
CHECKED: 	IN CHARGE (P&I) NUMBER: 	BY TEAM LEADER: 	A.E.M. (P&I) NUMBER: K O A J	DIRE. No.:	EH / GR / M-01
TEAM LEADER: 	D.G.M. (P&I) NUMBER:	DO NOT SCALE			



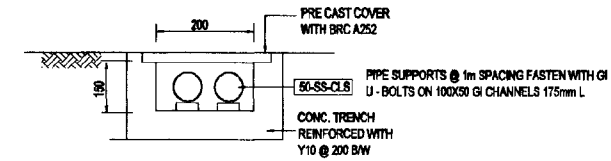
DETAILS OF CHLORINE INJECTION
POINT 1 & 2 (TYPICAL)

SCALE - 1:50



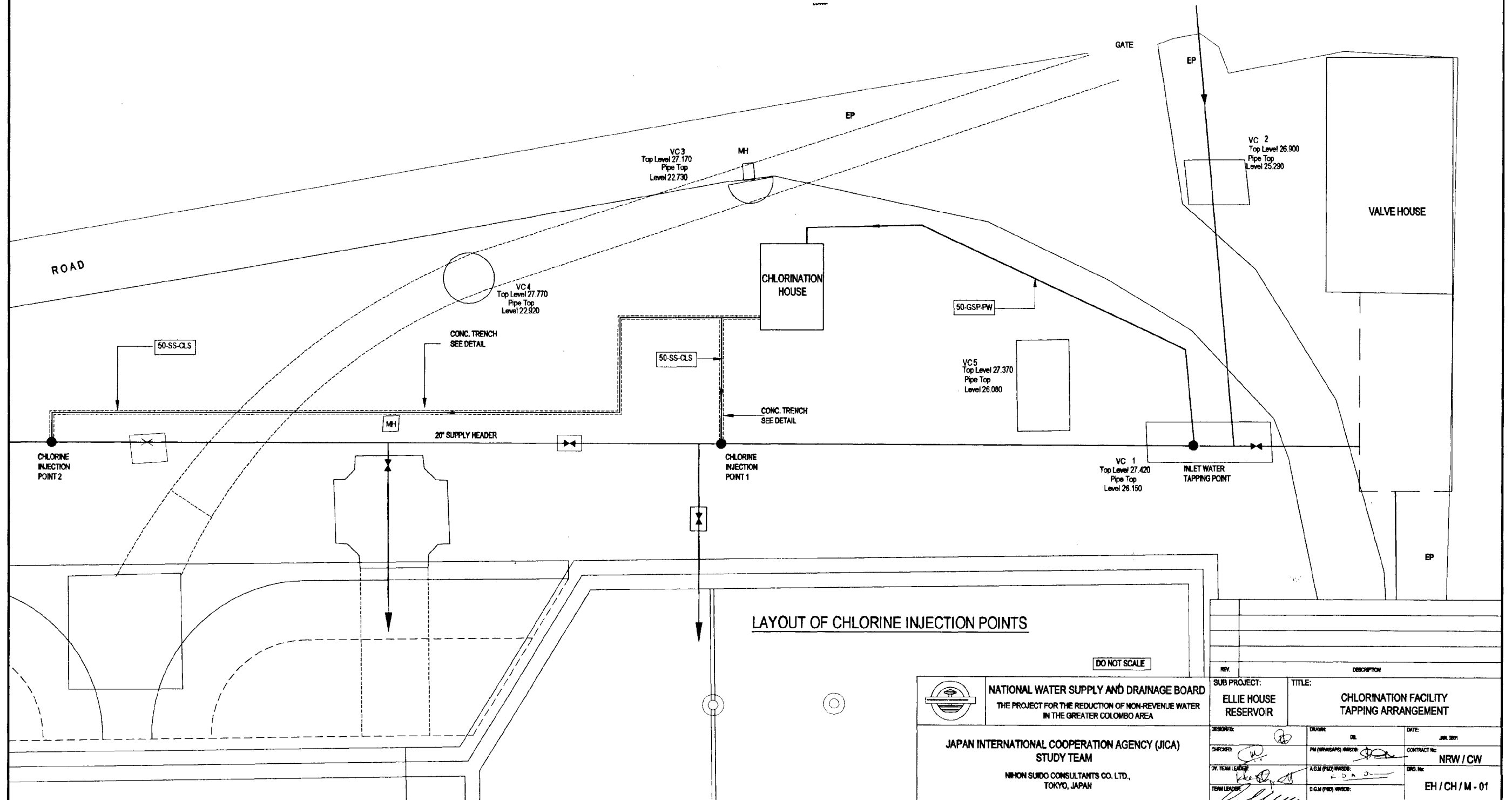
DETAILS OF INLET WATER
TAPPING POINT (TYPICAL)

SCALE - 1:50




DETAIL OF UNDER GROUND
LAYING OF CHLORINE SOLUTION PIPING
(TYPICAL)

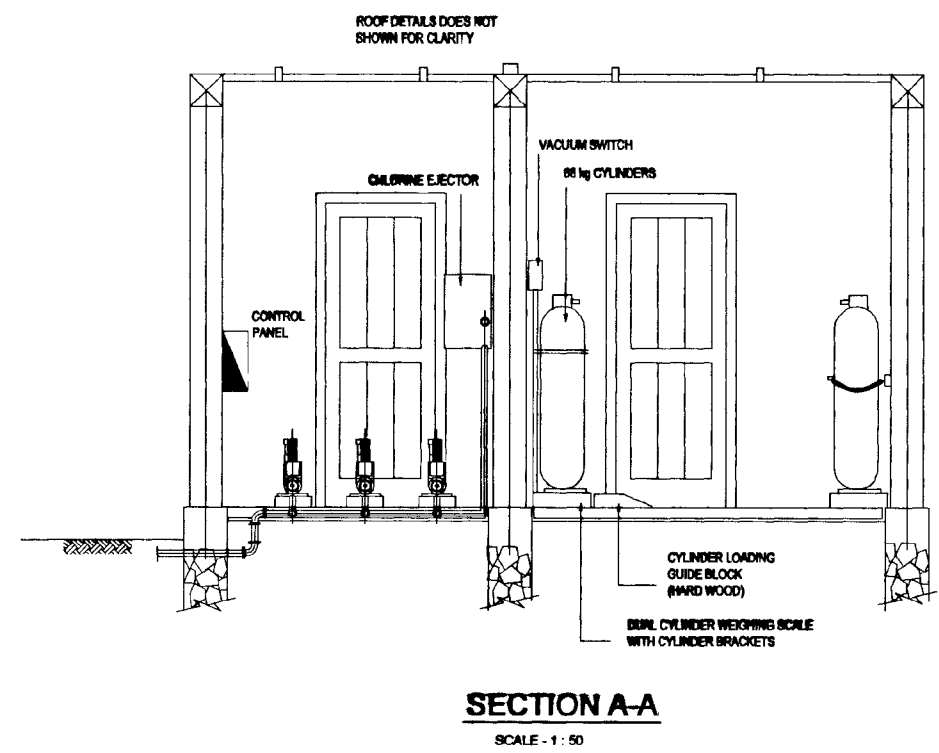
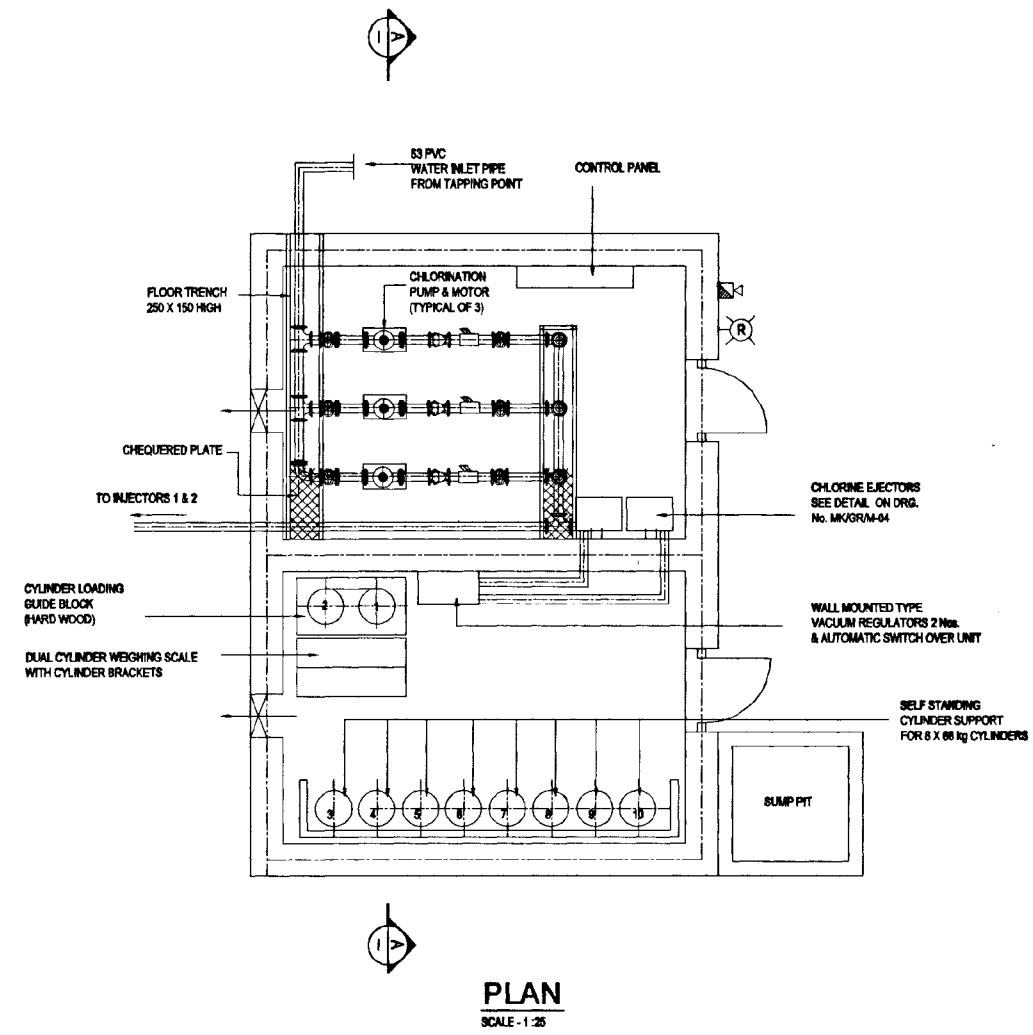
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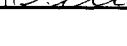
LAYOUT OF CHLORINE INJECTION POINTS

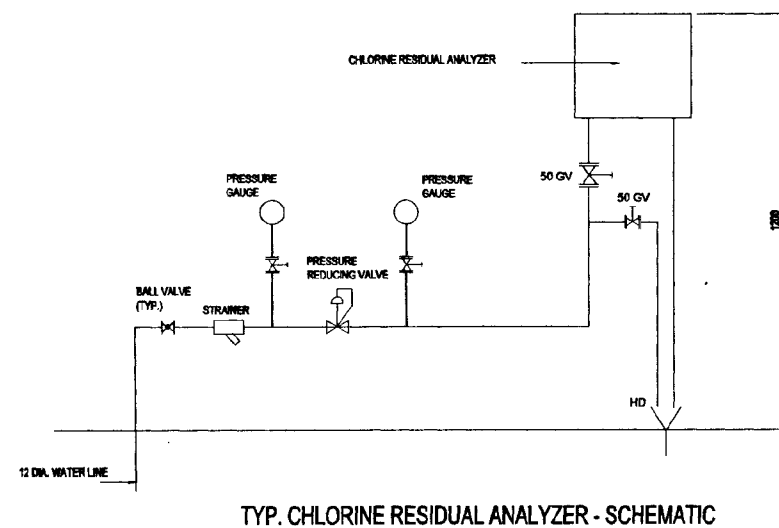
DO NOT SCALE

 <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>	<p>SUB PROJECT: ELLIE HOUSE RESERVOIR</p>		<p>TITLE: CHLORINATION FACILITY TAPPING ARRANGEMENT</p>	
	<p>DESIGNED: <i>[Signature]</i></p>	<p>DRAWN: <i>[Signature]</i></p>	<p>DATE: JUN 2011</p>	<p>CONTRACT No: NRW / CW</p>
	<p>CHECKED: <i>[Signature]</i></p>	<p>PM (NRW/SAPS) WARD: <i>[Signature]</i></p>	<p>DRG. No:</p>	<p>EH / CH / M - 01</p>
	<p>DT. TEAM LEADER: <i>[Signature]</i></p>	<p>A.G.M (P&I) INSIDE: <i>[Signature]</i></p>	<p>D.G.M (P&I) W/CD:</p>	

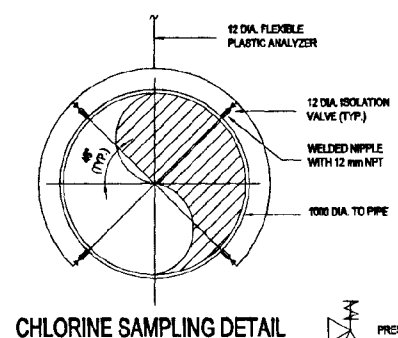


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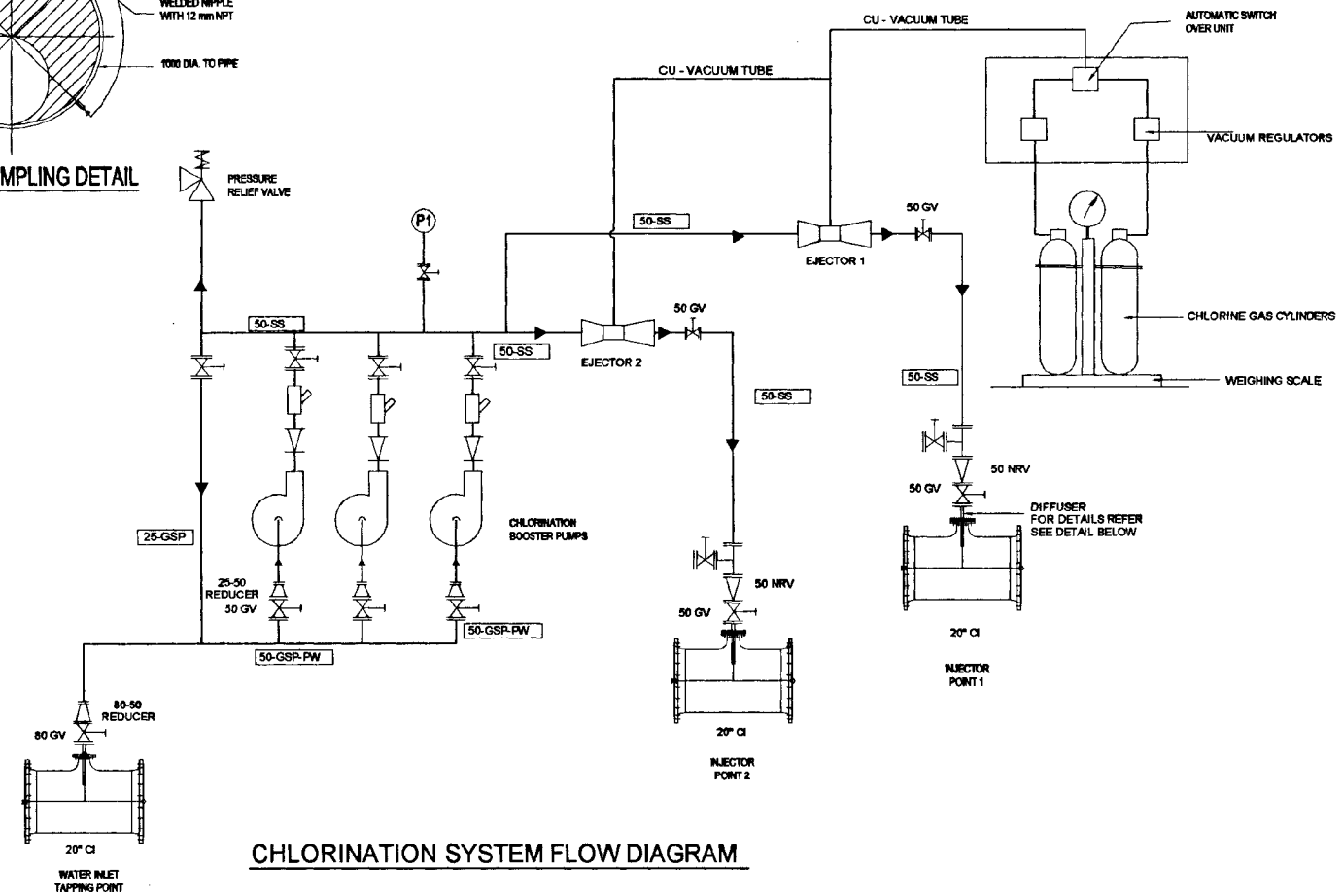
 <p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	<p>SUB PROJECT: ELLIE HOUSE RESERVOIR</p>	<p>TITLE: CHLORINATION HOUSE</p>
	<p>DESIGNED: </p> <p>CHECKED: </p> <p>DR. TEAM LEADER: </p> <p>TEAM LEADER: </p>	<p>DATE: JUN 2001</p> <p>CONTRACT No: NRW / CW</p> <p>DRG. No: EH/CH/M-02</p>



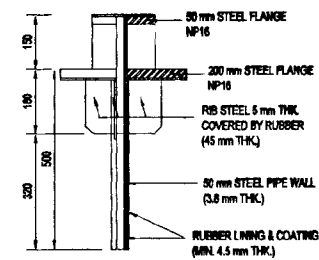
TYP. CHLORINE RESIDUAL ANALYZER - SCHEMATIC



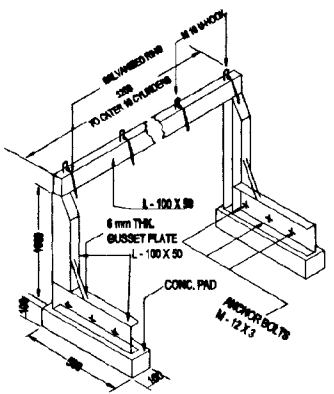
CHLORINE SAMPLING DETAIL



CHLORINATION SYSTEM FLOW DIAGRAM




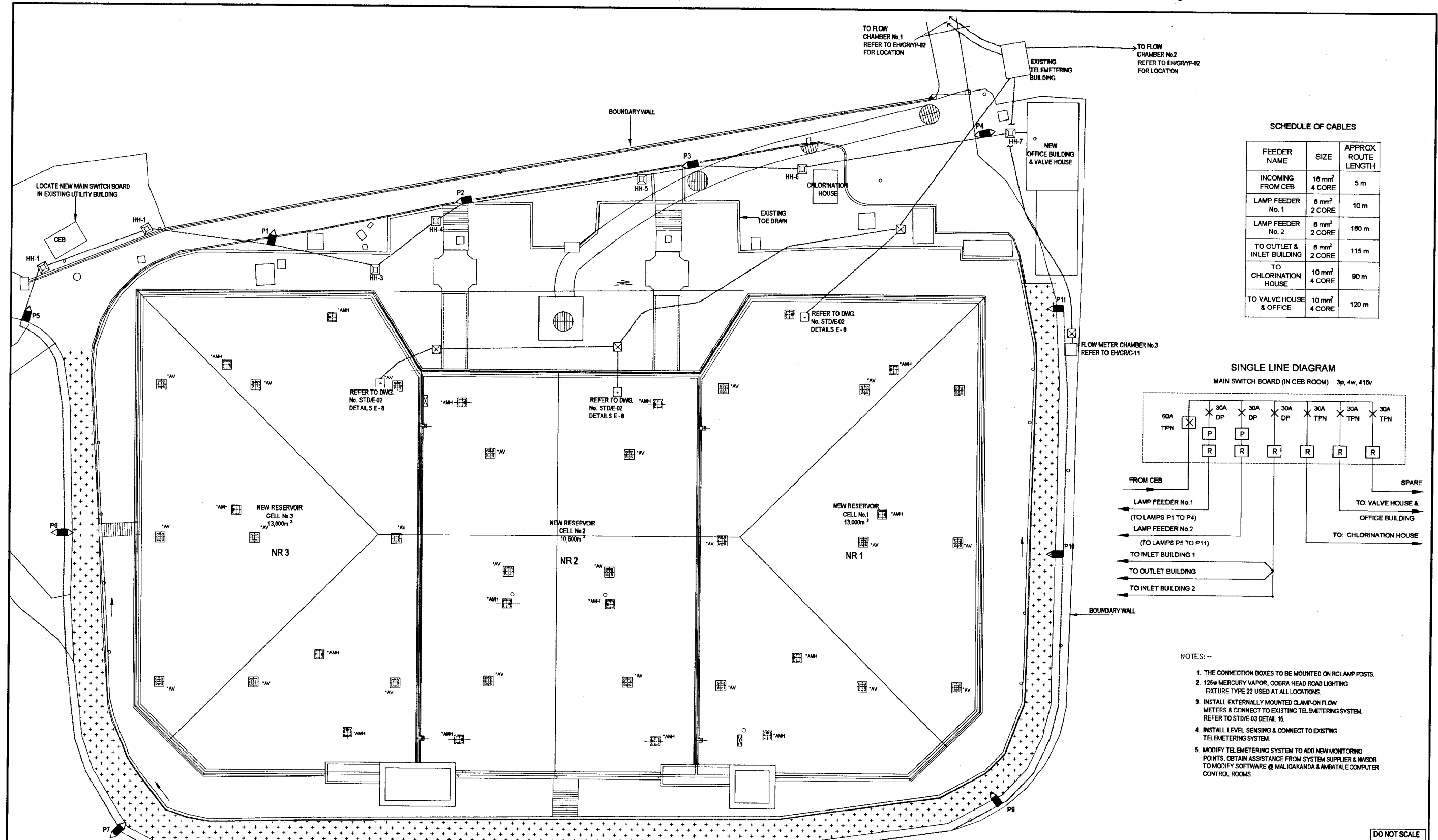
CHLORINE DIFFUSER



SELF STANDING CYLINDER SUPPORT

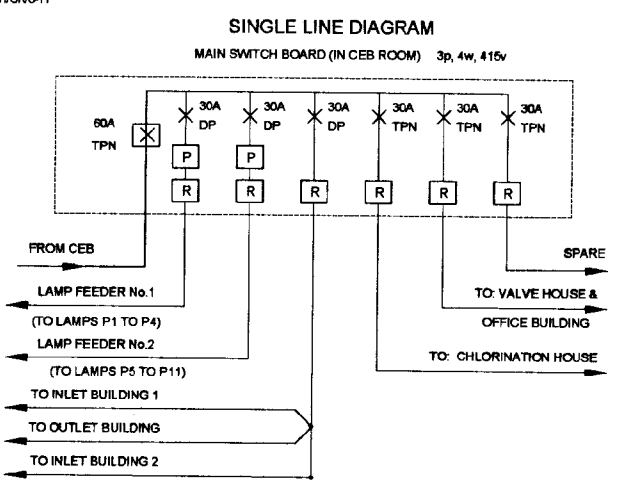
DO NOT SCALE

 NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: ELLIE HOUSE RESERVOIR	TITLE: CHLORINATION FACILITY MISCELLANEOUS DETAILS
	DESIGNED: [Signature] CHECKED: [Signature] DR. TEAM LEADER: [Signature] TEAM LEADER: [Signature]	DATE: JUN 2001 PM (PWS&D) NUMBER: [Signature] A.G.M (PWS&D) NUMBER: [Signature] D.O.M (PWS&D) NUMBER: [Signature]



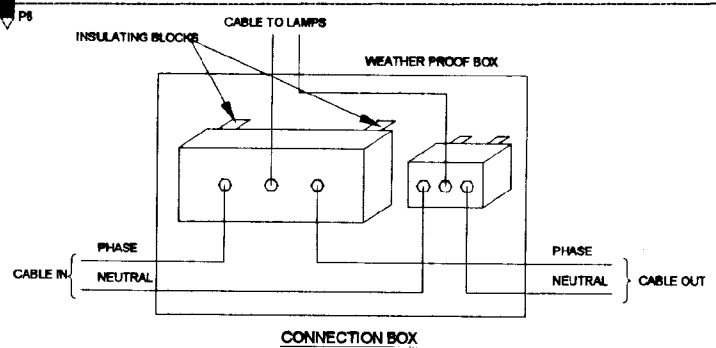
SCHEDULE OF CABLES

FEEDER NAME	SIZE	APPROX ROUTE LENGTH
INCOMING FROM CEB	16 mm ² 4 CORE	5 m
LAMP FEEDER No. 1	6 mm ² 2 CORE	10 m
LAMP FEEDER No. 2	6 mm ² 2 CORE	160 m
TO OUTLET & INLET BUILDING	6 mm ² 2 CORE	115 m
TO CHLORINATION HOUSE	10 mm ² 4 CORE	80 m
TO VALVE HOUSE & OFFICE	10 mm ² 4 CORE	120 m



- NOTES: --
1. THE CONNECTION BOXES TO BE MOUNTED ON RCLAMP POSTS.
 2. 125w MERCURY VAPOR, COBRA HEAD ROAD LIGHTING FIXTURE TYPE 22 USED AT ALL LOCATIONS.
 3. INSTALL EXTERNALLY MOUNTED CLAMP-ON FLOW METERS & CONNECT TO EXISTING TELEMETERING SYSTEM. REFER TO STD/E-03 DETAIL 16.
 4. INSTALL LEVEL SENSING & CONNECT TO EXISTING TELEMETERING SYSTEM.
 5. MODIFY TELEMETERING SYSTEM TO ADD NEW MONITORING POINTS. OBTAIN ASSISTANCE FROM SYSTEM SUPPLIER & MMSDB TO MODIFY SOFTWARE @ MALIGAKANDA & AMBATALE COMPUTER CONTROL ROOMS.

- LEGEND:**
- HAND HOLE 600 x 600
 - ⊗ HAND HOLE FOR INSTRUMENTATION
 - LEVEL SENSOR
 - ⊕ RC LAMP POST WITH TWO LAMPS
 - ⊖ RC LAMP POST WITH ONE LAMP
 - ⊗ MCCB
 - ⊖ MCB
 - ⊕ PHOTO-ELECTRIC LAMP CONTROL
 - ⊖ R.C.C.B.
- NEW INSTRUMENTATION CABLE IN PVC CONDUIT
SC - 1.5mm² PVC SHIELDED



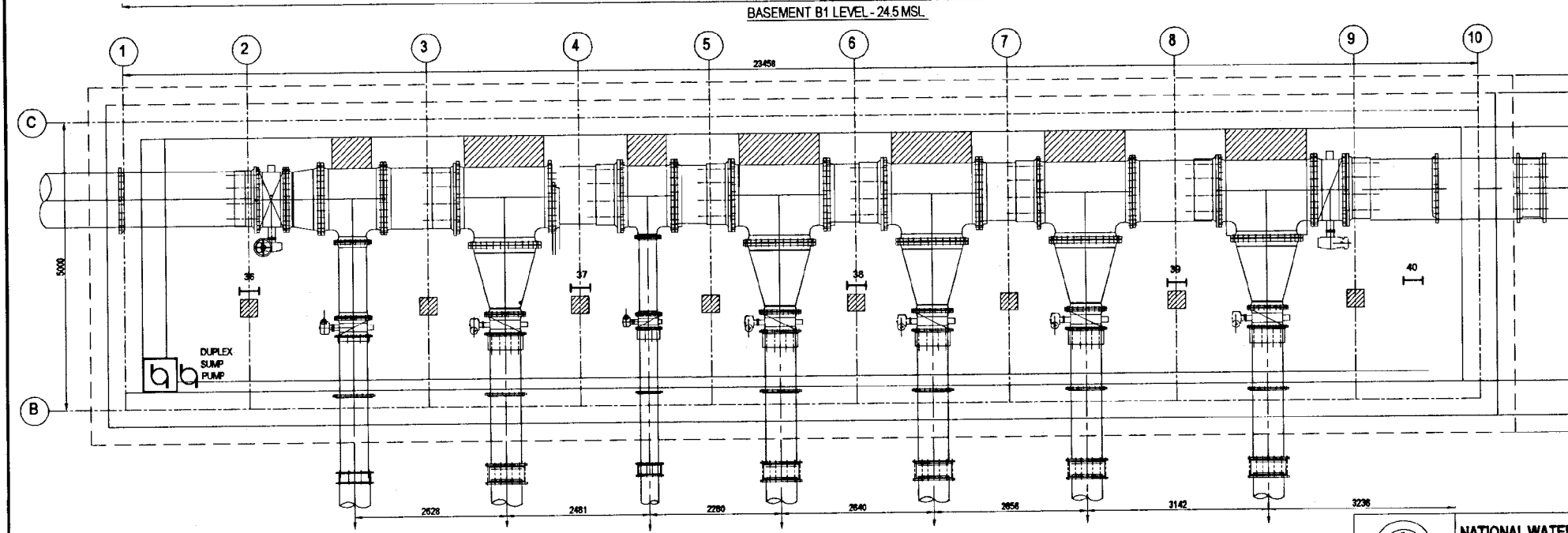
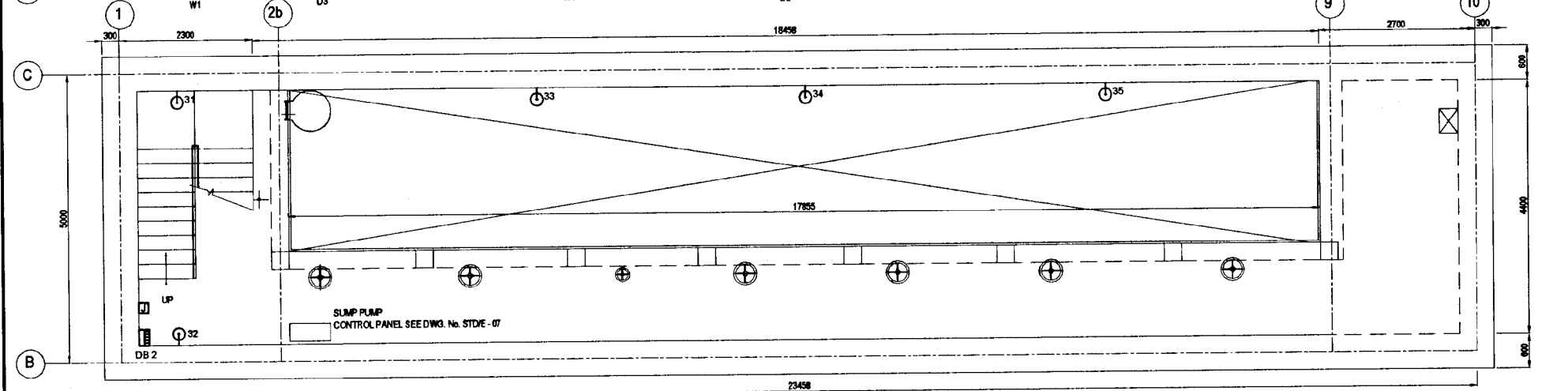
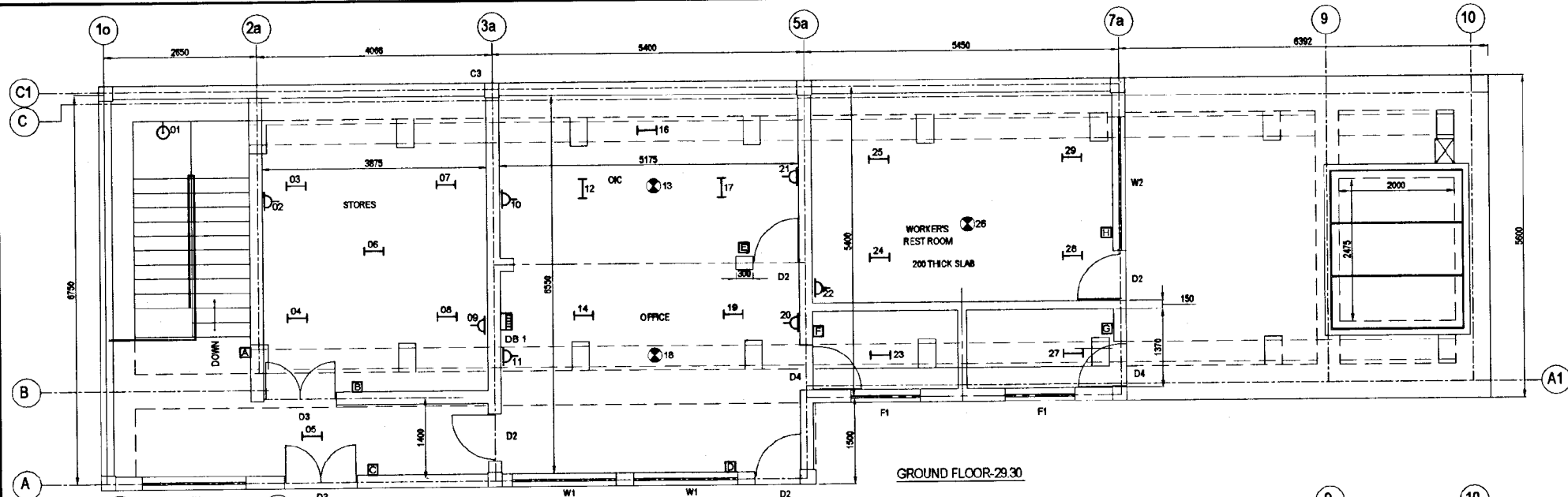
DO NOT SCALE

NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

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

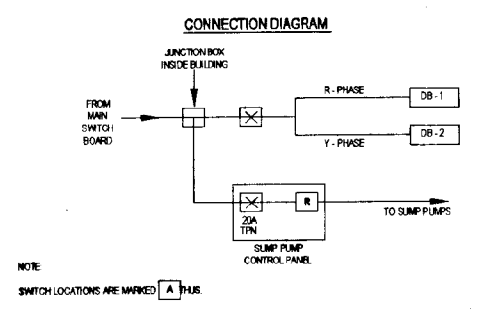
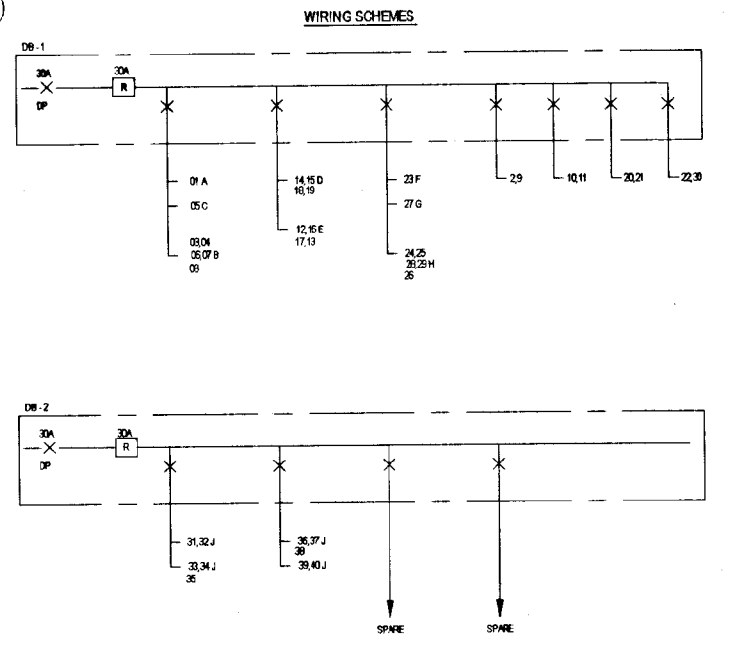
SUB PROJECT: ELLIE HOUSE RESERVOIR
TITLE: SITE LIGHTING, POWER & INSTRUMENTATION

DESIGNED: *Hid. Senkawa* DATE: JUL 2001
CHECKED: *[Signature]* CONTRACT NO: NRW / CW
DR. TEAM LEADER: *[Signature]* A. ELM (PMD) NUMBER: *[Signature]* DRG. No: EH / GR / E - 01
TEAM LEADER: *[Signature]* D.E.M (PMD) NUMBER: *[Signature]*



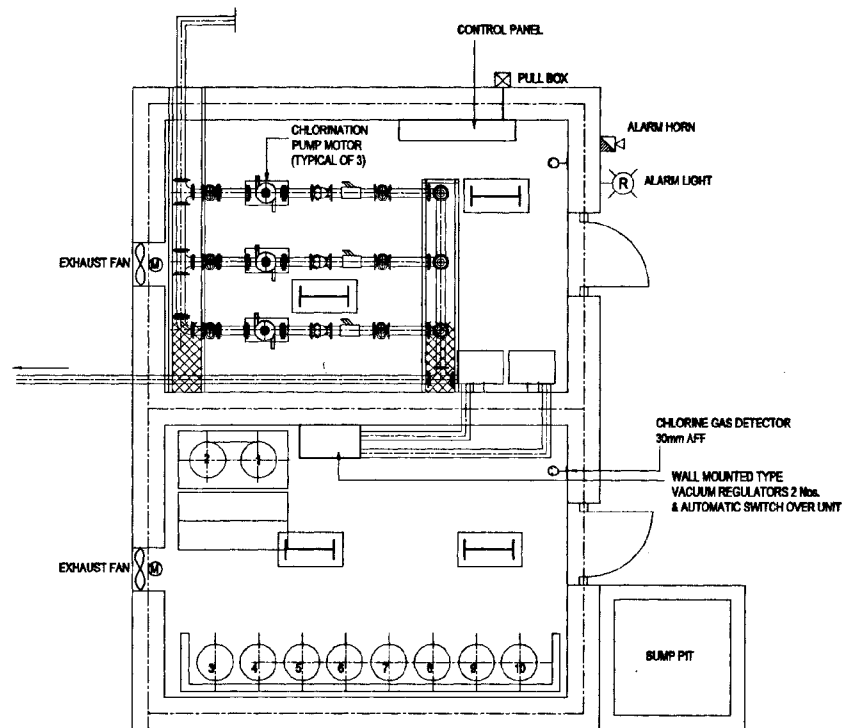
LEGEND:

	DISTRIBUTION BOARD
	MCB
	MCDB
	RCDB
	FLUORESCENT LAMP TYPE 27 MOUNTED ON SLAB OR CEILING
	FLUORESCENT LAMP TYPE 19 MOUNTED ON SLAB OR CEILING
	FLUORESCENT LAMP TYPE 19 MOUNTED ON WALL IN VERTICAL POSITION
	CEILING FANS
	SOCKET OUTLET ON WALLS OR COLUMNS (15A)

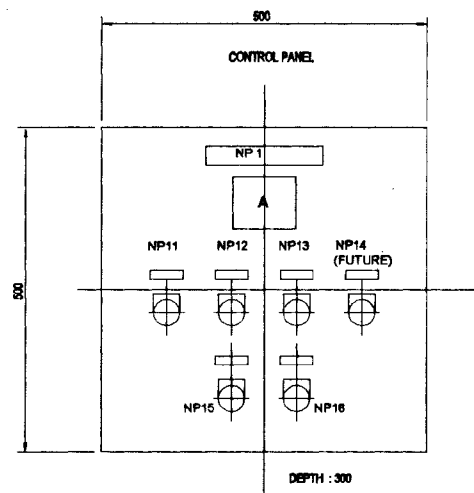


DO NOT SCALE

<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: ELLIE HOUSE RESERVOIR</p> <p>TITLE: VALVE HOUSE AND OFFICE LIGHTING AND SMALL POWER</p>	
<p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM</p> <p>NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>		<p>DESIGNED: <i>M.H. Jayathilaka</i></p> <p>CHECKED: <i>[Signature]</i></p> <p>DR. TEAM LEADER: <i>[Signature]</i></p> <p>TEAM LEADER: <i>[Signature]</i></p>	<p>DATE: JUN 2001</p> <p>CONTRACT No: NRW / CW</p> <p>DRG. No: EH/GRE-02</p>



PLAN
SCALE - 1:25



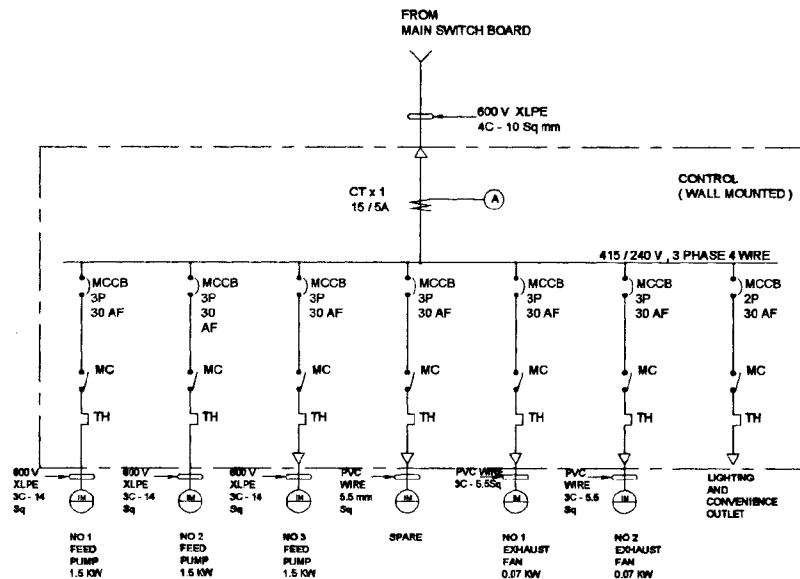
NOTE 1

CONTROL SWITCH SHALL BE PUSH BUTTON AND ALTERNATE TYPE NOT MOMENTARY TYPE

NOTE 2

THE ENCLOSURE OF THE DISTRIBUTION BOARD SHALL BE WATER-TIGHT (IP 65 OR BETTER) AND SHALL BE PROTECTED AGAINST CORROSION IN A CHLORINE CONTAMINATED ATMOSPHERE.

ALL WIRING SHALL BE IN RIGID PVC CONDUITS, FULLY SEALED AGAINST INGRESS OF ANY LIQUID.



SCHEMATIC ONE - LINE

LEGEND:-

FLUORESCENT LAMP TYPE 21 MOUNTED ON RC SLAB OR CEILING

NP	DESCRIPTION
NP 1	SWITCH BOX (CHLORINATION)
NP 11	FEED PUMP No. 1 (1.5 KW)
NP 12	- DC - No. 2 (1.5 KW)
NP 13	- DC - No. 3 (1.5 KW)
NP 14	FUTURE
NP 15	EXHAUST FAN No. 1 (0.07 KW)
NP 16	- DC - No. 2 (0.07 KW)

NOTE 3

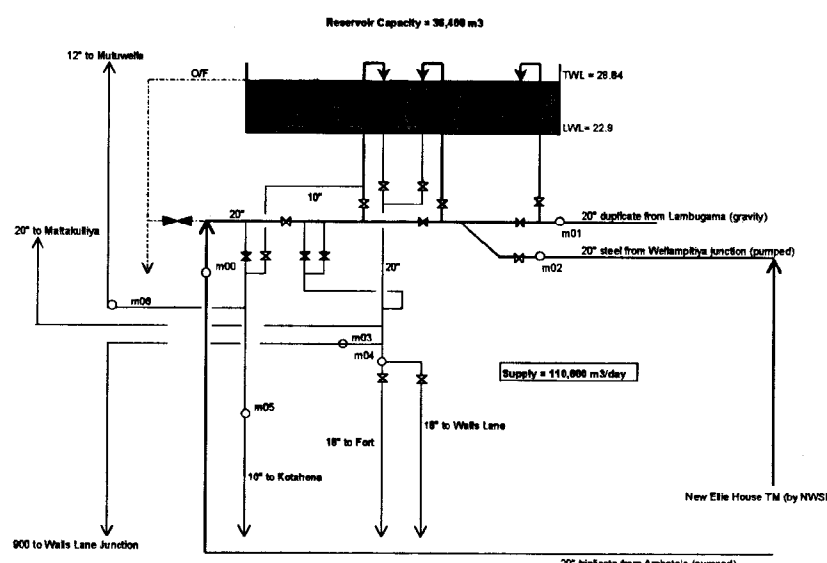
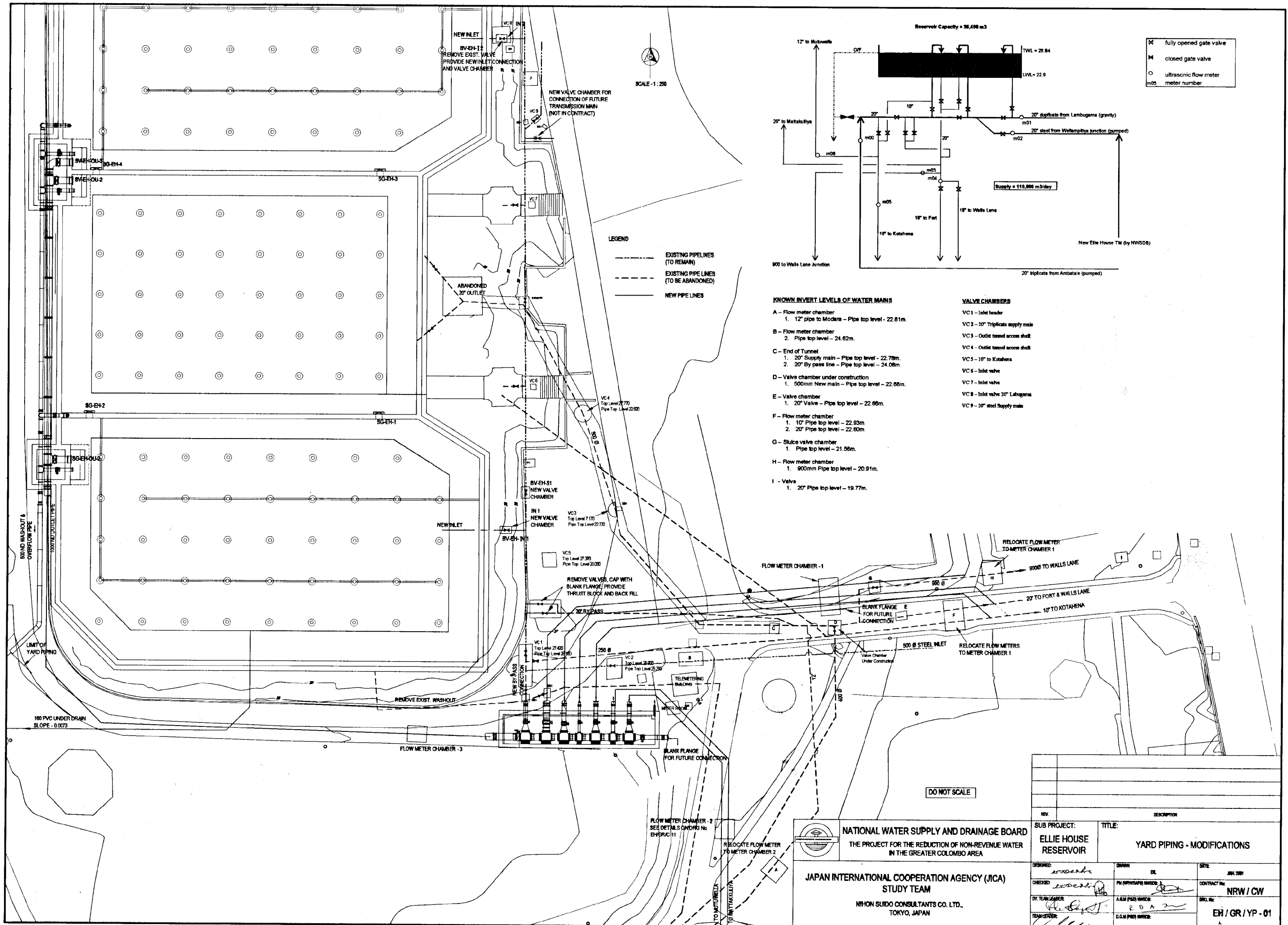
FOR VENTILATION FAN MOTOR, HAVING SMALL OUTPUT (0.07 KW), SINGLE PHASE MAY BE APPLIED

NOTE 4

PROVIDE REMOTE SWITCH TO START FANS No. 2 IN CHLORINE STORAGE ROOM.

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: ELLIE HOUSE RESERVOIR	TITLE: CHLORINATION HOUSE POWER & LIGHTING
	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM NIPPON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN		DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> DATE: JUN. 2001	DRAWN: <i>[Signature]</i> CONTRACT No: NRW/CW D.G.M (P&L) INCHG: <i>[Signature]</i> D.G.M (P&L) INCHG: <i>[Signature]</i>



	fully opened gate valve
	closed gate valve
	ultrasonic flow meter
	meter number

LEGEND

- EXISTING PIPE LINES (TO REMAIN)
- - - EXISTING PIPE LINES (TO BE ABANDONED)
- NEW PIPE LINES

KNOWN INVERT LEVELS OF WATER MAINS

- A - Flow meter chamber**
 - 12" pipe to Modana - Pipe top level - 22.81m.
- B - Flow meter chamber**
 - Pipe top level - 24.62m.
- C - End of Tunnel**
 - 20" Supply main - Pipe top level - 22.78m.
 - 20" By pass line - Pipe top level - 24.06m.
- D - Valve chamber under construction**
 - 500mm New main - Pipe top level - 22.88m.
- E - Valve chamber**
 - 20" Valve - Pipe top level - 22.66m.
- F - Flow meter chamber**
 - 10" Pipe top level - 22.93m.
 - 20" Pipe top level - 22.60m.
- G - Sluice valve chamber**
 - Pipe top level - 21.56m.
- H - Flow meter chamber**
 - 900mm Pipe top level - 20.91m.
- I - Valve**
 - 20" Pipe top level - 19.77m.

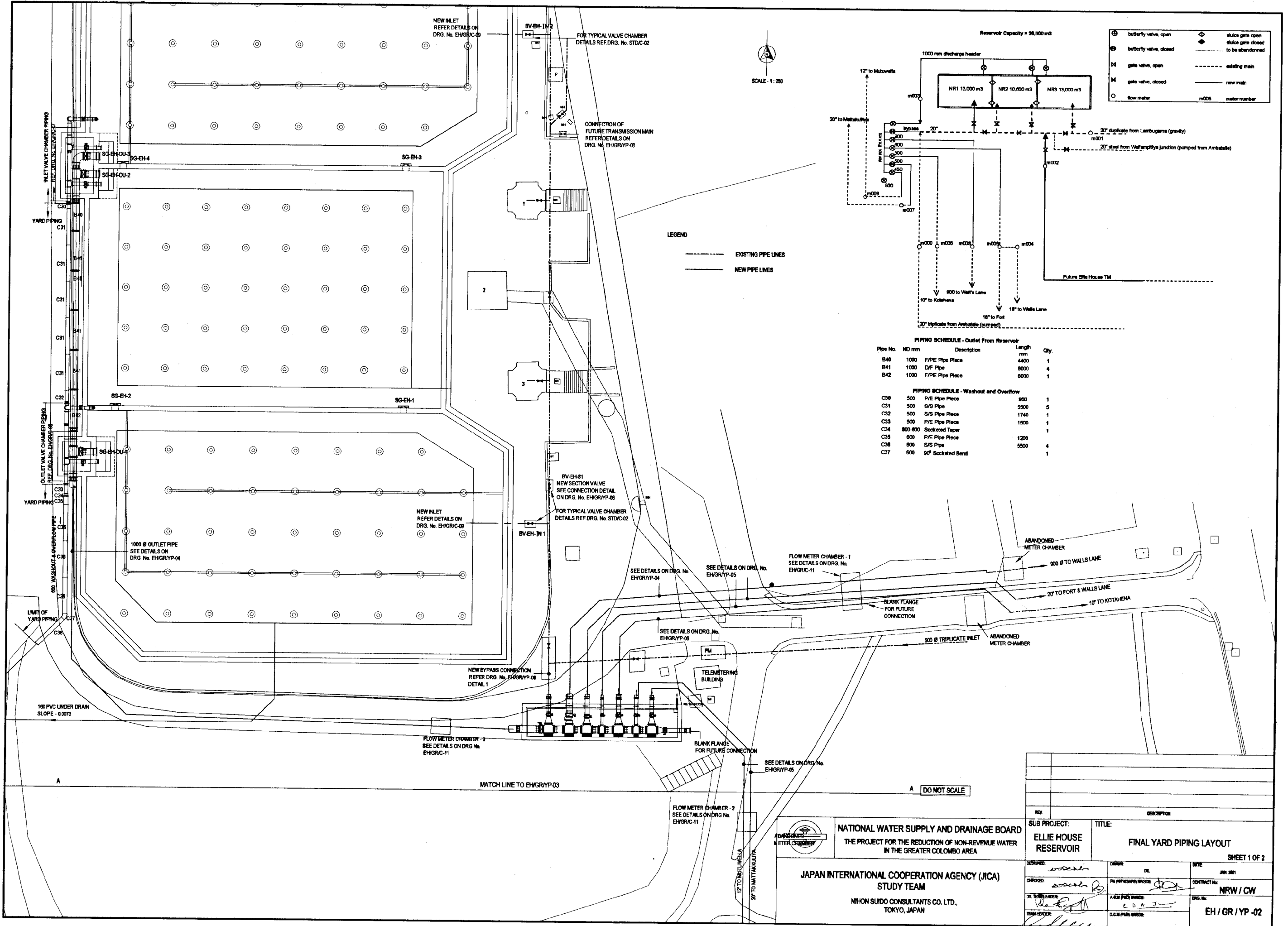
VALVE CHAMBERS

- VC1 - Inlet header
- VC2 - 20" Triplicate supply main
- VC3 - Outlet tunnel access shaft
- VC4 - Outlet tunnel access shaft
- VC5 - 10" to Kotahena
- VC6 - Inlet valve
- VC7 - Inlet valve
- VC8 - Inlet valve 20" Labugama
- VC9 - 20" steel Supply main

DO NOT SCALE

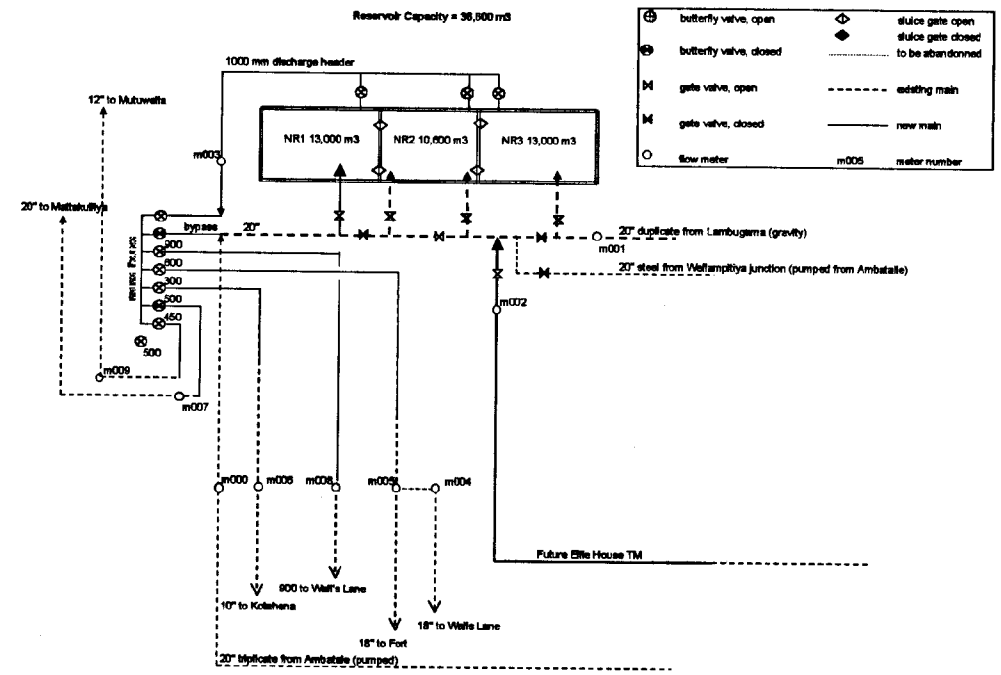
<p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>		SUB PROJECT:	TITLE:
		ELLIE HOUSE RESERVOIR	YARD PIPING - MODIFICATIONS
DESIGNED:	DRAWN:	DATE:	JAN 2001
CHECKED:	PI (NWS&D) INCH:	CONTRACT No:	NRW / CW
DR. TEAM LEADER:	A.I.M (P&D) INCH:	DRG. No:	EH / GR / YP - 01
TEAM LEADER:	D.G.M (P&D) INCH:		

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



SCALE: 1:250

LEGEND
 - - - - - EXISTING PIPE LINES
 ——— NEW PIPE LINES



PIPING SCHEDULE - Outlet From Reservoir

Pipe No.	ND mm	Description	Length mm	Qty.
B40	1000	F/P/E Pipe Piece	4400	1
B41	1000	D/F Pipe	8000	4
B42	1000	F/P/E Pipe Piece	8000	1

PIPING SCHEDULE - Washout and Overflow

Pipe No.	ND mm	Description	Length mm	Qty.
C30	500	P/E Pipe Piece	950	1
C31	500	S/S Pipe	5500	5
C32	500	S/S Pipe Piece	1740	1
C33	500	P/E Pipe Piece	1500	1
C34	500-600	Socketed Taper		1
C35	600	P/E Pipe Piece	1200	1
C36	600	S/S Pipe	5500	4
C37	600	90° Socketed Bend		1

⊕	butterfly valve, open	⊕	sluice gate open
⊖	butterfly valve, closed	⊖	sluice gate closed
⊕	gate valve, open	⊕	to be abandoned
⊖	gate valve, closed	---	existing main
○	flow meter	---	new main
		m005	meter number

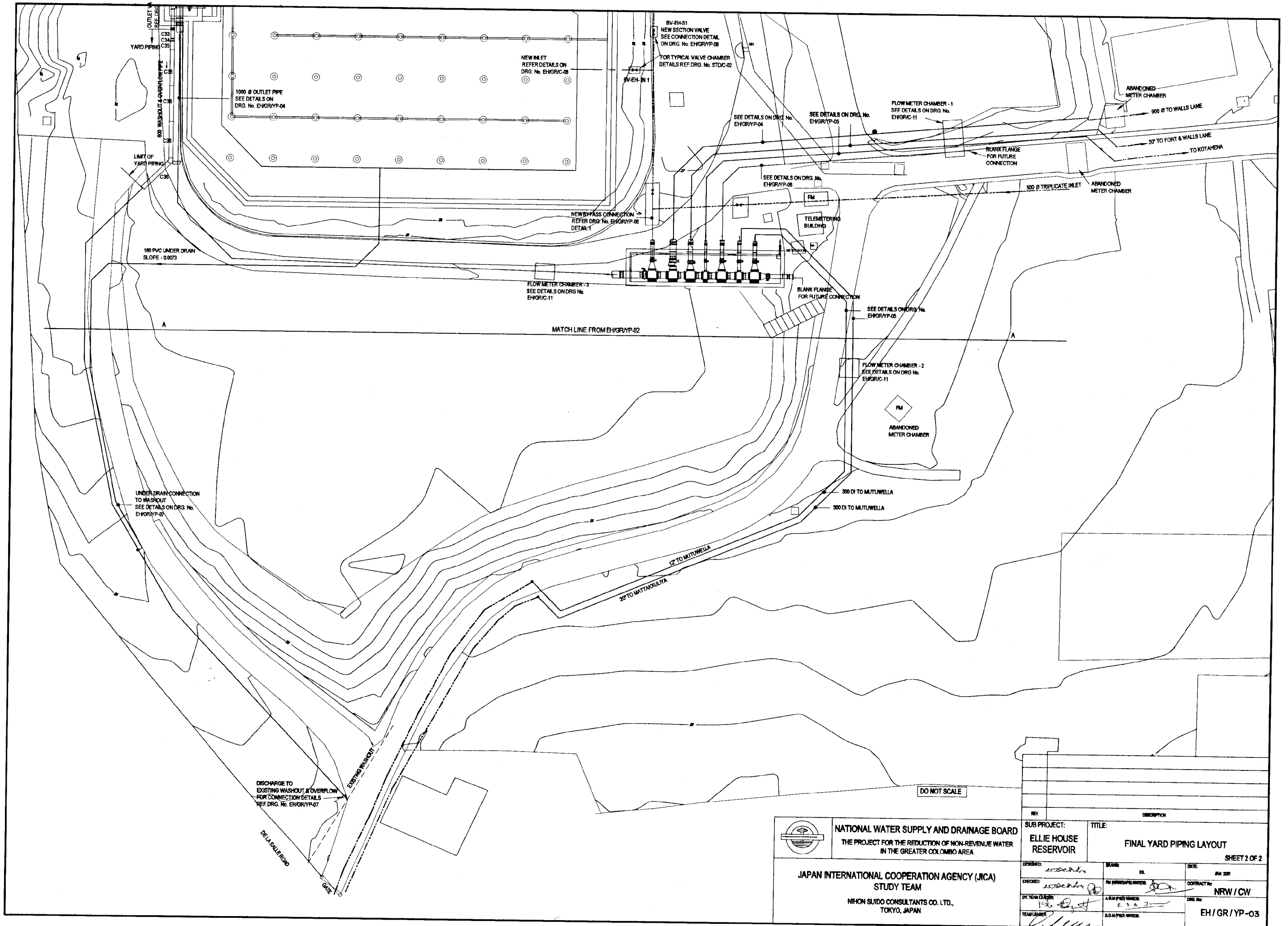
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
 THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA

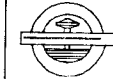
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
 STUDY TEAM
 NIPPON SUIDO CONSULTANTS CO. LTD.,
 TOKYO, JAPAN

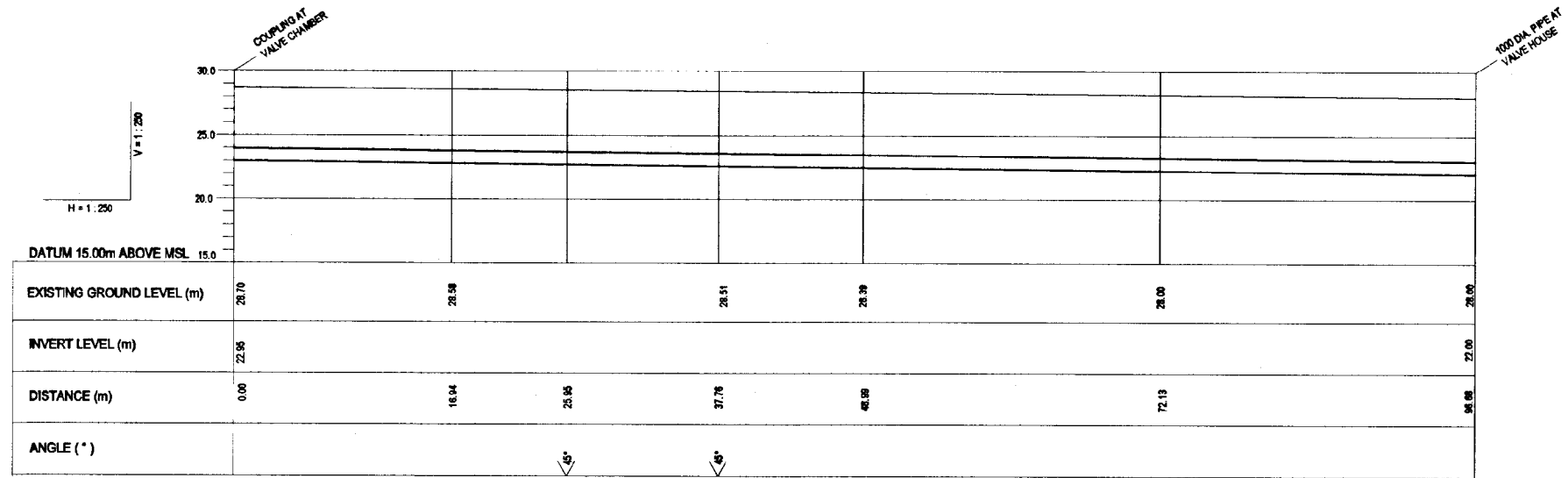
REV.	DESCRIPTION

SUB PROJECT: ELLIE HOUSE RESERVOIR		TITLE: FINAL YARD PIPING LAYOUT	
DESIGNED: <i>[Signature]</i>		DATE: JAN 2011	
CHECKED: <i>[Signature]</i>		CONTRACT NO: NRW/CW	
DR. TEAM LEADER: <i>[Signature]</i>		DRG. NO: EH/GR/YP-02	
TEAM LEADER: <i>[Signature]</i>			

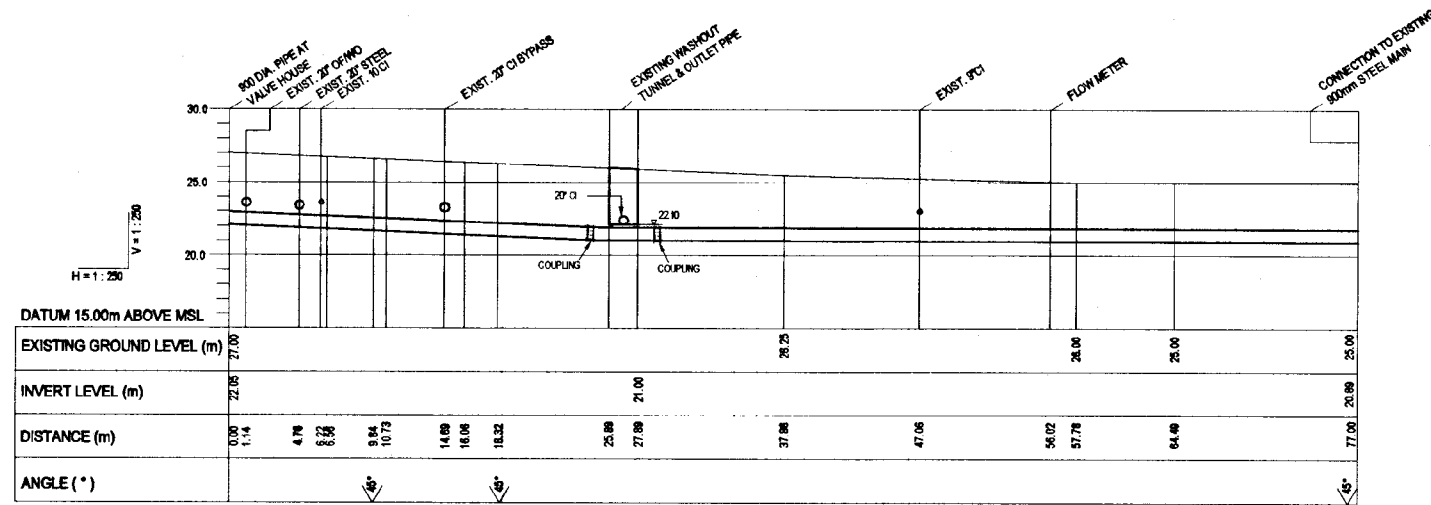
SHEET 1 OF 2



 <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: ELLIE HOUSE RESERVOIR</p>		<p>TITLE: FINAL YARD PIPING LAYOUT</p>	
	SHEET 2 OF 2			
	<p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM</p> <p>NIHON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>		<p>DESIGNED: <i>[Signature]</i></p> <p>CHECKED: <i>[Signature]</i></p> <p>DR. TEAM LEADER: <i>[Signature]</i></p> <p>TEAM LEADER: <i>[Signature]</i></p>	<p>SCALE: DL</p> <p>DATE: JAN 2001</p> <p>CONTRACT NO: NRW / CW</p> <p>DRG. NO: EH / GR / YP - 03</p>

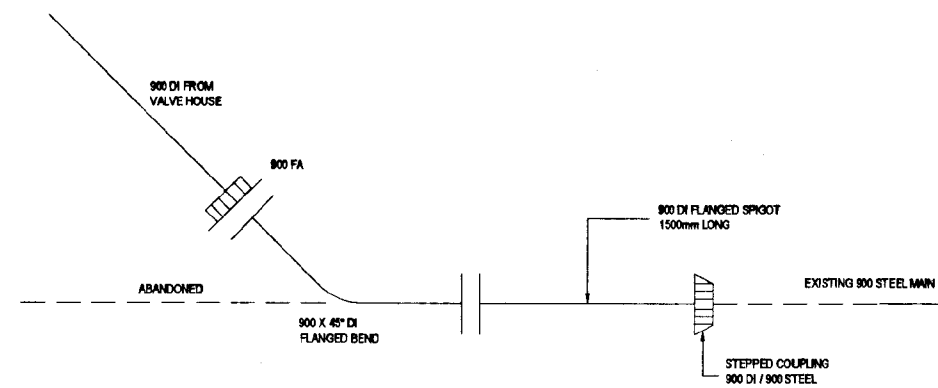


1000 Ø DI INLET TO VALVE HOUSE



900 Ø DI OUTLET TO WALLS LANE

- NOTES:
- 4m SECTION OF PIPE UNDER EXISTING TUNNEL INSTALLED BY JACKING OR ANOTHER METHOD THAT WILL NOT DAMAGE THE TUNNEL OR OUTLET PIPE.
 - EXISTING PIPE INVERT LEVELS TO BE CONFIRMED BY CONTRACTOR BEFORE STARTING.

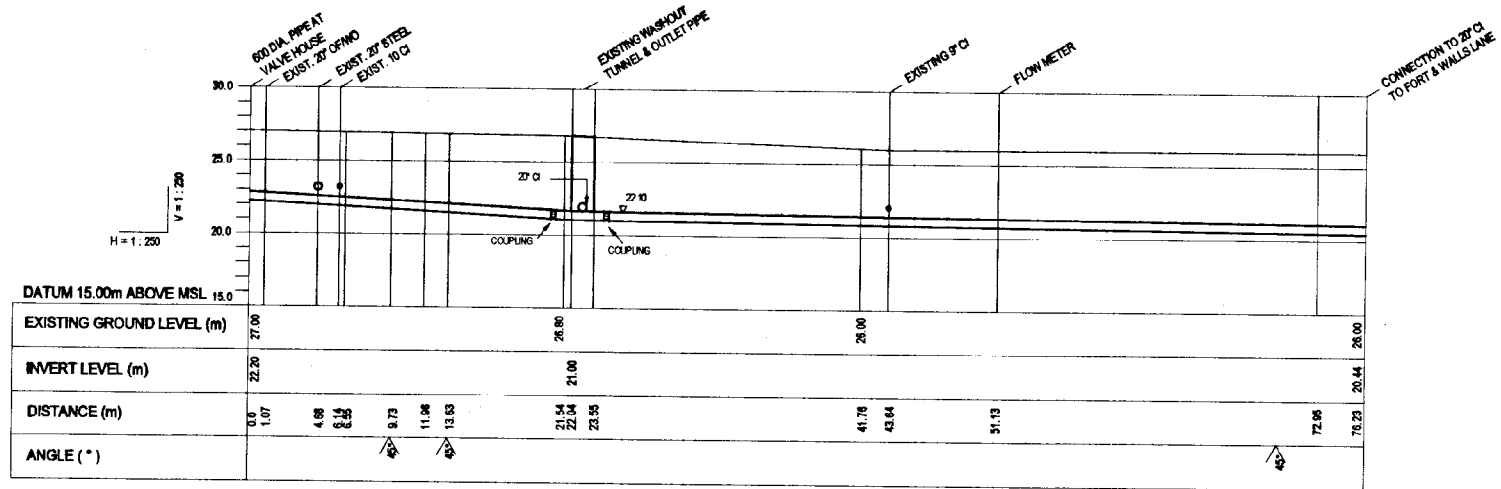


CONNECTION TO EXISTING 900 STEEL MAIN

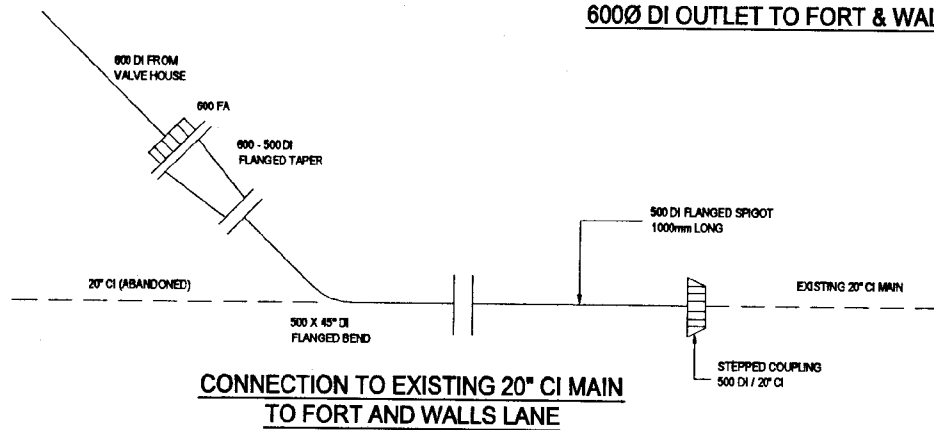
DO NOT SCALE

<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: ELLIE HOUSE RESERVOIR</p>	<p>TITLE: PROFILE - CONNECTION AT 1000 DI INLET TO VALVE HOUSE & 900 DI DISTRIBUTION MAIN TO WALLS LANE</p>
	<p>DESIGNED: [Signature]</p>	<p>DATE: JAN 2011</p>
<p>CHECKED: [Signature]</p>	<p>PROJECT MANAGER: [Signature]</p>	<p>ENG. No: EH / GR / YP-04</p>
<p>DRY. TEAM LEADER: [Signature]</p>	<p>DATE: [Signature]</p>	
<p>TEAM LEADER: [Signature]</p>	<p>DATE: [Signature]</p>	

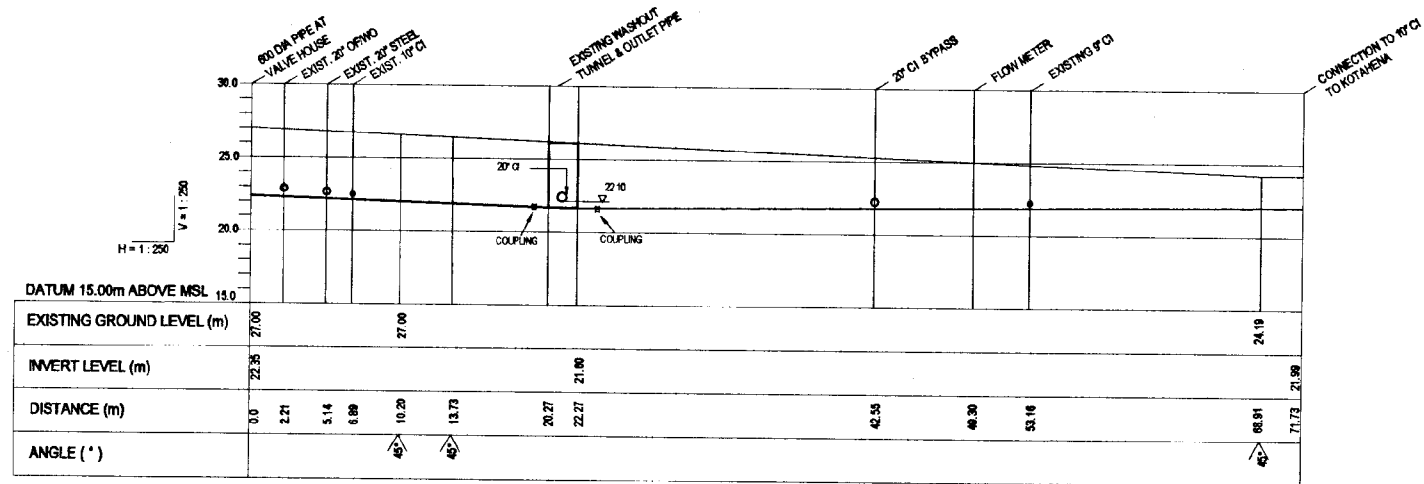
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN



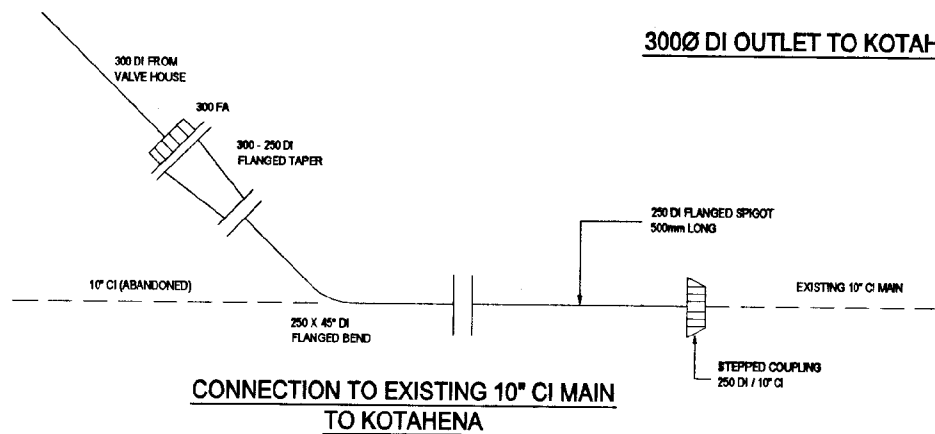
600Ø DI OUTLET TO FORT & WALLS LANE



CONNECTION TO EXISTING 20\"/>



300Ø DI OUTLET TO KOTAHENA



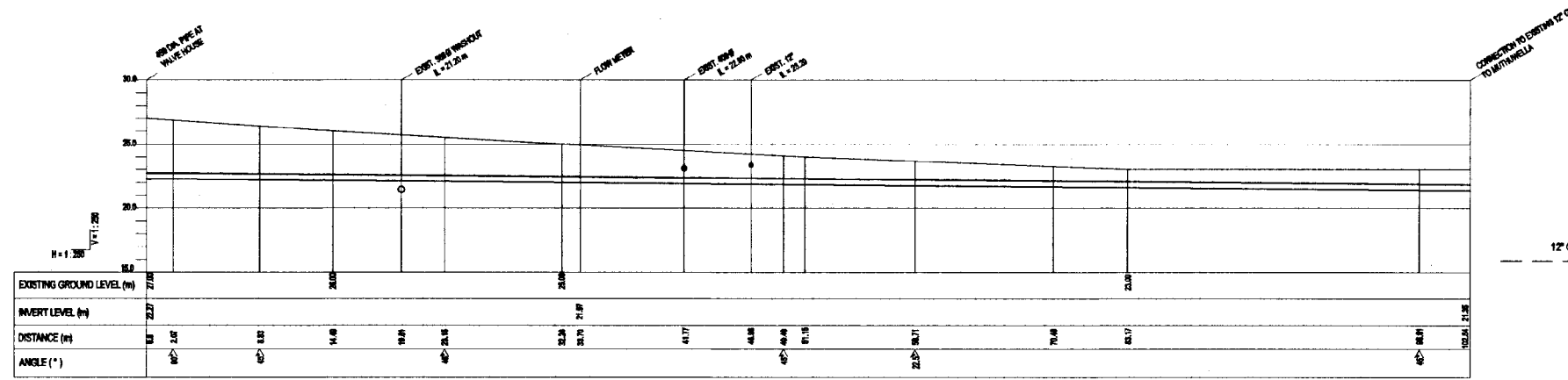
CONNECTION TO EXISTING 10\"/>

NOTES:

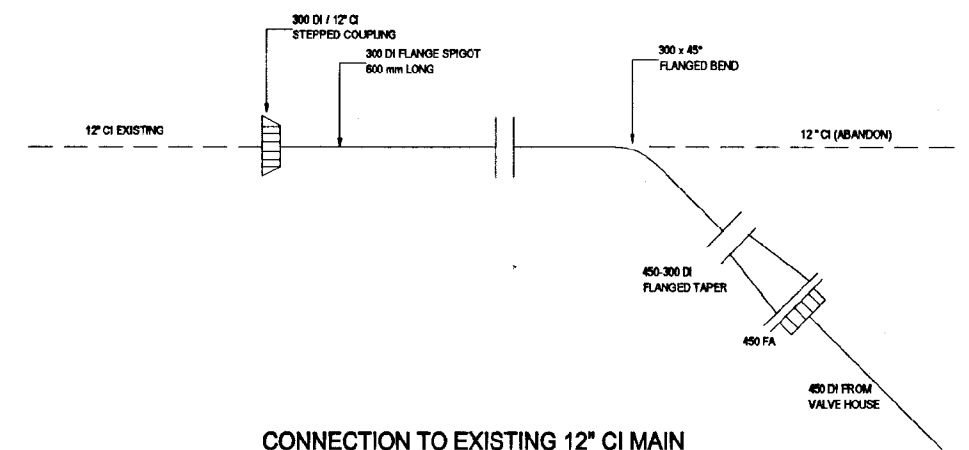
1. 4m SECTION OF PIPE UNDER EXISTING TUNNEL INSTALLED BY JACKING OR ANOTHER METHOD THAT WILL NOT DAMAGE THE TUNNEL OR OUTLET PIPE.
2. EXISTING PIPE INVERT LEVELS TO BE CONFIRMED BY CONTRACTOR BEFORE STARTING.

DO NOT SCALE

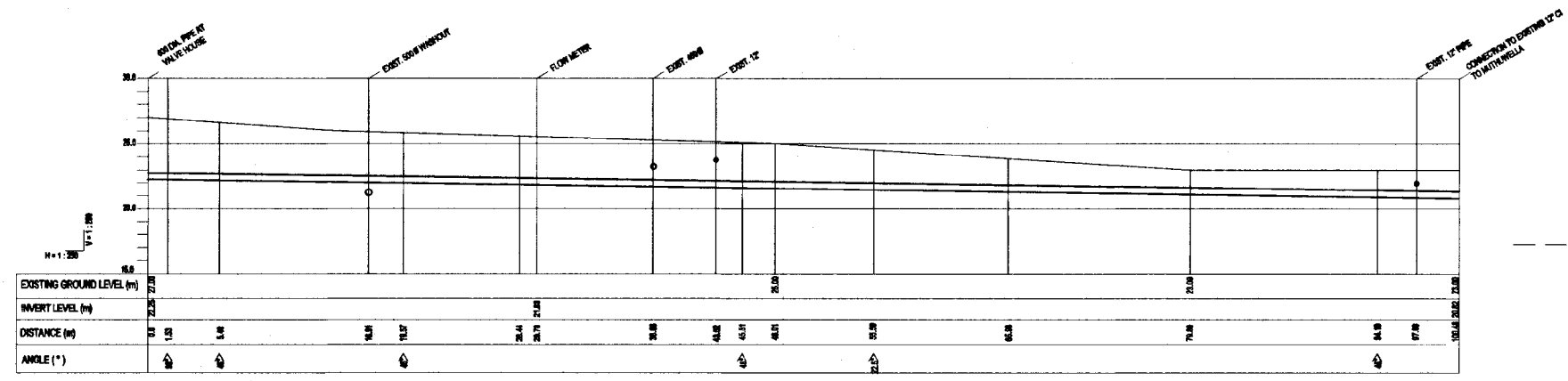
<p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>		<p>DESIGNED: <i>asanka</i></p>		<p>DATE: JAN 2011</p>	
		<p>CHECKED: <i>asanka</i></p>		<p>CONTRACT NO: NRW / CW</p>	
<p>DESIGNED BY: <i>asanka</i></p>		<p>PROJECT NO: EH / GR / YP-05</p>		<p>DATE: JAN 2011</p>	
<p>TEAM LEADER: <i>asanka</i></p>		<p>CONTRACT NO: NRW / CW</p>		<p>DATE: JAN 2011</p>	
<p>TEAM MEMBER: <i>asanka</i></p>		<p>CONTRACT NO: NRW / CW</p>		<p>DATE: JAN 2011</p>	



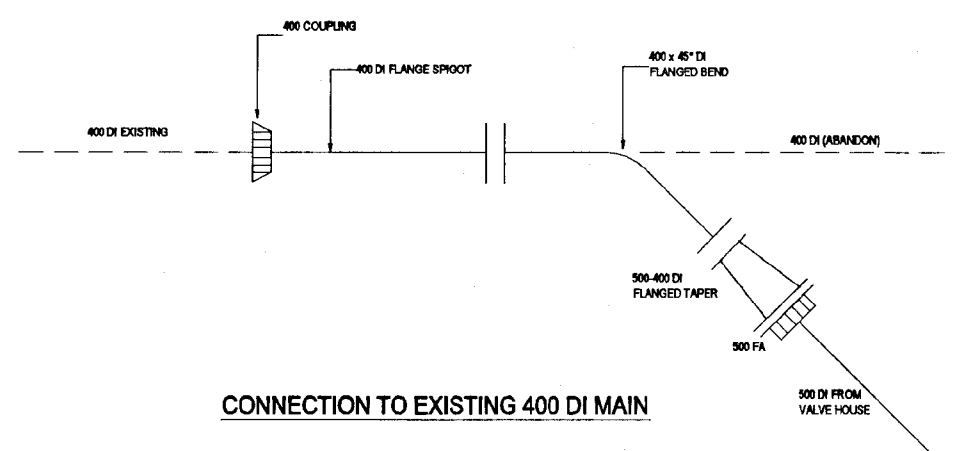
450 DIA. MUTHUWELLA



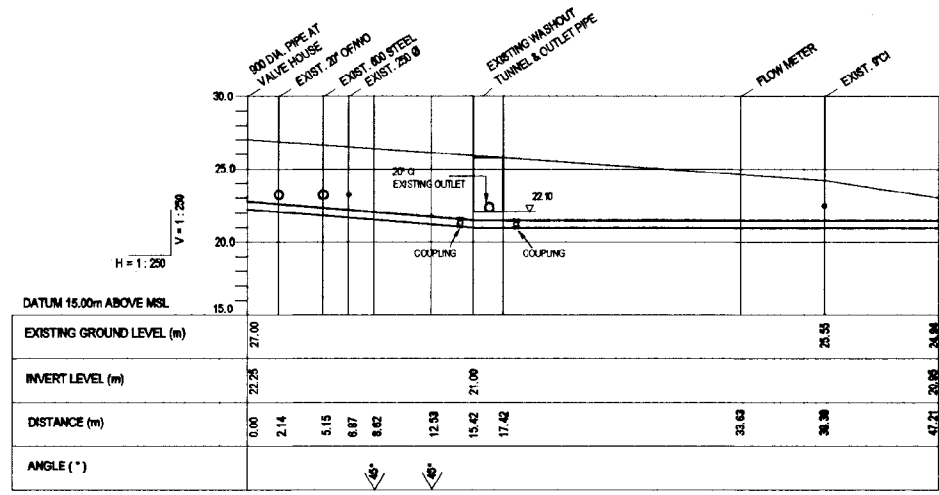
CONNECTION TO EXISTING 12\"/>



500 DIA. MATTAKKULIYA



CONNECTION TO EXISTING 400\"/>

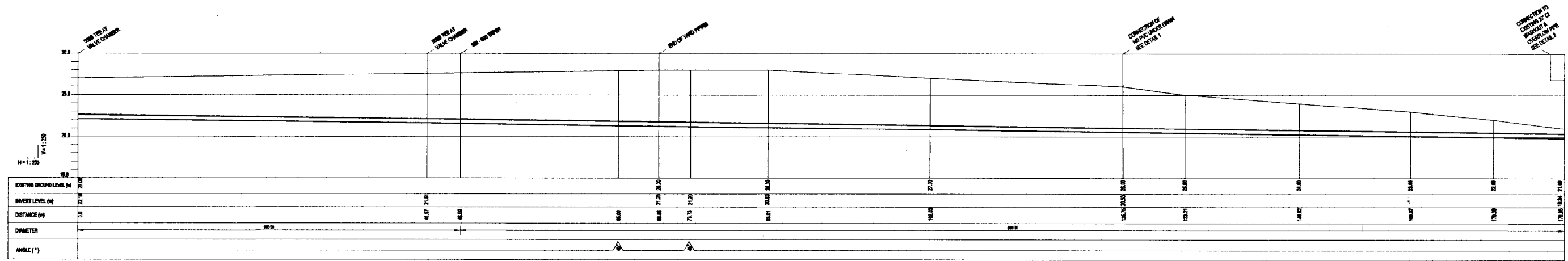


500Ø OUTLET FOR FUTURE EXTENSION

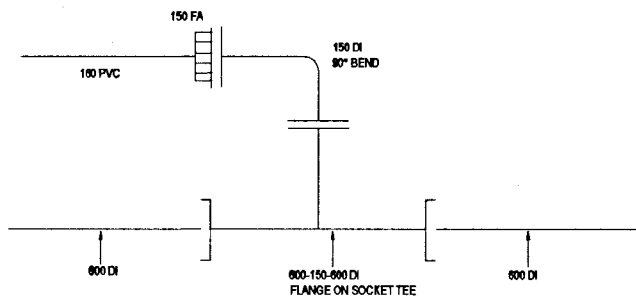
- NOTES:
- 4m SECTION OF PIPE UNDER EXISTING TUNNEL INSTALLED BY JACKING OR ANOTHER METHOD THAT WILL NOT DAMAGE THE TUNNEL OR OUTLET PIPE.
 - EXISTING PIPE INVERT LEVELS TO BE CONFIRMED BY CONTRACTOR BEFORE STARTING.

DO NOT SCALE

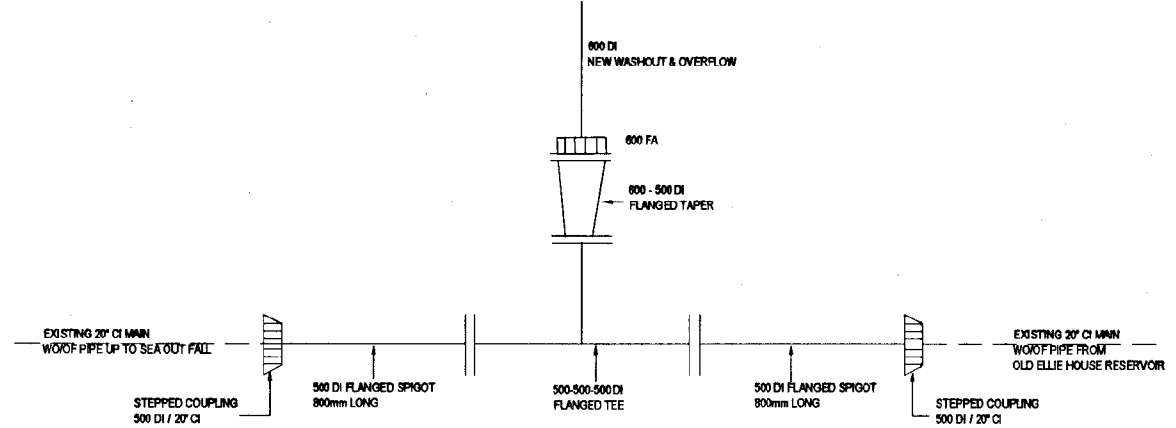
<p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	<p>SUB PROJECT: ELLIE HOUSE RESERVOIR</p>	<p>TITLE: PROFILE - CONNECTION AT 450 DI DISTRIBUTION MAIN TO MUTHUWELLA, 500 DI DISTRIBUTION MAIN TO MATTAKKULIYA AND 500 DI FUTURE CONNECTION</p>
	<p>DESIGNED: [Signature]</p> <p>CHECKED: [Signature]</p> <p>DRY. TEAM LEADER: [Signature]</p> <p>TEAM LEADER: [Signature]</p>	<p>DRAWN: [Signature]</p> <p>FW (NRW/S&D) INCHDR: [Signature]</p> <p>A.S.M (P&S) INCHDR: [Signature]</p> <p>D.S.M (P&S) INCHDR: [Signature]</p>



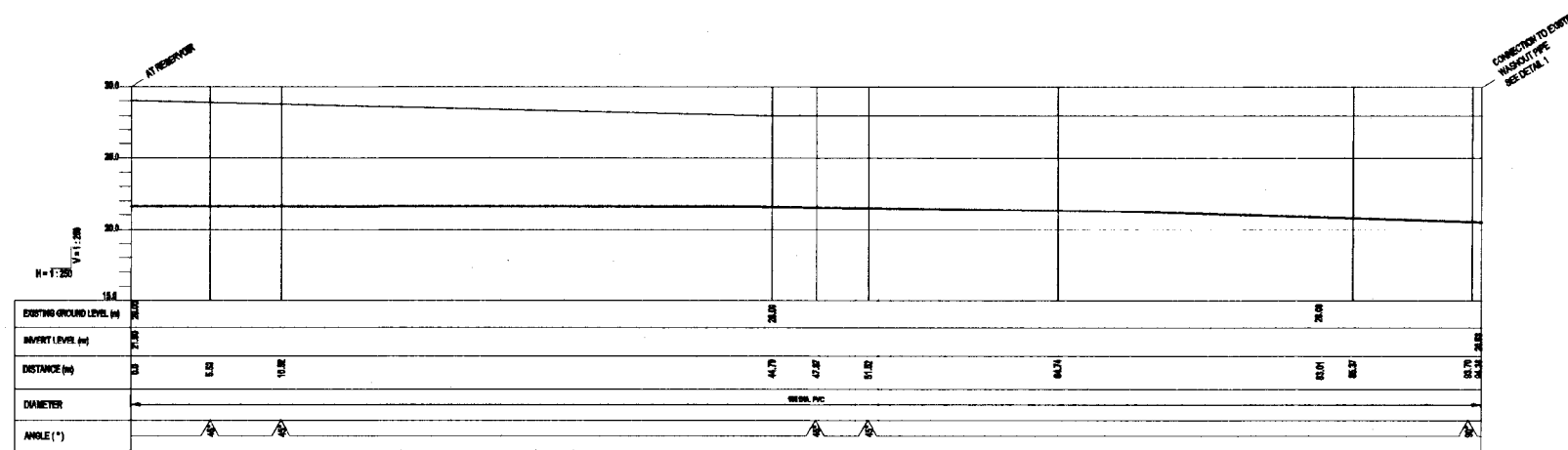
500/600 OVERFLOW AND WASHOUT PIPE



DETAIL 1
CONNECTION OF UNDER DRAIN PIPE
TO WASHOUT



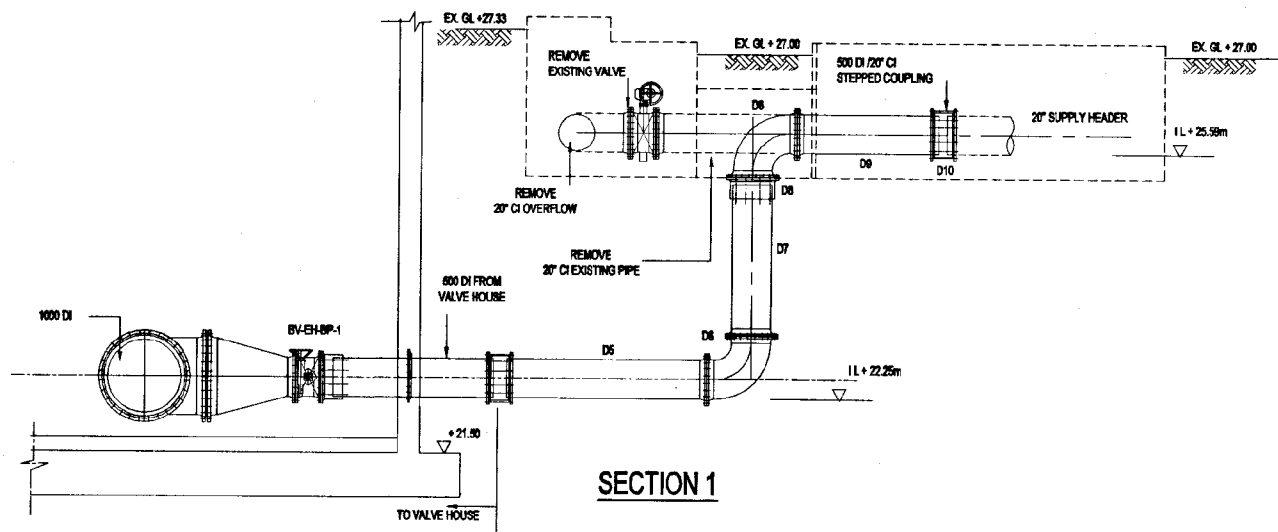
DETAIL 2
CONNECTION OF NEW WASHOUT/OVERFLOW TO
EXISTING 20" CI WASHOUT & OVERFLOW PIPE



160 mm DIA. PVC UNDER DRAIN PIPE

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: ELLIE HOUSE RESERVOIR</p>	<p>TITLE: PROFILE - 600 DI WASHOUT & OVERFLOW AND 160 PVC UNDER DRAIN</p>
	<p>DESIGNED: <i>[Signature]</i></p>	<p>DATE: JUN 2001</p>
<p>CHECKED: <i>[Signature]</i></p>	<p>PN APPROVAL NUMBER: <i>[Signature]</i></p>	<p>DRILL NO: EH / GR / YP-07</p>
<p>DT. TEAM LEADER: <i>[Signature]</i></p>	<p>A.S.M (P.M.) NUMBER: 2.0.A.2001</p>	
<p>TEAM LEADER: <i>[Signature]</i></p>	<p>D.S.M (P.M.) NUMBER:</p>	



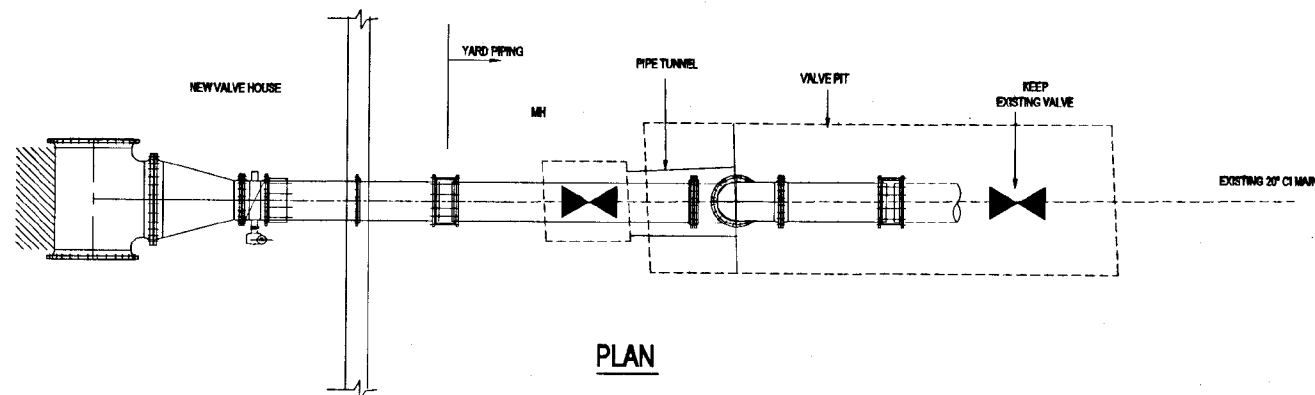
FUTURE TRANSMISSION CONNECTION DETAIL

(NOT IN CONTRACT)

PIPING SCHEDULE


PIPE No.	ND mm	DESCRIPTION	LENGTH mm	QTY.
D5	500	F/P/E Pipe Piece	2810	1
D6	500	90° Flanged Bend		2
D7	500	F/P/E Pipe Piece	2100	1
D8	500	Flange Adaptor		1
D9	500	F/P/E Pipe Piece	1950	1
D10	500	Stepped Coupling		1

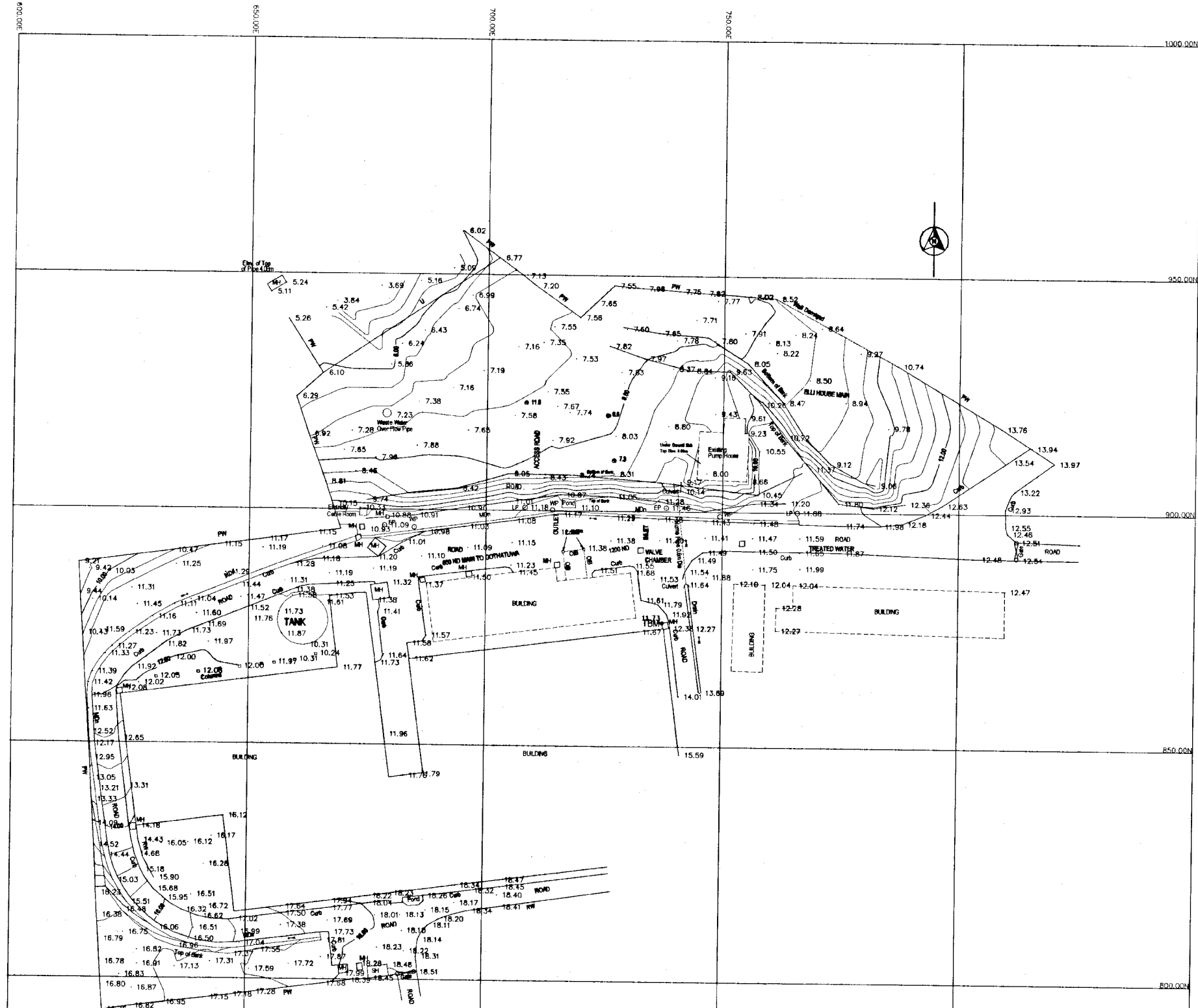
CONNECTION DETAIL FOR NEW SECTIONAL VALVE - BV-EH-S1



CONNECTION OF EXISTING 20" CI MAIN

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: ELLIE HOUSE RESERVOIR</p>	<p>TITLE: MISCELLANEOUS YARD PIPING CONNECTION DETAILS</p>
	<p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM</p> <p>NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>	<p>DESIGNED: <i>[Signature]</i></p> <p>CHECKED: <i>[Signature]</i></p> <p>DR. TEAM LEADER: <i>[Signature]</i></p> <p>TEAM LEADER: <i>[Signature]</i></p>



SURVEY PLAN
SCALE: 1:800

- NOTE:
1. ELEVATIONS ARE BASED ON MSL DATUM
 2. ELEVATIONS ARE IN METERS.
 3. TBM = 12.380 m MSL


REFERENCE:

B	- PERMANENT BUILDING	SH	- SECURITY HUT
MDn	- MASONRY DRAIN	WP	- WATER PIPE
RW	- RETAINING WALL	LP	- LAMP POST
MH	- MANHOLE	U	- UNDEFINED
PW	- PARAPET WALL	ORB	- OVERHEAD IRON BEAM

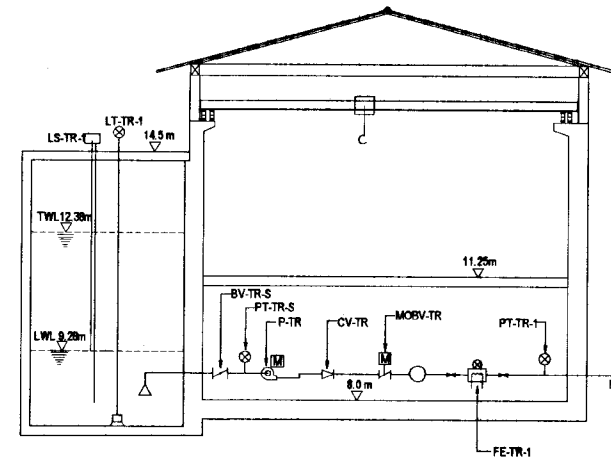
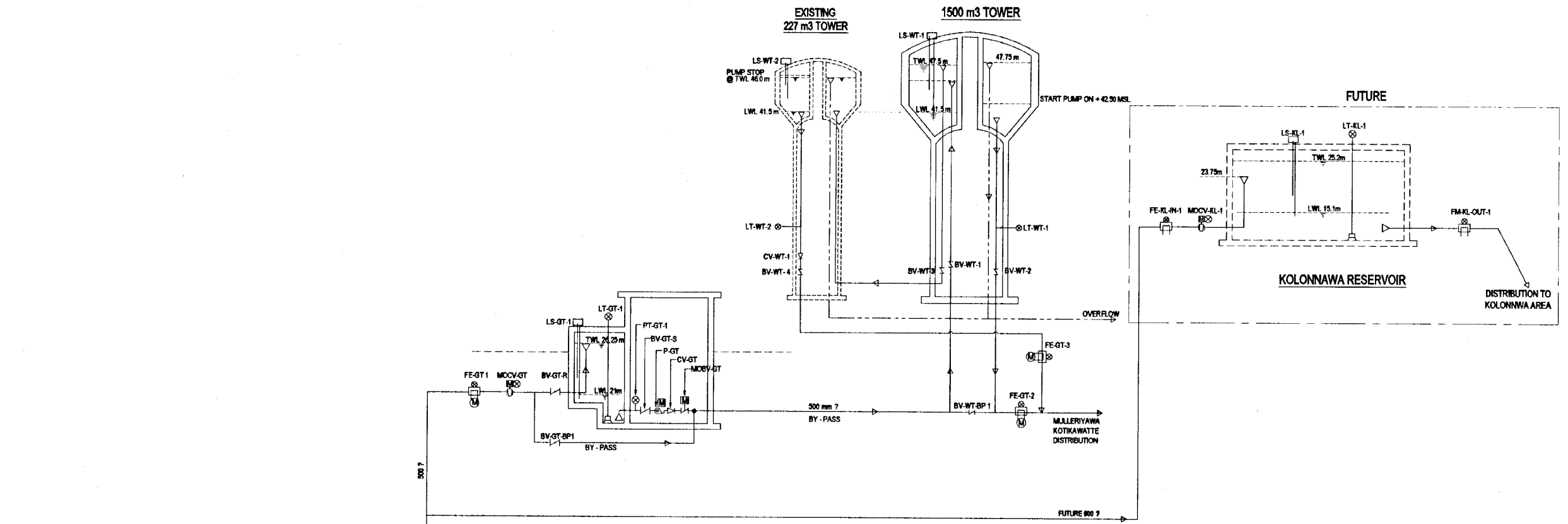
DO NOT SCALE

REV.	DESCRIPTION

NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA		SUB PROJECT: KOTIKAWATTE MULLERYAWA	TITLE: SURVEY PLAN
DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> DR. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	DRAWN: <i>[Signature]</i> PW (PROVISED) INCHES: <i>[Signature]</i> A.G.M (PROV) INCHES: <i>[Signature]</i> O.G.M (PROV) INCHES: <i>[Signature]</i>	DATE: JAN 2001	CONTRACT NO: NRW/CW DRG NO: KMU/PS/G/01


NATIONAL WATER SUPPLY AND DRAINAGE BOARD
 THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER
 IN THE GREATER COLOMBO AREA

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




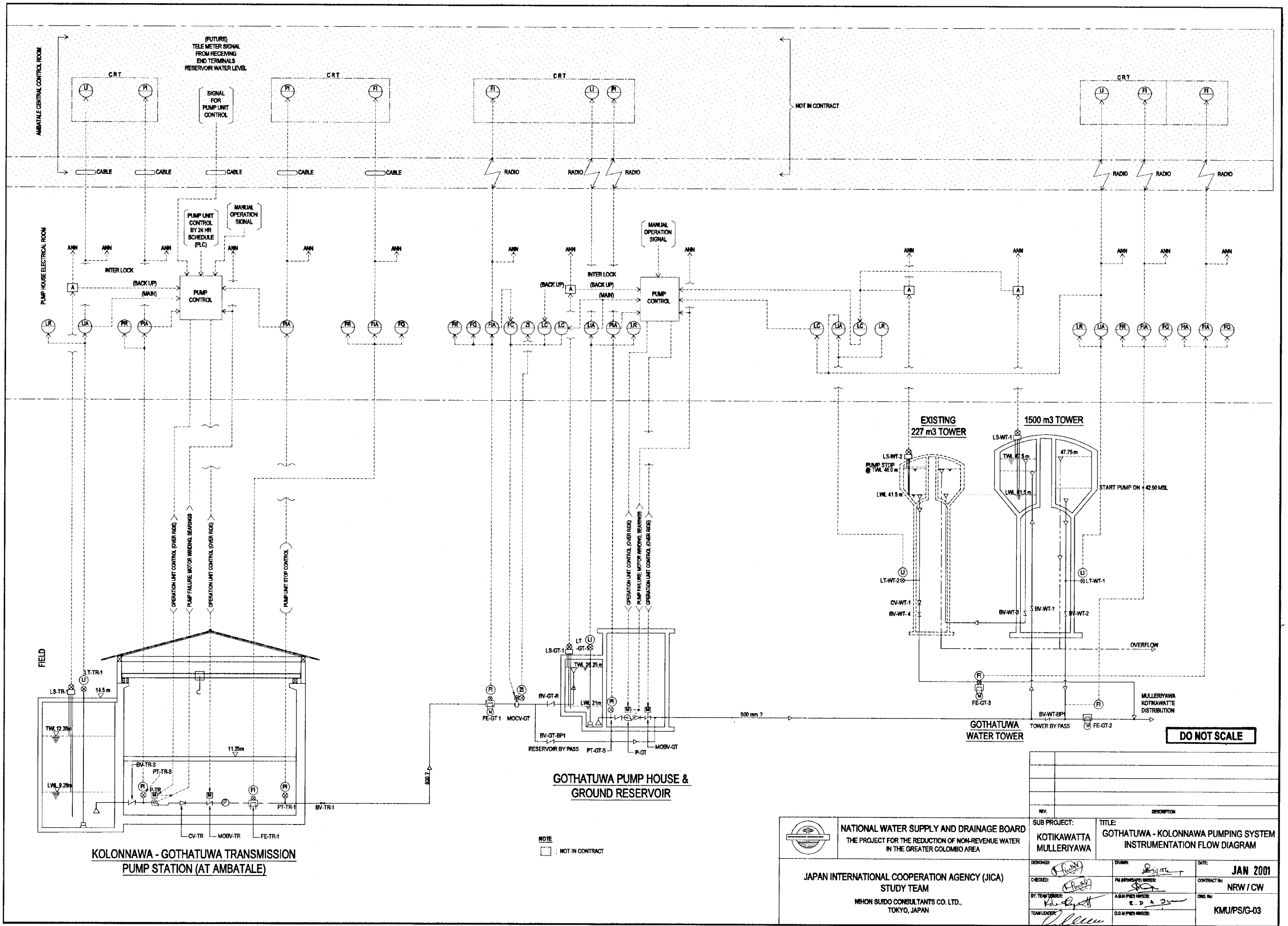
**KOLONNAWA - GOTHATUWA TRANSMISSION
PUMP STATION AT AMBATALE**

- ABBREVIATION**
- LT - LEVEL TRANSMETER
 - LS - LEVEL SWITCH
 - TWL - TOP WATER LEVEL
 - LWL - LOW WATER LEVEL
 - BV-TR-S - BUTTERFLY VALVE TRANSMISSION, SUPPLY
 - P-GT - PUMP @ GOTHATUWA
 - P-TR - PUMP TRANSMISSION
 - CV - CHECK VALVE
 - MOBV - MOTOR OPERATED BUTTERFLY VALVE
 - FE - FLOW METER MAGNETIC
 - MOCV - MOTOR OPERATED CONTROL VALVE
 - GV - GATE VALVE
 - PT - PRESSURE TRANSDUCER
 - BP - BY-PASS

PUMP SPECIFICATION	GOTHATUWA - KOLONNAWA PUMP HOUSE		GOTHATUWA PUMP HOUSE	
	(this contract)	(future)	(this contract)	(future)
Total no. of pumps	3	4	2	3
Pump unit in operation	2	3	1	2
Pump unit on stand-by	1	1	1	1
Q (m ³) each	11.85	14	18	18
TDH (m) each	42	50	30	30
Motor Output (kw) each	165	165	130	130
Type of pump	double volute horizontal		double volute horizontal	

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: GOTHATUWA GROUND RESERVOIR & PUMP HOUSE SCHEMATIC FLOW DIAGRAM</p>
	<p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM NIHON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>	<p>DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> DRAWN: <i>[Signature]</i> DATE: JAN 2001</p>




KOLONNAWA - GOTHATUWA TRANSMISSION PUMP STATION (AT AMBATALE)

GOTHATUWA PUMP HOUSE & GROUND RESERVOIR

GOTHATUWA WATER TOWER

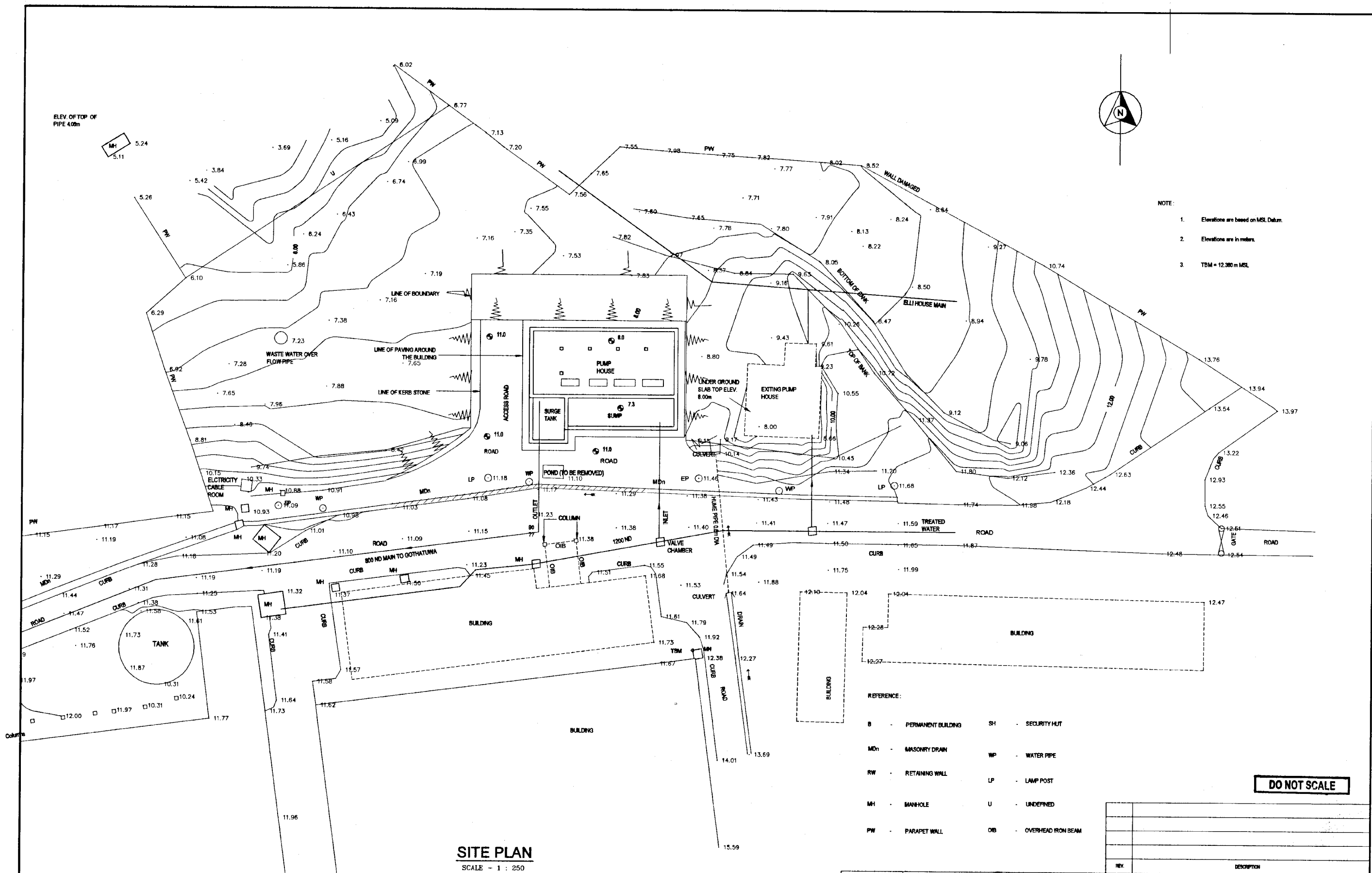
DO NOT SCALE

NOTE
 [Dashed Box] : NOT IN CONTRACT

 <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: GOTHATUWA - KOLONNAWA PUMPING SYSTEM INSTRUMENTATION FLOW DIAGRAM
	DESIGNED: [Signature] CHECKED: [Signature] BY: TEAM LEADER: [Signature] TEAM LEADER: [Signature]	DRAWN: [Signature] P.M. (PREPARED) NUMBER: [Signature] A.G.M. (P.M.) NUMBER: E. D. A. [Signature] D.G.M. (P.M.) NUMBER:



- NOTE:
1. Elevations are based on MSL Datum.
 2. Elevations are in meters.
 3. TBM = 12.380 m MSL.

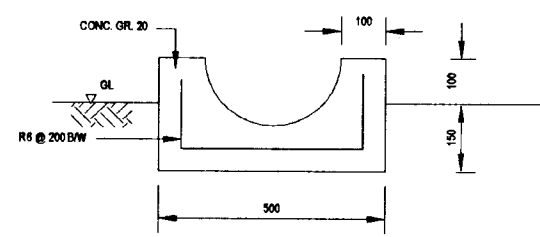
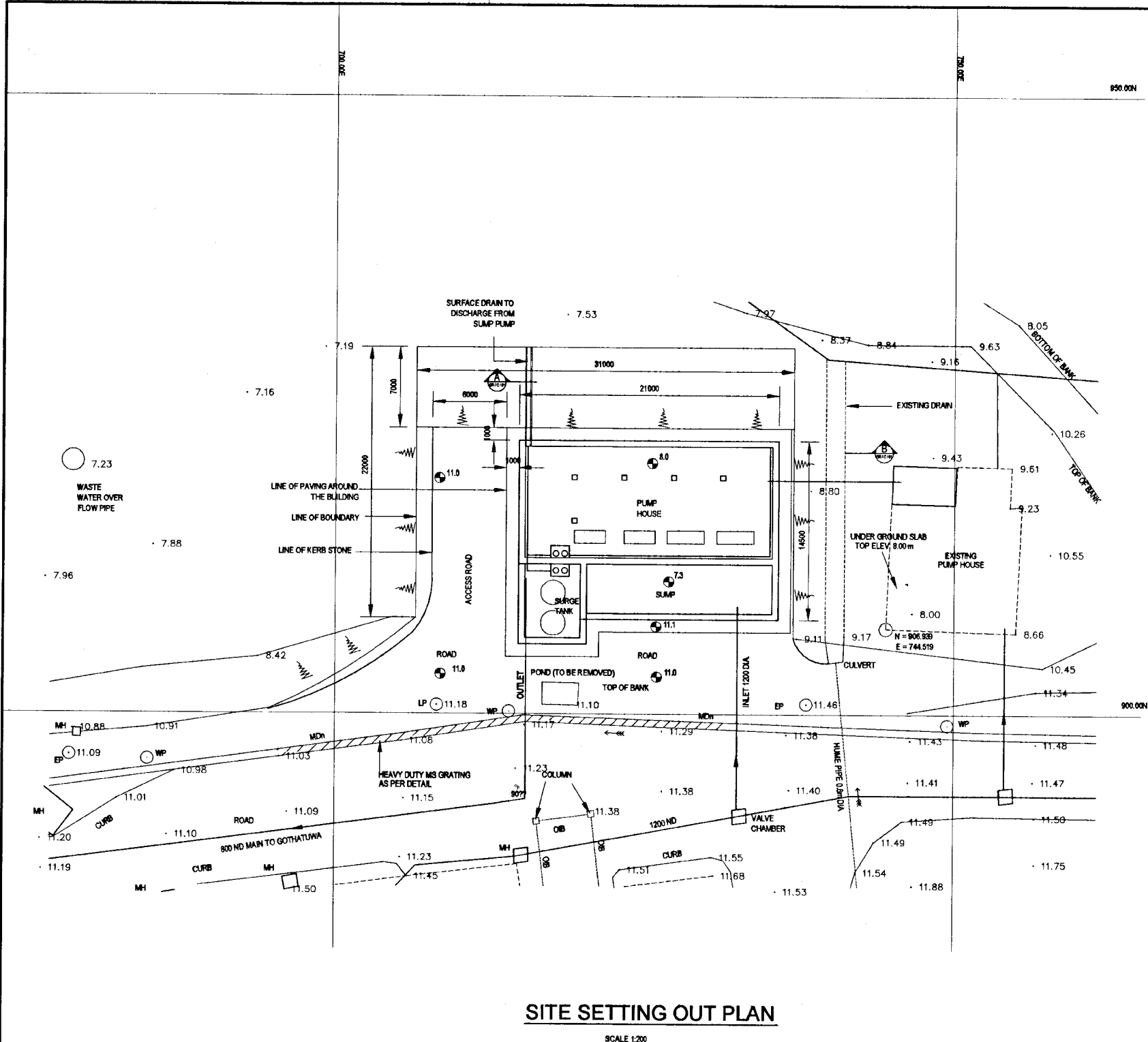


SITE PLAN
SCALE - 1 : 250

DO NOT SCALE

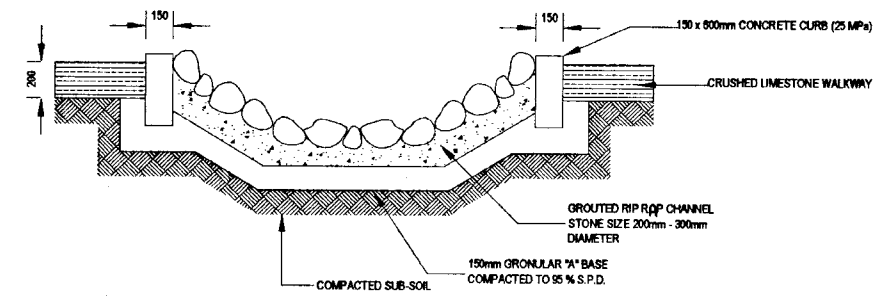
- REFERENCE:
- B - PERMANENT BUILDING
 - MDn - MASONRY DRAIN
 - RW - RETAINING WALL
 - MH - MANHOLE
 - PW - PARAPET WALL
 - SH - SECURITY HUT
 - WP - WATER PIPE
 - LP - LAMP POST
 - U - UNDERNEED
 - ORB - OVERHEAD IRON BEAM

<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: KOTIKAWATTE MULLERIYAWA</p>	<p>TITLE: GOTTHATUWA-KOLONNAWA PUMP HOUSE SITE PLAN</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>CONTRACT NO: NRW / CW</p>
<p>NIHON SUJIDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>	<p>DRY. TEAM LEADER: <i>[Signature]</i></p>	<p>DRG. NO: KMU/PS/C/01</p>



CROSS SECTION 'A' OF DRAIN
SCALE 1:10

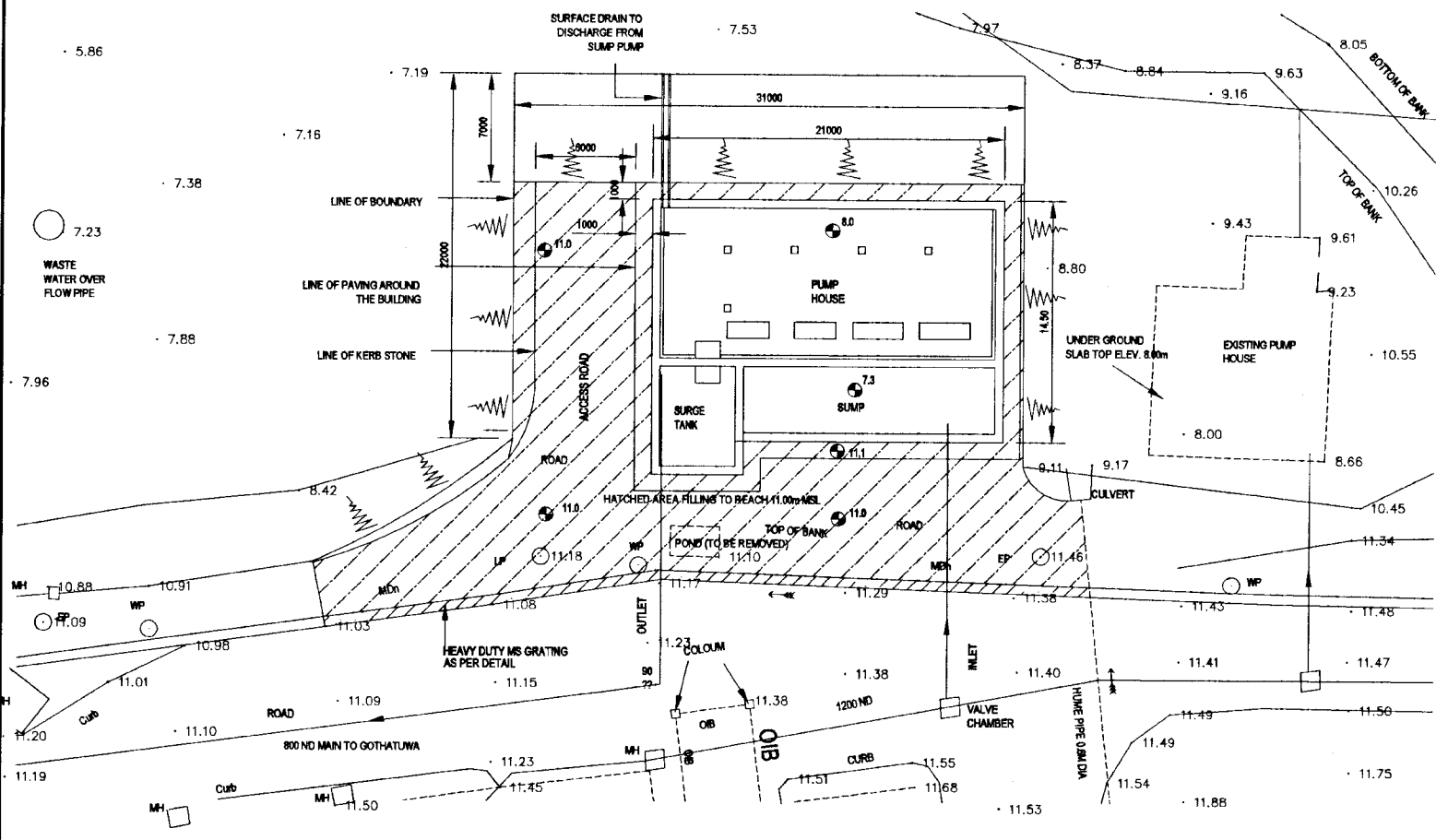
NOTE: PUMP HOUSE & RESERVOIR SHALL BE ORIENTED PARALLEL TO THE 1200 ? MAIN TO AVOID ANY HORIZONTAL BENDS IN THE SUPPLY LINE TO THE RESERVOIR.



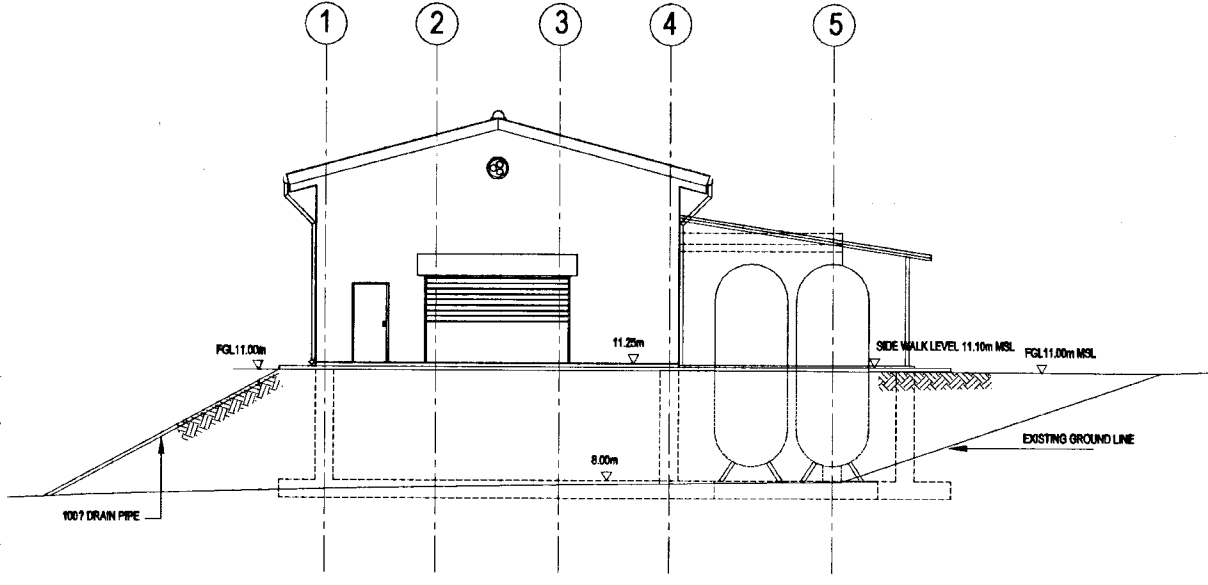
GRouted RIP RAP ON EXISTING DRAIN SECTION B-B

DO NOT SCALE

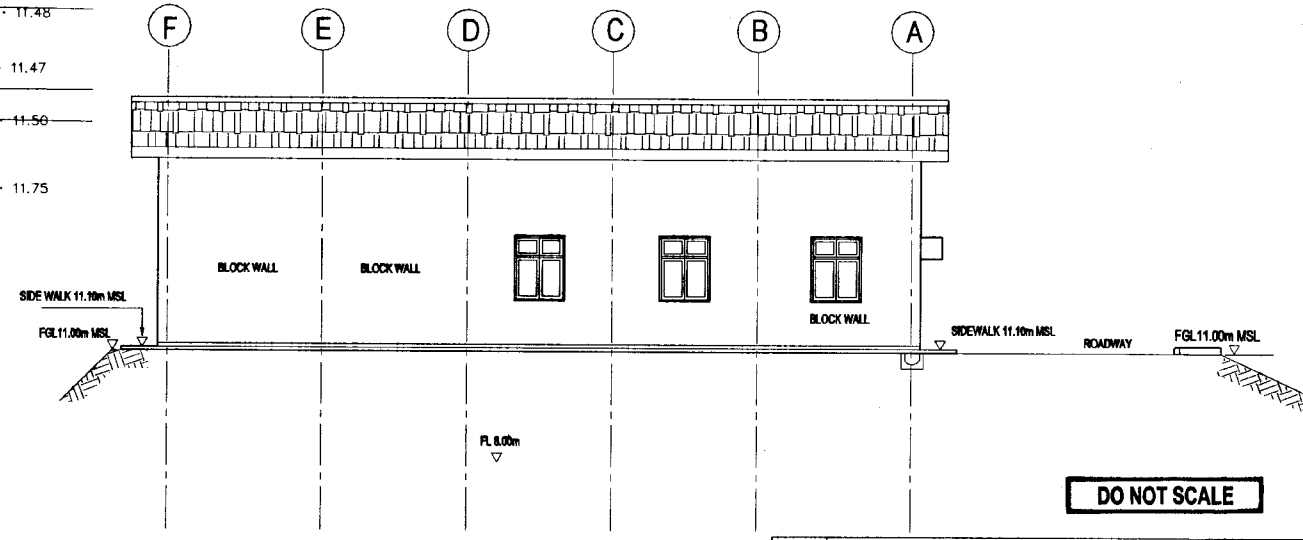
	NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: KOTIKAWATTE MULLERIYAWA	TITLE: GOATHUWA-KOLONNAWA PUMP HOUSE SETTING OUT PLAN
	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM Nihon Suido Consultants Co. Ltd., TOKYO, JAPAN	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 (PMD) INCHARGE: <i>[Signature]</i> C.I.M (PMD) INCHARGE: <i>[Signature]</i>



SITE GRADING PLAN
SCALE 1:200



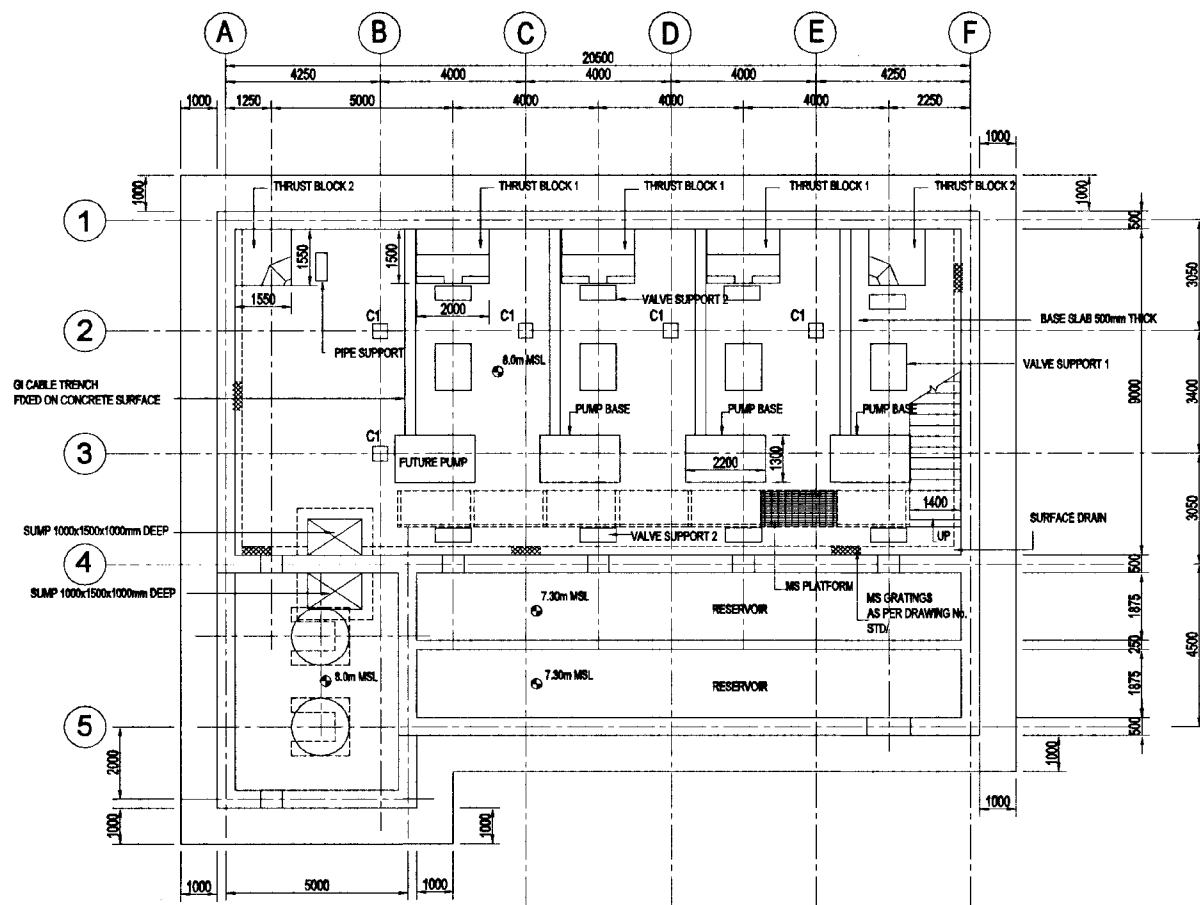
ELEVATION 1
SCALE - 1:100



ELEVATION 2
SCALE - 1:100

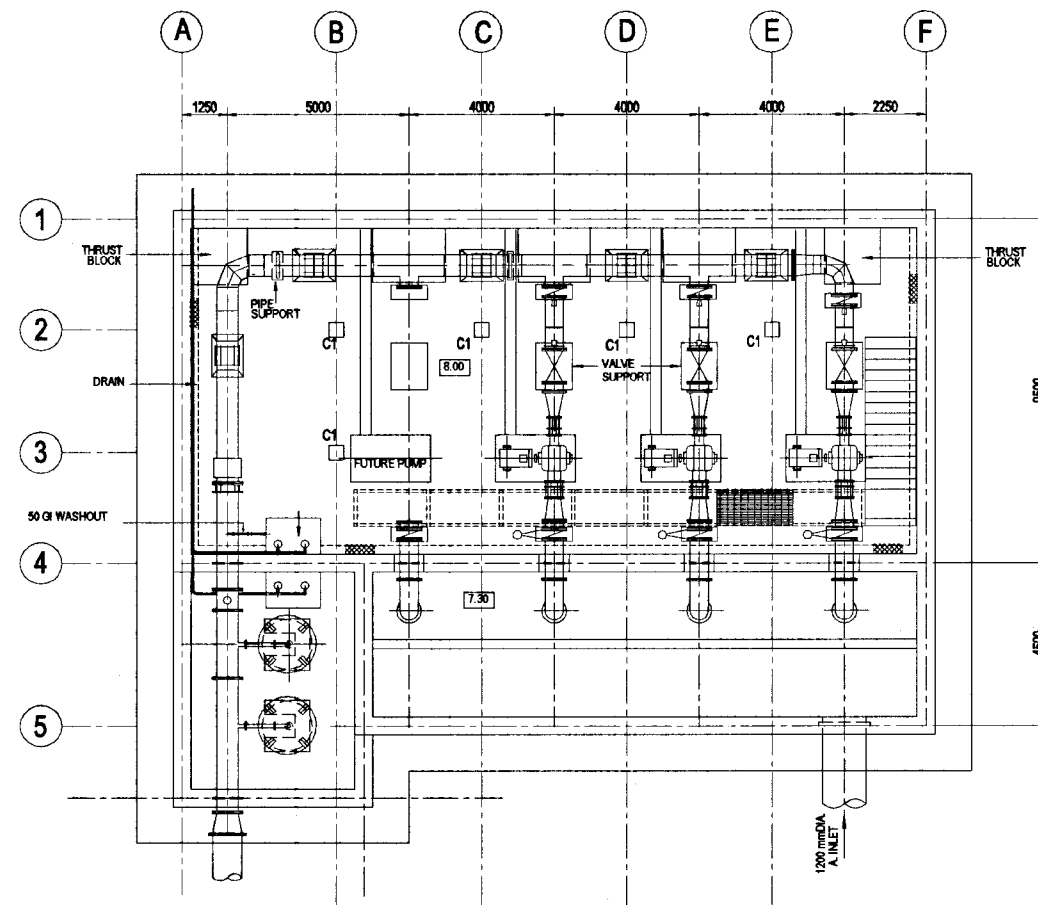
DO NOT SCALE

<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: KOTIKAWATTE MULLERIYAWA</p>	<p>TITLE: GOATHUWA-KOLONNAWA PUMP HOUSE SITE GRADING PLAN</p>
	<p>DESIGNED: <i>[Signature]</i></p>	<p>DATE: JAN 2001</p>
<p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM</p>	<p>CONTRACT NO: NRW / CW</p>	<p>DRINK: <i>[Signature]</i></p>
<p>NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>	<p>DRG. No: KMUPS/C/03</p>	<p>BY: TEAM LEADER: <i>[Signature]</i></p>
		<p>REV. DESCRIPTION</p>



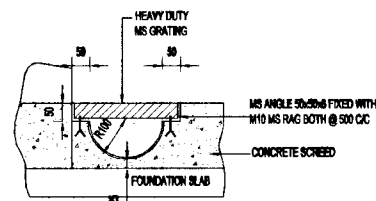
PLAN AT 8.00m MSL

SCALE - 1:100



GENERAL LAYOUT PLAN AT 8.00m MSL


SCALE - 1:100

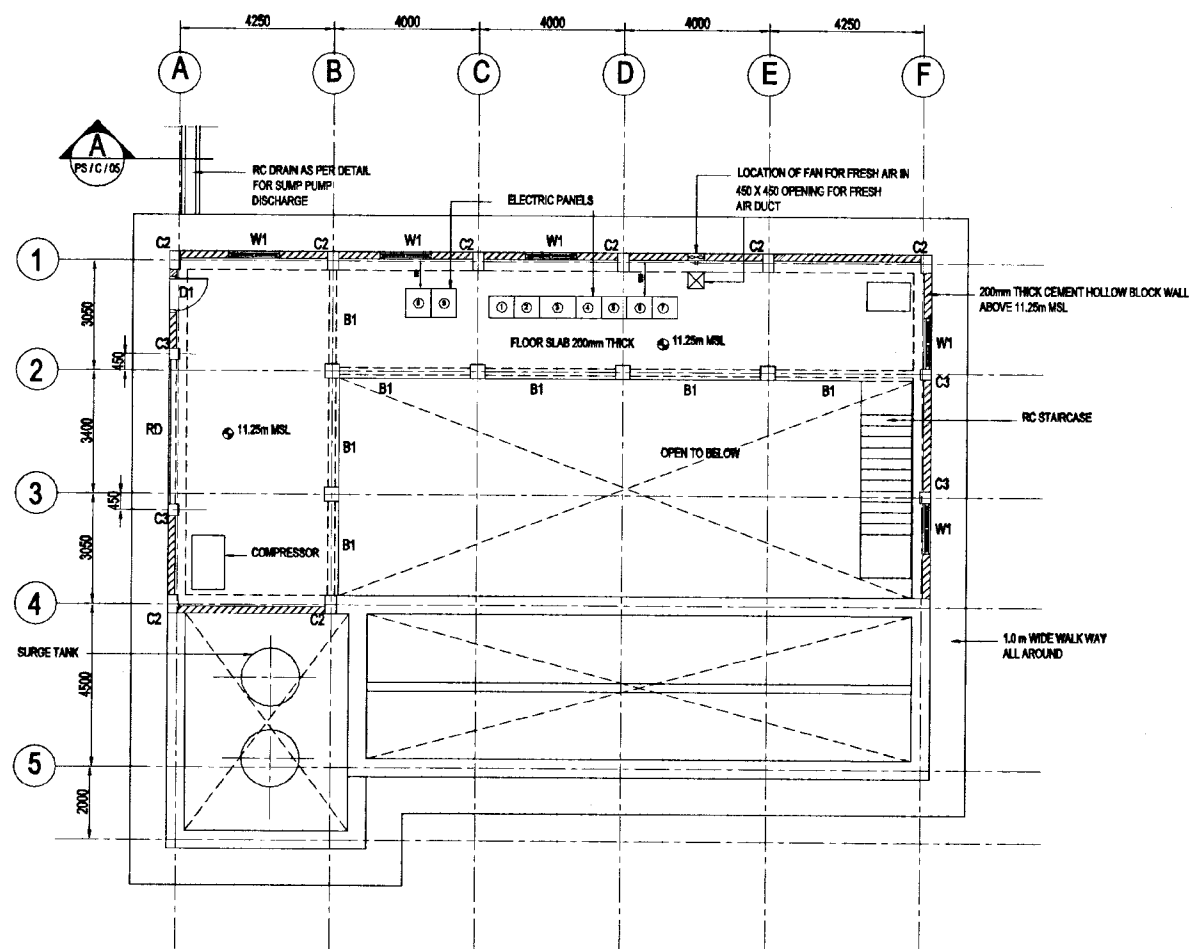


DETAIL OF GUTTER DRAIN

SCALE 1:10

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: KOTIKAWATTE MULLERIYAWA</p>	<p>TITLE: GOTHATUWA-KOLONNAWA PUMP HOUSE GENERAL ARRANGEMENT OF PUMP HOUSE</p>
	<p>DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> DR. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i></p>	<p>DATE: JAN 2001 CONTRACT NO: NRW / CW DRG. NO: KMUPS/C/04</p>

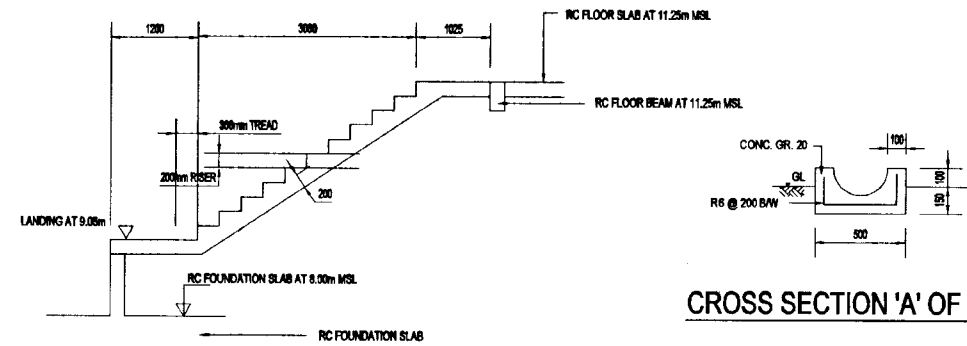


PLAN AT 11.25m LEVEL

SCALE - 1:100

SCHEDULE OF DOORS & WINDOWS

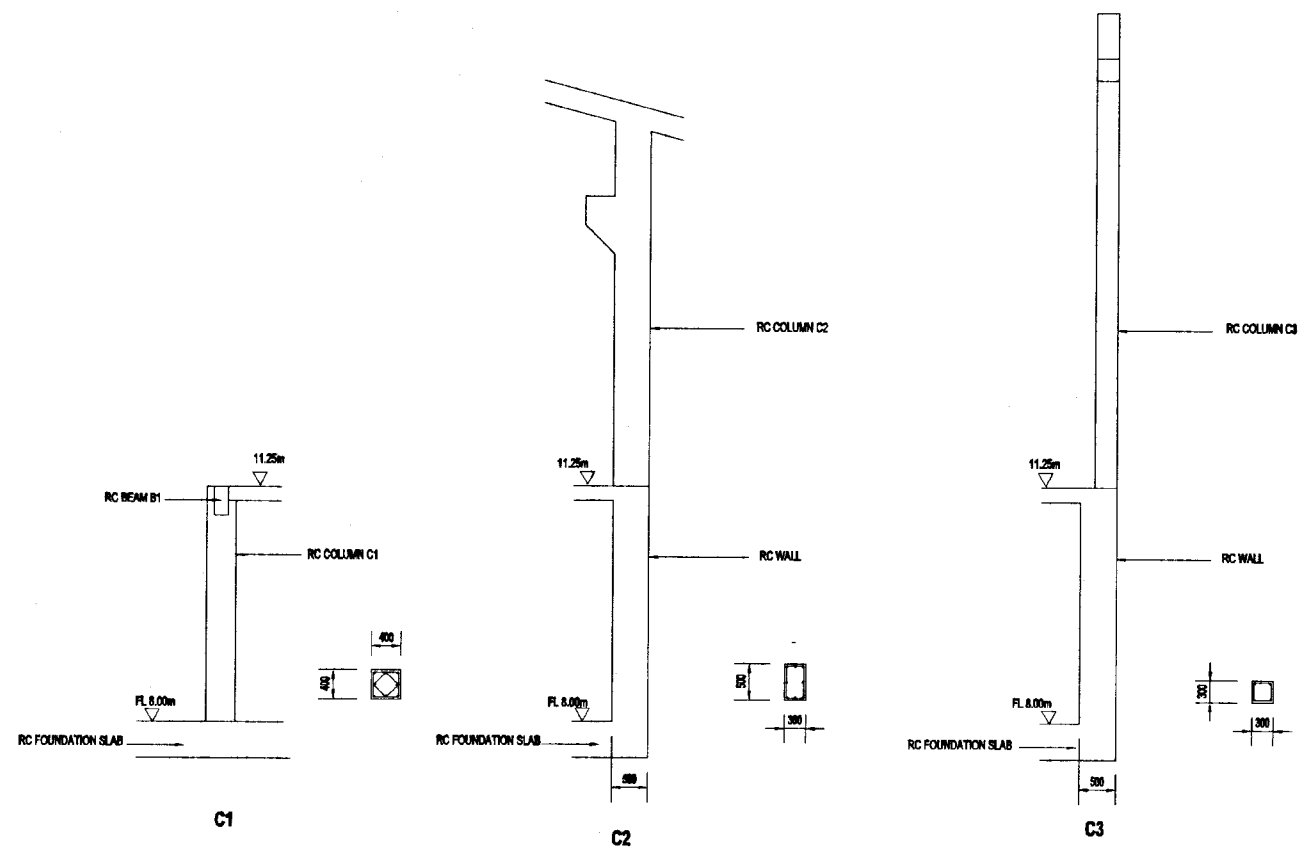
TYPE	SIZE IN mm		DESCRIPTION	QUANTITY
	WIDTH	HEIGHT		
D1	1000	2200	BRONZE ANODISED ALUMINUM DOOR WITH GLAZED PANELS	01
W1	1400	1800	BRONZE ANODISED ALUMINUM FRAMES & PANELS WITH GLASS	05
RD	4000	3000	ALUMINUM ROLLER DOOR	01



CROSS SECTION 'A' OF DRAIN

DETAIL OF RC STAIRCASE

SCALE - 1:50

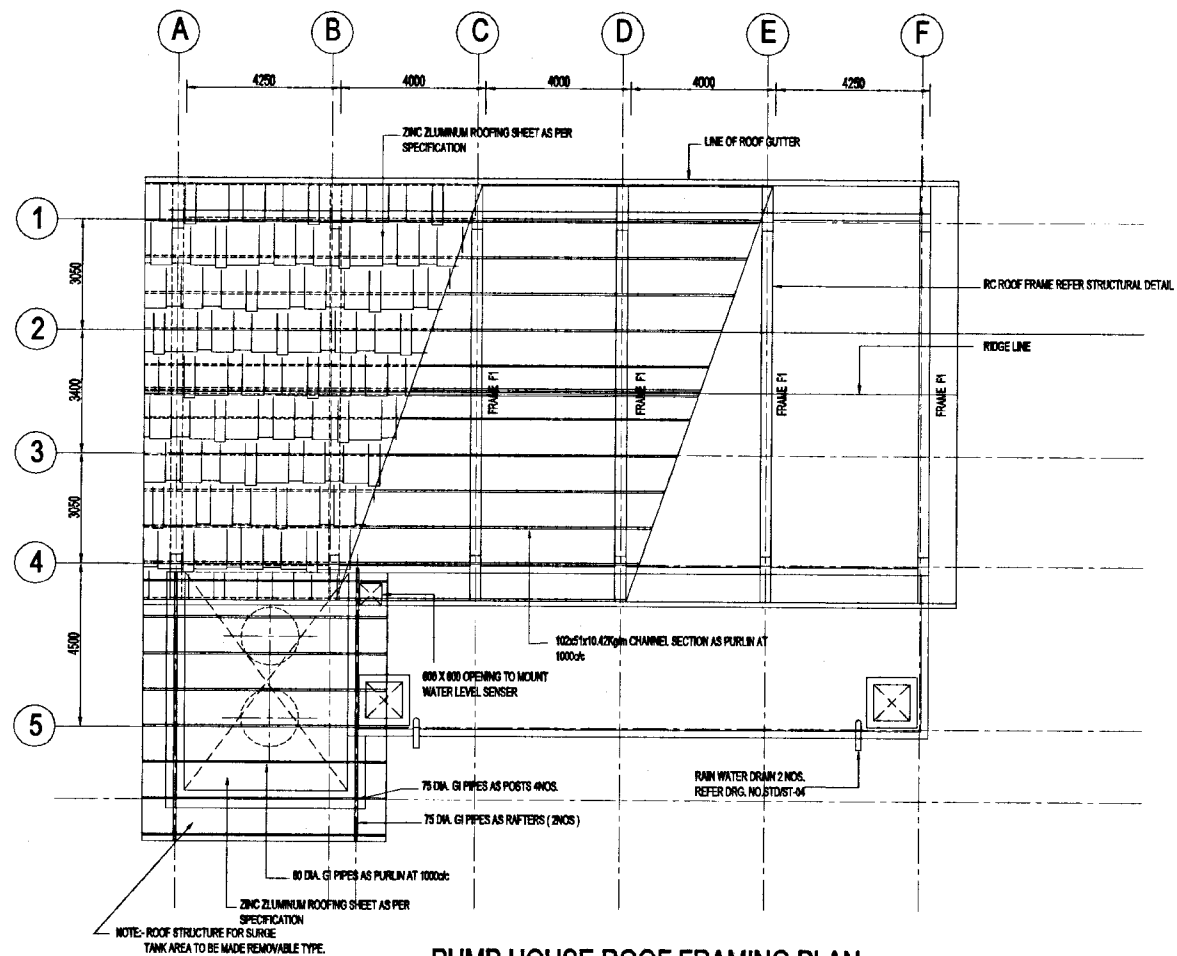


DETAIL OF COLUMNS

SCALE - 1:50

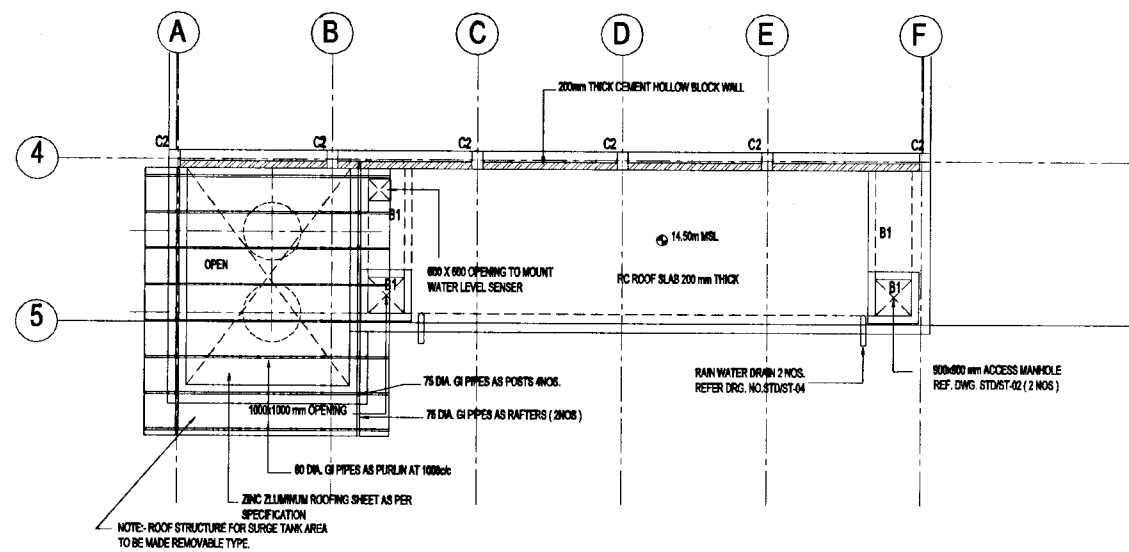
DO NOT SCALE

<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: KOTIKAWATTE MULLERIYAWA</p>	<p>TITLE: GOTHATUWA-KOLONNAWA PUMP HOUSE PLAN AT 11.25 MSL</p>
	<p>DESIGNED: <i>[Signature]</i></p>	<p>DRAWN: <i>[Signature]</i></p>
<p>CHECKED: <i>[Signature]</i></p>	<p>IN CHARGE: <i>[Signature]</i></p>	<p>CONTRACT No: NRW / CW</p>
<p>DT. TEAM LEADER: <i>[Signature]</i></p>	<p>A.S.M. (PMD) INCHARGE: <i>[Signature]</i></p>	<p>DWG. No: KMU/PS/C/05</p>
<p>TEAM LEADER: <i>[Signature]</i></p>	<p>D.G.M. (PMD) INCHARGE: <i>[Signature]</i></p>	



PUMP HOUSE ROOF FRAMING PLAN


SCALE - 1:100

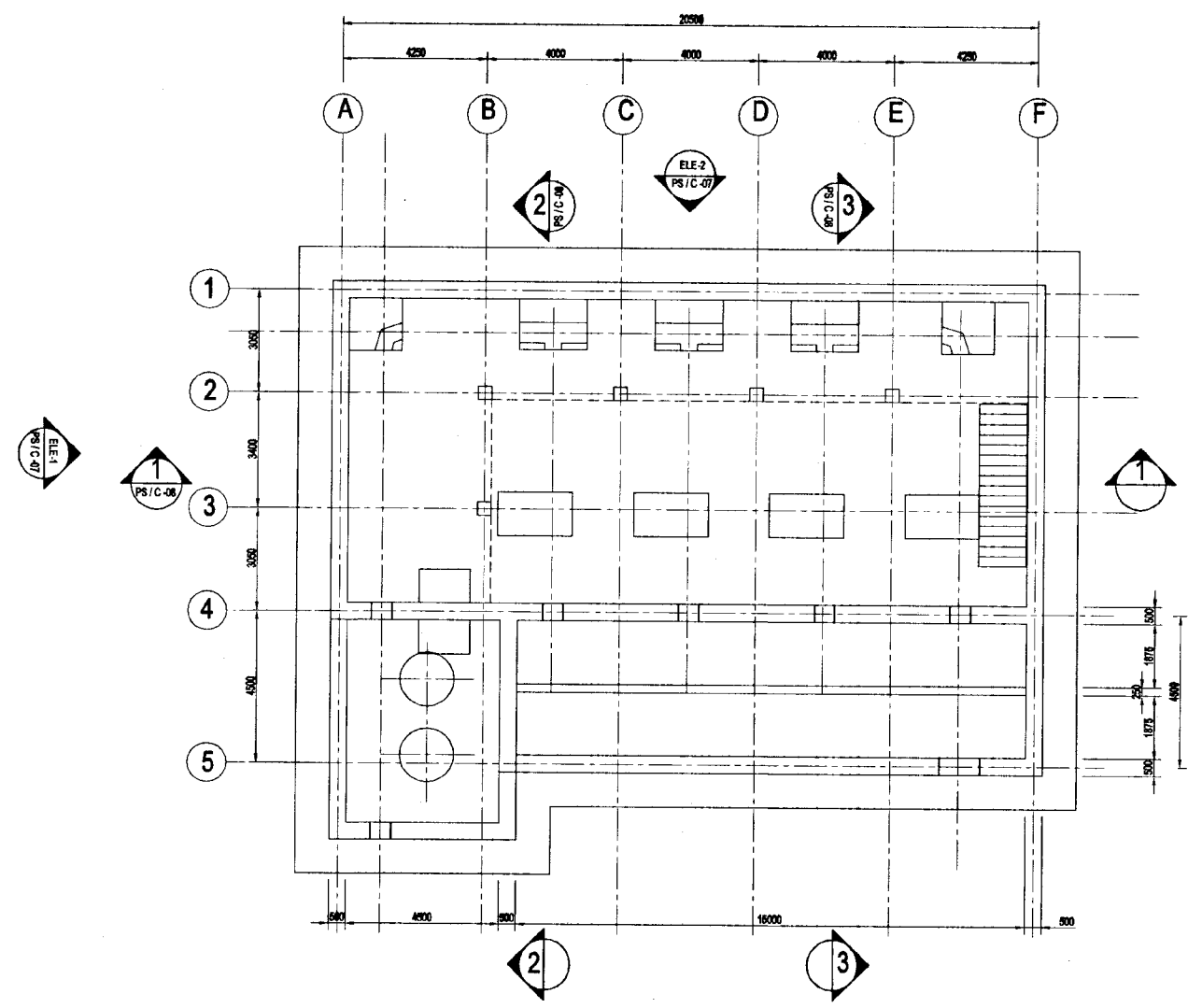


RESERVOIR ROOF PLAN AT 14.50m LEVEL

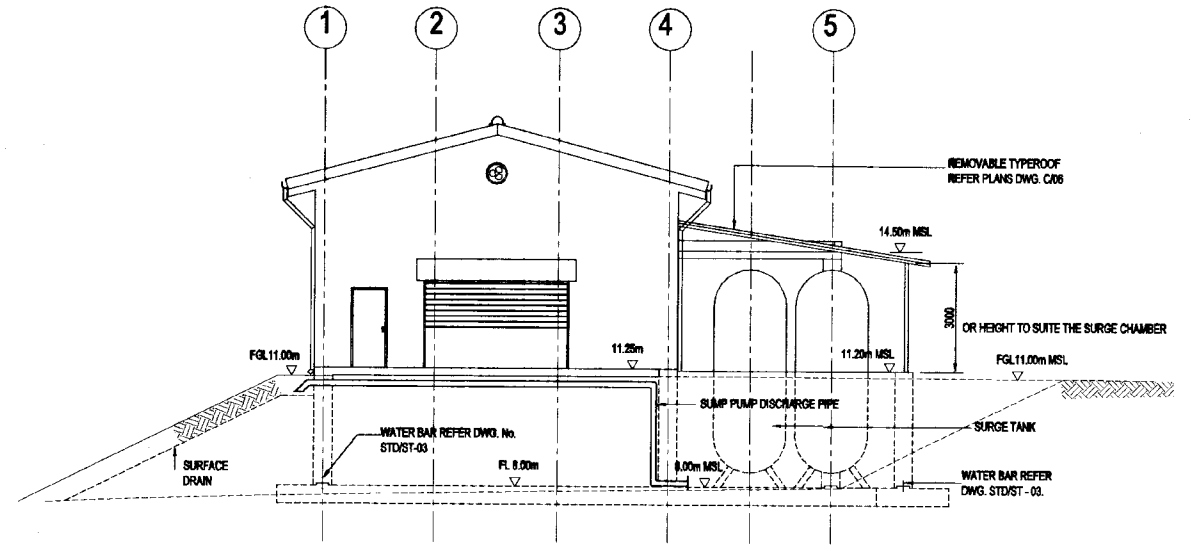
SCALE - 1:100

DO NOT SCALE

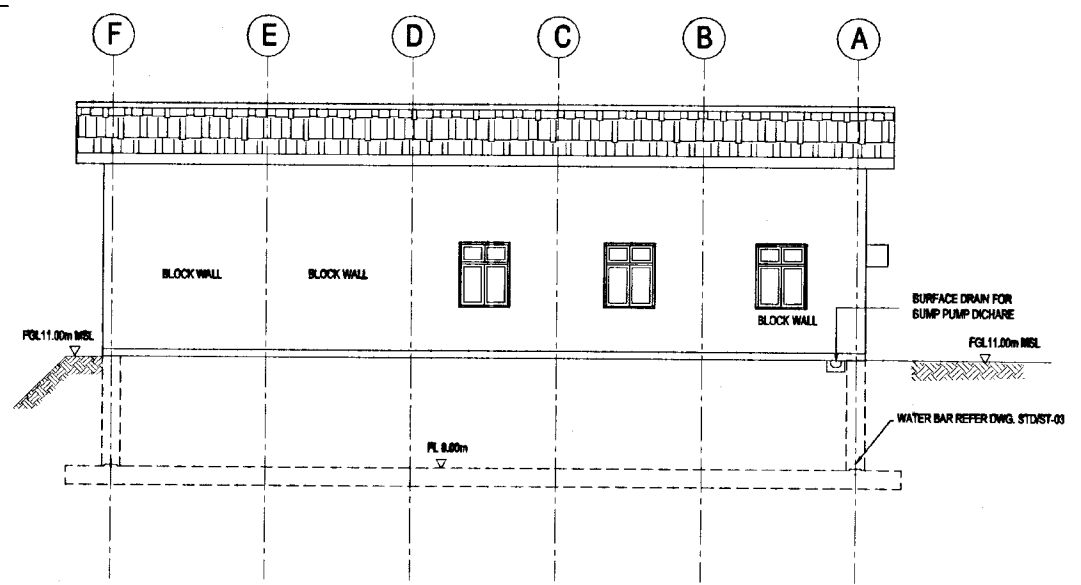
 <p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	<p>SUB PROJECT: KOTIKAWATTE MULLERIYAWA</p>		<p>TITLE: GOTHATUWA - KOLONNAWA PUMP HOUSE ROOFING PLAN</p>	
	<p>DESIGNED: <i>[Signature]</i></p> <p>CHECKED: <i>[Signature]</i></p> <p>BY TEAM LEADER: <i>[Signature]</i></p> <p>TEAM LEADER: <i>[Signature]</i></p>	<p>DRAWN: <i>[Signature]</i></p> <p>PM SUPERVISOR: <i>[Signature]</i></p> <p>A&M (P&I) MNSDR: <i>[Signature]</i></p> <p>D.G.M (P&I) MNSDR: <i>[Signature]</i></p>	<p>DATE: JAN 2001</p> <p>CONTRACT No: NRW / CW</p> <p>DRG. No: KMU/PS/C/06</p>	



KEY PLAN
SCALE - 1:100




ELEVATION 1
SCALE - 1:100

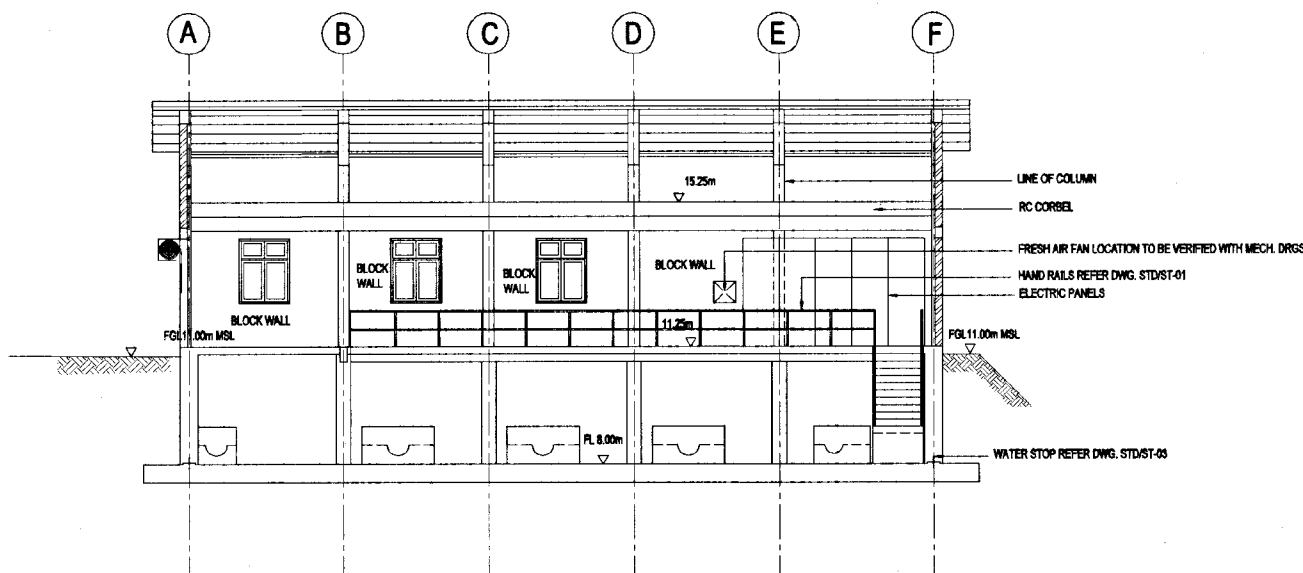


ELEVATION 2
SCALE - 1:100

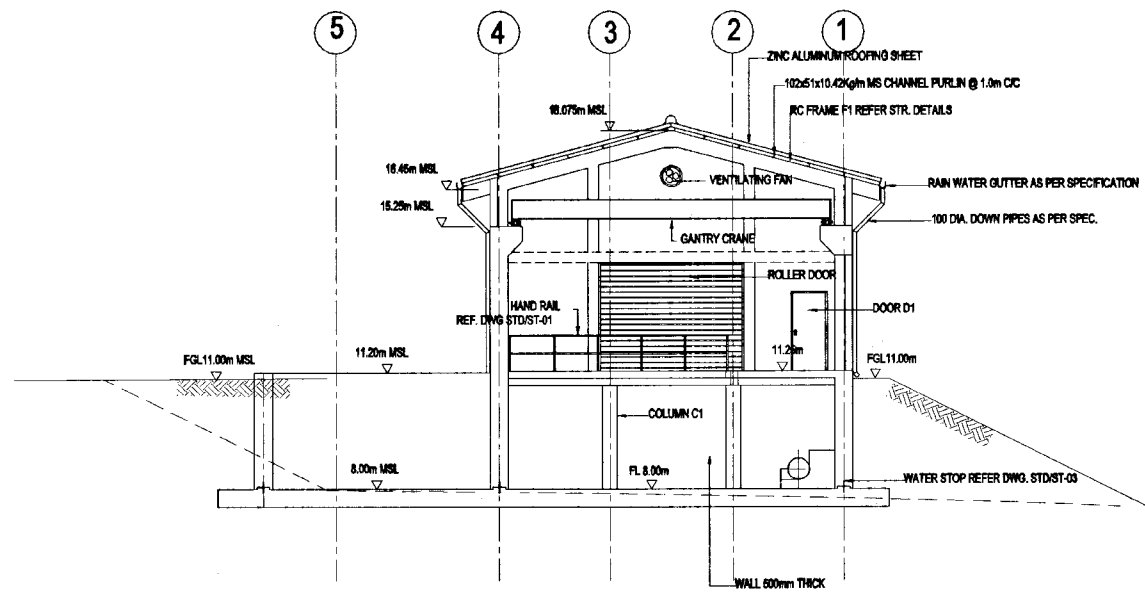
DO NOT SCALE

 NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: KOTIKAWATTE MULLERIYAWA		TITLE: GOTHATUWA - KOLONNAWA PUMP HOUSE ELEVATIONS	
	DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> DR. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	DRAWN: <i>[Signature]</i> PM (PROVISED) INCHARGE: <i>[Signature]</i> A.O.M (PMD) INCHARGE: <i>[Signature]</i> D.O.M (PMD) INCHARGE: <i>[Signature]</i>	DATE: JAN 2001	CONTRACT NO.: NRW / CW

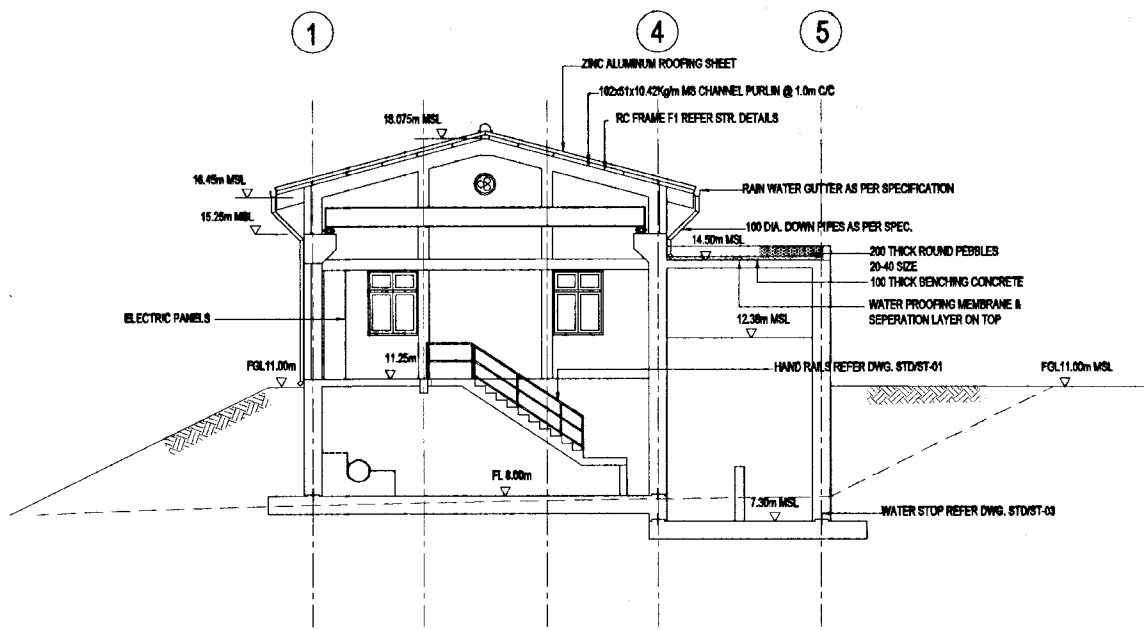
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
 NIHON SUDO CONSULTANTS CO. LTD.,
 TOKYO, JAPAN



SECTIONAL ELEVATION 1
SCALE - 1:100



SECTIONAL ELEVATION 2
SCALE - 1:100

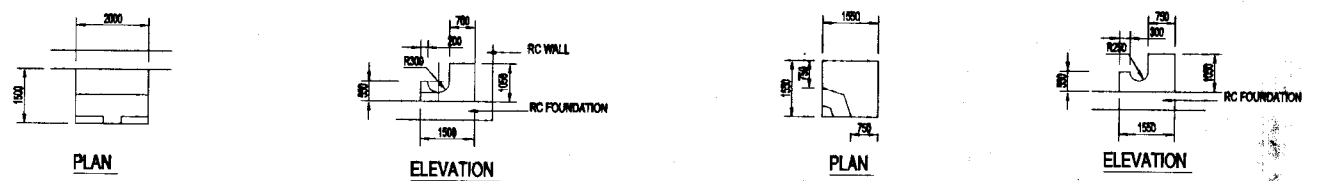


SECTIONAL ELEVATION 3
SCALE - 1:100

DO NOT SCALE

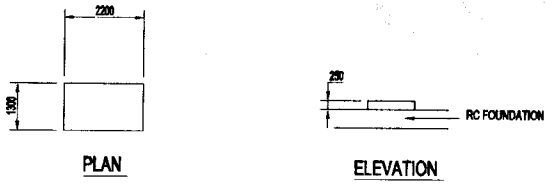
REV.	DESCRIPTION

<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: KOTIKAWATTE MULLERIYAWA</p>	<p>TITLE: GOTHATUWA - KOLONNAWA PUMP HOUSE SECTIONAL ELEVATIONS & DETAILS</p>
	<p>DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> DR. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i></p>	<p>DRAWN: <i>[Signature]</i> PM (PAPAWASIE) HANDS: <i>[Signature]</i> A-EM (PMD) HANDS: <i>[Signature]</i> R. D. A. J. D.&M (PMD) HANDS: <i>[Signature]</i></p>
<p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>		



THRUST BLOCK 1
SCALE - 1:100

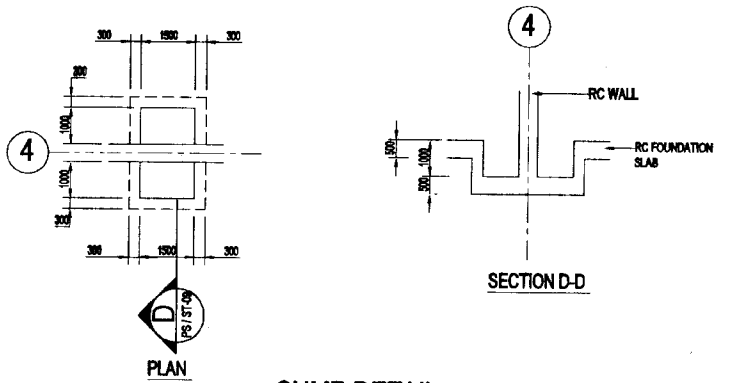
THRUST BLOCK 2
SCALE - 1:100



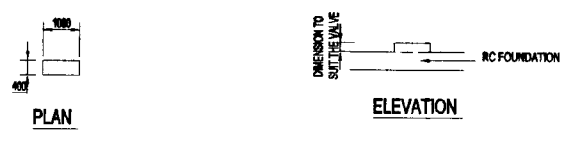
PUMP BASE
SCALE - 1:100



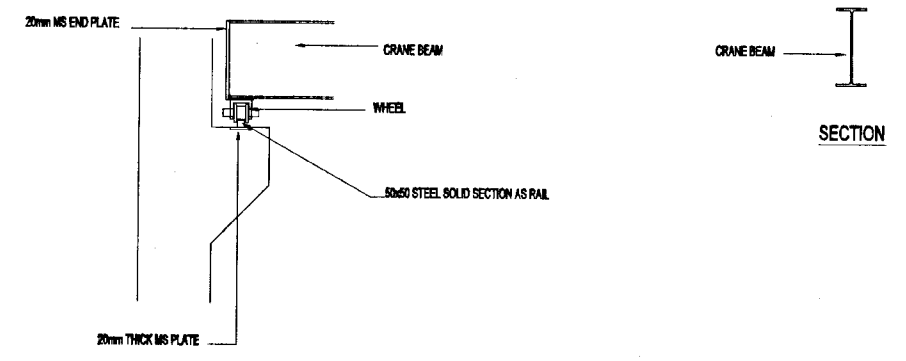
VALVE SUPPORT 1
SCALE - 1:100



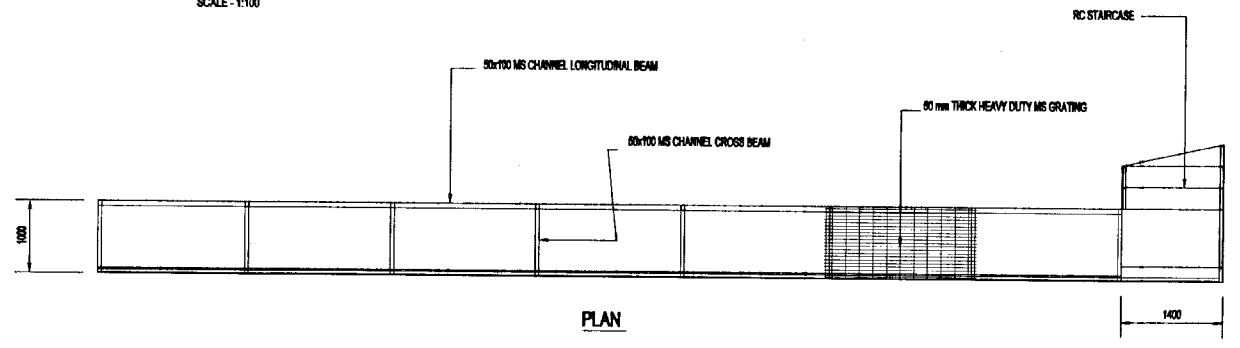
SUMP DETAIL
SCALE - 1:100



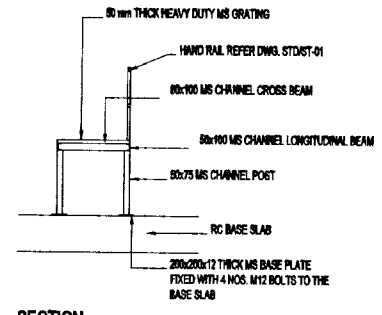
VALVE SUPPORT 2
SCALE - 1:100



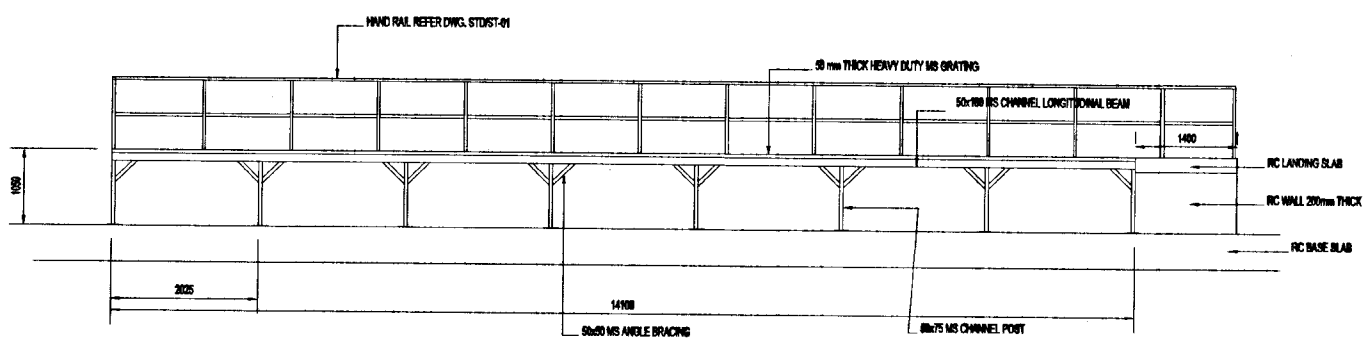
GANTRY CRANE BEAM DETAIL
SCALE - 1:25



PLAN



SECTION



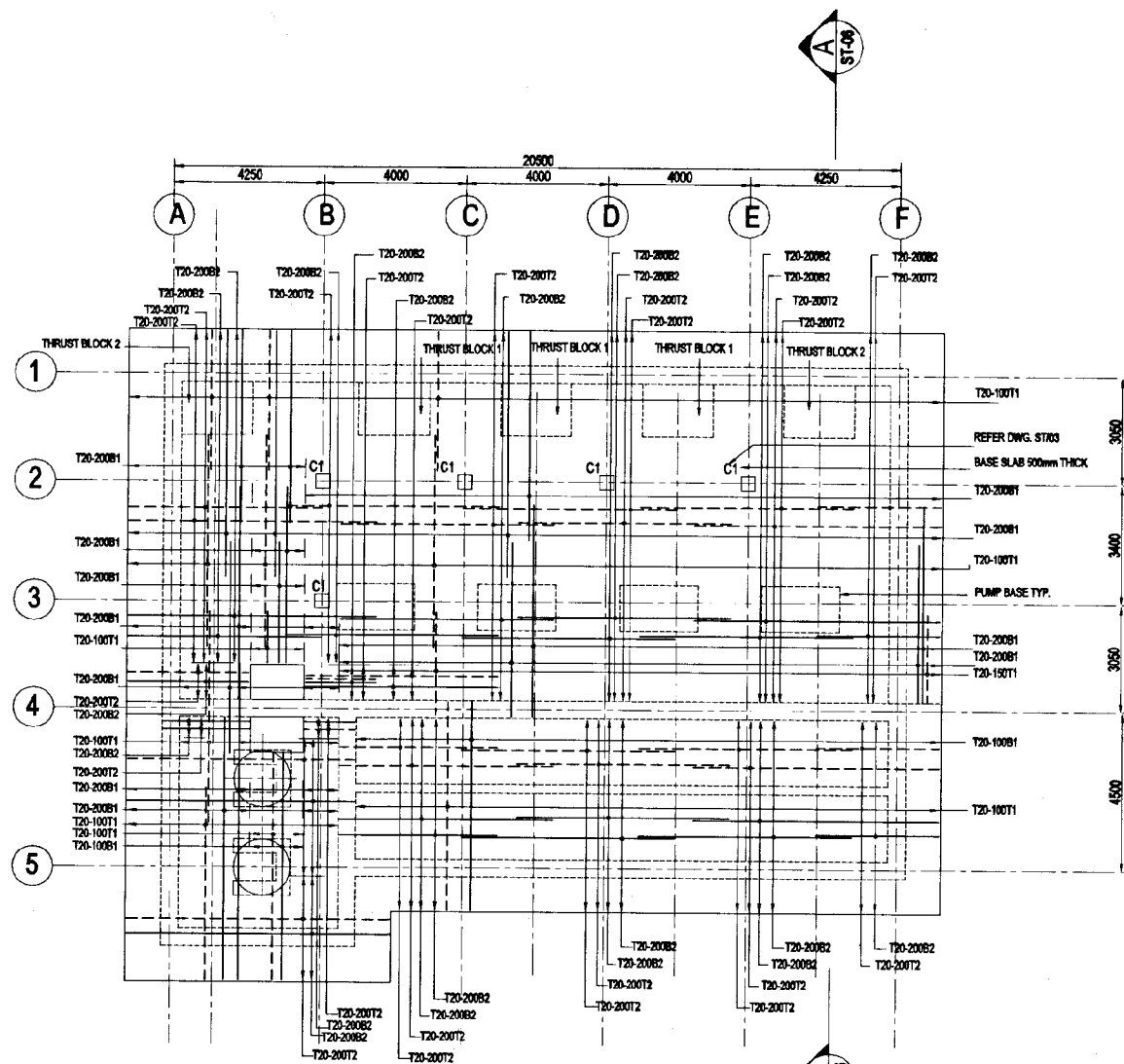
ELEVATION

DETAIL OF MS PLATFORM
SCALE - 1:50

NOTE: ALL THE CONNECTION SHALL BE OF FILLET WELD OF 8mm LEG LENGTH

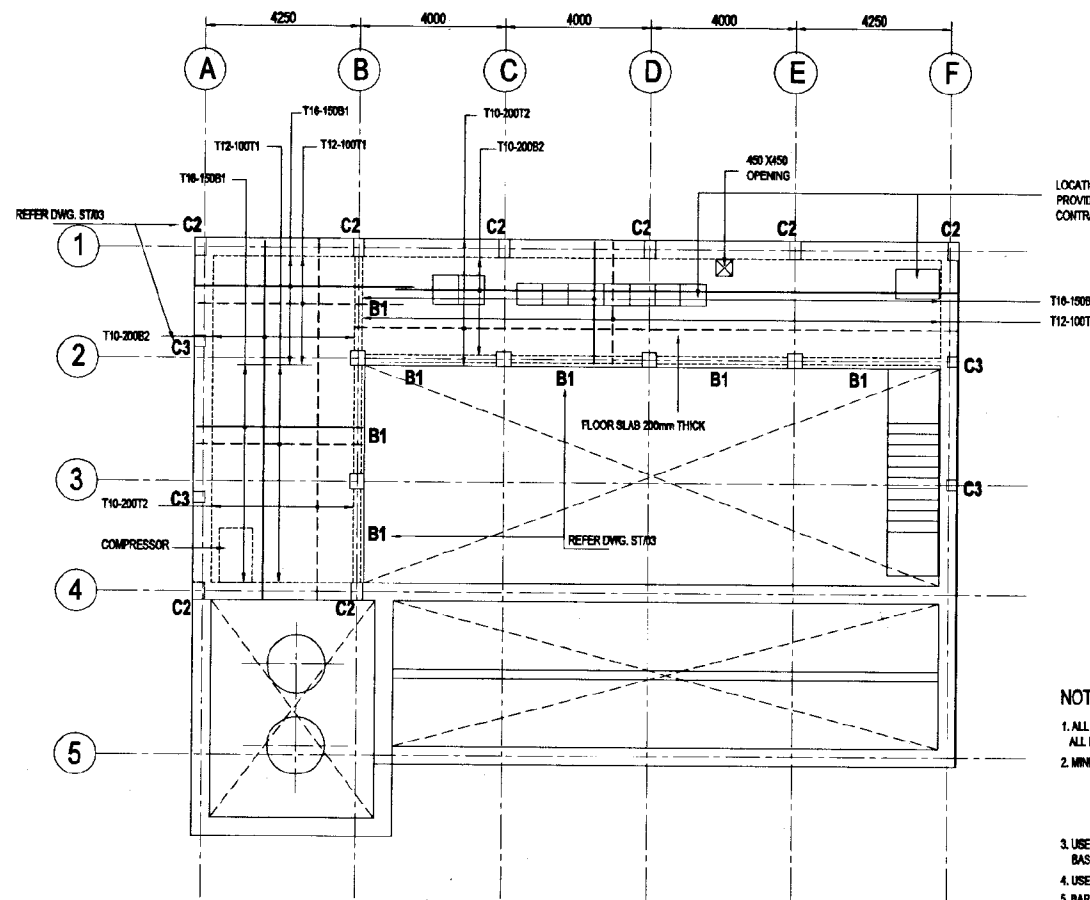
DO NOT SCALE

	NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA		SUB PROJECT: KOTIKAWATTE MULLERIYAWA	TITLE: GOATHUWA-KOLONNAWA PUMP HOUSE MISCELLANEOUS DETAILS
	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM NIHON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN		DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> D.Y. TEAM LEADER: <i>[Signature]</i> TEAM LEADER: <i>[Signature]</i>	DATE: JAN 2001 CONTRACT NO.: NRW / CW DWA. NO.: KMU/PS/C/09



FOUNDATION PLAN

SCALE - 1:100



RC SLAB PLAN AT 11.25m LEVEL

SCALE - 1:100

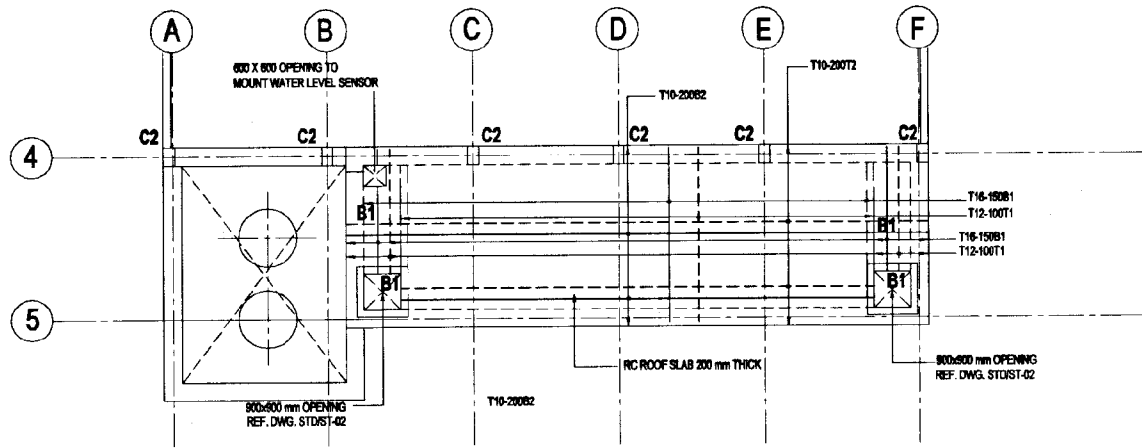
LOCATION OF ELECTRICAL PANELS RIGID CONDUITS TO BE PROVIDED IN THE SLAB AS PER ELECTRICAL DRAWINGS, CONTRACTOR TO COORDINATE.

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED. ALL LEVELS ARE IN METRES ABOVE MSL.
 2. MINIMUM CLEAR COVER TO REINFORCEMENT FOR BEAMS & SLABS 30mm FOR FOUNDATION & RETAINING WALLS 50mm FOR COLUMNS 40mm FOR SURFACE IN CONTACT WITH WATER 50mm
 3. USE GRADE S6 (20) CONCRETE FOR ALL THE WALLS, BASE SLAB, ROOF SLABS, COLUMNS & BEAMS.
 4. USE GRADE 20 (40) FOR SCREED & BINDING CONCRETE.
 5. BAR NOTATION IS AS FOLLOWS:-
- | | |
|---|---|
| TYPE OF STEEL
T - TOR STEEL
R - MILD STEEL
BAR DIAMETER mm
BAR MARK | BAR LOCATION
T - TOP, B - BOTTOM
EF - EACH FACE
NF - NEAR FACE
FF - FAR FACE
BAR SPACING |
|---|---|
6. LAP / ANCHORAGE LENGTH 50?
 7. CHARACTERISTIC STRENGTH OF HIGH YIELD STEEL (T) 480N/mm² & MILD STEEL (R) 250N/mm²
 8. SAFE BEARING CAPACITY OF SOIL 200kN/m²
 9. FOR INFORMATION:- LIVE LOADS ON FLOOR SLAB 5kN/m², ON PUMP HOUSE ROOF 1.0kN/m², ON RESERVOIR ROOF 2.5kN/m²
WIND SPEED 34m/s, SOIL DENSITY 20.00kN/m³, Km=333 & Kp=0.0
 10. FILLING UNDER THE FOUNDATION SHALL BE DONE WITH LATERITIC GRAVEL WHICH IS PLACED IN LAYERS AND COMPACTED AT OR NEAR ITS OPTIMUM MOISTURE CONTENT TO ATTAIN A MINIMUM OF 95% PROCTOR DENSITY. SUCH A COMPACTED FILL SHALL HAVE AN ALLOWABLE BEARING CAPACITY OF AT LEAST 125 kN/m².
 11. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL STRUCTURAL, ARCHITECTURAL, ELECTRICAL, MECHANICAL, CIVIL DRAWINGS & ALL STANDARD DRAWINGS.

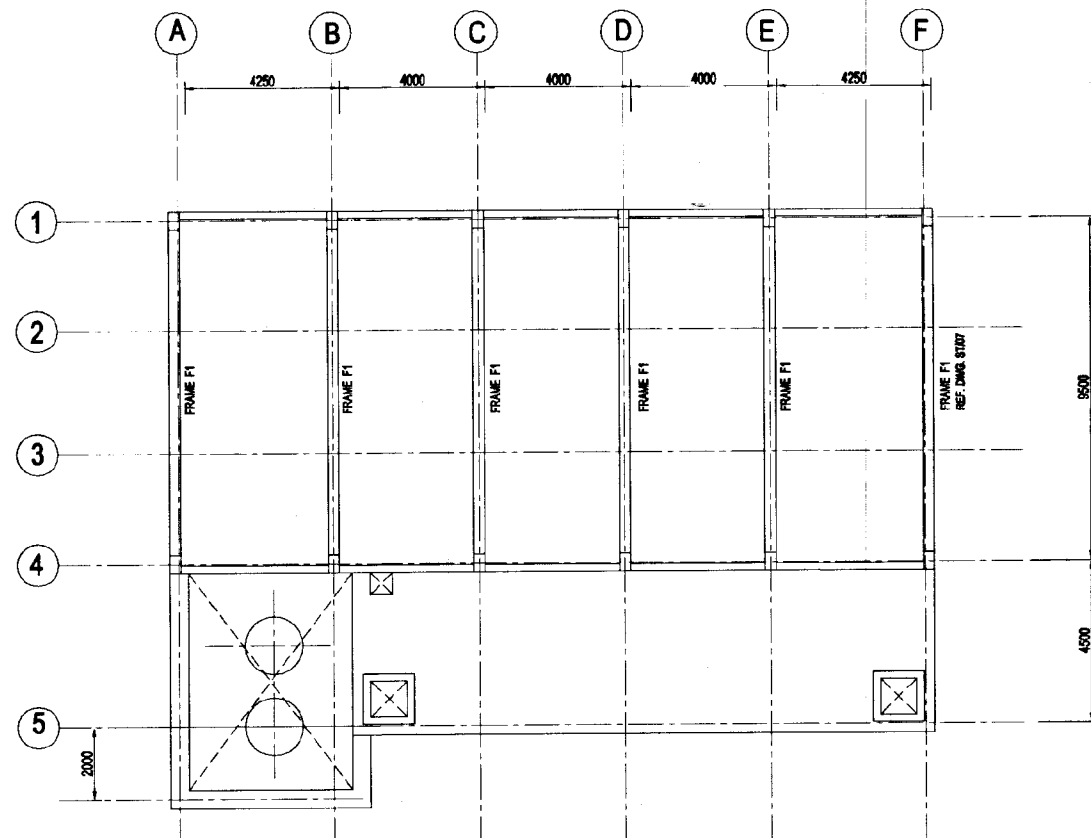
DO NOT SCALE

 NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: KOTIKAWATTE MULLERIYAWA	TITLE: GOTHATUWA-KOLONNAWA PUMP HOUSE FOUNDATION PLAN AND RC SLAB PLAN AT 11.25m LEVEL
	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM NIPPON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN	
DESIGNED: <i>[Signature]</i>	DRAWN: <i>[Signature]</i>	DATE: JAN 2001
CHECKED: <i>[Signature]</i>	PM APPROVAL: <i>[Signature]</i>	CONTRACT No: NRW / CW
DT. TEAM LEADER: <i>[Signature]</i>	A.E.M. (PMD) INCHARGE: <i>[Signature]</i>	DWG. No: KMU/PS/ST/01
TEAM LEADER: <i>[Signature]</i>	D.O.M. (PMD) INCHARGE: <i>[Signature]</i>	



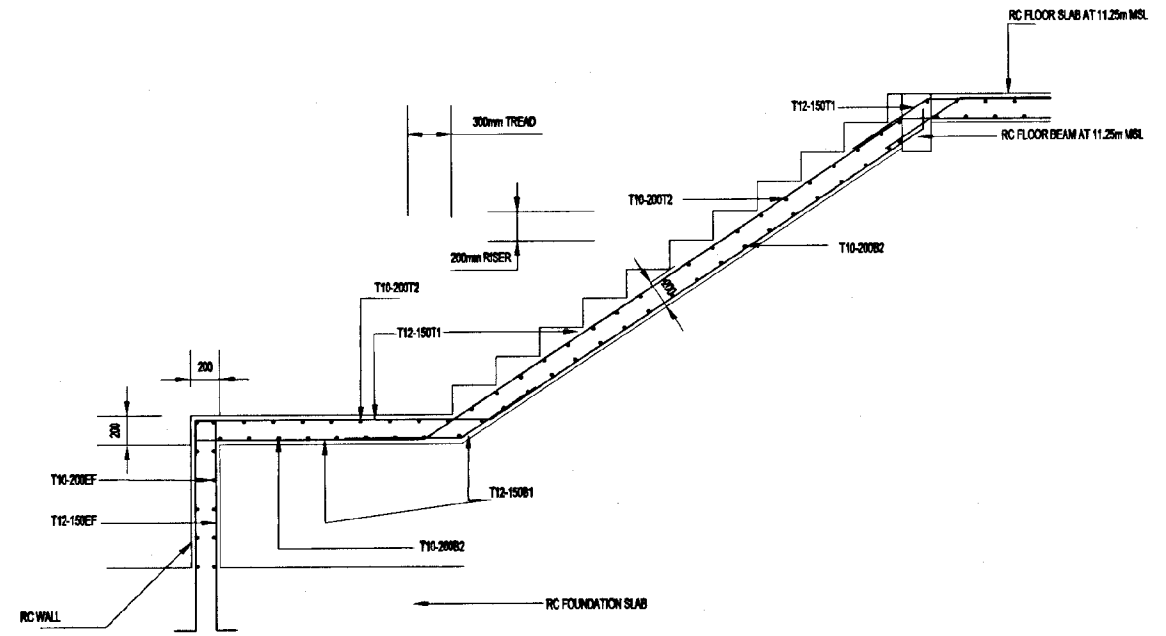
RC SLAB PLAN AT 14.50m LEVEL

SCALE - 1:100



ROOF FRAMING PLAN


SCALE - 1:100

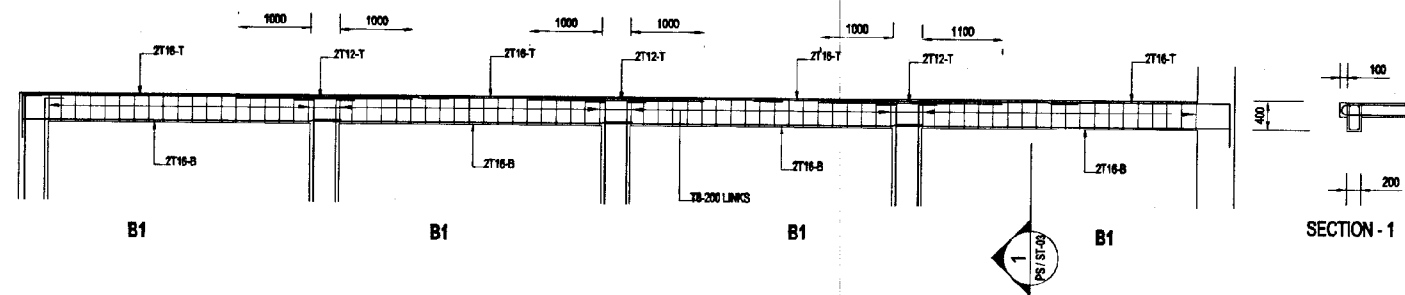


DETAIL OF RC STAIRCASE

SCALE - 1:25

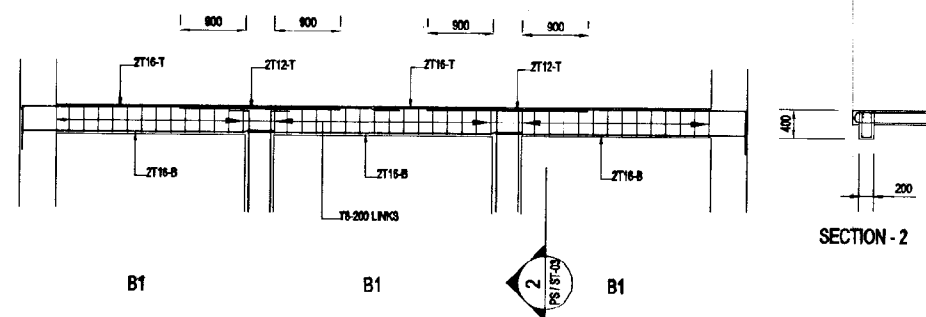
DO NOT SCALE

 NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA	SUB PROJECT: KOTIKAWATTE MULLERIYAWA		TITLE: GOTHATUWA-KOLONNAWA PUMP HOUSE ROOF FRAMING PLAN AND RC SLAB PLAN AT 14.50m LEVEL	
	DESIGNED: <i>[Signature]</i>	DRAWN: <i>[Signature]</i>	DATE: JAN 2001	
	CHECKED: <i>[Signature]</i>	PM (SUPERVISOR) INCHARGE: <i>[Signature]</i>	CONTRACT No: NRW / CW	
	DT. TEAM LEADER: <i>[Signature]</i>	FSM (PM) INCHARGE: <i>[Signature]</i>	DIRE. I/C: KMU / PS / ST / 02	
TEAM LEADER: <i>[Signature]</i>	D.M. PARTY INCHARGE: <i>[Signature]</i>			



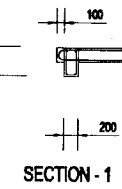
RC BEAMS ON GRID 2 AT 11.25m LEVEL

SCALE - 1:50

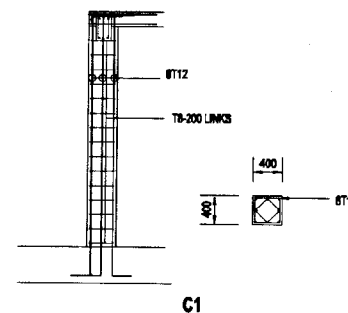


RC BEAMS ON GRID B AT 11.25m LEVEL

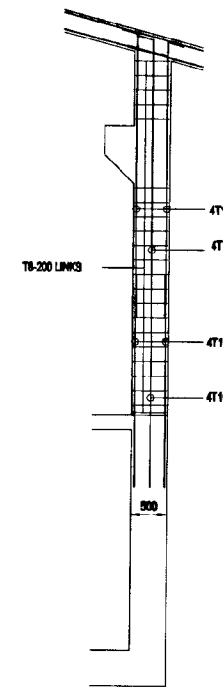
SCALE - 1:50



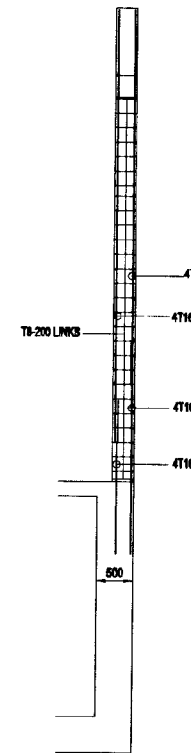
SECTION - 1



C1



C2




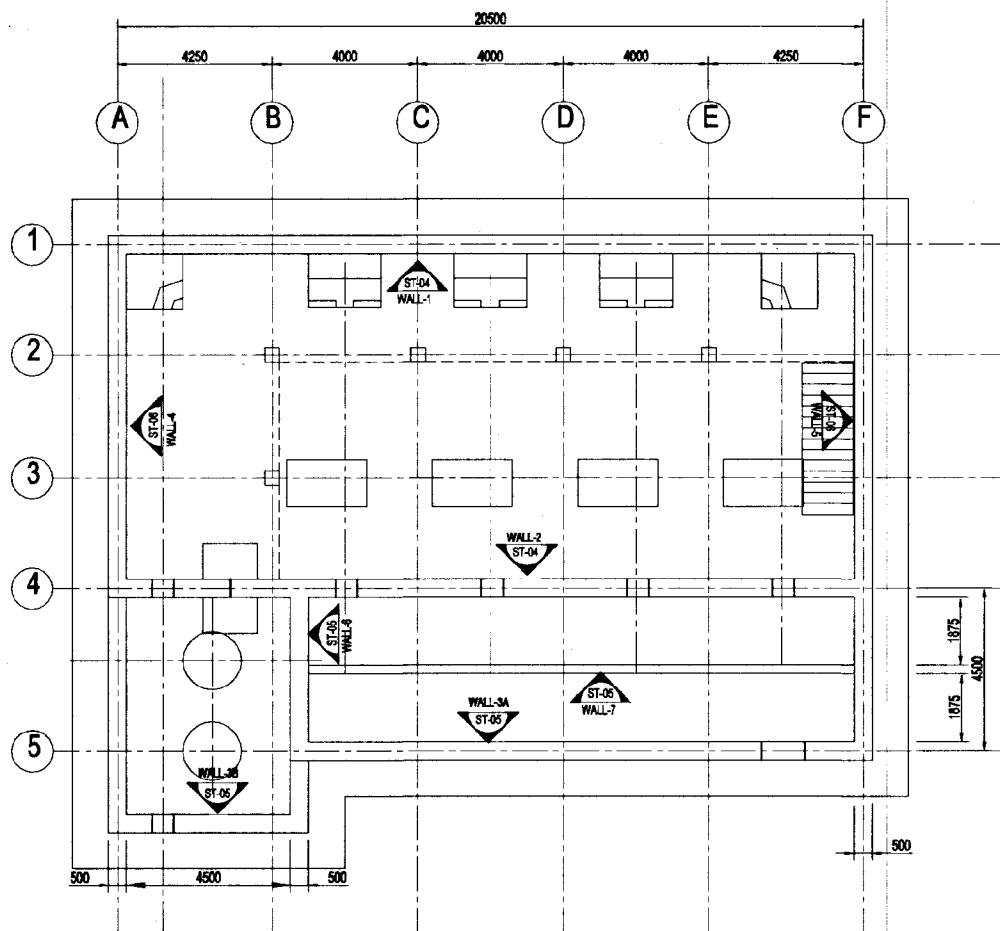
C3

DETAIL OF COLUMNS

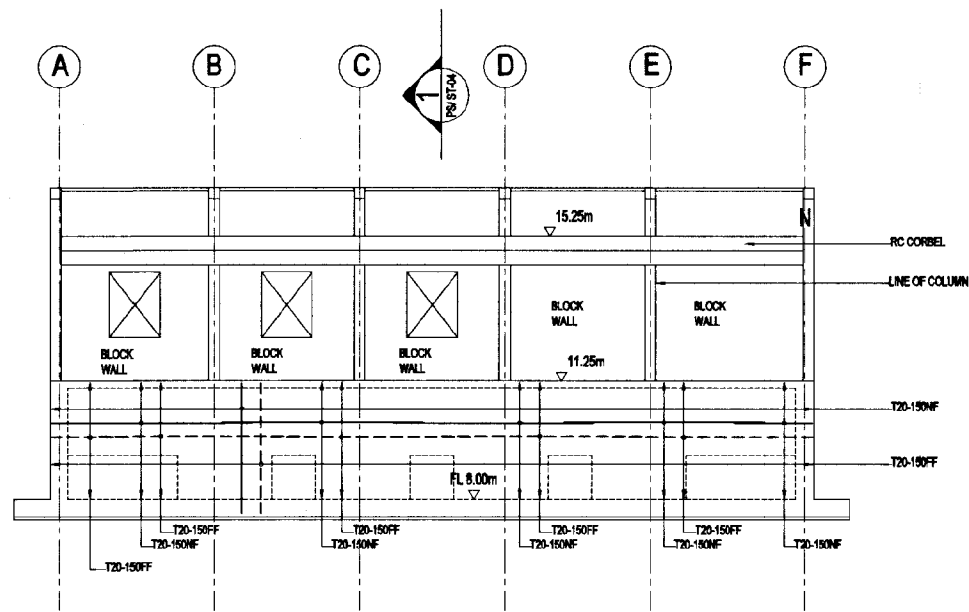
SCALE - 1:30

DO NOT SCALE

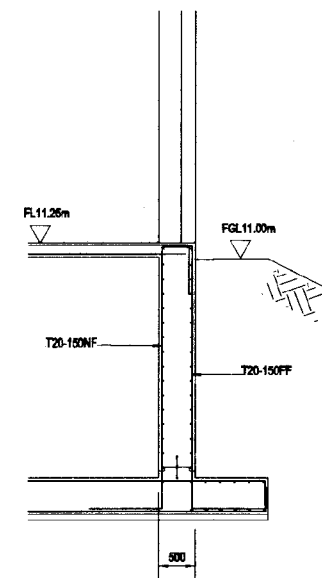
 <p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM</p> <p>NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>	<p>SUB PROJECT: KOTIKAWATTE MULLERIYAWA</p>		<p>TITLE: GOTHATUWA-KOLONNAWA PUMP HOUSE DETAIL OF COLUMNS AND RC BEAMS</p>	
	<p>DESIGNED: <i>[Signature]</i></p>	<p>DRAWN: <i>[Signature]</i></p>	<p>DATE: JAN 2001</p>	
	<p>CHECKED: <i>[Signature]</i></p>	<p>PIB APPROVAL NUMBER: <i>[Signature]</i></p>	<p>CONTRACT NO: NRW / CW</p>	
	<p>BY TEAM LEADER: <i>[Signature]</i></p>	<p>A.E.M. (PIB) NUMBER: <i>[Signature]</i></p>	<p>DRG. NO: KMU / PS / ST / 03</p>	
<p>TEAM LEADER: <i>[Signature]</i></p>	<p>D.A.M. (PIB) NUMBER:</p>			



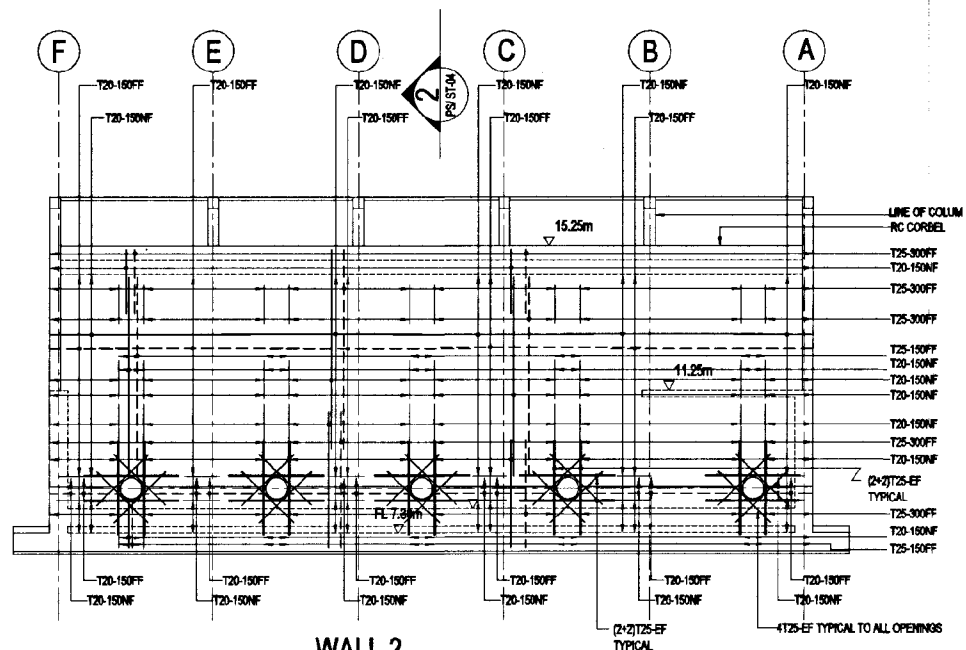
KEY PLAN FOR WALLS



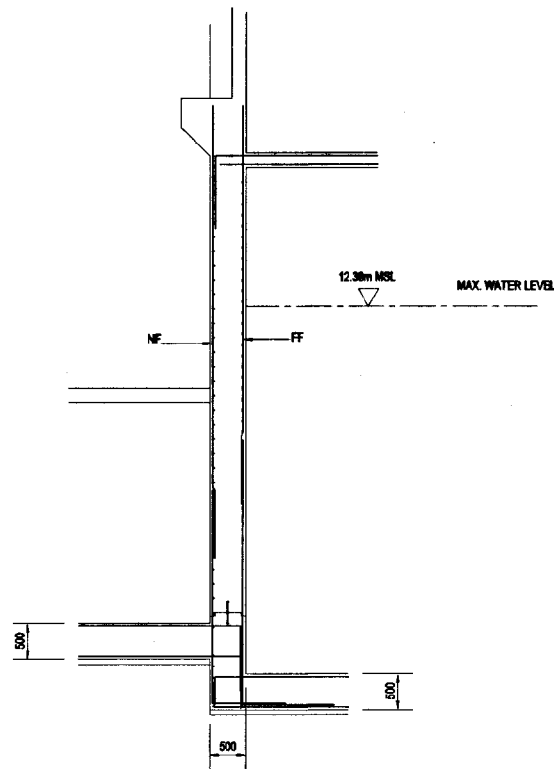
WALL 1
SCALE - 1:25



WALL SECTION 1
SCALE - 1:50



WALL 2
SCALE - 1:100

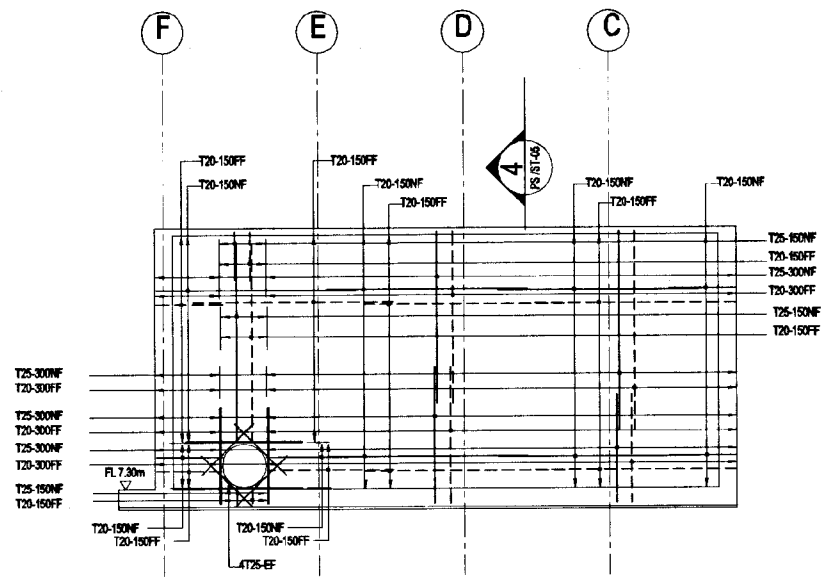


WALL SECTION 2
SCALE - 1:50

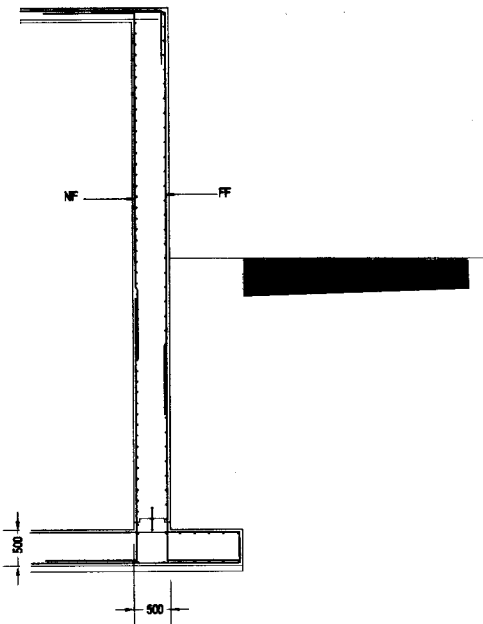
DO NOT SCALE

<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: KOTIKAWATTE MULLERIYAWA</p>	<p>TITLE: GOTHATUWA-KOLONNAWA PUMP HOUSE KEY PLAN FOR DETAIL WALLS, WALL 1 AND WALL 2</p>
	<p>DESIGNED: <i>[Signature]</i></p>	<p>DATE: JAN 2001</p>
<p>CHECKED: <i>[Signature]</i></p>	<p>CONTRACT NO: NRW / CW</p>	<p>DRG. NO.: KMU / PS / ST / 04</p>
<p>DR. TEAM LEADER: <i>[Signature]</i></p>	<p>K.S.M. P.W. NUMBER: R. S. A. J.</p>	
<p>TEAM LEADER: <i>[Signature]</i></p>	<p>C.S.M. P.W. NUMBER:</p>	

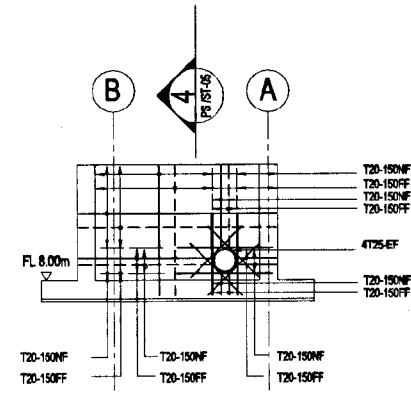
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN



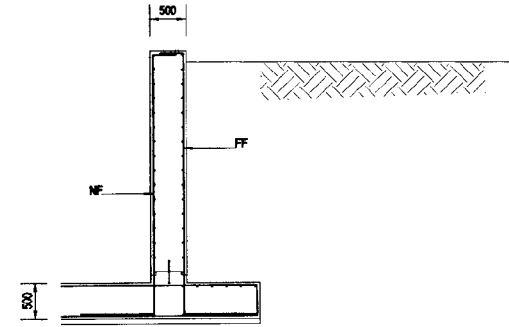
WALL 3A
SCALE - 1:100



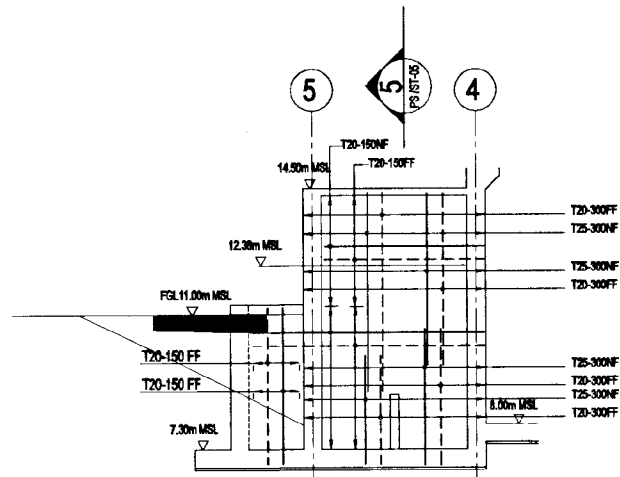
WALL SECTION 3
SCALE - 1:50



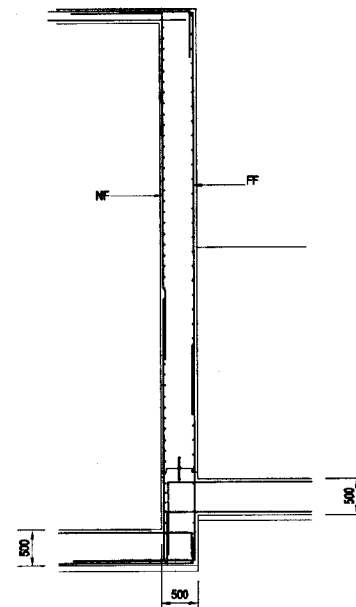
WALL 3B
SCALE - 1:100



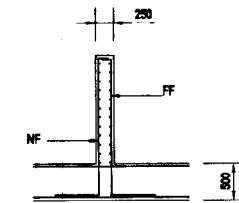
WALL SECTION 4
SCALE - 1:50



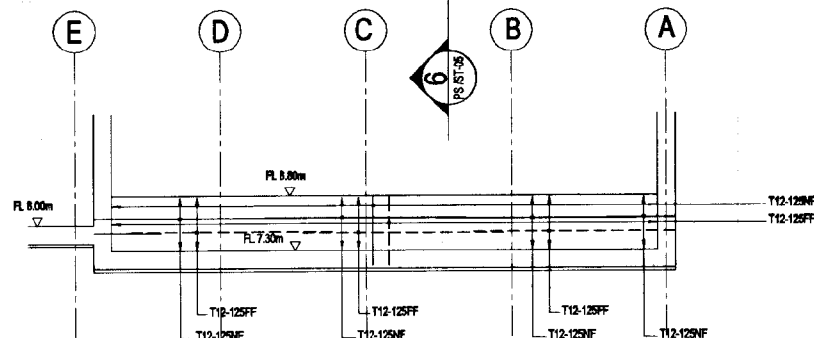
WALL 6
SCALE - 1:100



WALL SECTION 5
SCALE - 1:50

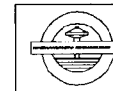


WALL SECTION 6
SCALE - 1:50



WALL 7
SCALE - 1:100

DO NOT SCALE

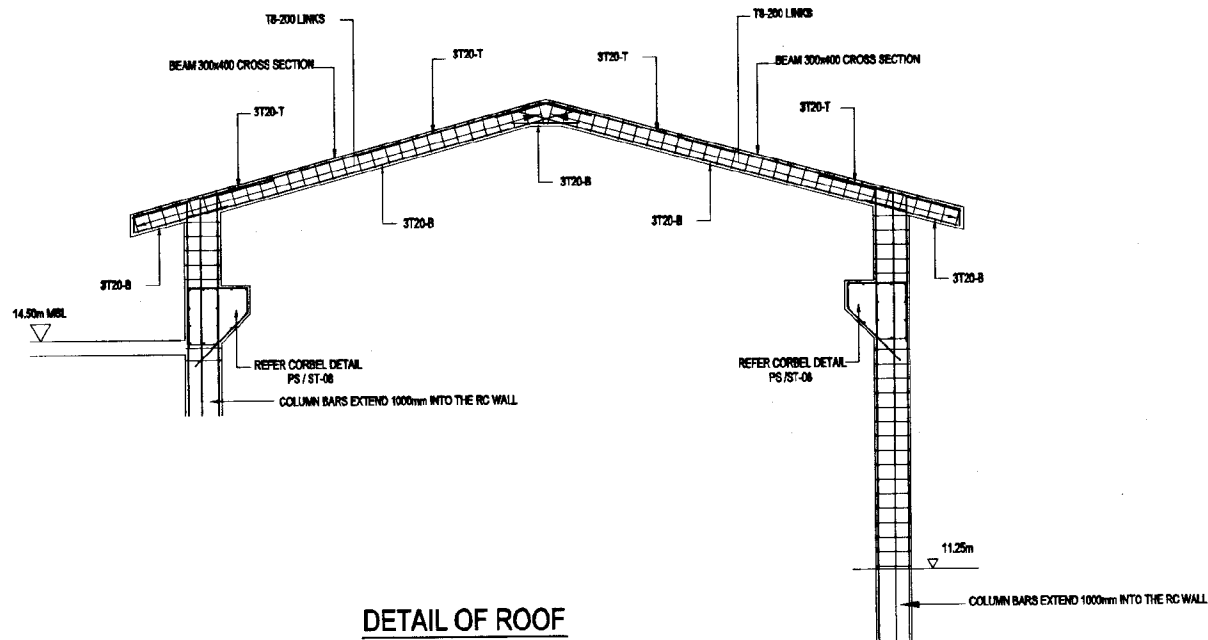
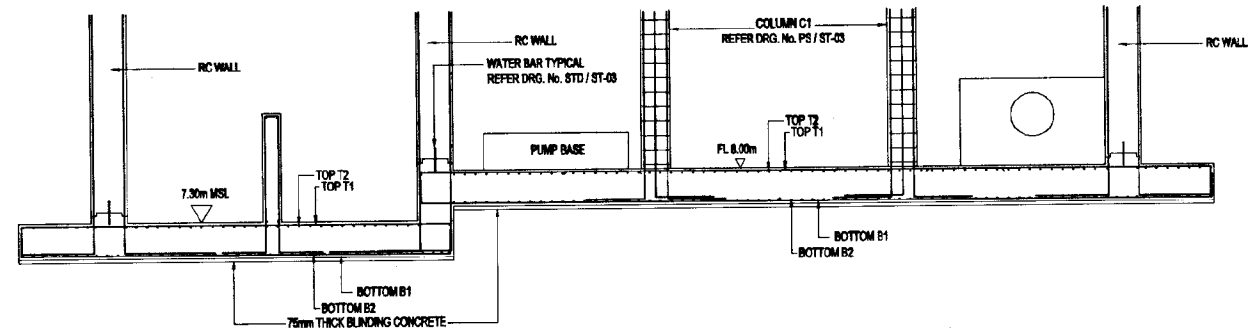
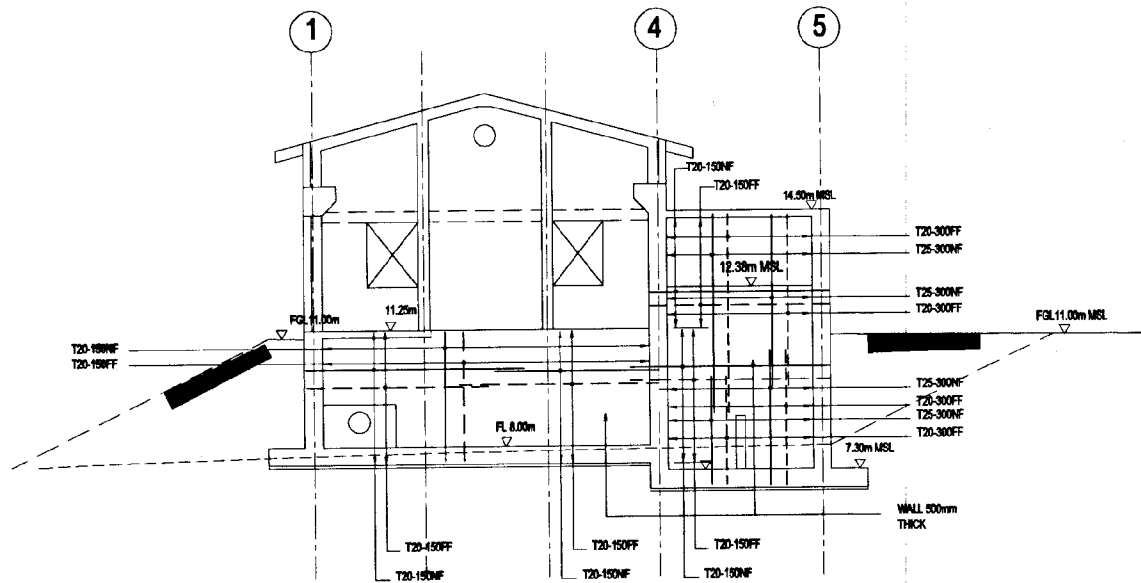
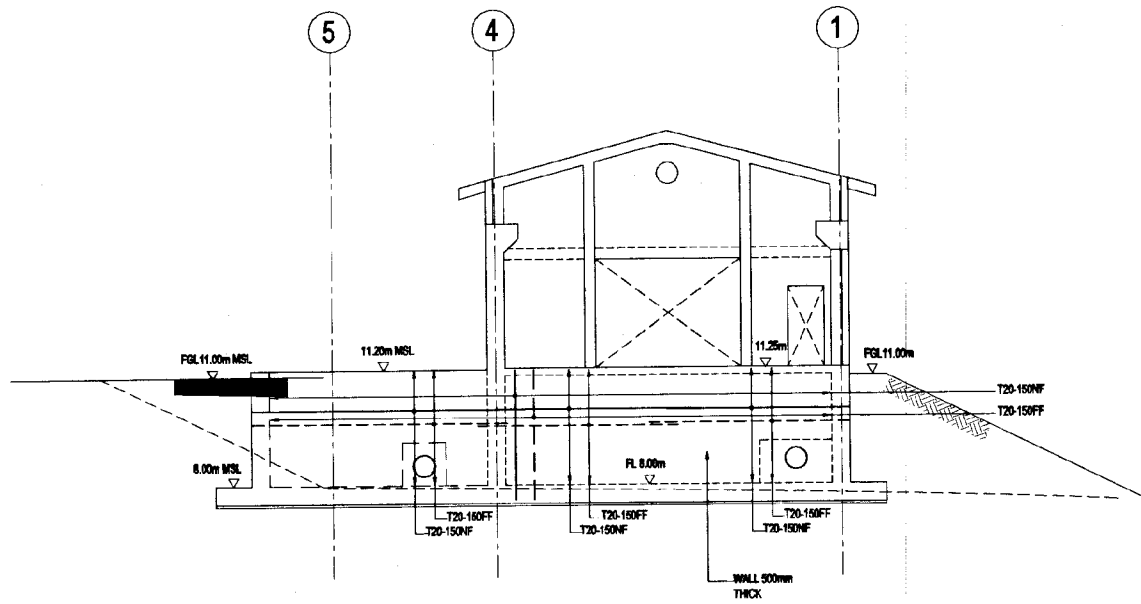


NATIONAL WATER SUPPLY AND DRAINAGE BOARD
THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER
IN THE GREATER COLOMBO AREA


SUB PROJECT: KOTIKAWATTE MULLERIYAWA
TITLE: GOTHATUWA-KOLONNAWA PUMP HOUSE LOWER LEVEL FLOOR PLAN WITH WALLS, WALL 6 AND WALL 7

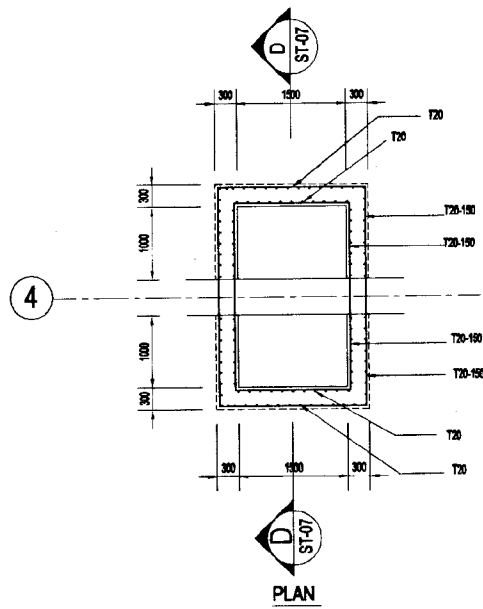
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STUDY TEAM
NIHON SUIDO CONSULTANTS CO. LTD.,
TOKYO, JAPAN

REV.	DESCRIPTION
DESIGNED: <i>[Signature]</i>	DATE: JAN 2001
CHECKED: <i>[Signature]</i>	CONTRACT NO: NRW / CW
DR. TEAM LEADER: <i>[Signature]</i>	DRS. IN: KMU / PS / ST / 05
TEAM LEADER: <i>[Signature]</i>	

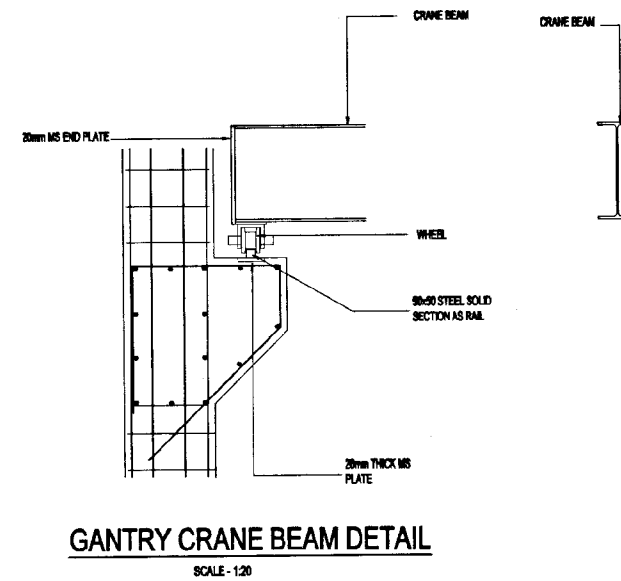
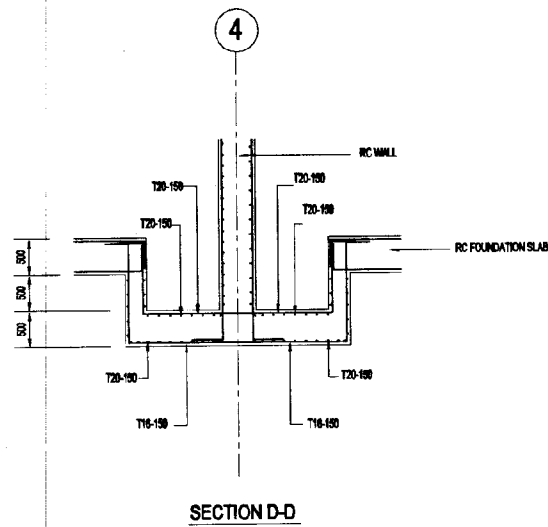


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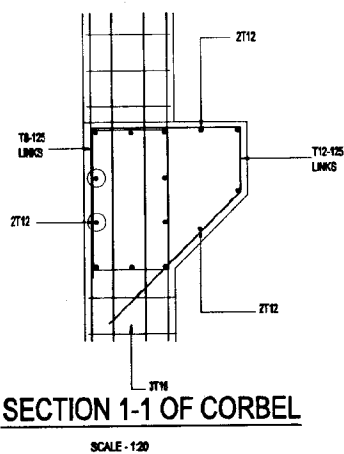
 <p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM</p> <p>NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>	<p>SUB PROJECT: KOTIKAWATTE MULLERIYAWA</p>	<p>TITLE: GOTHATUWA-KOLONNAWA PUMP HOUSE DETAILS OF WALLS 4, 5, FOUNDATION SECTION AND ROOF FRAME</p>
	<p>DESIGNED: <i>[Signature]</i></p>	<p>DATE: JAN 2001</p>
	<p>CHECKED: <i>[Signature]</i></p>	<p>CONTRACT NO: NRW / CW</p>
	<p>BY TEAM LEADER: <i>[Signature]</i></p>	<p>DWG. NO: KMU / PS / ST / 06</p>



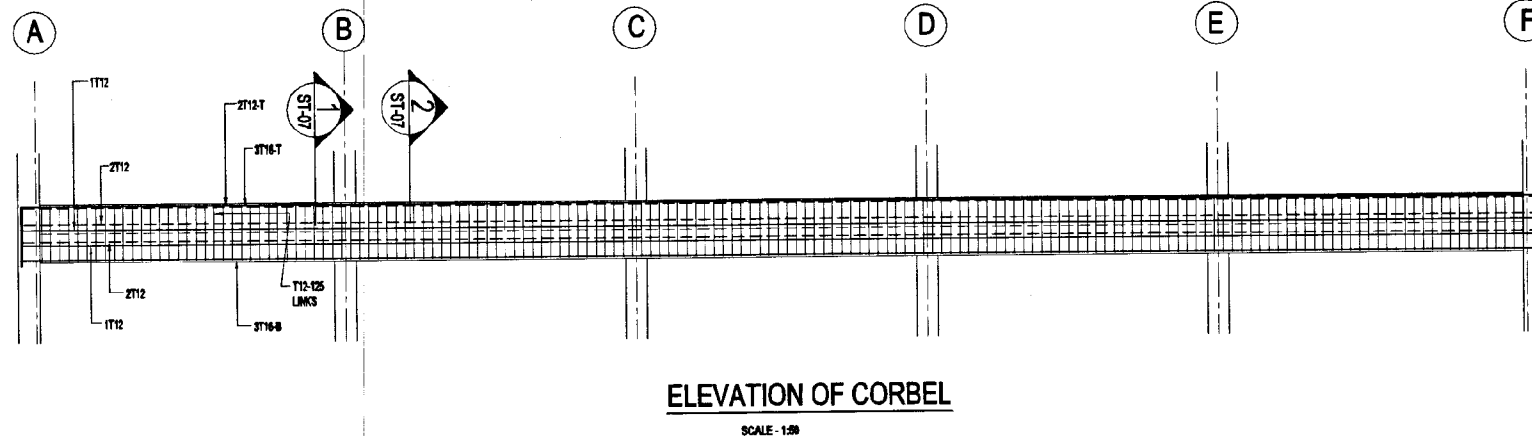
SUMP DETAIL
SCALE - 1:50



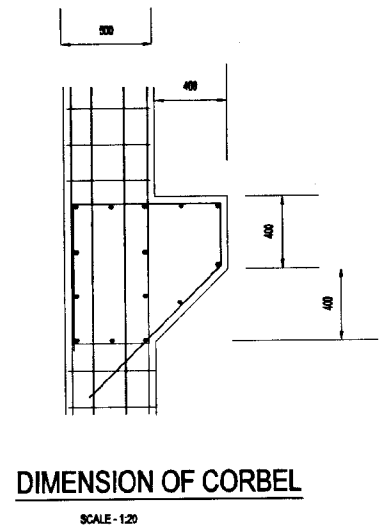
GANTRY CRANE BEAM DETAIL
SCALE - 1:20



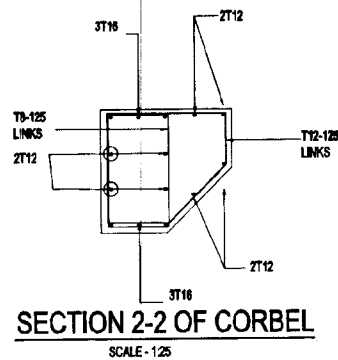
SECTION 1-1 OF CORBEL
SCALE - 1:20



ELEVATION OF CORBEL
SCALE - 1:50




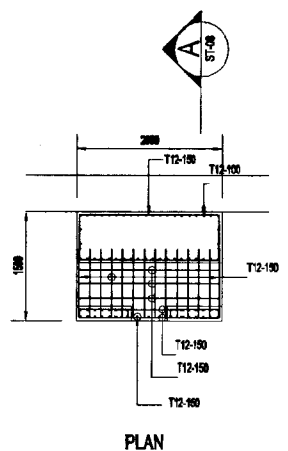
DIMENSION OF CORBEL
SCALE - 1:20



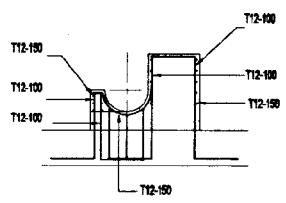
SECTION 2-2 OF CORBEL
SCALE - 1:25

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: KOTIKAWATTE MULLERIYAWA		TITLE: GOTHATUWA-KOLONNAWA PUMP HOUSE SUMP, GANTRY CRANE BEAM AND CORBEL DETAILS	
DESIGNED:	<i>[Signature]</i>	DRAWN:	<i>[Signature]</i>	DATE:	JAN 2001
CHECKED:	<i>[Signature]</i>	PA PERMITS/NO:		CONTRACT NO:	NRW / CW
DR. TEAM LEADER:	<i>[Signature]</i>	PA/PA (PND) NO/NO:	<i>[Signature]</i>	DWG. NO.:	KMU / PS / ST-07
TEAM LEADER:	<i>[Signature]</i>	D.A.M (PND) NO/NO:			

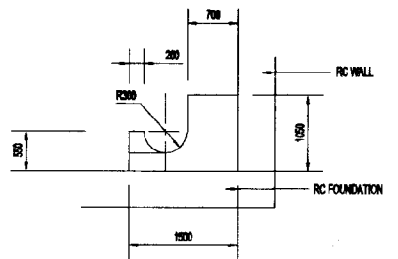


PLAN

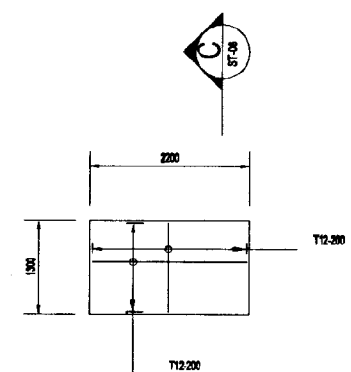


SECTION A-A

THRUST BLOCK 1
SCALE - 1:50

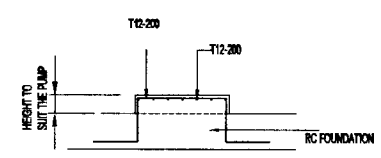


ELEVATION

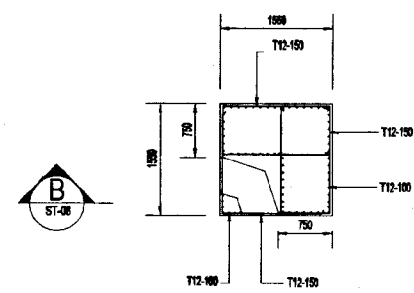


PLAN

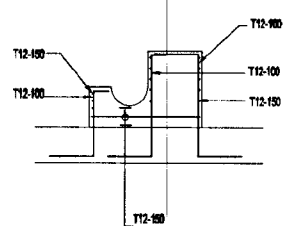
PUMP BASE
SCALE - 1:50



SECTION C-C

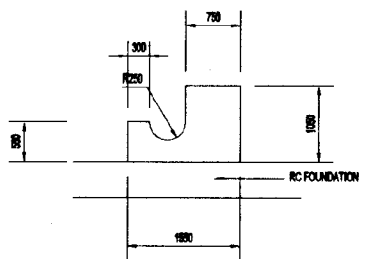


PLAN

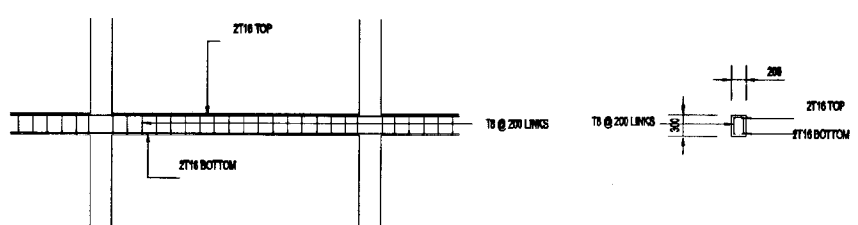


SECTION B-B

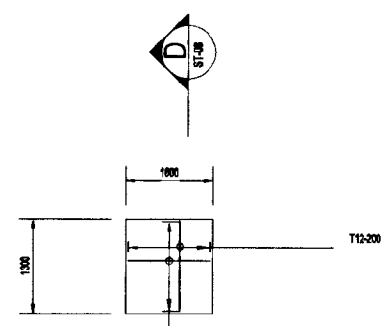
THRUST BLOCK 2
SCALE - 1:50



ELEVATION

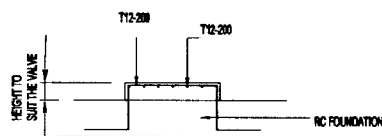


LINTEL DETAIL TYPICAL
SCALE - 1:50

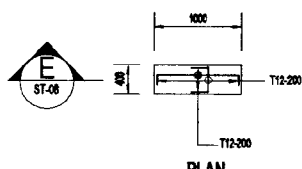


PLAN

VALVE SUPPORT 1
SCALE - 1:50

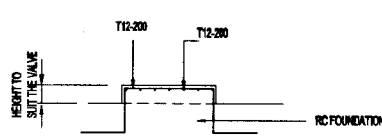


SECTION D-D




PLAN

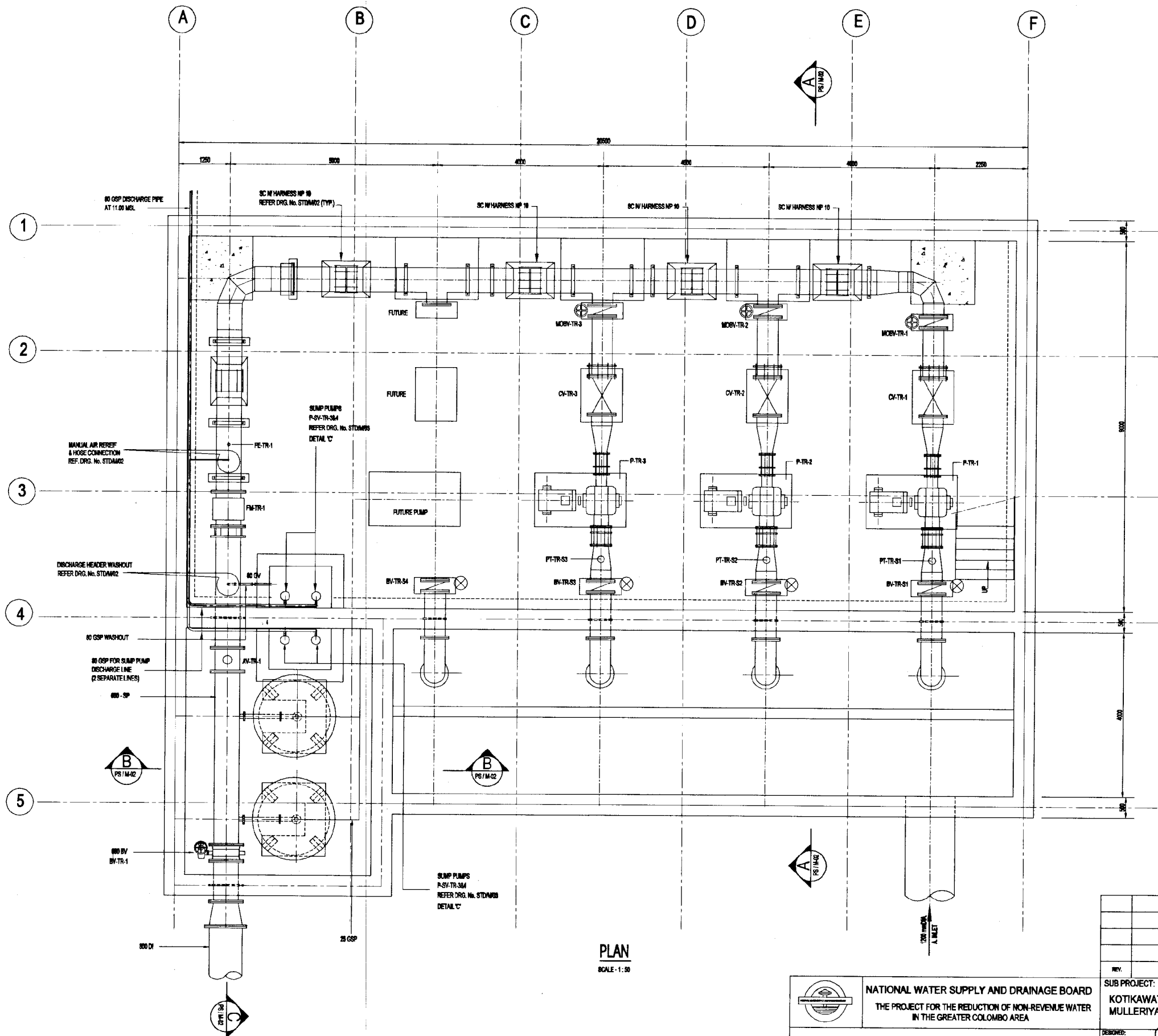
VALVE SUPPORT 2
SCALE - 1:50



SECTION E-E

DO NOT SCALE


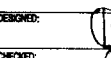

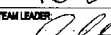

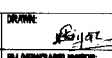
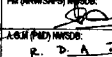
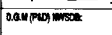
 <p>NATIONAL WATER SUPPLY AND DRAINAGE BOARD THE PROJECT FOR THE REDUCTION OF NON-REVENUE WATER IN THE GREATER COLOMBO AREA</p>	<p>SUB PROJECT: KOTIKAWATTE MULLERIYAWA</p>	<p>TITLE: GOTHATUWA-KOLONNAWA PUMP HOUSE DETAIL OF TRUST BLOCKS</p>
	<p>DESIGNED: <i>[Signature]</i></p>	<p>DRINK: <i>[Signature]</i></p>
<p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM</p>	<p>CHECKED: <i>[Signature]</i></p>	<p>CONTRACT NO: NRW / CW</p>
<p>NIHON SUIDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>	<p>BY TEAM LEADER: <i>[Signature]</i></p>	<p>DRG. NO: KMU / PS / ST-08</p>
	<p>TEAM LEADER: <i>[Signature]</i></p>	

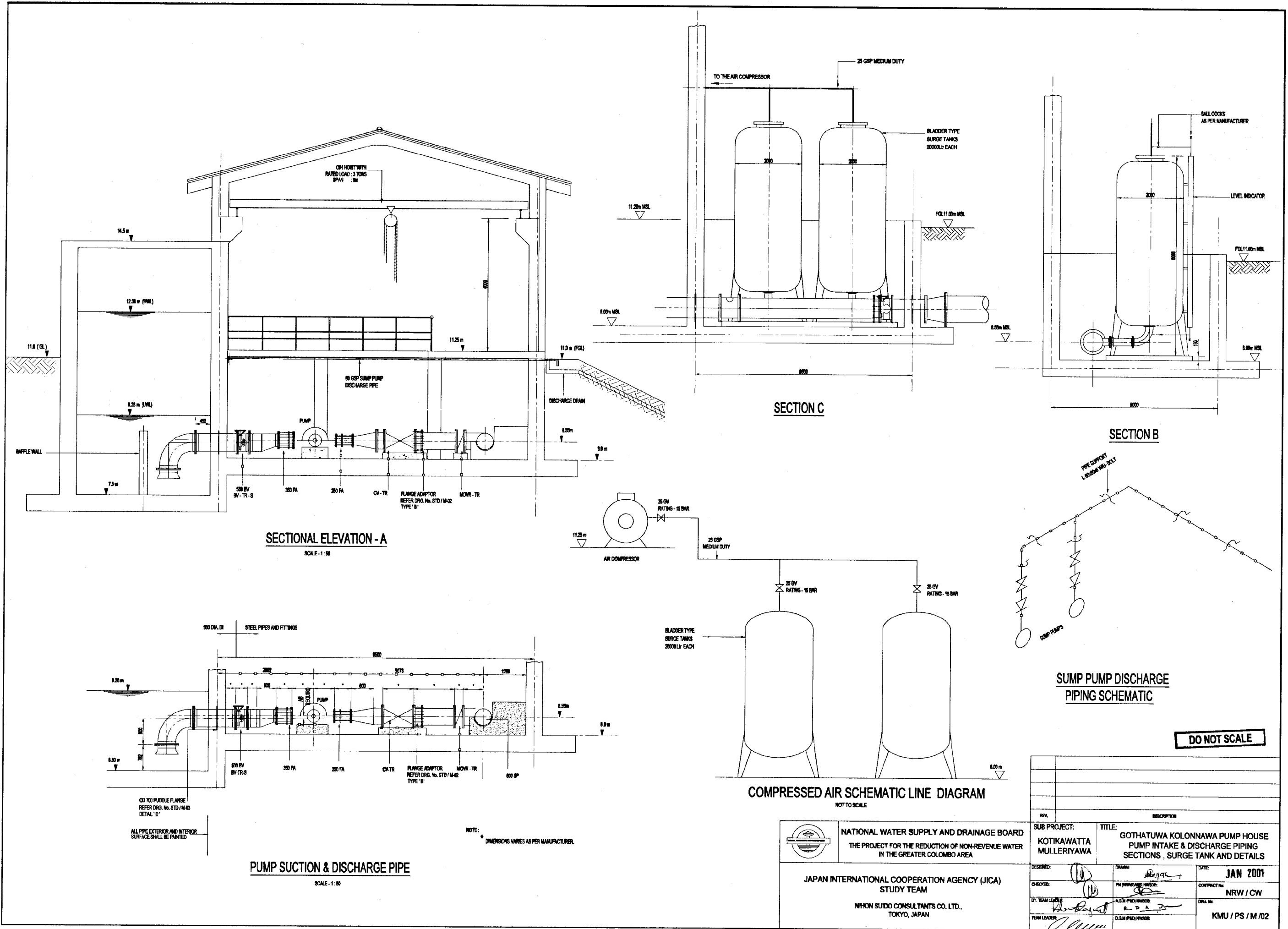


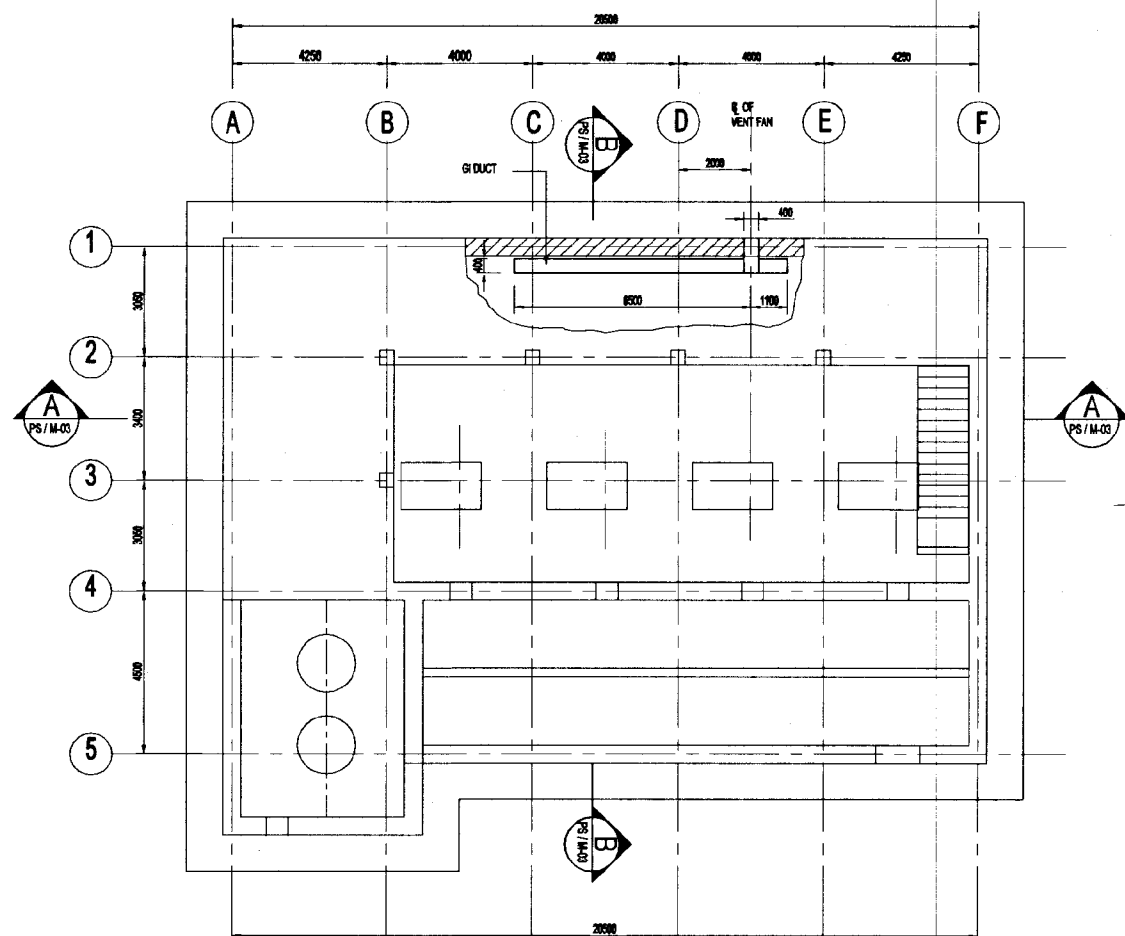
NOTE: REFER DRG. STDAM01 FOR SYMBOLS AND ABBREVIATION

PLAN
SCALE - 1:50

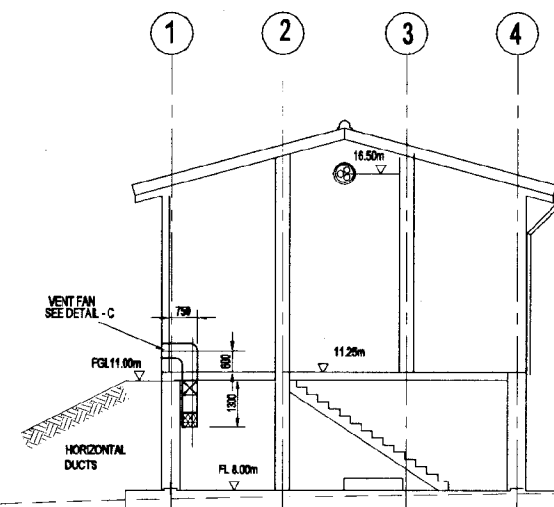
DO NOT SCALE

 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: GOATHUWA KOLONNAWA PUMP HOUSE PUMP INTAKE & DISCHARGE PIPING LAYOUT PLAN
DESIGNED:  CHECKED:  BY TEAM LEADER:  TEAM LEADER: 	DRAWN:  ALL DIMENSIONS IN METERS A.S.M (P.R.D) IN CHARGE:  D.O.M (P.R.D) IN CHARGE: 	DATE: JAN 2001 CONTRACT NO: NRW / CW DRG. NO: KMU / PS / M / 01	

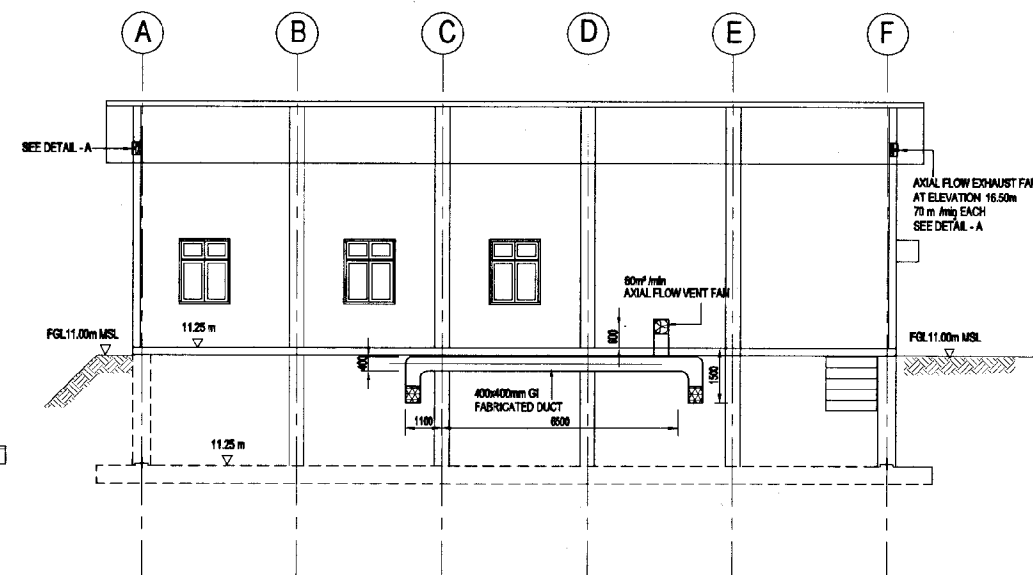




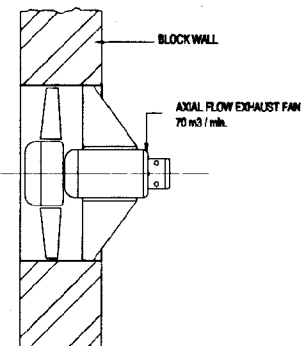
SECTIONAL FLOOR PLAN
SCALE - 1:100



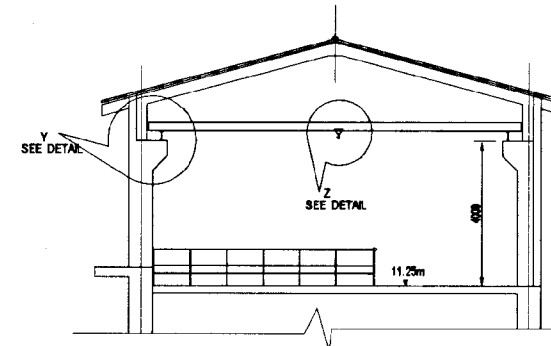
SECTION B-B
SCALE - 1:100



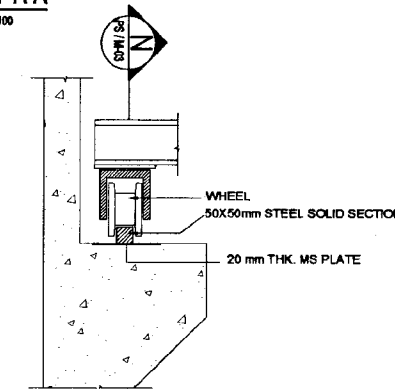
SECTION A-A
SCALE - 1:100



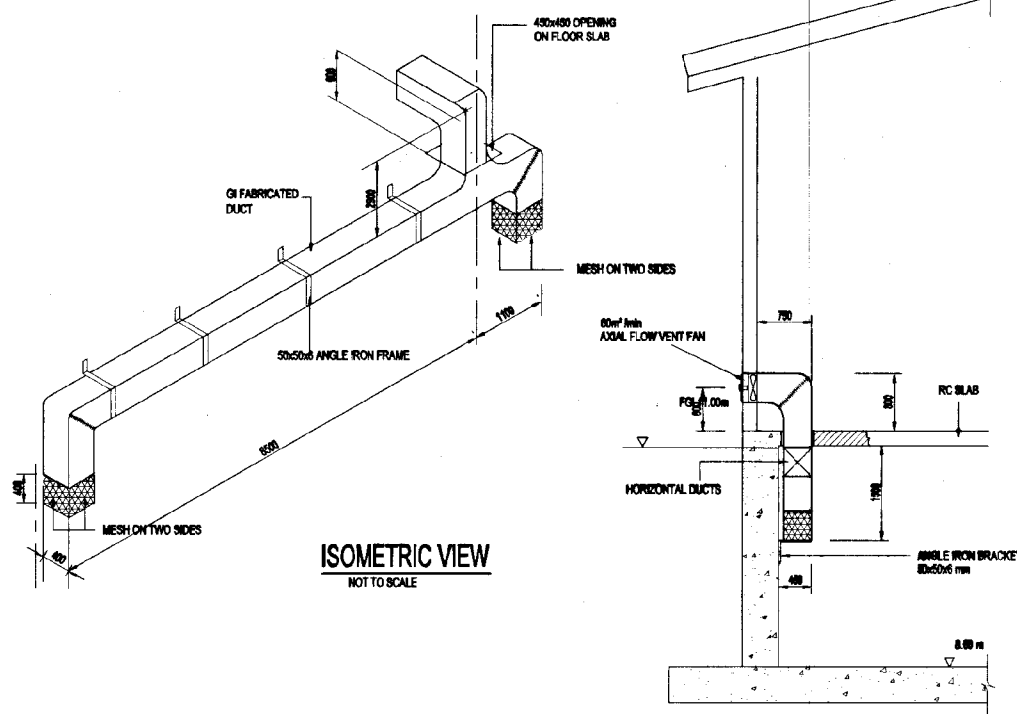
DETAIL - A
NOT TO SCALE



ELEVATION OF GANTRY CRANE

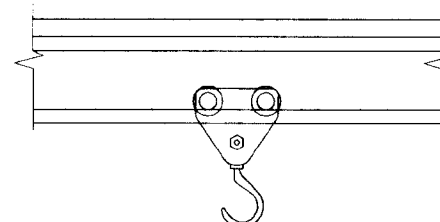


DETAIL AT - Y
NTS



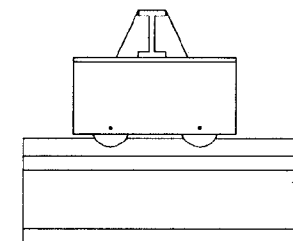
ISOMETRIC VIEW
NOT TO SCALE

DETAIL - C
SCALE - 1:50



DETAIL AT - Z
NTS

PUMP HOUSE	SPAN	RATED LOAD (T)
GOTHATUWA	10	3
AMBATALE	8	3



SECTION N - N
NTS

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: GOTHATUWA KOLONNAWA PUMP HOUSE VENTILATION & CRANE DETAILS</p>
	<p>DESIGNED: [Signature]</p> <p>CHECKED: [Signature]</p> <p>BY: TEAM LEADER: [Signature]</p> <p>TEAM LEADER: [Signature]</p>	<p>DRAWN: [Signature]</p> <p>PI: [Signature]</p> <p>ALL IN CHARGE: [Signature]</p> <p>O.B.M. PWD: [Signature]</p>
<p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) STUDY TEAM NIHON SUDO CONSULTANTS CO. LTD., TOKYO, JAPAN</p>		