

APPENDIX 10

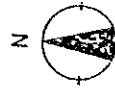
BASIC DESIGN DRAWINGS

APPENDIX 10-1

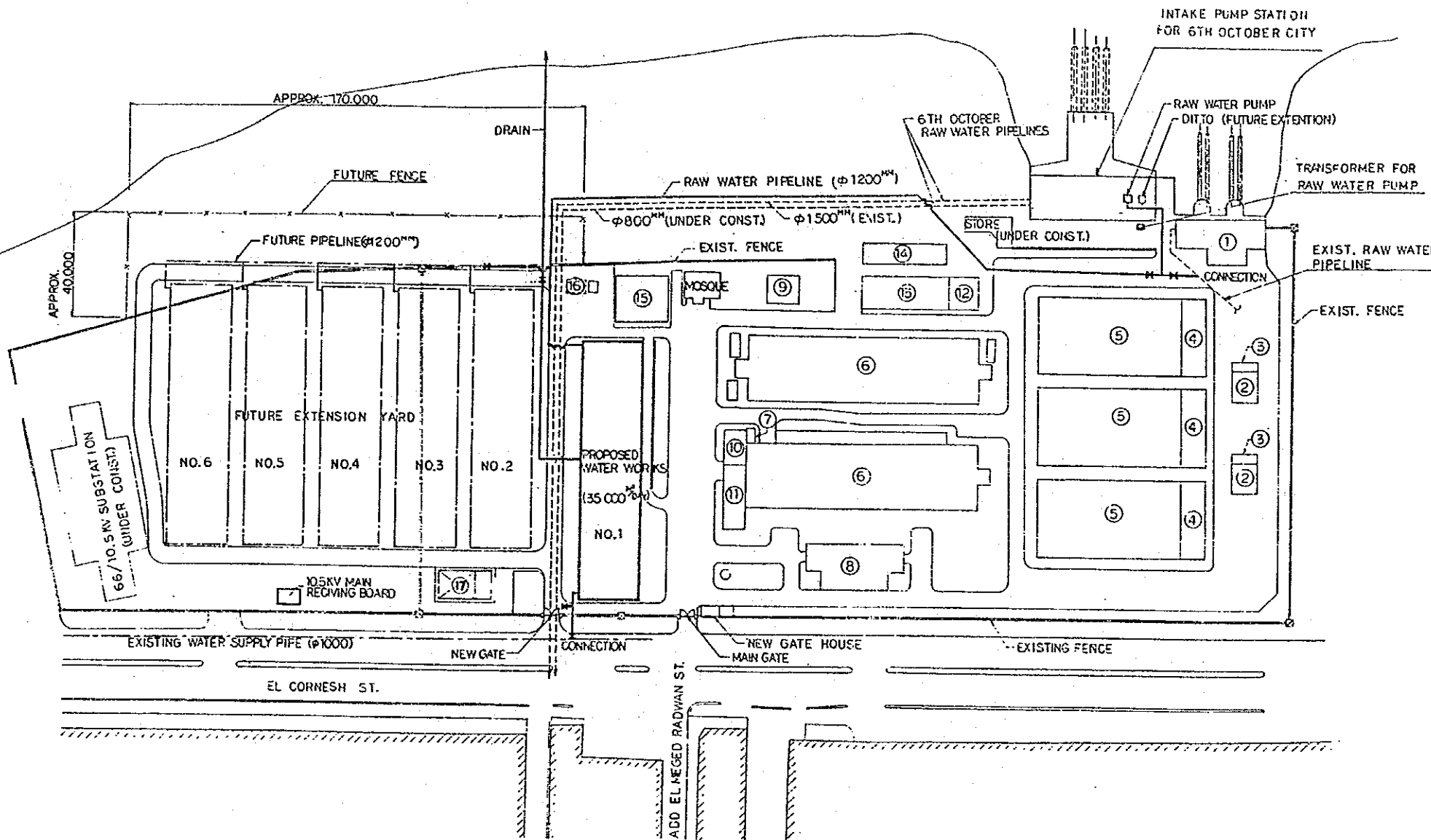
SOUTH GIZA WATERWORKS EXPANSION PLAN

LIST OF DRAWINGS

EGM-WT-01	General Layout of Waterworks for the Project
EGM-WT-02	Plan and Cross-Section of Intake Pump Facilities
EGM-WT-03	Plan of Water Purification Facilities
EGM-WT-04	Cross-Section of Purification Facilities
EGM-WT-05	Layout of Electrical & Chemical Room
EGM-WT-06	Surface Washing Facility
EGM-WT-07	Plan and Cross-Section of Water Purification Plant
EGM-WT-08	Plan of Sedimentation Basin (1/3)
EGM-WT-09	Plan of Sedimentation Basin (2/3)
EGM-WT-10	Plan of Sedimentation Basin (3/3)
EGM-WT-11	Cross-Section of Sedimentation Basin (1/3)
EGM-WT-12	Cross-Section of Sedimentation Basin (2/3)
EGM-WT-13	Cross-Section of Sedimentation Basin (3/3)
EGM-WT-14	Plan of Rapid Sand Filter Basin and Clear Water Reservoir (1/3)
EGM-WT-15	Plan of Rapid Sand Filter Basin and Clear Water Reservoir (2/3)
EGM-WT-16	Plan of Rapid Sand Filter Basin and Clear Water Reservoir (3/3)
EGM-WT-17	Cross-Section of Rapid Sand Filter Basin and Clear Water Reservoir (1/3)
EGM-WT-18	Cross-Section of Rapid Sand Filter Basin and Clear Water Reservoir (2/3)
EGM-WT-19	Cross-Section of Rapid Sand Filter Basin and Clear Water Reservoir (3/3)
EGM-WT-20	Plan of Distribution Pump Station
EGM-WT-21	Cross-Section of Distribution Pump Station and Connection to Existing Water Supply Trunk Line
EGM-WT-22	Elevation of Rapid Sand Filter Basin
EGM-WT-23	Plan of Operation Building for Rapid Sand Filter Basin
EGM-WT-24	Plan of Operation Building for Rapid Sand Filter Basin
EGM-WT-25	Fitting Detail of Operation Building for Rapid Sand Filter Basin
EGM-WT-26	Instrument System Diagram
EGM-WT-27	Online Diagram



RIVER NILE



EXISTING FACILITIES OF SOUTH GIZA WATERWORKS

- ① INTAKE PUMP STATION (FOR EXISTING WATERWORKS)
- ② DISTRIBUTION BASIN AND DOSING APPARATUS
- ③ PRE-CHLORINATION
- ④ FLOCCULATION BASIN
- ⑤ COAGULATION BASIN
- ⑥ FILTER BASIN
- ⑦ POST-CHLORINATION
- ⑧ DISTRIBUTION PUMP STATION
- ⑨ SLUDGE BASIN
- ⑩ WATER QUALITY LABORATORY
- ⑪ ADMINISTRATION BUILDING
- ⑫ WORKSHOP
- ⑬ WAREHOUSE
- ⑭ CHLORINE STORAGE
- ⑮ EMERGENCY GENERATOR
- ⑯ FUEL OIL RESERVOIR
- ⑰ OFFICE

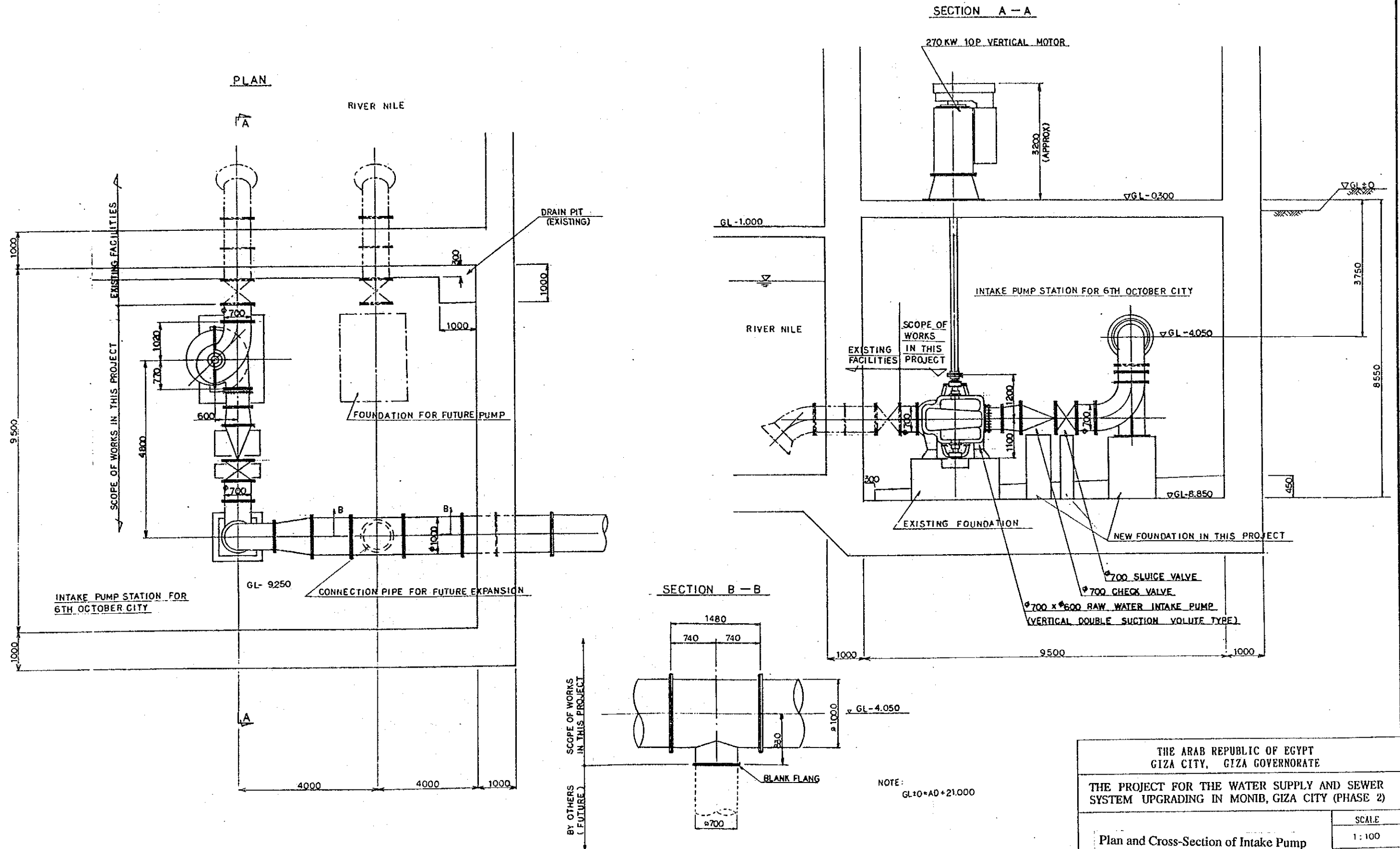
LEGEND
 [] FACILITIES } SCOPE OF WORKS IN THIS PROJECT
 — PIPELINES }
 M VALVES }

PLAN S=1:2000

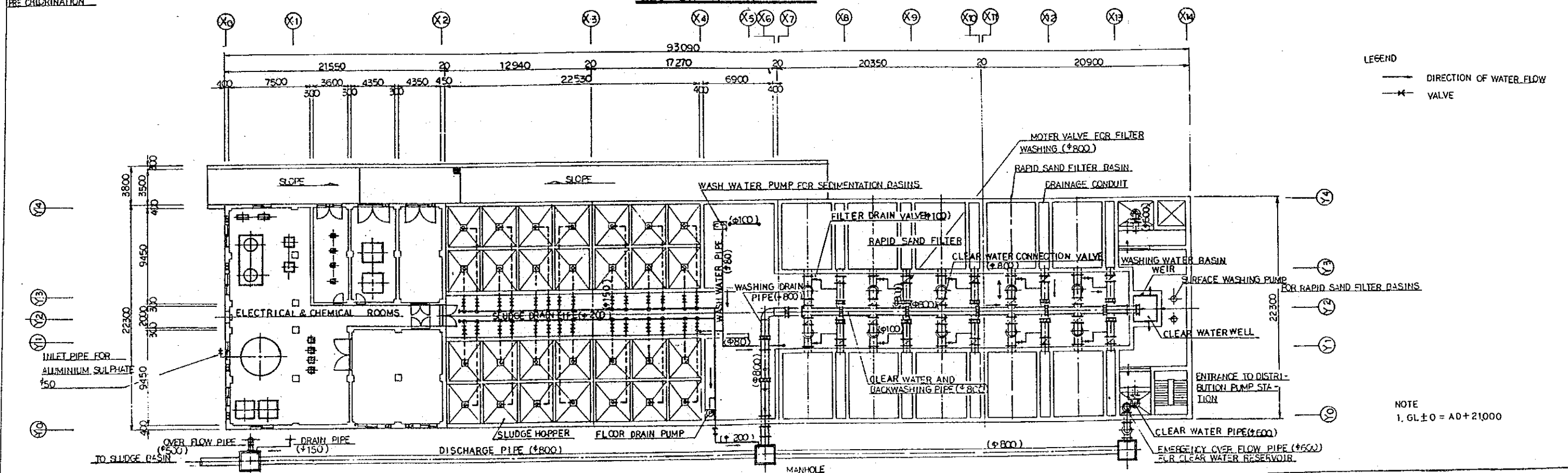
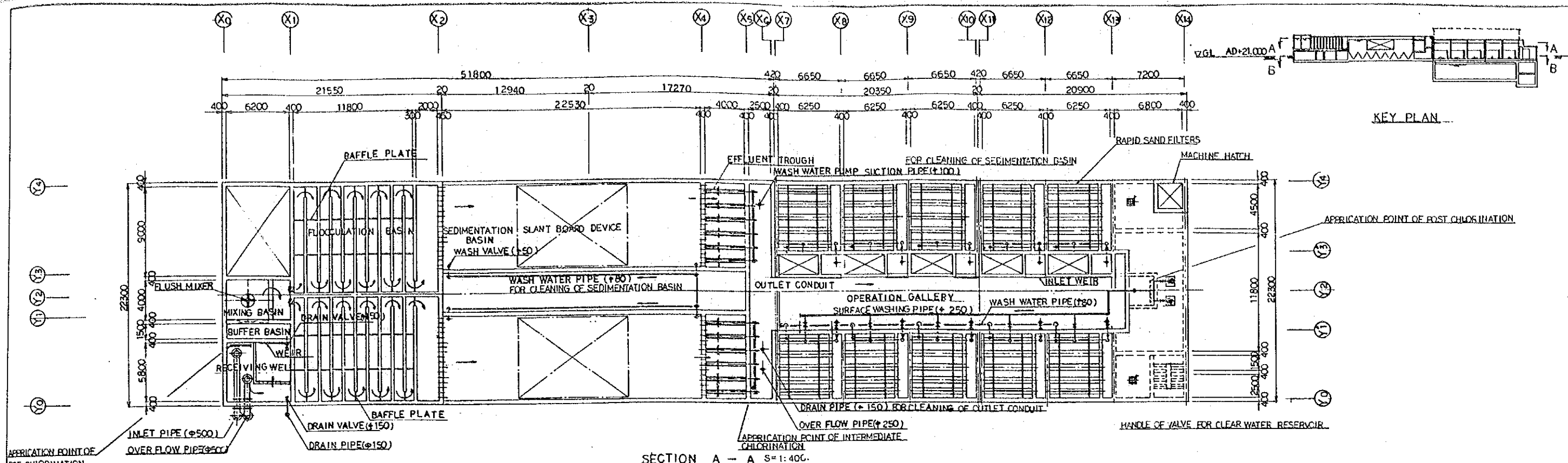
THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
General Layout of Waterworks for the Project	SCALE 1:2000
	DRAWING NO. EGM-WT-01
	JAPAN INTERNATIONAL COOPERATION AGENCY

RAW WATER INTAKE PUMP

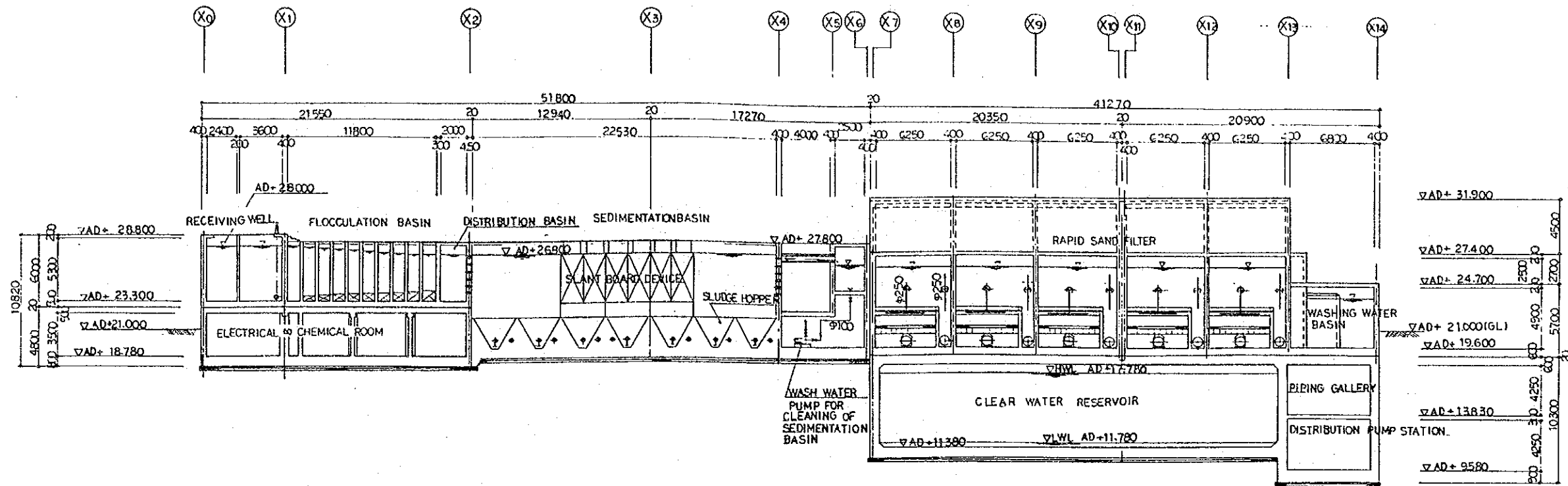
S=1:100



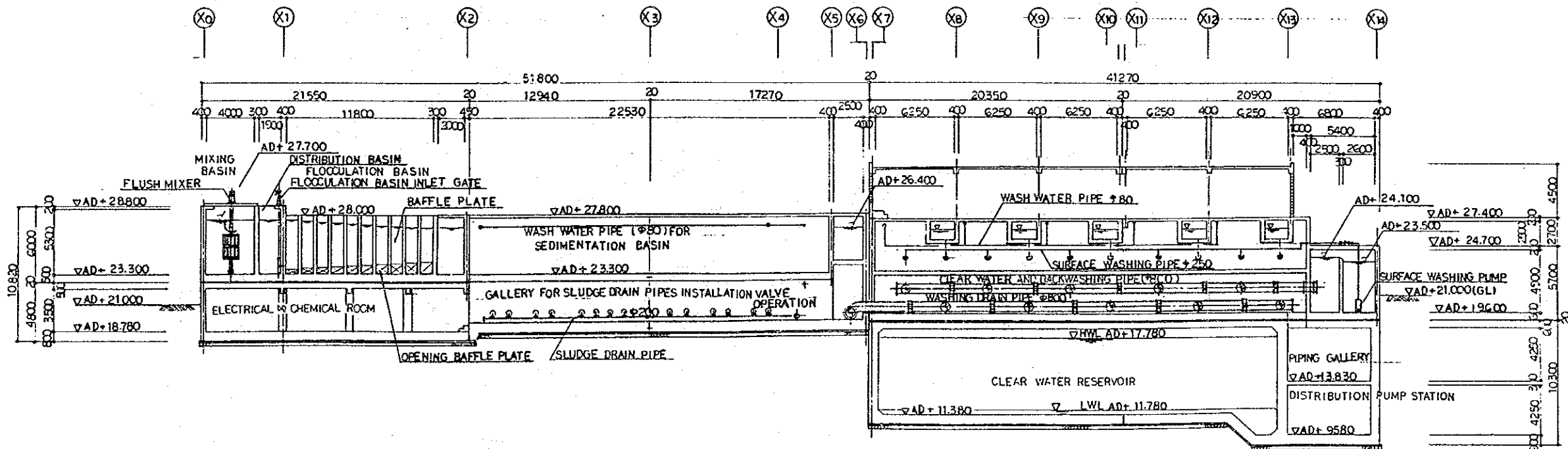
THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Plan and Cross-Section of Intake Pump Facilities	SCALE
	1:100
	DRAWING NO.
EGN-WT-02	
JAPAN INTERNATIONAL COOPERATION AGENCY	



THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MOMB, GIZA CITY (PHASE 2)	
Plan of Water Purification Facilities	SCALE:
	1:400
	DRAWING NO.
JGM-WT-03	
JAPAN INTERNATIONAL COOPERATION AGENCY	

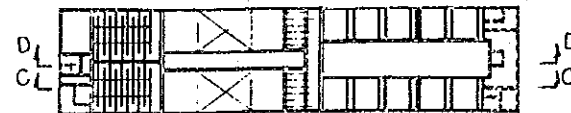


SECTION C - C s=1:400



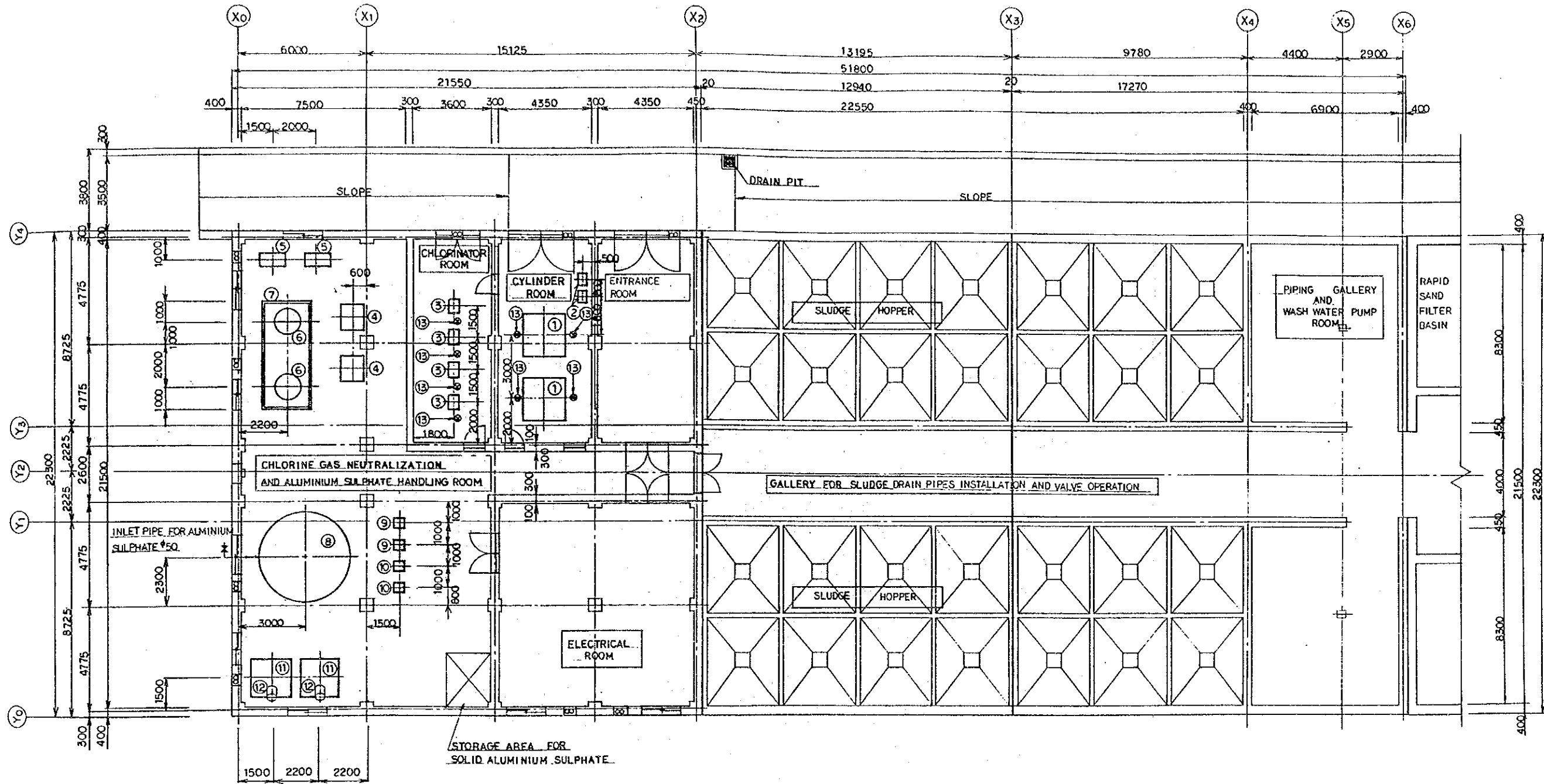
SECTION D - D s=1:400

NOTE: GL ± 0 = AD+21.000 (m).



KEY PLAN

THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Cross-Section of Purification Facilities	SCALE 1:400
	DRAWING NO. EGH-WT-04
	JAPAN INTERNATIONAL COOPERATION AGENCY



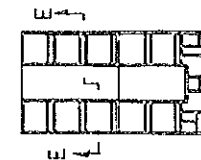
NOTE
1. GL ± 0 = AD + 21,000

NAME OF FACILITY FOR CHEMICAL DOSING EQUIPMENT	MAIN SPECIFICATION
① CHLORINE CYLINDER WEIGHING SCALE	WEIGHING CAPACITY 4000 KG, MINIMUM GRADUATION 2 KG
② INDICATOR UNIT FOR CHLORINE CYLINDER WEIGHING SCALE	DIGITAL INDICATOR TYPE
③ CHLORINATOR	6KG/H 2 UNITS (PRE AND INTER-MEDIATE), 2KG/H 2 UNITS (1 STAND BY)
④ CHLORINE GAS EXHAUST FAN	60 M ³ /MIN
⑤ CAUSTIC SODA SOLUTION RECIRCULATION PUMP	600 L/MIN
⑥ ABSORPTION TOWER	1000 KG/H (PVC)
⑦ CAUSTIC SODA SOLUTION STORAGE TANK	16 M ³ (INSIDE RUBBER LINING STEEL, OUTSIDE PAINTING)
⑧ LIQUID ALUMINIUM SULPHATE STORAGE TANK	12 M ³ (FRP)
⑨ LIQUID ALUMINIUM SULPHATE TRANSFER PUMP	6 L/MIN
⑩ ALUMINIUM SULPHATE SOLUTION DOSING PUMP	16 L/H
⑪ ALUMINIUM SULPHATE SOLUTION TANK	4 M ³ (FRP)
⑫ AGITATOR	PORTABLE TYPE
⑬ CHLORINE GAS DETECTOR	DETECTION RANGE MIN. 0 PPM, MAX. 5 PPM

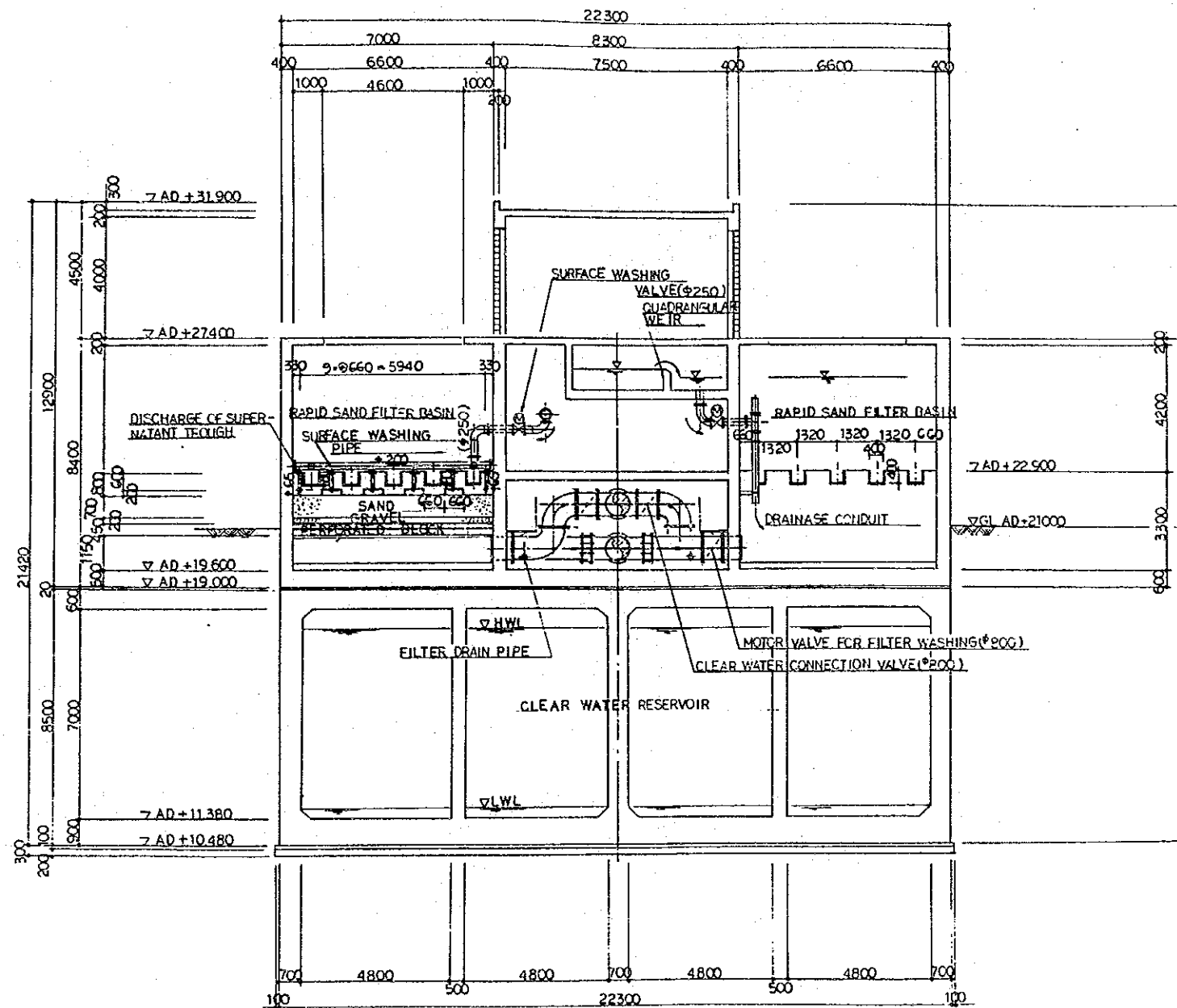
THE ARAB REPUBLIC OF EGYPT
GIZA CITY, GIZA GOVERNORATE

THE PROJECT FOR THE WATER SUPPLY AND SEWER
SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)

Layout of Electrical & Chemical Room	SCALE 1:200
	DRAWING NO. EGH-WT-05
	JAPAN INTERNATIONAL COOPERATION AGENCY

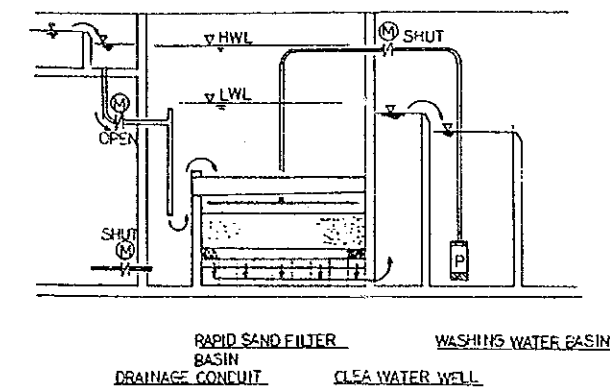


KEY PLAN

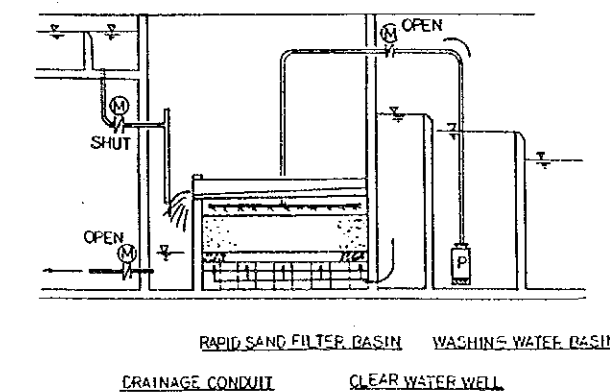


SECTION E - E s=1:200

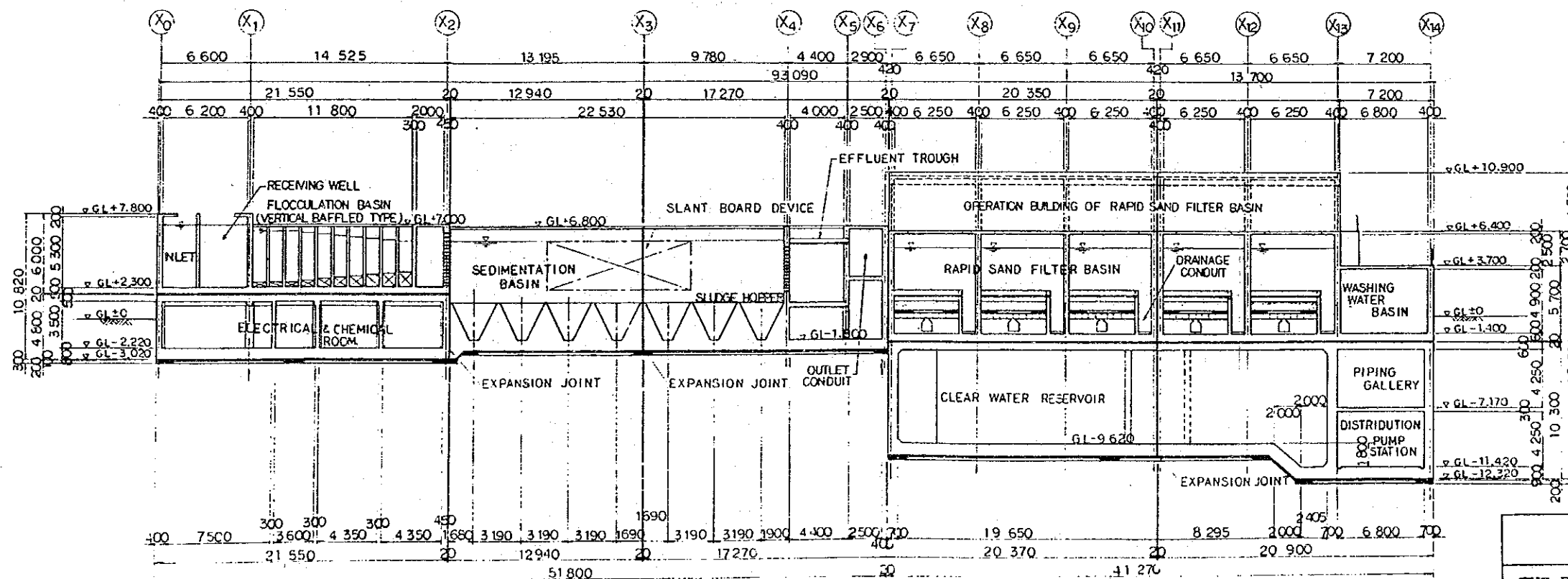
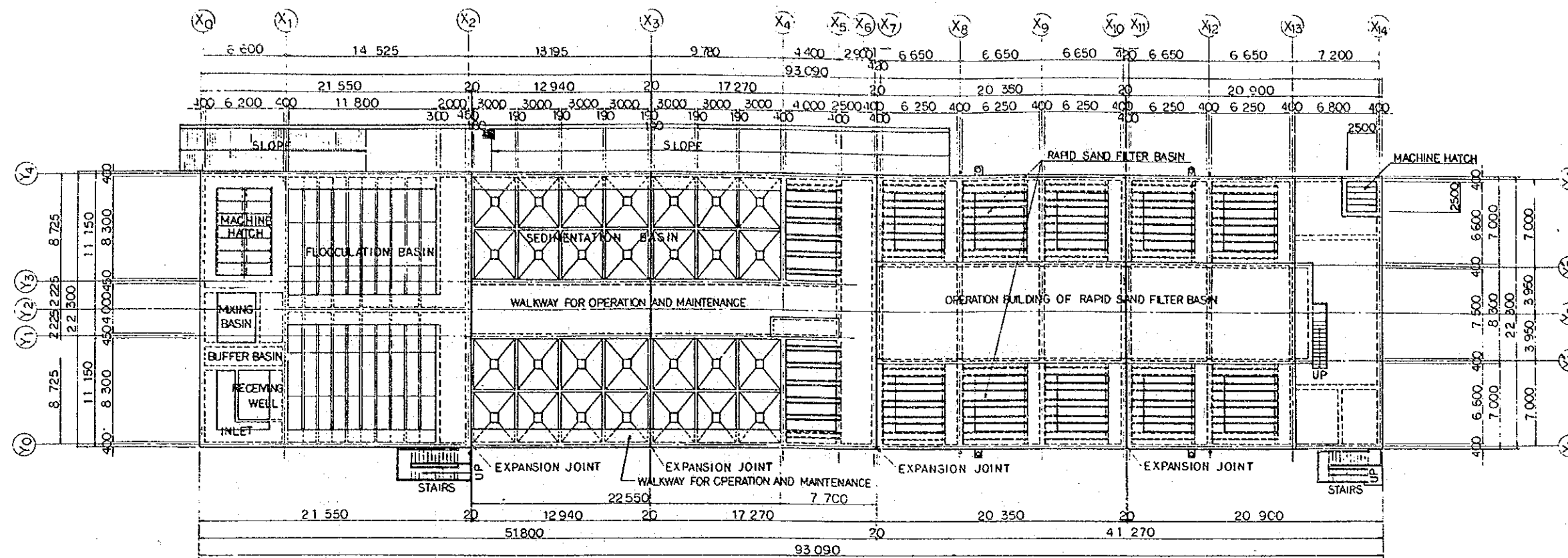
1. WATER FLOW IN THE MIDST OF FILTRATION



2. WATER FLOW IN THE MIDST OF BACKWASHING

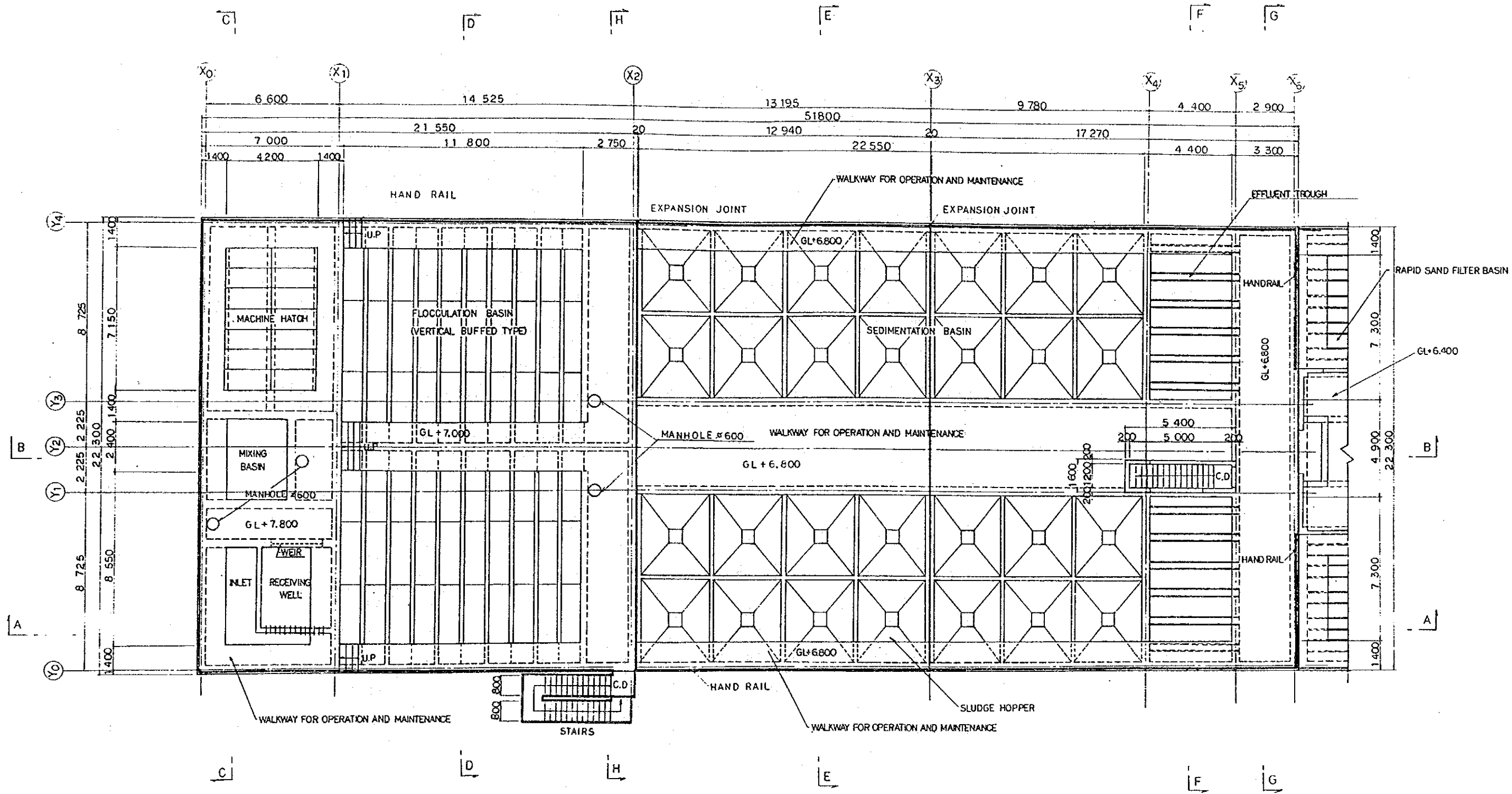


THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Surface Washing Facility	SCALE
	1: 200
	DRAWING NO.
EGM-WT-06	
JAPAN INTERNATIONAL COOPERATION AGENCY	



NOTE:
GL=0=AD-21000

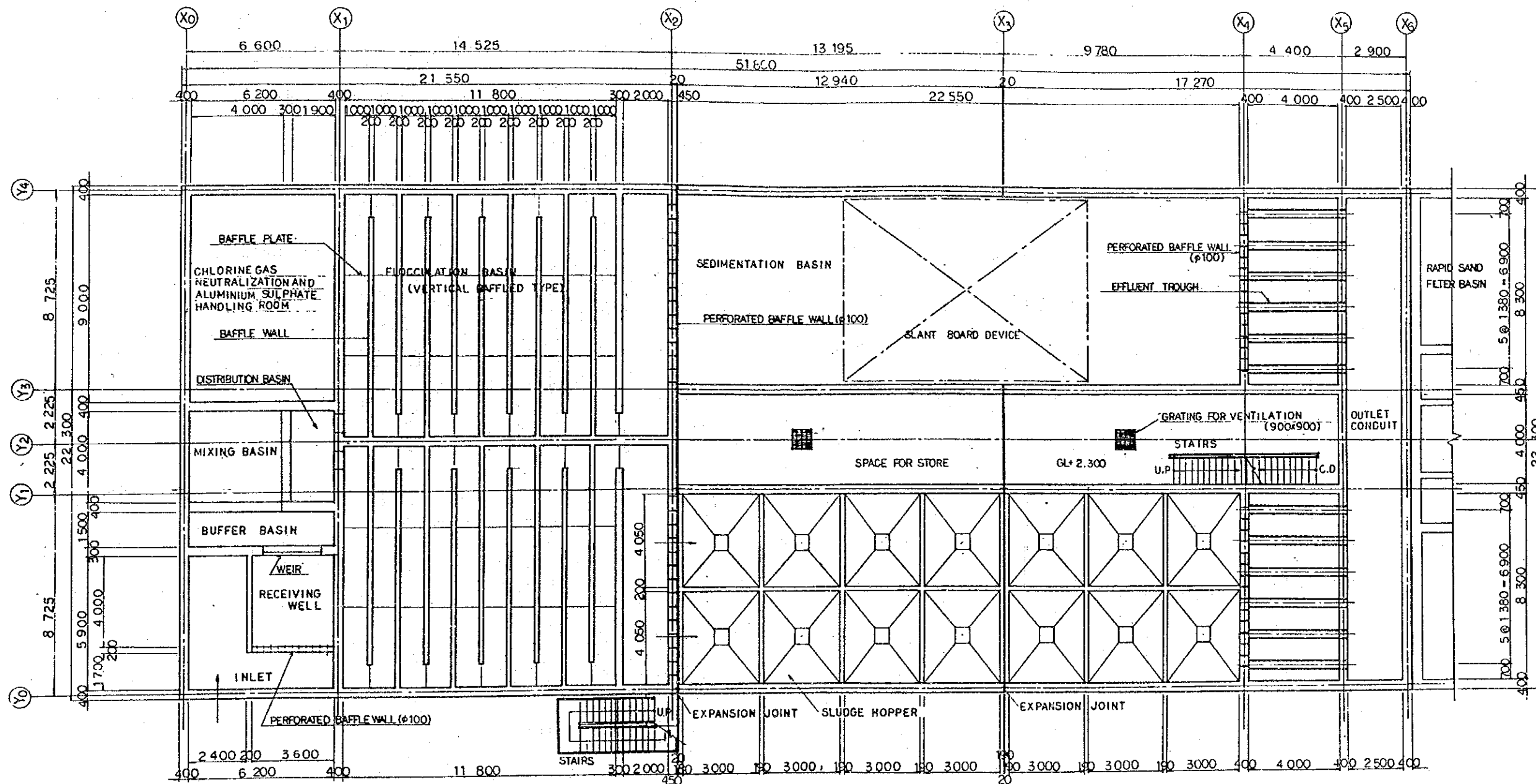
THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Plan and Cross-Section of Water Purification Plant	SCALE 1:400
	DRAWING NO. EGM-WT-07
	JAPAN INTERNATIONAL COOPERATION AGENCY



FLOOR PLAN S=1:200

NOTE:
GL+0=AD+21.000

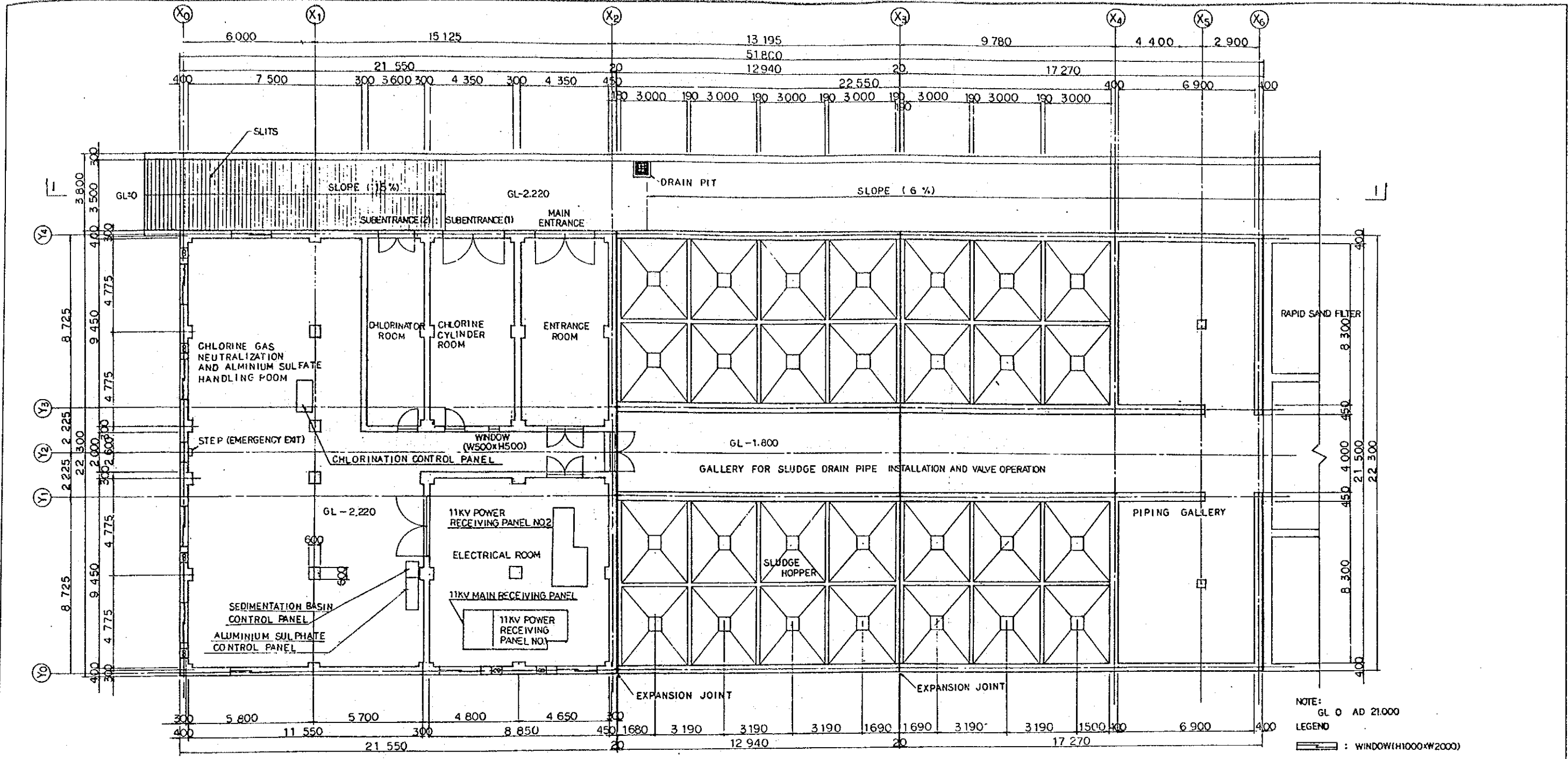
THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Plan of Sedimentation Basin (1/3)	SCALE 1:200
	DRAWING NO. EGM-WT-08
	JAPAN INTERNATIONAL COOPERATION AGENCY



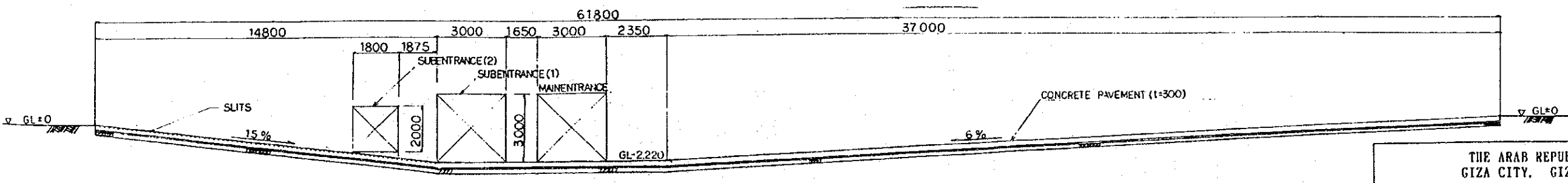
GL+5.800 FLOOR PLAN S=1:200

NOTE:
GL+0=AD+21.000

THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Plan of Sedimentation Basin (2/3)	SCALE 1:200
	DRAWING NO. EGM-WT-09
	JAPAN INTERNATIONAL COOPERATION AGENCY



GL-1.800 (GL-2.220) FLOOR PLAN S=1:200



SECTION I-I S=1:200

NOTE
1. GL ± 0 = AD+21,000

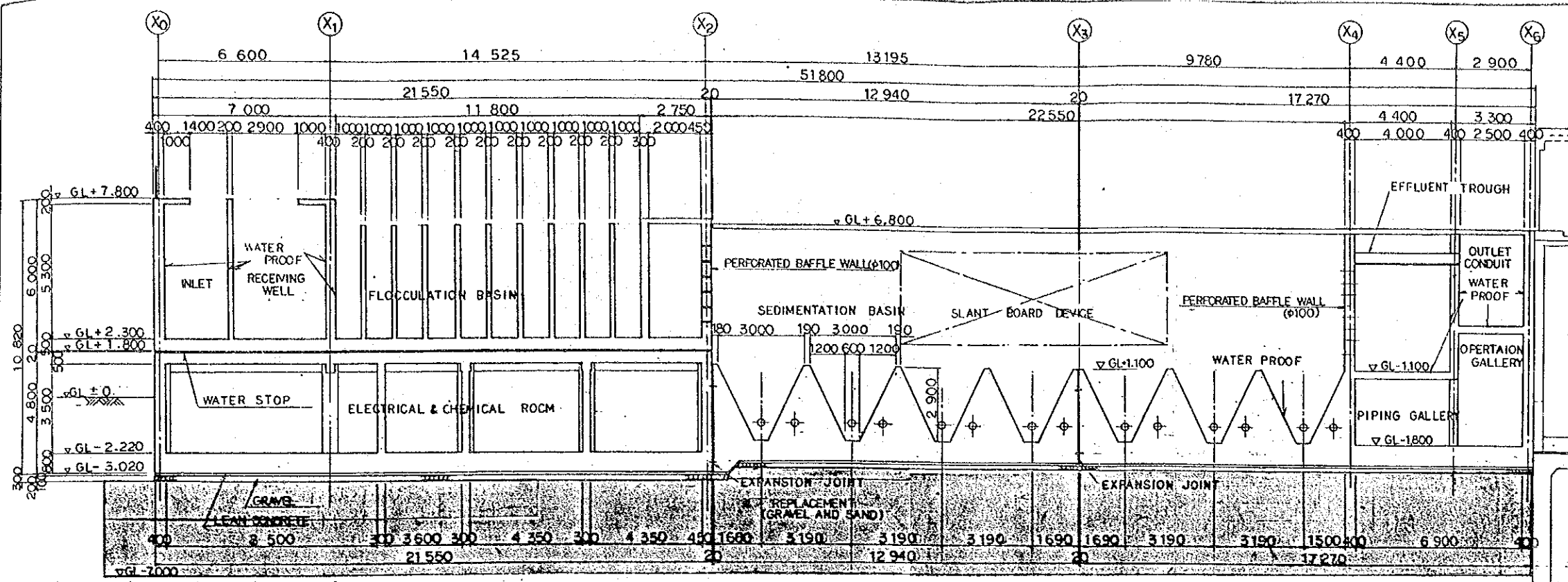
THE ARAB REPUBLIC OF EGYPT
GIZA CITY, GIZA GOVERNORATE

THE PROJECT FOR THE WATER SUPPLY AND SEWER
SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)

Plan of Sedimentation Basin (3/3)

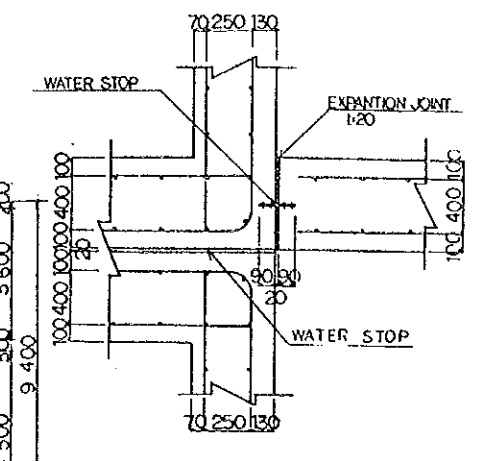
JAPAN INTERNATIONAL COOPERATION AGENCY

SCALE	1:200
DRAWING NO.	EGM-WT-10

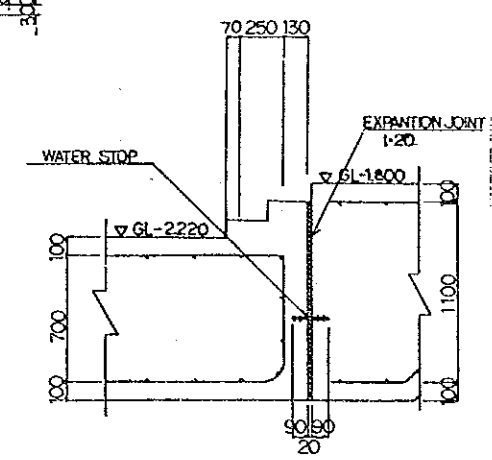


SECTION A-A S=1:200

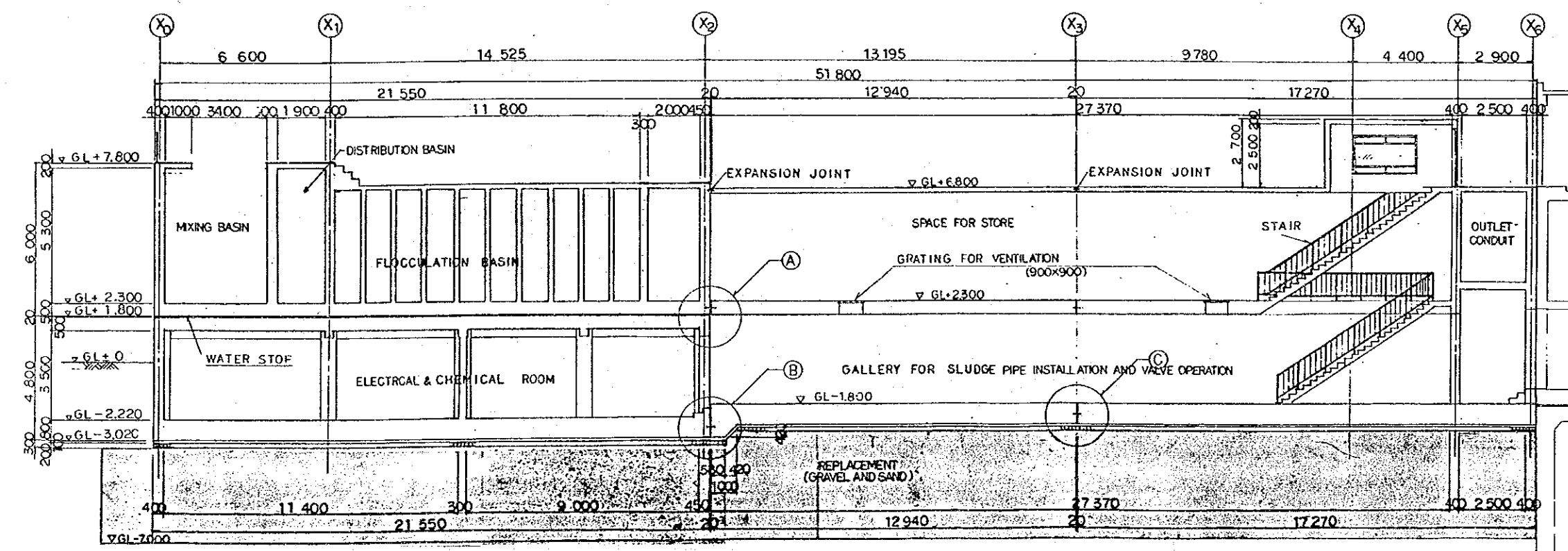
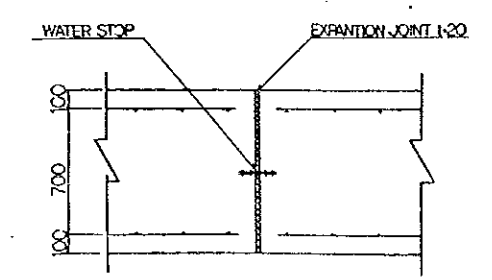
DETAIL (A) S=1:40



DETAIL (B)



DETAIL (C)



SECTION B-B S=1:200

- NOTES
 1. GL±0=AD±21.000
 2. FOR THE LOCATION OF SECTIONS, SEE DRAWING NO. EGM-WT-08.

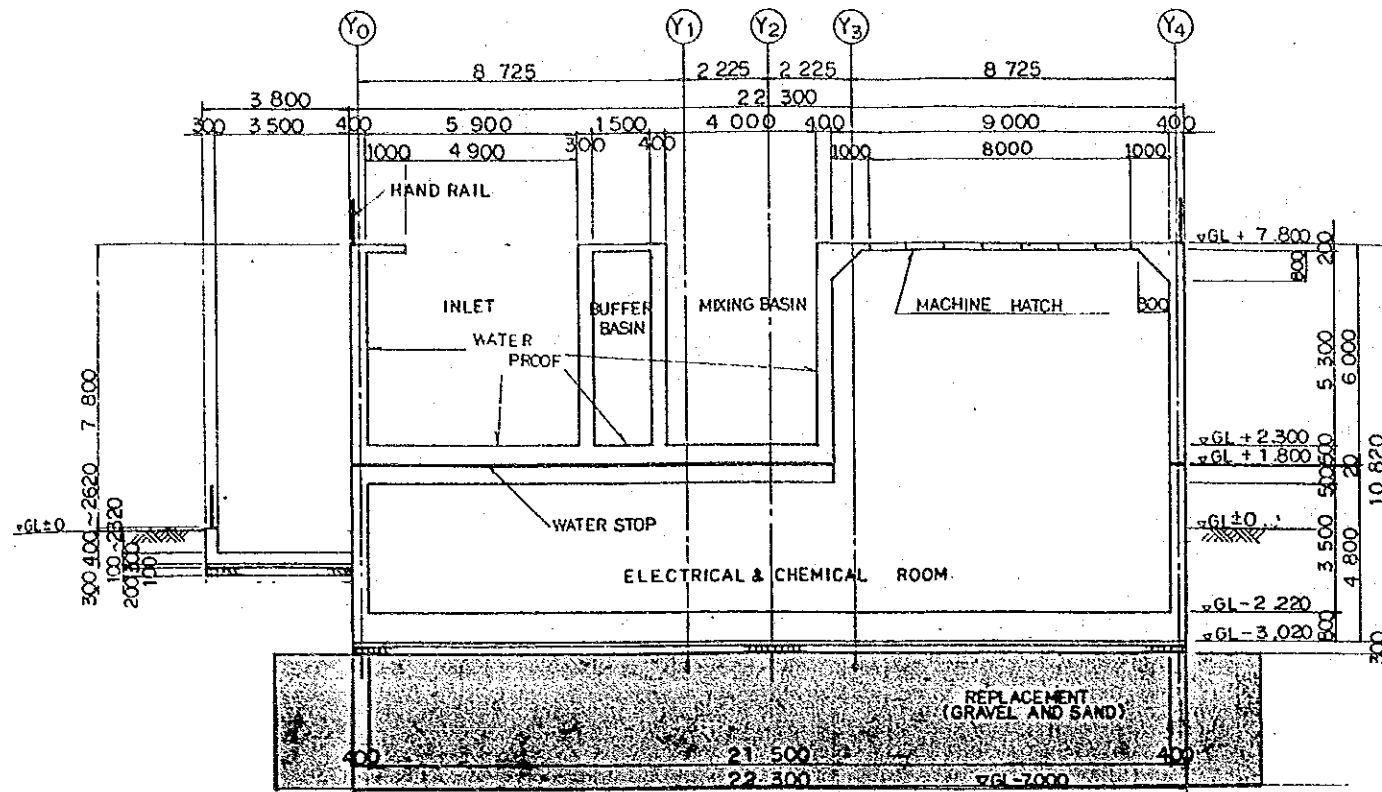
THE ARAB REPUBLIC OF EGYPT
 GIZA CITY, GIZA GOVERNORATE

THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)

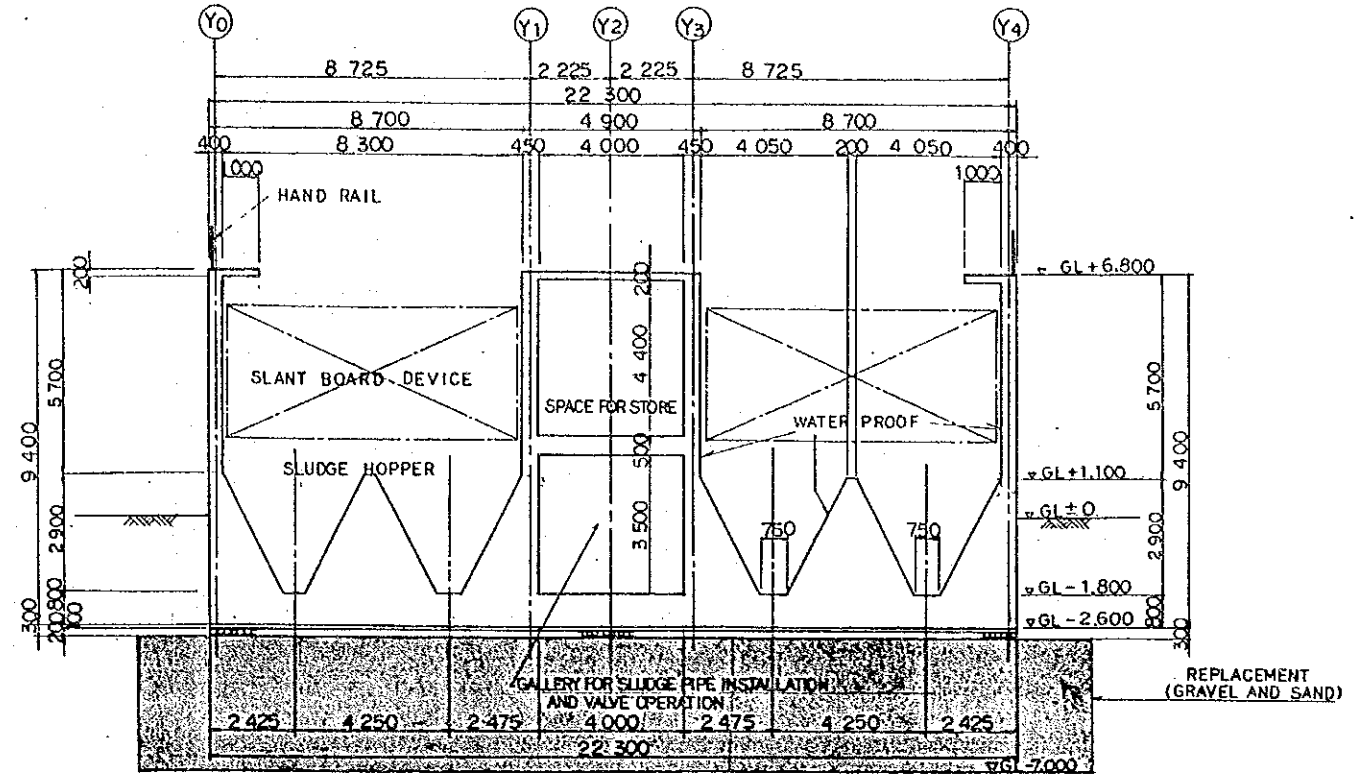
Cross-Section of Sedimentation Basin
 (1/3)

SCALE:	AS SHOWN
DRAWING NO.	EGM-WT-11

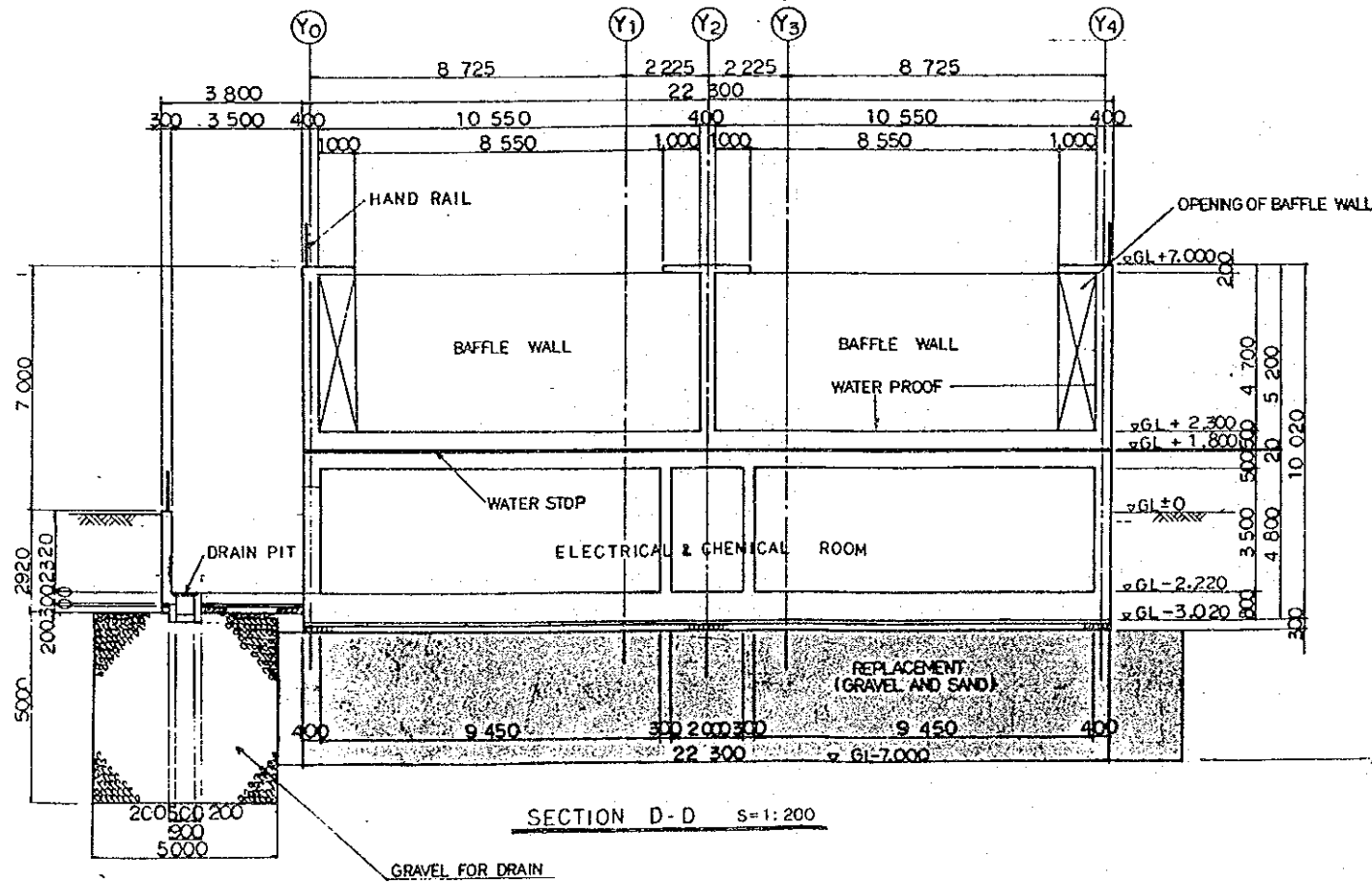
JAPAN INTERNATIONAL COOPERATION AGENCY



SECTION C-C s=1:200



SECTION E-E s=1:200



SECTION D-D s=1:200

- NOTES
1. GL=0+AD+21.000
 2. FOR THE LOCATION OF SECTIONS, SEE DRAWING NO. EGM-WT-08.

SOIL PROFILE

DEPTH	LEGEND	DESCRIPTION	N-VALUE
			10, 30, 20, 40
5.50		SILTY CLAY	8
6.50		FINE SAND WITH CLAY	27
			35, 30, 28, 36, 45
12.00		SAND	

THE ARAB REPUBLIC OF EGYPT
GIZA CITY, GIZA GOVERNORATE

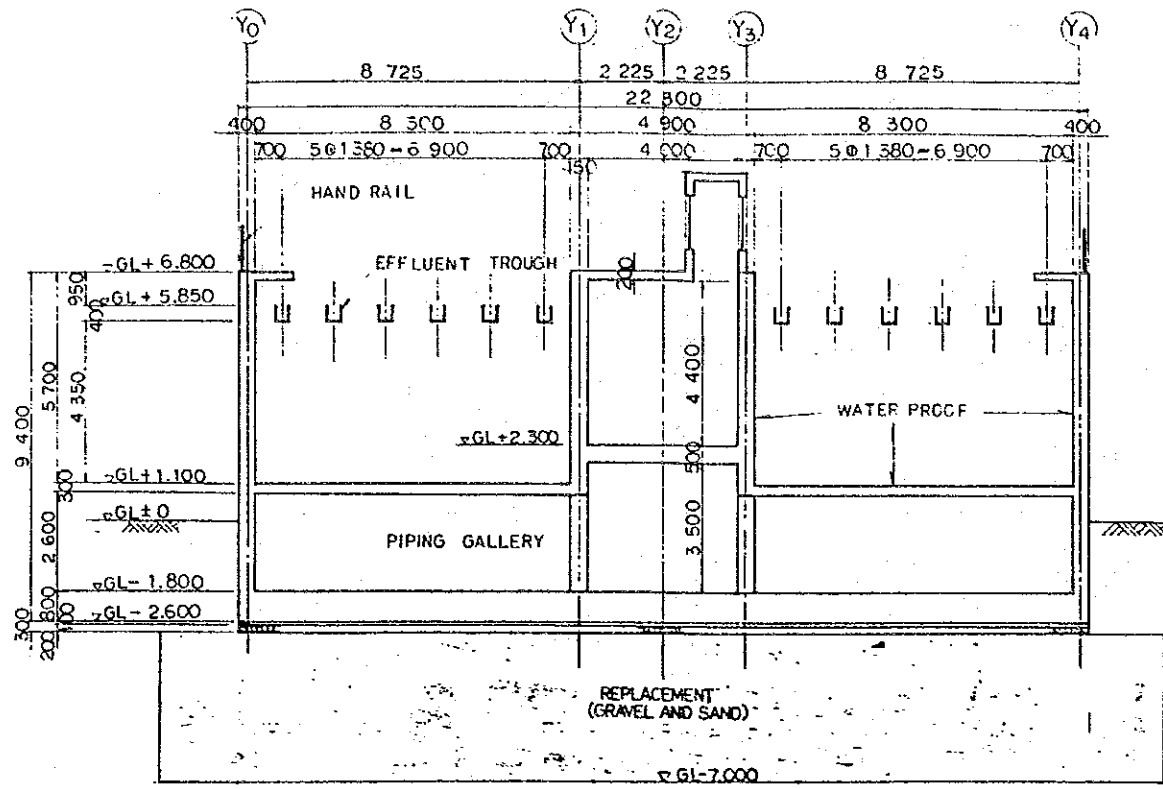
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)

Cross-Section of Sedimentation Basin (2/3)

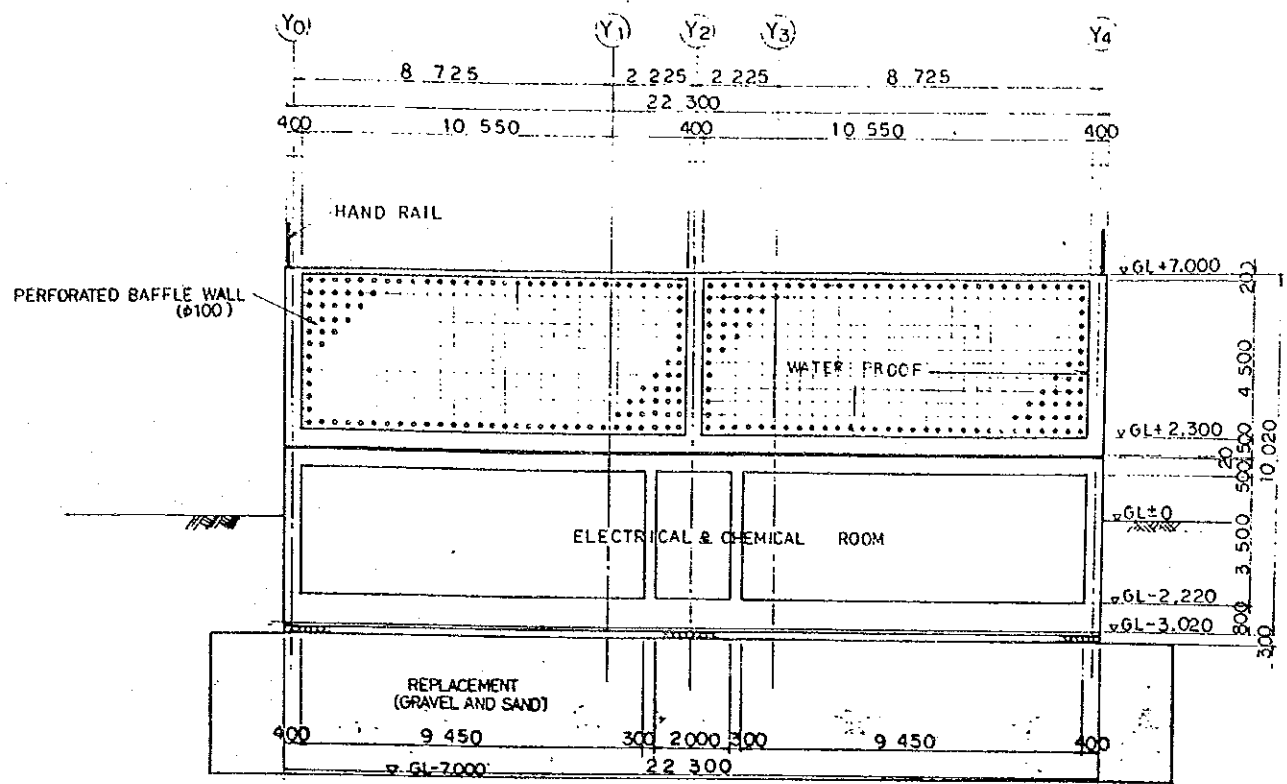
SCALE
1:200

DRAWING NO.
EGM-WT-12

JAPAN INTERNATIONAL COOPERATION AGENCY

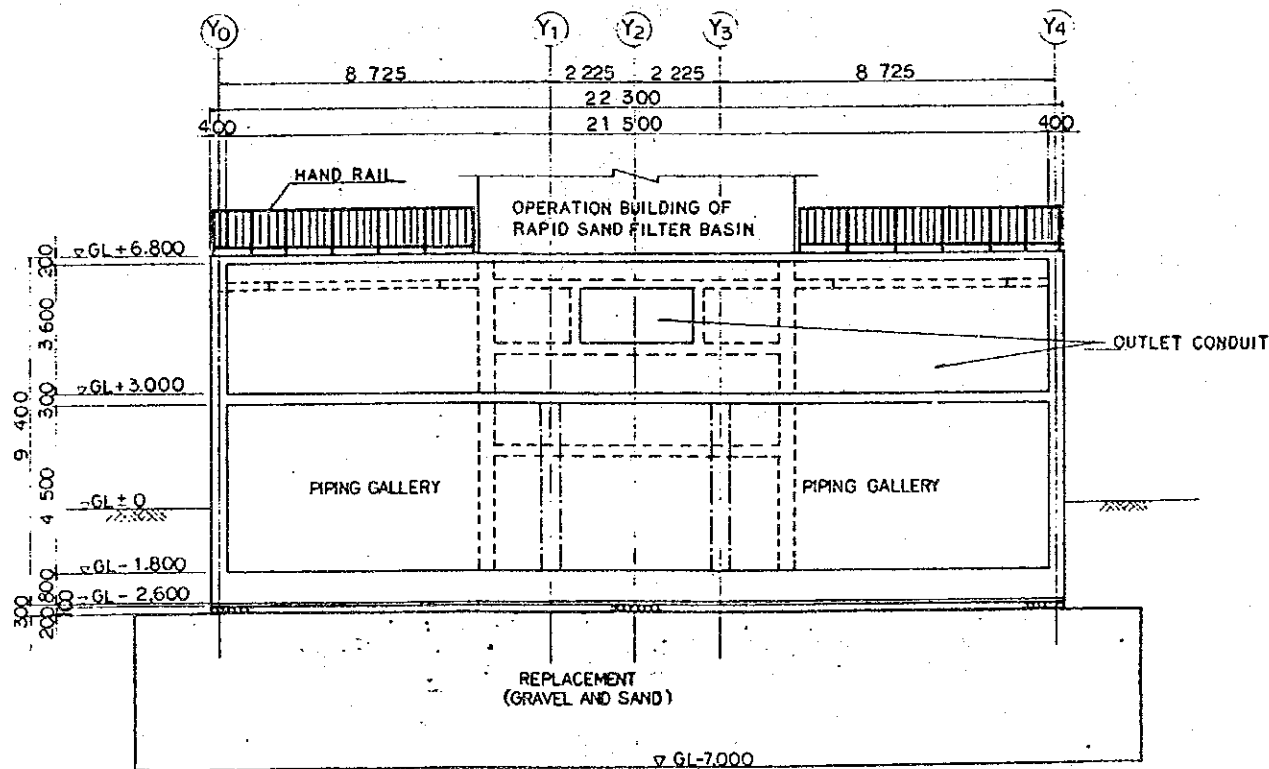


SECTION F-F s=1:200



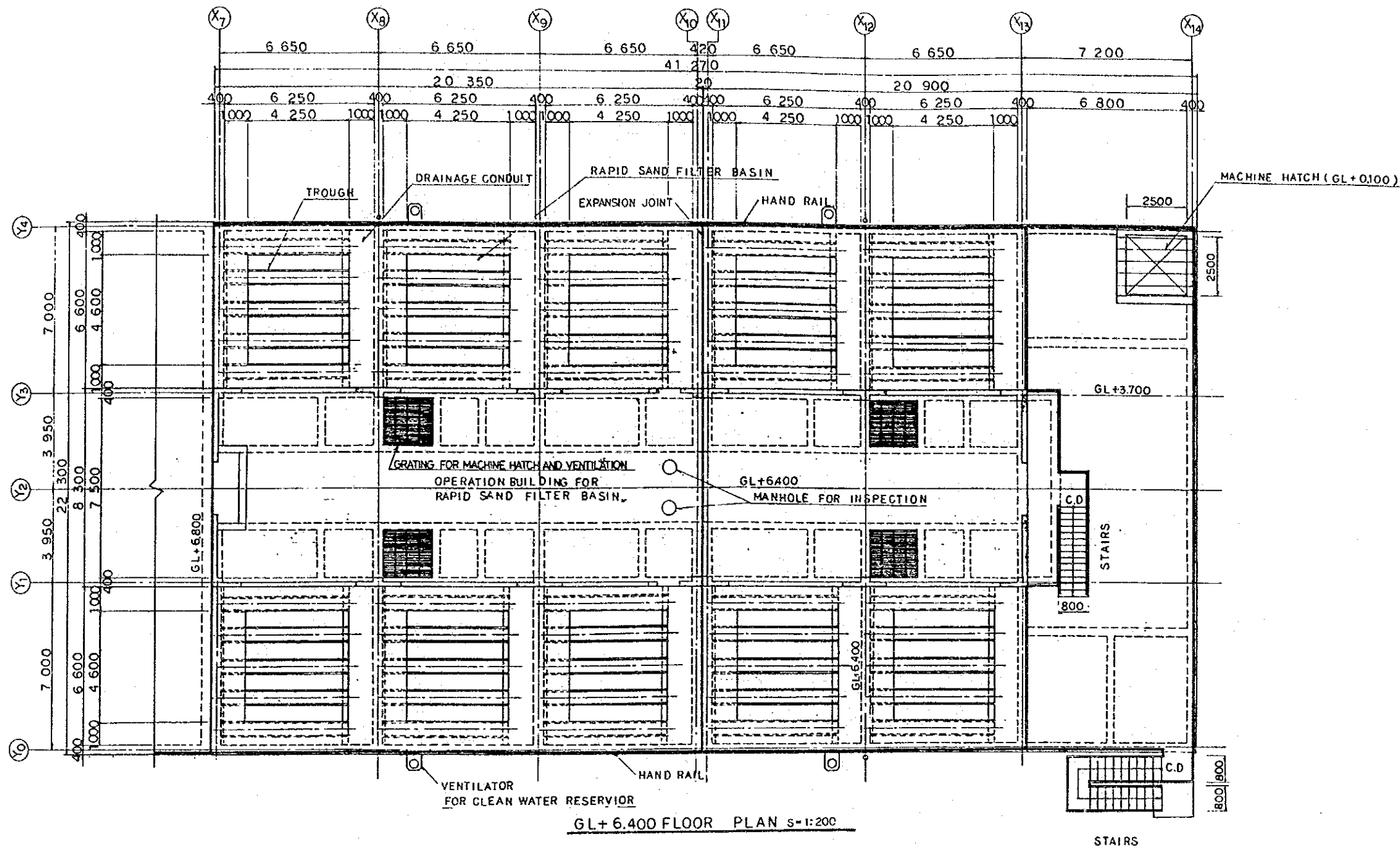
SECTION H-H s=1:200

- NOTES
1. GL±0=AD+21.000
 2. FOR THE LOCATION OF SECTIONS, SEE DRAWING NO. EGM-WT-08.

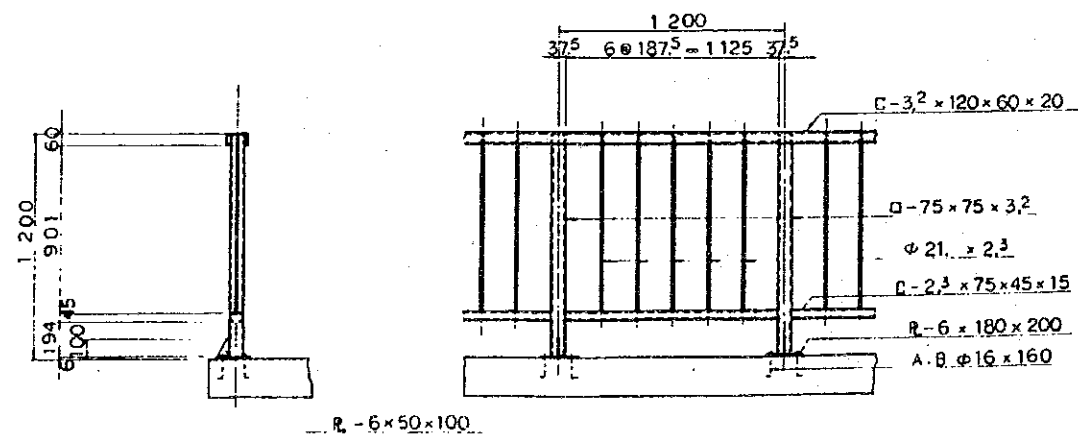


SECTION G-G s=1:200

THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Cross-Section of Sedimentation Basin (3/3)	SCALE 1:200
	DRAWING NO. EGM-WT-13.
	JAPAN INTERNATIONAL COOPERATION AGENCY

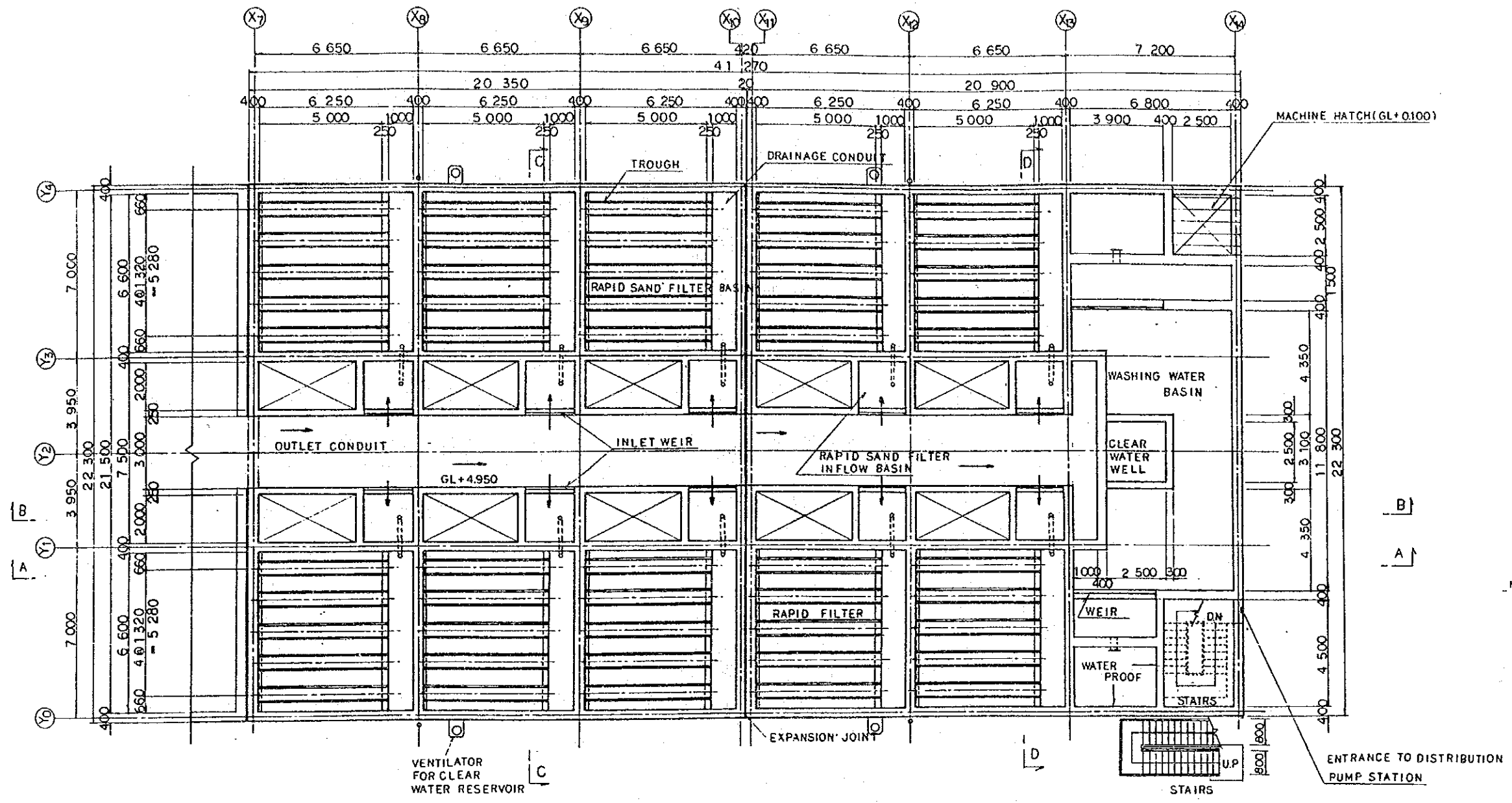


NOTE:
GL ± 0 = AD ± 21,000



HAND RAIL DETAIL S=1:40

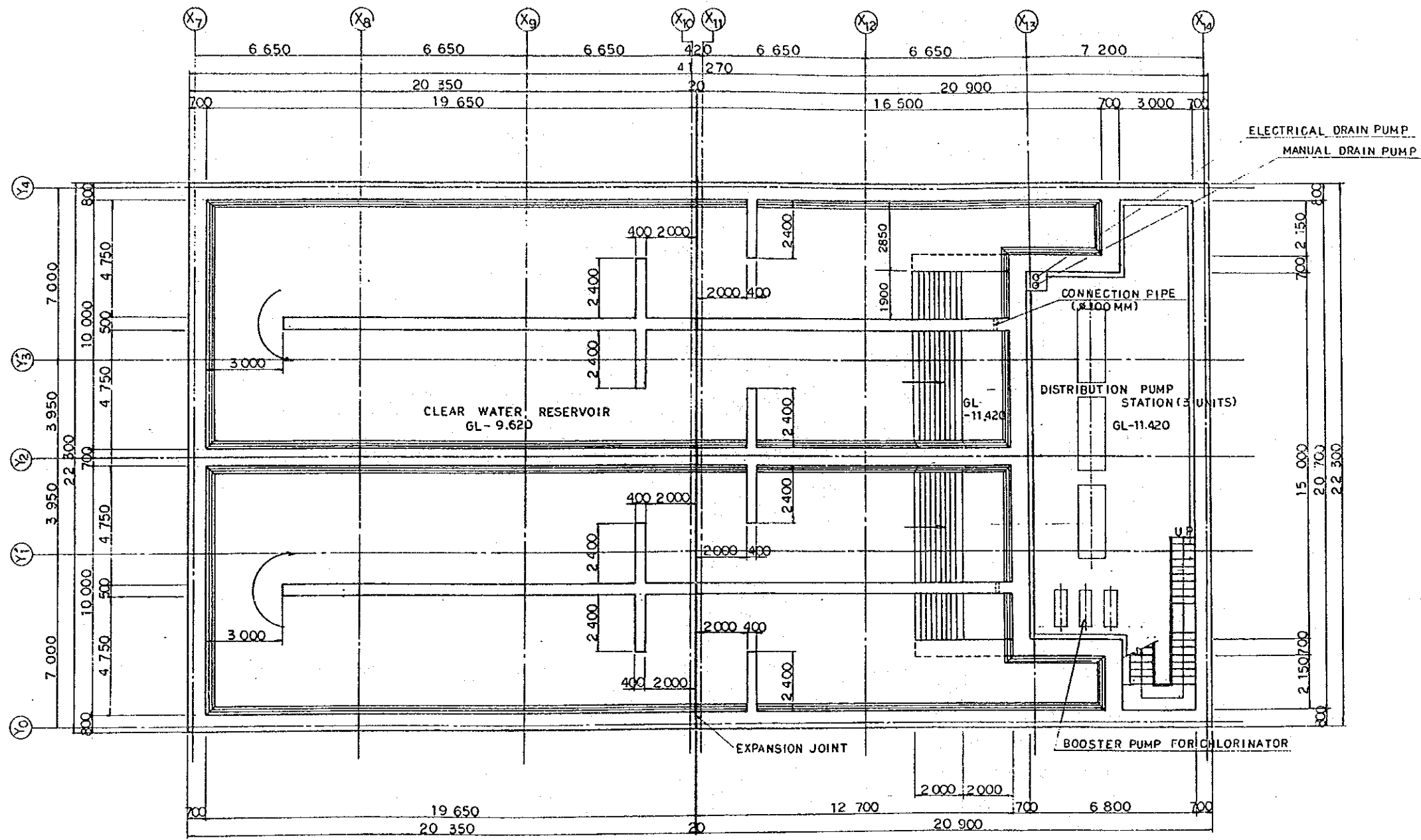
THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Plan of Rapid Sand Filter Basin and Clear Water Reservoir (1/3)	SCALE AS SHOWN
	DRAWING NO. EGM-WT-14
	JAPAN INTERNATIONAL COOPERATION AGENCY



NOTES:
 1. GL ± 0 = AD + 21.000
 2. → SHOWS WATER FLOW DIRECTION

GL+3.400 FLOOR PLAN S=1:200

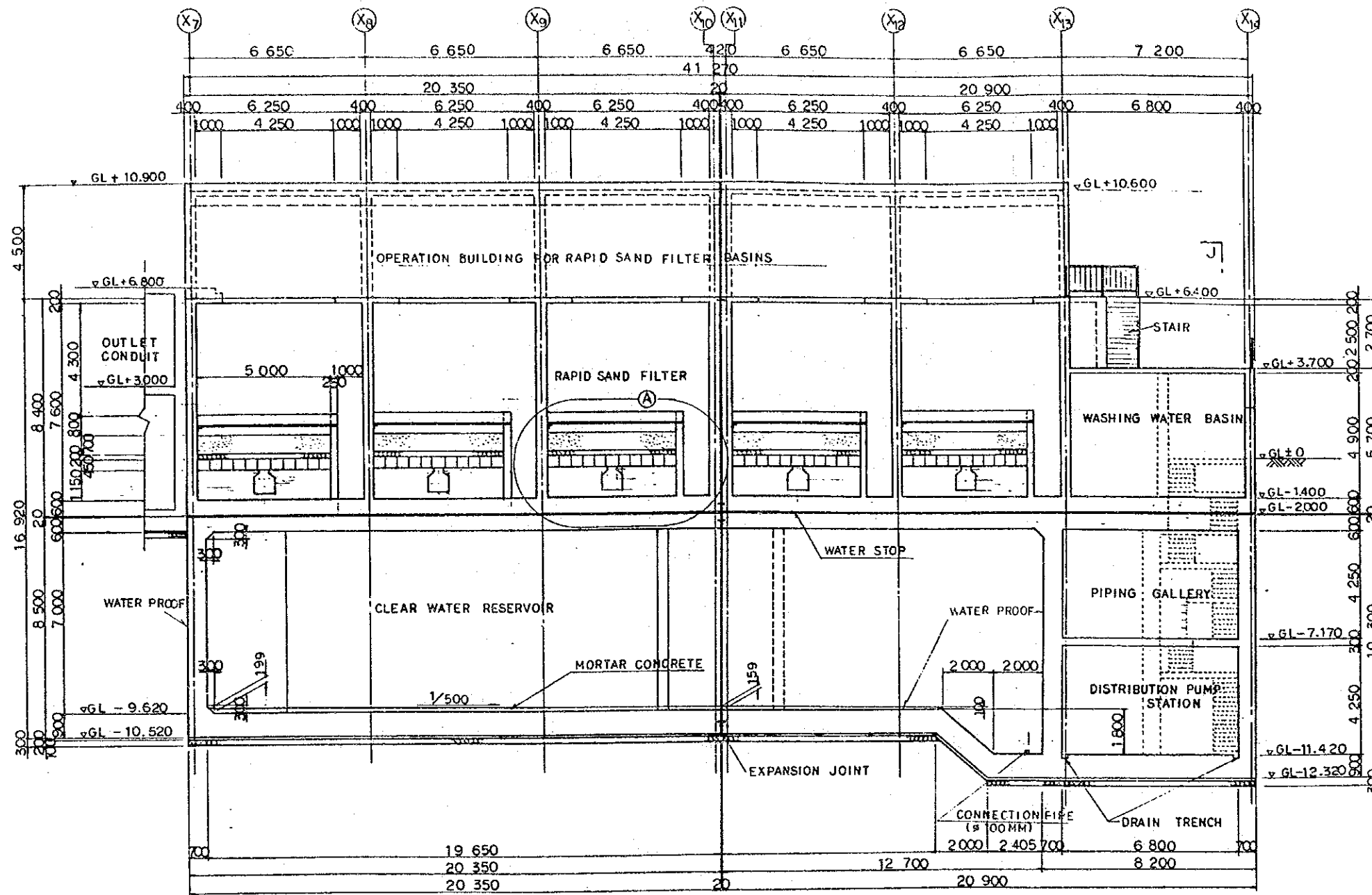
THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Plan of Rapid Sand Filter Basin and Clear Water Reservoir (2/3)	SCALE
	1:200
	DRAWING NO. EGM-WT-15
JAPAN INTERNATIONAL COOPERATION AGENCY	



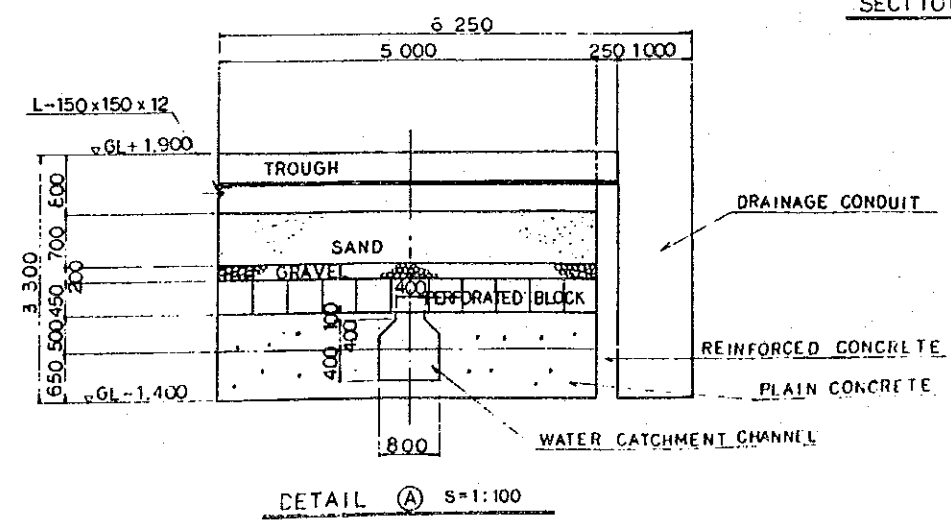
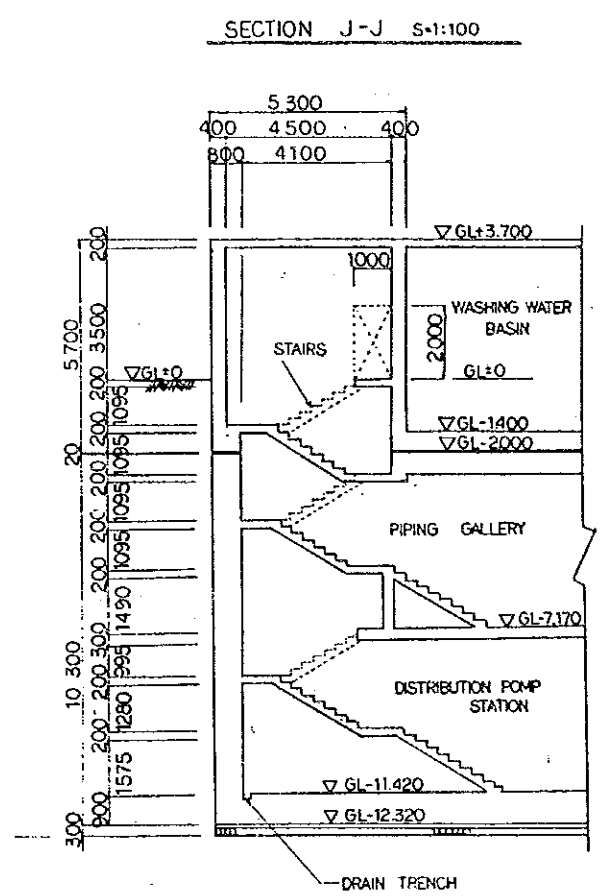
NOTES:
 1. GL ± 0 = AD + 21.000
 2. → SHOWS WATER FLOW DIRECTION

GL-11.420 (GL - 9.620) FLOOR PLAN S=1:200

THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Plan of Rapid Sand Filter Basin and Clear Water Reservoir (3/3)	SCALE 1:200
	DRAWING NO. EGM-WT-16
	JAPAN INTERNATIONAL COOPERATION AGENCY

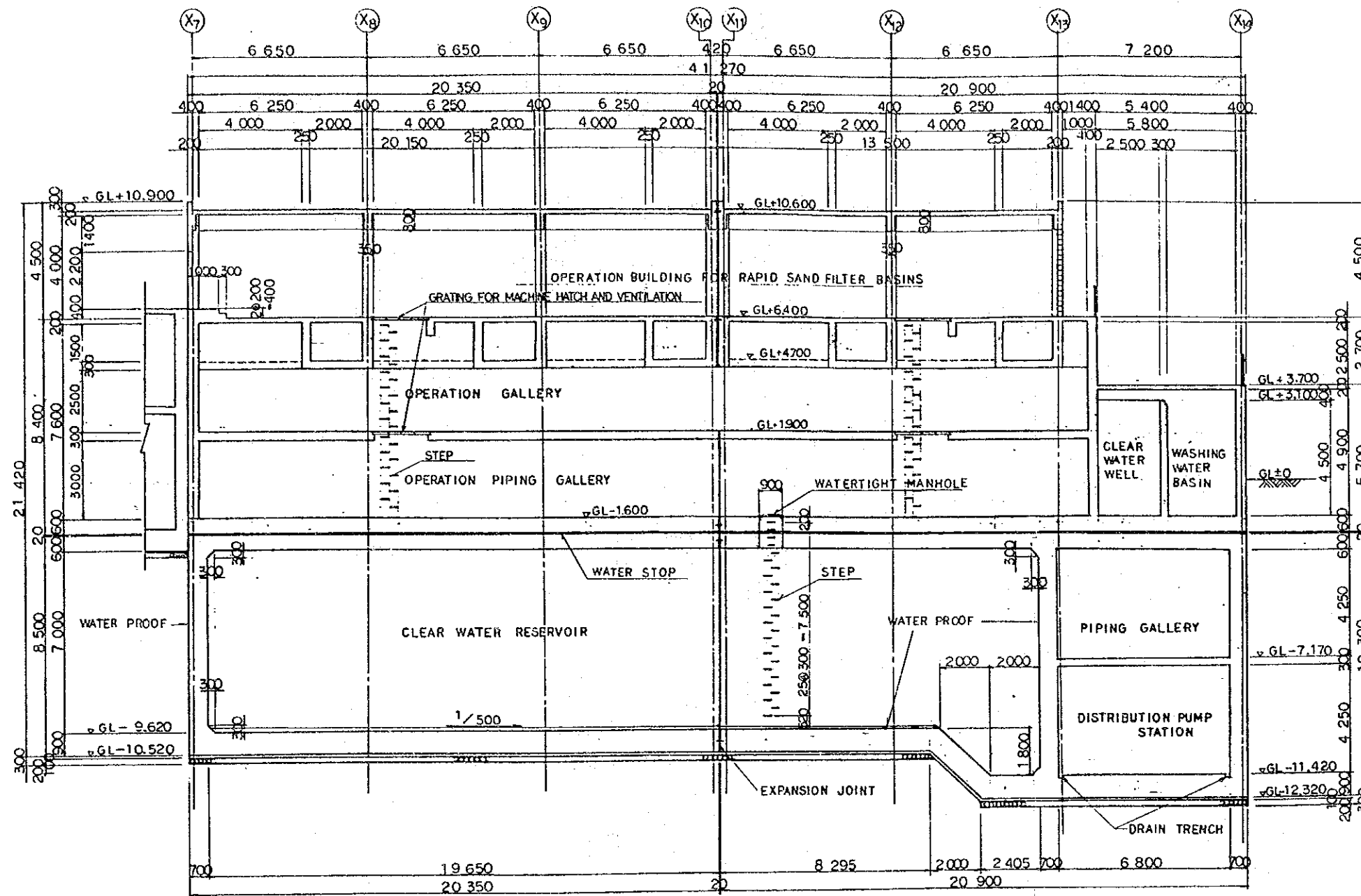


SECTION A-A S=1:200



- NOTES
1. GL±0 = AD+21.000
 2. FOR THE LOCATION OF SECTIONS, SEE DRAWING NO. EGM-WT-15.

THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Cross-Section of Rapid Sand Filter Basin and Clear Water Reservoir (1/3)	SCALE
	AS SHOWN
	DRAWING NO. EGM-WT-17
JAPAN INTERNATIONAL COOPERATION AGENCY	

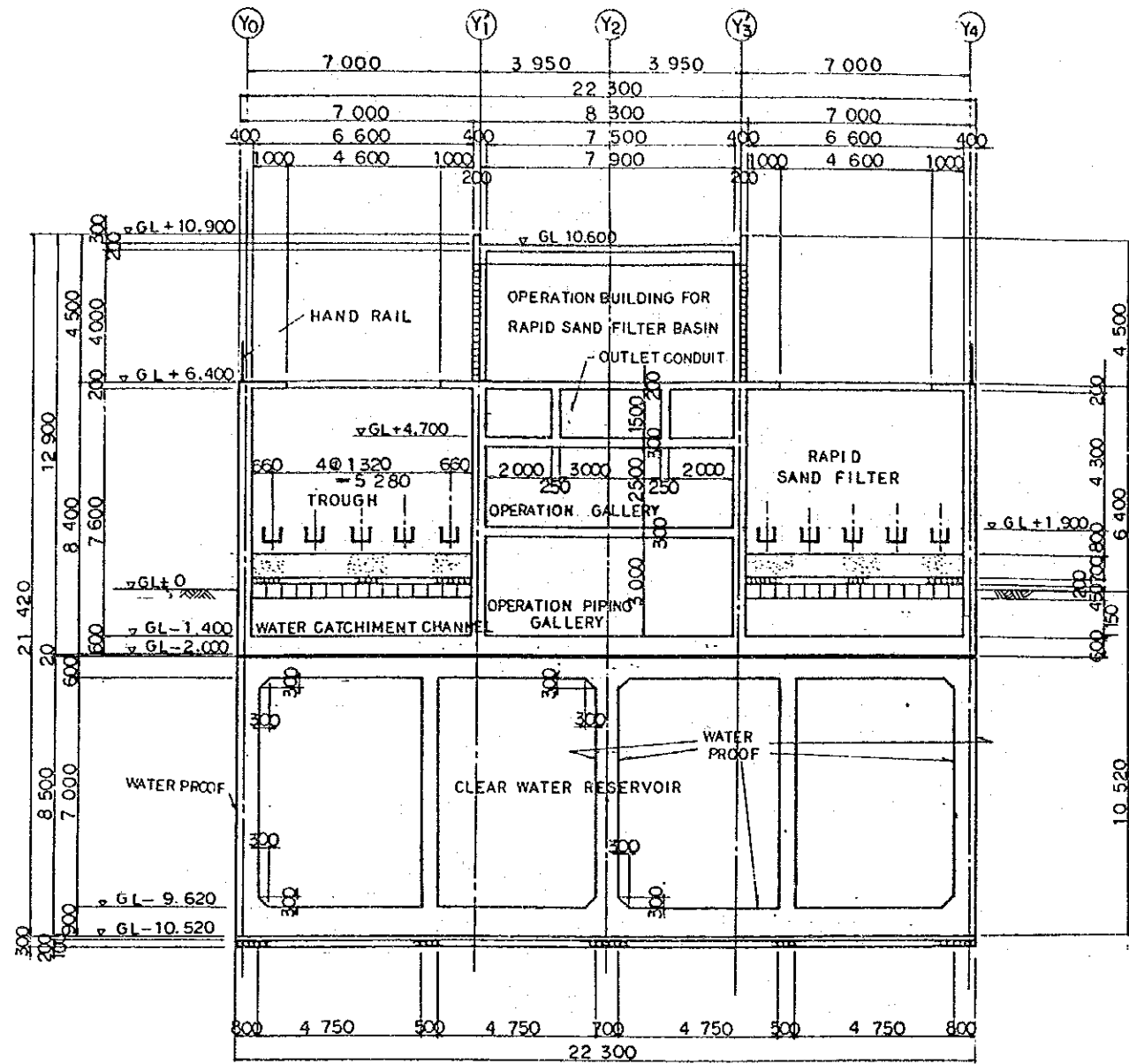


NOTES

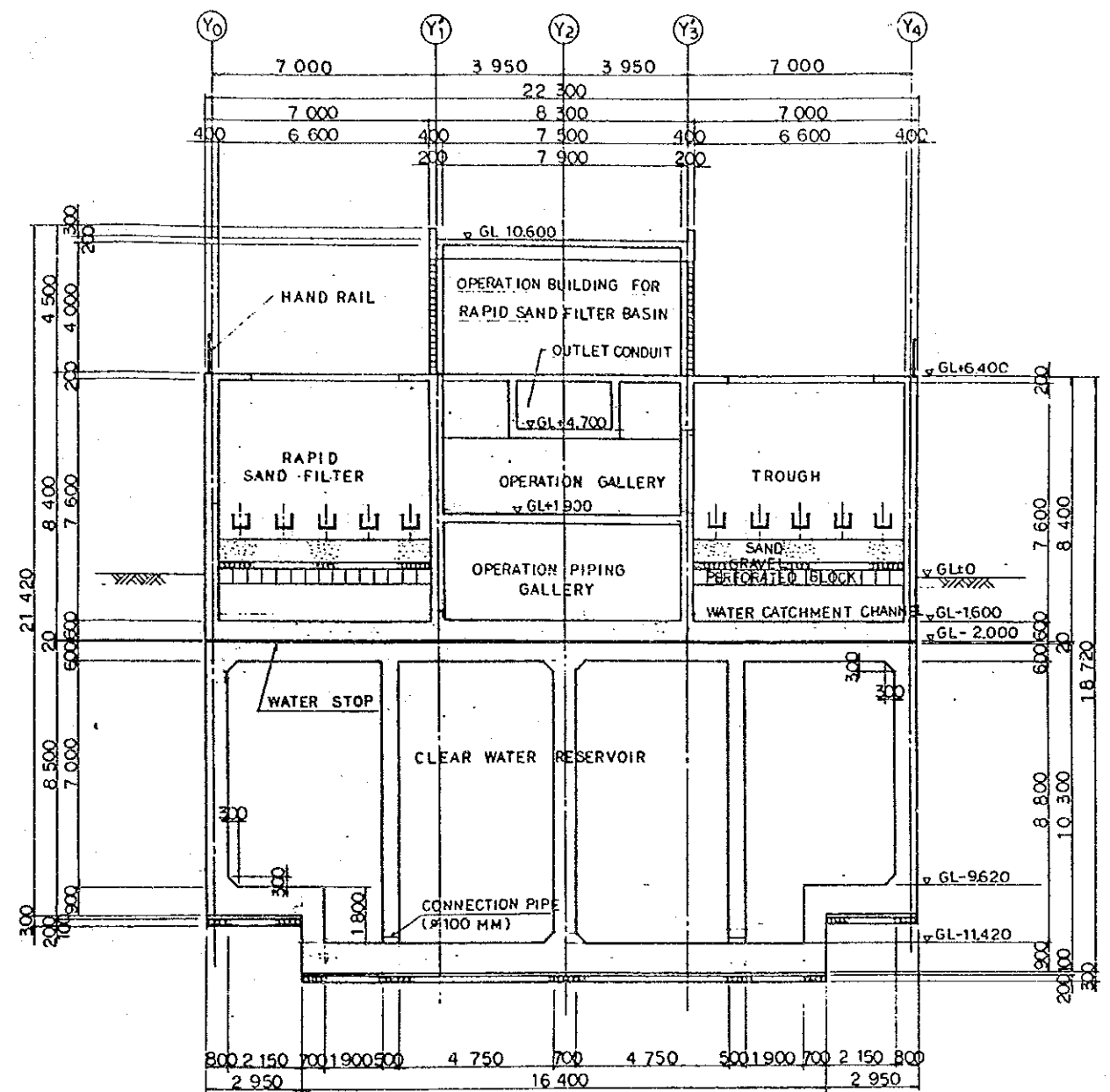
1. GL±0=AD+21.000
2. FOR THE LOCATION OF SECTIONS, SEE DRAWING NO. EGM-WT-15.

SECTION B-B S=1:200

THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Cross-Section of Rapid Sand Filter Basin and Clear Water Reservoir (2/3)	SCALE 1: 200
	DRAWING NO. EGM-WT-18
	JAPAN INTERNATIONAL COOPERATION AGENCY



SECTION C-C S=1:200



SECTION D-D S=1:200

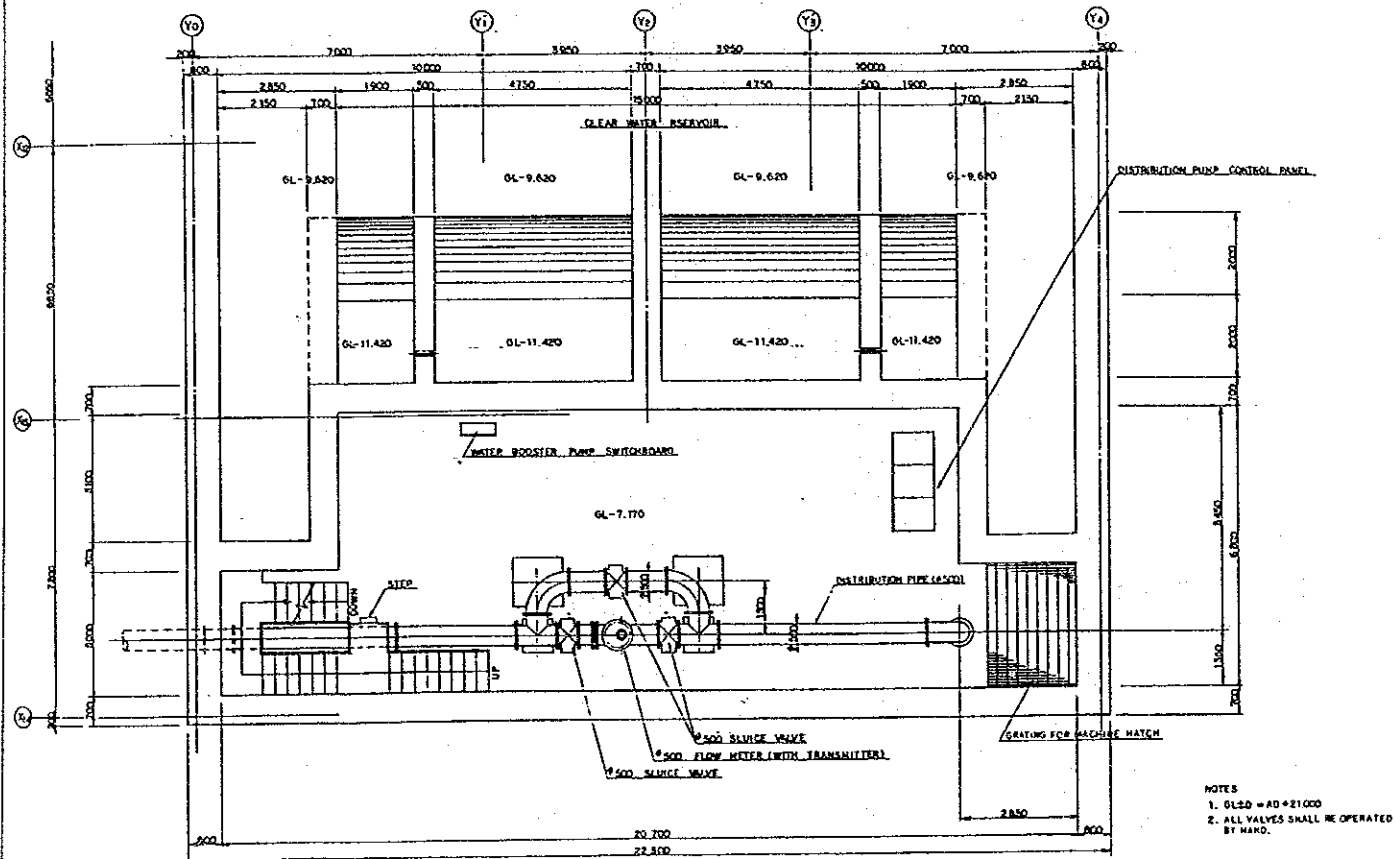
NOTES

1. GL+0 = AD + 21.000
2. FOR THE LOCATION OF SECTIONS, SEE DRAWING NO. EGM - WT - 15.

THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Cross-Section of Rapid Sand Filter Basin and Clear Water Reservoir (3/3)	SCALE 1:200
	DRAWING NO. EGM-WT-19
	JAPAN INTERNATIONAL COOPERATION AGENCY

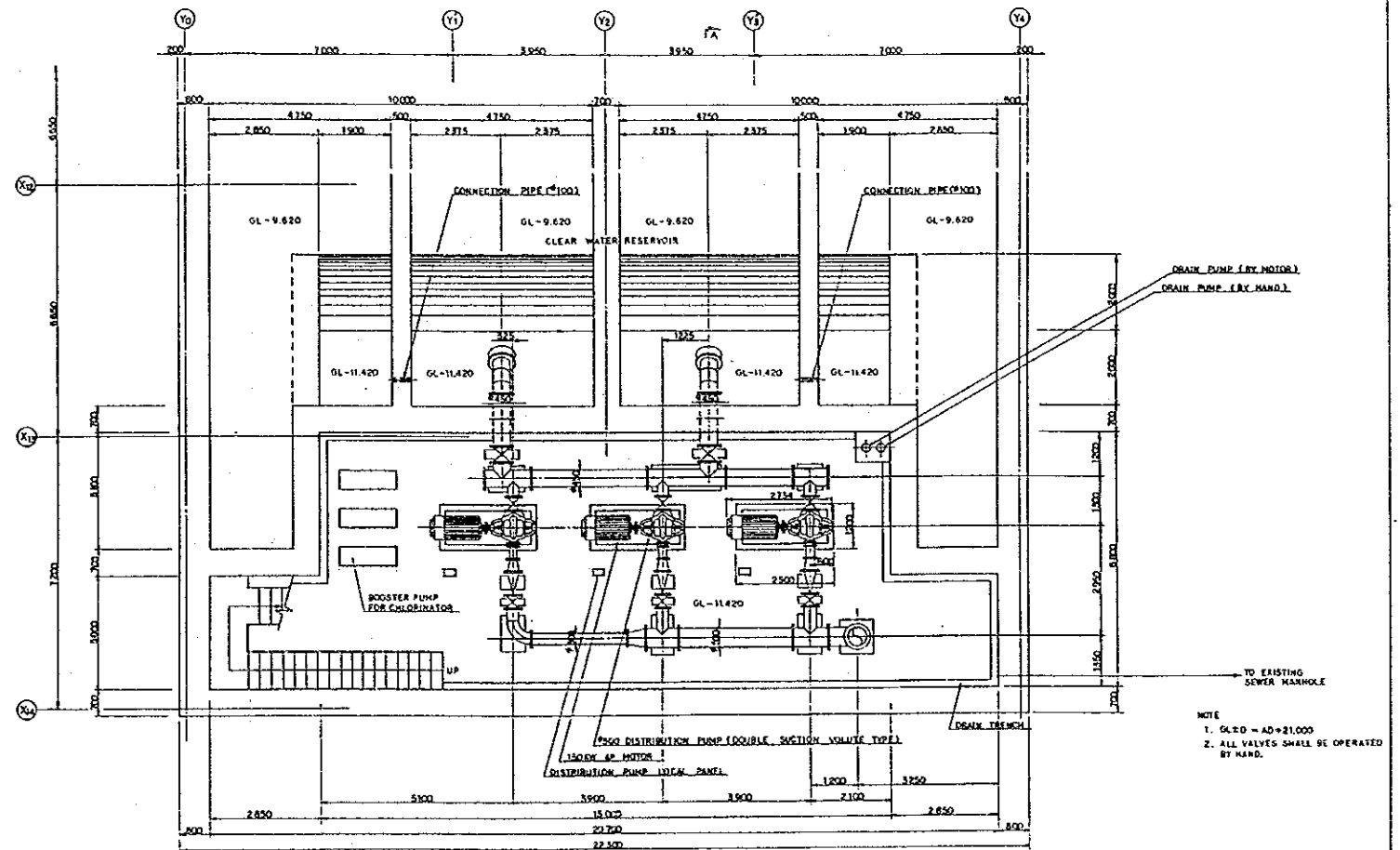
DISTRIBUTION PUMP STATION

**DISTRIBUTION PUMP
φ500 FLOW METER ROOM PLAN**



NOTES
1. G.L.S.D = RD + 21.000
2. ALL VALVES SHALL BE OPERATED BY HAND.

DISTRIBUTION PUMP ROOM PLAN

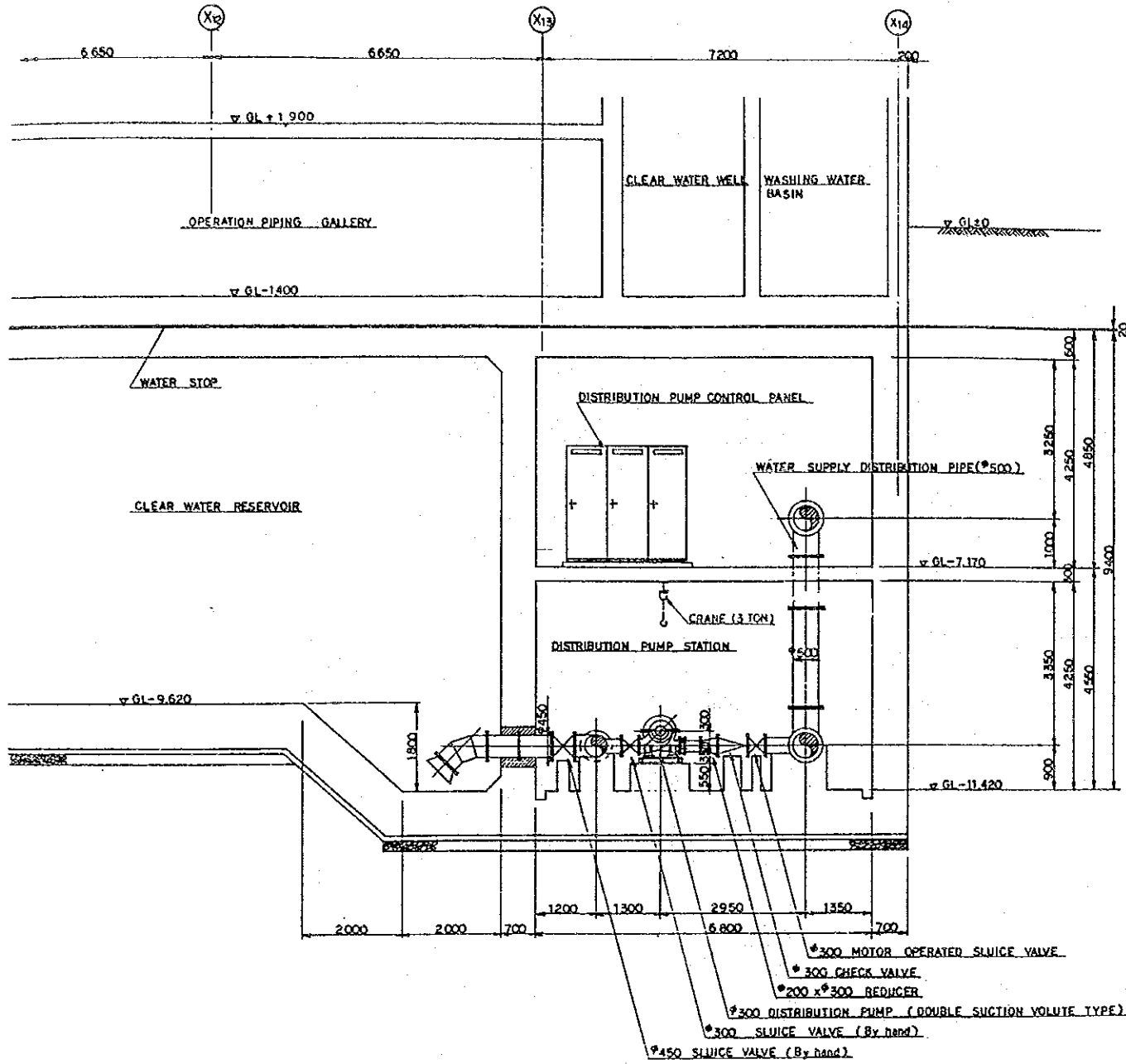


NOTE
1. G.L.S.D = RD + 21.000
2. ALL VALVES SHALL BE OPERATED BY HAND.

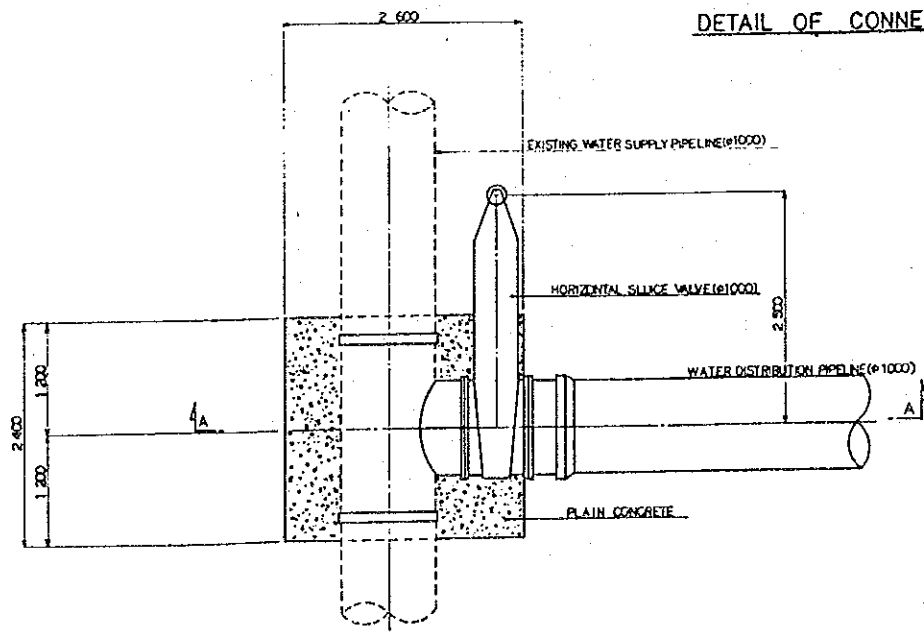
THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Plan of Distribution Pump Station	SCALE NONE
	DRAWING NO. EGM-WT-20
	JAPAN INTERNATIONAL COOPERATION AGENCY

DISTRIBUTION PUMP STATION

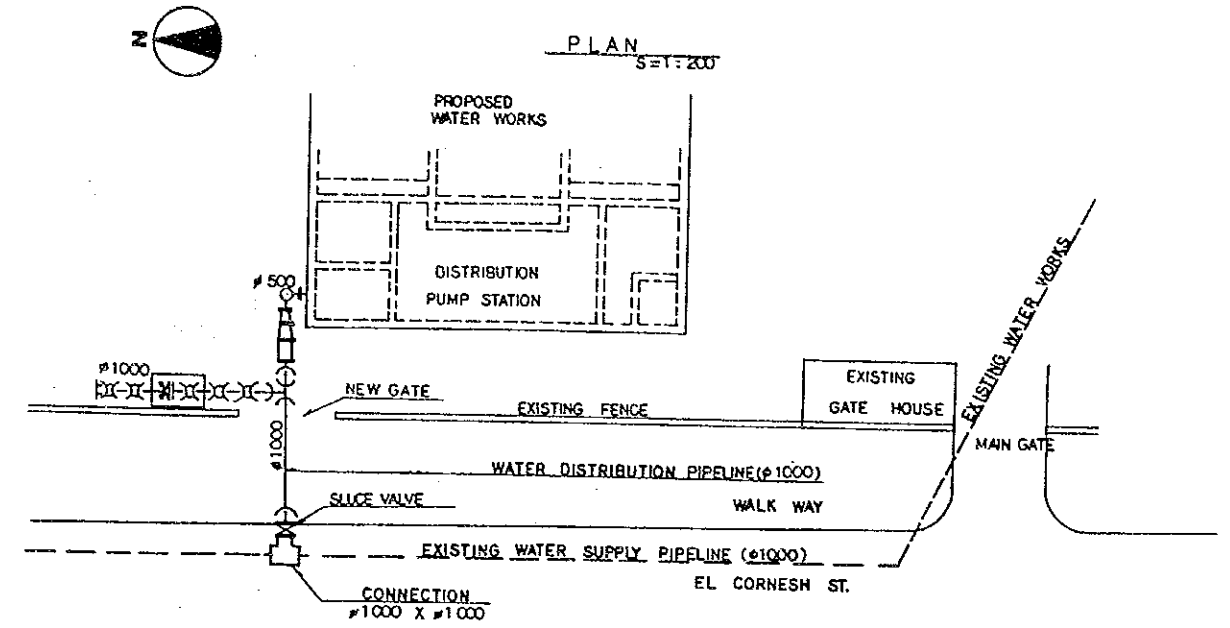
SECTION A-A



DETAIL OF CONNECTION

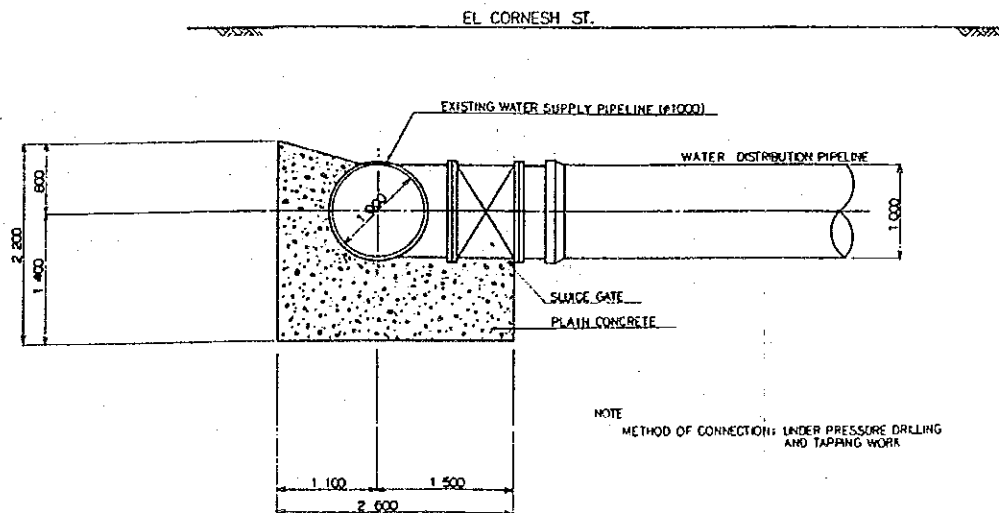


CONNECTION TO EXISTING PIPE LINE

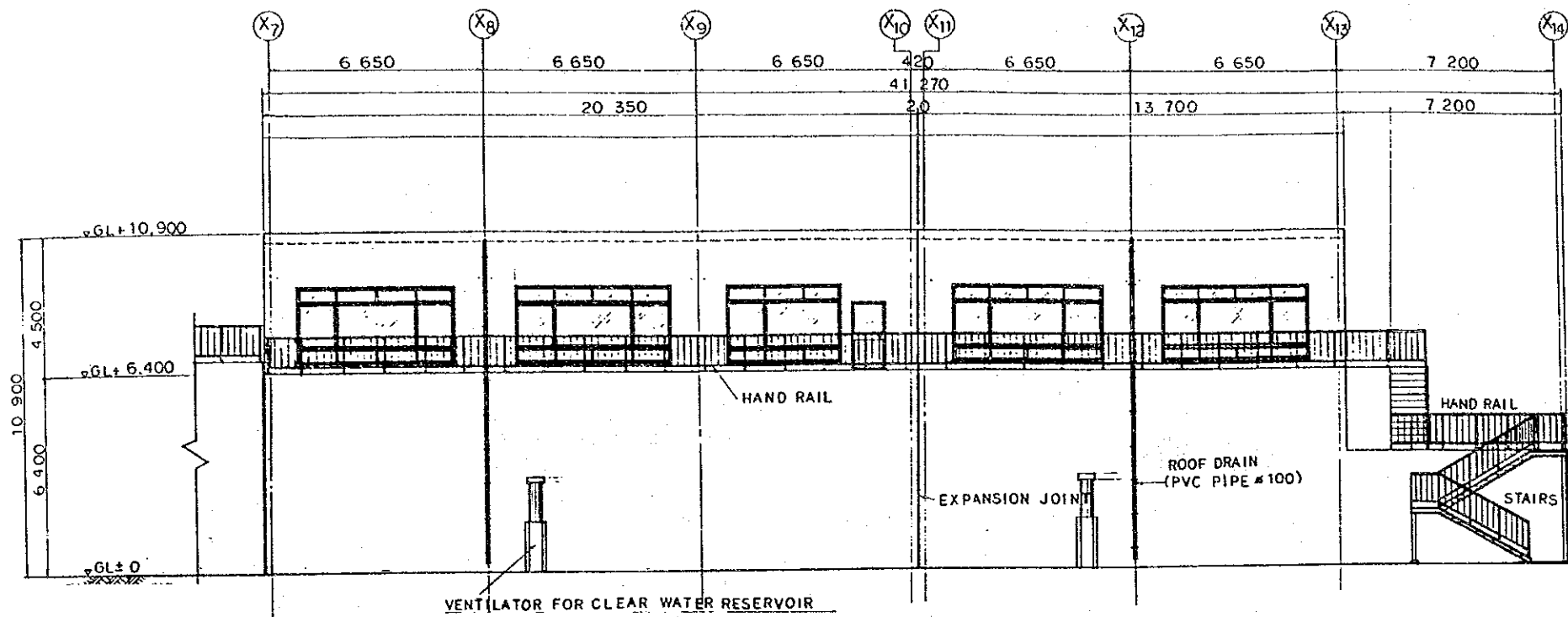


NOTE
1. GL ±0 = AD+21.000

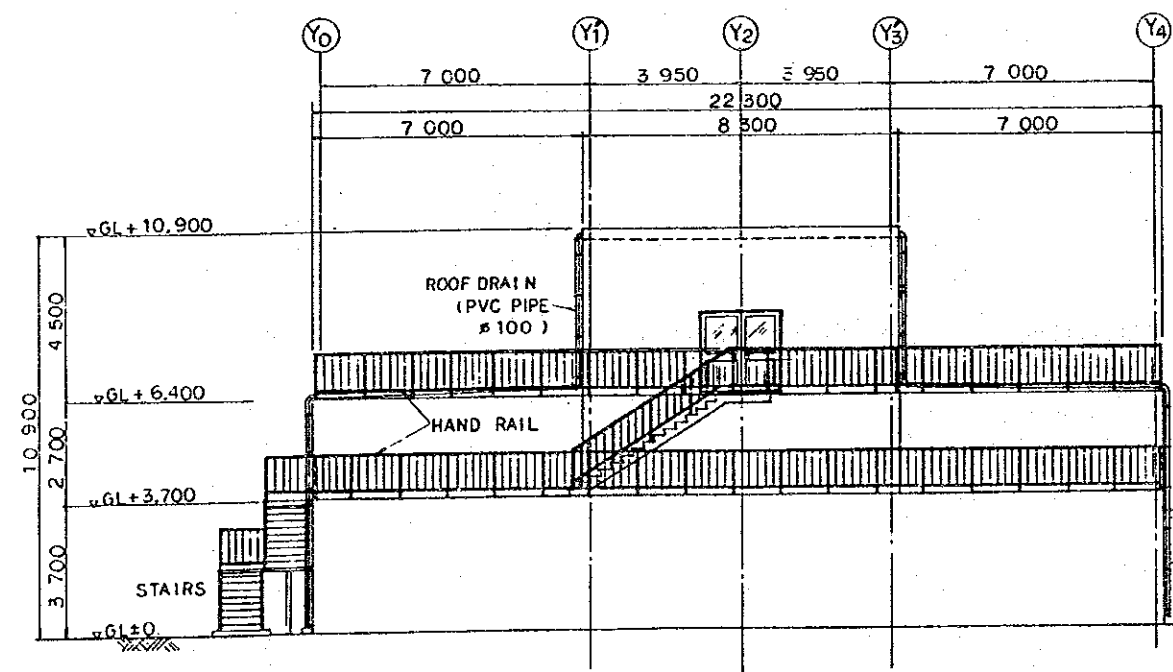
SECTION B-B



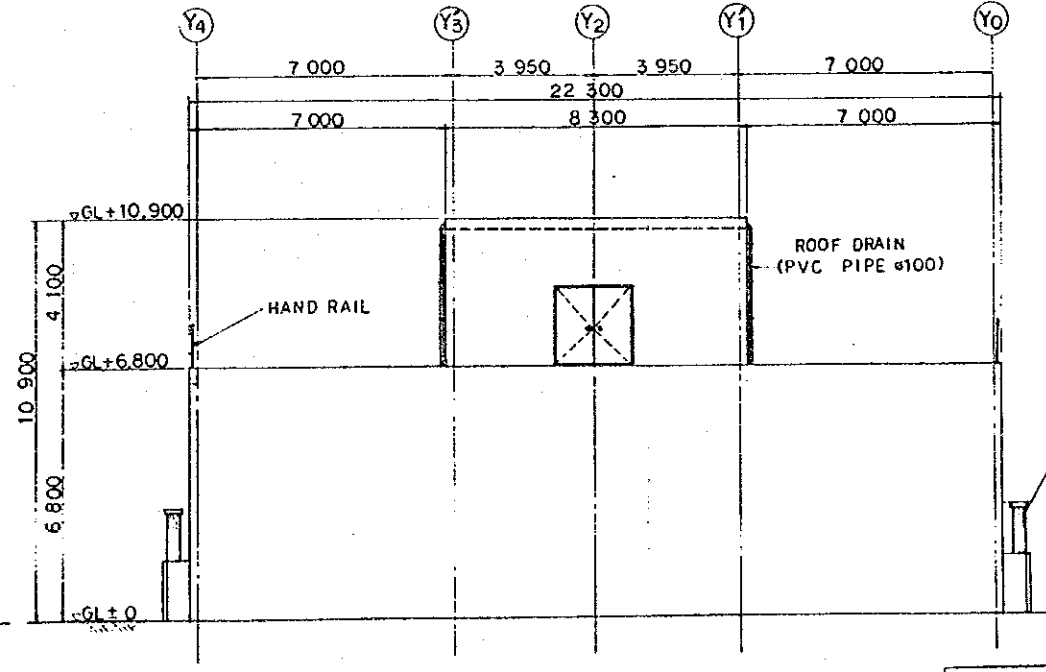
THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Cross-Section of Distribution Pump Station and Connection to Existing Water Supply Trunk Line	SCALE
	NONE
	DRAWING NO.
EGM-WT-21	
JAPAN INTERNATIONAL COOPERATION AGENCY	



NORTH ELEVATION S=1:200



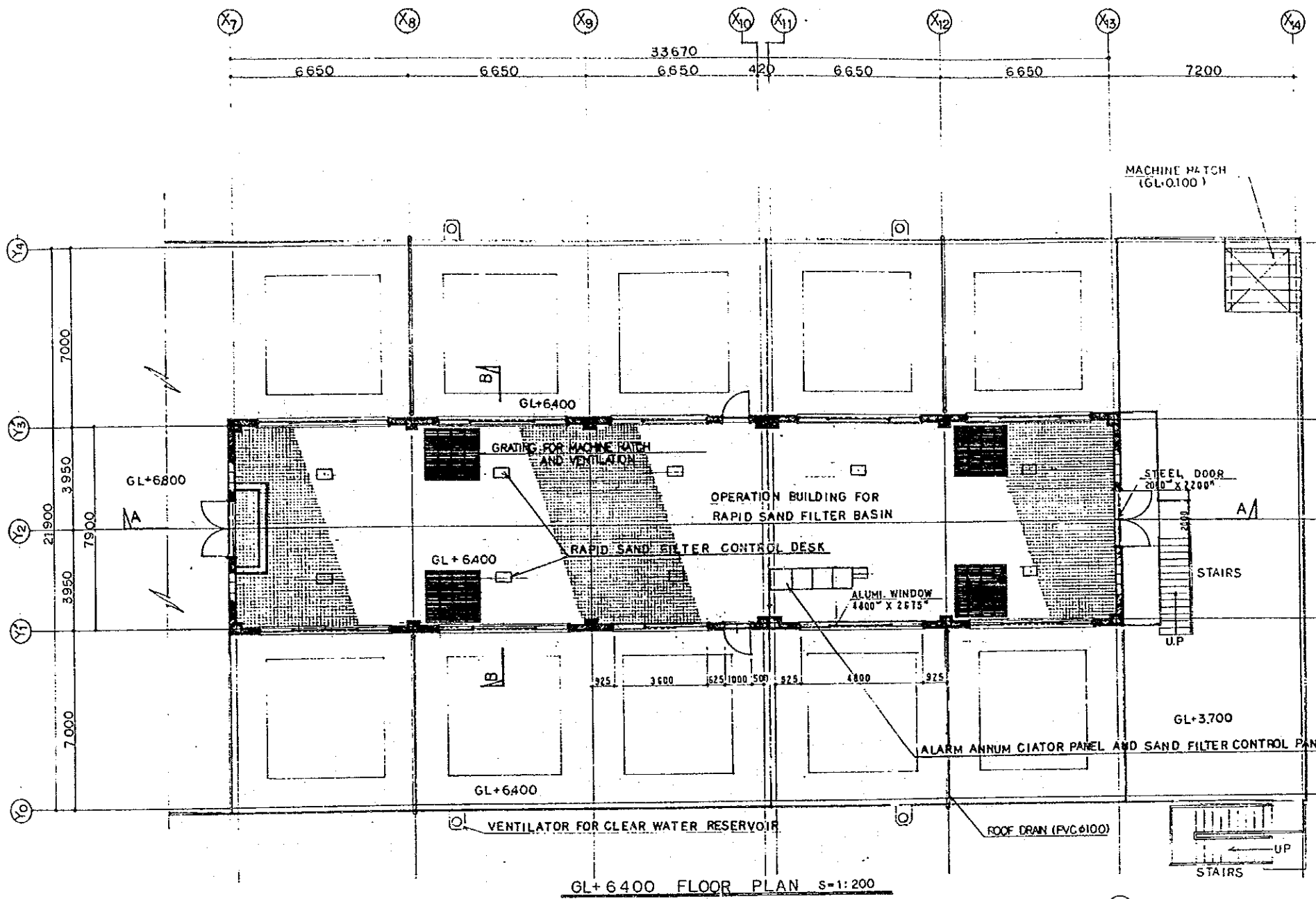
WEST ELEVATION S=1:200



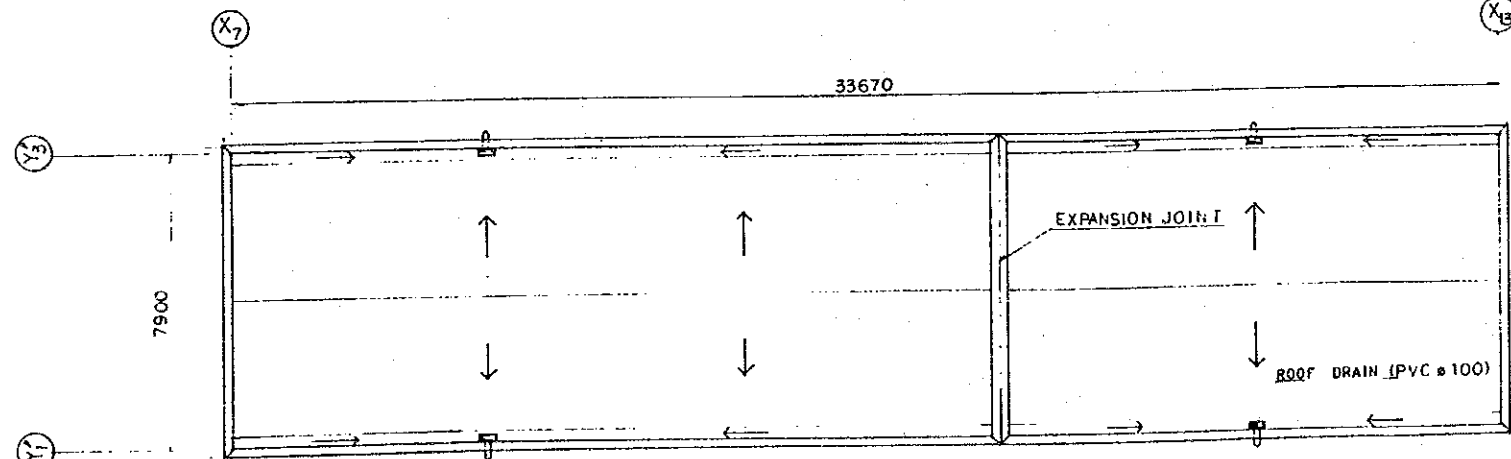
EAST ELEVATION S=1:200

NOTE:
GL=0=AD+21000

THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Elevation of Rapid Sand Filter Basin	SCALE
	1:200
	DRAWING NO.
EGH-WT-22	
JAPAN INTERNATIONAL COOPERATION AGENCY	



GL+ 6 400 FLOOR PLAN S=1: 200



ROOF PLAN S=1: 200

EXTERIOR FINISHING

- ROOF ; ASPHALT MEMBRANE WATER-PROOFING
- WALL ; MORTAR TROWEL WITH E.P
- BASE BOARD ; MORTAR TROWEL FINISH
- COPING ; ALUMI. FOLDED-PLATE THK. 2 MM
- ROOF DRAIN ; PVC PIPE Ø100
- FITTING ; ALUMI. WINDOW , STEEL DOOR

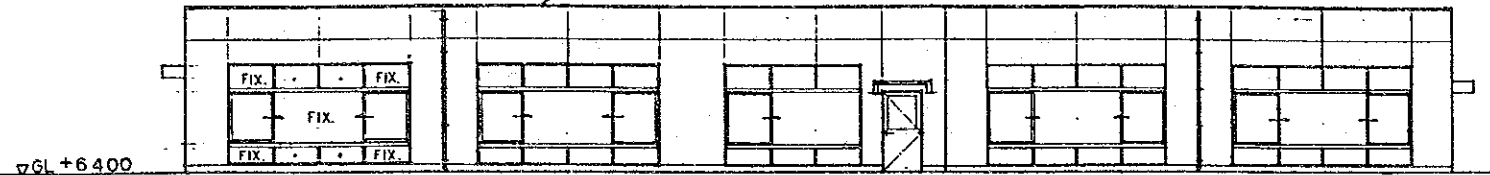
INTERIOR FINISHING

- FLOOR ; VITREOUS TILE 100^Ø
- WALL ; SEMI-VITREOUS TILE 100^Ø (UP TO 2700 MM)
MORTAR TROWEL WITH E.P
- CEILING ; EXPOSED CONCRETE WITH E.P

NOTE:
GL ± 0 = AD + 21.000

THE ARAB REPUBLIC OF EGYPT GIZA CITY. GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Plan of Operation Building for Rapid Sand Filter Basin	SCALE 1: 200
	DRAWING NO. EGM-WT-23
	JAPAN INTERNATIONAL COOPERATION AGENCY

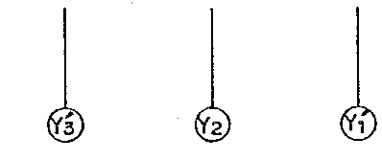
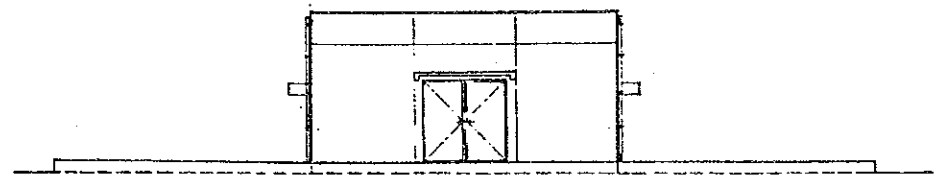
OPERATION BUILDING FOR RAPID SAND FILTER BASIN



GL +6.400

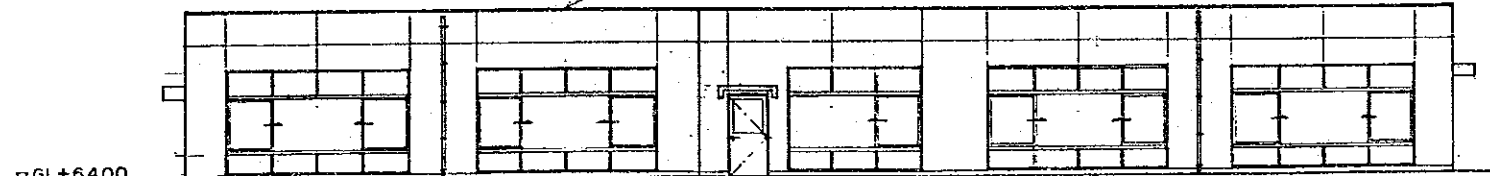


Y1 LINE ELEVATION S=1:200

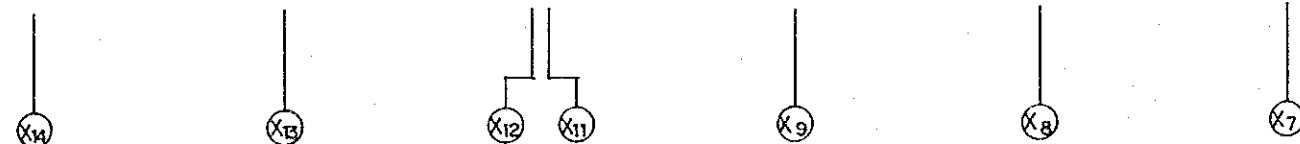


X7 LINE ELEVATION S=1:200

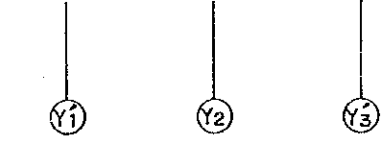
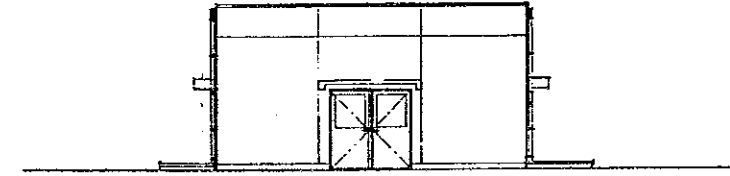
OPERATION BUILDING FOR RAPID SAND FILTER BASIN



GL +6.400



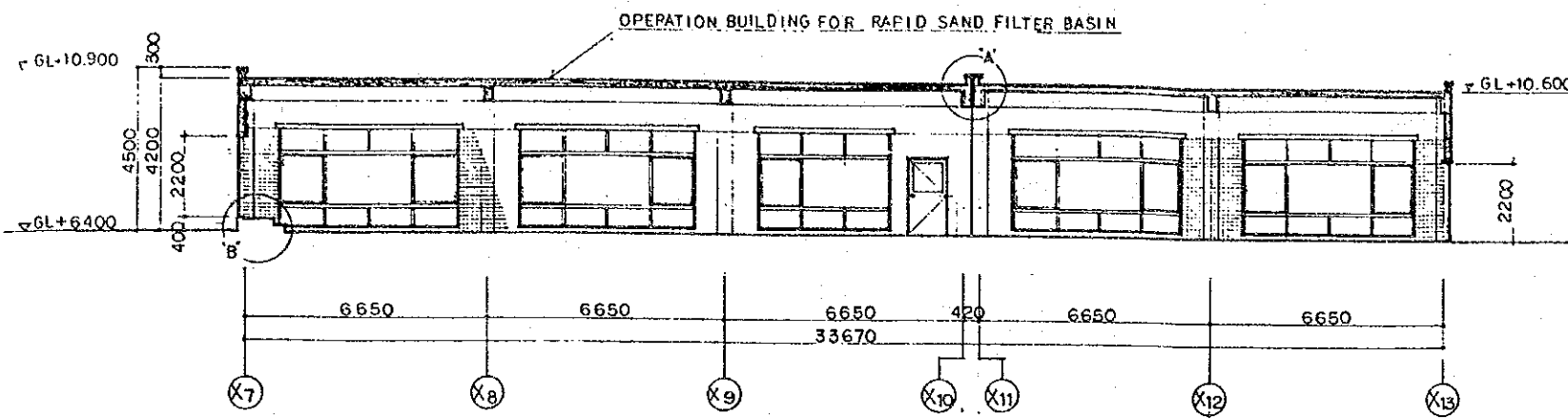
Y3 LINE ELEVATION S=1:200



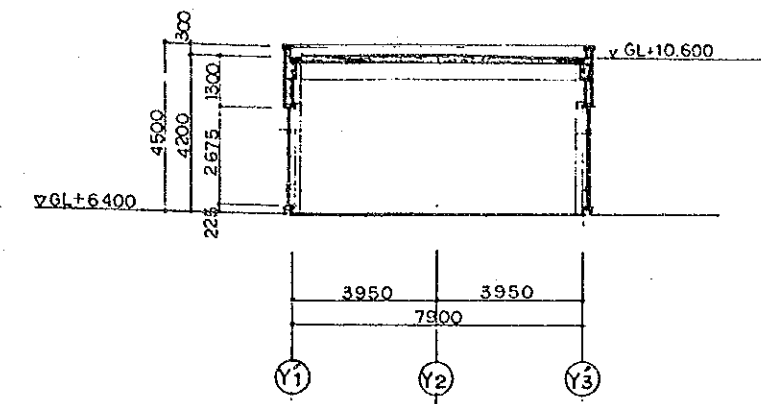
X14 LINE ELEVATION S=1:200

NOTE:
GL±0 = AD+ 21.000

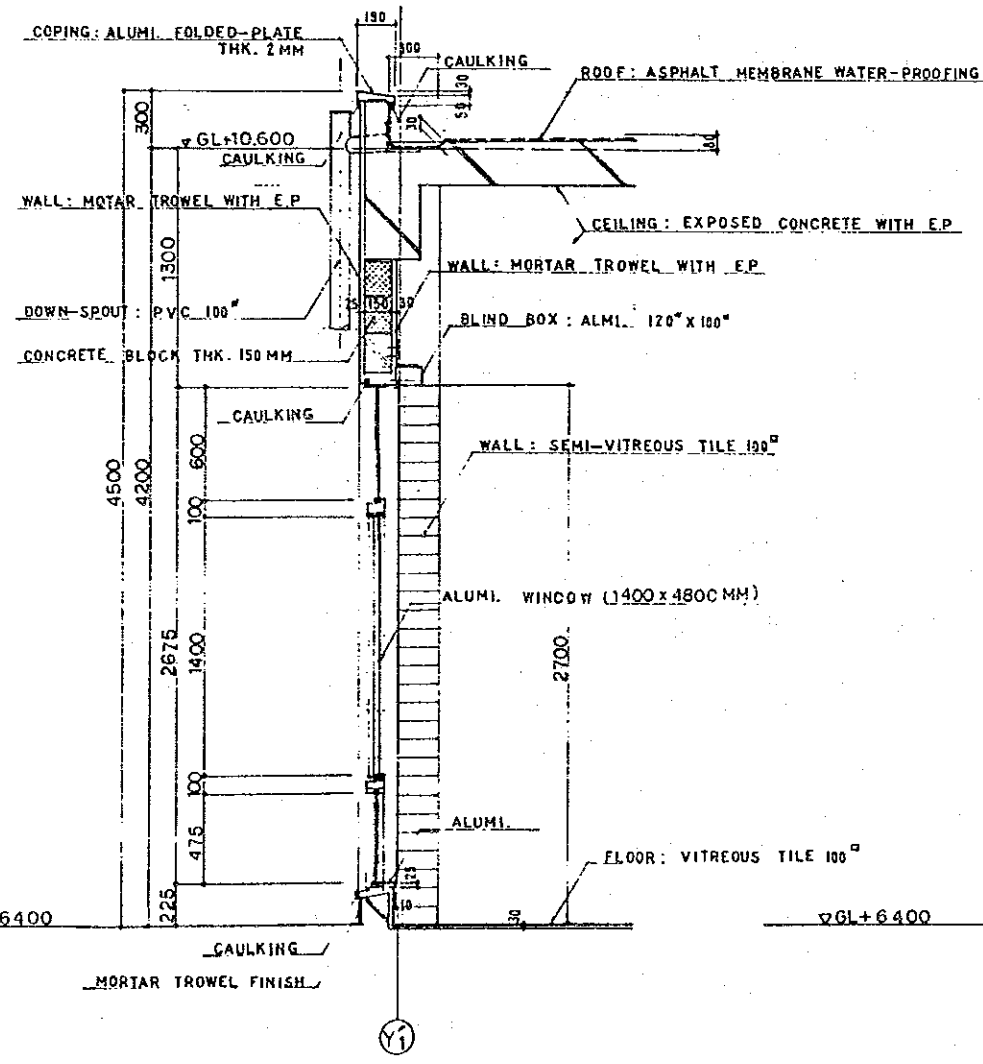
THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Plan of Operation Building for Rapid Sand Filter Basin	SCALE 1:200
	DRAWING NO. EGH-WT-24
JAPAN INTERNATIONAL COOPERATION AGENCY	



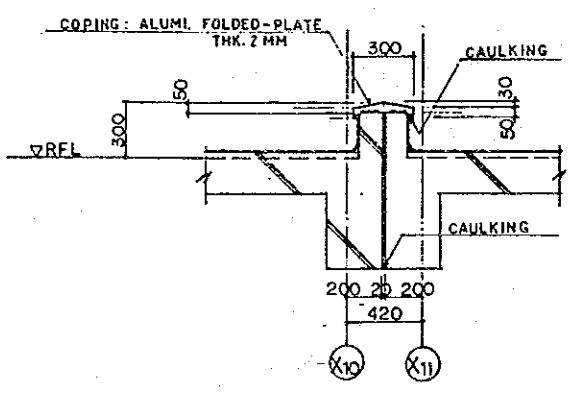
SECTION A - A S=1:200



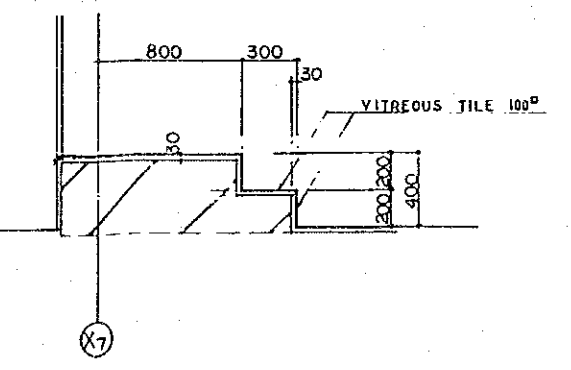
SECTION B - B S=1:200



SECTION DETAIL S=1:40



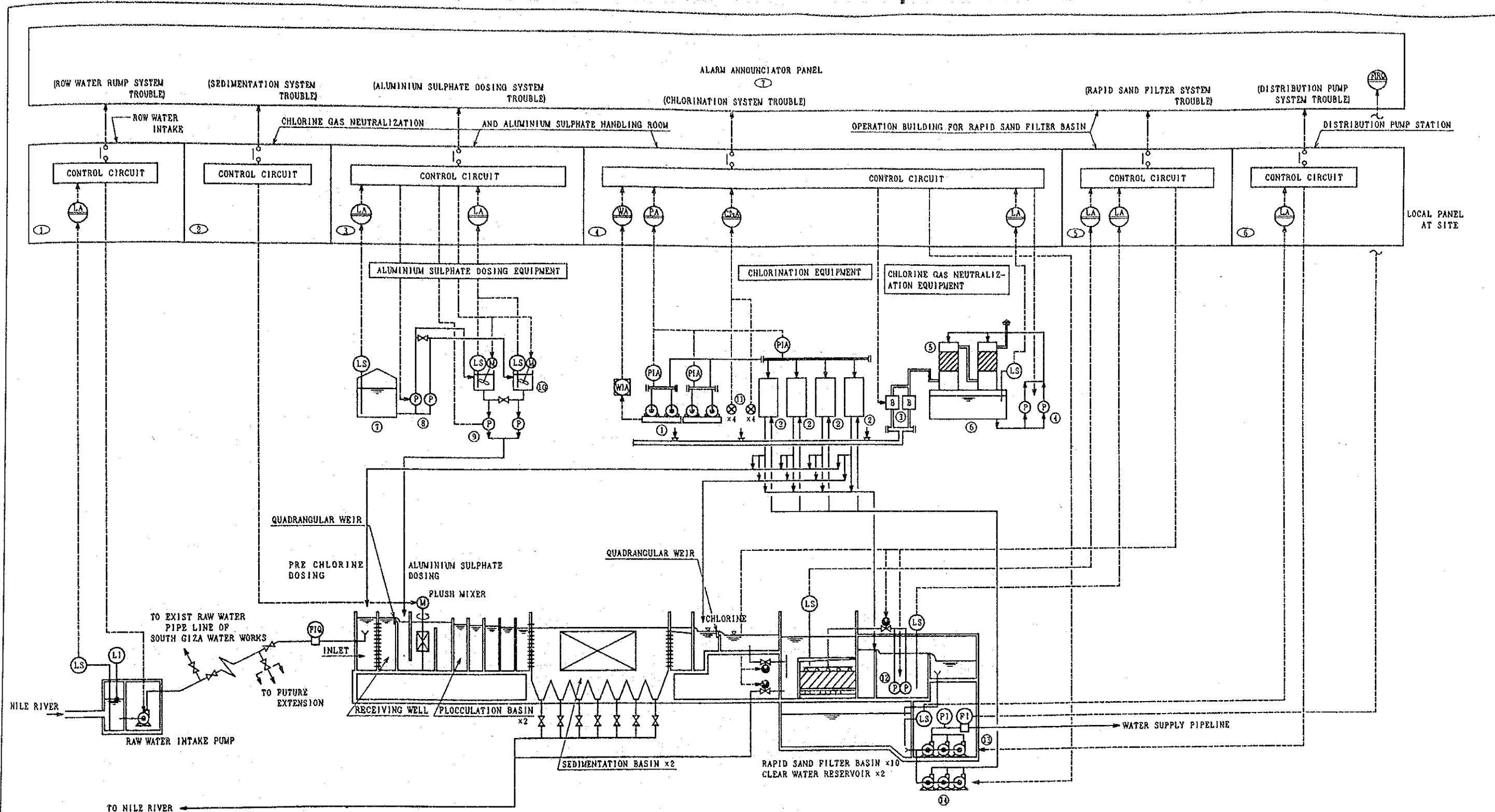
DETAIL A S=1:40



DETAIL B S=1:40

NOTE:
GL±0=AD+21.000

THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Fitting Detail of Operation Building for Rapid Sand Filter Basin	SCALE AS SHOWN
	DRAWING NO. EGM-WT-25
	JAPAN INTERNATIONAL COOPERATION AGENCY



NAME OF FACILITY FOR CHEMICAL DOSING EQUIPMENT

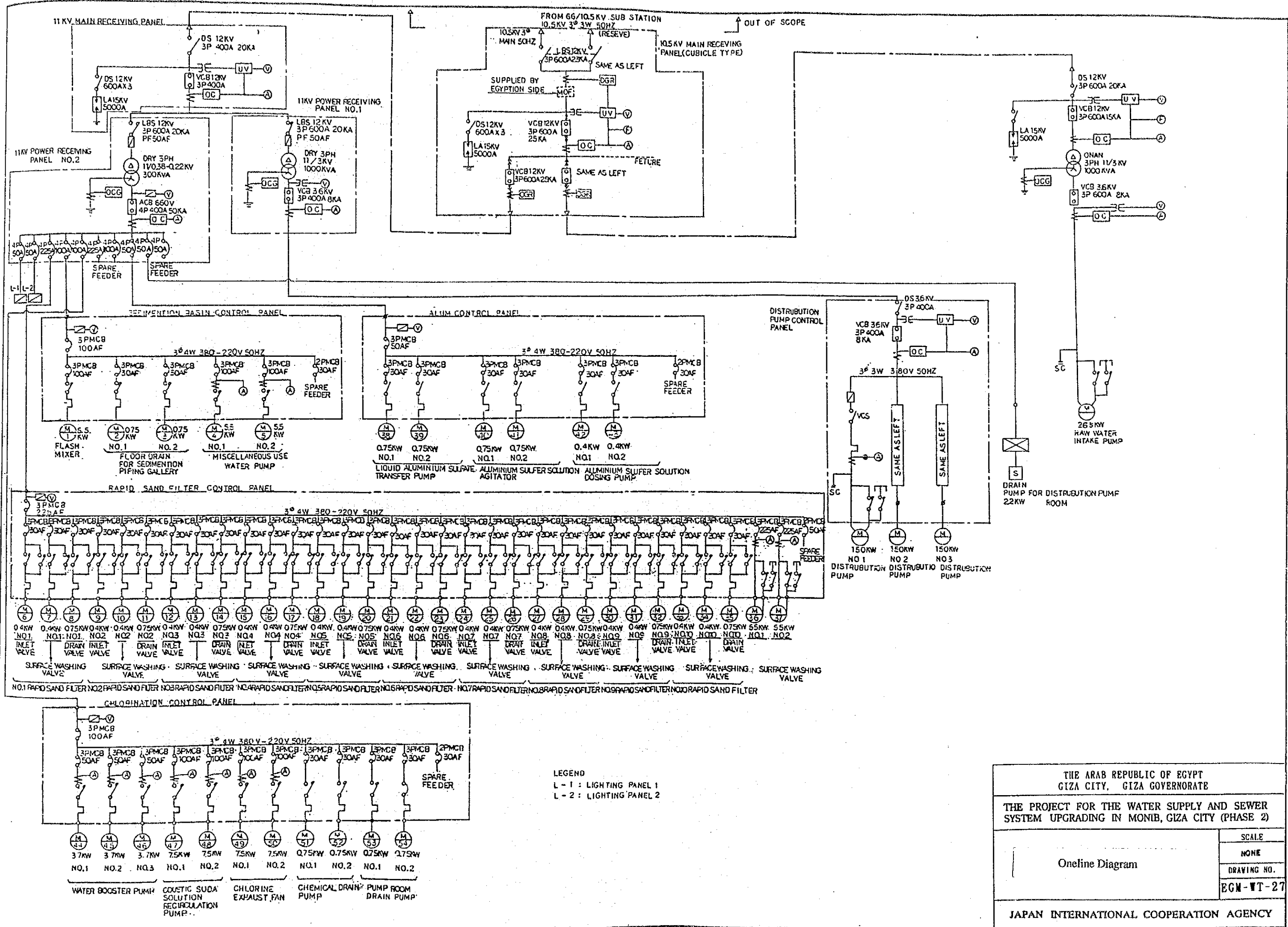
- ① CHLORINE CYLINDER WEIGHING SCALE
- ② CHLORINATOR
- ③ CHLORINE GAS EXHAUST FAN
- ④ CAUSTIC SODA SOLUTION RECIRCULATION PUMP
- ⑤ ABSORPTION TOWER
- ⑥ CAUSTIC SODA SOLUTION STORAGE TANK
- ⑦ LIQUID ALUMINIUM SULPHATE STORAGE TANK
- ⑧ LIQUID ALUMINIUM SULPHATE TRANSFER PUMP
- ⑨ ALUMINIUM SULPHATE SOLUTION DOSING PUMP
- ⑩ ALUMINIUM SULPHATE SOLUTION TANK
- ⑪ CHLORINE GAS DETECTOR
- ⑫ SURFACE WASHING PUMP
- ⑬ DISTRIBUTION PUMP
- ⑭ WATER BOOSTER PUMP

LEGEND

- LS : LEVEL SWITCH
- LA : LEVEL ALARM
- FIQ : FLOW INDICATOR & TOTALIZER
- WA : WEIGHT ALARM
- PA : PRESSURE ALARM
- PI : PRESSURE INDICATOR
- CIGA : CHLORINE GAS LEAK ALARM
- LI : WATER LEVEL INDICATOR
- ⊗ : MOTOR VALVE
- ⊕ : VALVE BY HANDLE

- ① RAW WATER INTAKE PUMP CONTROL PANEL
- ② SEDIMENTATION BASIN CONTROL PANEL
- ③ ALUMINIUM SULPHATE CONTROL PANEL
- ④ CHLORINATION CONTROL PANEL
- ⑤ RAPID SAND FILTER CONTROL PANEL
- ⑥ DISTRIBUTION PUMP CONTROL PANEL
- ⑦ ALARM ANNUCIATOR PANEL

THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Instrument System Diagram	SCALE NONE
	DRAWING NO. EGM-WT-26
	JAPAN INTERNATIONAL COOPERATION AGENCY



LEGEND
 L - 1 : LIGHTING PANEL 1
 L - 2 : LIGHTING PANEL 2

THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Online Diagram	SCALE
	NONE
	DRAWING NO.
EGM-WT-27	
JAPAN INTERNATIONAL COOPERATION AGENCY	

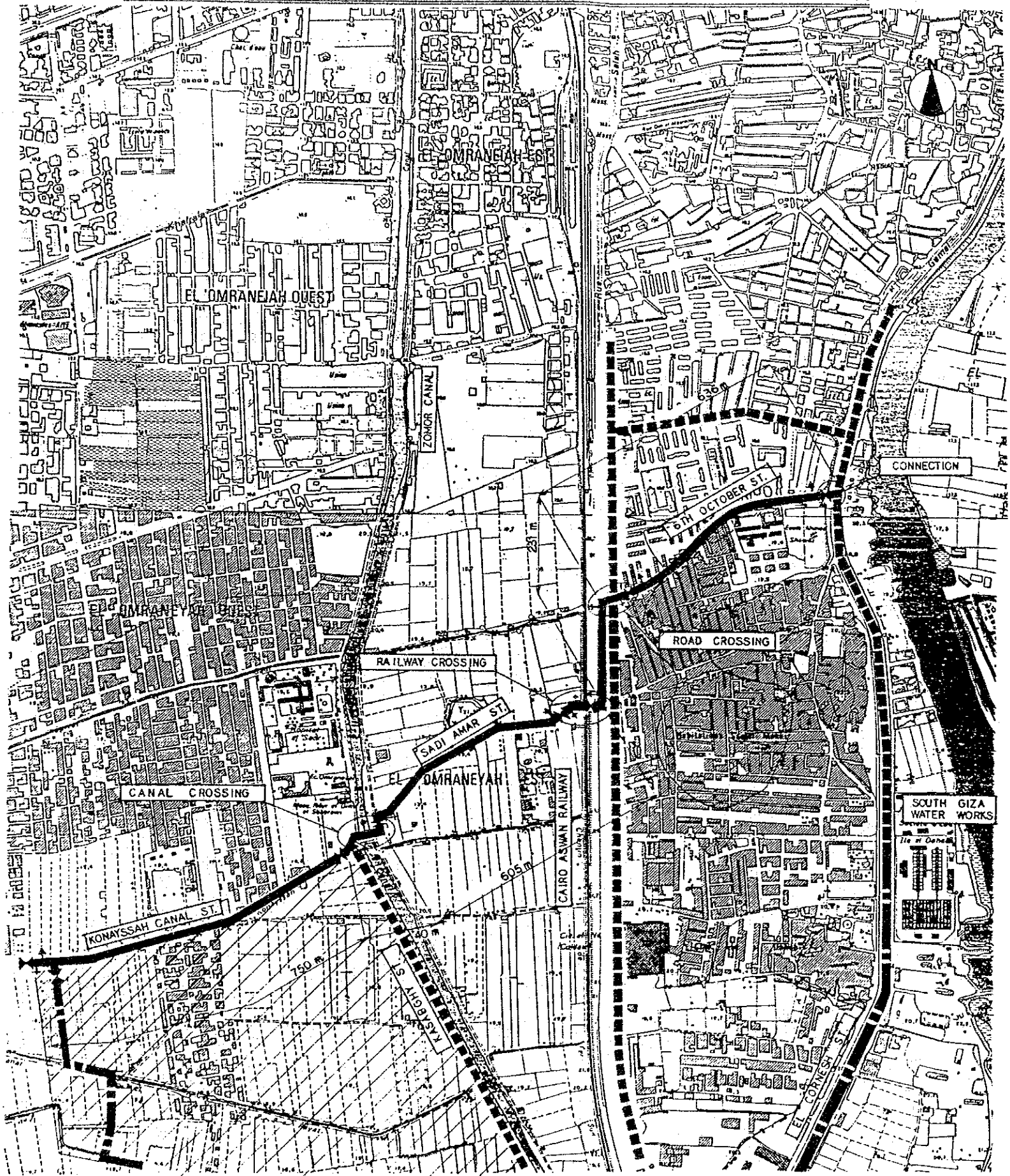
APPENDIX 10-2

WATER SUPPLY TRUNK LINE CONSTRUCTION PLAN







LIST OF DRAWINGS

EGM-WL-01	Plan for Water Supply Trunk Line Facilities
EGM-WL-02	Connection to Existing Water Supply Trunk Line
EGM-WL-03	Standard Structure of Ancillary Equipment (1/2)
EGM-WL-04	Standard Structure of Ancillary Equipment (2/2)
EGM-WL-05	Plan and Cross-Section of Trunk Road Crossing Section
EGM-WL-06	Plan and Cross-Section of Railway Crossing Section
EGM-WL-07	Plan and Cross-Section of Canal Crossing Section

PLAN OF APPURTENANCE FOR WATER SUPPLY TRUNK LINE S-1 5 000



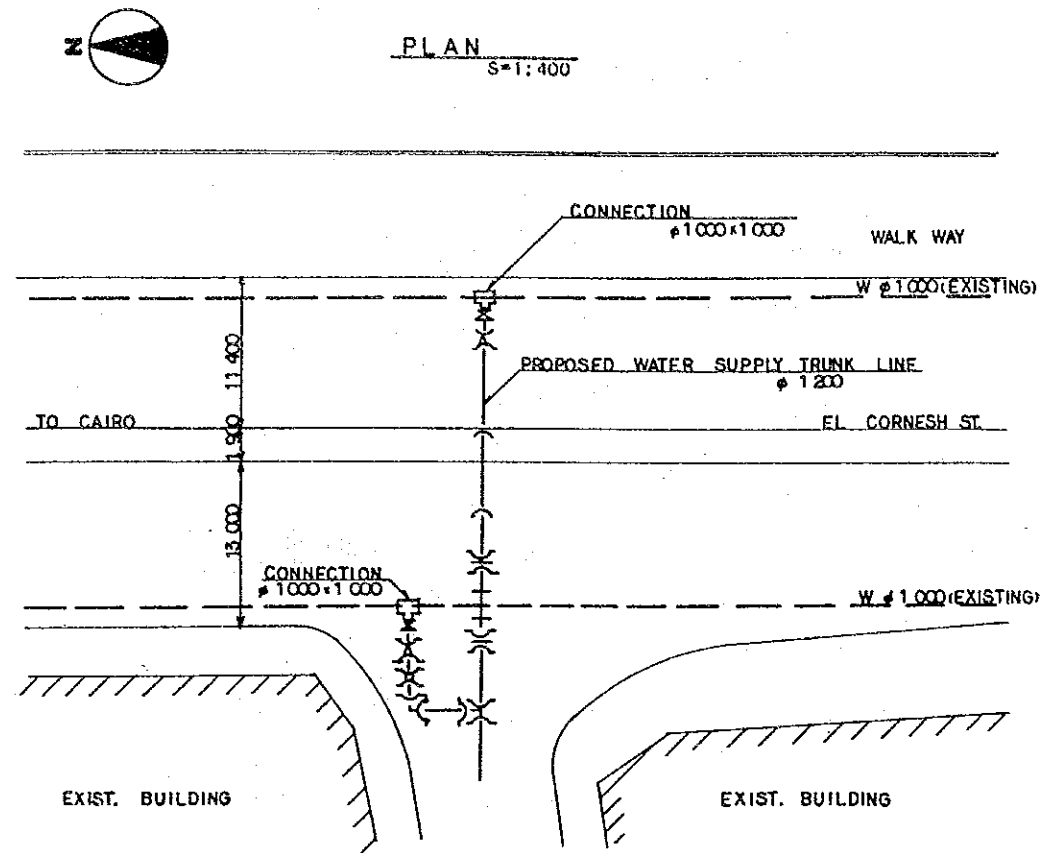
LEGEND

-  PROPOSED WATER TRUNK LINE
-  VALVE
-  AIR RELIEF VALVE
-  WASH OUT
-  WATER SUPPLY BRANCH LINE (PHASE -1 CONSTRUCTION)
-  EXISTING WATER SUPPLY PIPELINE

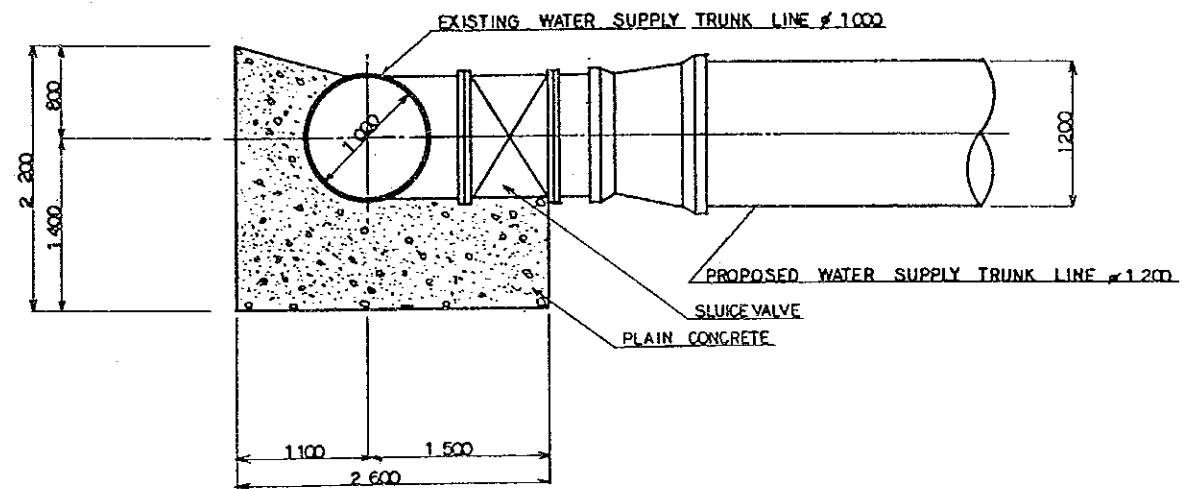
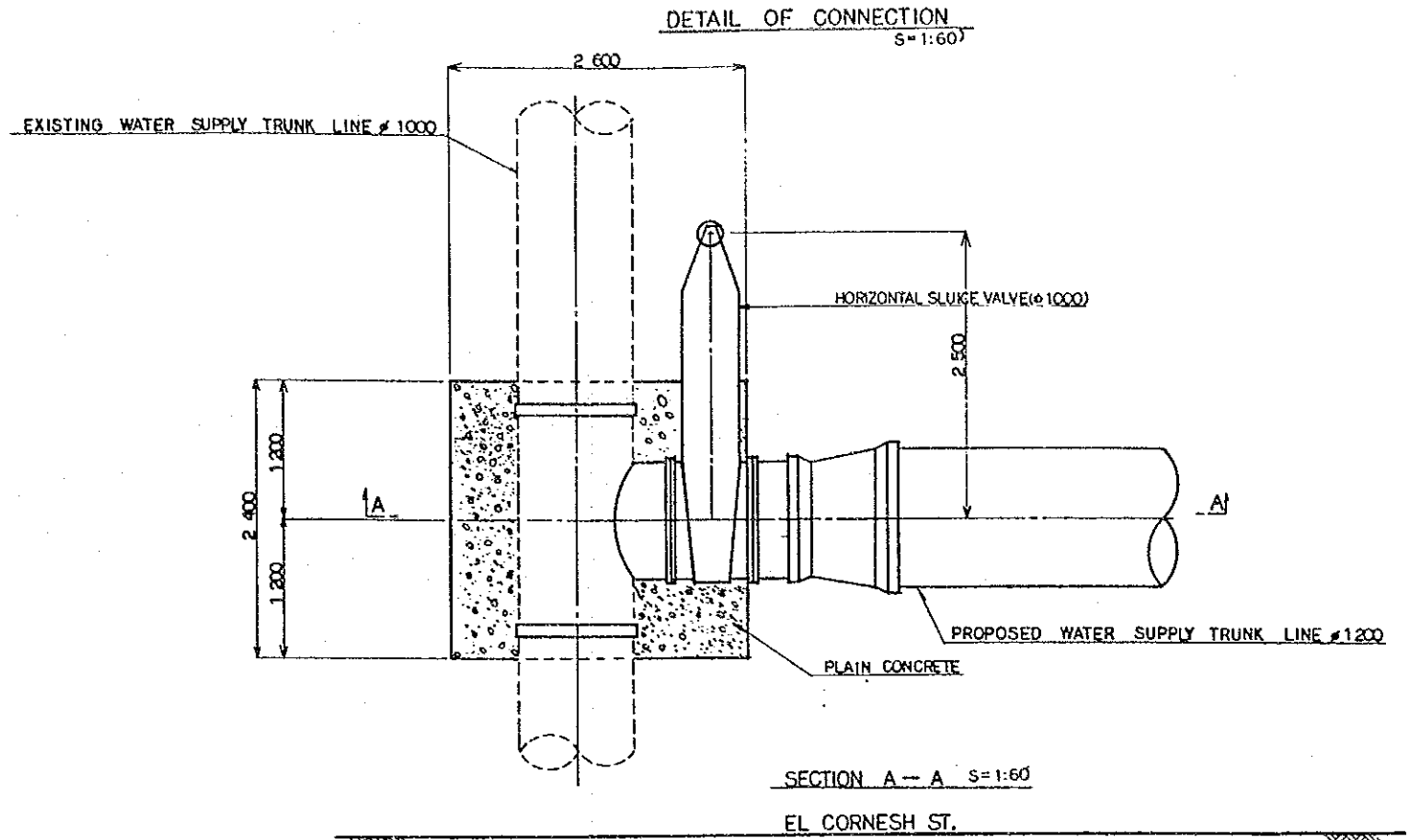
- NOTES**
1. FOR THE DETAIL OF RAILWAY CROSSING, SEE DRAWING NO. EGM-WL-06.
 2. FOR THE DETAIL OF ROAD CROSSING, SEE DRAWING NO. EGM-WL-05.
 3. FOR THE DETAIL OF CANAL CROSSING, SEE DRAWING NO. EGM-WL-07.
 4. FOR THE DETAIL OF CONNECTION, SEE DRAWING NO. EGM-WL-02.
 5. FOR THE DETAIL OF VALVE CHAMBERS, SEE DRAWING NO. EGM-WL-03.

THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Plan for Water Supply Trunk Line Facilities	SCALE
	AS SHOWN
	DRAWING NO. EGM-WL-01
JAPAN INTERNATIONAL COOPERATION AGENCY	

PLAN OF CONNECTION TO EXISTING PIPE LINE



NOTE
1. FOR THE LOCATION OF CONNECTION
SEE DRAWING NO. EGM-WL-01.



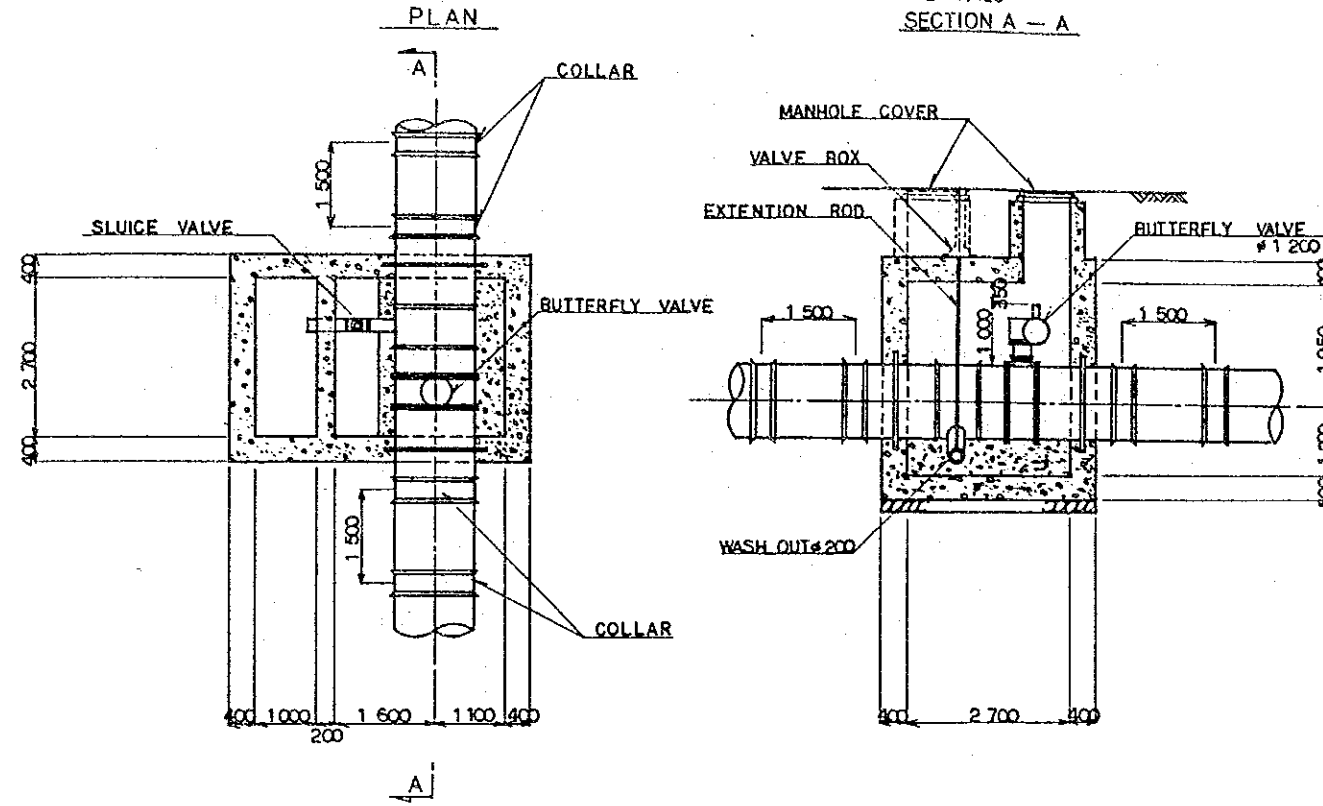
THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Connection to Existing Water Supply Trunk Line	SCALE
	AS SHOWN
	DRAWING NO.
	EGM-WL-02
JAPAN INTERNATIONAL COOPERATION AGENCY	

VALVE CHAMBER

BUTTERFLY VALVE CHAMBER (VERTICAL TYPE)

S = 1:120

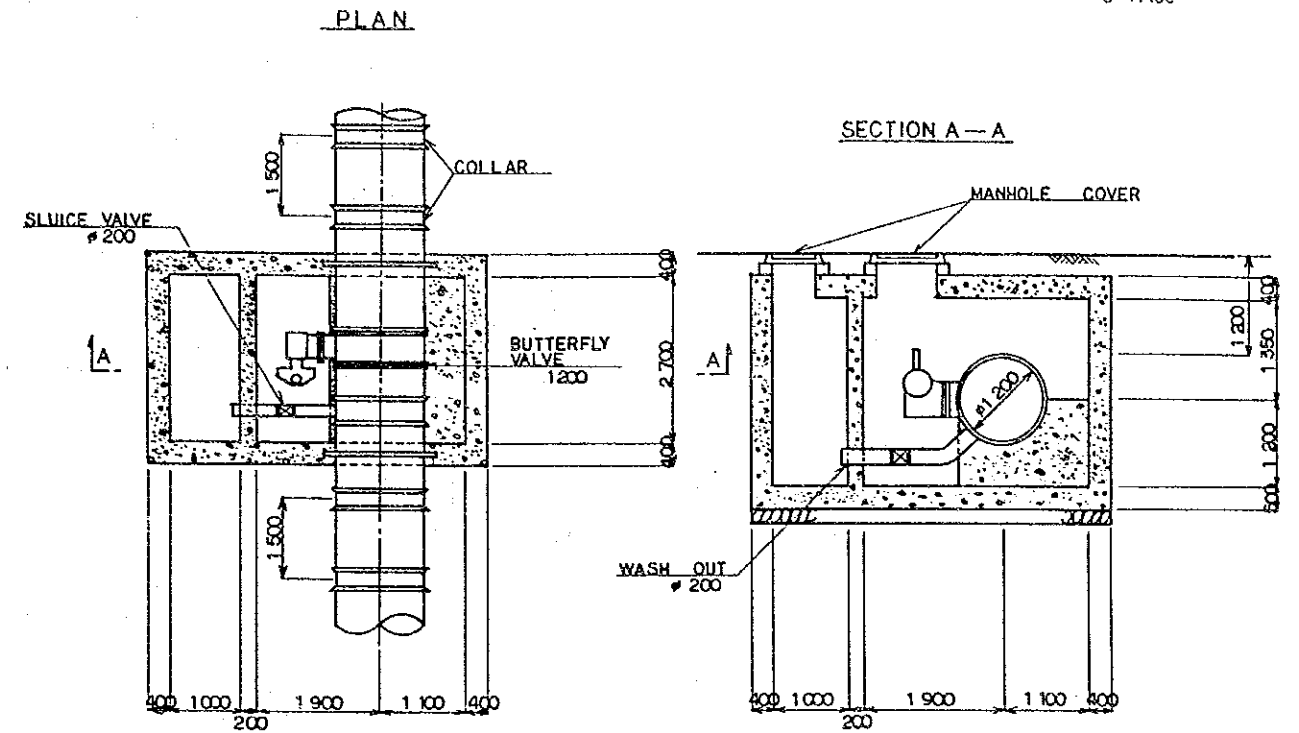
SECTION A - A



BUTTERFLY VALVE CHAMBER (HORIZONTAL TYPE)

S = 1:100

SECTION A - A

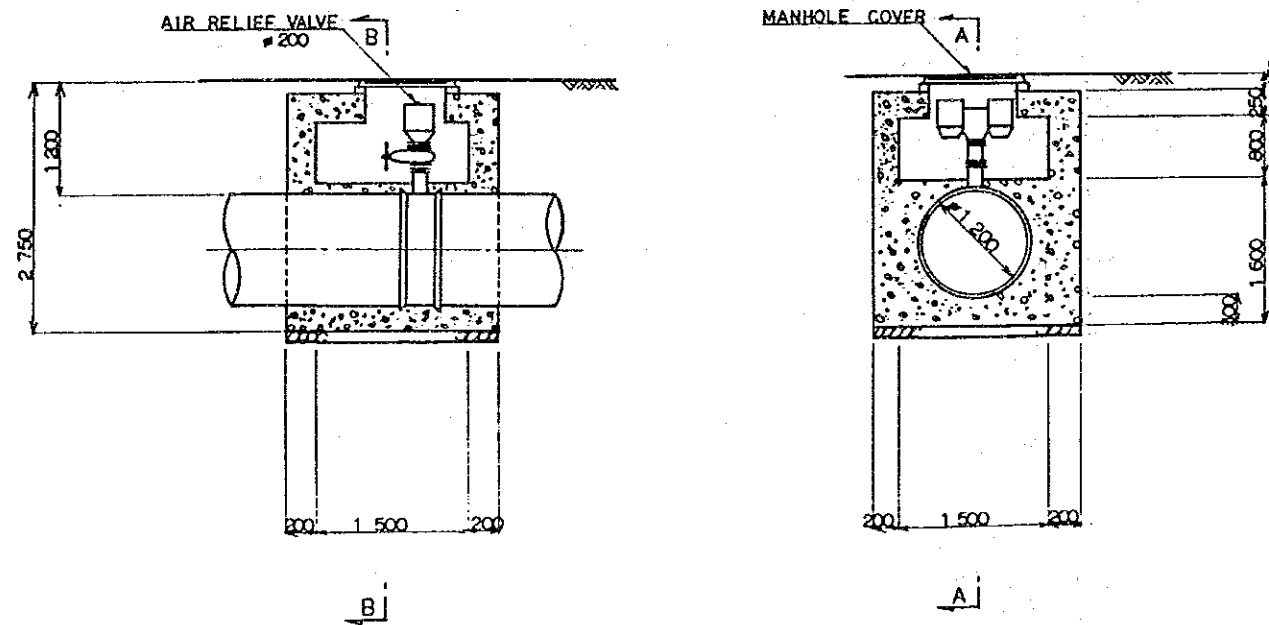


AIR RELIEF VALVE CHAMBER

S = 1:80

SECTION A - A

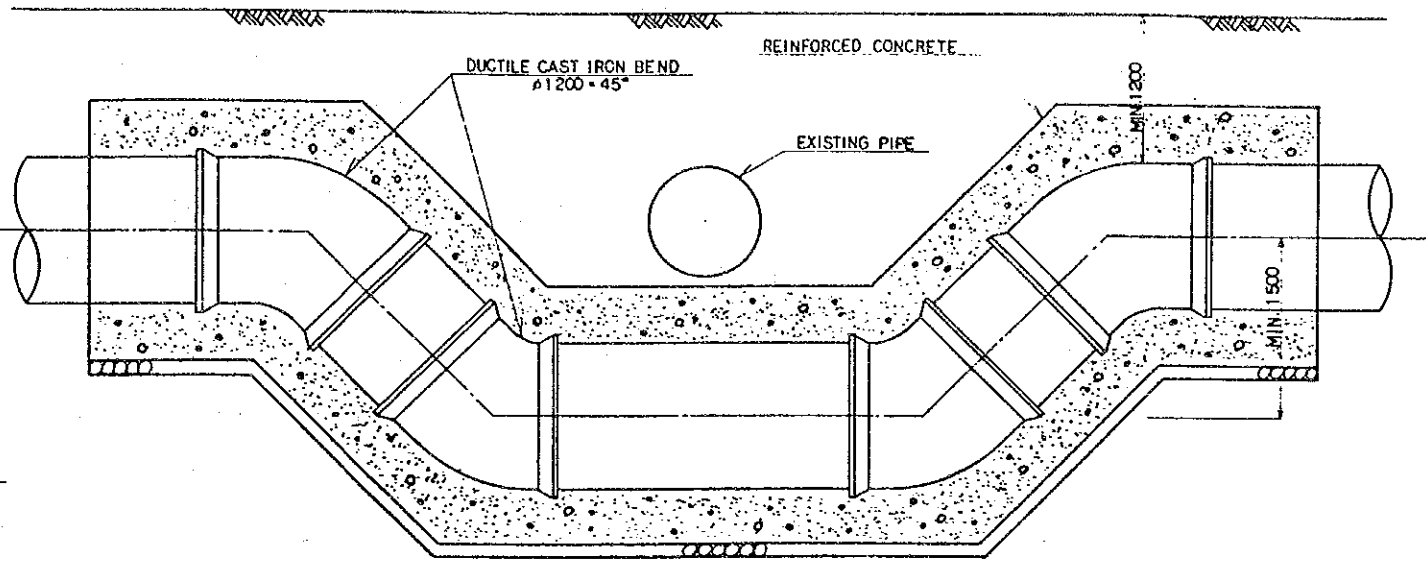
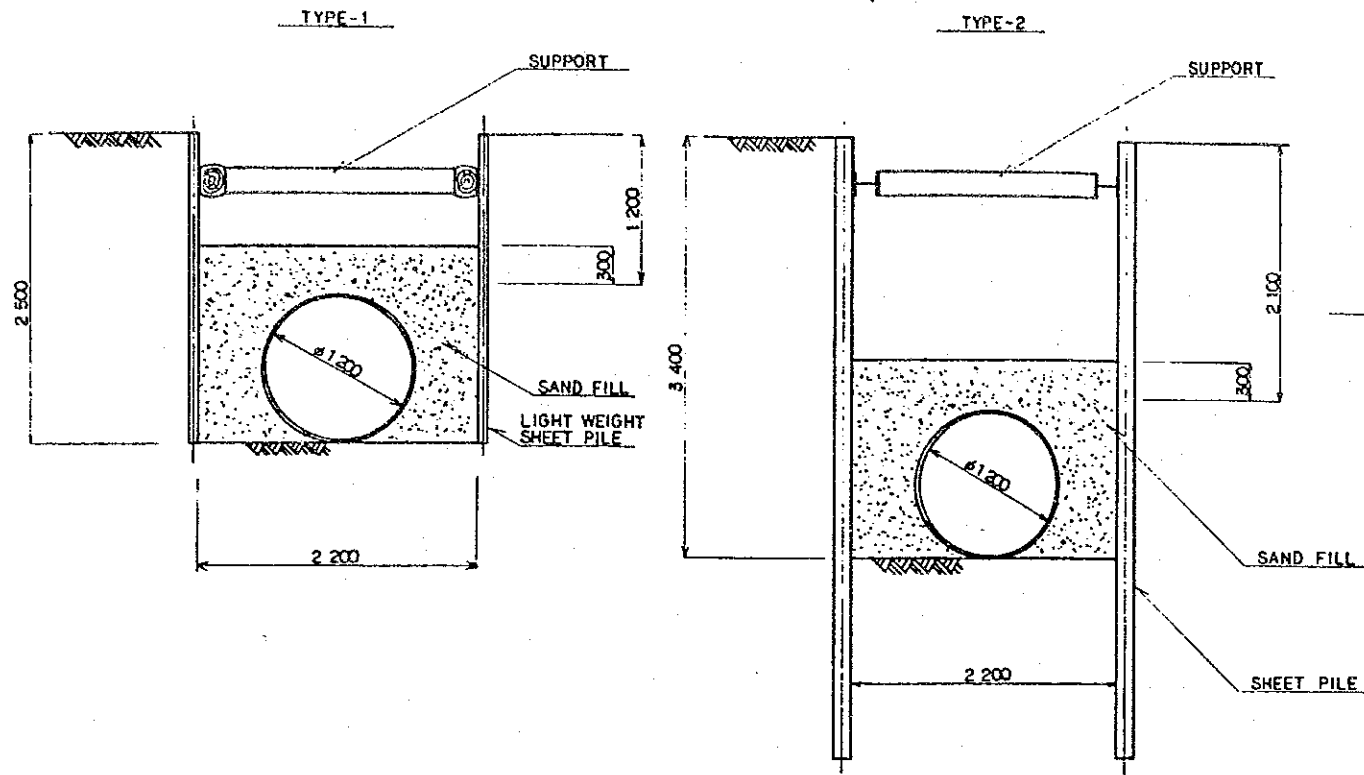
SECTION B - B



THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Standard Structure of Ancillary Equipment (1/2)	SCALE
	AS SHOWN
	DRAWING NO.
EGM-WI-03	
JAPAN INTERNATIONAL COOPERATION AGENCY	

TYPICAL SECTION OF PIPE LAYING S=1:60

TYPICAL SECTION OF PIPE CROSSING S=1:60

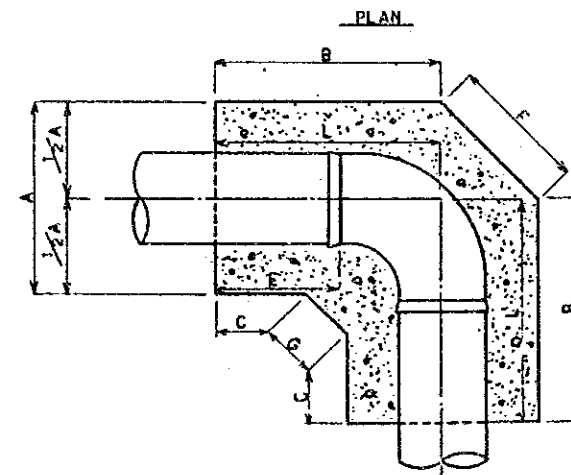
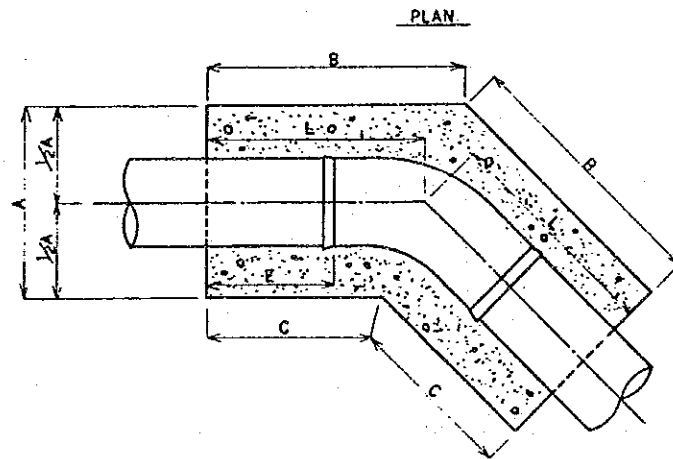
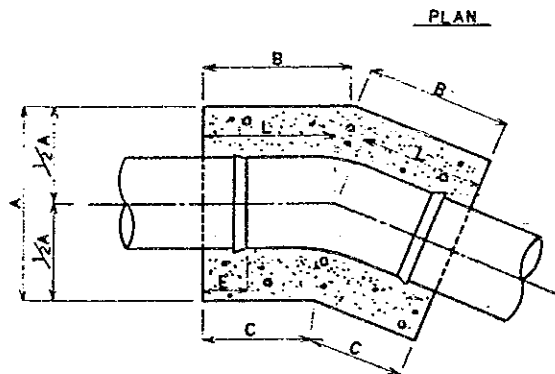


ANCHOR BLOCK STANDARDS FOR WATER SUPPLY TRUNK LINE φ1200

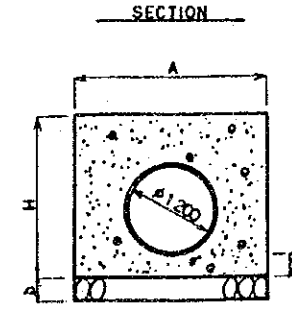
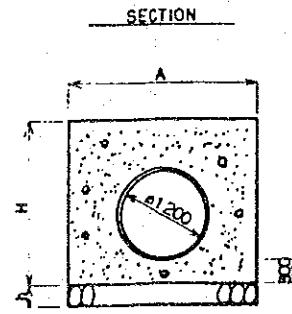
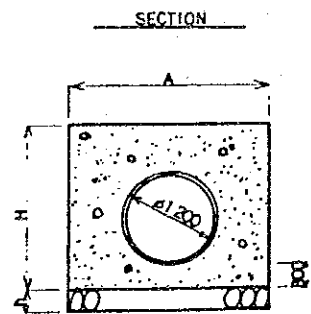
IN CASE OF 22½ BEND

IN CASE OF 45° BEND

IN CASE OF 90° BEND



NOTE
 1 TYPICAL SECTION OF PIPE LAYING SHALL BE BASICALLY APPLIED AS FOLLOWS
 -TYPE-1: CAIRO - ASWAN ST.
 SADI AMAR ST.
 -TYPE-2: 6TH OCTOBER ST.
 KONAYSSAH CANAL ST.



	A	B	C	E	H	h	L
HORIZONTAL	2300	1530	1070	330	1750	300	1300
VERTICAL	1850	1700	1410	620	1900	300	1600

	A	B	C	E	H	h	L
HORIZONTAL	2300	3190	2310	1720	1750	300	2750
VERTICAL	2150	2560	1640	1070	2200	300	2100

	A	B	C	E	F	G	H	h	L
HORIZONTAL	2300	4640	3250	3370	1630	340	1750	300	4640
VERTICAL	2300	4690	3300	3420	1630	340	2400	300	4690

THE ARAB REPUBLIC OF EGYPT
 GIZA CITY, GIZA GOVERNORATE

THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)

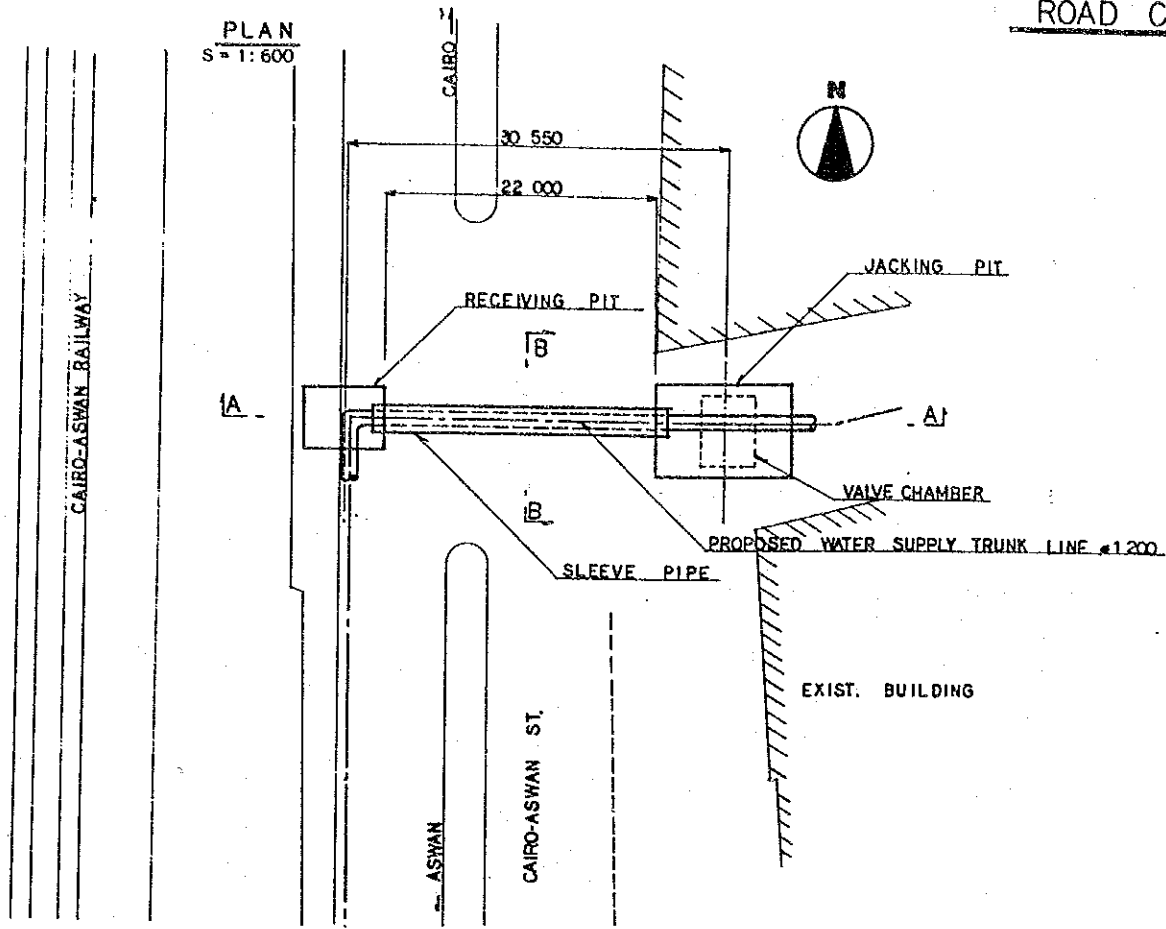
Standard Structure of Ancillary Equipment (2/2)

SCALE	AS SHOWN
DRAWING NO.	PGM-WL-04

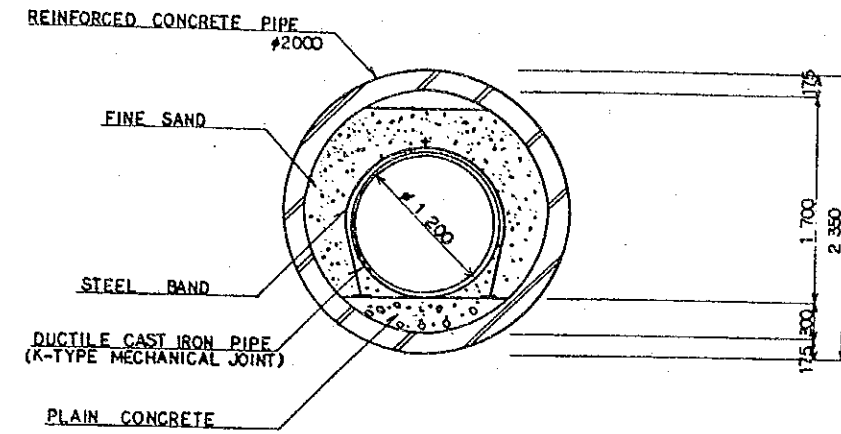
JAPAN INTERNATIONAL COOPERATION AGENCY

ROAD CROSSING - SLEEVE JACKING METHOD

PLAN
S = 1:600



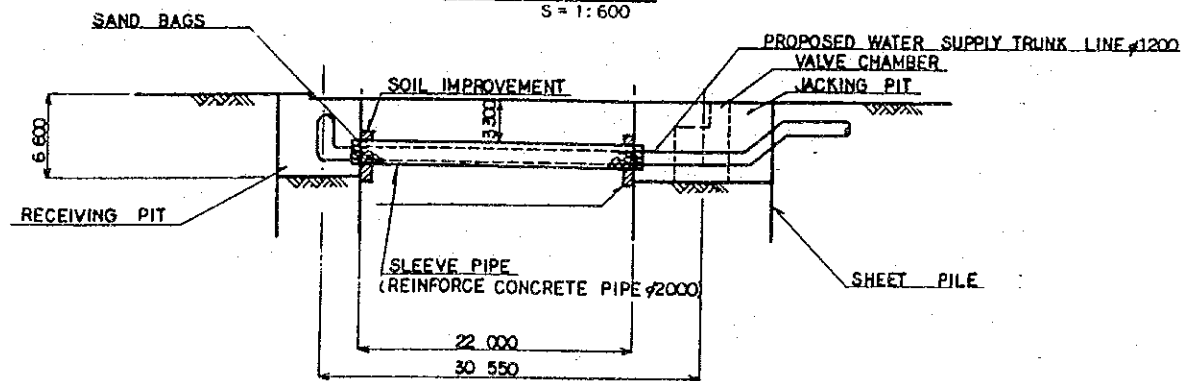
SECTION B - B
S = 1:60



NOTE

- 1 FOR THE LOCATION OF ROAD CROSSING, SEE DRAWING NO. EGM-WL-01.

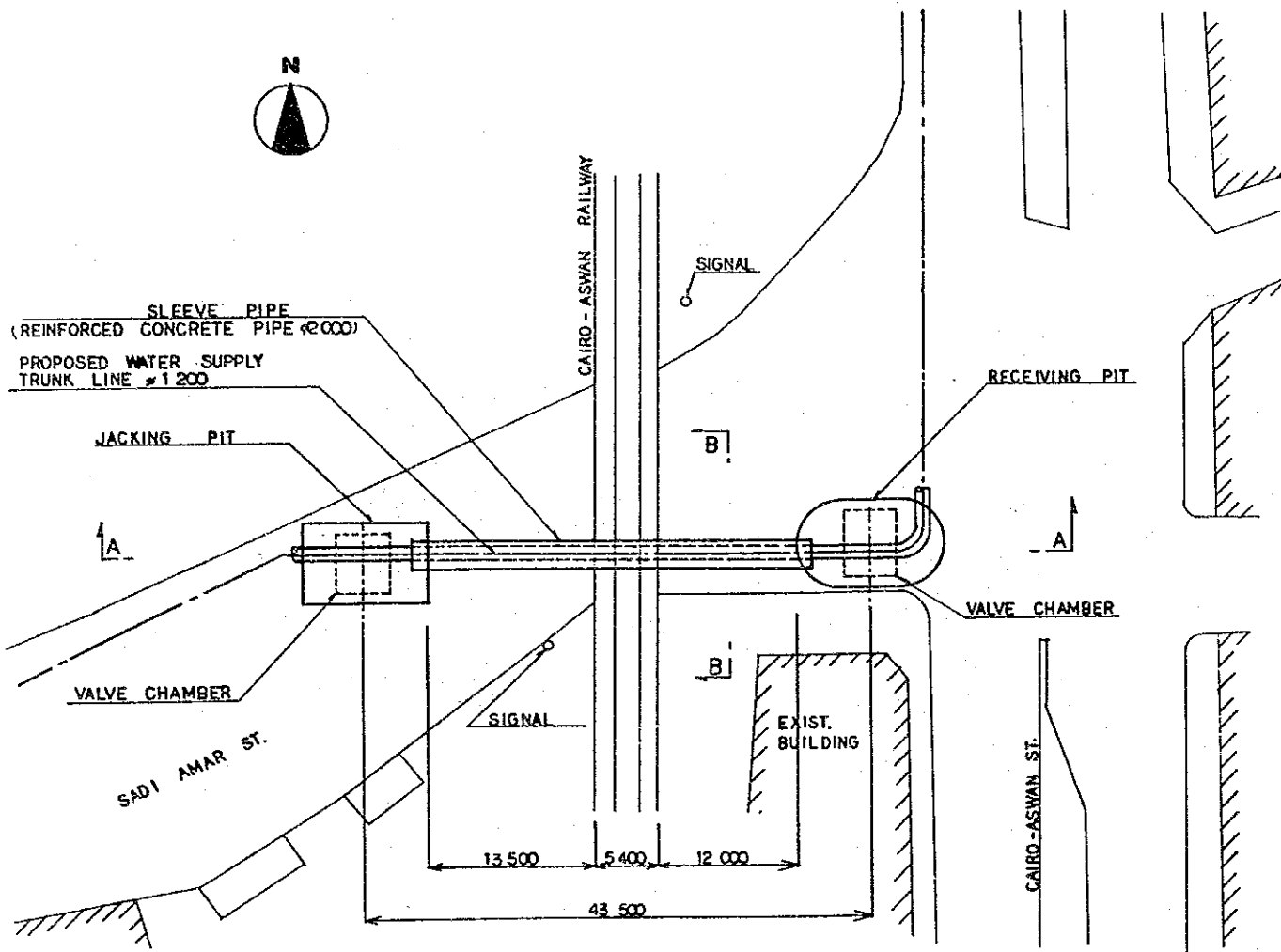
SECTION A - A
S = 1:600



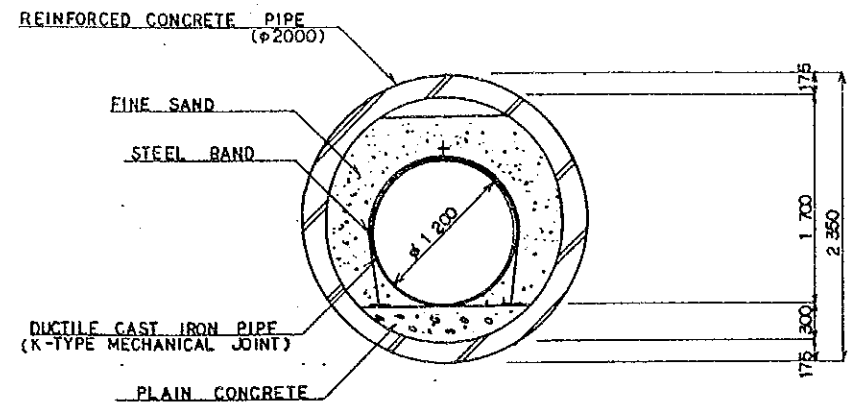
THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Plan and Cross-Section of Trunk Road Crossing Section	SCALE
	AS SHOWN
	DRAWING NO. EGM-WL-05
JAPAN INTERNATIONAL COOPERATION AGENCY	

RAILWAY CROSSING - SLEEVE JACKING METHOD

PLAN
S = 1:600

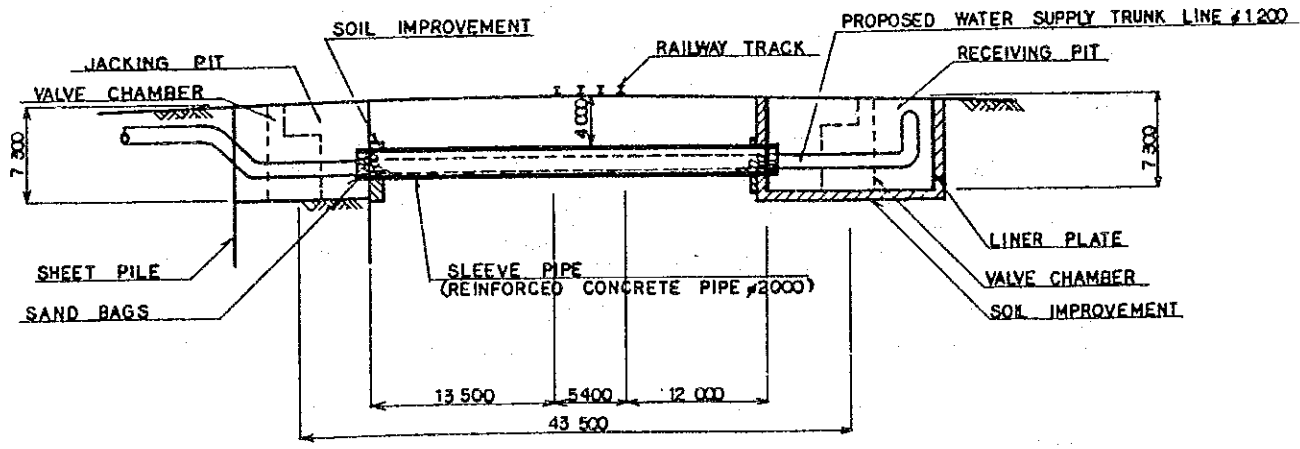


SECTION B - B
S = 1:60



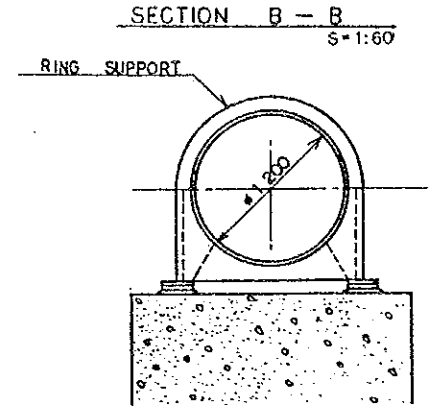
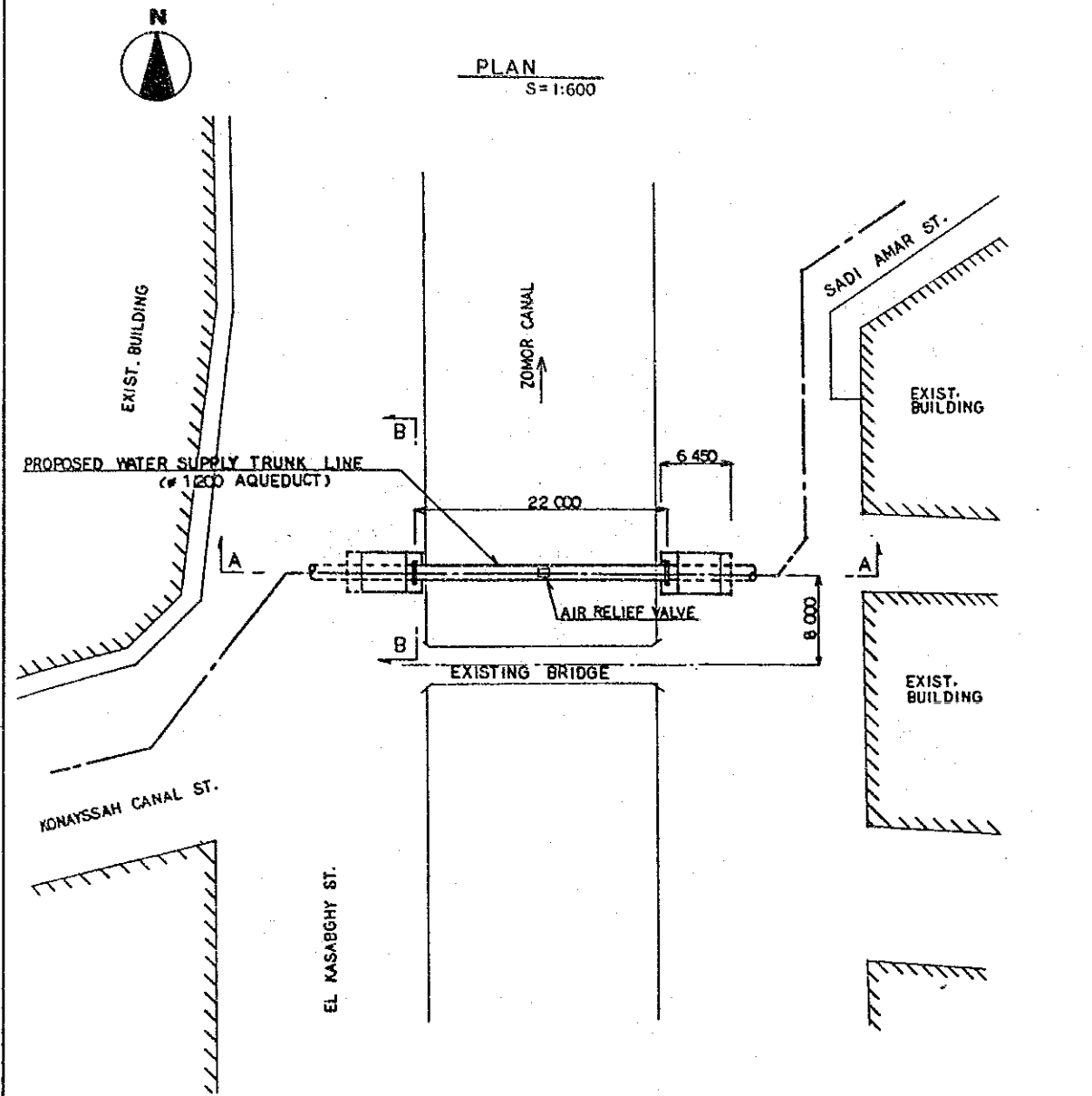
NOTE
1. FOR THE LOCATION OF RAILWAY CROSSING
SEE DRAWING NO. EGM-WL-01.

SECTION A - A
S = 1:600

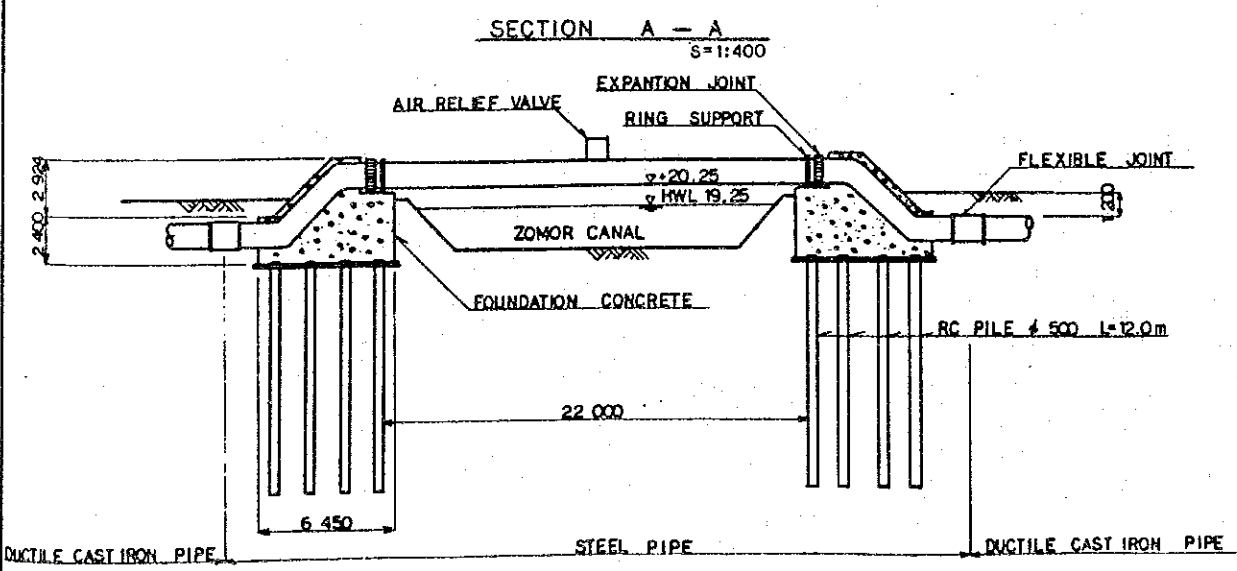


THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Plan and Cross-Section of Railway Crossing Section	SCALE AS SHOWN
	DRAWING NO. EGM-WL-06
	JAPAN INTERNATIONAL COOPERATION AGENCY

CANAL CROSSING - AQUEDUCT



NOTE
1. FOR THE LOCATION OF CANAL CROSSING
SEE DRAWING NO EGM-WL-01.



THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Plan and Cross-Section of Canal Crossing Section	SCALE
	AS SHOWN
	DRAWING NO.
	EGM-WL-07
JAPAN INTERNATIONAL COOPERATION AGENCY	

APPENDIX 10-3

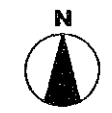
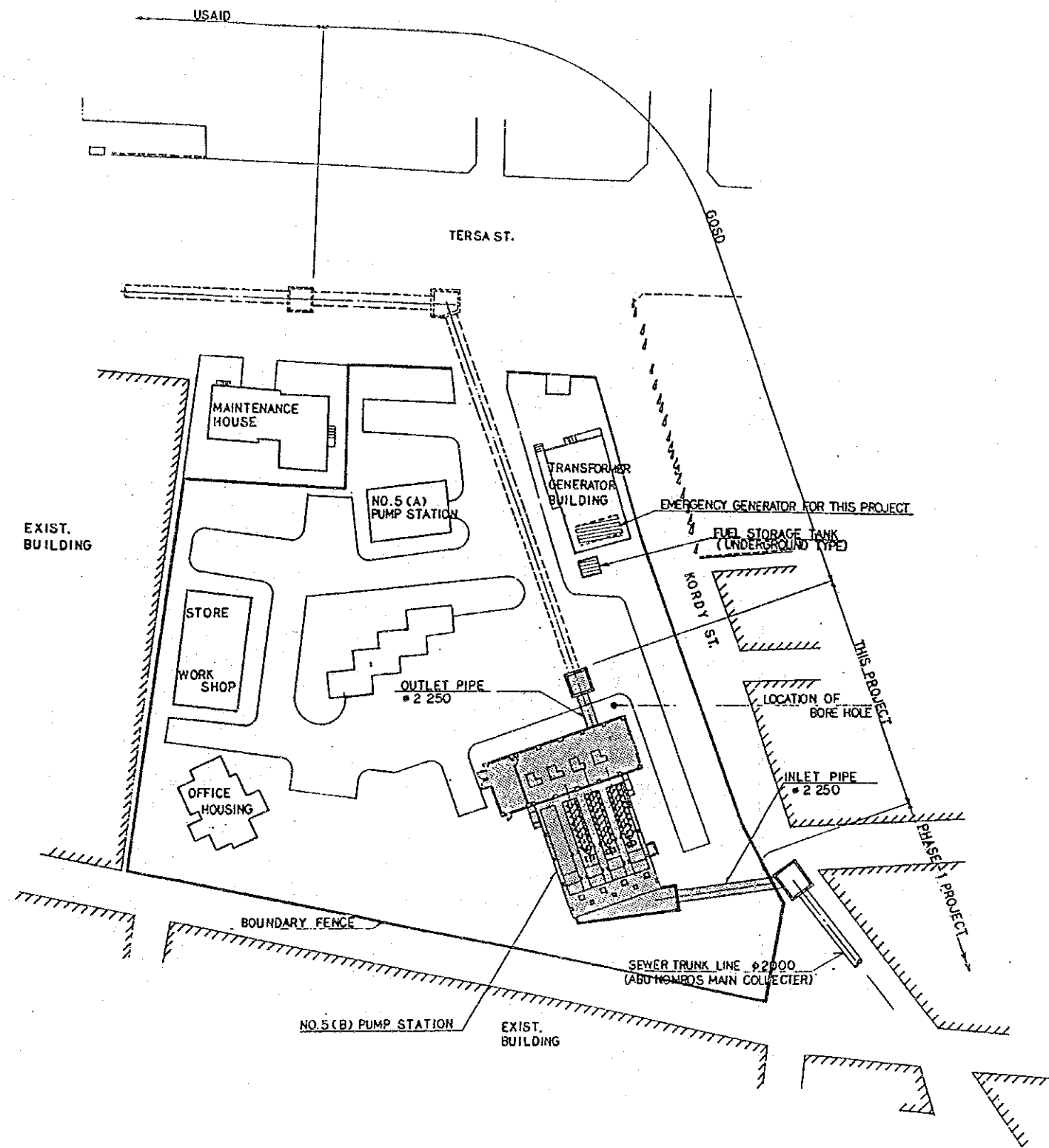
**SEWER TRANSFER PUMP STATION NO.5 (B)
CONSTRUCTION PLAN**

LIST OF DRAWINGS

- EGM-S-01 General Layout of Sewer Transfer Pump Station No. 5 (B)
- EGM-S-02 Plan of Pumping Facility
- EGM-S-03 Cross-Section of Pumping Facility
- EGM-S-04 Elevation of Pump House
- EGM-S-05 Plan and Cross-Section of Pump House
- EGM-S-06 Structural Plan and Cross-Section of Sewer Transfer Pump Station No. 5 (B) (1/4)
- EGM-S-07 Structural Plan and Cross-Section of Sewer Transfer Pump Station No. 5 (B) (2/4)
- EGM-S-08 Structural Plan and Cross-Section of Sewer Transfer Pump Station No. 5 (B) (3/4)
- EGM-S-09 Structural Plan and Cross-Section of Sewer Transfer Pump Station No. 5 (B) (4/4)
- EGM-S-10 Oneline Diagram of Sewer Transfer Pump Station No. 5 (B)

GENERAL LAYOUT OF SEWER TRANSFER PUMP STATION NO.5 (B)

S=1:1000

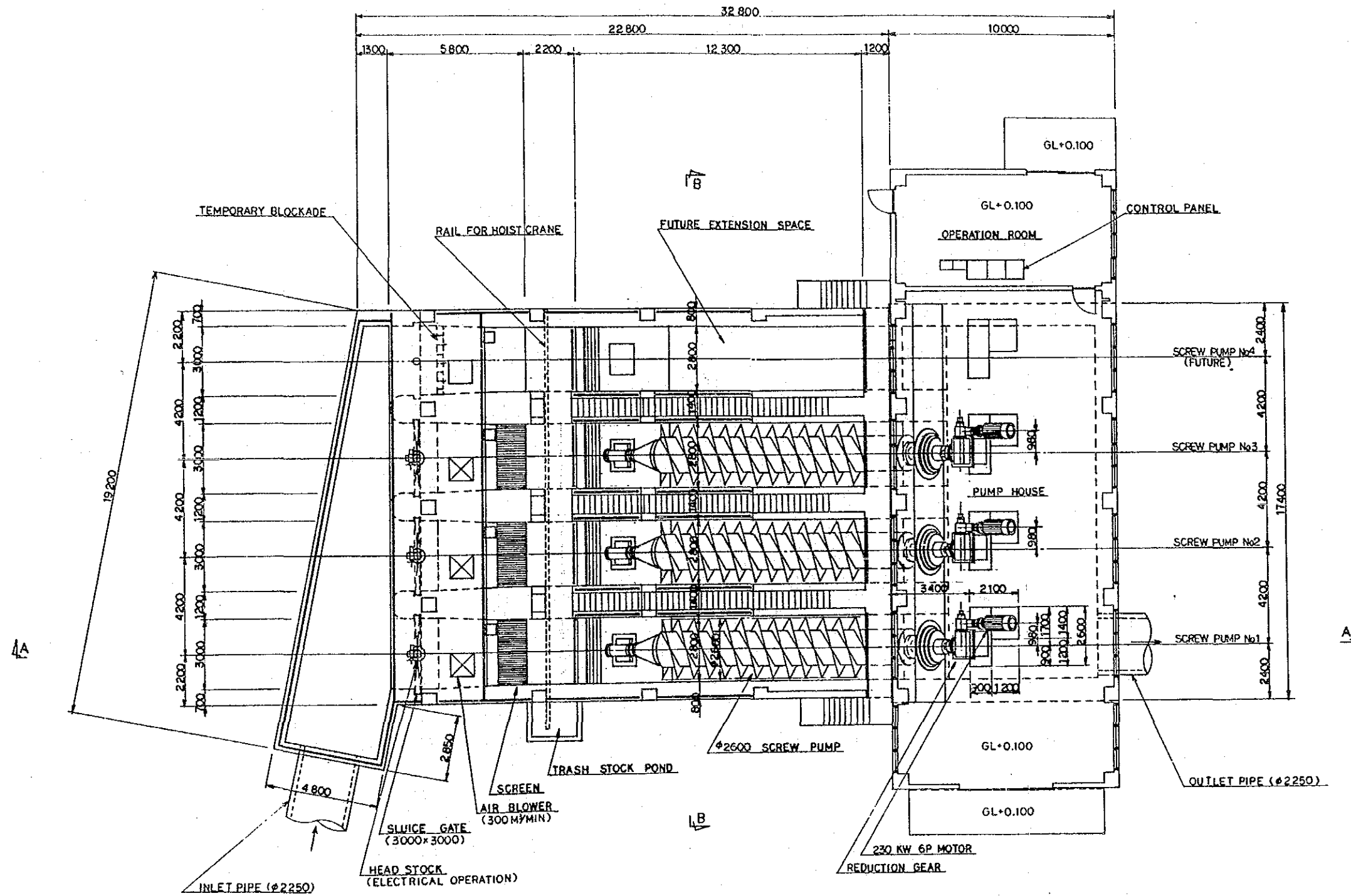


THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
General Layout of Sewer Transfer Pump Station No. 5 (B)	SCALE
	AS SHOWN
	DRAWING NO.
	EGM-S-01
JAPAN INTERNATIONAL COOPERATION AGENCY	

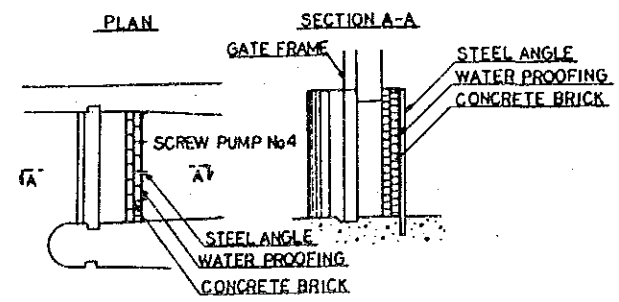
SEWER TRANSFER PUMP STATION NO.5 (B)

S=1:200

φ2600 SCREW PUMP GENERAL PLAN



DETAIL OF TEMPORARY BLOCKADE S=1:200

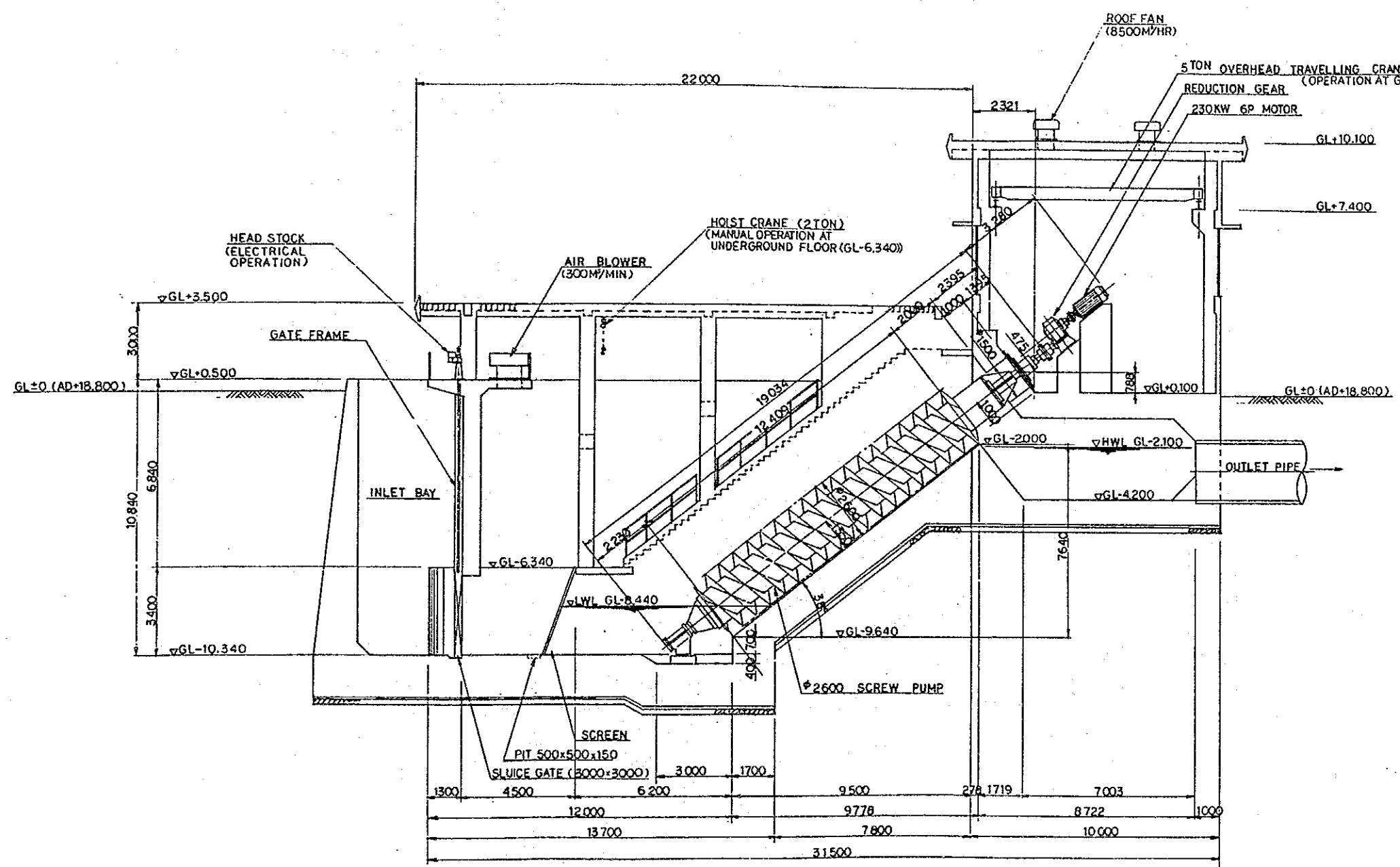


THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Plan of Pumping Facility	SCALE
	AS SHOWN
	DRAWING NO. EGW-S-02
JAPAN INTERNATIONAL COOPERATION AGENCY	

SEWER TRANSFER PUMP STATION NO.5 (B)

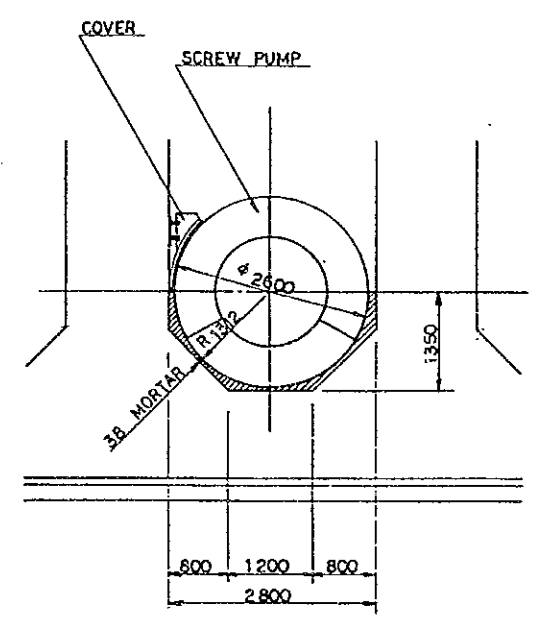
S=1:200

SECTION A - A

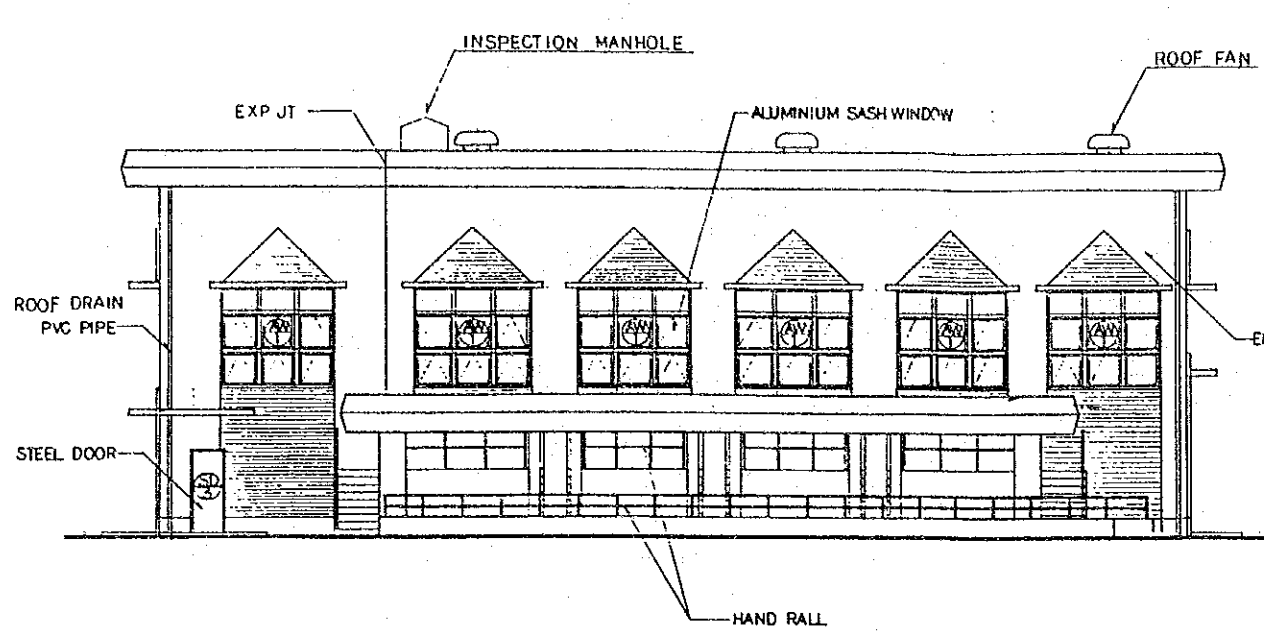


SECTION B - B

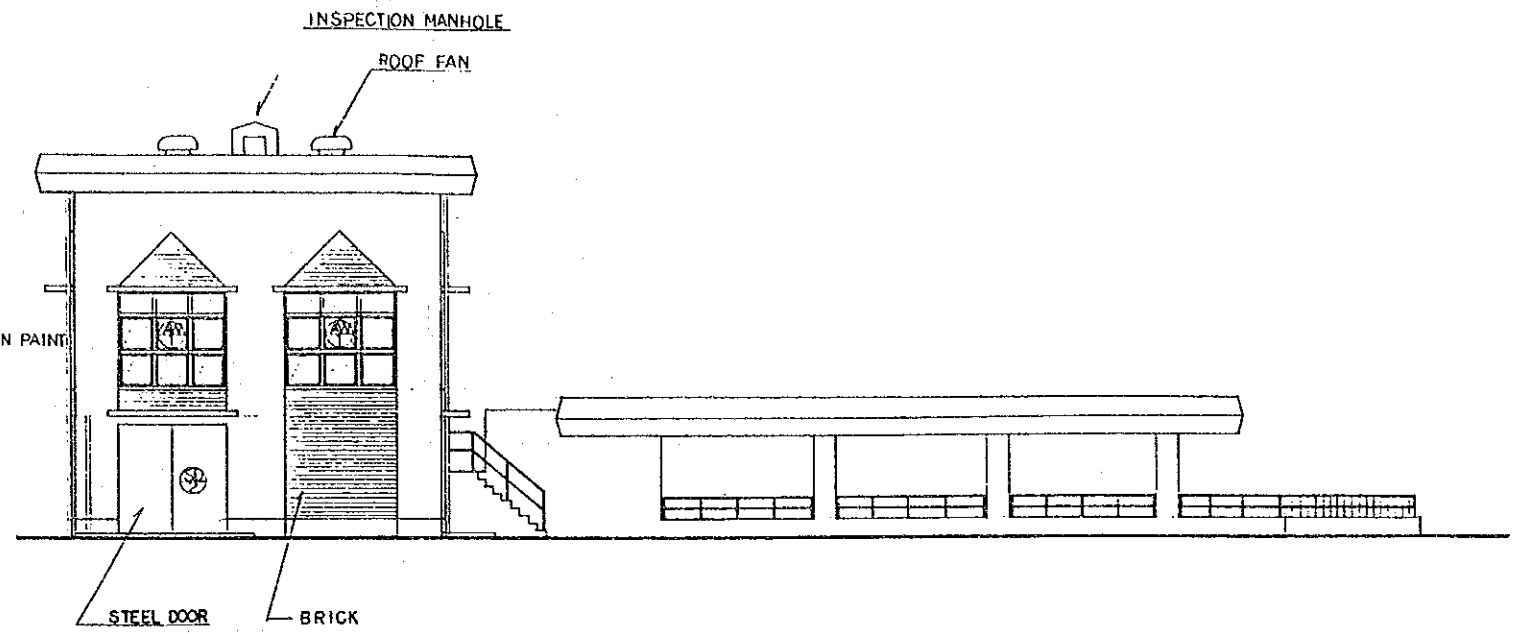
S=1:100



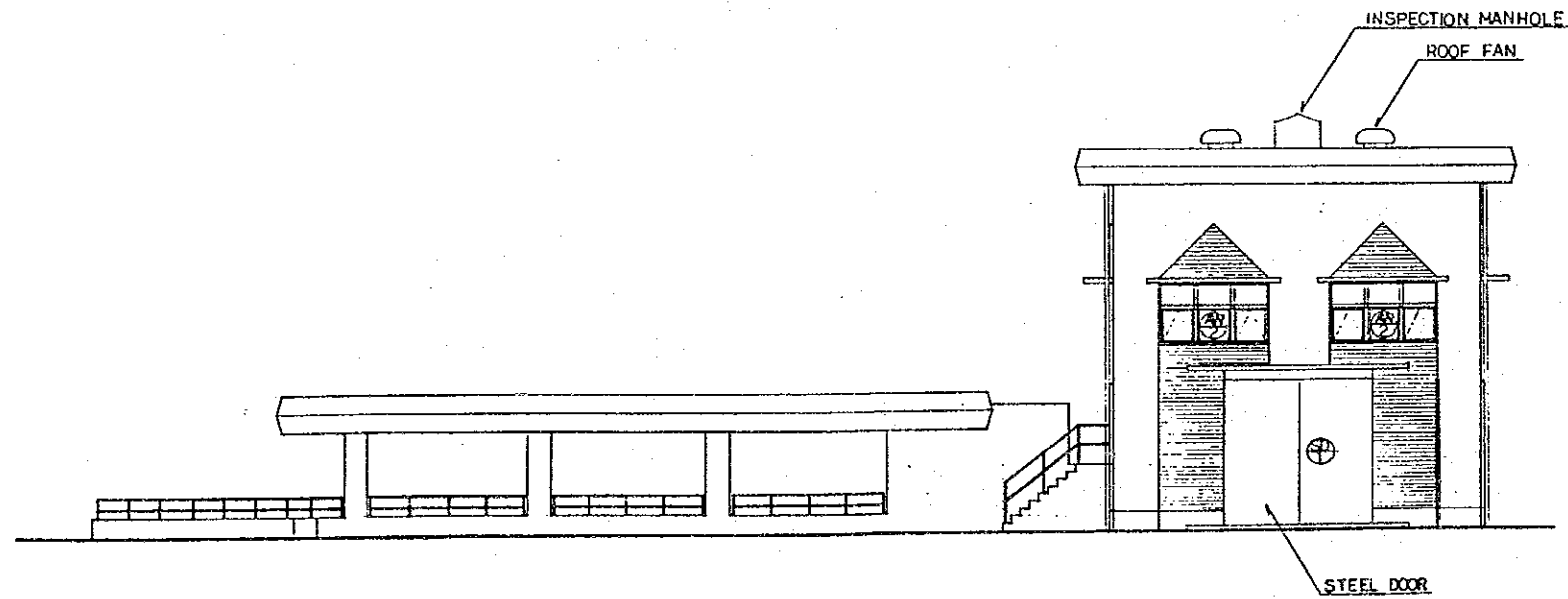
THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Cross-Section of Pumping Facility	SCALE
	AS SHOWN
	DRAWING NO.
	EGM-S-03
JAPAN INTERNATIONAL COOPERATION AGENCY	



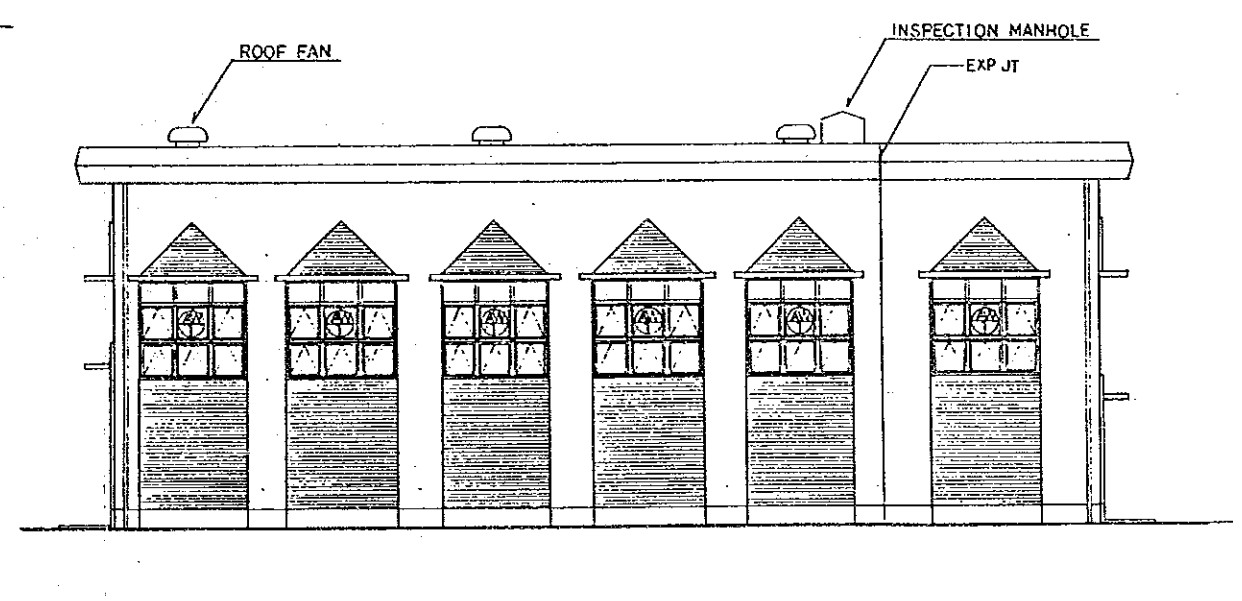
PUMP HOUSE-SOUTHEAST ELEVATION S=1:200



PUMP HOUSE-SOUTHWEST ELEVATION S=1:200

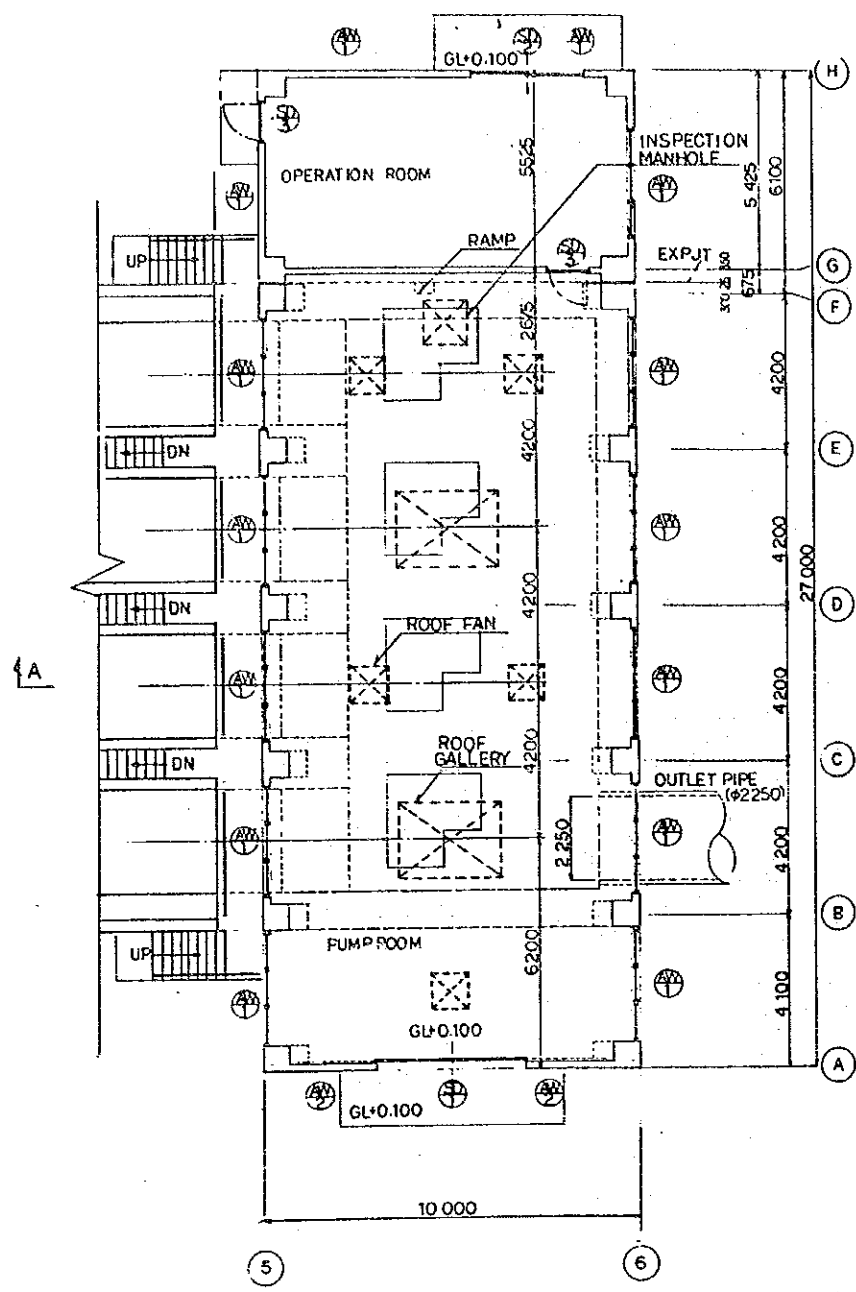


PUMP HOUSE-NORTHEAST ELEVATION S=1:200

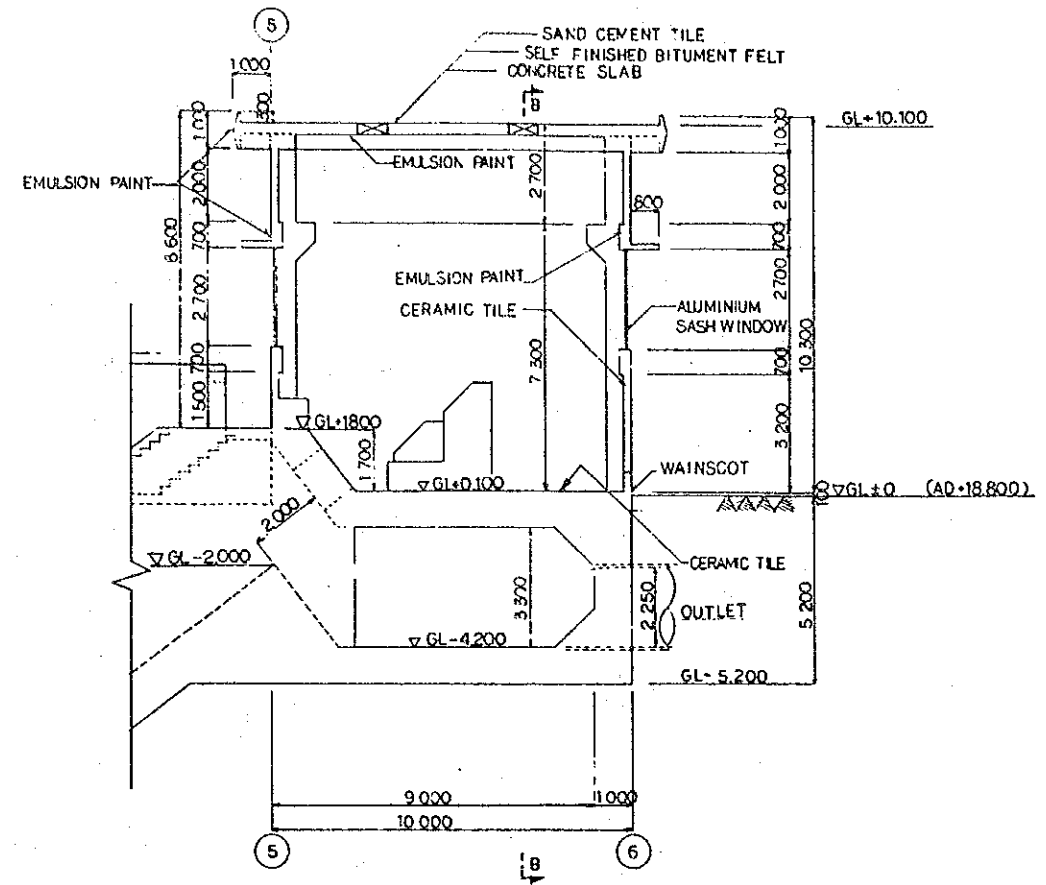


PUMP HOUSE-NORTHWEST ELEVATION S=1:200

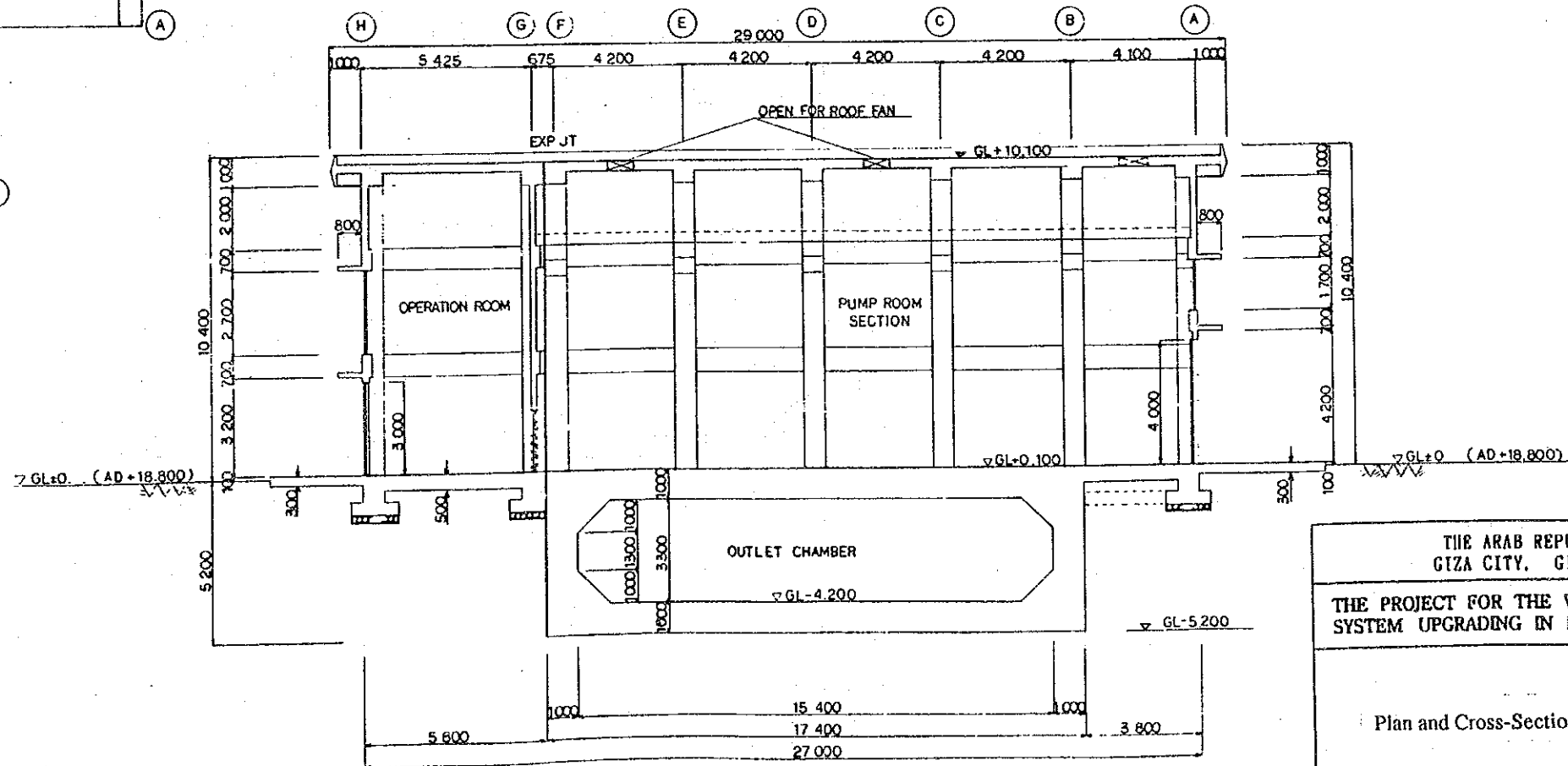
THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Elevation of Pump House	SCALE
	AS SHOWN
	DRAWING NO. EGM-S-04
JAPAN INTERNATIONAL COOPERATION AGENCY	



PUMP HOUSE PLAN



PUMP HOUSE - SECTION A-A S=1:200



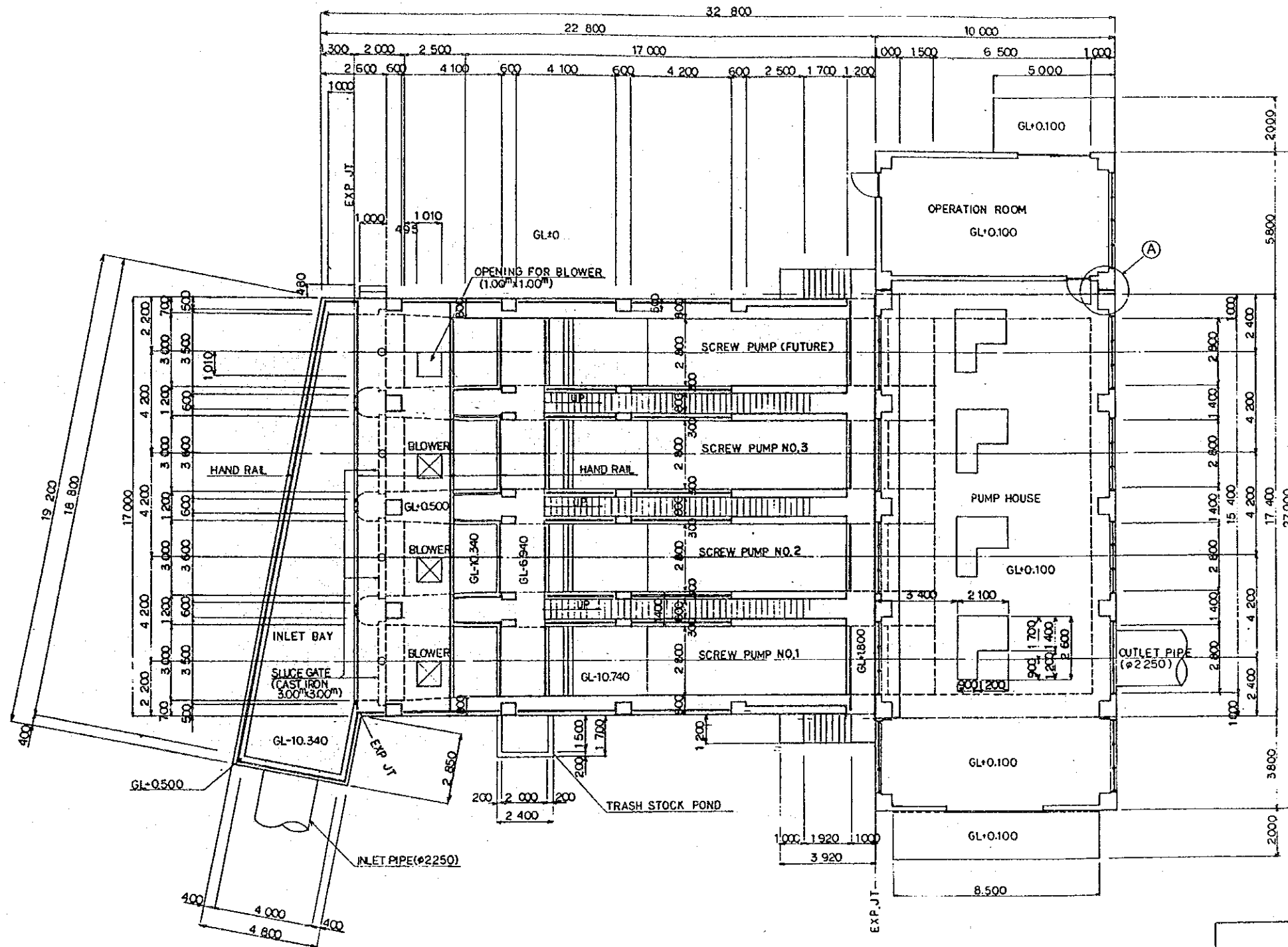
PUMP HOUSE - SECTION B-B S=1:200

THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Plan and Cross-Section of Pump House	SCALE
	AS SHOWN
	DRAWING NO.
EGM-S-05	
JAPAN INTERNATIONAL COOPERATION AGENCY	

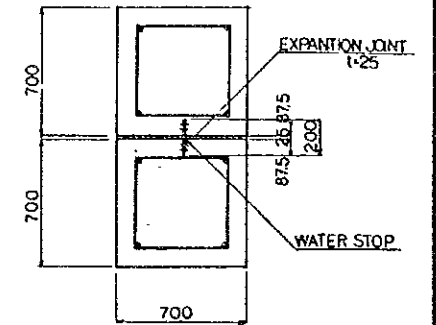
SEWER TRANSFER PUMP STATION NO. 5 (B) (1/4)

S=1:100

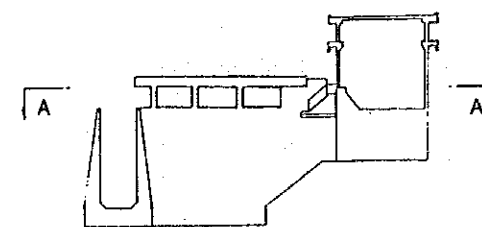
SECTION A—A



DETAIL (A) S=1:40



KEY PLAN



THE ARAB REPUBLIC OF EGYPT
GIZA CITY, GIZA GOVERNORATE

THE PROJECT FOR THE WATER SUPPLY AND SEWER
SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)

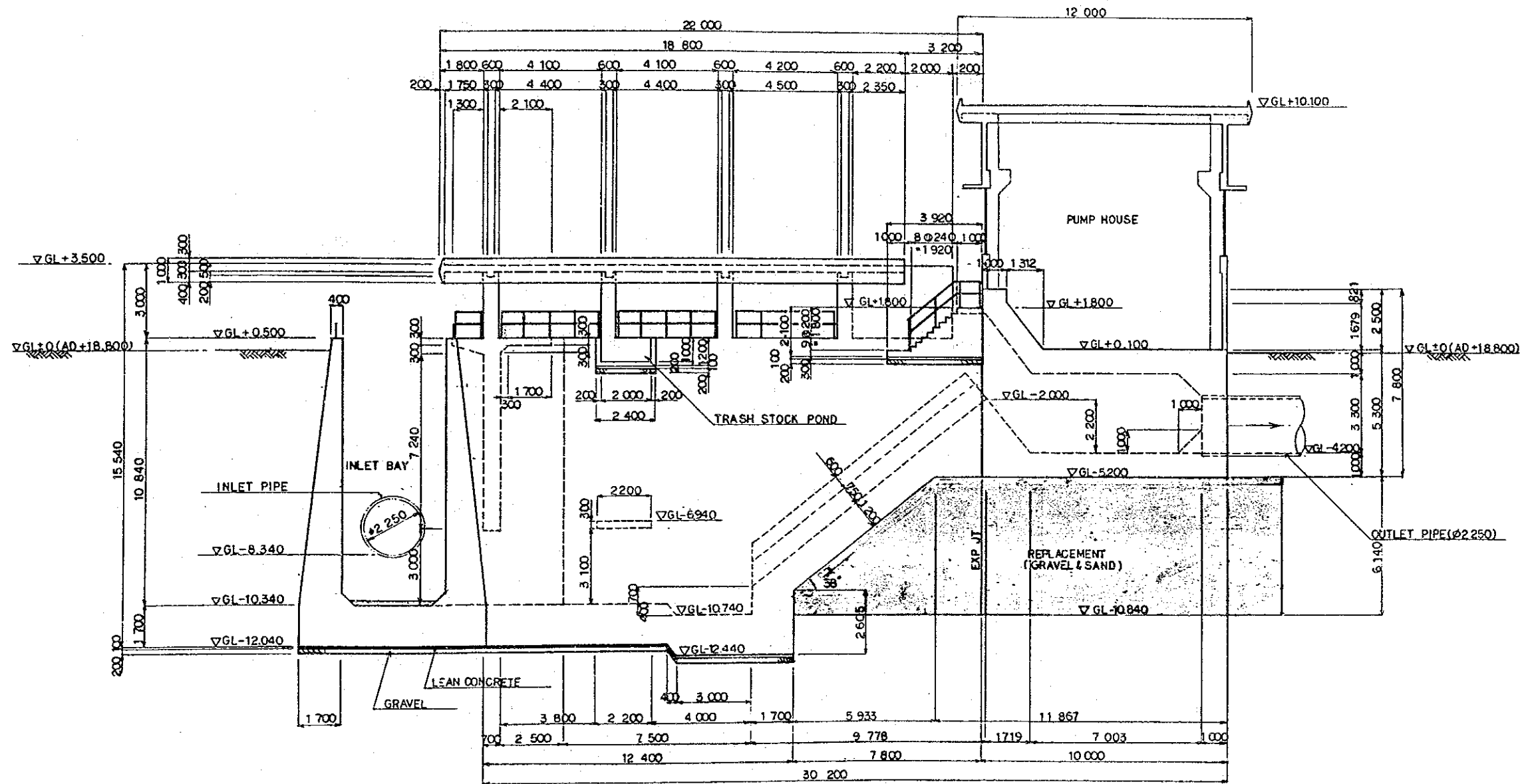
Structural Plan and Cross-Section of Sewer Transfer Pump Station No. 5 (B) (1/4)	SCALE
	AS SHOWN
	DRAWING NO. EGM-S-06

JAPAN INTERNATIONAL COOPERATION AGENCY

SEWER TRANSFER PUMP STATION NO. 5 (B) (2/4)

S=1:100

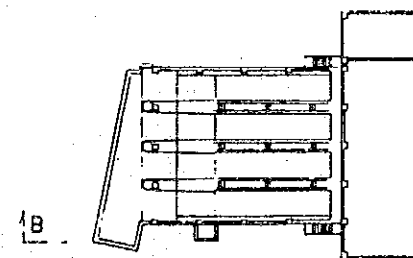
SECTION B - B



SOIL PROFILE

DEPTH	LEGEND	DESCRIPTION	N-VALUE
10.30			40
15			15
9			9
9			9
16			16
17			17
24		SILTY CLAY	24
27			27
33		FINE SAND WITH CLAY	33
36			36
15.00		SAND	

KEY PLAN



THE ARAB REPUBLIC OF EGYPT
GIZA CITY, GIZA GOVERNORATE

THE PROJECT FOR THE WATER SUPPLY AND SEWER
SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)

Structural Plan and Cross-Section of Sewer
Transfer Pump Station No. 5 (B) (2/4)

SCALE

AS SHOWN

DRAWING NO.

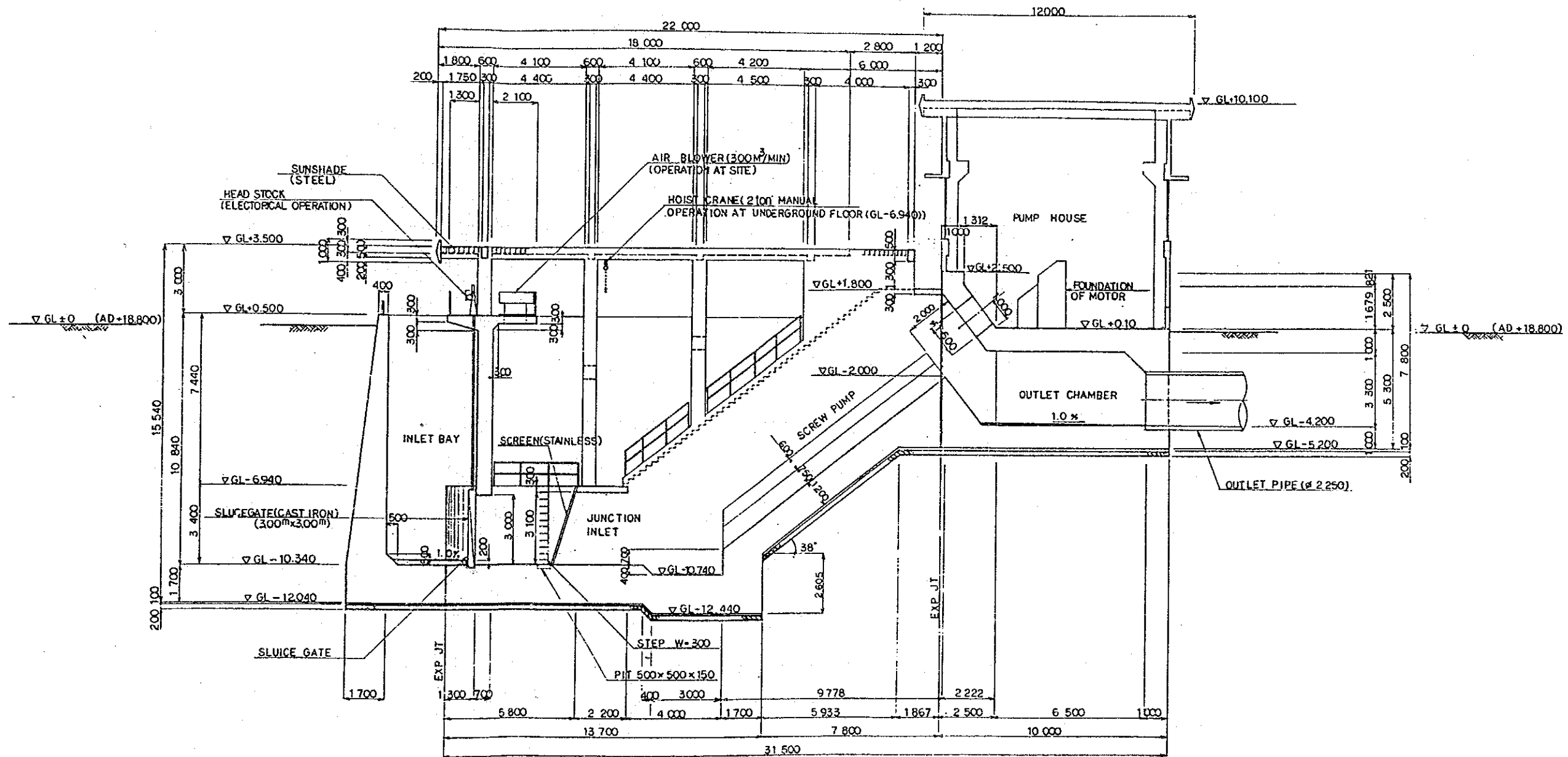
EGM-S-07

JAPAN INTERNATIONAL COOPERATION AGENCY

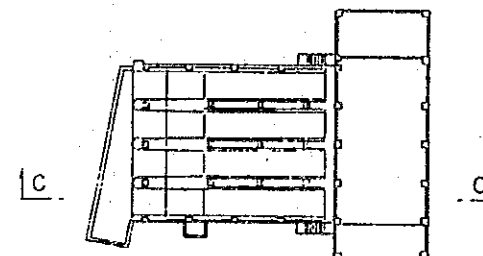
SEWER TRANSFER PUMP STATION NO.5 (B)(3/4)

5=1:200

SECTION C-C



KEY PLAN

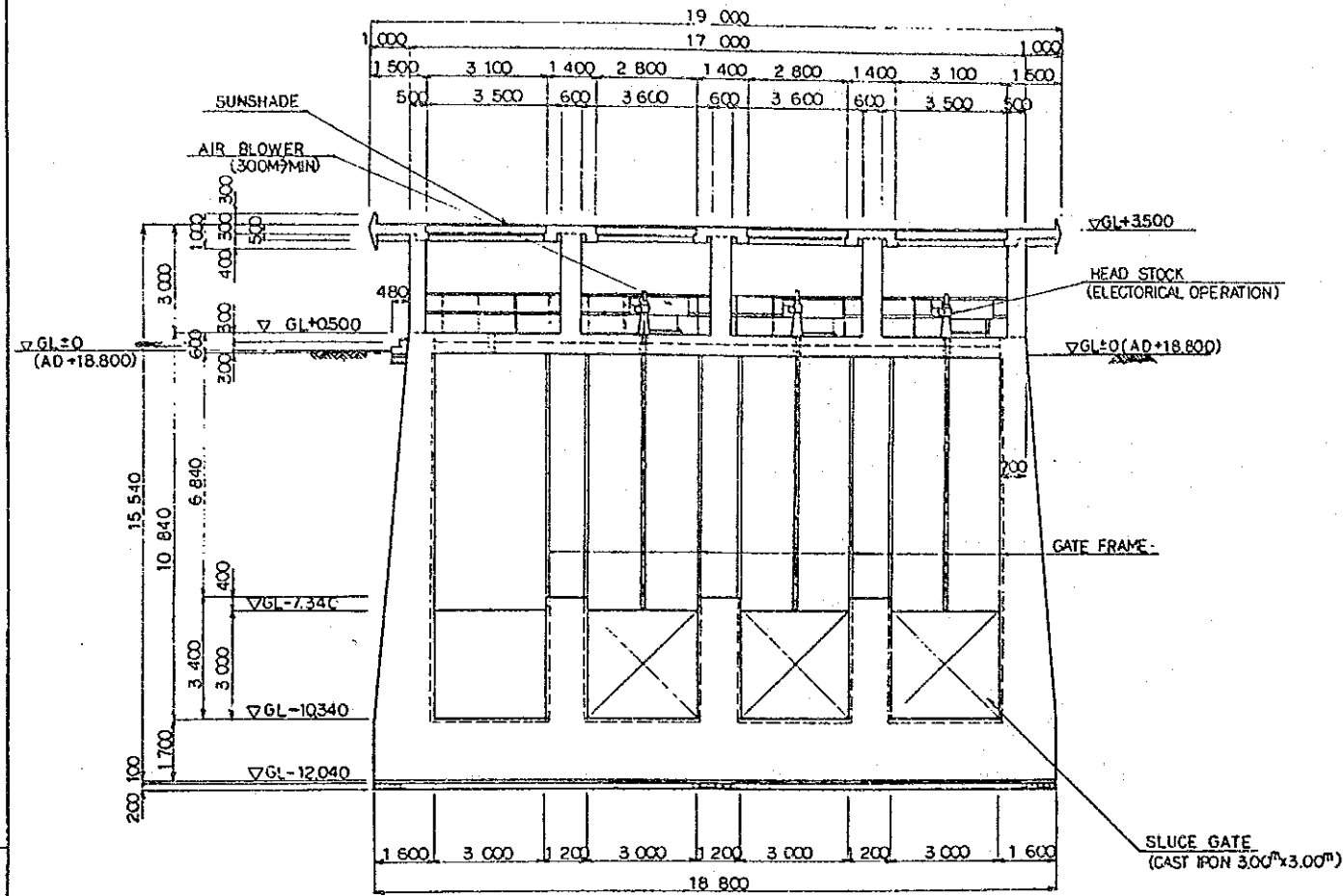


THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Structural Plan and Cross-Section of Sewer Transfer Pump Station No. 5 (B) (3/4)	SCALE
	AS SHOWN
	DRAWING NO. EGM-S-08
JAPAN INTERNATIONAL COOPERATION AGENCY	

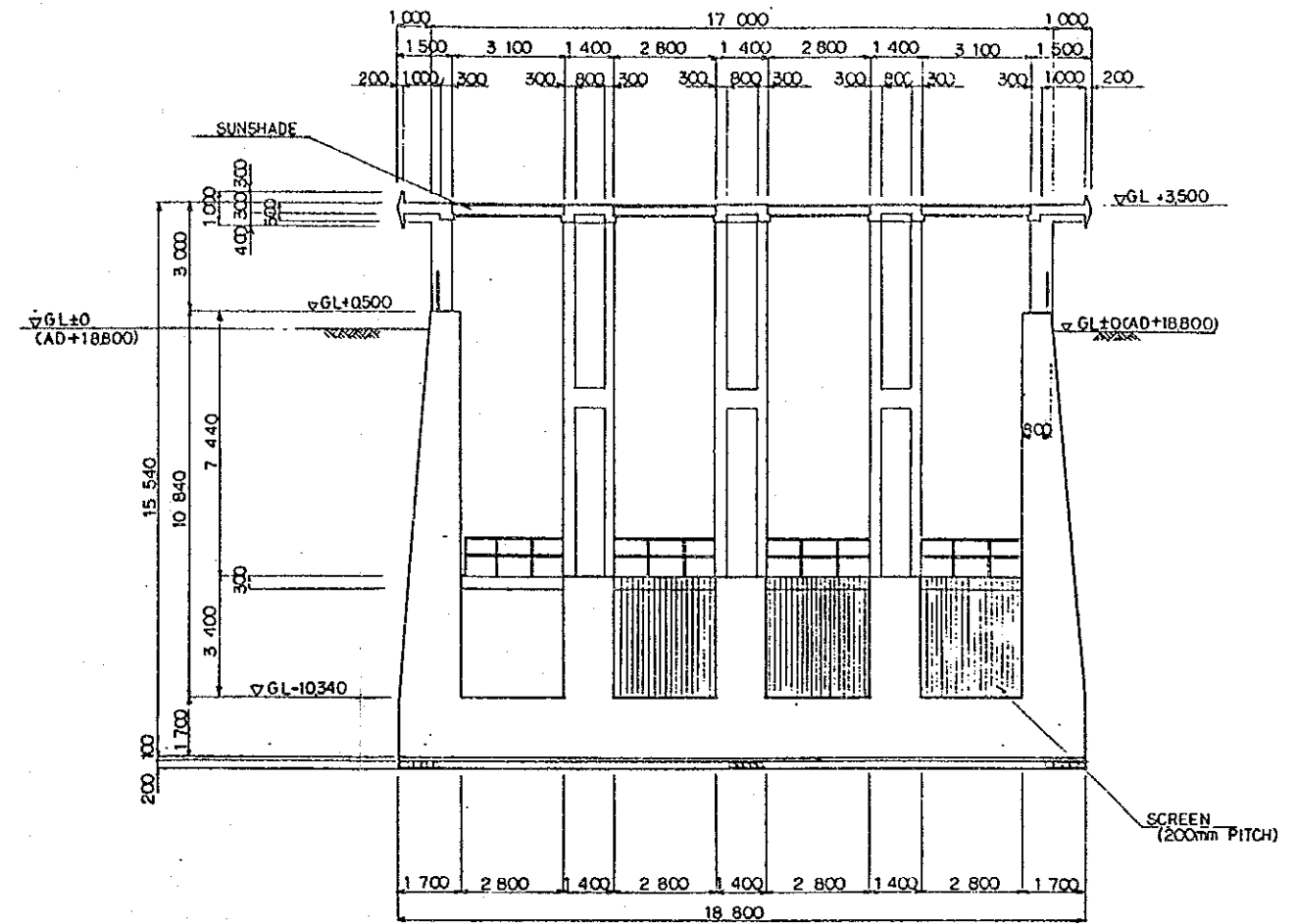
SEWER TRANSFER PUMP STATION NO.5 (B) (4/4)

S=1:200

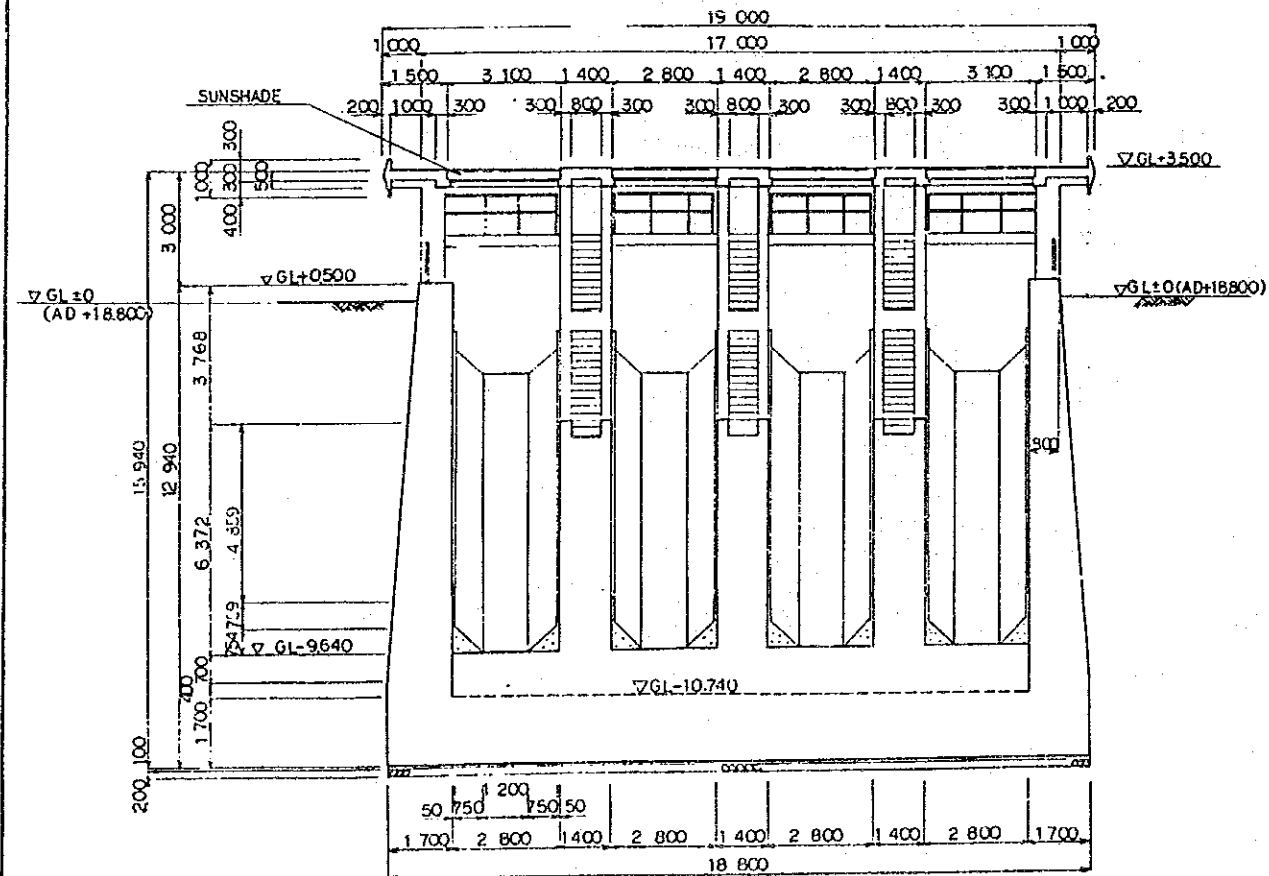
SECTION E--E



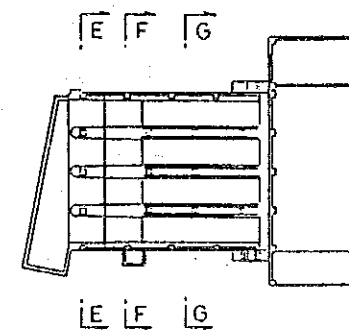
SECTION F--F



SECTION G--G

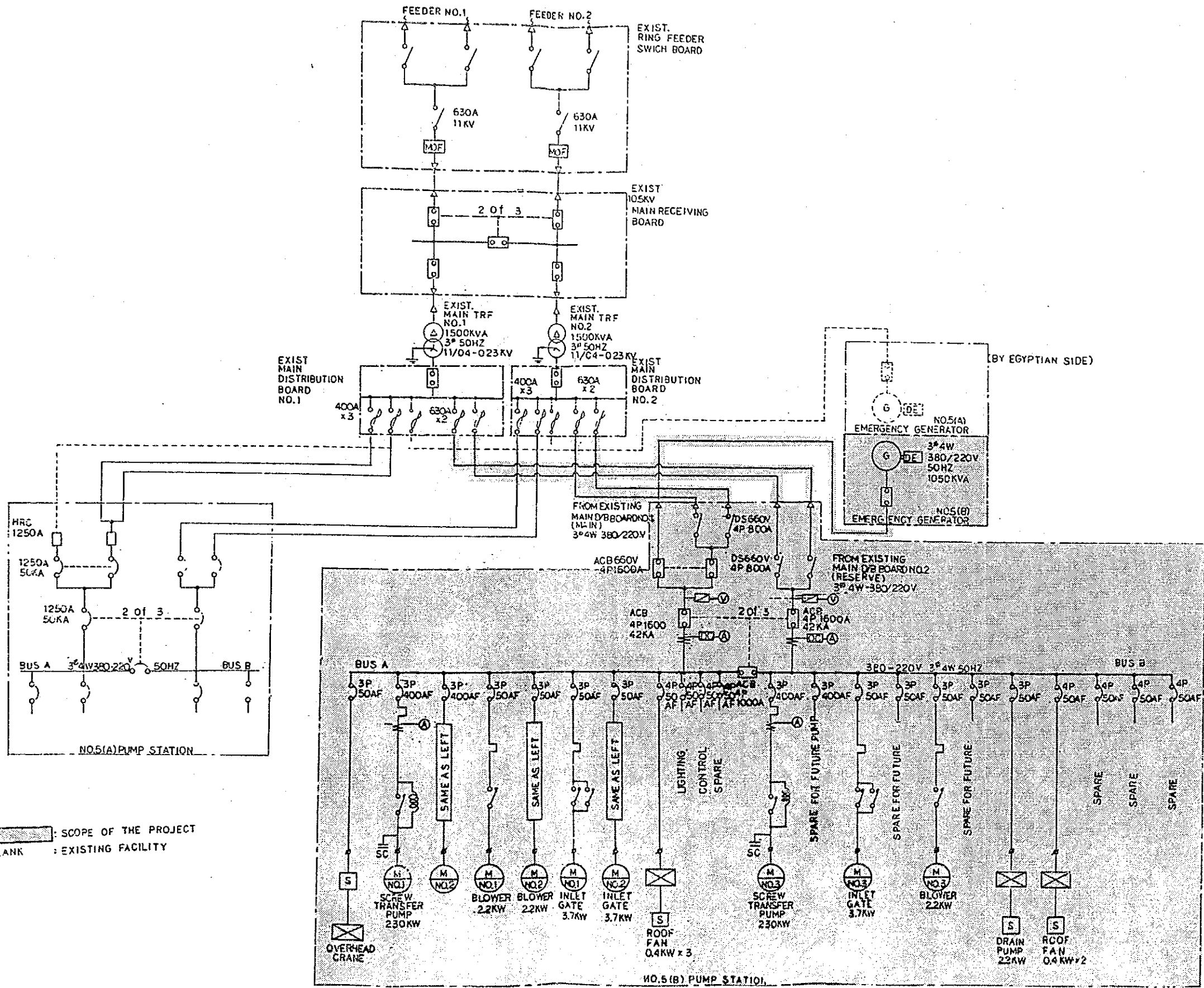


KEY PLAN



THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Structural Plan and Cross-Section of Sewer Transfer Pump Station No. 5 (B) (4/4)	SCALE
	AS SHOWN
	DRAWING NO.
EGM-S-09	
JAPAN INTERNATIONAL COOPERATION AGENCY	

10.5KV DISTRIBUTION LINE
(FROM CAIRO DISTRIBUTION COMPANY)
10.5 KV 3^Φ 50HZ



MARKS : SCOPE OF THE PROJECT
 BLANK : EXISTING FACILITY

THE ARAB REPUBLIC OF EGYPT GIZA CITY, GIZA GOVERNORATE	
THE PROJECT FOR THE WATER SUPPLY AND SEWER SYSTEM UPGRADING IN MONIB, GIZA CITY (PHASE 2)	
Online Diagram of Sewer Transfer Pump Station No. 5 (B)	SCALE NONE
	DRAWING NO. EGM-S-10
	JAPAN INTERNATIONAL COOPERATION AGENCY

