

**DETAIL DESIGN  
FOR  
LABORATORY BUILDING  
OF  
DESALINATION RESEARCH PROJECT  
IN  
THE KINGDOM OF SAUDI ARABIA**

**VOLUME 3 of 6 VOLUMES**

**AUGUST, 1987**

**JAPAN INTERNATIONAL COOPERATION AGENCY**



DETAIL DESIGN FOR  
LABORATORY BUILDING OF  
DESALINATION RESEARCH PROJECT  
IN THE KINGDOM OF SAUDI ARABIA

VOLUME 3 OF 6 VOLUMES

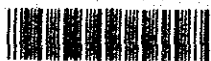
DRAWINGS

BUILDING DRAWINGS  
AIR-CONDITIONING DRAWINGS  
MECHANICAL DRAWINGS  
ELECTRICAL DRAWINGS  
EQUIPMENT LAYOUT DRAWINGS

AUGUST 1987

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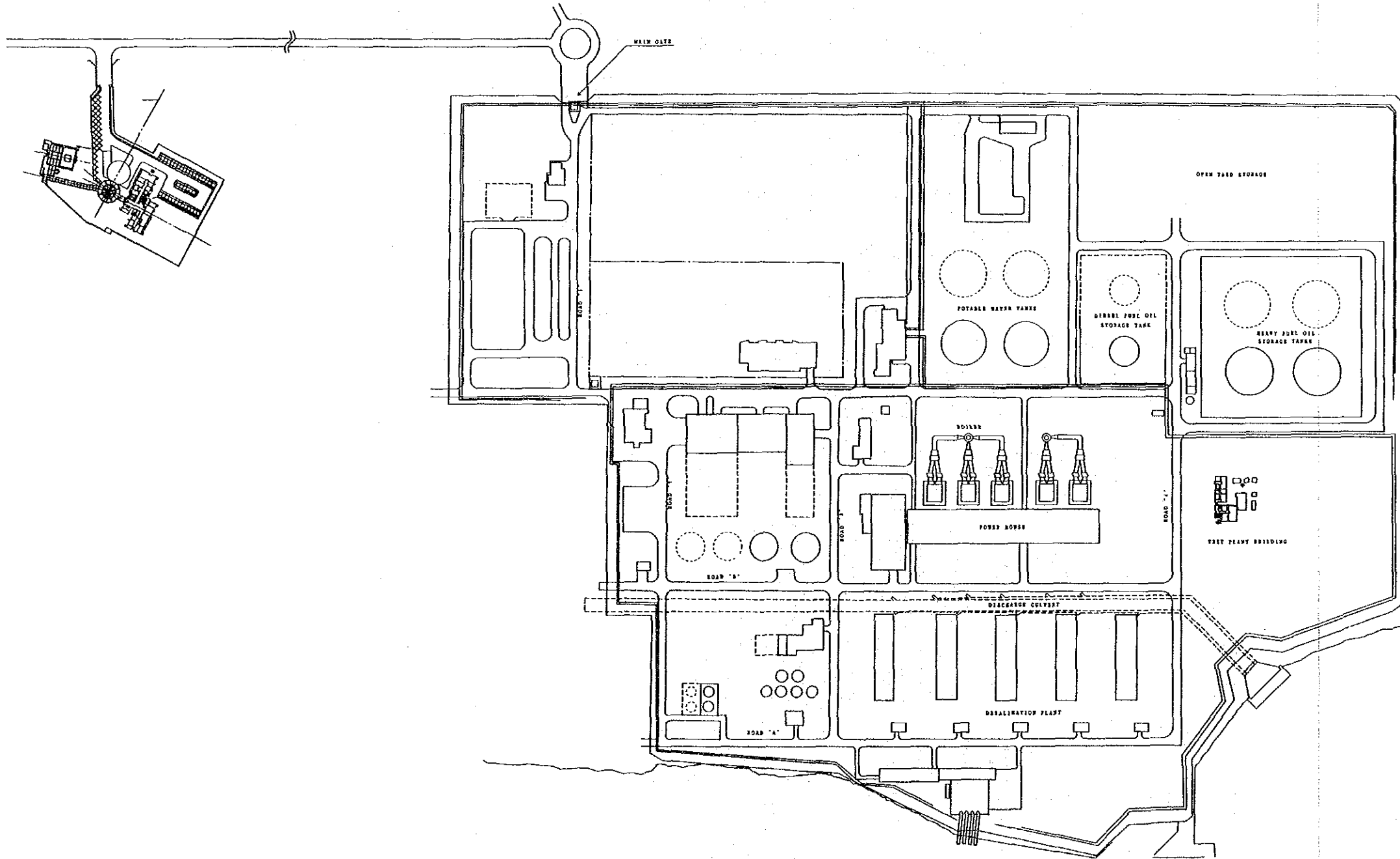
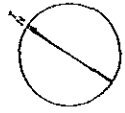
国際協力事業団	
受入 月日 '88. 3. 1	312
登録No. 17243	62.5
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**DRAWINGS**



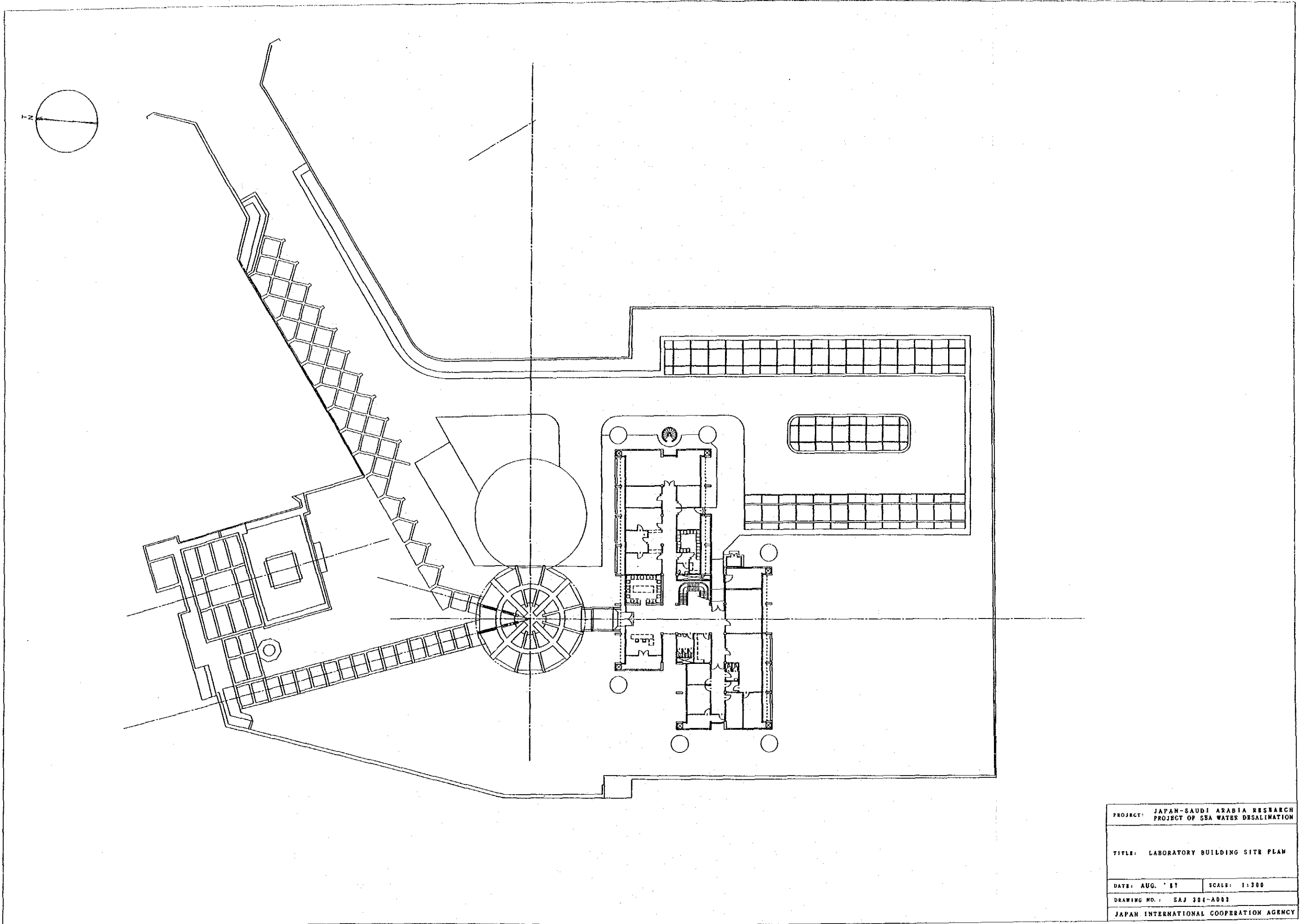
## BUILDING DRAWINGS

SAJ 304 - A001	GRAND SITE PLAN	
SAJ 304 - A002	LABORATOY BUILDING	- SITE PLAN
SAJ 304 - A003	LABORATOY BUILDING	- FINISH SCHELDULE
SAJ 304 - A004	LABORATOY BUILDING	- PLAN (GROUND FLOOR)
SAJ 304 - A005	LABORATOY BUILDING	- PLAN (FIRST FLOOR)
SAJ 304 - A006	LABORATOY BUILDING	- SECTION
SAJ 304 - A007	LABORATOY BUILDING	- EXISTING CONDITION (GROUND FLOOR)
SAJ 304 - A008	LABORATOY BUILDING	- EXISTING CONDITION (FIRST FLOOR)
SAJ 304 - A009	LABORATOY BUILDING	- PLAN FOR ADDED & MODIDIED PARTS (GROUND FLOOR)
SAJ 304 - A010	LABORATOY BUILDING	- PLAN FOR ADDED & MODIDIED PARTS (FIRST FLOOR)
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SAJ 304 - A013	LABORATOY BUILDING	- REMOVAL & MODIFIED DETAILS (2/2)
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SAJ 304 - A101	TEST PLANT BUILDING	- SITE PLAN
SAJ 304 - A102	TEST PLANT BUILDING	- FINISH SCHEDULE
SAJ 304 - A103	TEST PLANT BUILDING	- PLAN (GROUND FLOOR)
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SAJ 304 - A105	TEST PLANT BUILDING	- ELEVATION
SAJ 304 - A106	TEST PLANT BUILDING	- SECTION
SAJ 304 - A107	TEST PLANT BUILDING	- DETAL PLAN
SAJ 304 - A108	TEST PLANT BUILDING	- CEILING PLAN
SAJ 304 - A109	TEST PLANT BUILDING	- DOOR & WINDOW SCHEDULE
SAJ 304 - A110	TEST PLANT BUILDING	- DOOR & WINDOW DETAILS
SAJ 304 - A111	TEST PLANT BUILDING	- WALL SECTION
SAJ 304 - A112	TEST PLANT BUILDING	- TOILET & SHOWER ROOM DETAILS
SAJ 304 - A113	TEST PLANT BUILDING	- INTERIOR & EXTERIOR DETAILS
SAJ 304 - A114	TEST PLANT BUILDING	- FOUNDATION, ROOF, FRAMING PLANS & DETAILS
SAJ 304 - A115	TEST PLANT BUILDING	- FRAMING ELEVATION
SAJ 304 - A116	TEST PLANT BUILDING	- MEMBER LIST & FOUNDATION DETAILS
SAJ 304 - A117	TEST PLANT BUILDING	- EXISTING CONDITION
SAJ 304 - A201	ROAD & CARSHELTER	- PLAN, ELEVATION, SECTION & DETAILS



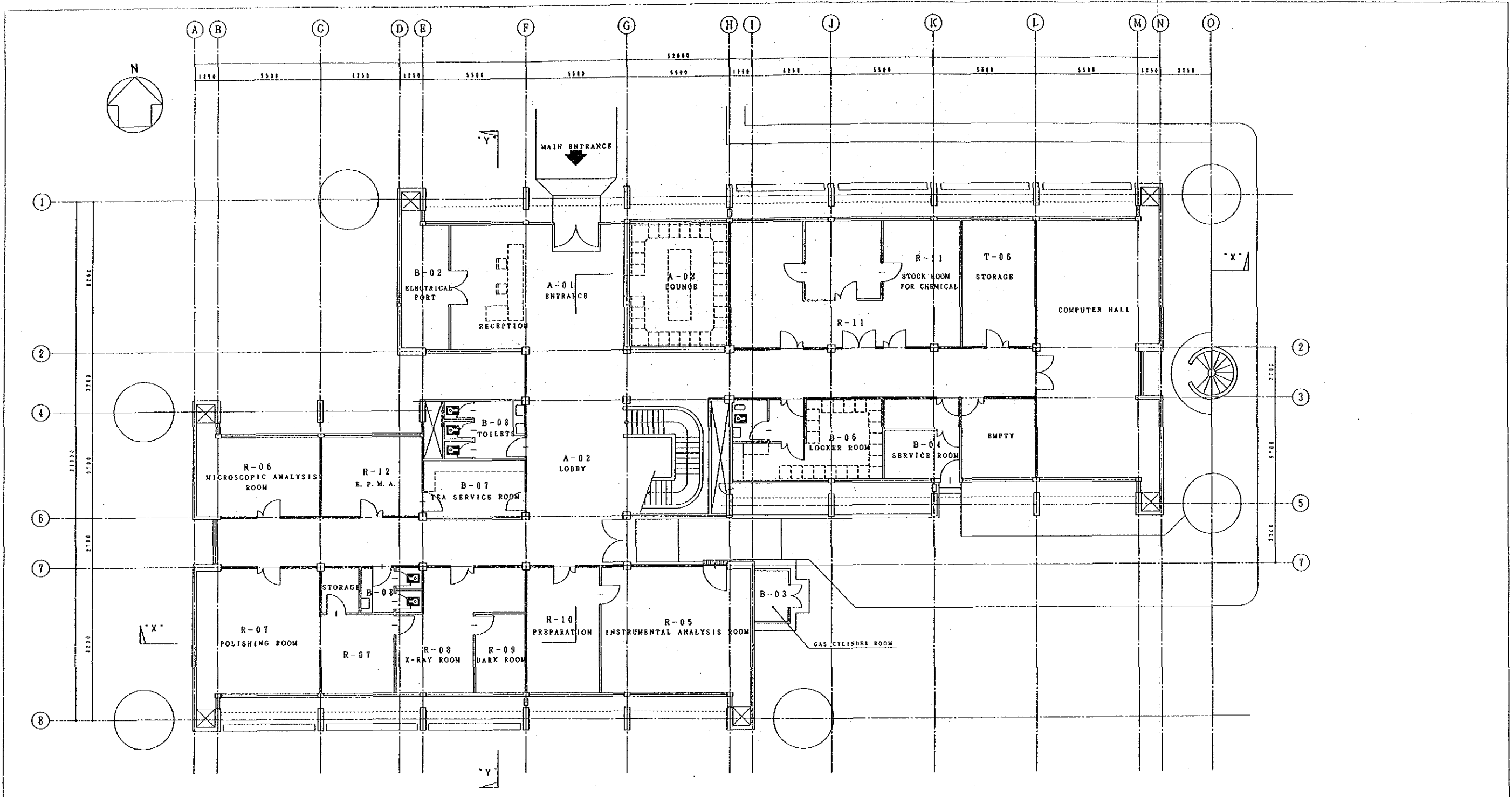
PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION	
TITLE: GRAND SITE PLAN	
DATE: AUG. '81	SCALE: 1:2000
DRAWING NO.: SAJ 364-A001	
JAPAN INTERNATIONAL COOPERATION AGENCY	



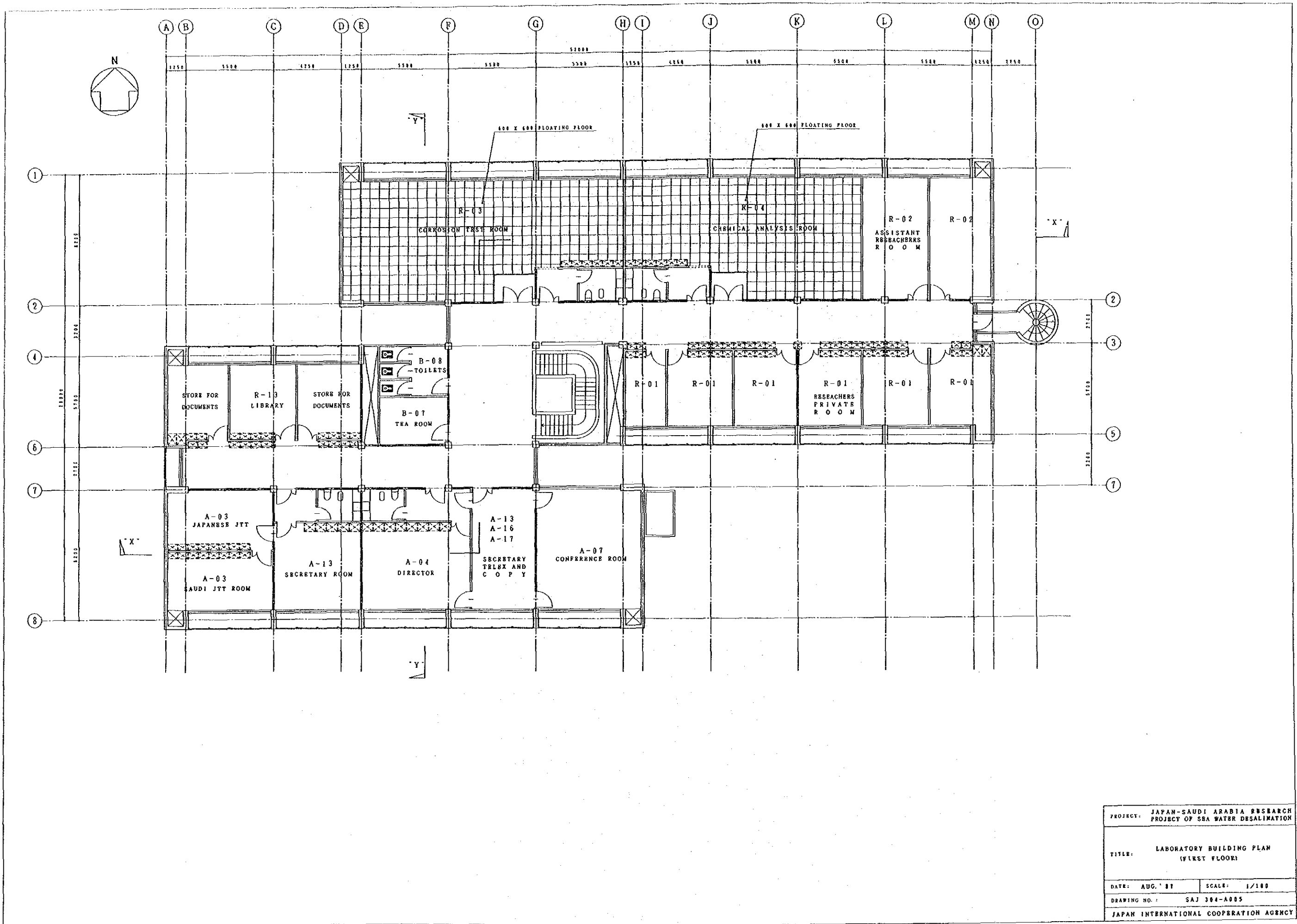


PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SBA WATER DESALINATION	
TITLE: LABORATORY BUILDING SITE PLAN	
DATE: AUG. '81	SCALE: 1:300
DRAWING NO.: SAJ 304-A003	
JAPAN INTERNATIONAL COOPERATION AGENCY	

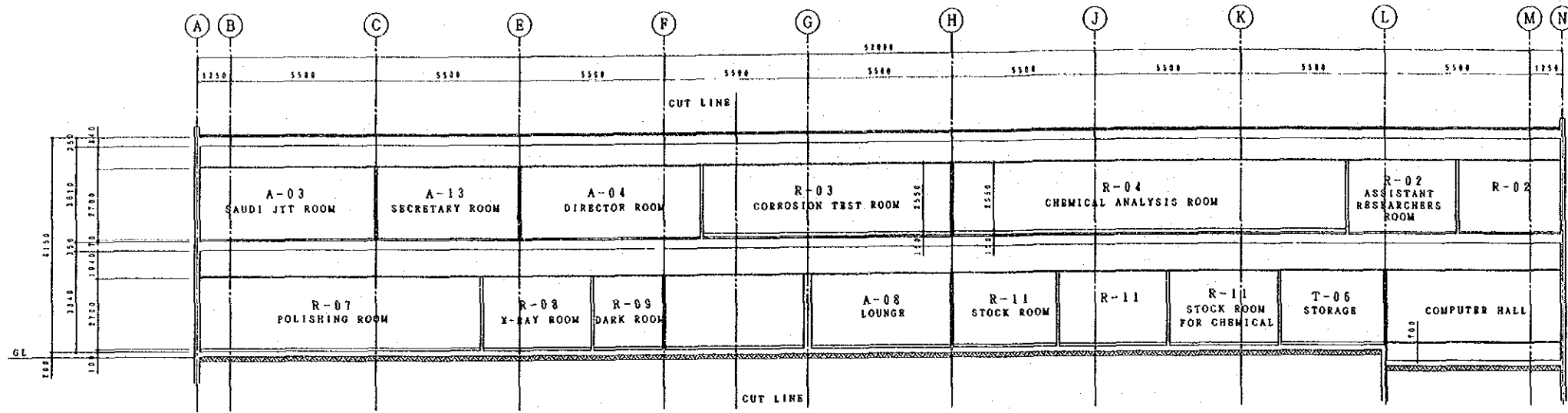
EXTERIOR FINISH SCHEDULE										NOTE
SURFACE OF PARTS		MATERIAL		FINISH		REMARKS				
FRAME		AS IT IS		AS IT IS						
FOUNDATION		AS IT IS		AS IT IS						
ROOF		AS IT IS		AS IT IS						
GIRDER, COLUMN, EAVES		AS IT IS		AS IT IS						
WALL		AS IT IS		AS IT IS						
BASE		AS IT IS		AS IT IS						
DOOR & FRAME		AS IT IS		AS IT IS						
WINDOW & FRAME		AS IT IS		AS IT IS						
INTERIOR FINISH SCHEDULE										
RM NO	ROOM NAME	FLOOR	BASE	HEIGHT	WAINSCOT	HEIGHT	WALL	CEILING	HEIGHT	REMARKS
A - 0 1	ENTRANCE	AS IT IS	AS IT IS		-		AS IT IS	AS IT IS	2700	
A - 0 2	LOBBY	AS IT IS	AS IT IS		-		AS IT IS	AS IT IS	2700	
A - 0 3	ROOM FOR MEMBERS OF JOINT TECHNICAL TEAM	AS IT IS	AS IT IS		-		AS IT IS	AS IT IS	2700	
A - 0 4	DIRECTOR'S ROOM	AS IT IS	AS IT IS		-		AS IT IS	AS IT IS	2700	
A - 0 5	ADMINISTRATIVE OFFICE ROOM	AS IT IS	AS IT IS		-		AS IT IS	AS IT IS	2700	
A - 0 7	CONFERENCE ROOM	AS IT IS	AS IT IS		-		AS IT IS	AS IT IS	2700	
A - 0 8	LOUNGE	AS IT IS	AS IT IS		-		AS IT IS	AS IT IS	2700	
A - 1 3	TELEX ROOM & COPY	AS IT IS	AS IT IS		-		AS IT IS	AS IT IS	2700	
A - 1 7	SECRETARY ROOM	AS IT IS	AS IT IS		-		AS IT IS	AS IT IS	2700	
R - 0 1	RESEACHER'S PRIVATE ROOMS	AS IT IS	AS IT IS		-		AS IT IS	AS IT IS	2700	
R - 0 2	ASSISTANT RESEACHER'S ROOMS	AS IT IS	AS IT IS		-		AS IT IS	AS IT IS	2700	
R - 0 3	CORROSION TEST ROOM	VINYL TILE *	VINYL	100	-		PLASTER BOARD E. P	AS IT IS	2550	* FLOATING FLOOR
R - 0 4	CHEMICAL ANALYSIS ROOM	VINYL TILE *	VINYL	100	-		PLASTER BOARD E. P	AS IT IS	2550	* FLOATING FLOOR
R - 0 5	INSTRUMENT ANALYSIS ROOM	VINYL TILE	VINYL	100	-		PLASTER BOARD E. P	AS IT IS	2700	
R - 0 6	MICROSCOPIC ANALYSIS ROOM	VINYL TILE	VINYL	100	-		PLASTER BOARD E. P	AS IT IS	2700	
R - 0 7	POLISHING ROOM	VINYL TILE	VINYL	100	-		PLASTER BOARD E. P	AS IT IS	2700	
R - 0 8	X-RAY ROOM	VINYL TILE	VINYL	100	-		PLASTER BOARD E. P	AS IT IS	2700	
R - 0 9	DARK ROOM	VINYL TILE	VINYL	100	-		PLASTER BOARD E. P	AS IT IS	2700	
R - 1 0	PREPARATION ROOM	VINYL TILE	VINYL	100	-		PLASTER BOARD E. P	AS IT IS	2700	
R - 1 1	STOCK ROOM FOR CHEMICAL	VINYL TILE	VINYL	100	-		PLASTER BOARD E. P	AS IT IS	2700	
R - 1 2	E. P. M. A ROOM	VINYL TILE	VINYL	100	-		PLASTER BOARD E. P	AS IT IS	2700	
B - 0 1	AIR CONDITIONING MACHINE ROOM	AS IT IS	AS IT IS		-		AS IT IS	AS IT IS	2700	
B - 0 2	ELECTRICAL SUBSTATION ROOM	AS IT IS	AS IT IS		-		AS IT IS	AS IT IS	2700	
B - 0 3	GAS CYLINDER ROOM	CONCRETE STEEL TROWEL	-		-		FAIR FACED BLOCK	EXPOSED CONCRETE		ROOF W/P MORTAR
B - 0 5	SHOWER ROOM	AS IT IS	AS IT IS		-		AS IT IS	AS IT IS	2700	
B - 0 6	LOCKER ROOM	AS IT IS	AS IT IS		-		AS IT IS	AS IT IS	2700	
B - 0 7	TEA SERVICE ROOM	AS IT IS	AS IT IS		AS IT IS		AS IT IS	AS IT IS	2700	
B - 0 8	TOILET	AS IT IS	AS IT IS		AS IT IS		AS IT IS	AS IT IS	2700	
PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION										
TITLE: LABORATORY BUILDING FINISH SCHEDULE										
DATE: AUG. '87 SCALE: NONE										
DRAWING NO.: SAJ 304-A003										
JAPAN INTERNATIONAL COOPERATION AGENCY										



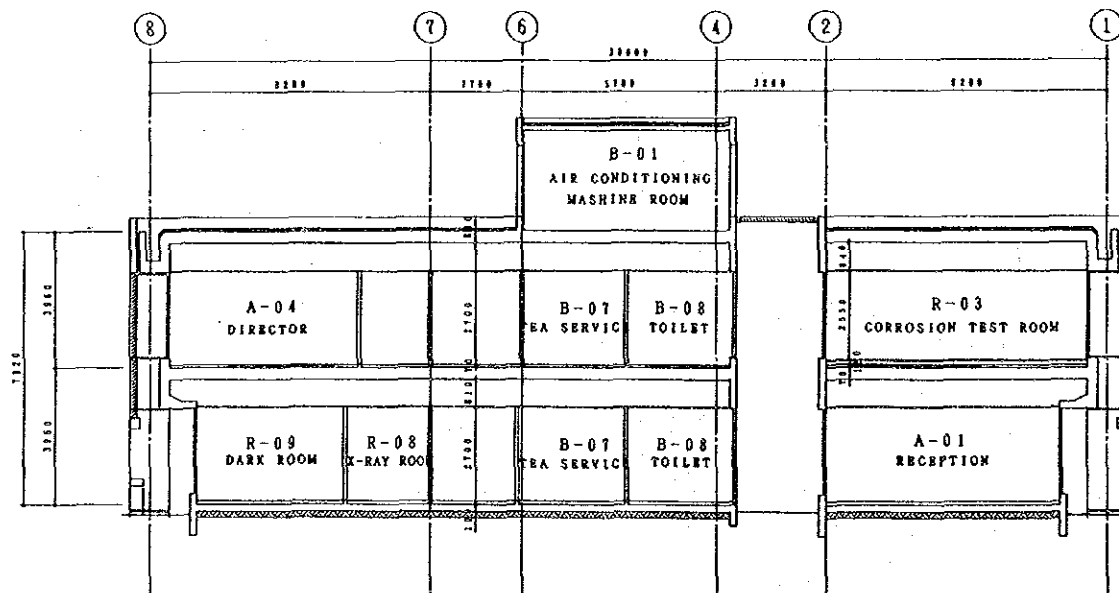
PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION	
TITLE: LABORATORY BUILDING PLAN (GROUND FLOOR)	
DATE: AUG. '87	SCALE: 1/100
DRAWING NO.: SAJ 301-A664	
JAPAN INTERNATIONAL COOPERATION AGENCY	



PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION	
TITLE: LABORATORY BUILDING PLAN (FIRST FLOOR)	
DATE: AUG. '81	SCALE: 1/100
DRAWING NO.: SAJ 304-A005	
JAPAN INTERNATIONAL COOPERATION AGENCY	

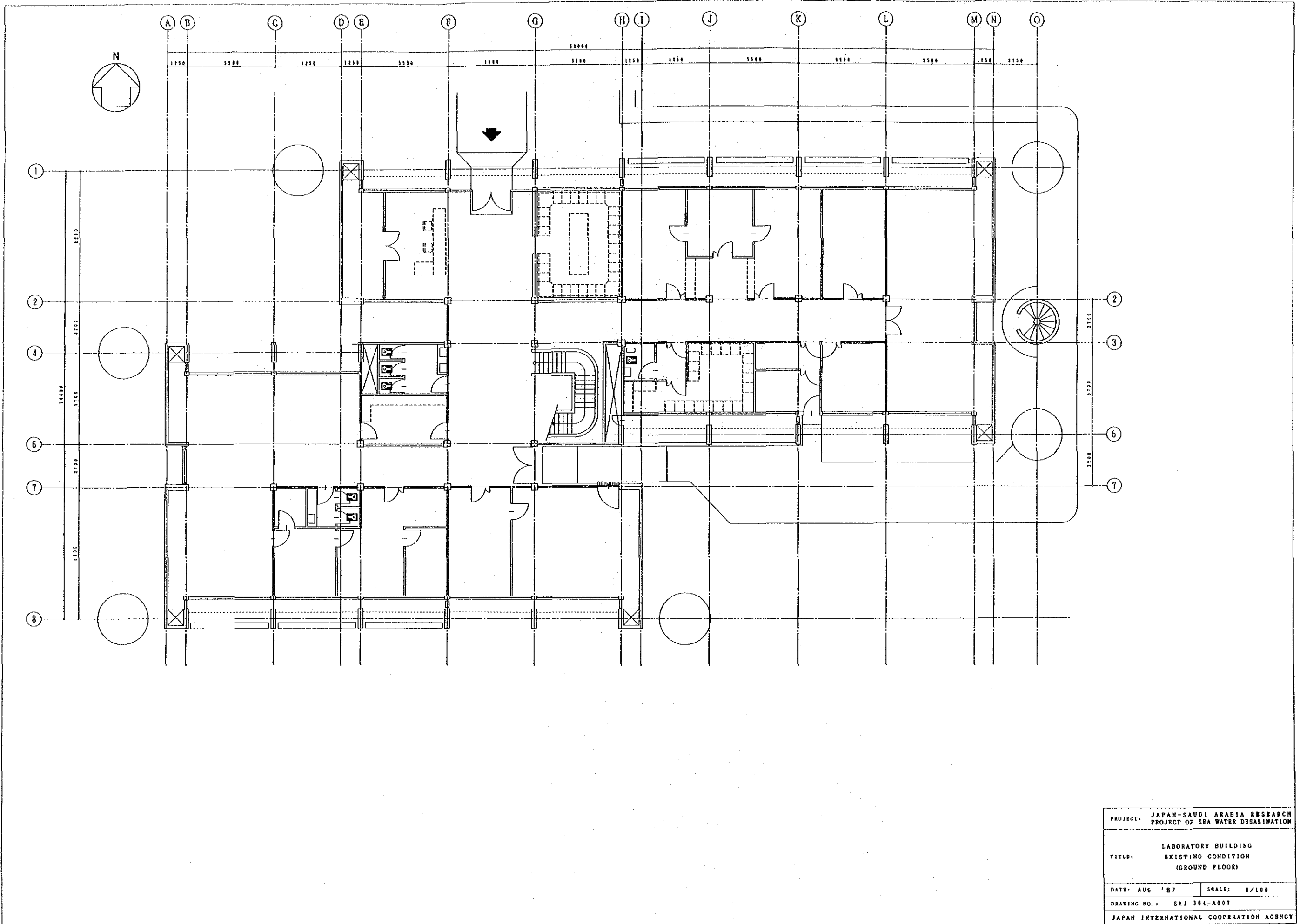


"X" - "X" SECTION

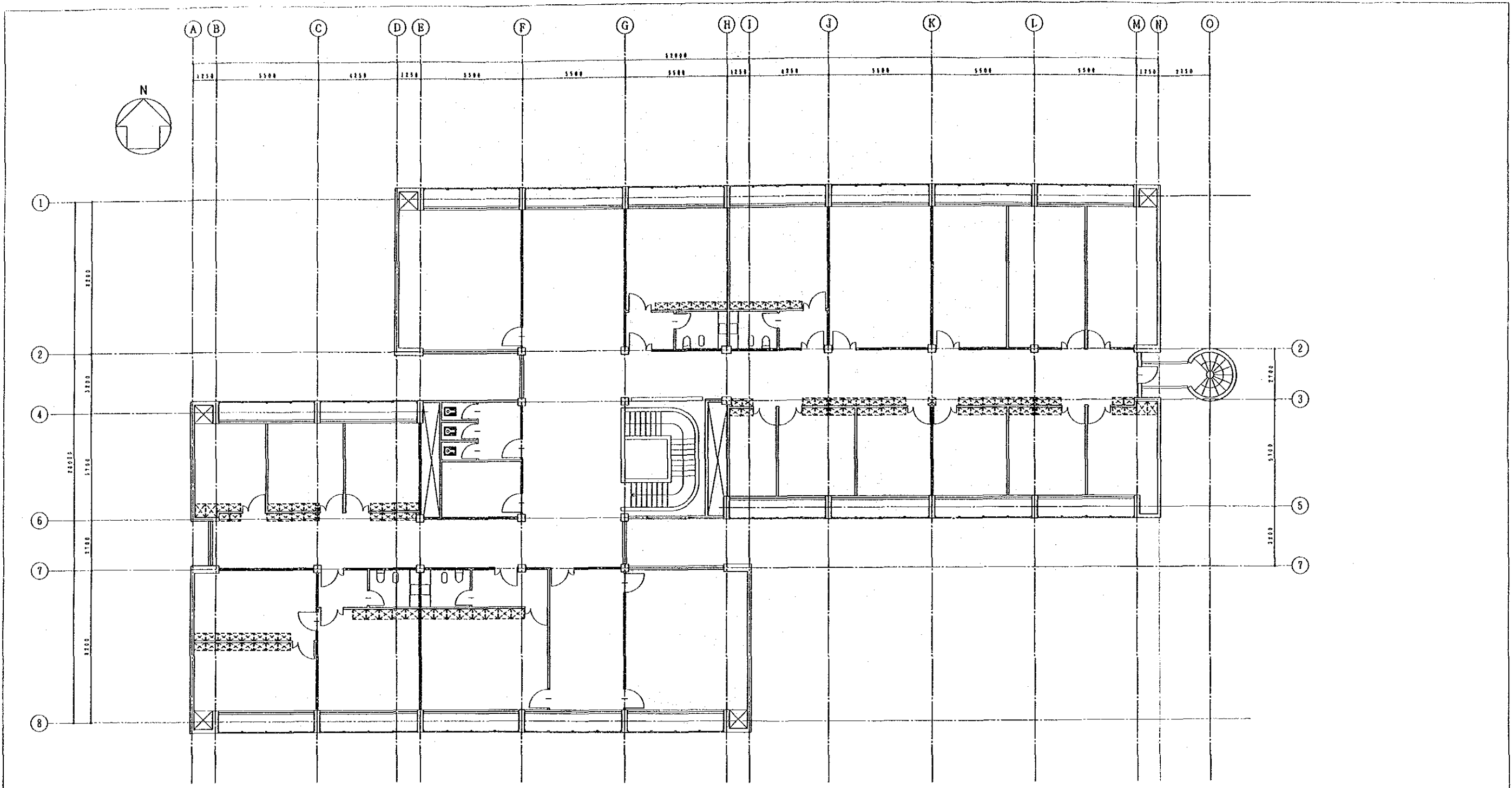


"Y" - "Y" SECTION

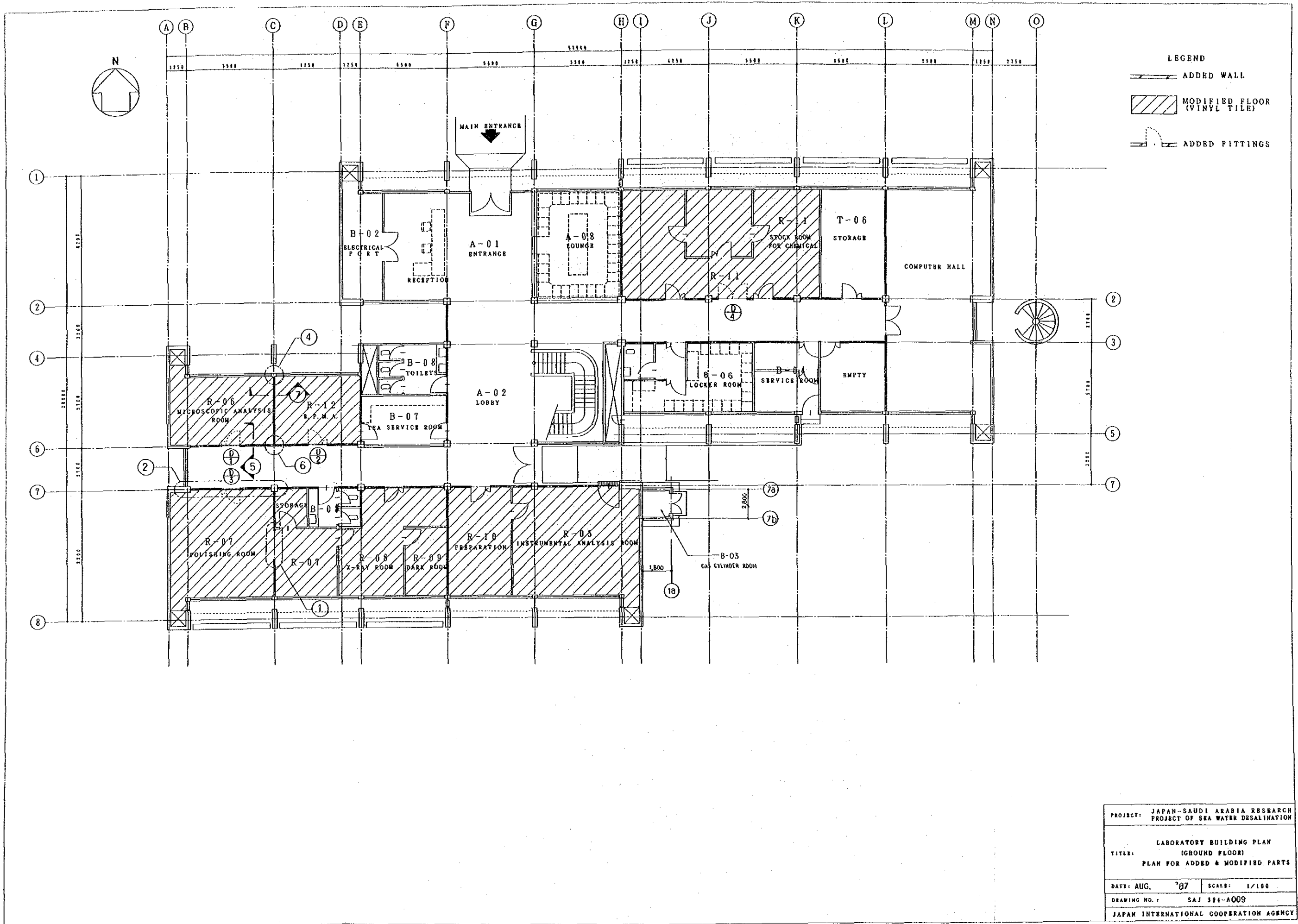
PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION	
TITLE: LABORATORY BUILDING SECTION	
DATE: AUG. '81	SCALE: 1/100
DRAWING NO.: SAJ 304-006	
JAPAN INTERNATIONAL COOPERATION AGENCY	



PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION	
TITLE: LABORATORY BUILDING EXISTING CONDITION (GROUND FLOOR)	
DATE: AUG '87	SCALE: 1/100
DRAWING NO.: SAJ 304-A001	
JAPAN INTERNATIONAL COOPERATION AGENCY	

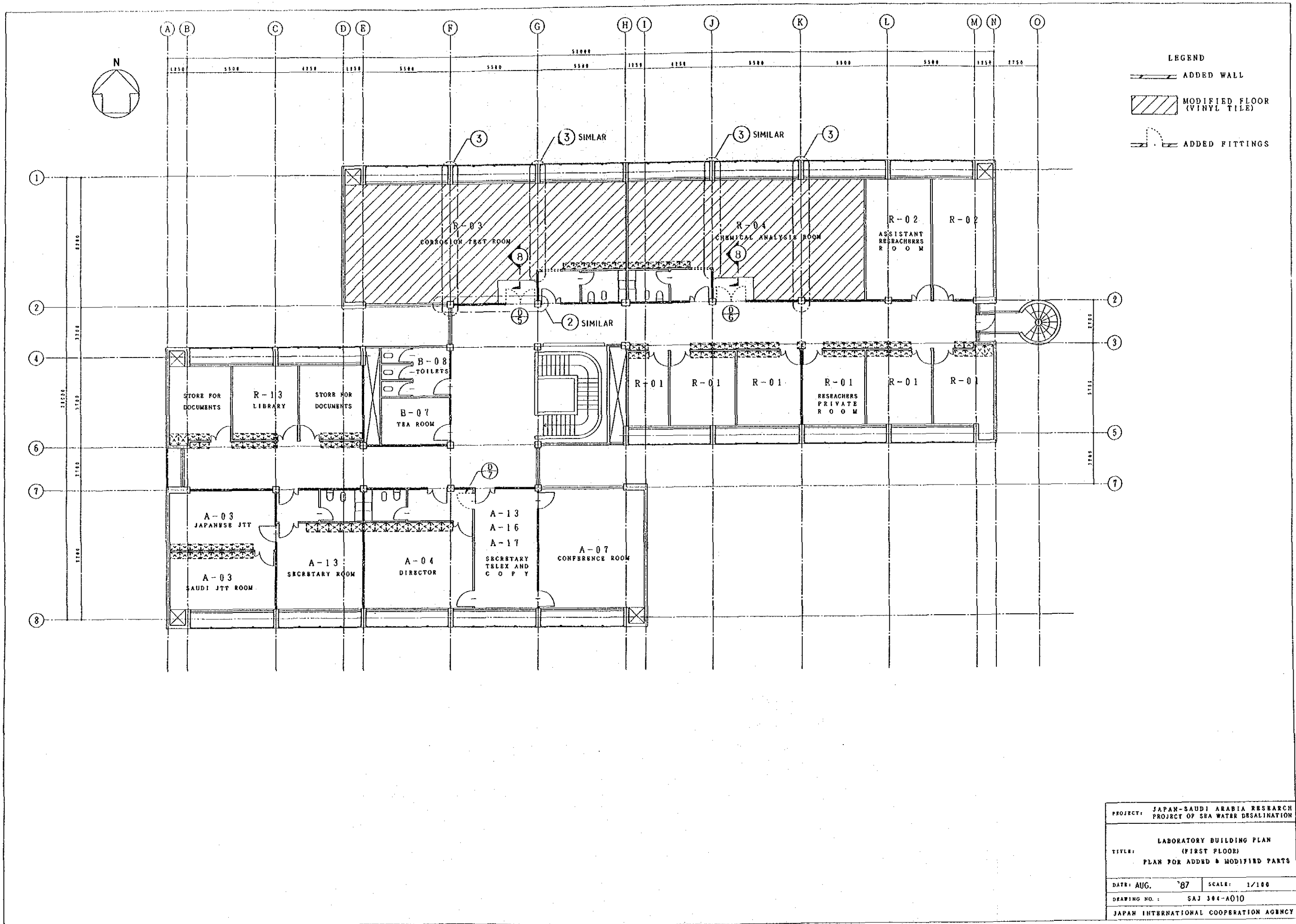


PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION	
TITLE: LABORATORY BUILDING EXISTING CONDITION (FIRST FLOOR)	
DATE: AUG. '81	SCALE: 1/100
DRAWING NO.: SAI 304-R002	
JAPAN INTERNATIONAL COOPERATION AGENCY	

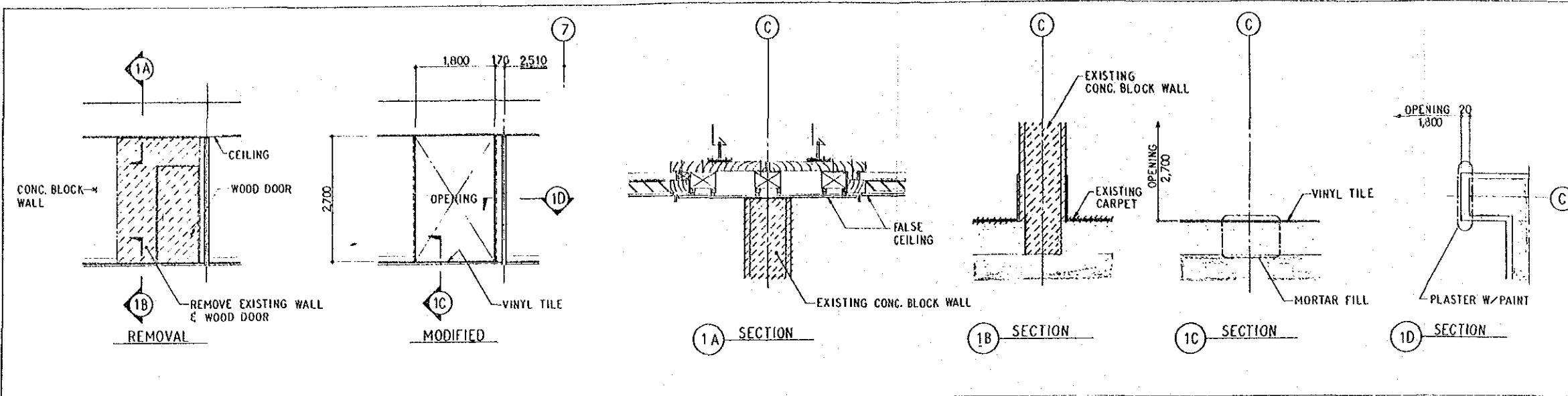


PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION	
TITLE: LABORATORY BUILDING PLAN (GROUND FLOOR) PLAN FOR ADDED & MODIFIED PARTS	
DATE: AUG. '87	SCALE: 1/100
DRAWING NO.: SAJ 304-A009	
JAPAN INTERNATIONAL COOPERATION AGENCY	



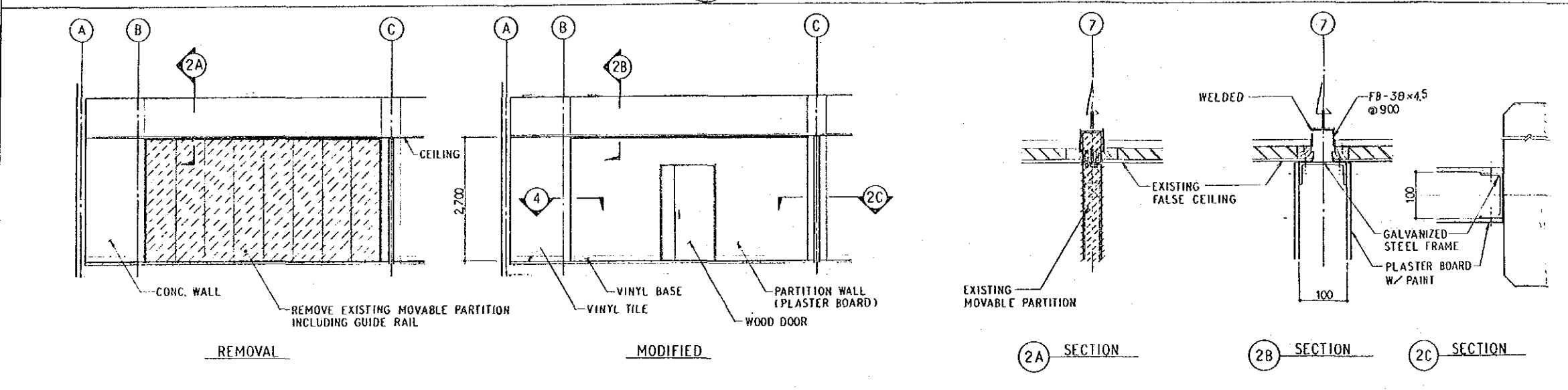


PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION	
TITLE: LABORATORY BUILDING PLAN (FIRST FLOOR) PLAN FOR ADDED & MODIFIED PARTS	
DATE: AUG. '87	SCALE: 1/100
DRAWING NO.: SAJ 304-A010	
JAPAN INTERNATIONAL COOPERATION AGENCY	

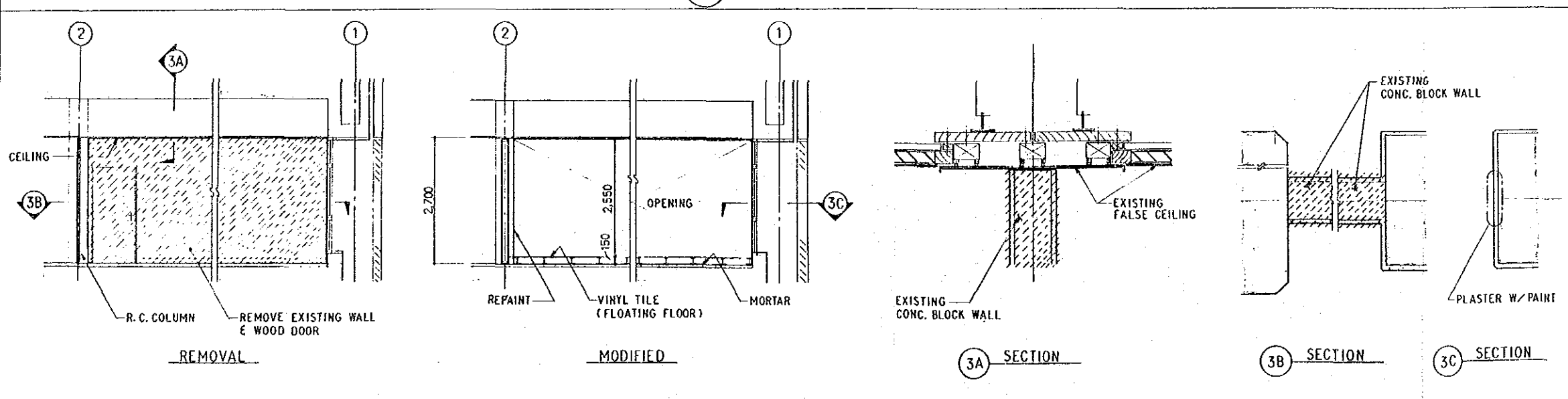


**INDICATION**  
 [Hatched pattern] INDICATES EXISTING  
 [Cross-hatched pattern] TO BE REMOVED

1 DETAIL

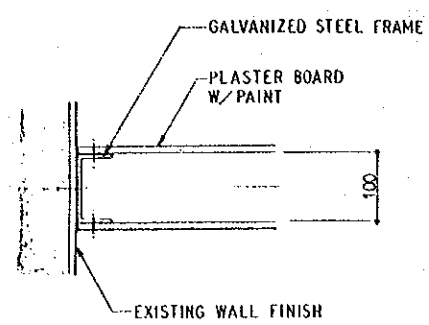


2 DETAIL

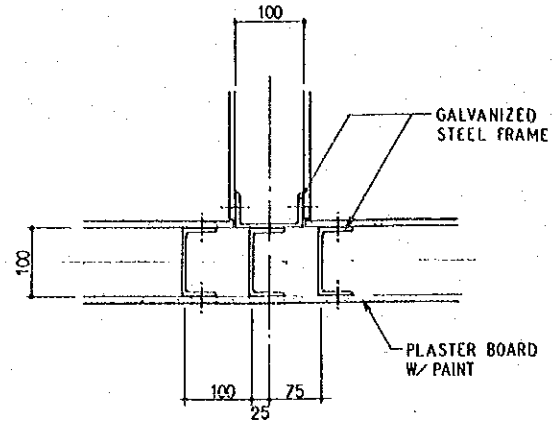


3 DETAIL

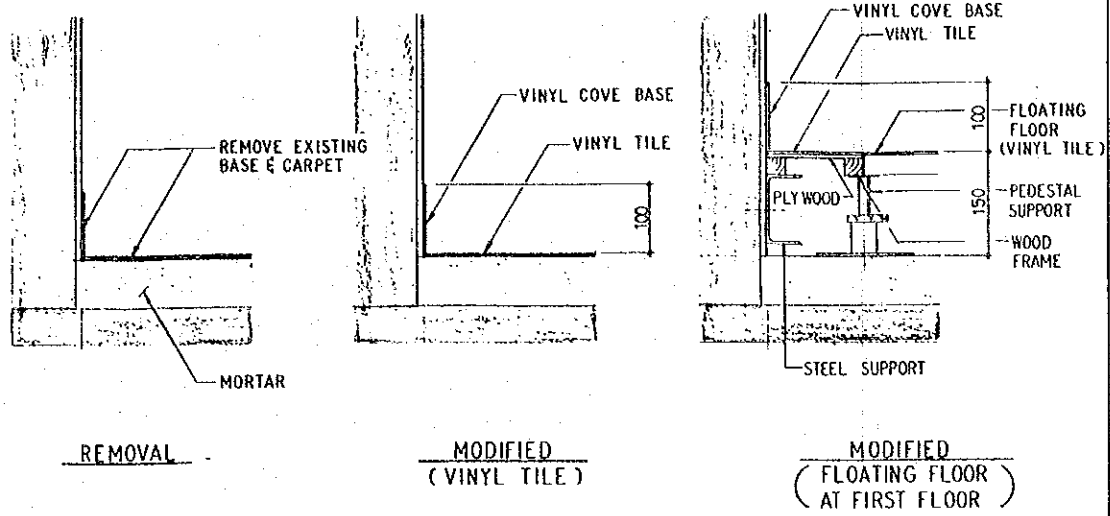
PROJECT: JAPAN-SAUDI ARABIA RESEARCH  
 PROJECT OF SEA WATER DESALINATION  
 TITLE: LABORATORY BUILDING  
 REMOVAL & MODIFIED DETAILS (1/2)  
 DATE: AUG '87 SCALE: 1:50, 1:5  
 DRAWING NO.: SAJ 304-A011  
 JAPAN INTERNATIONAL COOPERATION AGENCY



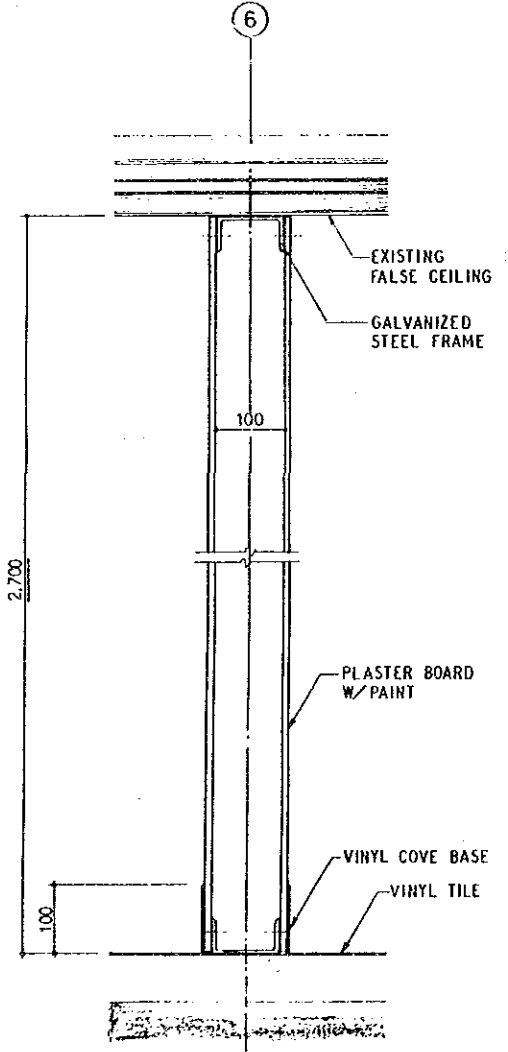
4 DETAIL



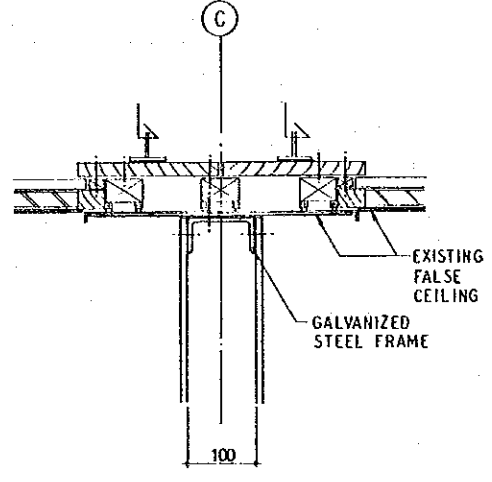
6 DETAIL



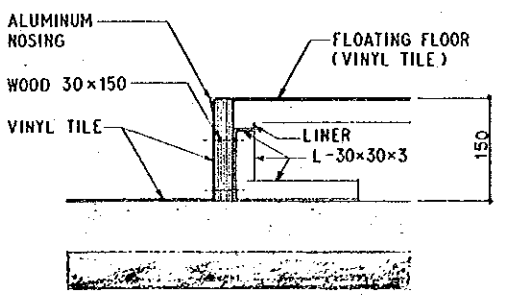
9 FLOOR FINISH DETAIL



5 SECTION



7 SECTION



8 SECTION

PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION

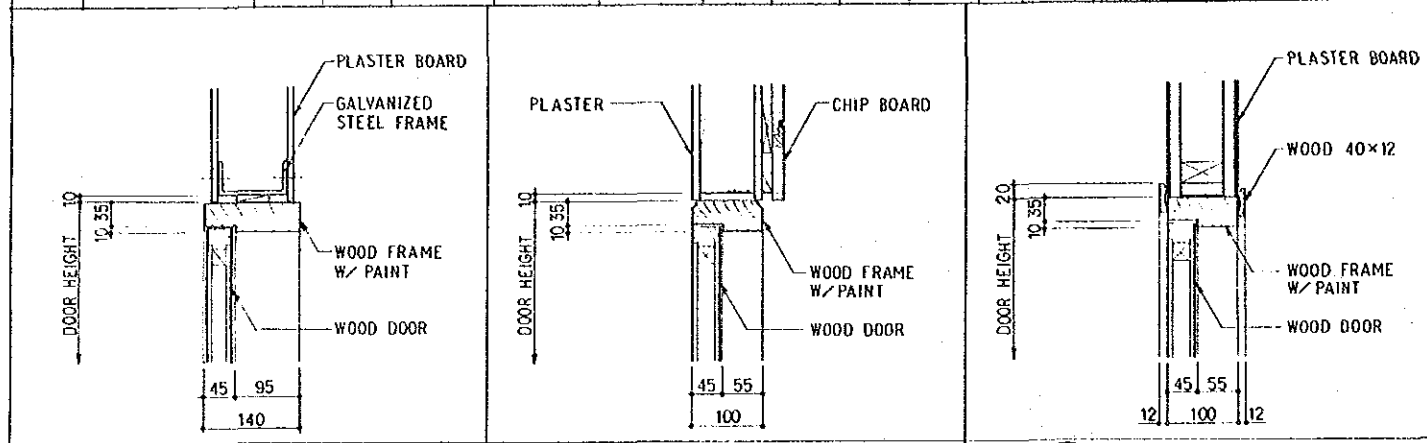
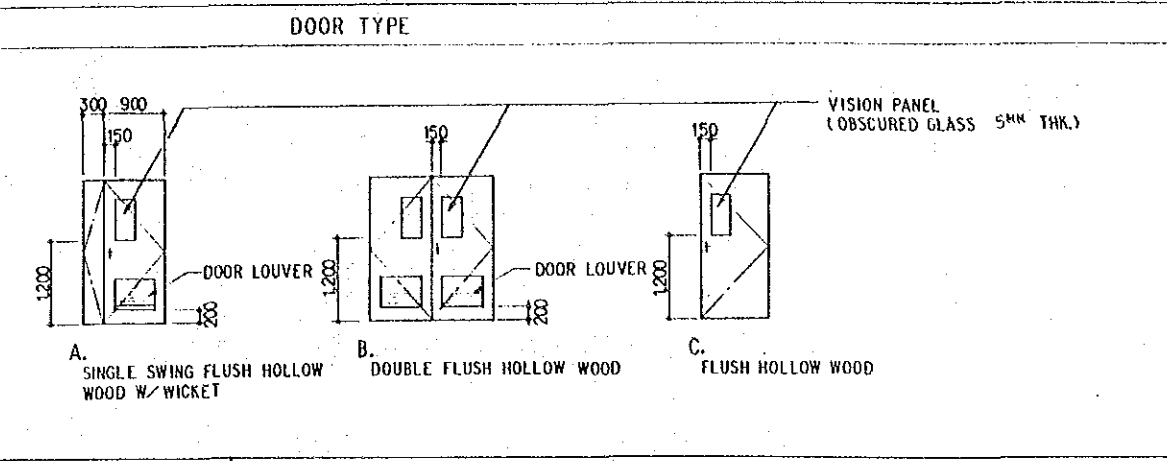
TITLE: LABORATORY BUILDING REMOVAL & MODIFIED DETAILS (2/2)

DATE: AUG '87 SCALE: 1:5

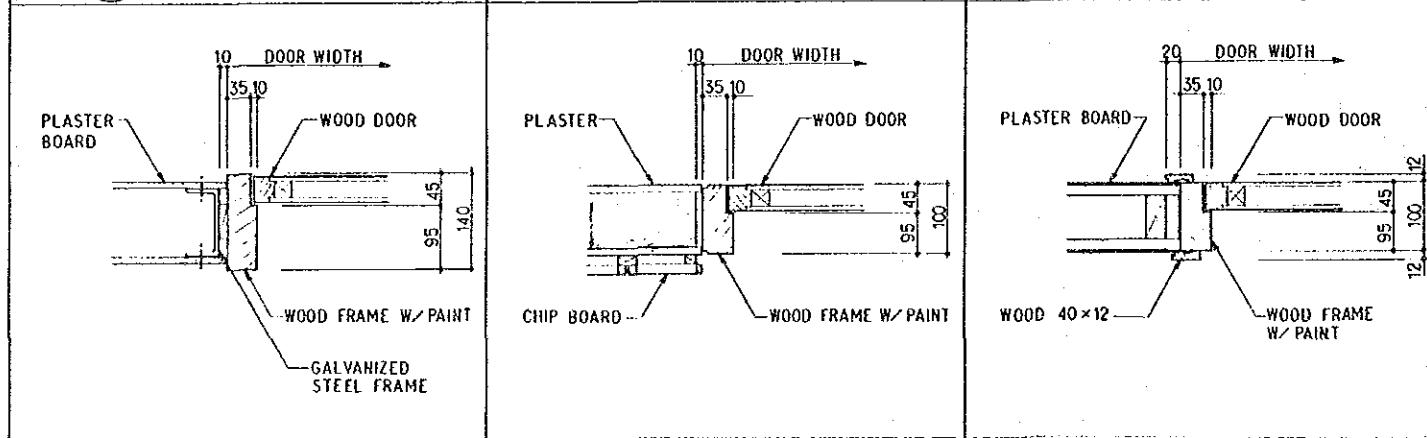
DRAWING NO.: SAJ 304-A012

JAPAN INTERNATIONAL COOPERATION AGENCY

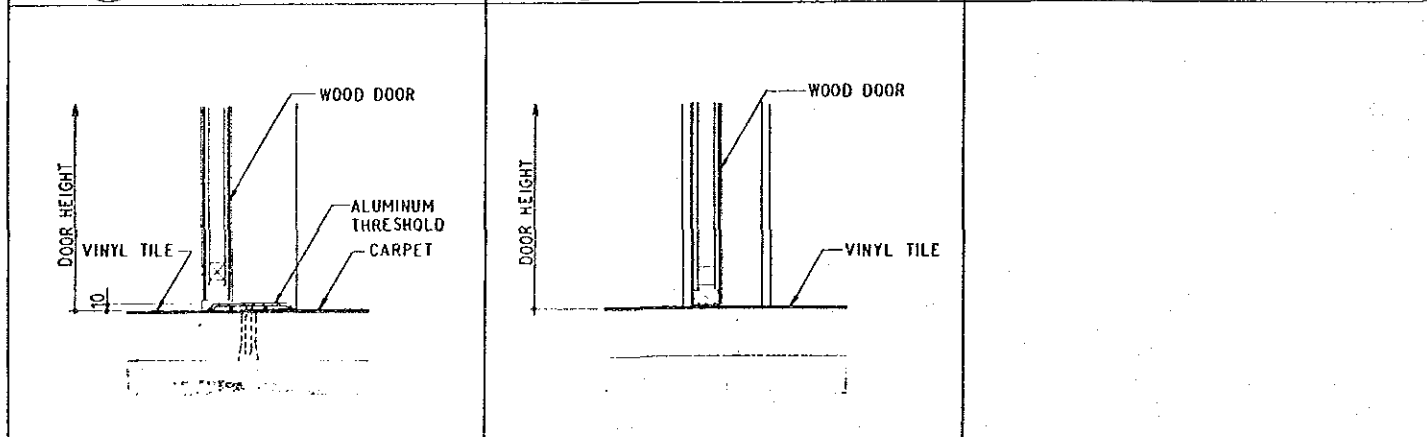
DOOR SCHEDULE												
NO.	SIZE (W x H)	THK.	TYPE	MATERIAL			DETAIL NO.			HARDWARE TYPE	REMARKS	
				DOOR	FRAME	THRESHOLD	HEAD	JAMB	THRES.		VISION PANEL SIZE (W x H)	DOOR LOUVER SIZE (W x H)
1	1,200 x 2,100	40	A	WOOD	WOOD	ALUMINUM	1	2	3	1	300 x 600	600 x 450
2	1,200 x 2,100	40	A	DO.	DO.	DO.	1	2	3	1	DO.	DO.
3	1,200 x 2,100	40	A	DO.	DO.	DO.	1	2	3	1	DO.	DO.
4	1,800 x 2,100	40	B	DO.	DO.	DO.	4	5	3	1	DO.	DO.
5	1,800 x 2,100	40	B	DO.	DO.	DO.	4	5	3	1	DO.	DO.
6	1,800 x 2,100	40	B	DO.	DO.	DO.	4	5	3	1	DO.	DO.
7	1,000 x 2,100	40	C	DO.	DO.	—	7	8	6	2	DO.	—



1 HEAD      4 HEAD      7 HEAD



2 JAMB      5 JAMB      8 JAMB



3 THRESHOLD      6 THRESHOLD

HARDWARE TYPE

- 3 PAIR BUTTS  
LOCKSET - MORTICE TYPE  
KNOB (ACTIVE LEAF)  
DEAD BOLT  
FLUSH BOLT FOR FIXING ONE PANEL  
DOOR CLOSER
- 1-1/2 PAIR BUTTS  
LOCKSET - MORTICE TYPE  
KNOB  
DEAD BOLT  
DOOR CLOSER

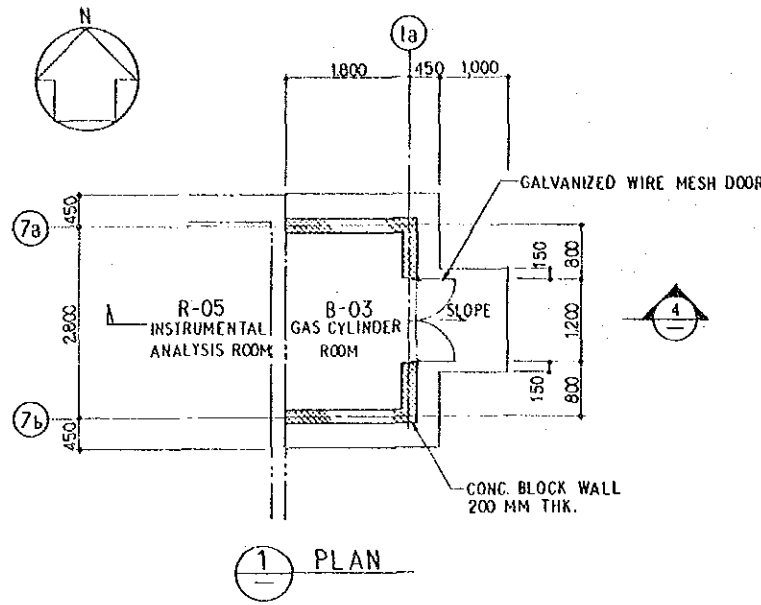
PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION

TITLE: LABORATORY BUILDING  
ADDITIONAL DOOR & DETAILS

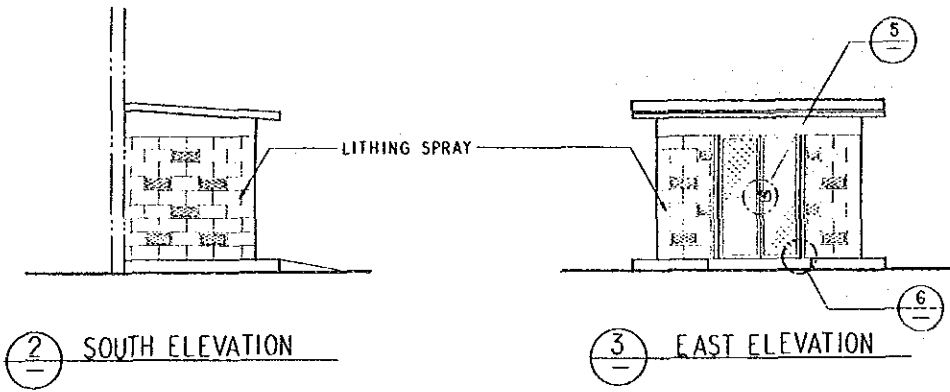
DATE: AUG '87    SCALE: 1:5

DRAWING NO.: SAJ 304 - A013

JAPAN INTERNATIONAL COOPERATION AGENCY

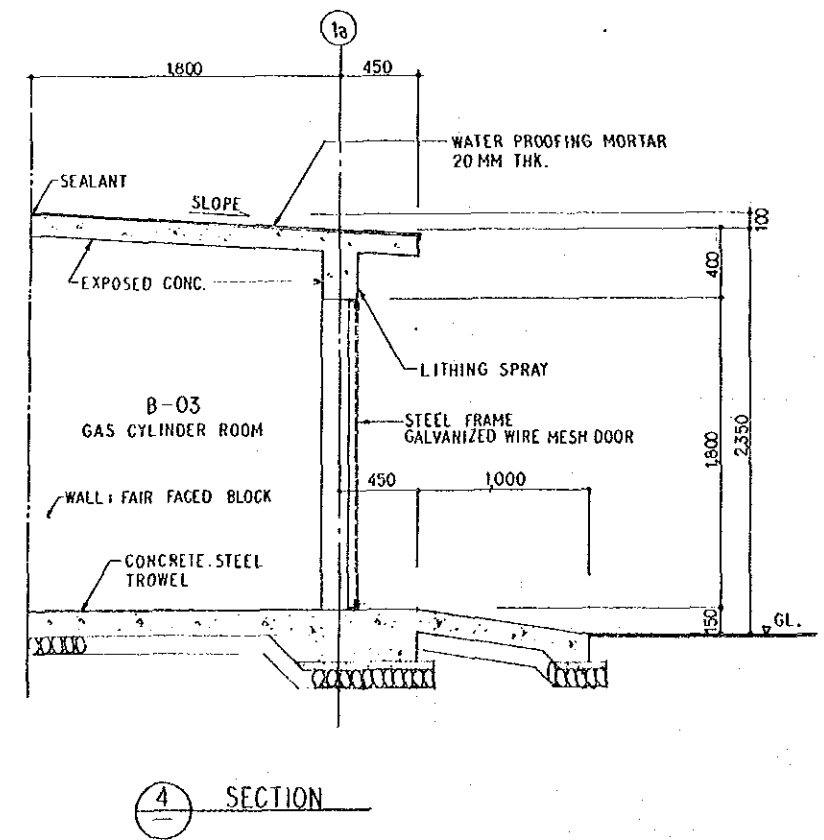


1 PLAN

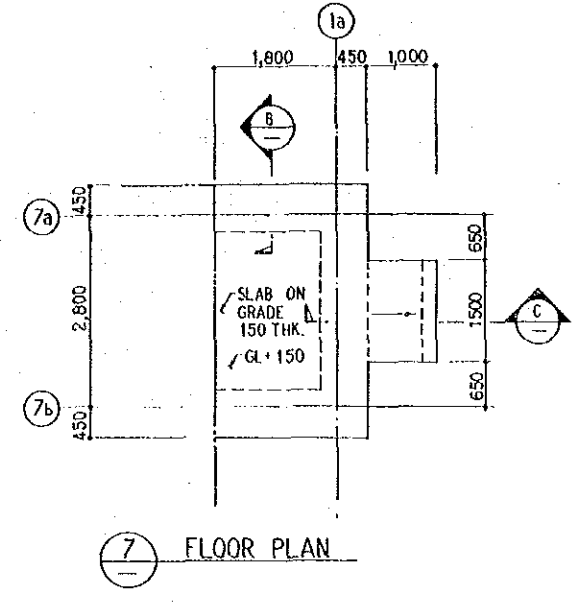


2 SOUTH ELEVATION

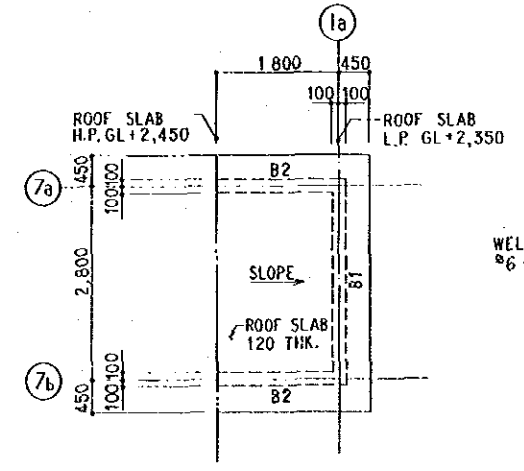
3 EAST ELEVATION



4 SECTION



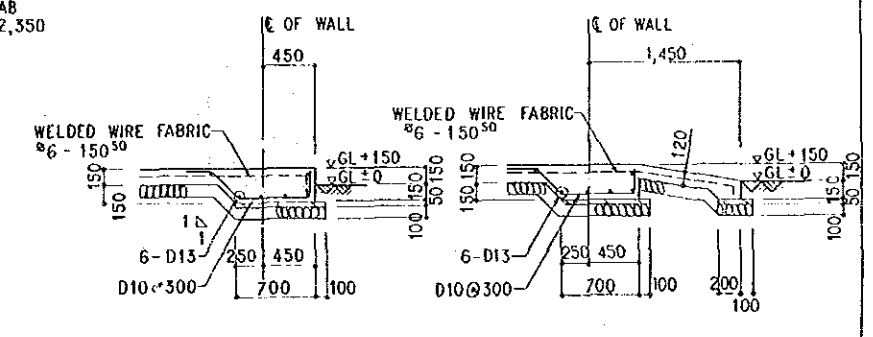
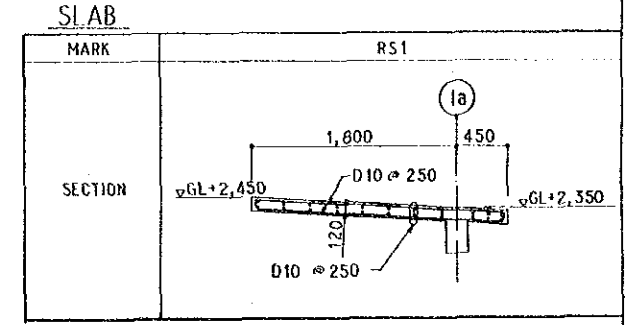
7 FLOOR PLAN



8 ROOF PLAN

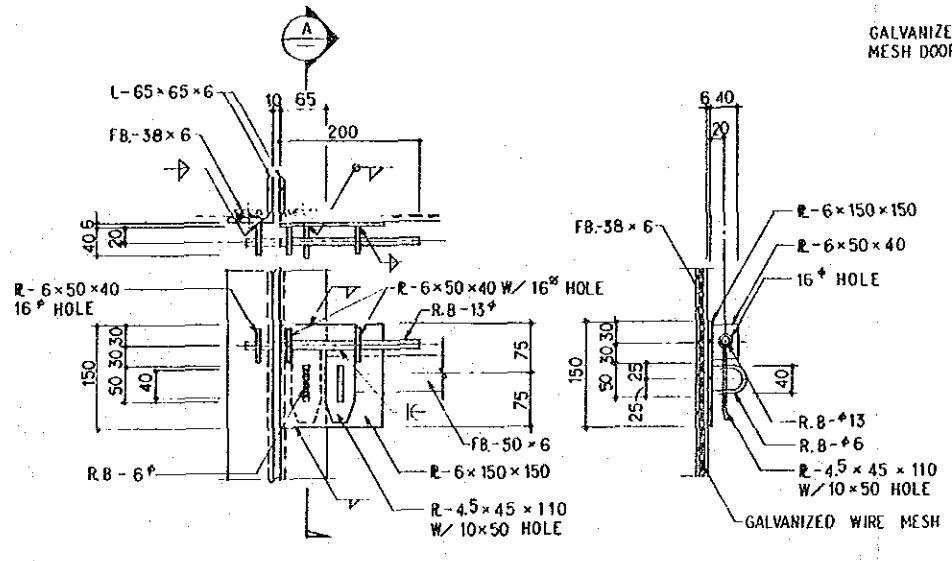
**BOND BEAM**

MARK	B1	B2
PORTION	ALL	ALL
SECTION		
TOP BAR	2 - D10	2 - D10
BOT. BAR	2 - D13	2 - D13
STIRRUP	D10 @ 250	D10 @ 250



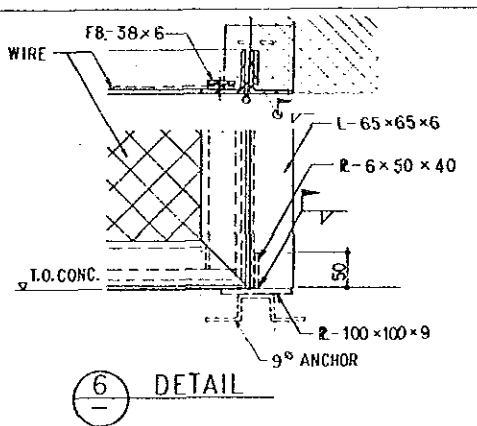
B SECTION

C SECTION



5 DETAIL

A SECTION



6 DETAIL

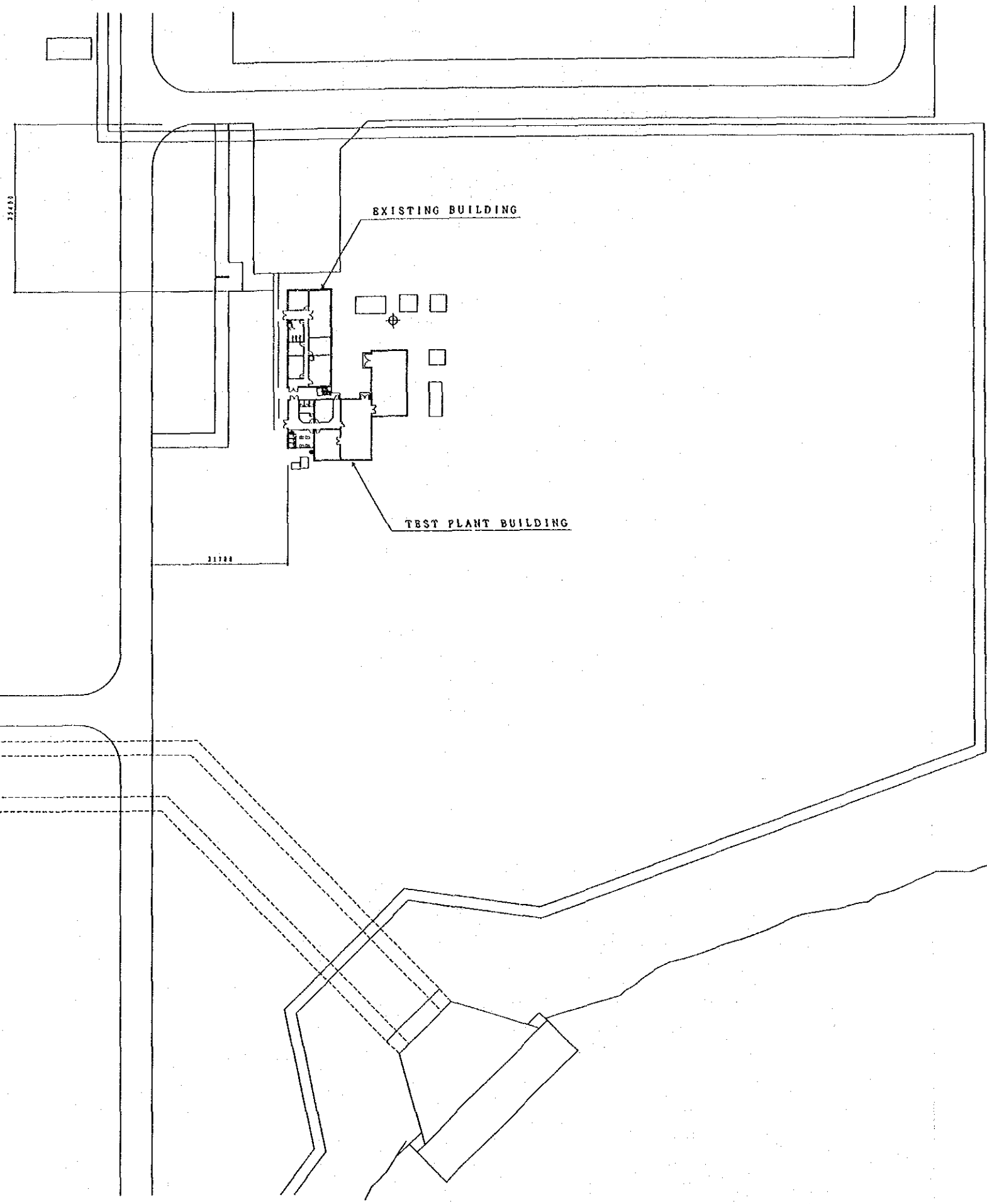
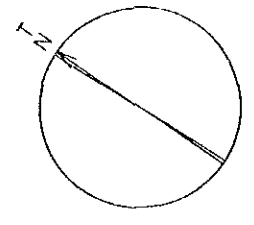
PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION

TITLE: LABORATORY BUILDING GAS CYLINDER ROOM PLANS, ELEVATIONS, DETAILS & LIST

DATE: AUG '87 SCALE: 1:50, 1:5, 1:20

DRAWING NO.: SAJ 304-A014

JAPAN INTERNATIONAL COOPERATION AGENCY



31703

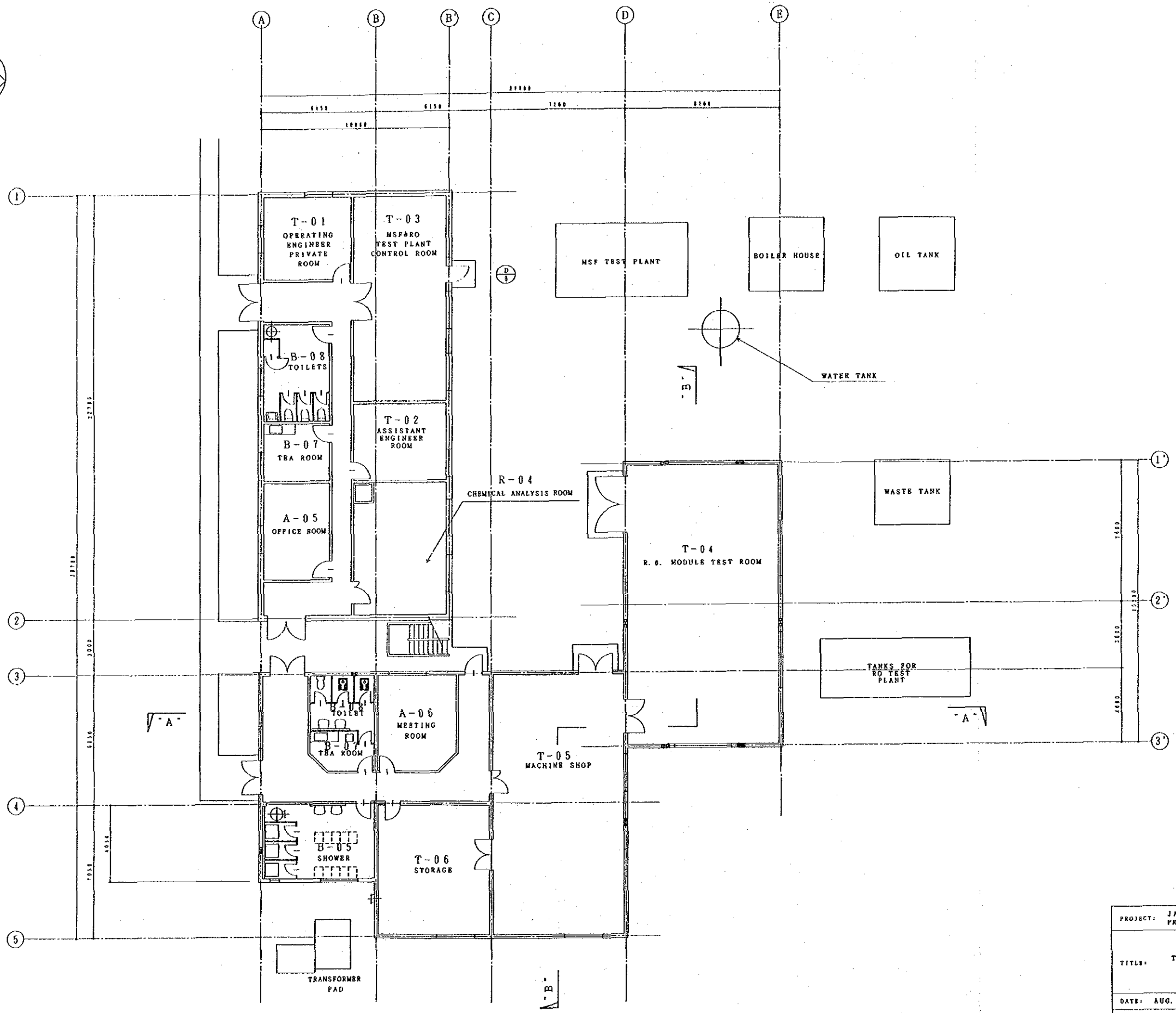
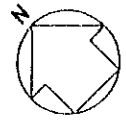
EXISTING BUILDING

TEST PLANT BUILDING

31704

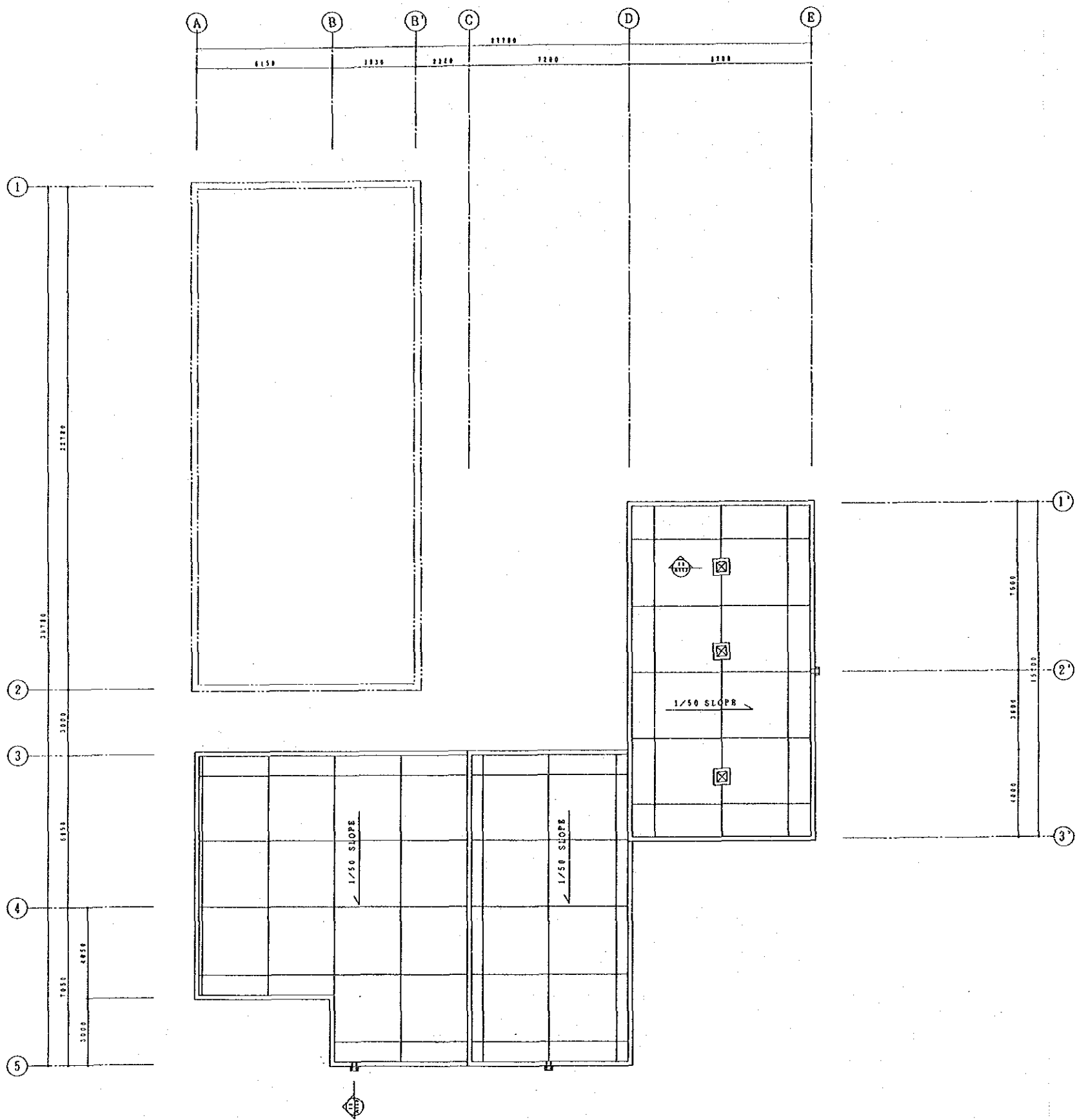
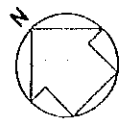
PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF S9A WATER DESALINATION	
TITLE: TEST PLANT BUILDING SITE PLAN	
DATE: AUG '81	SCALE: 1:500
DRAWING NO.: SAJ 304-A101	
JAPAN INTERNATIONAL COOPERATION AGENCY	

EXTERIOR FINISH SCHEDULE										NOTE
SURFACE OF PARTS		MATERIAL			FINISH			REMARKS		
FRAME		REINFORCED CONCRETE			CEMENT MORTAR LITHING SPRAY					
FOUNDATION		REINFORCED CONCRETE								
ROOF		REINFORCED CONCRETE			VINYL SHEET WATER PROOF CEMENT MORTAR FINISH			SLOPE 2%		
GIRDER, COLUMN, EAVES		REINFORCED CONCRETE								
WALL		CONCRETE BLOCK 20cm THK			CEMENT MORTAR LITHING SPRAY					
BASE		CEMENT MORTAR			STEEL TROWEL FINISH					
DOOR & FRAME		STEEL			OIL PAINT					
WINDOW & FRAME		ALUMINIUM								
INTERIOR FINISH SCHEDULE										
RM NO	ROOM NAME	FLOOR	BASE	HEIGHT	WAINSCOT	HEIGHT	WALL	CEILING	HEIGHT	REMARKS
T-01	OPERATING ENGINEER'S ROOM	AS IT IS	AS IT IS				AS IT IS	AS IT IS		
T-02	ASSISTANT ENGINEER'S ROOM	AS IT IS	AS IT IS				AS IT IS	AS IT IS		
T-03	TEST PLANT CONTROL ROOM	AS IT IS	AS IT IS				AS IT IS	AS IT IS		
T-04	RO MODULE TEST ROOM	MORTAR STEEL TROWEL	MORTAR STEEL TROWEL	100			MORTAR STEEL TROWEL	EXPOSED		
T-05	MACHINE SHOP	MORTAR STEEL TROWEL	MORTAR STEEL TROWEL	100			MORTAR STEEL TROWEL	EXPOSED		
T-06	STORAGE	MORTAR STEEL TROWEL	MORTAR STEEL TROWEL	100			MORTAR STEEL TROWEL	EXPOSED		
R-04	CHEMICAL ANALYSIS ROOM	AS IT IS	VINYL	100			MORTAR STEEL TROWEL EP	AS IT IS *		* RE-ARRANGEMENT
A-05	OFFICE ROOM	AS IT IS	VINYL	100			MORTAR STEEL TROWEL EP	AS IT IS *		* RE-ARRANGEMENT
A-06	MEETING ROOM	VINYL TILE	VINYL	100			MORTAR STEEL TROWEL EP	ACOUSTIC CEMENT BOARD	2400	
B-05	SHOWER ROOM	CERAMIC TILE			CERAMIC TILE	2100	MORTAR STEEL TROWEL EP	GLASS FIBER CEMENT BOARD VP	2400	
B-06	LOCKER ROOM	VINYL TILE	VINYL	100			MORTAR STEEL TROWEL EP	GLASS FIBER CEMENT BOARD VP	2400	
B-07	TEA SERVICE ROOM	VINYL TILE	VINYL	100			MORTAR STEEL TROWEL EP	GLASS FIBER CEMENT BOARD VP	2400	
B-08	TOILET	CERAMIC TILE			CERAMIC TILE	1600	MORTAR STEEL TROWEL EP	GLASS FIBER CEMENT BOARD VP	2400	
		PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION								
		TITLE: TEST PLANT BUILDING FINISH SCHEDULE								
		DATE: AUG. '87			SCALE: NONE					
		DRAWING NO. : SAJ 304-A102								
		JAPAN INTERNATIONAL COOPERATION AGENCY								

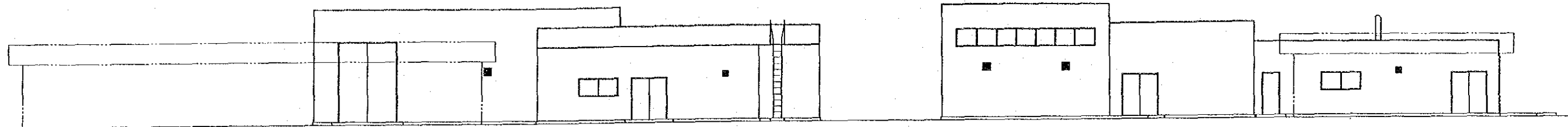


PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION	
TITLE: TEST PLANT BUILDING PLAN (GROUND FLOOR)	
DATE: AUG. '81	SCALE: 1:100
DRAWING NO.: SAJ 304-A103	
JAPAN INTERNATIONAL COOPERATION AGENCY	



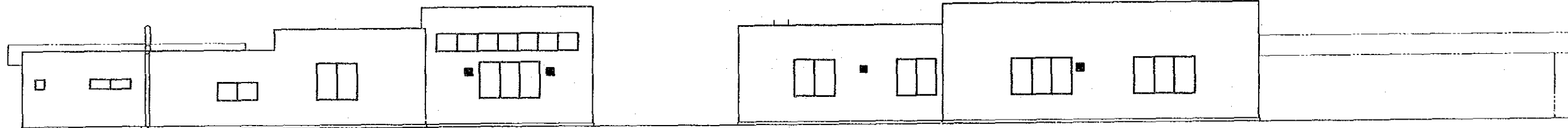


PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION	
TITLE: TEST PLANT BUILDING PLAN (ROOF FLOOR)	
DATE: AUG. '87	SCALE: 1:100
DRAWING NO.: SAJ 304-A104	
JAPAN INTERNATIONAL COOPERATION AGENCY	



WEST ELEVATION

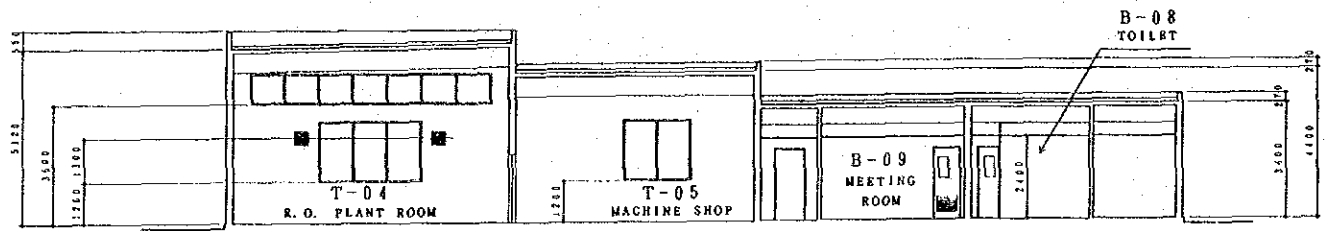
NORTH ELEVATION



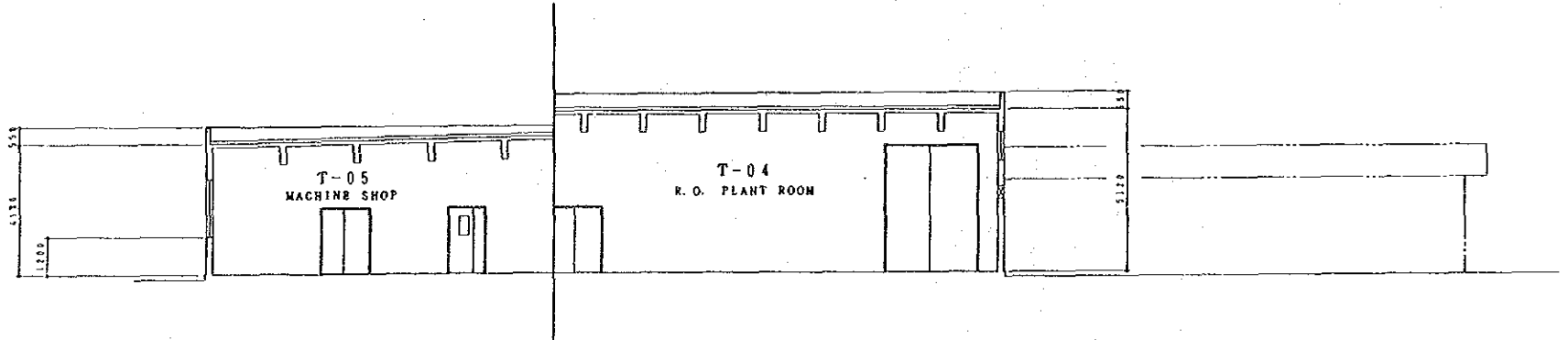
SOUTH ELEVATION

EAST ELEVATION

PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION	
TITLE: TEST PLANT BUILDING ELEVATION	
DATE: AUG '87	SCALE: 1/100
DRAWING NO.: SAJ 304-A105	
JAPAN INTERNATIONAL COOPERATION AGENCY	

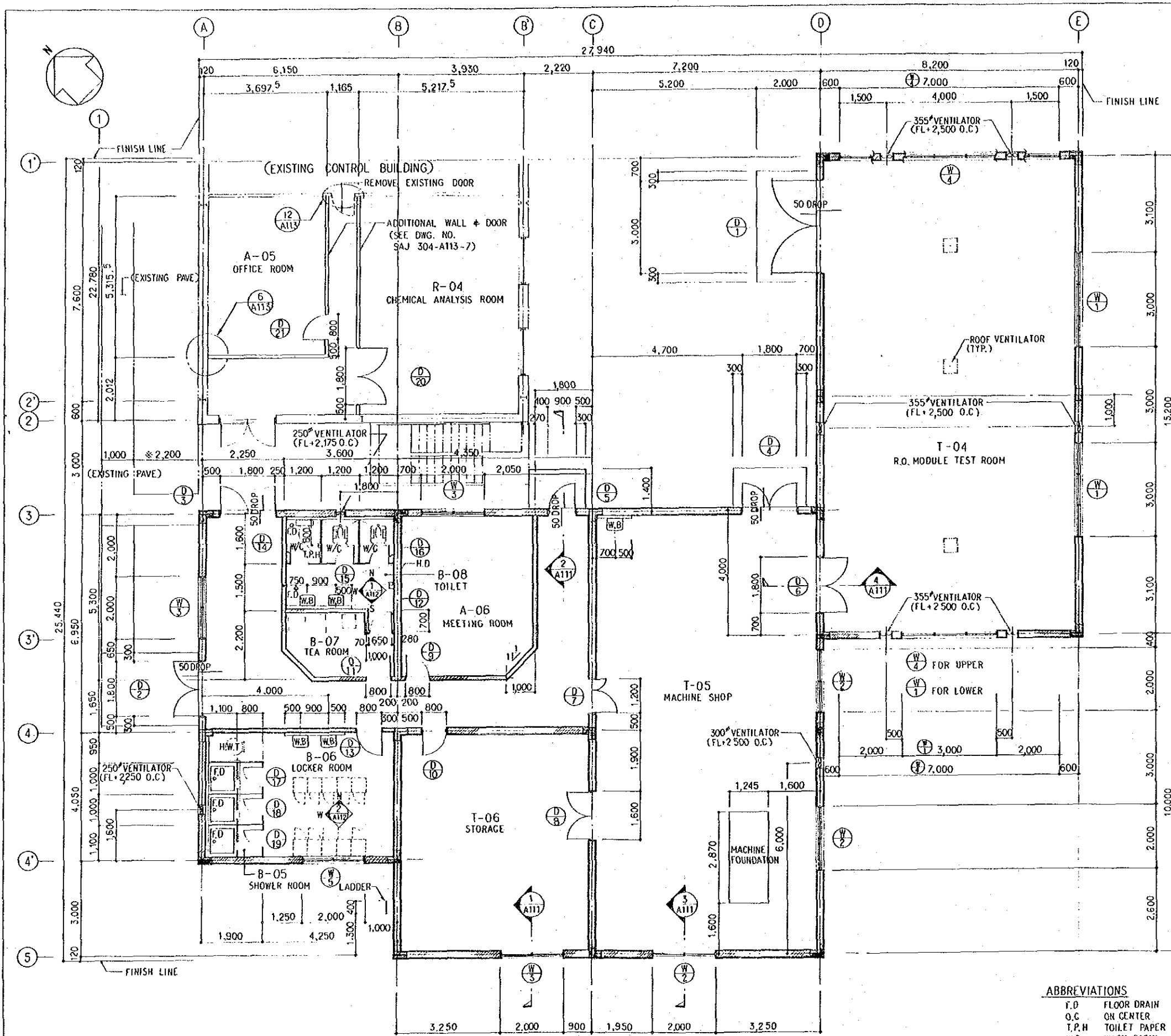


"A-A" SECTION



"B-B" SECTION

PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION	
TITLE: TEST PLANT BUILDING SECTION	
DATE: AUG' 87	SCALE: 1:100
DRAWING NO.: SAJ 304-A106	
JAPAN INTERNATIONAL COOPERATION AGENCY	

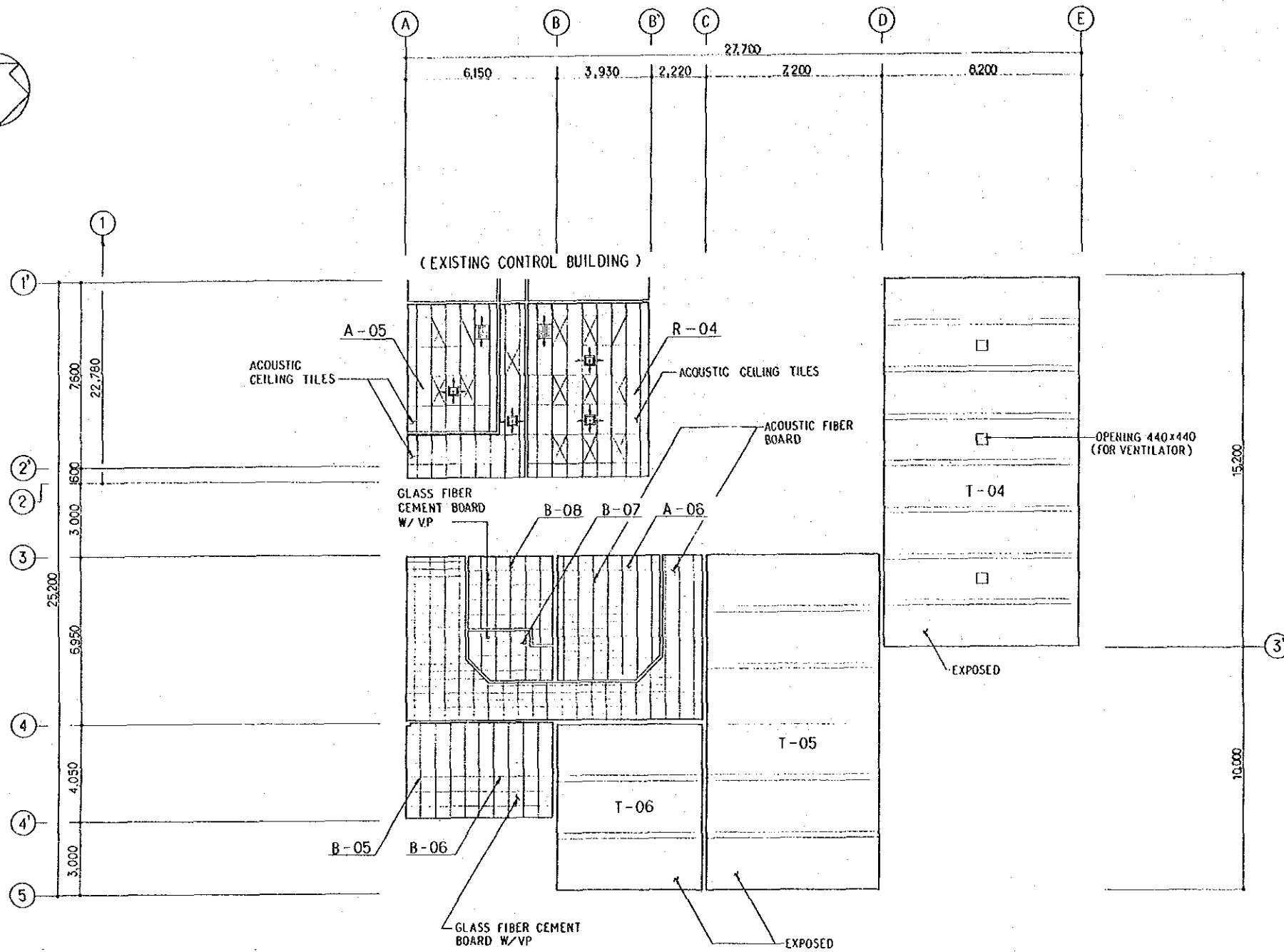
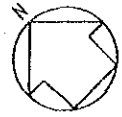


1  
—  
DETAIL FLOOR PLAN




\* THE DIMENSION SHALL BE ADJUSTED ACCORDING TO EXISTING PAVE

- ABBREVIATIONS**
- F.D FLOOR DRAIN
  - O.C ON CENTER
  - T.P.H TOILET PAPER HOLDER
  - W.B WASH BASIN
  - W/C WATER CLOSET
  - H.D HAND DRYER
  - H.W.T HOT WATER TANK

PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION	
TITLE: TEST PLANT BUILDING DETAIL FLOOR PLAN	
DATE: AUG '87	SCALE: 1:60
DRAWING NO.: SAJ 304-A107	
JAPAN INTERNATIONAL COOPERATION AGENCY	



RM. NO	ROOM NAME
T - 04	R.O. MODULE TEST ROOM
T - 05	MACHINE SHOP
T - 06	STORAGE
A - 06	MEETING ROOM
B - 05	SHOWER ROOM
B - 06	LOCKER ROOM
B - 07	TEA SERVICE ROOM
B - 08	TOILET
A - 05	OFFICE ROOM
R - 04	CHEMICAL ANALYSIS ROOM

-  CEILING DIFFUSER  
15' x 15'
-  RETURN AIR GRILLE  
24' x 24'
-  PROCESSED FLUORESCENT LIGHTING

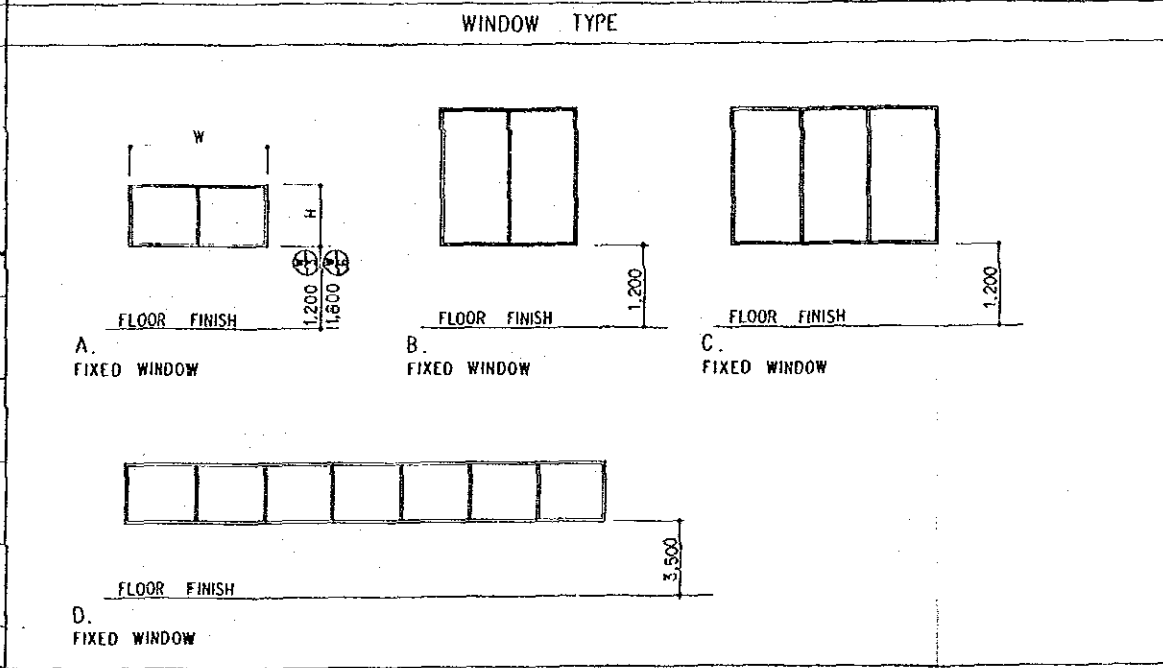
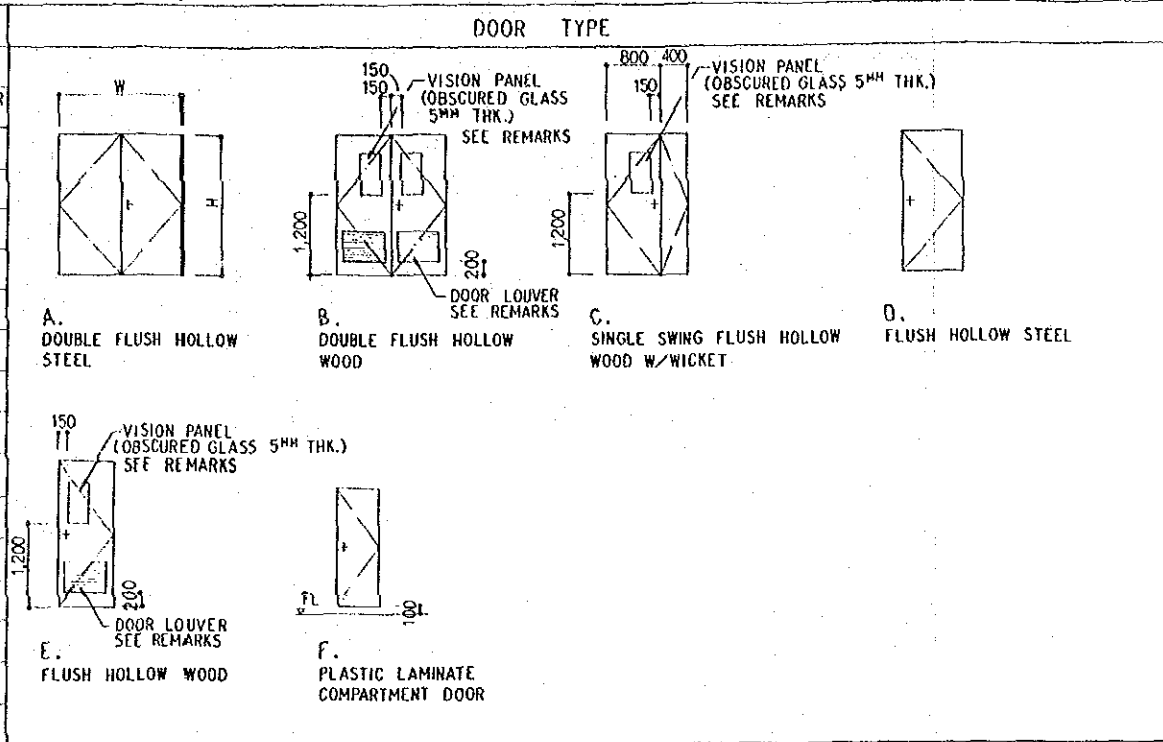
1 CEILING PLAN

PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION	
TITLE: TEST PLANT BUILDING CEILING PLAN	
DATE: AUG '87	SCALE: 1:100
DRAWING NO.: SAJ 304-A108	
JAPAN INTERNATIONAL COOPERATION AGENCY	

DOOR SCHEDULE												
NO.	SIZE (W x H)	THK.	TYPE	MATERIAL			DETAIL NO.			HARDWARE TYPE	REMARKS	
				DOOR	FRAME	THRES.	HEAD	JAMB	THRES.		VISION PANEL SIZE	DOOR LOUVER SIZE
D1	5,000 x 4,000	40	A	STEEL	STEEL	ALUM.	1 A110	2 A110	3 A110	1		
D2	1,800 x 2,100	40	A	D.O.	D.O.	D.O.	1 A110	2 A110	3 A110	1		
D3	1,800 x 2,100	40	A	D.O.	D.O.	D.O.	1 A110	2 A110	3 A110	1		
D4	1,800 x 2,100	40	A	D.O.	D.O.	D.O.	1 A110	2 A110	3 A110	1		
D5	900 x 2,100	40	D	D.O.	D.O.	D.O.	1 A110	2 A110	3 A110	3	REQ'D 2	
D6	1,800 x 2,100	40	A	D.O.	D.O.	D.O.	1 A110	2 A110	3 A110	2		
D7	1,200 x 2,100	40	C	WOOD	WOOD	D.O.	1 A110	2 A110	3 A110	4	300" x 600"	
D8	1,600 x 2,100	40	B	D.O.	D.O.		1 A110	2 A110	3 A110	4		
D9	800 x 2,100	40	E	D.O.	D.O.		1 A110	2 A110	3 A110	5	300" x 600"	600" x 450"
D10	800 x 2,100	40	E	D.O.	D.O.	ALUM.	1 A110	2 A110	3 A110	5	300" x 600"	600" x 450"
D11	800 x 2,100	40	E	D.O.	D.O.		1 A110	2 A110	3 A110	5	300" x 600"	600" x 450"
D12	650 x 2,100	40	E	D.O.	D.O.	ALUM.	1 A110	2 A110	3 A110	7	300" x 600"	
D13	800 x 2,100	40	E	D.O.	D.O.		1 A110	2 A110	3 A110	5	300" x 600"	600" x 450"
D14	610 x 1,725	25	F	PER MANUFACTURE			SEE DWG. NO. SAJ 304-A112-3			6		
D15	610 x 1,725	25	F	D.O.			D.O.			6		
D16	610 x 1,725	25	F	D.O.			D.O.			6		
D17	560 x 1,725	25	F	D.O.			SEE DWG. NO. SAJ 304-A112-4			6		
D18	560 x 1,725	25	F	D.O.			D.O.			6		
D19	560 x 1,725	25	F	D.O.			D.O.			6		
D20	1,800 x 2,100	40	B	WOOD	WOOD		10 A110	11 A110	9 A110	4	300" x 600"	600" x 450"
D21	800 x 2,100	40	E	D.O.	D.O.		10 A110	11 A110	9 A110	5	300" x 600"	600" x 450"

WINDOW SCHEDULE											
NO.	SIZE (W x H)	THK.	TYPE	MATERIAL			DETAIL NO.			HARDWARE TYPE	REMARKS
				WINDOW	FRAME	HEAD	JAMB	SILL			
W1	3,000 x 1,800		C	CLEAR GLASS 5MM THK.	ALUM.	13 A110	14 A110	15 A110		REQ'D 5	
W2	2,000 x 1,800		B	D.O.	D.O.	13 A110	14 A110	15 A110		REQ'D 3	
W3	2,000 x 900		A	D.O.	D.O.	13 A110	14 A110	15 A110		REQ'D 3	
W4	7,000 x 900		D	D.O.	D.O.	13 A110	14 A110	15 A110		REQ'D 2	
W5	2,000 x 500		A	D.O.	D.O.	13 A110	14 A110	15 A110		REQ'D 1	

HARDWARE TYPE	
1. 3 PAIR BUTTS LOCKSET-MORTICE TYPE LEVER HANDLE (ACTIVE LEAF) DEAD BOLT FLUSH BOLT FOR FIXING ONE PANEL DOOR CLOSER	4. 3 PAIR BUTTS LOCKSET-MORTICE TYPE KNOB (ACTIVE LEAF) FLUSH BOLT FOR FIXING ONE PANEL DOOR CLOSER
2. 3 PAIR BUTTS LOCKSET-MORTICE TYPE LEVER HANDLE (ACTIVE LEAF) FLUSH BOLT FOR FIXING ONE PANEL DOOR CLOSER	5. 1-1/2 PAIR BUTTS LOCKSET-MORTICE TYPE KNOB DOOR CLOSER
3. 1-1/2 PAIR BUTTS LOCKSET-MORTICE TYPE LEVER HANDLE DEAD BOLT DOOR CLOSER	6. LOCKSET-LAVATORY LATCH LAVATORY HINGE
	7. 1-1/2 PAIR BUTTS PUSH AND PULL PLATES KICK PLATE - PUSH SIDE DOOR CLOSER



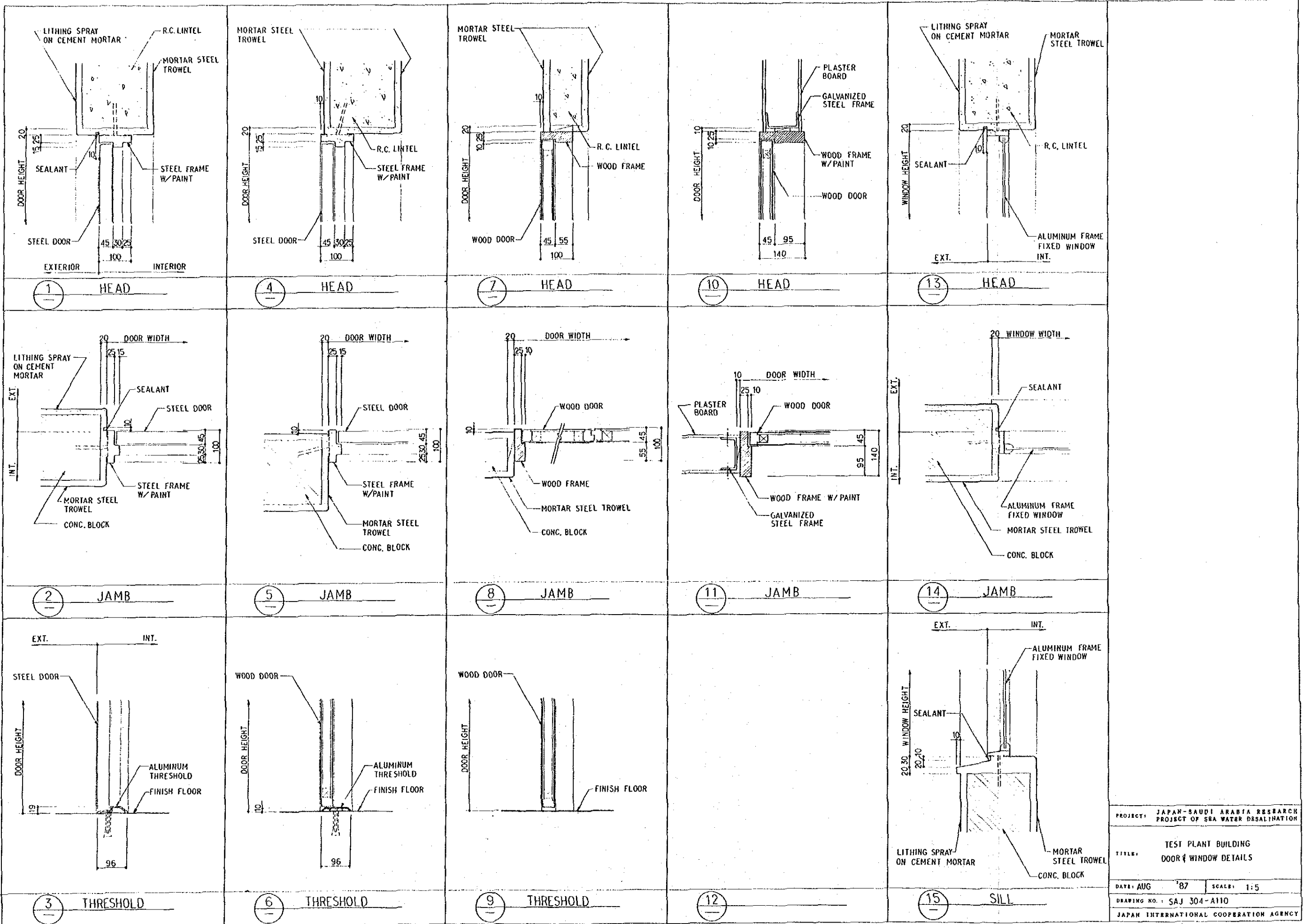
PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION

TITLE: TEST PLANT BUILDING DOOR & WINDOW SCHEDULE

DATE: AUG '87 SCALE: ---

DRAWING NO.: SAJ 304-A109

JAPAN INTERNATIONAL COOPERATION AGENCY



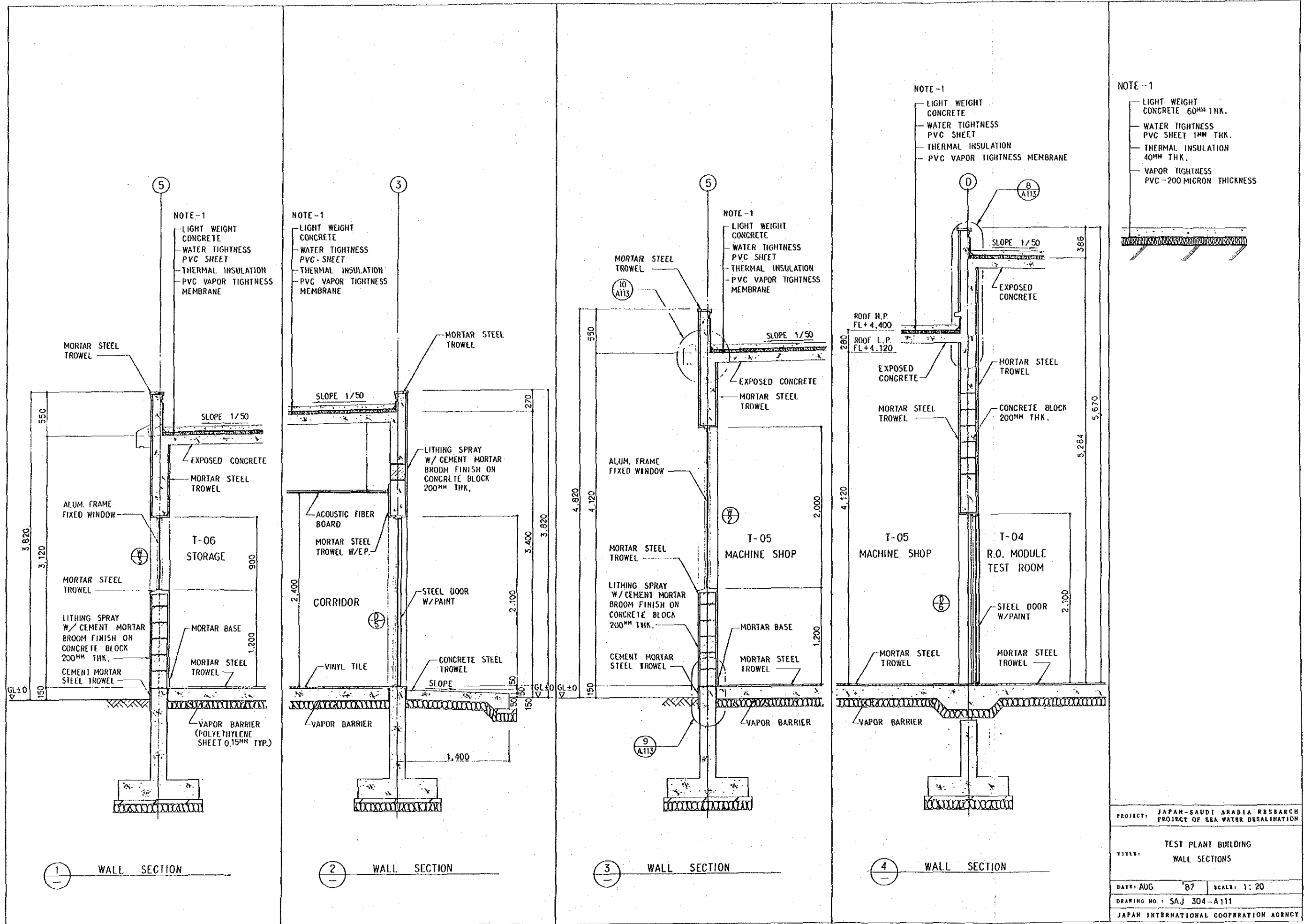
PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION

TITLE: TEST PLANT BUILDING DOOR & WINDOW DETAILS

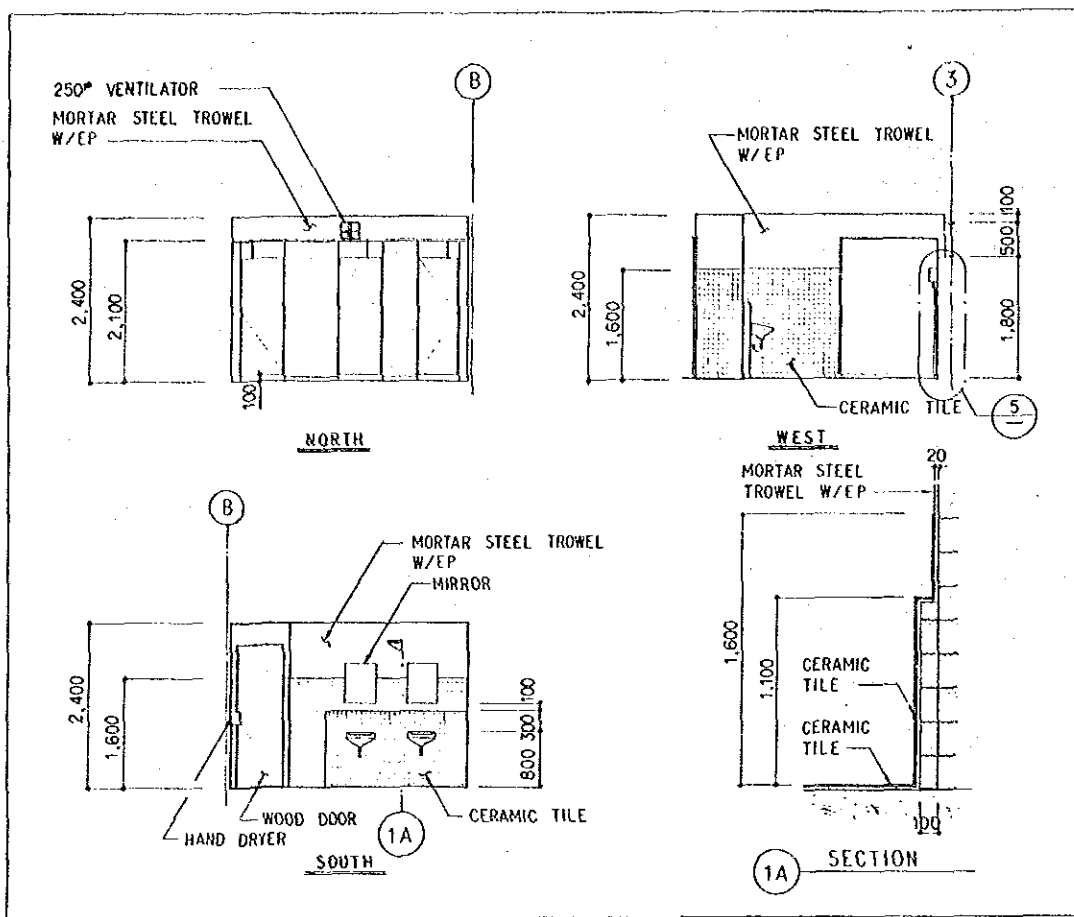
DATE: AUG '87 SCALE: 1:5

DRAWING NO.: SAJ 304-A110

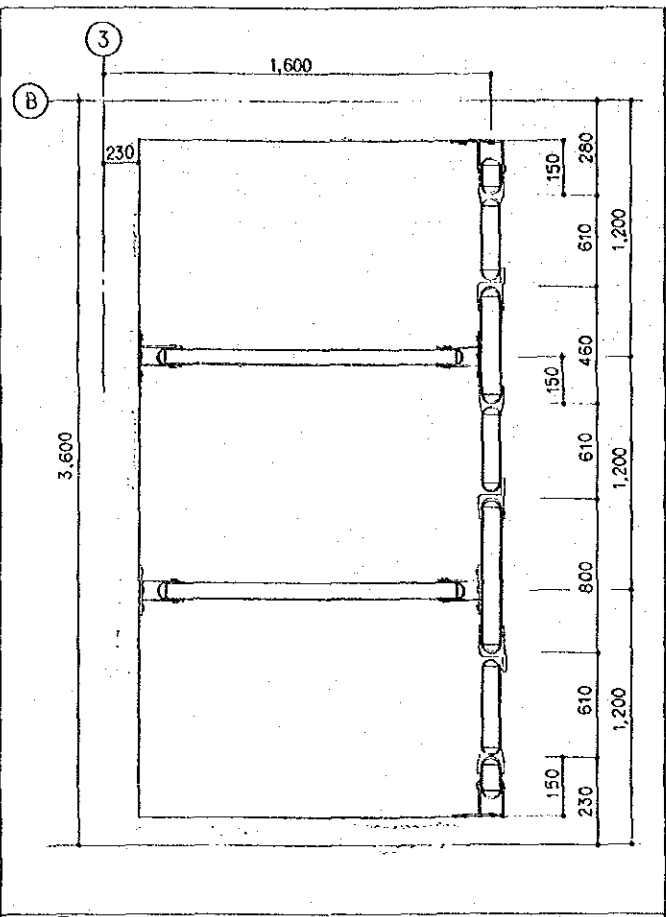
JAPAN INTERNATIONAL COOPERATION AGENCY



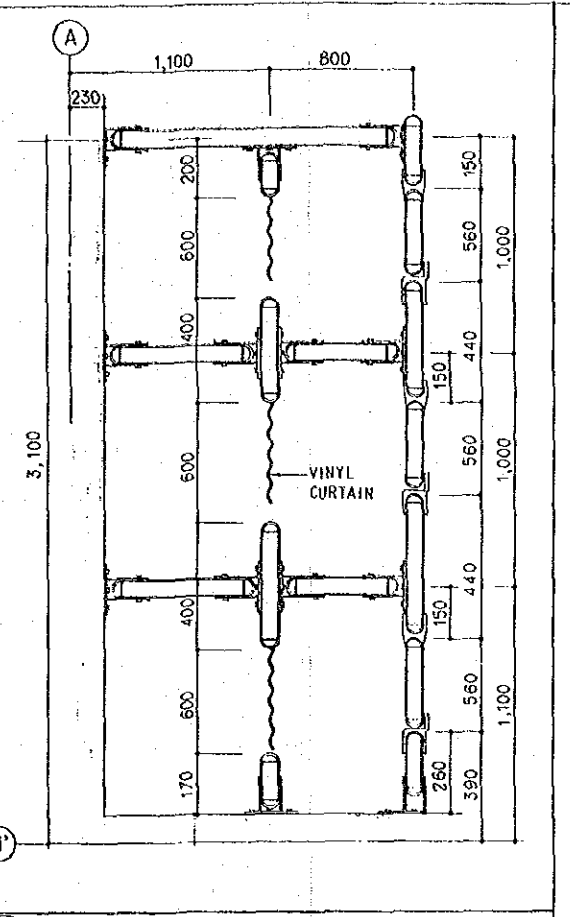




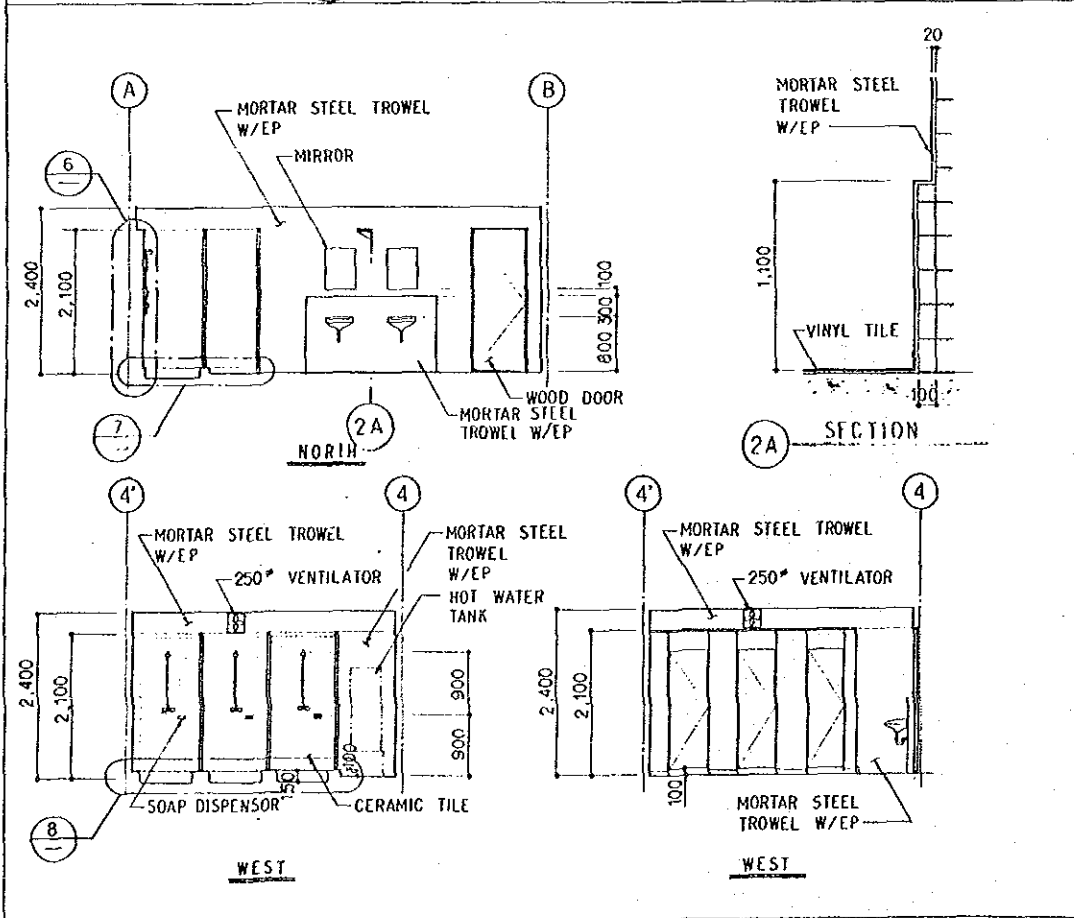
1 TOILET ELEVATION



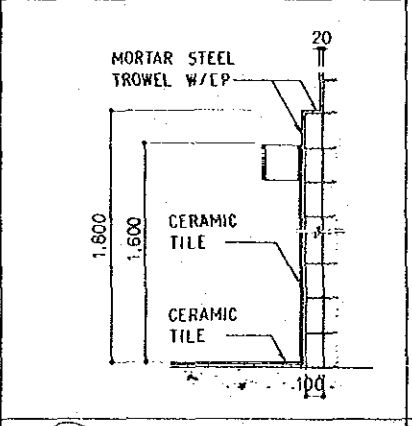
3 TOILET BOOTH DETAIL



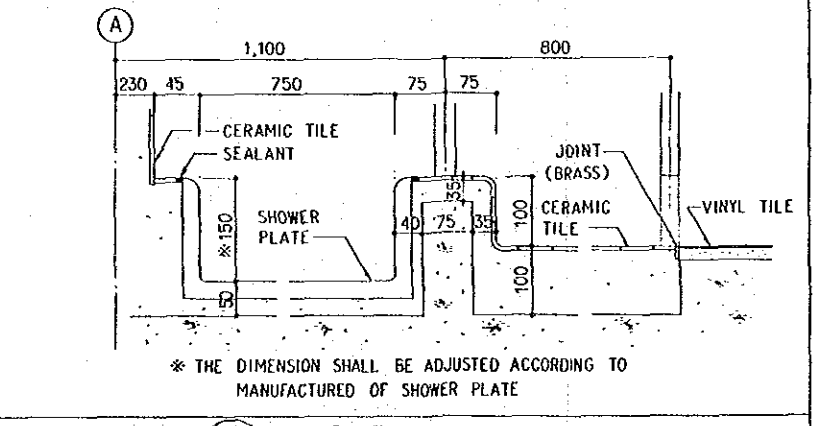
4 SHOWER ROOM BOOTH DETAIL



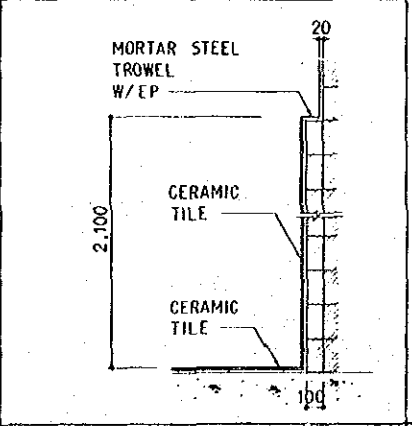
2 LOCKER ROOM & SHOWER ROOM ELEVATION



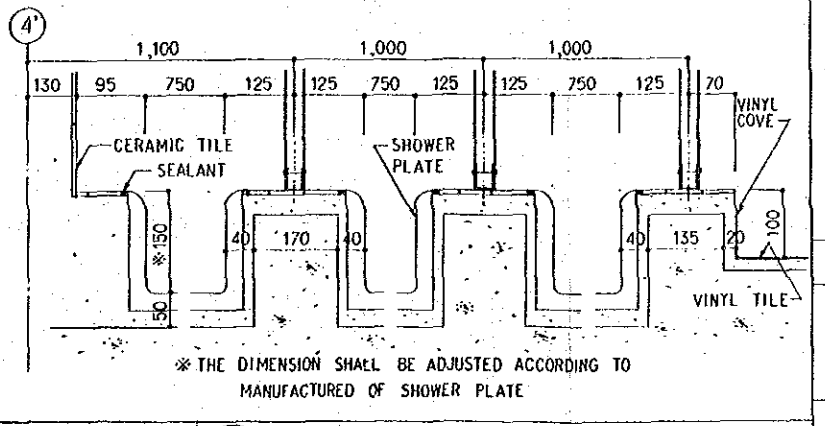
5 SECTION



7 DETAIL

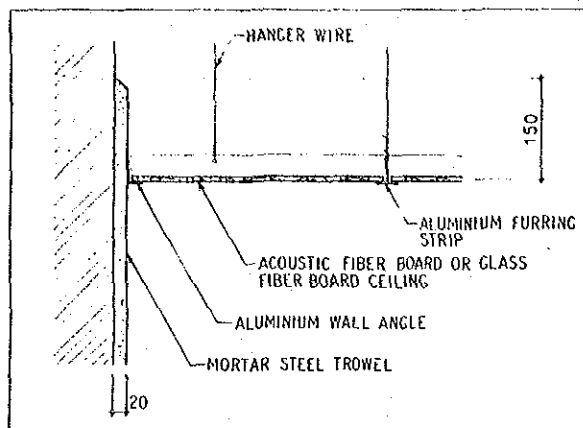


6 SECTION

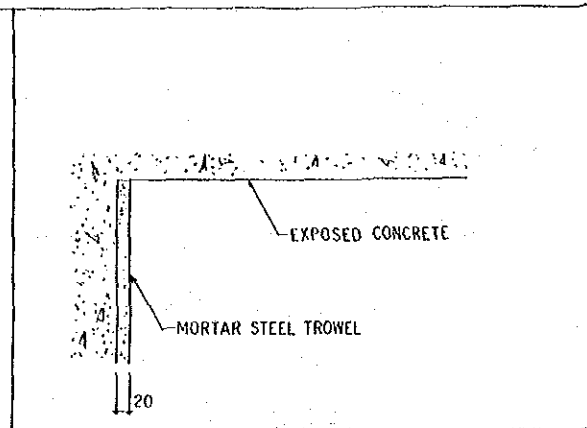


8 DETAIL

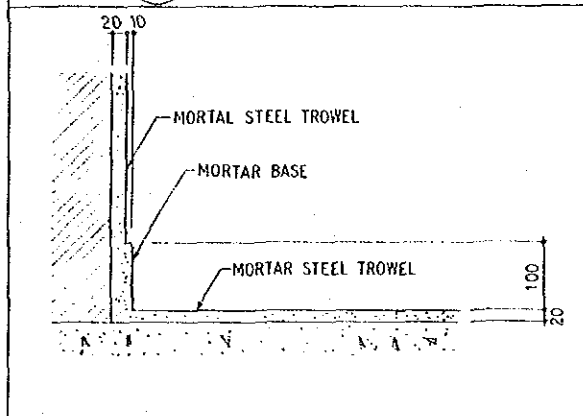
PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION  
 TEST PLANT BUILDING  
 TOILET & SHOWER ROOM DETAILS  
 DATE: AUG '87 SCALE: 1:50, 1:20, 1:5  
 DRAWING NO.: SAJ 304 - A 112  
 JAPAN INTERNATIONAL COOPERATION AGENCY



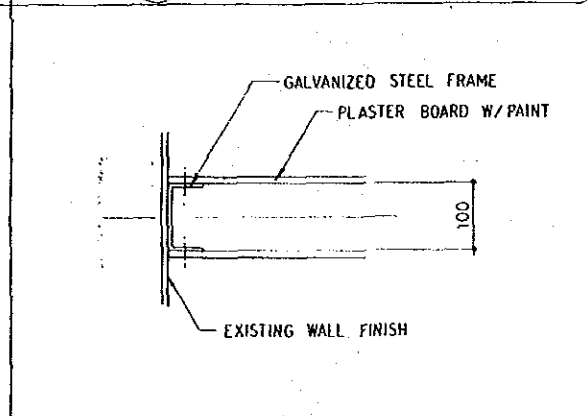
1 SUSPENDED CEILING



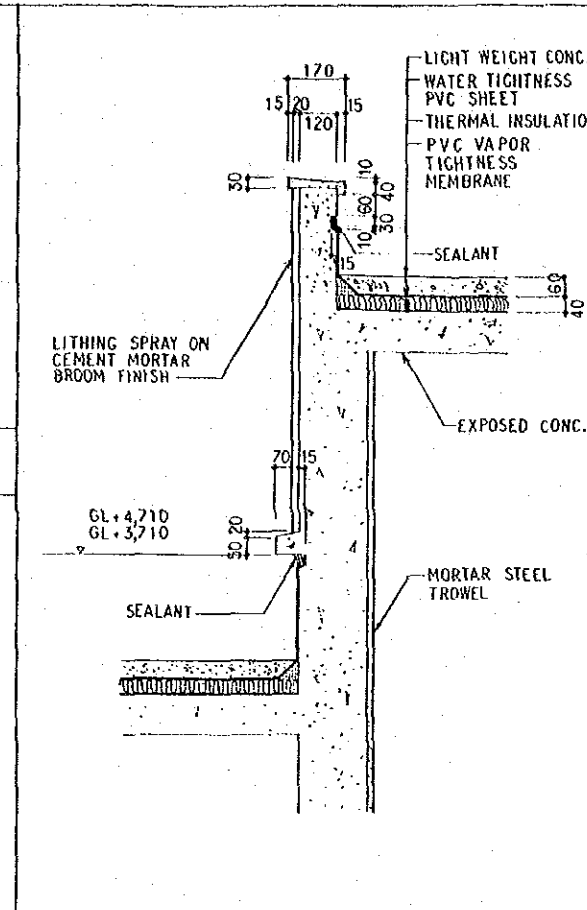
5 EXPOSED CEILING



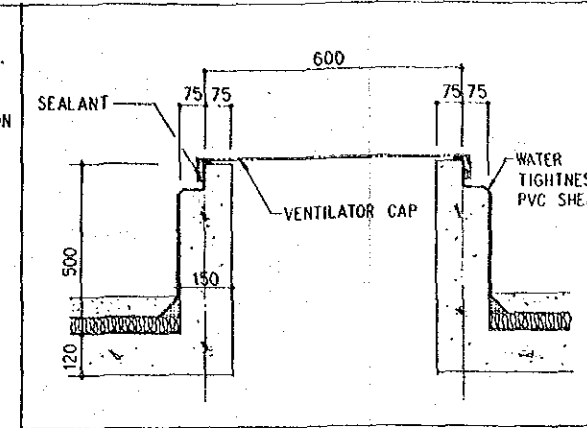
2 MORTAR FLOOR



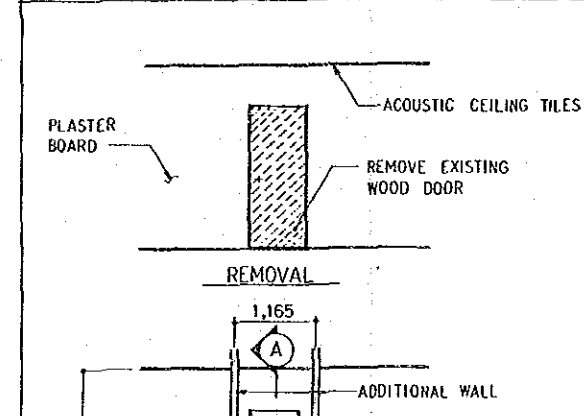
6 DETAIL



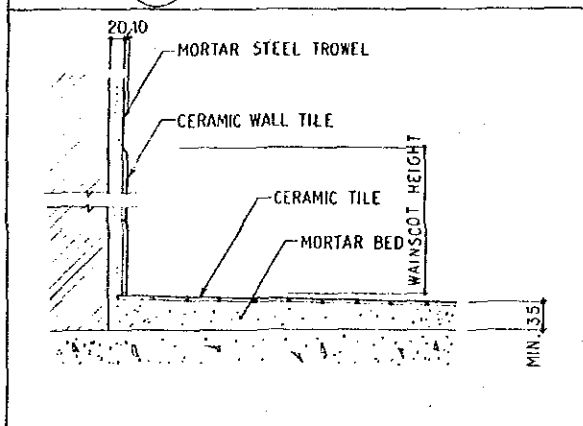
8 PARAPET DETAIL



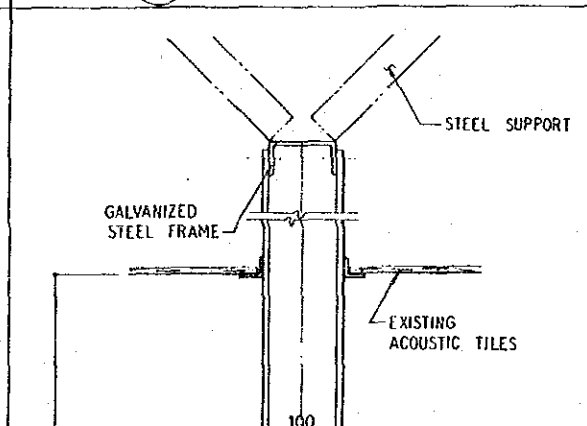
11 PARAPET DETAIL (FOR VENTILATOR)



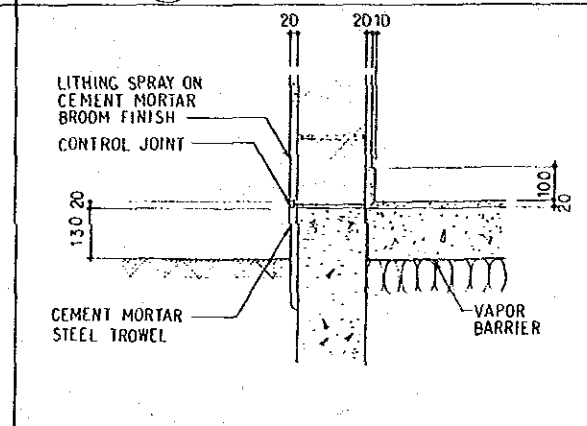
12 DETAIL



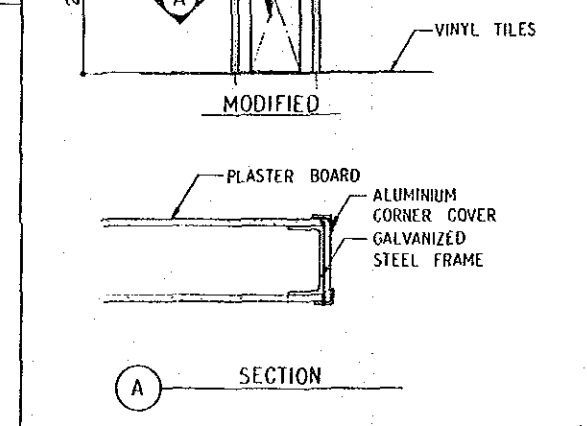
3 CERAMIC TILE FLOOR



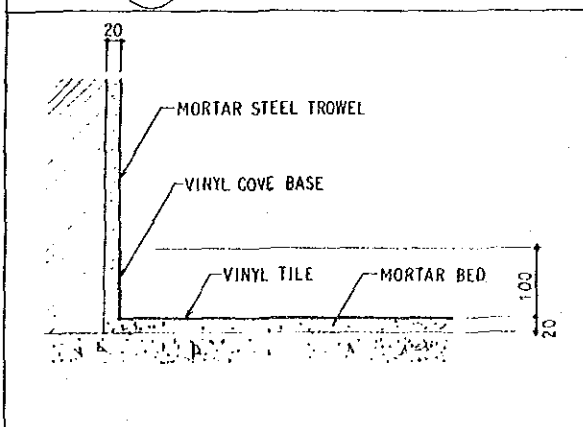
7 SECTION



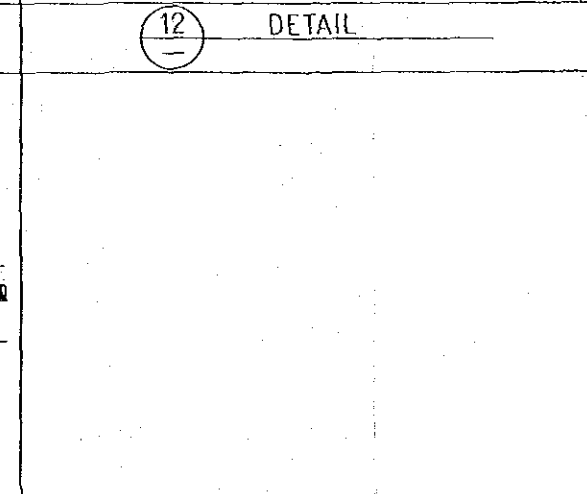
9 EXTERIOR BASE DETAIL



10 GARGOYLE DETAIL

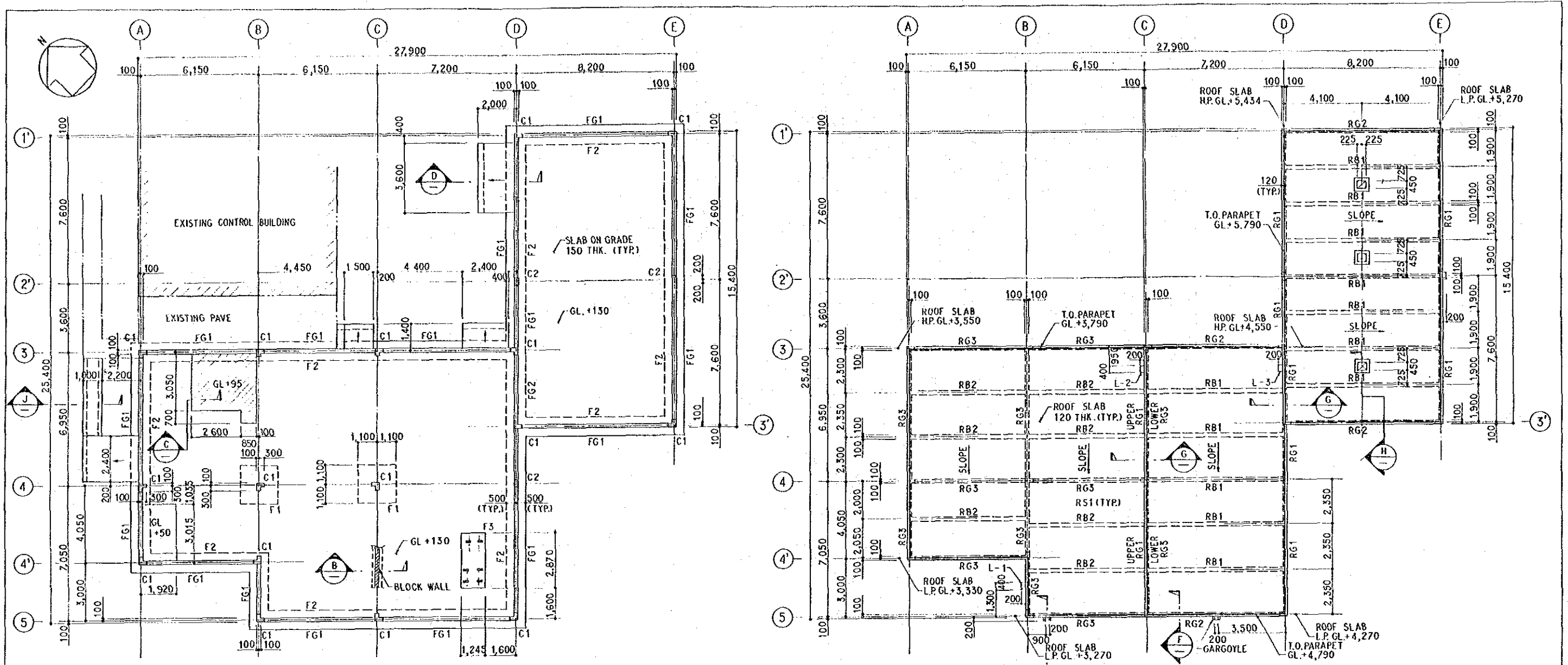


4 VINYL TILE FLOOR



11 MODIFIED SECTION

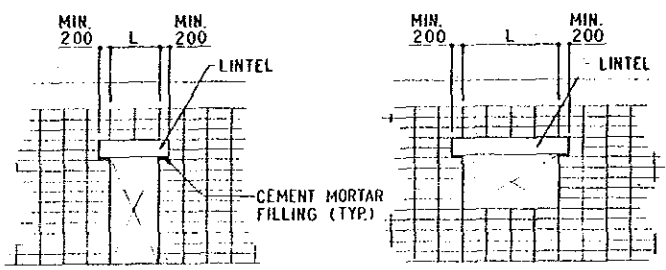
PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION  
 TITLE: TEST PLANT BUILDING INTERIOR & EXTERIOR DETAILS  
 DATE: AUG '87 SCALE: 1:5, 1:10  
 DRAWING NO.: SAJ 304-A113  
 JAPAN INTERNATIONAL COOPERATION AGENCY



1 FOUNDATION PLAN

\* THE DIMENSION SHALL BE ADJUSTED ACCORDING TO EXISTING PAVE.

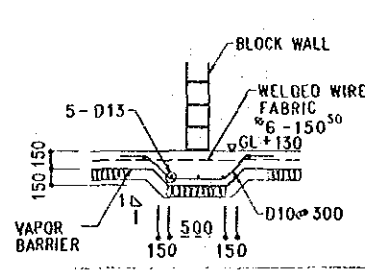
2 ROOF FRAMING PLAN



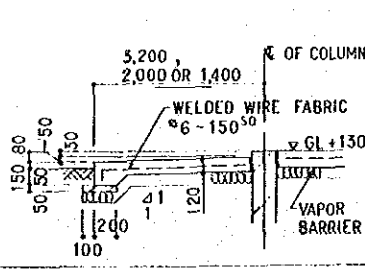
DOOR OPENING WINDOW OPENING

WALL LENGTH	L < 200		L > 200	
	L ≤ 1,000	1,000 < L ≤ 3,000	L ≤ 1,000	1,000 < L ≤ 2,000
SECTION				
TOP BAR	2 - D10	2 - D10	1 - D10	1 - D10
BOT BAR	2 - D10	2 - D13	1 - D10	1 - D13
STIRRUP	D10 @ 200	D10 @ 200	D10 @ 200	D10 @ 200

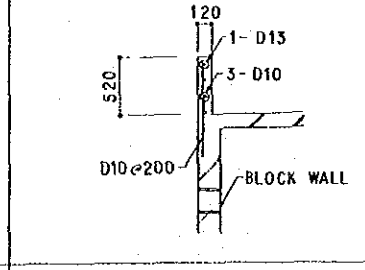
A LINTEL



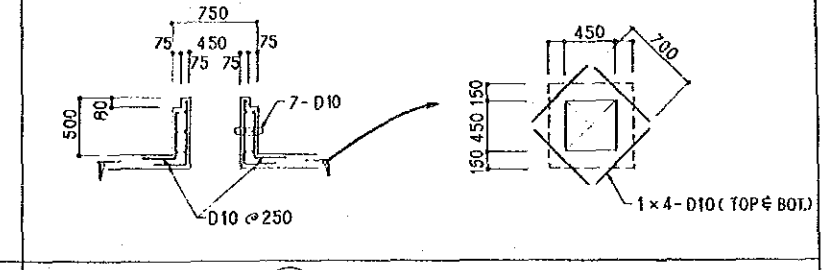
B SECTION



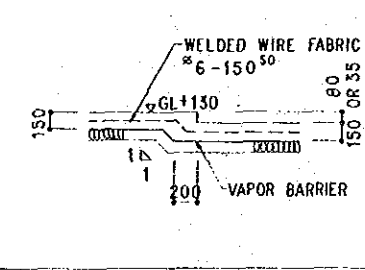
D SECTION



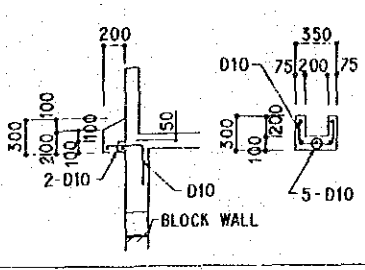
F SECTION



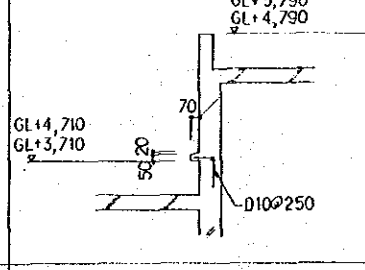
H SECTION



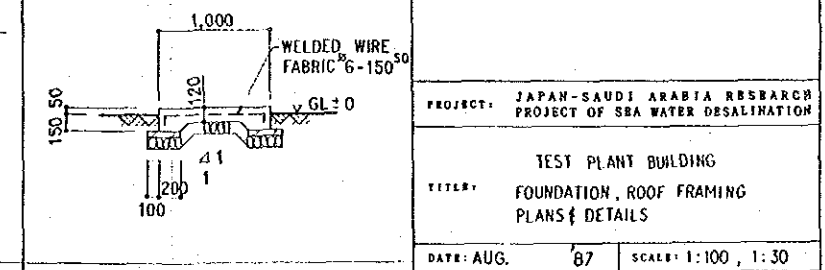
C SECTION



E SECTION

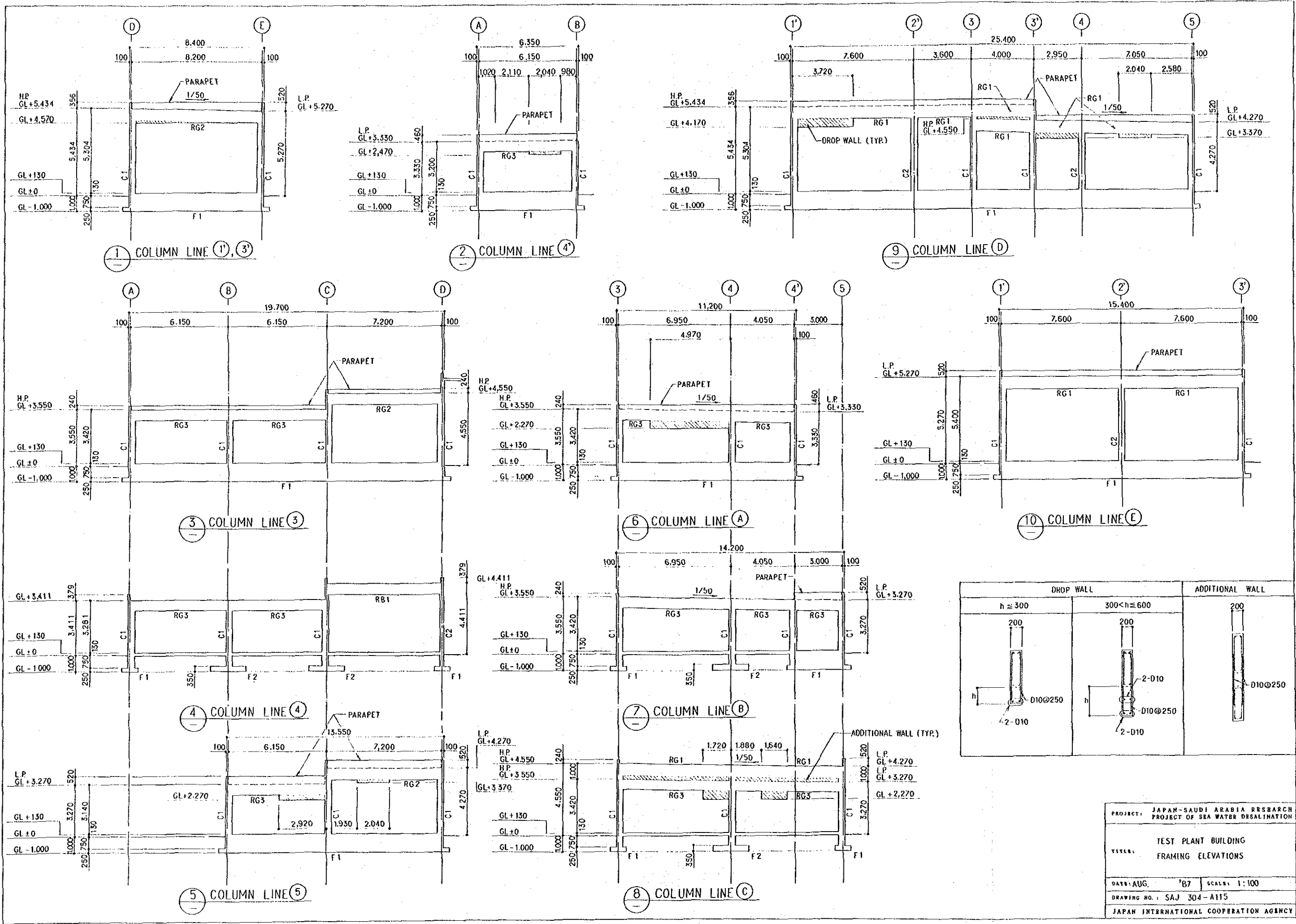


G SECTION



J SECTION

PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION  
 TITLE: TEST PLANT BUILDING FOUNDATION, ROOF FRAMING PLANS & DETAILS  
 DATE: AUG. 87 SCALE: 1:100, 1:30  
 DRAWING NO.: SAJ 304-A114  
 JAPAN INTERNATIONAL COOPERATION AGENCY



PROJECT: JAPAN-SAUDI ARABIA RESEARCH  
PROJECT OF SEA WATER DESALINATION

TITLE: TEST PLANT BUILDING  
FRAMING ELEVATIONS

DATE: AUG '87 SCALE: 1:100

DRAWING NO.: SAJ 304-A115

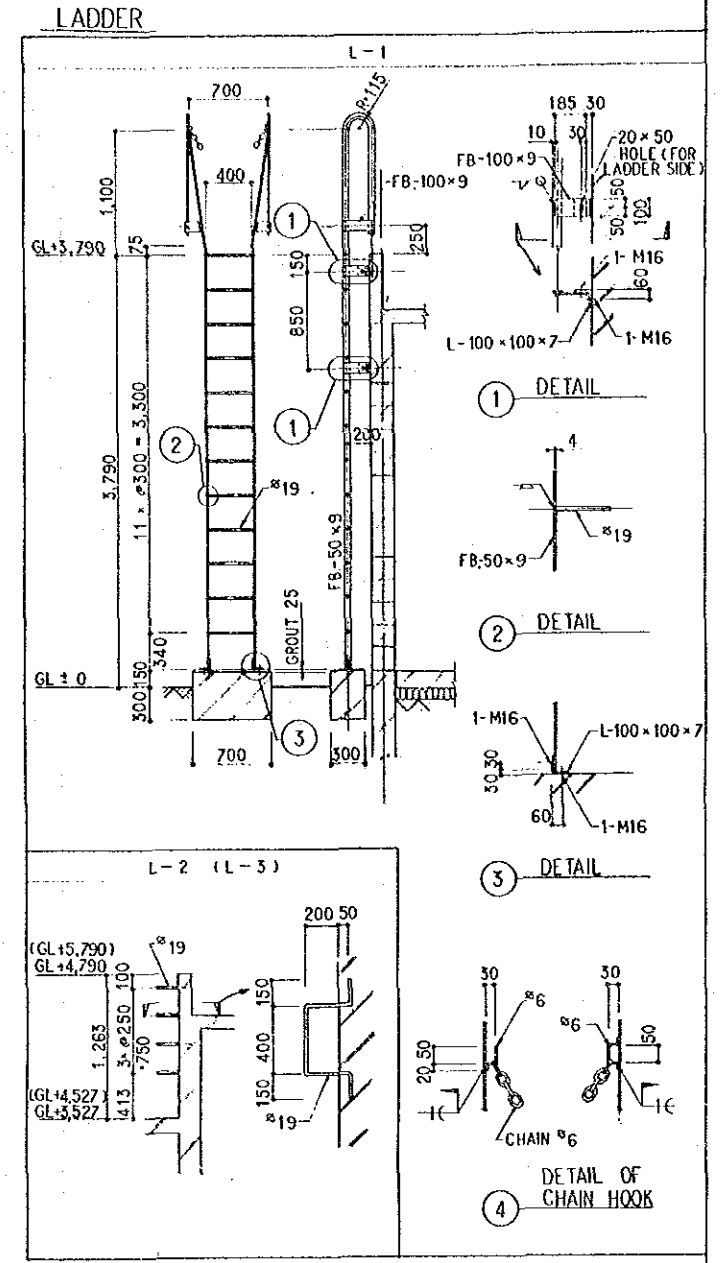
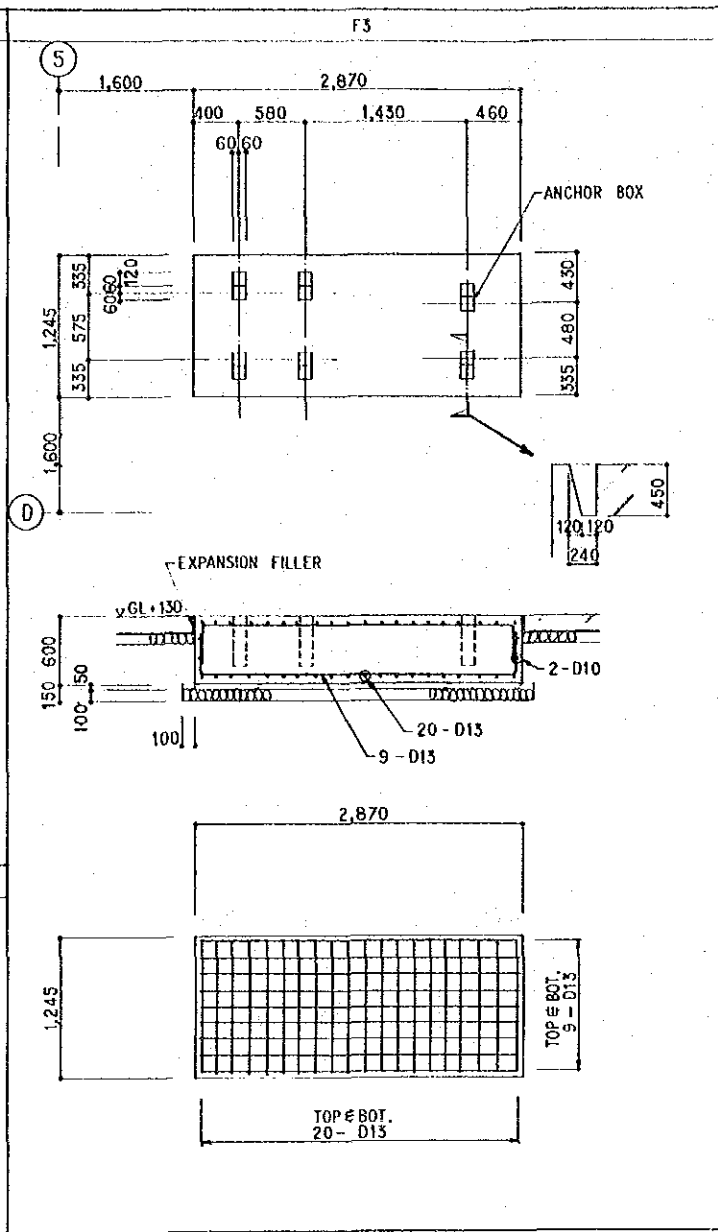
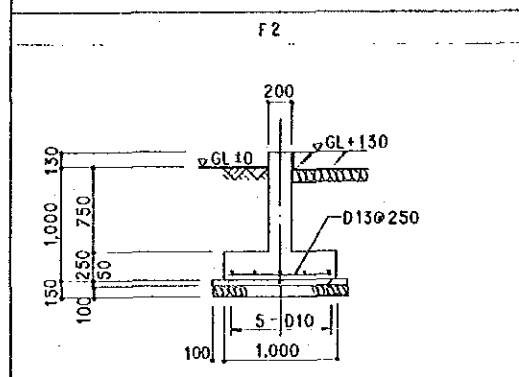
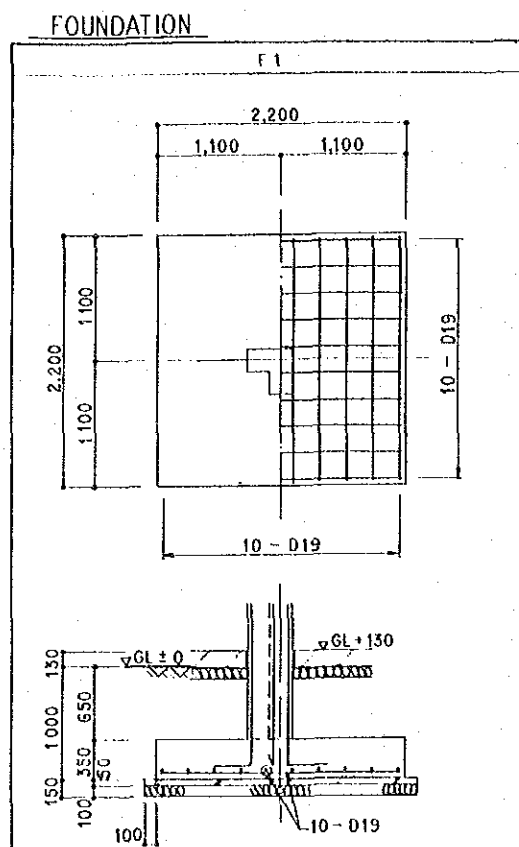
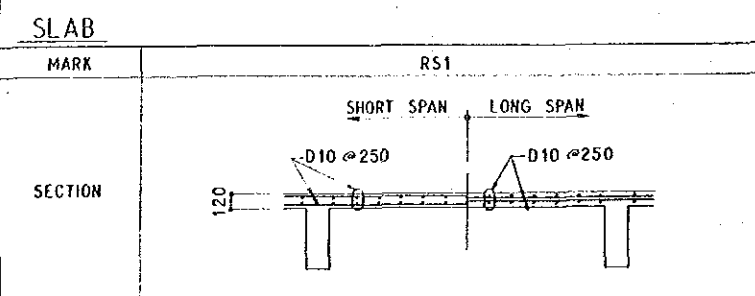
JAPAN INTERNATIONAL COOPERATION AGENCY

COLUMN			
MARK	C1	C2	
SECTION			
MAIN BAR	8 - D22	4 - D22	
TIE BAR	D10 @ 250	D10 @ 250	

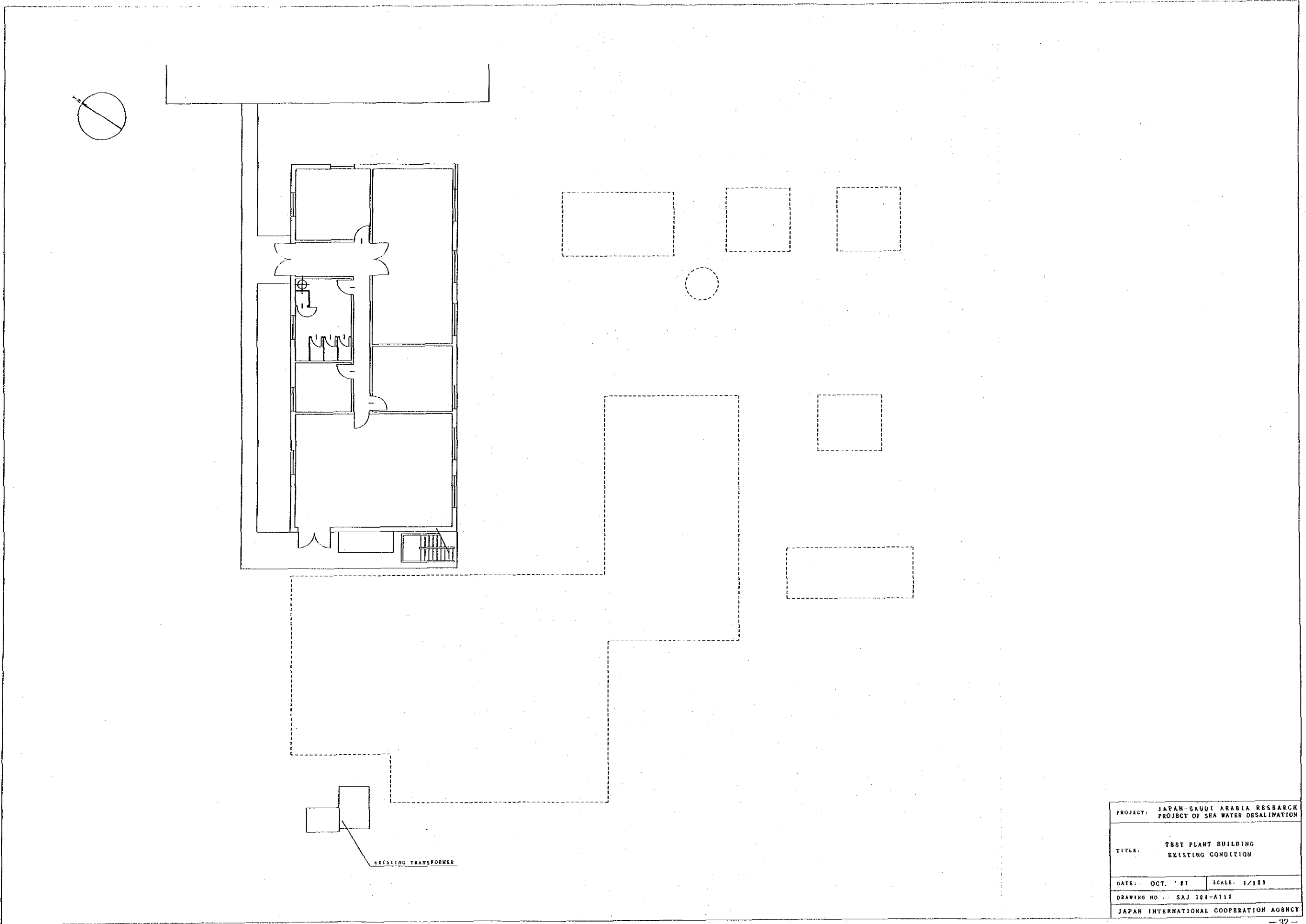
GRADE BEAM			
MARK	FG1	FG2	
PORTION	ALL	ALL	
SECTION			
TOP BAR	4 - D22	2 - D19	
BOT. BAR	4 - D19	2 - D19	
STIRRUP	D10 @ 250	D10 @ 250	
WEB BAR	4 - D10	2 - D10	

GIRDER			
MARK	RG1	RG2	RG3
PORTION	ALL	ALL	ALL
SECTION			
TOP BAR	4 - D22	2 - D19	4 - D19
BOT. BAR	2 - D22	2 - D19	4 - D19
STIRRUP	D10 @ 250	D10 @ 250	D10 @ 250
WEB BAR	2 - D10	2 - D10	2 - D10

BEAM		
MARK	RB1	RB2
PORTION	ALL	ALL
SECTION		
TOP BAR	2 - D16	2 - D19
BOT. BAR	2 - D22	2 - D19
STIRRUP	D10 @ 250	D10 @ 250
WEB BAR	2 - D10	2 - D10

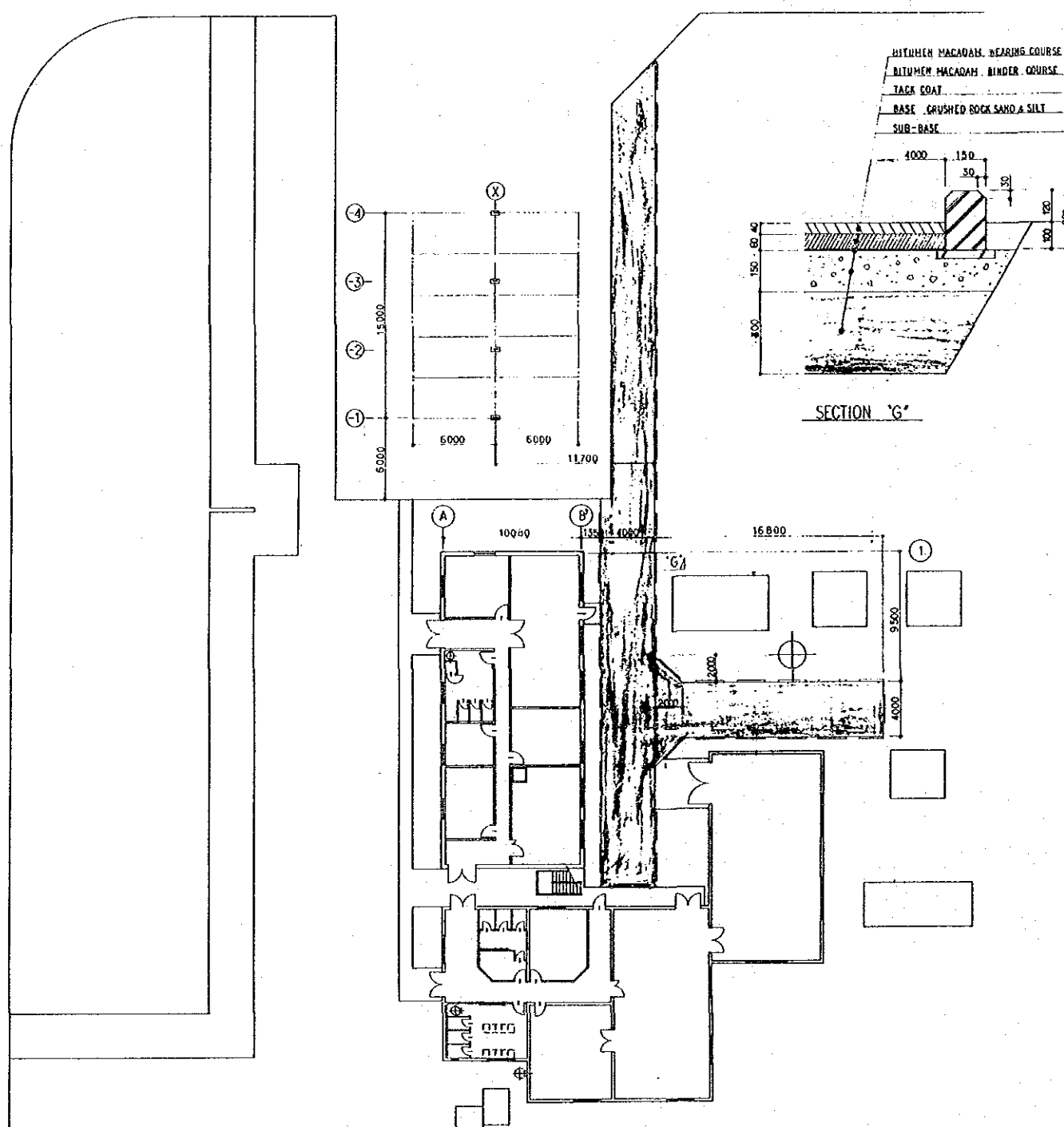
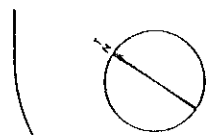


PROJECT:	JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION
TITLE:	TEST PLANT BUILDING MEMBER LIST, FOUNDATION & LADDER DETAILS
DATE:	AUG. '87
DRAWING NO.:	SAJ 304-A116
SCALE:	1:30, 1:20, 1:10
JAPAN INTERNATIONAL COOPERATION AGENCY	

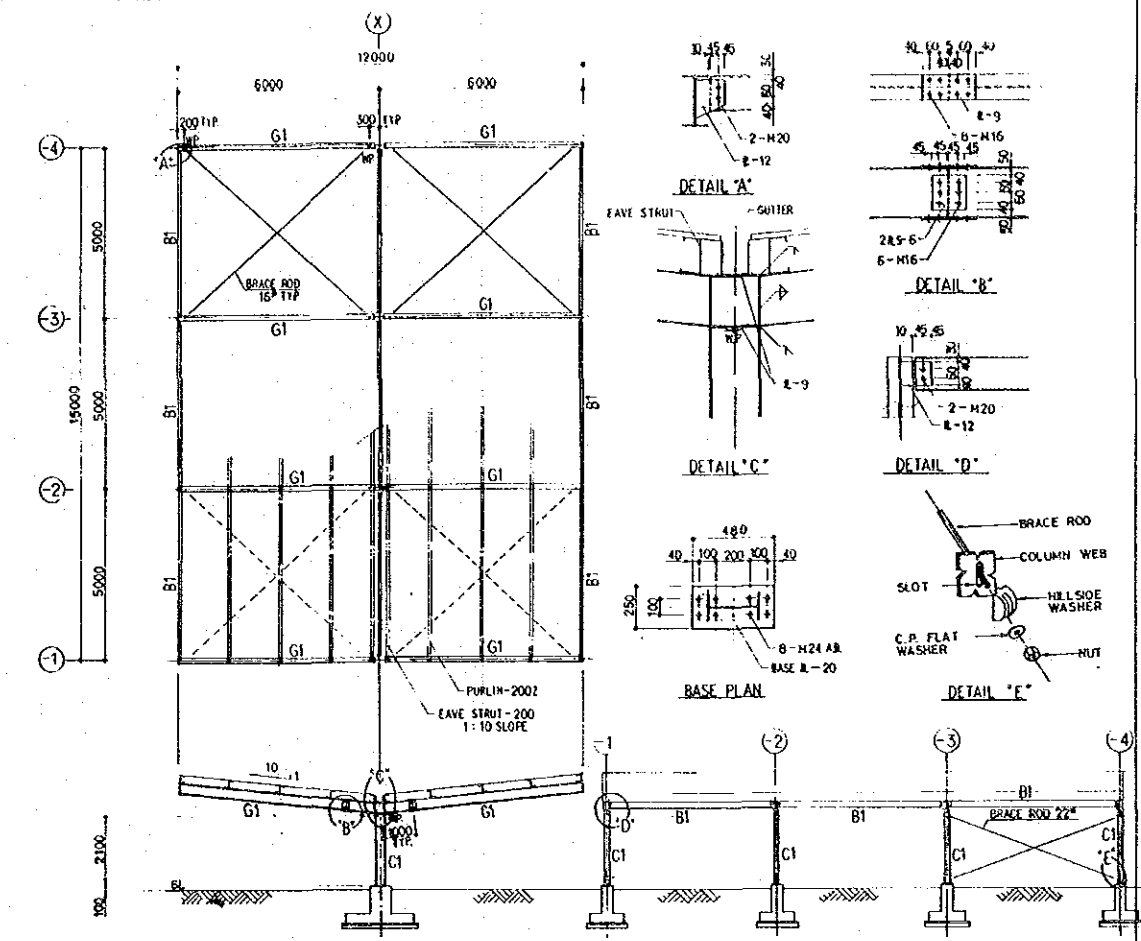


EXISTING TRANSFORMER

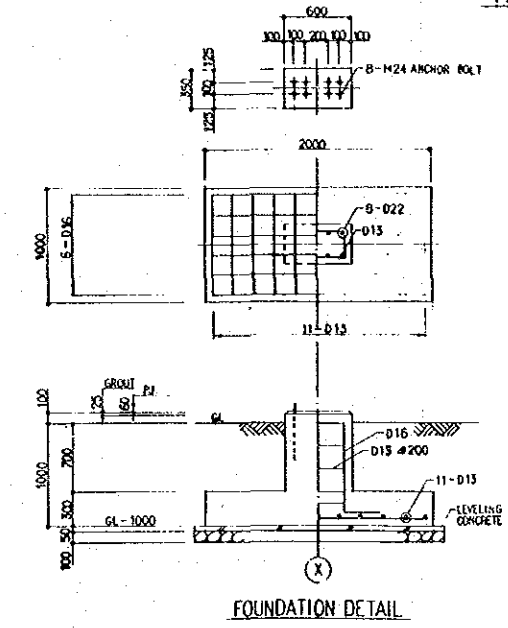
PROJECT: JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION	
TITLE: TBST PLANT BUILDING EXISTING CONDITION	
DATE: OCT. '81	SCALE: 1/100
DRAWING NO.: SAJ 301-A117	
JAPAN INTERNATIONAL COOPERATION AGENCY	



SECTION 'G'



FRAMING ELEVATION



FOUNDATION DETAIL

STEEL STRUCTURE MEMBER LIST

SYMBOL	MEMBER SIZE
C1	H-300 x 150 x 6.5 x 9
G1	H-300 x 150 x 6.5 x 9
B1	C-200 x 90 x 8 x 13.5

PROJECT:	JAPAN-SAUDI ARABIA RESEARCH PROJECT OF SEA WATER DESALINATION
TITLE:	ROAD & CAR SHELTER PLAN, ELEVATION, SECTION & DETAILS
DATE:	OCT. 87
SCALE:	1/200 1/100 1/30
DRAWING NO.:	SAJ 304-A 201
JAPAN INTERNATIONAL COOPERATION AGENCY	

