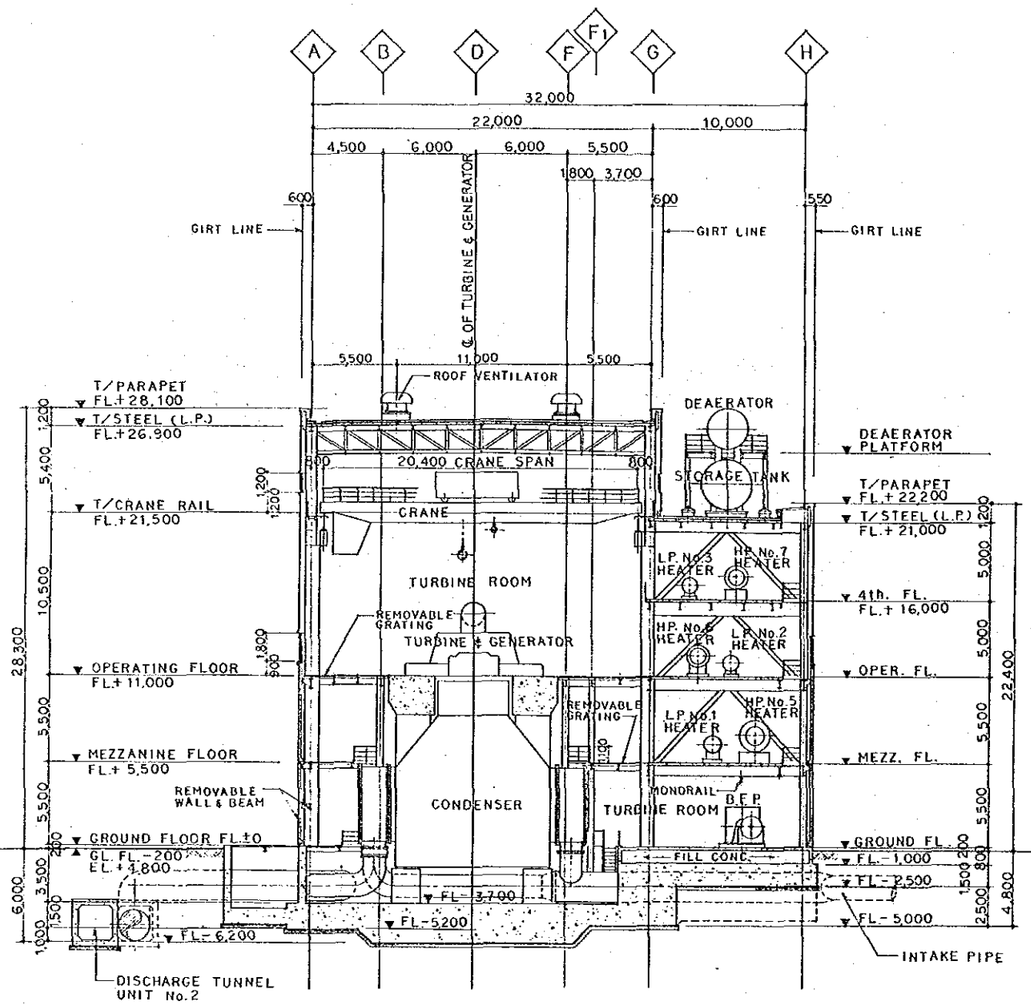

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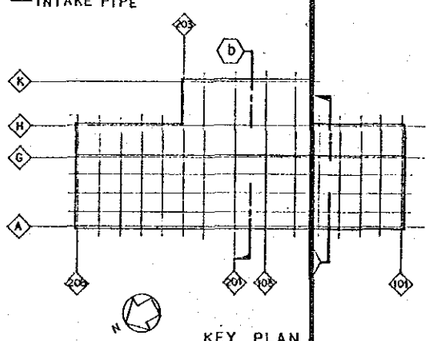
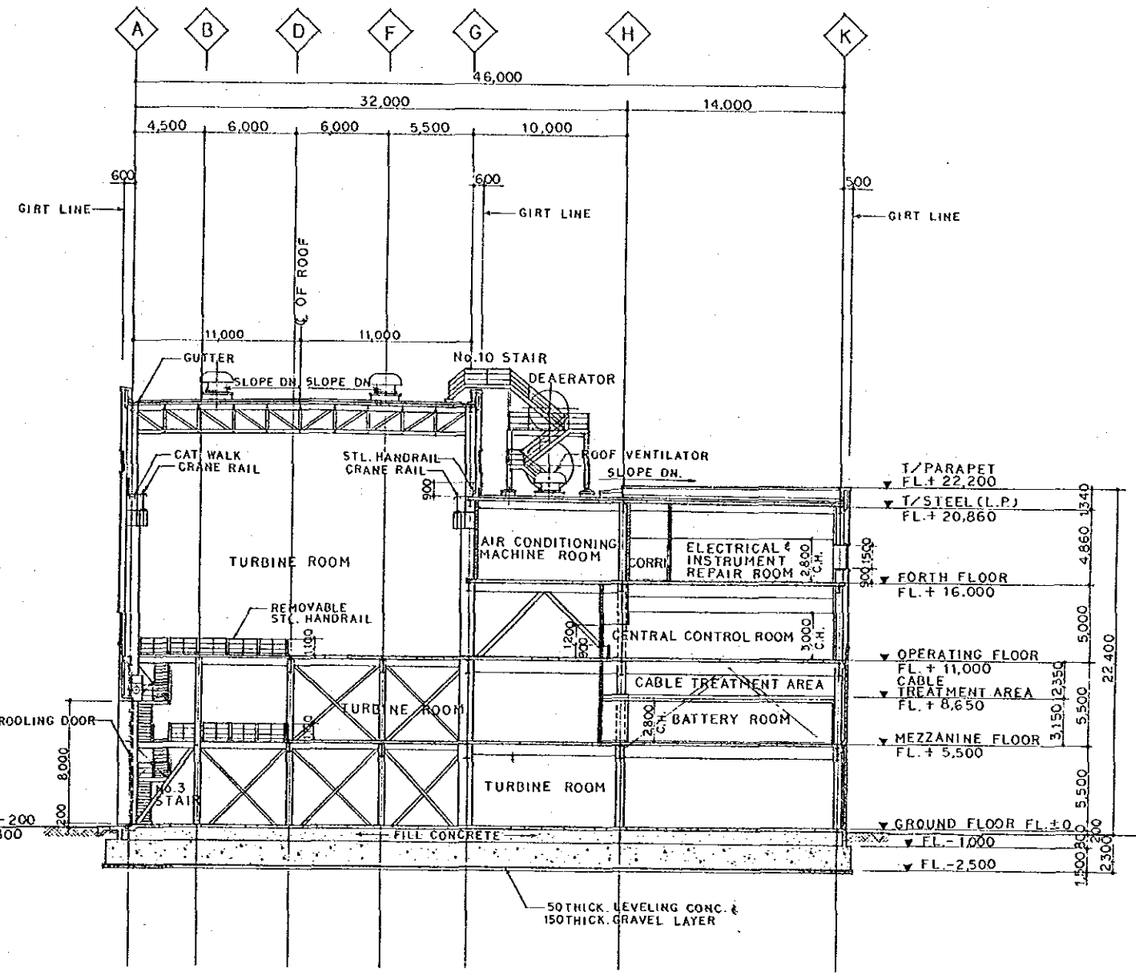
SCALE 1:200



KEY PLAN



ⓑ SECTION
SCALE 1:200

GRAPHIC SCALE
0 1 2 3 4 5 10 15m.
SCALE 1:200

PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

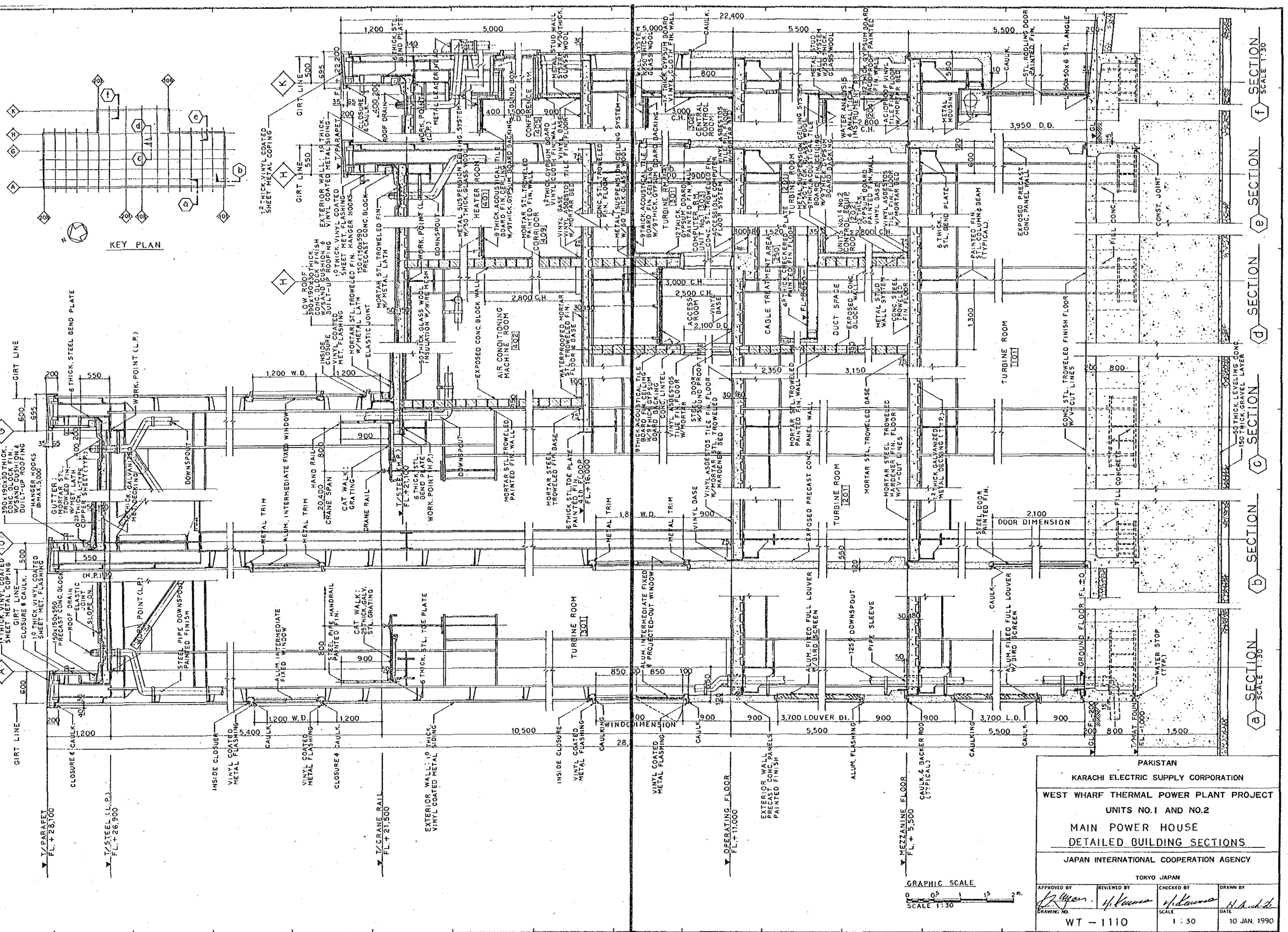
UNITS NO.1 AND NO.2

MAIN POWER HOUSE
SECTIONS

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

APPROVED BY	REVIEWED BY	CHECKED BY	DRAWN BY
DRAWING NO.	SCALE	DATE	
WAT-1109	1:200	10 JAN. 1990	


KEY PLAN
SECTION a SCALE 1:30
SECTION b
SECTION c
SECTION d
SECTION e
SECTION f SCALE 1:30
GRAPHIC SCALE
SCALE 1:30
PAKISTAN
KARACHI ELECTRIC SUPPLY CORPORATION
WEST WHARF THERMAL POWER PLANT PROJECT
UNITS NO.1 AND NO.2
MAIN POWER HOUSE
DETAILED BUILDING SECTIONS
JAPAN INTERNATIONAL COOPERATION AGENCY
TOKYO JAPAN
APPROVED BY
REVIEWED BY
CHECKED BY
DRAWN BY
DRAWING NO.
WT - 1110
SCALE
1 : 30
DATE
10 JAN. 1990

INTERIOR FINISH SCHEDULE

FLOOR	ELEV.	ROOM NAME	RM.No.	FLOOR		BASEBOARD			WAINSCOT			WALL		CEILING		SUSP. CEILING HEIGHT	REMARKS
				BACK'G	FIN.	BACK'G	FIN.	H.	BACK'G	FIN.	H.	BACK'G	FIN.	BACK'G	FIN.		
GROUND FLOOR	FL. ± 0	TURBINE ROOM	101	—	CONC. (HARDENER)	—	—	—	—	—	—	—	P.C.P.	—	GALV. MET. DECK.	—	FLOOR : W/V-CUT LINES 4m x 4.5m PATTERN PIT & TRENCH COVER : GRATING FIN. STL. STAIR. STL. HANDRAIL , FLR. DRAIN REMOV. WALL , EXPOSED CEILING
		GAS CYLINDERS STORAGE ROOM	102	—	CONC. STL. TROWELED	—	—	—	—	—	—	CONC.	PAINTED	—	C.A.S.	—	EXPOSED CEILING
MEZZANINE FLOOR	FL.+5,500	TURBINE ROOM	201	CONC.	M.S.T. (HARDENER)	—	—	—	—	—	—	—	P.C.P. PAINTED	—	GALV. MET. DECK.	—	FLOOR : W/V-CUT LINES & GRATING FLR. STL. HANDRAIL . EXPOSED CEILING
		UNITS No.1 & No.2 CONTROL EQUIPMENT ROOM	202	M.S.T.	V.A.T.	GYP. BO.	V. B.	75	—	—	—	M.S.T.					
		BATTERY ROOM	203	DO.	AP. V. T.	GYP. BO. & M.S.T.	DO.	DO.	—	—	—	GYP. BO.	PAINTED	GYP. BO.	A.T.B.	2,800	AIR CONDITIONING .
		WATER ANALYSIS & ANALITICAL INSTRUMENT RM.	204	DO.	DO.	DO.	DO.	DO.	—	—	—	GYP. BO. & M.S.T.	AP. P.	DO.	AP. P.	DO.	EXH. FAN , LAV.
		FUEL LABORATORY	205	DO.	DO.	DO.	DO.	DO.	—	—	—	DO.	DO.	DO.	A.T.B.	2,800 & 2,500	EXH. FAN , AIR CONDITIONING BLIND BOX , PARTITION : W/GLASS PANELS
		STORAGE ROOM	206	DO.	DO.	DO.	DO.	DO.	—	—	—	DO.	DO.	DO.	DO.	2,800	DO.
		ACCESS ROOM	207 ~ 210	DO.	V.A.T.	M.S.T.	DO.	DO.	—	—	—	DO.	DO.	DO.	DO.	2,500	C.A.D.
												M.S.T.	DO.	DO.	DO.	DO.	SOUND PROOF DOOR
	FL.+8,650	CABLE TREATMENT AREA	250	CHKD PL.	PAINTED	STEEL	PAINTED	75	—	—	—	—	P.C.P. CONC. BLK.	—	GALV. MET. DECK.	—	ACCESS LADDER
OPERATING FLOOR	FL.+11,000	TURBINE ROOM	301	M.S.T. (HARDENER)	V.A.T.	P.C.P. & M.S.T.	V. B.	75	P.C.P.	PAINTED	800	— M.S.T.	V.C.M. PAINTED	—	GALV. MET. DECK.	—	CAT WALK(CRANE LEVEL) : GRATING FLR. STL. HANDRAIL , EXPOSED CEILING CEILING(No.5 STAIR AREA) : C.A.F.B. PTD. FIN.
		CENTRAL CONTROL RM.	302	M.S.T.	V.A.T.	GYP. BO.	V. B.	75	—	—	—	GYP. BO.	VINYL CLOTH	GYP. BO.	A.T.B.	3,000 & 2,500	SOUND PROOF DOOR & WINDOW , C.A.D. AIR COND.. BLIND BOX
		COMPUTER RM. UNIT No.1	303	A.C.F.	P.C.T.	DO.	DO.	DO.	—	—	—	DO.	PAINTED	DO.	DO.	3,000	C.A.D. , AIR COND.
		COMPUTER RM. UNIT No.2	304	DO.	DO.	DO.	DO.	DO.	—	—	—	DO.	DO.	DO.	DO.	DO.	DO.
		CORRIDOR	305	M.S.T.	V.A.T.	GYP. BO. & M.S.T.	DO.	DO.	—	—	—	GYP. BO. & M.S.T.	DO.	DO.	DO.	2,500	BLIND BOX
		KITCHENETTE	306	DO.	DO.	M.S.T.	DO.	DO.	—	—	—	M.S.T.	DO.	C.A.F.B.	PAINTED	DO.	KITCHENETTE UNIT
		JANITORIAL	307	L.C.	WP. M.S.T.	DO.	PAINTED	100	—	—	—	DO.	DO.	DO.	DO.	DO.	MOP RACK , EXH. FAN , SINK
	FL.+10,970	LAVATORY	308	M.S.T. W/A.W. & L.C.	C.M.T. (UNGLAZED)	—	—	—	—	—	—	DO.	C.W.T. (SATIN GLA	DO.	DO.	DO.	TERR. PANEL PARTITIONS , FLR. DRAIN C.A.D. , EXH. FAN
	FL.+11,000	ACCESS ROOM	309 ~ 312	M.S.T.	V.A.T.	M.S.T.	V. B.	75	—	—	—	M.S.T.	PAINTED	GYP. BO.	A.T.B.	DO.	SOUND PROOF DOOR
FORTH FLOOR	FL.+21,000	HEATER ROOM	401	—	CONC. (HARDENER)	STEEL & M.S.T.	PAINTED	75	—	—	—	— M.S.T.	V.C.M. PAINTED	—	GALV. MET. DECK.	—	FLOOR : W/V-CUT LINES . STL. HANDRAIL , EXPOSED CEILING
		AIR CONDITIONING MACHINE ROOM	402	CONC.	WP. M.S.T.	M.S.T.	DO.	100	—	—	—	CONC. BLK.	PAINTED	GALV. MET. DECK.	GLASS WOOL W/WIRE MESH	—	FND. FIN. : WATERPROOFED M.S.T. EXPOSED CEILING
		PABX ROOM	403	A.C.F.	P.C.T.	GYP. BO. & M.S.T.	V. B.	75	—	—	—	GYP. BO. & M.S.T.	DO.	GYP. BO.	A.T. B.	2,800	C.A.D. , AIR COND.
		ELECTRICAL & INSTRUMENT REPAIR ROOM	404	M.S.T.	V.A.T.	DO.	DO.	DO.	—	—	—	DO.	DO.	DO.	DO.	DO.	BLIND BOX , C.A.D. , AIR COND.
		CONFERENCE ROOM	405	DO.	DO.	GYP. BO.	DO.	DO.	—	—	—	GYP. BO.	VINYL CLOTH	DO.	DO.	DO.	DO.
		SHIFT ROOM	406	DO.	DO.	DO.	DO.	DO.	—	—	—	DO.	DO.	DO.	DO.	DO.	DO.
		REST ROOM	407	DO.	DO.	DO.	DO.	DO.	—	—	—	DO.	DO.	DO.	DO.	DO.	DO.
		LOCKER ROOM	408	DO.	DO.	GYP. BO. M.S.T.	DO.	DO.	—	—	—	GYP. BO. & M.S.T.	PAINTED	DO.	DO.	DO.	C.A.D. , EXH. FAN
		CORRIDOR	409	DO.	DO.	M.S.T.	DO.	DO.	—	—	—	M.S.T.	DO.	DO.	DO.	DO	SOUND PROOF DOOR . C.A.D.
		KITCHENETTE	410	DO.	DO.	DO.	DO.	DO.	—	—	—	DO.	DO.	C.A.F.B.	PAINTED	2,500	KITCHENETTE UNIT .
		JANITORIAL	411	CONC.	WP. M.S.T.	DO.	PAINTED	100	—	—	—	DO.	DO.	DO.	DO.	DO.	MOP RACK , EXH. FAN , SINK
	FL.+20,970	LAVATORY	412	M.S.T. W/A.W. & L.C.	C.M.T. (UNGLAZED)	—	—	—	—	—	—	DO.	G.W.T. (SATIN GLA	DO.	DO.	DO.	TERR. PANEL PARTITIONS , FLR. DRAIN C.A.D. , EXH. FAN
LOW ROOF	FL.+21,600	STAIR CASE	501 ~ 503	—	GALV. GRATING	STEEL	PAINTED	75	—	—	—	—	V. C. M.	—	GALV. MET. DECK.	—	STL. HANDRAIL . EXPOSED CEILING
COMMON		DUCT SPACE	—	—	CONC.	—	—	—	—	—	—	—	CONC. BL	—	GALV. MET. DECK.	—	
		PIPE SPACE	—	—	DO.	—	—	—	—	—	—	—	DO.	—	DO.	—	
		STAIR	—	—	GALV. GRATING (TREADS+LANDG	STEEL (STRINGER)	PAINTED	50 (LANDING)	—	—	—	—	—	—	—	—	STL. HANDRAIL
BOILER AREA		ELEVATOR HALL	—	CHKD. PL.	PAINTED	STEEL	PAINTED	75	—	—	—	C.A.F.B.	PAINTED	C.A.F.B.	PAINTED		WALL & CEILING : W/50 THICK.GLASS WOOL
		DO. (GROUND FL ONLY)	—	CONC.	M.S.T.	M.S.T.	DO.	DO.	—	—	—	DO.	DO.	DO.	DO.		DO.
		ELEVATOR MACHINE RM.	—	CHKD.R.	PAINTED	STEEL	DO.	DO.	—	—	—	STEEL	GLASS WO W/WIRE ME	STEEL	GLASS WOOL W/WIRE MESH	—	EXH. FAN

NOTE :

GLASS WOOL INSULATION (50mm THICK.) SHALL BE DONE AT THE FOLLOWING PLACES OF THE AUXILIARY EQUIPMENT AREA (COLUMN LINE H TO K).

1) WALL FACING OUTSIDE EXCEPT GROUND FLOOR AND STAIRCASE
2) INSIDE WALLS AND CEILINGS OF CENTRAL CONTROL ROOM AND COMPUTER ROOMS
3) ALL CEILINGS OF FORTH FLOOR

EXTERIOR FINISH SCHEDULE

SURFACES	BACKING	FINISH	REMARKS
ROOF (HIGH)	W/ SAND CUSHION & BUILT-UP ROOFING	CONC. BLOCK	ELASTIC JOINT 4m x 4m PATTERN
ROOF (LOW)	DO.	DO.	16 SETS ROOF VENTILATOR
ROOF GUTTER	BUILT-UP ROOFING W/COPPER SHEET	M.S.T. W/METAL LATH	ELASTIC JOINT 2 SETS ROOF VENTILATOR ROOF DRAIN
PARAPET	—	V.C.M. (COPING & INSIDE)	HANGER HOOKS @ 5,000 MAX.
DEAERATOR PLATFORM	—	GALVANIZE GRATING	
PIPE SPACE	STEEL	PAINTED	
WALL (METAL SIDING)	—	V. C. M.	
WALL	P. C. P.	PAINTED	
FOUNDATION WALL	—	CONC.	
DOOR	STEEL	PAINTED	
WINDOW	—	ANODIZED ALUMINUM	
LOUVER	—	DO.	
HANDRAIL	STEEL	PAINTED	
STAIR	— (TREADS) STEEL (STRINGER)	GALV. GRATING PAINTED	
DOWNSPOUT	GALV. STL. PIPE	PAINTED	METAL BRACKETS
STOOP	—	CONC. STL. TROWELED	
TRENCH COVER	—	GALVANIZED GRATING	
BOILER AREA GROUND FLOOR	—	CONC. STL. TROWELED	
GAS CYLINDERS STORAGE RM. (ROOF)	—	C.A.S.	
DO. (WALL)	CONC.	PAINTED	
ELEVATOR (ROOF)	STEEL	PAINTED	
DO. (SHAFT)	DO.	DO.	

FINISH SCHEDULE ABBREVIATIONS

A.C.F. — ACCESSIBLE COMPUTER FLOOR SYSTEM.
AP. P. — ACIDPROOF PAINTED
AP. V.B. — ACIDPROOF VINYL BASE
AP. V.T. — ACIDPROOF VINYL TILE
A.T.B. — ACOUSTICAL TILE BOARD
A.W. — ASPHALT WATERPROOFING

BLK. — BLOCK
BO. — BOARD
C.A.D. — CEILING ACCESS DOOR
C.A.F.B. — CEMENT ASBESTOS FLEXIBLE BOARD
C.A.S. — CORRUGATED ASBESTOS SHEET
C.C.M. — CORRUGATED COLORED METAL
CHKD. — CHECKERED
C.M.T. — CERAMIC MOSAIC TILE
CONC. — CONCRETE
COND. — CONDITIONING
C.S.M. — COLORED SHEET METAL

DECK. — DECKING
DO. — DITTO
EXH. — EXHAUST
F.F. — FACTORY FINISH
FIN. — FINISH
FLR. — FLOOR
FND. — FOUNDATION

GALV. — GALVANIZED
G.W. — GLASS WOOL
G.W.T. — GLAZED WALL TILE
GYP. — GYPSUM
H. — HEIGHT
LAV. — LAVATORY
L.C. — LEAN CONCRETE

MAT. — MATERIAL
MET. — METAL
M.S.T. — MORTAR STEEL TROWELED
P.C.P. — PRECAST CONCRETE PANEL
P.C.T. — POLYVINYL CHLORIDE ASBESTOS TILE (STATIC ELECTRICITY PROOF)
PL. — PLATE
PTD. — PAINTED
REMOV. — REMOVABLE
RM. — ROOM
STL. — STEEL
SUSP. — SUSPENDED

TERR. — TERRAZZO
THICK. — THICKNESS

V.A.T. — VINYL ASBESTOS TILE
V.B. — VINYL BASE
V.C.M. — VINYL COATED METAL

W/ — WITH
WP. — WATERPROOFED

PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE
FINISH SCHEDULE

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

APPROVED BY	REVIEWED BY	CHECKED BY	DRAWN BY

DRAWING NO.	SCALE	DATE
WAT – 1111		10 JAN. 1990

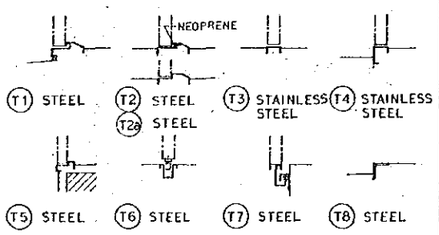
DOOR SCHEDULE

FLOOR	TARGET	TYPE	MAT.	SIZE W.	SIZE H.	SIZE THK.	HARD-WARE	THRE-SHOLD	QTY. UNIT No.1	QTY. UNIT No.2	REMARKS
GROUND FLOOR	MD 101	K	STEEL	8,000	8,000	1.6 (SLATS)	g	T8	1	0	PITCH OF SLATS --- 100 ROLLING DOOR
	MD 102	K	DO.	4,000	4,000	DO.	g	T8	2	0	DO.
	MD 103	G	DO.	1,900	2,100	40	c	T1	2	2	DOUBLE SWING DOOR
	MD 104	A	DO.	900	2,100	40	a	T1	3	1	
MEZZANINE FLOOR	MD 201	A	STEEL	850	2,100	40	a	T1	2	2	
	MD 202	G	DO.	2,000	2,470	40	c	T2	1	0	SOUNDPROOFED DOUBLE SWING DOOR
	MD 203	G	DO.	2,000	2,470	40	c	T3	1	0	DOUBLE SWING DOOR
	MD 204	G	DO.	1,800	2,100	40	c	T2	1	0	SOUNDPROOFED DOUBLE SWING DOOR
	MD 205	G	DO.	1,800	2,100	40	c	T3	1	0	DOUBLE SWING DOOR
	MD 206	G	DO.	1,800	2,100	40	c	T2a	1	0	DO.
	MD 207	A	DO.	900	2,100	40	a	T2	2	0	SOUNDPROOFED DOOR
	MD 208	A	DO.	900	2,100	40	a	T3	2	0	
	MD 209	A	DO.	900	2,100	40	a	T2	1	0	
	MD 210	A	DO.	600	600	25	e	T5	4	0	
	MD 211	A	DO.	450	450	25	e	T5	1	0	
	MD 212	M	WOOD	900	2,100	40	a	T3	1	0	LOUVER : 700 x 350
	MD 250	A	STEEL	600	1,000	40	b	T2a	2	0	
OPERATING FLOOR	MD 301	A	STEEL	850	2,100	40	a	T1	2	2	
	MD 302	G	DO.	2,000	2,470	40	c	T2	2	0	SOUNDPROOFED DOUBLE SWING DOOR
	MD 303	G	DO.	2,000	2,470	40	c	T3	2	0	DOUBLE SWING DOOR
	MD 304	A	DO.	900	2,100	40	a	T2	5	0	SOUNDPROOFED DOOR
	MD 305	A	DO.	900	2,100	40	a	T3	2	0	
	MD 306	A	DO.	800	2,100	40	a	T4	1	0	
	MD 307	D	DO.	800	2,100	40	h	T4	1	0	LOUVER : 700 x 350
	MD 308	B	DO.	800	2,100	40	a	T4	1	0	DO.
	MD 309	A	DO.	600	600	25	e	T5	4	0	
	MD 310	A	DO.	450	450	25	e	T5	1	0	
	MD 311	L	WOOD	600	1,700	40	f	NONE	2	0	
FORTH FLOOR	MD 401	A	STEEL	850	2,100	40	a	T1	1	1	
	MD 402	A	DO.	900	2,100	40	a	T2a	1	0	
	MD 403	G	DO.	1,800	2,100	40	c	T2a	1	0	DOUBLE SWING DOOR
	MD 404	G	DO.	1,800	2,100	40	c	T2	2	0	SOUNDPROOFED DOUBLE SWING DOOR
	MD 405	G	DO.	1,800	2,100	40	c	T3	1	0	DOUBLE SWING DOOR
	MD 406	J	DO.	1,800	2,100	40	c	T3	3	0	DO.
	MD 407	D	DO.	900	2,100	40	a	T3	4	0	LOUVER : 700 x 350
	MD 408	D	DO.	800	2,100	40	h	T4	1	0	DO.
	MD 409	B	DO.	800	2,100	40	a	T3	1	0	DO.
	MD 410	A	DO.	450	450	25	e	T5	1	0	
	MD 411	L	WOOD	600	1,700	40	f	NONE	1	0	
LOW ROOF	MD 501	C	STEEL	900	2,100	40	a	T1	2	1	
	MD 502	A	DO.	700	1,800	40	a	T1	1	1	
COMMON	MD F1	F	STEEL	850	2,000	40	d	T6	1	1	HANGER DOOR LOUVER : 600 x 300
	MD F2	F	DO.	850	2,000	40	d	T7	6	6	DO.
	MD F3	E	DO.	800	1,800	40	a	T1	1	1	LOUVERS : 600 x 300 x 2

HAROWARE LIST

DESCRIPTION \ GROUP	a	b	c	d	e	f	g	h
HINGE	O	O	O		O	O		O
DOOR KNOB	O	O	O					O
DOOR PULL				O				
LOCKSET	O	O	O	O	O			
DOOR CLOSER	O		O					O
FLUSH BOLT			O					
LATCH SET						O		
HANGER RAIL & ROLLOR				O				
PUSH BUTTON							O	

THRESHOLD TYPES



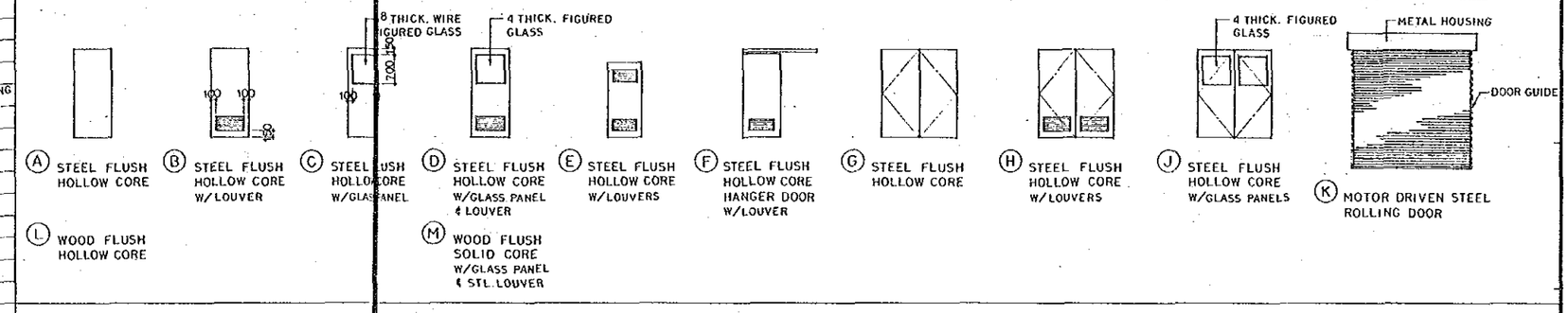
WINDOW SCHEDULE

TARGET	DESCRIPTION	SIZE W.	SIZE H.	LOCATION	QTY. UNIT No.1	QTY. UNIT No.2	REMARKS
MW 1	ALUM. INTERMEDIATE FIXED & PROJECTED-OUT WINDOW	61,260	1,800	TURBINE ROOM (OPERATING FLOOR)	1	0	6.8 THICK. WIRED GLASS MULTIPLE WINDOW TYPE
MW 1a	DO.	51,260	1,800	DO.	0	1	DO.
MW 2	DO.	33,485	1,800	DO.	1	0	DO.
MW 2a	DO.	33,485	1,800	DO.	0	1	DO.
MW 3	DO.	33,070	1,800	DO.	1	0	DO.
MW 3a	DO.	33,070	1,800	DO.	0	1	DO.
MW 4	ALUM. INTERMEDIATE FIXED WINDOW	61,260	1,200	TURBINE ROOM (CRANE LEVEL)	1	0	DO.
MW 4a	DO.	51,260	1,200	DO.	0	1	DO.
MW 5	DO.	56,915 3,375	1,200	DO.	1	0	DO.
MW 5a	DO.	46,915 3,375	1,200	DO.	0	1	DO.
MW 6	DO.	23,120	1,200	DO.	1	0	DO.
MW 6a	DO.	23,120	1,200	DO.	0	1	DO.
MW 7	ALUM. INTERMEDIATE FIXED & PROJECTED-OUT WINDOW	900	1,500	SHIFT RM., REST RM., CONFERENCE RM. etc.	18	0	6.8 THICK. WIRED GLASS
MW 8	ALUM. PROJECTED-OUT WINDOW	900	750	LAVATORY & KITCHENETTE	4	0	DO.
MW 9	ALUM. FIXED OBSERVATION WINDOW	3,050	1,200	CENTRAL CONTROL RM.	1	0	6 THICK. PAIR SHEET GLASS

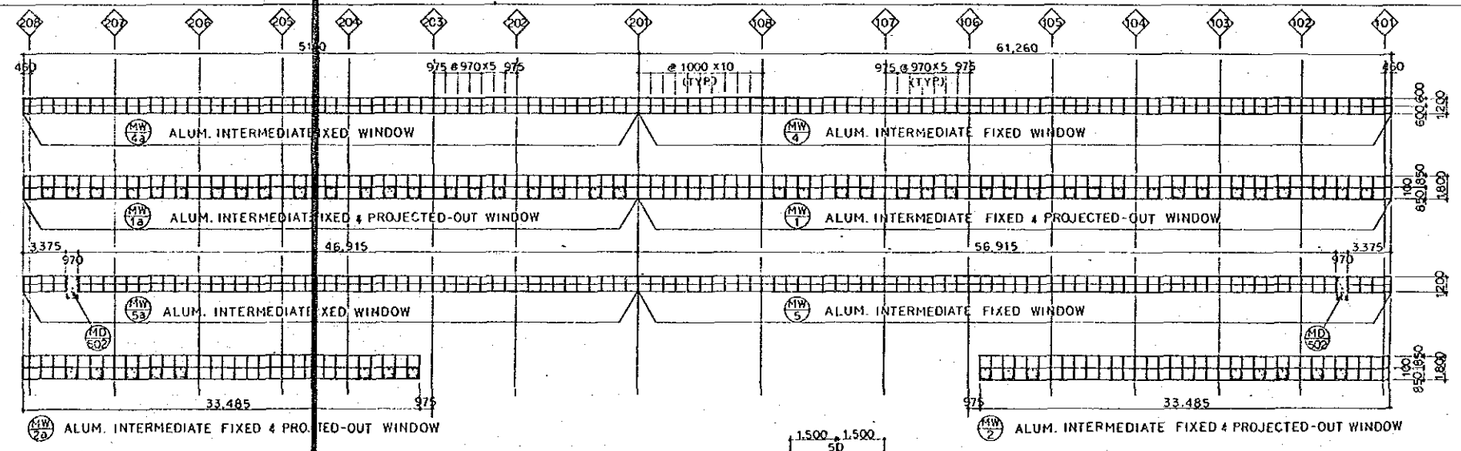
LOUVER SCHEDULE

TARGET	DESCRIPTION	SIZE W.	SIZE H.	LOCATION	QTY. UNIT No.1	QTY. UNIT No.2	REMARKS
ML 1	ALUM. FIXED FULL LOUVER	900	3,700	TURBINE ROOM (GROUND & MEZZ. FL.)	26	22	W/BIRD SCREEN
ML 2	ALUM. ADJUSTABLE 45° OPERATING LOUVER	900	3,700	TURBINE ROOM (GROUND FL.)	4	4	FUSIDLE TYPE W/BIRD SCREEN
ML 3	ALUM. FIXED FULL LOVER	1,000	1,200	BATTERY RM.	2	0	W/BIRD SCREEN
ML 4	DO.	1,000	650	LABORATORY	2	0	DO.
ML 5	DO.	1,000	1,000	CABLE TREATMENT AREA	4	0	DO.
ML 6	DO.	1,000	700	HEATER ROOM	1	0	DO.
ML 7	DO.	2,000	1,800	DO.	1	0	DO.
ML E1	STEEL FIXED FULL LOUVER	600	300	ELEVATOR HALL	7	7	W/BIRD SCREEN
ML E2	DO.	300	300	ELEVATOR MACHINE RM.	1	1	DO.

DOOR TYPES



WINDOW & LOUVER TYPES



PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE

DOOR, WINDOW & LOUVER SCHEDULES

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

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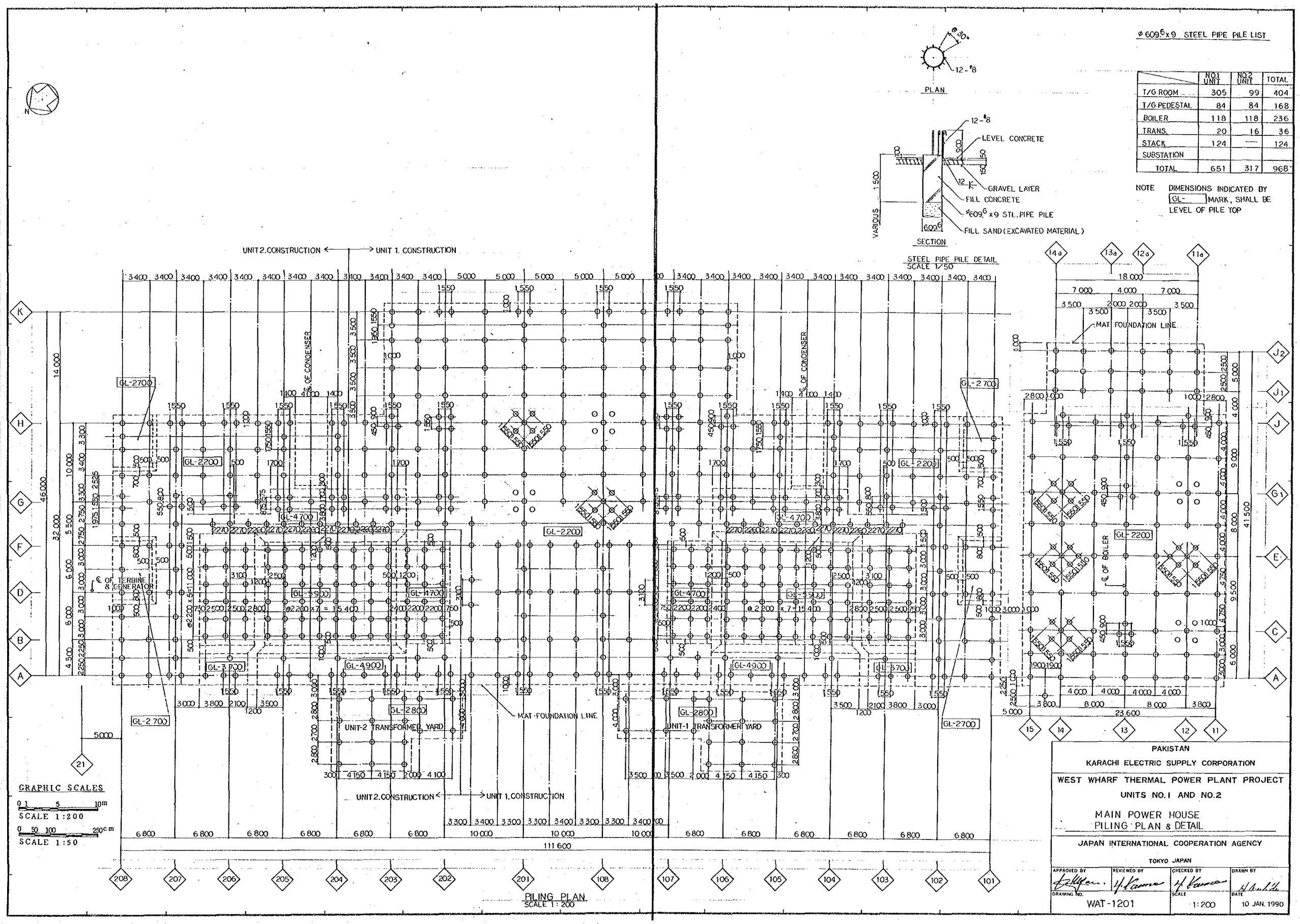
SCALE

DATE 10 JAN. 1990



PLAN

SECTION

STEEL PIPE PILE DETAIL
SCALE 1/50

φ609.6x9 STEEL PIPE PILE LIST

	NO.1 UNIT	NO.2 UNIT	TOTAL
T/G ROOM	305	99	404
T/G PEDESTAL	84	84	168
BOILER	118	118	236
TRANS.	20	16	36
STACK	124	—	124
SUBSTATION			
TOTAL	651	317	968

NOTE DIMENSIONS INDICATED BY GL- MARK, SHALL BE LEVEL OF PILE TOP

PILING PLAN
SCALE 1:200

PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE
PILING PLAN & DETAIL

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

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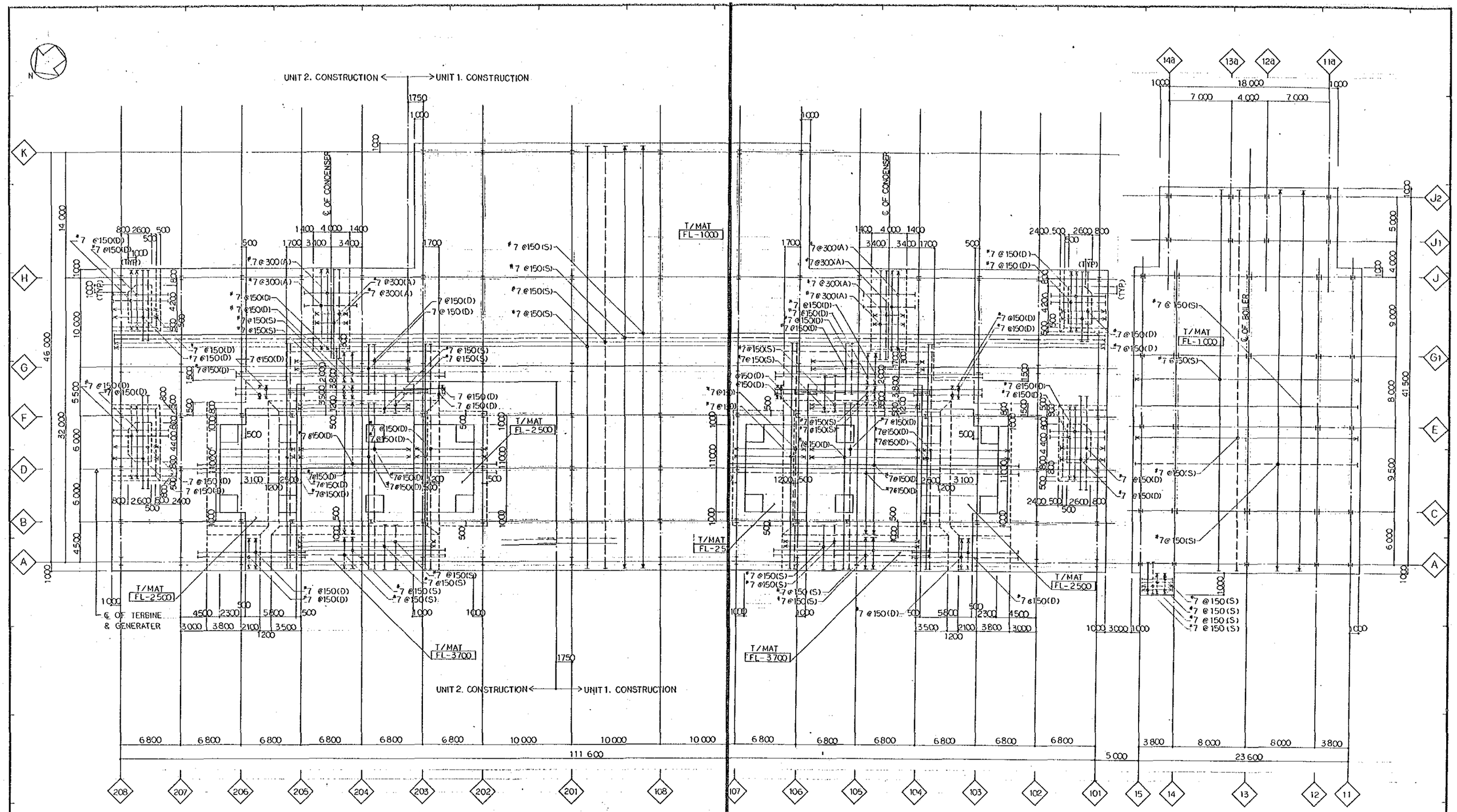
WAT-1201	1:200	10 JAN. 1990	



MAT FOUNDATION REINFORCING PLAN (T/ FDN. FL-1000)

SCALE 1:200

NOTES

1. ALL LAP SPLICE SHALL BE 35 DIAMETERS UNLESS OTHERWISE NOTED.

GRAPHIC SCALE

1 5 10m

SCALE 1:200

LEGEND

- TOP BAR (TOP BAR & MIDLE OF UPPER BAR)
- BOTTOM BAR (BOTTOM BAR & MIDLE OF LOWER BAR)
- (S) --- SINGLE LAYER
- (D) --- DOUBLE LAYER
- (A) --- ADDITIONAL RE-BAR

PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE

MAT FOUNDATION REINFORCING PLAN

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

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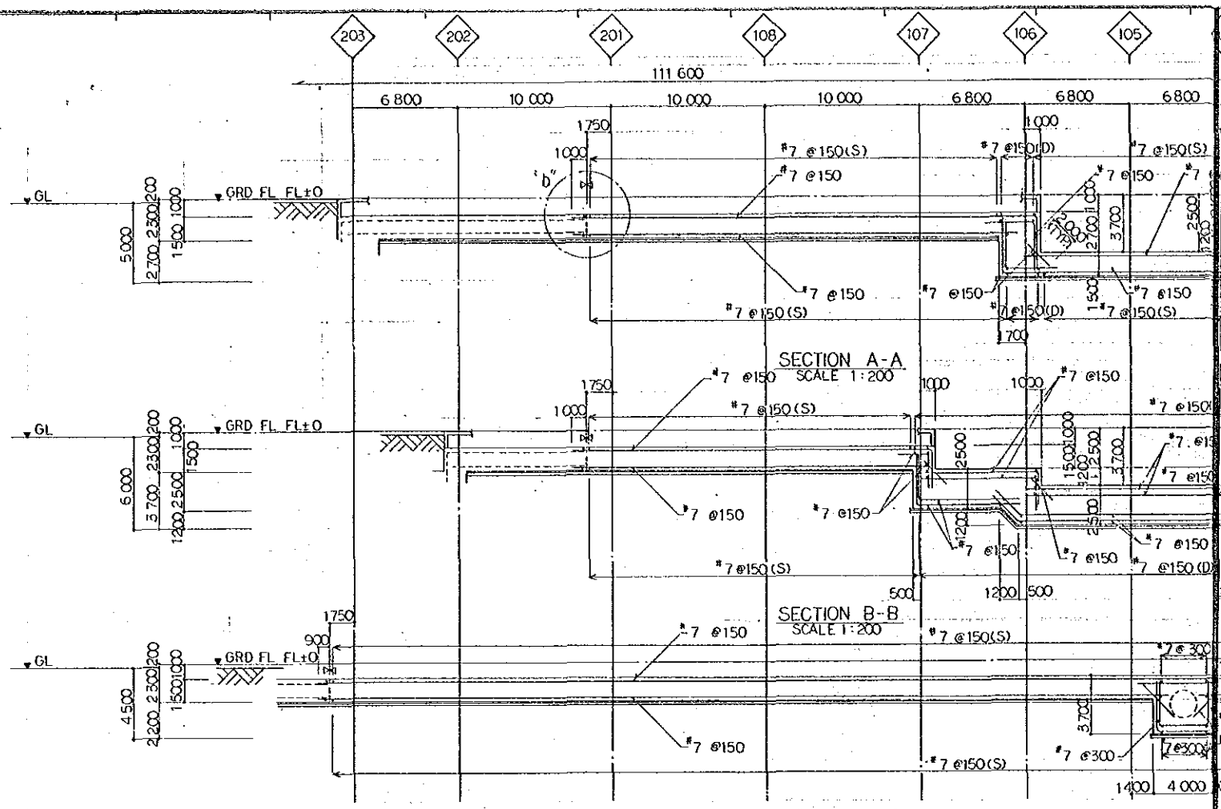
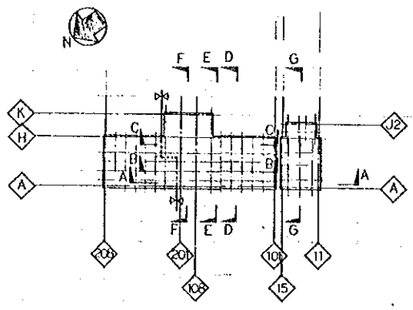
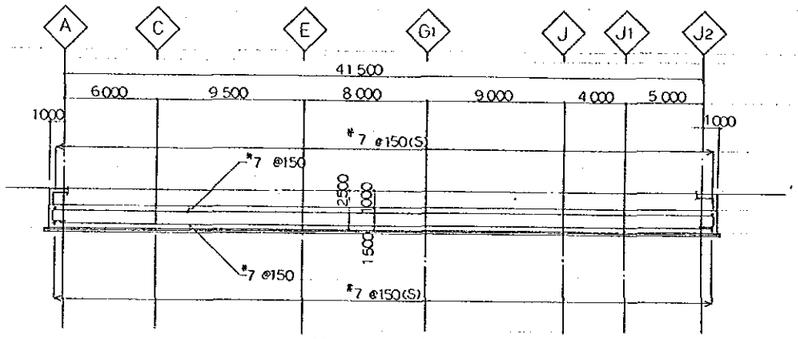
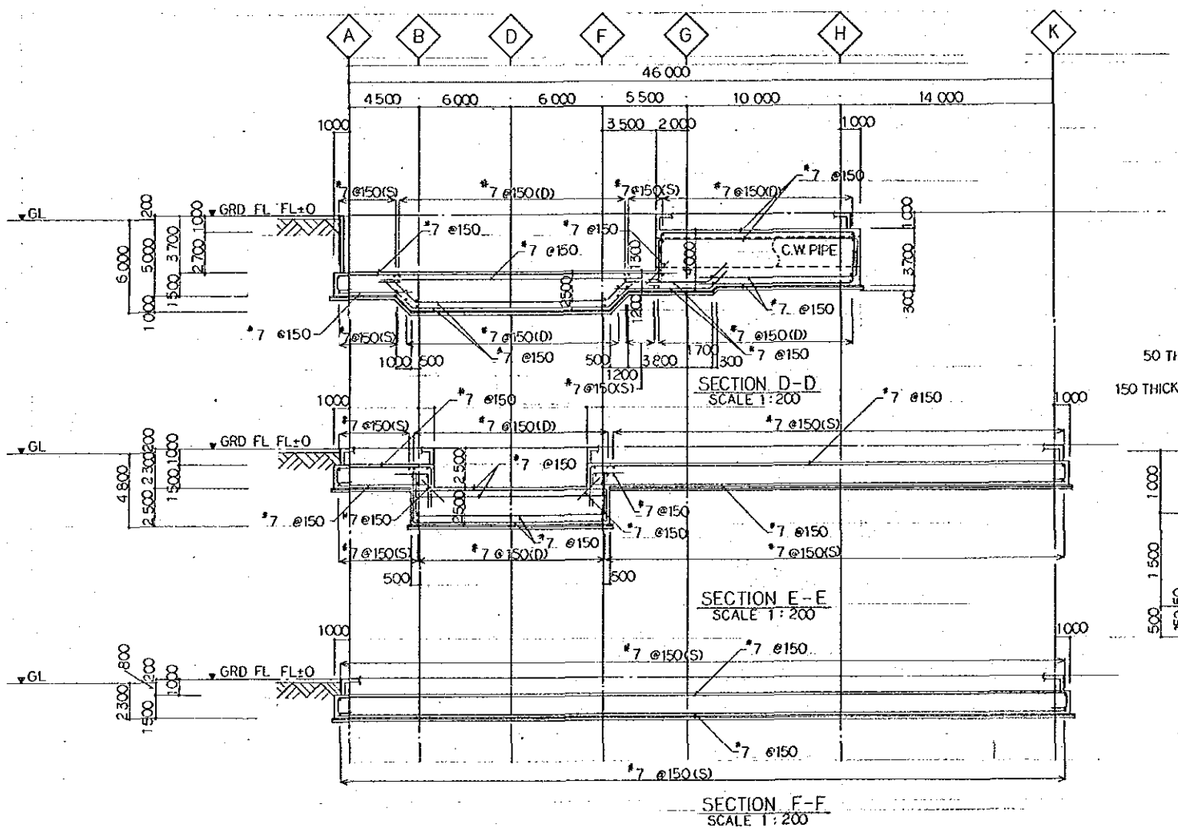
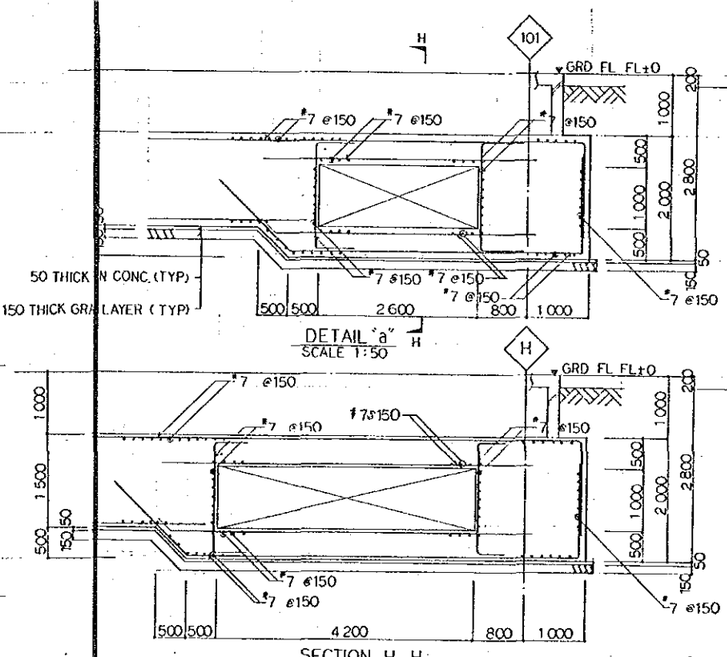
	H. Kawana	H. Kawana	H. Arai
DRAWING NO.		SCALE	DATE
WAT-1202		1:200	10 JAN. 1990

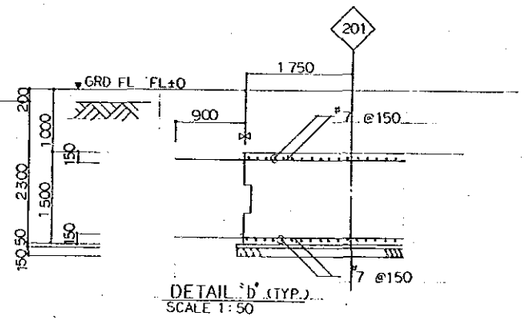












LEGEND

- ✠ --- CONSTRUCTION JOINT
- (S) --- SINGLE LAYER
- (D) --- DOUBLE LAYER
- (A) --- ADDITIONAL RE-BAR

GRAPHIC SCALES

SCALE 1:200

SCALE 1:50

PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE

MAT FOUNDATION REINFOCING SECTIONS

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

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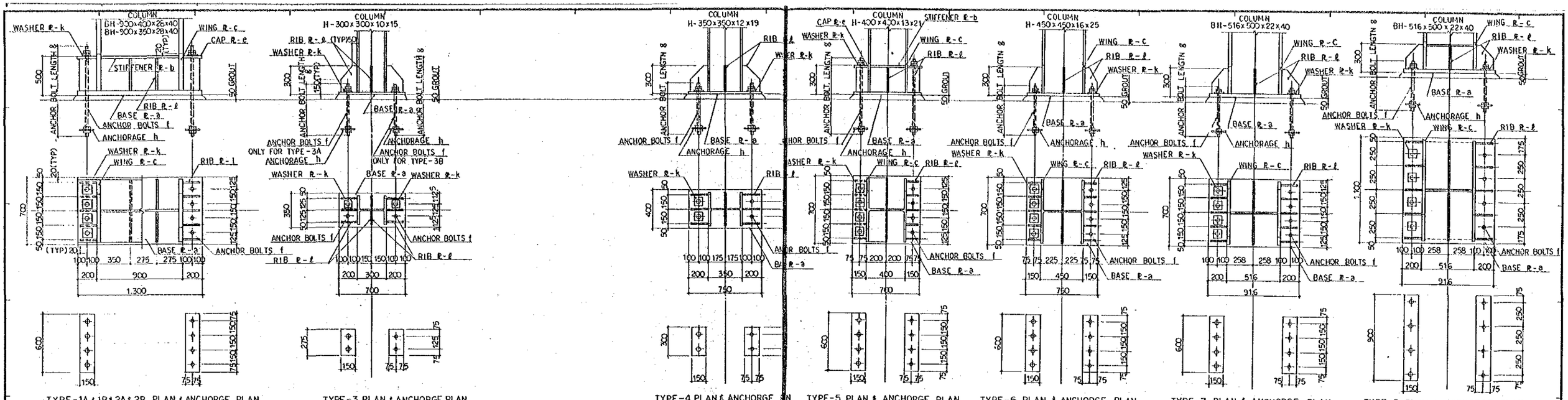
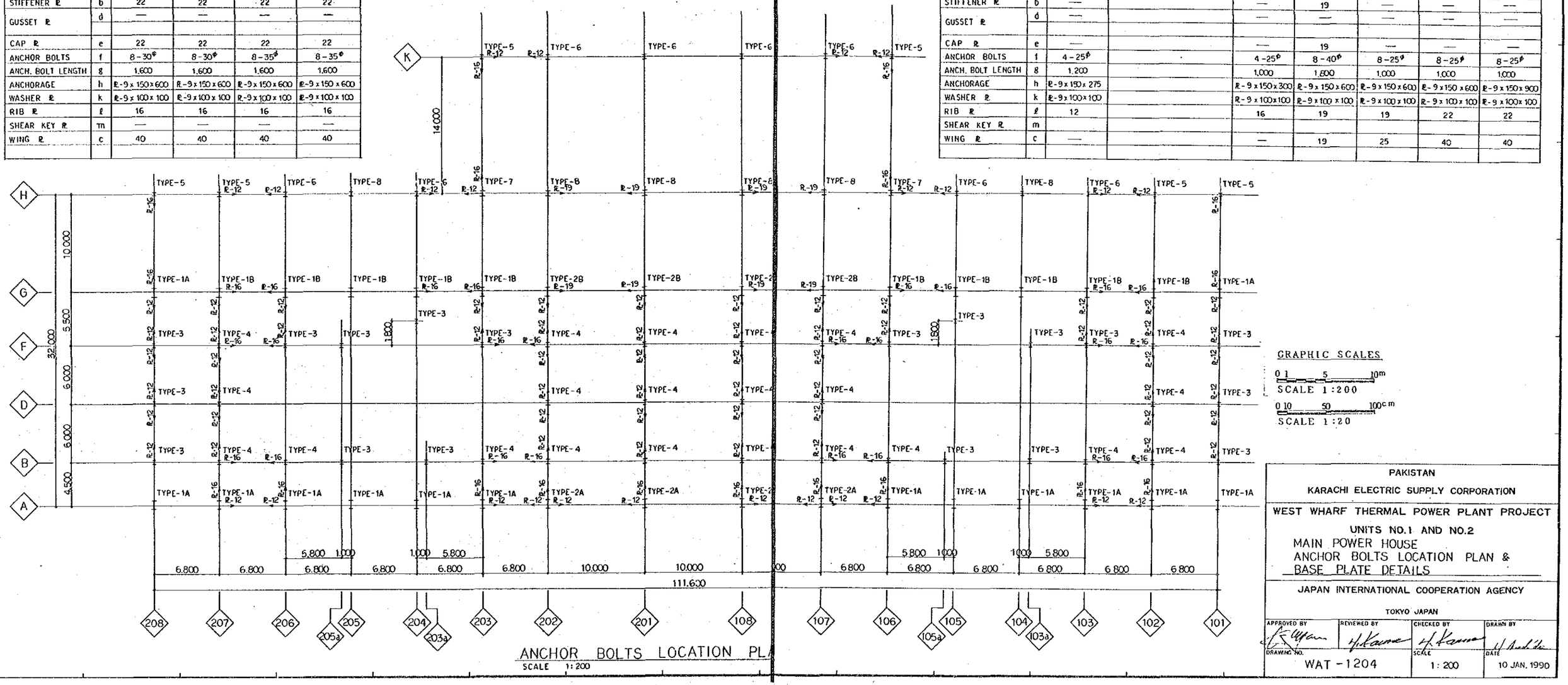
DRAWING NO.	SCALE	DATE	
WAT-1203	1:200	10 JAN. 1990	



		TYPE-1A	TYPE-1B	TYPE-2A	TYPE-2B
BASE ℝ A x B x t	a	1300 x 700 x 29	1300 x 700 x 45	1300 x 700 x 35	1300 x 700 x 50
STIFFENER ℝ	b	22	22	22	22
GUSSET ℝ	d	—	—	—	—
CAP ℝ	e	22	22	22	22
ANCHOR BOLTS	f	8 - 30ϕ	8 - 30ϕ	8 - 35ϕ	8 - 35ϕ
ANCH. BOLT LENGTH	g	1,600	1,600	1,600	1,600
ANCHORAGE	h	R-9 x 150 x 600	R-9 x 150 x 600	R-9 x 150 x 600	R-9 x 150 x 600
WASHER ℝ	k	R-9 x 100 x 100	R-9 x 100 x 100	R-9 x 100 x 100	R-9 x 100 x 100
RIB ℝ	ℓ	16	16	16	16
SHEAR KEY ℝ	m	—	—	—	—
WING ℝ	c	40	40	40	40

		TYPE-3	TYPE-4	TYPE-5	TYPE-6	TYPE-7	TYPE-8
BASE ℝ A x B x t	a	700 x 350 x 22	750 x 400 x 25	700 x 700 x 25	750 x 700 x 30	916 x 700 x 40	916 x 1100 x 38
STIFFENER ℝ	b	—	—	19	—	—	—
GUSSET ℝ	d	—	—	—	—	—	—
CAP ℝ	e	—	—	19	—	—	—
ANCHOR BOLTS	f	4 - 25ϕ	4 - 25ϕ	8 - 40ϕ	8 - 25ϕ	8 - 25ϕ	8 - 25ϕ
ANCH. BOLT LENGTH	g	1,200	1,000	1,600	1,000	1,000	1,000
ANCHORAGE	h	R-9 x 150 x 275	R-9 x 150 x 300	R-9 x 150 x 600	R-9 x 150 x 600	R-9 x 150 x 600	R-9 x 150 x 900
WASHER ℝ	k	R-9 x 100 x 100	R-9 x 100 x 100	R-9 x 100 x 100	R-9 x 100 x 100	R-9 x 100 x 100	R-9 x 100 x 100
RIB ℝ	ℓ	12	16	19	19	22	22
SHEAR KEY ℝ	m						
WING ℝ	c	—	—	19	25	40	40



PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE

ANCHOR BOLTS LOCATION PLAN & BASE PLATE DETAILS

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

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DRAWING NO.	SCALE	DATE	
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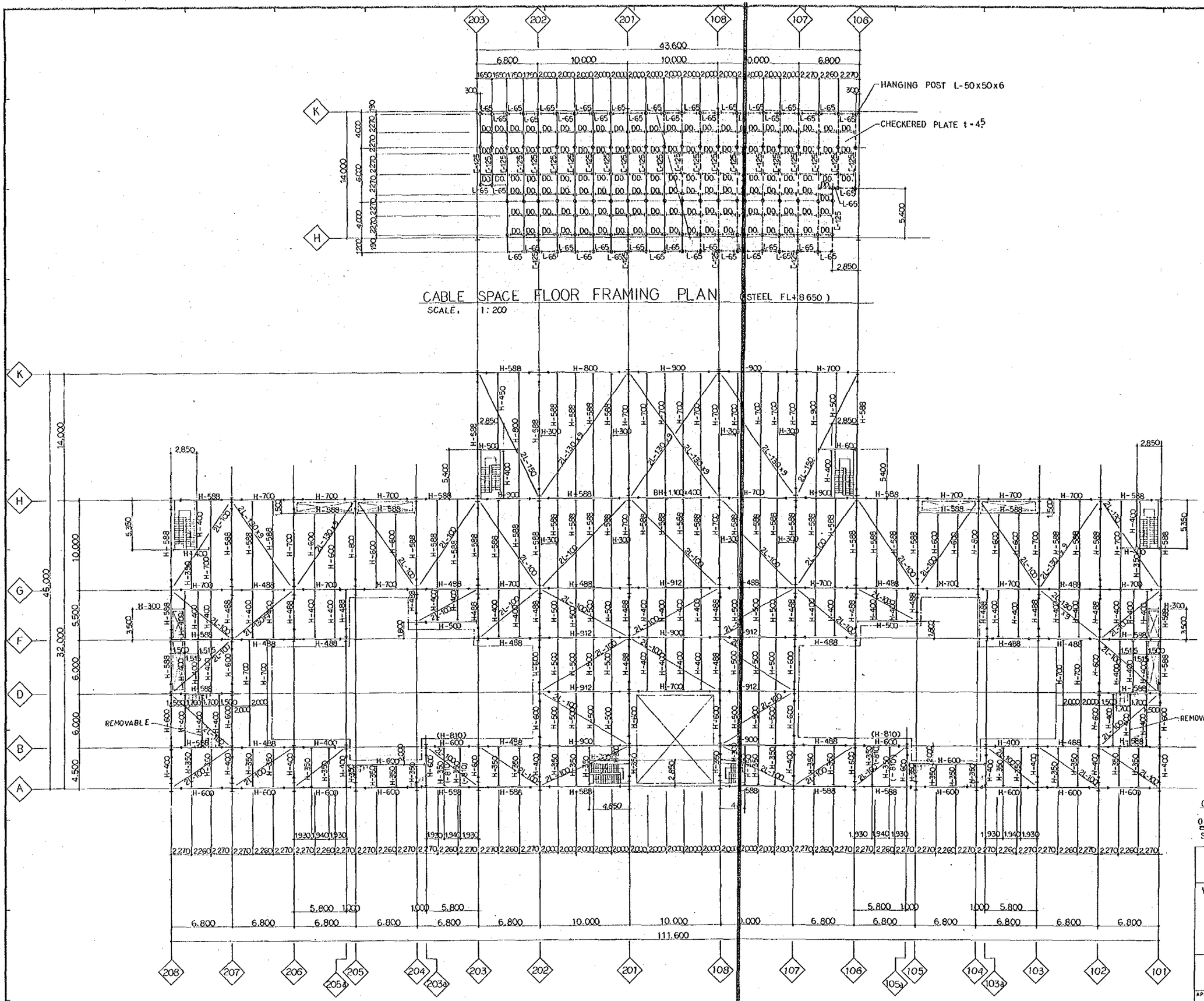

CABLE SPACE FLOOR FRAMING PLAN (STEEL FL+8650)
SCALE. 1:200

MEZZANINE FLOOR FRAMING PLAN (FL+5.500) T/STEEL-210
SCALE 1:200

MARK	SIZE OF MEMBER
H-200[1]	H-200×200× 8×12
H-244	H-244×175× 7×11
H-250	H-250×125× 6× 9
H-250[1]	H-250×250× 9×14
H-294	H-294×200× 8×12
H-300	H-300×150×6.5× 9
H-300[1]	H-300×300×10×15
H-350	H-350×175× 7×11
H-350[1]	H-350×350×12×19
H-390	H-390×300×10×16
H-400	H-400×200× 8×13
H-400[1]	H-400×400×13×21
H-440	H-440×300×11×18
H-450	H-450×200× 9×14
BH-450[1]	BH-450×450×16×25
BH-480×350	BH-480×350×16×22
H-488	H-488×300×11×18
H-500	H-500×200×10×16
BH-516×500	BH-516×500×22×40
H-588	H-588×300×12×20
H-600	H-600×200×11×17
H-700	H-700×300×13×24
BH-700×350	BH-700×350×28×40
BH-700×400	BH-700×400×28×40
H-800	H-800×300×14×26
H-900	H-900×300×16×28
BH-900×350	BH-900×350×28×40
BH-900×400	BH-900×400×28×40
H-912	H-912×302×18×34
BH-1100×400	BH-1100×400×22×36
[-100	[-100×50×5×7.5
[-125	[-125×65×6× 8
L-50	L-50×50×6
L-65	L-65×65×6
L-75	L-75×75×6
2L- 75	2L- 75× 75× 6
2L- 90	2L- 90× 90× 6
2L-100	2L-100×100× 7
2L-120	2L-120×120× 8
2L-130× 9	2L-130×130× 9
2L-130×12	2L-130×130×12
2L-130×15	2L-130×130×15
2L-150	2L-150×150×10
2L-175	2L-175×175×15
2L-200	2L-200×200×15

GRAPHIC SCALE
0 1 5 10m
SCALE 1:200

PAKISTAN
KARACHI ELECTRIC SUPPLY CORPORATION
WEST WHARF THERMAL POWER PLANT PROJECT
UNITS NO.1 AND NO.2
MAIN POWER HOUSE
MEZZANINE FLOOR FRAMING PLAN
JAPAN INTERNATIONAL COOPERATION AGENCY
TOKYO JAPAN

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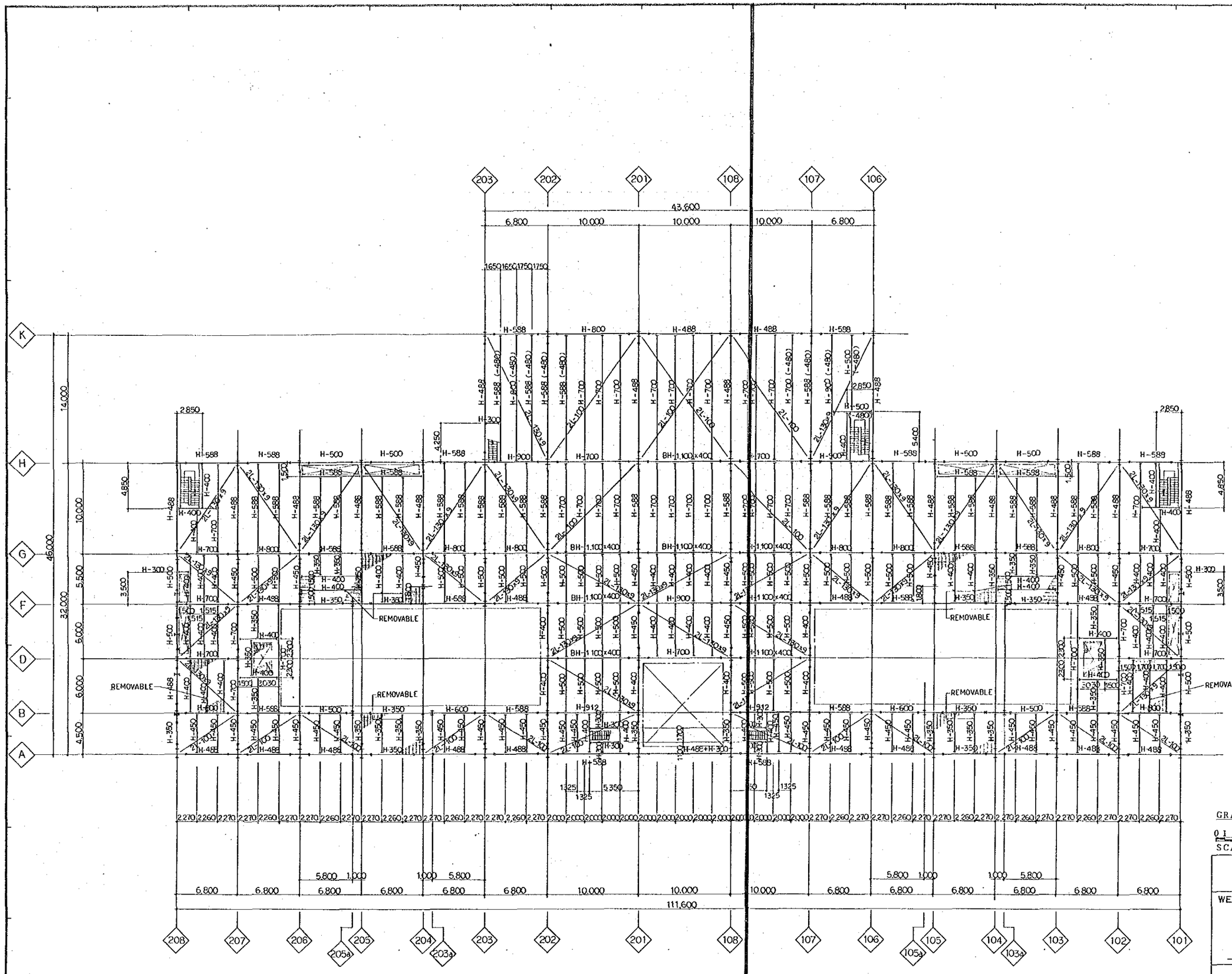
DRAWING NO.	SCALE	DATE	
WAT - 1205	1 : 200	10 JAN. 1990	



OPERATING FLOOR FRAMING PLA (FL+11,000) T/STEEL -210

SCALE....1 : 200

LEGEND

-----OPENING

MARK	SIZE OF MEMBER
H-200[1]	H-200×200× 8×12
H-244	H-244×175× 7×11
H-250	H-250×125× 6× 9
H-250[1]	H-250×250× 9×14
H-294	H-294×200× 8×12
H-300	H-300×150×6.5× 9
H-300[1]	H-300×300×10×15
H-350	H-350×175× 7×11
H-350[1]	H-350×350×12×19
H-390	H-390×300×10×16
H-400	H-400×200× 8×13
H-400[1]	H-400×400×13×21
H-440	H-440×300×11×18
H-450	H-450×200× 9×14
BH-450[2]	BH-450×450×16×25
BH-480×350	BH-480×350×16×22
H-488	H-488×300×11×18
H-500	H-500×200×10×16
BH-516×500	BH-516×500×22×40
H-588	H-588×300×12×20
H-600	H-600×200×11×17
H-700	H-700×300×13×24
BH-700×350	BH-700×350×28×40
BH-700×400	BH-700×400×28×40
H-800	H-800×300×14×26
H-900	H-900×300×16×28
BH-900×350	BH-900×350×28×40
BH-900×400	BH-900×400×28×40
H-912	H-912×302×18×34
BH-1100×400	BH-1100×400×22×36
[-100	[-100×50×5×7.5
[-125	[-125×65×6× 8
L-50	L-50×50×6
L-65	L-65×65×6
L-75	L-75×75×6
2L- 75	2L- 75× 75× 6
2L- 90	2L- 90× 90× 6
2L-100	2L-100×100× 7
2L-120	2L-120×120× 8
2L-130× 9	2L-130×130× 9
2L-130×12	2L-130×130×12
2L-130×15	2L-130×130×15
2L-150	2L-150×150×10
2L-175	2L-175×175×15
2L-200	2L-200×200×15

GRAPHIC SCALE

0 1 5 10m

SCALE 1:200

PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE

OPERATING FLOOR FRAMING PLAN

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

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WAT - 1206	1 : 200	10 JAN. 1990	

MARK	SIZE OF MEMBER
H-200[3]	H-200×200× 8×12
H-244	H-244×175× 7×11
H-250	H-250×125× 6× 9
H-250[2]	H-250×250× 9×14
H-294	H-294×200× 8×12
H-300	H-300×150×6.5× 9
H-300[3]	H-300×300×10×15
H-350	H-350×175× 7×11
H-350[2]	H-350×350×12×19
H-390	H-390×300×10×16
H-400	H-400×200× 8×13
H-400[3]	H-400×400×13×21
H-440	H-440×300×11×18
H-450	H-450×200× 9×14
BH-450[3]	BH-450×450×16×25
BH-480×350	BH-480×350×16×22
H-488	H-488×300×11×18
H-500	H-500×200×10×16
BH-516×500	BH-516×500×22×40
H-588	H-588×300×12×20
H-600	H-600×200×11×17
H-700	H-700×300×13×24
BH-700×350	BH-700×350×28×40
BH-700×400	BH-700×400×28×40
H-800	H-800×300×14×26
H-900	H-900×300×16×28
BH-900×350	BH-900×350×28×40
BH-900×400	BH-900×400×28×40
H-912	H-912×302×18×34
BH-1100×400	BH-1100×400×22×36
[-100	[-100×50×5×7.5
[-125	[-125×65×6× 8
L-50	L-50×50×6
L-65	L-65×65×6
L-75	L-75×75×6
2L- 75	2L- 75× 75× 6
2L- 90	2L- 90× 90× 6
2L-100	2L-100×100× 7
2L-120	2L-120×120× 8
2L-130× 9	2L-130×130× 9
2L-130×12	2L-130×130×12
2L-130×15	2L-130×130×15
2L-150	2L-150×150×10
2L-175	2L-175×175×15
2L-200	2L-200×200×15

LEGEND

-----OPENING

GRAPHIC SCALE

0 1 5 10m

SCALE 1:200

FORTH FLOOR FRAMING PLAN (FL+16.000) T/STEEL -150

SCALE 1 : 200

PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE

FORTH FLOOR FRAMING PLAN

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

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	H. Kawai	H. Kawai	H. Habib
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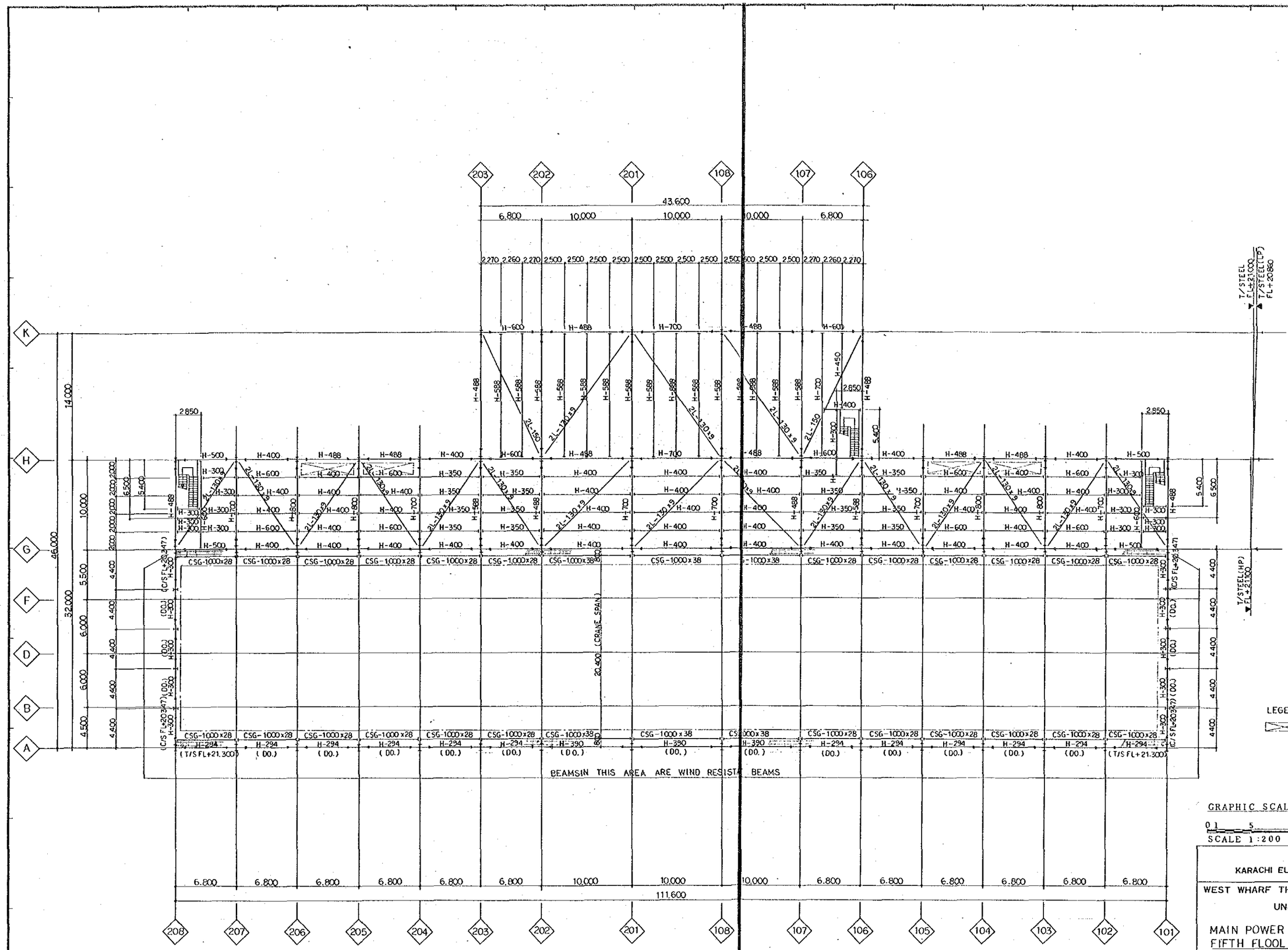
WAT - 1207	1 : 200	10 JAN. 1990	



MARK	SIZE OF MEMBER
H-200^{3}	H-200×200× 8×12
H-244	H-244×175× 7×11
H-250	H-250×125× 6× 9
H-250^{3}	H-250×250× 9×14
H-294	H-294×200× 8×12
H-300	H-300×150×6.5× 9
H-300^{3}	H-300×300×10×15
H-350	H-350×175× 7×11
H-350^{3}	H-350×350×12×19
H-390	H-390×300×10×16
H-400	H-400×200× 8×13
H-400^{3}	H-400×400×13×21
H-440	H-440×300×11×18
H-450	H-450×200× 9×14
BH-450^{3}	BH-450×450×16×25
BH-480×350	BH-480×350×16×22
H-488	H-488×300×11×18
H-500	H-500×200×10×16
BH-516×500	BH-516×500×22×40
H-588	H-588×300×12×20
H-600	H-600×200×11×17
H-700	H-700×300×13×24
BH-700×350	BH-700×350×28×40
BH-700×400	BH-700×400×28×40
H-800	H-800×300×14×26
H-900	H-900×300×16×28
BH-900×350	BH-900×350×28×40
BH-900×400	BH-900×400×28×40
H-912	H-912×302×18×34
BH-1100×400	BH-1100×400×22×36
[-100	[-100×50×5×7.5
[-125	[-125×65×6× 8
L-50	L-50×50×6
L-65	L-65×65×6
L-75	L-75×75×6
2L- 75	2L- 75× 75× 6
2L- 90	2L- 90× 90× 6
2L-100	2L-100×100× 7
2L-120	2L-120×120× 8
2L-130× 9	2L-130×130× 9
2L-130×12	2L-130×130×12
2L-130×15	2L-130×130×15
2L-150	2L-150×150×10
2L-175	2L-175×175×15
2L-200	2L-200×200×15

LEGEND

OPENING

GRAPHIC SCALE

0 1 5 10m

SCALE 1:200

FIFTH FLOOR (T/STEEL L.P FL+21.000) & CRANE LEVEL (T/CRANE RAIL FL+21.500) FRAMING PLAN

SCALE 1:200

PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE

FIFTH FLOOL & CRANE LEVEL FRAMING PLAN

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

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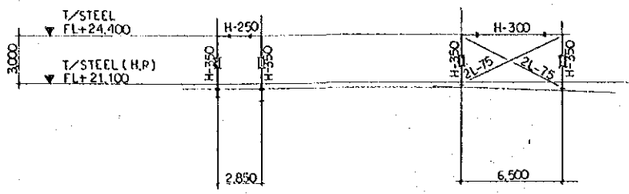
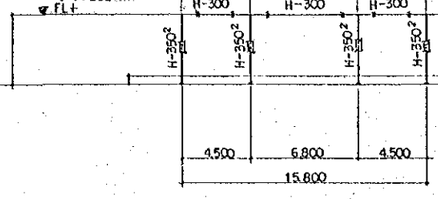
	H. Kawa	H. Kawa	H. Ishida
DRAWING NO.	SCALE	DATE	
WAT - 1208	1 : 200	10 JAN. 1990	

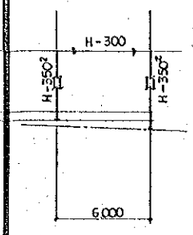


SECTION ⓐ
SCALE 1:200

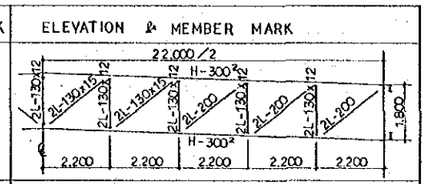
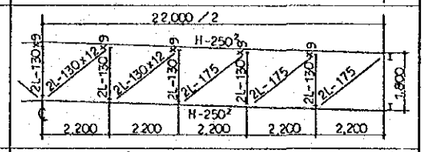
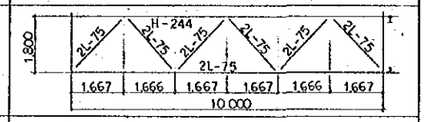
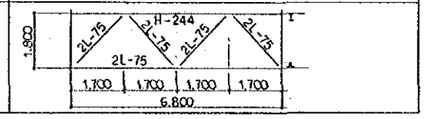


SECTION ⓑ
SCALE 1:200

SECTION ⓒ



SECTION ⓓ

TRUSS MARK	ELEVATION & MEMBER MARK
T1	
T2	
T3	
T4	

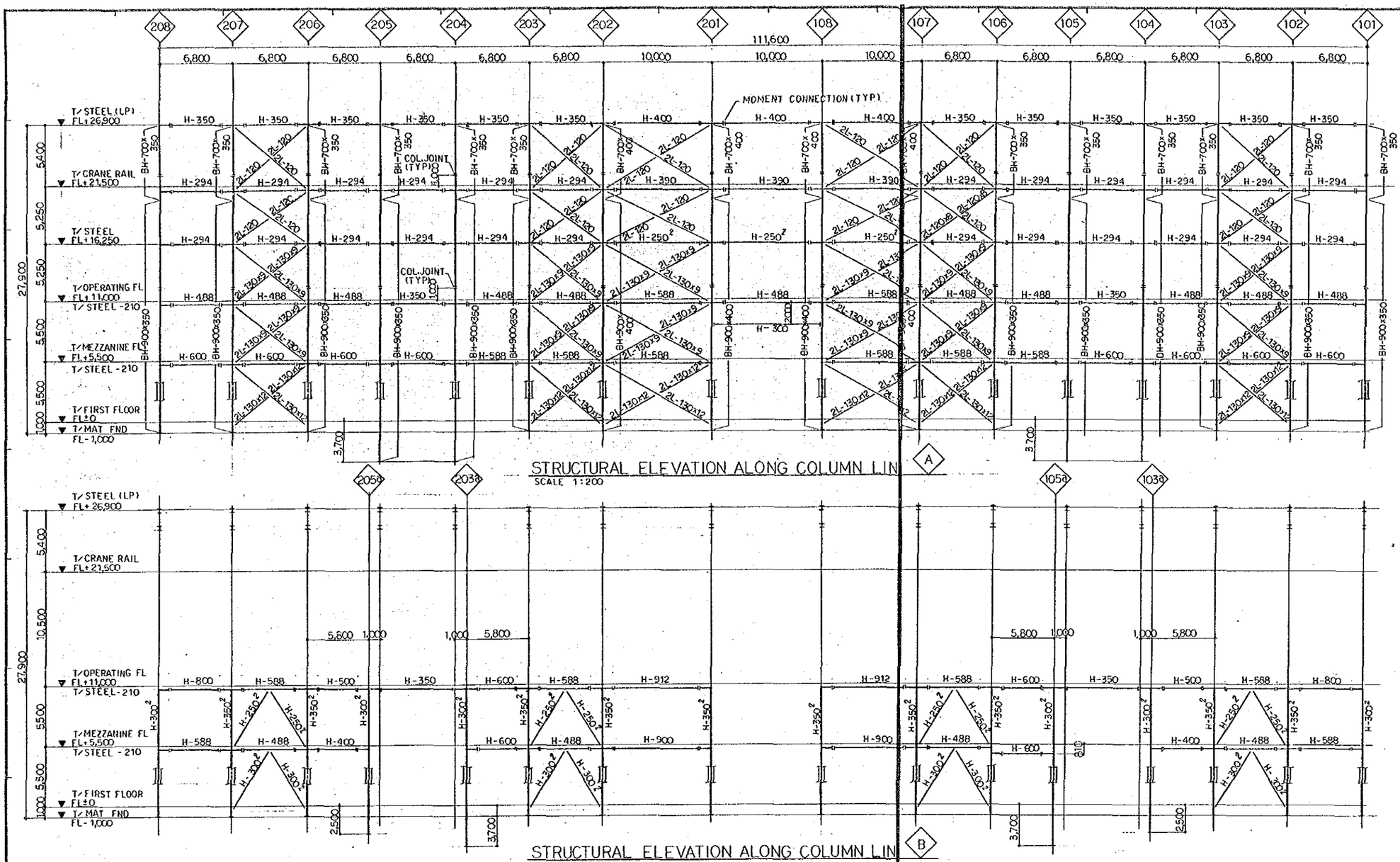
MARK	SIZE OF MEMBER
H-200³	H-200×200× 8×12
H-244	H-244×175× 7×11
H-250	H-250×125× 6× 9
H-250³	H-250×250× 9×14
H-294	H-294×200× 8×12
H-300	H-300×150×6.5× 9
H-300³	H-300×300×10×15
H-350	H-350×175× 7×11
H-350³	H-350×350×12×19
H-390	H-390×300×10×16
H-400	H-400×200× 8×13
H-400³	H-400×400×13×21
H-440	H-440×300×11×18
H-450	H-450×200× 9×14
BH-450³	BH-450×450×16×25
BH-480×350	BH-480×350×16×22
H-488	H-488×300×11×18
H-500	H-500×200×10×16
BH-516×500	BH-516×500×22×40
H-588	H-588×300×12×20
H-600	H-600×200×11×17
H-700	H-700×300×13×24
BH-700×350	BH-700×350×28×40
BH-700×400	BH-700×400×28×40
H-800	H-800×300×14×26
H-900	H-900×300×16×28
BH-900×350	BH-900×350×28×40
BH-900×400	BH-900×400×28×40
H-912	H-912×302×18×34
BH-1100×400	BH-1100×400×22×36
C-100	C-100×50×5×7.5
C-125	C-125×65×6× 8
L-50	L-50×50×6
L-65	L-65×65×6
L-75	L-75×75×6
2L- 75	2L- 75× 75× 6
2L- 90	2L- 90× 90× 6
2L-100	2L-100×100× 7
2L-120	2L-120×120× 8
2L-130× 9	2L-130×130× 9
2L-130×12	2L-130×130×12
2L-130×15	2L-130×130×15
2L-150	2L-150×150×10
2L-175	2L-175×175×15
2L-200	2L-200×200×15

DEAERATOR PLATFORM ℄ HIGH ROOF FRAMIN PLAN T/STEEL(L.P) FL+26,900
SCALE 1:200

GRAPHIC SCALE
0 1 5 10m
SCALE 1:200

PAKISTAN
KARACHI ELECTRIC SUPPLY CORPORATION
WEST WHARF THERMAL POWER PLANT PROJECT
UNITS NO.1 AND NO.2
MAIN POWER HOUSE
DEAERATOR PLATFORM & HIGH ROOF FRAMING PLAN
JAPAN INTERNATIONAL COOPERATION AGENCY
TOKYO JAPAN

APPROVED BY	REVIEWED BY	CHECKED BY	DRAWN BY
DRAWING NO.	SCALE	DATE	
WAT-1209	1:200	10 JAN. 1990	

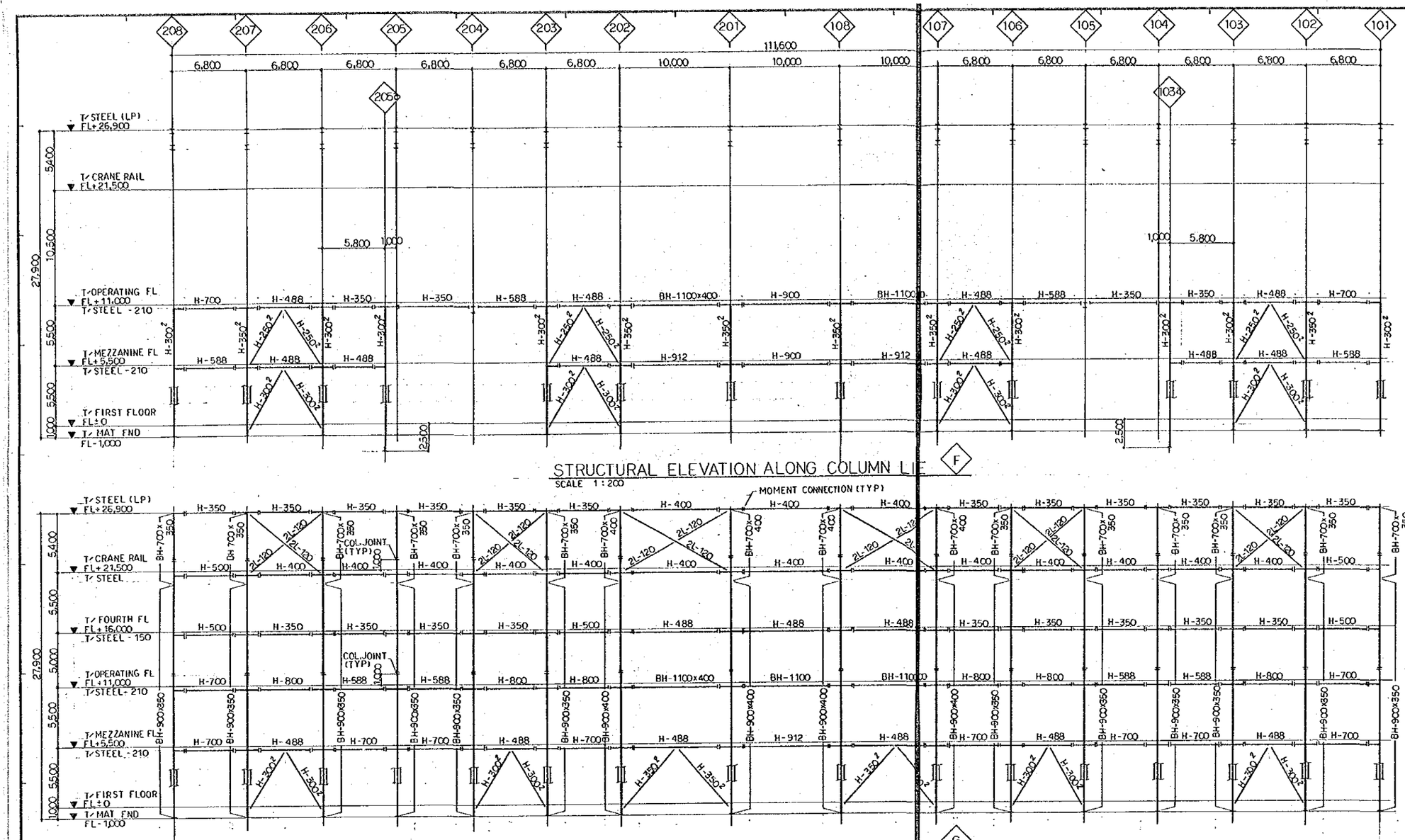


MARK	SIZE OF MEMBER
H-200[1]	H-200×200× 8×12
H-244	H-244×175× 7×11
H-250	H-250×125× 6× 9
H-250[1]	H-250×250× 9×14
H-294	H-294×200× 8×12
H-300	H-300×150×6.5× 9
H-300[1]	H-300×300×10×15
H-350	H-350×175× 7×11
H-350[1]	H-350×350×12×19
H-390	H-390×300×10×16
H-400	H-400×200× 8×13
H-400[1]	H-400×400×13×21
H-440	H-440×300×11×18
H-450	H-450×200× 9×14
BH-450[1]	BH-450×450×16×25
BH-480×350	BH-480×350×16×22
H-488	H-488×300×11×18
H-500	H-500×200×10×16
BH-516×500	BH-516×500×22×40
H-588	H-588×300×12×20
H-600	H-600×200×11×17
H-700	H-700×300×13×24
BH-700×350	BH-700×350×28×40
BH-700×400	BH-700×400×28×40
H-800	H-800×300×14×26
H-900	H-900×300×16×28
BH-900×350	BH-900×350×28×40
BH-900×400	BH-900×400×28×40
H-912	H-912×302×18×34
BH-1100×400	BH-1100×400×22×36
[-100	[-100×50×5×7.5
[-125	[-125×65×6× 8
L-50	L-50×50×6
L-65	L-65×65×6
L-75	L-75×75×6
2L- 75	2L- 75× 75× 6
2L- 90	2L- 90× 90× 6
2L-100	2L-100×100× 7
2L-120	2L-120×120× 8
2L-130× 9	2L-130×130× 9
2L-130×12	2L-130×130×12
2L-130×15	2L-130×130×15
2L-150	2L-150×150×10
2L-175	2L-175×175×15
2L-200	2L-200×200×15

GRAPHIC SCALE
0 1 5 10m
SCALE 1:200

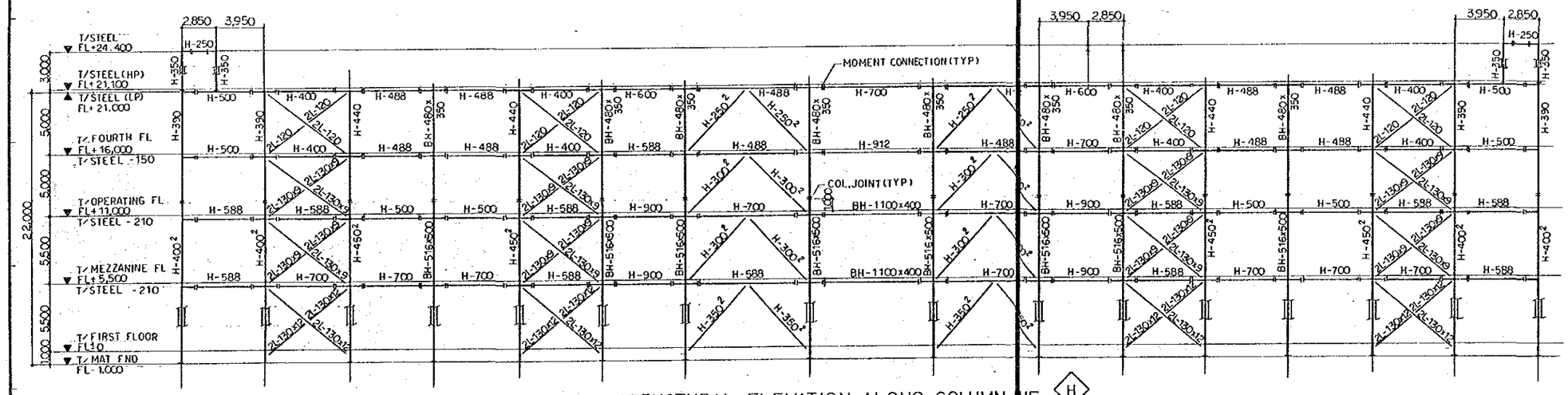
PAKISTAN
KARACHI ELECTRIC SUPPLY CORPORATION
WEST WHARF THERMAL POWER PLANT PROJECT
UNITS NO.1 AND NO.2
MAIN POWER HOUSE
STRACTURAL ELEVATION SHT-1
JAPAN INTERNATIONAL COOPERATION AGENCY
TOKYO JAPAN

APPROVED BY	REVIEWED BY	CHECKED BY	DRAWN BY
DRAWING NO.	SCALE	DATE	
WAT-1210	1:200	10 JAN. 1990	



STRUCTURAL ELEVATION ALONG COLUMN LIE F
SCALE 1:200

STRUCTURAL ELEVATION ALONG COLUMN LIE G
SCALE 1:200



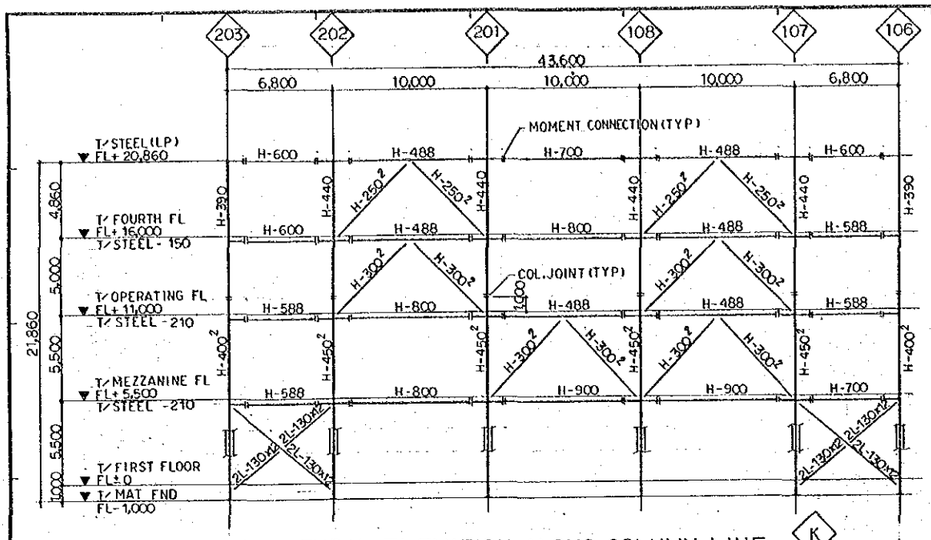
STRUCTURAL ELEVATION ALONG COLUMN LINE H
SCALE 1:200

MARK	SIZE OF MEMBER
H-200²	H-200×200× 8×12
H-244	H-244×175× 7×11
H-250	H-250×125× 6× 9
H-250²	H-250×250× 9×14
H-294	H-294×200× 8×12
H-300	H-300×150×6.5× 9
H-300²	H-300×300×10×15
H-350	H-350×175× 7×11
H-350²	H-350×350×12×19
H-390	H-390×300×10×16
H-400	H-400×200× 8×13
H-400²	H-400×400×13×21
H-440	H-440×300×11×18
H-450	H-450×200× 9×14
BH-450²	BH-450×450×16×25
BH-480×350	BH-480×350×16×22
H-488	H-488×300×11×18
H-500	H-500×200×10×16
BH-516×500	BH-516×500×22×40
H-588	H-588×300×12×20
H-600	H-600×200×11×17
H-700	H-700×300×13×24
BH-700×350	BH-700×350×28×40
BH-700×400	BH-700×400×28×40
H-800	H-800×300×14×26
H-900	H-900×300×16×28
BH-900×350	BH-900×350×28×40
BH-900×400	BH-900×400×28×40
H-912	H-912×302×18×34
BH-1100×400	BH-1100×400×22×36
[-100	[-100×50×5×7.5
[-125	[-125×65×6× 8
L-50	L-50×50×6
L-65	L-65×65×6
L-75	L-75×75×6
2L- 75	2L- 75× 75× 6
2L- 90	2L- 90× 90× 6
2L-100	2L-100×100× 7
2L-120	2L-120×120× 8
2L-130× 9	2L-130×130× 9
2L-130×12	2L-130×130×12
2L-130×15	2L-130×130×15
2L-150	2L-150×150×10
2L-175	2L-175×175×15
2L-200	2L-200×200×15

GRAPHIC SCALE
0 1 5 10m
SCALE 1:200

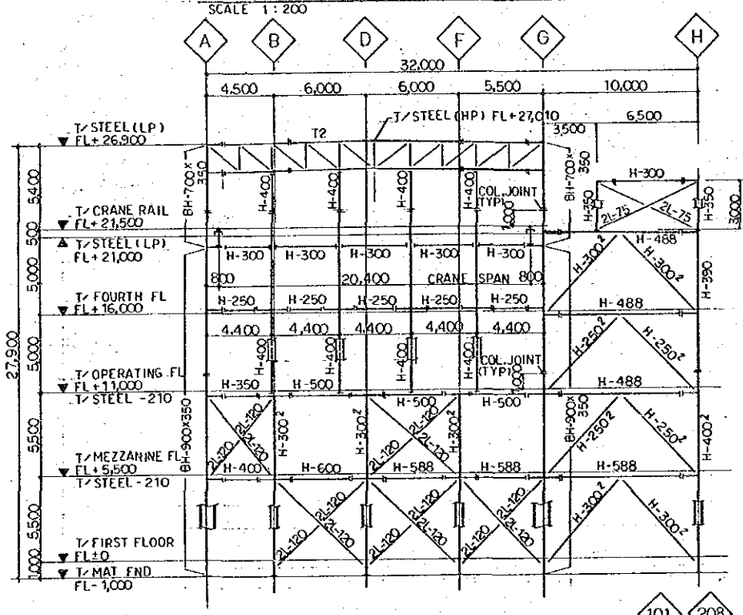
PAKISTAN
KARACHI ELECTRIC SUPPLY CORPORATION
WEST WHARF THERMAL POWER PLANT PROJECT
UNITS NO.1 AND NO.2
MAIN POWER HOUSE
STRACTURAL ELEVATION SHT-2
JAPAN INTERNATIONAL COOPERATION AGENCY
TOKYO JAPAN

APPROVED BY	REVIEWED BY	CHECKED BY	DRAWN BY
DRAWING NO.	SCALE	DATE	
WAT-1211	1:200	10 JAN. 1990	



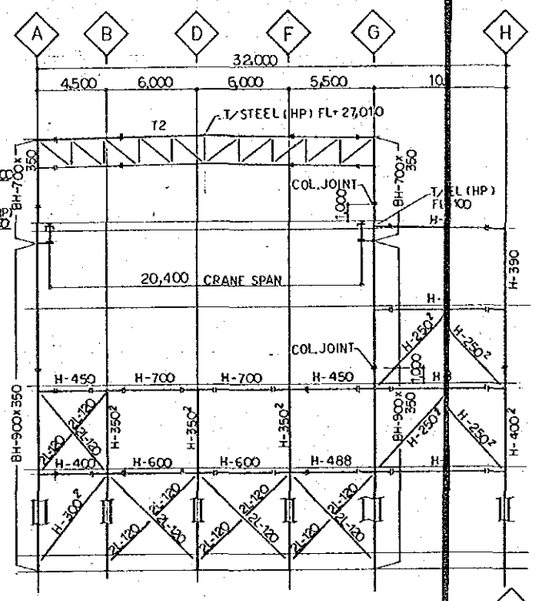
STRUCTURAL ELEVATION ALONG COLUMN LINE

SCALE 1:200



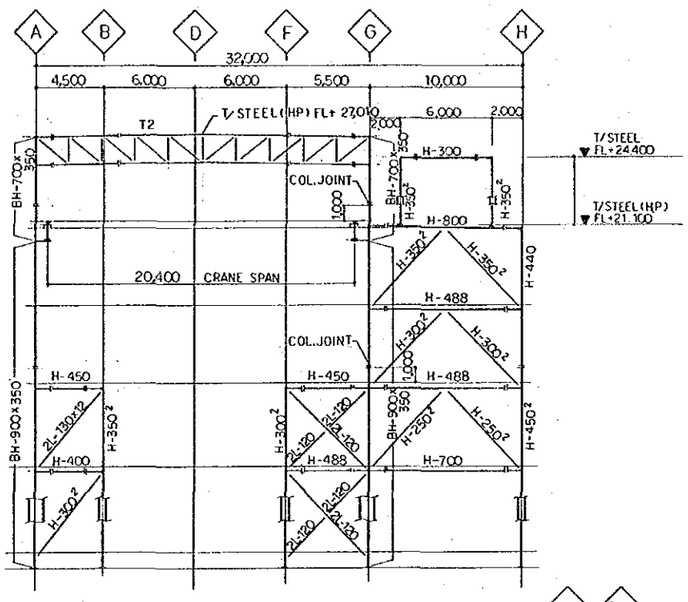
STRUCTURAL ELEVATION ALONG COLUMN LINE 101 & 208

SCALE 1:200



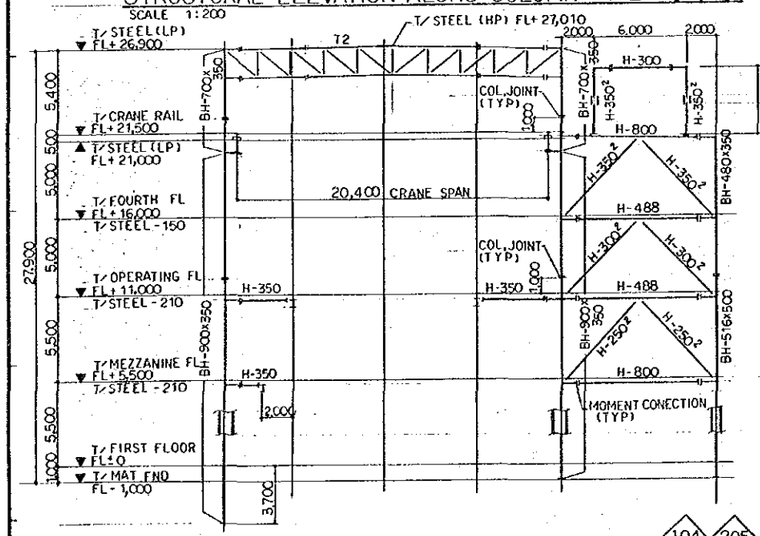
STRUCTURAL ELEVATION ALONG COLUMN LINE 102 & 207

SCALE 1:200



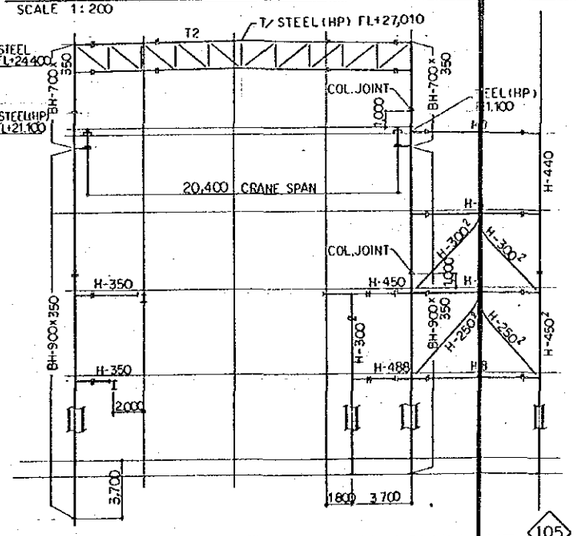
STRUCTURAL ELEVATION ALONG COLUMN LINE 103 & 206

SCALE 1:200



STRUCTURAL ELEVATION ALONG COLUMN LINE 104 & 205

SCALE 1:200



STRUCTURAL ELEVATION ALONG COLUMN LINE 105 & 204

SCALE 1:200

MARK	SIZE OF MEMBER
H-200¹	H-200×200× 8×12
H-244	H-244×175× 7×11
H-250	H-250×125× 6× 9
H-250¹	H-250×250× 9×14
H-294	H-294×200× 8×12
H-300	H-300×150×6.5× 9
H-300¹	H-300×300×10×15
H-350	H-350×175× 7×11
H-350¹	H-350×350×12×19
H-390	H-390×300×10×16
H-400	H-400×200× 8×13
H-400¹	H-400×400×13×21
H-440	H-440×300×11×18
H-450	H-450×200× 9×14
BH-450¹	BH-450×450×16×25
BH-480×350	BH-480×350×16×22
H-488	H-488×300×11×18
H-500	H-500×200×10×16
BH-516×500	BH-516×500×22×40
H-588	H-588×300×12×20
H-600	H-600×200×11×17
H-700	H-700×300×13×24
BH-700×350	BH-700×350×28×40
BH-700×400	BH-700×400×28×40
H-800	H-800×300×14×26
H-900	H-900×300×16×28
BH-900×350	BH-900×350×28×40
BH-900×400	BH-900×400×28×40
H-912	H-912×302×18×34
BH-1100×400	BH-1100×400×22×36
C-100	C-100×50×5×7.5
C-125	C-125×65×6× 8
L-50	L-50×50×6
L-65	L-65×65×6
L-75	L-75×75×6
2L- 75	2L- 75× 75× 6
2L- 90	2L- 90× 90× 6
2L-100	2L-100×100× 7
2L-120	2L-120×120× 8
2L-130× 9	2L-130×130× 9
2L-130×12	2L-130×130×12
2L-130×15	2L-130×130×15
2L-150	2L-150×150×10
2L-175	2L-175×175×15
2L-200	2L-200×200×15

GRAPHIC SCALE

0 1 5 10m

SCALE 1:200

PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE

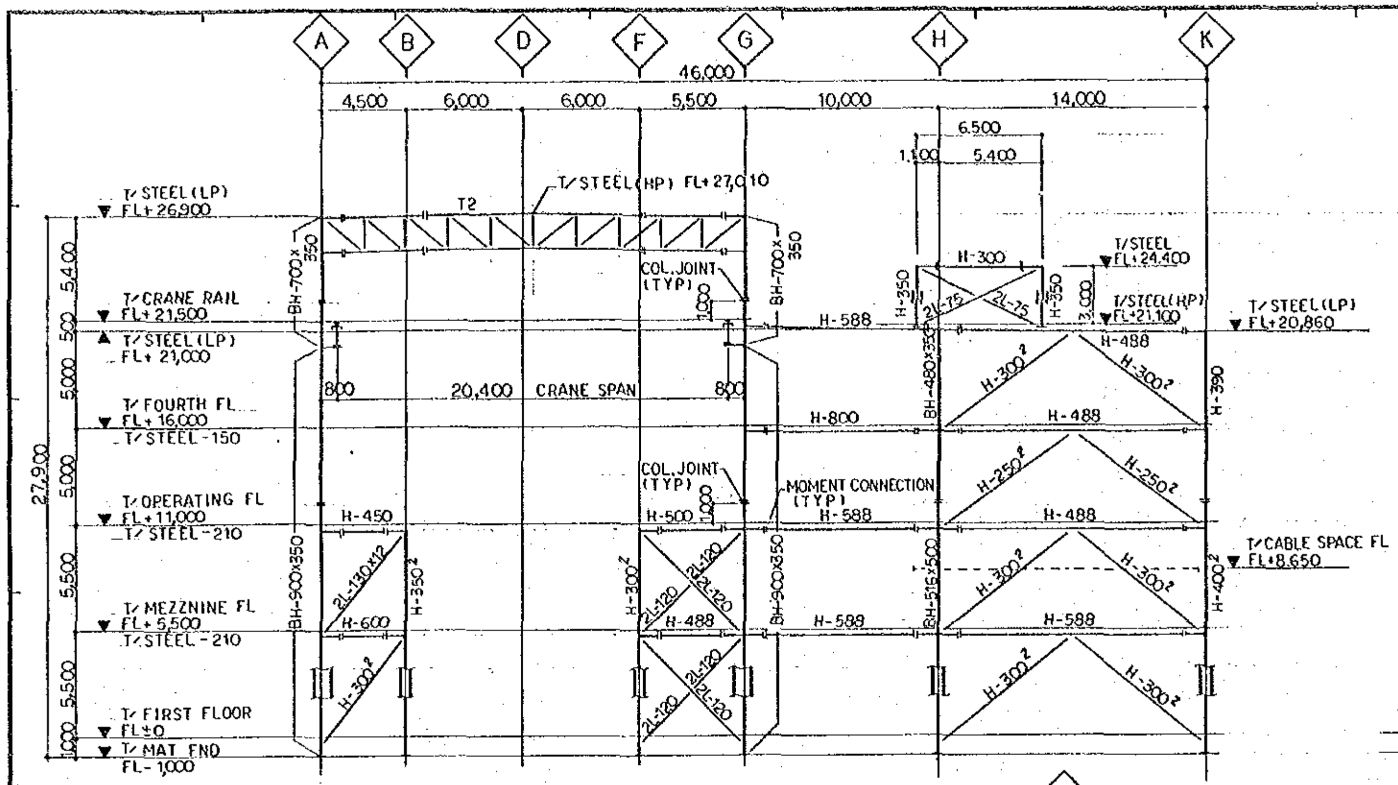
STRACTURAL ELEVATION SHT-3

JAPAN INTERNATIONAL COOPERATION AGENCY

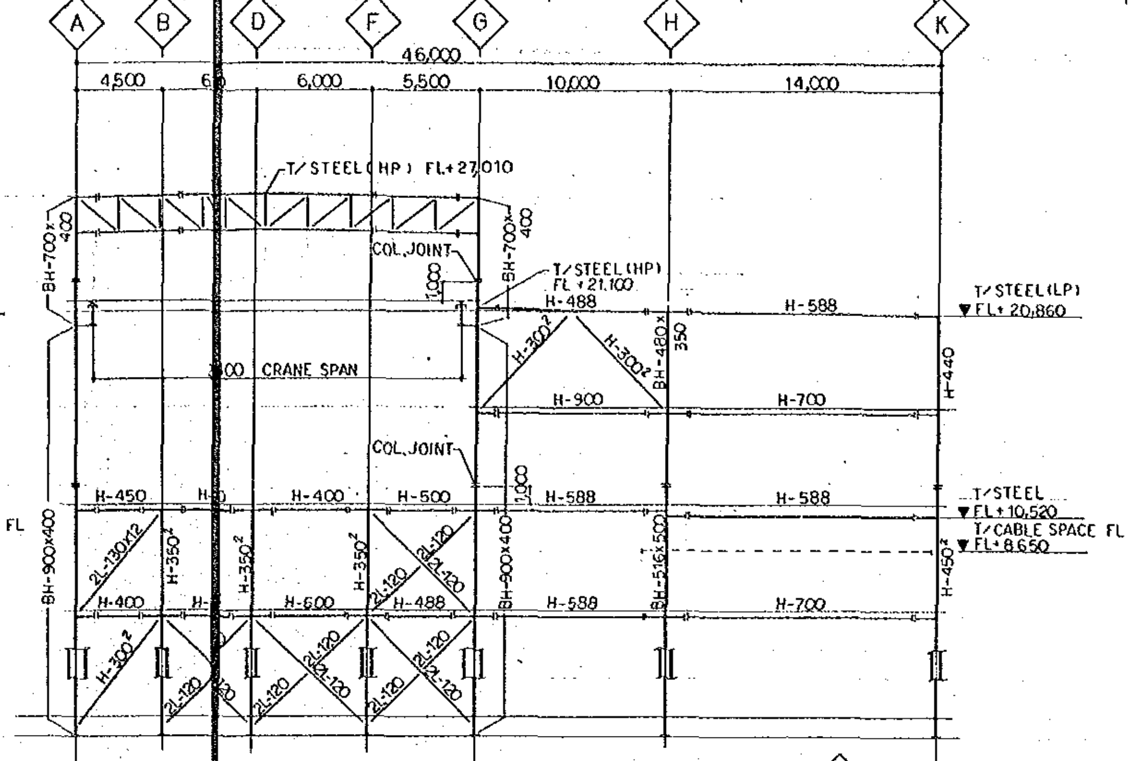
TOKYO JAPAN

APPROVED BY	REVIEWED BY	CHECKED BY	DRAWN BY

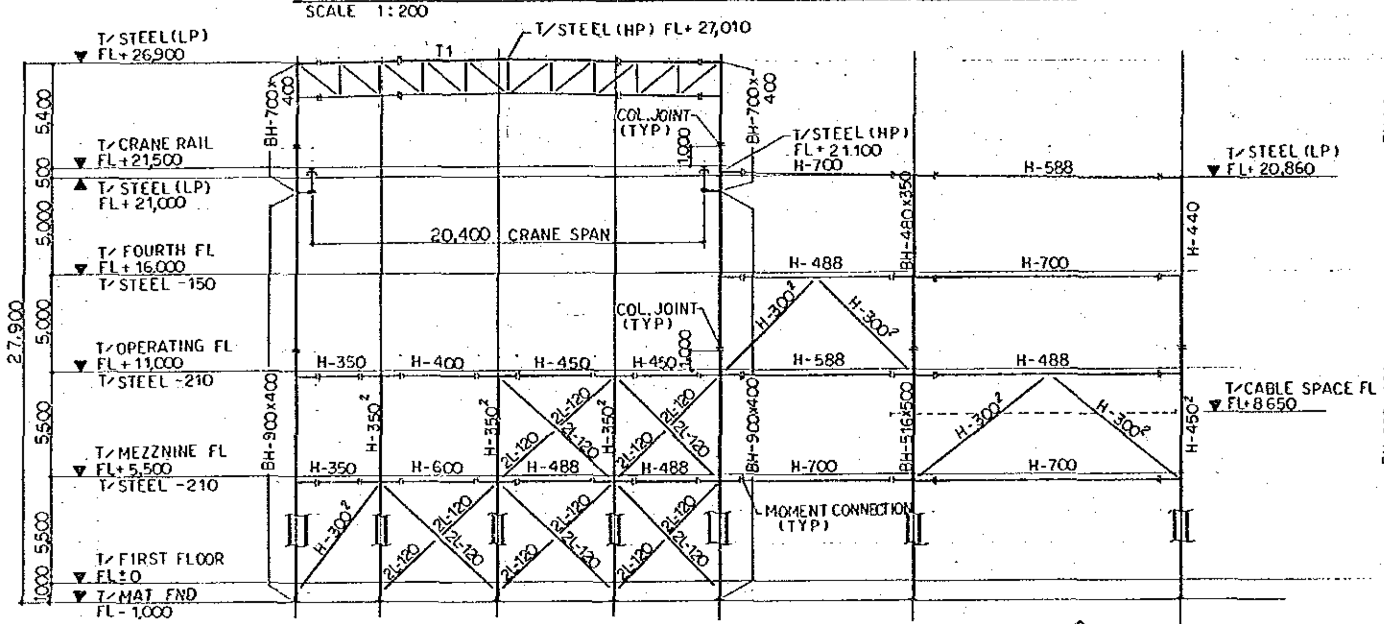
DRAWING NO.	SCALE	DATE
WAT-1212	1:200	10 JAN. 1990



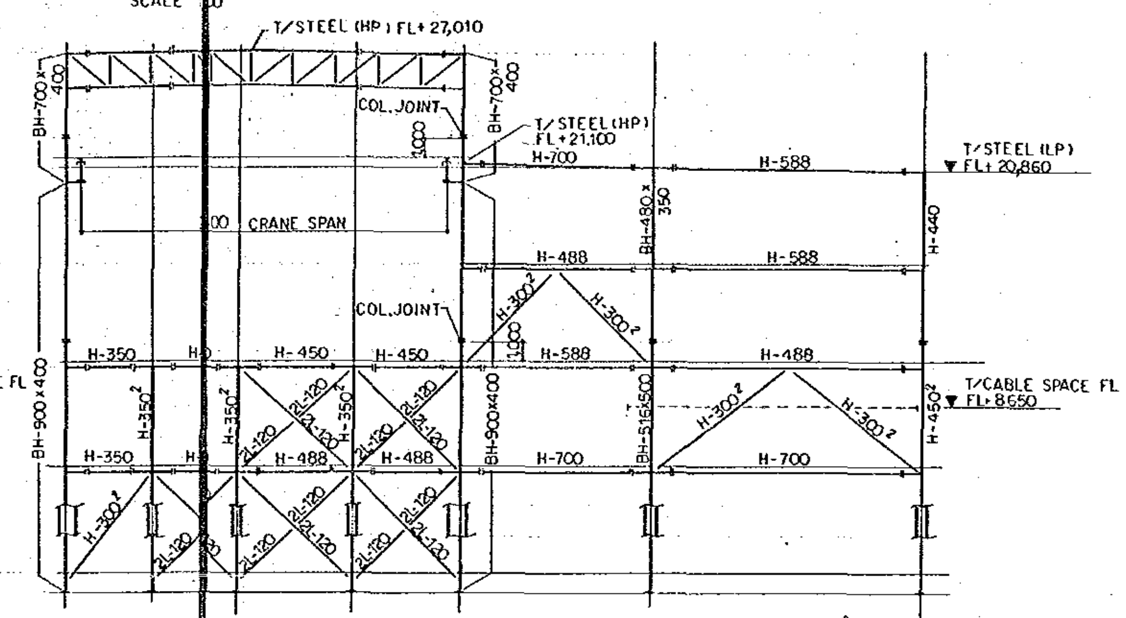
STRUCTURAL ELEVATION ALONG COLUMN LINE 106
SCALE 1:200



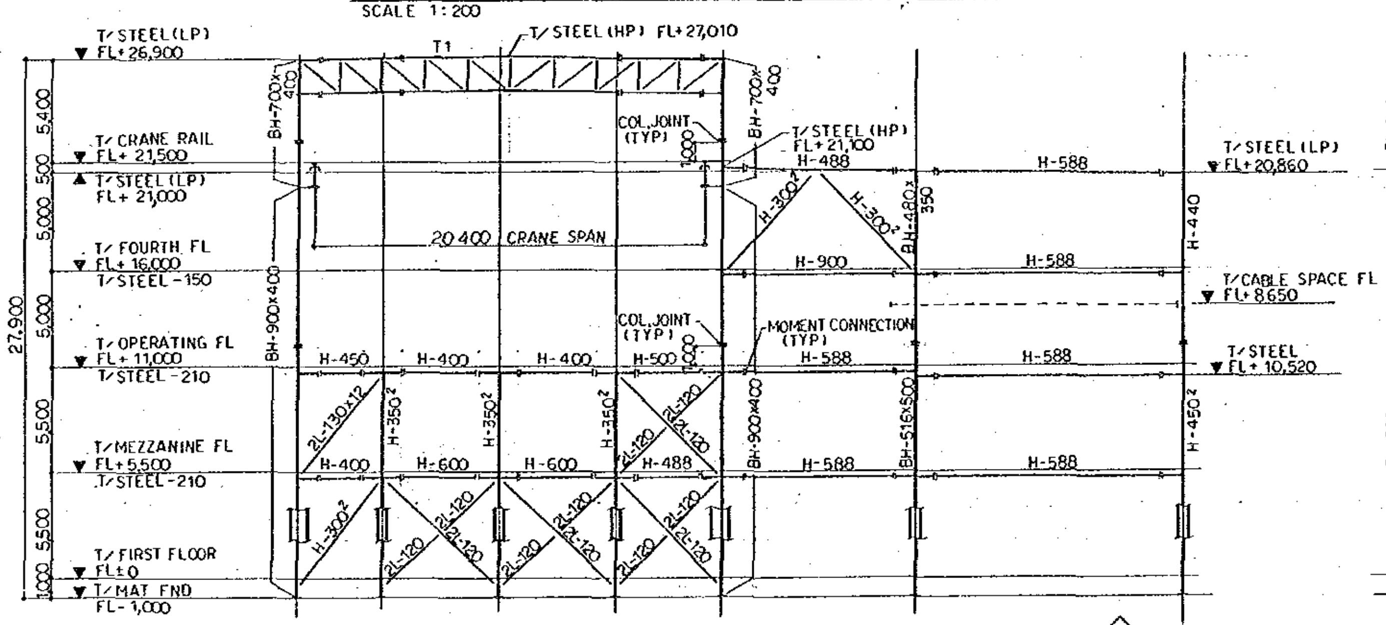
STRUCTURAL ELEVATION ALONG COLUMN LINE 107
SCALE 1:200



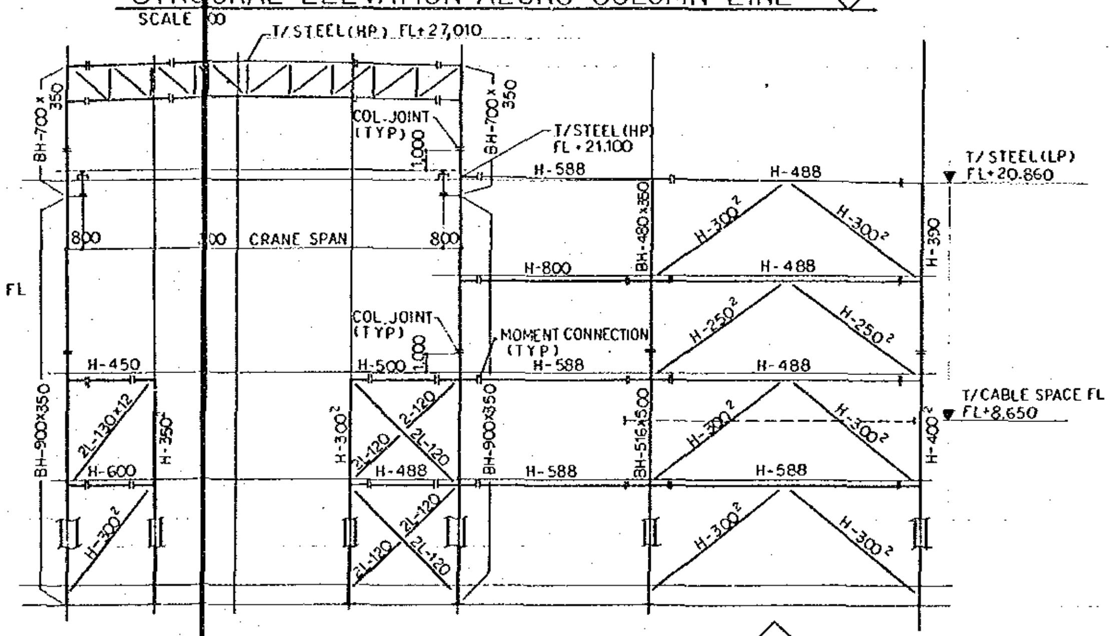
STRUCTURAL ELEVATION ALONG COLUMN LINE 108
SCALE 1:200



STRUCTURAL ELEVATION ALONG COLUMN LINE 201
SCALE 1:200



STRUCTURAL ELEVATION ALONG COLUMN LINE 202
SCALE 1:200



STRUCTURAL ELEVATION ALONG COLUMN LINE 203
SCALE 1:200

MARK	SIZE OF MEMBER
H-200'	H-200×200× 8×12
H-244	H-244×175× 7×11
H-250	H-250×125× 6× 9
H-250'	H-250×250× 9×14
H-294	H-294×200× 8×12
H-300	H-300×150×6.5× 9
H-300'	H-300×300×10×15
H-350	H-350×175× 7×11
H-350'	H-350×350×12×19
H-390	H-390×300×10×16
H-400	H-400×200× 8×13
H-400'	H-400×400×13×21
H-440	H-440×300×11×18
H-450	H-450×200× 9×14
BH-450'	BH-450×450×16×25
BH-480×350	BH-480×350×16×22
H-488	H-488×300×11×18
H-500	H-500×200×10×16
BH-516×500	BH-516×500×22×40
H-588	H-588×300×12×20
H-600	H-600×200×11×17
H-700	H-700×300×13×24
BH-700×350	BH-700×350×28×40
BH-700×400	BH-700×400×28×40
H-800	H-800×300×14×26
H-900	H-900×300×16×28
BH-900×350	BH-900×350×28×40
BH-900×400	BH-900×400×28×40
H-912	H-912×302×18×34
BH-1100×400	BH-1100×400×22×36
[-100	[-100×50×5×7.5
[-125	[-125×65×6× 8
L-50	L-50×50×6
L-65	L-65×65×6
L-75	L-75×75×6
2L- 75	2L- 75× 75× 6
2L- 90	2L- 90× 90× 6
2L-100	2L-100×100× 7
2L-120	2L-120×120× 8
2L-130× 9	2L-130×130× 9
2L-130×12	2L-130×130×12
2L-130×15	2L-130×130×15
2L-150	2L-150×150×10
2L-175	2L-175×175×15
2L-200	2L-200×200×15

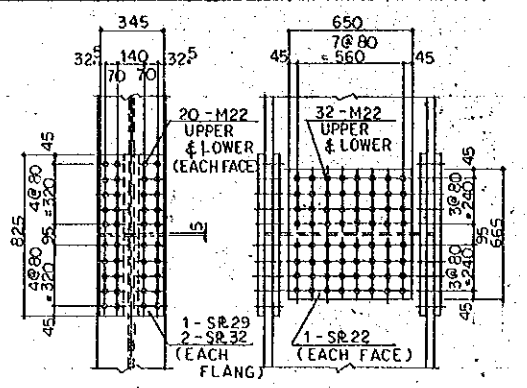
GRAPHIC SCALE
0 1 5 10m
SCALE 1:200

PAKISTAN
KARACHI ELECTRIC SUPPLY CORPORATION
WEST WHARF THERMAL POWER PLANT PROJECT
UNITS NO.1 AND NO.2
MAIN POWER HOUSE
STRACTURAL ELEVATION SHT-4
JAPAN INTERNATIONAL COOPERATION AGENCY
TOKYO JAPAN

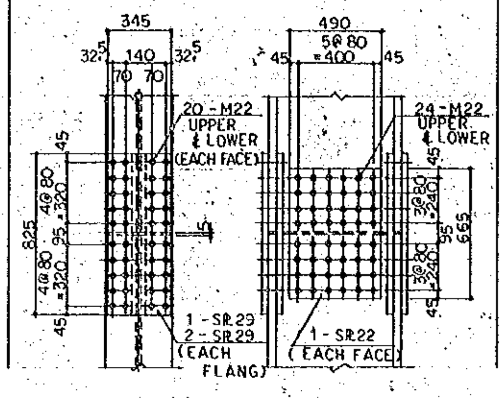
APPROVED BY	REVIEWED BY	CHECKED BY	DRAWN BY
DRAWING NO. WAT-1213		SCALE 1:200	DATE 10 JAN. 1990

COLUMN SCHEDULE

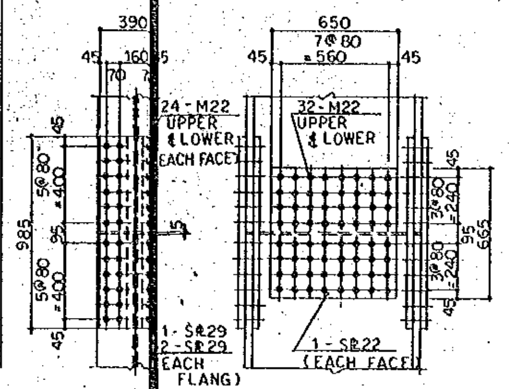
A-101,G-103 A-102,G-104 A-103,G-105 A-106,G-106 A-203,G-203 A-206,G-204 A-207,G-205 A-208,G-206 G-101,G-207 G-102,G-208	A-104 A-105 A-204 A-205	F-101 F-103 F-106 F-203 F-206 F-208 D-101 D-208	B-102,D-108 B-103,D-201 B-106,D-202 B-107,D-207 B-108,F-102 B-201,F-107 B-202,F-108 B-203,F-201 B-206,F-202 B-207,F-207 D-102 D-107	A-107 A-108 A-201 A-202 G-107 G-108 G-201 G-202	B-103a B-205a F-103a F-205a	B-105a B-203a F1-105 F1-204	H-101 H-102 H-207 H-208	B-101 B-208	H-103 H-105 H-204 H-206	H-104 H-107 H-108 H-201 H-202 H-205	H-106 H-203	106 203	K-107 K-108 K-201 K-202	WIND COLUMN COL. LINE A, 101, 208	WIND COLUMN COL. LINE G	WIND COLUMN COL. LINE H, K, 106, 203	WIND COLUMN COL. LINE 101, 208	WIND COLUMN COL. LINE 101, 208	WIND COLUMN STAIR CASE



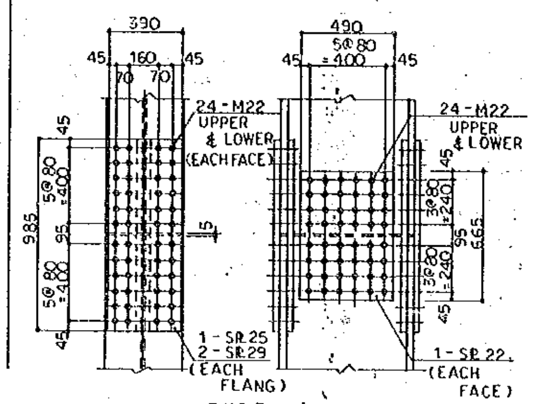
TYPE - 1



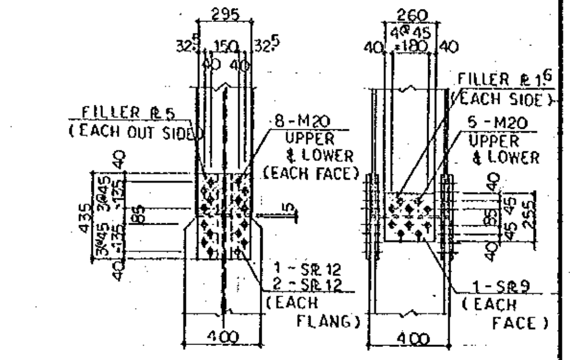
TYPE - 2



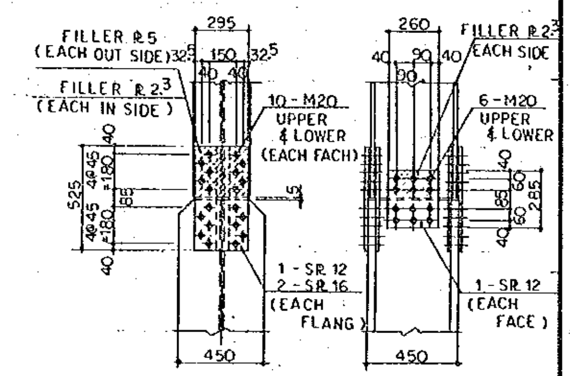
TYPE - 3



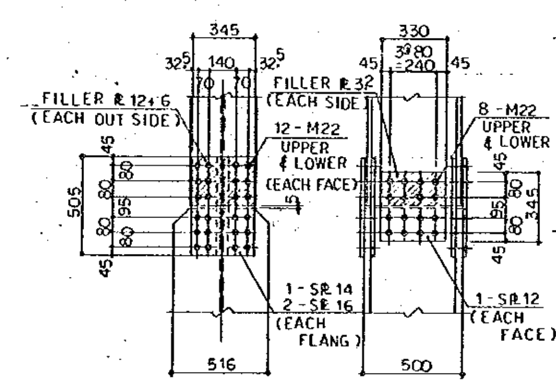
TYPE - 4



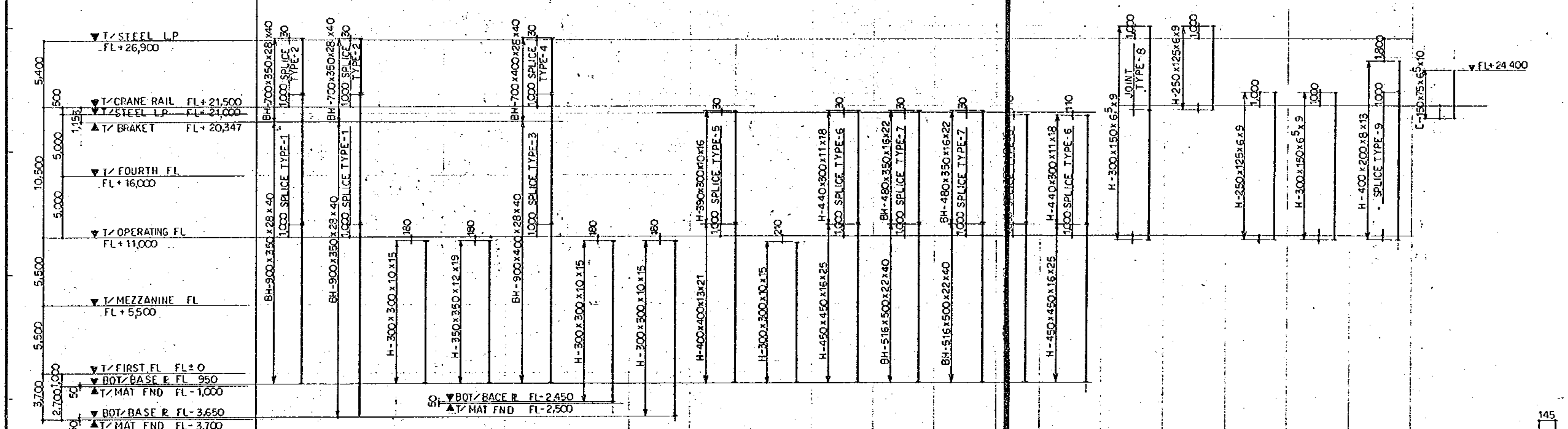
TYPE - 5



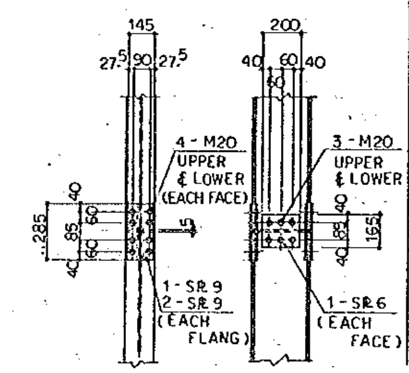
TYPE - 6



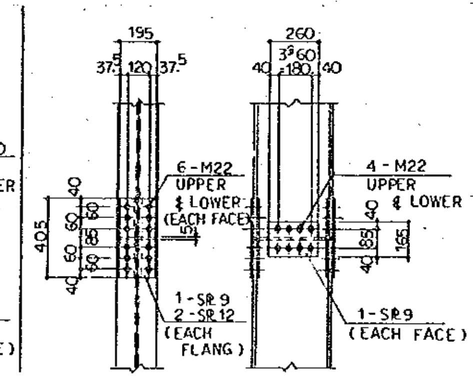
TYPE - 7



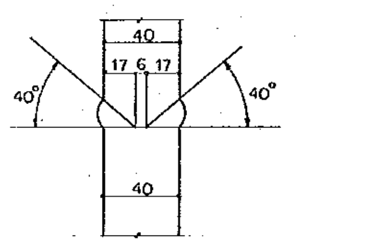
BASE PLATE TYPE		1-A 1-B	1-A	3	4	2-A 2-B	3	3	5	3	6	8	7		6
BASE PLATE SIZE	a	700	700	350	400	700	350	350	700	350	700	1100	700	00	700
	b	1,300	1,300	700	750	1,300	700	700	700	700	750	916	916	00	750
	t	29 45	29	22	25	35 50	22	22	25	22	30	38	40	25	30
ANCHOR BOLT SIZE		8-30ϕ	8-30ϕ	4-25ϕ	4-25ϕ	8-35ϕ	4-25ϕ	4-25ϕ	8-40ϕ	4-25ϕ	8-25ϕ	8-25ϕ	8-25ϕ	40ϕ	8-25ϕ
ANCHOR BOLT LENGTH		1,600	1,600	1,200	1,000	1,600	1,200	1,200	1,800	1,200	1,000	1,000	1,000	00	1,000
KEY PLATE SIZE	a														
	b														



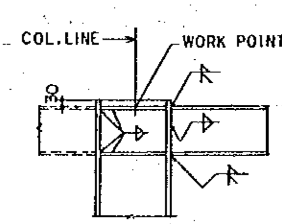
TYPE - 8



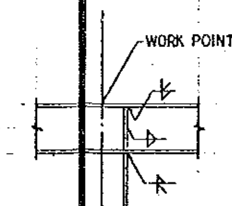
TYPE - 9



DETAIL OF WELD JOINT FOR COLUMN FLANGE
SCALE 1 : 2



TYPICAL COL. CUT OFF DETAIL
SCALE NOT SCALE



COL. CUT F DETAIL FOR B-101, B-208
SCALE N SCALE

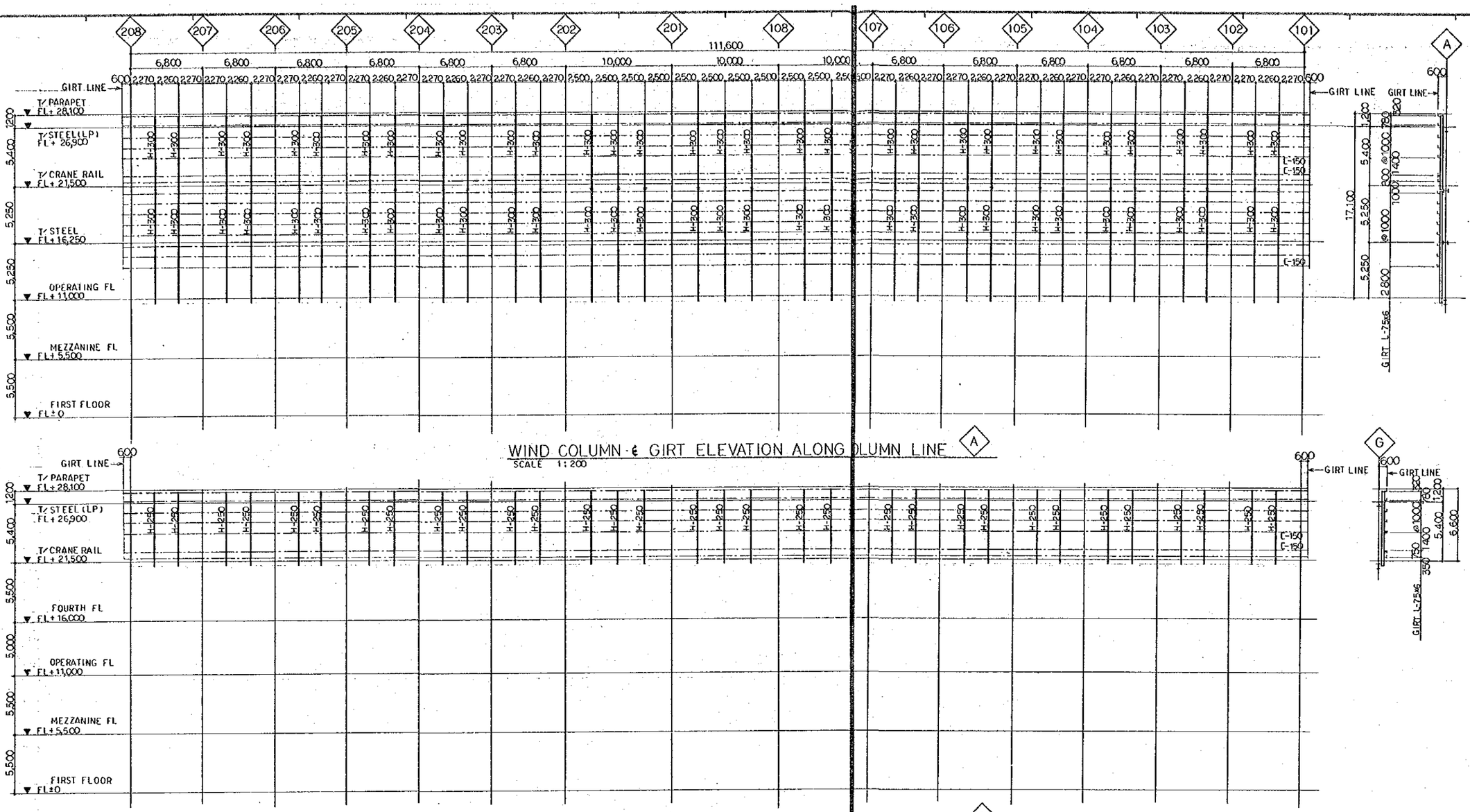
PAKISTAN
KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT
UNITS NO.1 AND NO.2

MAIN POWER HOUSE
COLUMN SCHEDULE

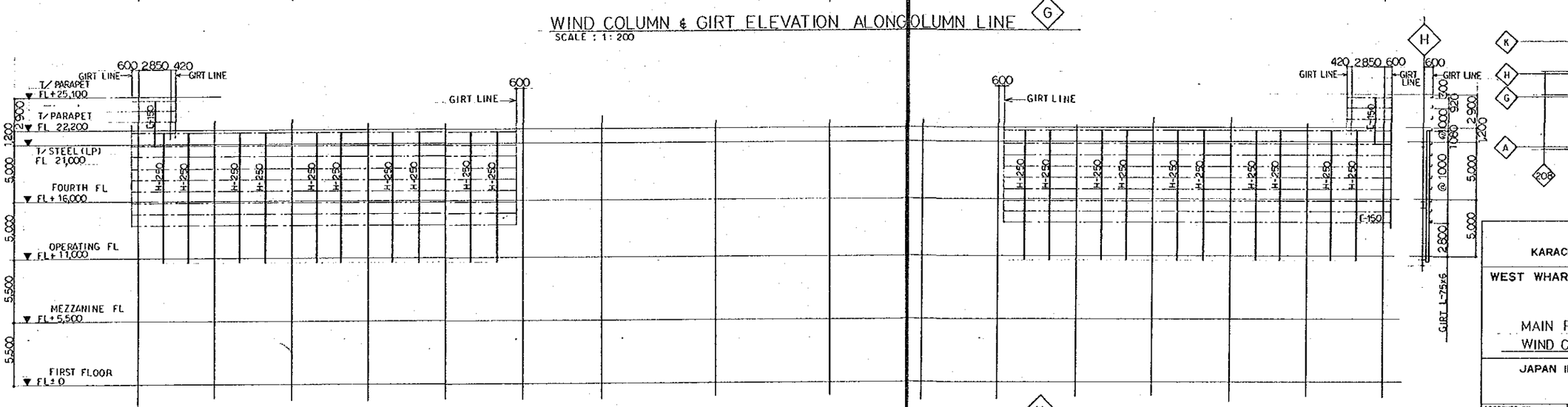
JAPAN INTERNATIONAL COOPERATION AGENCY
TOKYO JAPAN

APPROVED BY	REVIEWED BY	CHECKED BY	DRAWN BY
(signature)	(signature)	(signature)	(signature)
DRAWING NO. WAT-1214		SCALE 1:200, 1:20	DATE 10 JAN. 1990



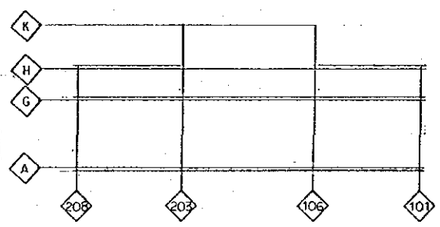
WIND COLUMN & GIRT ELEVATION ALONG COLUMN LINE (A)
SCALE 1:200

WIND COLUMN & GIRT ELEVATION ALONG COLUMN LINE (G)
SCALE : 1:200



WIND COLUMN & GIRT ELEVATION ALONG COLUMN LINE (H)
SCALE 1:200

MARK	SIZE OF MEMBER
H-250	H-250 x 125 x 6 x 9
H-300	H-300 x 150 x 6.5 x 9
L-75x6	L-75 x 75 x 6
C-150	C-150 x 75 x 6.5 x 10



KEY PLAN

PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE

WIND COLUMN & GIRT ELEVATIONS

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

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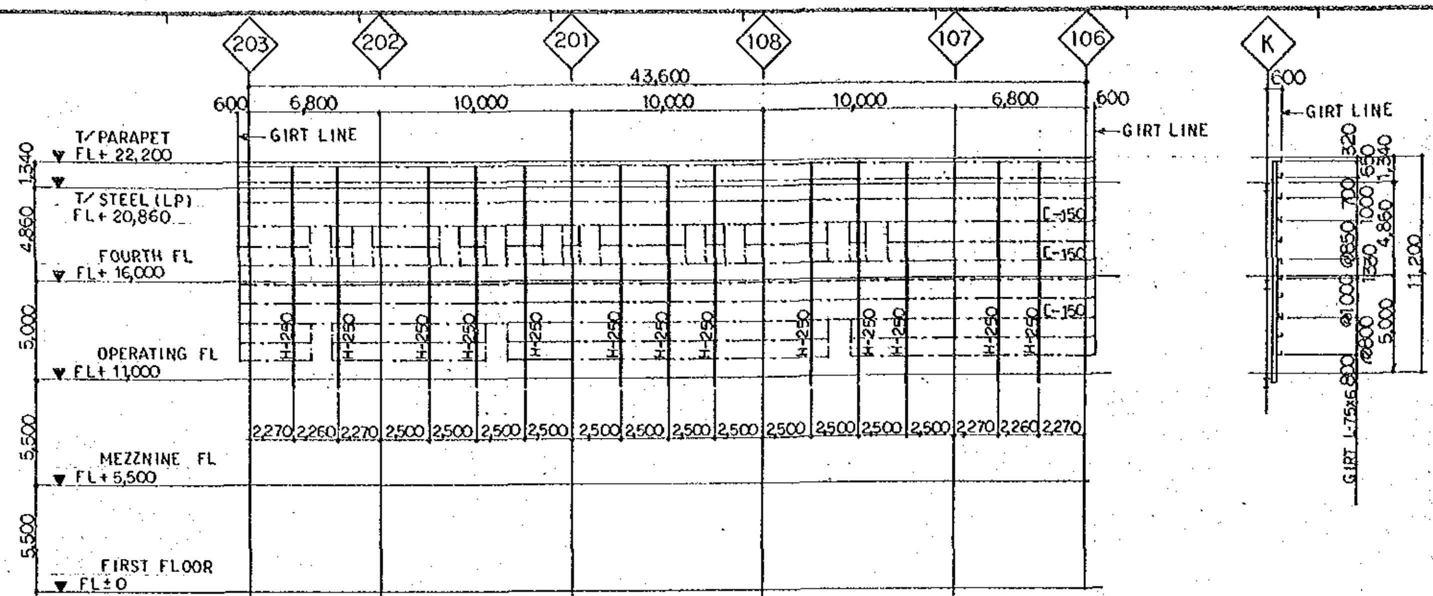
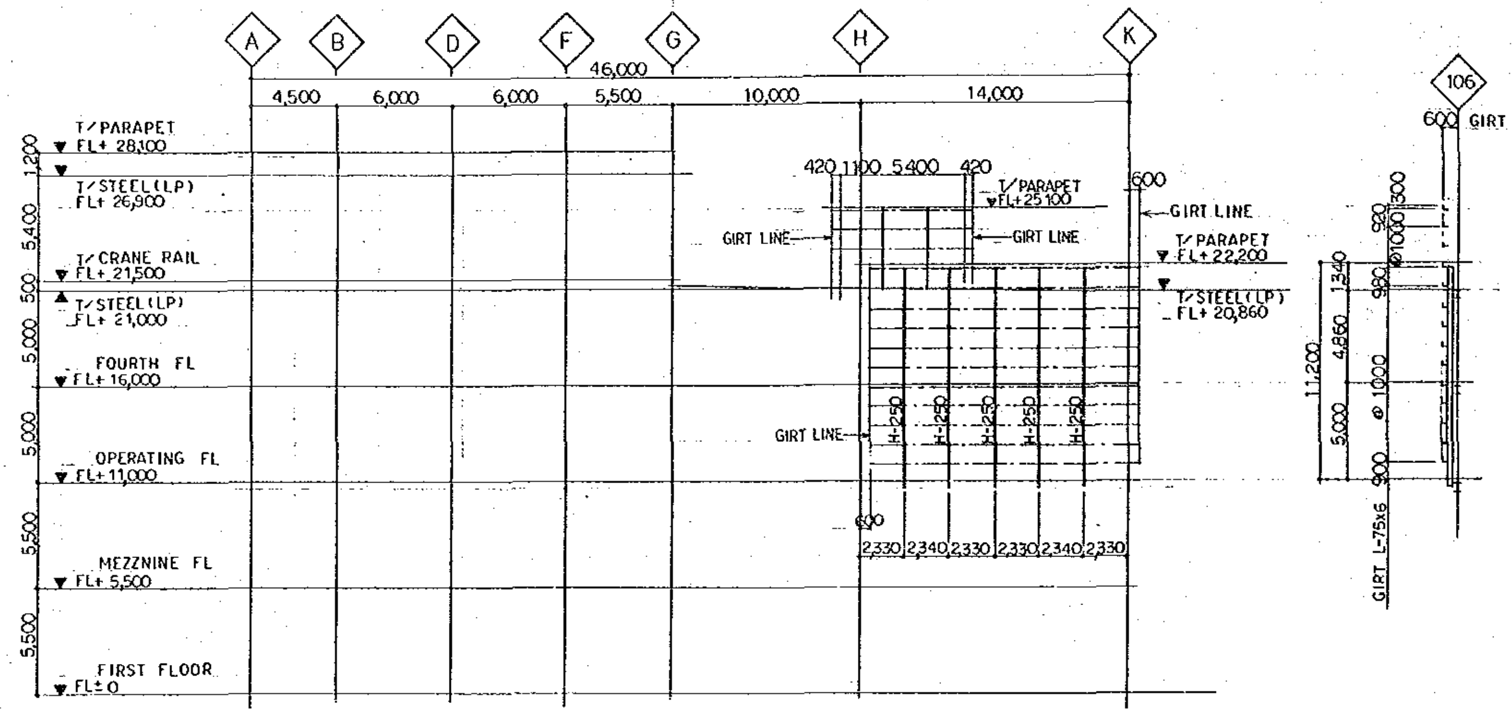
WAT-1215	1:200	10 JAN. 1990	



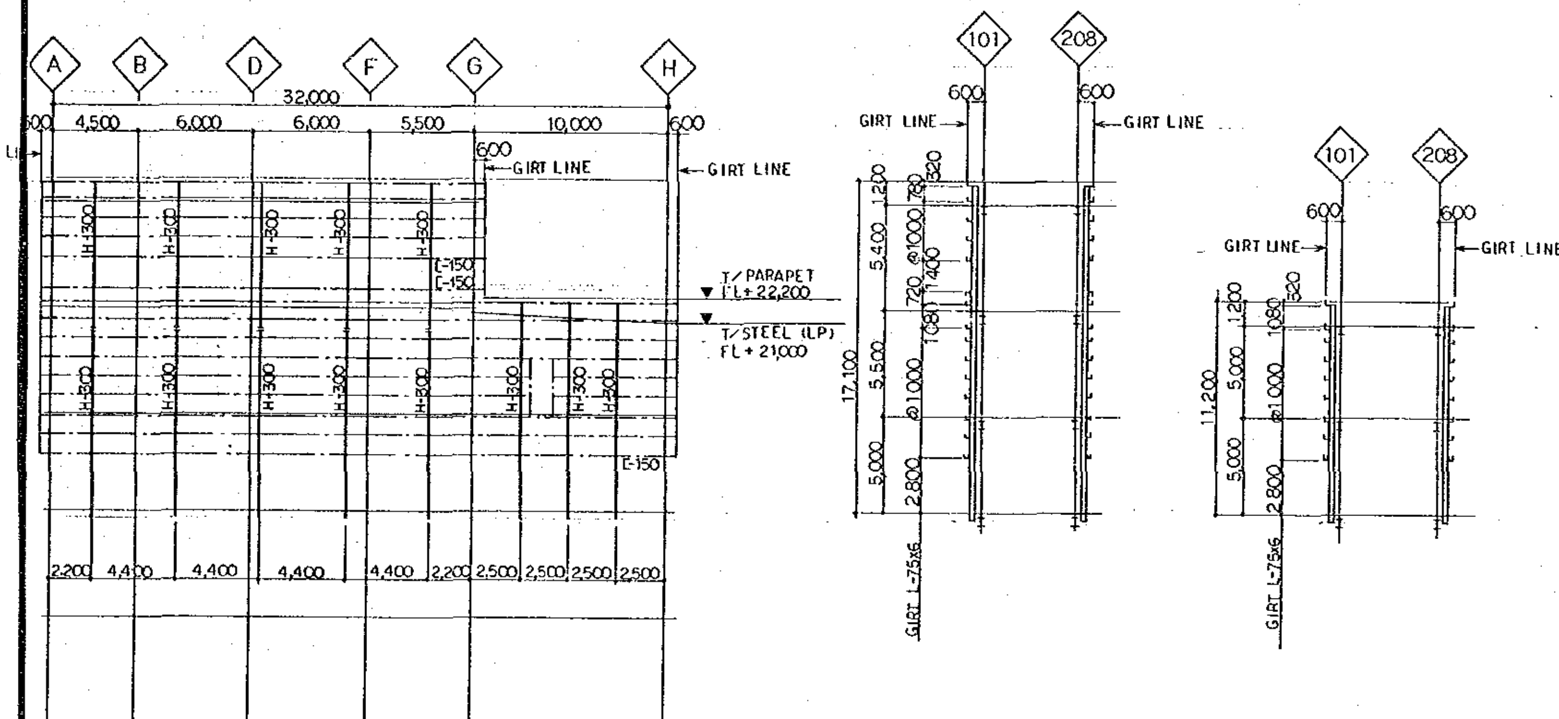
WIND COLUMN & GIRT ELEVATION ALONG COLMN LINE (K)

SCALE 1:200



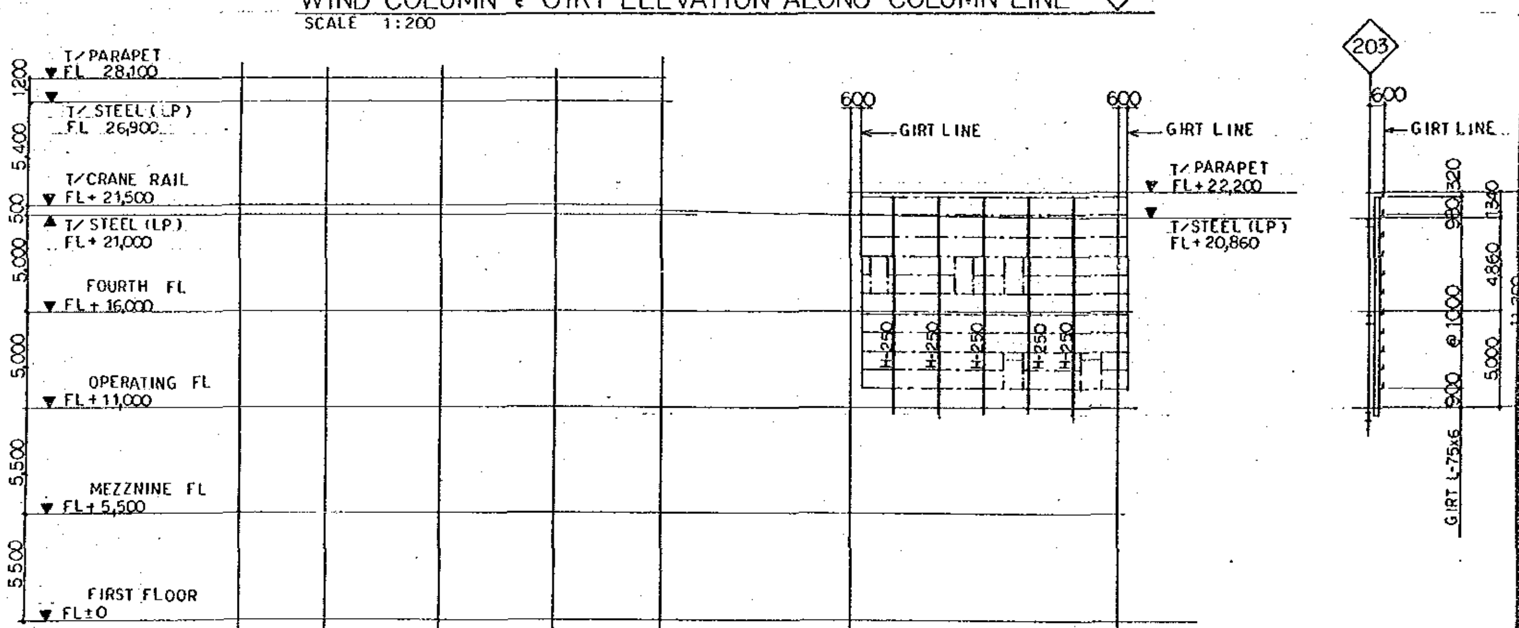
WIND COLUMN & GIRT ELEVATION ALONG COLUMN LINE (106)

SCALE 1:200



WIND COLUMN & GIRT ELEVATION ALONG COLUMN LINE (101) & (208)

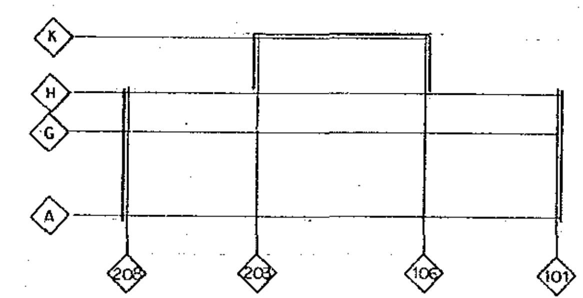
SCALE 1:200



WIND COLUMN & GIRT ELEVATION ALONG COLUMN LINE (203)

SCALE 1:200

MARK	SIZE OF MEMBER
H-250	H-250 x 125 x 6 x 9
H-300	H-300 x 150 x 6.5 x 9
L-75x6	L-75x75x6
[-150	[-150 x 75 x 6.5 x 10



KEY PLAN

PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE

WIND COLUMN & GIRT ELEVATIONS

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

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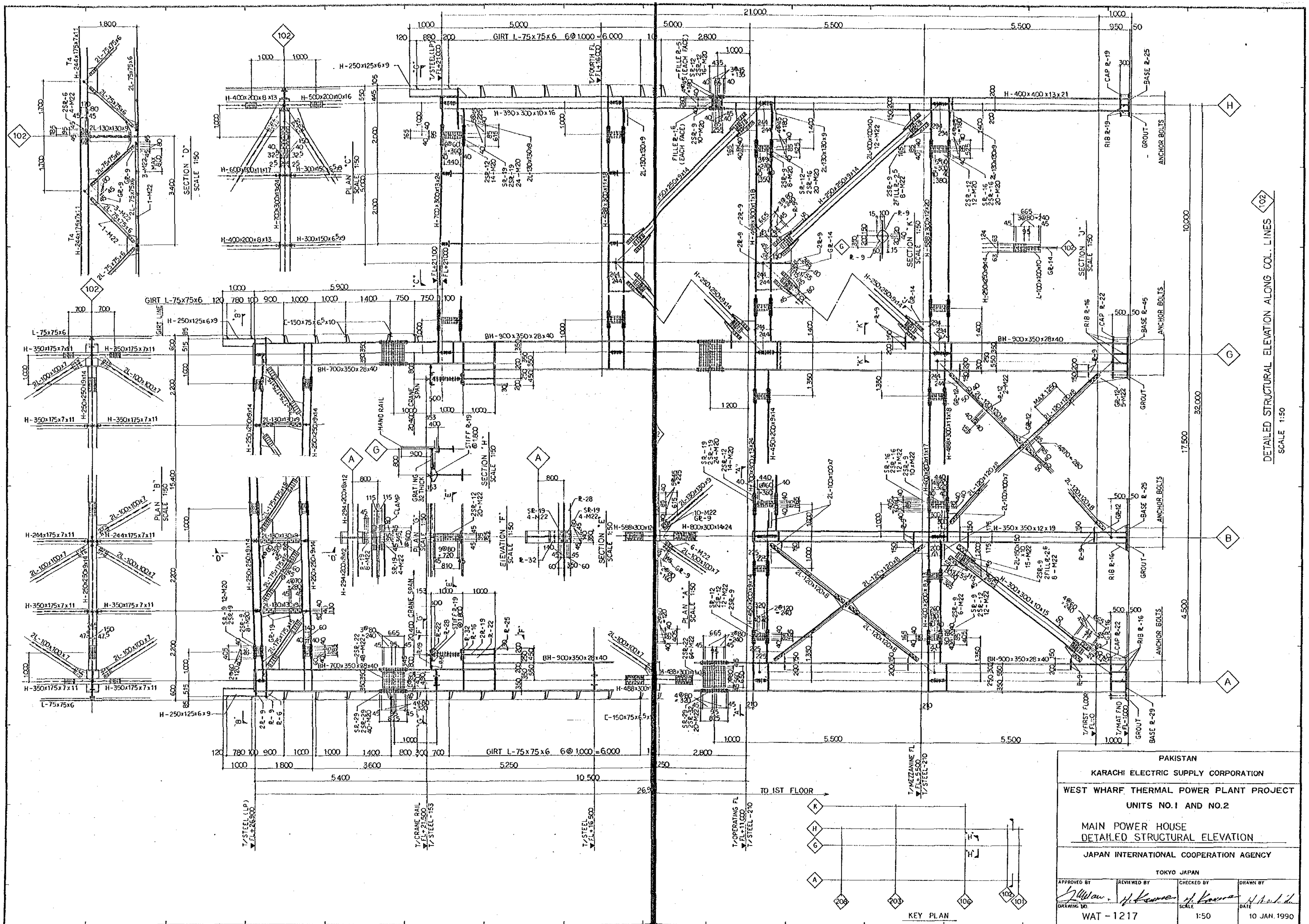
DRAWING NO. WAT-1216		SCALE 1:200	DATE 10 JAN. 1990



PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE
DETAILED STRUCTURAL ELEVATION

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

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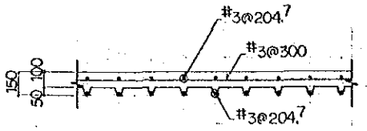
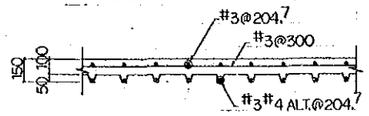
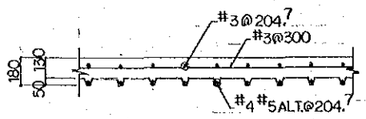
DRAWING NO. WAT-1217		SCALE 1:50	DATE 10 JAN. 1990



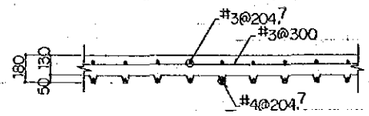
ROOF, 5TH FLOOR



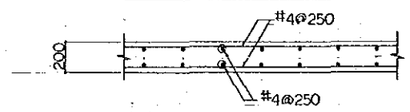
4TH FLOOR SLAB



OPERATING FLOOR SLAB (TURBINE ROOM ONLY)

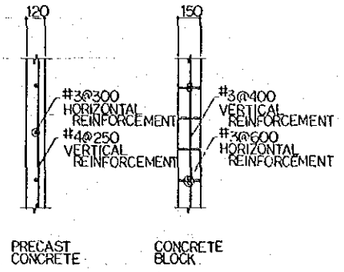


OPERATING FLOOR (EXCEPT TURBINE RM) &MEZZANINE FLOOR SLAB

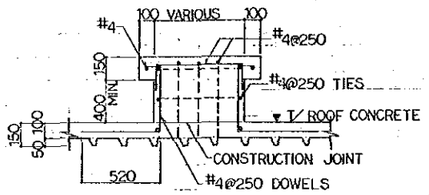


1ST FLOOR SLAB

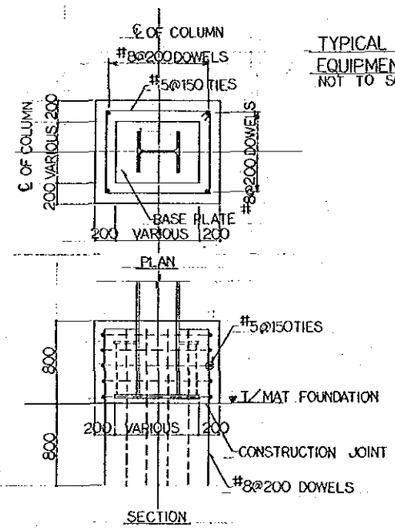
SLAB REINFORCING DETAILS
SCALE 1:20



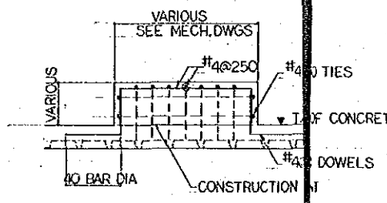
WALL REINFORCING DETAILS
SCALE 1:20

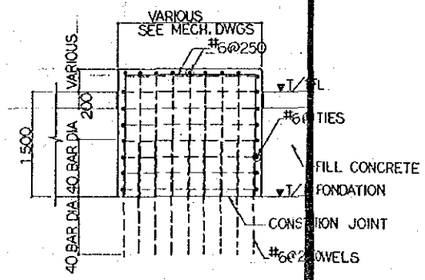


TYPICAL REINFORCING DETAIL FOR ROOF EQUIPMENT FOUNDATION
NOT TO SCALE

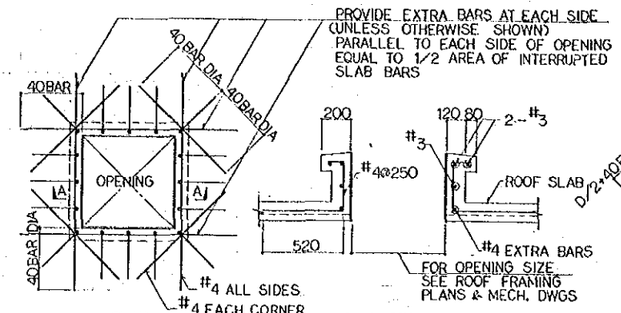


TYPICAL DOWEL DETAILS FOR COLUMN PEDESTAL

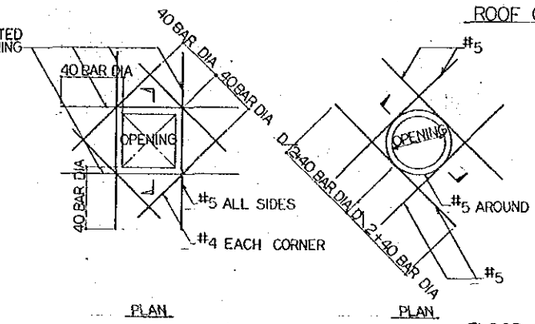


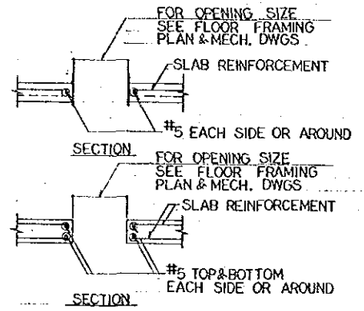


TYPICAL REINFORCING DETAIL FOR EQUIPMENT FOUNDATION
NOT TO SCALE

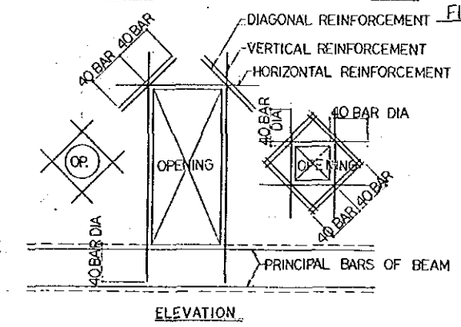


ROOF OPENINGS





FLOOR OPENING



ELEVATION

WALL OPENINGS

IN CASE OF SINGLE REINFORCEMENT ARRANGEMENT
DIAGONAL REINFORCEMENT 2-#4
VERTICAL REINFORCEMENT 1-#4
HORIZONTAL REINFORCEMENT 1-#4

IN CASE OF DOUBLE REINFORCEMENT ARRANGEMENT
DIAGONAL REINFORCEMENT 4-#4
VERTICAL REINFORCEMENT 2-#4
HORIZONTAL REINFORCEMENT 2-#4

OPENING STANDARD REINFORCEMENT ARRANGEMENT

PAKISTAN
KARACHI ELECTRIC SUPPLY CORPORATION
WEST WHARF THERMAL POWER PLANT PROJECT
UNITS NO.1 AND NO.2
MAIN POWER HOUSE
REINFORCEMENT STANDARD
JAPAN INTERNATIONAL COOPERATION AGENCY
TOKYO JAPAN

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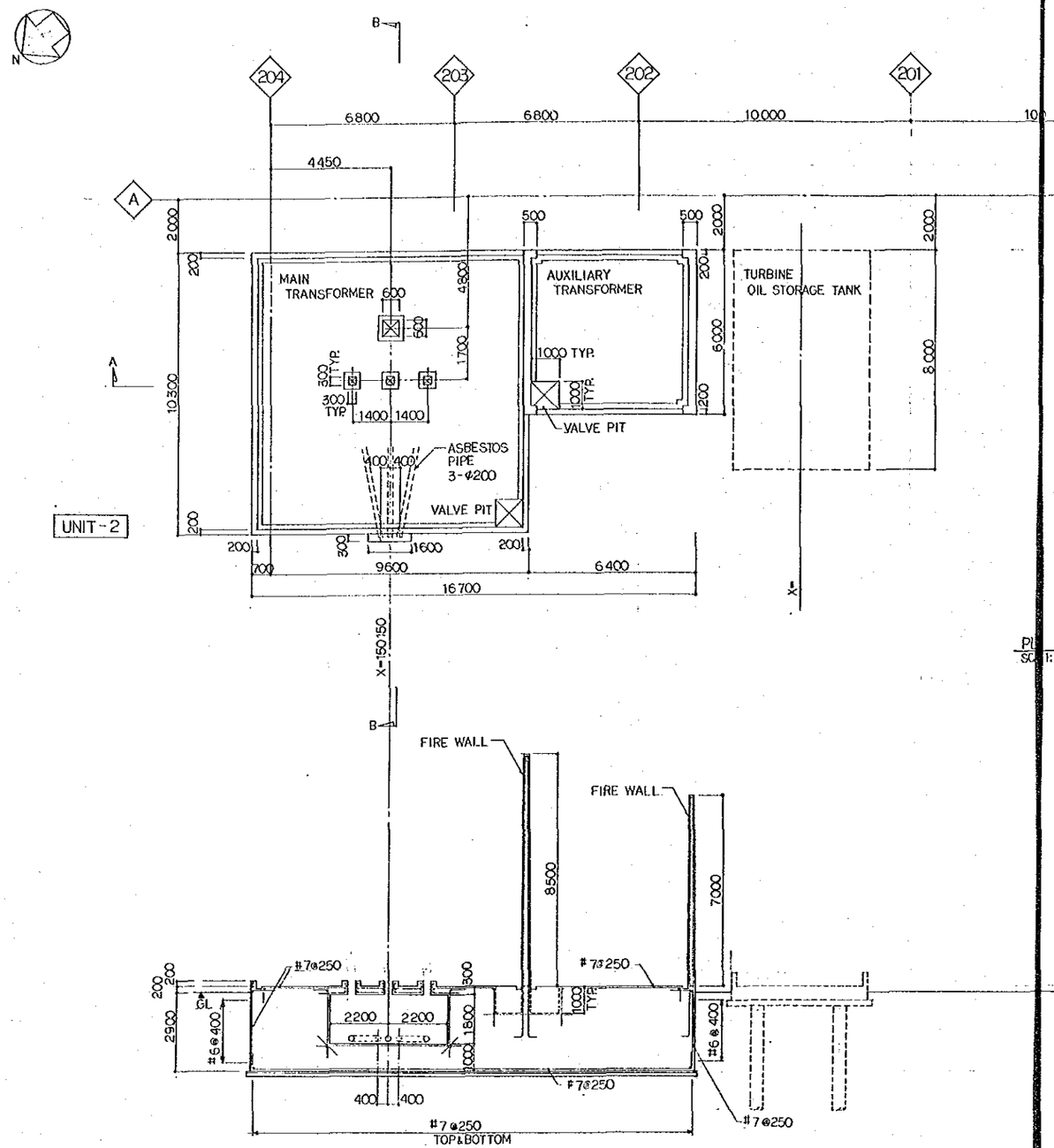
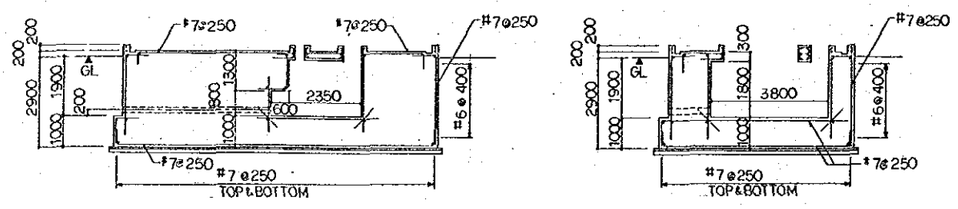
DRAWING NO.		SCALE	DATE
WAT - 1218		1:20	10 JAN. 1990



SECTION A-A
SCALE 1:100



SECTION B-B
SCALE 1:100

SECTION C-C
SCALE 1:100

GRAPHIC SCALE
0 1 5m
SCALE 1:100

PAKISTAN
KARACHI ELECTRIC SUPPLY CORPORATION
WEST WHARF THERMAL POWER PLANT PROJECT
UNITS NO.1 AND NO.2

TRANSFORMER YARD FOUNDATION

JAPAN INTERNATIONAL COOPERATION AGENCY
TOKYO JAPAN

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DRAWING NO.	SCALE	DATE	
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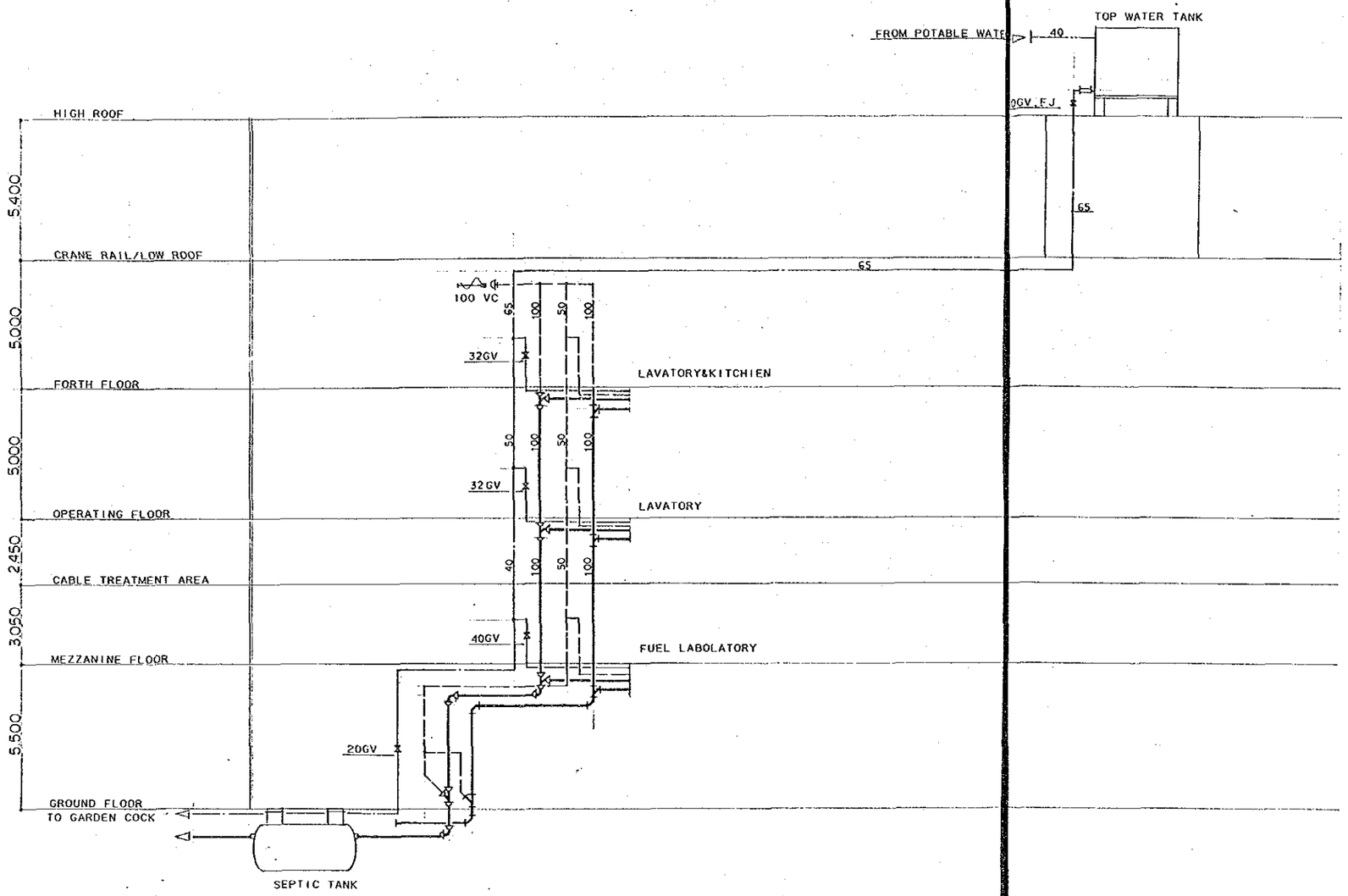

PLUMBING PIPING SKELETON (not to scale)

LEGEND

SYMBOLS	DESIGNATION	SPECIFICATION
	COLD WATER LIFT PIPING	POTABLE WATER, GALVANIZED CARBON STEEL
	COLD WATER SUPPLY PIPING	-do- -do-
	SOIL WATER PIPING	CAST IRON
	WASTE WATER PIPING	GALVANIZED CARBON STEEL
	VENT PIPING	
	GATE VALVE	GV
	FLEXIBLE JOINT	FJ
	FAUCET	FOR COLD WATER
	FLOOR DRAIN	FD
	CLEAN OUT	CO
	VENT CAP	VC
	SOIL WATER BASIN	
	RAIN WATER BASIN	

PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE
PLUMBING EQUIPMENT PIPING SKELETON, LEGEND

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

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DRAWING NO.		SCALE	DATE
WAT — 1301		not to scale	DEC 1989

PLUMBING EQUIPMENT SCHEDULE

NO.	MACHINE NAME	SPECIFICATION		Q'TY	REMARKS
T - 1	ROOF TOP WATER TANK	POTABLE ELEVATED WATER TANK CAPACITY : 2.5m3 DIMENSION : 1.5m x 1.5m x 1.5mH CONCRETE FOUNDATION : 500H		1	
SEP-1	SEPTIC TANK	F.R.P. CAPACITY : 2.0M^3		1	
EH - 1	WATER HEATER	ELECTRIC HEATER WALL MOUNTED CAPACITY : 10^L ELECTRIC OUTPUT : 1.5^{KW} (1^{Φ} 220^V)		2	

PLUMBING AND SANITARY FIXTURES SCHEDULE

NO.	FIXTURE NAME	SPECIFICATION	ACCESSORIES	Q'TY	REMARKS
C - 1	WATER CLOSET	VITREOUS CHINA, WASH-DOWN CLOSED COUPLED	LOW TANK W/INSULATING LINER AND HAND WASHING LID, TANK TRIM, SEAT AND COVER	3	
	ROLL PAPER HOLDER	PLASTIC MADE		3	
U - 1	URINAL	V.C WALL HANG.	INTEGRAL TRAP, FLUSH VALVE, INLET SPUD	5	
L - 1	LAVATORY	V.C WALL HANG.	LAVATORY FAUCET, WALL SUPPLY W/STOP POP-UP WASTE W/P-TRAP, PEDESTRAL	3	
	LIQUID SOAP HOLDER			3	
	MIRROR			3	
SS- 1	SERVICE SINK	V.C HIGH BACK	WALL FAUCET, W/ADJUSTABLE FLANGE, RH COVER WASTE W/CAST IRON S-TRAP	2	
	WALL FAUCET	FOR KITCHEN AND KITCHENETTE SINK SWING SPOUT		2	
	DECK FAUCET	FOR LABORATORY		14	
	GARDEN HOSE COCK	W/HOSE COUPLING	CAST IRON BOX	1	
FD- 1	FLOOR DRAIN	W/TRAP			
FD- 2	FLOOR DRAIN	WATER PROOF TYPE W/TRAP			

PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWERHOUSE
PLUMBING EQUIPMENT
SANITARY FIXTURES SCHEDULE

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

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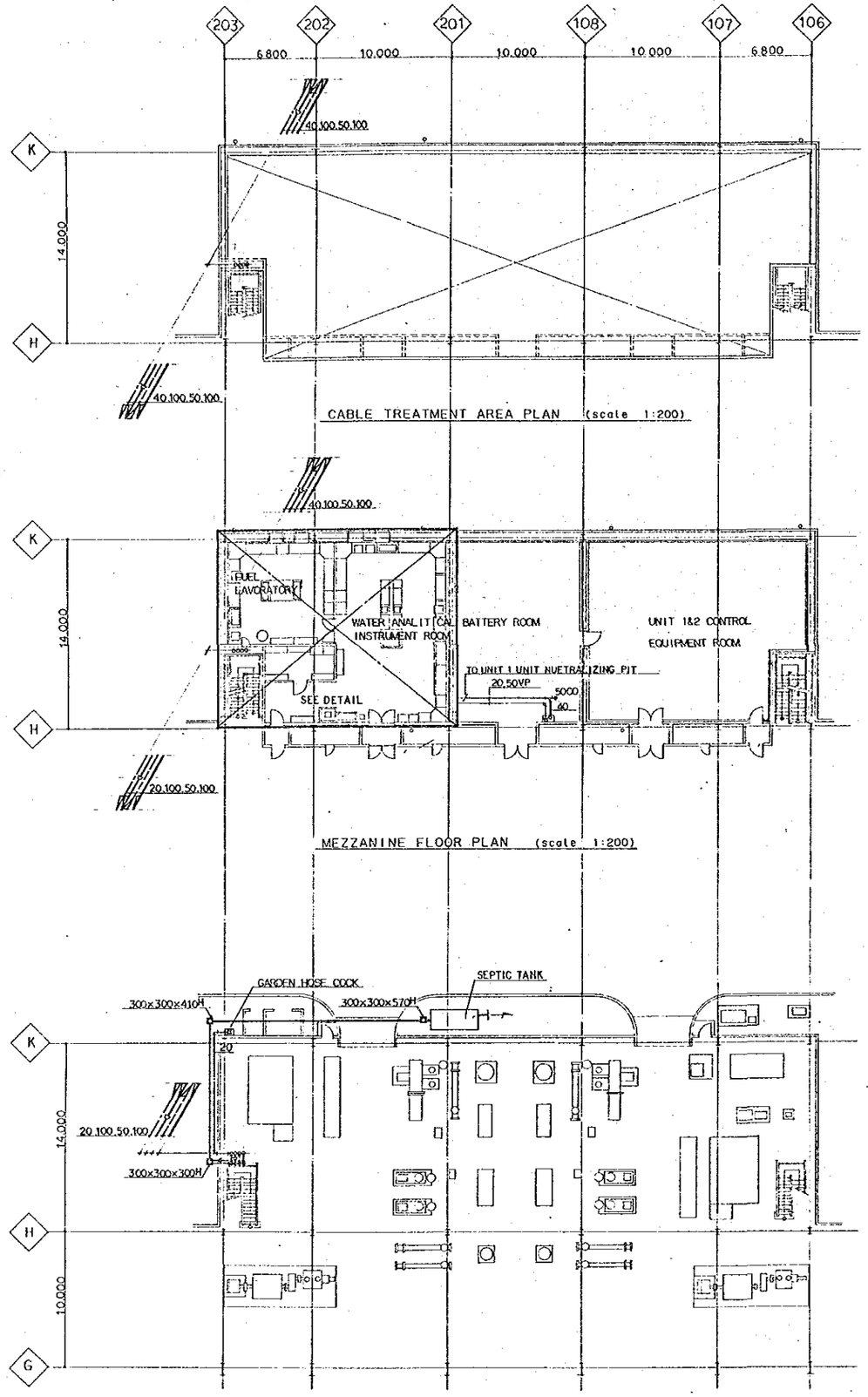
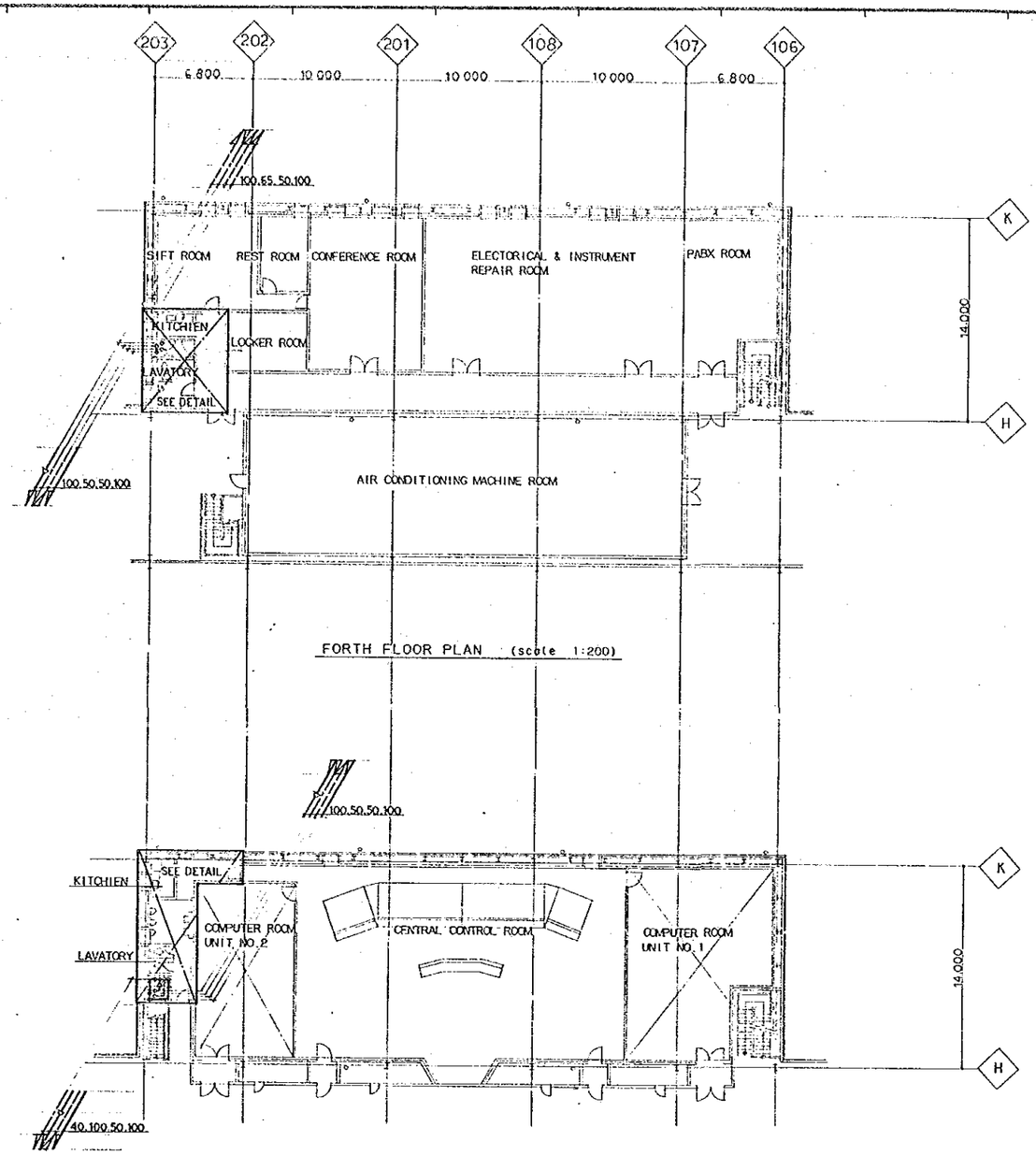
		Toya	Toya
DRAWING NO.	SCALE	DATE	
WAT - 1302		DEC 1989	





PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE
PLUMBING EQUIPMENT GROUND.MEZZANINE.
CABLE TREATMENT.OPERATING.FORTH FLOOR PLAN

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

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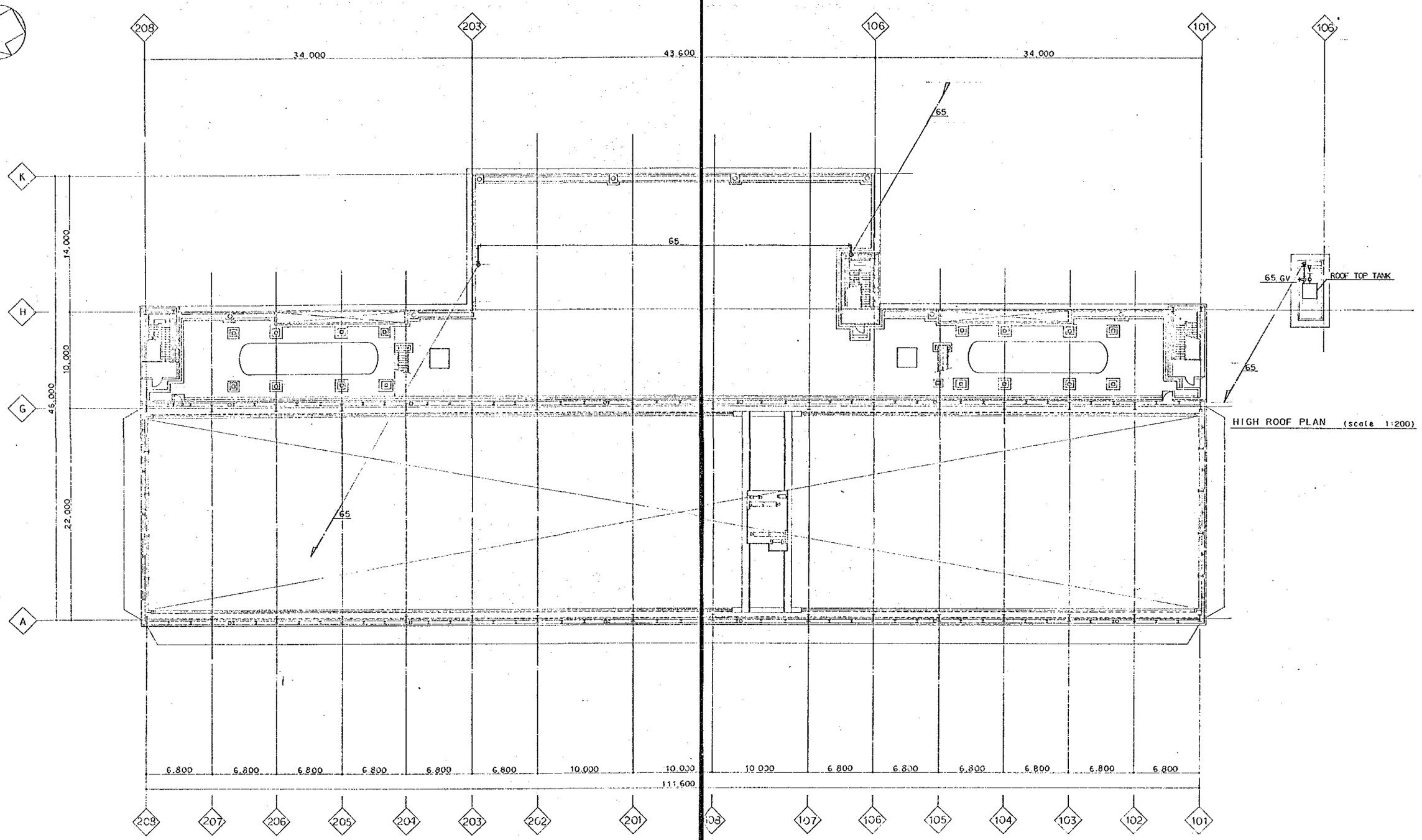
DRAWING NO.		SCALE	DATE
WAT-1303		1:200	DEC 1989



HIGH ROOF PLAN (scale 1:200)

CRANE RAIL AND LOW ROOF FLOOR PLAN (scale 1:200)

PAKISTAN

KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE
PLUMBING EQUIPMENT CRANE RAIL AND
LOW ROOF, HIGH ROOF FLOOR PLAN

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

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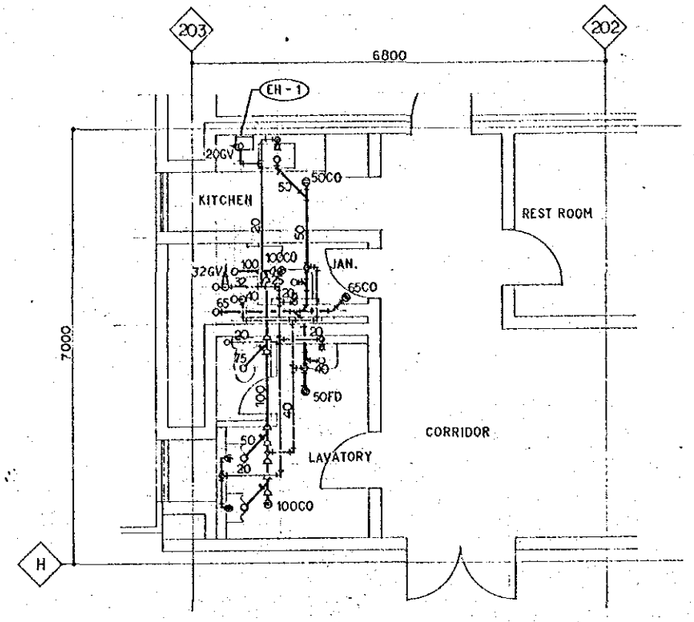
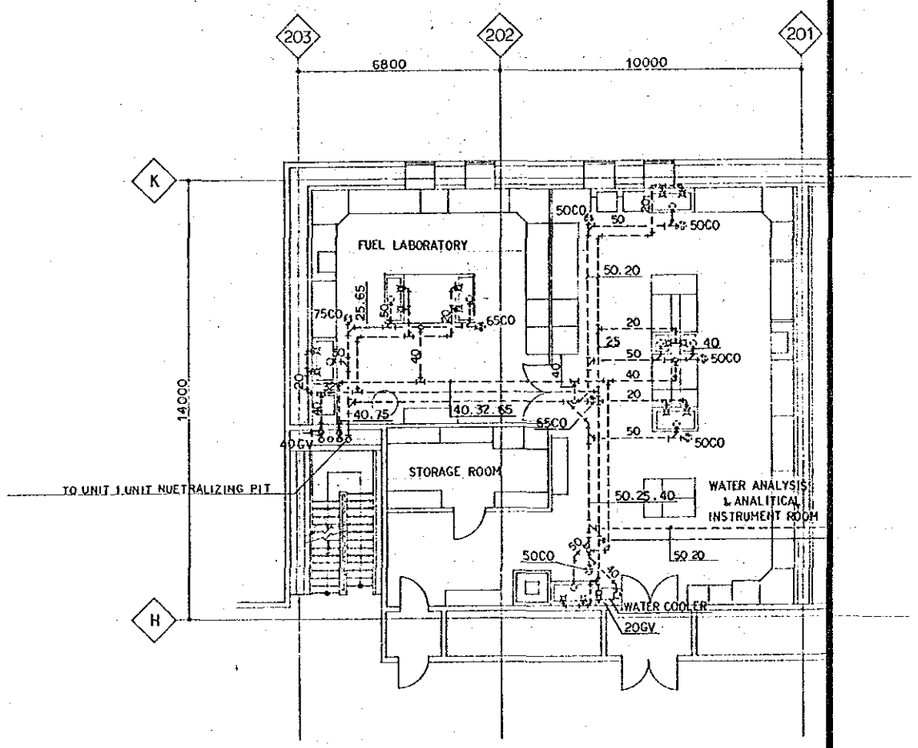
DRAWING NO.		SCALE	DATE
WAT-1304		1:200	DEC 1989



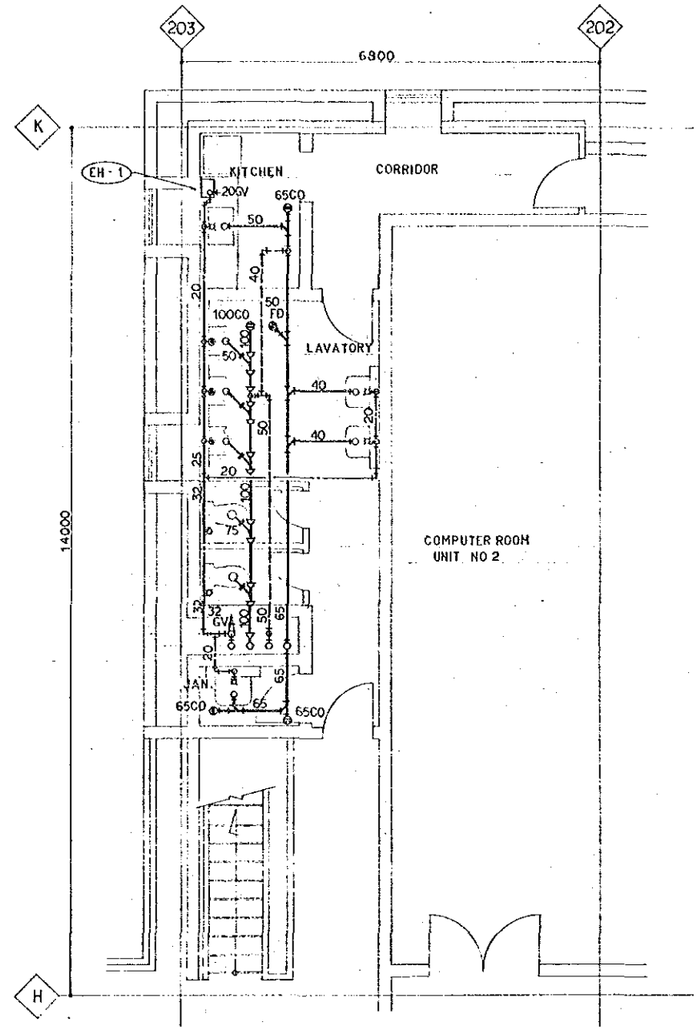
FORTH FLOOR DETAIL PLAN 1:50

SEE SCHEMATIC DIAGRAM Ⓐ



MEZZANINE FLOOR DETAIL PLAN 1:100

SEE SCHEMATIC DIAGRAM Ⓑ



OPERATING FLOOR DETAIL PLAN 1:50

SEE SCHEMATIC DIAGRAM Ⓒ

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KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE

PLUMBING EQUIPMENT DETAIL PLAN

JAPAN INTERNATIONAL COOPERATION AGENCY

TOKYO JAPAN

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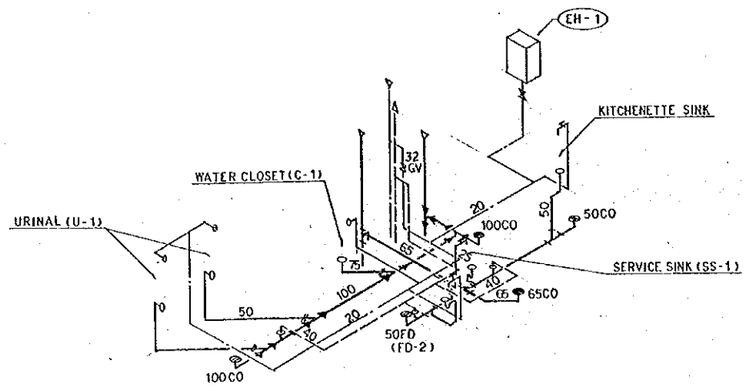
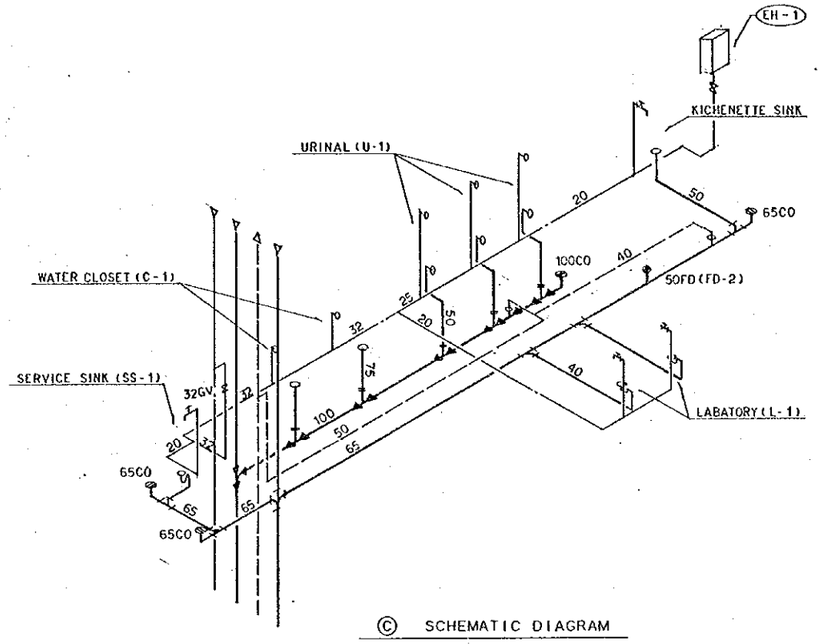


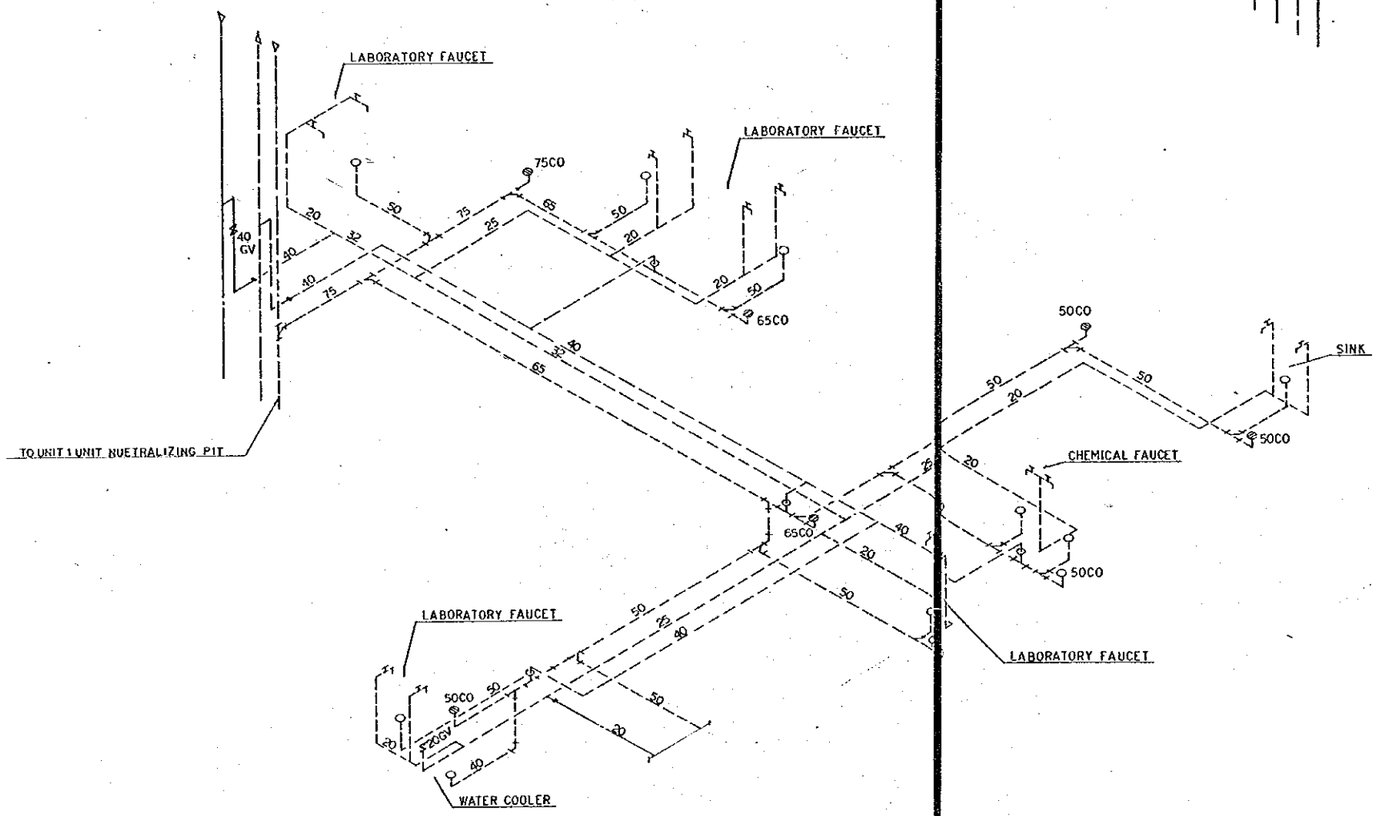
Ⓐ SCHEMATIC DIAGRAM

(4th FLOOR)



Ⓒ SCHEMATIC DIAGRAM

(OPERATING FLOOR)



Ⓑ SCHEMATIC DIAGRAM

(MEZZANINE FLOOR)

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KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE
PLUMBING EQUIPMENT
SCHEMATIC DIAGRAM

JAPAN INTERNATIONAL COOPERATION AGENCY

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AIR CONDITIONING EQUIPMENT SPECIFICATION LIST

PACKAGED, AIR COOLED LIQUID CHILLER

MARK	TYPE	CAPACITY	COOLING LOAD	CHILLED WATER	PRESSURE HEAD	MOTIVE POWER			Q'TY	NOTES
						COMPRESSOR	FAN	MO		
R - 1	AIR COOLED	39 RT	116,000kcal/H	387l/min (12-7°c)	2.1m/Aq	30kw x 2	0.75kw x 6	3φ - 0V	3	FOR AHU-1~4

PUMP

MARK	TYPE	DIA	WATER FLOW RATE	HEAD LIFT	POWER	MOTOR	Q'ty	NOTES
CWP - 1	VOLUTE	50 x 40	390l/min	20m/Aq	3.7kw	3φ - 380v	2	FOR R-1
CWP - 2	-do-	50 x 40	280l/min	20m/Aq	2.2kw	-do-	2	FOR AHU-2,3,4
CWP - 3	-do-	50 x 40	220l/min	20m/Aq	2.2kw	-do-	2	FOR AHU-1

AIR HUNDLING UNIT

MARK	TYPE	FAN				COOLING COIL			CHILLED WATER	AIR FILTER					REMEATER	Q'ty	NOTES
		AIR FLOW RATE	EXTERNAL STATIC PRESSURE	MOTIVE POWER	MOTER	COOLING LOAD	AIR INLET	AIR OUT		MATERIAL	PRES LOSS	FACE VELOCITY	EFFICIENCY	MOTIVE POWER	MOTIVE POWER		
AHU - 1	VERTICAL	20,700m³/H	70mmAq	11.0kw	3φ-380v	66,000kcal/H	DB:24.2°c WB:17.2°c	DB:14.1°c WB:13.4°c	220l/min	AUTO ROLL	25mmAq	2.5m/s	85% (AFI WEIGHT METHOD)	0.1kw(1φ-220v)	24kw(3φ-380v)	2	1ea STANBY
AHU - 2	-do-	11,500m³/H	60mmAq	3.7kw	-do-	47,000kcal/H	DB:25.3°c WB:17.3°c	DB:13.9°c WB:13.4°c	157l/min	-do-	25mmAq	2.5m/s	85% (AFI WEIGHT METHOD)	0.1kw(1φ-220v)	24kw(3φ-380v)	2	
AHU - 3	-do-	7,300m³/H	60mmAq	2.2kw	-do-	23,000kcal/H	DB:24.2°c WB:17.2°c	DB:14.1°c WB:13.4°c	77l/min	-do-	25mmAq	2.5m/s	85% (AFI WEIGHT METHOD)	0.1kw(1φ-220v)	24kw(3φ-380v)	2	
AHU - 4	-do-	3,300m³/H	60mmAq	1.5kw	-do-	13,000kcal/H	DB:24.9°c WB:17.7°c	DB:13.8°c WB:13.1°c	44l/min	-do-	25mmAq	2.5m/s	85% (AFI WEIGHT METHOD)	0.1kw(1φ-220v)	24kw(3φ-380v)	2	

RESERVOIR TANK

MARK	TYPE	CAPACITY	SIZE	Q'TY	REMARKS
RT - 1	STEEL	15 TON	3.0° x 2.0° x 2.5 H	1	

VENTILATOR EQUIPMENT SPECIFICATION LIST

MARK	TYPE	WHEEL DIAMETER	AIR FLOW RATE	STATIC PRESSURE	FAN MOTOR	POWER	Q'ty	ACCESSORJES	NOTES
EF - 1	CENTIFUGAL MULT-BANE	ss#4	15,100m³/H	25mmAq	3.7kw	3φ - 380v	1		
EF - 2	-do-	ss#2 1/2	5,060m³/H	25mmAq	1.5kw	-do-	1		
EF - 3	AXIAL	NO.6	15,000m³/H	15mmAq	2.2kw	-do-	1		
EF - 4	AXIAL	NO.2	250m³/H	10mmAq	80w	1φ - 220v	1		
EF - 5	-do-	NO.2	150m³/H	10mmAq	12w	-do-	1		
EF - 6	-do-	NO.1 1/2	100m³/H	7mmAq	12w	-do-	1		
VF - 1	CEILING	150φ	630m³/H	8mmAq	95w	1φ - 220v	1	150φ VENT C	
VF - 2	-do-	150φ	600m³/H	8mmAq	95w	-do-	1	-do-	
VF - 3	-do-	150φ	320m³/H	7mmAq	46w	-do-	1	-do-	
VF - 4	-do-	150φ	210m³/H	8mmAq	35w	-do-	1	-do-	
VF - 5	-do-	150φ	170m³/H	8mmAq	35w	-do-	1	-do-	
VF - 6	-do-	150φ	150m³/H	8mmAq	35w	-do-	1	-do-	
VF - 7	-do-	100φ	50m³/H	6mmAq	18w	-do-	2	100φ VENT CA	
RF - 1	ROOF VENTILATOR	1,200φ	22,300m³/H	10mmAq	3.7kw	3φ - 380v	16		
OF - 1	CENTIFUGAL MULT-BANE	ss#4	15,100 m3/H	25 mmAq	3.7kw	3φ - 380	1		

GRAPHICAL SYMBOLS LIST

SYMBOLS	N A M E
SA	SUPPLY AIR DUCT
RA	RETURN AIR DUCT
OA	OUTSIDE AIR DUCT
EA	EXAUST AIR DUCT
VD	VOLUME DAMPER
FD	FIRE DAMPER
	NOISE REDUCATION
RG	RETURN GRILLE
OAG	OUTSIDE GRILLE
EAG	EXAUST GRILLE
CS	CHILLED WATER SUPPLY
CR	CHILLED WATER RETURN
	MANUALLY VALVE
	THREE WAY VALVE
A	AIR RELEASE VALVE
	Y-STRAINER

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WEST WHARF THERMAL POWER PLANT PROJECT

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A/C AND VENTILATION EQUIPMENT SCHEDULE

JAPAN INTERNATIONAL COOPERATION AGENCY

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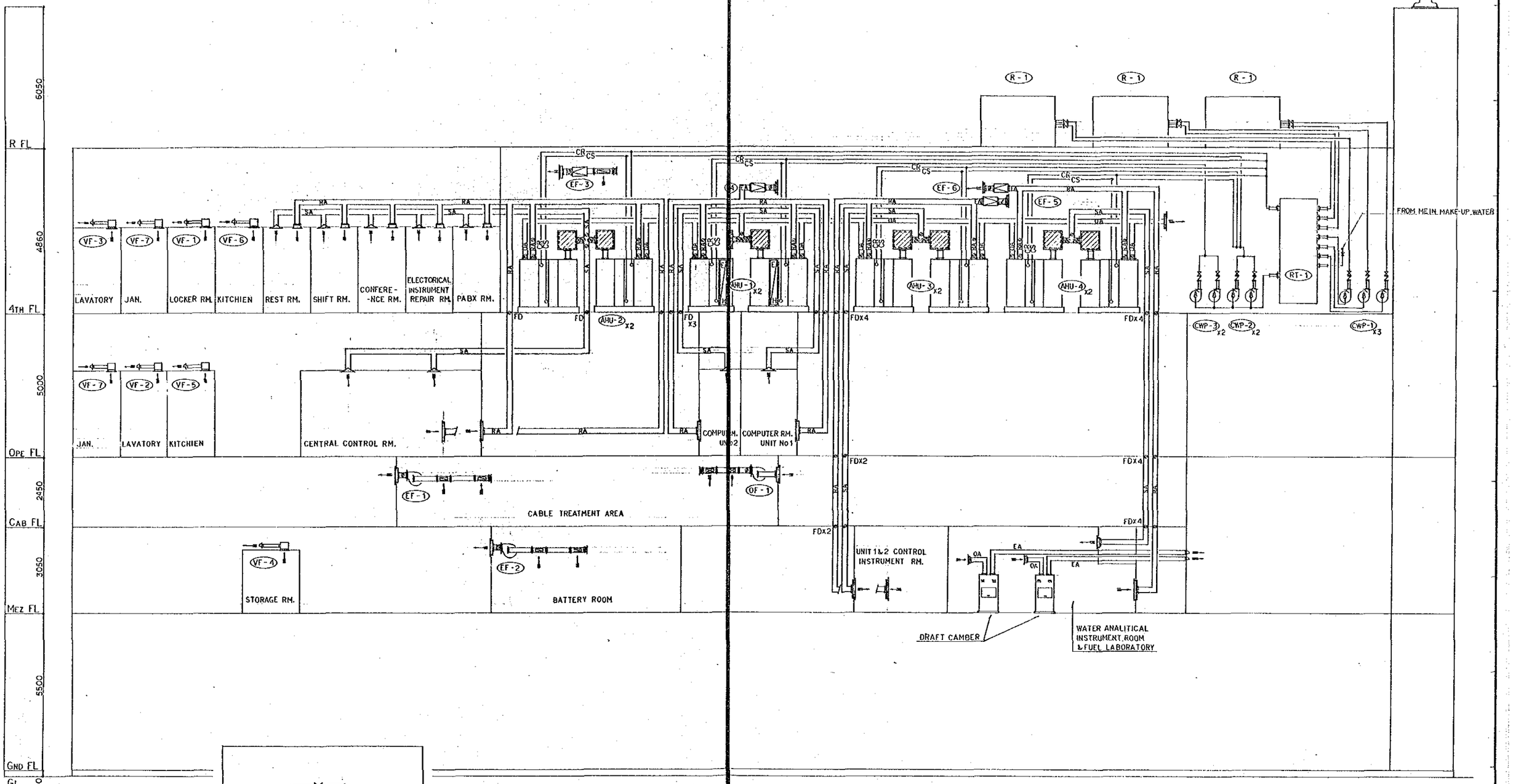

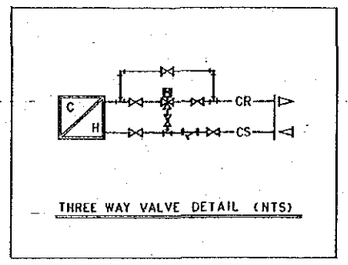

THREE WAY VALVE DETAIL (NTS)

DUCTING AND PING SKELETON (not to scale)

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KARACHI ELECTRIC SUPPLY CORPORATION

WEST WHARF THERMAL POWER PLANT PROJECT

UNITS NO.1 AND NO.2

MAIN POWER HOUSE
A/C AND VENTILATION
DUCTING AND PIPING SKELETON

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