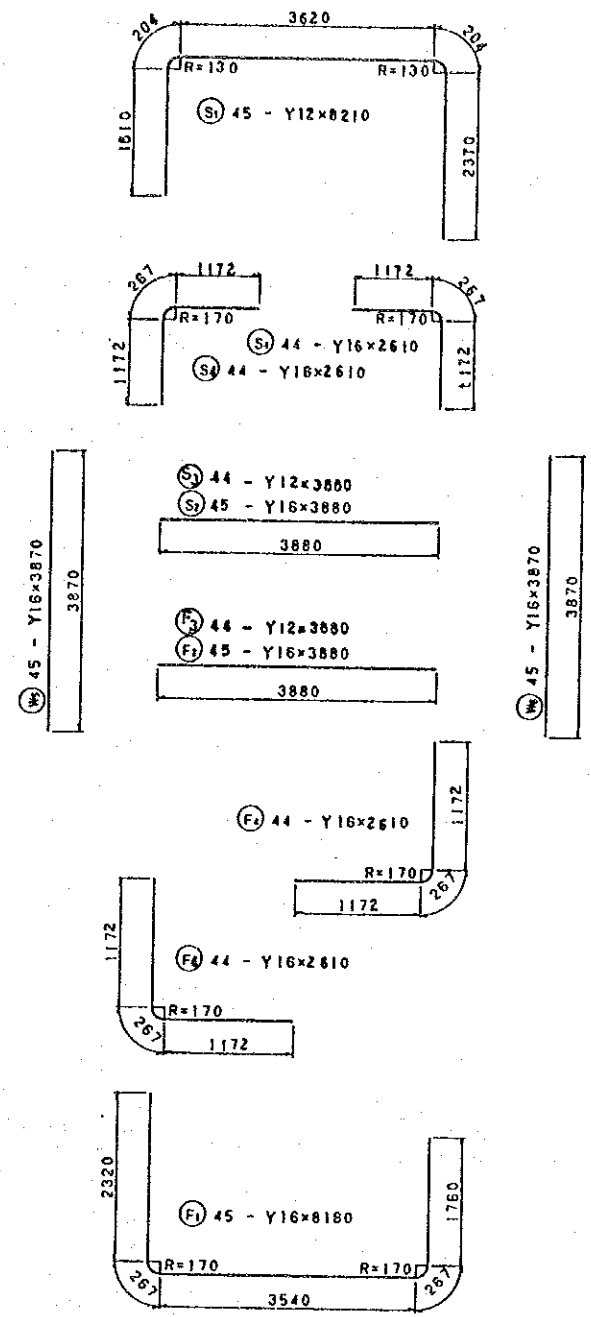
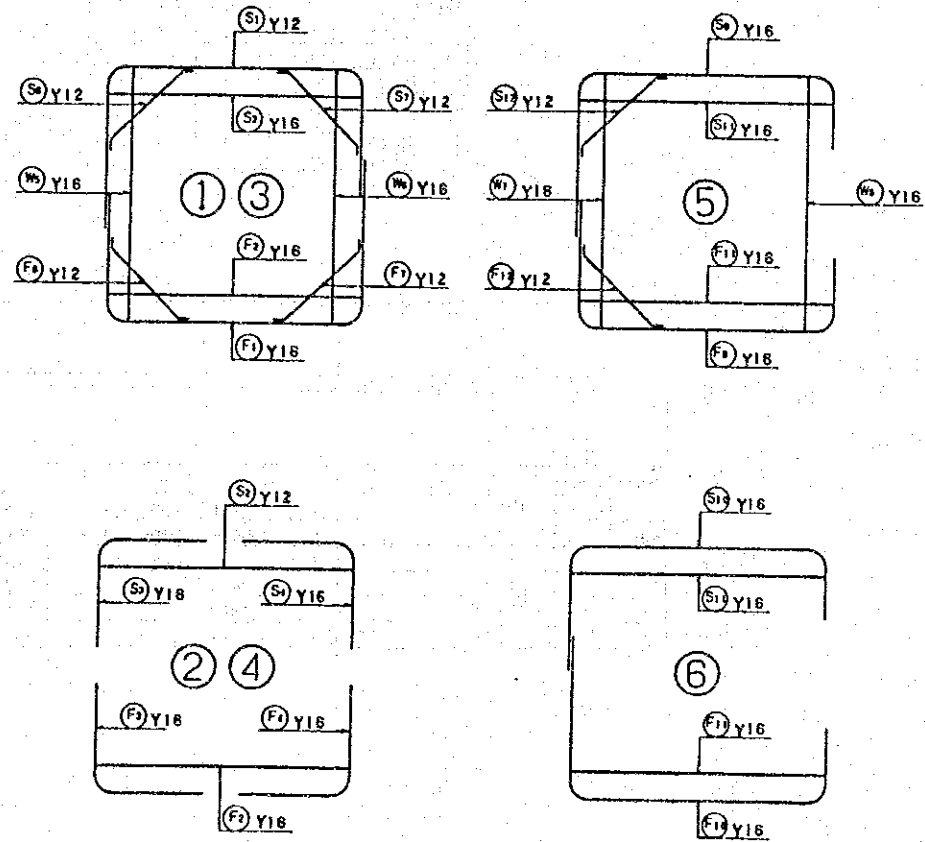
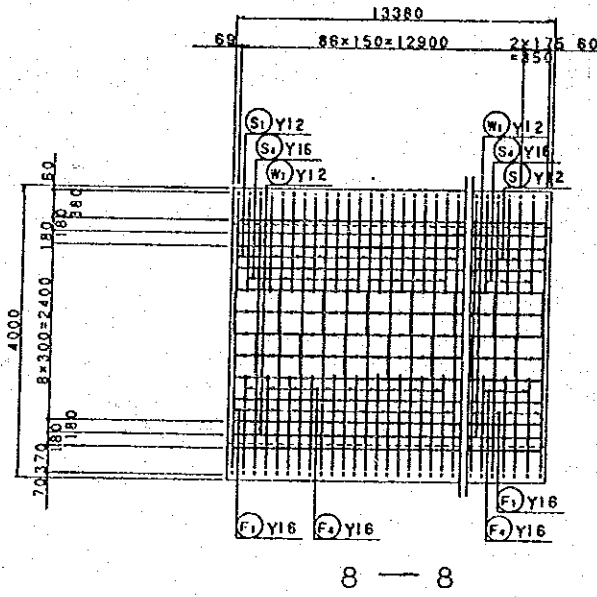
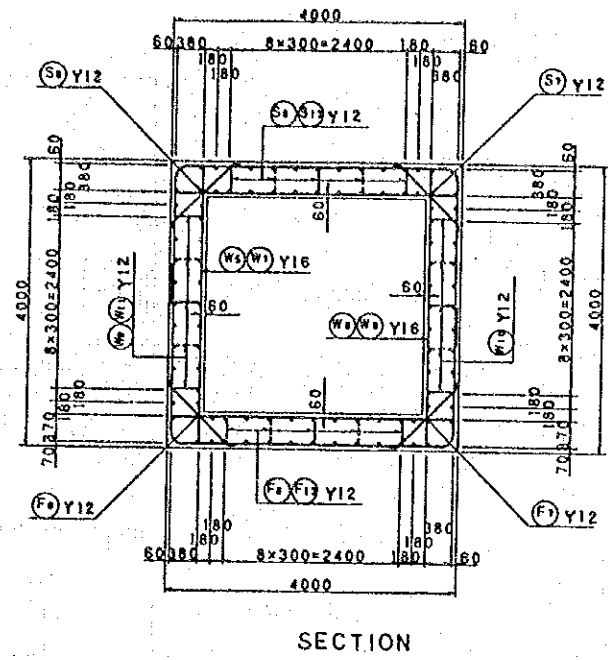
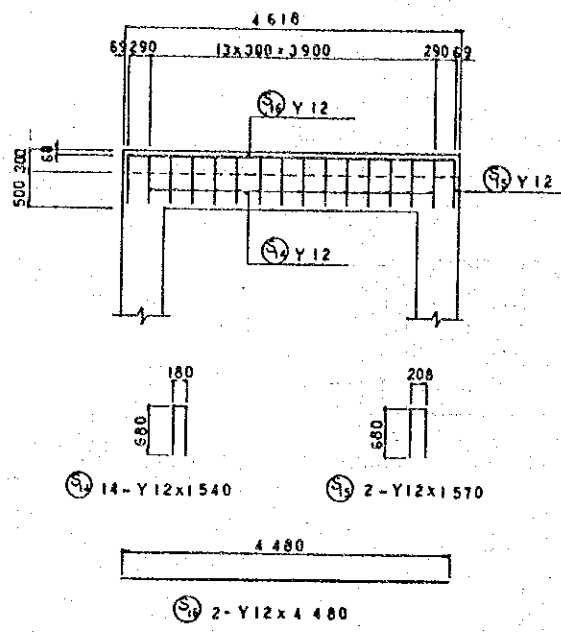
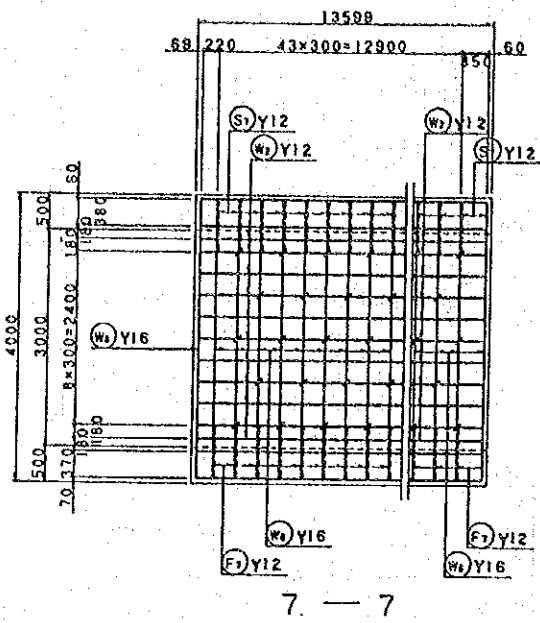


SURVEYED BY
 MAPPING BY
 LOCATION BY
 TRACED BY
 CHECKED BY

MOPW ROADS DEPT DRG NO.



REVISIONS	
DESCRIPTION	DATE

JAPAN INTERNATIONAL COOPERATION AGENCY

CHIEF ENGINEER (ROADS)
CHIEF SUPT ENG (DESIGN)

SEN SUPT ENG (DESIGN)
SUPT ENGINEER (DESIGN)
PROJECT ENGINEER

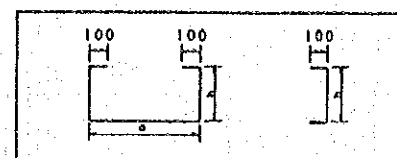
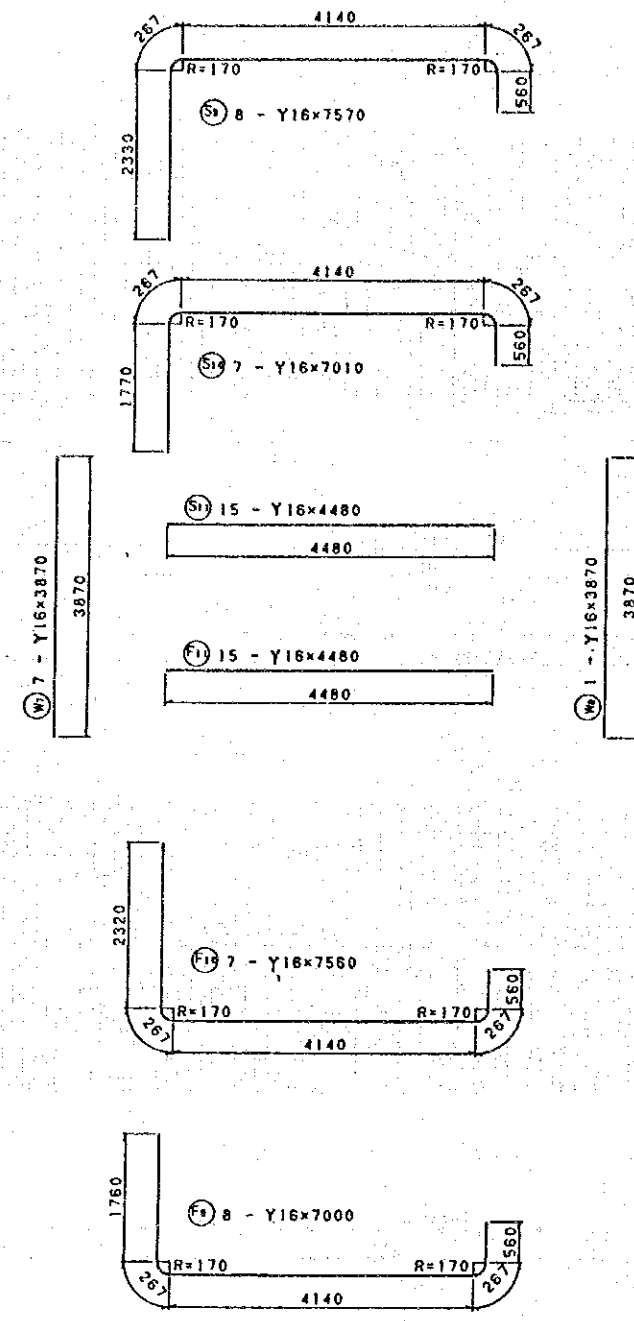
SCALES
1:50

NAIROBI BYPASS
WATER BOX CULVERTS
CR 13-971.00 V-3.00 B-3.00 (3)

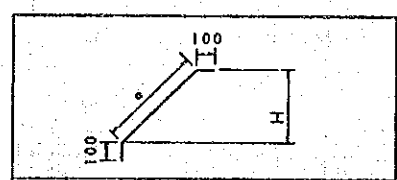
Q
SHEET 1090F 183

SURVEYED BY
 MAPPING BY
 LOCATION BY
 TRACED BY
 CHECKED BY

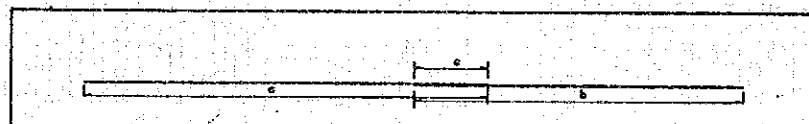
MOPW ROADS DEPT DRG NO



MARK	DIA	a	b	L	REMARK
S 8	Y12	328	409	1347	
S13	*	328	409	1347	
F 8	*	328	389	1327	
F13	*	328	389	1327	
W 8	*		409	609	
W10	*		409	809	
W11	*		468	668	



MARK	DIA	a	H	L	NUMBER
S 6	Y12	1124	785	1324	45
S 7	*	1124	785	1324	45
S12	*	1221	863	1421	7
F 8	*	1110	785	1310	45
F 7	*	1110	785	1310	45
F12	*	1206	853	1406	7



MARK	DIA	a	b	c	L = a + b	LAP-N	NUMBER
S 5	Y12	10000	3 671- 5911 (4791)	420	14 791	1	28
F 5	*	10000	3 671- 5911 (4791)	*	14 791	1	28
W 1	*	10000	3 671	*	13 671	1	11
W 2	*	10000	3 890	*	13 891	1	11
W 3	*	10000	5 692	*	15 692	1	11
W 4	*	10000	5 911	*	15 911	1	11

REVISIONS	
DESCRIPTION	DATE

JAPAN INTERNATIONAL
COOPERATION AGENCY

CHIEF ENGINEER (ROADS)
CHIEF SUPT ENG (DESIGN)

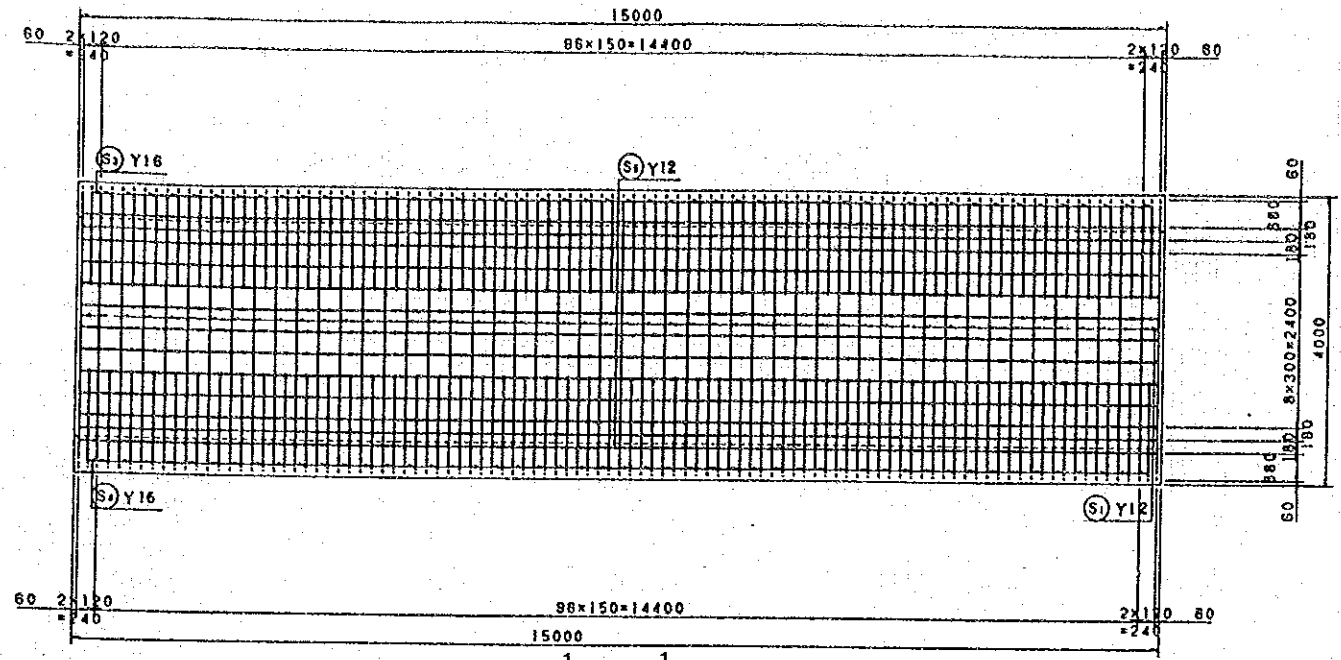
SEN SUPT ENG (DESIGN)
SUPT ENGINEER (DESIGN)
PROJECT ENGINEER

SCALES
1: 50

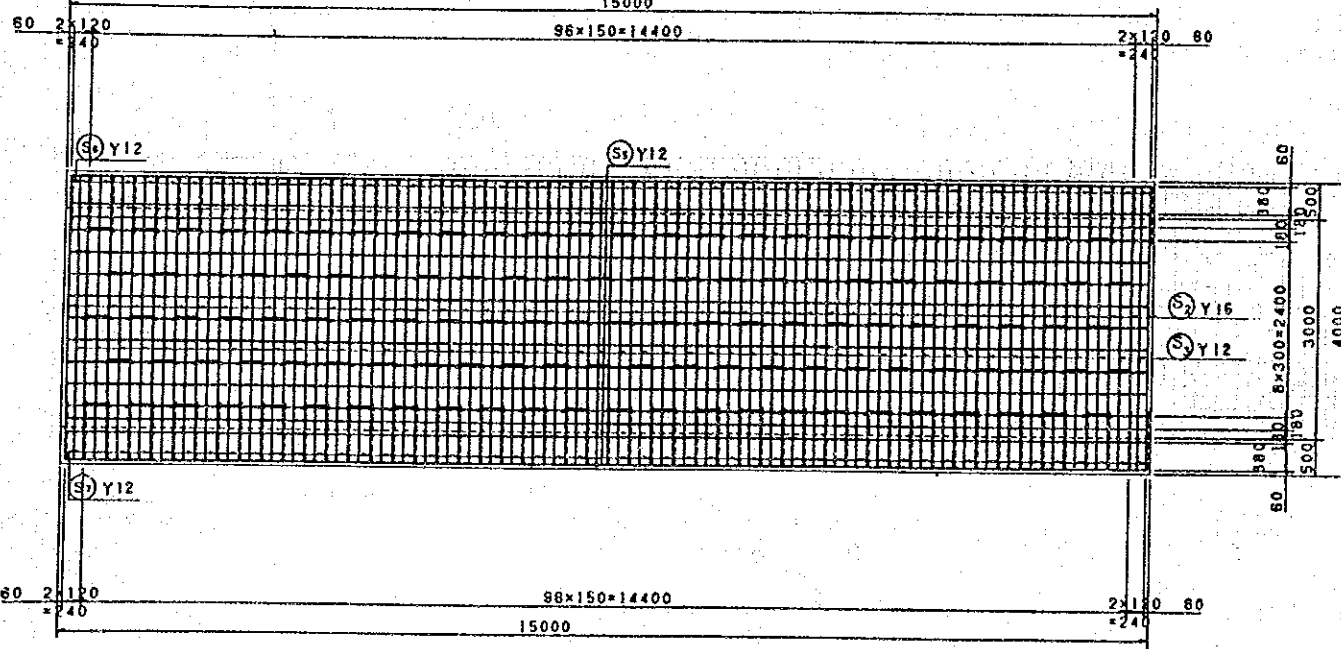
NAIROBI BYPASS
WATER BOX CULVERTS
CN 13-978.00 W-3.00 H-3.00 (4)

AERIAL PHOTO BY _____ SURVEYED BY _____
 MAPPING BY _____ TRACED BY _____
 LOCATION BY _____ CHECKED BY _____

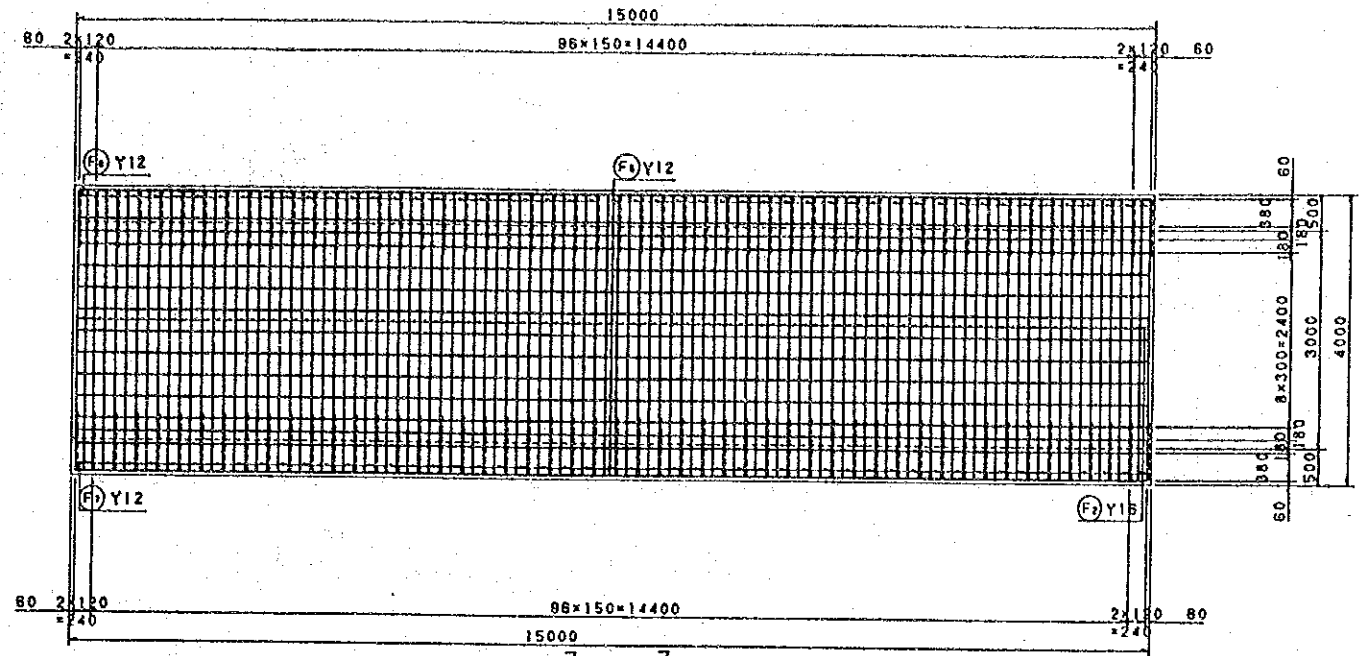
MOPW ROADS DEPT DRG NO



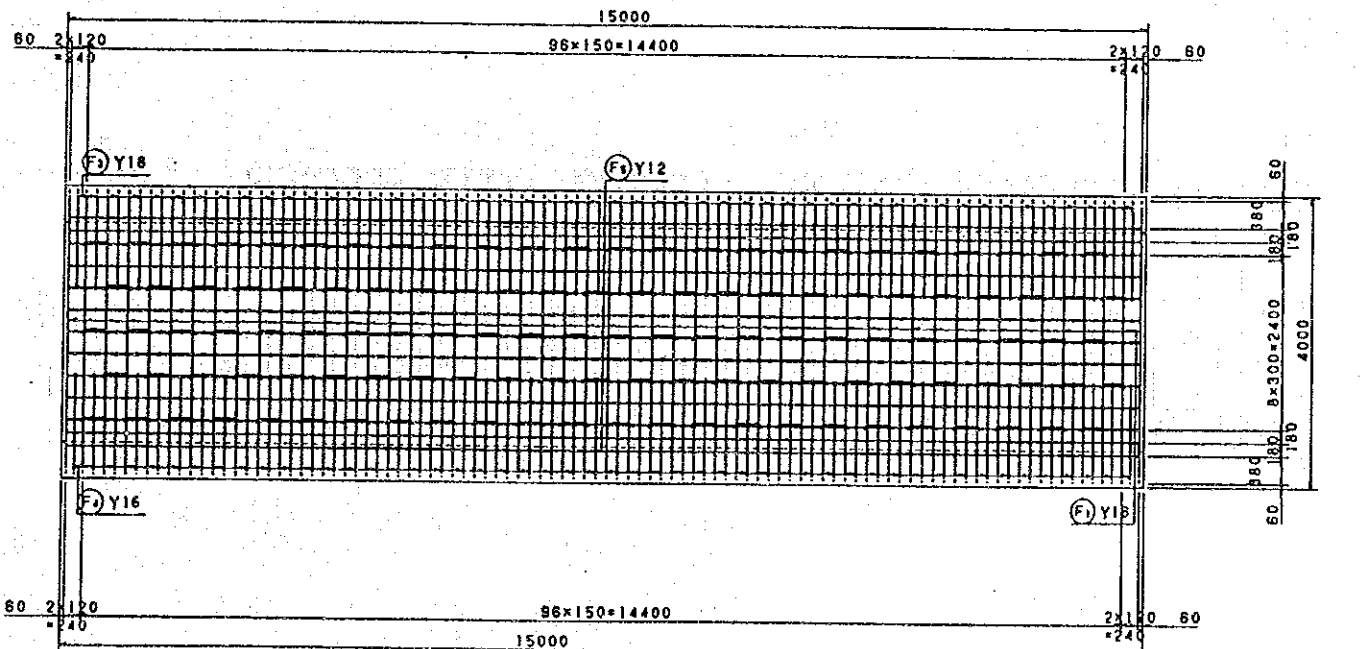
1 — 1



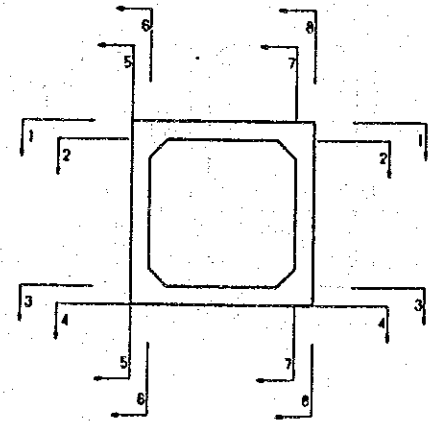
2 — 2



3 — 3

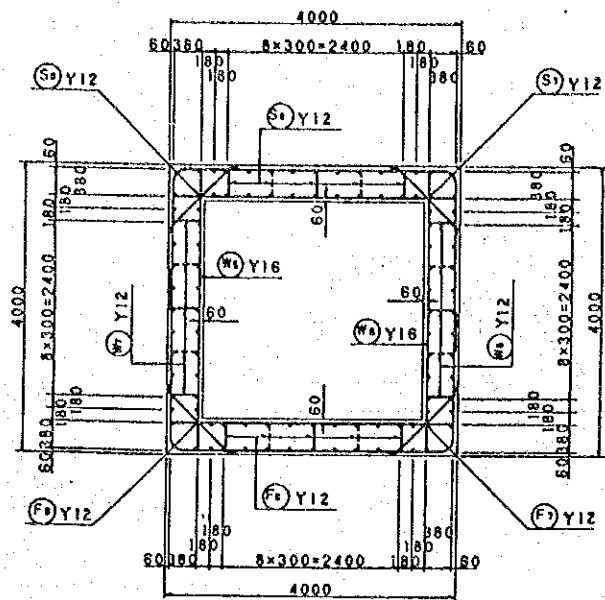


4 — 4

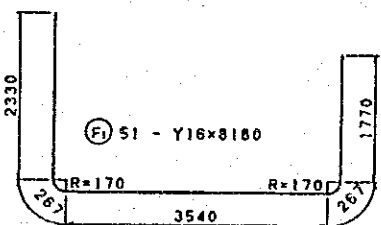
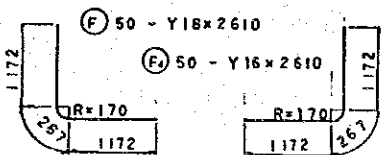
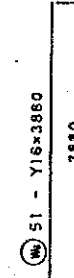
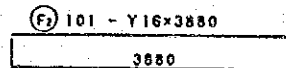
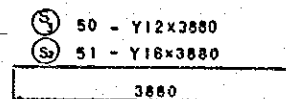
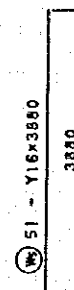
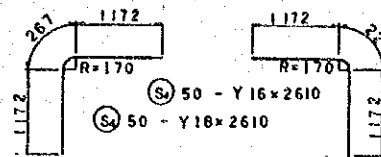
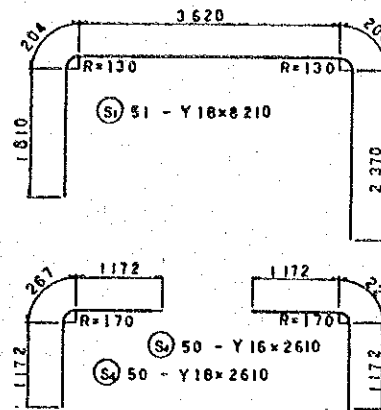
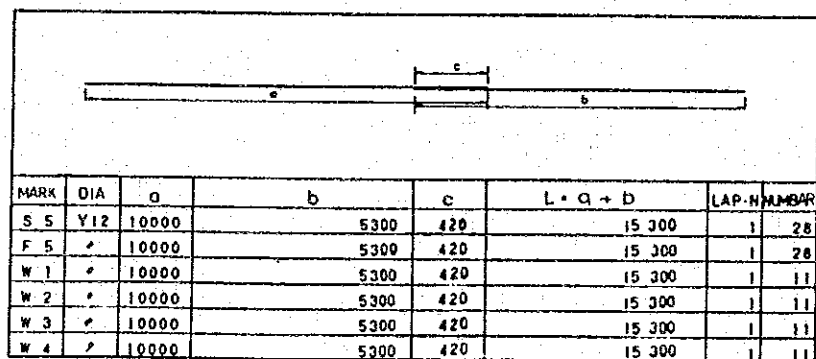
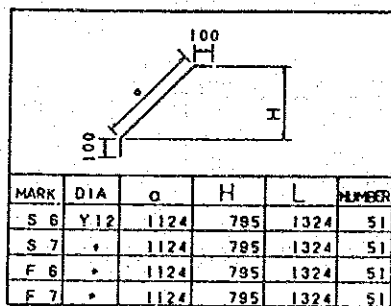
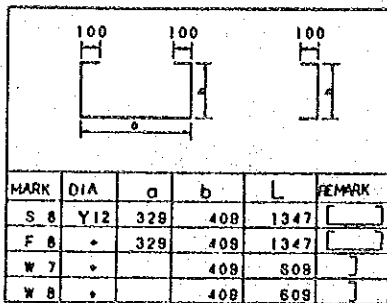
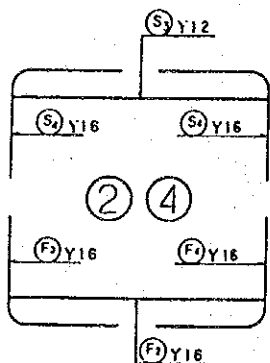
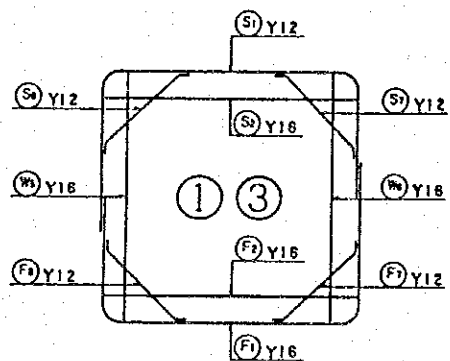


REVISIONS		JAPAN INTERNATIONAL COOPERATION AGENCY	CHIEF ENGINEER (ROADS) CHIEF SUPT ENG (DESIGN)	SEN SUPT. ENG (DESIGN) SUPT ENGINEER (DESIGN) PROJECT ENGINEER	SCALES 1:50	NAIROBI BYPASS WATER BOX CULVERTS CR 13+972.00 W=3.00 B=3.00 (S)	Q SHEET 111 OF 183
DESCRIPTION	DATE						

AERIAL PHOTO BY _____ SURVEYED BY _____
 MAPPING BY _____ TRACED BY _____
 LOCATION BY _____ CHECKED BY _____
 M.O.P.W. ROADS DEPT. DRG. NO. _____



SECTION



REVISIONS	DESCRIPTION	DATE

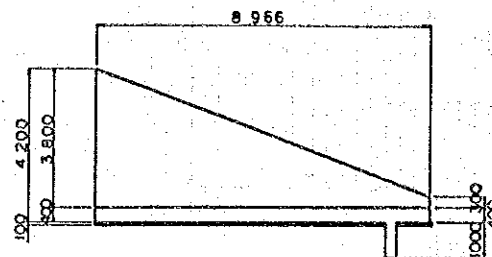
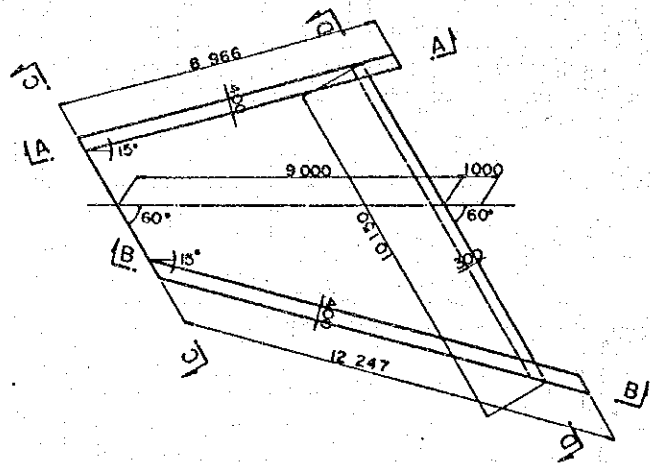
JAPAN INTERNATIONAL COOPERATION AGENCY
 CHIEF ENGINEER (ROADS)
 CHIEF SUPT. ENG. (DESIGN)

SEN SUPT. ENG. (DESIGN)
 SUPT. ENGINEER (DESIGN)
 PROJECT ENGINEER

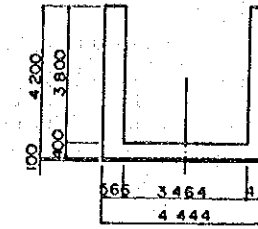
SCALES
 1: 50

NAIROBI BYPASS
 WATER BOX CULVERTS
 CH 13+972.00 R=3.00 R=3.00 (1)

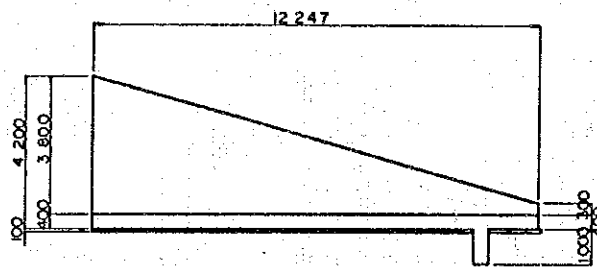
Q
 SHEET 115 OF 153



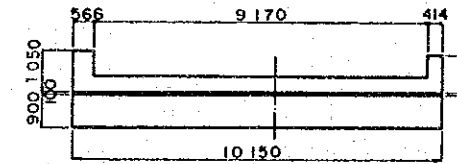
A - A



C - C



B - B



D - D

RETAINING WALL OF NO.1 BOX FOR DRAINAGE

AERIAL PHOTO BY	SURVEYED BY
MAPPING BY	TRACED BY
LOCATION BY	CHECKED BY

MOPW ROADS DEPT DRG NO

REVISIONS	
DESCRIPTION	DATE

JAPAN INTERNATIONAL COOPERATION AGENCY

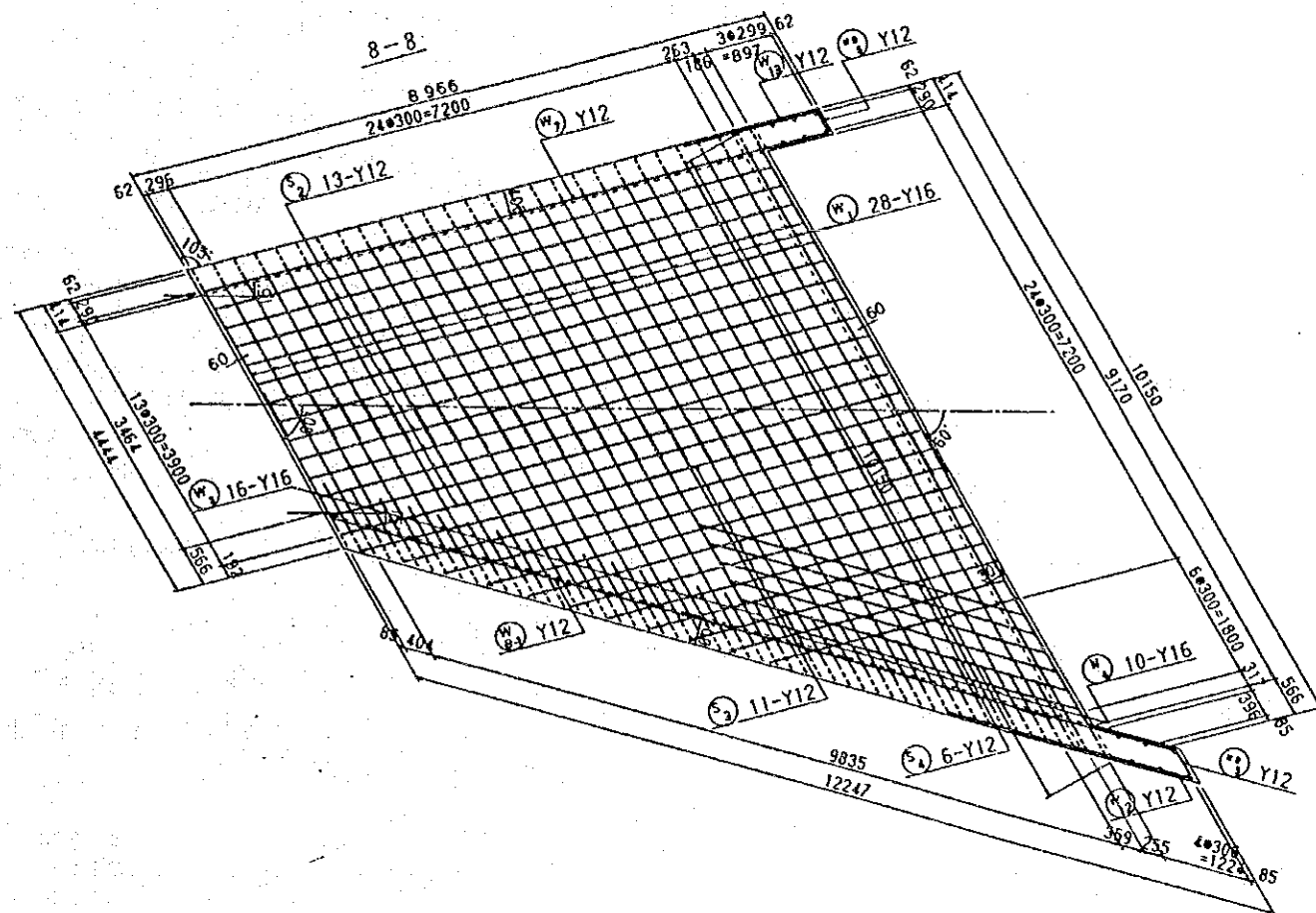
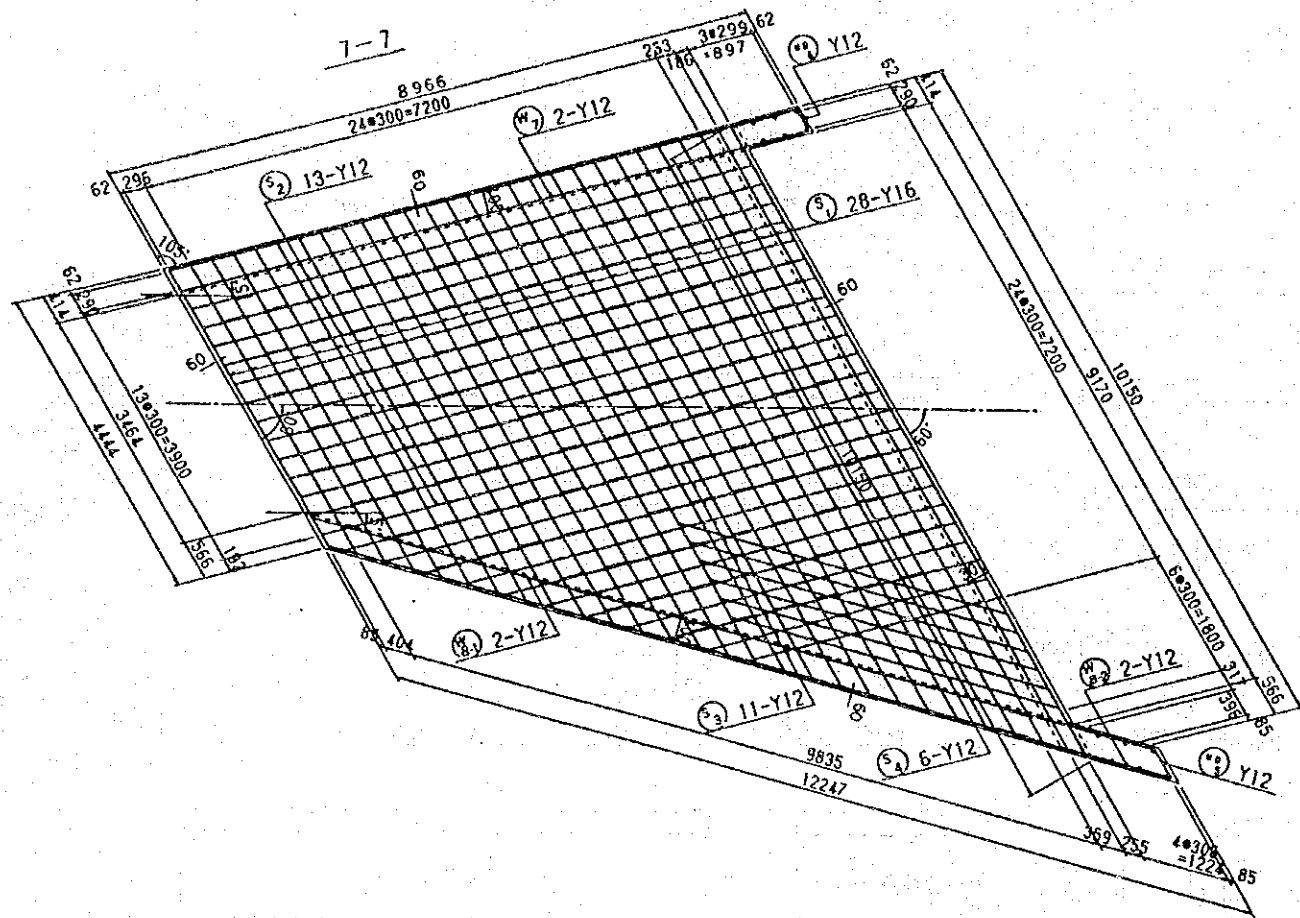
CHIEF ENGINEER (ROADS)
CHIEF SUPT ENG (DESIGN)

SEN SUPT. ENG (DESIGN)
SUPT ENGINEER (DESIGN)
PROJECT ENGINEER

SCALES
1:100

NAIROBI BYPASS
DRAINAGE BOX CULVERTS
CN 131974.00 0-3.00 0-3.00 (1)

Q
SHEET 114 OF 183



AERIAL PHOTO BY	SURVEYED BY
MAPPING	BY
LOCATION	CHECKED BY

MOPW ROADS DEPT. DRG. NO.

REVISIONS	
DESCRIPTION	DATE

JAPAN INTERNATIONAL COOPERATION AGENCY

CHIEF ENGINEER (ROADS)
CHIEF SUPT. ENG. (DESIGN)

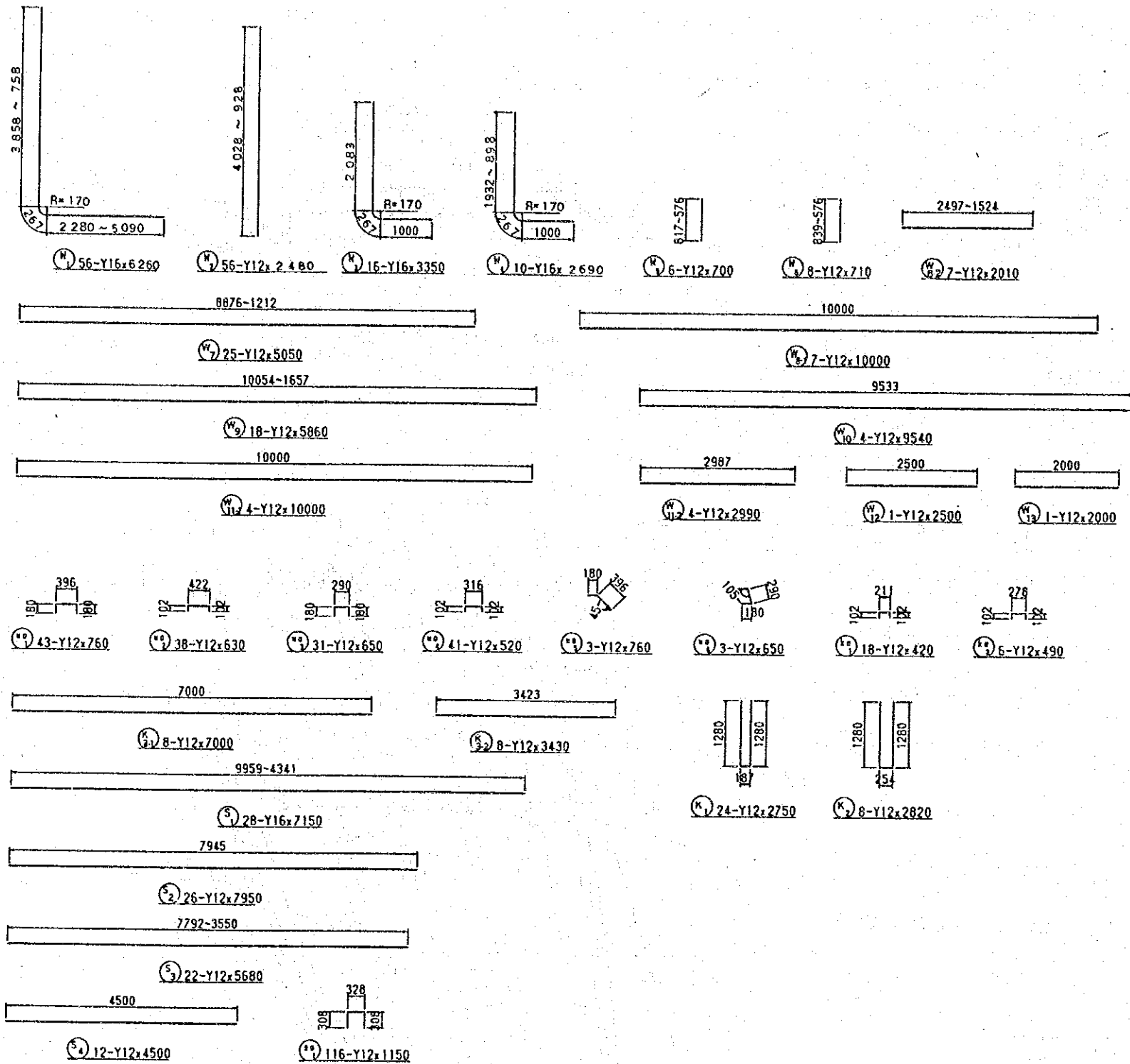
SEN SUPT. ENG. (DESIGN)
SUPT. ENGINEER (DESIGN)
PROJECT ENGINEER

SCALES
1:50

NAIROBI BYPASS
WATER BOX CULVERTS
CW 12*878.00 W*3.00 H*3.00 (9)

AERIAL PHOTO BY _____ SURVEYED BY _____
 MAPPING BY _____ TRACED BY _____
 LOCATION BY _____ CHECKED BY _____

MOPW ROADS DEPT. DRG. NO.



REVISIONS	
DESCRIPTION	DATE

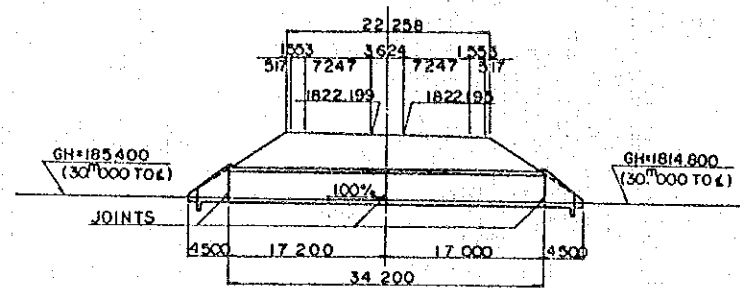
JAPAN INTERNATIONAL COOPERATION AGENCY
 CHIEF ENGINEER (ROADS)
 CHIEF SUPT. ENG. (DESIGN)

SEN SUPT. ENG. (DESIGN)
 SUPT. ENGINEER (DESIGN)
 PROJECT ENGINEER

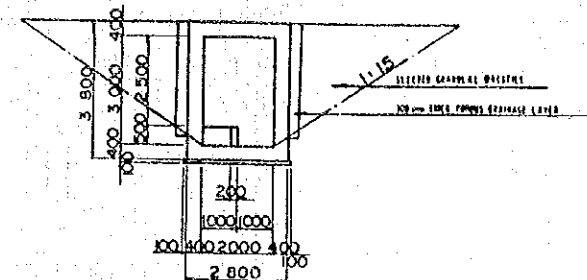
SCALES
 1:50

NAIROBI BYPASS
 WATER BOX CULVERTS
 CP 13+978.00 W+3.00 B+3.00 (11)

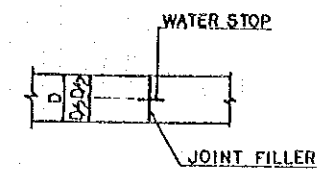
Q
 SHEET 117 OF 183



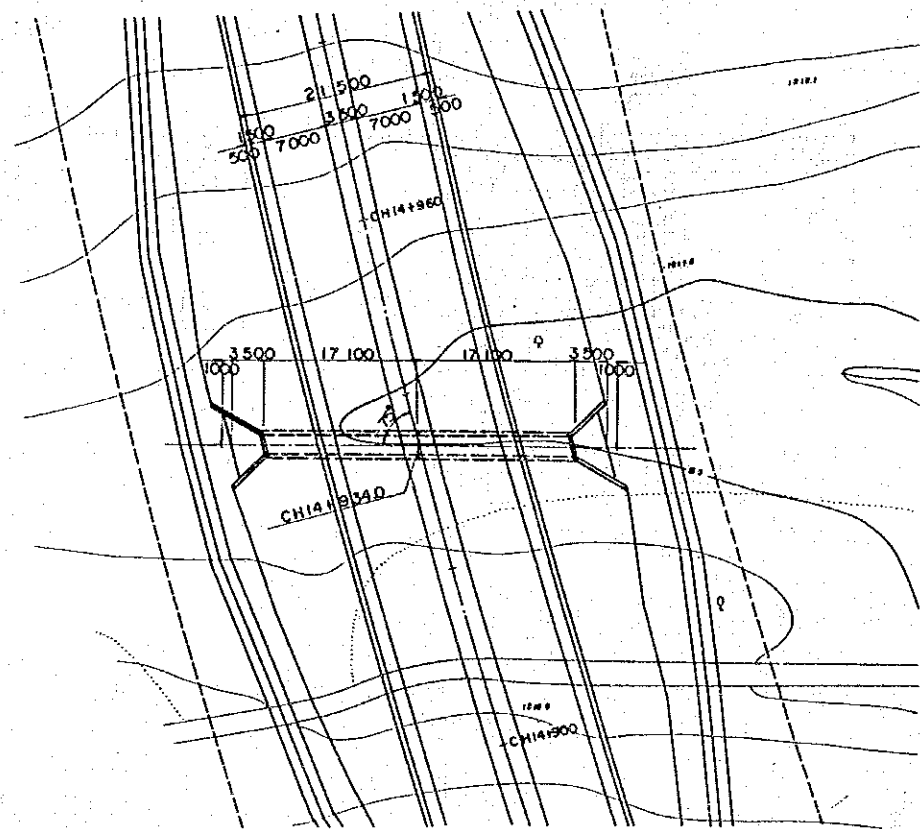
PROFILE SCALE 1:400



CROSS SECTION SCALE 1:100



DETAIL OF JOINTS



PLAN SCALE 1:400

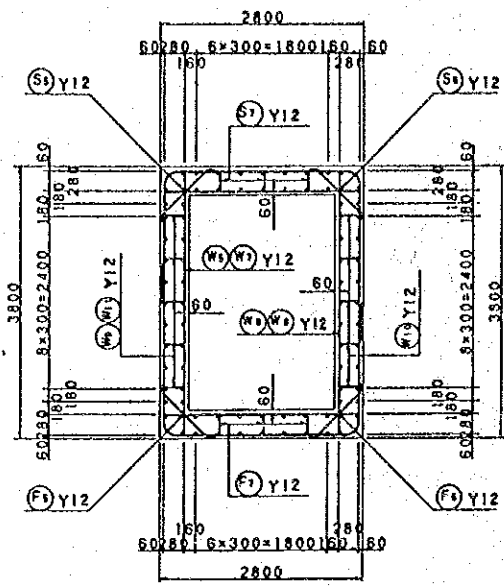
AERIAL PHOTO BY	SURVEYED BY
MAPPING BY	TRACED BY
LOCATION BY	CHECKED BY

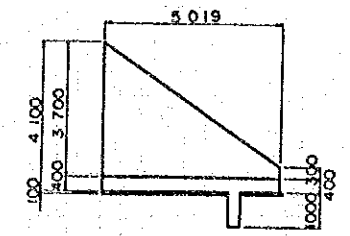
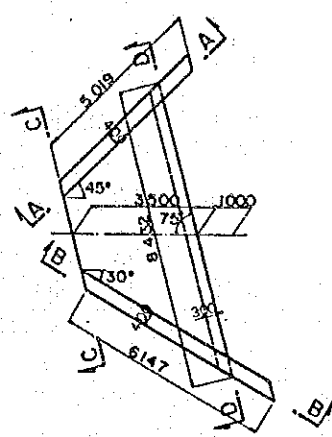
MOPW ROADS DEPT DRG NO.

REVISIONS		JAPAN INTERNATIONAL COOPERATION AGENCY	CHIEF ENGINEER (ROADS)	SEN SUPT. ENG (DESIGN)	SCALES	NAIROBI BYPASS	Q
DESCRIPTION	DATE						
			CHIEF SUPT. ENG (DESIGN)	SUPT. ENGINEER (DESIGN)	1:100,400	WATER BOX CULVERTS-NO.2	
				PROJECT ENGINEER		CR 14-934.00 W-2.00 R-3.00 (1)	SHEET 118 OF 183

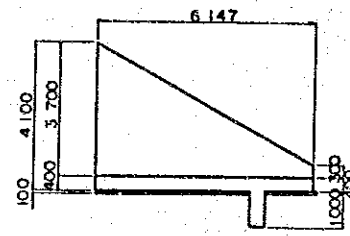
SURVEYED BY
 MAPPING BY
 AERIAL PHOTO BY
 TRACED BY
 LOCATION BY
 CHECKED BY

M.O.P.W. ROADS DEPT. DRG. NO.

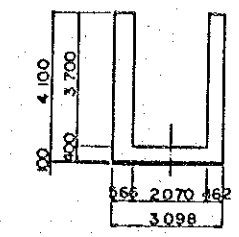




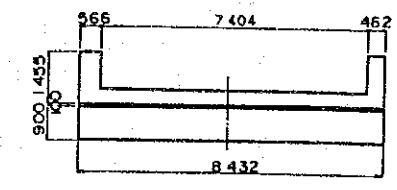
A - A



B - B



C - C



D - D

RETAINING WALL OF NO2 BOX FOR DRAINAGE

AERIAL PHOTO BY	SURVEYED BY
MAPPING BY	TRACED BY
LOCATION BY	CHECKED BY

M.O.P.W. ROADS DEPT DRG NO.

REVISIONS	
DESCRIPTION	DATE

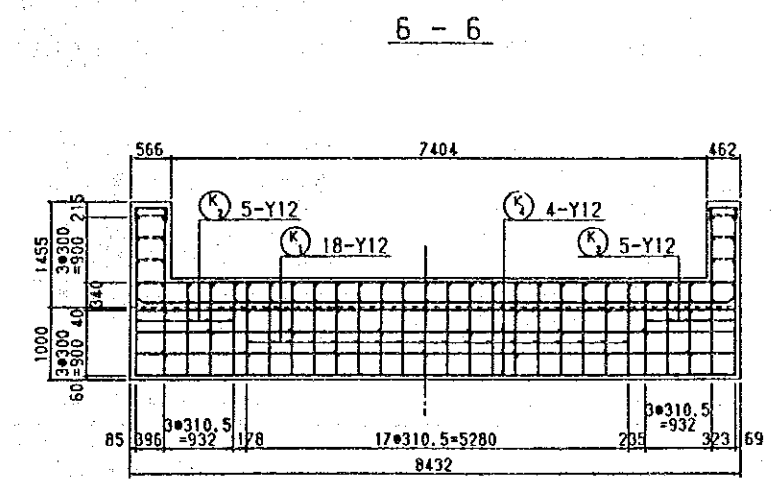
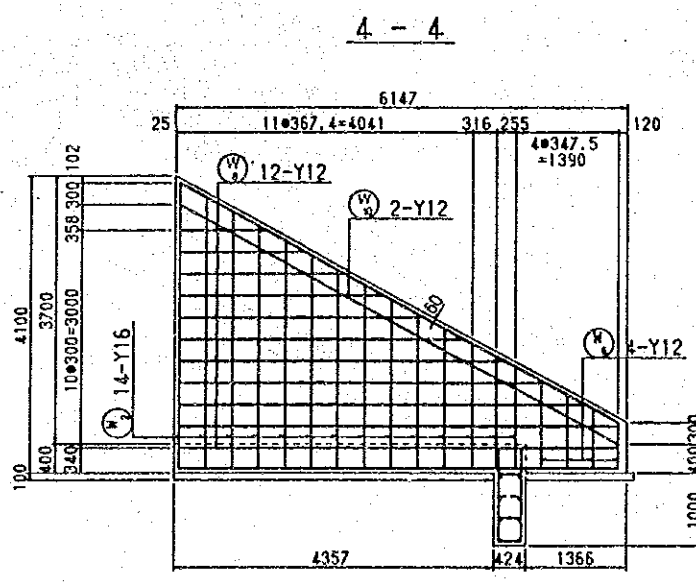
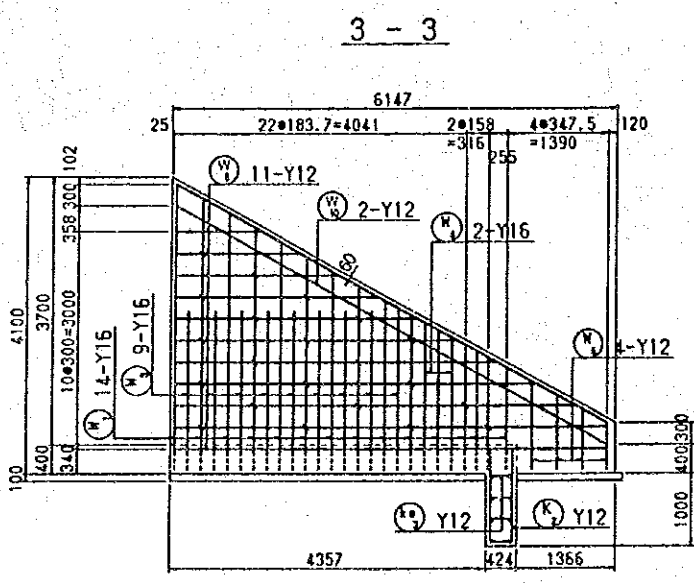
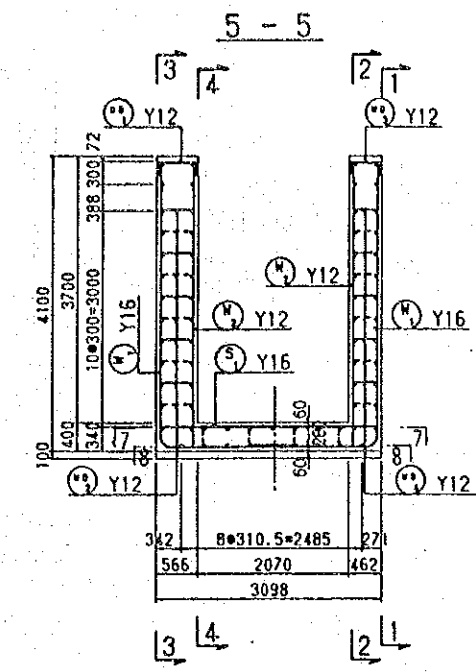
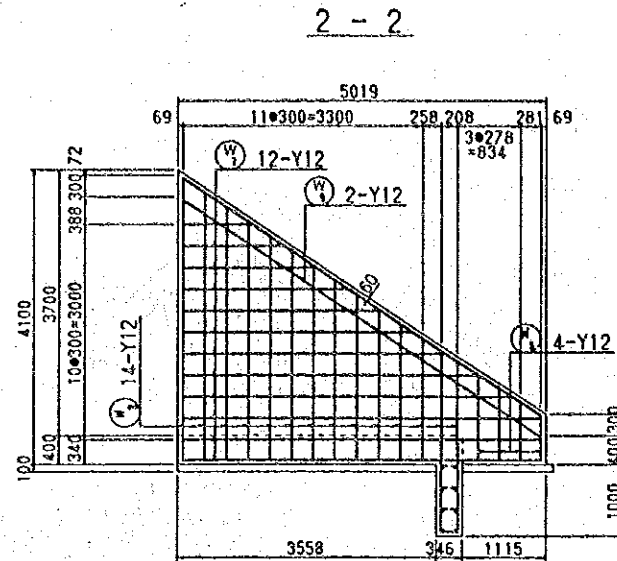
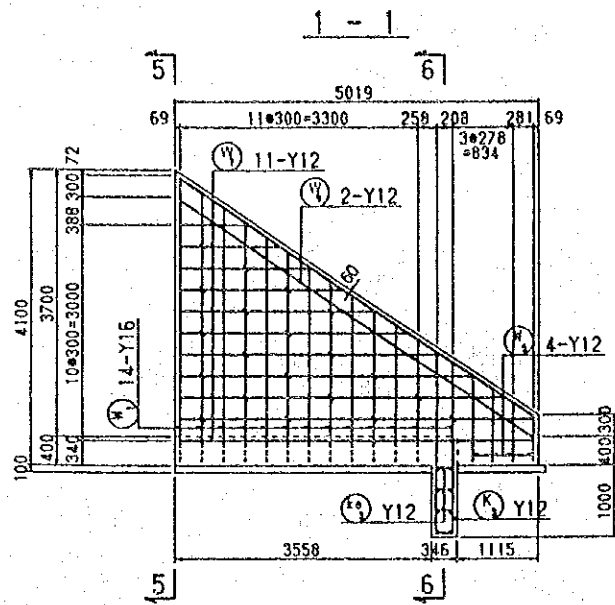
JAPAN INTERNATIONAL COOPERATION AGENCY	CHIEF ENGINEER (ROADS)
	CHIEF SUPT ENG (DESIGN)

SEN SUPT ENG (DESIGN)
SUPT ENGINEER (DESIGN)
PROJECT ENGINEER

SCALES
1:100

NAIROBI BYPASS
WATER BOX CULVERTS CB 14*934.00 W=2.00 H=3.00 (4)

Q
SHEET 121 OF 183



AERIAL PHOTO BY _____ SURVEYED BY _____
 MAPPING BY _____ TRACED BY _____
 LOCATION BY _____ CHECKED BY _____

MOPW, ROADS DEPT DRG NO.

REVISIONS	
DESCRIPTION	DATE

JAPAN INTERNATIONAL COOPERATION AGENCY

CHIEF ENGINEER (ROADS)
 CHIEF SUPT ENG (DESIGN)

SEN SUPT ENG (DESIGN)
 SUPT ENGINEER (DESIGN)
 PROJECT ENGINEER

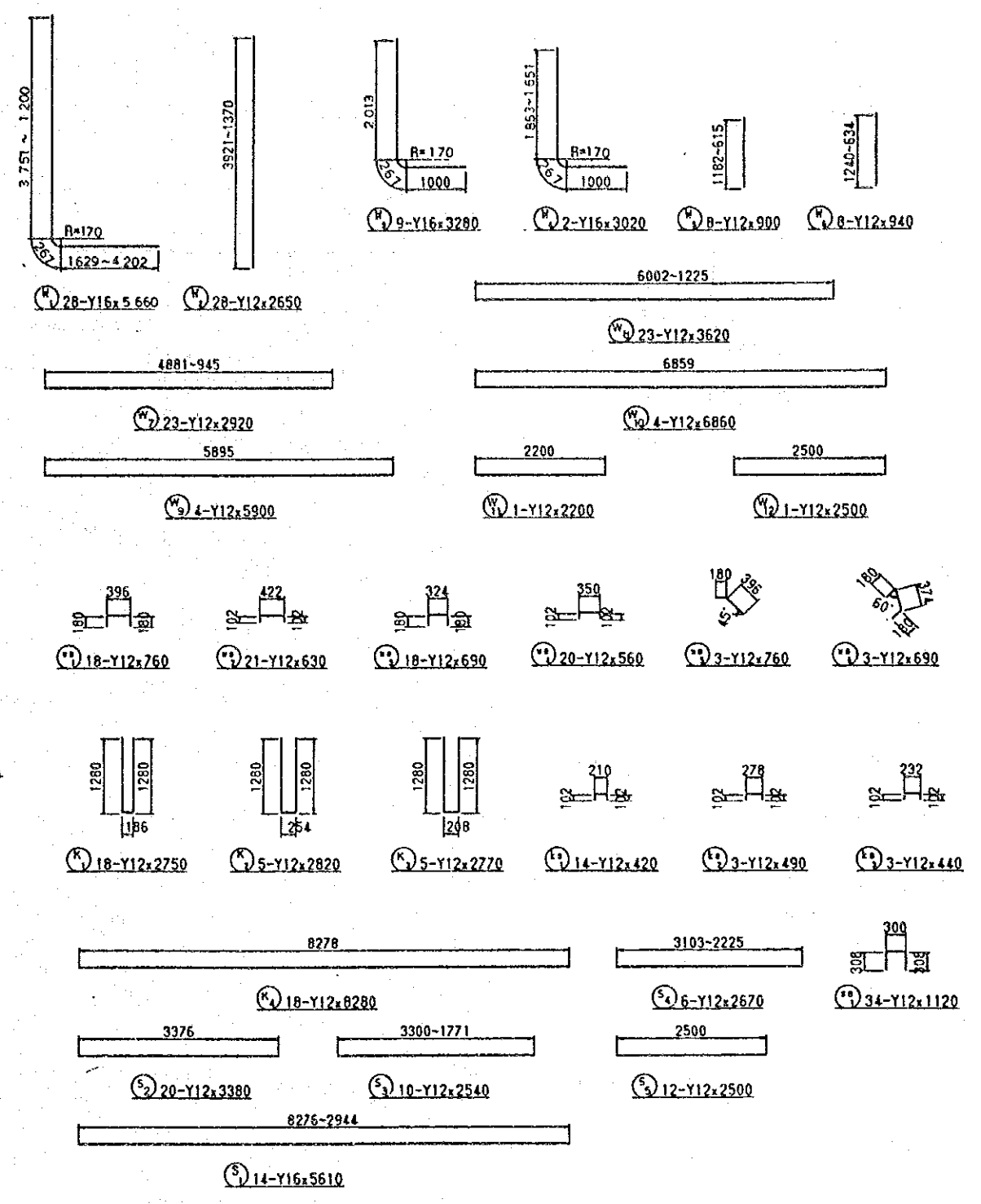
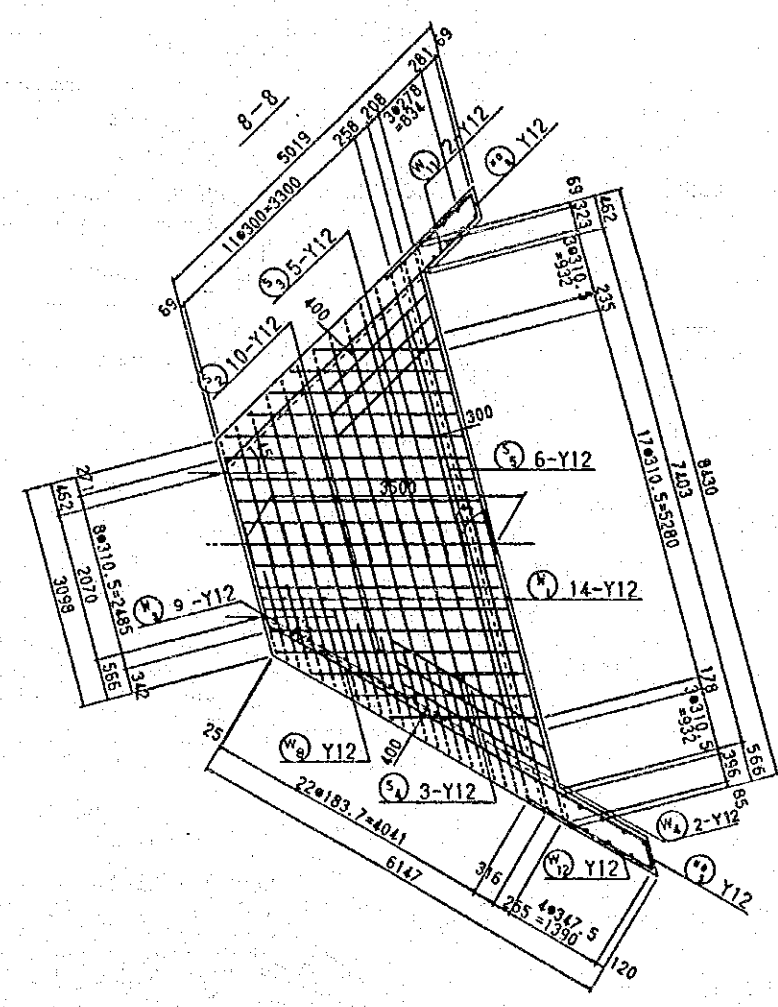
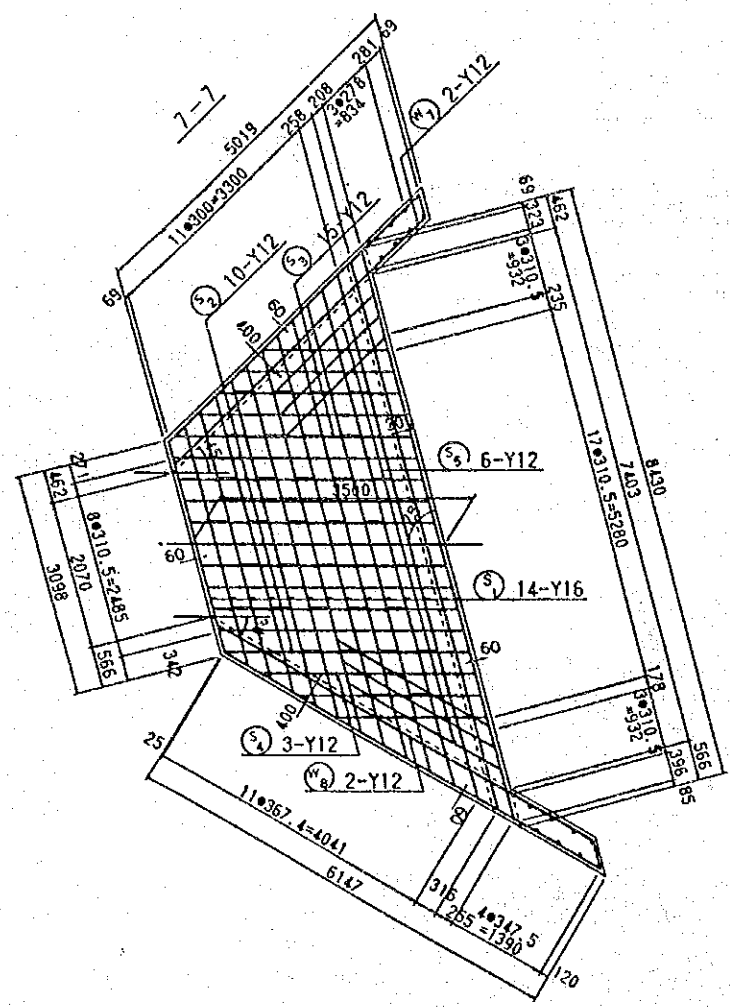
SCALES
 1:50

NAIROBI BYPASS
 WATER BOX CULVERTS
 CH 1+934.00 W=2.00 R=3.00 (S)

Q
 SHEET 122OF 183

AERIAL PHOTO BY _____
 MAPPING BY _____
 LOCATION BY _____

M.O.P.W. ROADS DEPT. DRG. NO. _____



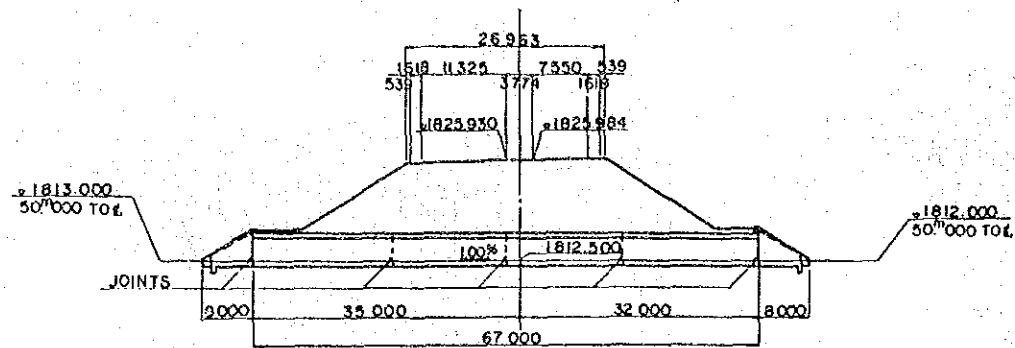
REVISIONS	
DESCRIPTION	DATE

JAPAN INTERNATIONAL COOPERATION AGENCY
 CHIEF ENGINEER (ROADS)
 CHIEF SUPT. ENG. (DESIGN)

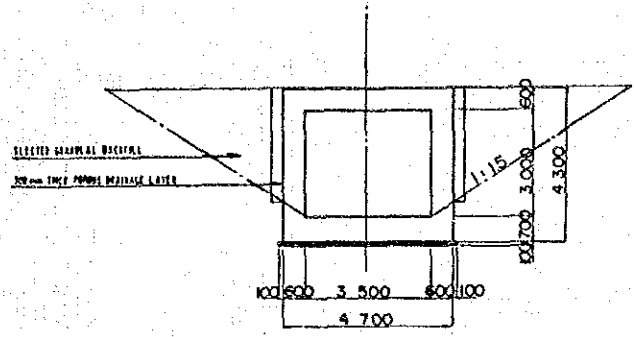
SEN SUPT. ENG. (DESIGN)
 SUPT. ENGINEER (DESIGN)
 PROJECT ENGINEER

SCALES
 1:50

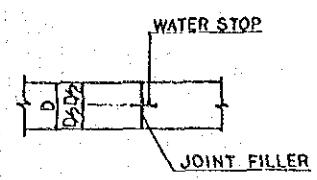
NAIROBI BYPASS
 WATER BOX CULVERTS
 CW 14-931.00 R=2.00 R=3.00 (R)



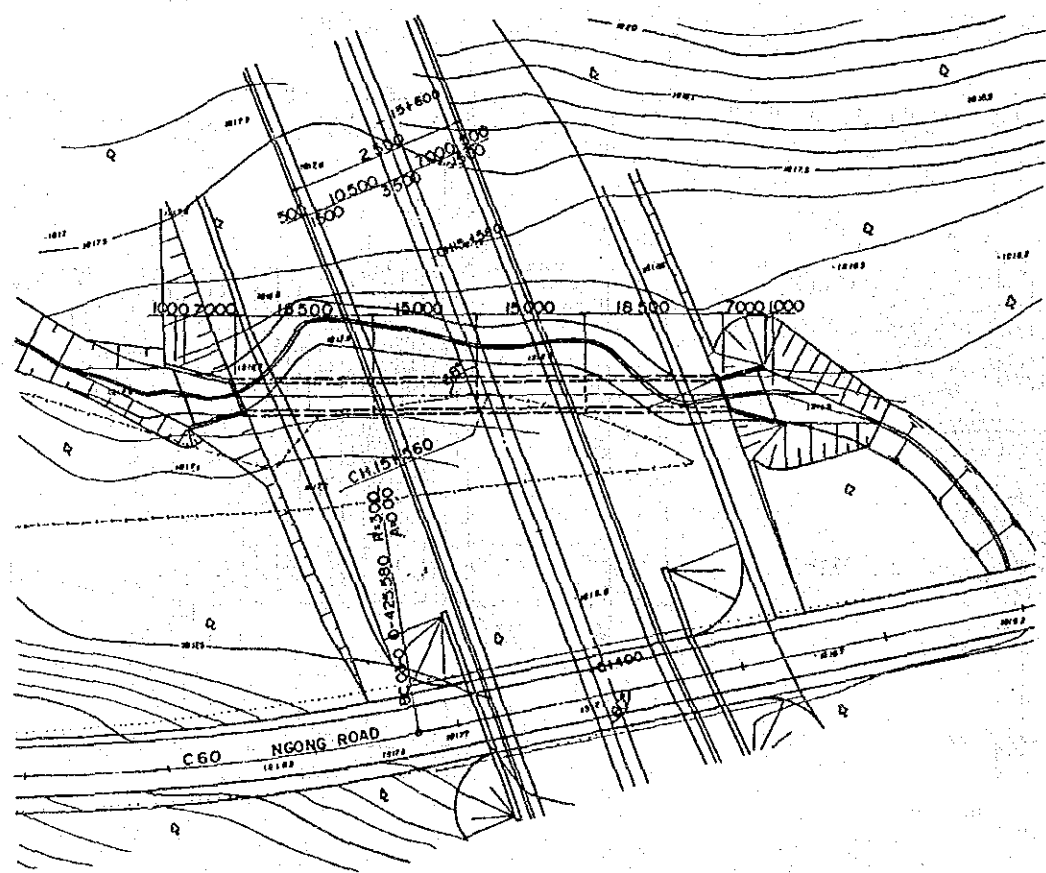
PROFILE SCALE 1:500



CROSS SECTION SCALE 1:100



DETAIL OF JOINTS



PLAN SCALE 1:500

AERIAL PHOTO BY _____ SURVEYED BY _____
 MAPPING BY _____ TRACED BY _____
 LOCATION BY _____ CHECKED BY _____

MOPW ROADS DEPT DRG NO

REVISIONS	
DESCRIPTION	DATE

JAPAN INTERNATIONAL
COOPERATION AGENCY

CHIEF ENGINEER (ROADS)
CHIEF SUPT ENG (DESIGN)

SEN SUPT. ENG (DESIGN)
SUPT ENGINEER (DESIGN)
PROJECT ENGINEER

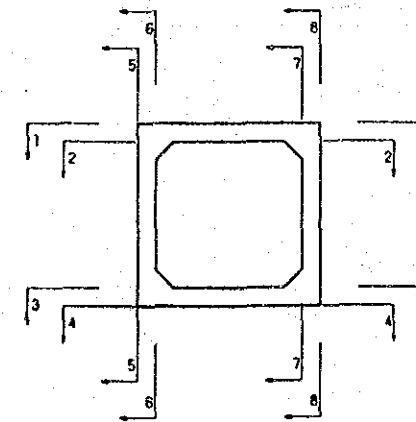
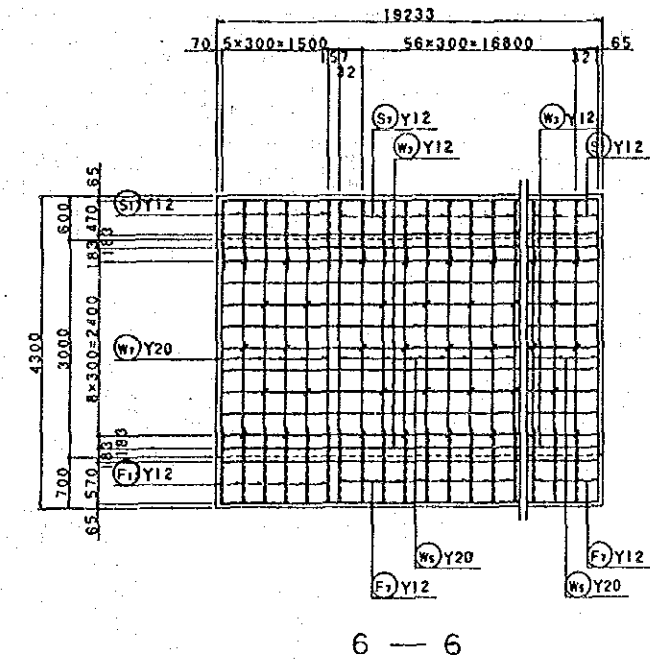
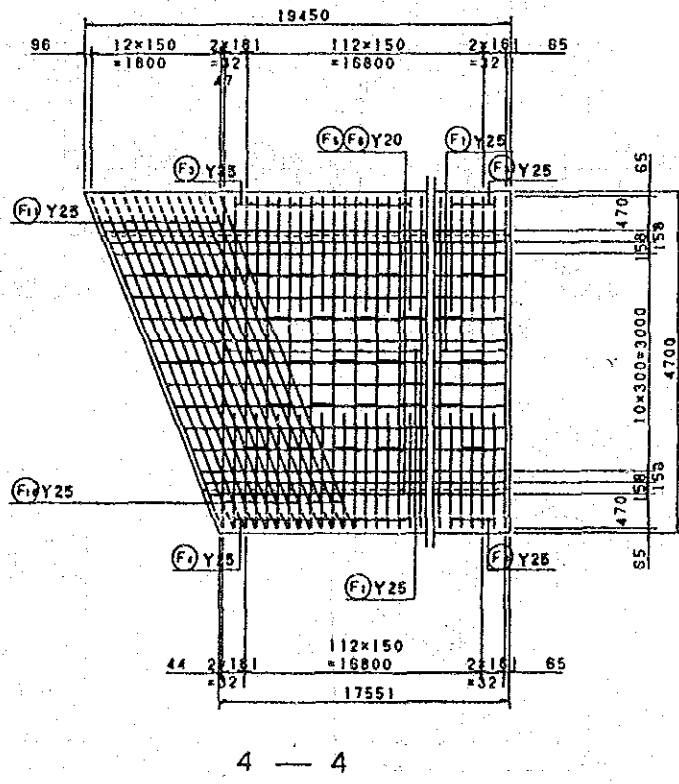
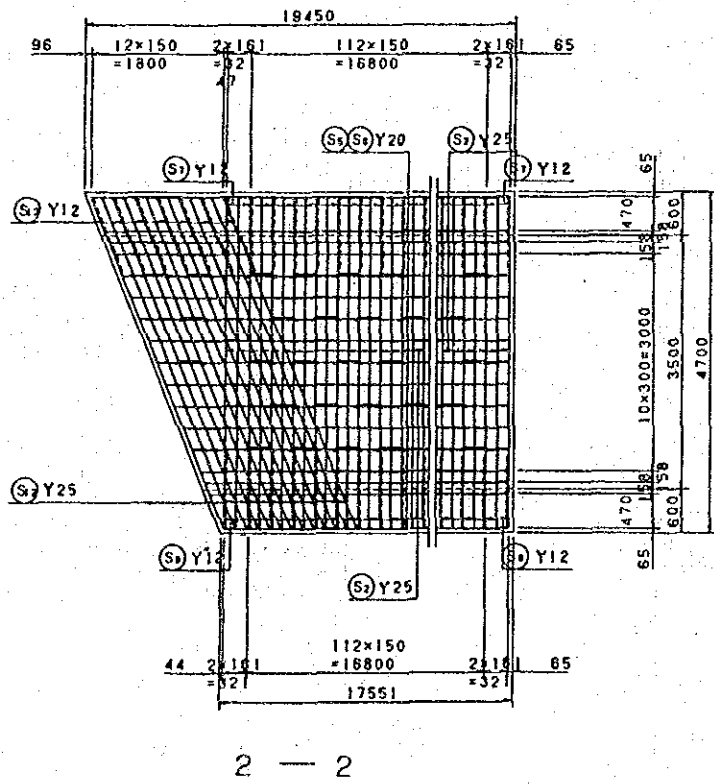
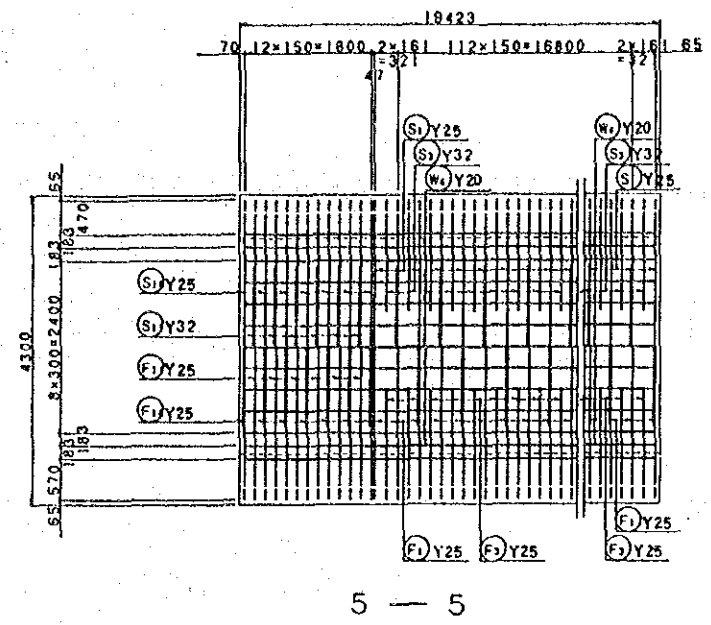
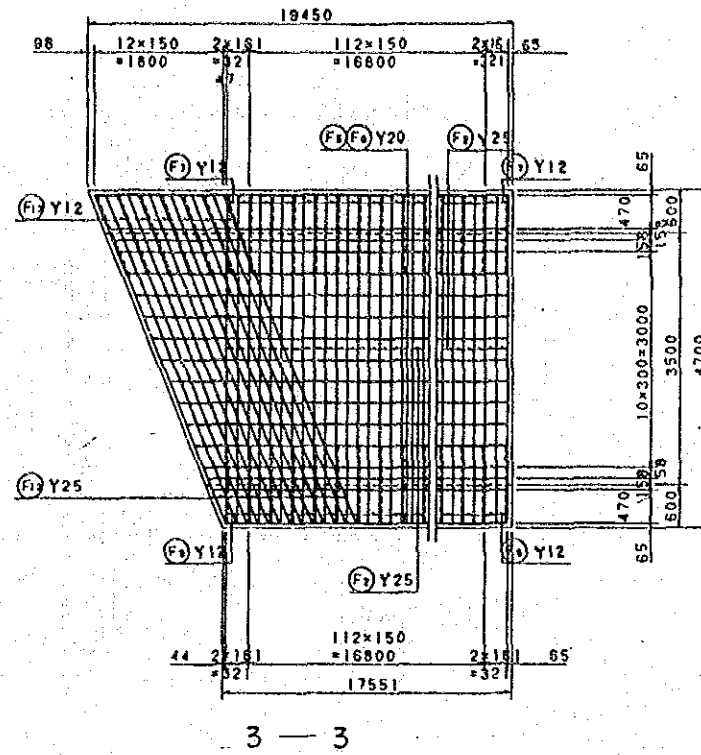
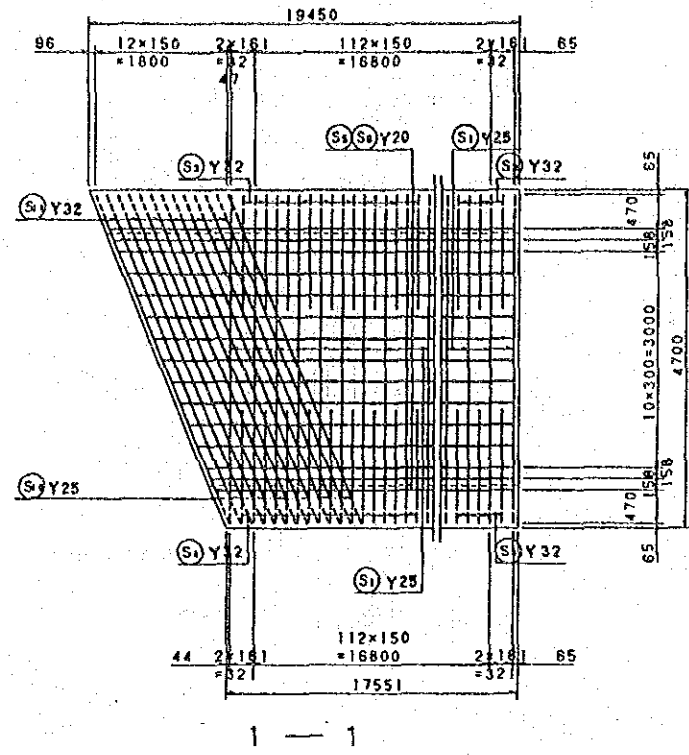
SCALES
1:100, 500

NAIROBI BYPASS
WATER BOX CULVERTS - NO.3
CH 15+560, 0+0=1.60 R=1.00 (1)

Q
SHEET 124 OF 183

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 CHECKED BY
 LOCATION BY

MOPW ROADS DEPT DRG NO.



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DESCRIPTION	DATE

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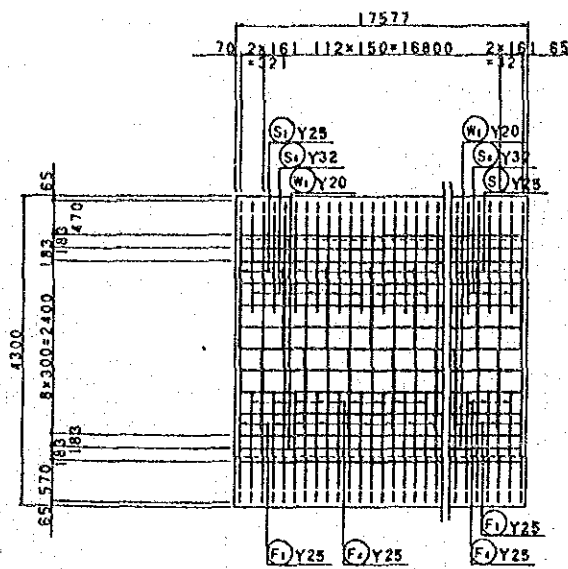
CHIEF ENGINEER (ROADS)
CHIEF SUPT ENG (DESIGN)

SEN SUPT ENG (DESIGN)
SUPT ENGINEER (DESIGN)
PROJECT ENGINEER

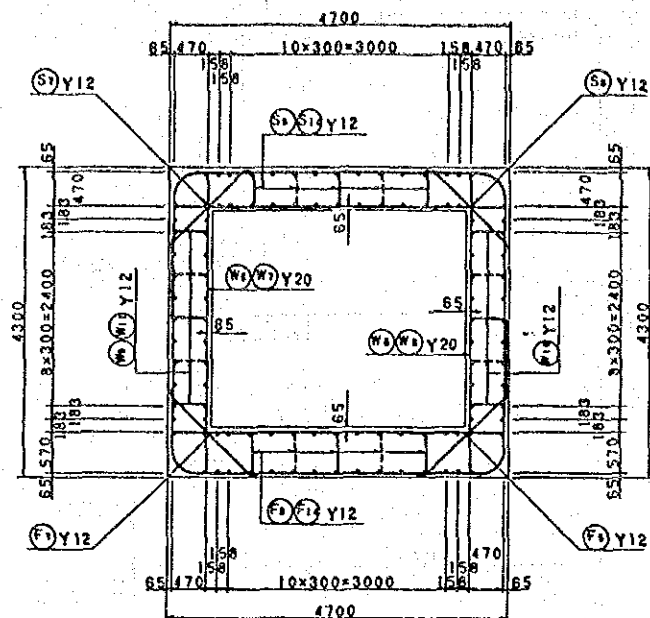
SCALES
1:50

NAIROBI BYPASS
WATER BOX CULVERTS
CR 15x550.00 Wx3.10 Hx3.00 (1)

0
SHEET 125 OF 103



8 — 8

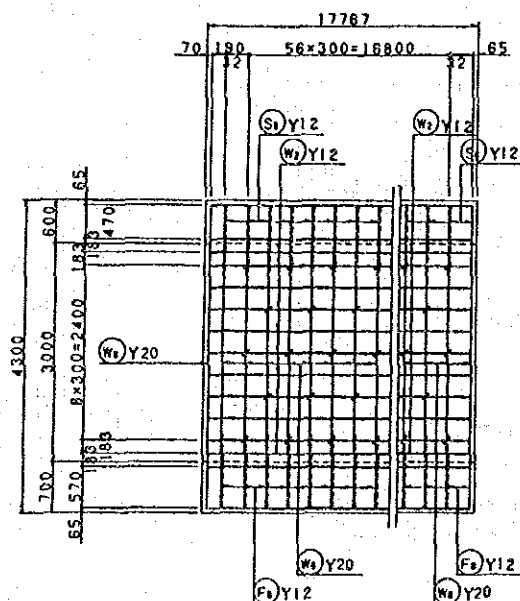


SECTION

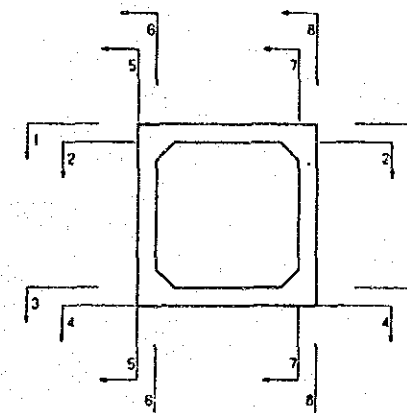
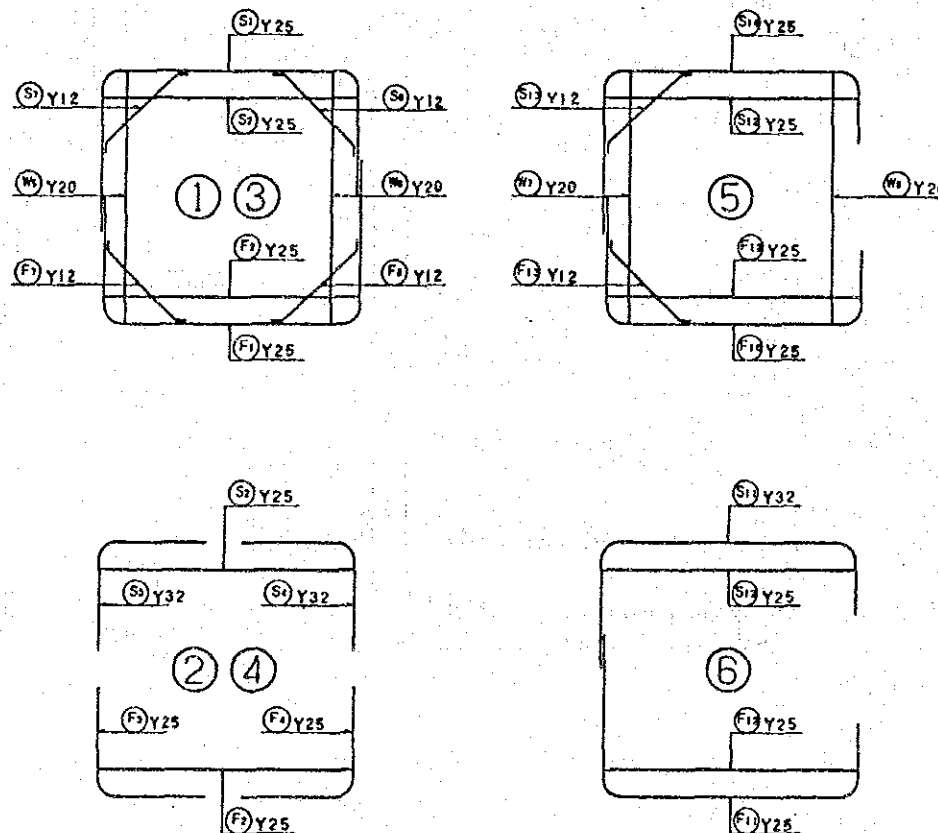
MARK	DIA	a	b	L	REMARK
S 8	Y12	345	512	1568	
S13	*	345	512	1568	
F 6	*	345	612	1769	
F13	*	345	612	1769	
W 9	*	—	510	710	
W10	*	—	510	710	
W11	*	—	547	747	

MARK	DIA	a	H	L	NUMBER
S 6	Y12	1383	978	1583	59
S 7	*	1383	978	1583	59
S12	*	1443	1020	1643	6
F 6	*	1525	1078	1725	59
F 7	*	1525	1078	1725	59
F12	*	1584	1120	1784	6

MARK	DIA	a	b	c	L = a + b	LAP	NUMBER
S 5	Y20	10000	8 142 - 9988 (9065)	700	19 065	1	32
F 5	Y16	10000	8 002 - 9848 (8925)	560	18 925	1	32
W 1	Y20	10000	8 142	700	16 142	1	11
W 2	Y12	10000	8 052	420	18 052	1	11
W 3	*	10000	9 316	420	19 316	1	11
W 4	Y20	10000	9 988	700	19 988	1	11



7 — 7



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REVISIONS	DESCRIPTION	DATE

JAPAN INTERNATIONAL COOPERATION AGENCY

CHIEF ENGINEER (ROADS)
 CHIEF SUPT. ENG. (DESIGN)

SEN SUPT. ENG. (DESIGN)
 SUPT. ENGINEER (DESIGN)
 PROJECT ENGINEER

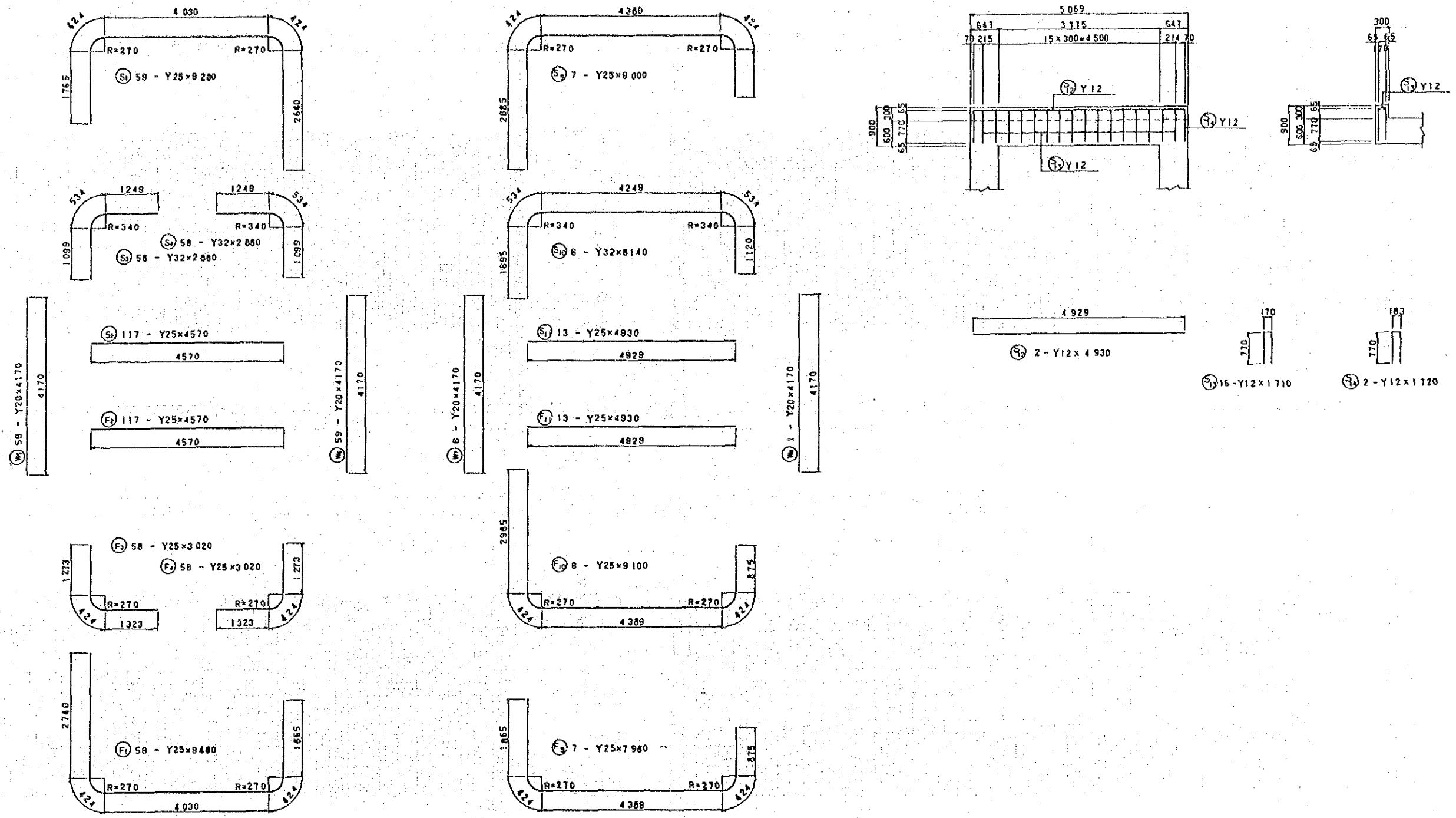
SCALES
 1:50

NAIROBI BYPASS
 WATER BOX CULVERTS
 CB 15x50.00 R-3.50 R-3.00 (3)

SHEET 126 OF 163

AERIAL PHOTO BY _____ SURVEYED BY _____
 MAPPING BY _____ TRACED BY _____
 LOCATION BY _____ CHECKED BY _____

M.O.P.W. ROADS DEPT. DRG. NO.



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DESCRIPTION	DATE

JAPAN INTERNATIONAL
COOPERATION AGENCY

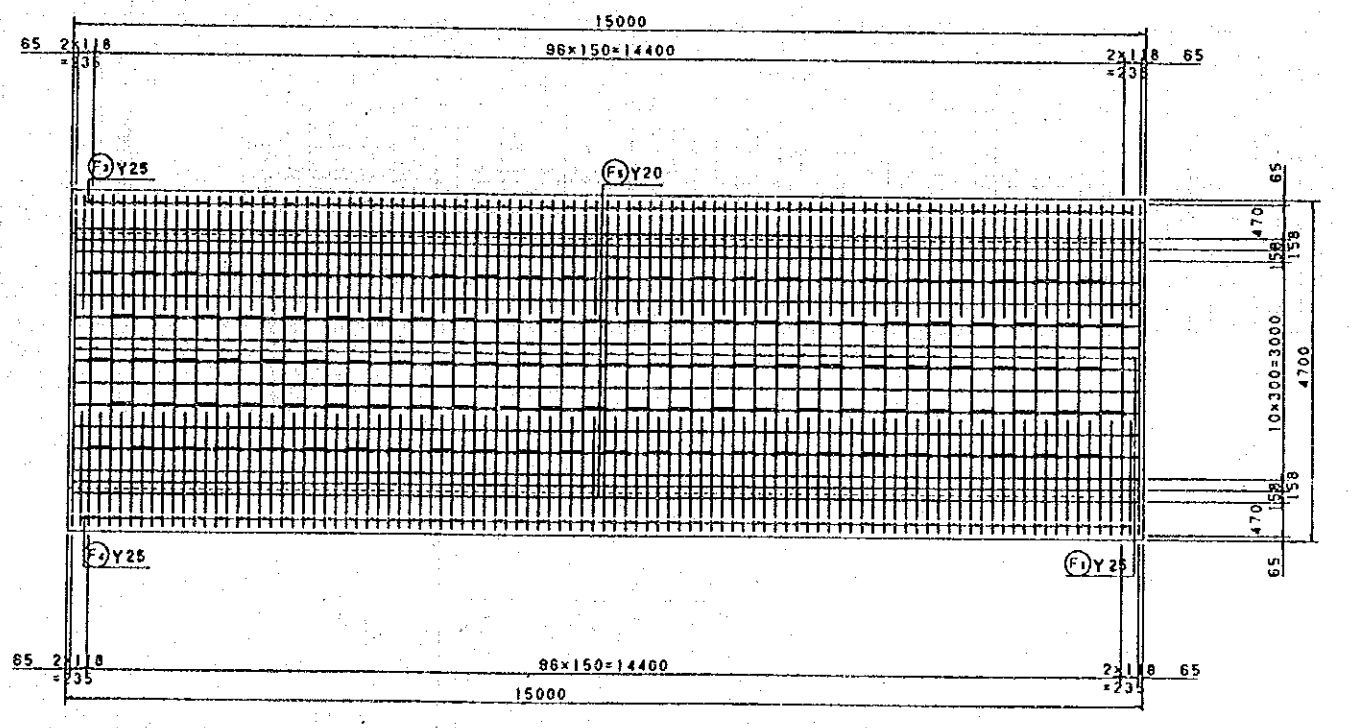
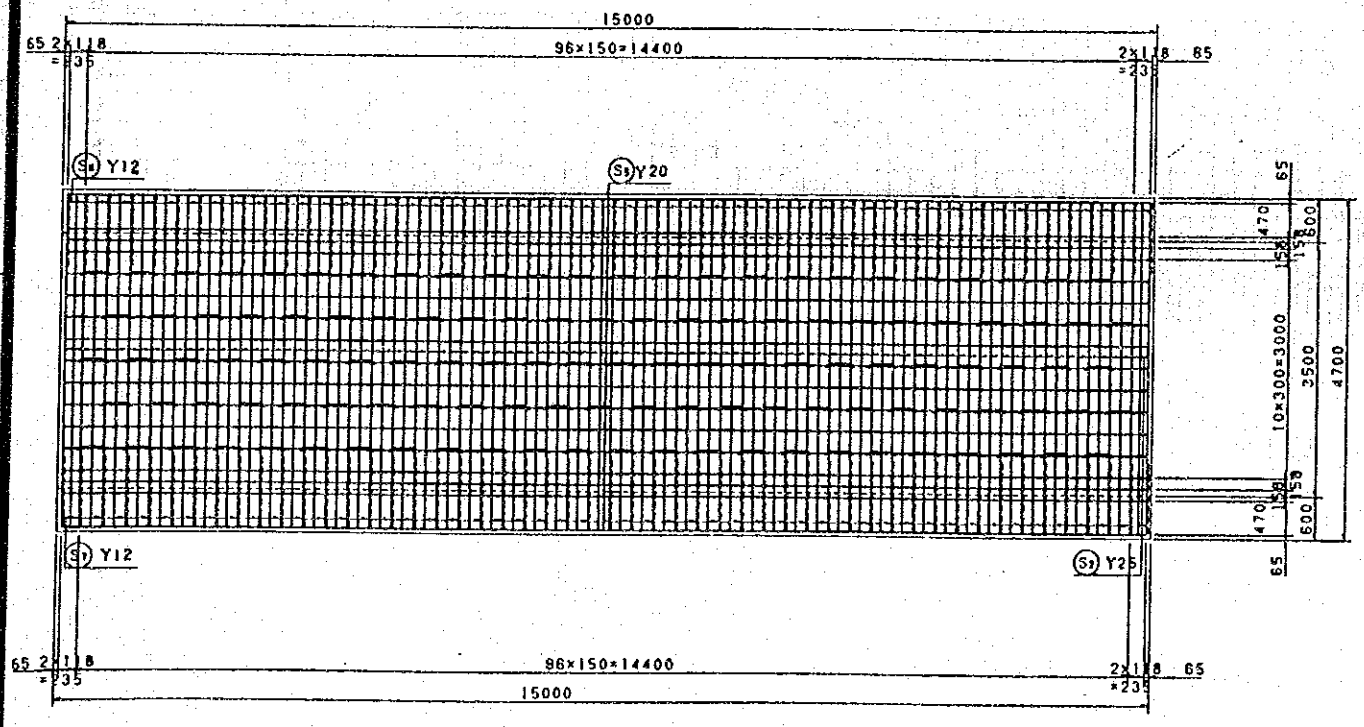
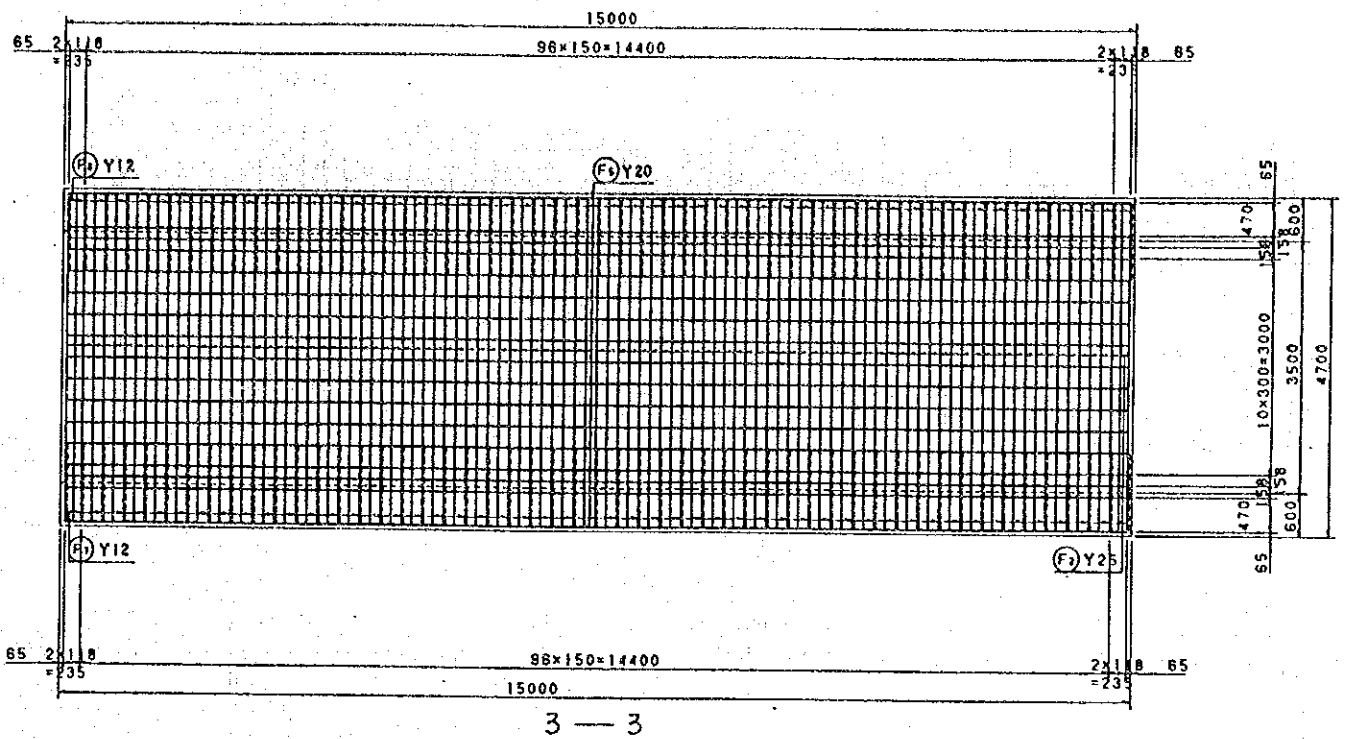
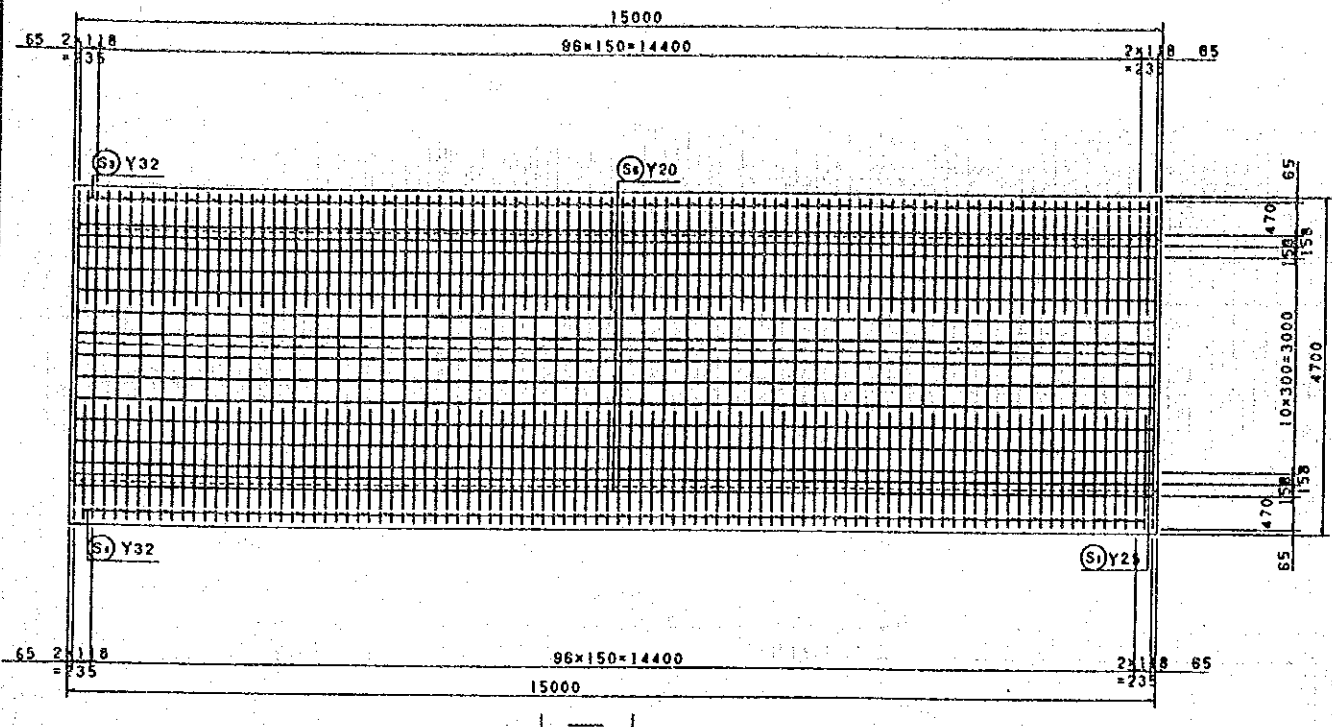
CHIEF ENGINEER (ROADS)
CHIEF SUPT. ENG. (DESIGN)

SEN. SUPT. ENG. (DESIGN)
SUPT. ENGINEER (DESIGN)
PROJECT ENGINEER

SCALES
1:50

NAIROBI BYPASS
WATER BOX CULVERTS
CN 15+600.00 W=3.60 H=3.00 (4)

Q
SHEET 127 OF 183



AERIAL PHOTO BY _____
 MAPPING BY _____
 SURVEYED BY _____
 TRACED BY _____
 LOCATION BY _____
 CHECKED BY _____

M.O.P.W. ROADS DEPT. DRG. NO.

REVISIONS	
DESCRIPTION	DATE

JAPAN INTERNATIONAL
COOPERATION AGENCY

CHIEF ENGINEER (ROADS)
CHIEF SUPT. ENG. (DESIGN)

SEN. SUPT. ENG. (DESIGN)
SUPT. ENGINEER (DESIGN)
PROJECT ENGINEER

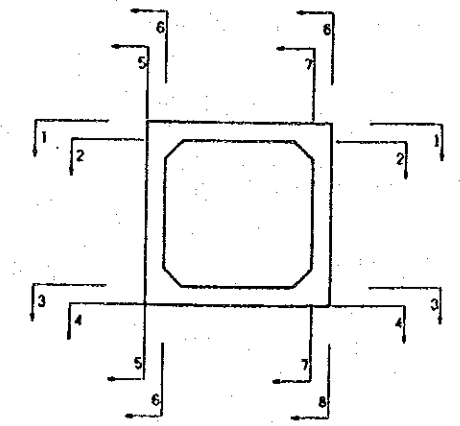
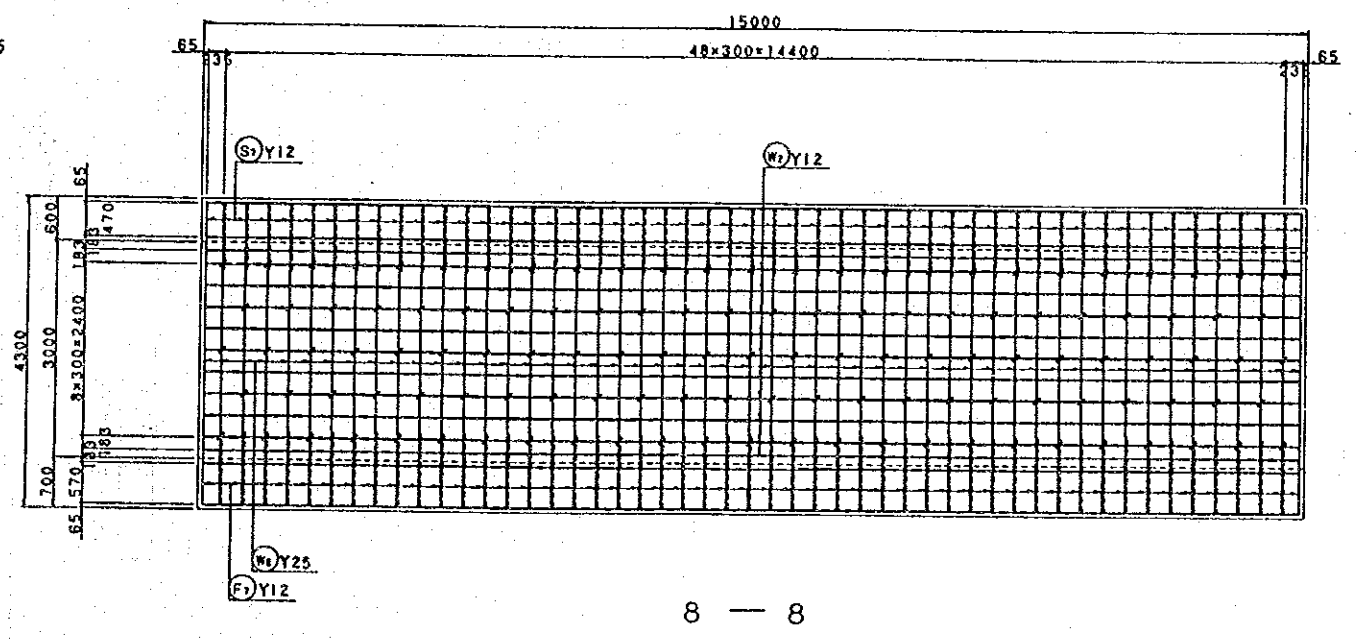
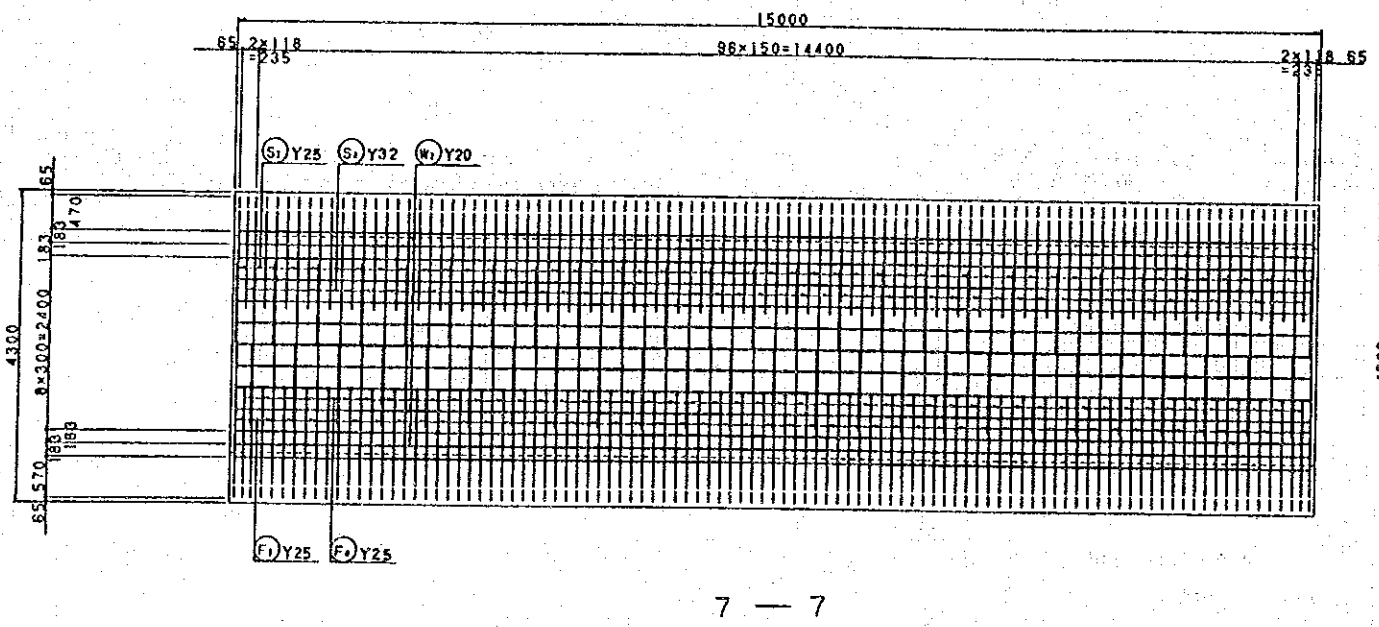
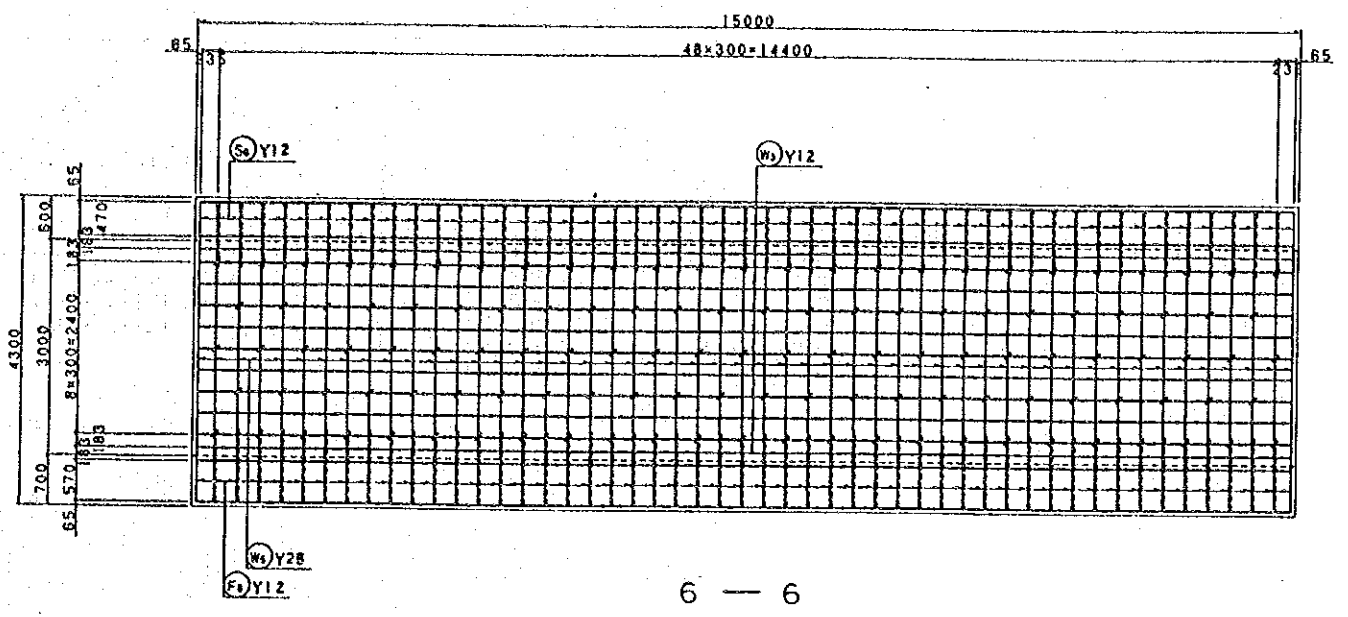
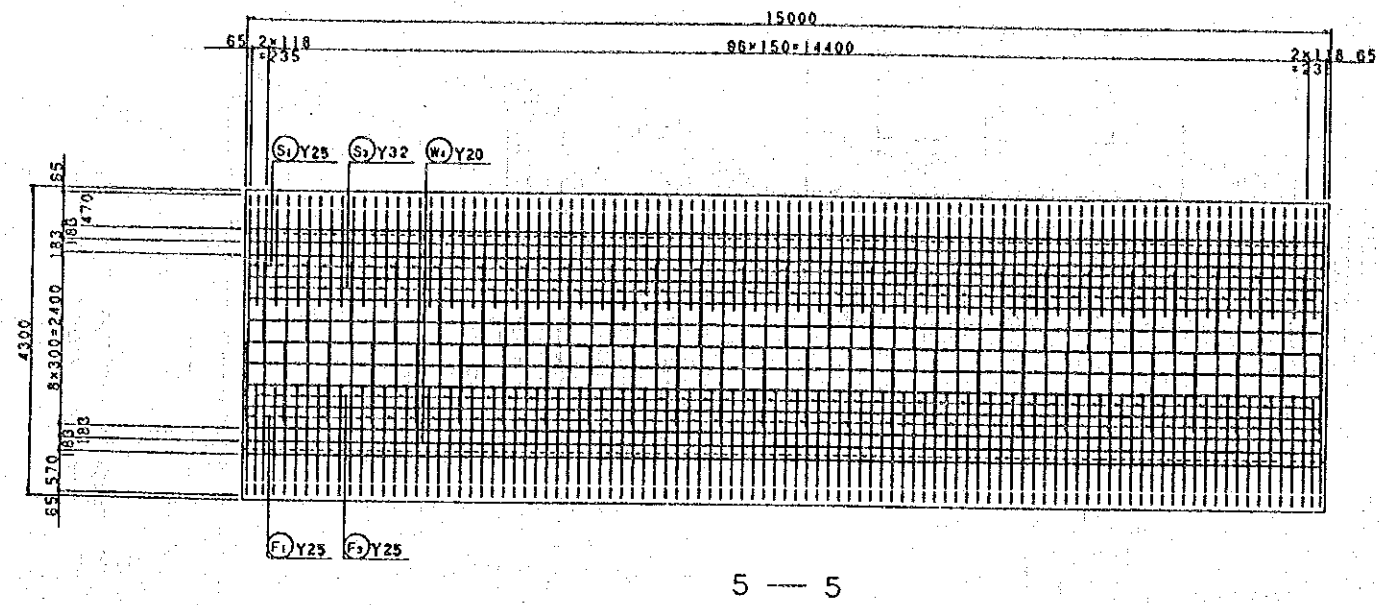
SCALES
1:50

NAIROBI BYPASS
WATER BOX CULVERTS
CH 15+560.00 W=3.40 H=3.00 (6)

Q
SHEET 126 OF 183

AERIAL PHOTO BY _____ SURVEYED BY _____
 MAPPING BY _____ TRACED BY _____
 LOCATION BY _____ CHECKED BY _____

M.O.P.W. ROADS DEPT. DRG. NO. _____



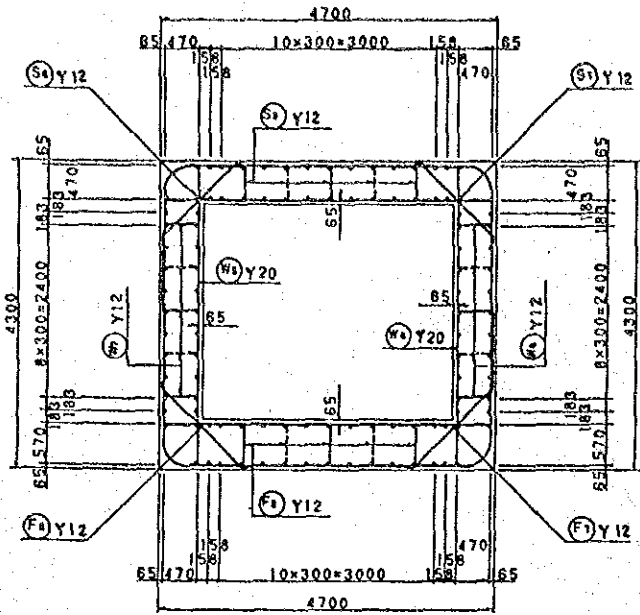
REVISIONS	
DESCRIPTION	DATE

JAPAN INTERNATIONAL COOPERATION AGENCY
 CHIEF ENGINEER (ROADS)
 SEN SUPT ENG (DESIGN)
 SUPT ENGINEER (DESIGN)
 PROJECT ENGINEER

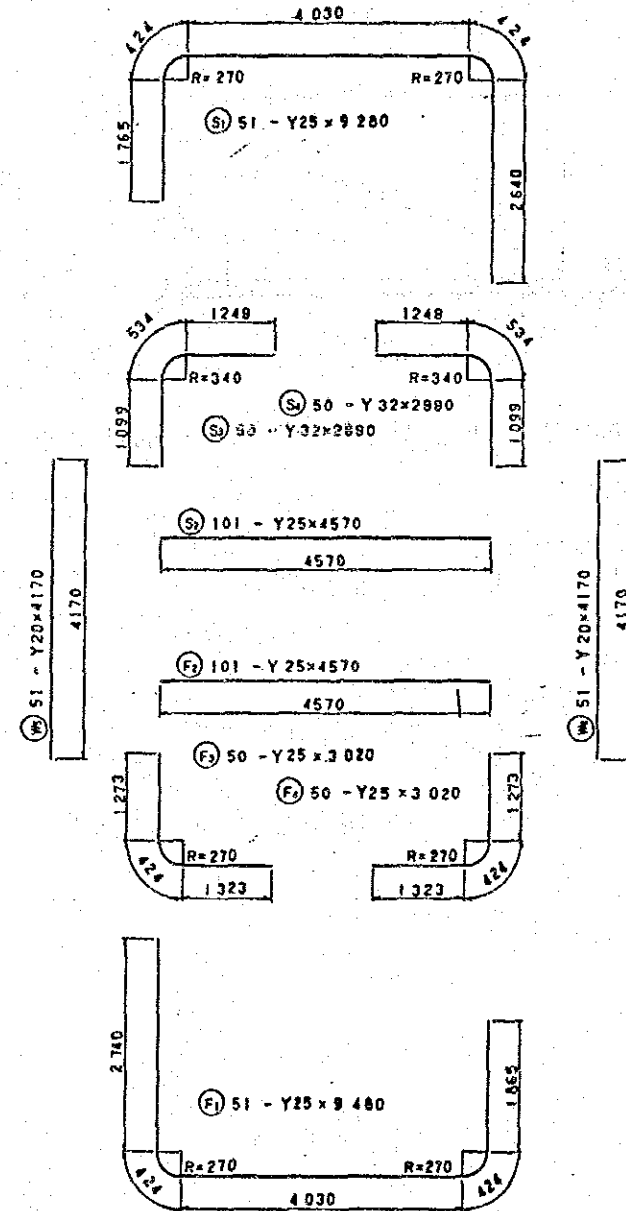
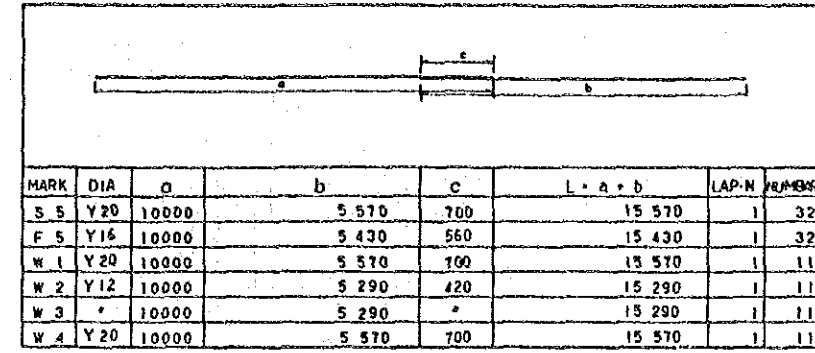
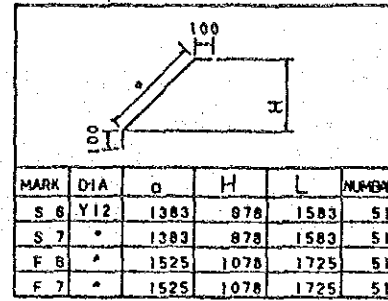
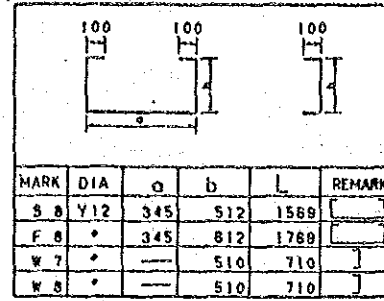
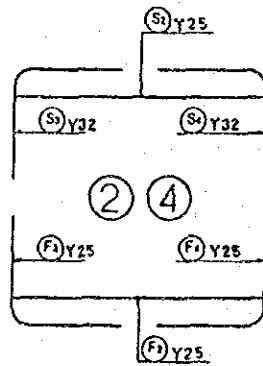
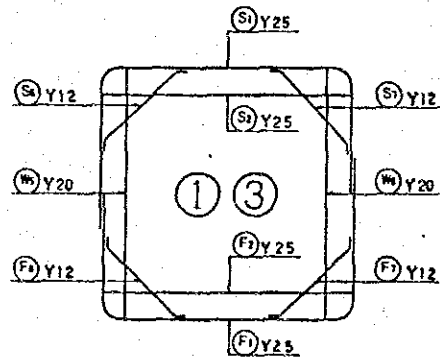
SCALES
 1:50

NAIROBI BYPASS
 WATER BOX CULVERTS
 CH 16+660.00 R=3.50 R+3.00 (S)

Q
 SHEET 129 OF 163



SECTION



AERIAL PHOTO BY _____ SURVEYED BY _____
 MAPPING BY _____ TRACED BY _____
 LOCATION BY _____ CHECKED BY _____

M.O.P.W. ROADS DEPT. DRG. NO. _____

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JAPAN INTERNATIONAL COOPERATION AGENCY

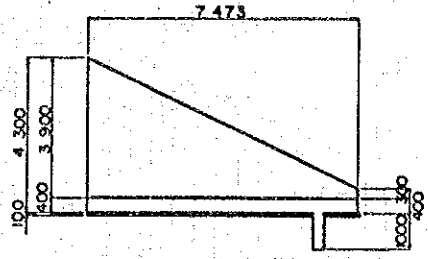
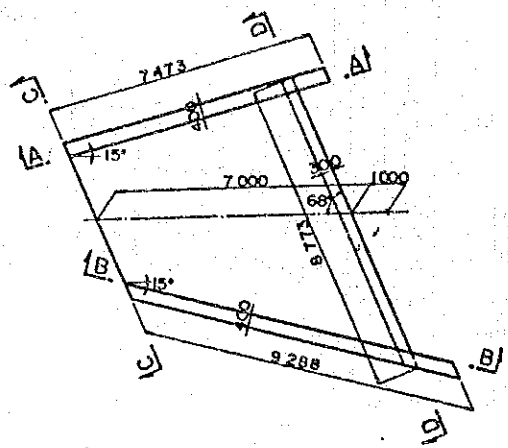
CHIEF ENGINEER (ROADS)
 CHIEF SUPT. ENG. (DESIGN)

SEN SUPT. ENG. (DESIGN)
 SUPT. ENGINEER (DESIGN)
 PROJECT ENGINEER

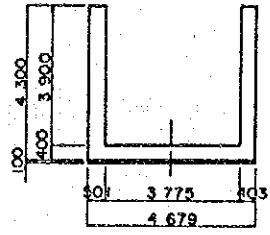
SCALES
 1:50

NAIROBI BYPASS
 WATER BOX CULVERTS
 CS 15x1650, CO 9x7, 60 R=3, 00 (1)

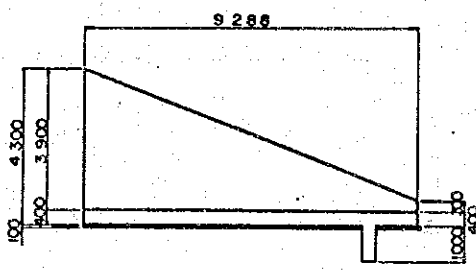
Q
 SHEET 130 OF 183



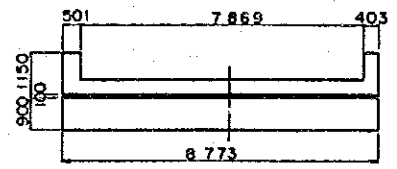
A - A



C - C



B - B



D - D

RETAINING WALL OF NO.3 BOX FOR DRAINAGE

AERIAL PHOTO BY	SURVEYED BY
MAPPING BY	TRACED BY
LOCATION BY	CHECKED BY

M.O.P.W. ROADS DEPT. DRG. NO.

REVISIONS	
DESCRIPTION	DATE

JAPAN INTERNATIONAL COOPERATION AGENCY

CHIEF ENGINEER (ROADS)
CHIEF SUPT. ENG. (DESIGN)

SEN. SUPT. ENG. (DESIGN)
SUPT. ENGINEER (DESIGN)
PROJECT ENGINEER

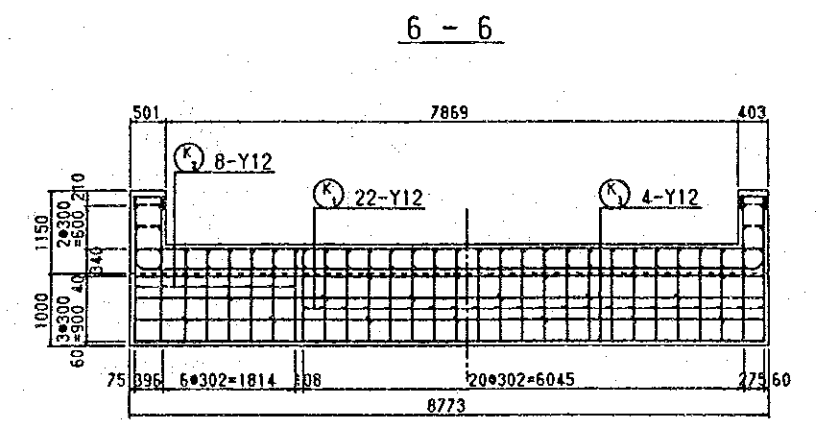
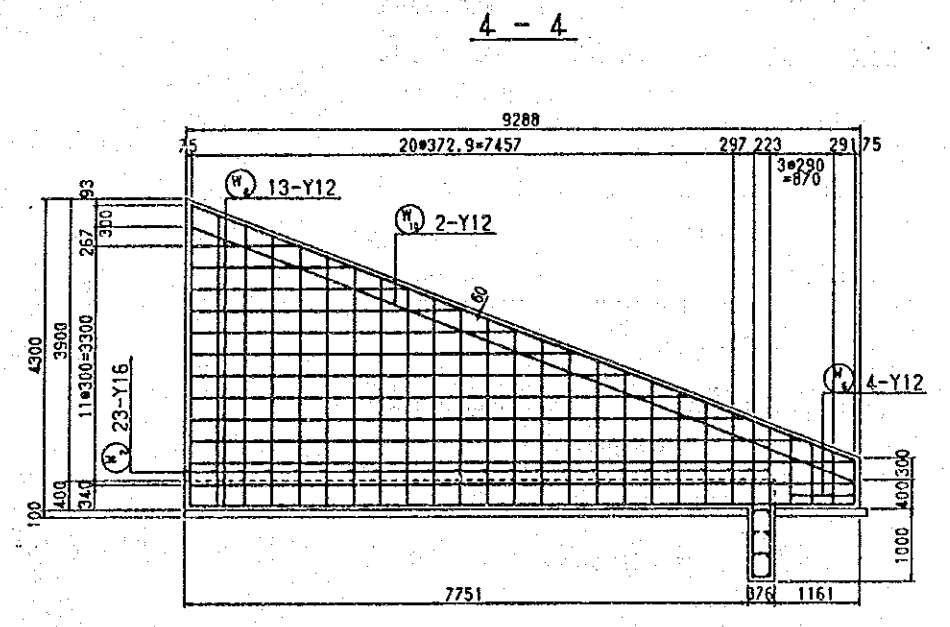
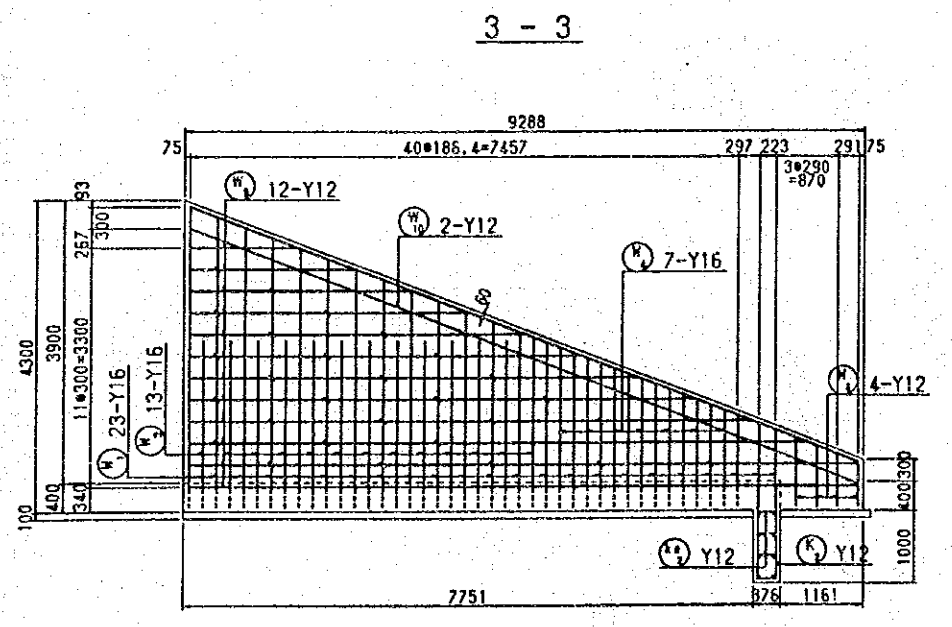
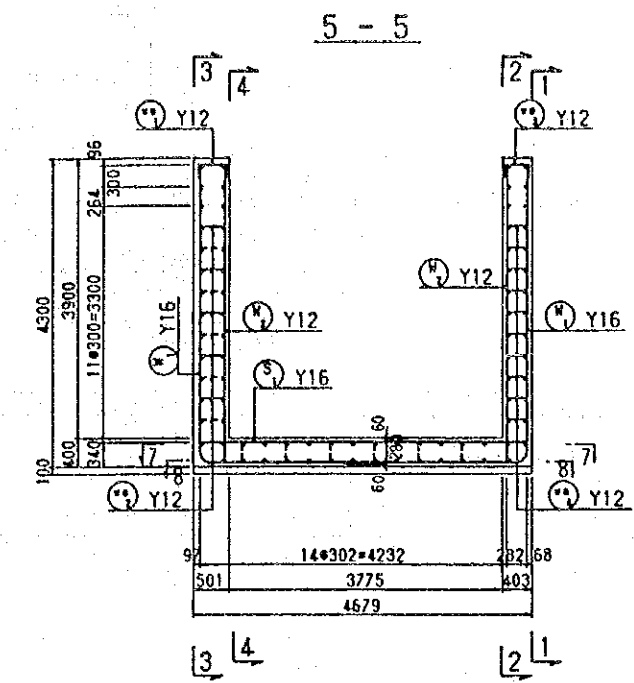
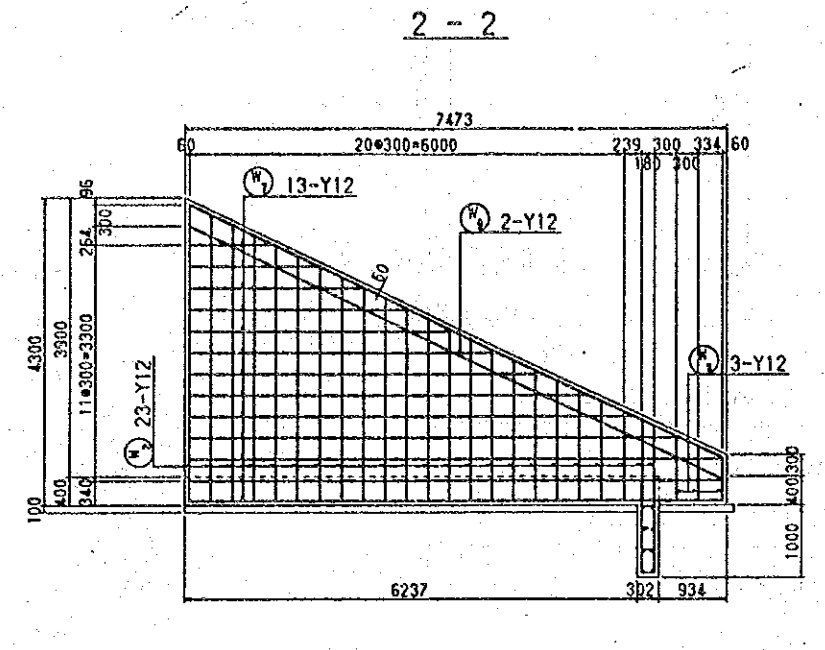
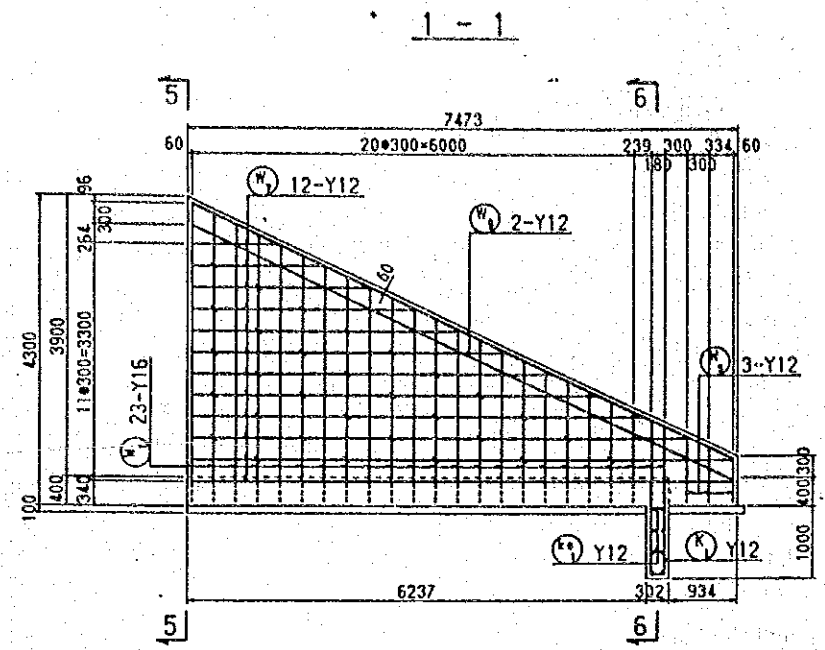
SCALES
1:100

NAIROBI BYPASS
PATTERN BOX CULVERTS
CR 15+560.00 V=2.60 D=3.05 (R)

Q
SHEET 131 OF 103

AERIAL PHOTO BY _____ SURVEYED BY _____
 MAPPING BY _____ TRACED BY _____
 LOCATION BY _____ CHECKED BY _____

M.O.P.W. ROADS DEPT. DRG. NO. _____



REVISIONS	
DESCRIPTION	DATE

JAPAN INTERNATIONAL
 COOPERATION AGENCY

CHIEF ENGINEER (ROADS)
 CHIEF SUPT. ENG. (DESIGN)

SEN. SUPT. ENG. (DESIGN)
 SUPT. ENGINEER (DESIGN)
 PROJECT ENGINEER

SCALES
 1:50

NAIROBI BYPASS
 WATER BOX CULVERTS
 CR 15-460.00 W-3, 60 B-3, 00 (6)

Q
 SHEET 132 OF 183

