


JOURNAL OF INTERNATIONAL COOPERATION AGENCY OF JAPAN  
INTERNATIONAL COOPERATION  
JOURNAL OF INTERNATIONAL COOPERATION AGENCY OF JAPAN

FIELD STUDY  
ON  
ADDIS ABABA BLOOD CONTROL PROJECT  
IN  
THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

FIELD REPORT  
VOLUME 9  
DATA BOOKS

FIELD STUDY

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INTERNATIONAL COOPERATION AGENCY OF JAPAN  
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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
REGION 14 ADMINISTRATION  
THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

THE STUDY  
ON  
ADDIS ABABA FLOOD CONTROL PROJECT  
IN  
THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

FINAL REPORT

VOLUME V  
DATA BOOK

MAY 1998

NIPPON KOEI CO., LTD.  
NIKKEN CONSULTANTS, INC.

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1144068 (2)

Applied Exchange Rate  
US\$ 1.0 = Birr 6.8 = Japanese Yen 114.7  
(As of June 1997)

**THE STUDY  
ON  
ADDIS ABABA FLOOD CONTROL PROJECT**

**FINAL REPORT**

**VOLUME V**

**DATA BOOK**

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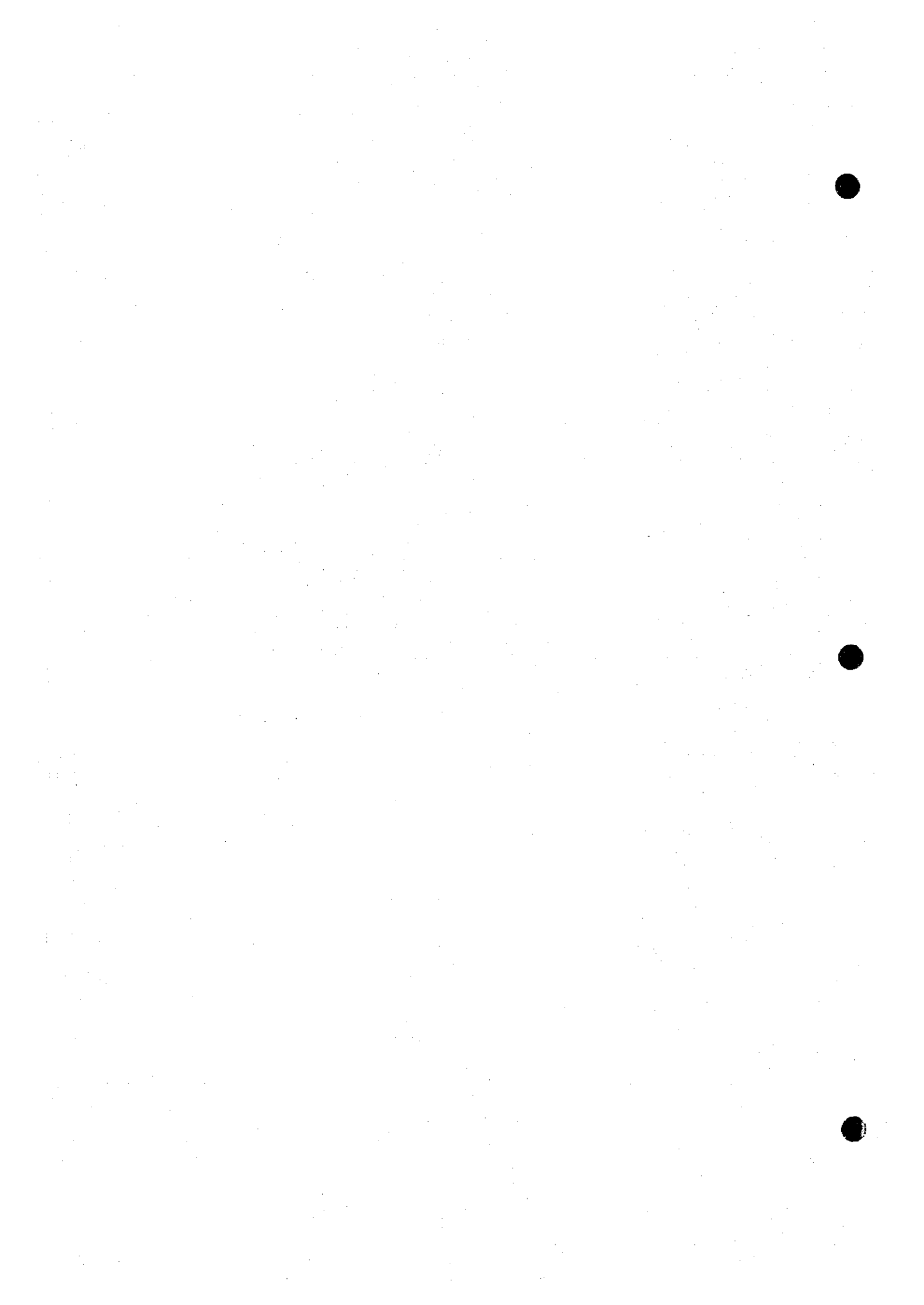
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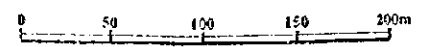
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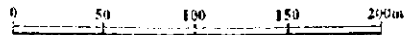
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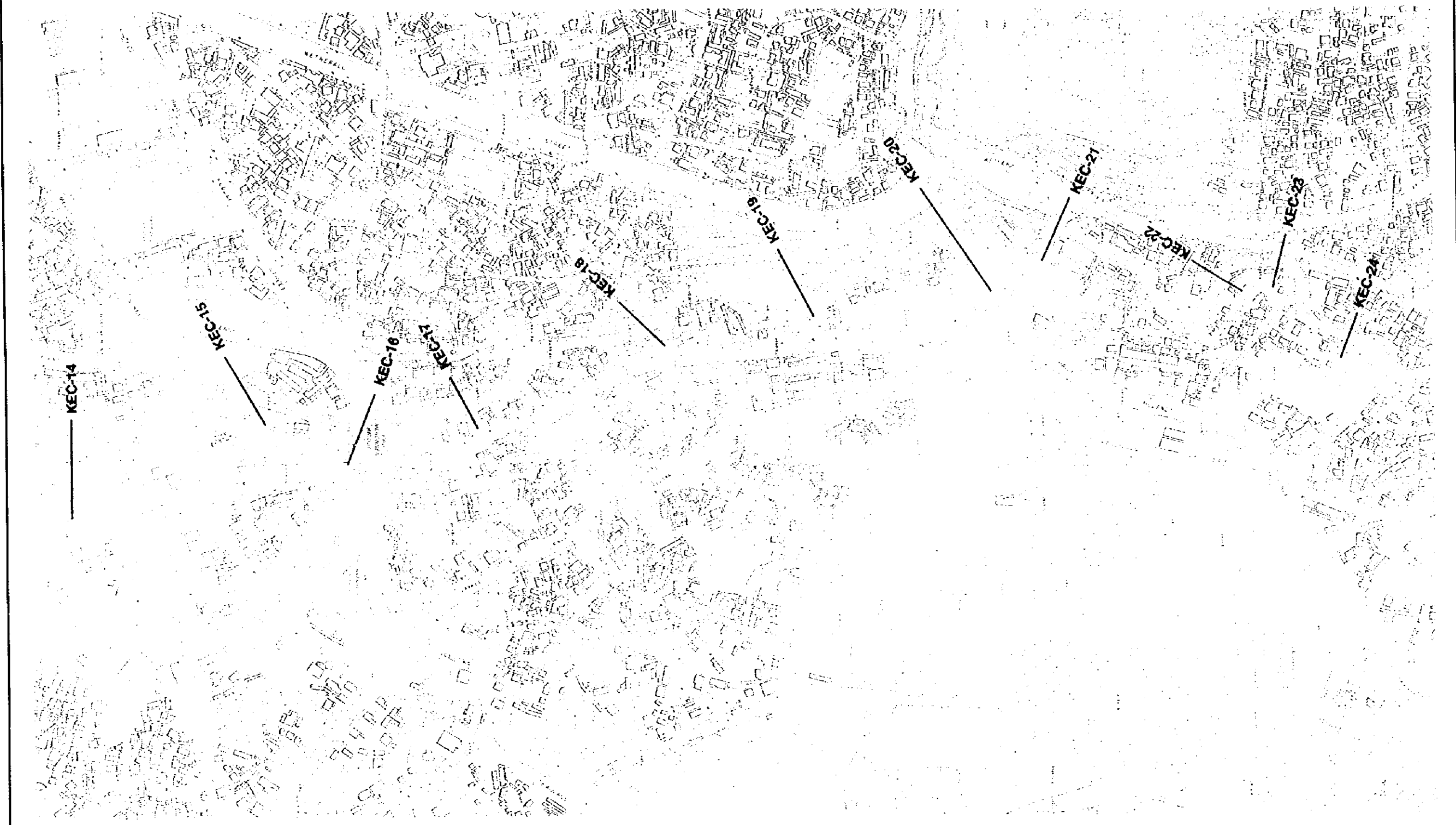
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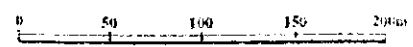
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KEC-PLAN-03

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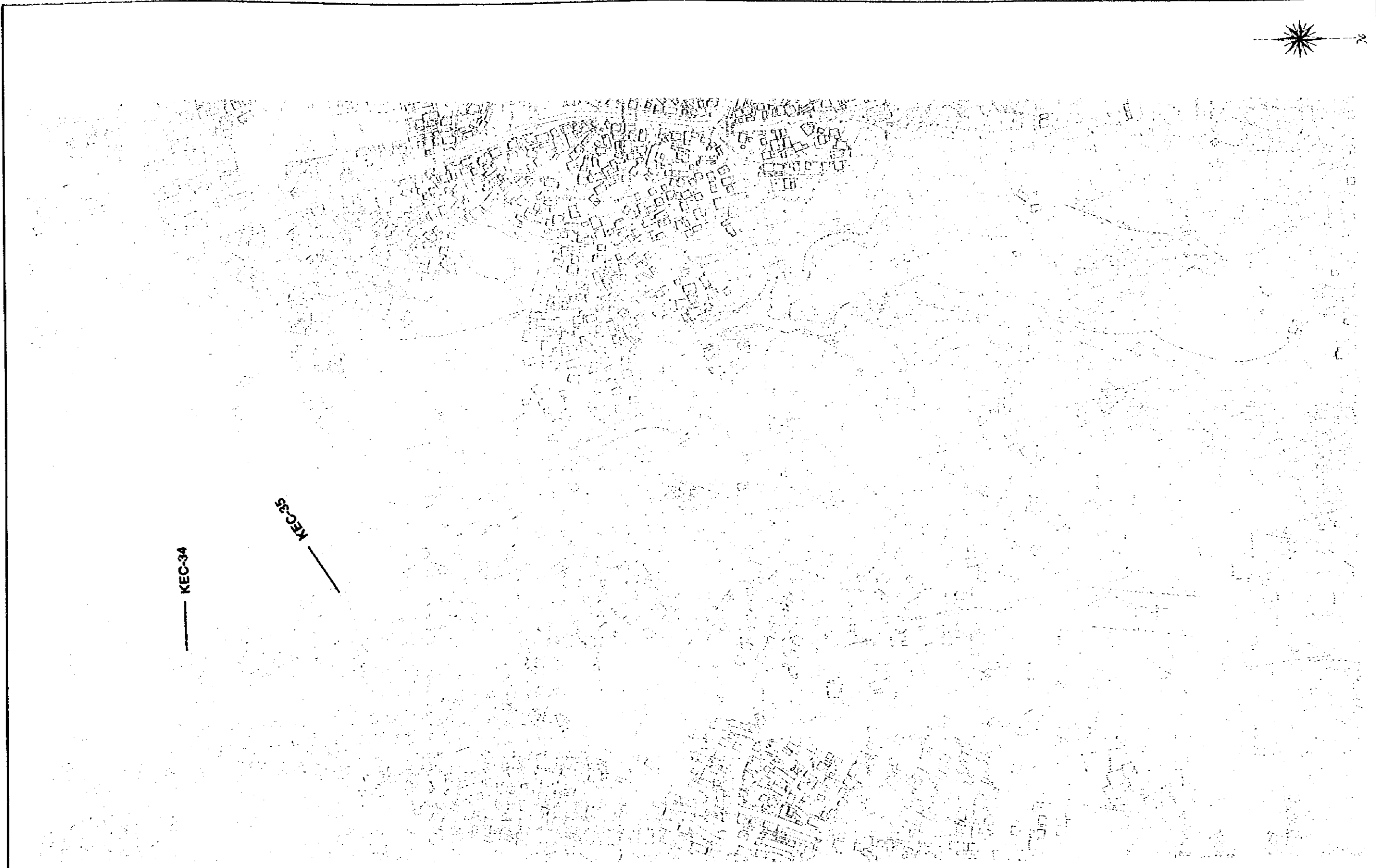
No.31,32,43,44



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

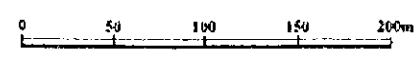
JAPAN INTERNATIONAL COOPERATION AGENCY  
REGION 14 ADMINISTRATION

DRAWING NO.  
KEC-PLAN-04



— KEC-34

— KEC-35



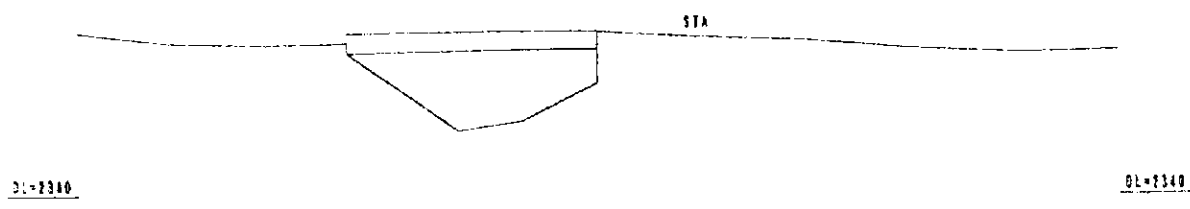
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY  
REGION 14 ADMINISTRATION

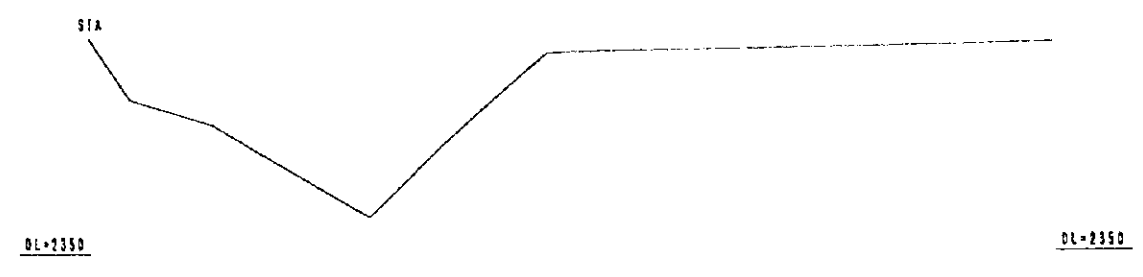
DRAWING NO.	
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Cross Section S=1:200

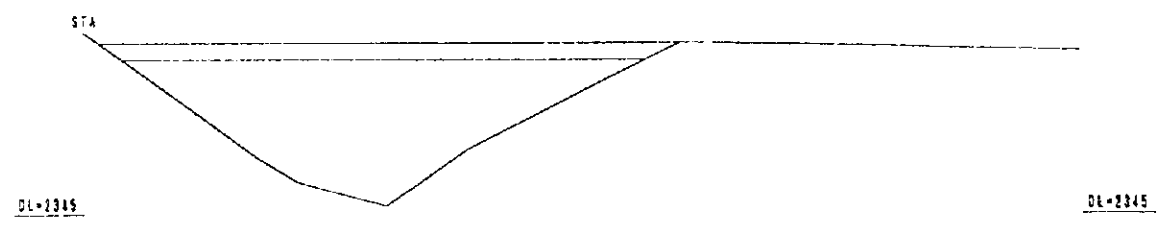
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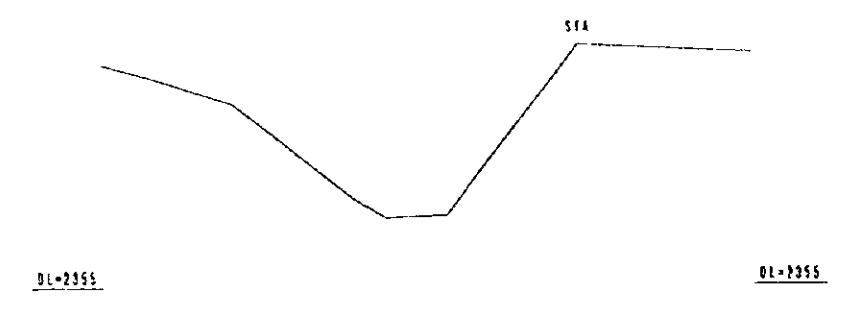
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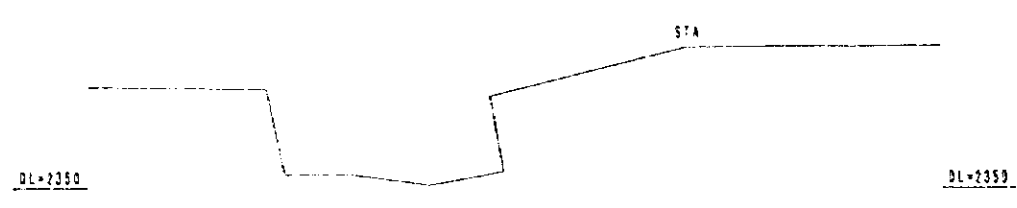
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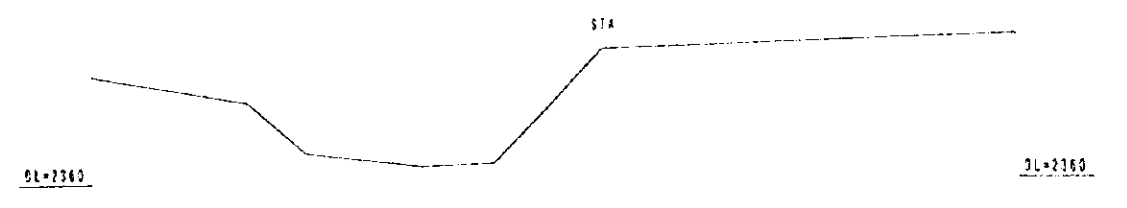
KEC-05



KEC-03



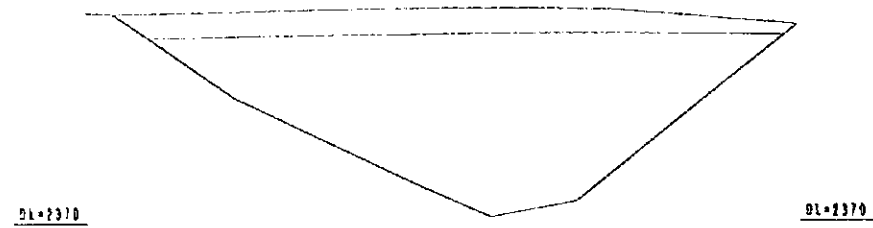
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THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KEC-SECT-01	LOCATION OF RIVER CROSS SECTION KECHENE (KEC) RIVER (01/03)

Cross Section S=1:200

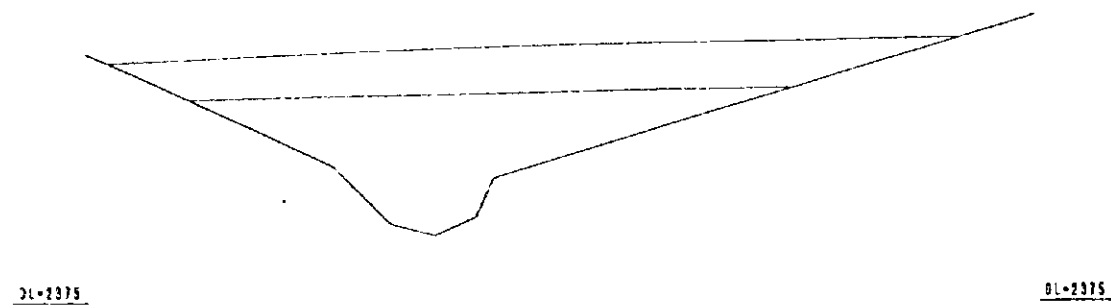
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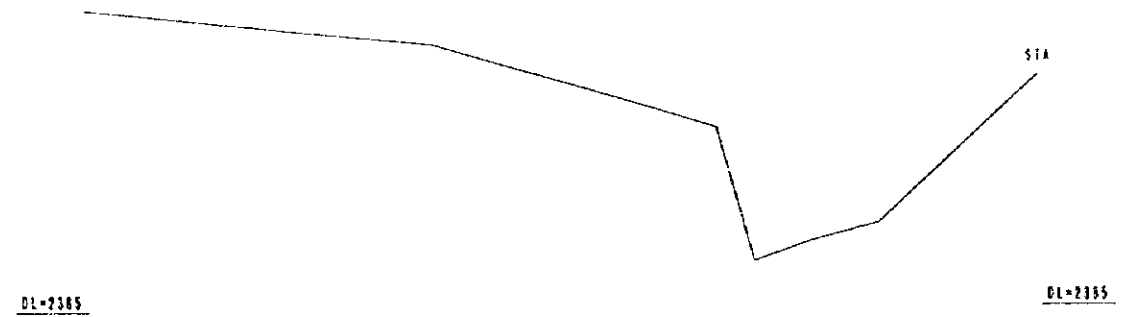
KEC-10



KEC-08



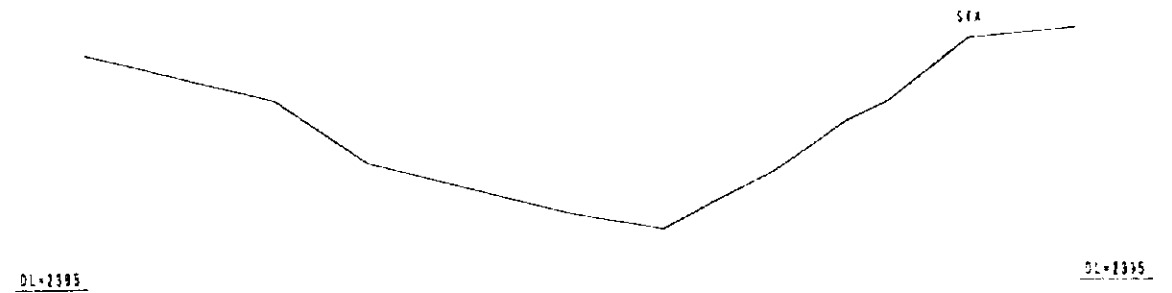
KEC-11



KEC-09



KEC-12



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KEC-SECT-02	LOCATION OF RIVER CROSS SECTION KECHENE (KEC) RIVER (02/08)



Cross Section S=1:200

KEC-13

DL-2403

STA

DL-2409

KEC-15

STA

DL-2420

DL-2420

KEC-16

KEC

STA

DL-2439

DL-2439

KEC-14

DL-2410

STA

DL-2410

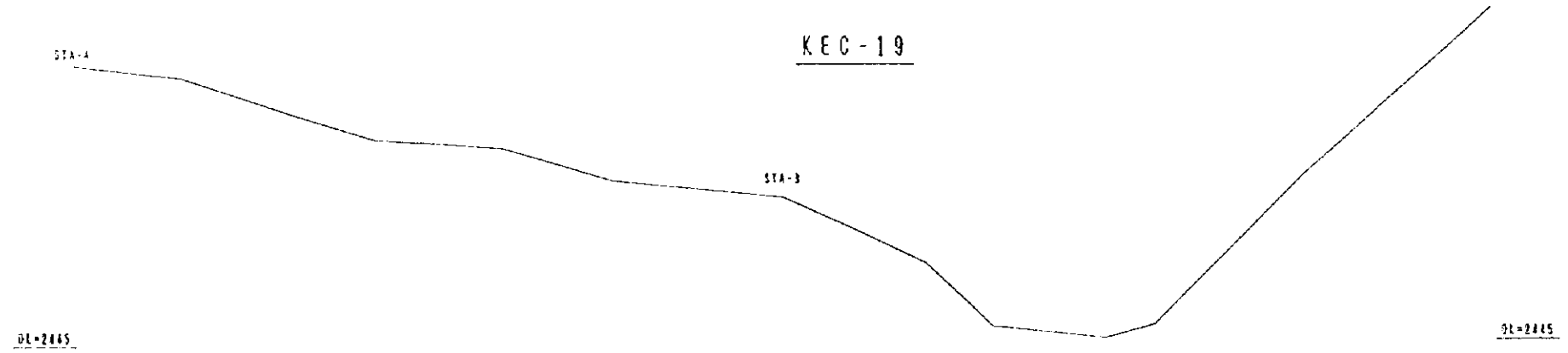
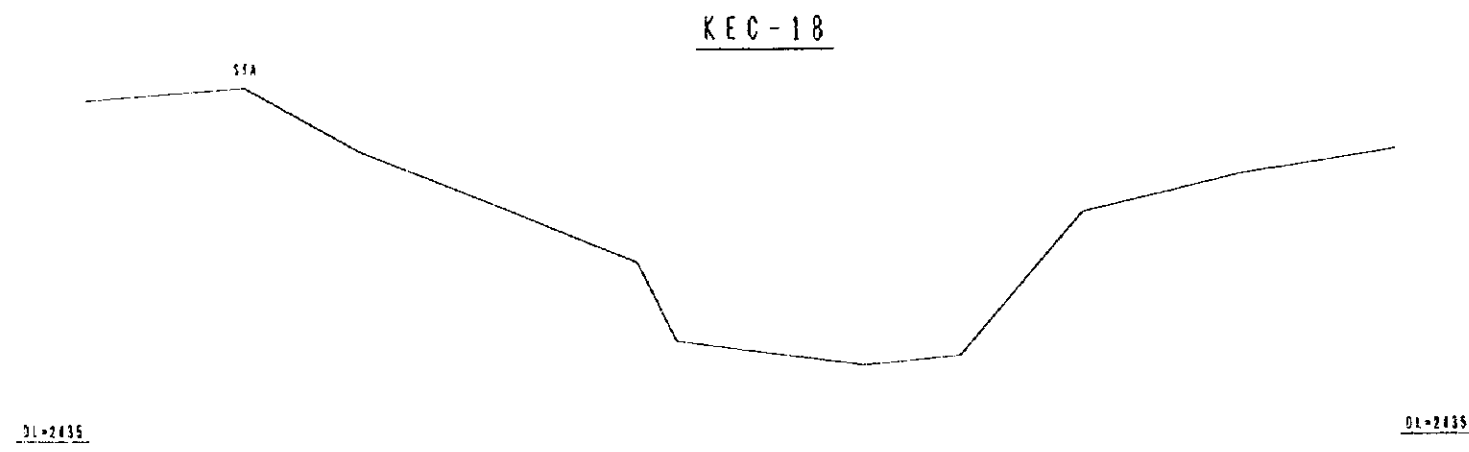
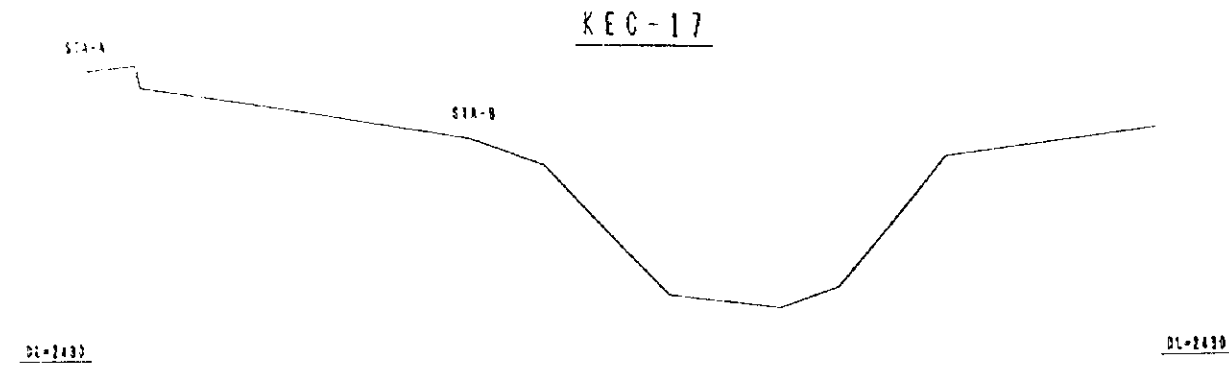
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY  
REGION 14 ADMINISTRATION

DRAWING NO.  
KEC-SECT-03

LOCATION OF RIVER CROSS SECTION  
KECHENE (KEC) RIVER (03/03)

Cross Section S=1:200



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KEC-SECT-04	LOCATION OF RIVER CROSS SECTION KECHENE (KEC) RIVER (04/08)

Cross Section S=1:200

KEC-20

STA

DL-2445

DL-2445

KEC-21

KEC-23

DL-2450

DL-2450

DL-2455

DL-2455

STA

KEC-22

KEC-24

DL-2455

DL-2455

DL-2455

DL-2455

STA

STA

THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

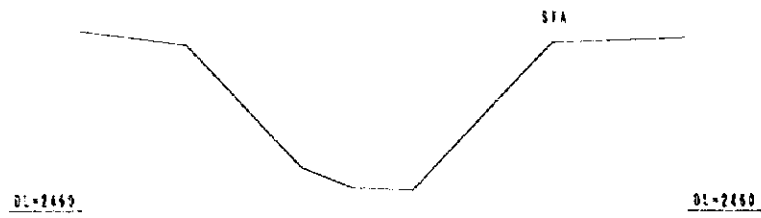
JAPAN INTERNATIONAL COOPERATION AGENCY  
REGION 14 ADMINISTRATION

DRAWING NO.  
KEC-SECT-05

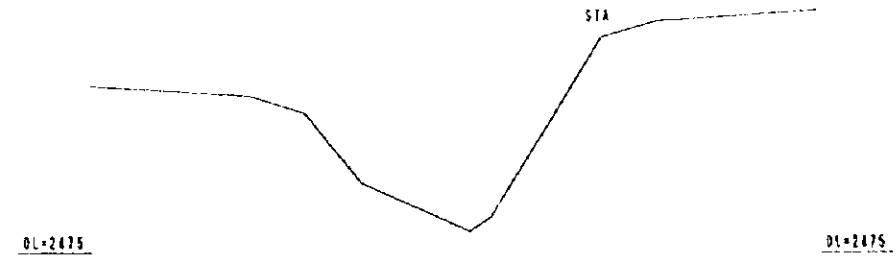
LOCATION OF RIVER CROSS SECTION  
KECHENE (KEC) RIVER (05/08)

Cross Section S=1:200

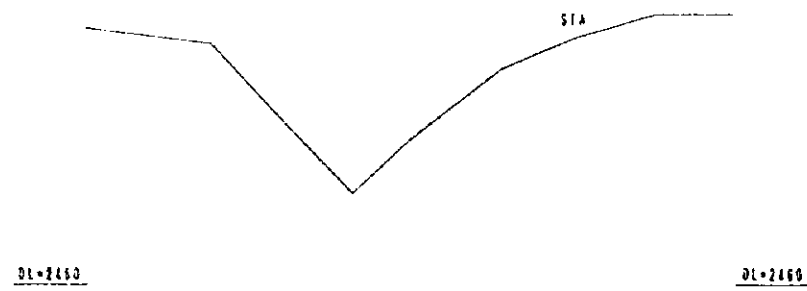
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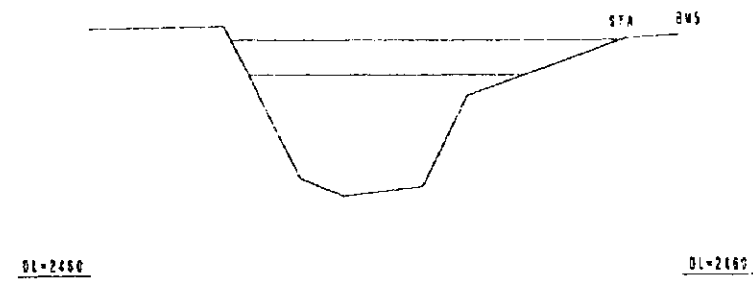
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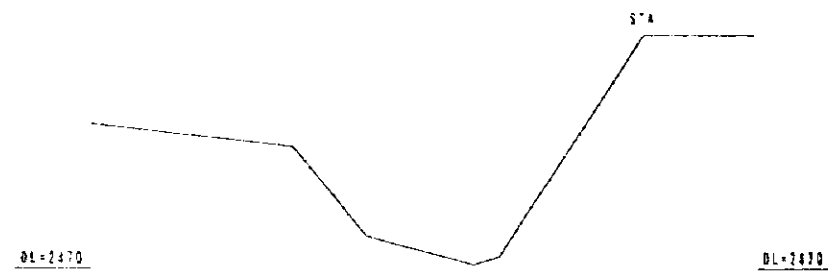
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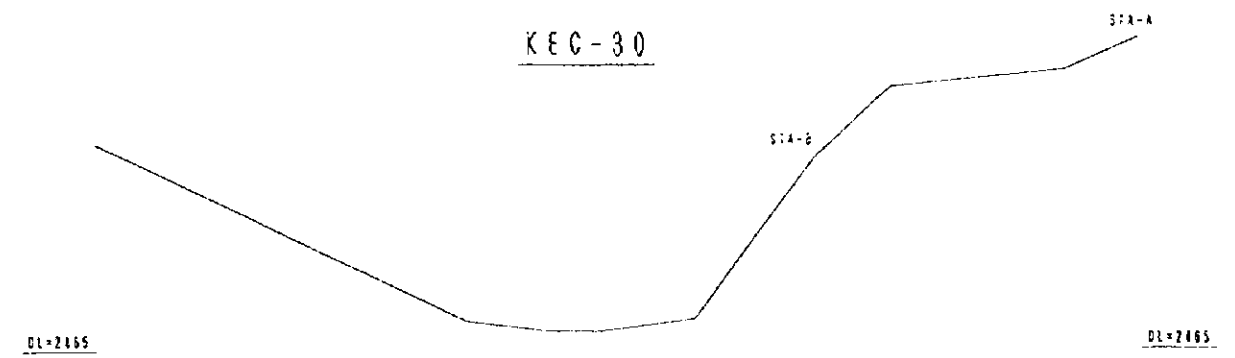
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KEC-27



KEC-30



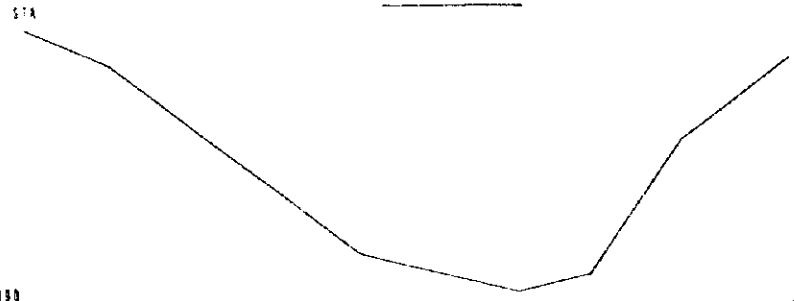
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY  
REGION 14 ADMINISTRATION

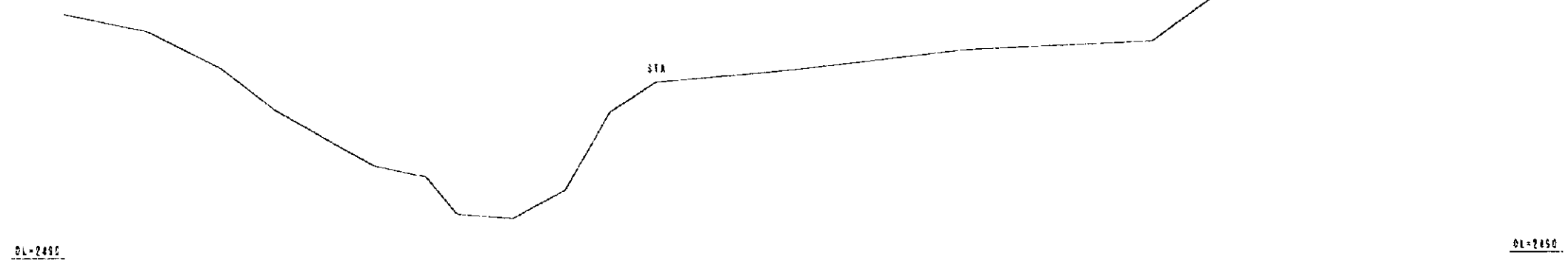
DRAWING NO. KEC-SECT-05	LOCATION OF RIVER CROSS SECTION KECHENE (KEC) RIVER (06/08)
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Cross Section S=1:200

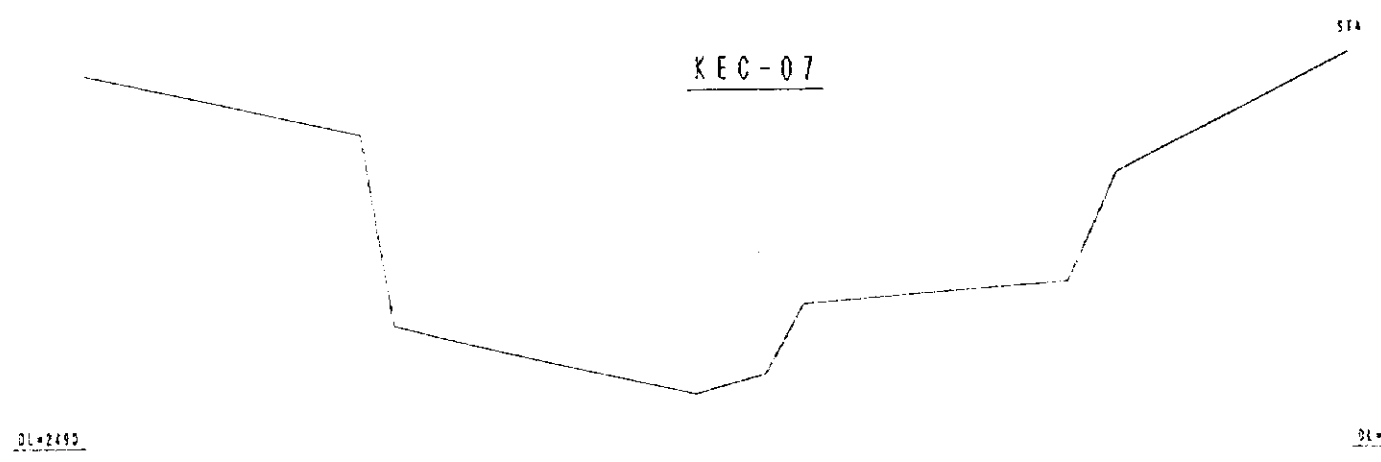
KEC-31



KEC-31 (a)

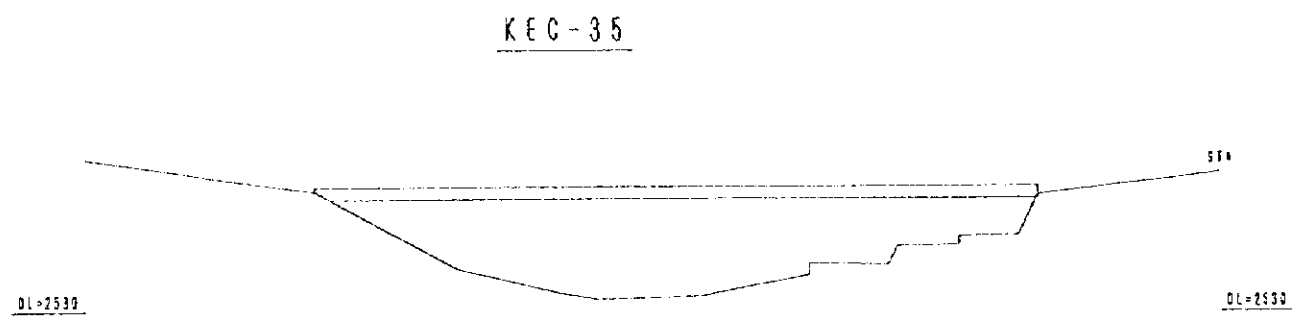
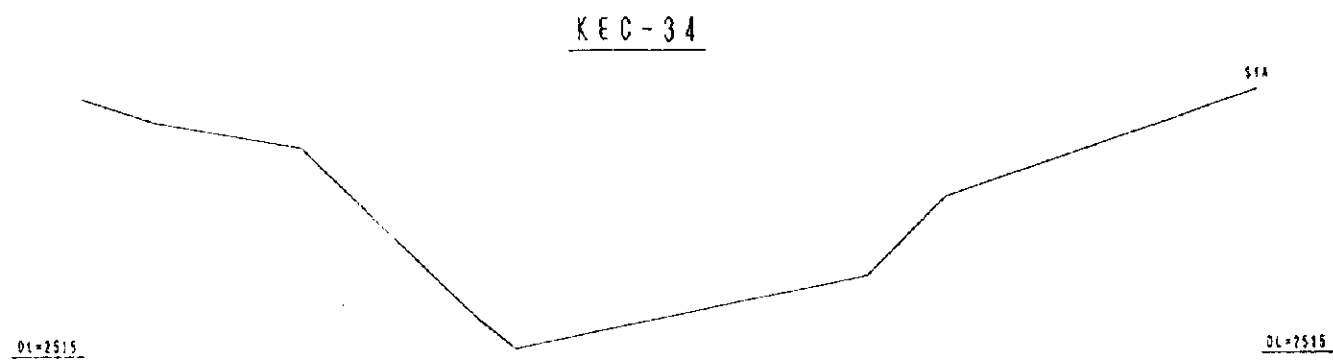
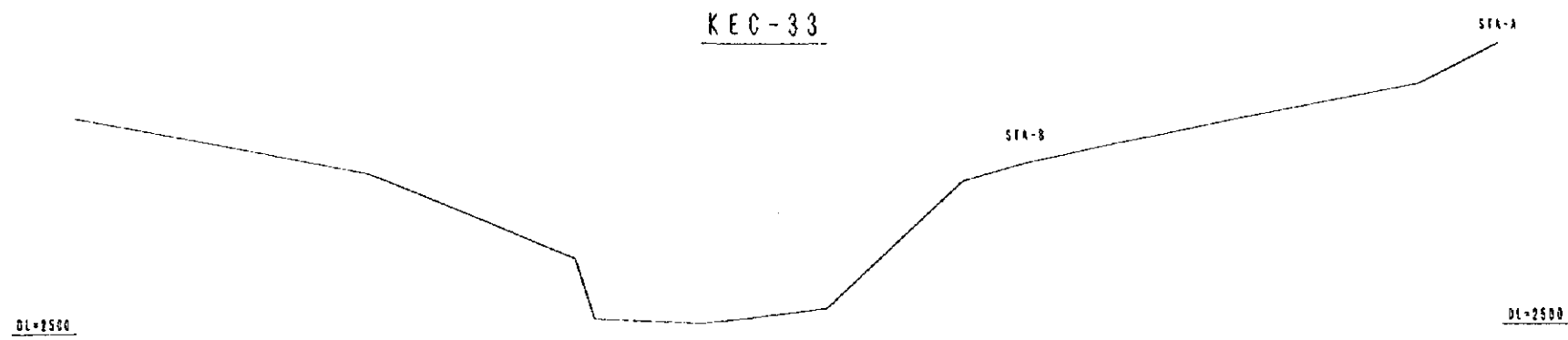


KEC-07



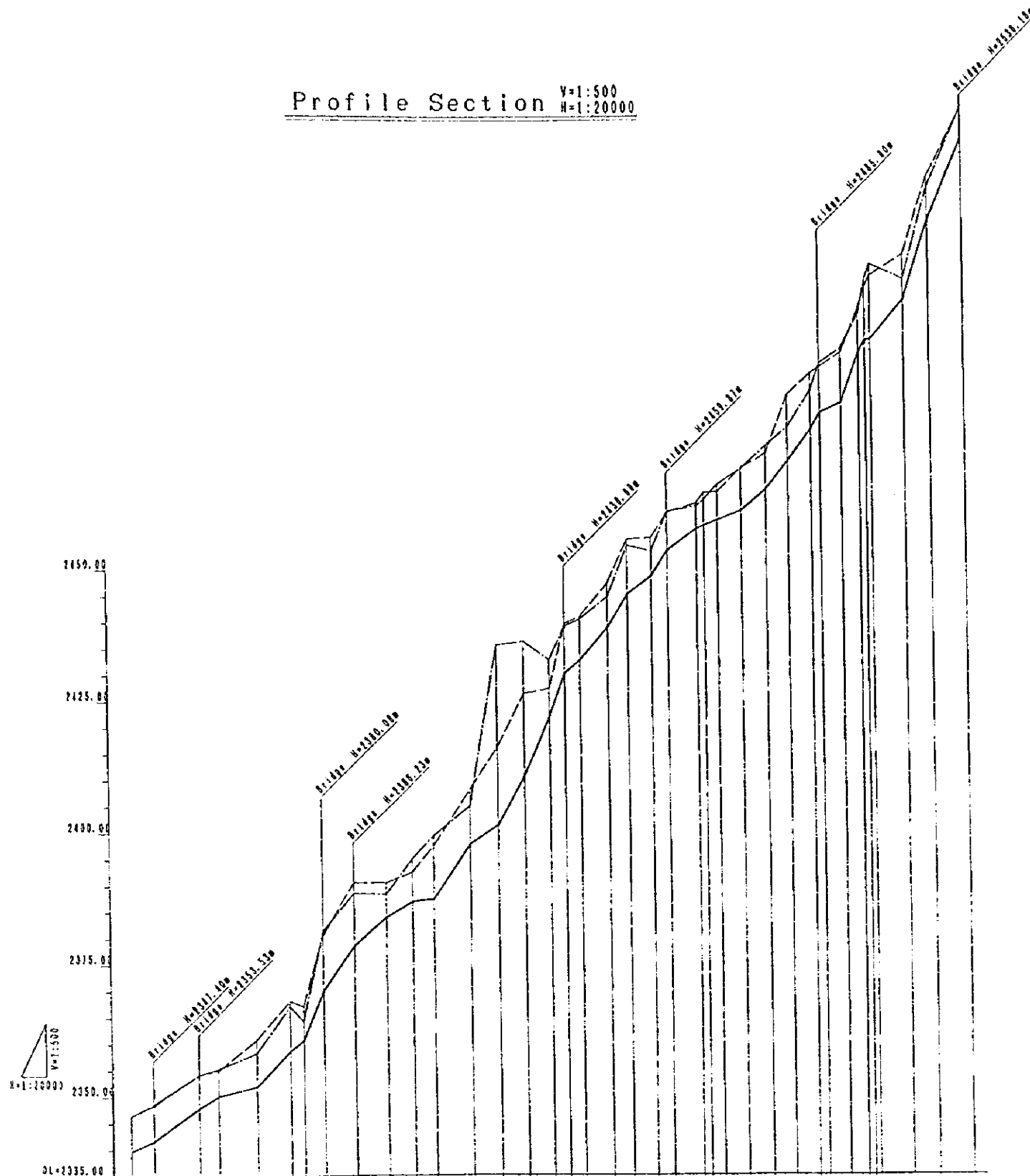
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY	
REGION II ADMINISTRATION	
DRAWING NO. KEC-SECT-07	LOCATION OF RIVER CROSS SECTION KECHENE (KEC) RIVER (07/08)

Cross Section S=1:200



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KEC-SECT-08	LOCATION OF RIVER CROSS SECTION KECHENE (KEC) RIVER (08/93)

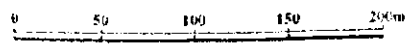
Profile Section V=1:500  
H=1:20000



Station No.	Left Bank	Right Bank	River Bed	Accumulate D.	Distance
0	2355.97	2355.56	2355.48	0.0	0.0
1	2356.42	2356.01	2355.93	174.0	174.0
2	2356.87	2356.46	2356.38	348.0	348.0
3	2357.32	2356.91	2356.83	522.0	522.0
4	2357.77	2357.36	2357.28	696.0	696.0
5	2358.22	2357.81	2357.73	870.0	870.0
6	2358.67	2358.26	2358.18	1044.0	1044.0
7	2359.12	2358.71	2358.63	1218.0	1218.0
8	2359.57	2359.16	2359.08	1392.0	1392.0
9	2360.02	2359.61	2359.53	1566.0	1566.0
10	2360.47	2360.06	2359.98	1740.0	1740.0
11	2360.92	2360.51	2360.43	1914.0	1914.0
12	2361.37	2360.96	2360.88	2088.0	2088.0
13	2361.82	2361.41	2361.33	2262.0	2262.0
14	2362.27	2361.86	2361.78	2436.0	2436.0
15	2362.72	2362.31	2362.23	2610.0	2610.0
16	2363.17	2362.76	2362.68	2784.0	2784.0
17	2363.62	2363.21	2363.13	2958.0	2958.0
18	2364.07	2363.66	2363.58	3132.0	3132.0
19	2364.52	2364.11	2364.03	3306.0	3306.0
20	2364.97	2364.56	2364.48	3480.0	3480.0
21	2365.42	2365.01	2364.93	3654.0	3654.0
22	2365.87	2365.46	2365.38	3828.0	3828.0
23	2366.32	2365.91	2365.83	4002.0	4002.0
24	2366.77	2366.36	2366.28	4176.0	4176.0
25	2367.22	2366.81	2366.73	4350.0	4350.0
26	2367.67	2367.26	2367.18	4524.0	4524.0
27	2368.12	2367.71	2367.63	4698.0	4698.0
28	2368.57	2368.16	2368.08	4872.0	4872.0
29	2369.02	2368.61	2368.53	5046.0	5046.0
30	2369.47	2369.06	2368.98	5220.0	5220.0
31	2369.92	2369.51	2369.43	5394.0	5394.0
32	2370.37	2369.96	2369.88	5568.0	5568.0
33	2370.82	2370.41	2370.33	5742.0	5742.0
34	2371.27	2370.86	2370.78	5916.0	5916.0
35	2371.72	2371.31	2371.23	6090.0	6090.0

Left Bank	———
Right Bank	-----
River Bed	———

THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA  
JAPAN INTERNATIONAL COOPERATION AGENCY  
REGION 14 ADMINISTRATION  
DRAWING NO. LOCATION OF RIVER PROFILE SECTION  
KEC-SECT-31 KECHENE (KEC) RIVER (01/01)



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

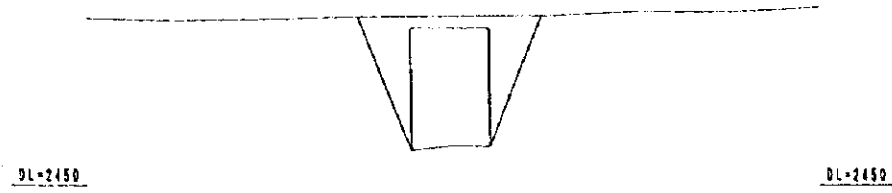
JAPAN INTERNATIONAL COOPERATION AGENCY  
REGION 14 ADMINISTRATION

DRAWING NO.  
KECR-PLAN-01

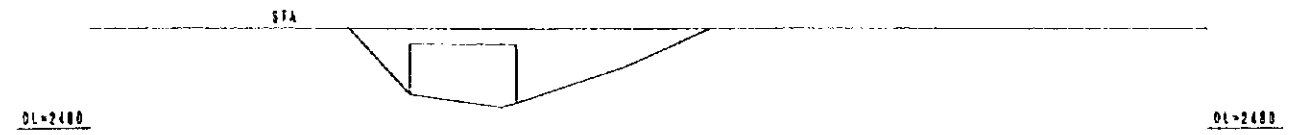


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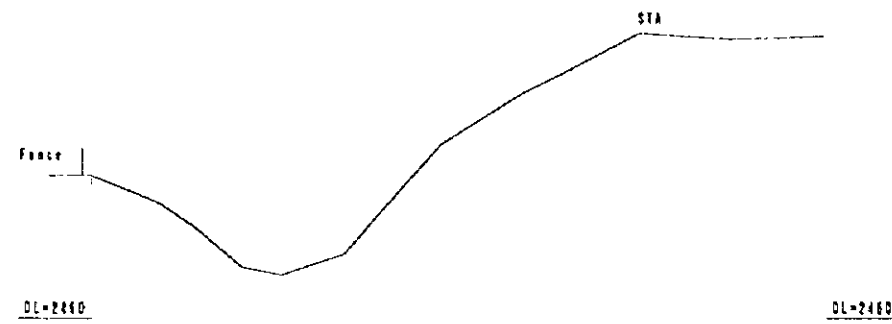
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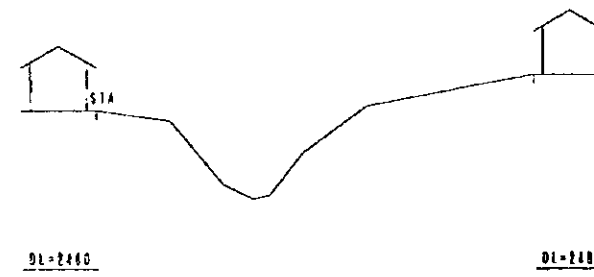
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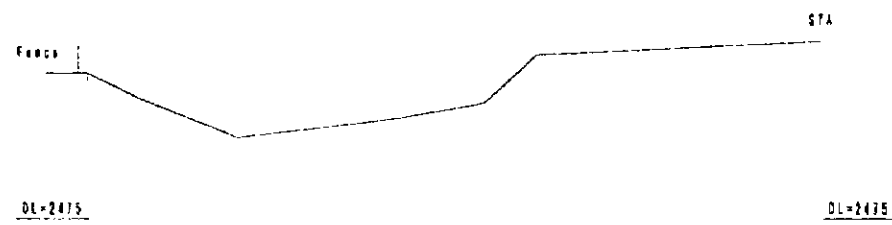
KECR-02



KECR-05



KECR-03



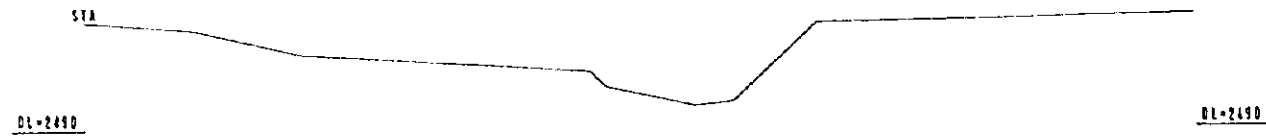
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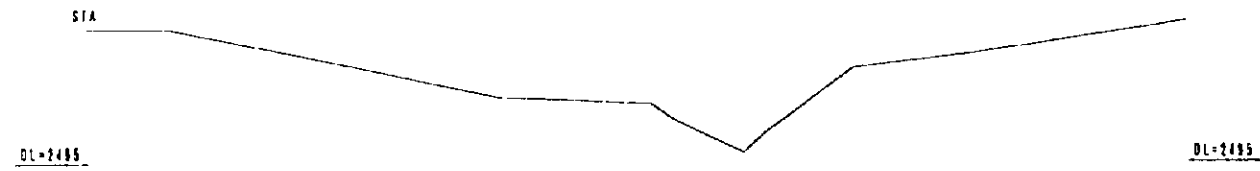
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KECR-SECT-01	LOCATION OF RIVER CROSS SECTION KECHENE (KECR) RIVER (01/01)

Cross Section S=1:200

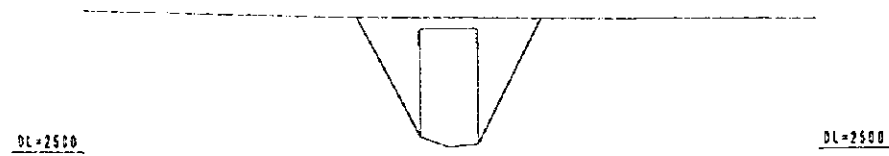
KECR-07



KECR-08

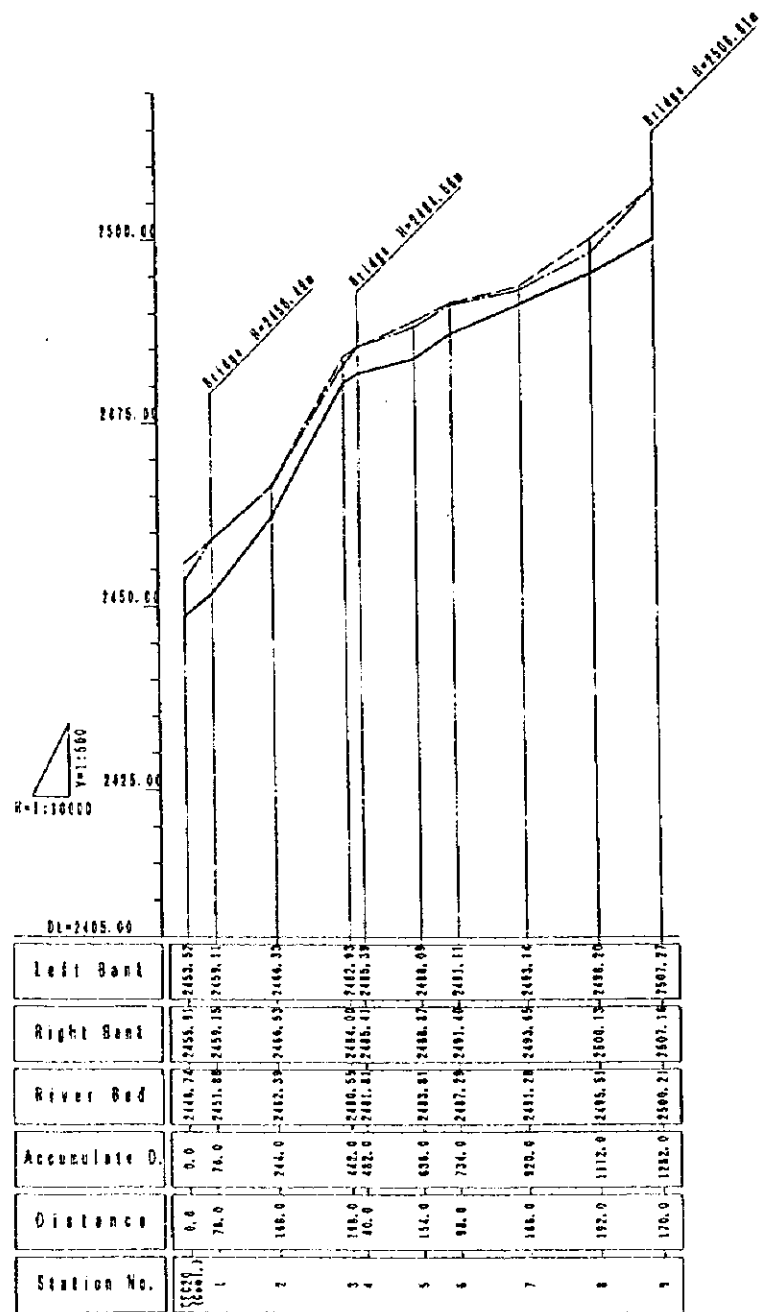


KECR-09



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KECR-SECT-02	LOCATION OF RIVER CROSS SECTION KECHENE (KECR) RIVER (01/02)

Profile Section  $V=1:500$   
 $H=1:10000$

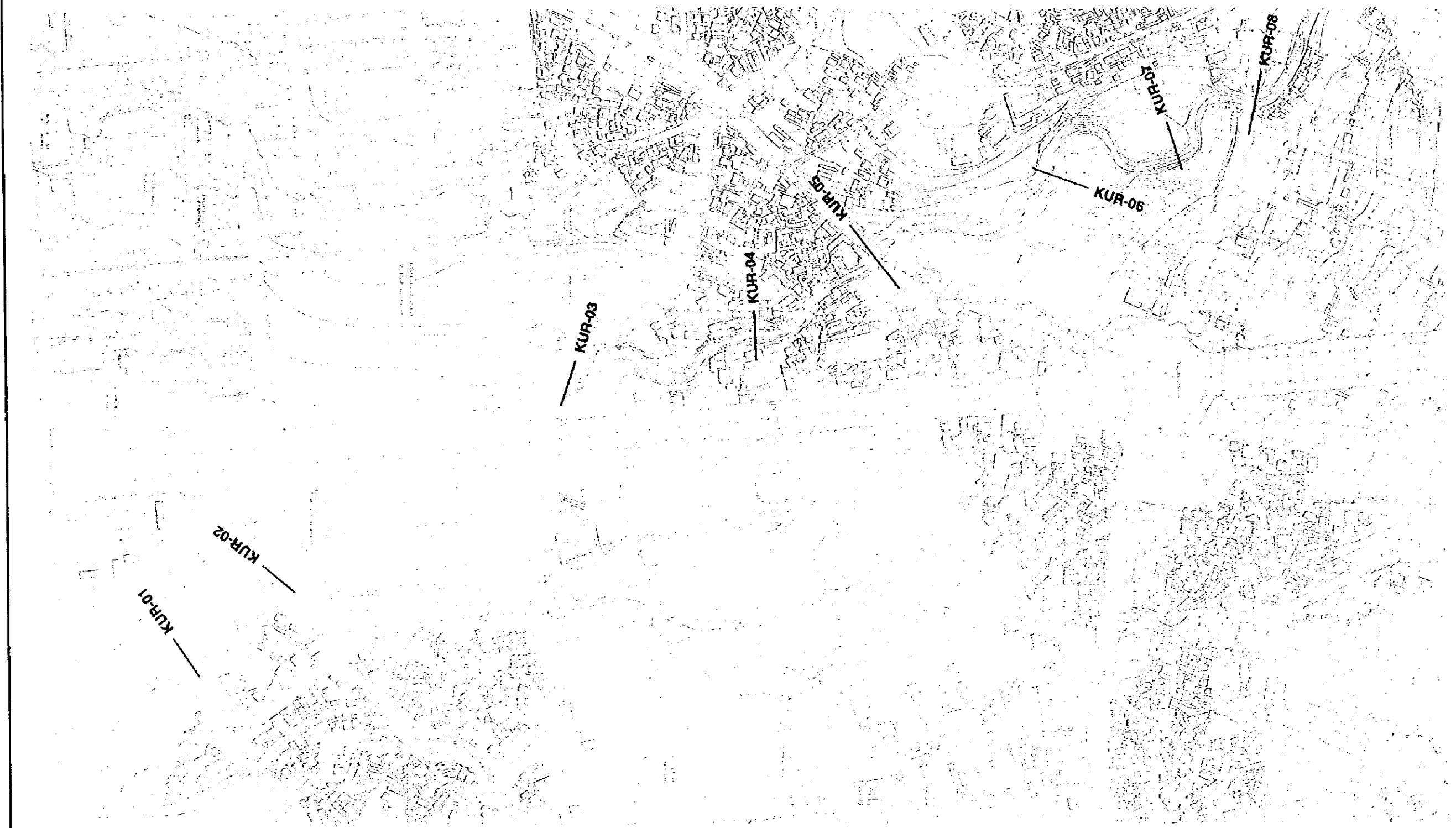


Left Bank	———
Right Bank	-----
River Bed	———

THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY  
REGION 14 ADMINISTRATION

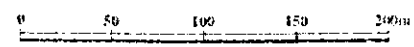
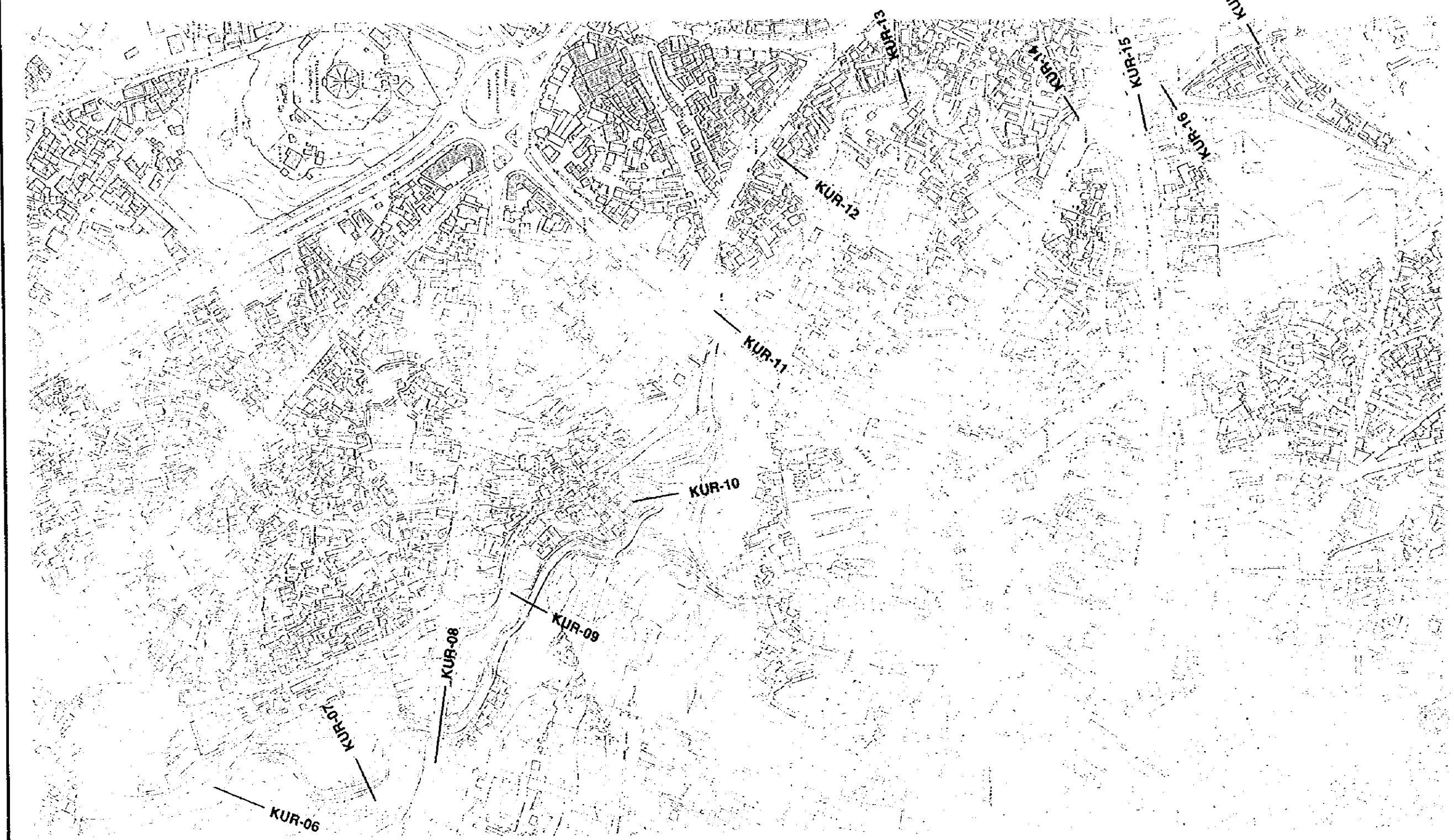
DRAWING NO. LOCATION OF RIVER PROFILE SECTION  
KECR-SECT-03 KECHENE (KECR) RIVER (01/03)



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

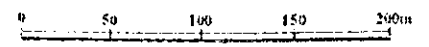
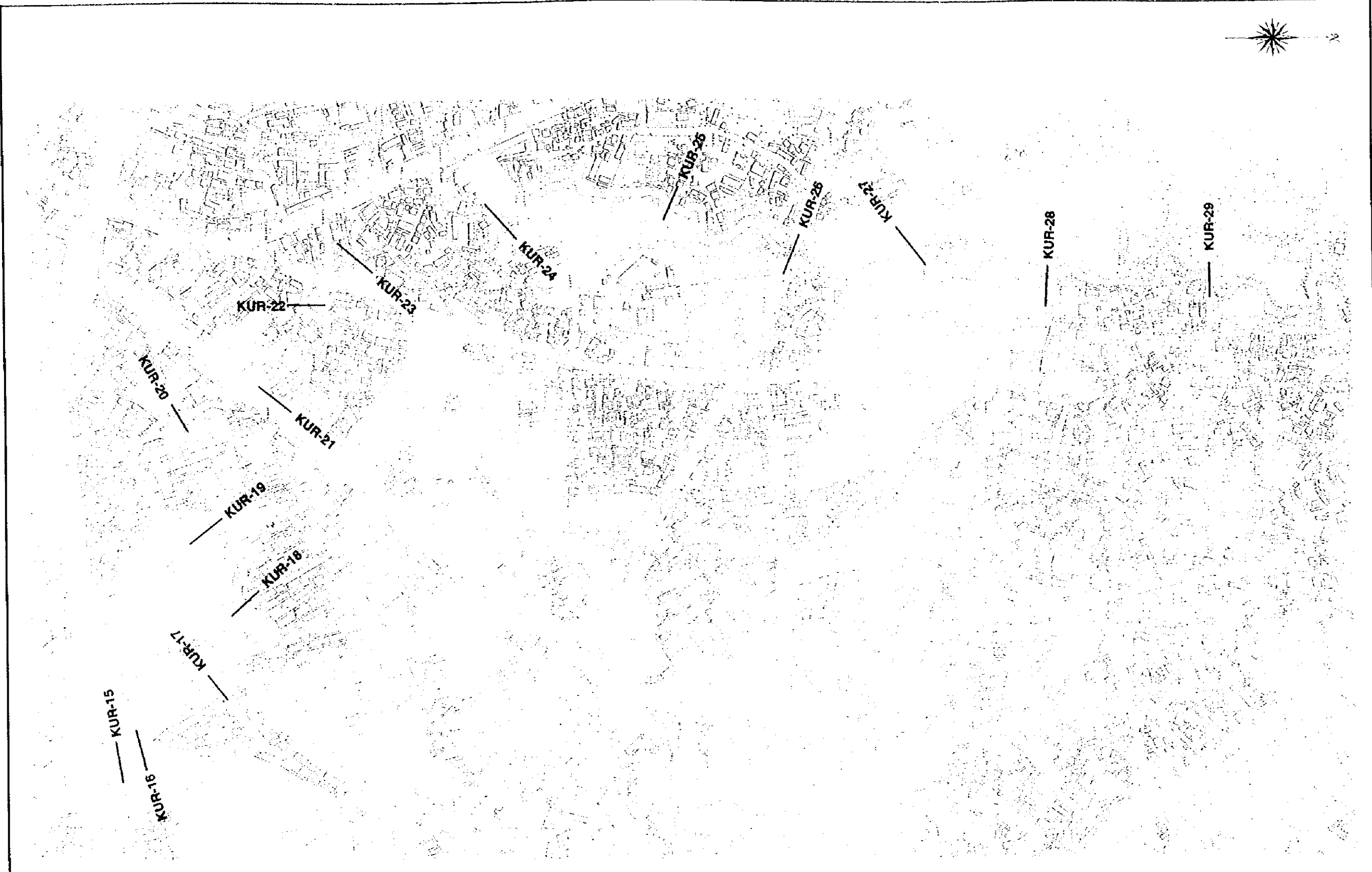
JAPAN INTERNATIONAL COOPERATION AGENCY  
REGION 14 ADMINISTRATION

DRAWING NO.  
KUR-PLAN-01



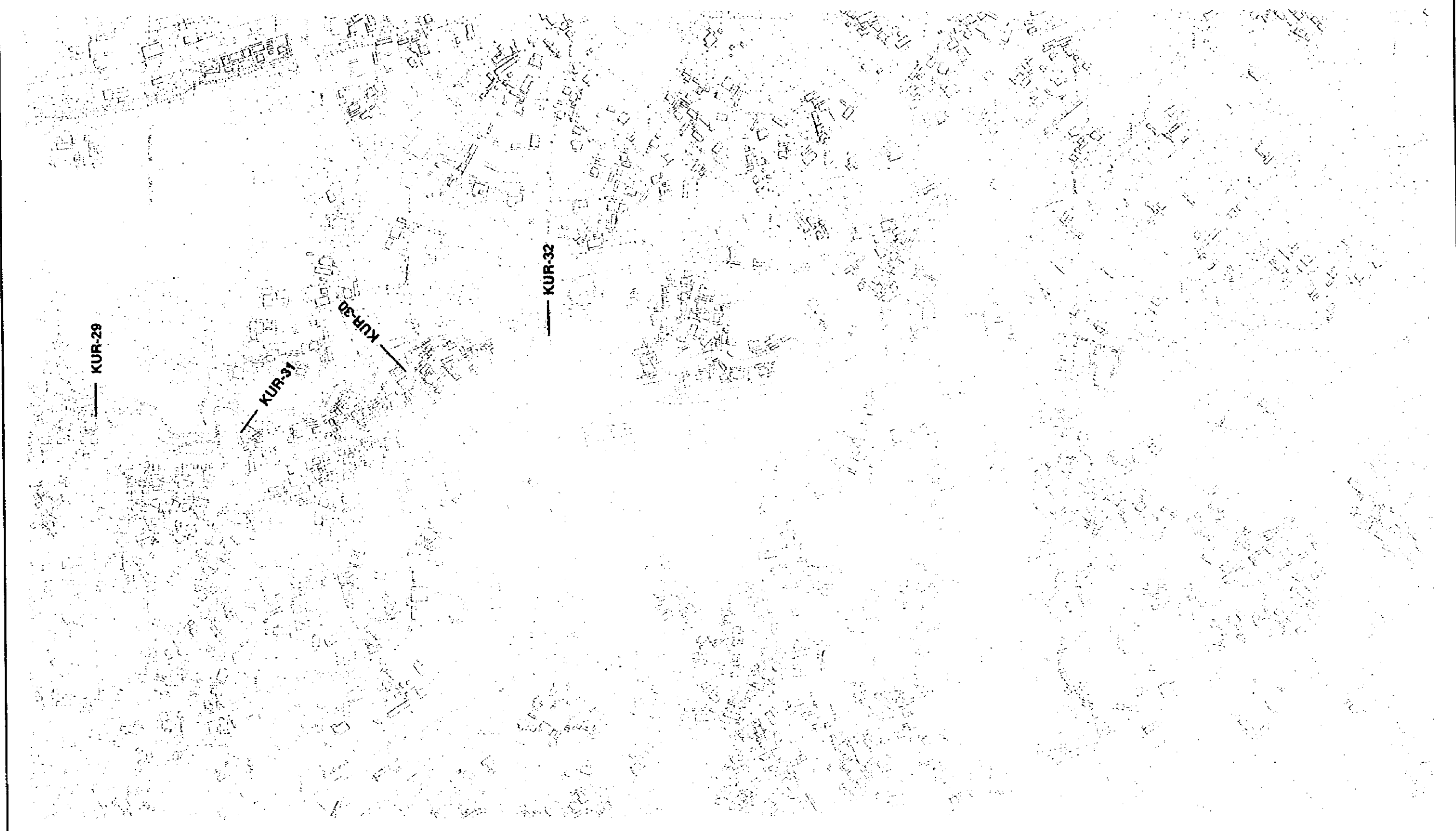
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO.	
KUR-PLAN-02	

No.42,43,54,55



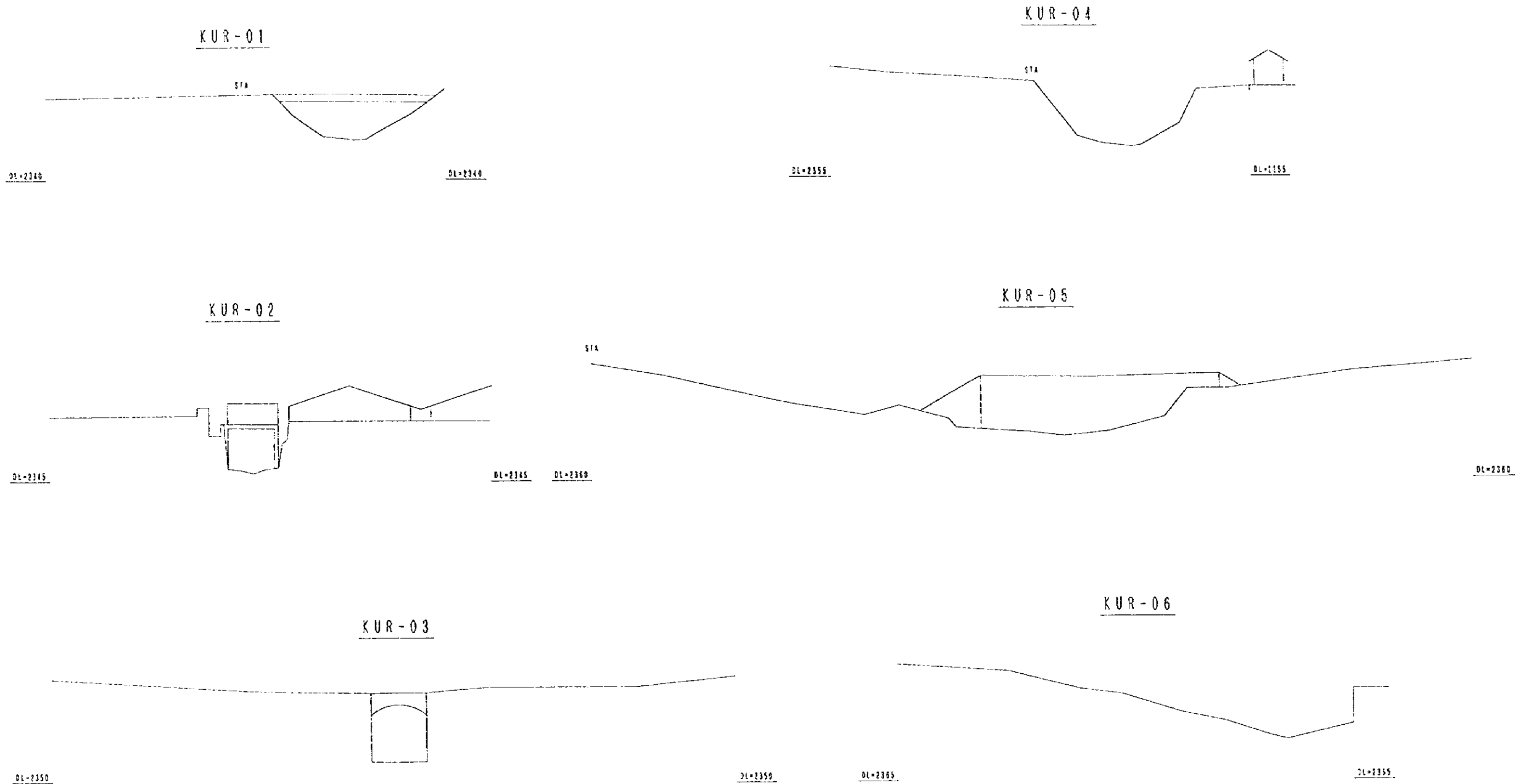
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO.	
KUR-PLAN-03	

No.30,42



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KUR-PLAN-04	

Cross Section S=1:200

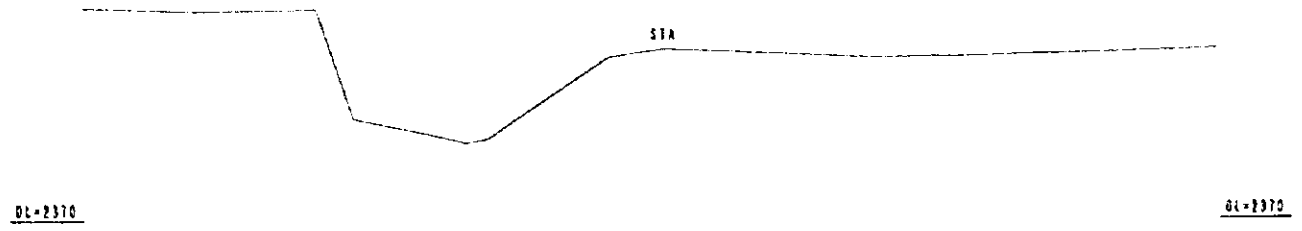


THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KUR-SECT-01	LOCATION OF RIVER CROSS SECTION KURTUNE (KUR) RIVER (01/06)

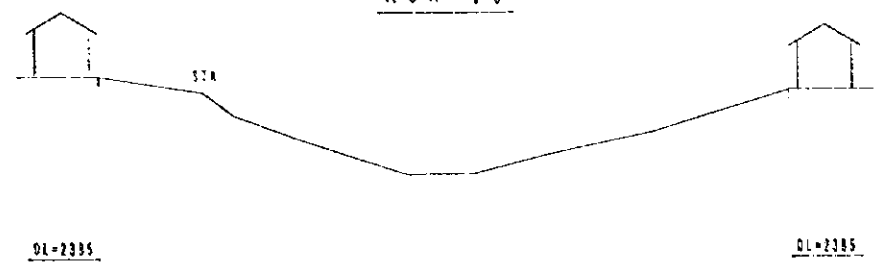


Cross Section S=1:200

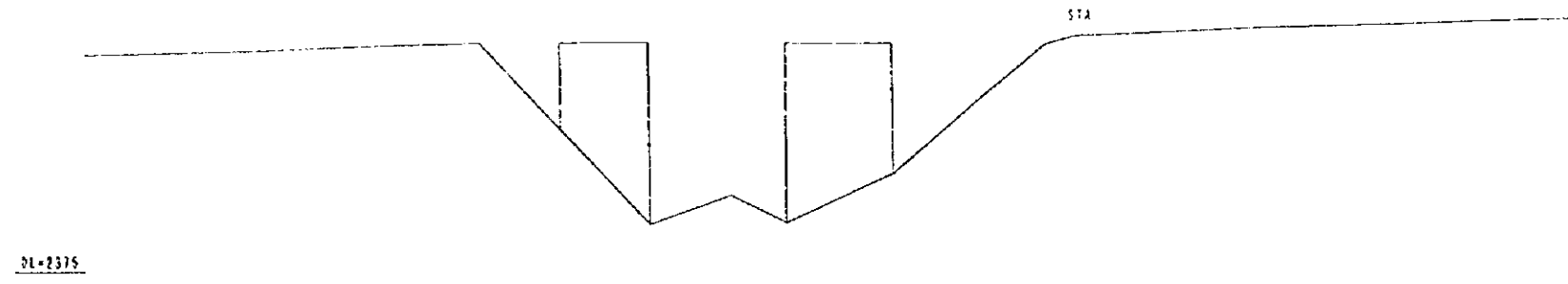
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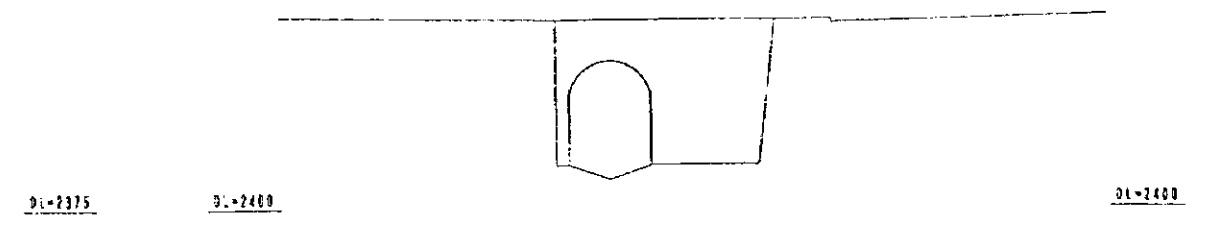
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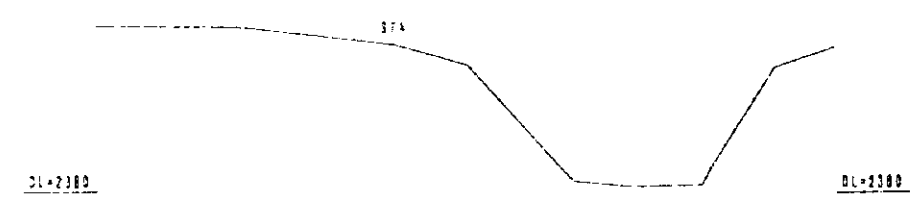
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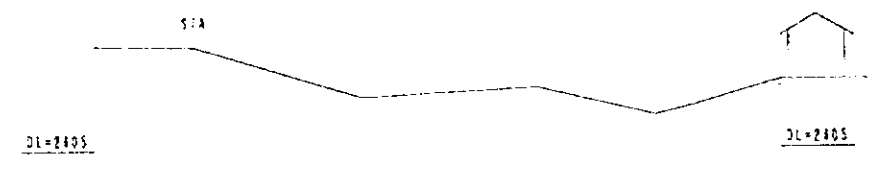
KUR-11



KUR-09



KUR-12



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KUR-SECT-02	LOCATION OF RIVER CROSS SECTION KURTUME (KUR) RIVER (02/06)

Cross Section S=1:200

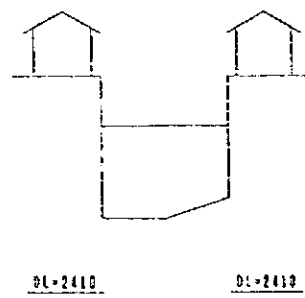
KUR-13



KUR-16



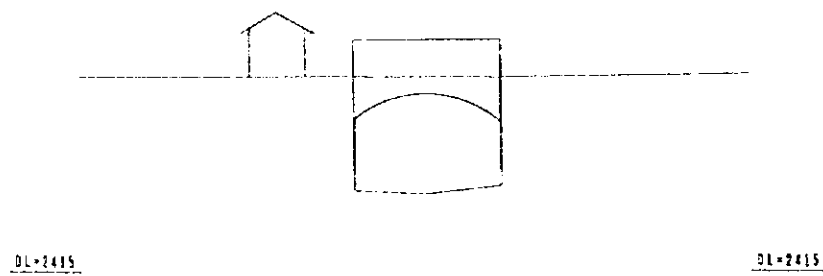
KUR-14



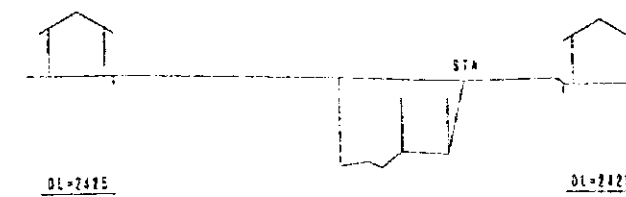
KUR-17



KUR-15



KUR-18



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

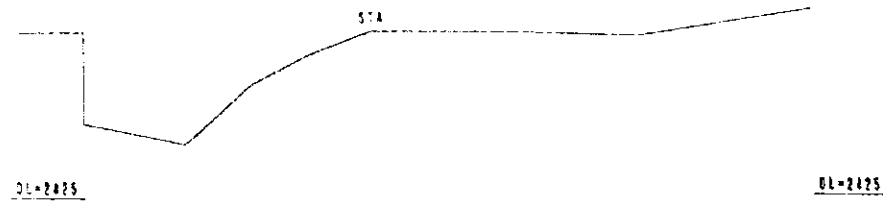
JAPAN INTERNATIONAL COOPERATION AGENCY  
REGION 14 ADMINISTRATION

DRAWING NO.  
KUR-SECT-03

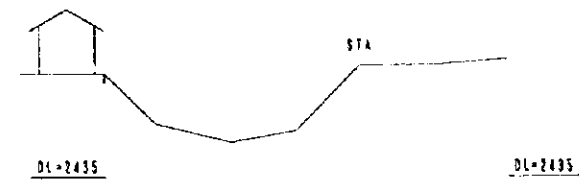
LOCATION OF RIVER CROSS SECTION  
KURTUME (KUR) RIVER (03/05)

Cross Section S=1:200

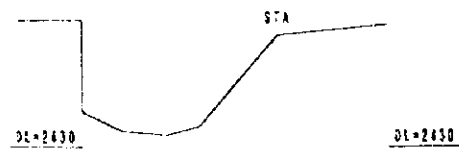
KUR-19



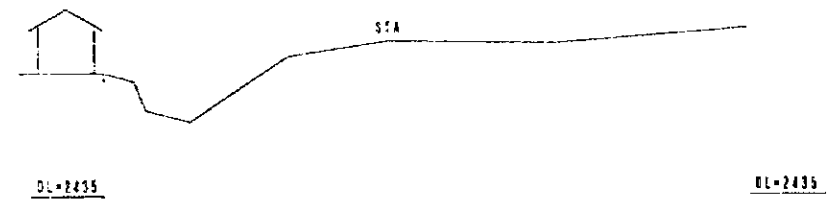
KUR-22



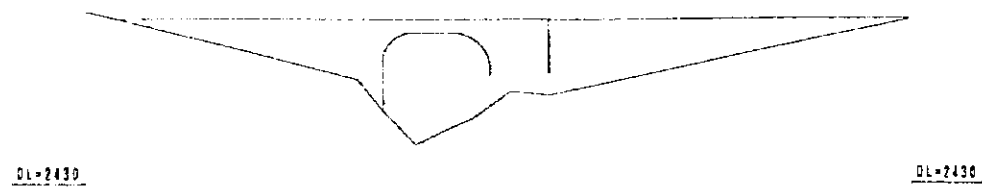
KUR-20



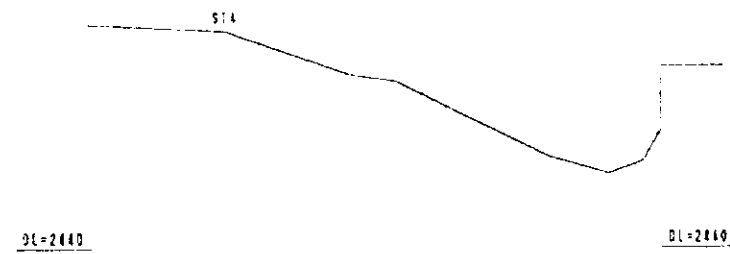
KUR-23



KUR-21



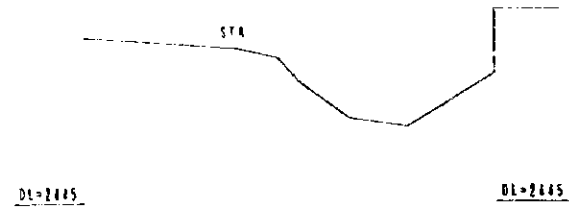
KUR-24



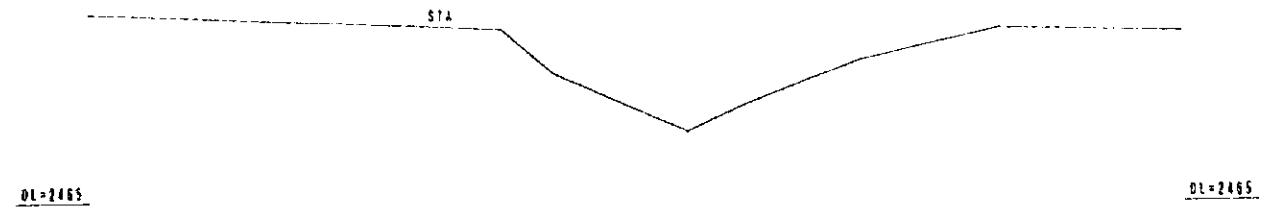
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION IN ADMINISTRATION	
DRAWING NO. KGR-SECT-04	LOCATION OF RIVER CROSS SECTION KURTUME (KUR) RIVER (04/06)

Cross Section S=1:200

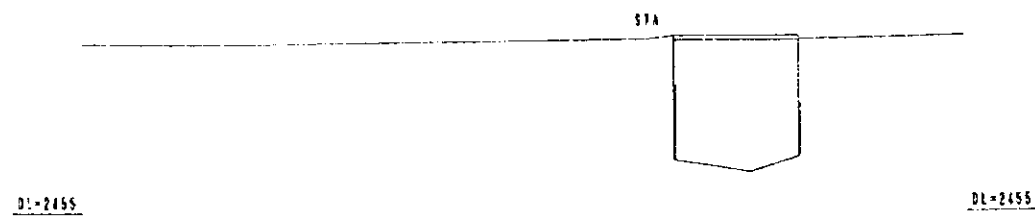
KUR-25



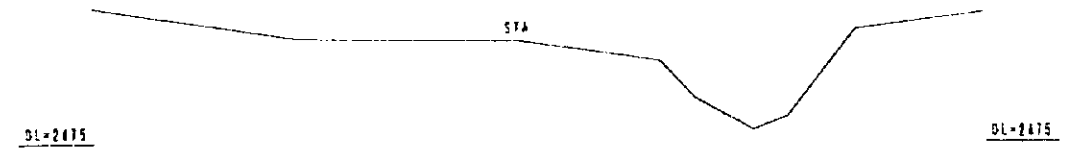
KUR-28



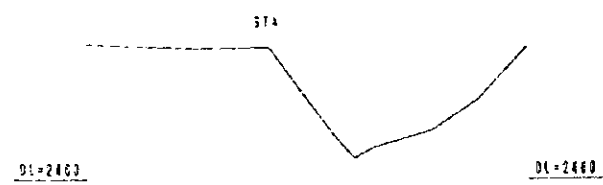
KUR-26



KUR-29



KUR-27



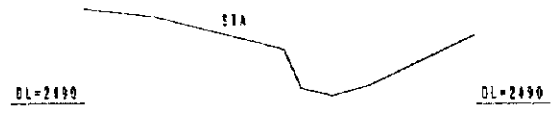
KUR-30



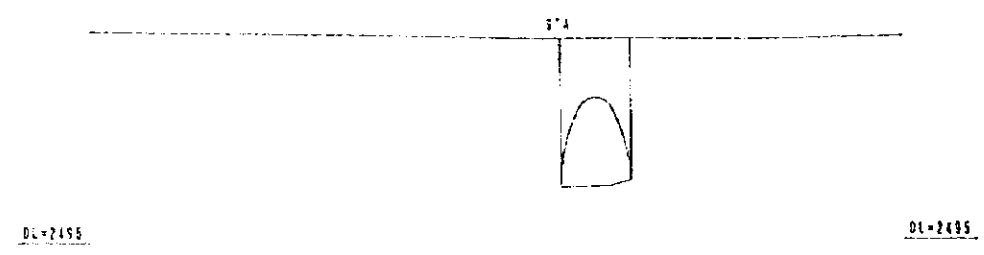
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KUR-SECT-05	LOCATION OF RIVER CROSS SECTION KURTOME (KUR) RIVER (05/06)

Cross Section S=1:200

KUR-31



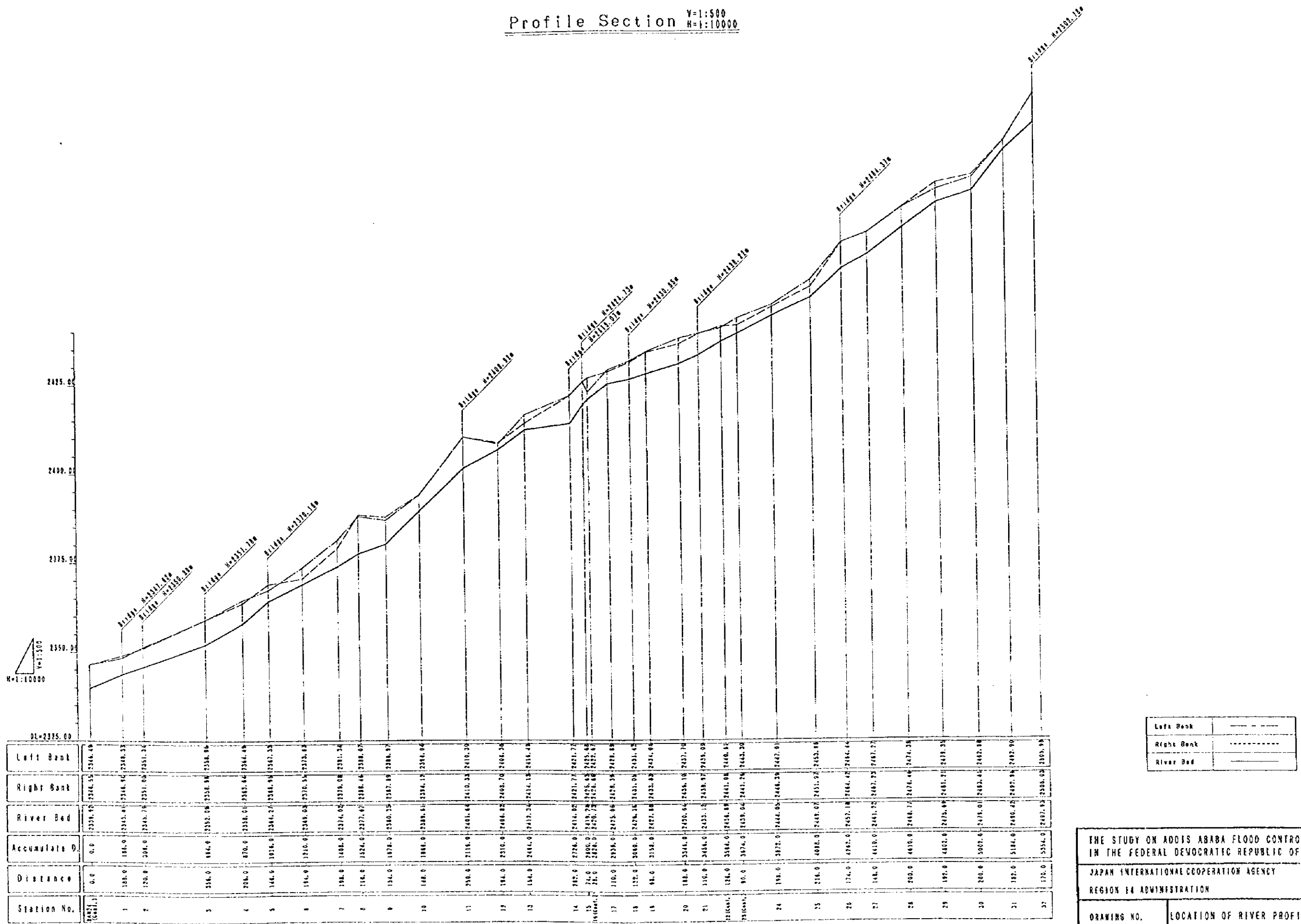
KUR-32



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KUR-SECT-08	LOCATION OF RIVER CROSS SECTION KURTUME (KUR) RIVER (06/06)

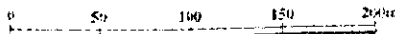
Profile Section V=1:500  
H=1:10000

DL=2375.00  
V=1:500  
H=1:10000



Left Bank	- - - - -
Right Bank	- · - · - ·
River Bed	—————

Left Bank	2376.00	2377.50	2378.50	2380.00	2381.50	2383.00	2384.50	2386.00	2387.50	2389.00	2390.50	2392.00	2393.50	2395.00	2396.50	2398.00	2399.50	2401.00	2402.50	2404.00	2405.50	2407.00	2408.50	2410.00	2411.50	2413.00	2414.50	2416.00	2417.50	2419.00	2420.50	2422.00	2423.50	2425.00	2426.50	2428.00	2429.50	2431.00	2432.50	2434.00	2435.50	2437.00	2438.50	2440.00	2441.50	2443.00	2444.50	2446.00	2447.50	2449.00	2450.50	2452.00	2453.50	2455.00	2456.50	2458.00	2459.50	2461.00	2462.50	2464.00	2465.50	2467.00	2468.50	2470.00	2471.50	2473.00	2474.50	2476.00	2477.50	2479.00	2480.50	2482.00	2483.50	2485.00	2486.50	2488.00	2489.50	2491.00	2492.50	2494.00	2495.50	2497.00	2498.50	2500.00	2501.50	2503.00	2504.50	2506.00	2507.50	2509.00	2510.50	2512.00	2513.50	2515.00	2516.50	2518.00	2519.50	2521.00	2522.50	2524.00	2525.50	2527.00	2528.50	2530.00	2531.50	2533.00	2534.50	2536.00	2537.50	2539.00	2540.50	2542.00	2543.50	2545.00	2546.50	2548.00	2549.50	2551.00	2552.50	2554.00	2555.50	2557.00	2558.50	2560.00	2561.50	2563.00	2564.50	2566.00	2567.50	2569.00	2570.50	2572.00	2573.50	2575.00	2576.50	2578.00	2579.50	2581.00	2582.50	2584.00	2585.50	2587.00	2588.50	2590.00	2591.50	2593.00	2594.50	2596.00	2597.50	2599.00	2600.50	2602.00	2603.50	2605.00	2606.50	2608.00	2609.50	2611.00	2612.50	2614.00	2615.50	2617.00	2618.50	2620.00	2621.50	2623.00	2624.50	2626.00	2627.50	2629.00	2630.50	2632.00	2633.50	2635.00	2636.50	2638.00	2639.50	2641.00	2642.50	2644.00	2645.50	2647.00	2648.50	2650.00	2651.50	2653.00	2654.50	2656.00	2657.50	2659.00	2660.50	2662.00	2663.50	2665.00	2666.50	2668.00	2669.50	2671.00	2672.50	2674.00	2675.50	2677.00	2678.50	2680.00	2681.50	2683.00	2684.50	2686.00	2687.50	2689.00	2690.50	2692.00	2693.50	2695.00	2696.50	2698.00	2699.50	2701.00	2702.50	2704.00	2705.50	2707.00	2708.50	2710.00	2711.50	2713.00	2714.50	2716.00	2717.50	2719.00	2720.50	2722.00	2723.50	2725.00	2726.50	2728.00	2729.50	2731.00	2732.50	2734.00	2735.50	2737.00	2738.50	2740.00	2741.50	2743.00	2744.50	2746.00	2747.50	2749.00	2750.50	2752.00	2753.50	2755.00	2756.50	2758.00	2759.50	2761.00	2762.50	2764.00	2765.50	2767.00	2768.50	2770.00	2771.50	2773.00	2774.50	2776.00	2777.50	2779.00	2780.50	2782.00	2783.50	2785.00	2786.50	2788.00	2789.50	2791.00	2792.50	2794.00	2795.50	2797.00	2798.50	2800.00	2801.50	2803.00	2804.50	2806.00	2807.50	2809.00	2810.50	2812.00	2813.50	2815.00	2816.50	2818.00	2819.50	2821.00	2822.50	2824.00	2825.50	2827.00	2828.50	2830.00	2831.50	2833.00	2834.50	2836.00	2837.50	2839.00	2840.50	2842.00	2843.50	2845.00	2846.50	2848.00	2849.50	2851.00	2852.50	2854.00	2855.50	2857.00	2858.50	2860.00	2861.50	2863.00	2864.50	2866.00	2867.50	2869.00	2870.50	2872.00	2873.50	2875.00	2876.50	2878.00	2879.50	2881.00	2882.50	2884.00	2885.50	2887.00	2888.50	2890.00	2891.50	2893.00	2894.50	2896.00	2897.50	2899.00	2900.50	2902.00	2903.50	2905.00	2906.50	2908.00	2909.50	2911.00	2912.50	2914.00	2915.50	2917.00	2918.50	2920.00	2921.50	2923.00	2924.50	2926.00	2927.50	2929.00	2930.50	2932.00	2933.50	2935.00	2936.50	2938.00	2939.50	2941.00	2942.50	2944.00	2945.50	2947.00	2948.50	2950.00	2951.50	2953.00	2954.50	2956.00	2957.50	2959.00	2960.50	2962.00	2963.50	2965.00	2966.50	2968.00	2969.50	2971.00	2972.50	2974.00	2975.50	2977.00	2978.50	2980.00	2981.50	2983.00	2984.50	2986.00	2987.50	2989.00	2990.50	2992.00	2993.50	2995.00	2996.50	2998.00	2999.50	3001.00	3002.50	3004.00	3005.50	3007.00	3008.50	3010.00	3011.50	3013.00	3014.50	3016.00	3017.50	3019.00	3020.50	3022.00	3023.50	3025.00	3026.50	3028.00	3029.50	3031.00	3032.50	3034.00	3035.50	3037.00	3038.50	3040.00	3041.50	3043.00	3044.50	3046.00	3047.50	3049.00	3050.50	3052.00	3053.50	3055.00	3056.50	3058.00	3059.50	3061.00	3062.50	3064.00	3065.50	3067.00	3068.50	3070.00	3071.50	3073.00	3074.50	3076.00	3077.50	3079.00	3080.50	3082.00	3083.50	3085.00	3086.50	3088.00	3089.50	3091.00	3092.50	3094.00	3095.50	3097.00	3098.50	3000.00	3001.50	3003.00	3004.50	3006.00	3007.50	3009.00	3010.50	3012.00	3013.50	3015.00	3016.50	3018.00	3019.50	3021.00	3022.50	3024.00	3025.50	3027.00	3028.50	3030.00	3031.50	3033.00	3034.50	3036.00	3037.50	3039.00	3040.50	3042.00	3043.50	3045.00	3046.50	3048.00	3049.50	3051.00	3052.50	3054.00	3055.50	3057.00	3058.50	3060.00	3061.50	3063.00	3064.50	3066.00	3067.50	3069.00	3070.50	3072.00	3073.50	3075.00	3076.50	3078.00	3079.50	3081.00	3082.50	3084.00	3085.50	3087.00	3088.50	3090.00	3091.50	3093.00	3094.50	3096.00	3097.50	3099.00	3100.50	3102.00	3103.50	3105.00	3106.50	3108.00	3109.50	3111.00	3112.50	3114.00	3115.50	3117.00	3118.50	3120.00	3121.50	3123.00	3124.50	3126.00	3127.50	3129.00	3130.50	3132.00	3133.50	3135.00	3136.50	3138.00	3139.50	3141.00	3142.50	3144.00	3145.50	3147.00	3148.50	3150.00	3151.50	3153.00	3154.50	3156.00	3157.50	3159.00	3160.50	3162.00	3163.50	3165.00	3166.50	3168.00	3169.50	3171.00	3172.50	3174.00	3175.50	3177.00	3178.50	3180.00	3181.50	3183.00	3184.50	3186.00	3187.50	3189.00	3190.50	3192.00	3193.50	3195.00	3196.50	3198.00	3199.50	3201.00	3202.50	3204.00	3205.50	3207.00	3208.50	3210.00	3211.50	3213.00	3214.50	3216.00	3217.50	3219.00	3220.50	3222.00	3223.50	3225.00	3226.50	3228.00	3229.50	3231.00	3232.50	3234.00	3235.50	3237.00	3238.50	3240.00	3241.50	3243.00	3244.50	3246.00	3247.50	3249.00	3250.50	3252.00	3253.50	3255.00	3256.50	3258.00	3259.50	3261.00	3262.50	3264.00	3265.50	3267.00	3268.50	3270.00	3271.50	3273.00	3274.50	3276.00	3277.50	3279.00	3280.50	3282.00	3283.50	3285.00	3286.50	3288.00	3289.50	3291.00	3292.50	3294.00	3295.50	3297.00	3298.50	3300.00	3301.50	3303.00	3304.50	3306.00	3307.50	3309.00	3310.50	3312.00	3313.50	3315.00	3316.50	3318.00	3319.50	3321.00	3322.50	3324.00	3325.50	3327.00	3328.50	3330.00	3331.50	3333.00	3334.50	3336.00	3337.50	3339.00	3340.50	3342.00	3343.50	3345.00	3346.50	3348.00	3349.50	3351.00	3352.50	3354.00	3355.50	3357.00	3358.50	3360.00	3361.50	3363.00	3364.50	3366.00	3367.50	3369.00	3370.50	3372.00	3373.50	3375.00	3376.50	3378.00	3379.50	3381.00	3382.50	3384.00	3385.50	3387.00	3388.50	3390.00	3391.50	3393.00	3394.50	3396.00	3397.50	3399.00	3400.50	3402.00	3403.50	3405.00	3406.50	3408.00	3409.50	3411.00	3412.50	3414.00	3415.50	3417.00	3418.50	3420.00	3421.50	3423.00	3424.50	3426.00	3427.50	3429.00	3430.50	3432.00	3433.50	3435.00	3436.50	3438.00	3439.50	3441.00	3442.50	3444.00	3445.50	3447.00	3448.50	3450.00	3451.50	3453.00	3454.50	3456.00	3457.50	3459.00	3460.50	3462.00	3463.50	3465.00	3466.50	3468.00	3469.50	3471.00	3472.50	3474.00	3475.50	3477.00	3478.50	3480.00	3481.50	3483.00	3484.50	3486.00	3487.50	3489.00	3490.50	3492.00	3493.50	3495.00	3496.50	3498.00	3499.50	3501.00	3502.50	3504.00	3505.50	3507.00	3508.50	3510.00	3511.50	3513.00	3514.50	3516.00	3517.50	3519.00	3520.50	3522.00	3523.50	3525.00	3526.50	3528.00	3529.50	3531.00	3532.50	3534.00	3535.50	3537.00	3538.50	3540.00	3541.50	3543.00	3544.50	3546.00	3547.50	3549.00	3550.50	3552.00	3553.50	3555.00	3556.50	3558.00	3559.50	3561.00	3562.50	3564.00	3565.50	3567.00	3568.50	3570.00	3571.50	3573.00	3574.50	3576.00	3577.50	3579.00	3580.50	3582.00	3583.50	3585.00	3586.50	3588.00	3589.50	3591.00	3592.50	3594.00	3595.50	3597.00	3598.50	3600.00	3601.50	3603.00	3604.50	3606.00	3607.50	3609.00	3610.50	3612.00	3613.50	3615.00	3616.50	3618.00	3619.50	3621.00	3622.50	3624.00	3625.50	3627.00	3628.50	3630.00	3631.50	3633.00	3634.50	3636.00	3637.50	3639.00	3640.50	3642.00	3643.50	3645.00	3646.50	3648.00	3649.50	3651.00	3652.50	3654.00	3655.5
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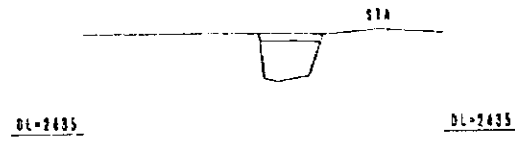
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 11 ADMINISTRATION	
DRAWING NO.	
KURL-PLAN-01	

Cross Section S=1:200

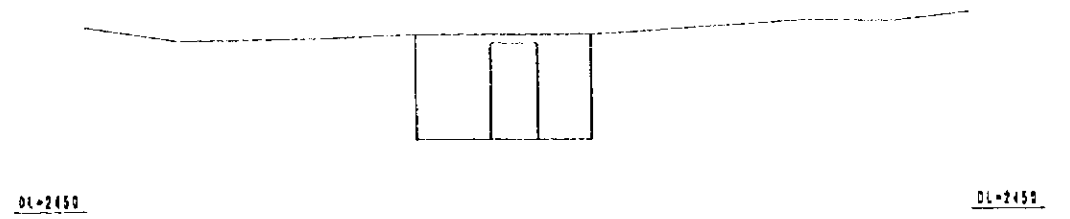
KURL-01



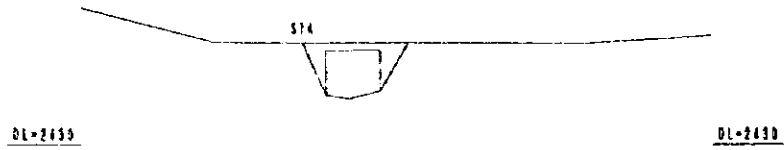
KURL-04



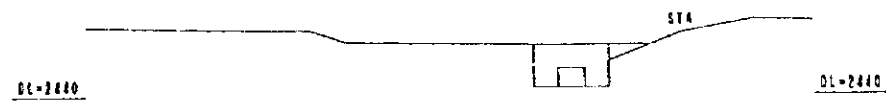
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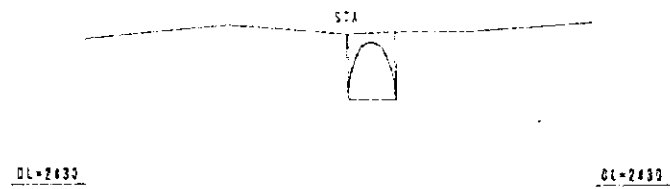
KURL-02



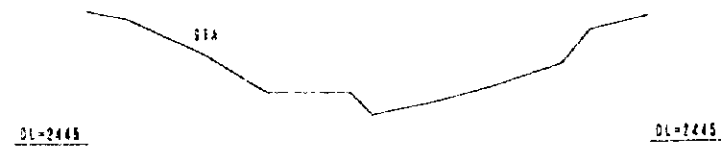
KURL-05



KURL-03



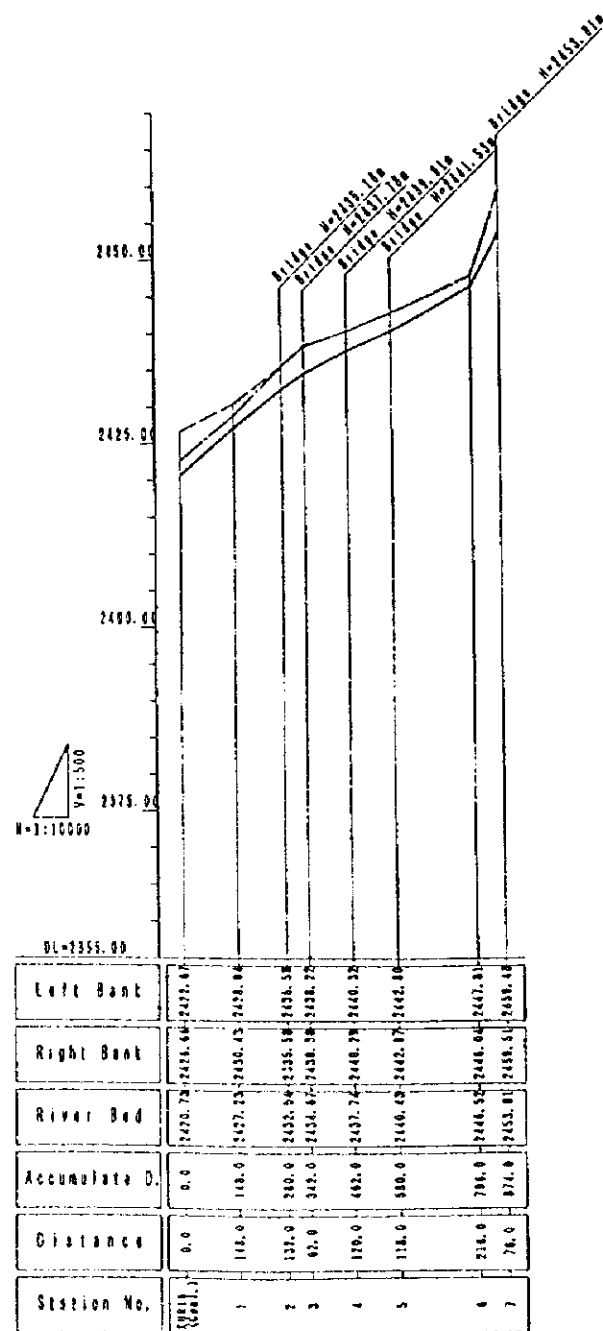
KURL-06



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KURL-SECT-01	LOCATION OF RIVER CROSS SECTION KURTUME (KURL) RIVER (01/01)



Profile Section  $V=1:500$   
 $H=1:10000$

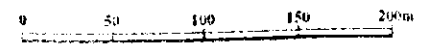


Left Bank	———
Right Bank	-----
River Bed	- . - . -

THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY  
REGION 14 ADMINISTRATION

DRAWING NO. KURL-SECT-01	LOCATION OF RIVER PROFILE SECTION KURTUME (KURL) RIVER (01/01)
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THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

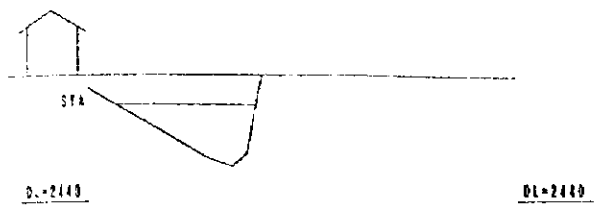
JAPAN INTERNATIONAL COOPERATION AGENCY  
REGION 14 ADMINISTRATION

DRAWING NO.	
KURRI-PLAN-01	

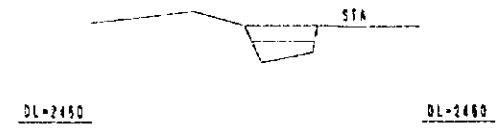
No. 30,42

Cross Section S=1:200

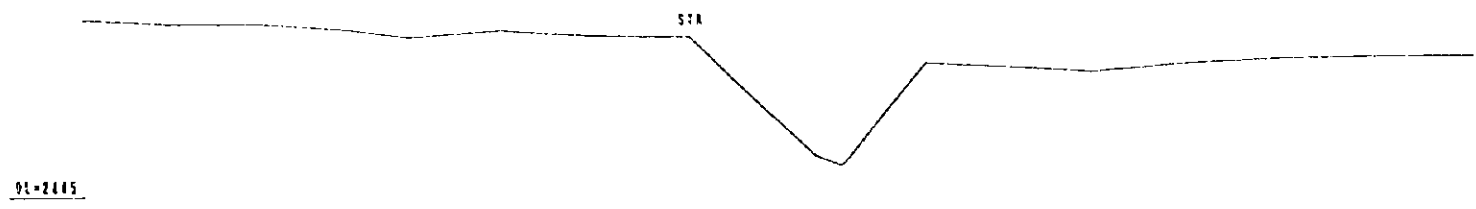
KURRI-01



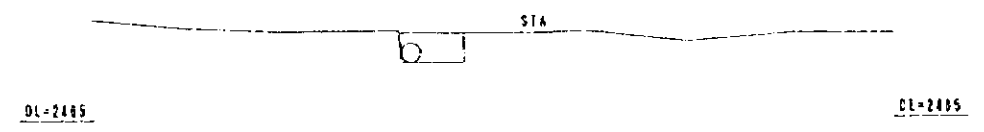
KURRI-04



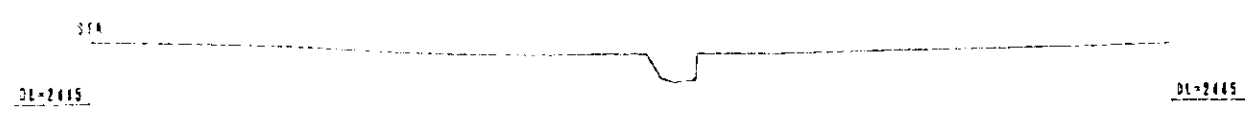
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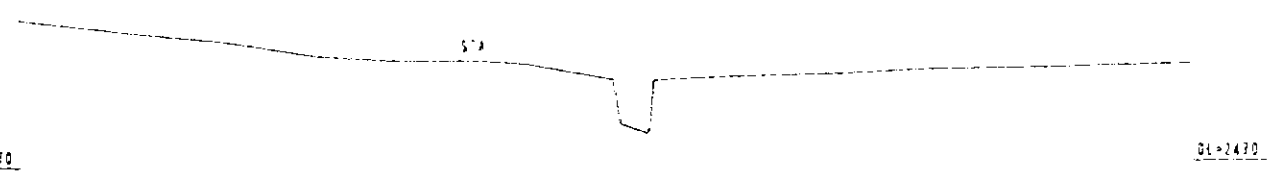
KURRI-05



KURRI-03



KURRI-06

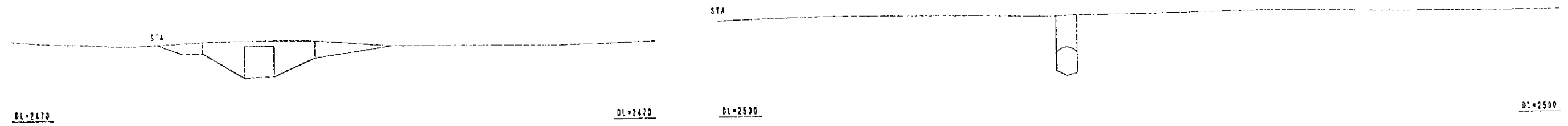


THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KURRI-SECT-01	LOCATION OF RIVER CROSS SECTION KURTUME (KURRI) RIVER (01/02)

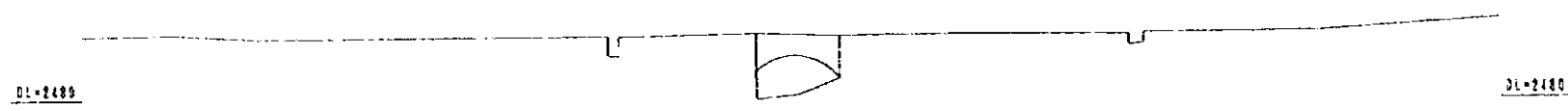
Cross Section S=1:200

KURRI-17

KURRI-10



KURRI-08

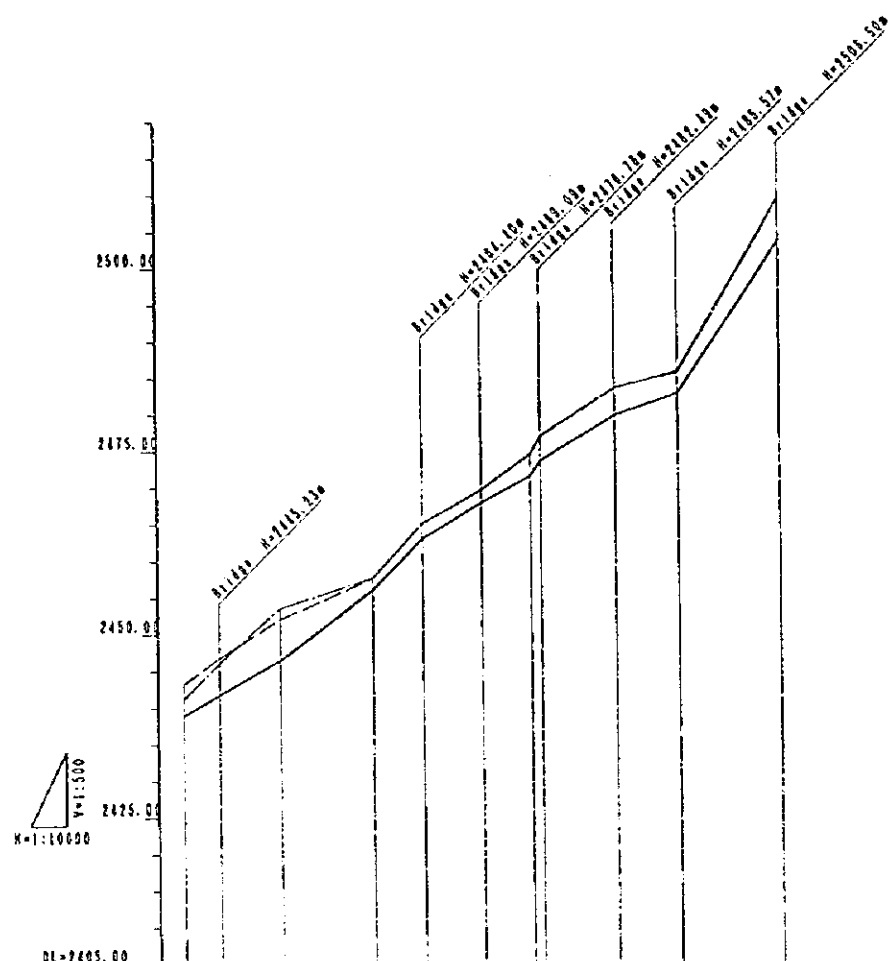


KURRI-09



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KURRI-SECT-02	LOCATION OF RIVER CROSS SECTION KURTUME (KURRI) RIVER (02/02)

Profile Section V=1:500  
H=1:10000

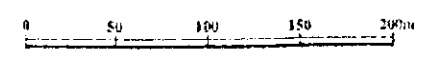


DL=2405.00									
Left Bank	2431.06	2442.30	2458.24	2468.24	2488.88	2497.50	2498.65	2498.88	2491.45
Right Bank	2421.00	2446.85	2452.18	2465.16	2485.75	2491.50	2492.00	2492.00	2491.45
River Bed	2421.00	2421.00	2421.00	2421.00	2421.00	2421.00	2421.00	2421.00	2421.00
Accumulate D.	0.0	100.0	200.0	322.0	480.0	621.0	747.5	858.5	1030.5
Distance	0.0	100.0	200.0	256.0	356.0	456.0	556.0	656.0	772.0
Station No.	1	2	3	4	5	6	7	8	10

Left Bank	———
Right Bank	-----
River Bed	.....

THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
 IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA  
 JAPAN INTERNATIONAL COOPERATION AGENCY  
 REGION 14 ADMINISTRATION

DRAWING NO. KURRI-SECT-01	LOCATION OF RIVER PROFILE SECTION KURTUME (KURRI) RIVER (01/01)
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THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY  
REGION 14 ADMINISTRATION

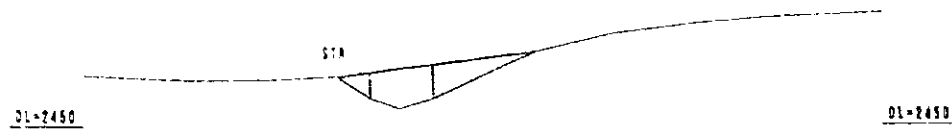
DRAWING NO.	
KURR2-PLAN-01	

1-2-19

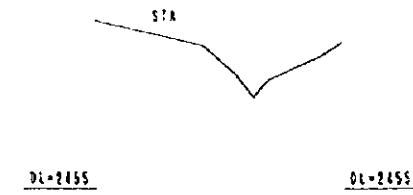
No.30,42

Cross Section S=1:200

KURR2-01



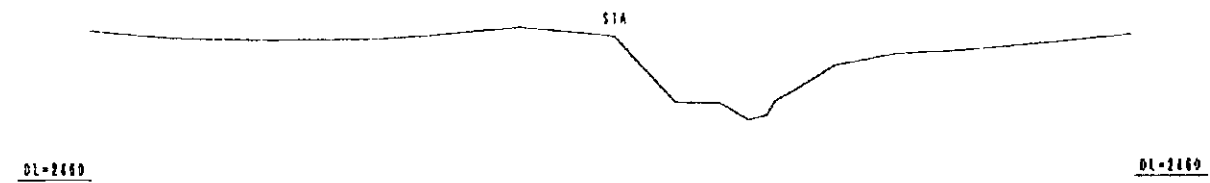
KURR2-04



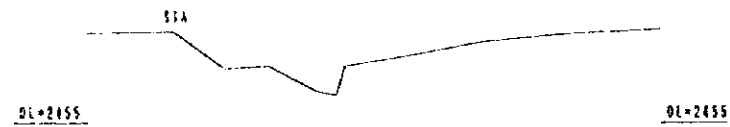
KURR2-02



KURR2-05



KURR2-03

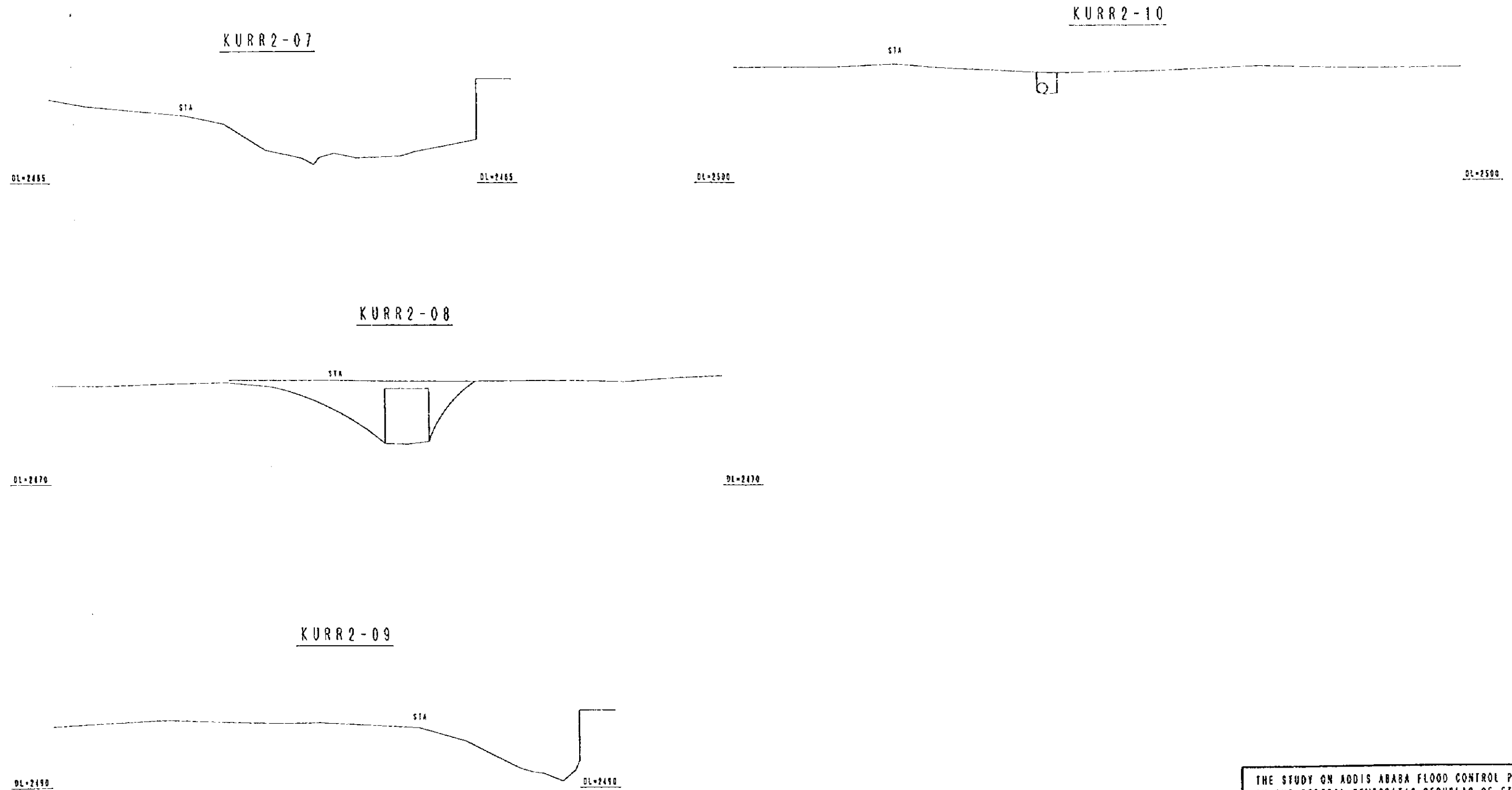


KURR2-06



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KURR2-SECT-01	LOCATION OF RIVER CROSS SECTION KURTUME (KURR2) RIVER (01/02)

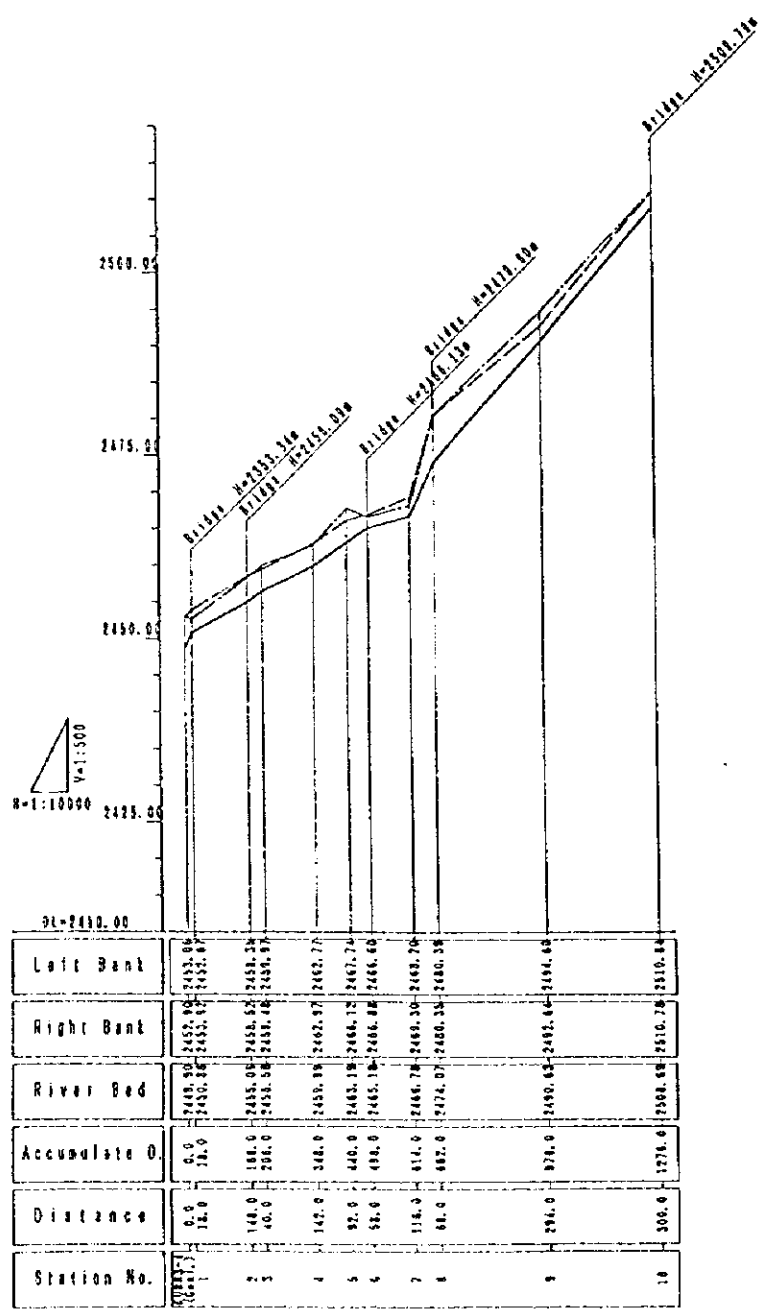
Cross Section S=1:200



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KURR2-SECT-02	LOCATION OF RIVER CROSS SECTION KURTUME (KURR2) RIVER (02/02)



Profile Section V=1:500  
H=1:10000



Left Bank	-----
Right Bank	.....
River Bed	—————

THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY  
REGION 14 ADMINISTRATION

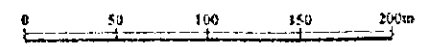
DRAWING NO. LOCATION OF RIVER PROFILE SECTION  
KURR2-SECT-01 KURTUME (KURR2) RIVER (01/01)



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
 IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

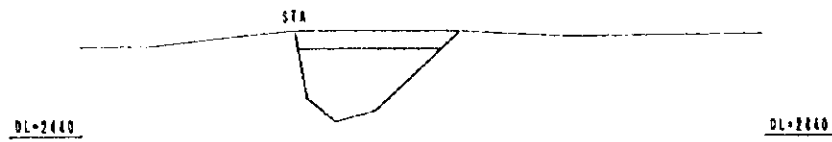
JAPAN INTERNATIONAL COOPERATION AGENCY  
 REGION 14 ADMINISTRATION

DRAWING NO.  
 KURR3-PLAN-01

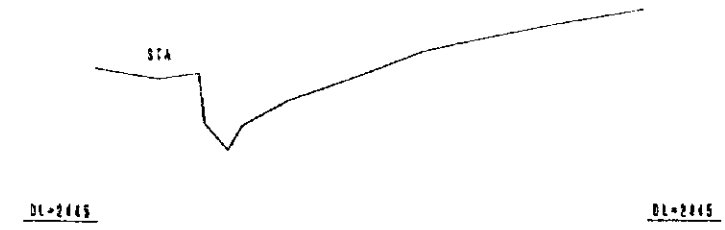


Cross Section S=1:200

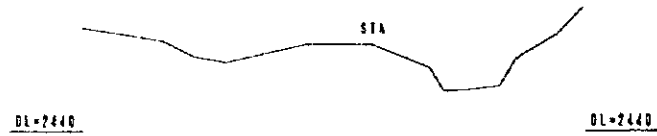
KURR3-01



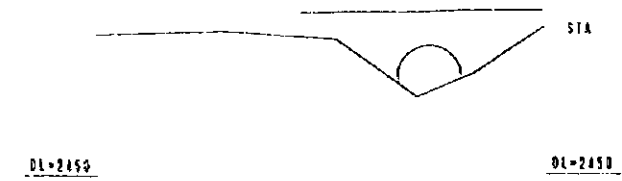
KURR3-04



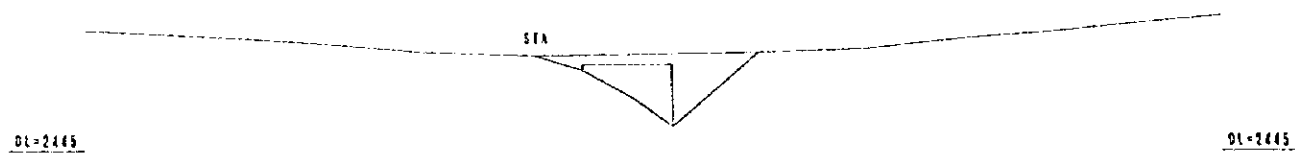
KURR3-02



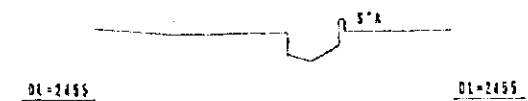
KURR3-05



KURR3-03



KURR3-06



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

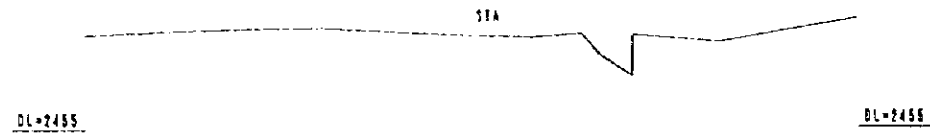
JAPAN INTERNATIONAL COOPERATION AGENCY  
REGION 14 ADMINISTRATION

DRAWING NO.  
KURR3-SECT-01

LOCATION OF RIVER CROSS SECTION  
KURTUME (KURR3) RIVER (01/03)

Cross Section S=1:200

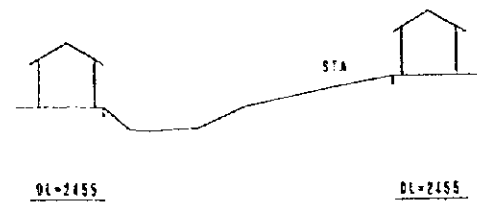
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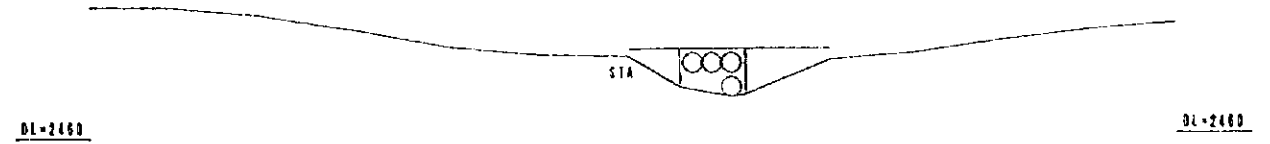
KURR3-10



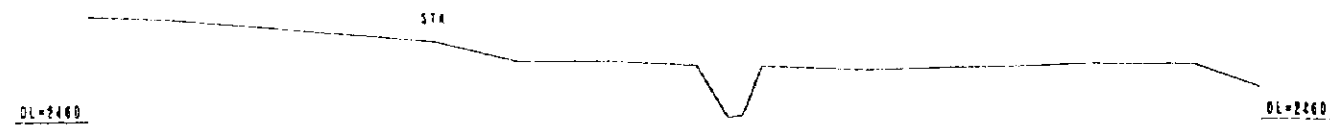
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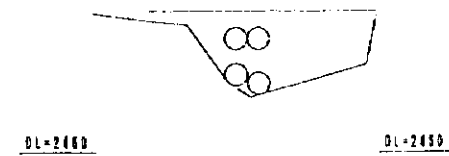
KURR3-11



KURR3-09

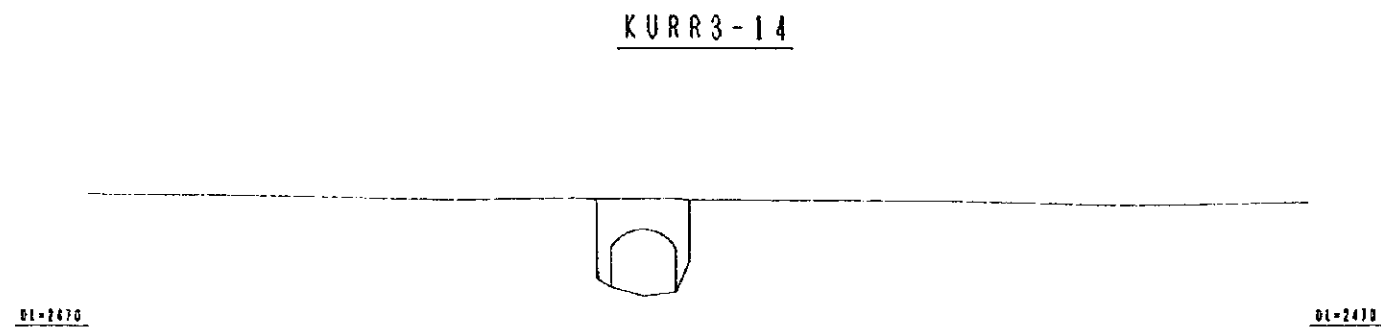
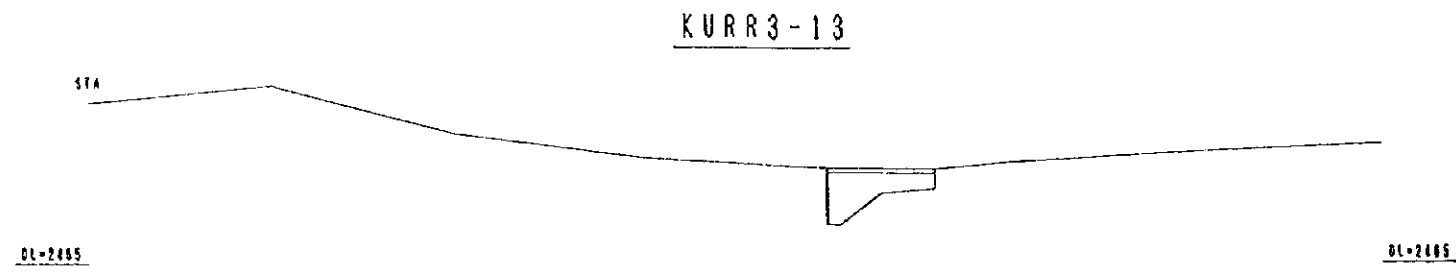


KURR3-12



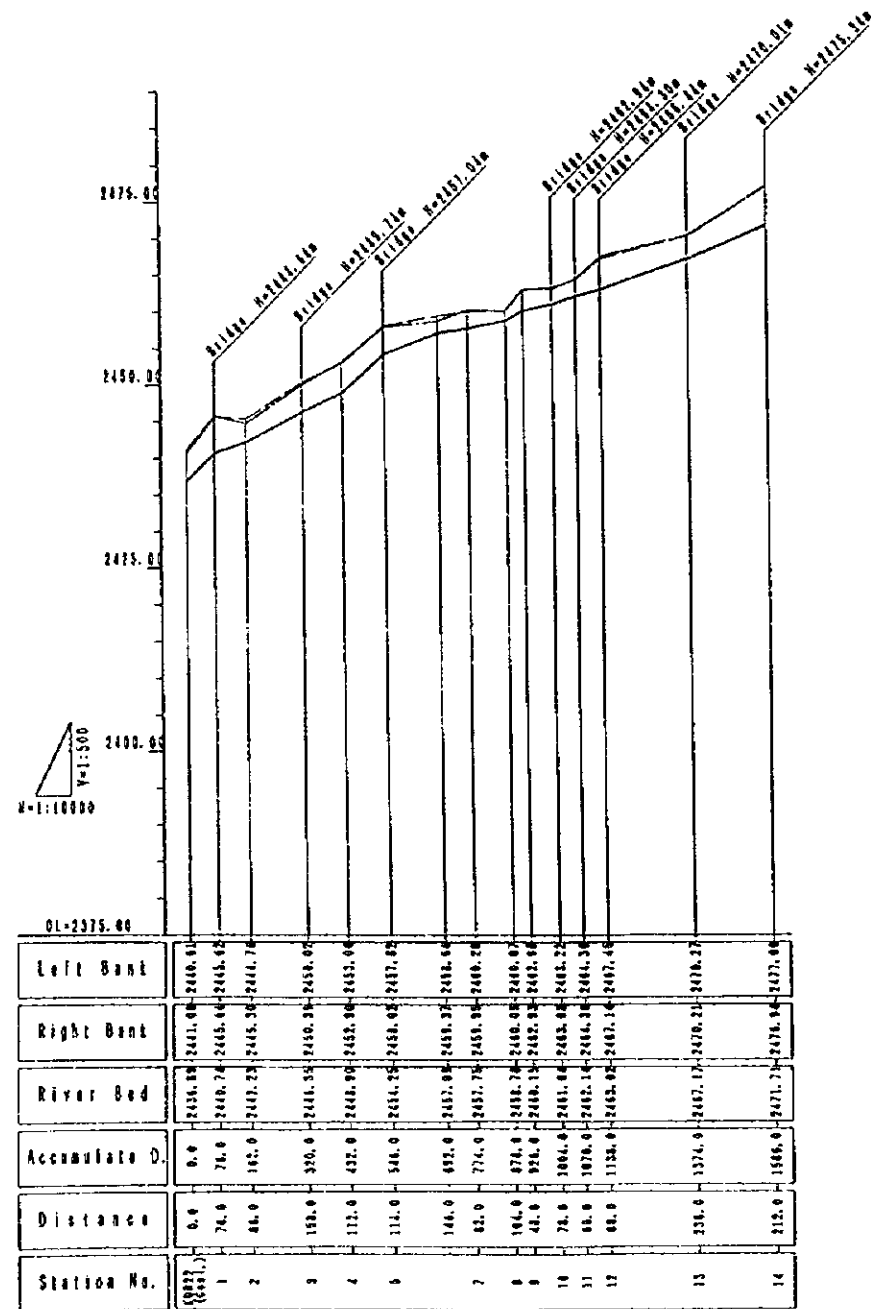
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KURR3-SECT-02	LOCATION OF RIVER CROSS SECTION KURTUWE (KURR3) RIVER (02/03)

Cross Section S=1:200



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA	
JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION	
DRAWING NO. KURR3-SECT-03	LOCATION OF RIVER CROSS SECTION KURTUME (KURR3) RIVER (03/03)

Profile Section V=1:500  
H=1:10000



Left Bank	—————
Right Bank	-----
River Bed	.....

THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT  
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA  
JAPAN INTERNATIONAL COOPERATION AGENCY  
REGION 14 ADMINISTRATION

DRAWING NO. LOCATION OF RIVER PROFILE SECTION  
KURRS-SECT-01 KURTUME (KURRS) RIVER (01/01)