

付属資料

調査団の構成

担当	氏名	所属
団長	鈴木 治夫	国際協力事業団 無償資金協力業務部 次長
農村開発計画	功刀 旭	農用地整備公団 業務部業務課課長
灌漑排水計画	遠矢 勇作	日本工営株式会社
施設設計	岡部 寛	日本工営株式会社
農村インフラ整備	田中 重之	日本工営株式会社
積算	水島 清隆	日本工営株式会社

面談者及び調査団カウンターパートリスト (1/2)

A. 面談者

1. 農林省

Mr. Inkong MAHAVONG	大臣
Mr. Sitaheng RASPONA	副大臣
Mr. Kham Ovane BOUPHA	副大臣
Mr. Moanty VONGPHANOULON	官房長官
Mr. Kou CHANSINA	計画局長
Mr. Bounthong XAISIDA	森林局自然保護課長

2. 外務省

Mrs. Kanika PHOMMACHANH	第2局次長
Mrs. Samsanouk VONGSACK	第2局員

3. タゴン農場

Mr. Keo CHANTAVONG	副農場長
安尾 正元 氏	JICA専門家
竹森 英治 氏	JICA専門家

4. 在ラオス国日本大使館

早川 照夫 氏	特命全権大使
真鍋 寛 氏	一等書記官

5. その他政府機関

Mr. Inpasith THATHONGSAKD	農林省灌漑・小水力発電公社副総裁
Mr. Vankham THAMMACHAK	農林省灌漑・小水力発電公社副総裁
Mr. Khamphone SAIGNASANE	電力公社副総裁
Mr. Samlith SILAPHET	上水道公社副総裁
Mr. Oth KEOMANIVONG	上水道公社業務主任
Mr. Phila KHAMKOHOMHPHANH	ビエンチャン首都圏庁運輸通信建設局次長
Mr. Phom THONG	サイタニ郡庁農業課長
Mr. Houmpheng SAVATPHONH	サイタニ群庁農業課長代理

面談者及び調査団カウンターパートリスト (2/2)

Mr. Linseng DOUANGSAUANH	建設省都市開発計画公社総裁
Mr. Khamsy VIXAIGNOL	農林省第一灌漑公社副総裁
Mr. Vongphachan VONGSIKEO	農林省第二灌漑公社総裁
Mr. Boumy RATTANATRAY	農林省第二灌漑公社副総裁
Mr. Kham Souk Lang Ka VANG	ビエンチャン首都圏庁灌漑公社副総裁
Mr. Richard L. BROWN	ラオ-オーストラリア灌漑計画建設事務所長
Mr. Svisavath CHASAME	ラオ-オーストラリア灌漑計画事務所長

6. メコン委員会 (バンコック)

Mr. Caspar J. KAMP	事務局長
Mr. Vanpract CHARLES	スタッフ
Mr. Wouter L. ARRIENS	スタッフ
Mr. Harrison JOHN	スタッフ
Mr. Choung PHANRAJSAVONG	スタッフ
Mr. Somphong MONGKHONVILAY	スタッフ
Mr. Khamphiou VISSAPRA	スタッフ
川合 尚 氏	JICA専門家
石坂 邦美 氏	JICA専門家

B. 調査団カウンターパート

Mr. Alom THAVONESOUK	農林省計画局次長
Dr. Soulasith UPRAVANH	ビエンチャン首都圏庁農業部
Mr. Somphone THAMMAVONG	農林省農業普及局
Mr. Oudon SISONGKHAM	農林省計画局
Mr. Pay THOUN	ビエンチャン首都圏庁灌漑部

協議議事録

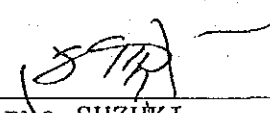
MINUTES OF DISCUSSIONS
ON
THE BASIC DESIGN STUDY
FOR
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT
IN
THE SUBURBS OF VIENTIANE

In response to the request of the Government of Lao People's Democratic Republic, the Government of Japan decided to conduct a Basic Design Study for Grant Aid to the Agricultural and Rural Development Project in the Suburbs of Vientiane (hereinafter referred to as the Project) and entrusted the Study to the Japan International Cooperation Agency (hereinafter referred to as JICA). JICA sent to Lao People's Democratic Republic the Basic Design Study Team headed by Mr. Haruo SUZUKI, Deputy Director of Grant Aid Project Management Department, JICA from November 21, 1989 to December 11, 1989.


The Team had a series of discussions on the Project with the officials concerned of the Government of Lao People's Democratic Republic, and also conducted a field survey in the proposed Project area. The Lao Team was headed by Mr. Alom THAVONESOUK, Deputy Director of Planning Department, Ministry of Agriculture and Forestry. The members of the Lao Team and those of the JICA Basic Design Study Team are given in Annex II hereto attached.

As a result of the Basic Design Study, both parties agreed to recommend to their respective Governments that the major points of understanding reached between them, attached hereto as Annex I, should be examined towards the realization of the Project.

Vientiane, November 28, 1989



Haruo SUZUKI
Leader
Basic Design Study Team
JICA



Alom THAVONESOUK
Leader
Lao Team
Ministry of Agriculture and
Forestry

1. OBJECTIVES OF THE PROJECT

The main objectives of the Project are i) to increase rice production to ease the chronic shortage of rice in the Vientiane Municipality through irrigation development and introduction of improved farming practices and ii) to provide rural infrastructures for enhancement of social and agricultural activities of farmers.

2. PROJECT AREA

The Project area is located at about 6 km to 25 km north of Vientiane city along the national roads of routes 10 and 13 as shown in the attached Location Map.

3. EXECUTING AGENCY

The Ministry of Agriculture and Forestry of the Government of Lao PDR will be responsible for execution of the Project.

4. INCEPTION REPORT

The Government of Lao PDR accepted and agreed to the Inception Report submitted by the JICA Basic Design Study Team on November 23, 1989.

5. SCOPE OF THE PROJECT WORKS

The scope of the Project works will be determined based on the results of the Basic Design Study and within the scope of Japan's economic cooperation program. The scope of the Project works provisionally agreed between the JICA Study Team and the Government of Lao PDR is outlined as follows;

- (a) Irrigation development for a net area of 1,200 ha, which mostly extends along the national roads of routes 10 and 13 and will be commanded by the Headreach and the West Main Canal No.1
- (b) Provision of the Main Pump Station, whose civil works component will be provided in full scale for irrigation of 1,700 ha-area but numbers of pumping equipment to be installed will be limited so that the total pumping capacity will meet the water requirements for irrigation of 1,200 ha-area
- (c) Provision of the Headreach and the Regulating Pond, both with capacities sufficient to irrigate 1,700 ha-area

- (d) Provision of main and secondary canals, drains and farm roads with their related structures for 1,200 ha-area
- (e) On-farm works for 1,200 ha-area
- (f) Improvement of rural infrastructures for five villages, i.e. B. Pha Khao, B. Sa Phang Muk, B. Don Noun, B. Xai and B. Na Khe.
- (g) Provision of an office building and a warehouse
- (h) Provision of equipment and tools for operation and maintenance of the Project

6. REQUEST OF THE GOVERNMENT OF LAO PDR

The Basic Design Study Team will convey to the Government of Japan the request of the Government of Lao PDR that the Government of Japan will take necessary measures i) to cooperate in implementation of the Project within the scope of the Japan's Grant Aid Program and ii) to extend technical cooperation in operation of the Project after its completion.

7. JAPAN'S GRANT AID SYSTEM

The Government of Lao PDR has understood the Japan's Grant Aid System explained by the Survey Team, which includes a principle of use of a Japanese consulting firm and a Japanese general contractor for implementation of the Project.

8. UNDERTAKINGS OF THE GOVERNMENT OF LAO PDR

In connection with implementation of the Project, the Government of Lao PDR will make the following arrangements on its responsibility;

- (a) To secure the lands necessary for construction of the Project facilities
- (b) To clear and reclaim the above lands as required before commencement of the construction
- (c) To provide electricity distribution lines to the proposed sites of the Main Pump Station, the Project office and the warehouse
- (d) To make arrangements on exemption of customs duties and customs clearance of materials and equipment brought from abroad for the purpose of the implementation of

the Project.

- (e) To utilize and maintain properly and effectively the facilities and equipment provided under the Grant Aid
- (f) To make necessary arrangements on provision of the facilities and equipment, which are directly related to the Project but are not covered by the scope of the Project works to be implemented under the Grant Aid

9. TENTATIVE IMPLEMENTATION PROGRAM

It is expected that, subject to the consent of the Government of Lao PDR and the Government of Japan, the implementation of the Project works will be made in three stages as indicated in the attached Tentative Implementation Schedule, and that the Project works will be implemented stage by stage after making budgetary arrangement in each stage and based on the results of the consultation to be made between the both Governments.

10. PRIVILEGES AND IMMUNITIES

Details of the privileges and immunities to be provided by the Government of Lao PDR will be specified in the Exchange of Notes between the Government of Japan and the Government of Lao PDR, which will constitute part of the Project Agreement to be concluded.

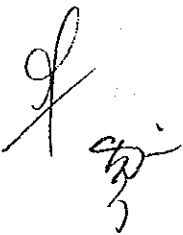
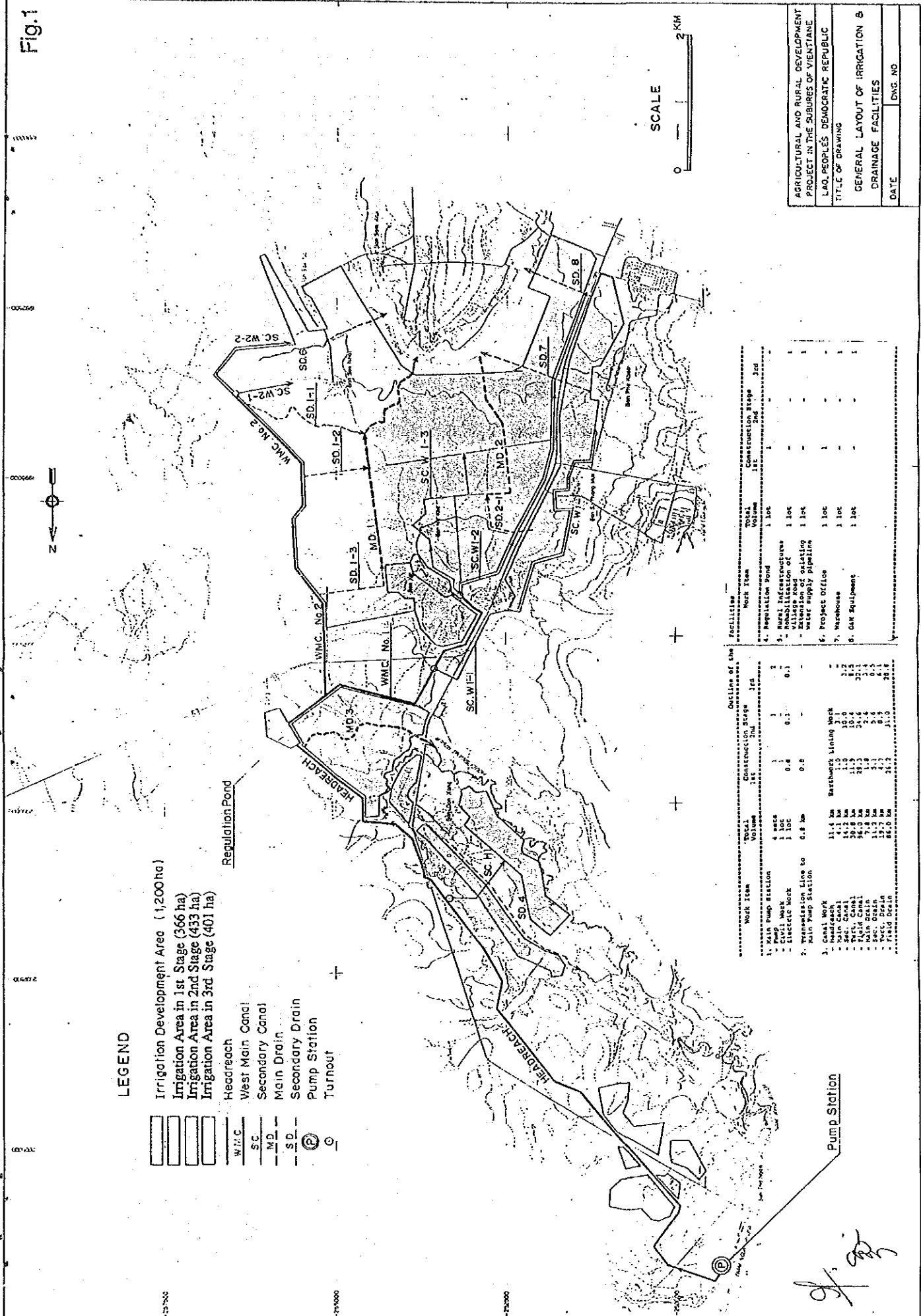


Fig.1



LEGEND

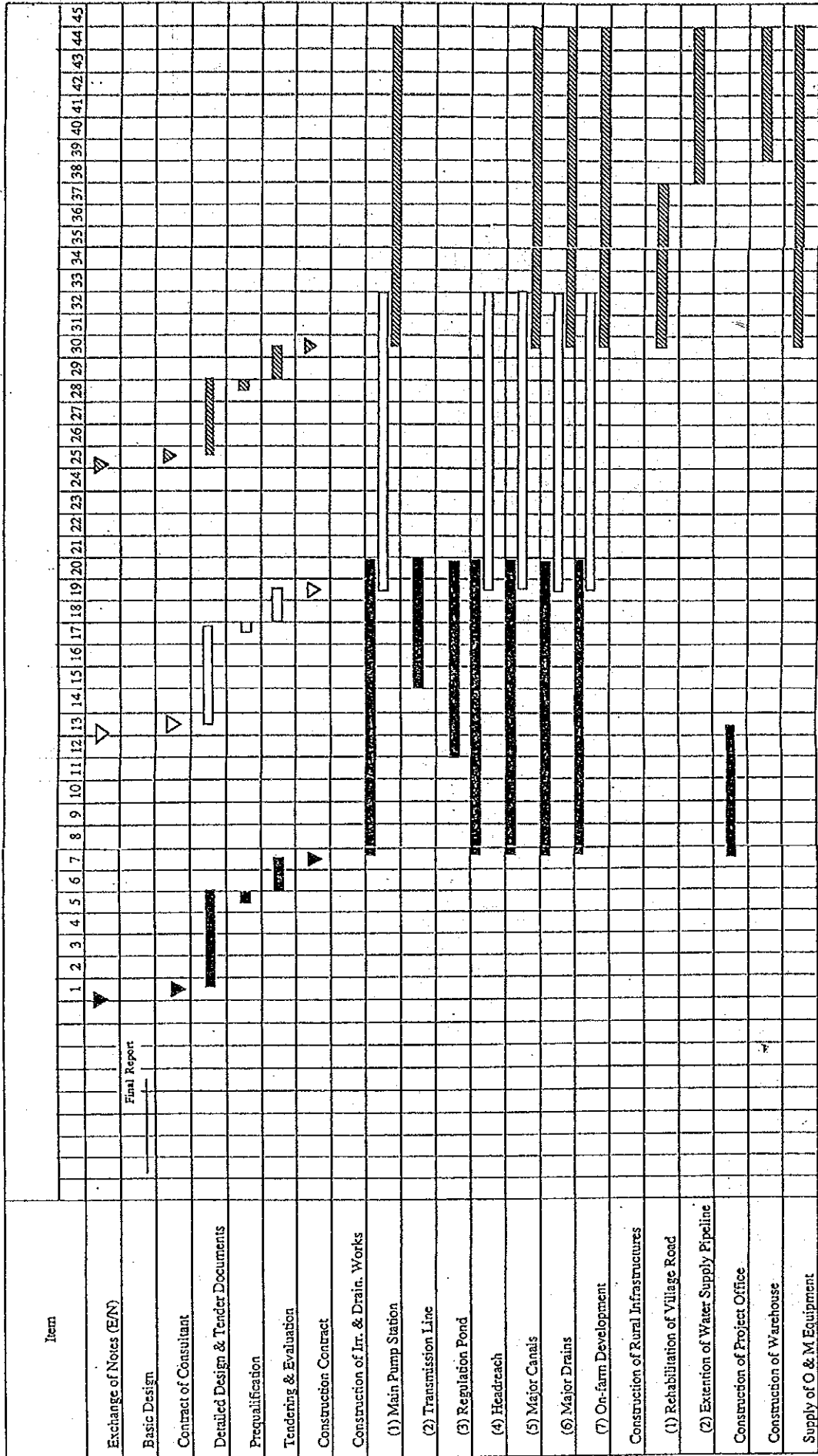
- Irrigation Development Area (1,200 ha)
- Irrigation Area in 1st Stage (366 ha)
- Irrigation Area in 2nd Stage (433 ha)
- Irrigation Area in 3rd Stage (401 ha)
- Headreach
- West Main Canal
- Secondary Canal
- Main Drain
- Secondary Drain
- Pump Station
- Turnout

Work Item	Outline of the Construction Stage		Facilities	
	1st	2nd	Work Item	Volume
1. Pump Station	4 sets	2	4. Regulation Pond	1 lot
- Civil Work	1 lot	0.3	5. Rural Infrastructure	1 lot
- Electric Work	0.8	0.3	- Rehabilitation of village road	1 lot
2. Transmission Line to Main Pump Station	0.8 km	-	- waste supply pipeline	1 lot
3. Canal Work	11.4 km	26.7	6. Project Office	1 lot
- Main Canal	4.1 km	11.0	7. Warehouse	1 lot
- Sec. Canal	14.2 km	15.7	8. O&M Equipment	1 lot
- Main Drain	28.0 km	31.3		
- Main Drain	7.8 km	8.4		
- Main Drain	13.7 km	15.3		
- Main Drain	8.5 km	9.5		
- Field Drain	86.0 km	91.0		

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Fig.2

Tentative Implementation Schedule of the Project



▽ : Stage I

▬ : Stage II

▨ : Stage III

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LIST OF PARTICIPANTS

A. GOVERNMENT OF LAO PDR

Mr. Alom Thavonesouk	:	Deputy Director, Planning Department, MAF (Team Leader)
Dr. Soulasith Upravanh	:	Agricultural Service of Vientiane Municipality (Deputy)
Mr. Somphone Thammavong	:	Agricultural Extension Department, MAF
Mr. Oudon Sisongkham	:	Planning Department, MAF
Mr. Pay Thoun	:	Irrigation Service of Vientiane Municipality

B. JICA BASIC DESIGN STUDY TEAM

Mr. Haruo Suzuki	:	Japan International Cooperation Agency
Mr. Akira Kunugi	:	Japan Agricultural Land Development Agency
Mr. Yusaku Toya	:	Nippon Koei Co., Ltd.
Mr. Hiroshi Okabe	:	Nippon Koei Co., Ltd.
Mr. Shigeyuki Tanaka	:	Nippon Koei Co., Ltd.

Country Data

I 基礎指標

1. 国名 ラオス人民民主共和国
 首都 ビエンチャン 人口 21万人(1987年)
 独立年月日 1975年12月2日
2. 国土・人口(1988年)
 面積 236,800 km² 人口 3,940,000人 人口密度 17人/km²
 人口増加率 2.9% 都市人口比率 15% 平均寿命 50才
3. 政体
 ラオス人民革命党の率いる民主共和制
4. 宗教
 仏教
5. 言語
 ラオス語
6. 民族
 タイ系(ラオ、黒タイ族等) 60%、プロトネシア系、中国系
7. 教育
 成人識字率(15才~45才) 98.75% (1985年)
 初等学校就学率 89.5% (1980年)
8. 通貨レート
 通貨単位 キップ(KIP)
 レート 720キップ(対US\$) 1989年
9. 気候・地勢・緯度
 ラオスはその国境を中国、ミャンマー、タイ、カンボジア、ヴェトナムに接する内陸国

で、ほぼ日本の本州に匹敵する国土を有する。熱帯気候のため高温多湿で、雨期(5月～10月)と乾期(11月～4月)に分かれている。国土の約80%が標高200m～3,000mの間にあり、メコン川およびその支川沿いの低地で稲作が行なわれている。北緯14°～22°、東経100°～108°に位置する南北に細長い国である。

II 社会・経済指標

1. 国内総生産(1986年)

GDP 655百万US\$ 一人当りGDP US\$177
 成長率 6.4% (1982年～1986年)

2. 産業構成(1986年)

	農業	工業	サービス業
GDP割合	65.2%	14.0%	20.8%
労働力割合	80.0%	2.2%	17.8%

3. 主要輸出入品目

主要輸出品目

		(百万US\$)				
		1983	1984	1985	1986	1987
(1)	交換可能通貨圏	<u>27.8</u>	<u>31.8</u>	<u>38.4</u>	<u>39.5</u>	<u>35.1</u>
	コーヒー	1.6	0.6	0.3	2.1	0.9
	電力	24.0	26.9	29.4	29.9	13.7
	木材	1.7	3.7	5.6	5.5	19.5
	その他	0.5	0.6	3.1	2.0	1.0
(2)	非交換可能通貨圏	<u>13.0</u>	<u>13.8</u>	<u>19.0</u>	<u>15.6</u>	<u>29.1</u>
	コーヒー	6.9	8.1	8.2	7.1	8.5
	木材	1.3	1.3	5.6	2.3	13.3
	すず、石こう	3.7	2.3	2.5	5.0	4.2
	その他	1.1	2.1	2.7	1.2	3.1
	合 計	<u>40.8</u>	<u>45.6</u>	<u>57.4</u>	<u>55.0</u>	<u>64.2</u>

主要輸入品目

(百万US\$)

	1983	1984	1985	1986	1987
(1) 交換可能通貨圏(非援助)	52.1	35.4	38.3	41.1	55.6
米およびその他食糧	6.3	4.0	1.7	3.0	7.7
石 油	14.0	10.8	10.6	7.8	6.4
機械および鋼材	16.0	10.3	11.1	12.3	14.8
その他	11.0	5.3	7.7	9.4	17.2
私的輸入	4.8	4.9	2.2	3.6	4.5
県レベル輸入	-	-	5.0	5.0	5.0
(2)非交換可能通貨圏(非援助)	40.0	62.0	66.6	71.5	82.4
(3) 援助による輸入	57.3	64.5	88.3	73.1	78.2
交換可能通貨圏	24.2	23.9	39.3	37.3	26.1
非交換可能通貨圏	33.1	40.6	49.0	35.8	52.1
合 計	149.4	161.9	193.2	185.7	216.2
交換可能通貨圏	76.3	59.3	87.3	76.9	81.7
非交換可能通貨圏	73.1	102.6	105.9	108.8	134.5

出典 : Lao PDR, Country Economic Memorandum, Sept.21,1988, World Bank

4. 就労人口 (1985年)

労働人口 1.6百万人

5. インフレ率 (CPI)

(%)

1982/83	1983/84	1984/85	1985/86	1986/87
62.5	27.2	114.7	35.0	6.1

出典 : Lao PDR, Country Economic Memorandum, Sept.21, 1988, World Bank

6. 国際収支

(百万US\$) (推定)

	1983	1984	1985	1986	1987
貿易収支	-108.6	-118.1	-139.5	-130.7	-152.0
輸出	40.8	43.8	53.6	55.0	64.2
輸入	149.4	161.9	193.2	185.7	216.2
サービス	-12.5	-9.8	-7.2	6.6	7.2
移転収支	25.4	44.9	53.1	34.2	30.5
経常収支	-95.7	-82.4	-93.7	-89.9	-114.3
資本収支	76.5	86.0	101.9	106.7	115.0
誤差・脱漏	31.1	-9.1	10.4	-7.7	-11.8
総合収支	11.9	-6.0	18.7	9.1	11.1

出典：Lao PDR, Country Economic Memorandum, Sept.21, 1988, World Bank

7. 為替準備高

(百万US\$)

	1983	1984	1985	1986	1987
金	0.60	0.60	0.60	0.60	0.60
外国為替	18.70	10.56	25.33	31.79	20.60
SDRs	0.14	0.02	0.01	0.16	0.01
外貨準備高合計	19.44	11.28	25.94	32.55	21.21
対外流動債務	-17.45	-15.19	-11.26	-8.80	-8.60
純外貨準備高	1.99	-3.99	14.68	23.75	12.61

出典：Lao PDR, Country Economic Memorandum, Sept.21, 1988, World Bank

8. 対外債務残高

(百万US\$)

	1984	1985	1986	1987
交換可能通貨圏	126.2	145.3	175.4	200.8
非交換可能通貨圏	318.8	341.8	432.2	534.8
合計債務残高	445.0	487.1	607.6	735.6

出典：Lao PDR, Country Economic Memorandum, Sept.21, 1988, World Bank

9. 対日貿易

(百万US\$)

	1981	1982	1983	1984
輸出(木材)	3.79	1.16	2.36	0.63
輸入(機械、金属製品)	8.95	9.79	15.23	5.17

出典：日本側通関統計

10. 財政収支

(百万キップ)

	1983	1984	1985	1986	1987(推定)
歳入	3,496	4,948	10,299	18,503	20,108
歳出	2,945	4,126	10,624	15,883	16,833
経常収支	551	822	-325	2,620	3,275
開発支出	3,750	4,259	10,182	11,732	11,841
財政収支	-3,199	-3,437	-10,507	-9,112	-8,566
資金調達 (対外借款)	3,199	3,437	10,507	9,112	8,566

出典：Lao PDR, Country Economic Memorandum, Sept.21, 1988, World Bank

III 開発指標

1. 国家開発計画

(1) 過去の開発計画 (1975年以降)

3ヶ年計画	1978年～1980年
第1次5ヶ年計画	1981年～1985年

上記開発計画を通じ基礎的食糧自給および農産品輸出のため、農業および林業資源の開発政策に着手し、同時に農民を貨幣経済の流通網下に徐々に取り込むために、都市と地方間の取引の観点から商業を発展させ、かつ、商業および通信の向上をはかることにより、自然経済による後進性を克服することを目指してきた。

第1次5ヶ年計画の目標は次のとおりであった。

- i) 農業および林業生産の増大
- ii) 工業生産の増大
- iii) 経済インフラの改善
- iv) 人的資源の開発、教育、保健制度の向上
- v) 国内商業および貿易の拡大
- vi) 国家歳入、歳出の増大
- vii) 公営企業の能力の強化・向上
- viii) 農業組合を通じた生産の奨励
- ix) 国家企業の強化および公営企業の効率向上

(2) 現行開発計画

第2次5ヶ年計画(1986年～1990年)

一般目標

- i) 食糧自給の達成、食糧以外の輸入の削減、国際収支の改善を目的とする生産および輸出の促進
- ii) 運輸および通信部門の整備
- iii) 基幹要員の養成および人的資源の開発

重点施策

- i) 経済成長の刺激策
既存インフラおよび機械の有効利用、小規模で高収益プロジェクトの選択、生産へのインセンティブ(国営、公営、民営の生産者に対する価格、サービス面での支援)、農業生産の多様化および増大、自国の一次産品のより効率的な使用の促進
- ii) 財政措置
財政赤字の安定と支出抑制および一部税収の増大による財政の均衡の回復、輸出促進による貿易収支および国際収支の改善
- iii) インフレ抑制策
通貨の増大抑制、公的部門の債務の減少、国民所得に占める貯蓄率の向上、価格および補助金政策の改訂
- iv) 計画立案および経済運営面での措置
信頼し得る統計機関の設立、経済政策と外国援助との調整促進、計画の選択・実施・評価能力の向上、行政機関および国営企業の合理化、民間部門の機能面の合理化

第1次及び第2次5ヶ年計画における各セクターの年成長率は次表のように設定されている。

(%)

項目	第1次計画 (1981-1985)	第2次計画 (1986-1990)
農業・畜産	11.85	7.05
作物	5.30	11.30
工業	7.20	13.65
運輸	7.80	11.30
建設	7.10	12.55
国内商業	10.20	7.70
全体	7.00	10.35

(2) 新経済政策

第2次5ヶ年計画で公約された新経済政策の内容は、1986年の第4回最高人民会議の決議文において公表された。それに基づく農業政策は、食糧の増産及び森林保全のための焼き畑農業の縮小に特に重点を置いている。1987年には、第5回中央委員総会により新経済政策の具体的方針が採択され、実施に移された。現在、米価統制の撤廃、輸出入認可の拡大等様々な改革が進行中である。また今後、国による補助の削減、一物一価制の採用、貿易の自由化等により、市場原理経済を導入し、生産活動を振興することが図られている。農業分野においては、従来の集団化政策に替わり、家族経営農家を生産主体として重視することとなった。

1. 国家予算、開発予算

国家予算 (1986年1月～12月)

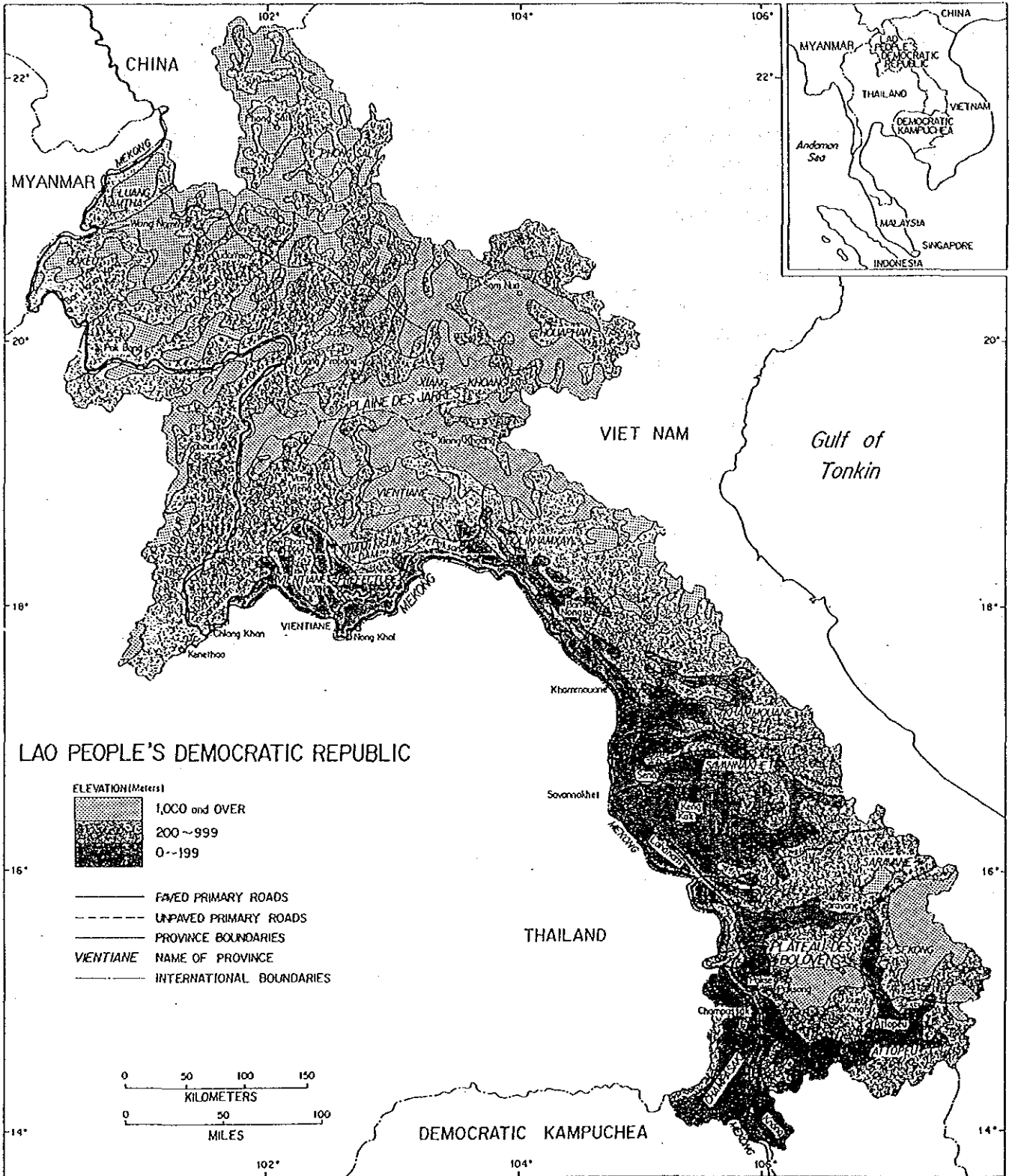
歳入		歳出	
非税収入	16,748百万キップ	経常支出	15,883百万キップ
税収入	1,755 〃	開発支出	11,732 〃
外国援助、他	9,112 〃		
合計	27,615 〃	合計	27,615 〃

開発予算

第2次5ヶ年計画期間中の投資額は次のように計画されている。

部 門	投 資 額 (百万US\$)	割 合 (%)
1. 農業部門	<u>127.0</u>	<u>34.7</u>
(1) 天水稲作および他作物	18.5	5.1
(2) 畜産および水産	27.5	7.5
(3) 灌漑	70.6	19.3
(4) 教育訓練	10.4	2.8
2. 鉱工業およびエネルギー	<u>77.2</u>	<u>21.1</u>
(1) 工業	9.7	2.7
(2) エネルギー	66.6	18.2
(3) その他	0.9	0.2
3. 運輸および通信	<u>106.0</u>	<u>29.0</u>
4. 商業	<u>13.4</u>	<u>3.7</u>
5. 住宅および水道	<u>14.8</u>	<u>4.0</u>
6. 教育	<u>13.9</u>	<u>3.8</u>
7. 保健・衛生	<u>13.2</u>	<u>3.6</u>
8. 合 計	365.5	100.0

出典：Lao PDR, Country Economic Memorandum, July 15, 1986 World Bank



収集資料リスト

1. 地図関係

- | | | |
|---------------|----------------------------|-----|
| (1) 地形図 (青焼き) | 縮尺 : 1/10,000 (1967/68年作成) | 9 葉 |
| (2) 州別行政図 | : 1/1,250,000 (1989年作成) | 2 葉 |
| (3) 人口分布図 | : 1/2,000,000 (1969年作成) | 1 葉 |

2. 統計資料、開発計画関係

- (1) Vientiane Etude Du Schema Directeur Diagnostic Urbain Et Recommandations Preliminaires
Ministry of Communication, Transport, Post and Construction, December 1988
- (2) Urban Development Programme in The Prefecture of Vientiane, Proposal on Rearrangement
of District Boundaries of Hatsaifong and Saithany and Selection of District Centres,
UNDP, August 1988
- (3) Vientiane Schema Directeur Et D' Aménagement Urbain, UNDP, May 1989
- (4) Vientiane Master Plan Study Road Dossier, Urban Development Program for the Vientiane
Prefecture, Ministry of Communication, Transportation, the Post and Telecommunications
and Construction, January 1989
- (5) Basic Data about The Social and Economic Development of Lao People's Democratic
Republic, Ministry of Economy Plan and Finance, 1989

3. 水文資料

- (1) 日・月別気象資料 (気温、湿度、蒸発、風速、日照、雨量)
 - ピエンチャン : 1988~1989
 - タゴン : 1986~1988
 - サラカム : 1987~1989
- (2) ナムグム河日水位
 - タゴン : 1988

添付図面

図面リスト (1/2)

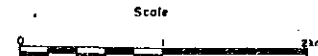
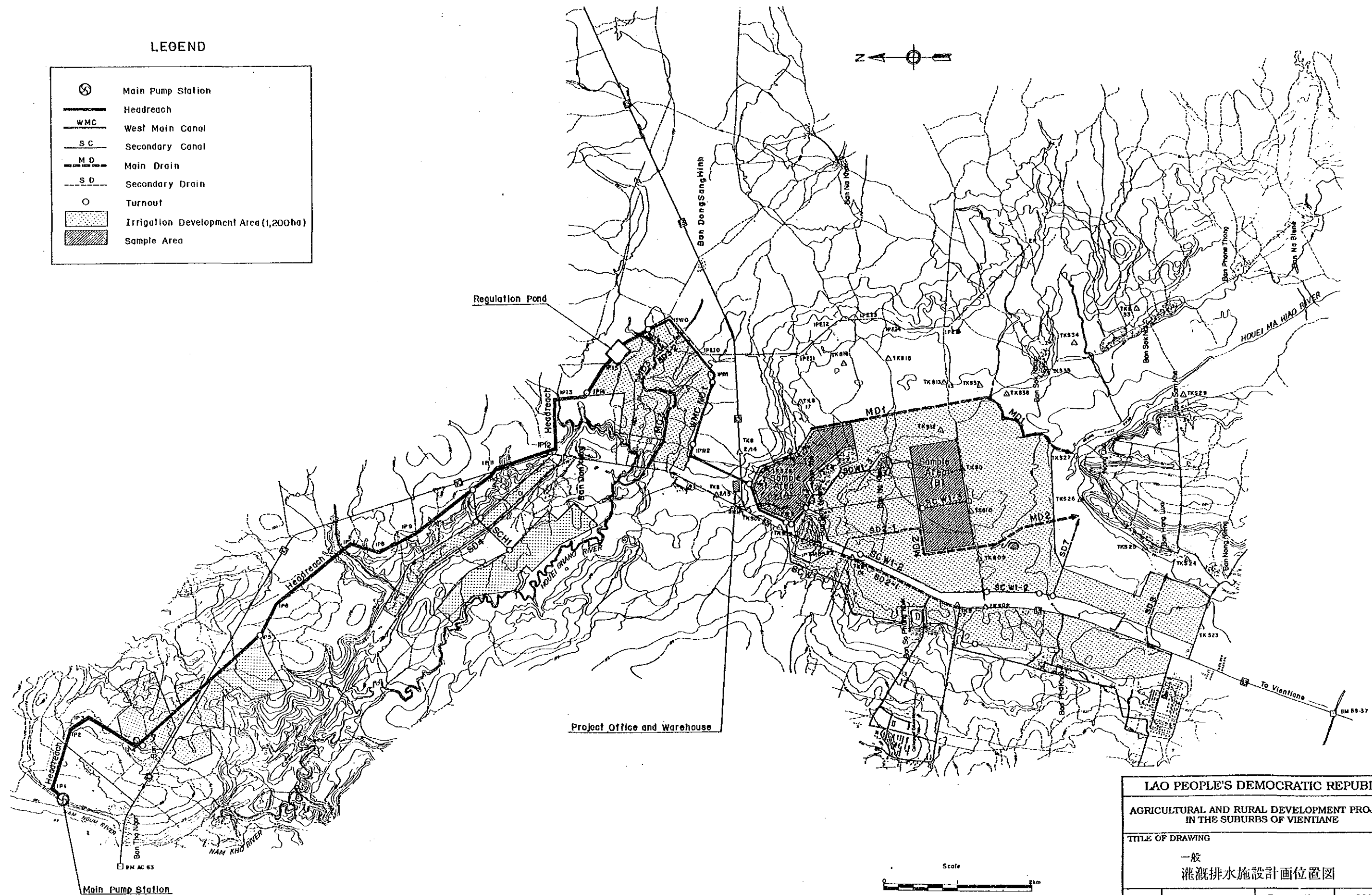
番号	図面番号	図面表題
一般		
1	0001	灌漑排水施設計画位置図
主ポンプ場		
2	1001	平面図及び縦断面図
3	1002	コントロールハウス
4	1003	リペアーショップ
5	1004	吐出水槽
調整池		
6	2001	平面図及び横断面図
7	2002	流入工／余水吐
8	2003	取水工
灌漑用水路及び農道		
9	3001	導水路平面図及び縦断面図(1/2)
10	3002	導水路平面図及び縦断面図(2/2)
11	3003	第1西幹線用水路縦断面図
12	3004	標準断面図
13	3005	水路ライニング標準設計図／階段工
14	3006	コンクリートライニングブロック
15	3007	導水路斜面保護工
16	3008	分水工(1/2)
17	3009	分水工(2/2)
18	3010	制水門
19	3011	サイホン(1/2)
20	3012	サイホン(2/2)
21	3013	余水吐／全量余水吐
22	3014	暗渠
23	3015	クロスドレーン
24	3016	落差工／フットパス

図面リスト (2/2)

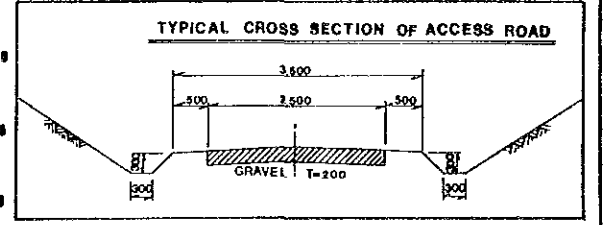
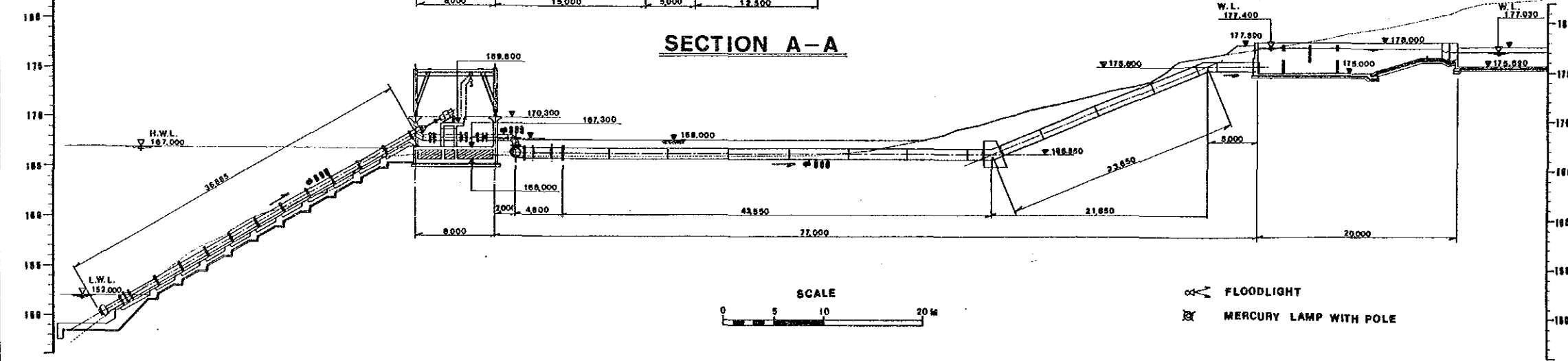
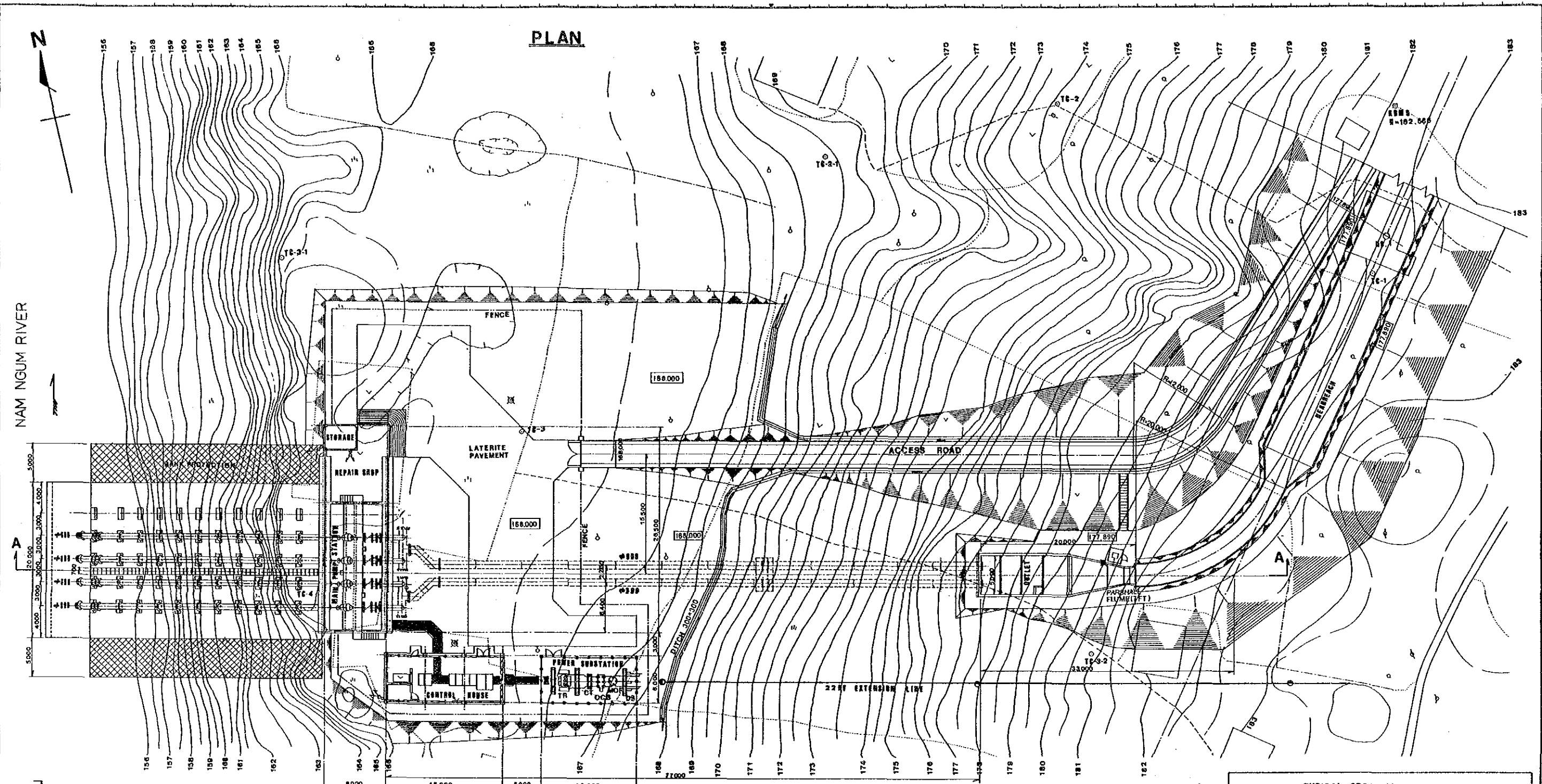
番号	図面番号	図面表題
排水路		
25	4001	幹線排水路(MD-1)縦断面図及び標準断面図
26	4002	幹線排水路(MD-2&MD-3)縦断面図
27	4003	排水暗渠／落差工
末端施設		
28	5001	計画位置図(サンプル地区A)
29	5002	計画位置図(サンプル地区B)
30	5003	分水工
農村インフラ		
31	6001	計画位置図／農村道路
32	6002	飲料水供給施設
維持管理事務所及び資機材倉庫		
33	7001	計画位置図
34	7002	維持管理事務所(1/2)
35	7003	維持管理事務所(2/2)
36	7004	資機材倉庫(1/2)
37	7005	資機材倉庫(2/2)

LEGEND

	Main Pump Station
	Headreach
	West Main Canal
	Secondary Canal
	Main Drain
	Secondary Drain
	Turnout
	Irrigation Development Area (1,200ha)
	Sample Area

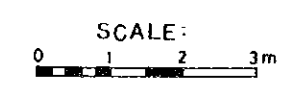
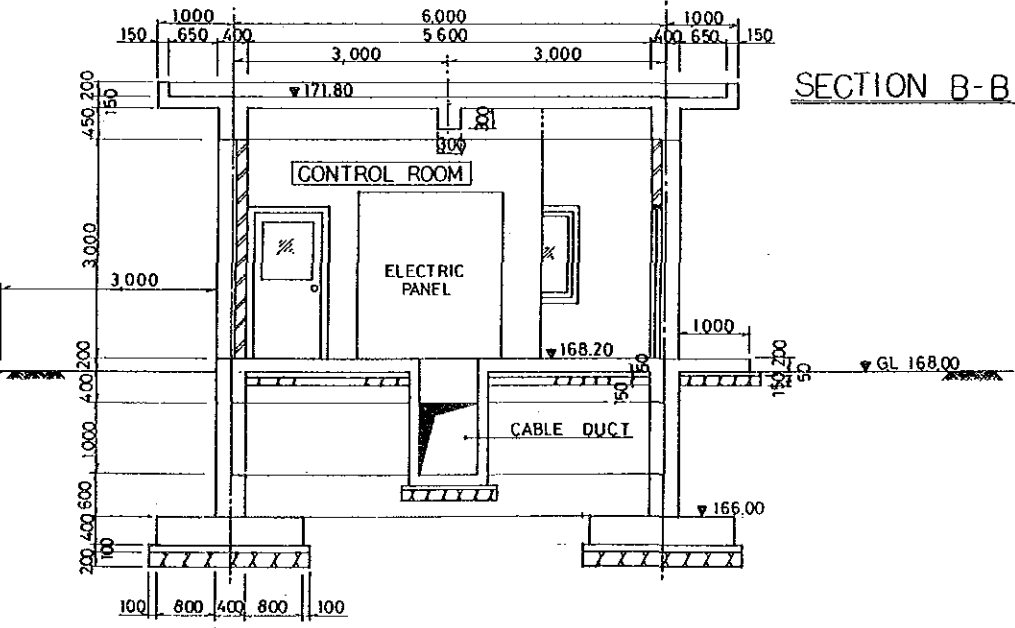
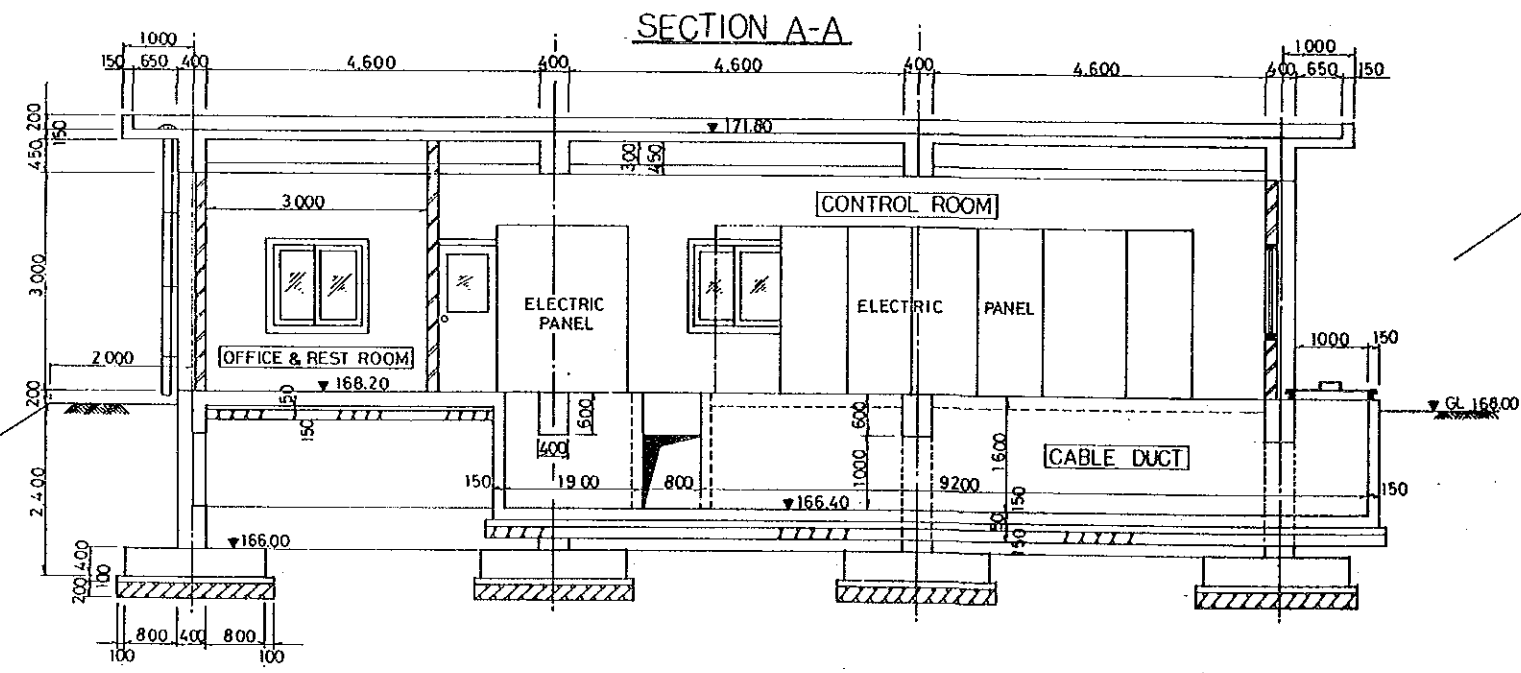
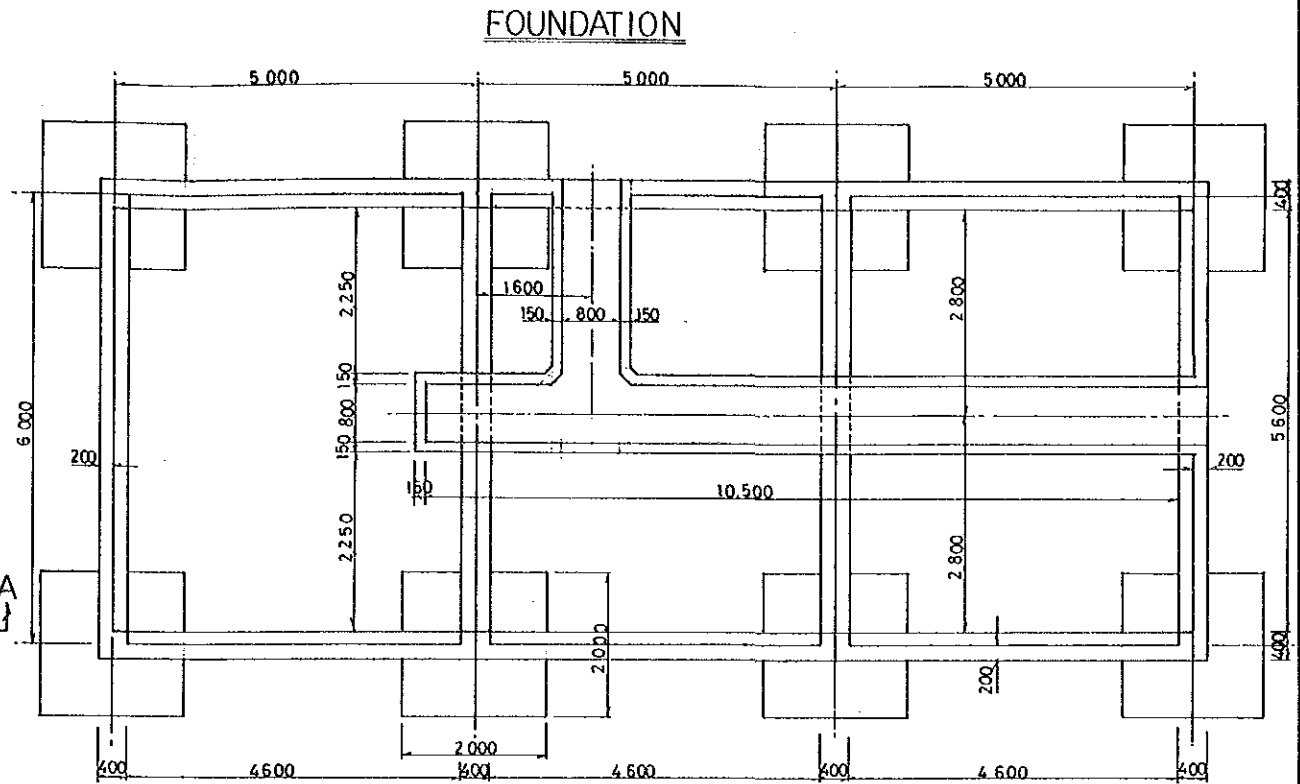
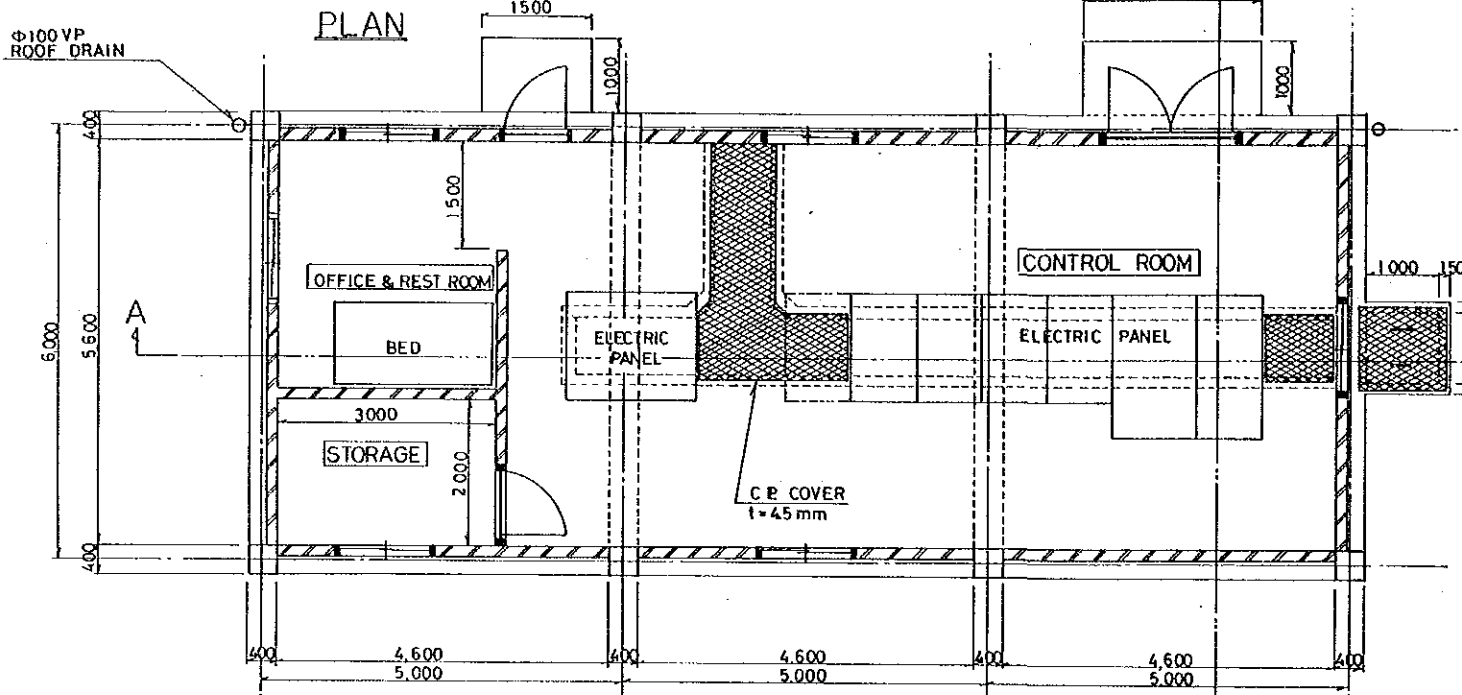


LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING		
一般 灌溉排水施設計画位置図		
Date	Drawing No.	0001
JAPAN INTERNATIONAL COOPERATION AGENCY		

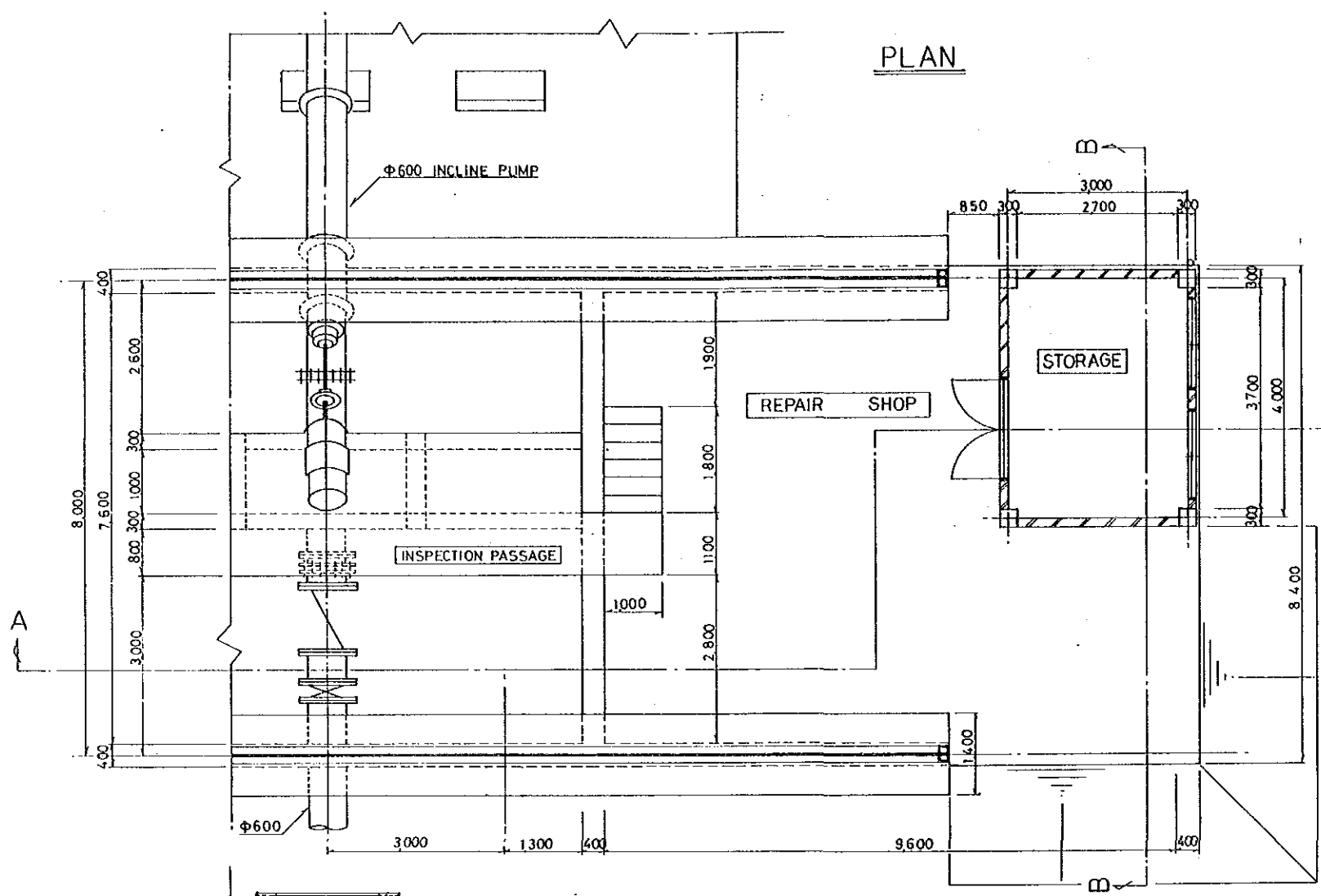


LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 主ポンプ場 平面図及び縦断面図		
Date	Drawing No.	1001
JAPAN INTERNATIONAL COOPERATION AGENCY		

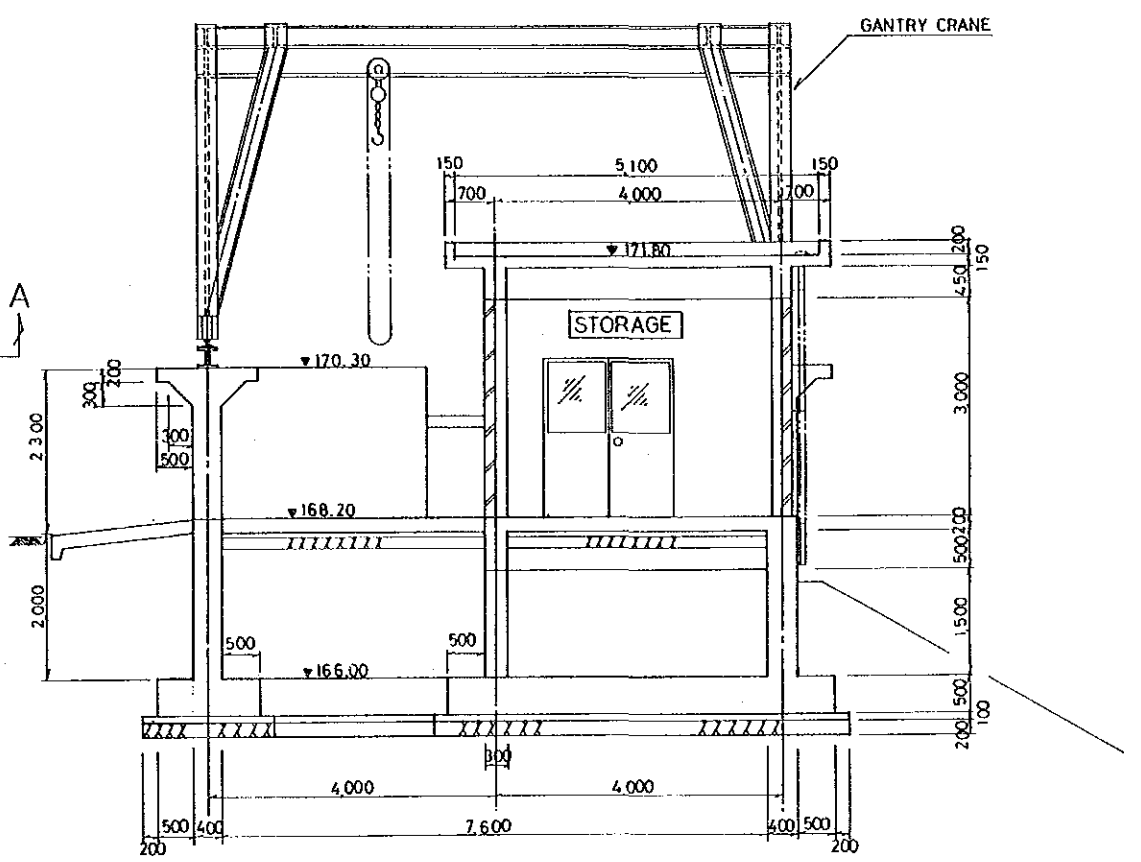
- FLOODLIGHT
- MERCURY LAMP WITH POLE



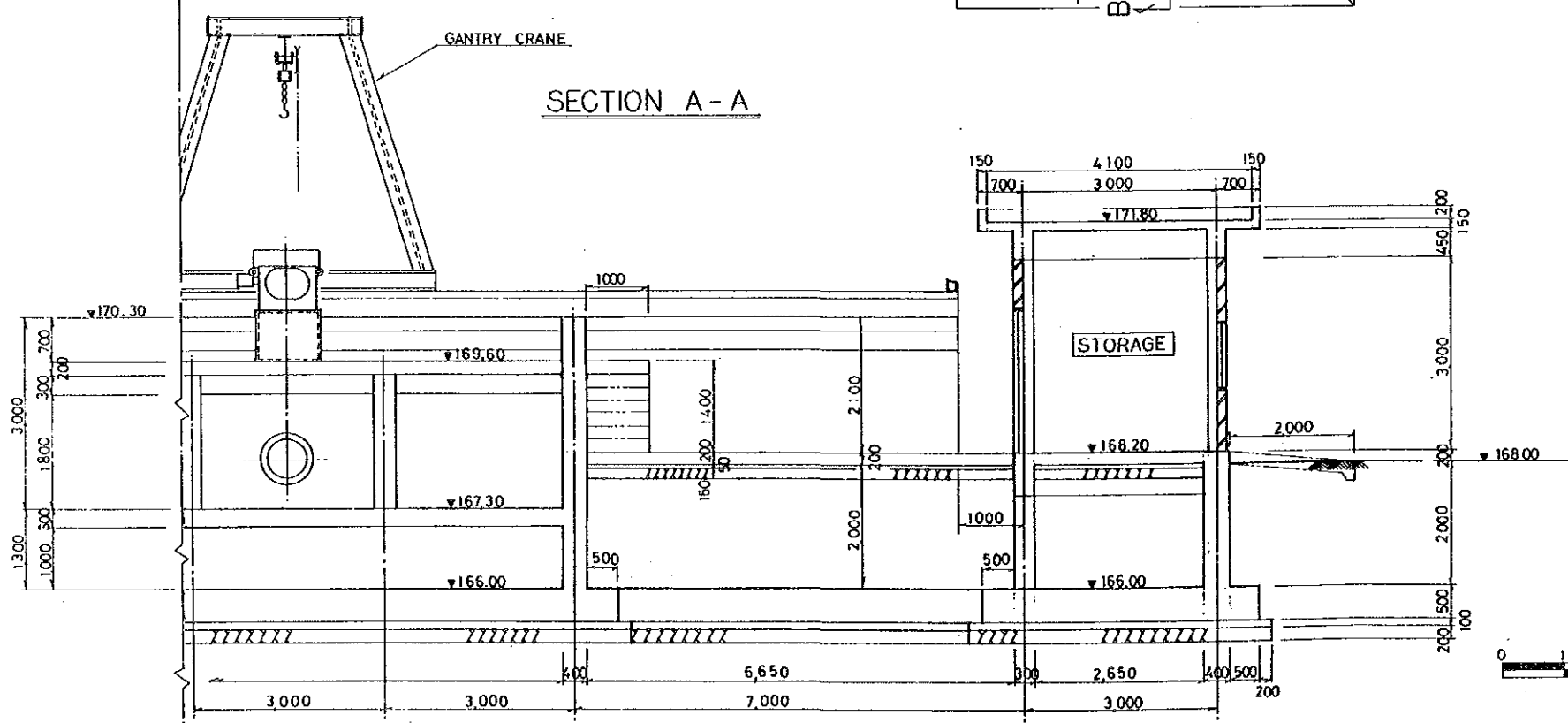
LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 主ポンプ場 コントロールハウス		
Date	Drawing No.	1002
JAPAN INTERNATIONAL COOPERATION AGENCY		



SECTION B-B

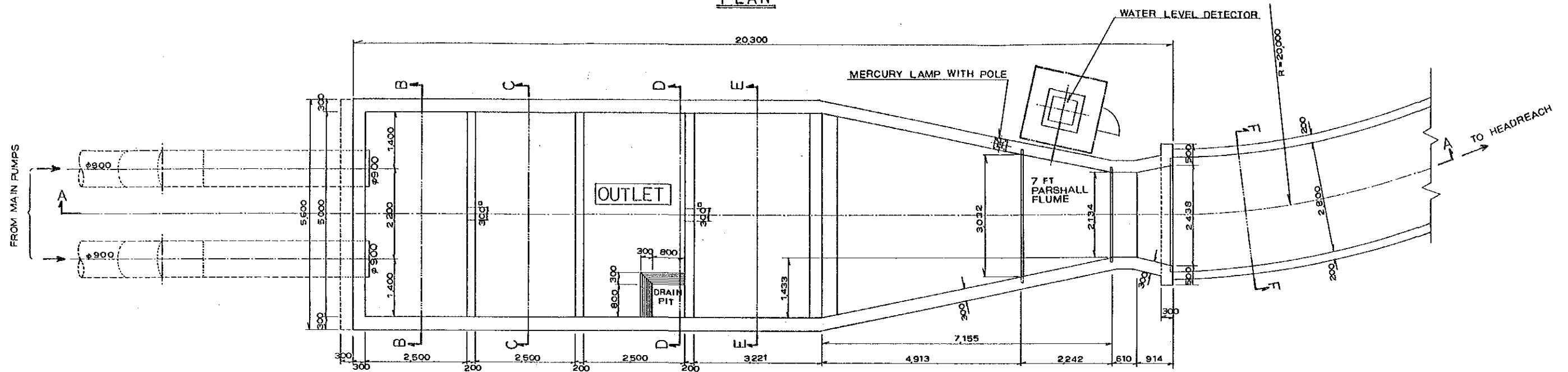


SECTION A-A

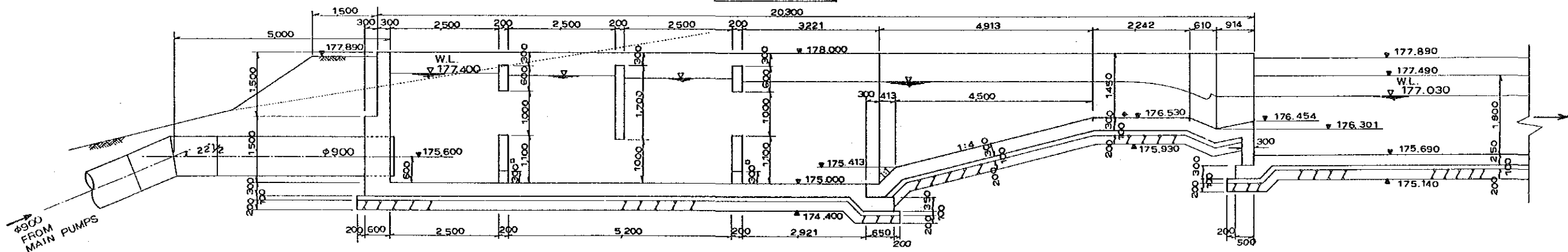


LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING		
主ポンプ場 リペアショップ		
Date	Drawing No.	1003
JAPAN INTERNATIONAL COOPERATION AGENCY		

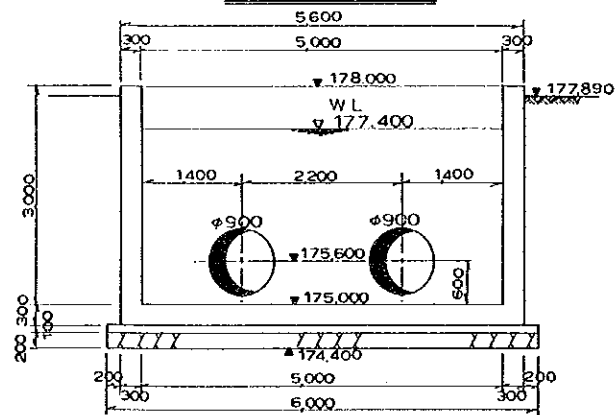
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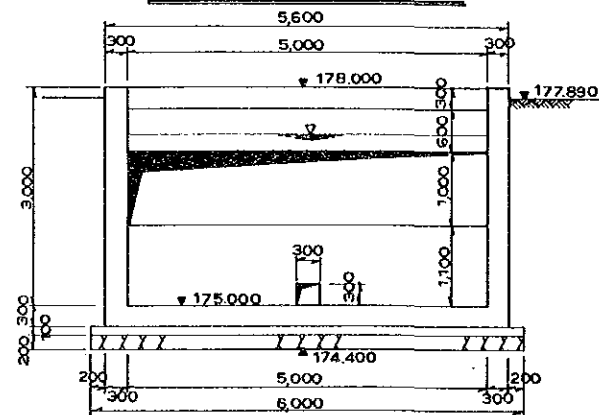
SECTION A-A



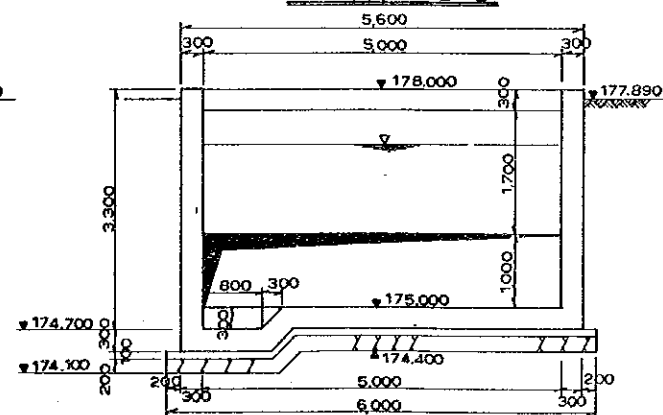
SECTION B-B



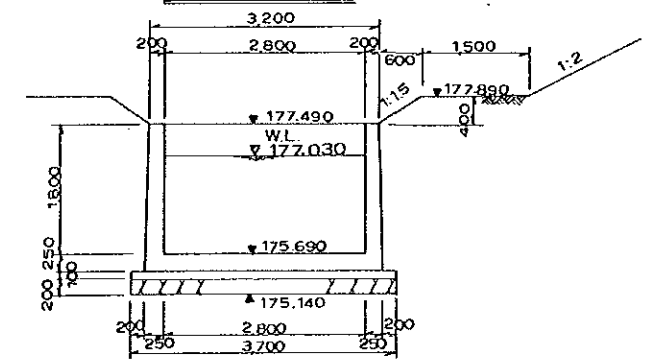
SECTION C-C & E-E



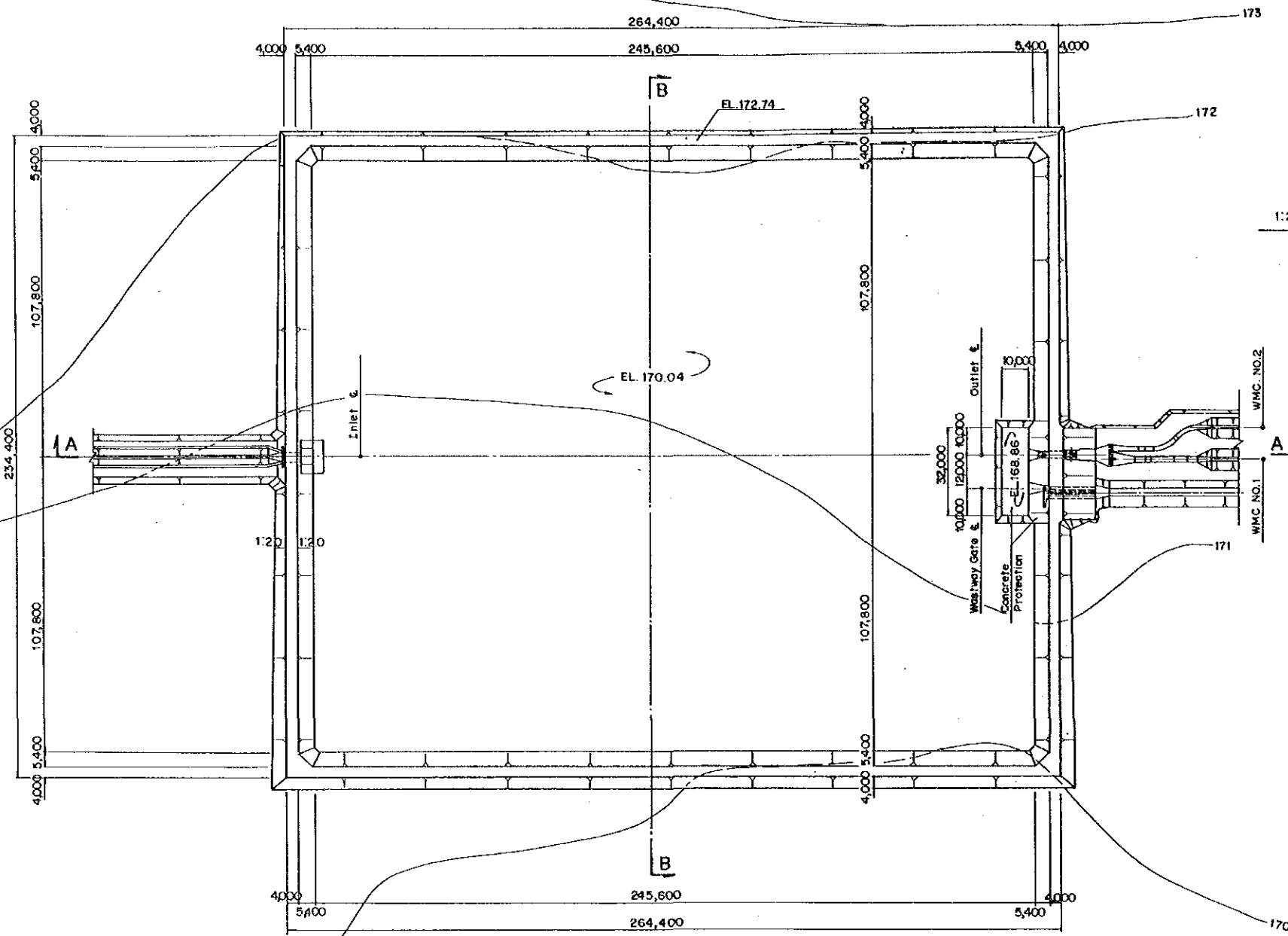
SECTION D-D



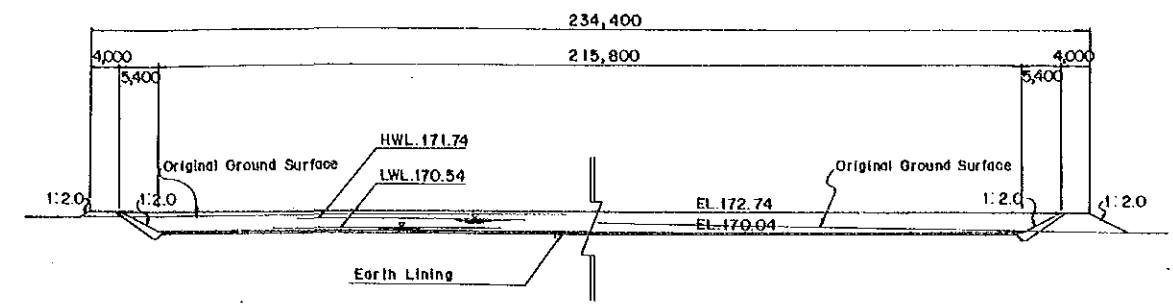
SECTION F-F



LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 主ポンプ場 吐出水槽		
Date	Drawing No.	1004
JAPAN INTERNATIONAL COOPERATION AGENCY		

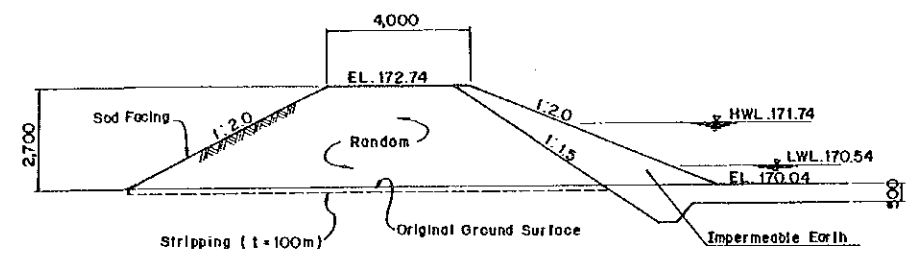


PLAN SCALE - A

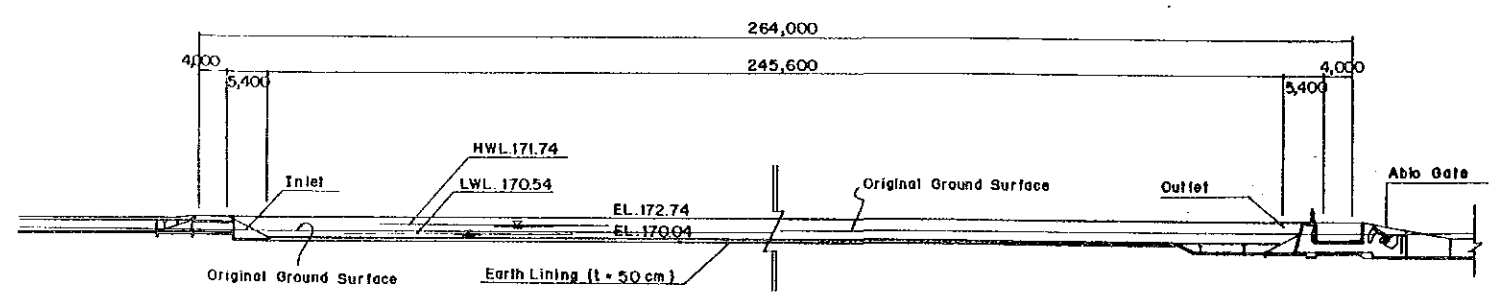


SECTION B-B SCALE - B

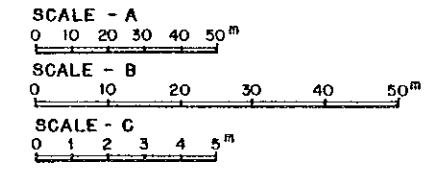
DIKE OF REGULATION POND



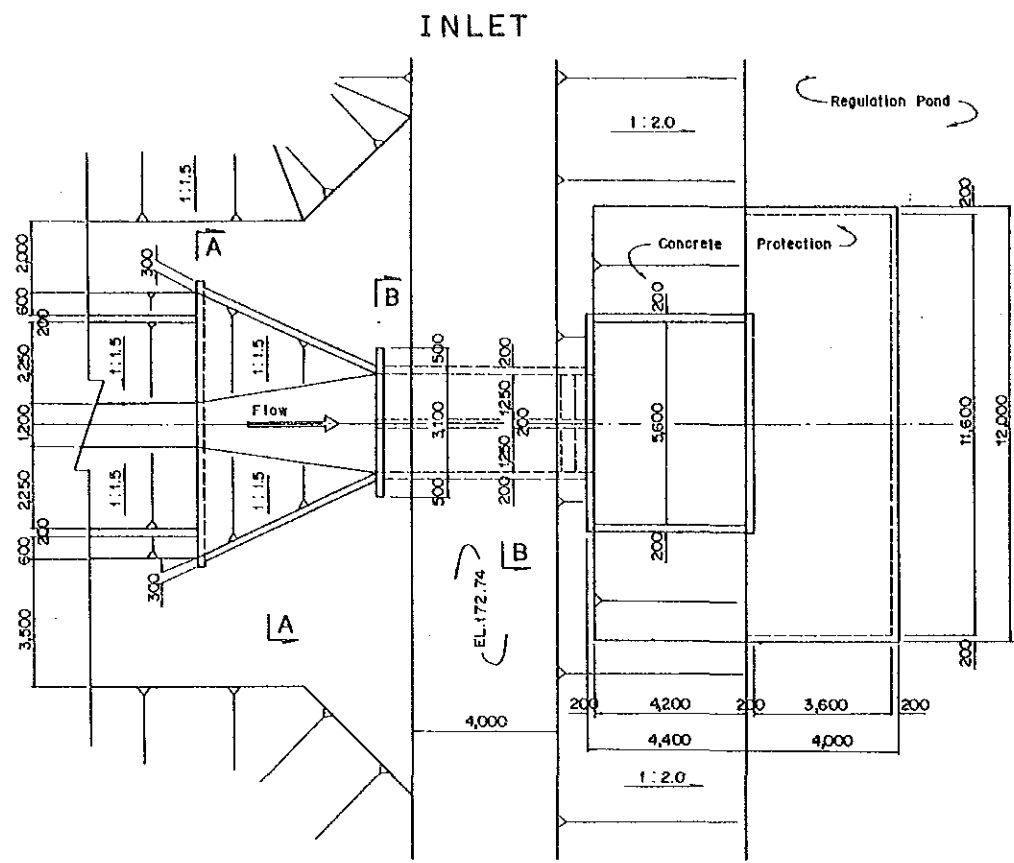
SECTION SCALE - C



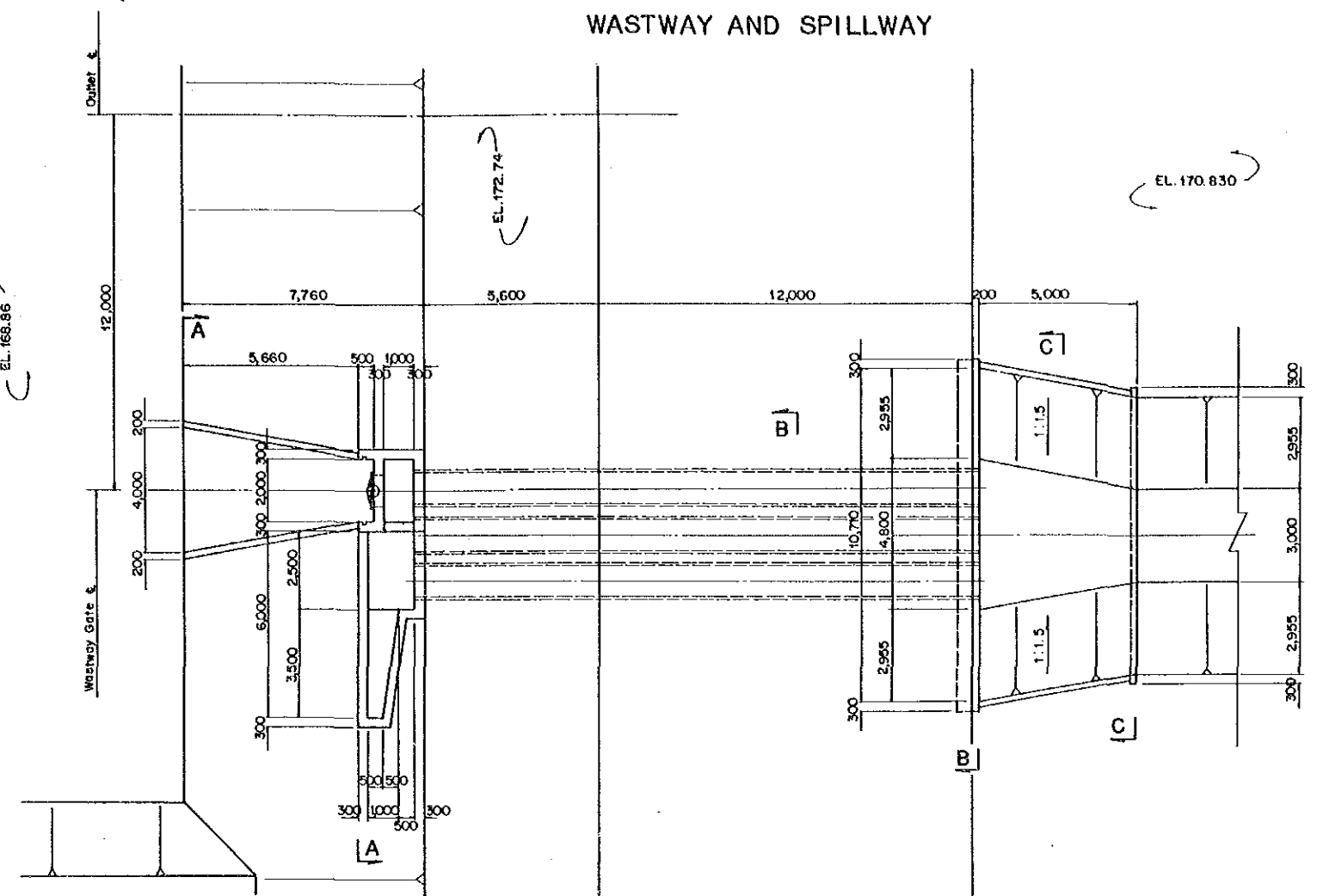
SECTION A-A SCALE - B



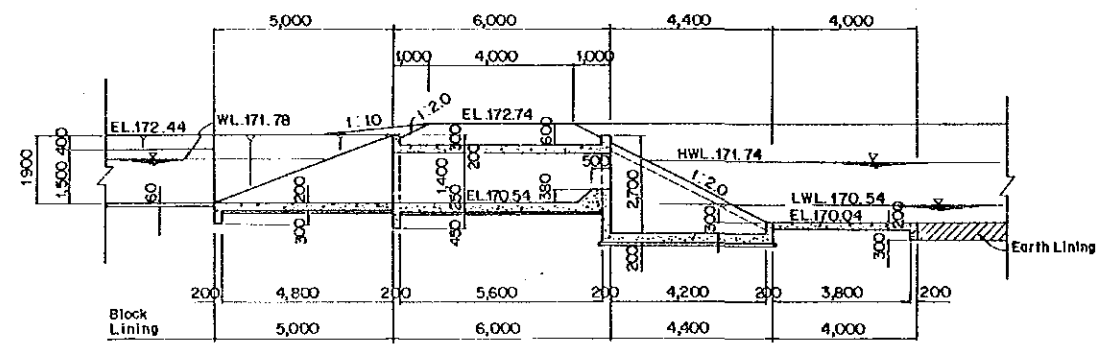
LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 調整池 平面図及び横断面図		
Date	Drawing No.	2001
JAPAN INTERNATIONAL COOPERATION AGENCY		



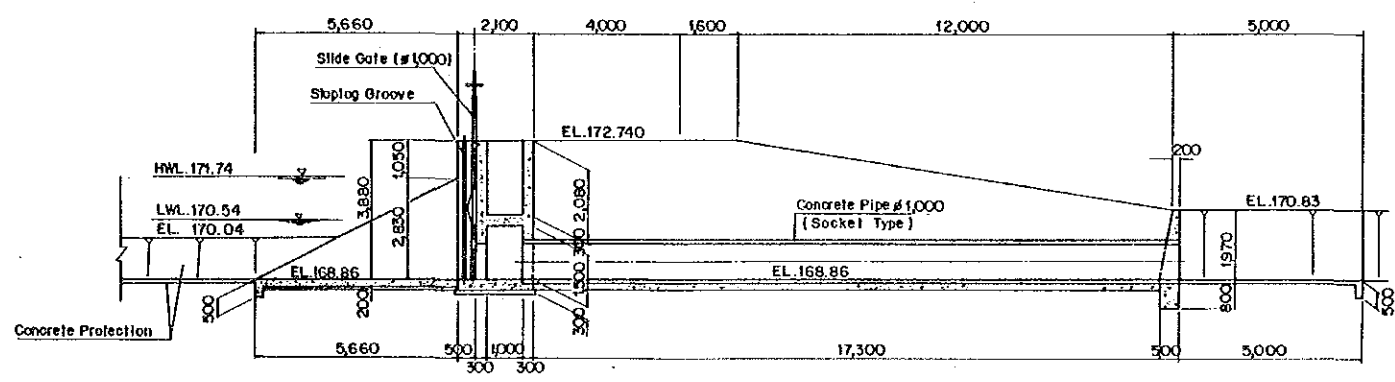
PLAN



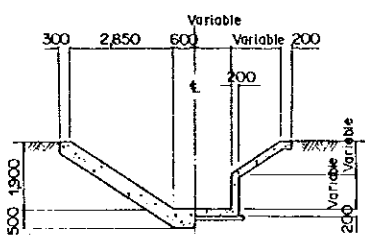
PLAN



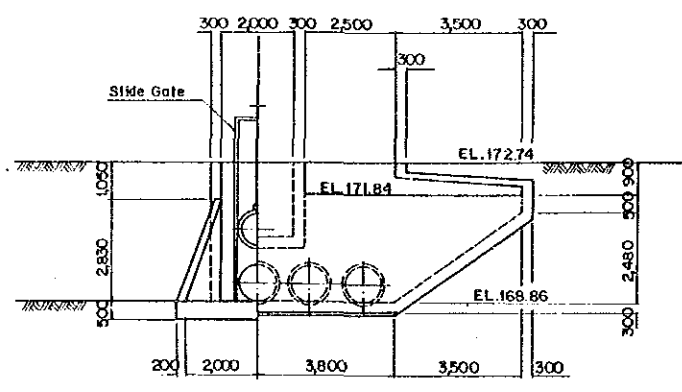
PROFILE



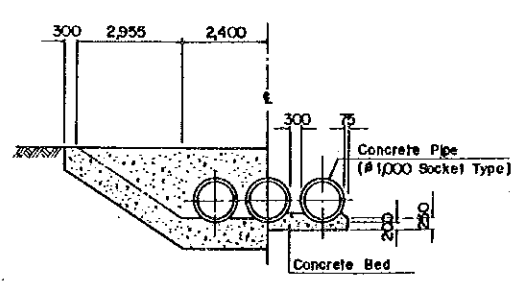
PROFILE



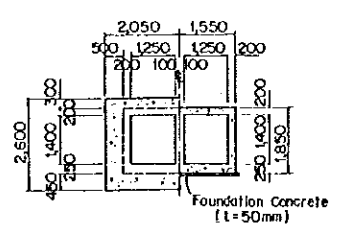
SECTION A-A



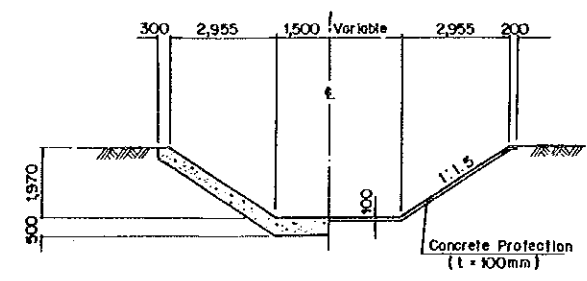
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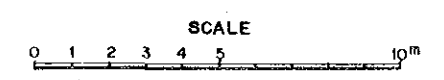
SECTION B-B



SECTION B-B

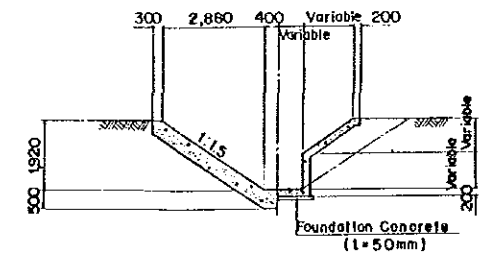
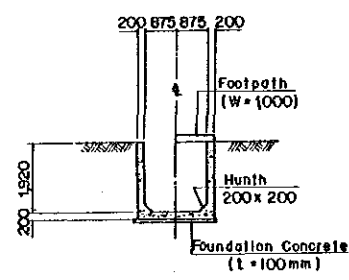
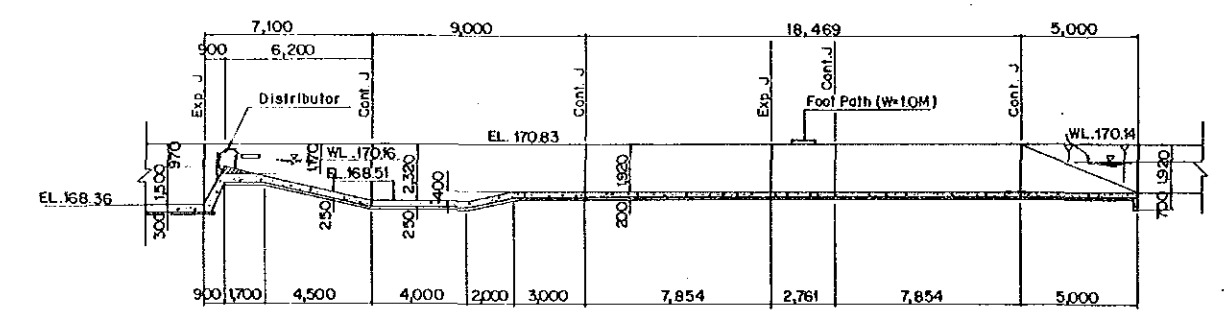
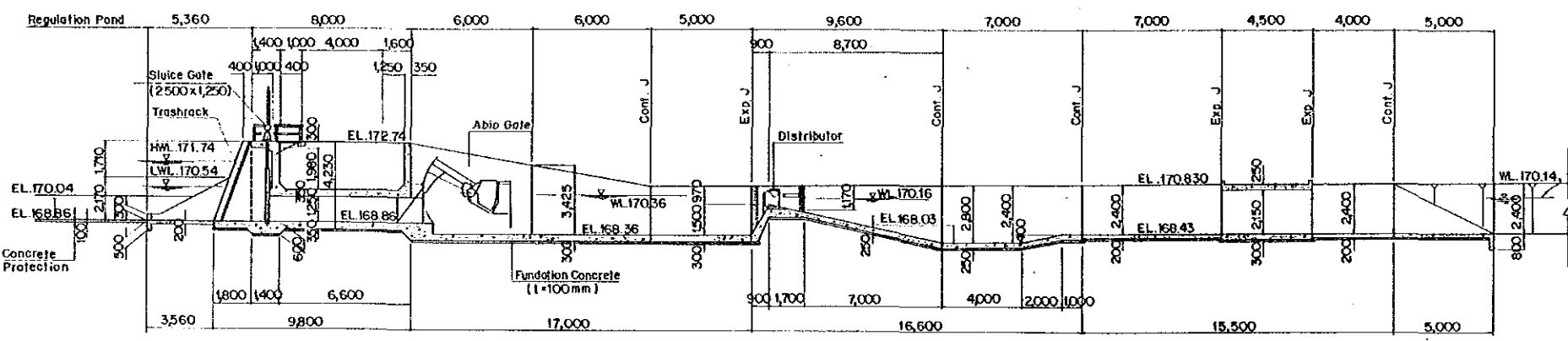
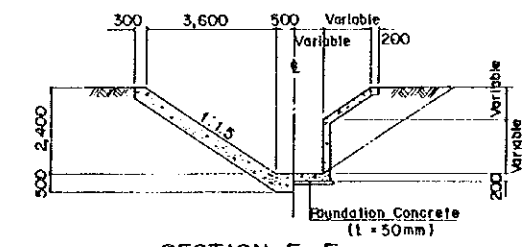
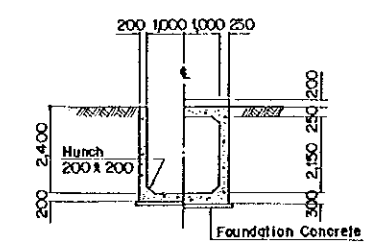
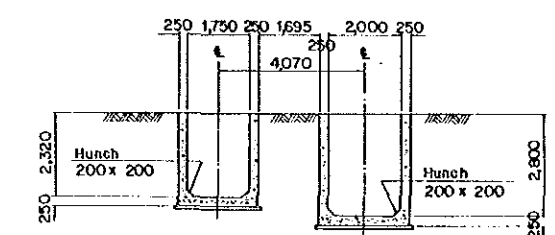
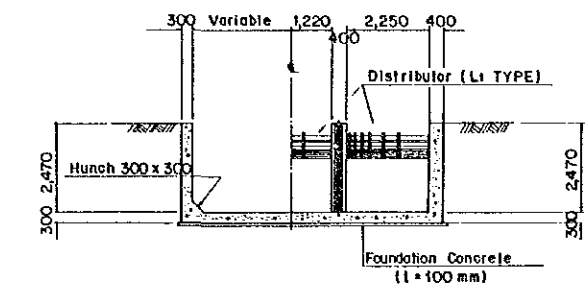
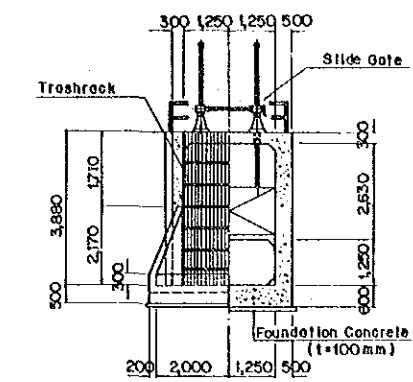
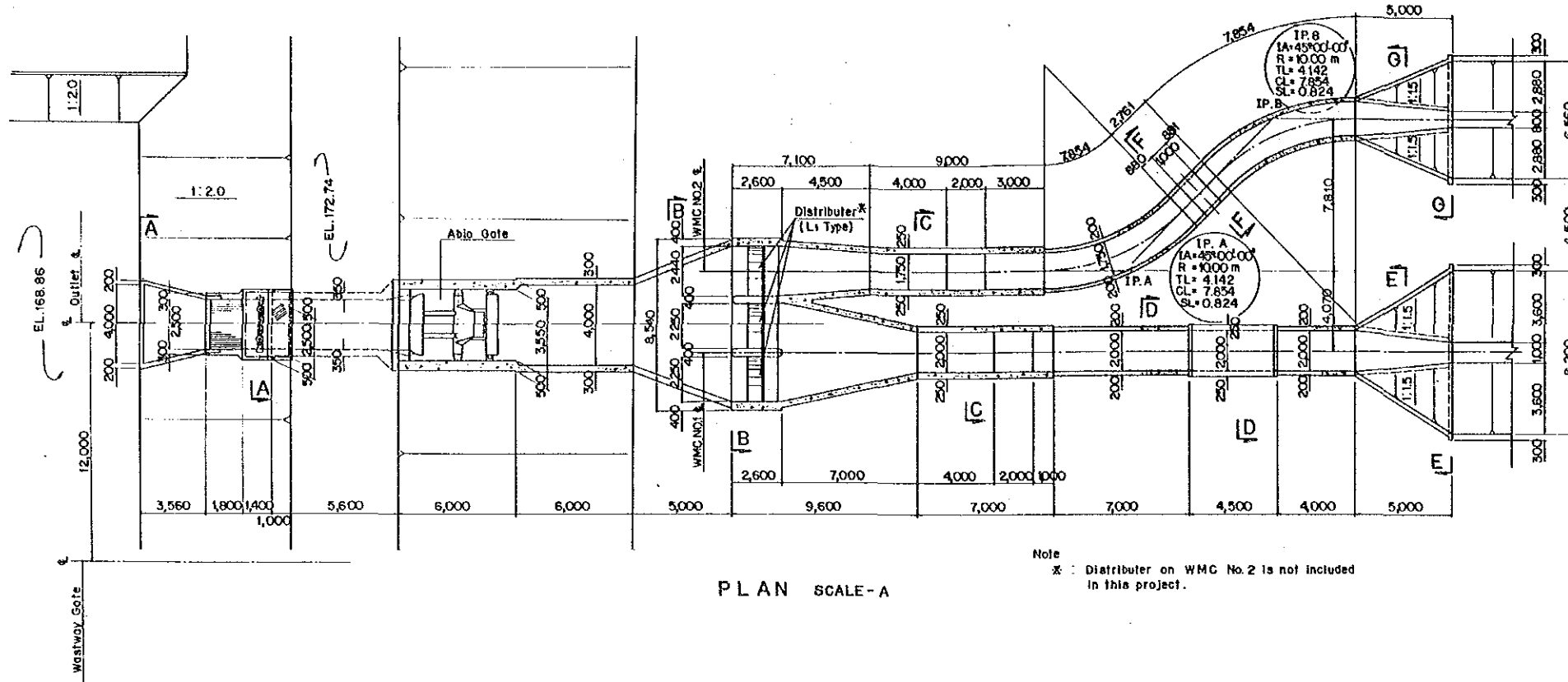


SECTION C-C



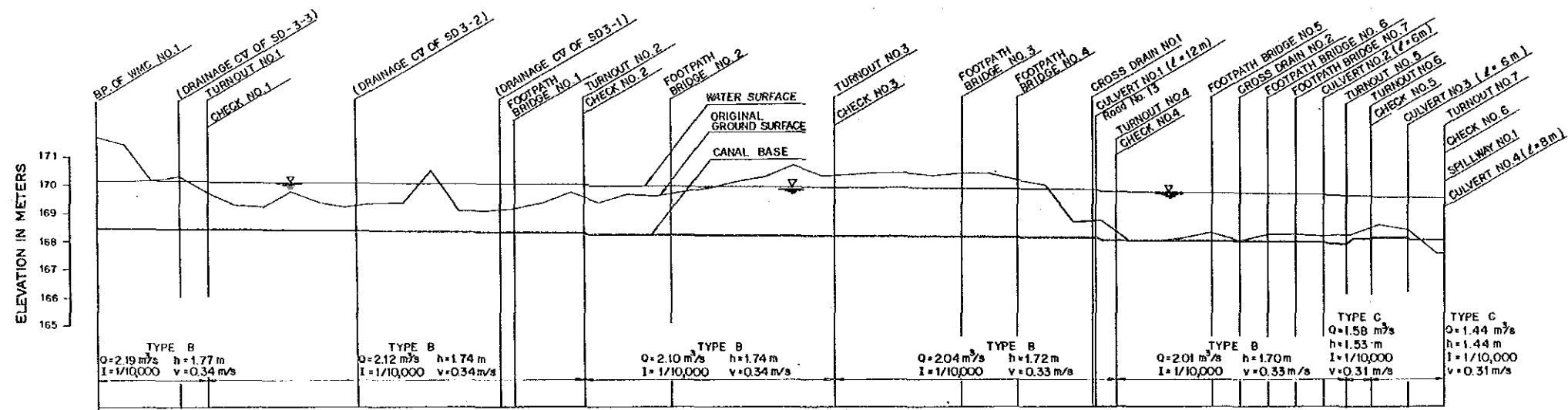
LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 調整池 流入工/余水吐		
Date	Drawing No.	2002
JAPAN INTERNATIONAL COOPERATION AGENCY		

OUTLET



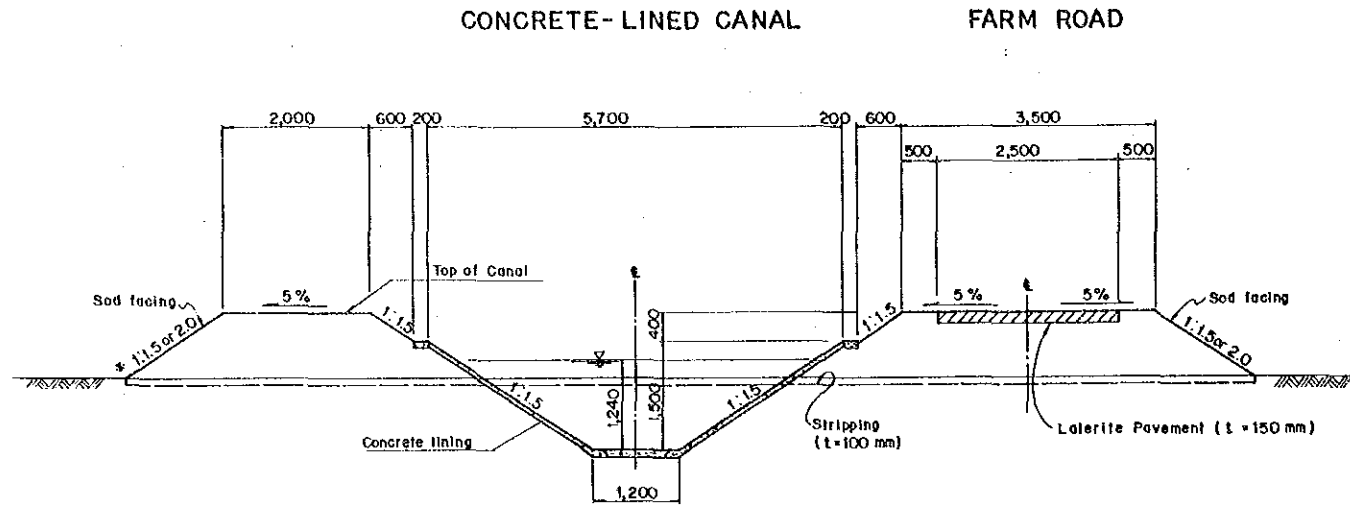
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SCALE - B
0 1 2 3 4 5 m

LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 調整池 取水工		
Date	Drawing No.	2003
JAPAN INTERNATIONAL COOPERATION AGENCY		



WATER SURFACE ELEVATION	CANAL BASE ELEVATION	ORIGINAL GROUND SURFACE	ACCUMULATED DISTANCE	DISTANCE	STATION	CURVE
170.14	169.37	171.08	0.00	0.00	No. 0	
170.13	169.36	171.42	100.00	100.00	No. 1	
170.12	169.35	170.14	200.00	100.00	No. 2	
170.11	169.34	170.28	300.00	100.00	No. 3	
170.06	169.33	169.99	400.00	100.00	No. 4	
170.05	169.32	169.26	500.00	100.00	No. 5	
170.04	169.31	169.19	600.00	100.00	No. 6	
170.03	169.30	169.75	700.00	100.00	No. 7	
170.02	169.29	168.30	800.00	100.00	No. 8	
170.01	169.28	169.35	900.00	100.00	No. 9	
170.00	169.27	169.14	1000.00	100.00	No. 10	
169.99	169.26	168.88	1100.00	100.00	No. 11	
169.98	169.25	169.32	1200.00	100.00	No. 12	
169.97	169.24	170.45	1300.00	100.00	No. 13	
169.96	169.23	169.06	1400.00	100.00	No. 14	
169.95	169.22	169.03	1500.00	100.00	No. 15	
169.94	169.21	169.23	1600.00	100.00	No. 16	
169.93	169.20	169.28	1700.00	100.00	No. 17	
169.92	169.19	169.28	1800.00	100.00	No. 18	
169.91	169.18	169.28	1900.00	100.00	No. 19	
169.90	169.17	169.28	2000.00	100.00	No. 20	
169.89	169.16	169.49	2100.00	100.00	No. 21	
169.88	169.15	169.60	2200.00	100.00	No. 22	
169.87	169.14	169.67	2300.00	100.00	No. 23	
169.86	169.13	169.82	2400.00	100.00	No. 24	
169.85	169.12	170.03	2500.00	100.00	No. 25	
169.84	169.11	170.20	2600.00	100.00	No. 26	
169.83	169.10	170.38	2700.00	100.00	No. 27	
169.82	169.09	170.58	2800.00	100.00	No. 28	
169.81	169.08	170.23	2900.00	100.00	No. 29	
169.80	169.07	170.28	3000.00	100.00	No. 30	
169.79	169.06	170.26	3100.00	100.00	No. 31	
169.78	169.05	170.31	3200.00	100.00	No. 32	
169.77	169.04	170.32	3300.00	100.00	No. 33	
169.76	169.03	170.20	3400.00	100.00	No. 34	
169.75	169.02	170.27	3500.00	100.00	No. 35	
169.74	169.01	170.26	3600.00	100.00	No. 36	
169.73	169.00	170.06	3700.00	100.00	No. 37	
169.72	168.99	169.94	3800.00	100.00	No. 38	
169.71	168.98	169.70	3900.00	100.00	No. 39	
169.70	168.97	168.23	4000.00	100.00	No. 40	
169.69	168.96	168.43	4100.00	100.00	No. 41	
169.68	168.95	168.16	4200.00	100.00	No. 42	
169.67	168.94	168.09	4300.00	100.00	No. 43	
169.66	168.93	168.23	4400.00	100.00	No. 44	
169.65	168.92	168.00	4500.00	100.00	No. 45	
169.64	168.91	168.23	4600.00	100.00	No. 46	
169.63	168.90	168.23	4700.00	100.00	No. 47	
169.62	168.89	168.23	4800.00	100.00	No. 48	
169.61	168.88	168.23	4900.00	100.00	No. 49	
169.60	168.87	168.23	5000.00	100.00	No. 50	

LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 灌溉用水路及び農道 第1西幹線用水路縦断面図		
Date	Drawing No.	3003
JAPAN INTERNATIONAL COOPERATION AGENCY		

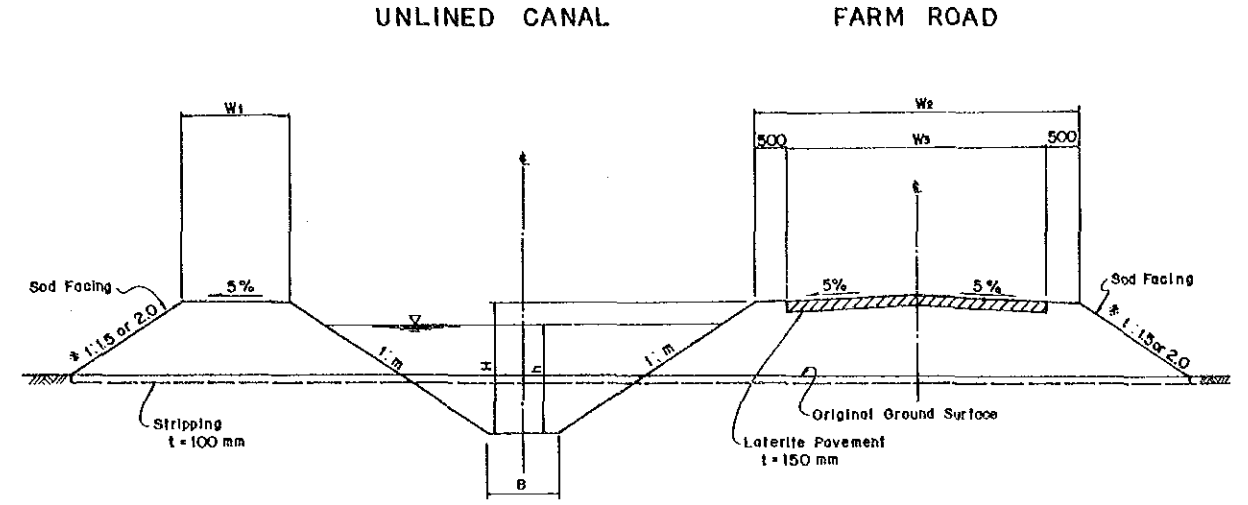


* Note : Outer slope of canal and road shall be as follows.
 Elevation of Top of canal - Elevation of OGS ≤ 2.5 m : 1 : 1.5
 Elevation of Top of canal - Elevation of OGS > 2.5 m : 1 : 2.0

TYPICAL CROSS SECTION SCALE - A
 (Type A)

CANAL DIMENSION TABLE

Canal Type	B	H	h max	W1	W2	W3	m
A	1,200	1,500	1,240	2,000	3,500	2,500	1.5

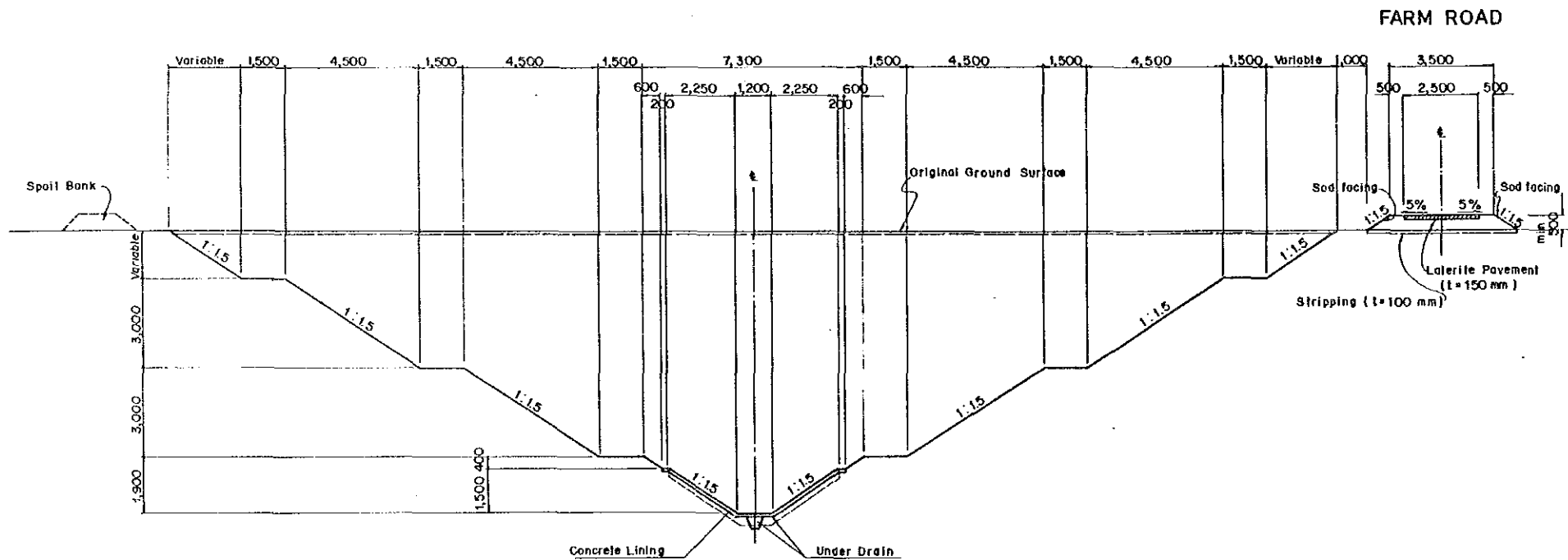


Note : Laterite pavement will be provided only on the top of farm roads for headreach, main and secondary canals

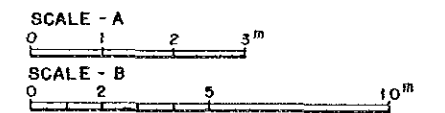
TYPICAL CROSS SECTION SCALE - A
 (Type A, B)

CANAL DIMENSION TABLE

Canal Type	B	H	h max	W1	W2	W3	m
B	1,000	2,000	1,770	1,500	4,500	3,500	1.5
C	1,000	2,000	1,530	1,500	4,500	3,500	1.5

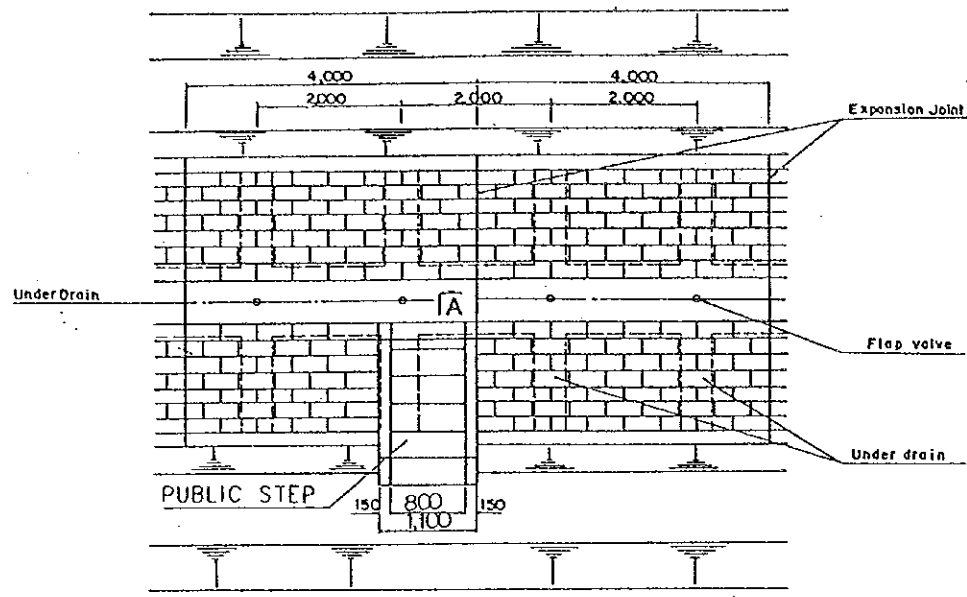


TYPICAL CROSS SECTION OF DEEP CUT SCALE - B
 (Type A)

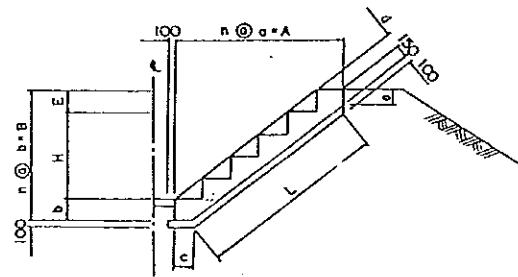


LAO PEOPLE'S DEMOCRATIC REPUBLIC			
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE			
TITLE OF DRAWING 灌溉用水路及び農道 標準断面図			
Date		Drawing No.	3004
JAPAN INTERNATIONAL COOPERATION AGENCY			

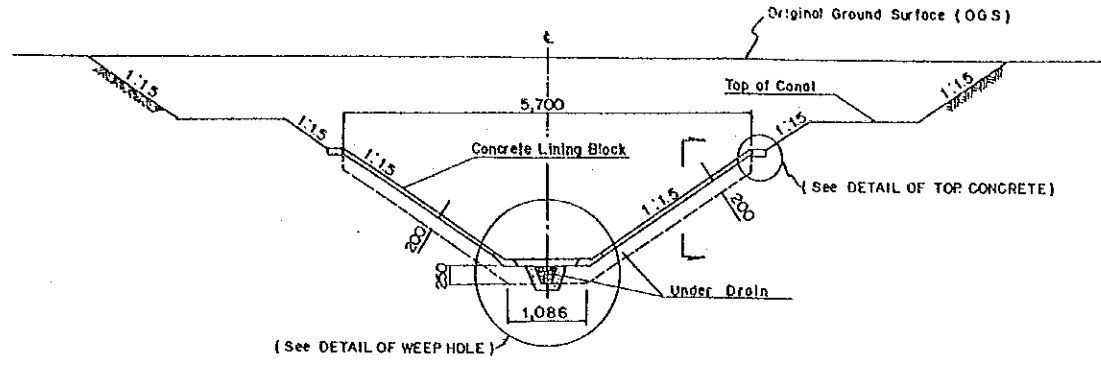
PUBLIC STEP



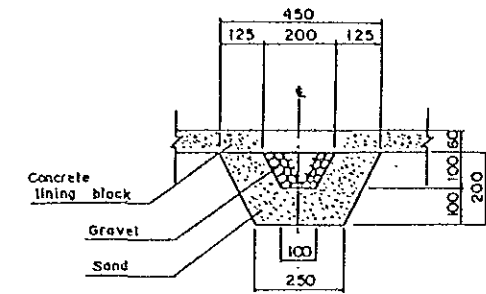
P.L.A.N
SCALE : A



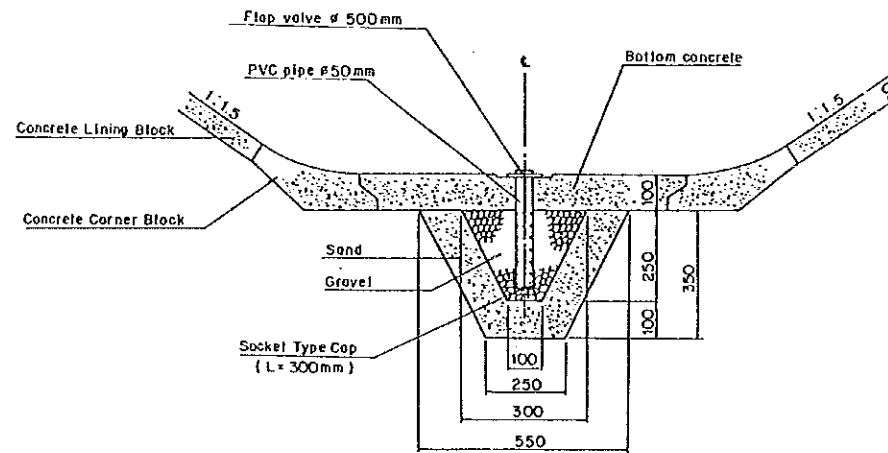
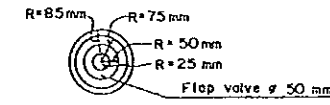
SECTION A-A
SCALE : A



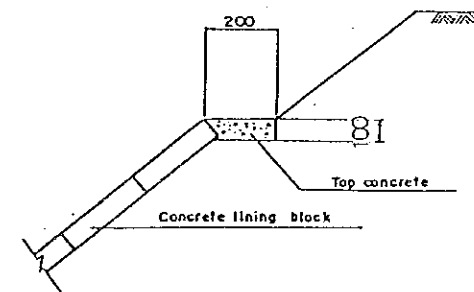
TYPICAL CROSS SECTION OF UNDER DRAIN
SCALE : A



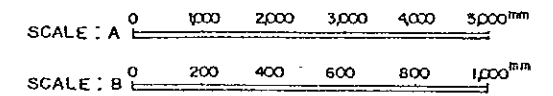
SECTION C-C
SCALE : B



DETAIL OF WEEP HOLE
SCALE : B



DETAIL OF TOP CONCRETE
SCALE : B

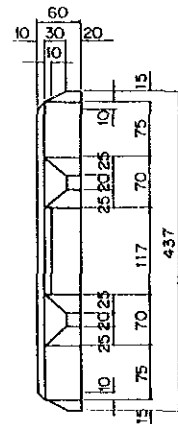
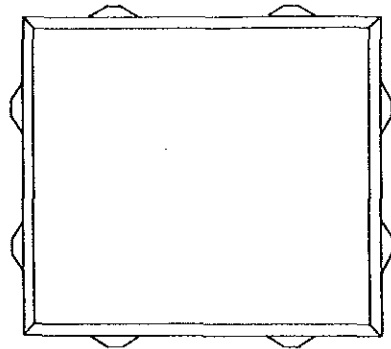
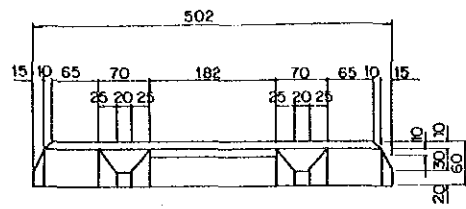


LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 灌溉用水路及び農道 水路ライニング標準設計図/階段工		
Date	Drawing No.	3005
JAPAN INTERNATIONAL COOPERATION AGENCY		

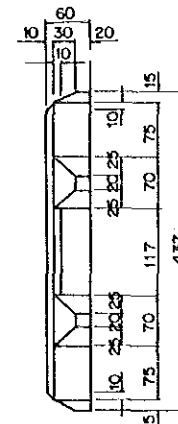
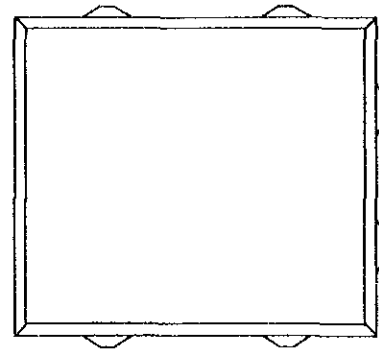
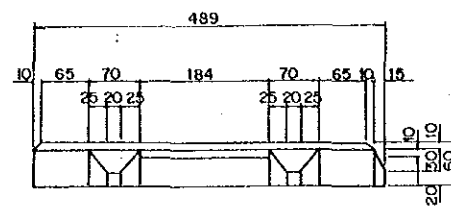
CONCRETE LINING BLOCK

SCALE - A

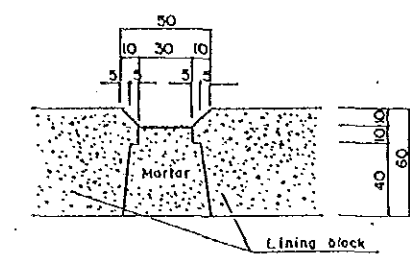
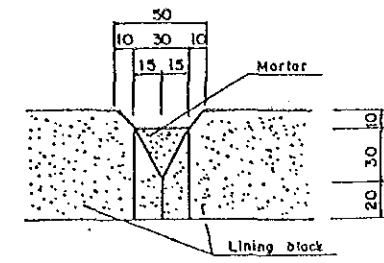
TYPE - A



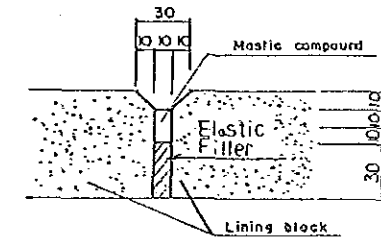
TYPE - B



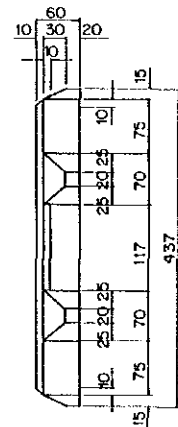
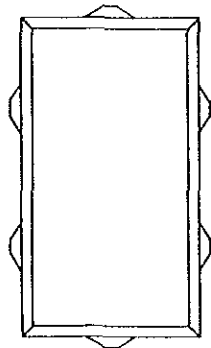
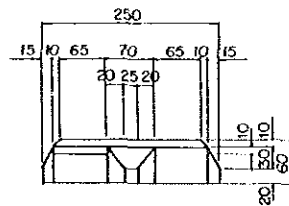
JOINT
SCALE - B



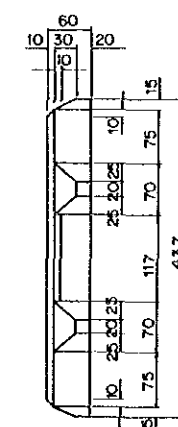
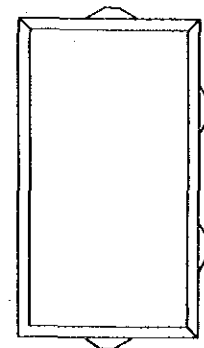
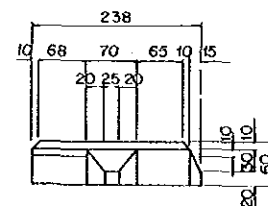
EXPANSION JOINT
SCALE - B



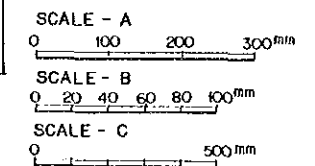
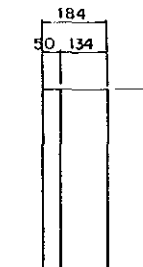
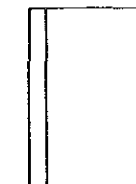
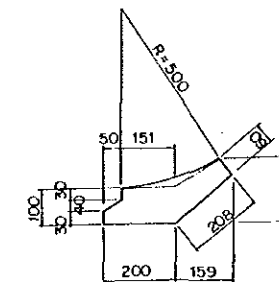
TYPE - C



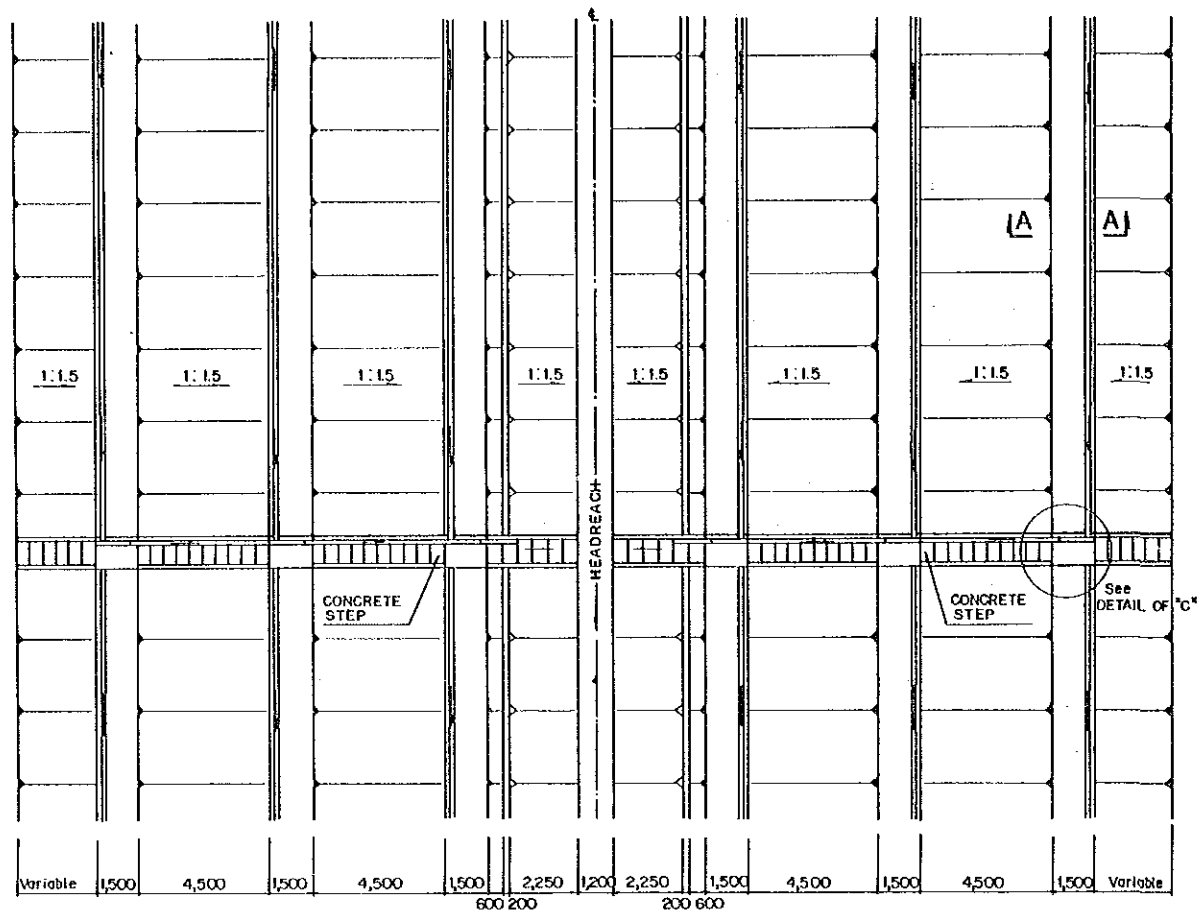
TYPE - D



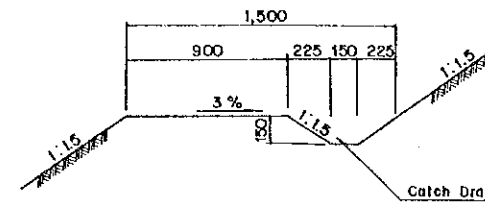
CONCRETE CORNER BLOCK (TYPE-E)
SCALE - C



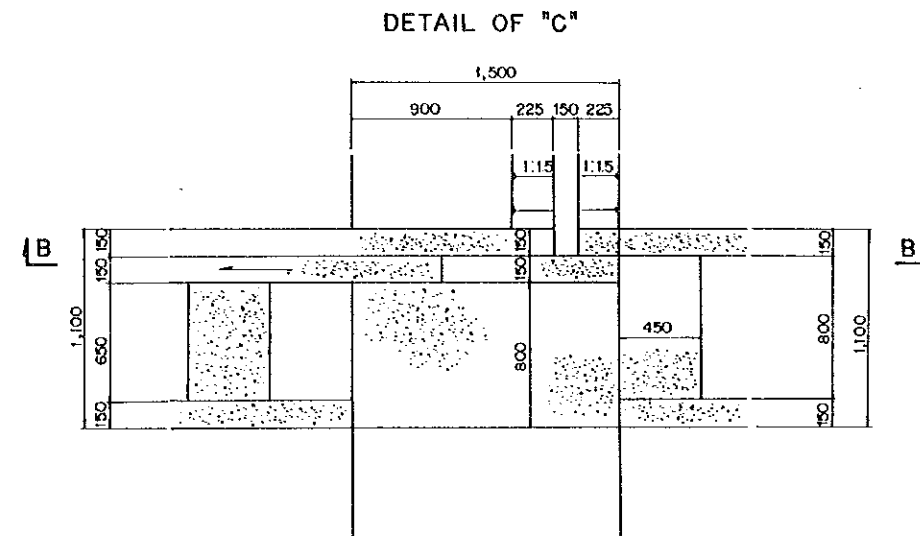
LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 灌漑用水路及び農道 コンクリートライニングブロック		
Date	Drawing No.	3006
JAPAN INTERNATIONAL COOPERATION AGENCY		



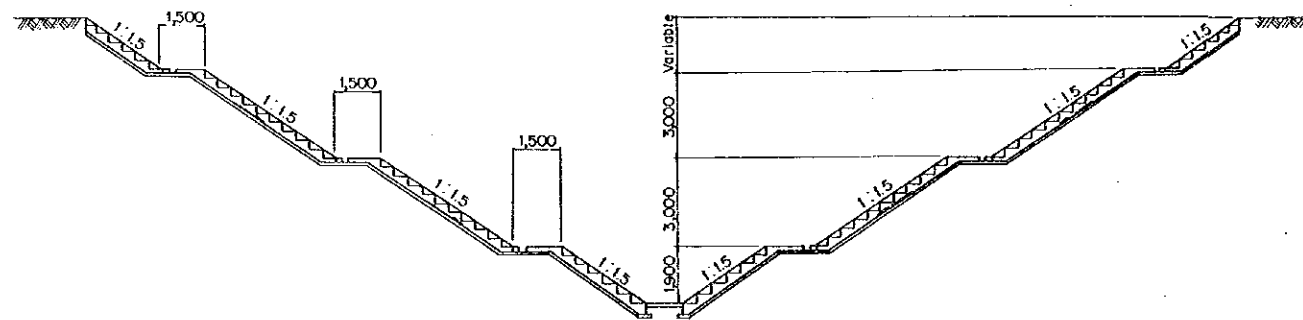
PLAN SCALE - A



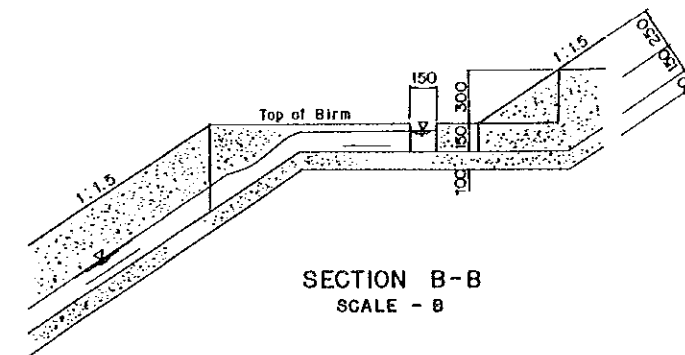
SECTION A-A SCALE - B



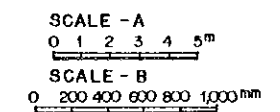
PLAN SCALE - B



PROFILE SCALE - A



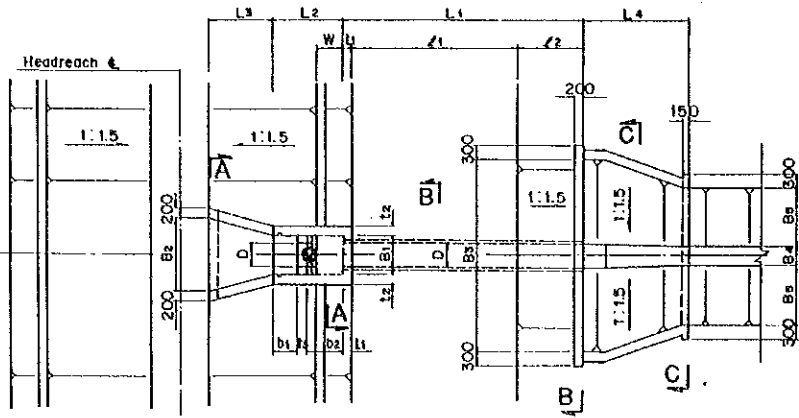
SECTION B-B
SCALE - B



NOTE : CONCRETE STEP SHALL BE PROVIDED ON EVERY 100 METERS OF DEEP CUT PORTION IN HEADREACH.

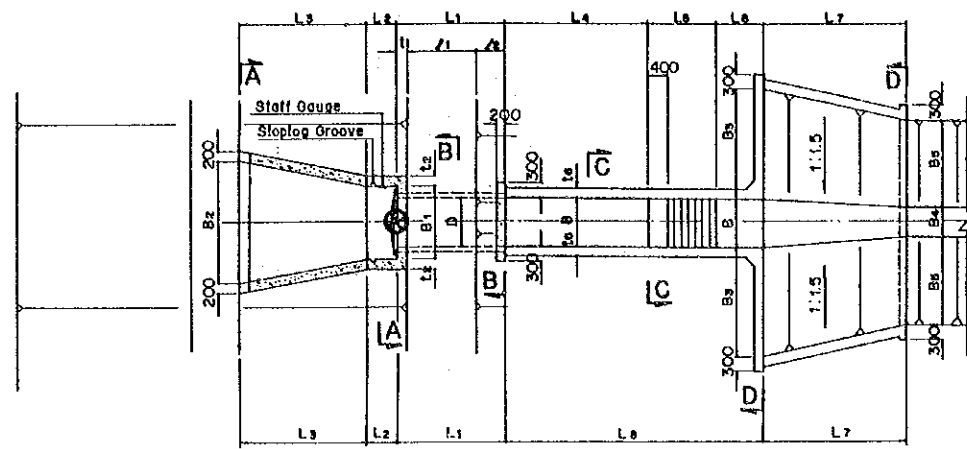
LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 灌漑用水路及び農道 導水路斜面保護工		
Date	Drawing No.	3007
JAPAN INTERNATIONAL COOPERATION AGENCY		

TYPE - A



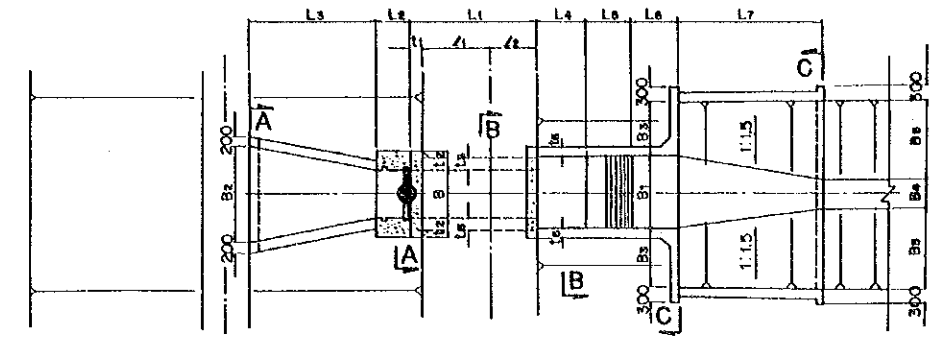
PLAN SCALE - A

TYPE - B

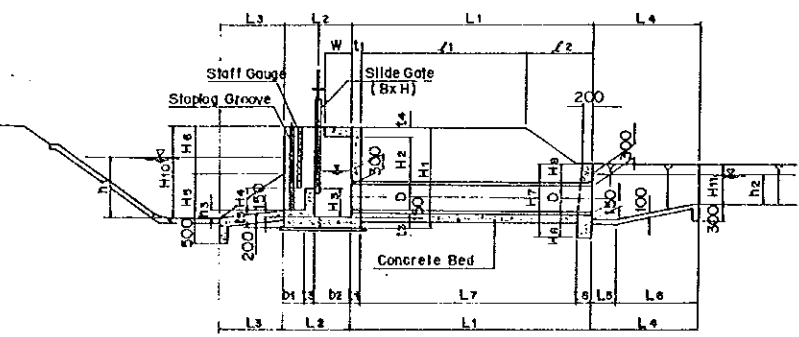


PLAN SCALE - A

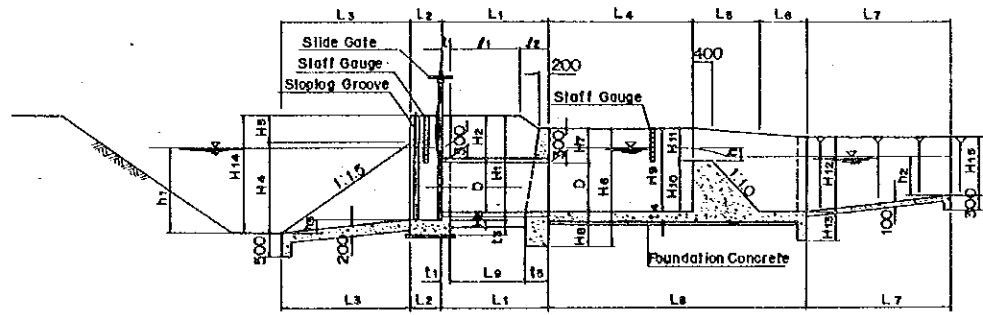
TYPE - C



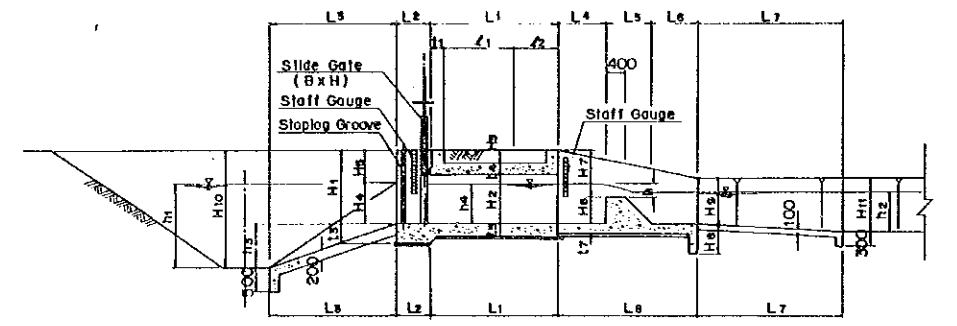
PLAN SCALE - A



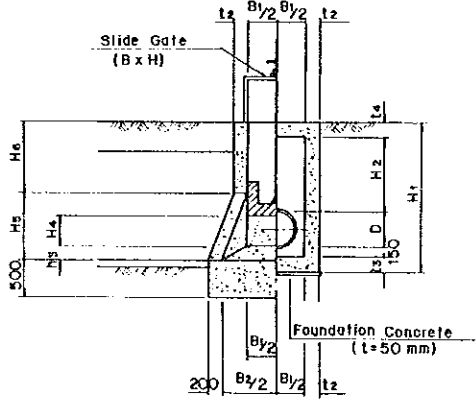
PROFILE SCALE - A



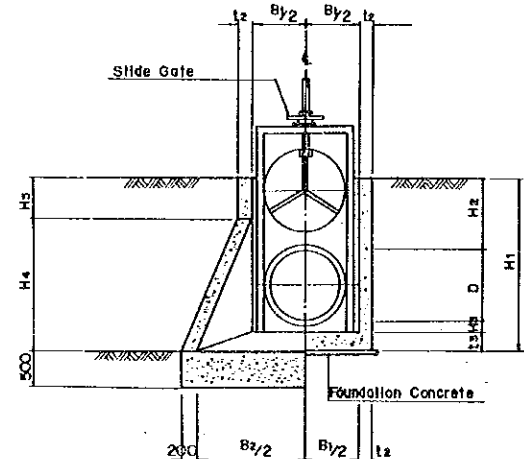
PROFILE SCALE - A



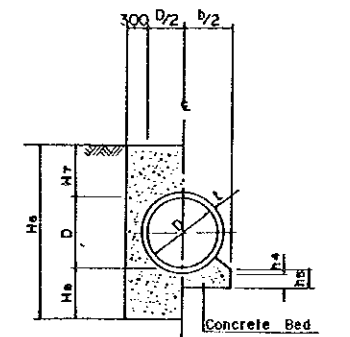
PROFILE SCALE - A



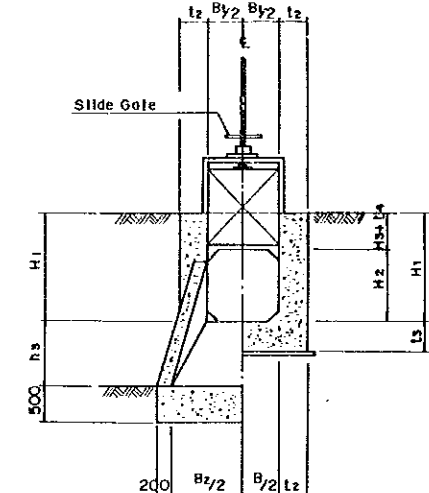
SECTION A-A SCALE - B



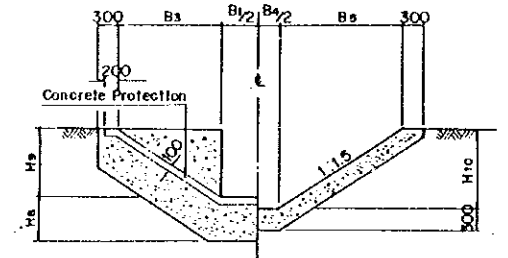
SECTION A-A SCALE - B



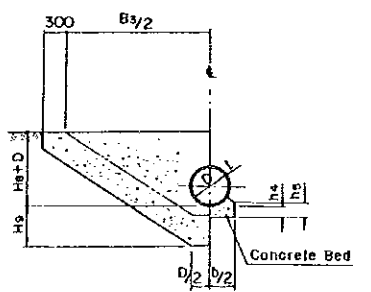
SECTION B-B SCALE - B



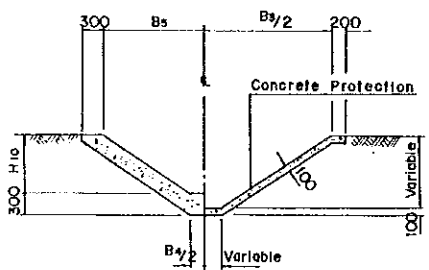
SECTION A-A SCALE - B



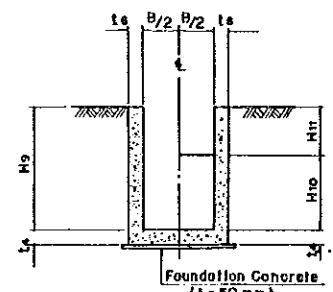
SECTION C-C SCALE - B



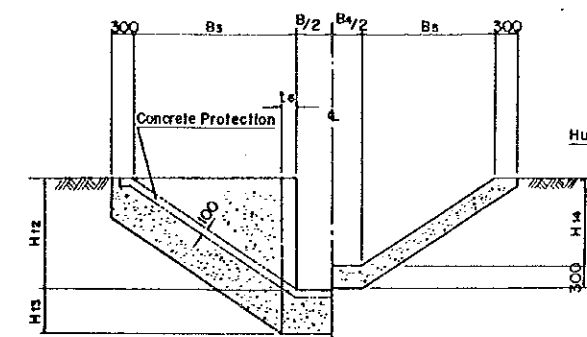
SECTION B-B SCALE - B



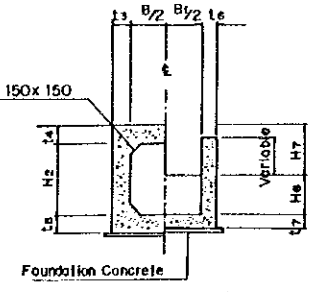
SECTION C-C SCALE - B



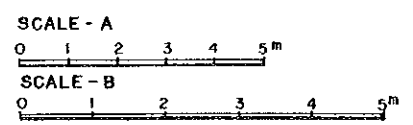
SECTION C-C SCALE - B



SECTION D-D SCALE - B

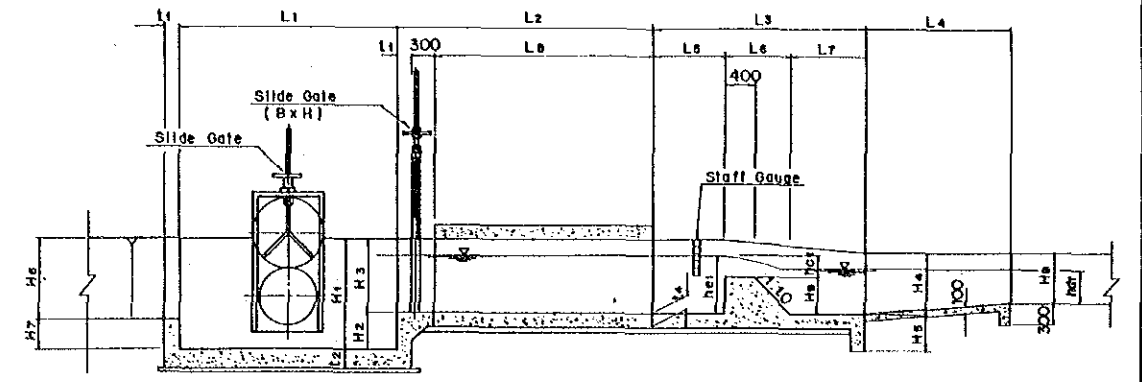
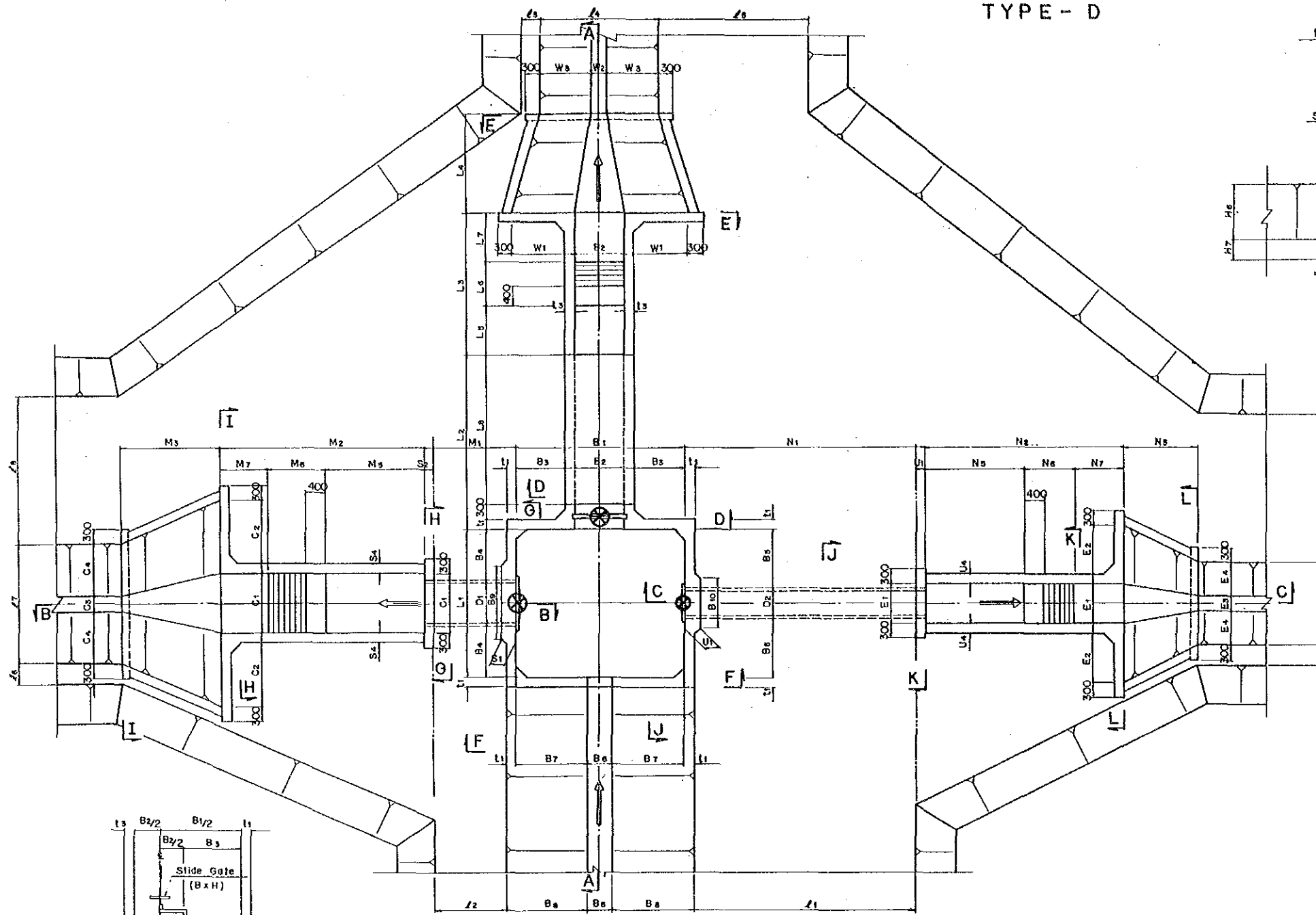


SECTION B-B SCALE - B

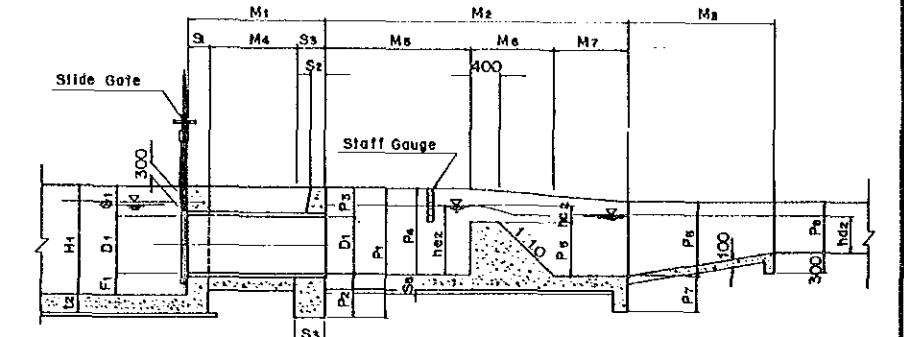


LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING		
灌溉用水路及び農道 分水工(1/2)		
Date	Drawing No.	3008
JAPAN INTERNATIONAL COOPERATION AGENCY		

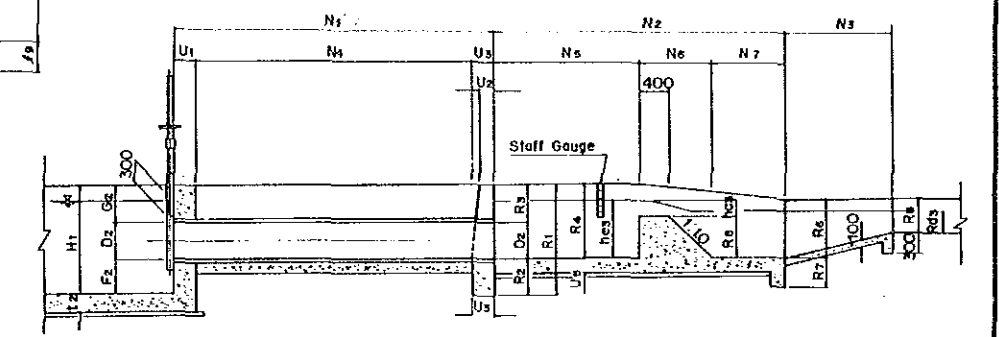
TYPE - D



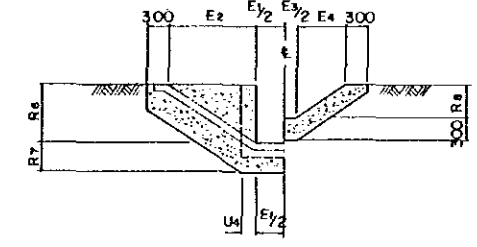
SECTION A-A



SECTION B-B



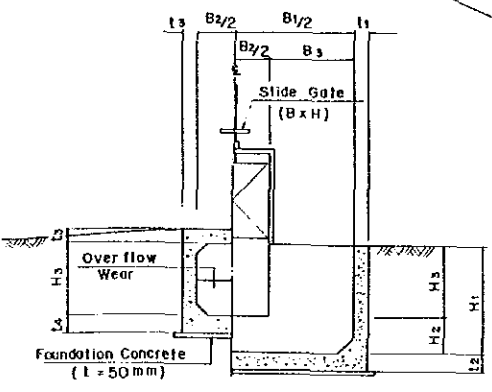
SECTION C-C



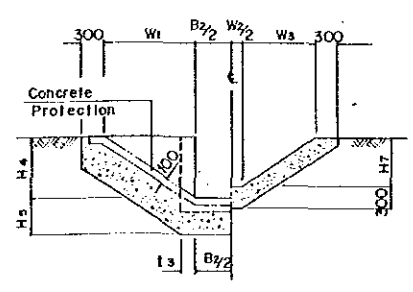
SECTION L-L



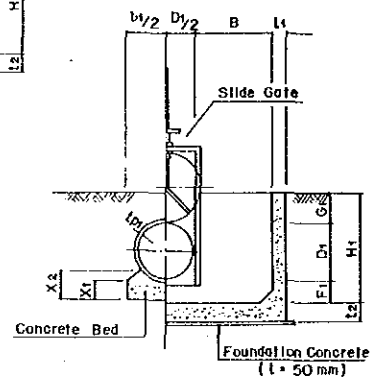
SCALE 0 1 2 3 4 5 m



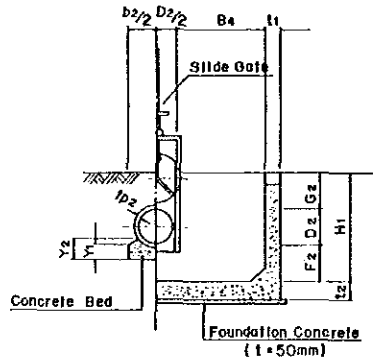
SECTION D-D



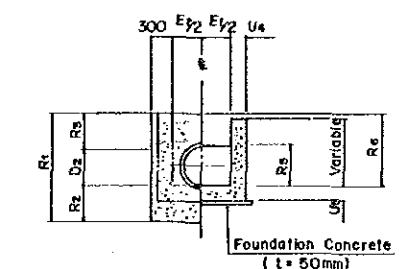
SECTION E-E



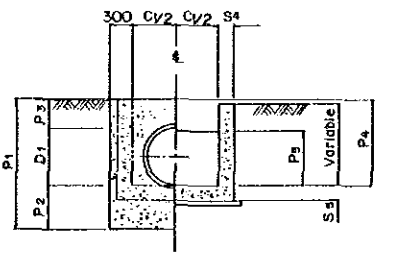
SECTION G-G



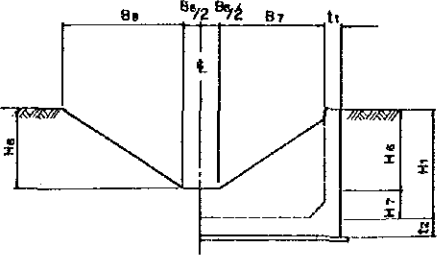
SECTION J-J



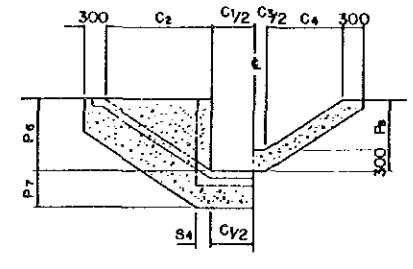
SECTION K-K



SECTION H-H



SECTION F-F



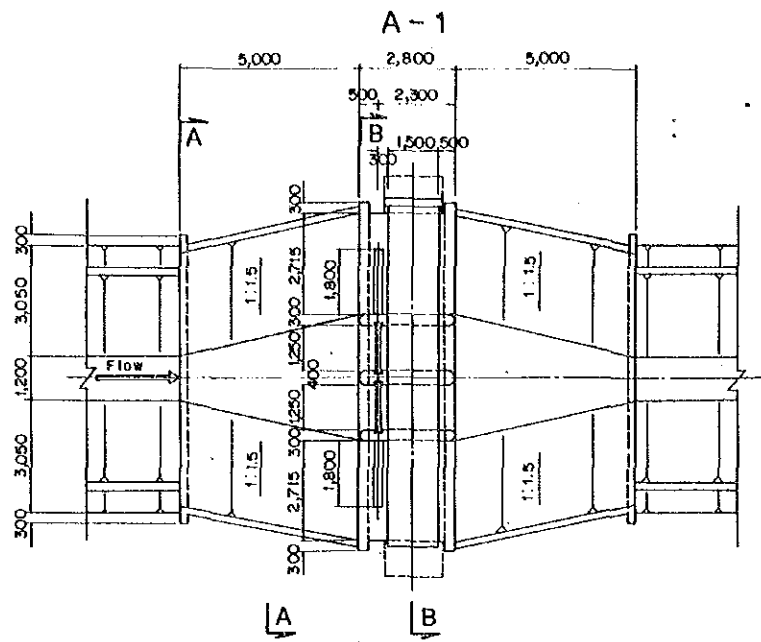
SECTION I-I

LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 灌漑用水路及び農道 分水工 (2/2)		
Date	Drawing No.	3009
JAPAN INTERNATIONAL COOPERATION AGENCY		

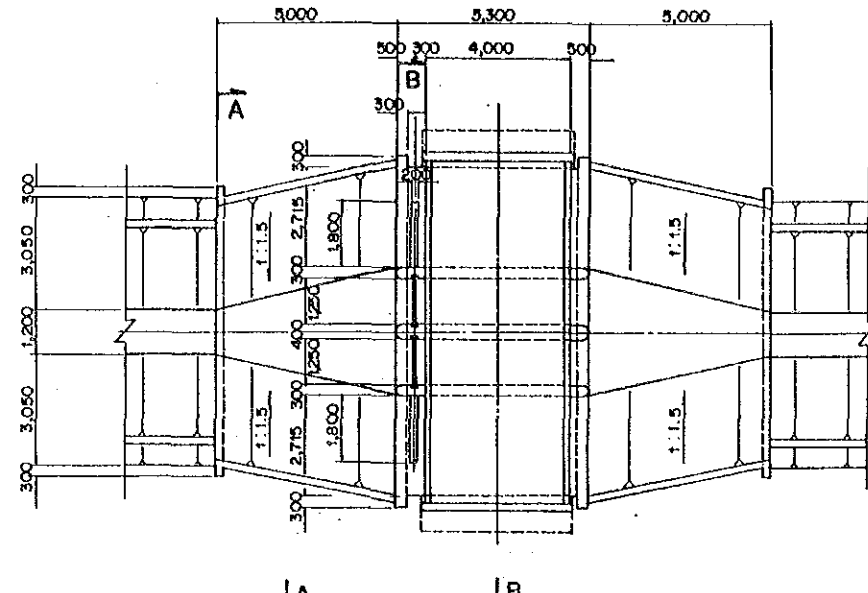
TYPE - A

A - 2

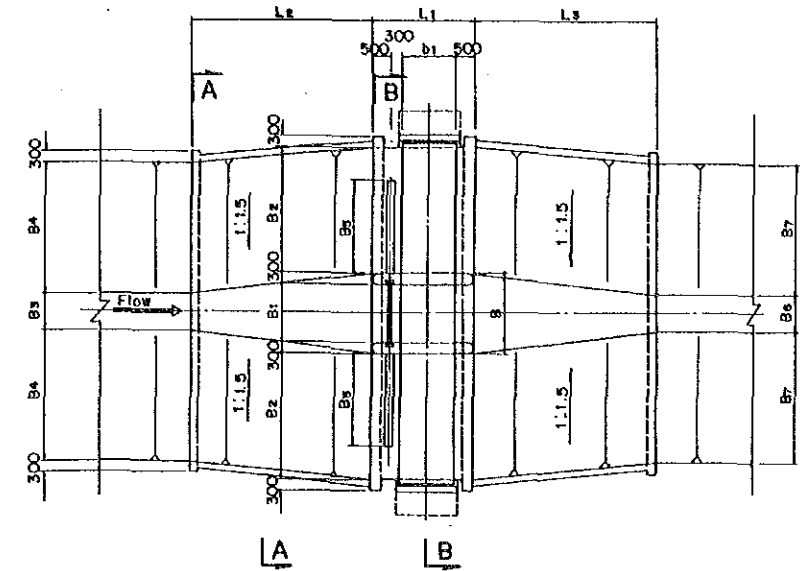
TYPE - B



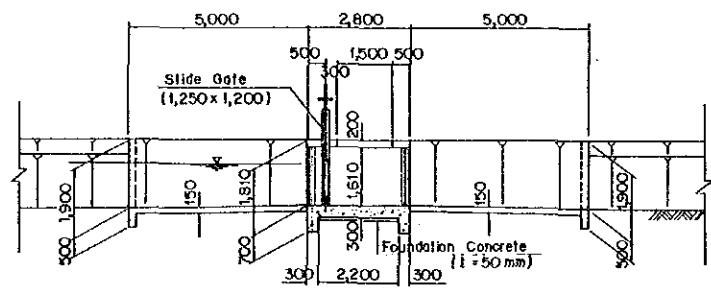
PLAN



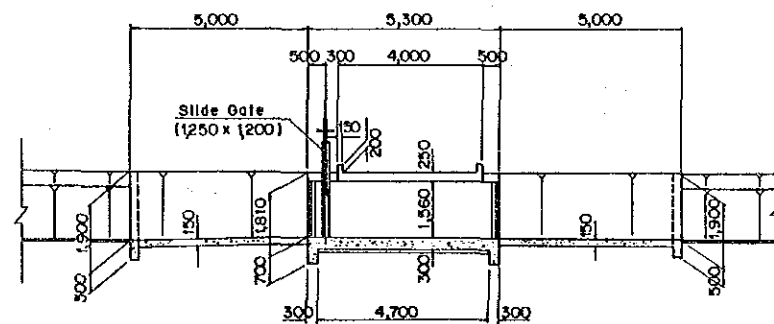
PLAN



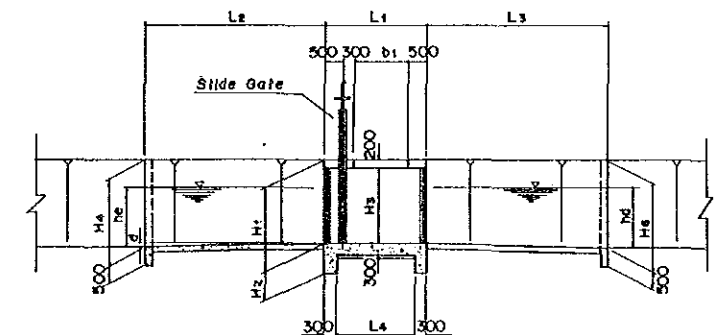
PLAN



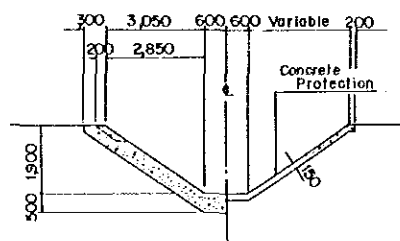
PROFILE



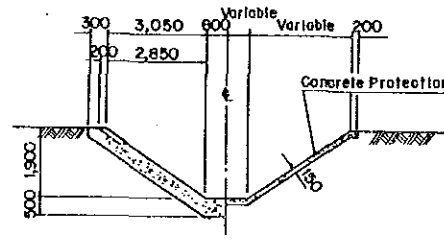
PROFILE



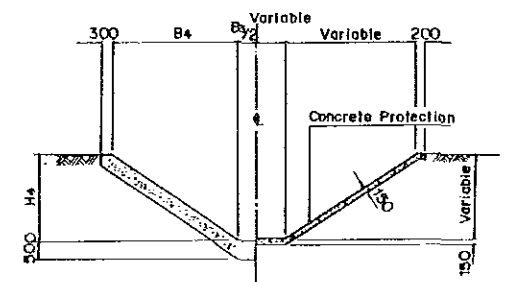
PROFILE



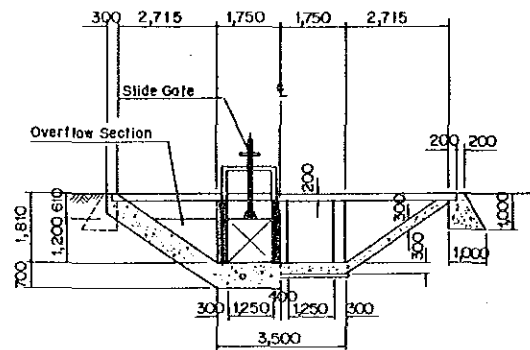
SECTION A-A



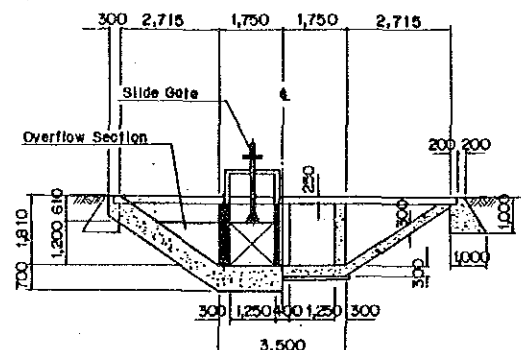
SECTION A-A



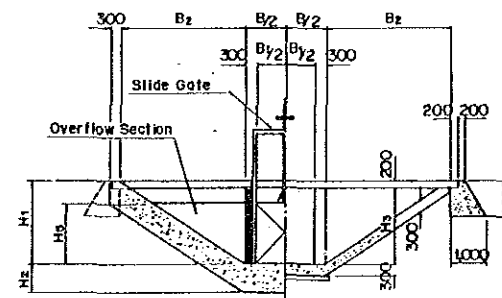
SECTION A-A



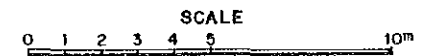
SECTION B-B



SECTION B-B

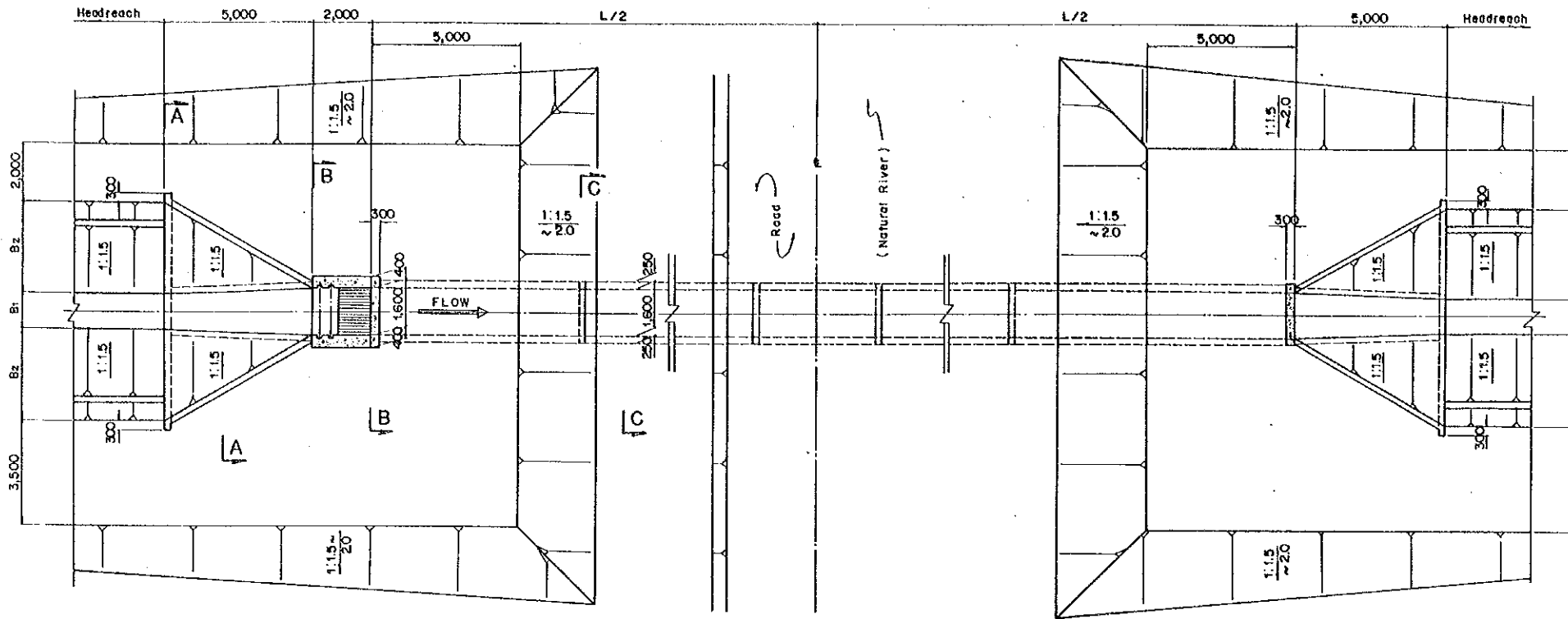


SECTION B-B



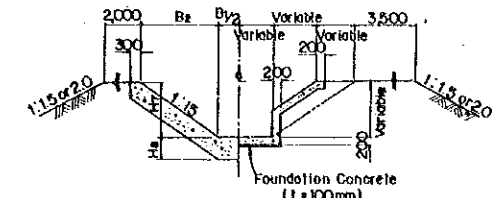
LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 灌溉用水路及び農道 制水門		
Date	Drawing No.	3010
JAPAN INTERNATIONAL COOPERATION AGENCY		

TYPE - A

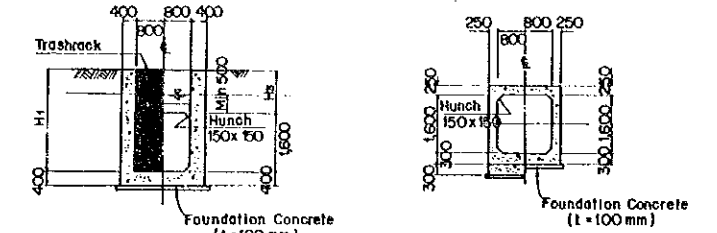


PLAN

SYPHON TYPE - A

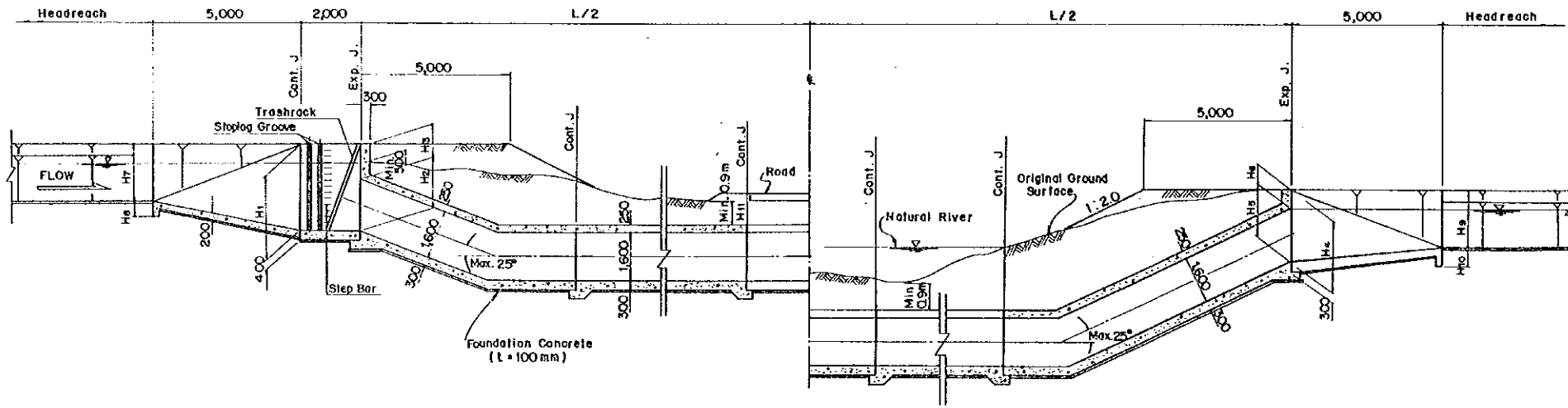


SECTION A-A



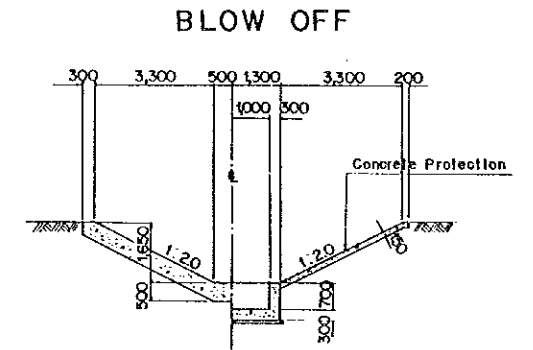
SECTION B-B

SECTION C-C

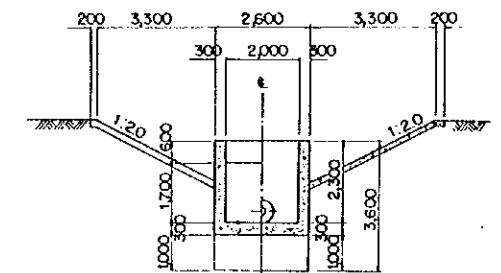


PROFILE

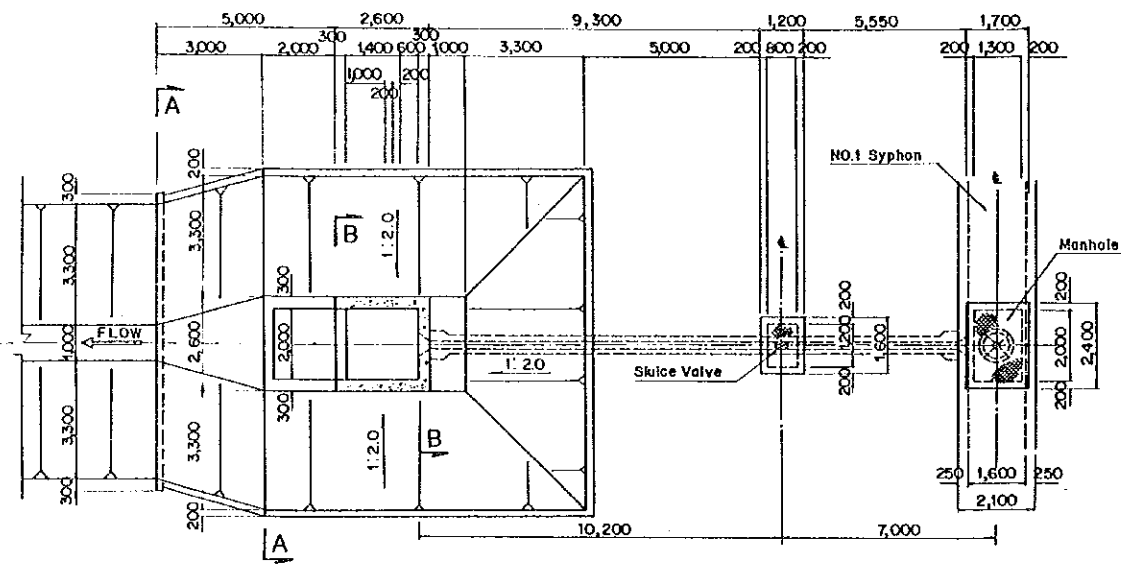
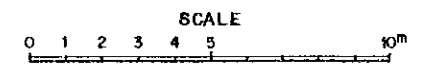
BLOW OFF



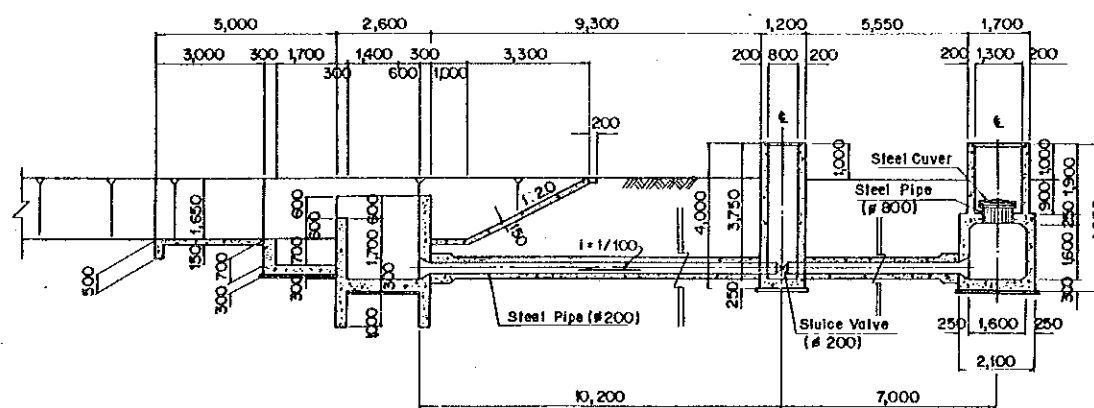
SECTION A-A



SECTION B-B



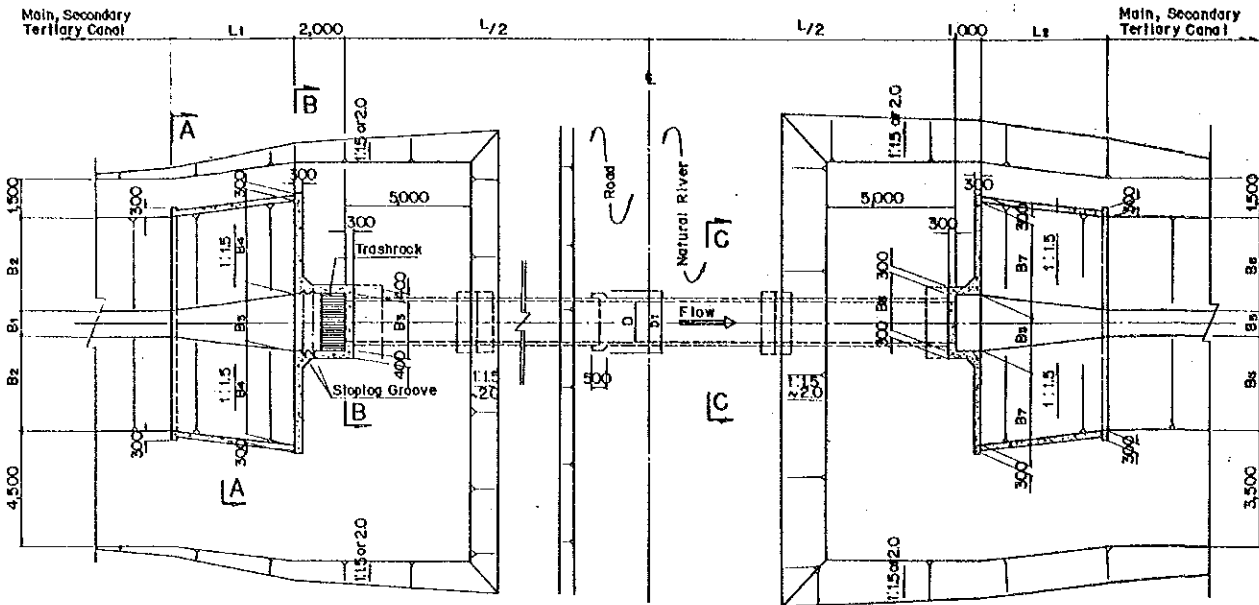
PLAN



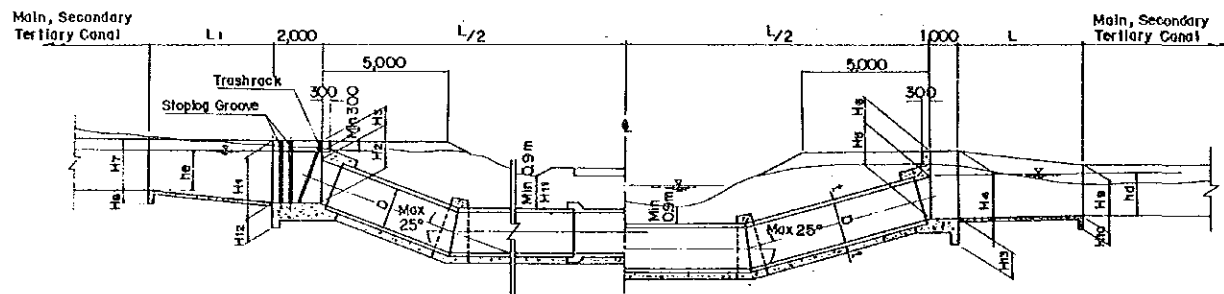
PROFILE

LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 灌溉用水路及び農道 サイホン(1/2)		
Date	Drawing No.	3011
JAPAN INTERNATIONAL COOPERATION AGENCY		

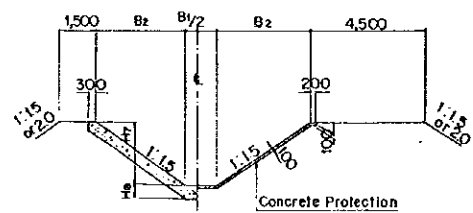
TYPE - B



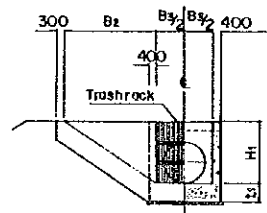
PLAN



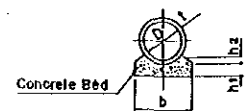
PROFILE



SECTION A-A

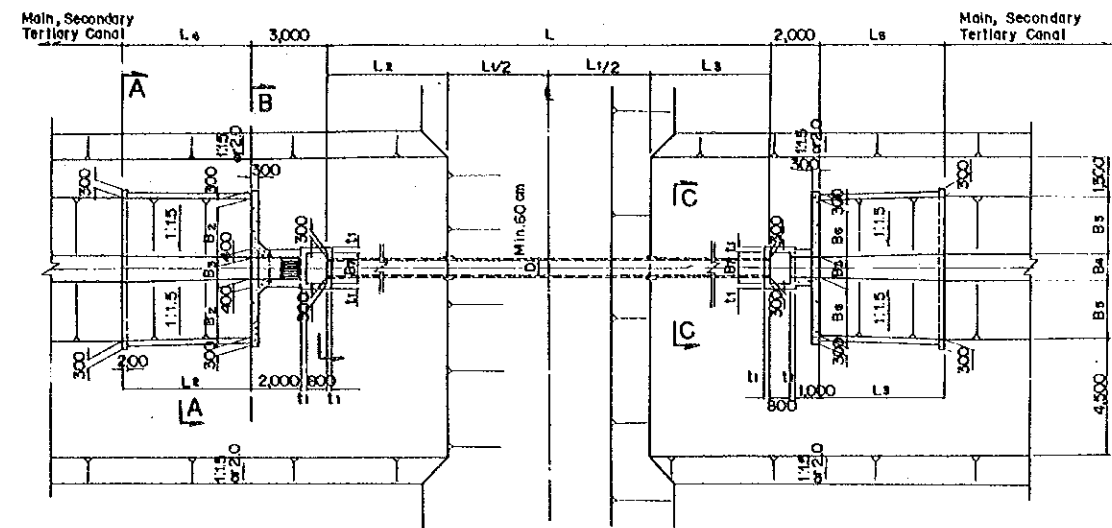


SECTION B-B

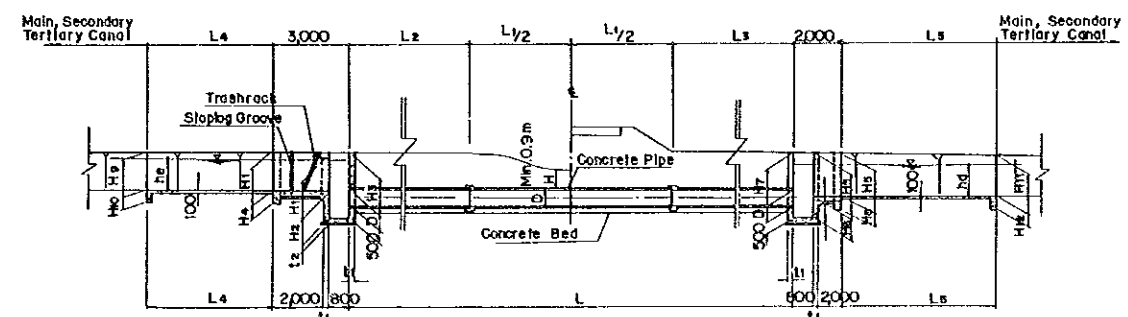


SECTION C-C

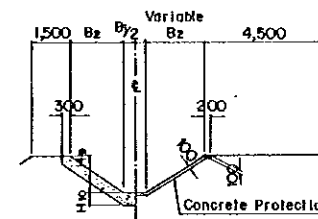
TYPE - G



PLAN



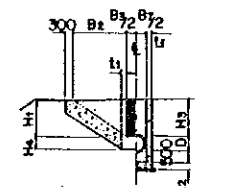
PROFILE



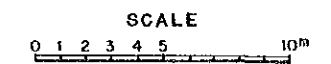
SECTION A-A



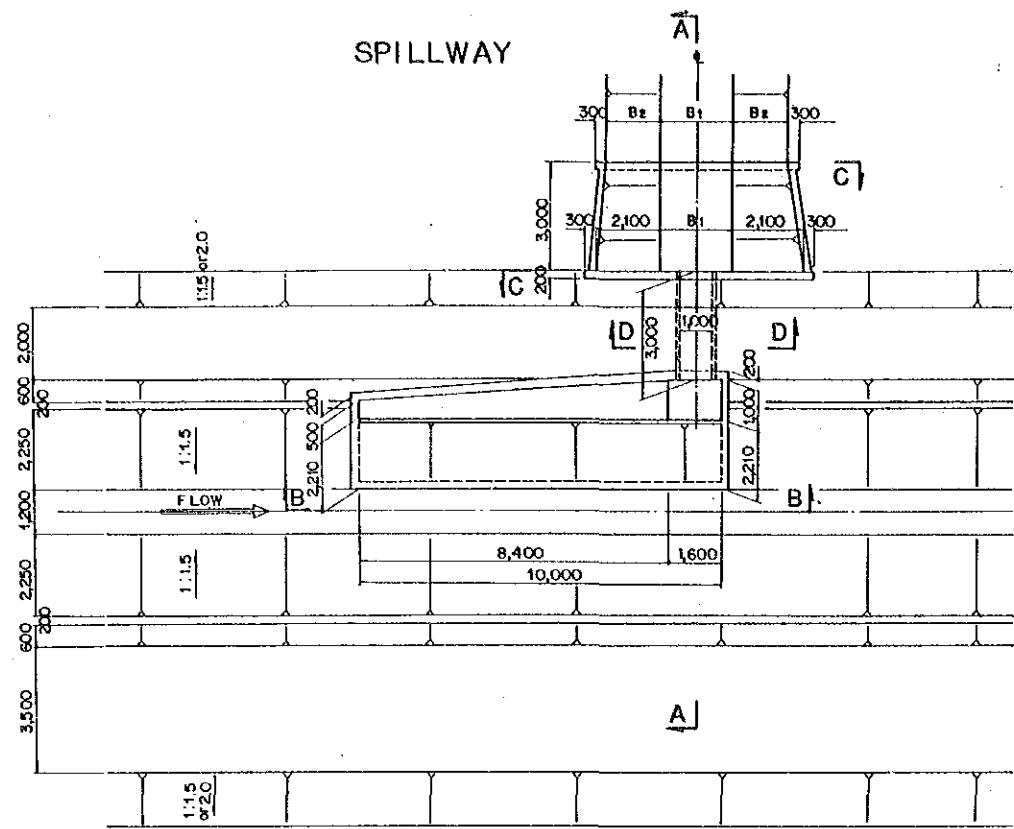
SECTION C-C



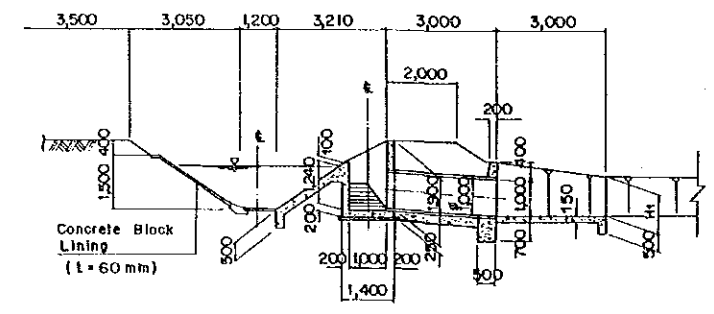
SECTION B-B



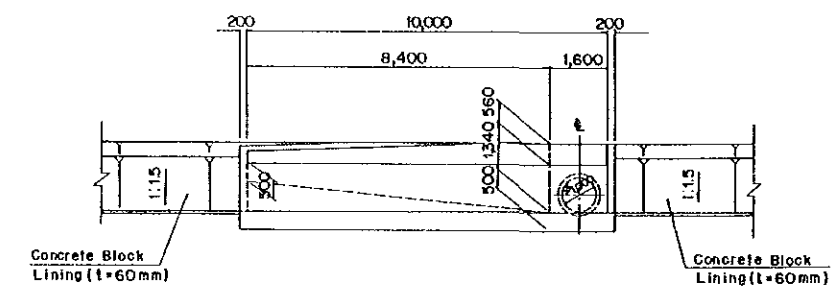
LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 灌溉用水路及び農道 サイホン(2/2)		
Date	Drawing No.	3012
JAPAN INTERNATIONAL COOPERATION AGENCY		



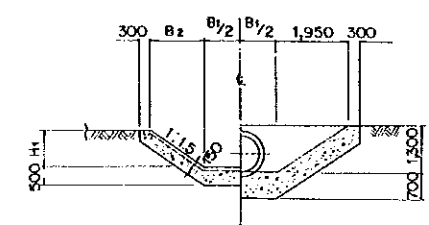
PLAN



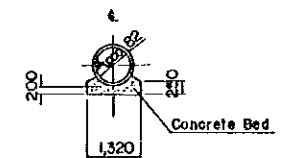
SECTION A-A



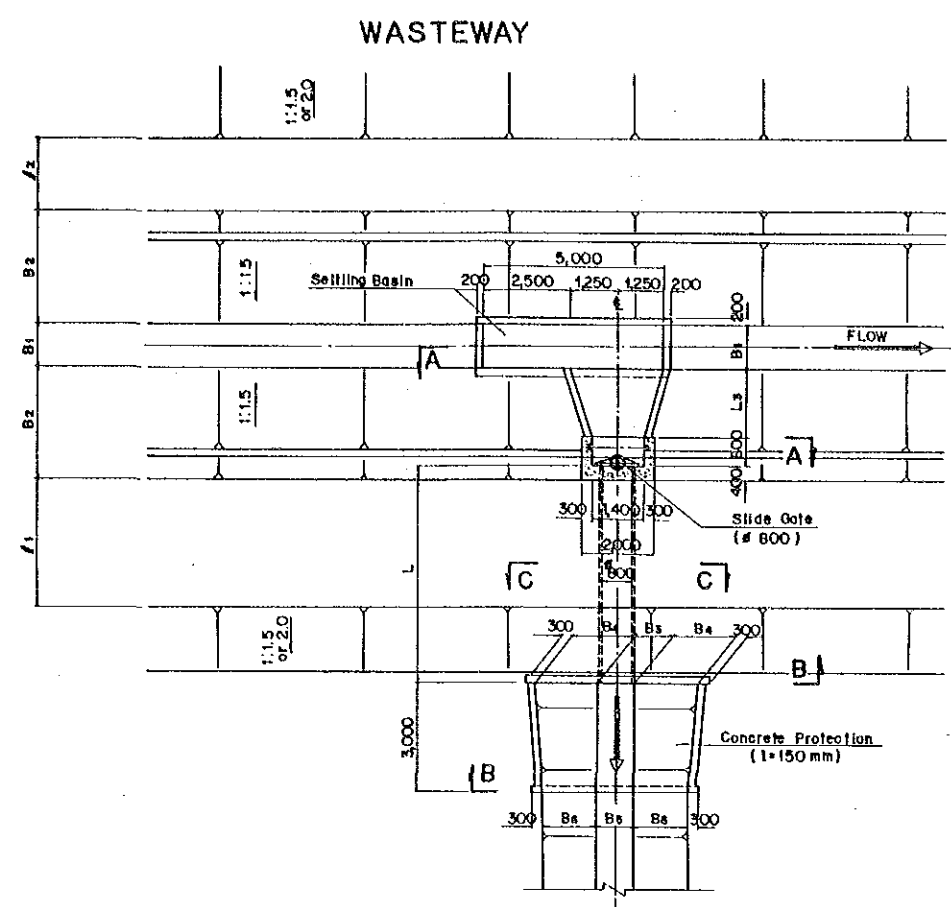
SECTION B-B



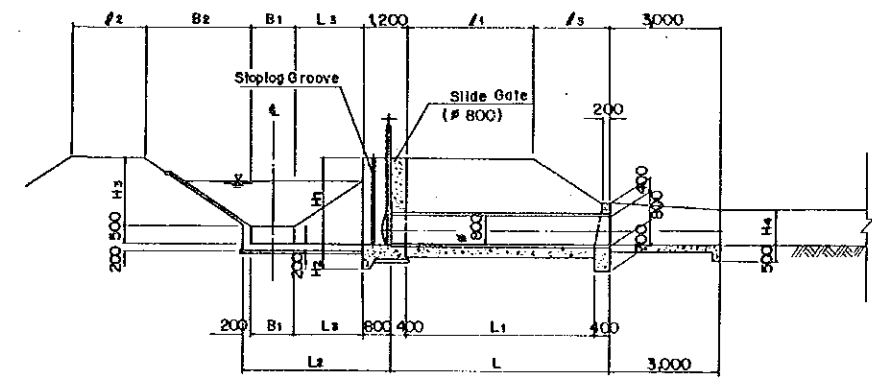
SECTION C-C



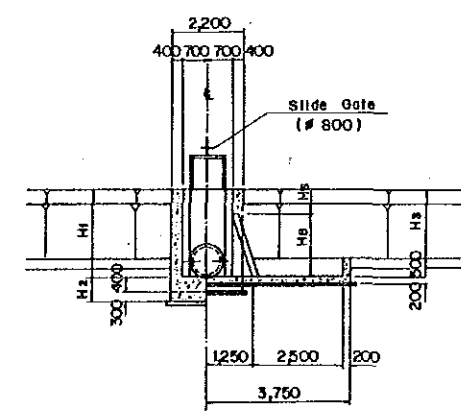
SECTION D-D



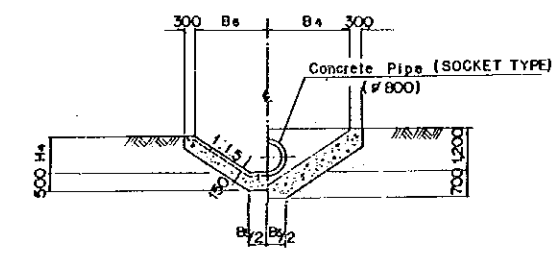
PLAN



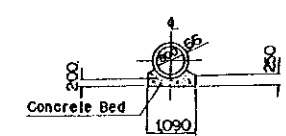
PROFILE



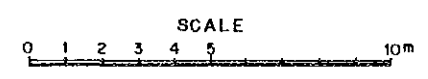
SECTION A-A



SECTION B-B

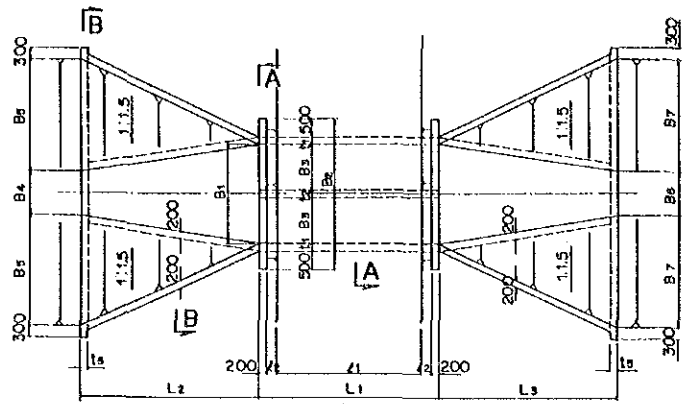


SECTION C-C

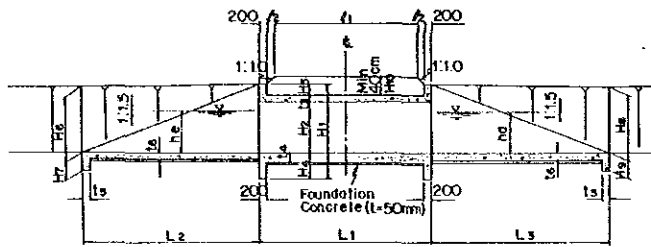


LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 灌溉用水路及び農道 余水吐/全量余水吐		
Date	Drawing No.	3013
JAPAN INTERNATIONAL COOPERATION AGENCY		

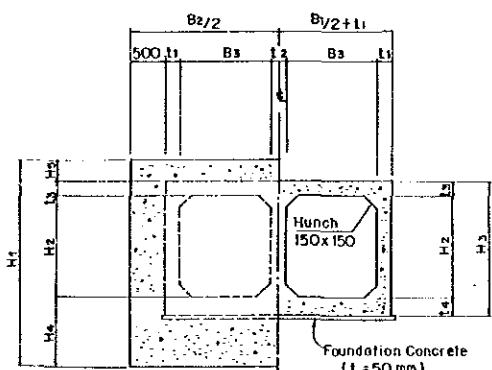
TYPE - A



PLAN SCALE - A

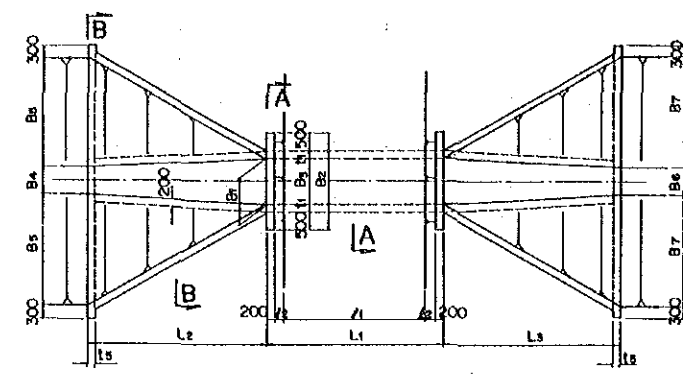


PROFILE SCALE - A

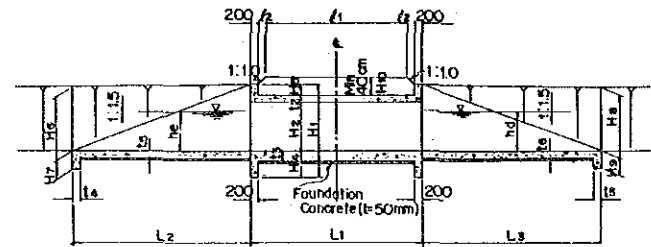


SECTION A-A SCALE - B

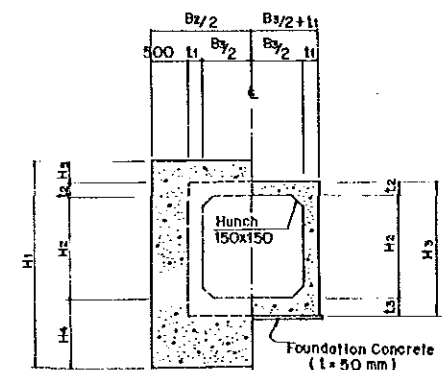
TYPE - B



PLAN SCALE - A

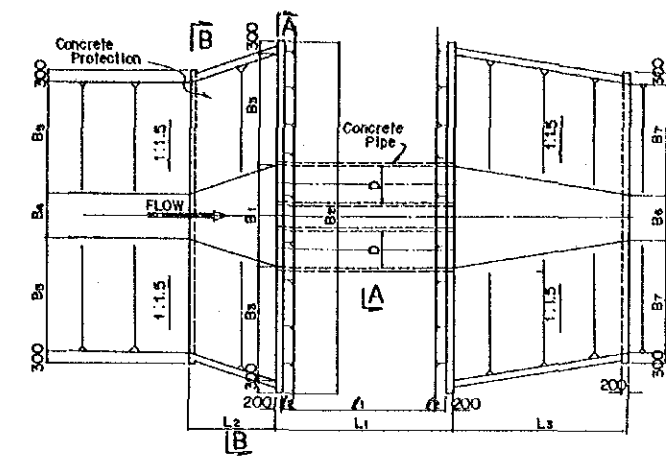


PROFILE SCALE - A

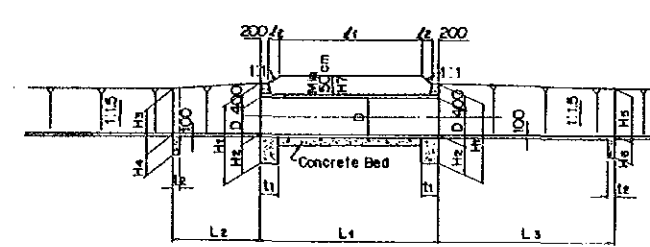


SECTION A-A SCALE - B

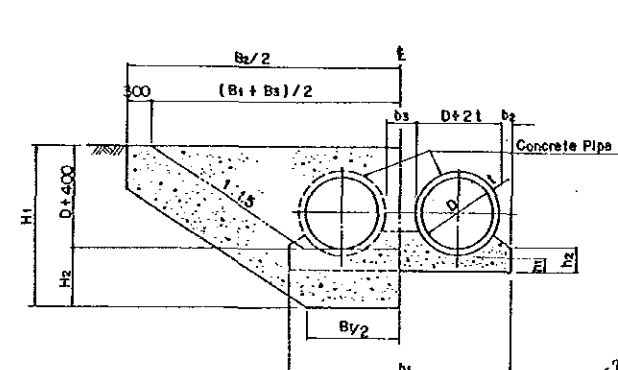
TYPE - C



PLAN SCALE - A

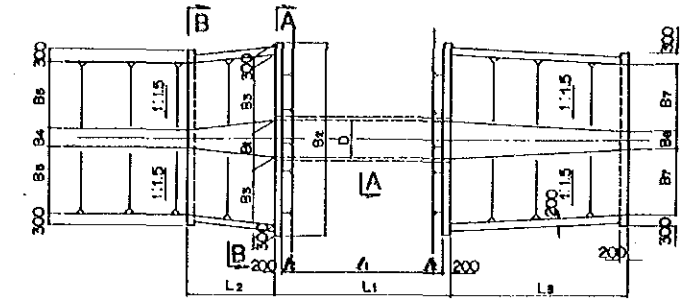


PROFILE SCALE - A

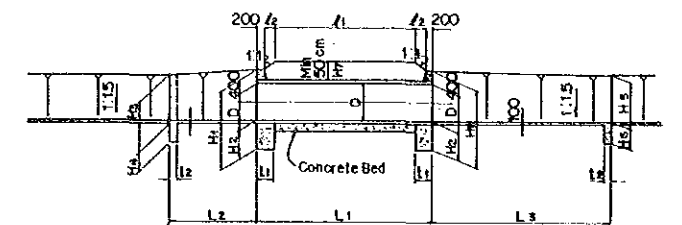


SECTION A-A SCALE - B

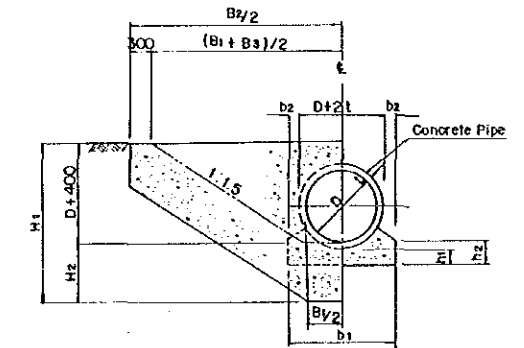
TYPE - D



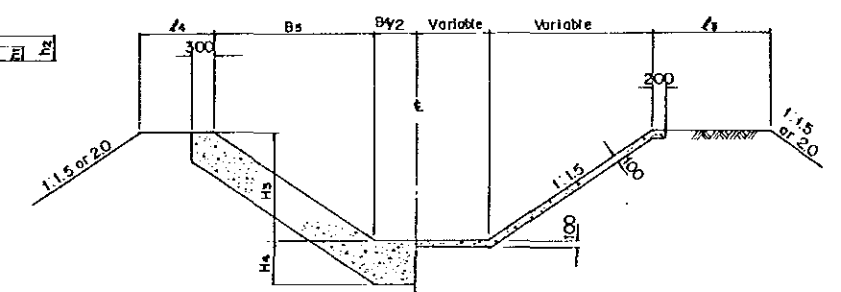
PLAN SCALE - A



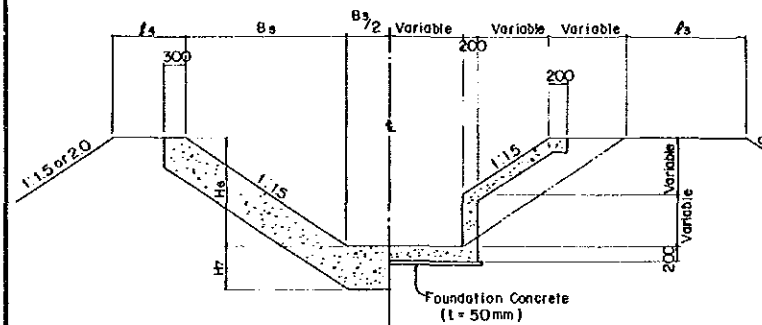
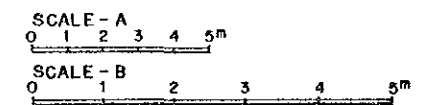
PROFILE SCALE - A



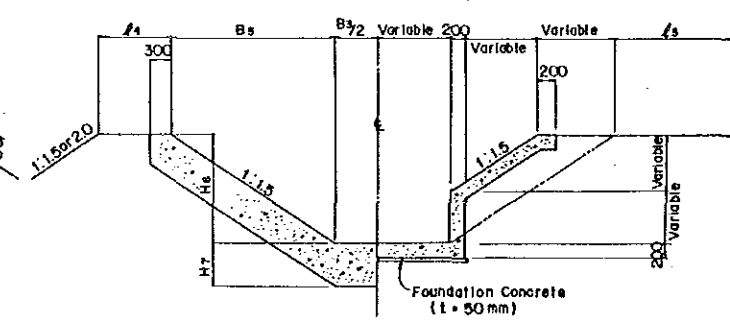
SECTION SCALE - B



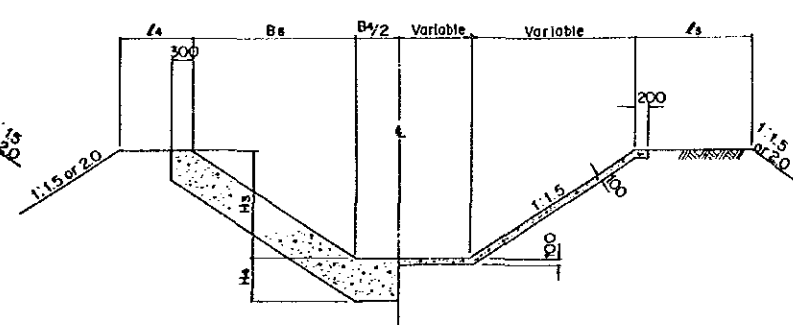
SECTION B-B SCALE - B



SECTION B-B SCALE - B

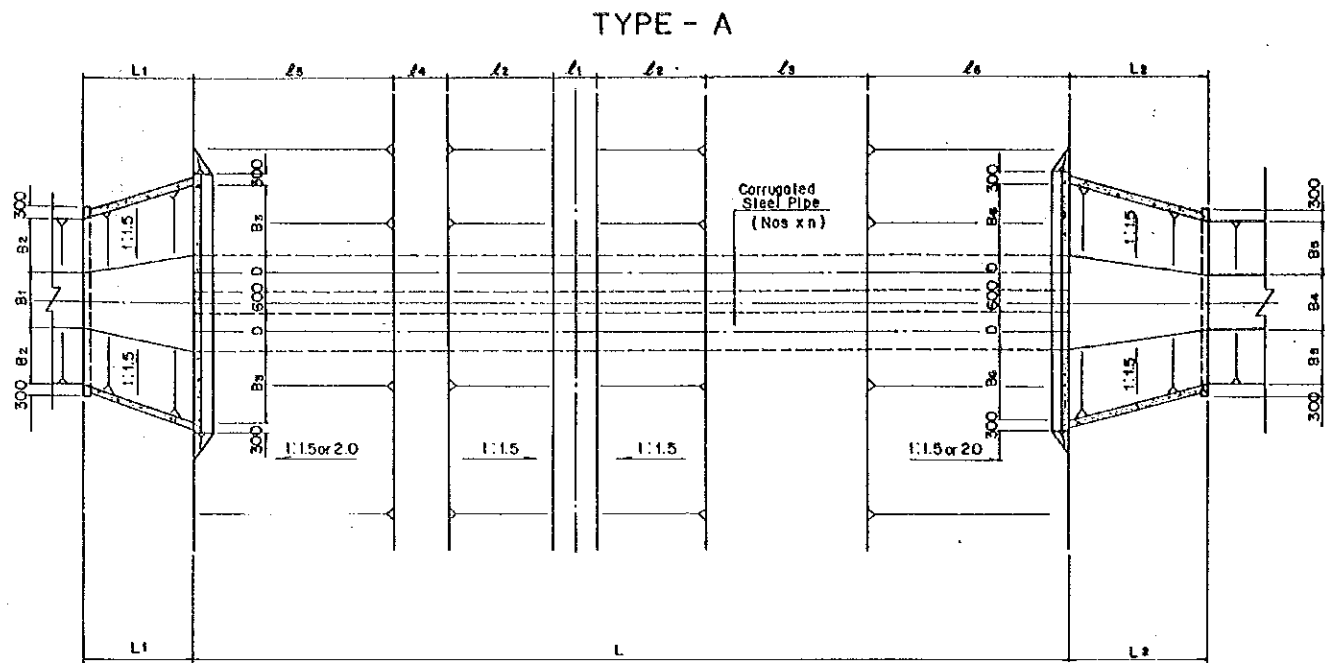


SECTION B-B SCALE - B

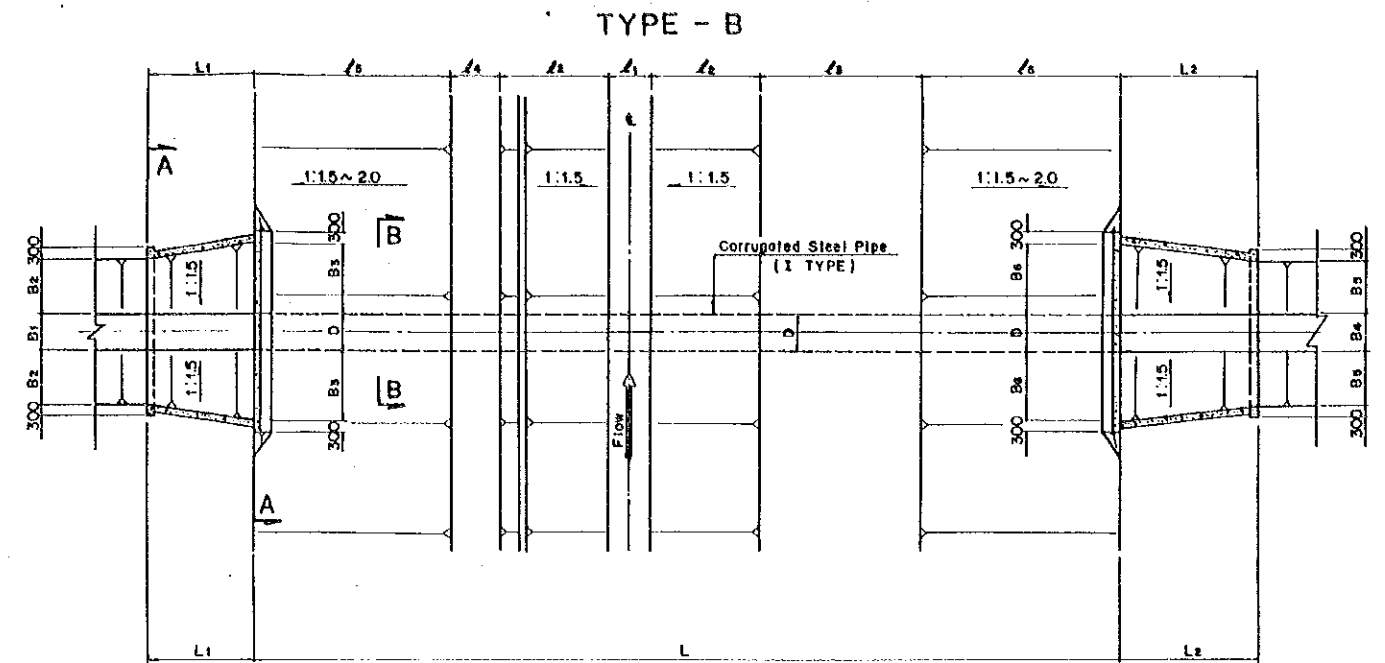


SECTION B-B SCALE - B

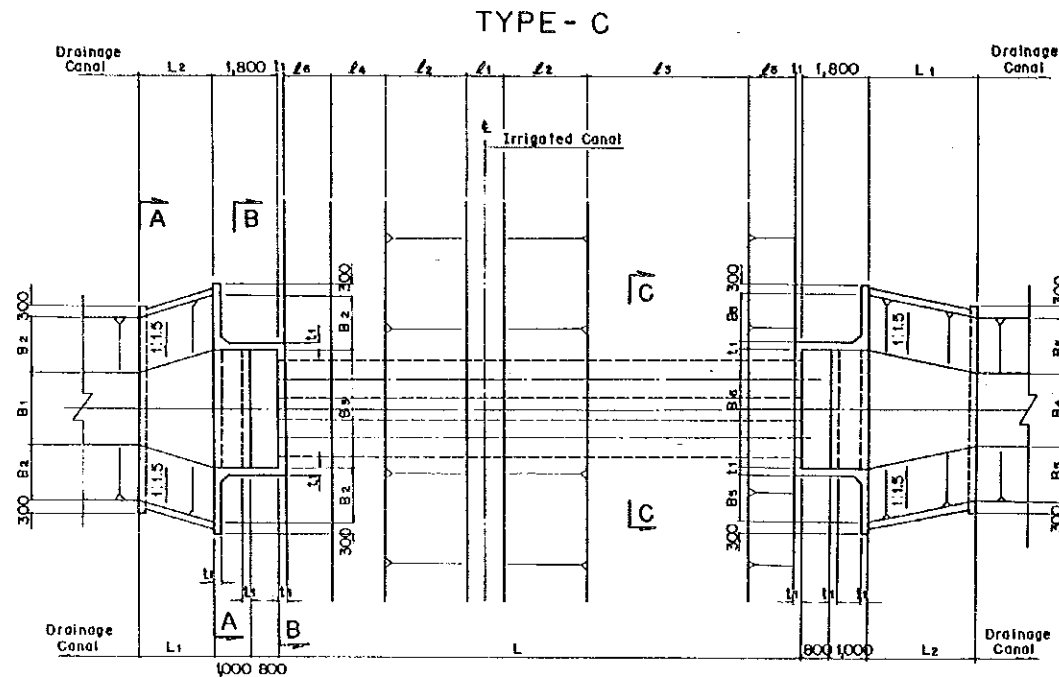
LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 灌溉用水路及び農道 暗渠		
Date	Drawing No.	3014
JAPAN INTERNATIONAL COOPERATION AGENCY		



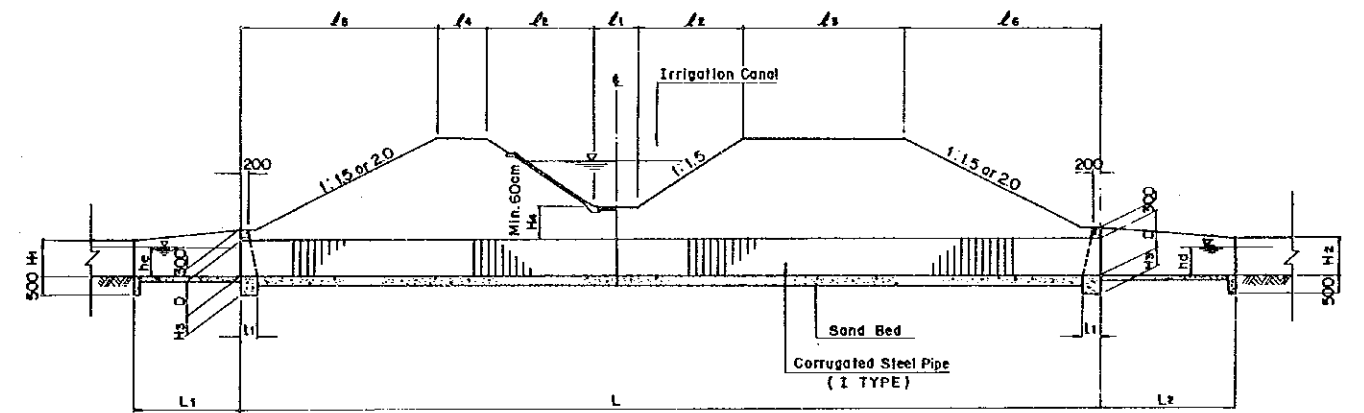
PLAN SCALE - A



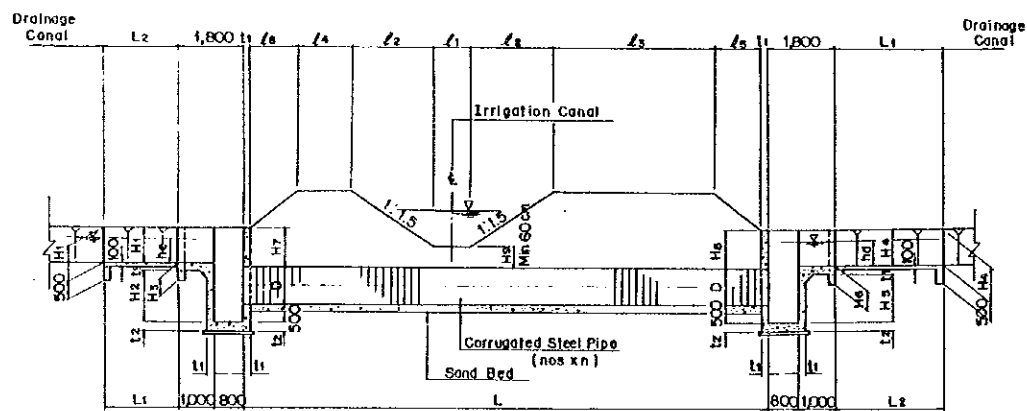
PLAN SCALE - A



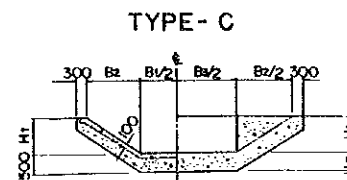
PLAN SCALE - A



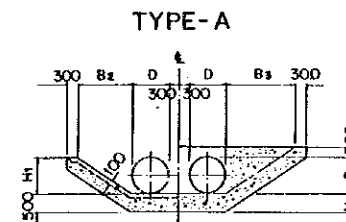
PROFILE (TYPE A and B) SCALE - A



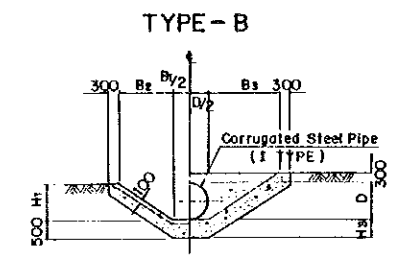
PROFILE SCALE - A



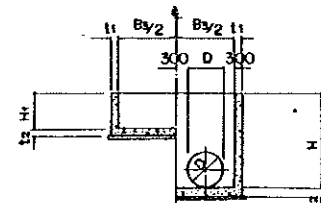
SECTION A-A SCALE - A



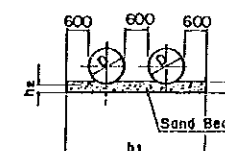
SECTION A-A SCALE - A



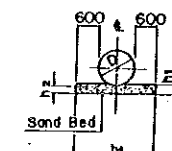
SECTION A-A SCALE - A



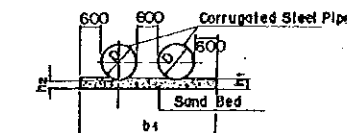
SECTION B-B SCALE - A



SECTION B-B SCALE - A



SECTION B-B SCALE - A



SECTION C-C SCALE - A

0 1 2 3 4 5 10m

LAO PEOPLE'S DEMOCRATIC REPUBLIC

AGRICULTURAL AND RURAL DEVELOPMENT PROJECT
IN THE SUBURBS OF VIENTIANE

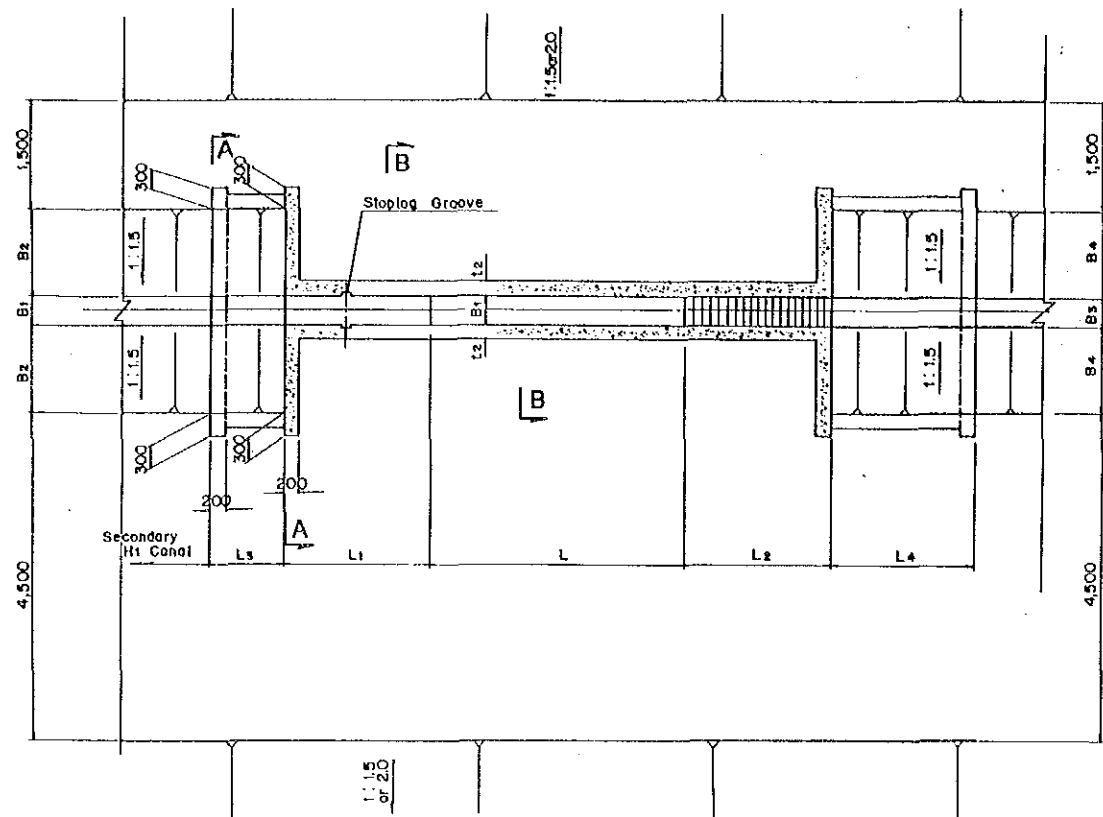
TITLE OF DRAWING

灌溉用水路及び農道
クロスドレーン

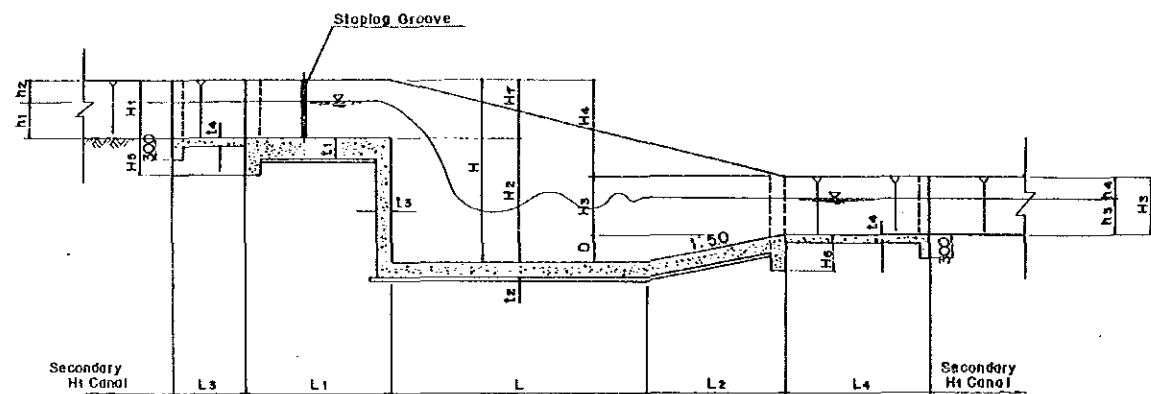
Date Drawing No. 3015

JAPAN INTERNATIONAL COOPERATION AGENCY

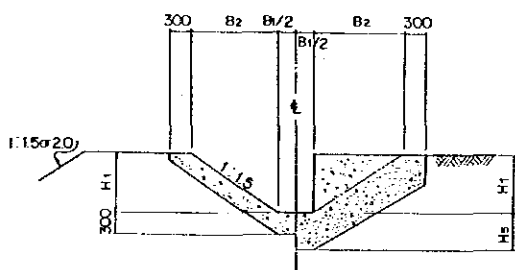
DROP



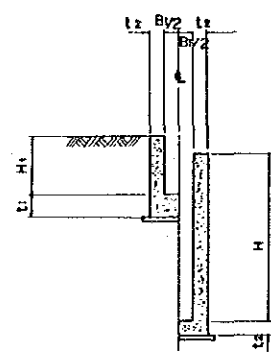
PLAN SCALE - A



PROFILE SCALE - A

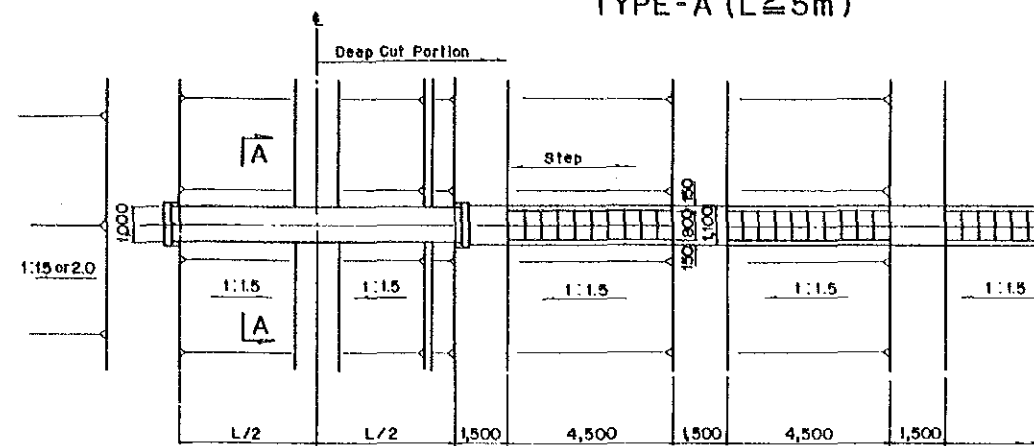


SECTION A-A SCALE - A

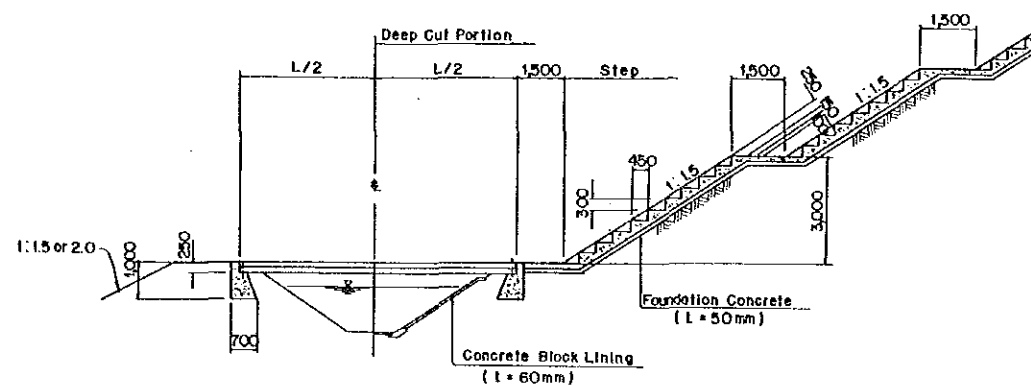


SECTION B-B SCALE - A

FOOTPATH BRIDGE
TYPE-A ($L \geq 5m$)

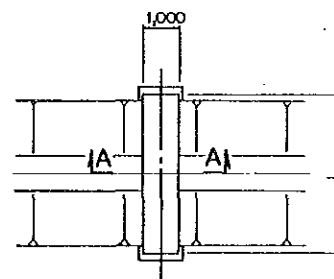


PLAN SCALE - B

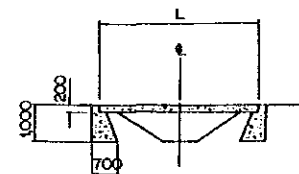


PROFILE SCALE - B

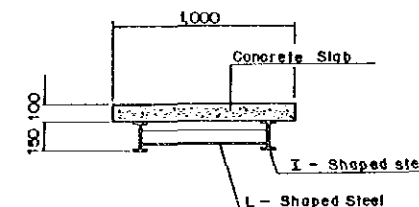
TYPE-B ($L < 5m$)



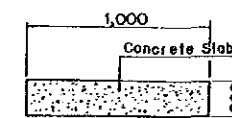
PLAN SCALE - B



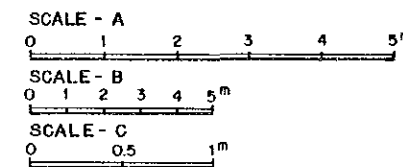
PROFILE SCALE - B



SECTION A-A SCALE - C



SECTION A-A SCALE - C

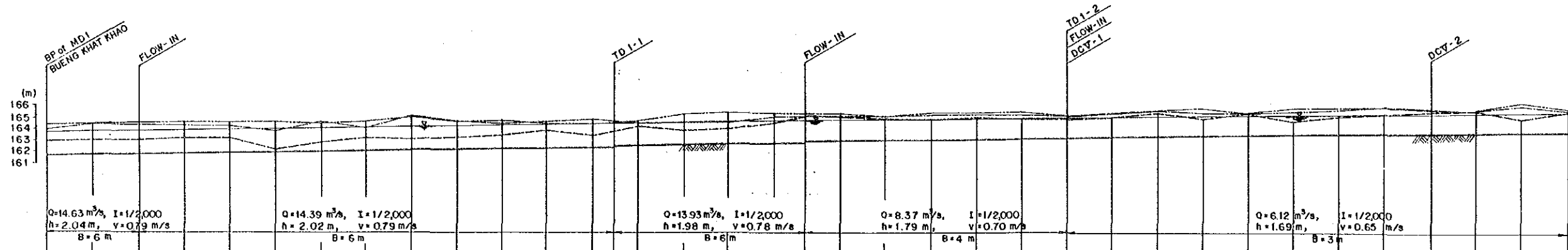


LAO PEOPLE'S DEMOCRATIC REPUBLIC

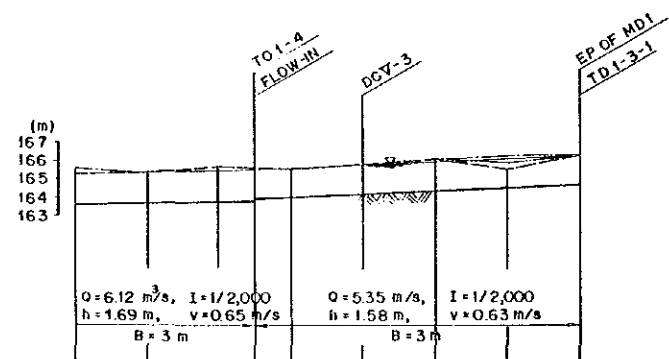
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT
IN THE SUBURBS OF VIENTIANE

TITLE OF DRAWING
灌溉用水路及び農道
落差工/フットパス

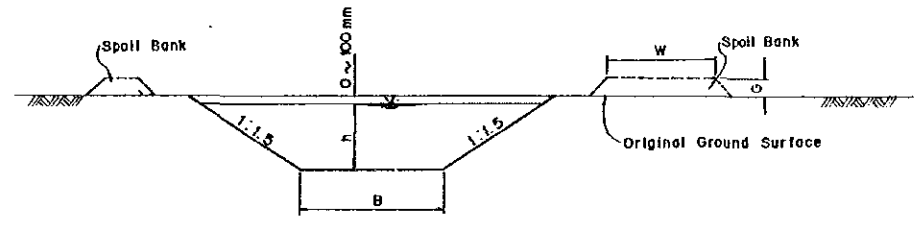
Date	Drawing No.	3016
JAPAN INTERNATIONAL COOPERATION AGENCY		



STATION	DISTANCE	ACCUMULATED DISTANCE	GROUND SURFACE ELEVATION (m)			PROPOSED ELEVATION (m)	
			RIGHT BANK	LEFT BANK	BASE	CANAL BASE	WATER SURFACE
BP	0	0	163.89	164.25	162.36	161.54	163.58
No. 1	100	100	164.28	164.31	162.87	161.59	163.63
No. 2	100	200	164.28	164.41	162.90	161.64	163.68
No. 3	100	300	164.24	164.44	163.15	161.71	163.73
No. 4	100	400	164.13	164.46	163.15	161.76	163.78
No. 5	100	500	163.75	164.56	162.08	161.81	163.83
No. 6	100	600	164.50	164.40	162.75	161.86	163.88
No. 7	100	700	163.96	164.44	163.04	161.91	163.93
No. 8	100	800	164.83	164.85	162.97	161.96	163.98
No. 9	100	900	164.41	164.46	163.11	162.01	164.03
No. 10	100	1000	164.36	164.49	163.29	162.06	164.08
No. 11	100	1100	164.41	164.24	163.71	162.11	164.13
No. 12	100	1200	164.64	164.01	163.21	162.16	164.18
No. 13	50	1250	164.25	164.53	164.03	162.22	164.23
No. 14	100	1400	164.40	164.93	163.67	162.30	164.28
No. 15	100	1500	164.21	165.09	163.73	162.35	164.33
No. 16	100	1600	164.84	165.04	164.21	162.40	164.38
No. 17	74	1674	164.80	165.05	164.76	162.43	164.41
No. 18	75	1749	164.84	164.99	164.68	162.56	164.45
No. 19	100	1849	164.80	164.73	164.50	162.71	164.50
No. 20	100	1949	165.00	165.16	164.50	162.76	164.55
No. 21	100	2049	165.12	165.13	164.62	162.81	164.60
No. 22	100	2149	165.03	165.15	164.58	162.86	164.65
No. 23	100	2249	164.76	164.74	164.57	162.93	164.70
No. 24	100	2349	165.19	165.00	164.66	163.06	164.75
No. 25	100	2449	165.02	165.02	165.02	163.11	164.80
No. 26	100	2549	165.03	165.09	164.47	163.16	164.85
No. 27	100	2649	164.99	164.98	165.00	163.21	164.90
No. 28	100	2749	165.55	165.28	164.36	163.26	164.95
No. 29	100	2849	165.50	165.36	164.82	163.31	165.00
No. 30	100	2949	165.57	165.48	164.98	163.36	165.05
No. 31	100	3049	165.20	165.20	165.20	163.41	165.10
No. 32	100	3149	165.36	165.32	165.32	163.46	165.15
No. 33	100	3249	165.86	165.03	164.53	163.51	165.20
EP	100	3349	165.49	165.21	165.21	163.56	165.25



STATION	DISTANCE	ACCUMULATED DISTANCE	GROUND SURFACE ELEVATION (m)			PROPOSED ELEVATION (m)	
			RIGHT BANK	LEFT BANK	BASE	CANAL BASE	WATER SURFACE
No. 33	100	3349	165.48	165.56	165.21	163.56	165.25
No. 34	100	3449	165.28	165.28	165.28	163.61	165.30
No. 35	100	3549	165.43	165.43	165.43	163.66	165.35
No. 36	49	3649	165.37	165.37	165.37	163.80	165.38
No. 37	100	3749	165.52	165.52	165.52	163.87	165.45
No. 38	100	3849	165.79	165.50	165.66	163.92	165.50
No. 39	100	3949	165.79	165.50	165.19	163.97	165.55
EP	100	4049	165.60	165.60	164.02	164.02	165.60



TYPICAL CROSS SECTION OF DRAIN

- LEGEND**
- PROPOSED WATER SURFACE
 - PROPOSED CANAL BASE
 - ORIGINAL GROUND SURFACE
 - ORIGINAL RIGHT BANK
 - ORIGINAL LEFT BANK
 - DRAINAGE CULVERT

HORIZONTAL SCALE
0 100 200m

VERTICAL SCALE
0 2 4 6 8m

LAO PEOPLE'S DEMOCRATIC REPUBLIC

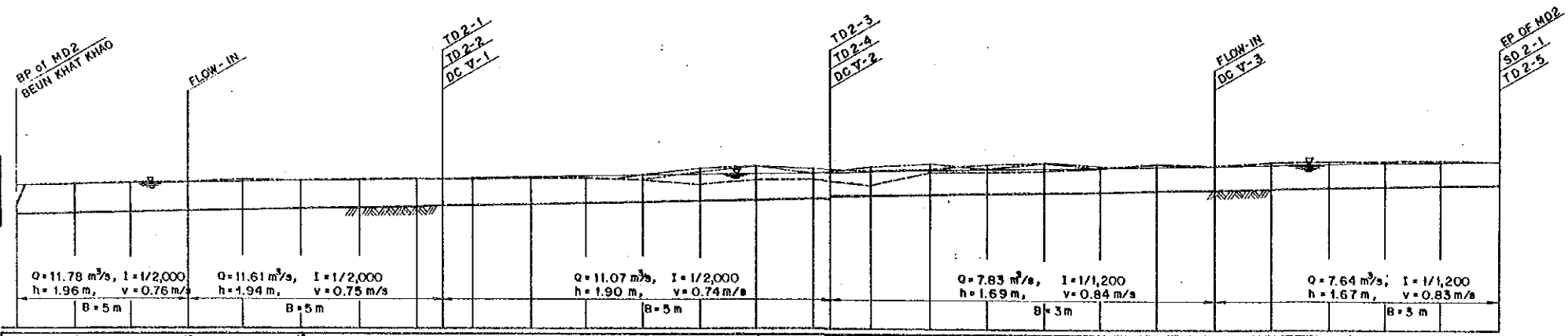
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT
IN THE SUBURBS OF VIENTIANE

TITLE OF DRAWING
排水路
幹線排水路(MD-1)縦断面図及び標準断面図

Date	Drawing No.	4001
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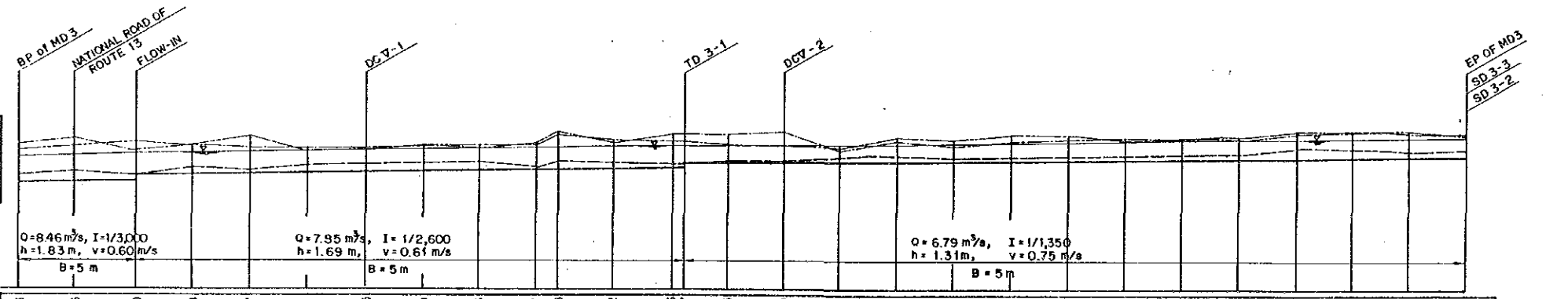
JAPAN INTERNATIONAL COOPERATION AGENCY

166
165
164
163
162
161



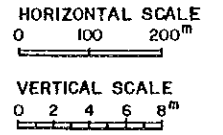
STATION	DISTANCE	ACCUMULATED DISTANCE	GROUND SURFACE ELEVATION		PROPOSED ELEVATION	
			RIGHT BANK	LEFT BANK	CANAL BASE	WATER SURFACE
BP 12	0.12	0.00	162.89	162.59	161.85	163.81
No. 1	88	100	163.88	163.88	161.90	163.86
No. 2	100	200	163.94	163.94	161.95	163.91
No. 3	100	300	163.96	163.96	162.00	163.96
No. 4	100	400	164.16	164.16	162.07	164.01
No. 5	100	500	164.12	164.12	162.12	164.06
No. 6	100	600	164.17	164.17	162.17	164.11
No. 7	100	700	164.19	164.19	162.22	164.16
No. 8	50	750	164.18	164.18	162.28	164.18
No. 9	100	800	164.16	164.16	162.31	164.21
No. 10	100	900	164.15	164.15	162.36	164.25
No. 11	100	1000	164.21	164.21	162.41	164.31
No. 12	100	1100	164.14	164.14	162.46	164.36
No. 13	100	1200	164.68	164.77	162.51	164.41
No. 14	50	1300	165.04	165.02	162.56	164.46
No. 15	70	1400	164.81	164.53	162.61	164.51
No. 16	100	1450	164.85	164.77	162.65	164.52
No. 17	100	1500	164.68	165.03	162.69	164.58
No. 18	100	1600	164.85	165.26	162.98	164.67
No. 19	100	1700	165.20	164.85	163.06	164.75
No. 20	100	1800	165.33	165.29	163.14	164.83
No. 21	100	1900	165.31	165.04	163.23	164.92
No. 22	100	2000	165.15	165.15	163.31	165.00
No. 23	100	2100	165.07	165.07	163.39	165.08
No. 24	100	2200	165.27	165.27	163.50	165.17
No. 25	100	2300	165.42	165.42	163.58	165.22
No. 26	100	2400	165.42	165.42	163.66	165.33
No. 27	100	2500	165.44	165.44	163.75	165.42
EP.	100	2600	165.46	165.46	163.83	165.50

170
169
168
167
166
165
164



STATION	DISTANCE	ACCUMULATED DISTANCE	GROUND SURFACE ELEVATION		PROPOSED ELEVATION	
			RIGHT BANK	LEFT BANK	CANAL BASE	WATER SURFACE
BP.	0	0	168.20	167.74	166.04	167.33
No. 1	100	100	168.55	168.03	166.18	167.36
No. 2	100	200	167.56	168.23	165.94	167.40
No. 3	100	300	167.89	167.94	166.42	167.44
No. 4	100	400	167.67	168.61	166.21	167.47
No. 5	100	500	167.69	167.49	166.54	167.51
No. 6	100	600	167.72	167.55	166.55	167.55
No. 7	100	700	167.77	167.80	166.55	167.59
No. 8	100	800	167.60	167.78	166.71	167.63
No. 9	100	900	168.04	167.79	166.25	167.67
No. 10	37	937	168.89	168.62	166.65	167.68
No. 11	150	1037	168.12	168.17	166.58	167.72
No. 12	24	1137	168.71	168.29	166.57	167.76
No. 13	76	1161	168.73	168.04	166.84	167.77
No. 14	100	1237	168.90	168.04	166.79	167.83
No. 15	98	1435	167.63	167.68	167.14	167.97
No. 16	100	1535	168.29	168.60	167.25	168.05
No. 17	100	1635	168.04	168.35	167.05	168.12
No. 18	100	1735	168.40	168.83	167.26	168.20
No. 19	100	1835	168.48	168.81	167.26	168.27
No. 20	100	1935	168.53	168.48	167.38	168.34
No. 21	100	2035	168.59	168.64	167.42	168.42
No. 22	100	2135	168.82	168.69	167.62	168.49
No. 23	100	2235	168.98	169.14	167.94	168.57
No. 24	100	2335	169.17	169.24	168.12	168.64
No. 25	100	2435	169.21	169.27	167.87	168.71
EP.	100	2535	169.08	168.96	168.03	168.79

- LEGEND**
- PROPOSED WATER SURFACE
 - PROPOSED CANAL BASE
 - ORIGINAL GROUND SURFACE
 - ORIGINAL RIGHT BANK
 - ORIGINAL LEFT BANK
 - DRAINAGE CULVERT



LAO PEOPLE'S DEMOCRATIC REPUBLIC

AGRICULTURAL AND RURAL DEVELOPMENT PROJECT
IN THE SUBURBS OF VIENTIANE

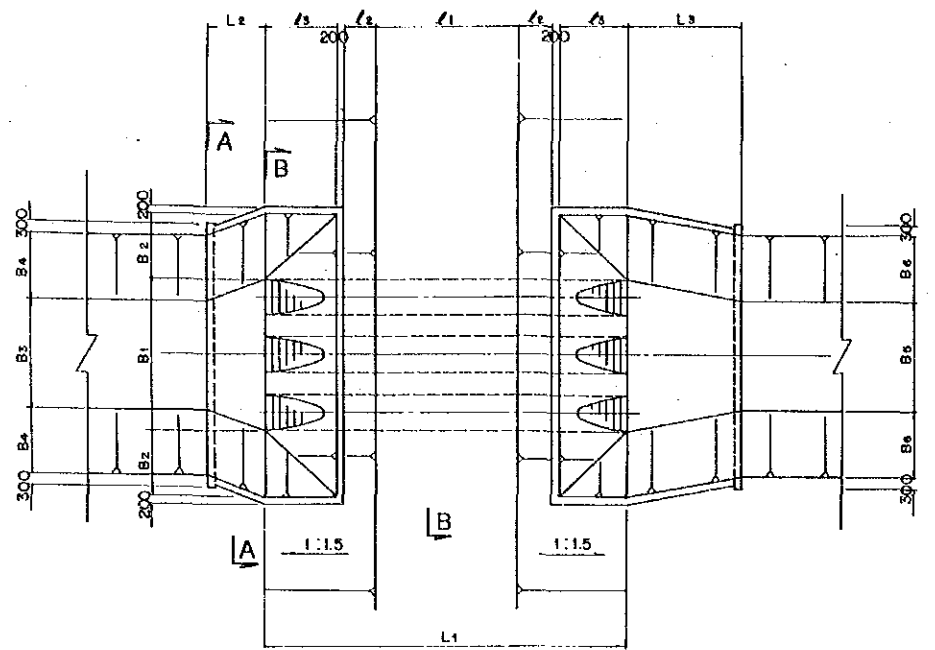
TITLE OF DRAWING
排水路
幹線排水路(MD-2&MD-3)縦断面図

Date: _____ Drawing No. 4002

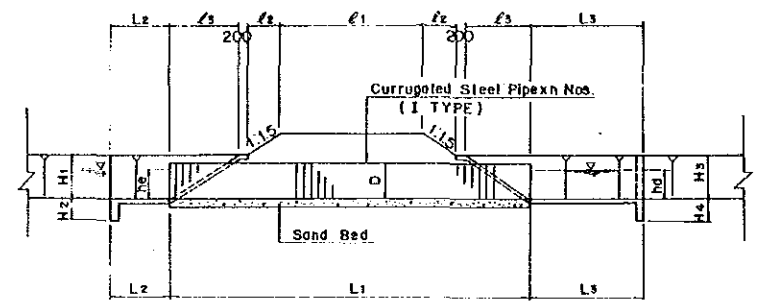
JAPAN INTERNATIONAL COOPERATION AGENCY

CULVERTS

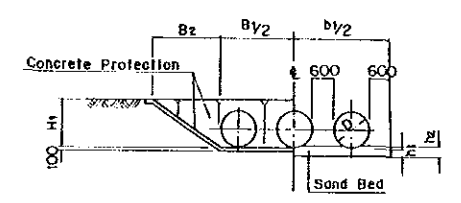
TYPE - A



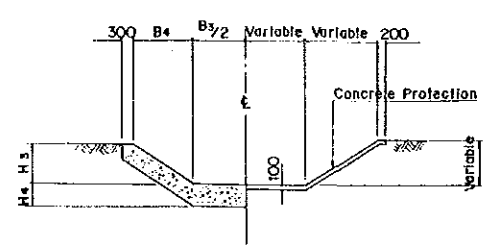
PLAN



PROFILE

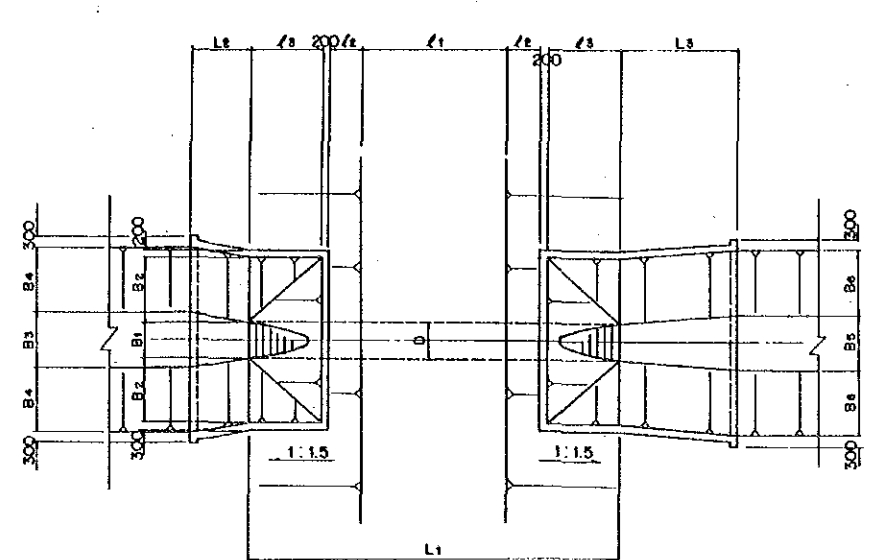


SECTION A-A

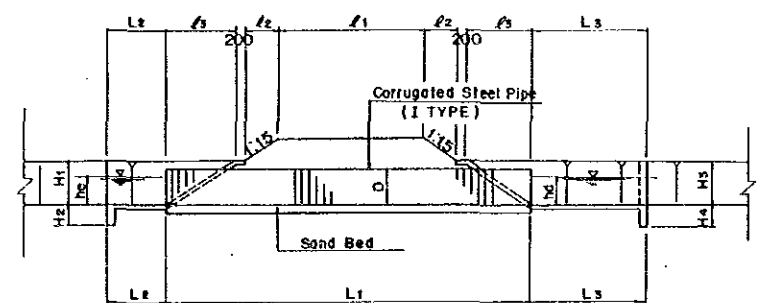


SECTION B-B

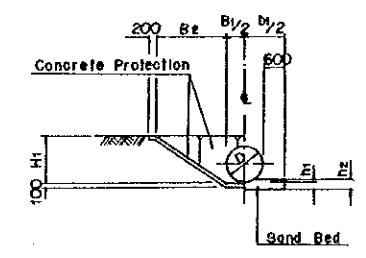
TYPE - B



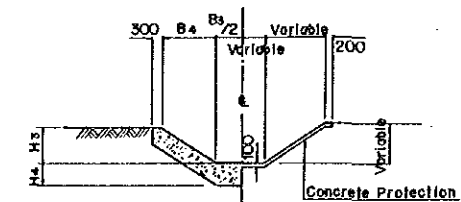
PLAN



PROFILE

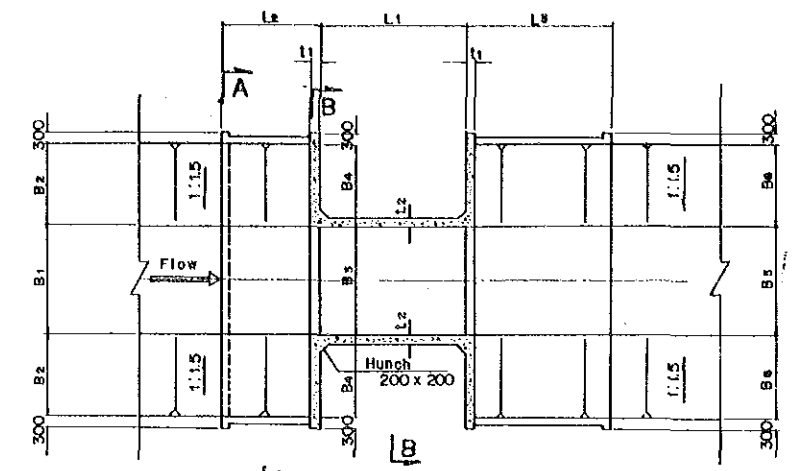


SECTION A-A

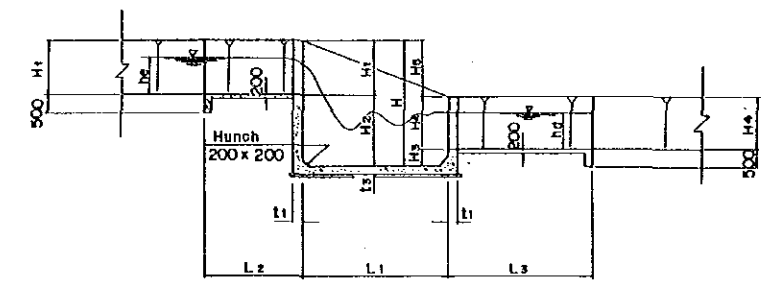


SECTION B-B

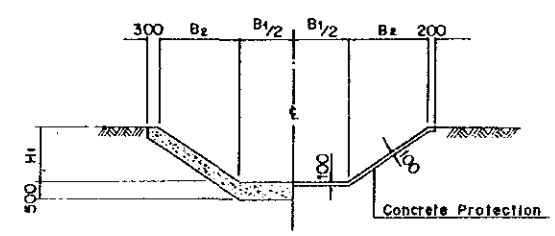
DROPS



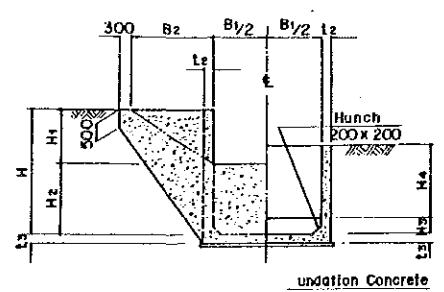
PLAN



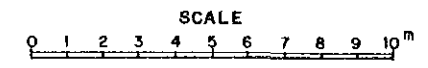
PROFILE



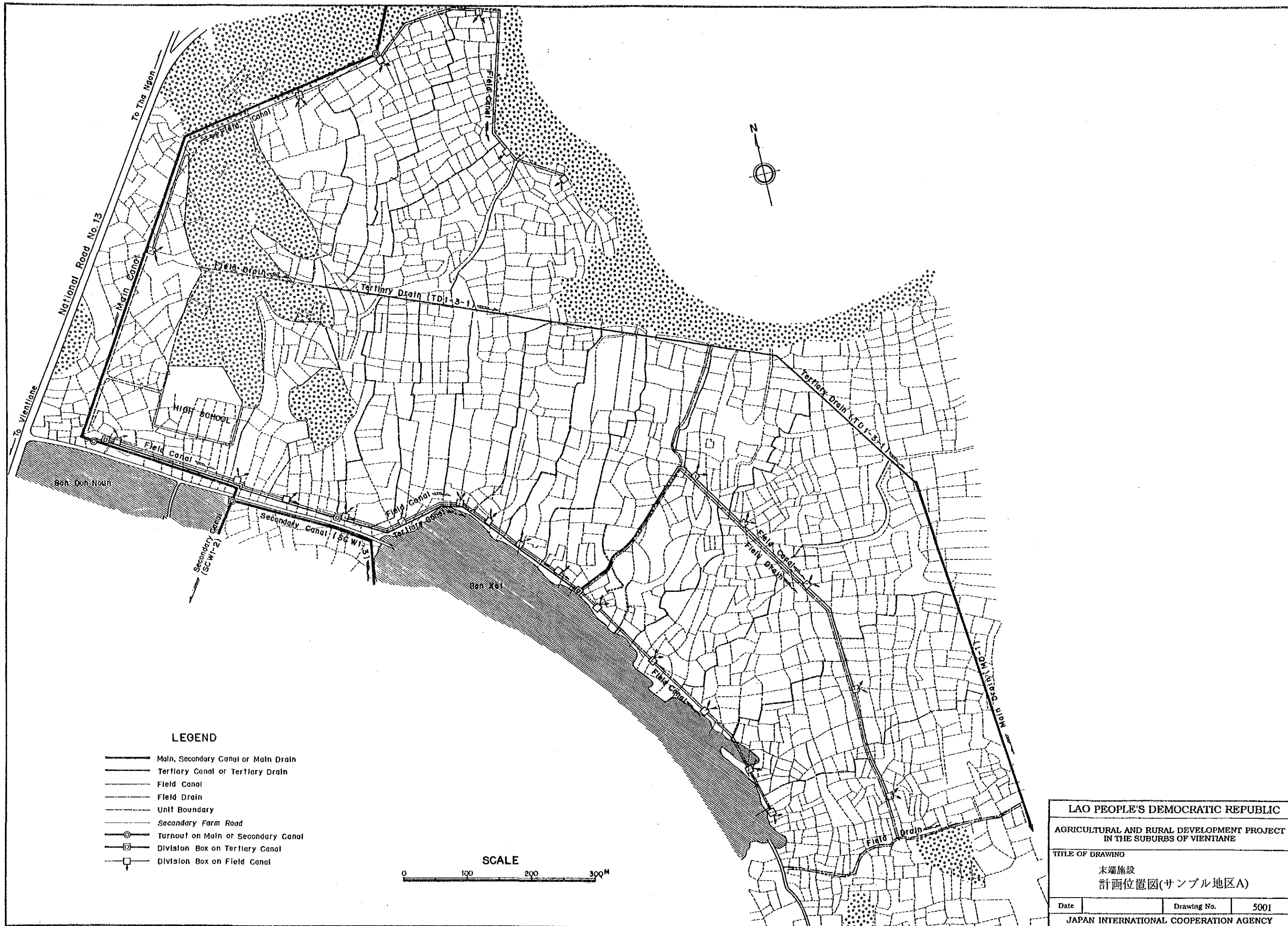
SECTION A-A



SECTION B-B



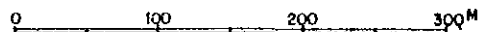
LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 排水路 排水暗渠/落差工		
Date	Drawing No.	4003
JAPAN INTERNATIONAL COOPERATION AGENCY		



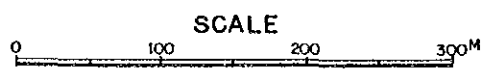
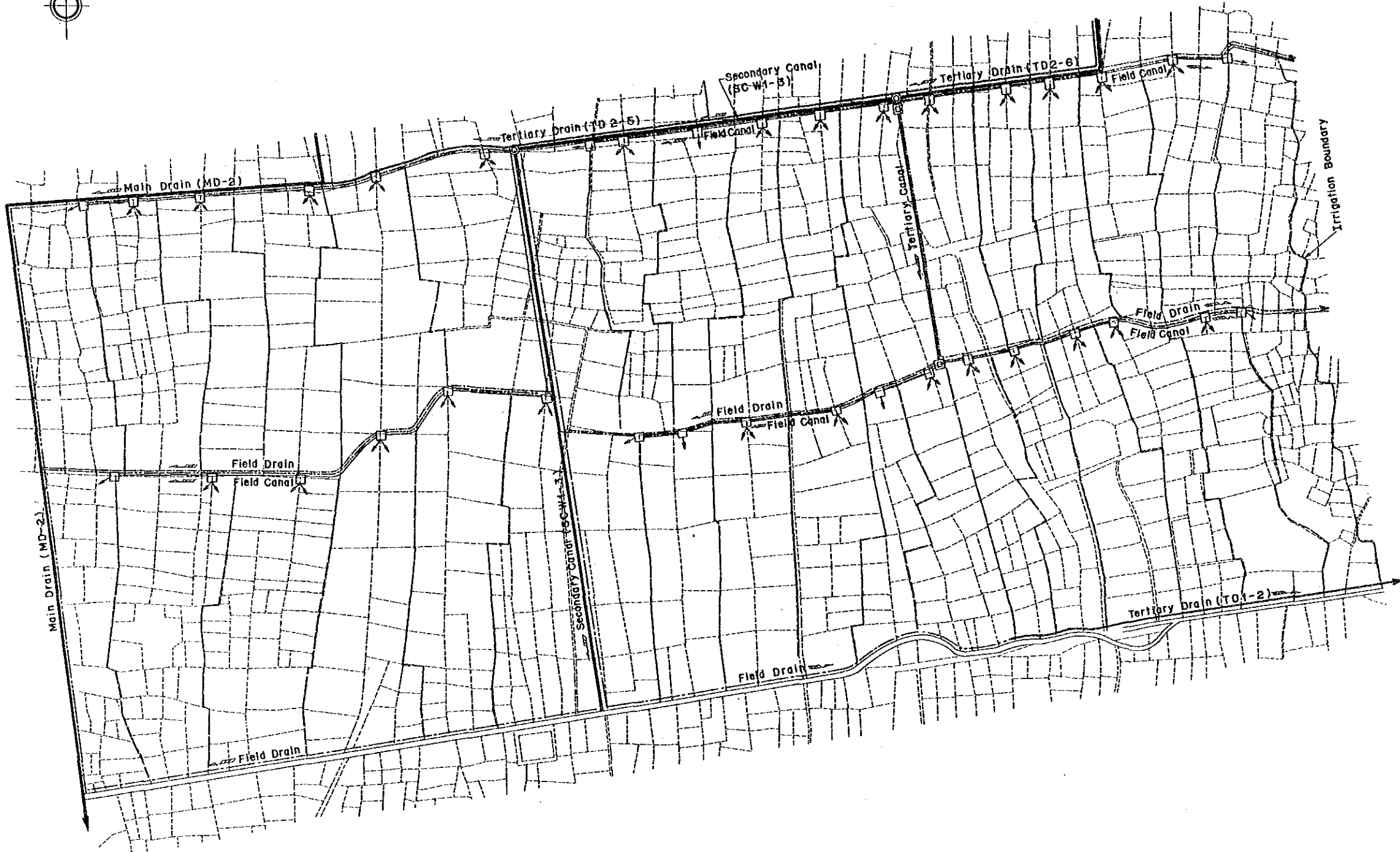
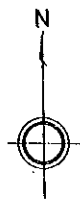
LEGEND

- Main, Secondary Canal or Main Drain
- Tertiary Canal or Tertiary Drain
- Field Canal
- Field Drain
- - - - - Unit Boundary
- Secondary Farm Road
- Turnout on Main or Secondary Canal
- Division Box on Tertiary Canal
- Division Box on Field Canal

SCALE



LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 末端施設 計画位置図(サンプル地区A)		
Date	Drawing No.	5001
JAPAN INTERNATIONAL COOPERATION AGENCY		

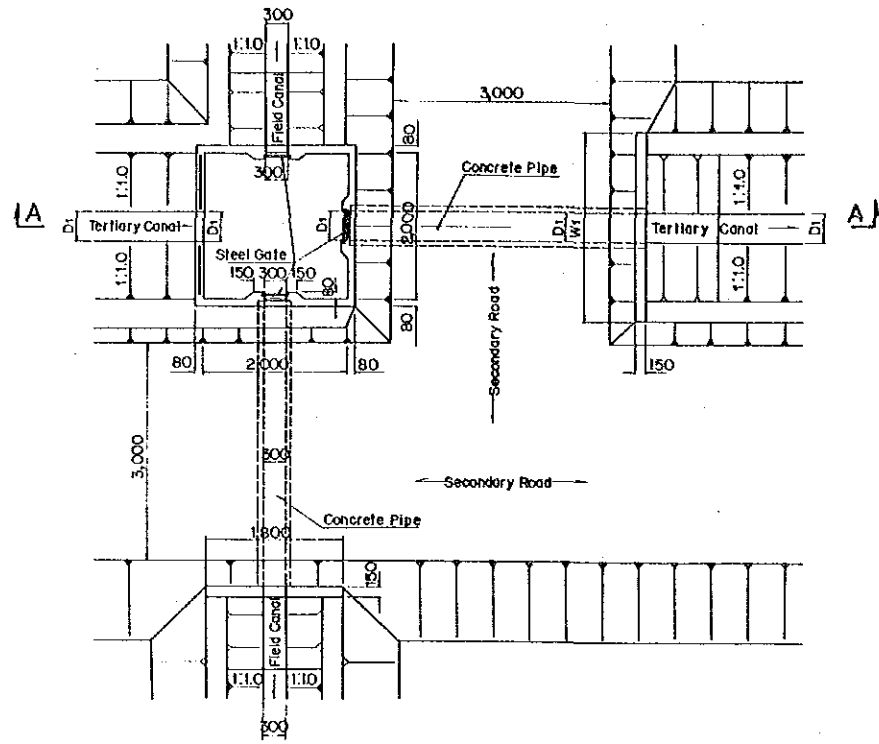


LEGEND

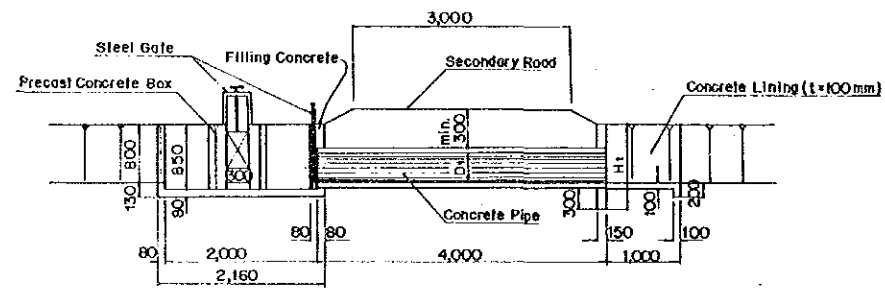
- Main, Secondary Canal or Main Drain
- Tertiary Canal or Tertiary Drain
- Field Canal
- Field Drain
- - - Unit Boundary
- - - Secondary Farm Road
- Turnout on Main or Secondary Canal
- Division Box on Tertiary Canal
- Division Box on Field Canal

LAO PEOPLE'S DEMOCRATIC REPUBLIC			
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE			
TITLE OF DRAWING 末端施設 計画位置図(サンプル地区B)			
Date		Drawing No.	5002
JAPAN INTERNATIONAL COOPERATION AGENCY			

DIVISION BOX on TERTIARY CANAL

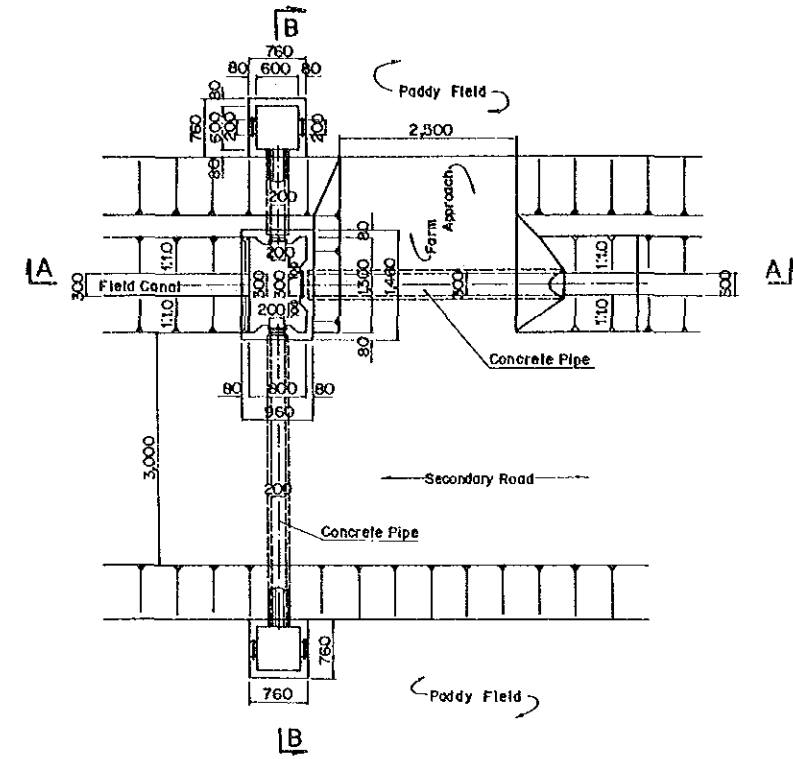


PLAN

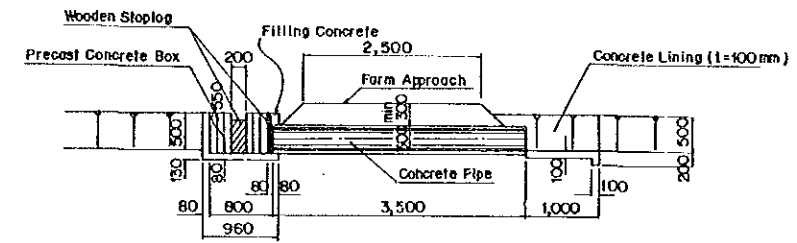


SECTION A-A

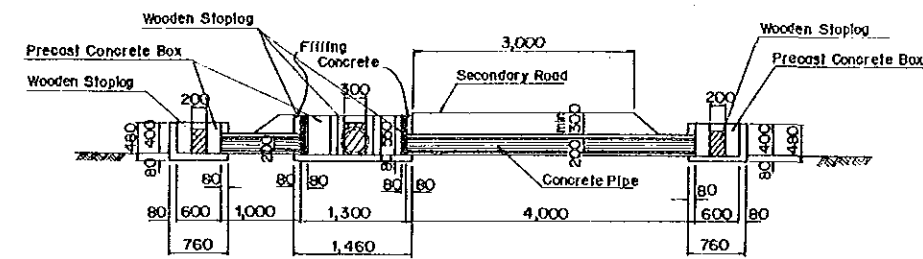
DIVISION BOX on FIELD CANAL



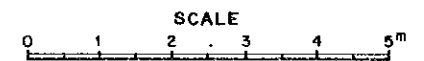
PLAN



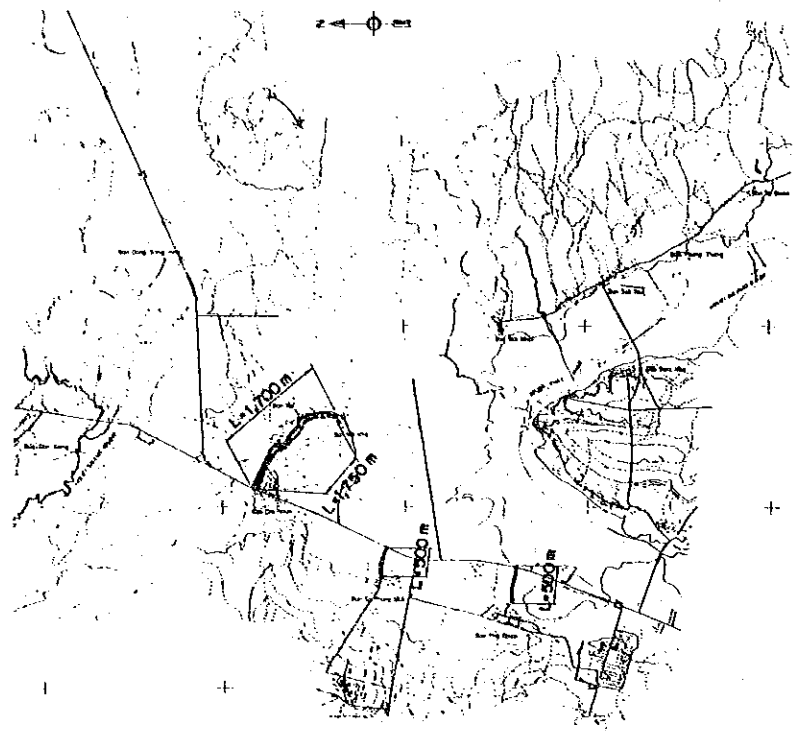
SECTION A-A



SECTION B-B



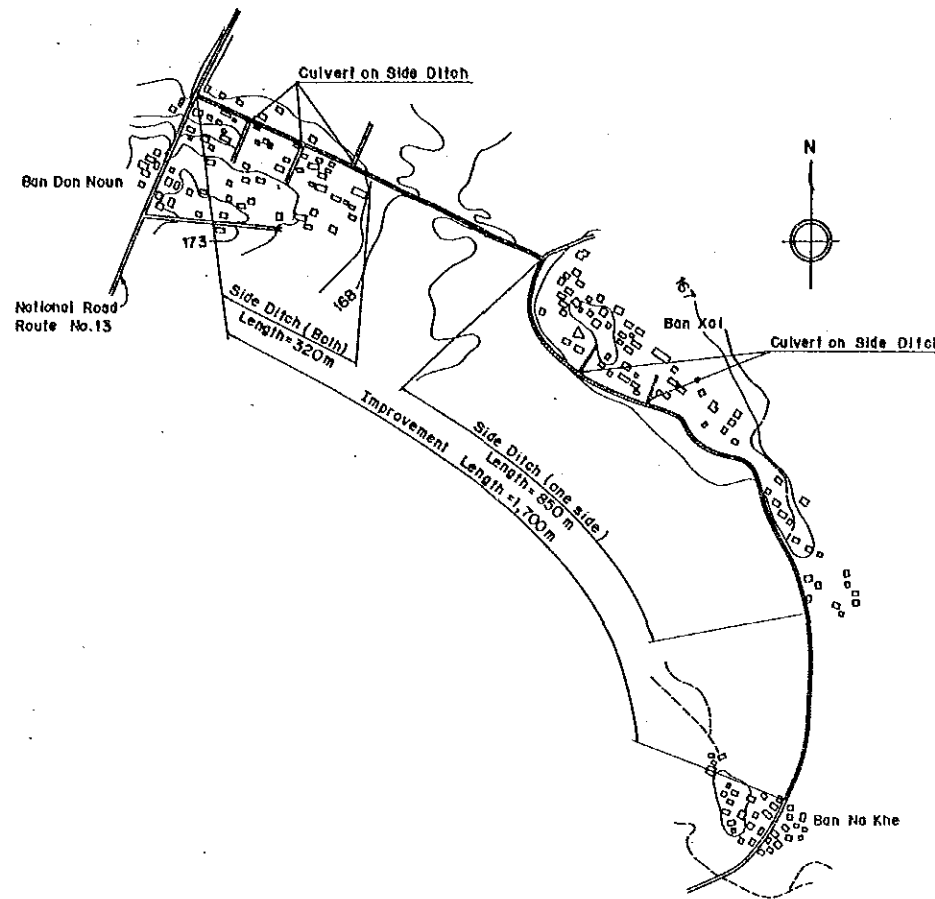
LAO PEOPLE'S DEMOCRATIC REPUBLIC			
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE			
TITLE OF DRAWING 末端施設 分水工			
Date		Drawing No.	5003
JAPAN INTERNATIONAL COOPERATION AGENCY			



LEGEND

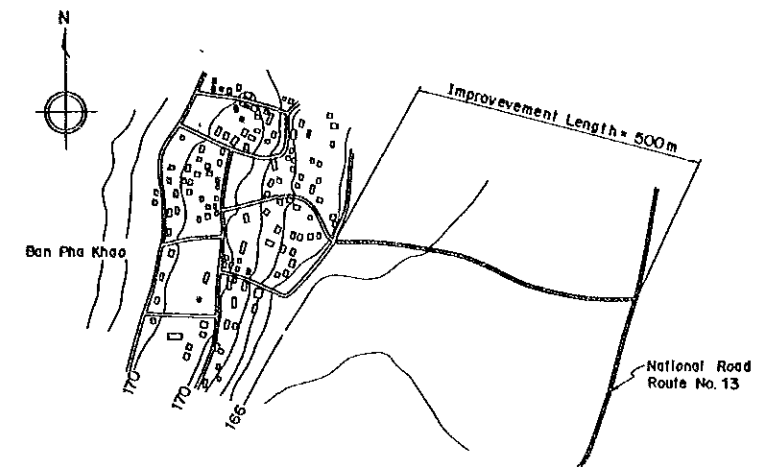
- Village Road to be Improved
- - - Proposed Pipe Line of Water Supply

GENERAL LAYOUT OF RURAL INFRASTRUCTURES



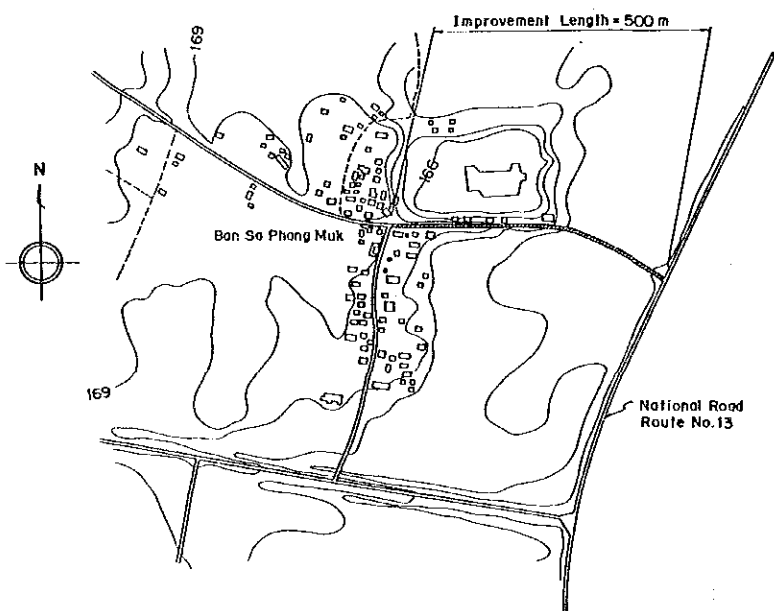
PLAN

(Route 13 to Ban Don Noun - Bai Xai - Ban Na Khe)



PLAN

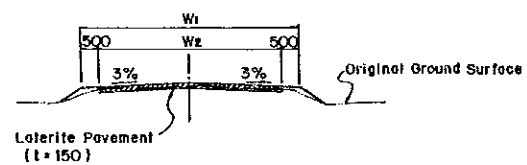
(Route 13 to Ban Pha Khao)



PLAN

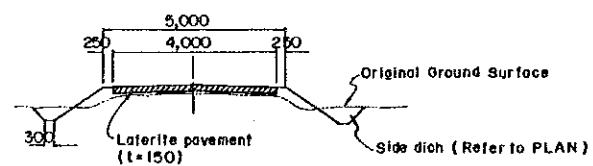
(Route 13 to Ban Sa Phang Muk)

ROAD



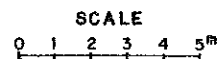
TYPICAL SECTION

Location of Village	W ₁	W ₂
Route No.13 to Ban Pha Khao	7,000	6,000
Route No.13 to Ban Sa Phang Muk	6,000	5,000

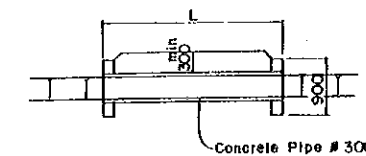
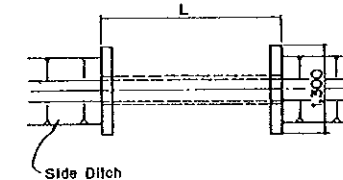


TYPICAL SECTION

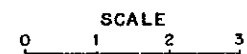
(Route 13 to Ban Don Noun - Ban Xai - Ban Na Khe)



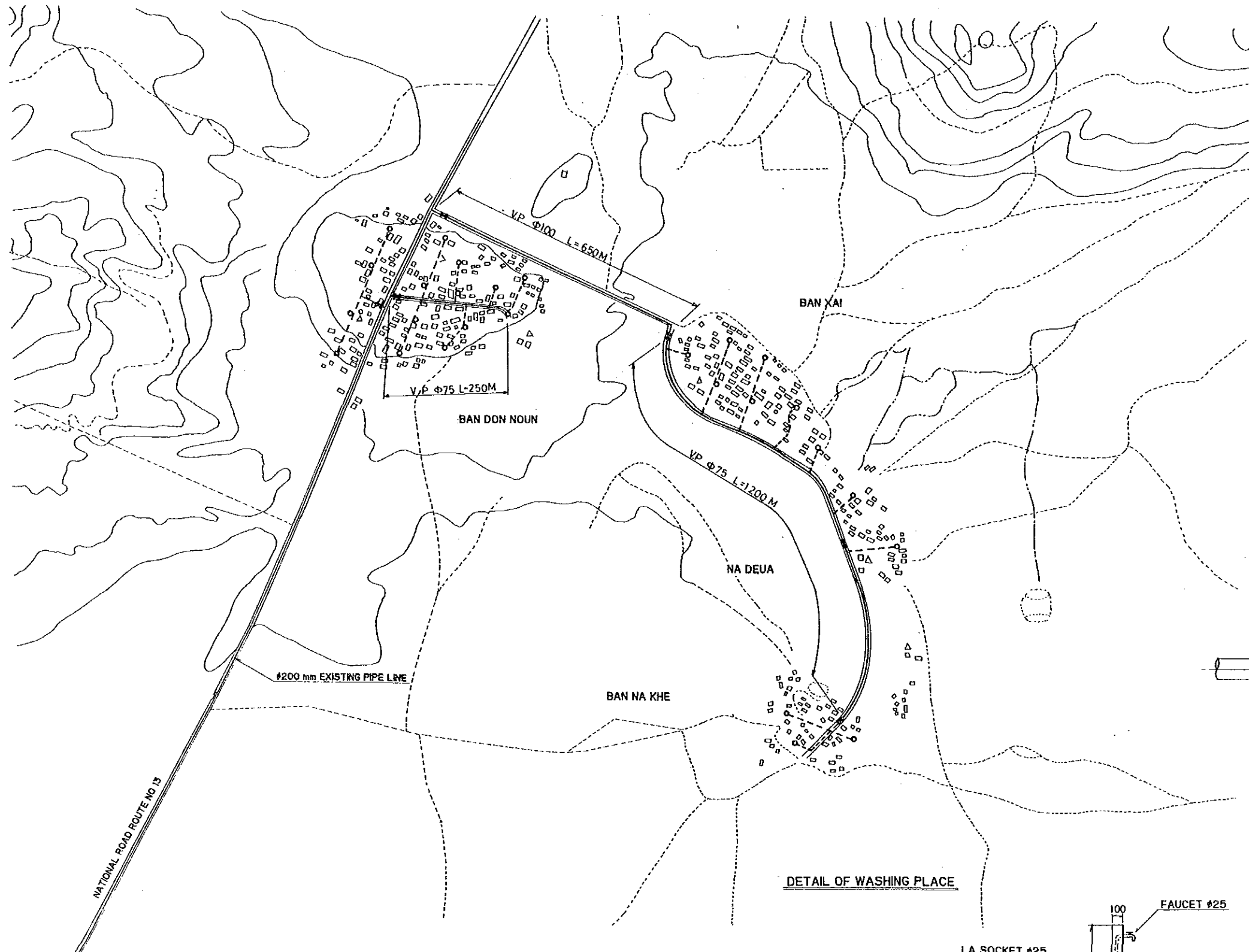
CULVERT



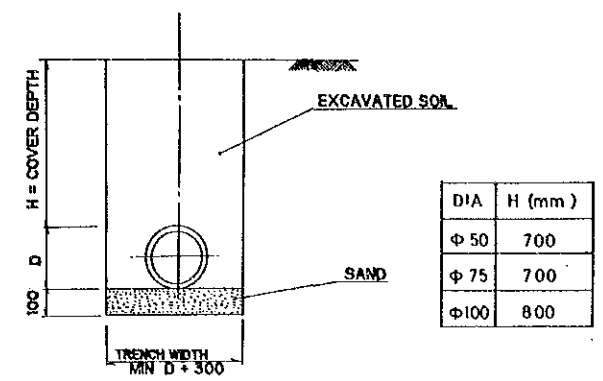
TYPICAL SECTION



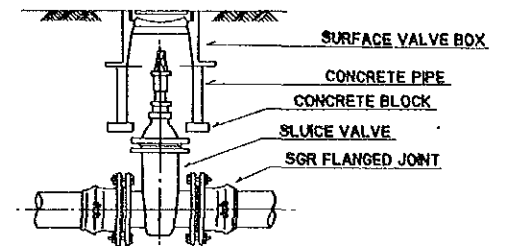
LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 農村インフラ 計画位置図/農村道路		
Date	Drawing No.	6001
JAPAN INTERNATIONAL COOPERATION AGENCY		



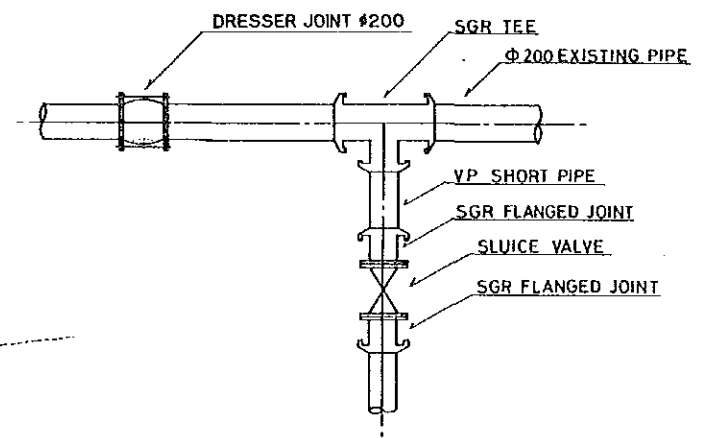
TYPICAL TRENCH DETAIL



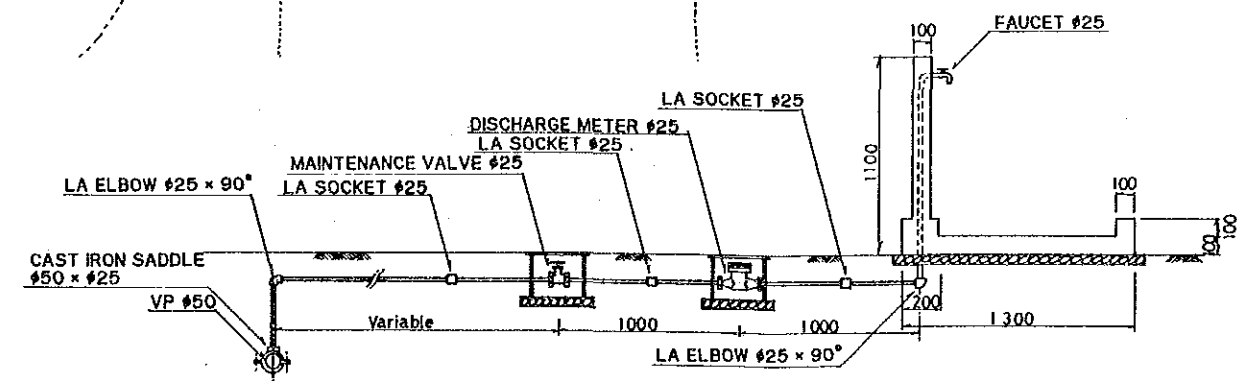
VALVE BOX



TYPICAL BRANCHING OFF



DETAIL OF WASHING PLACE



PVC PIPE (VP)		SLUICE VALVE		DISCHARGE METER
DIA	LENGTH(m)	DIA	NOS	NOS
50	1.950	25	28	28
75	1.450	75	4	-
100	650	100	2	-
TOTAL	4.050		34	28

LOCATION OF WASHING PLACE
SLUICE VALVE
VP Φ 50

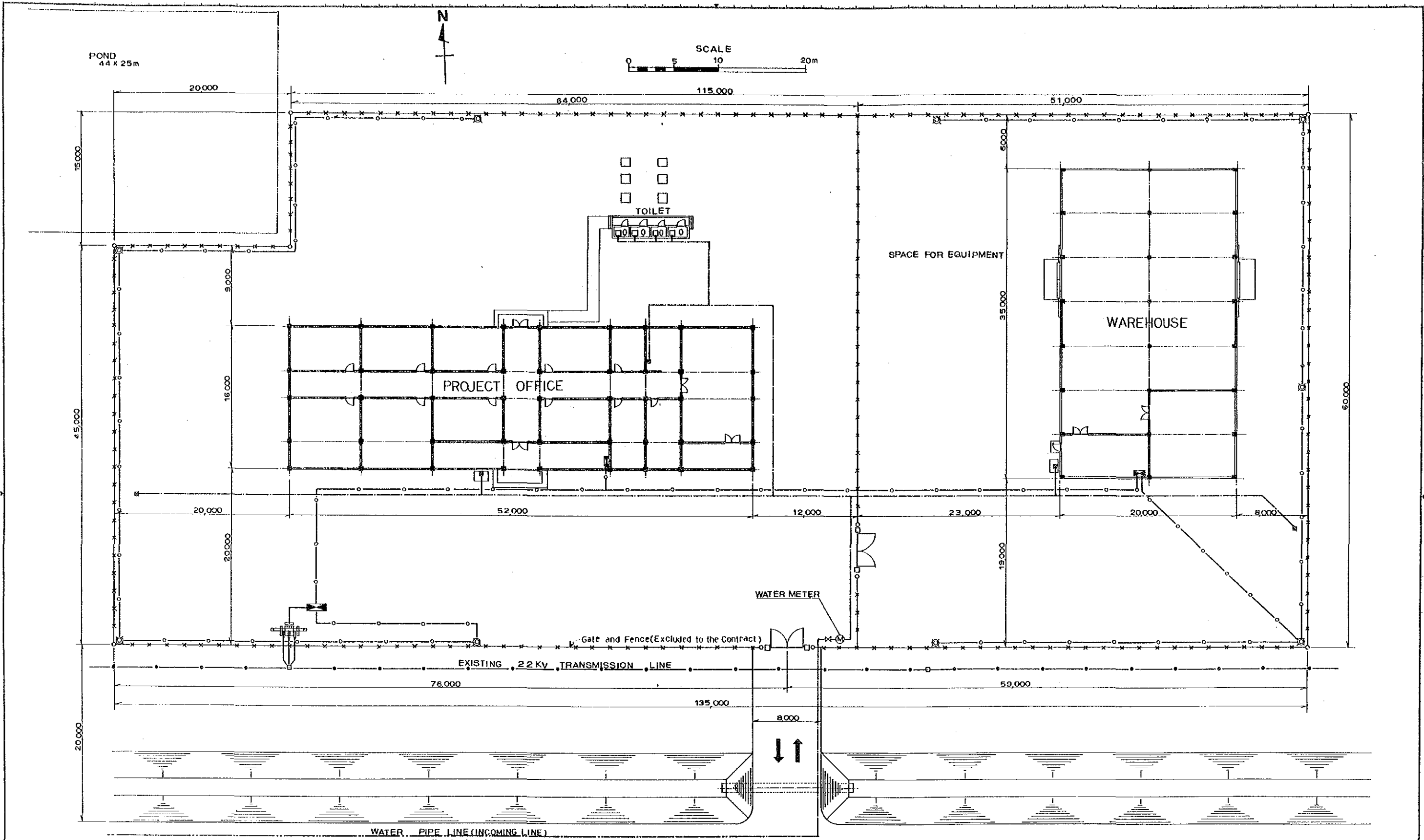
LAO PEOPLE'S DEMOCRATIC REPUBLIC

AGRICULTURAL AND RURAL DEVELOPMENT PROJECT
IN THE SUBURBS OF VIENTIANE

TITLE OF DRAWING
農村インフラ
飲料水供給施設

Date	Drawing No.	6002
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JAPAN INTERNATIONAL COOPERATION AGENCY



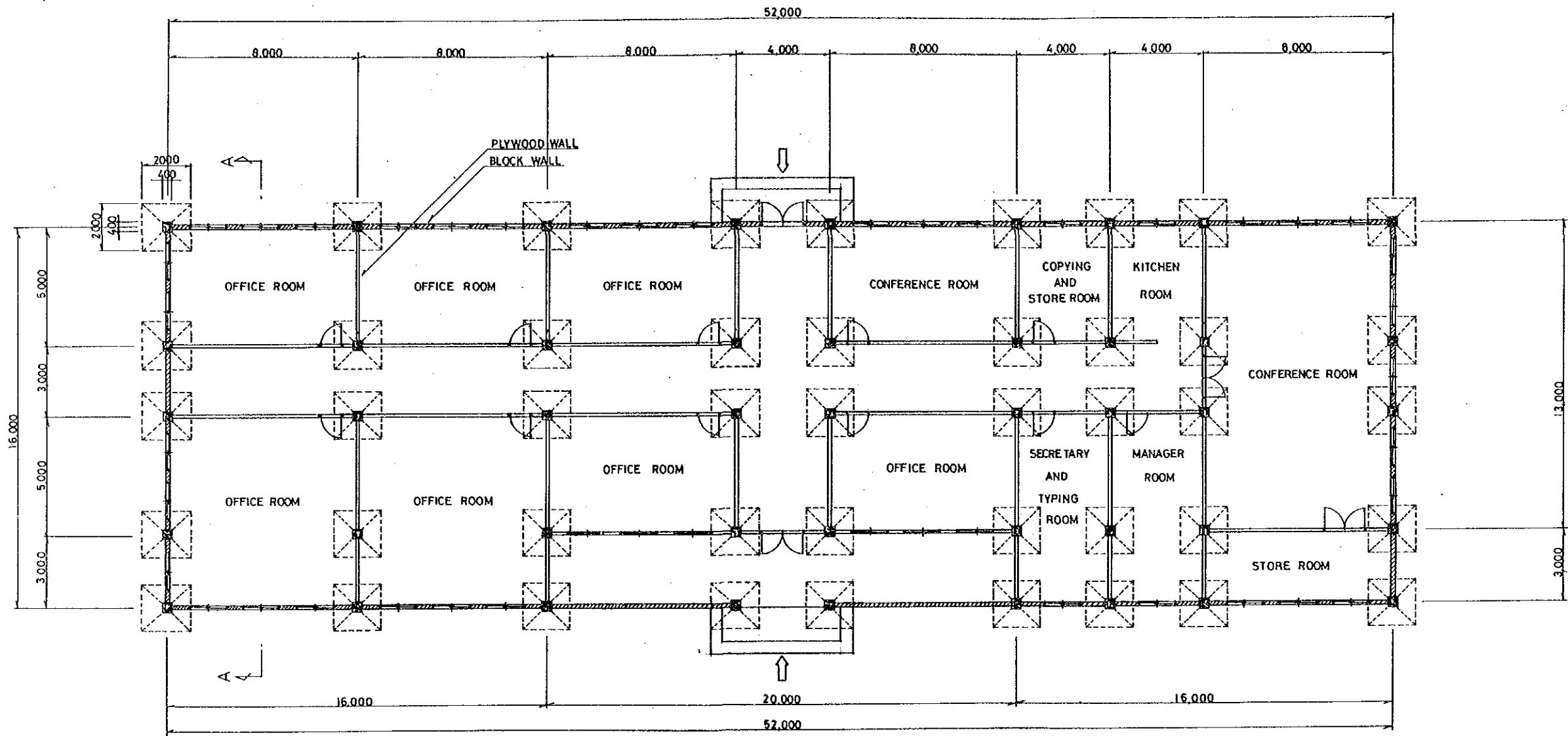
← TO VIENTIANE

NATIONAL ROUTE No.13

- WATER SUPPLY LINE
- - -○- - - ELECTRICITY SUPPLY LINE
- ⊠ MERCURY LAMP WITH POLE
- ⊞ FAUCET
- ⊞ DISTRIBUTION BOARD

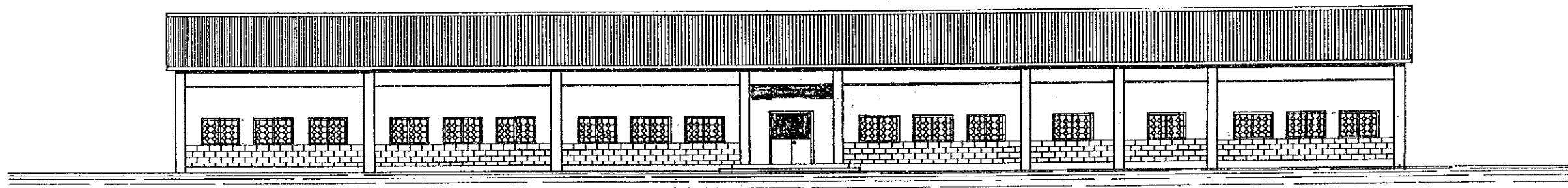
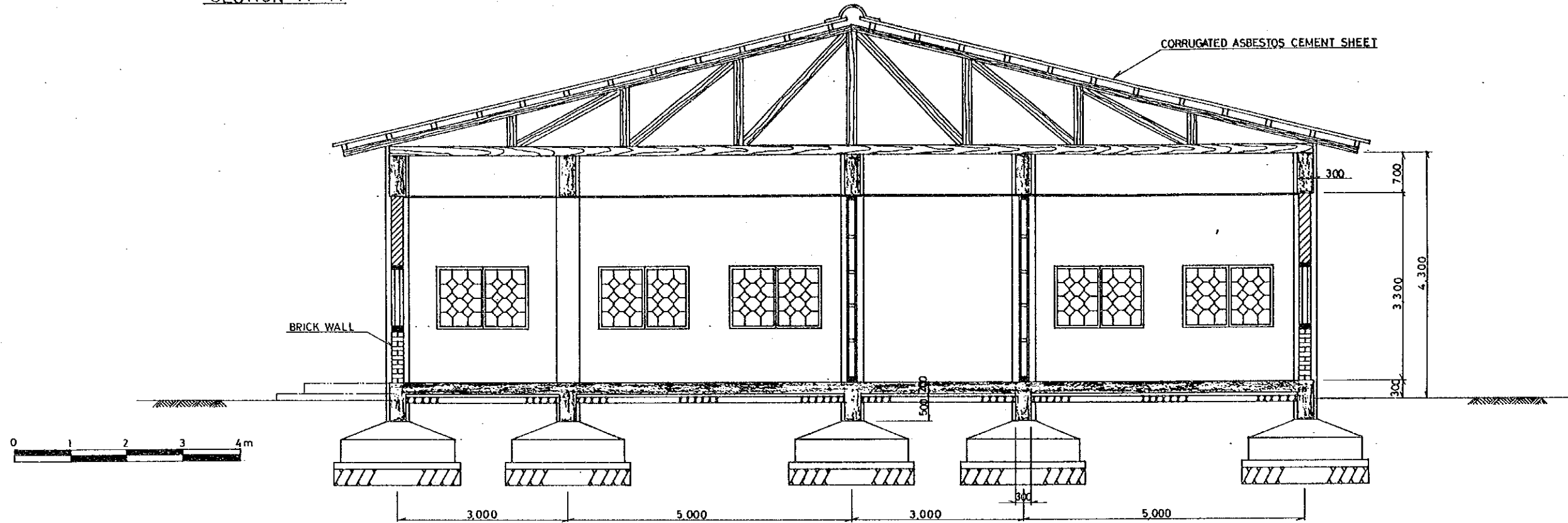
LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING 維持管理事務所及び資機材倉庫 計画位置図		
Date	Drawing No.	7001
JAPAN INTERNATIONAL COOPERATION AGENCY		

PROJECT OFFICE



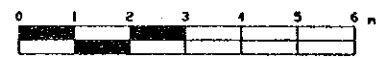
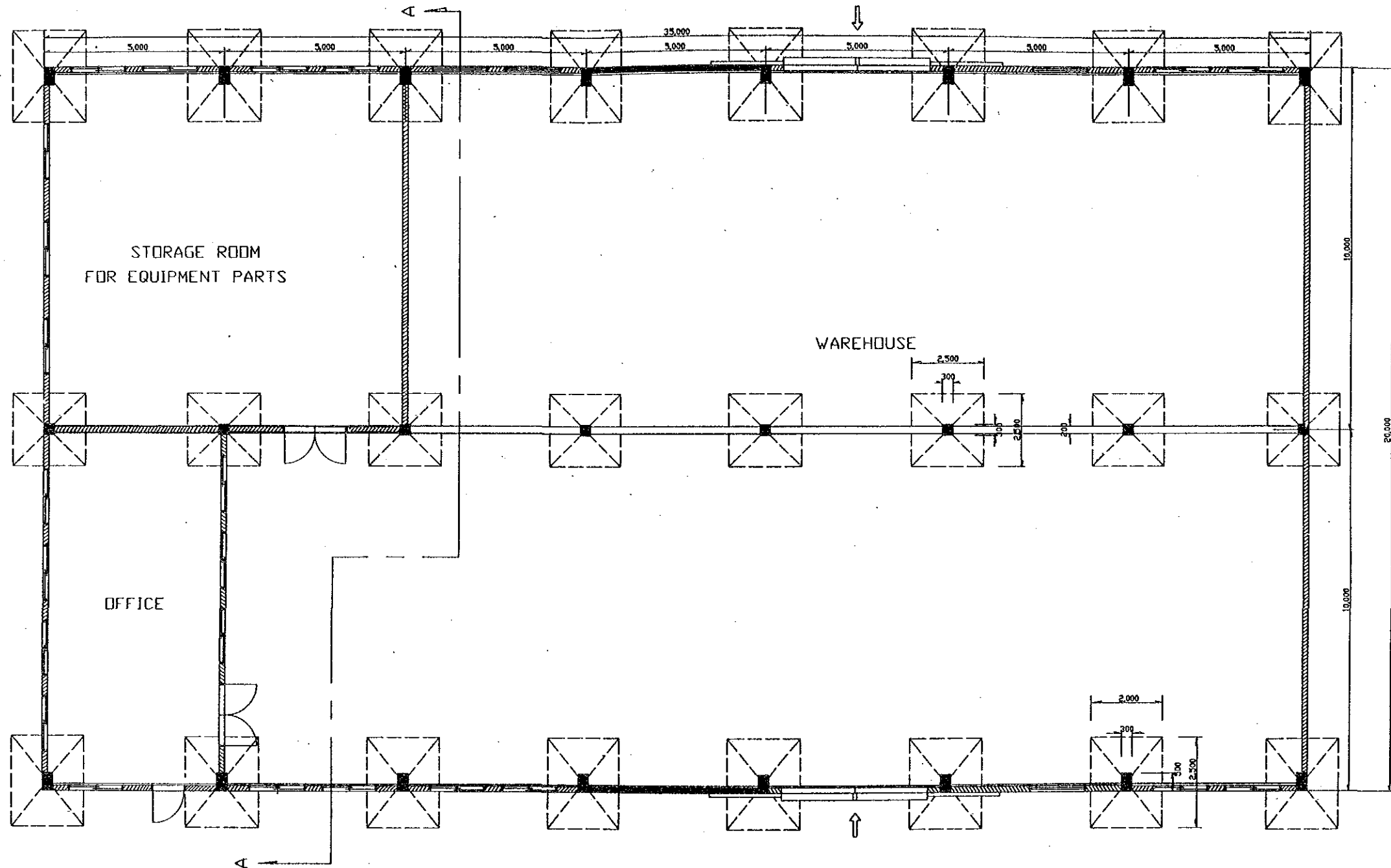
LAO PEOPLE'S DEMOCRATIC REPUBLIC		
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE		
TITLE OF DRAWING		
維持管理事務所及び資機材倉庫 維持管理事務所(1/2)		
Date	Drawing No.	7002
JAPAN INTERNATIONAL COOPERATION AGENCY		

SECTION A-A



FRONT VIEW

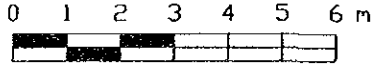
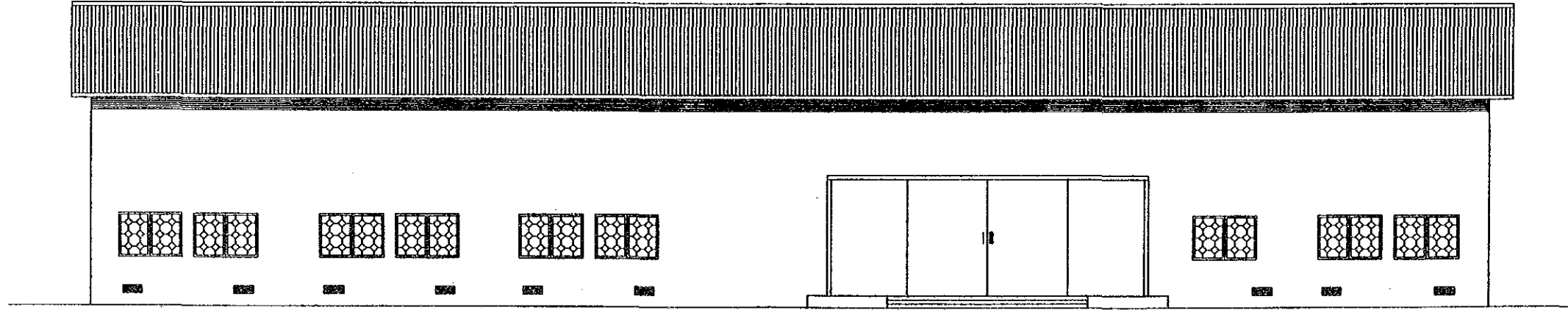
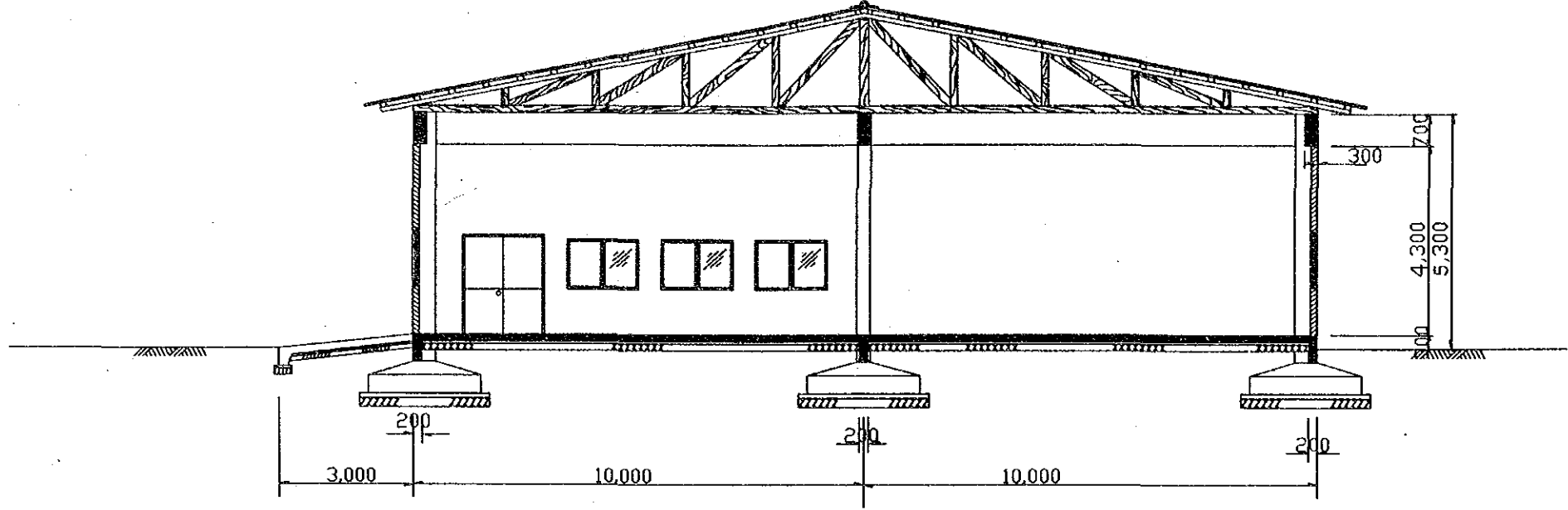
LAO PEOPLE'S DEMOCRATIC REPUBLIC			
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE			
TITLE OF DRAWING			
維持管理事務所及び資機材倉庫 維持管理事務所(2/2)			
Date	Drawing No.	7003	
JAPAN INTERNATIONAL COOPERATION AGENCY			



LAO PEOPLE'S DEMOCRATIC REPUBLIC			
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE			
TITLE OF DRAWING 維持管理事務所及び資機材倉庫 資機材倉庫(1/2)			
Date		Drawing No.	7004
JAPAN INTERNATIONAL COOPERATION AGENCY			

WAREHOUSE

SECTION A-A



FRONT VIEW

LAO PEOPLE'S DEMOCRATIC REPUBLIC			
AGRICULTURAL AND RURAL DEVELOPMENT PROJECT IN THE SUBURBS OF VIENTIANE			
TITLE OF DRAWING 維持管理事務所及び資機材倉庫 資機材倉庫(2/2)			
Date		Drawing No.	7005
JAPAN INTERNATIONAL COOPERATION AGENCY			

JICA