社会開発調査部報告書

JAPAN INTERNATIONAL COOPERATION AGENCY

HANOI PEOPLE'S COMMITTEE SOCIALIST REPUBLIC OF VIET NAM

THE STUDY ON URBAN DRAINAGE AND WASTEWATER DISPOSAL SYSTEM IN HANOI CITY

FINAL REPORT

DATA BOOK

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FEBRUARY 1995

NIPPON KOEI CO., LTD. CTI ENGINEERING CO., LTD.

ESTIMATE OF PROJECT COST

Estimate of Base Cost :

At 1994 Price Level

Currency Exchange Rate : US\$ 1 = Dong 10,800 = Yen 100

THE STUDY ON URBAN DRAINAGE AND WASTEWATER DISPOSAL SYSTEM IN HANOI CITY

DATA BOOK (TOPOGRAPHIC SURVEY DATA)

1. Longitudinal and Cross Sections of To Lich River

2. Longitudinal and Cross Sections of Lu River

3. Longitudinal and Cross Sections of Set River

4. Longitudinal and Cross Sections of Kim Nguu River

5. Longitudinal and Cross Sections of Old To Lich River

6. Topography of Thanh Liet Weir & Yen So Pumping Station

7. Topography of 7 Lakes

8. Topography of Yen So Regulating Reservoir

9. Cross Section of Linh Dam Lake

10. Cross Sections and Bridge Dimensions of Drainage Channels



LIST OF REPORTS

- 1. Executive Summary
- 2. Main Report
- Part I : Master Plan for Urban Drainage and Wastewater Disposal System in Hanoi City

Part II : Feasibility Study on the To Lich River Basin Drainage Project

3. Appendix Vol. I

- A. Socio-economy
- B. City Development Plan
- C. Hydrology
- D. Drainage Plan

4. Appendix Vol. II

- E. Wastewater Disposal Plan
 - F. Environment and Water Quality
 - G. Construction Plan and Cost Estimate

H. Economic Evaluation

- J. Geotechnical Investigation
- K. Topographic Survey
- L. Urgent Project Basic Design Report

5. Data Book

(This Volume)

ABBREVIATIONS

(1) Domestic Organizations

DCWSS	Design Company for Water Supply and Sanitation System
GDOMH	General Department of Meteorology and Hydrogy
HEC	Hanoi Environment Committee
HPC	Hanoi People's Committee
HSDC (or SDC)	Hanoi Sewerage and Drainage Company
HUPI (or UPI)	Hanoi Urban Planning Institute
HWSC (or WSC)	Hanoi Water Supply Company
INVESCo	Investment Company for the Development of Water Sector
IURP	Institute of Urban and Rural Planning of MOC
MOC	Ministry of Construction
MOSTE	Ministry of Science, Technology and Environment
MOWR	Ministry of Water Resources
SPC	State Planning Committee
TUPWS	Transport and Urban Public Works Service
URENCO	Hanoi Urban Environment Company
WASECO	Water and Sewerage Construction Organization
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(2) International or Foreign Organizations

CIDA	Canadian International Development Agency
FINNIDA	Finnish International Development Agency
JICA	Japan International Cooperation Agency
SIDA	Swedish International Development Authority
OECF	Overseas Economic Cooperation Fund, Japan
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization

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(3) Others

BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
DAWF	Daily Average Water Flow
DSF	Design Stormwater Flow
EIRR	Economic Internal Rate of Return
EL	Elevation above Mean Sea Level
GDP	Gross Domestic Product
GF	Groundwater Infiltration
HMWF	Hourly Maximum Water Flow
OM	Operation and Maintenance
SS	Suspended Solids
TN	Total Nitrogen
TP	Total Phosphorus

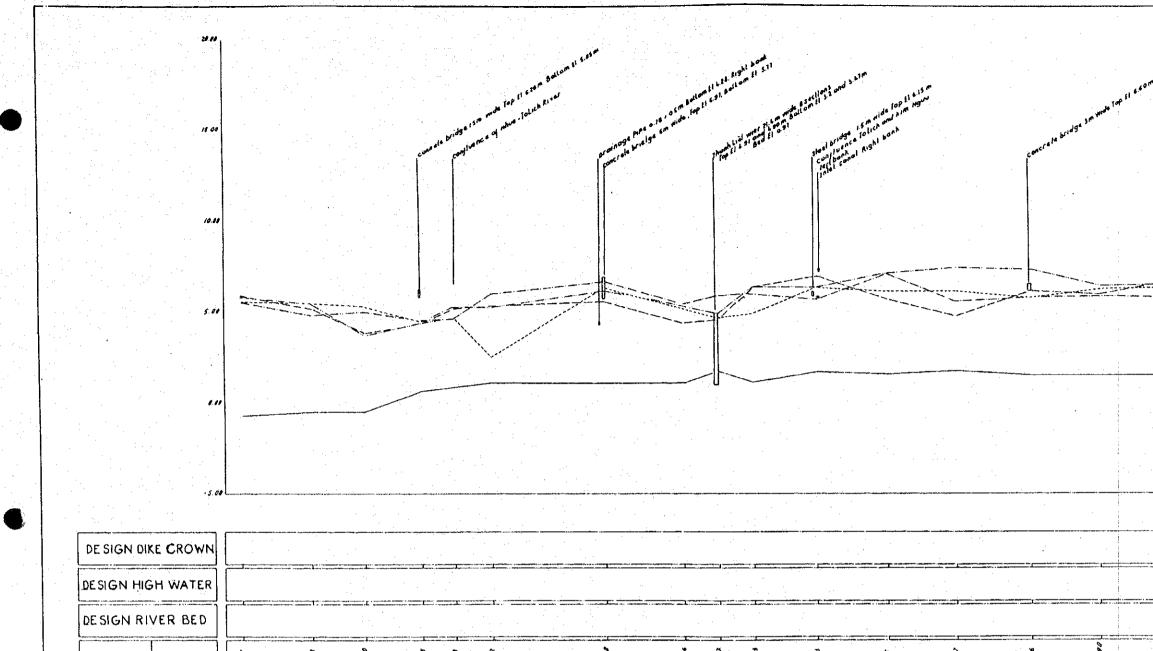
ABBREVIATIONS OF MEASUREMENT

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1. Longitudinal and Cross Sections of To-Lich River

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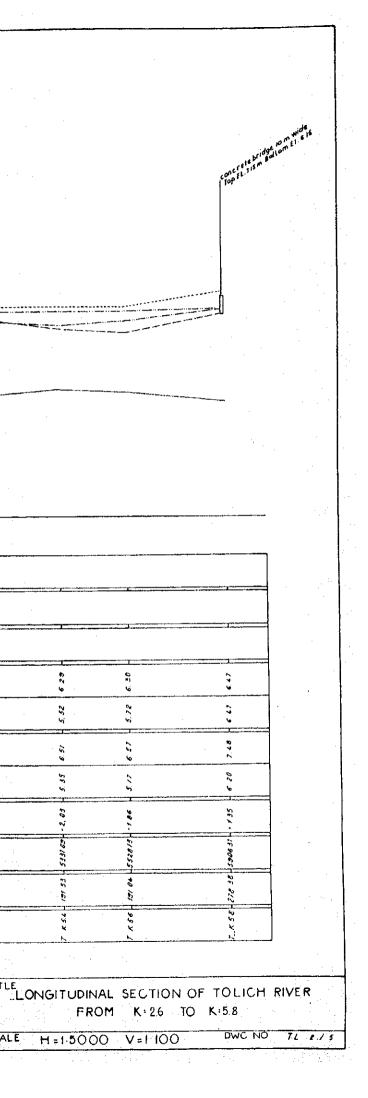
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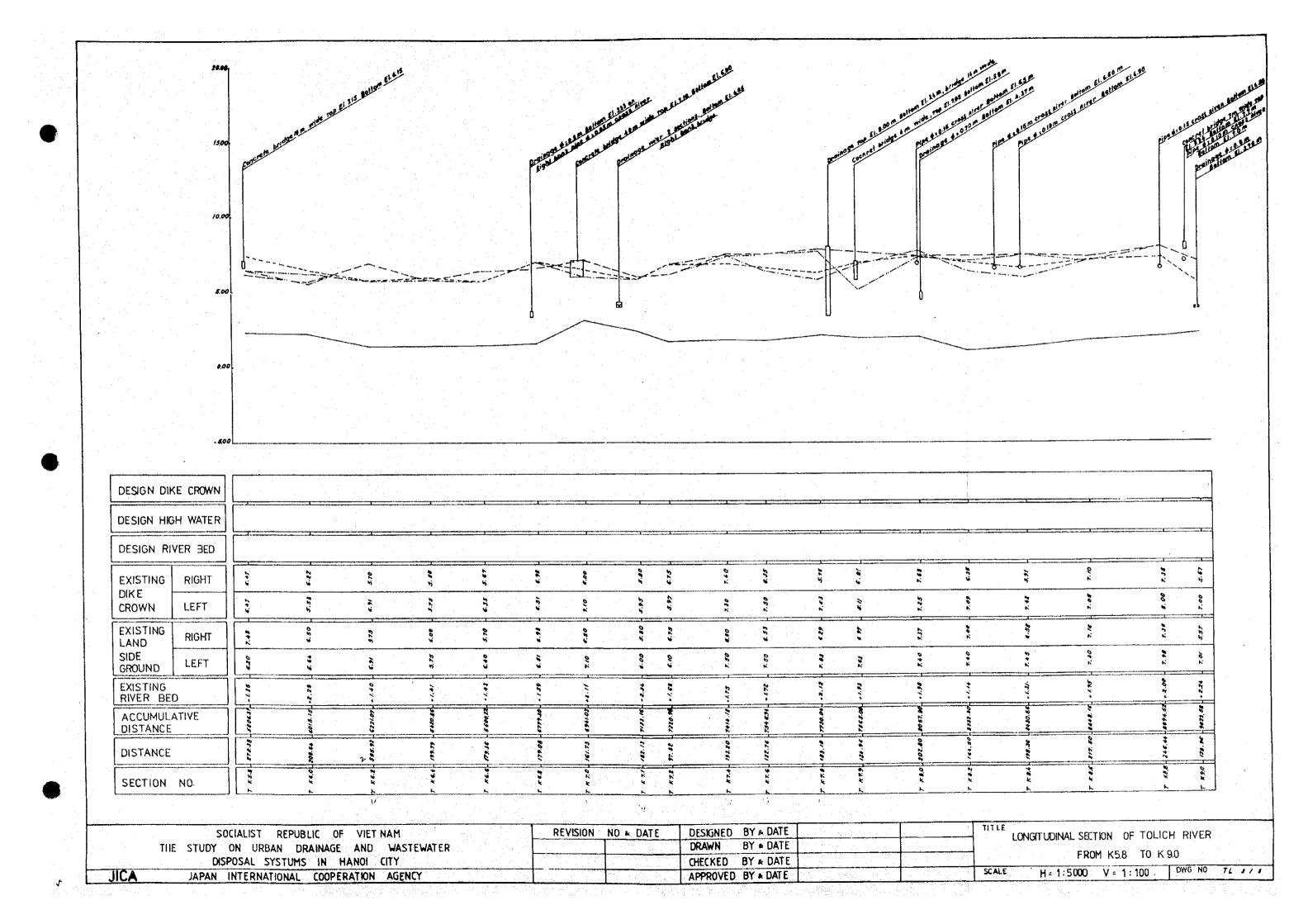
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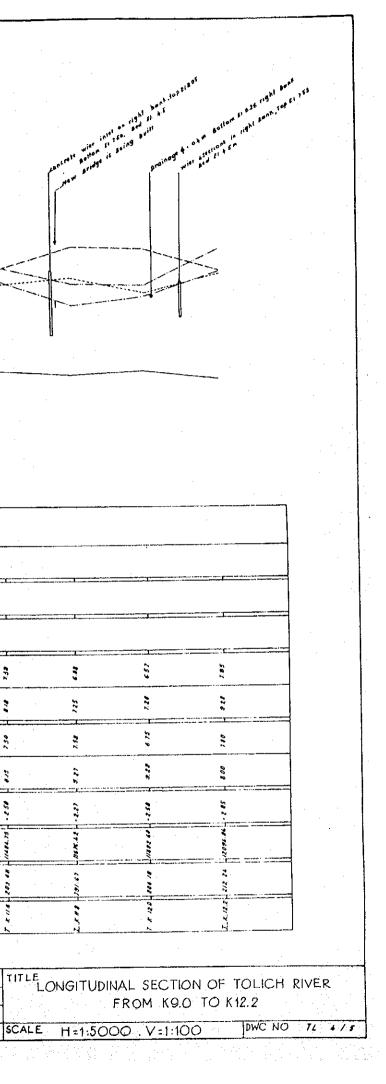




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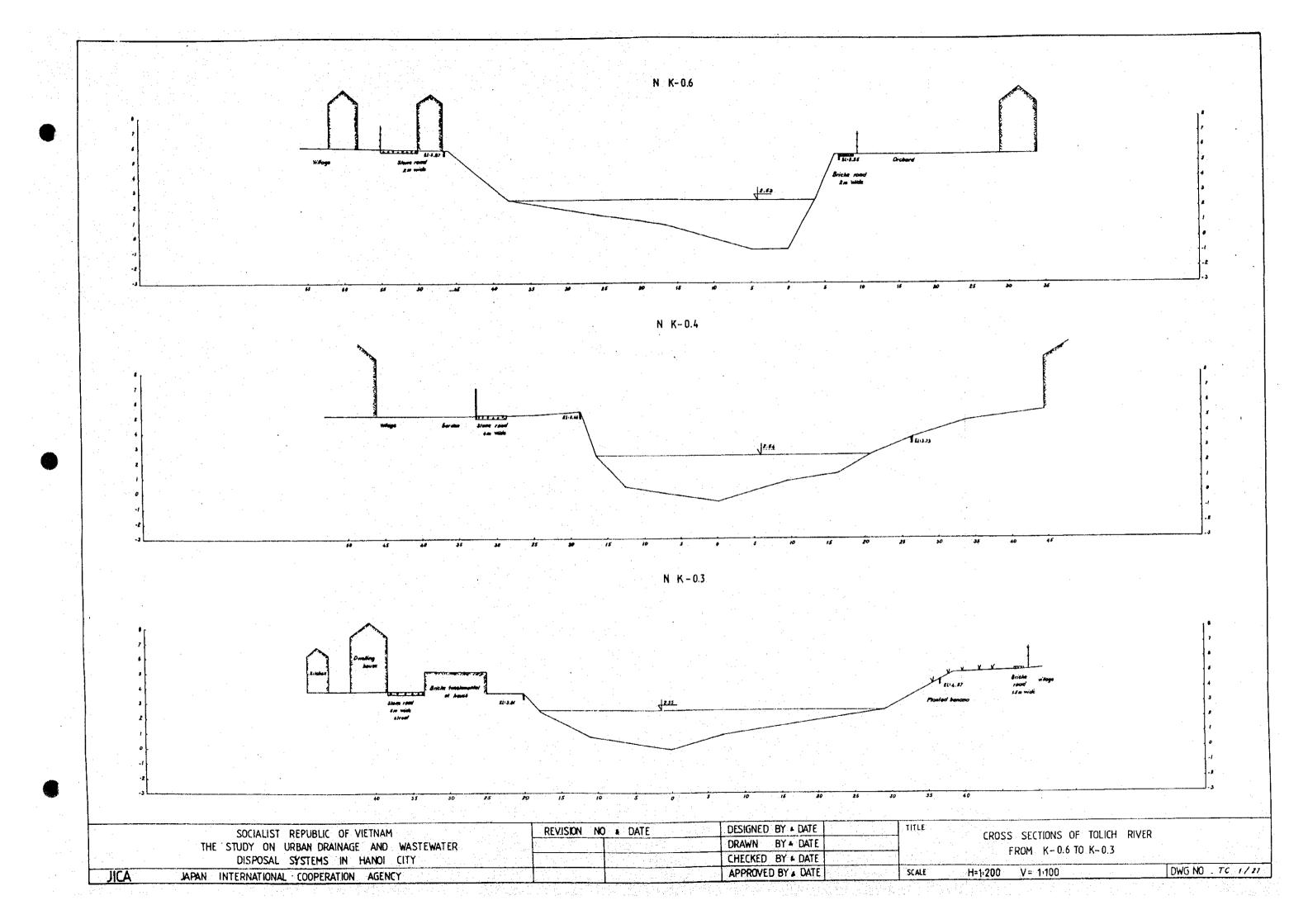
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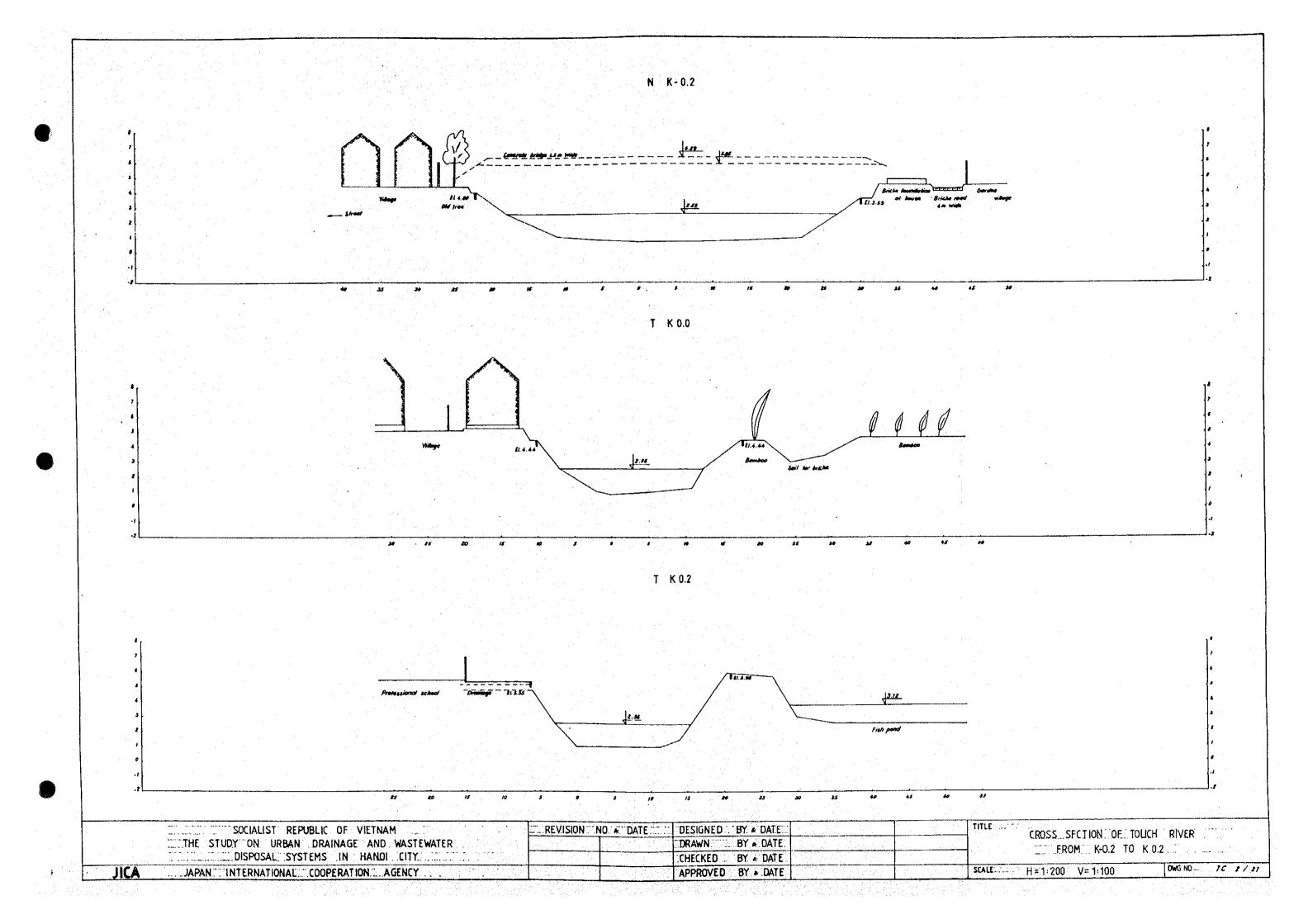


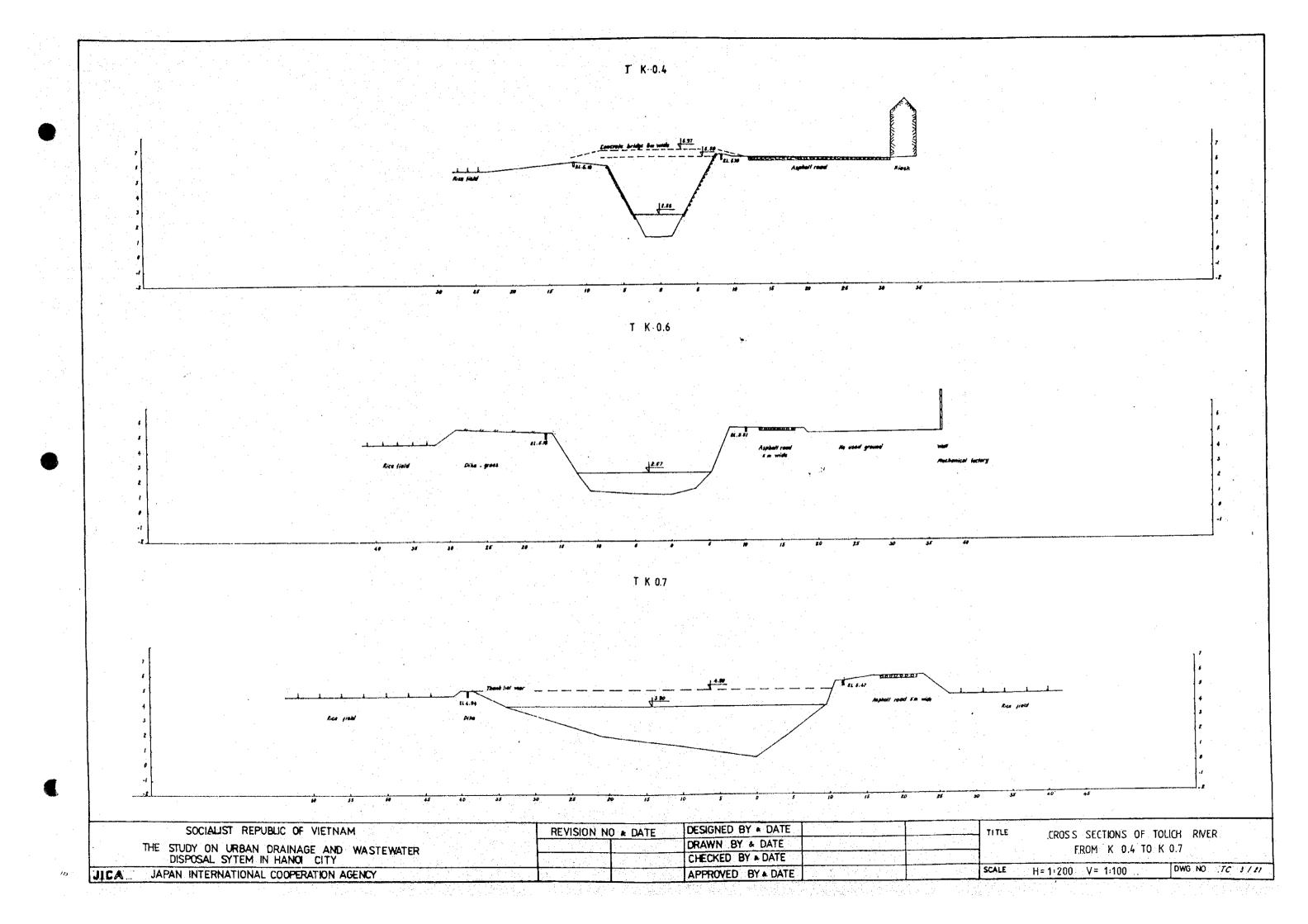
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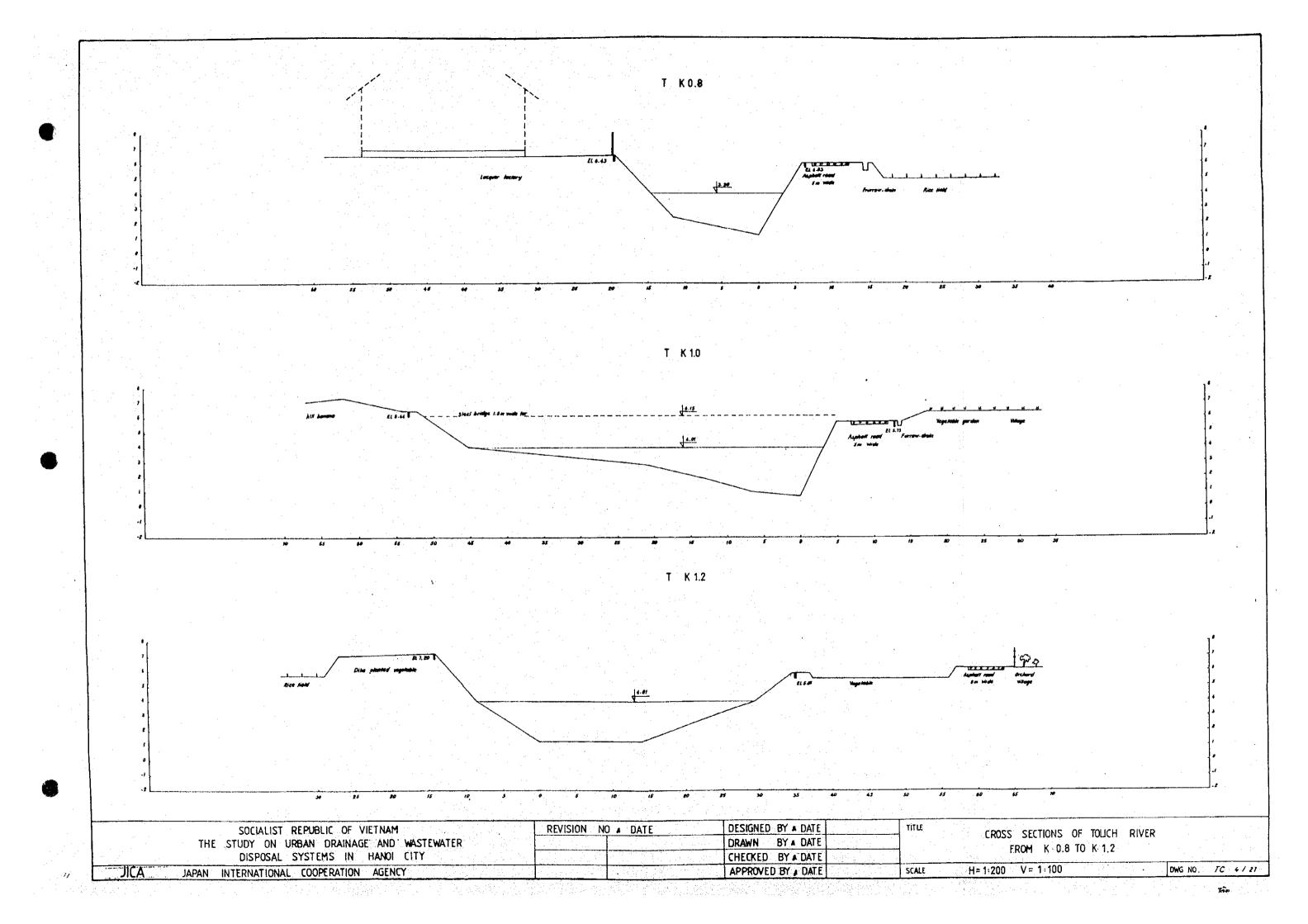
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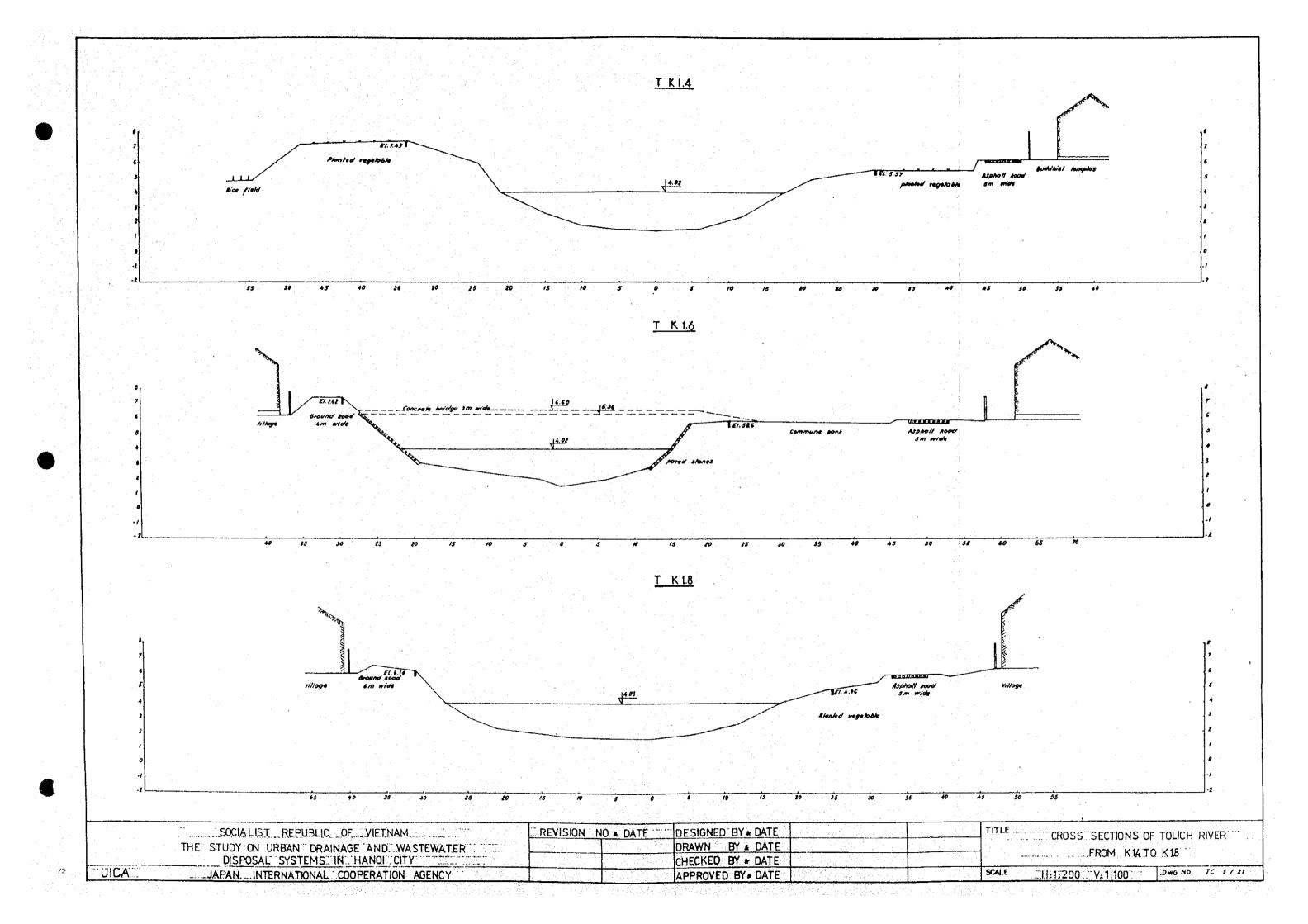
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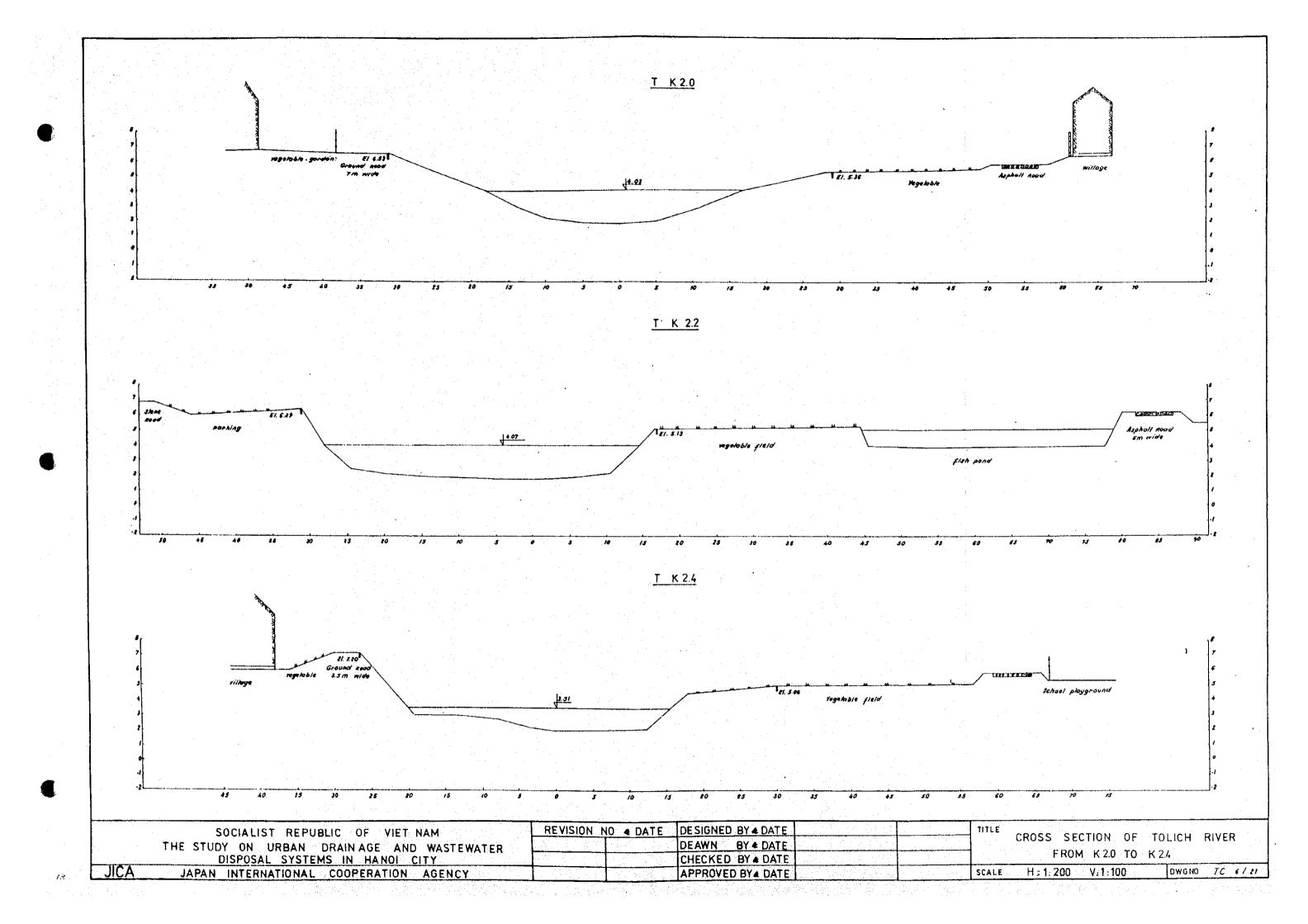


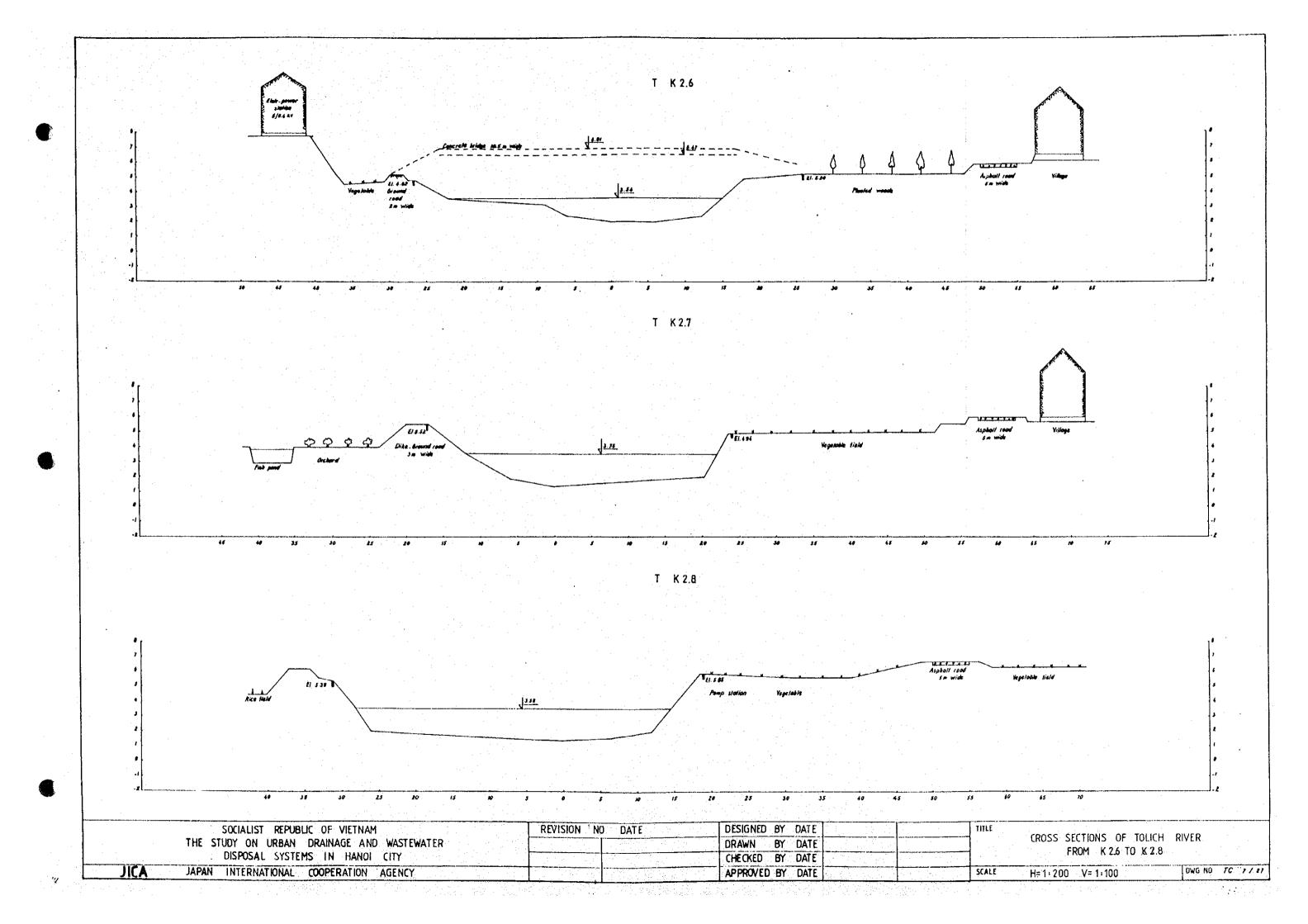


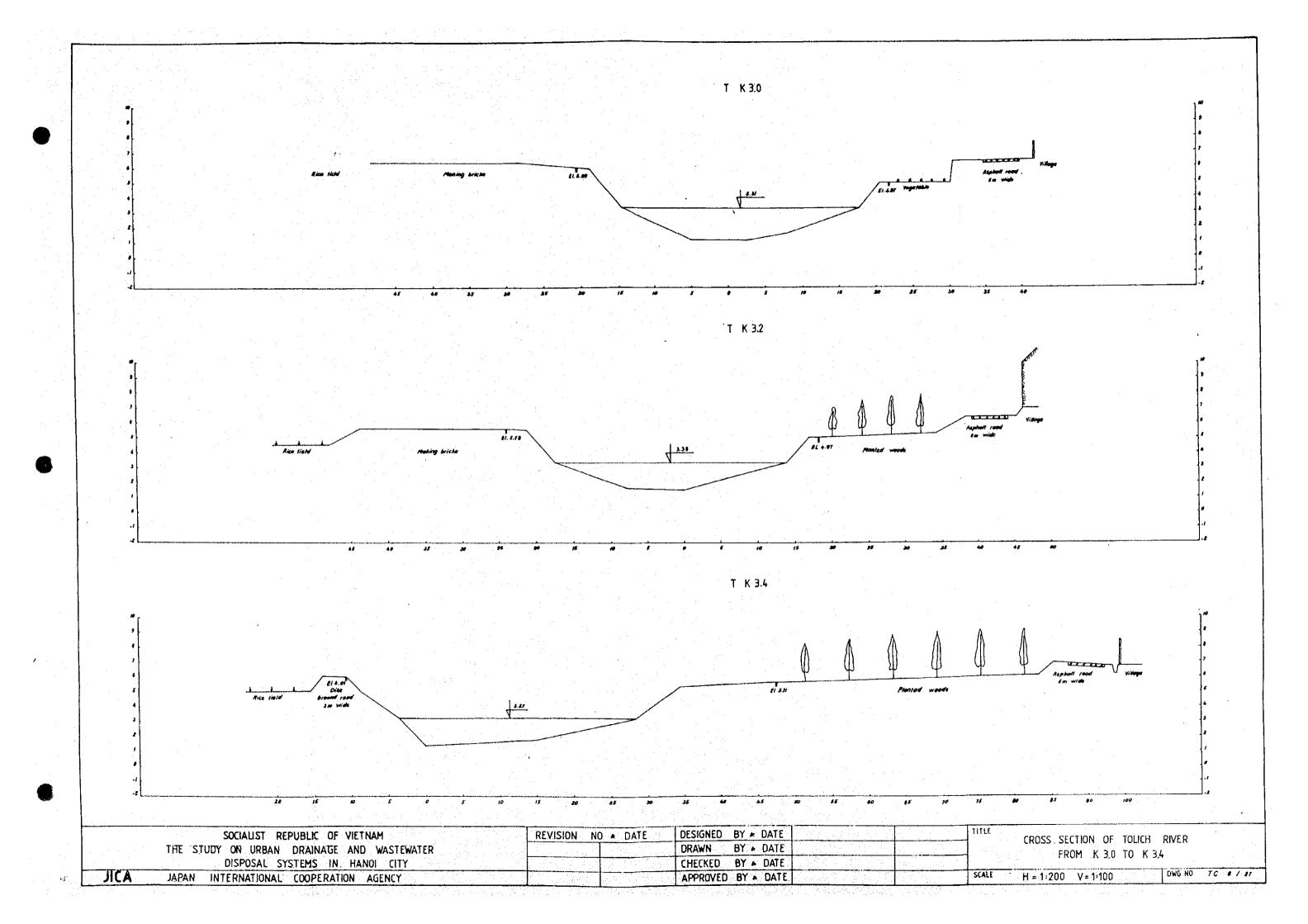


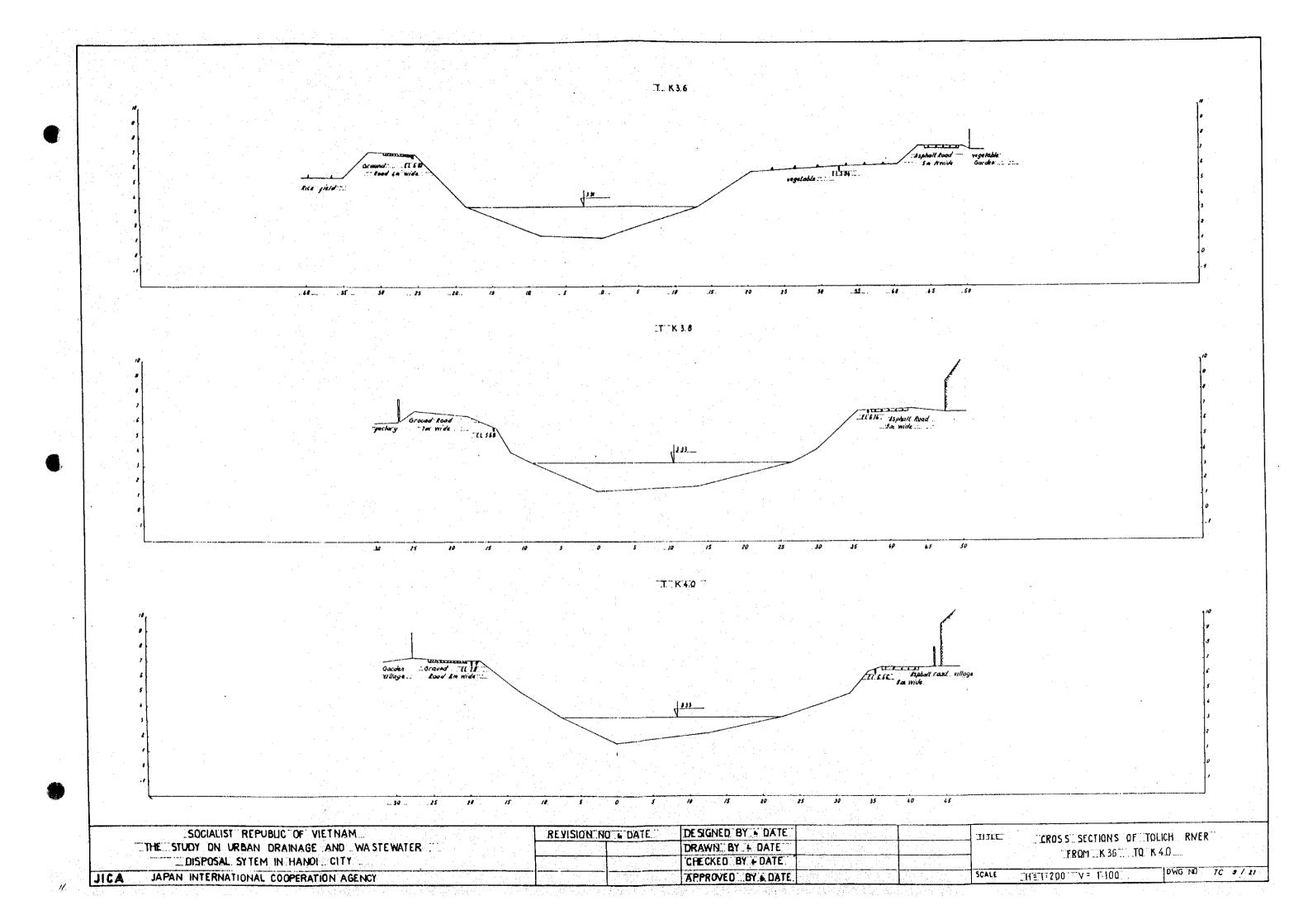


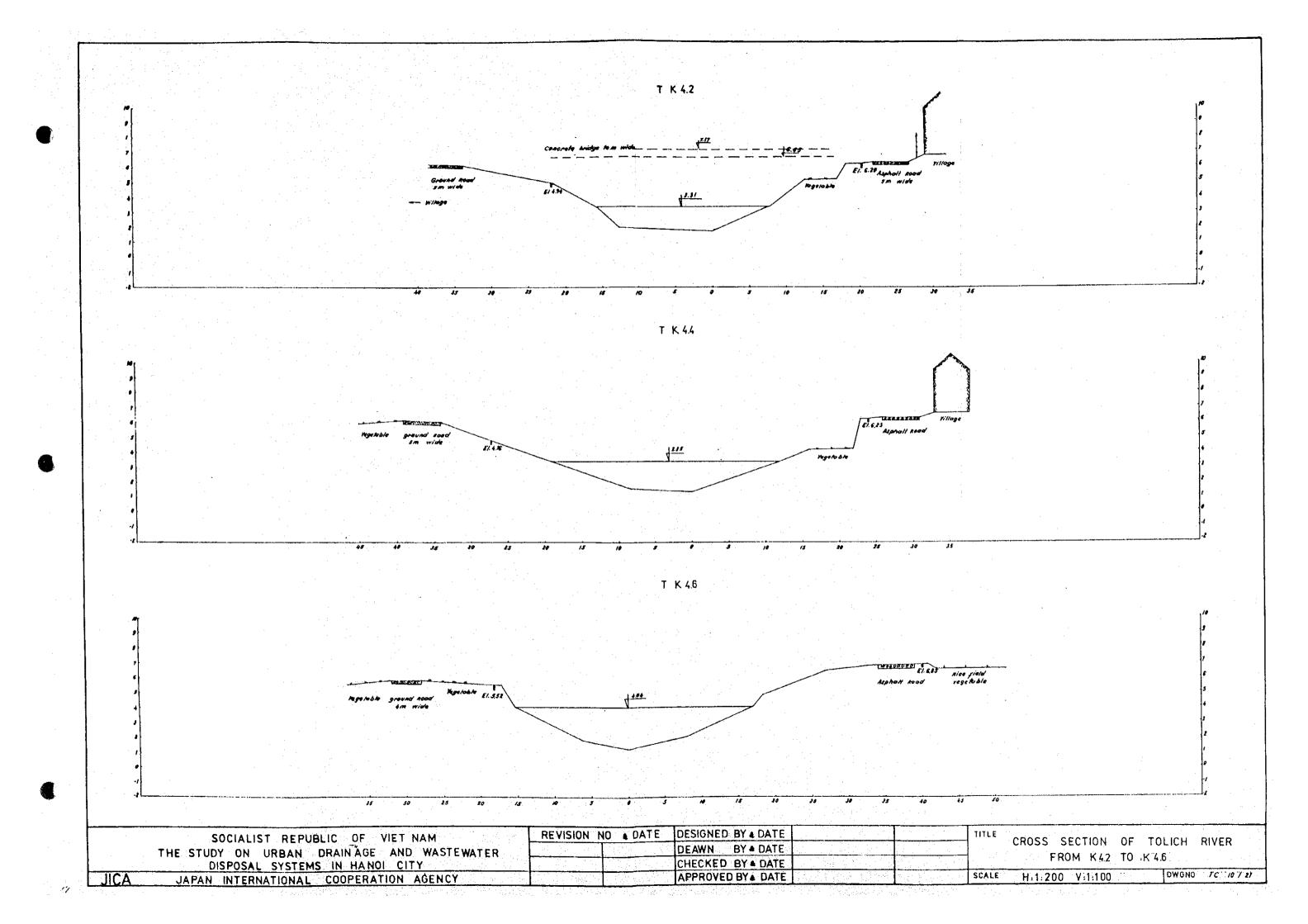


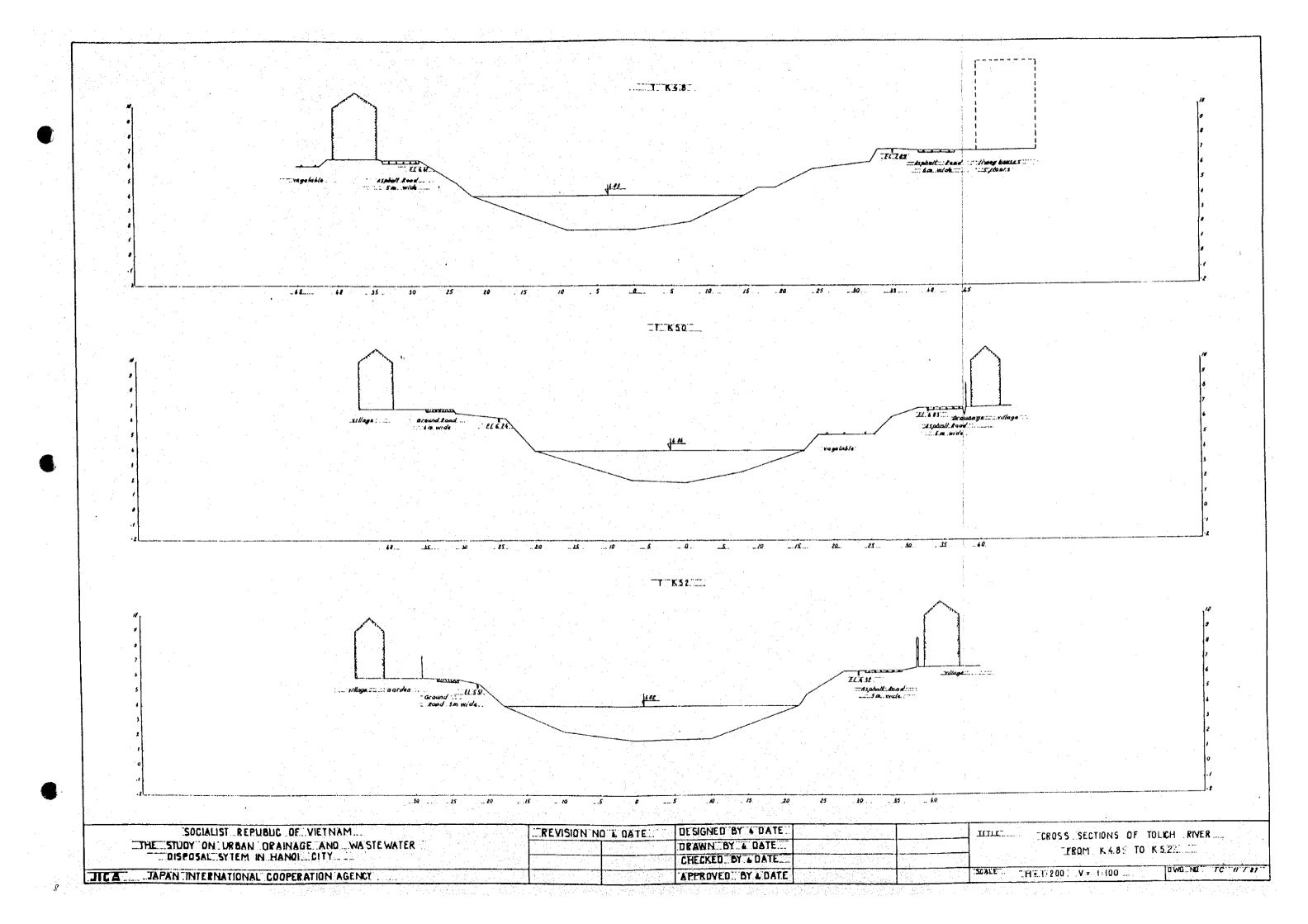


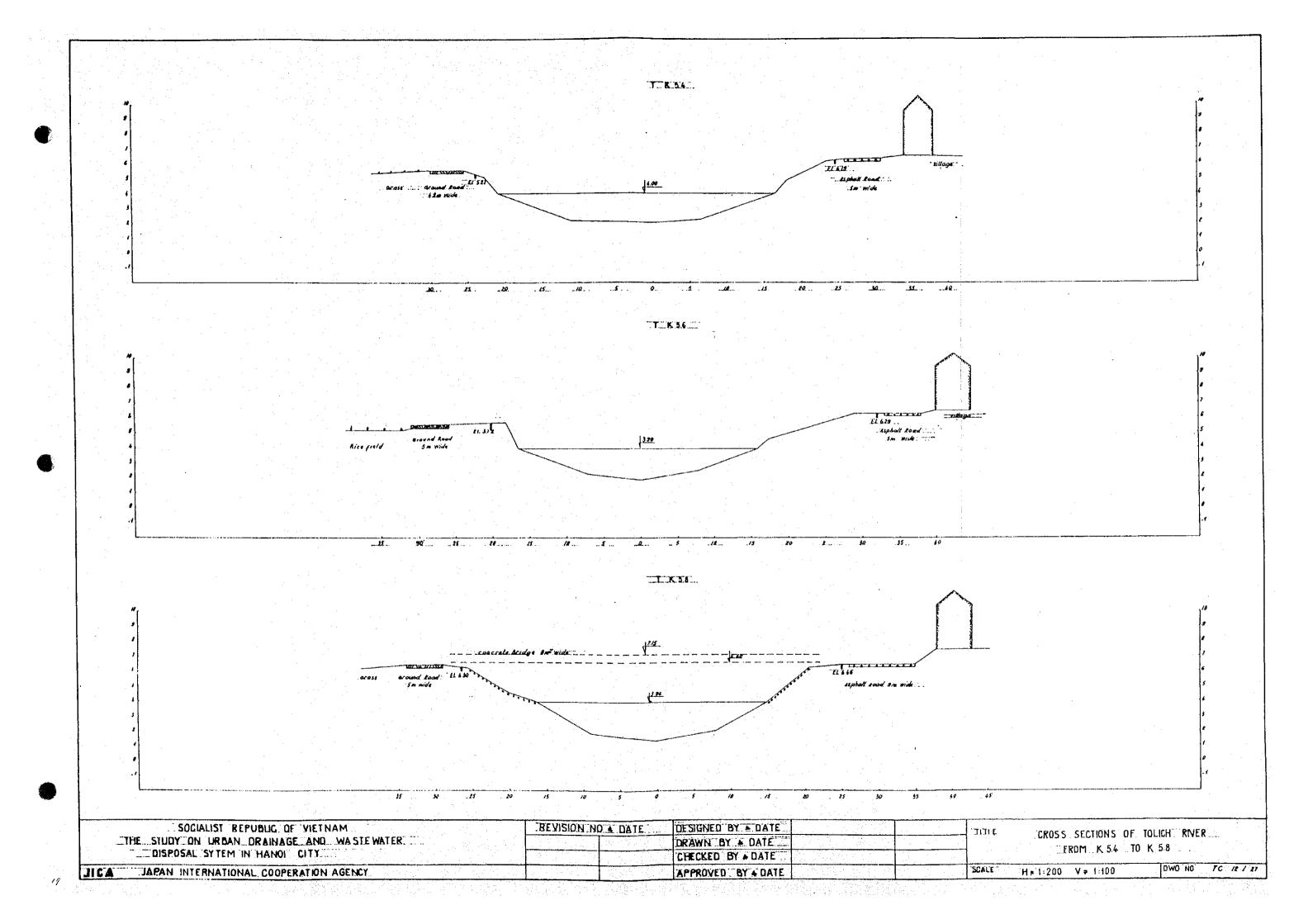


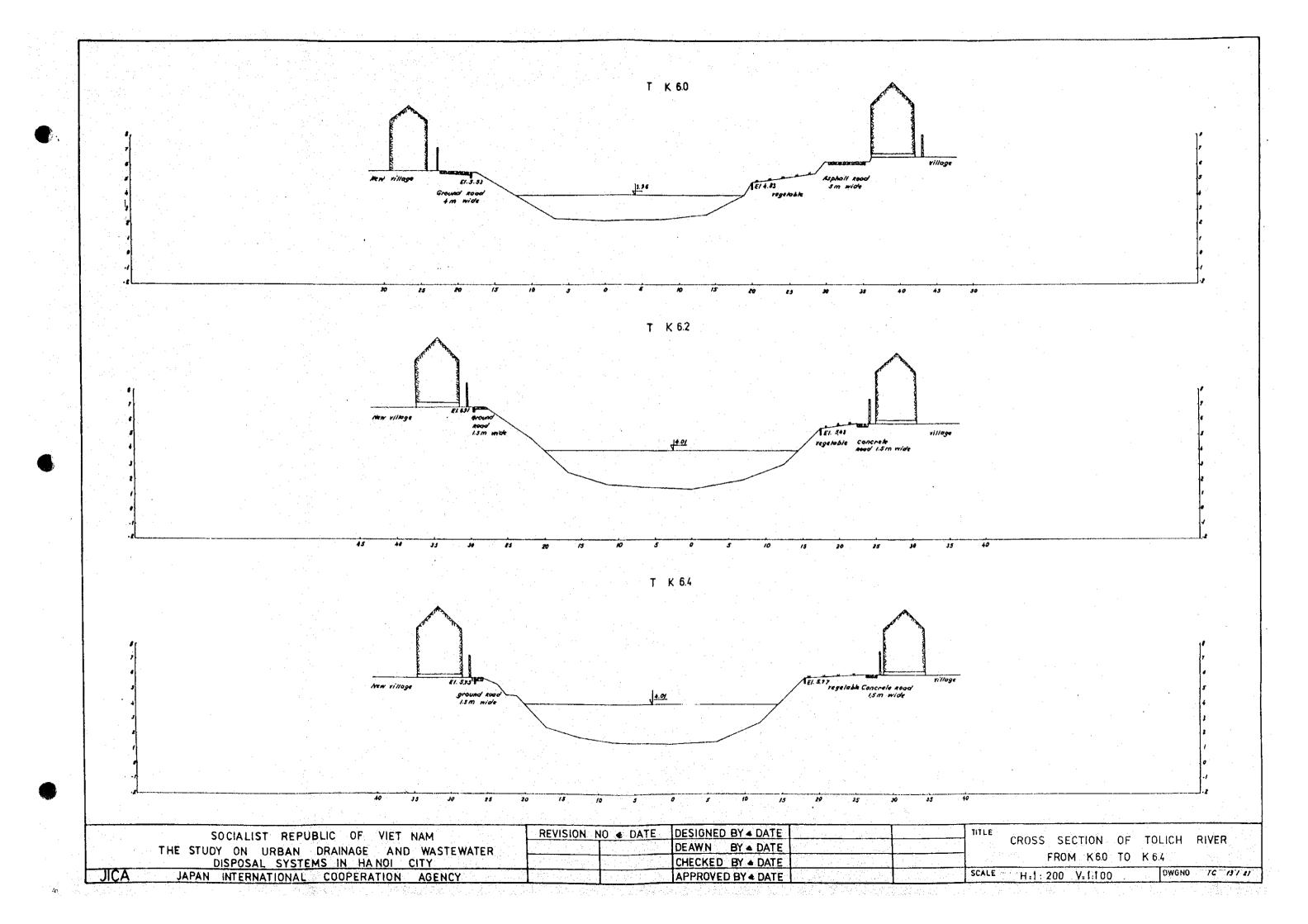


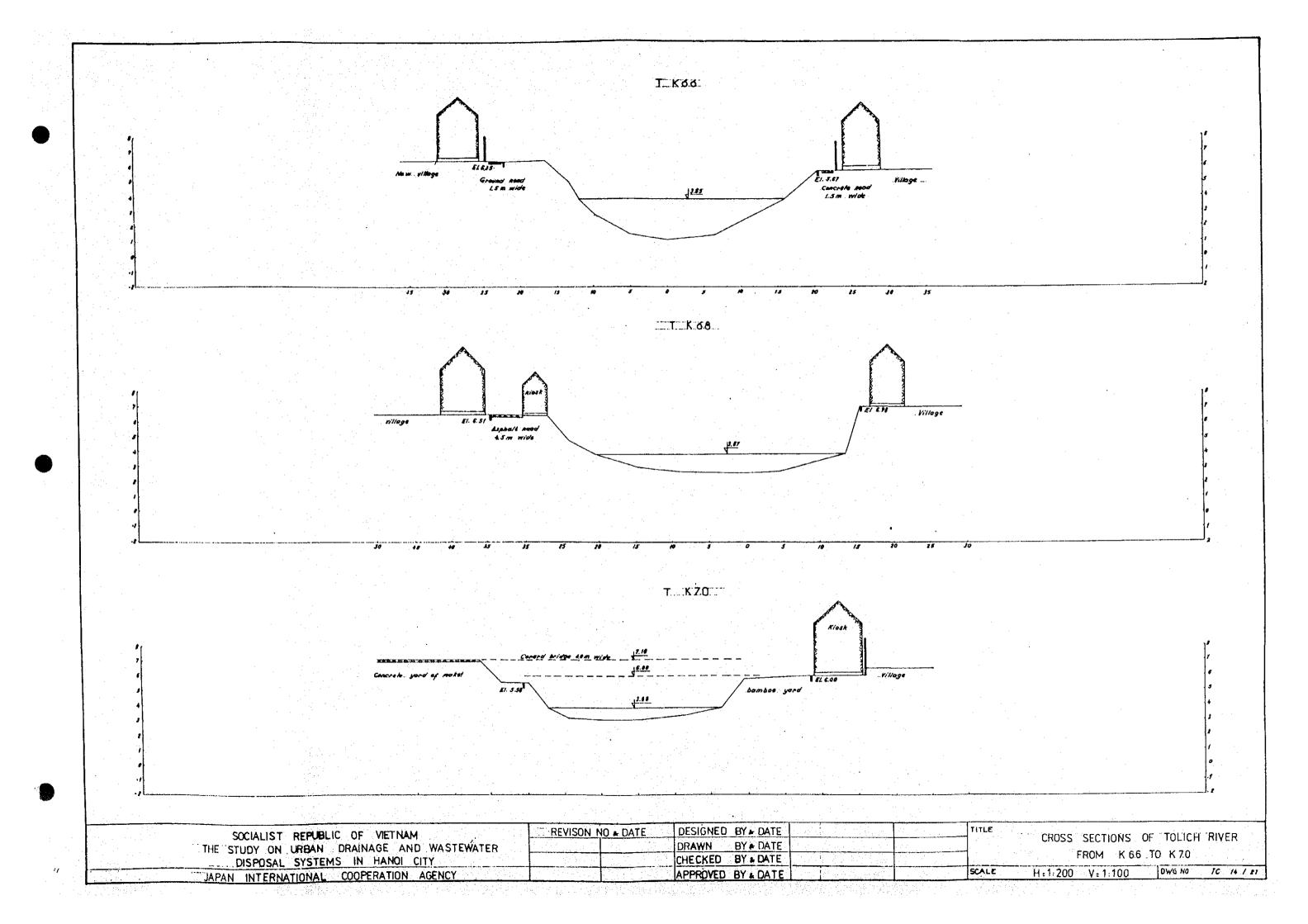


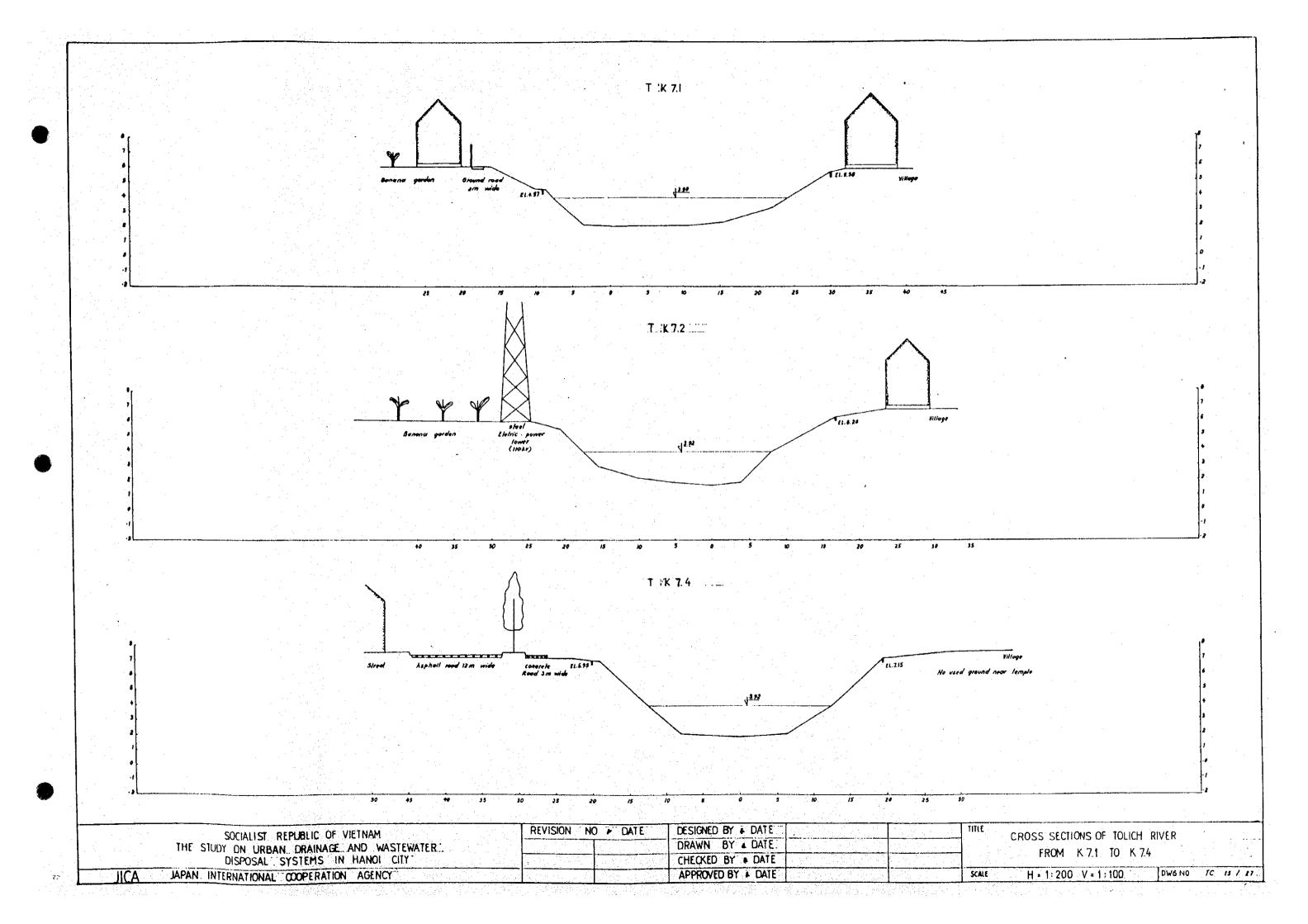


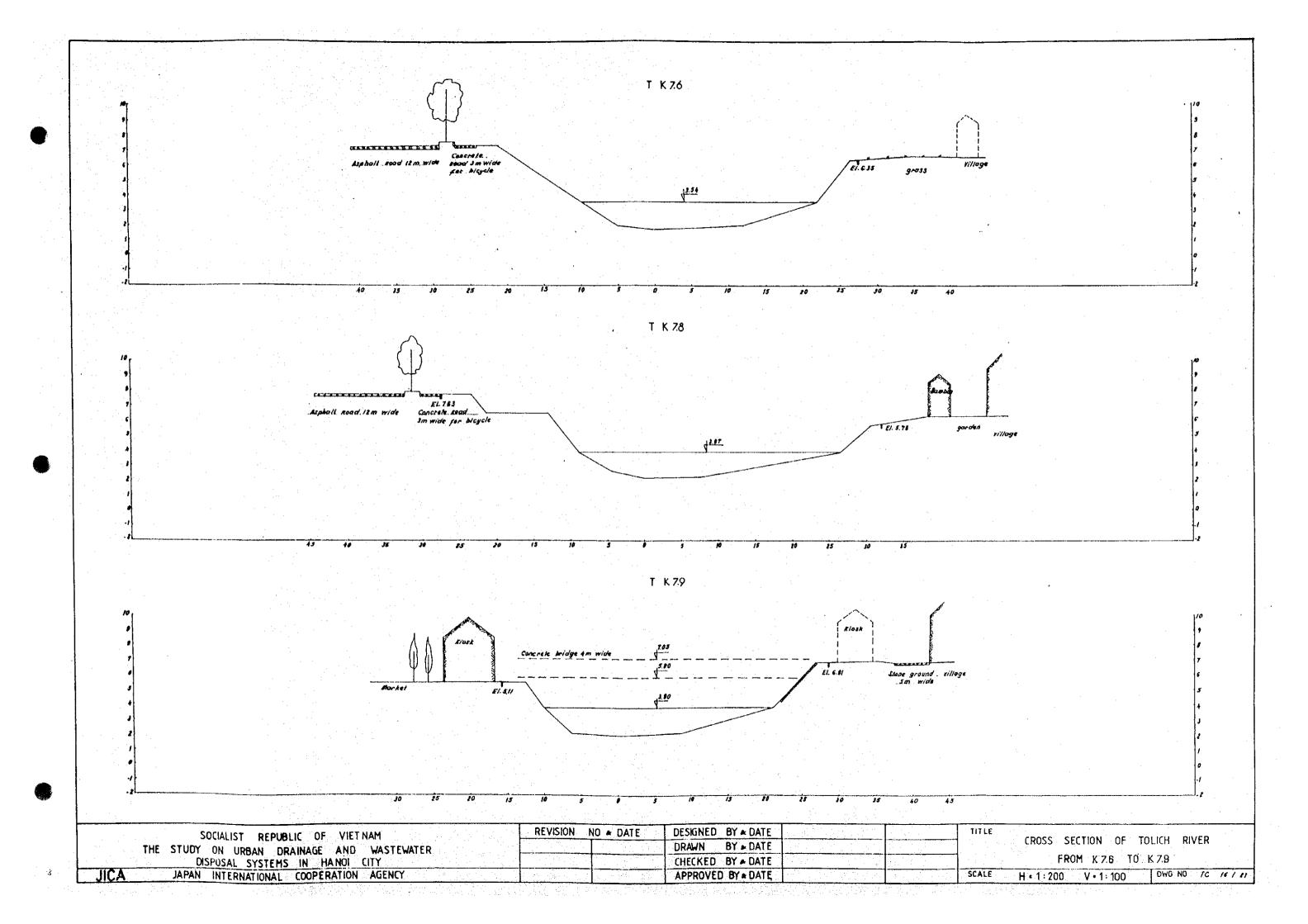


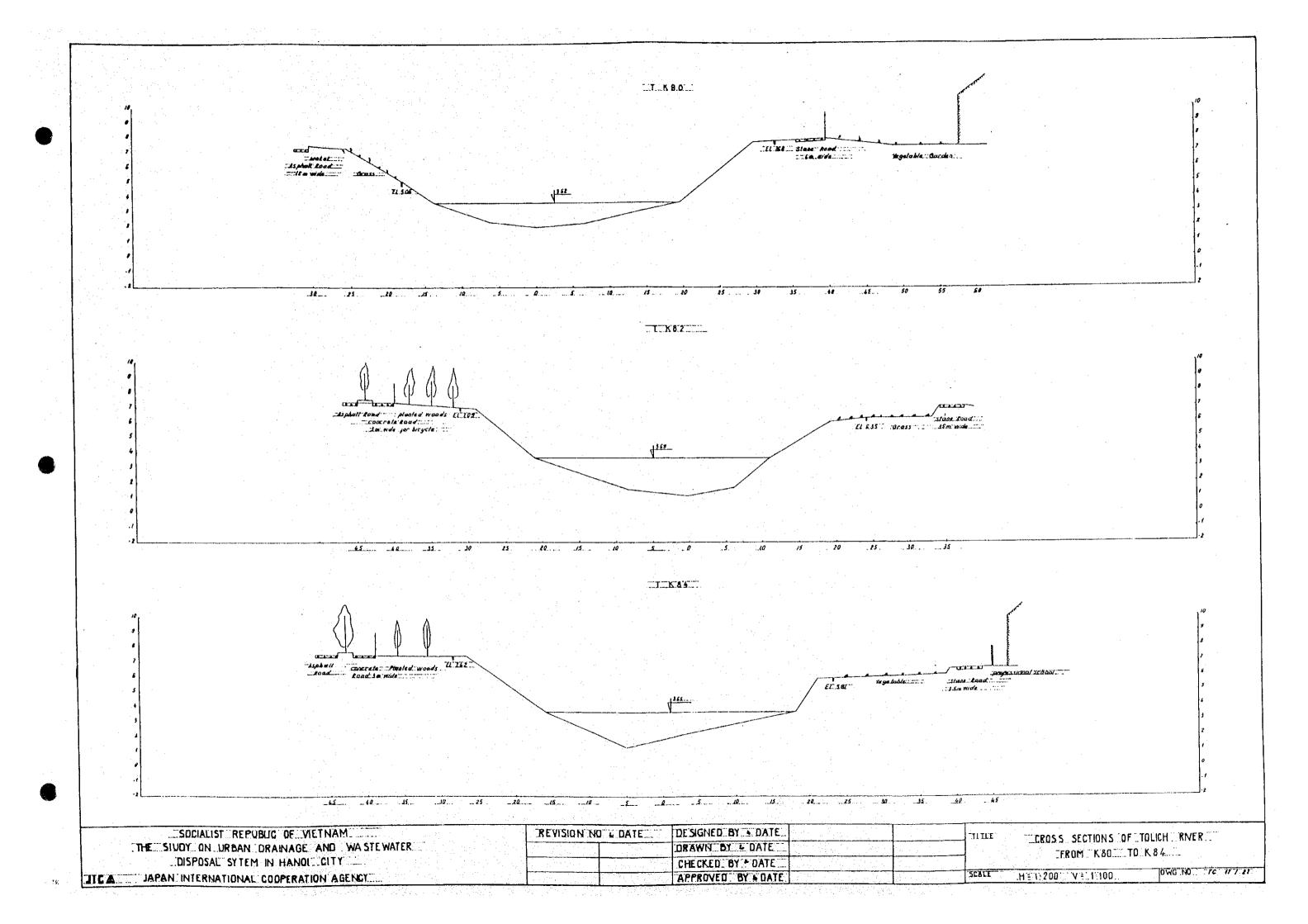


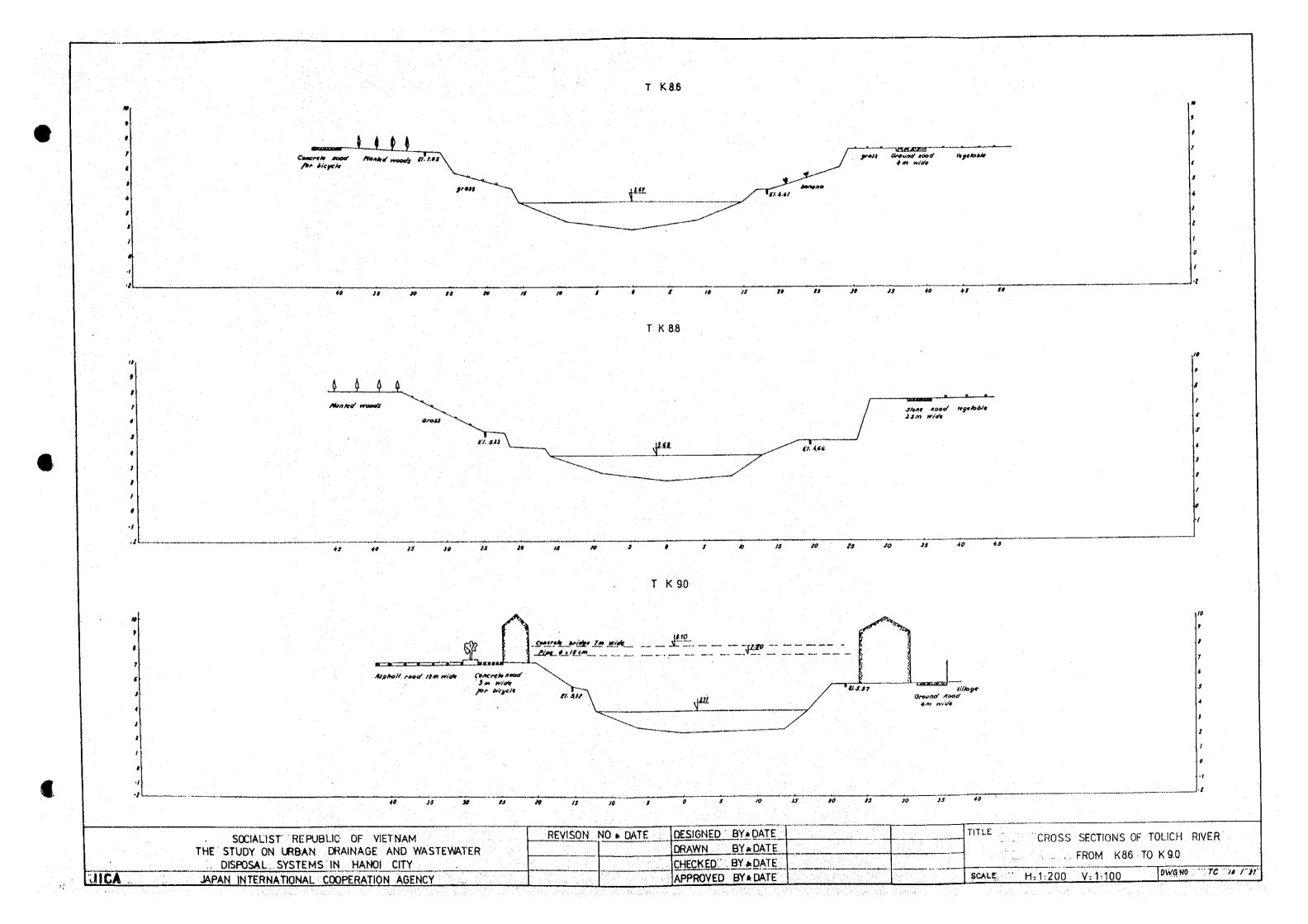


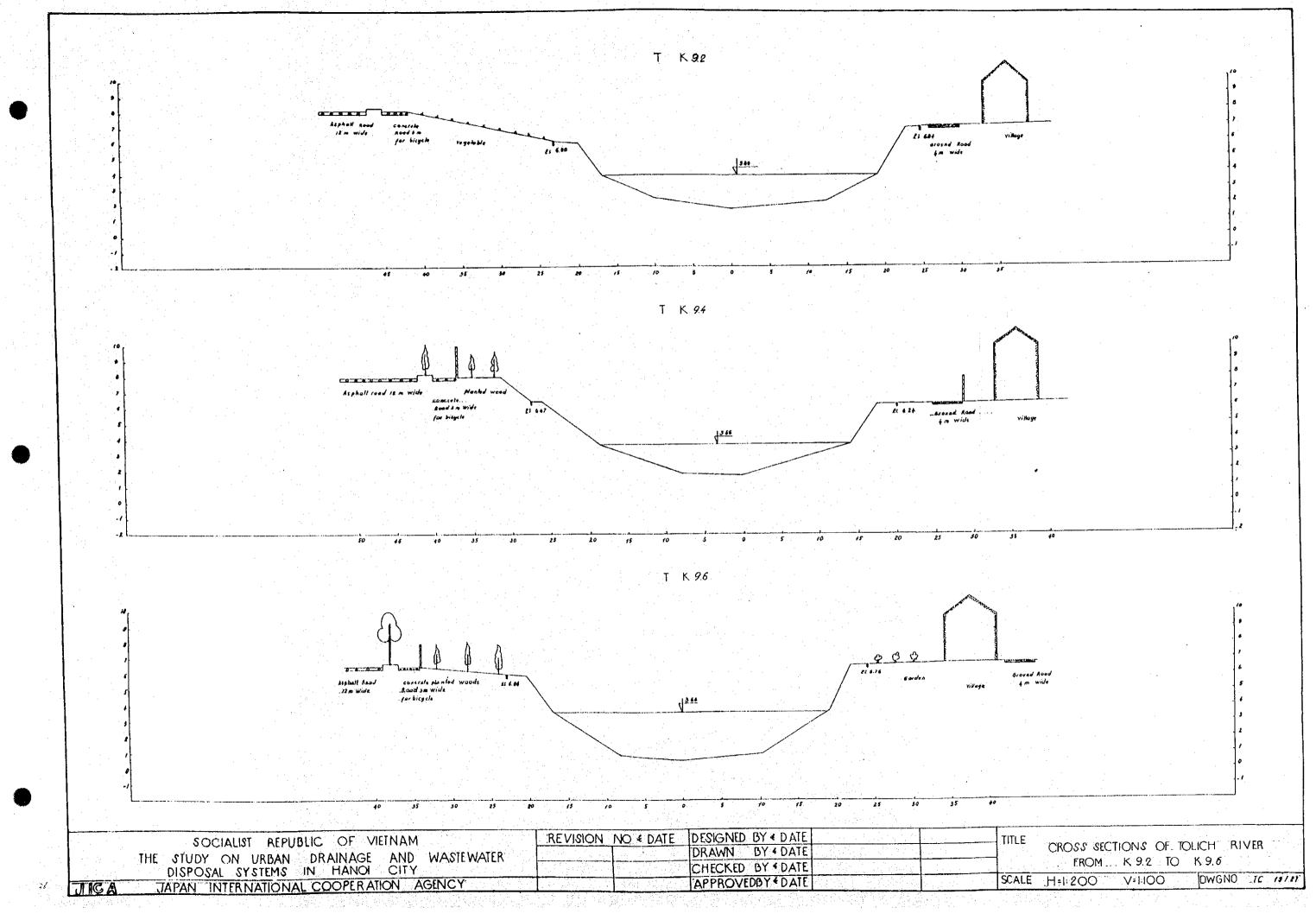


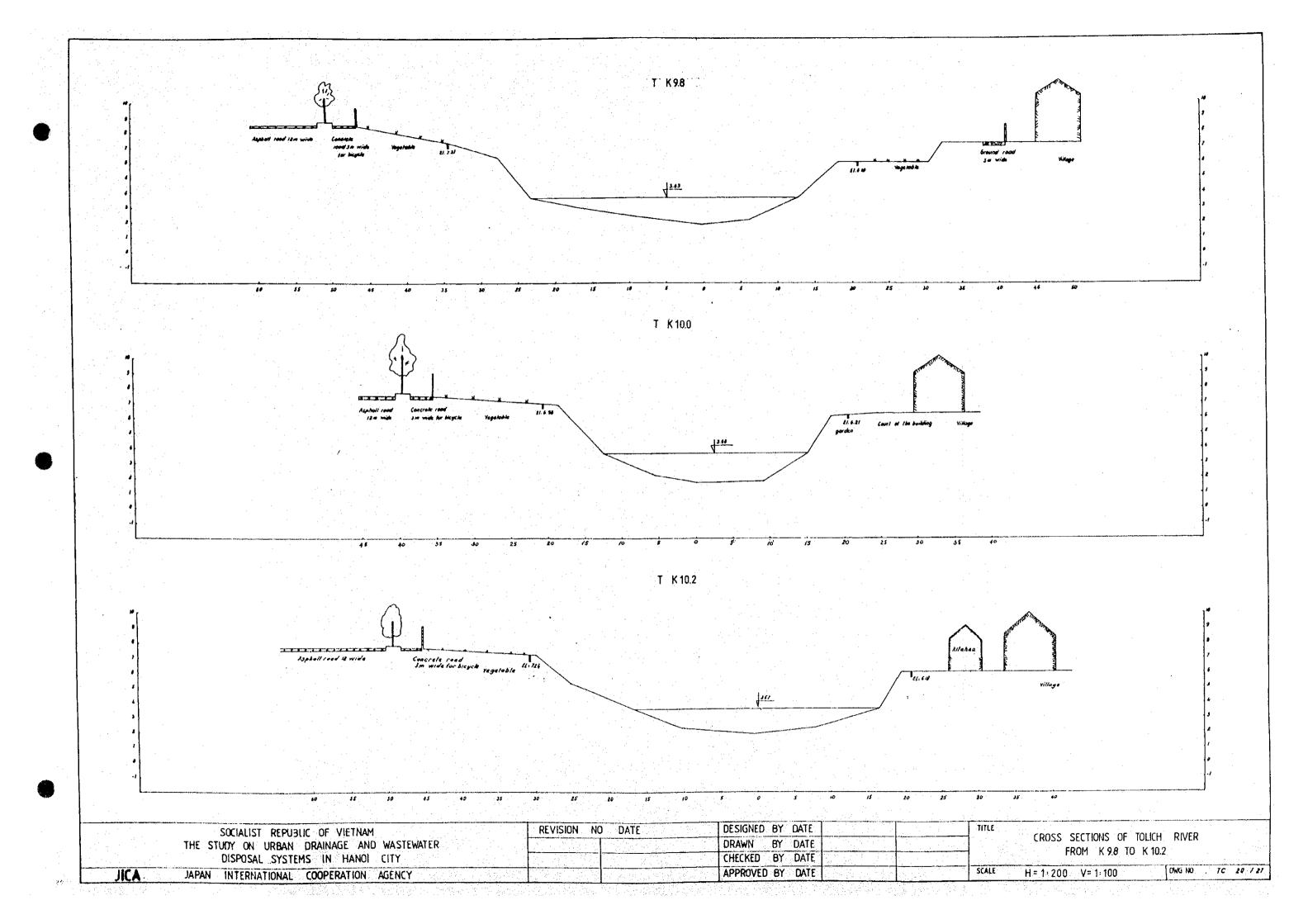


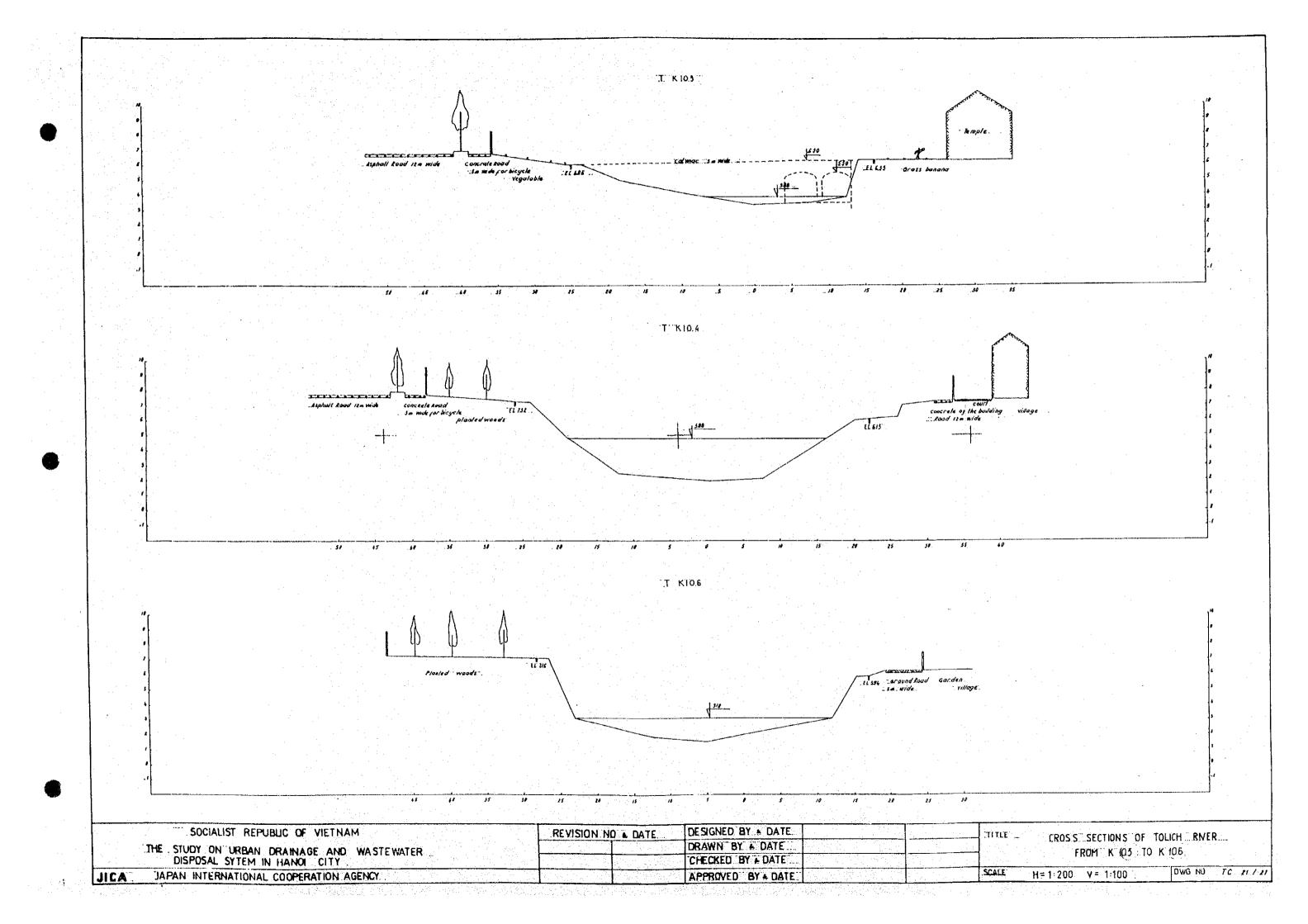


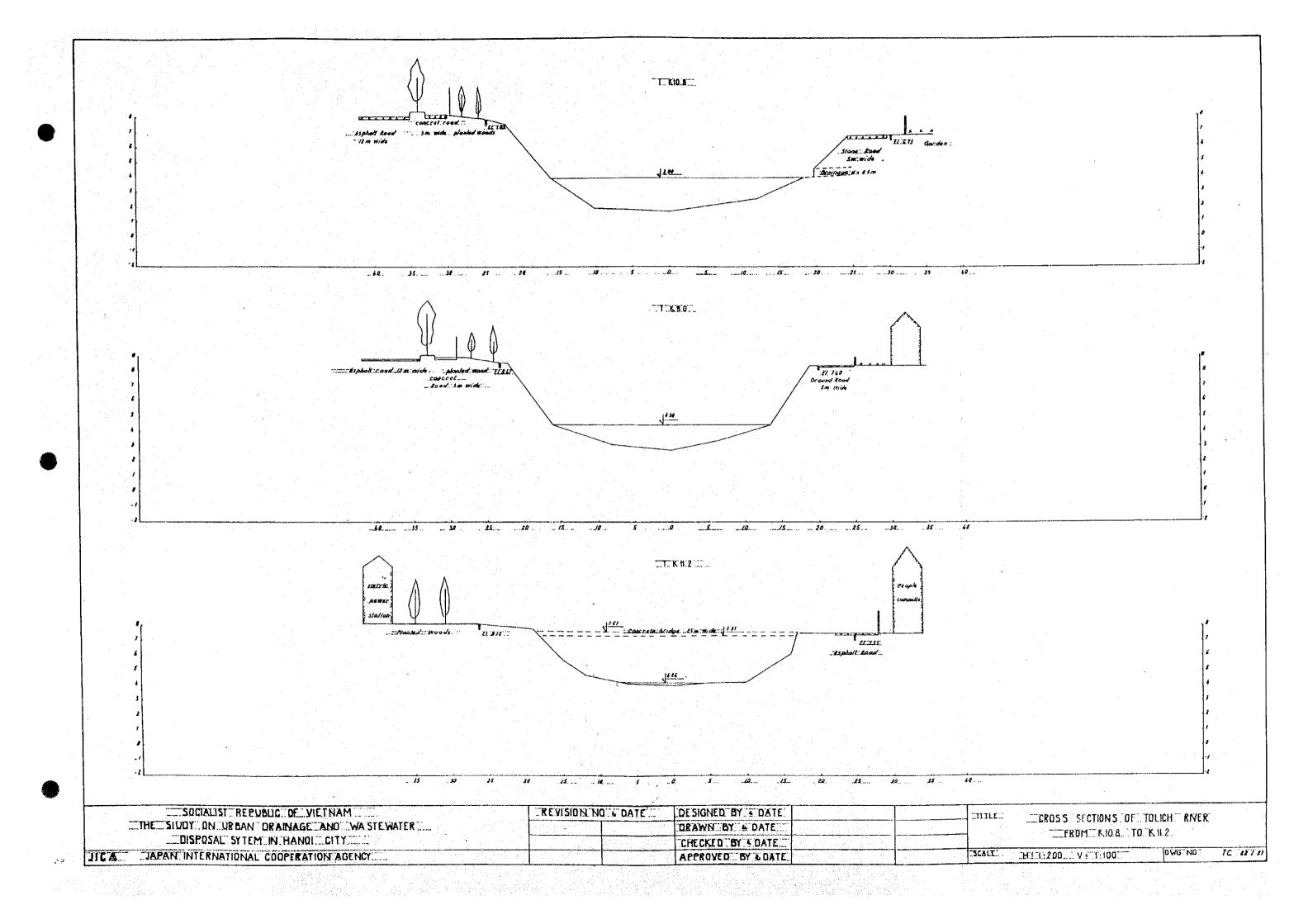




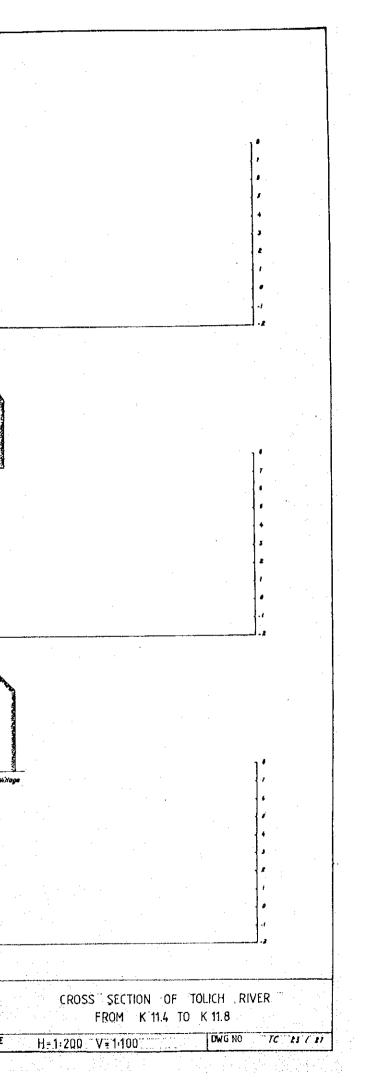


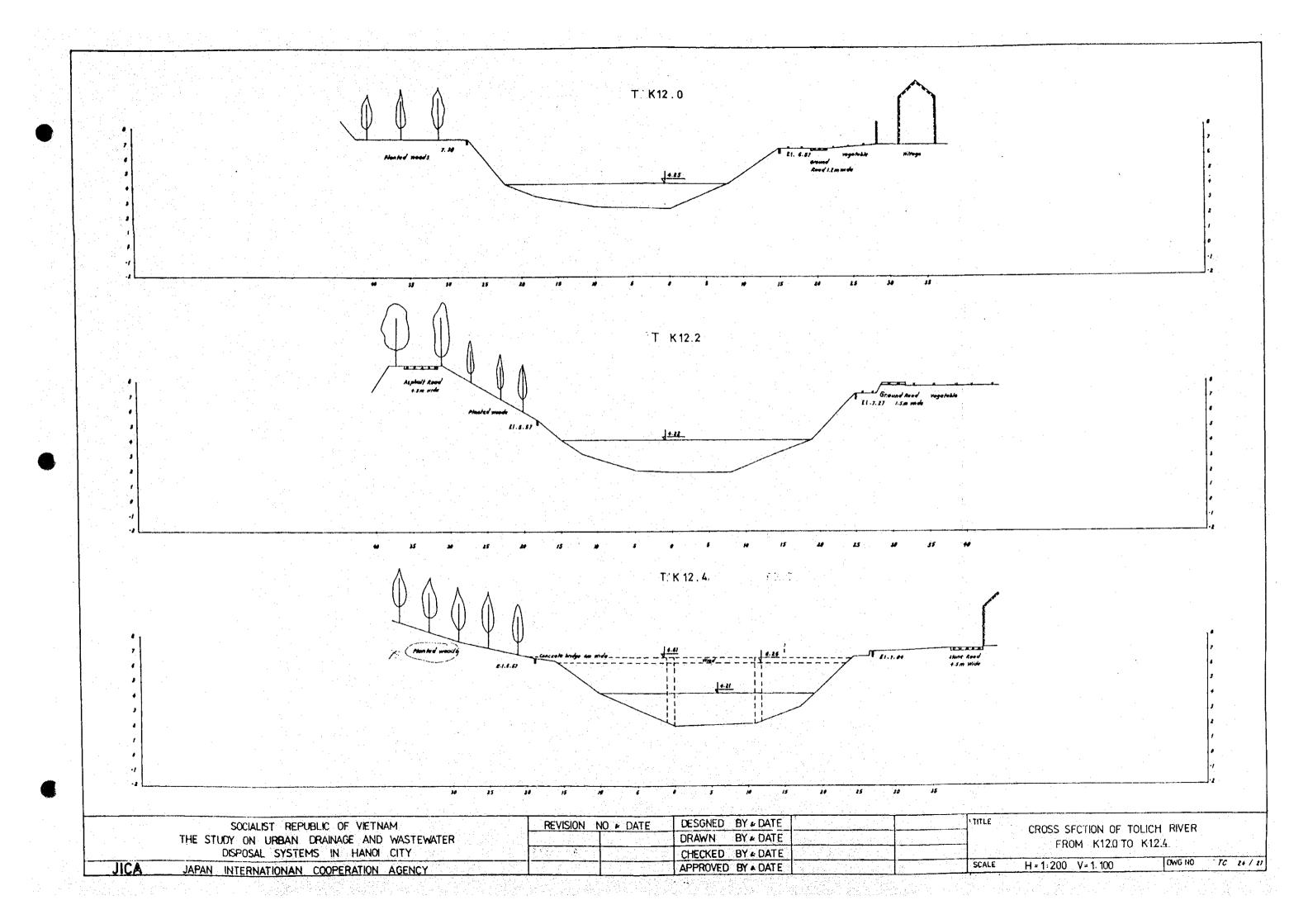


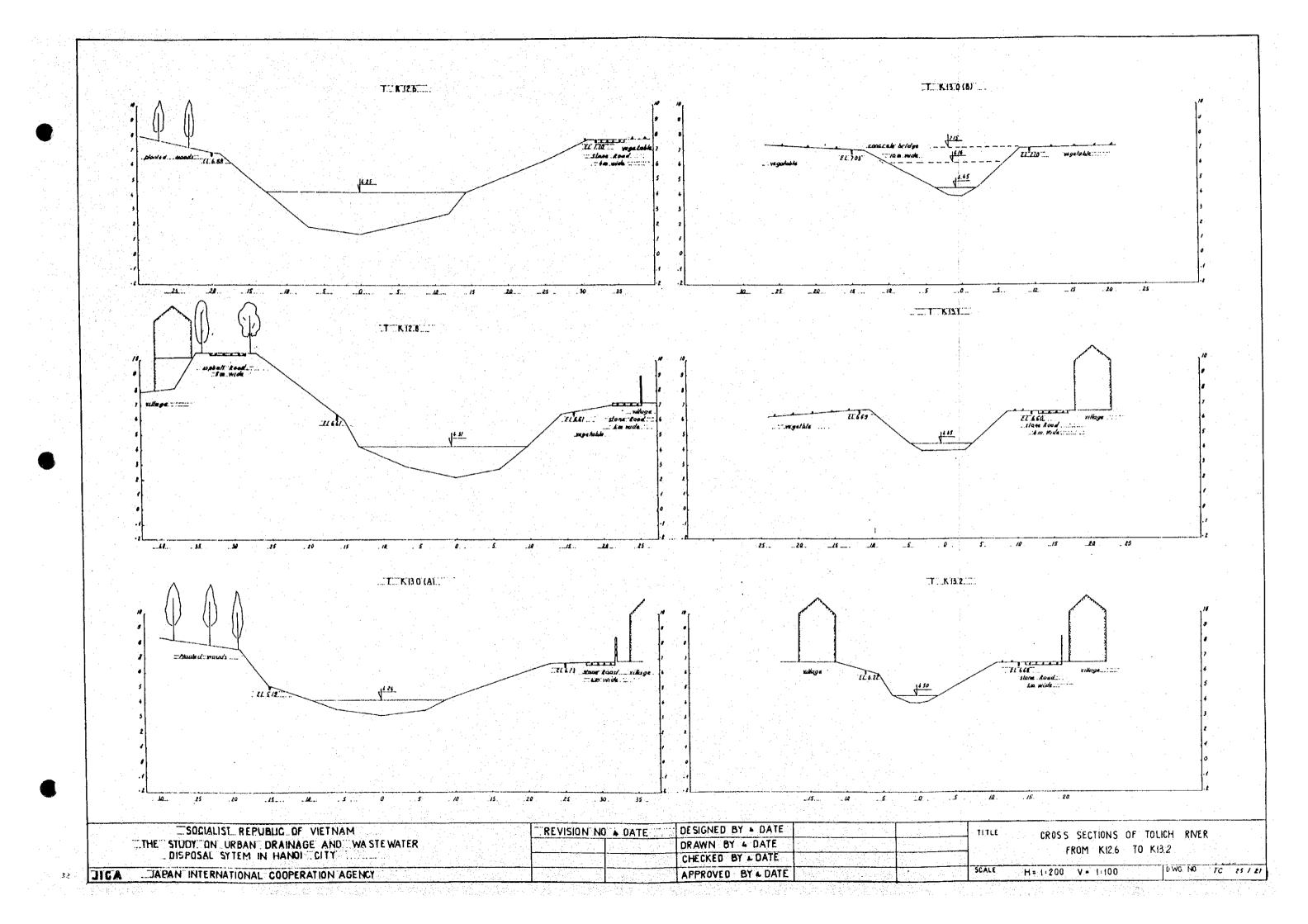


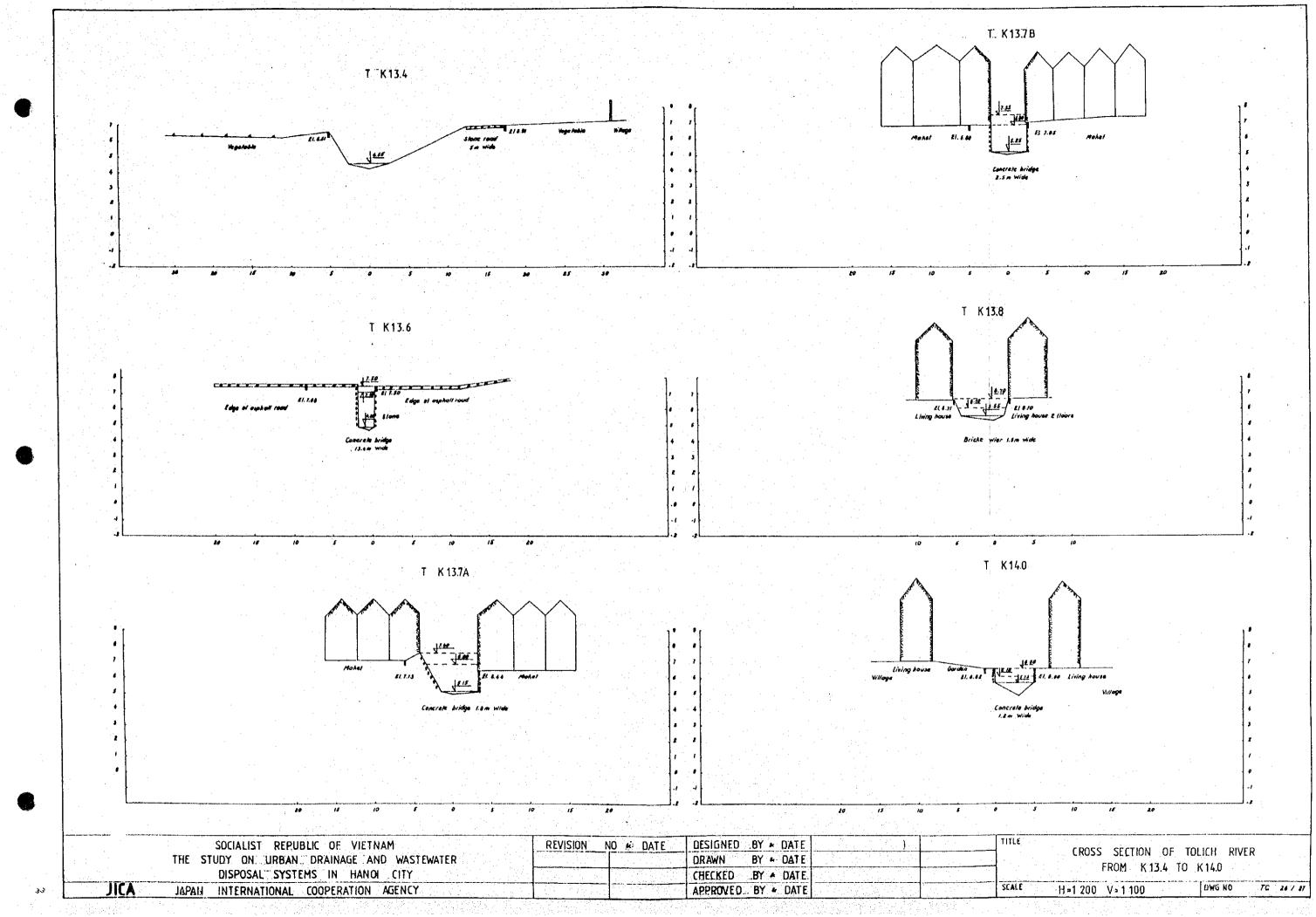


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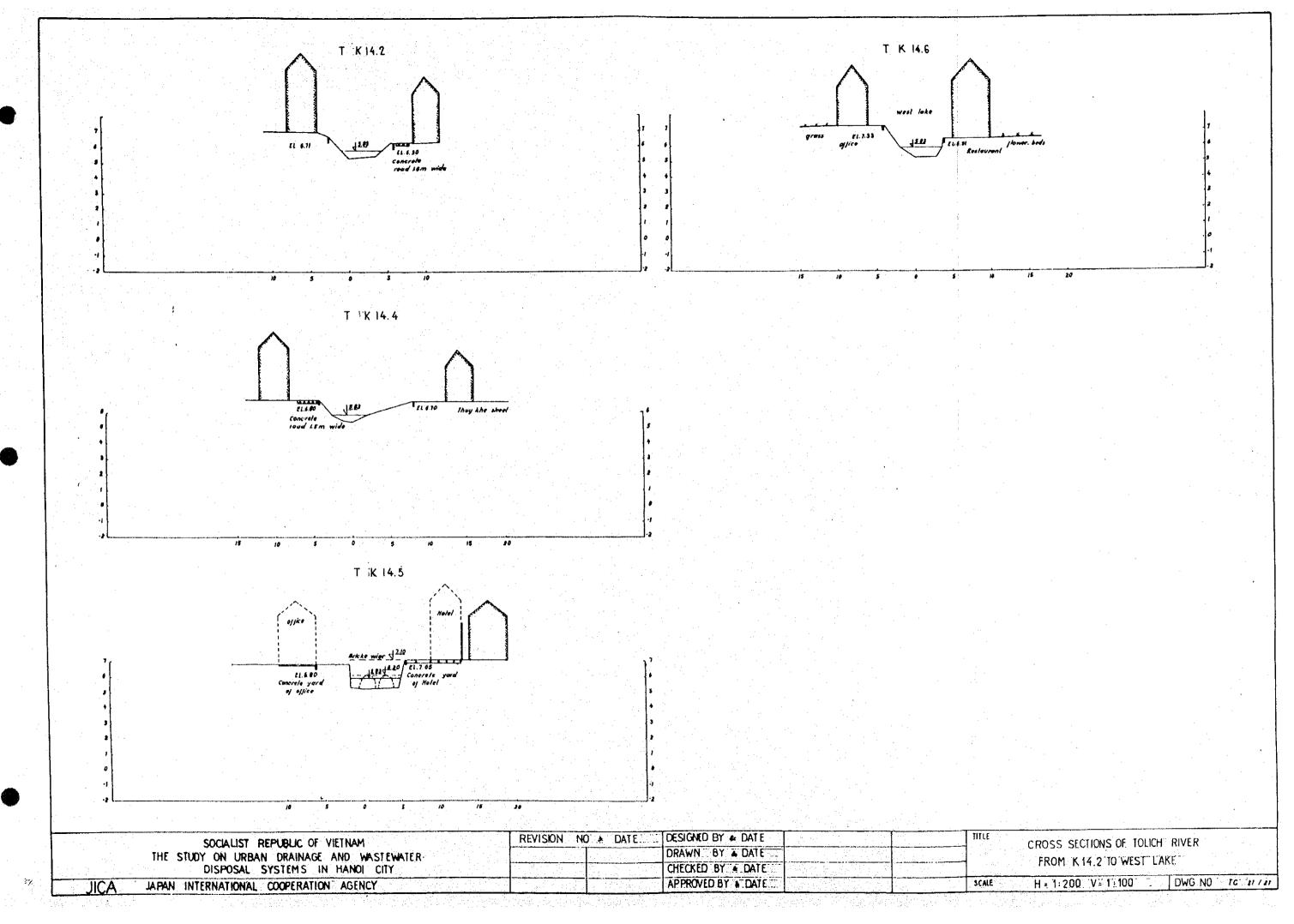






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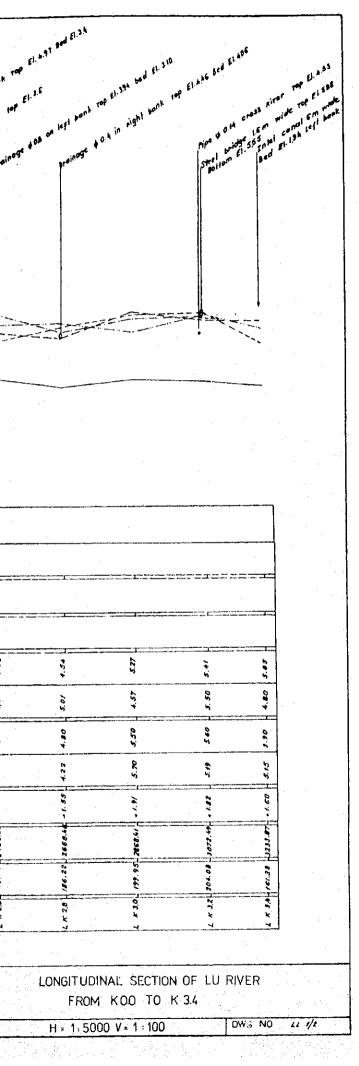
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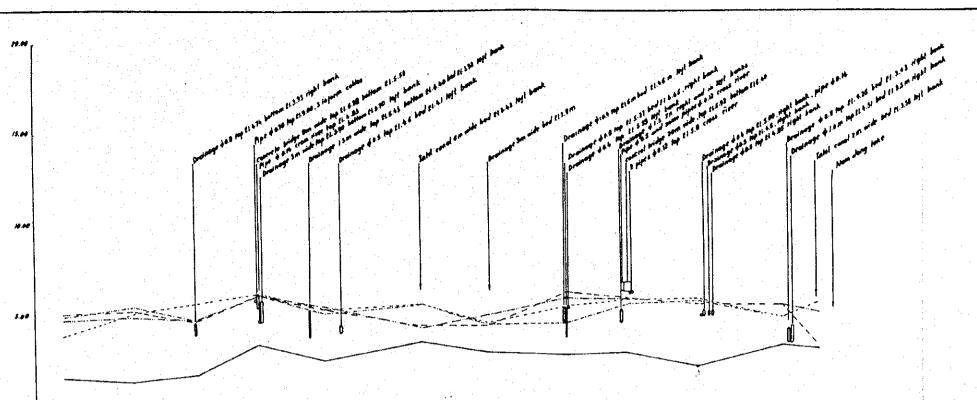
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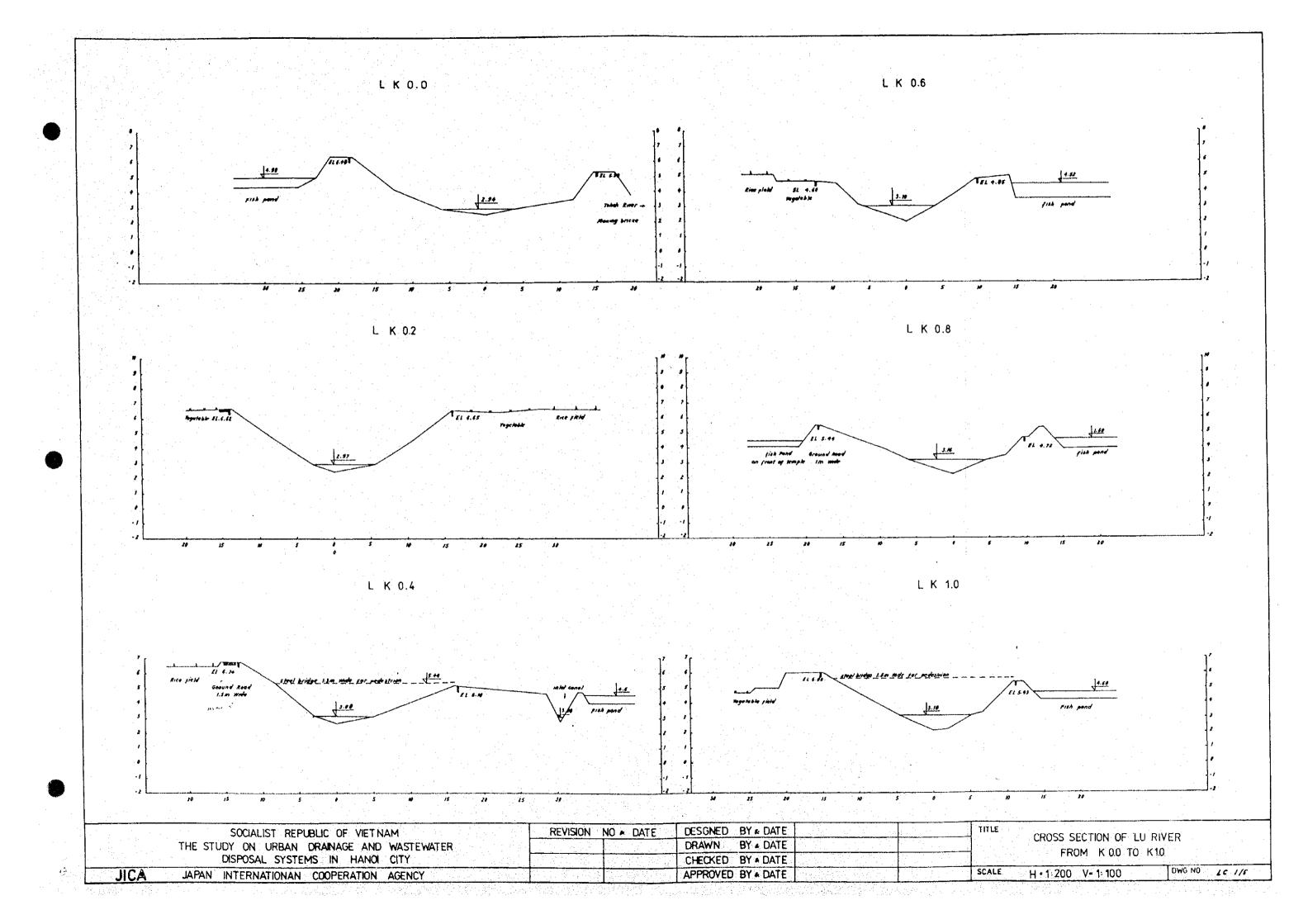
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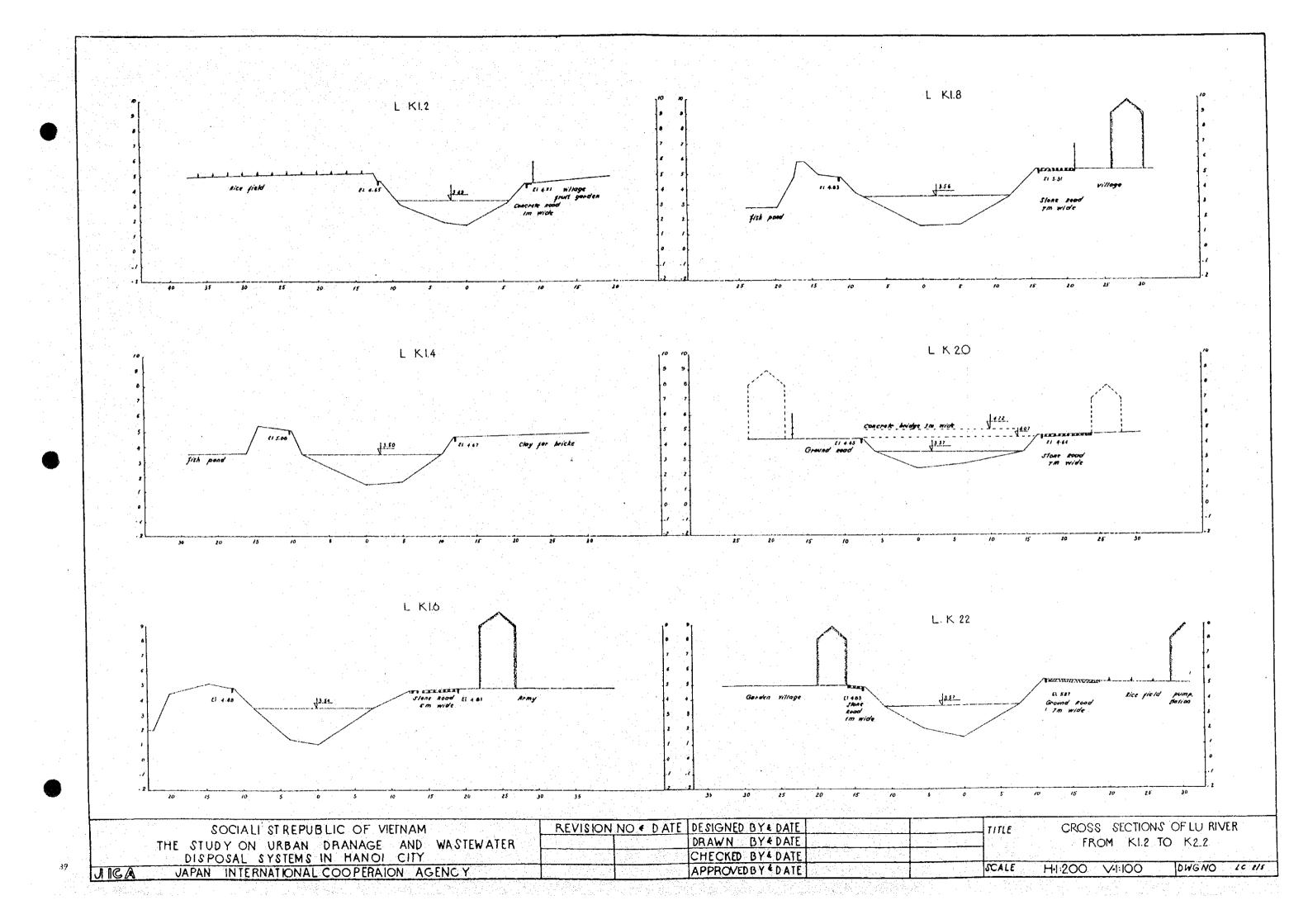


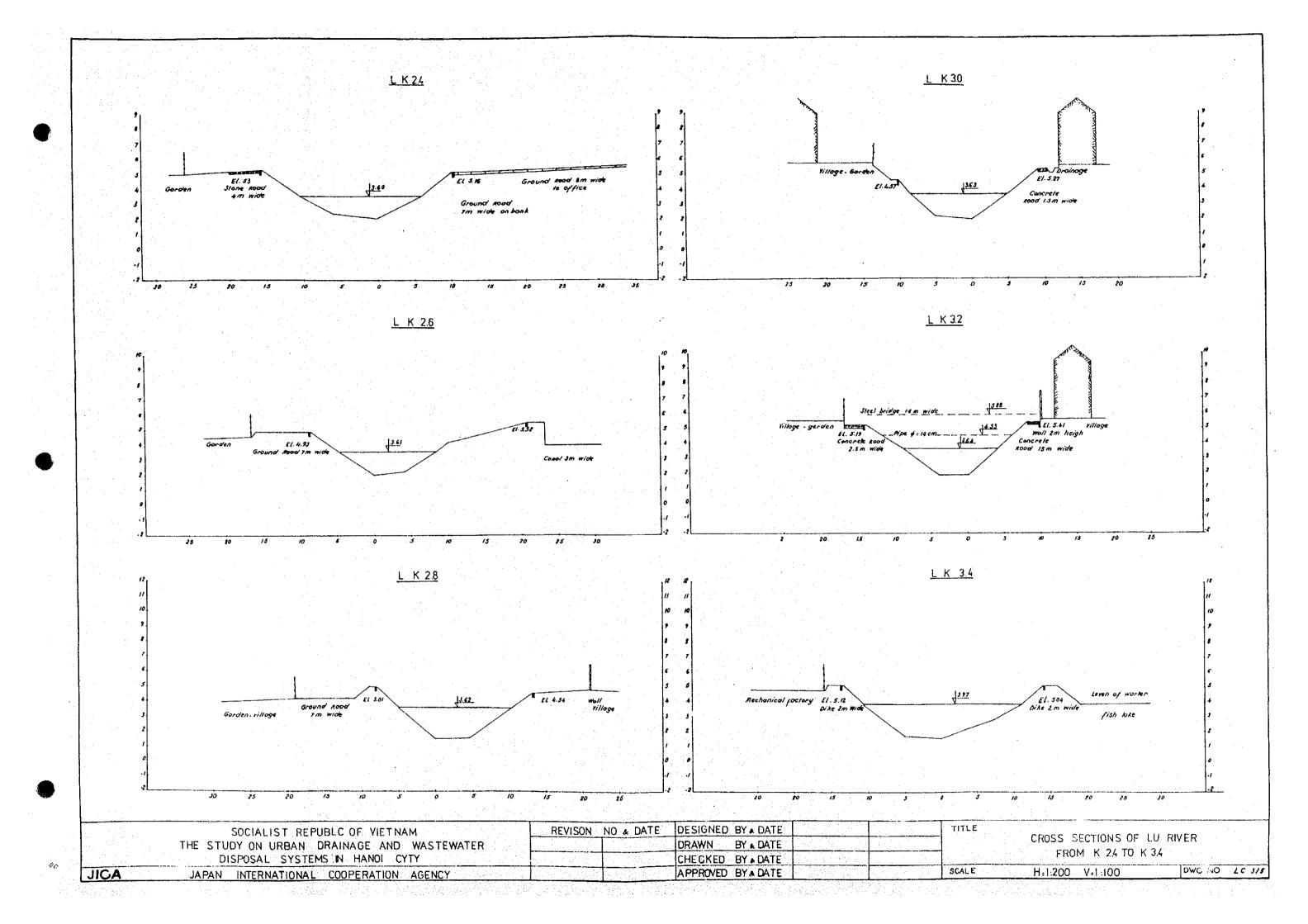
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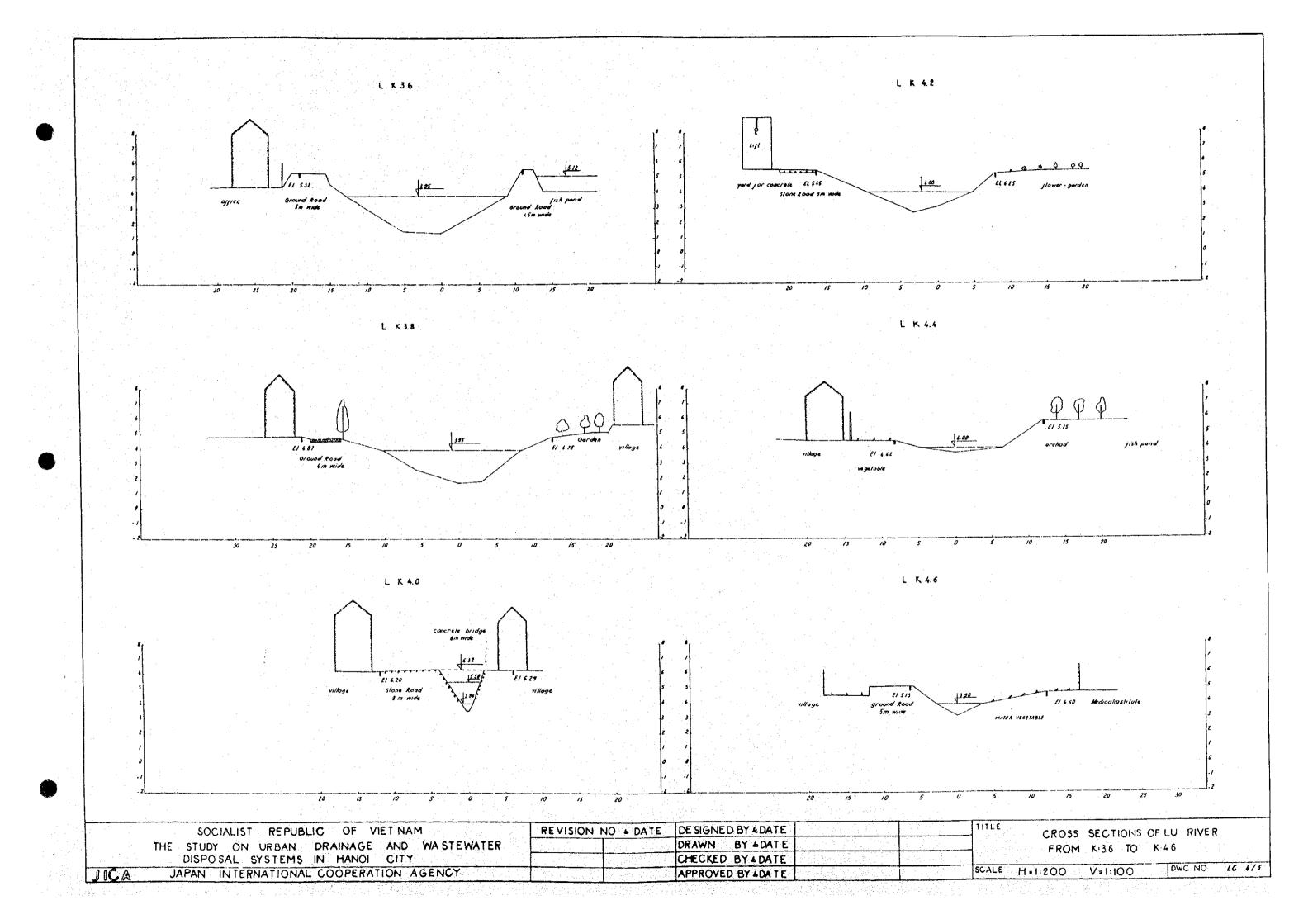


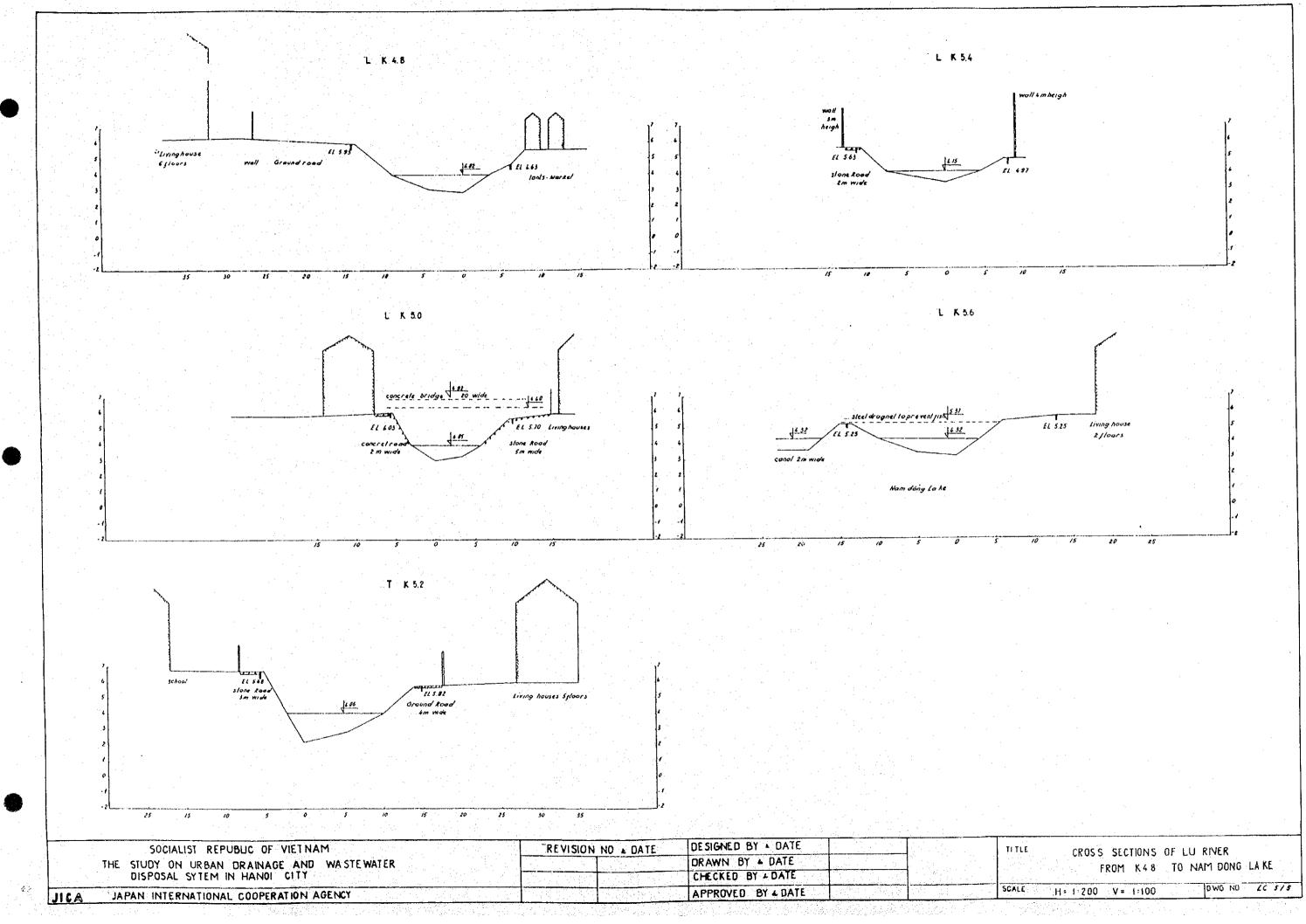
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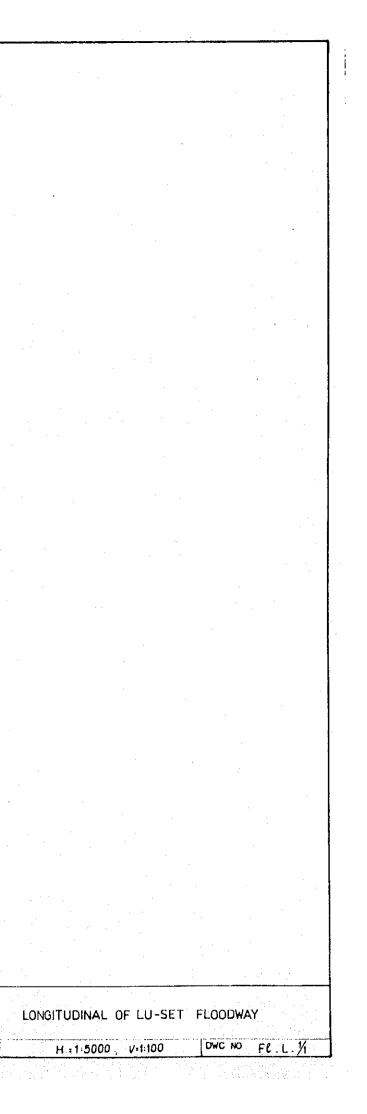


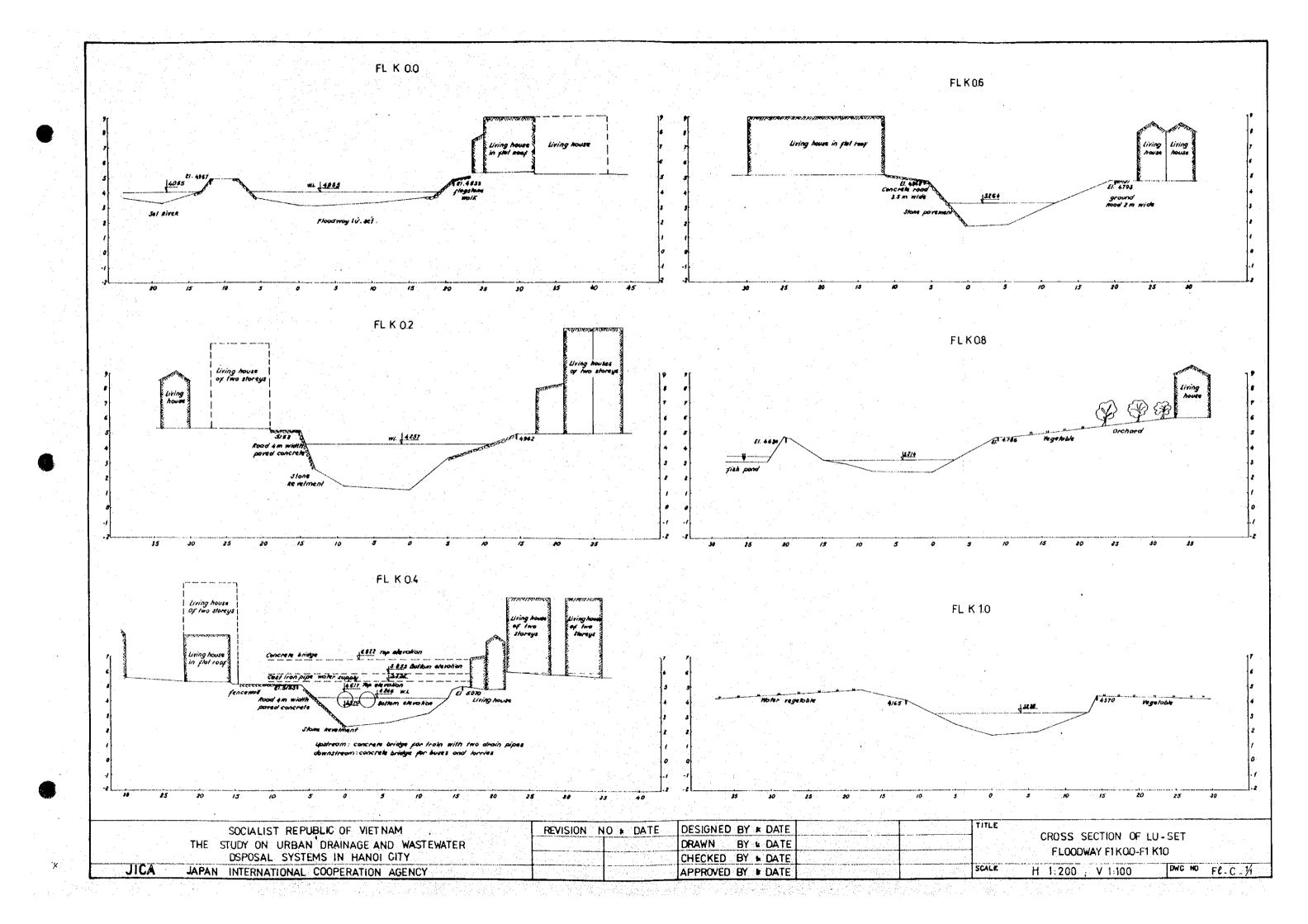




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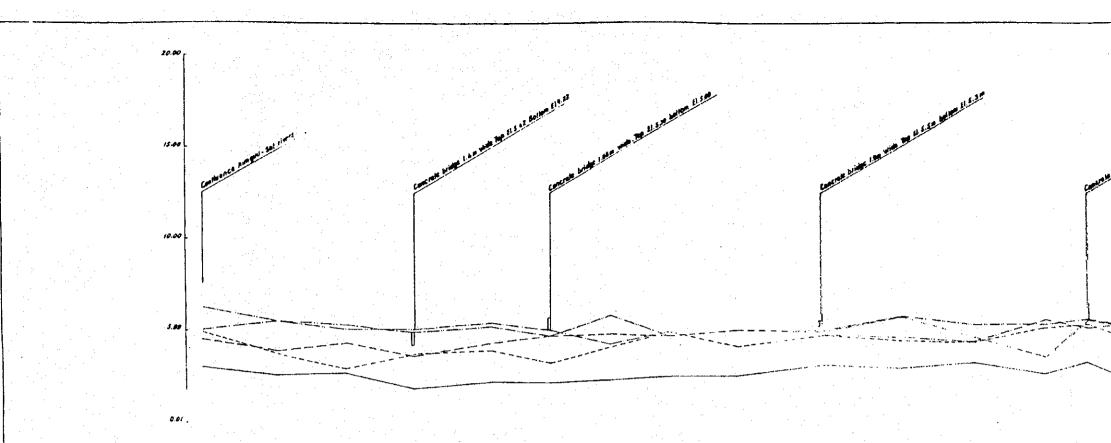
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3. Longitudinal and Cross Sections of Set River

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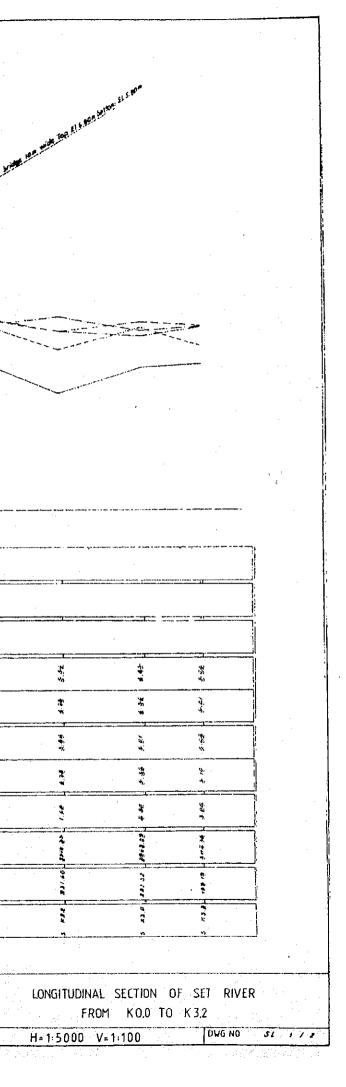
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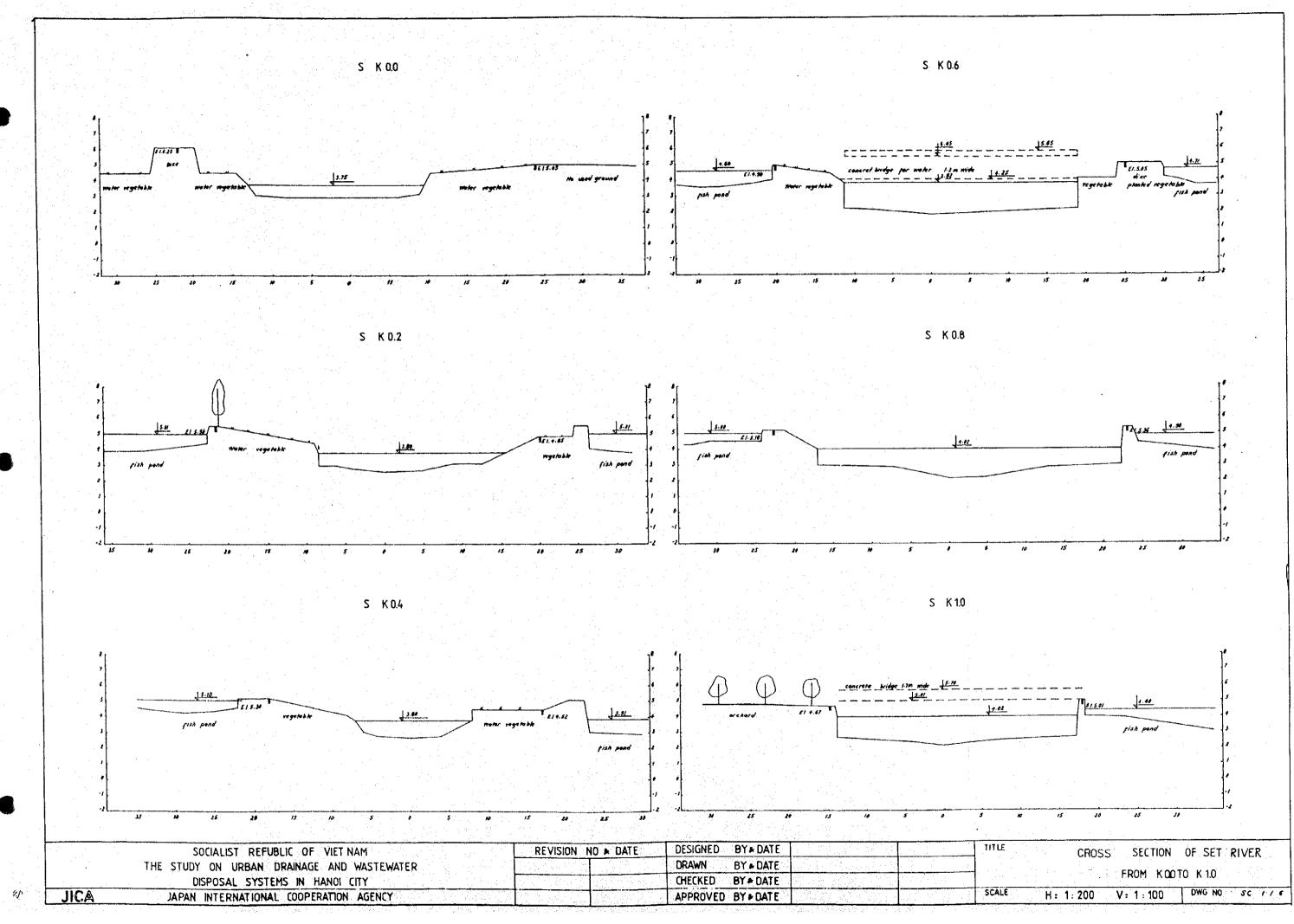
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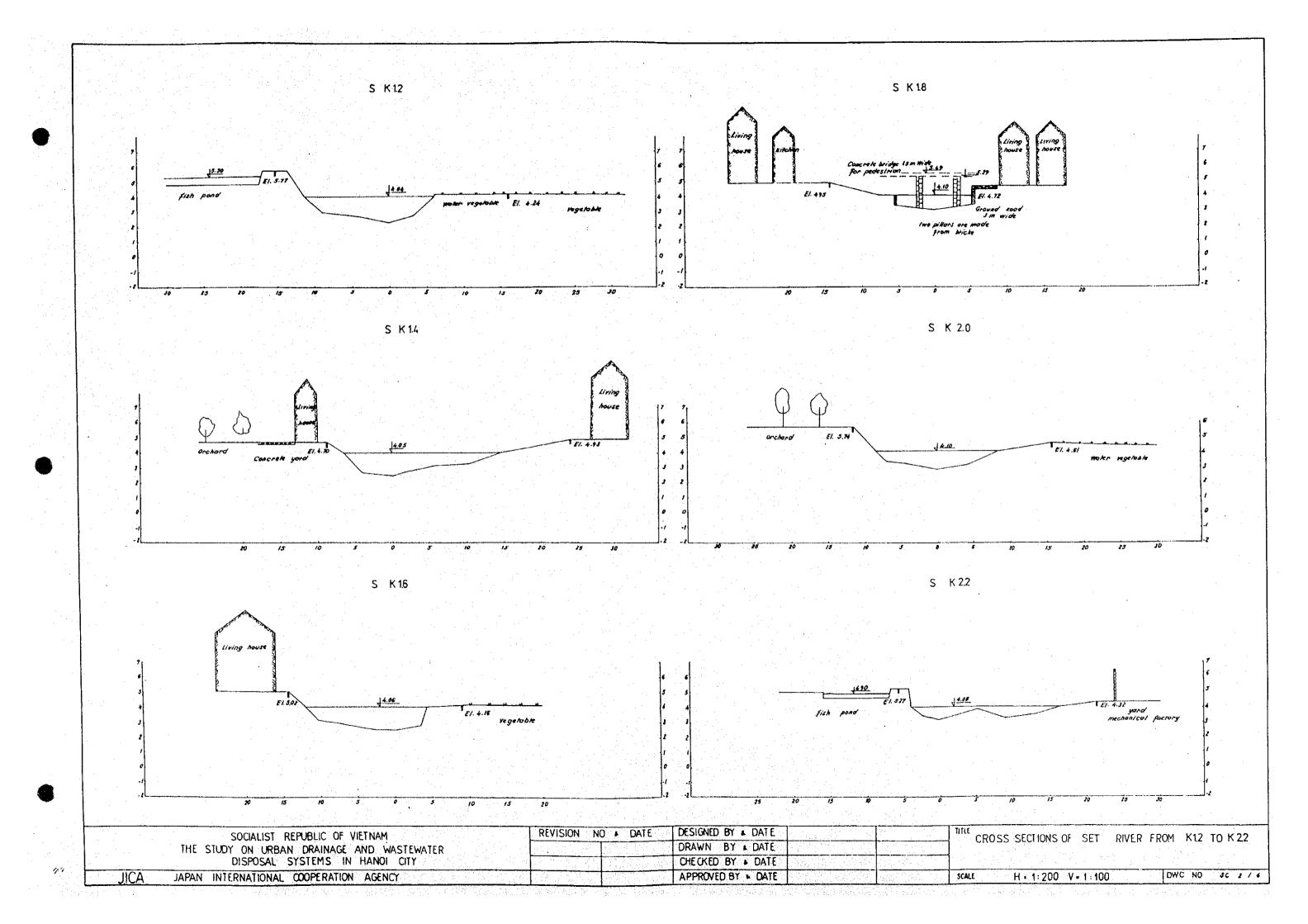
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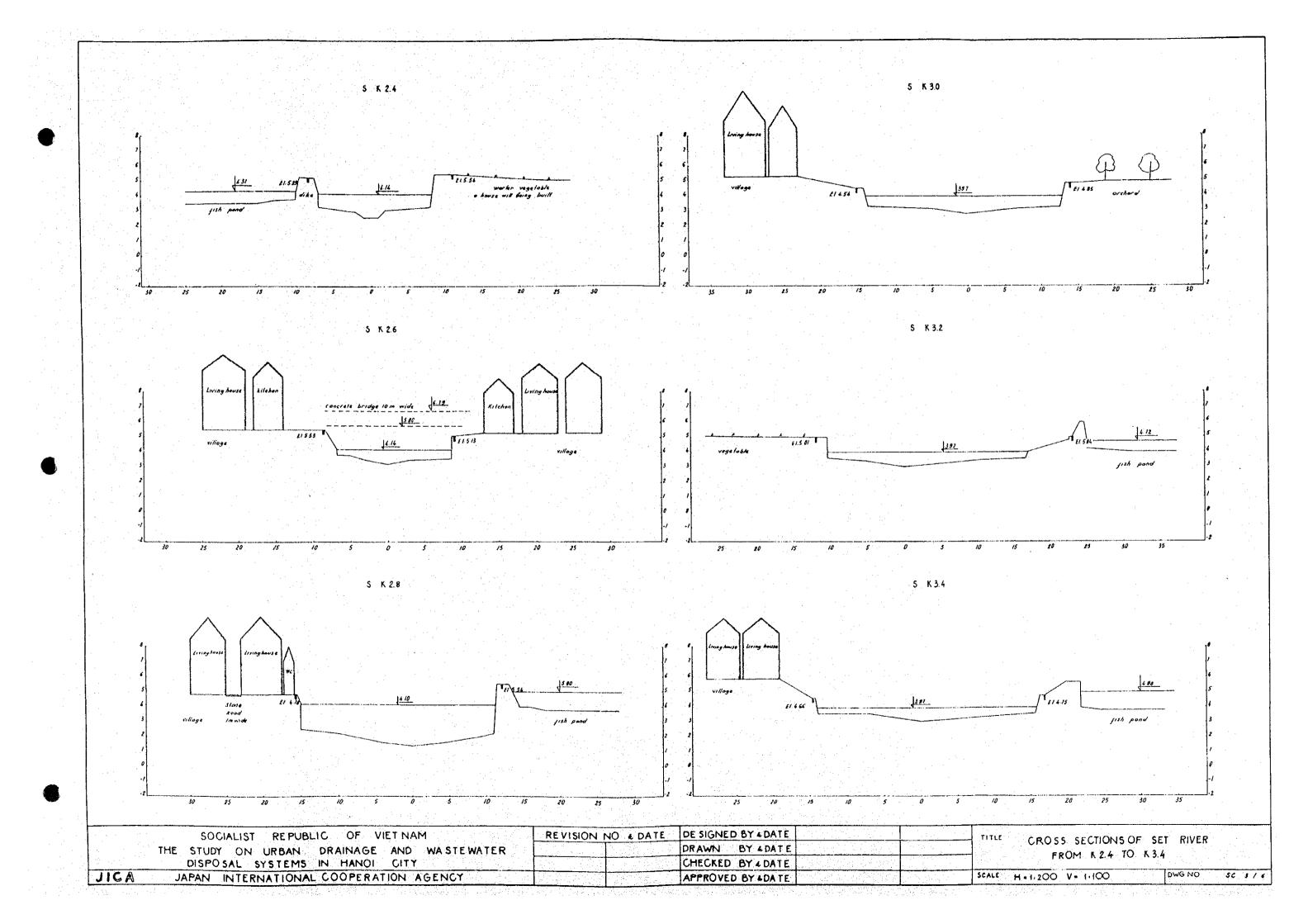
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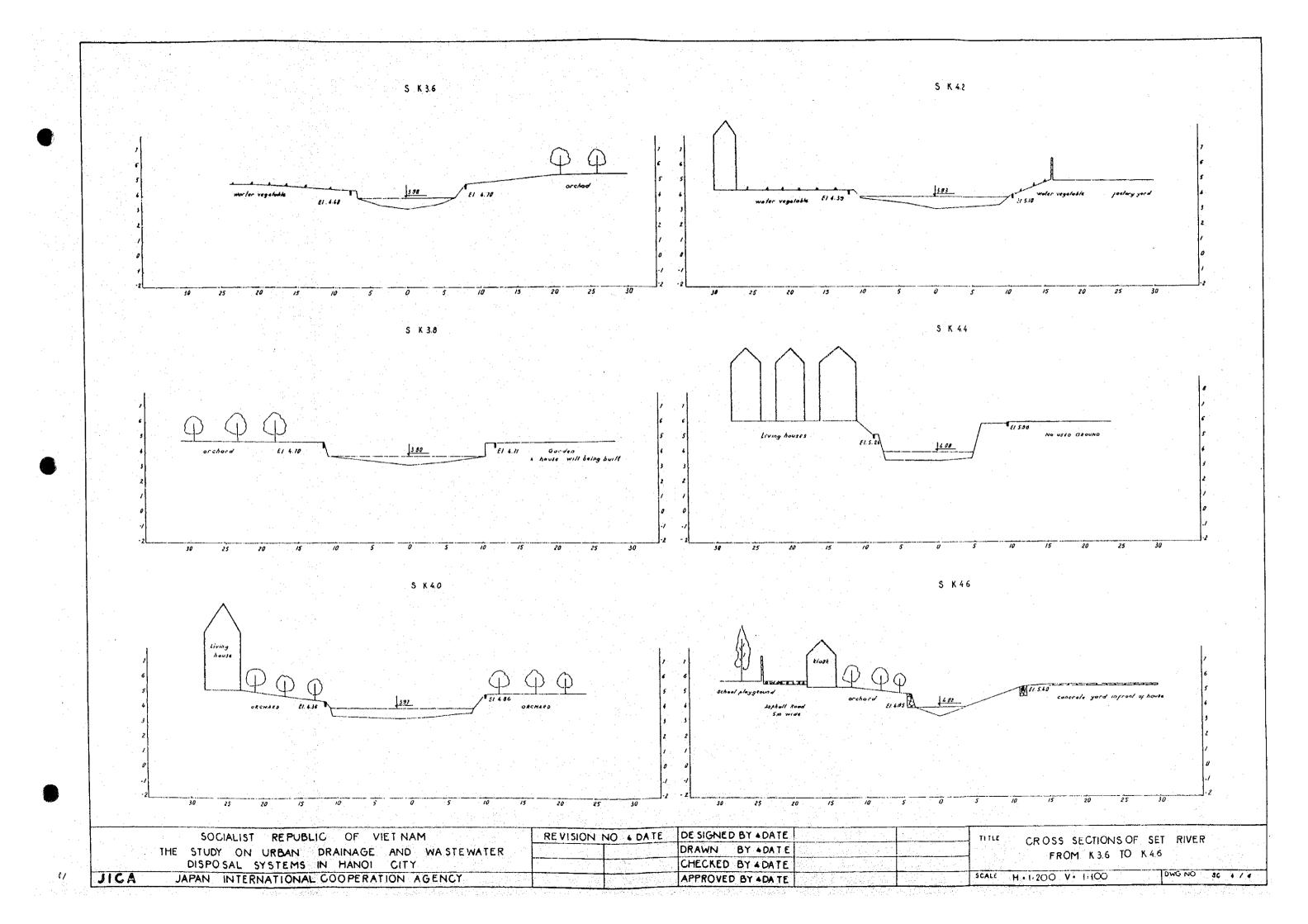
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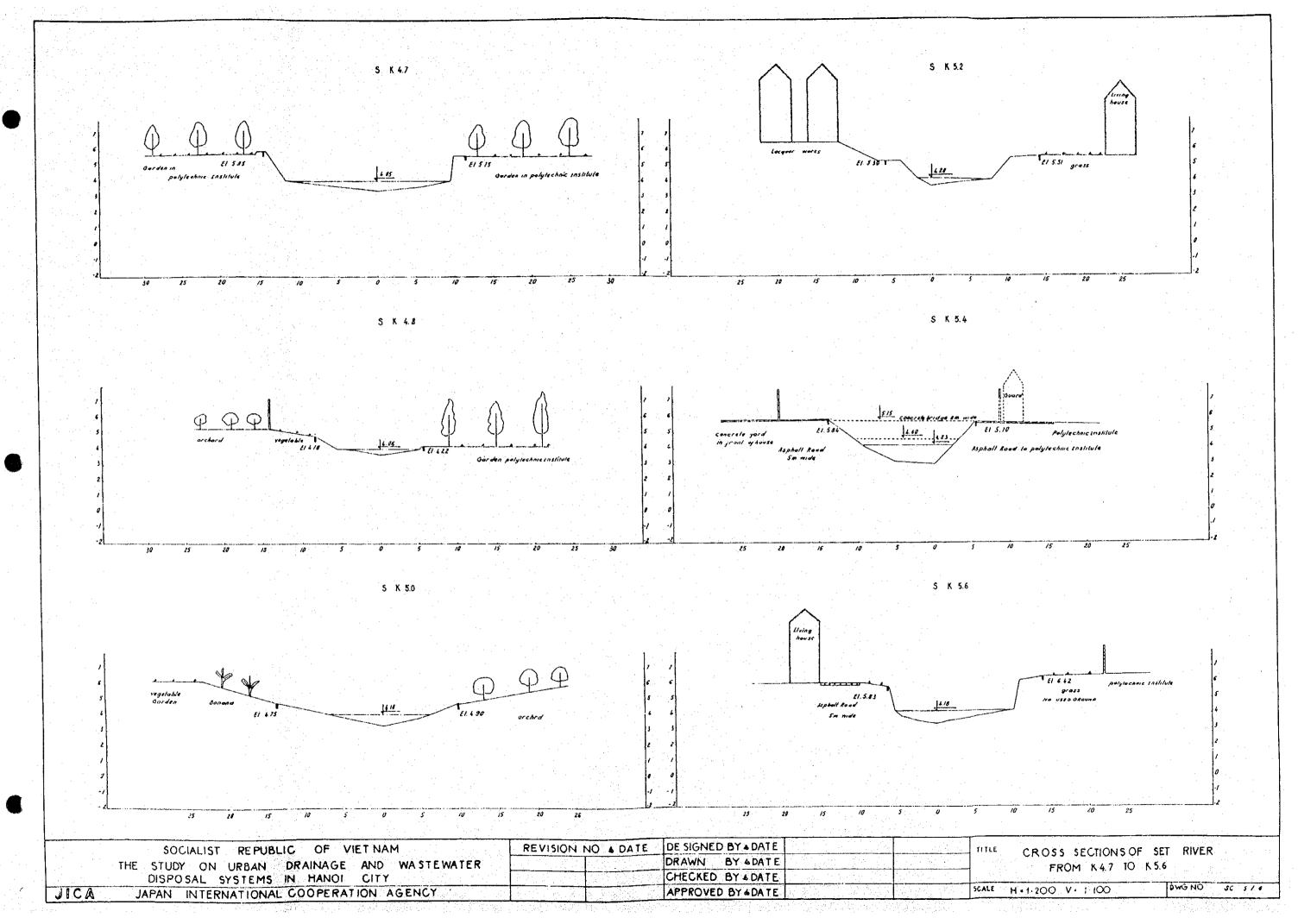
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