

FEASIBILITY STUDY  
ON  
THE NAM NGIEP-I HYDROELECTRIC POWER PROJECT (Phase II)  
IN  
THE LAO PEOPLE'S DEMOCRATIC REPUBLIC

FINAL REPORT  
VOLUME 1 : MAIN REPORT

**DRAWINGS**

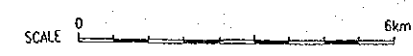
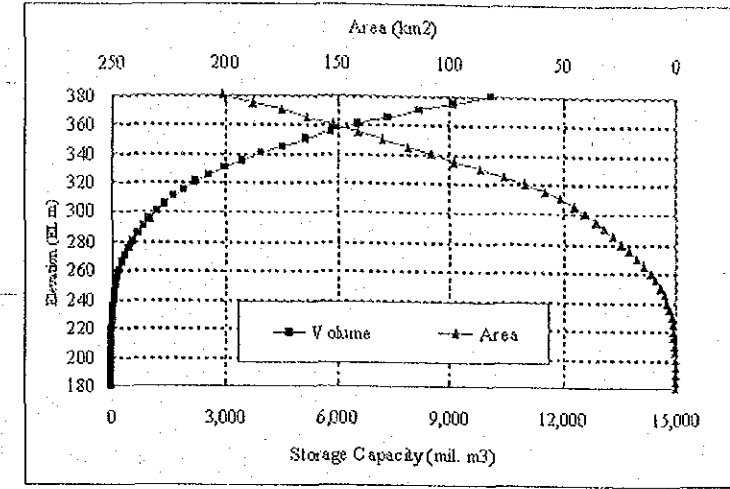
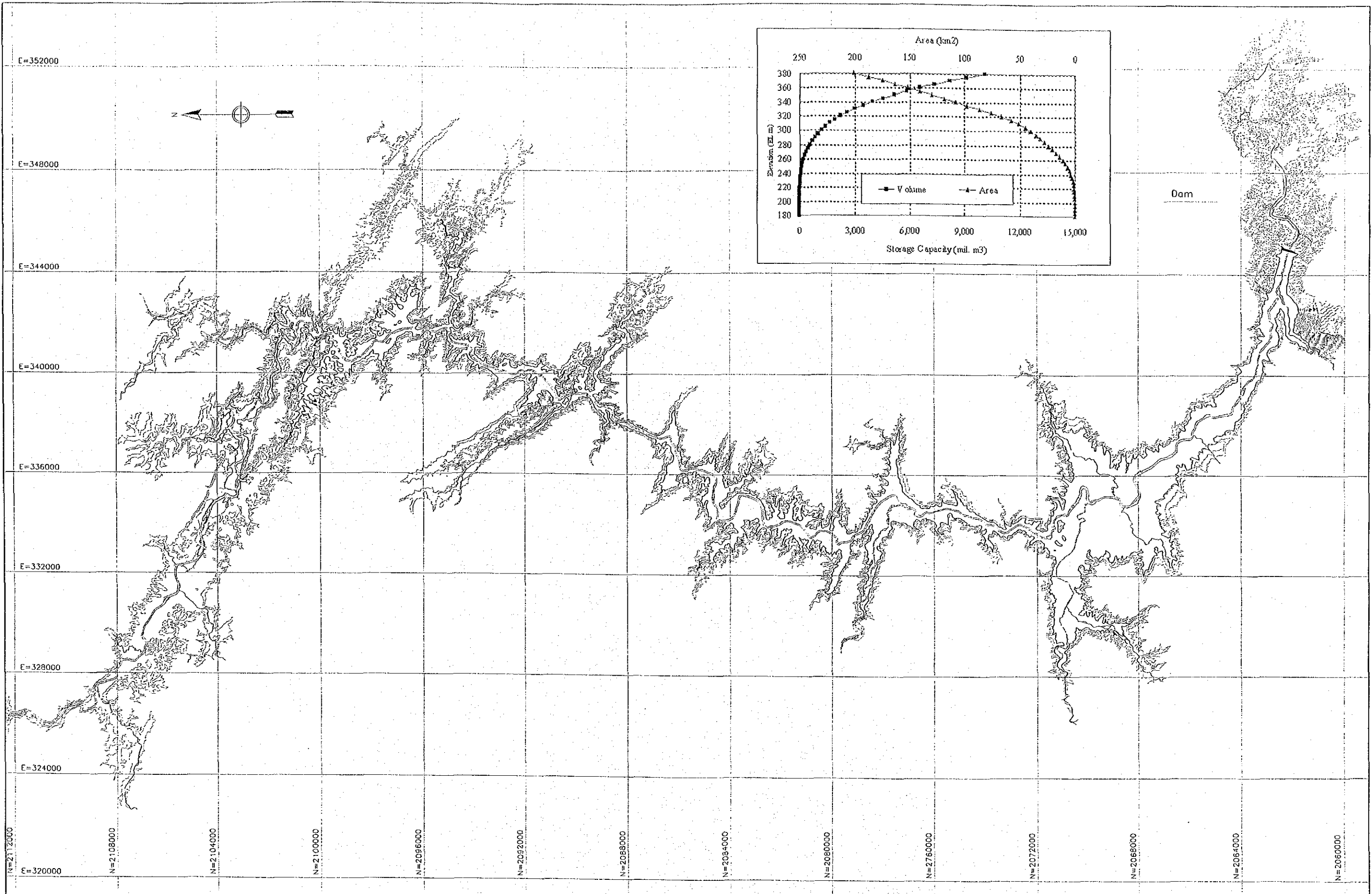
FEASIBILITY STUDY  
ON  
THE NAM NGIEP-I HYDROELECTRIC POWER PROJECT (Phase II)  
IN  
THE LAO PEOPLE'S DEMOCRATIC REPUBLIC

**FINAL REPORT**

**VOLUME 1 : MAIN REPORT**

**LIST OF DRAWINGS**

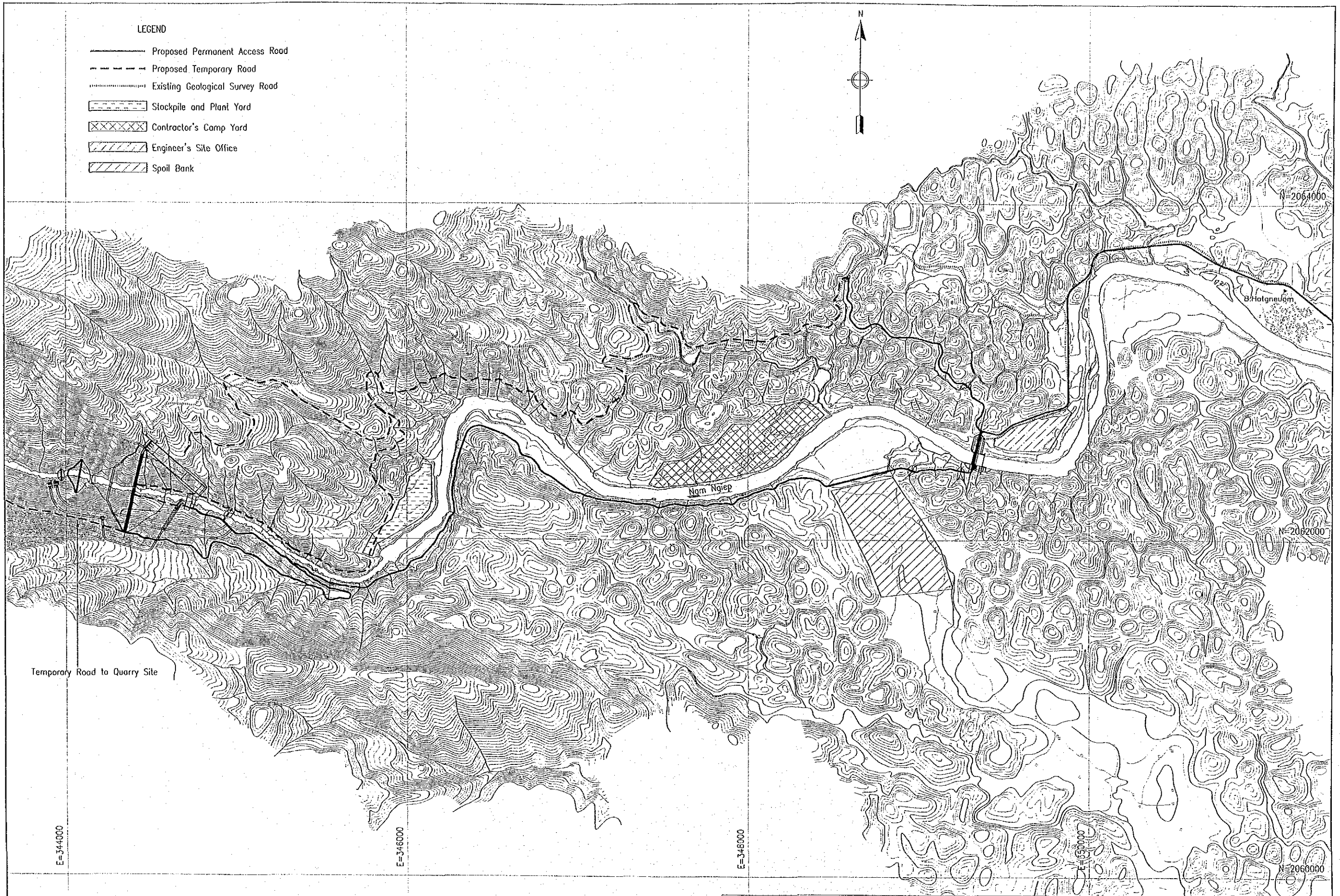
DWG.01	Main Dam, Reservoir Map .....	D - 1
DWG.02	Temporary Facilities, General Plan .....	D - 2
DWG.03	Access and Temporary Roads, Profiles and Typical Sections .....	D - 3
DWG.04	Temporary Road to Quarry Sites, General Plan .....	D - 4
DWG.05	Main Dam, General Plan.....	D - 5
DWG.06	Main Dam, Longitudinal Section and Front Elevation .....	D - 6
DWG.07	Main Dam, Typical Section and Details .....	D - 7
DWG.08	Main Dam, Cross Sections (1) .....	D - 8
DWG.09	Main Dam, Cross Sections (2) .....	D - 9
DWG.10	Main Dam, Cross Sections (3) .....	D - 10
DWG.11	River Diversion Works, Profile of Tunnel No.1 .....	D - 11
DWG.12	River Diversion Works, Inlet Structure and Section of Tunnel No.1 .....	D - 12
DWG.13	River Diversion Works, Profile of Tunnel No.2 .....	D - 13
DWG.14	River Diversion Works, Inlet Structure and Section of Tunnel No.2 .....	D - 14
DWG.15	Spillway, Profile and Weir Details .....	D - 15
DWG.16	Spillway, Sections (1) .....	D - 16
DWG.17	Spillway, Sections (2) .....	D - 17
DWG.18	Power Waterway, Profile and Sections .....	D - 18
DWG.19	Power Waterway, Inlet of Power Intake .....	D - 19
DWG.20	Powerhouse (Main Dam), Plan and Sections .....	D - 20
DWG.21	Re-regulating Facilities, Reservoir Map .....	D - 21
DWG.22	Re-regulating Facilities, River Diversion .....	D - 22
DWG.23	Re-regulating Facilities, Plan and Elevation .....	D - 23
DWG.24	Re-regulating Facilities, Sections .....	D - 24
DWG.25	Transmission Line and Access Route (1) .....	D - 25
DWG.26	Transmission Line and Access Route (2) .....	D - 26
DWG.27	Main Dam, Alternative General Plan for Future Extension .....	D - 27
DWG.28	Dam Site, Geological Profile .....	D - 28
DWG.29	Drilling Logs (1/2 : ND-1, ND-2, ND-3, ND-4, ND-5).....	D - 29
DWG.30	Drilling Logs (2/2 : NQ-1, NQ-2, NR-1, NR-2) .....	D - 30



FEASIBILITY STUDY ON THE NAM NGIEP-I HYDROELECTRIC POWER PROJECT (Phase II) IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC JAPAN INTERNATIONAL COOPERATION AGENCY	DWG. 01 Main Dam Reservoir Map
---	-----------------------------------

LEGEND

- Proposed Permanent Access Road
- - - Proposed Temporary Road
- ⋯ Existing Geological Survey Road
- ▭ Stockpile and Plant Yard
- ▣ Contractor's Camp Yard
- ▨ Engineer's Site Office
- ▧ Spoil Bank



Temporary Road to Quarry Site

E=344000

E=346000

E=348000

N=2064000

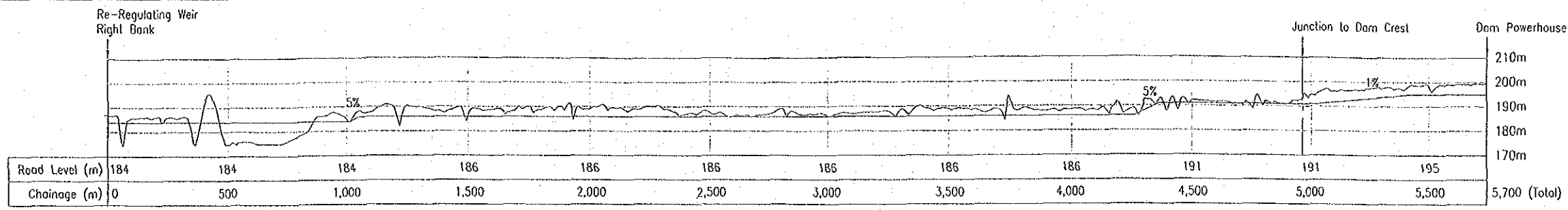
N=2062000

N=2060000

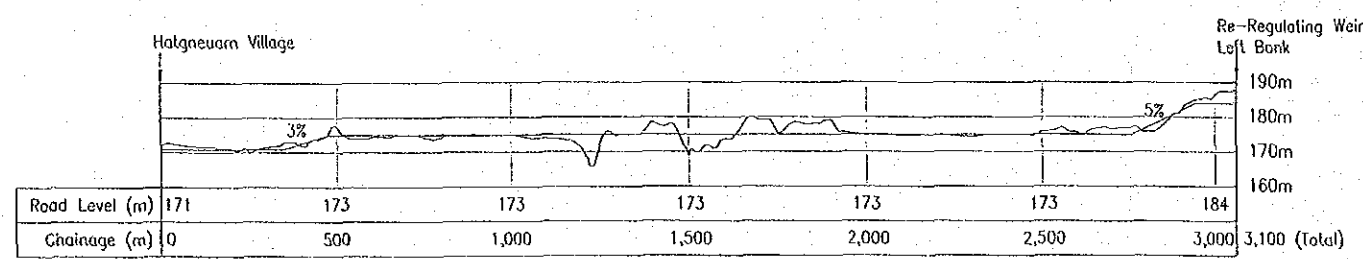
SCALE 0 1km

FEASIBILITY STUDY  
ON THE NAM NGIEP-I HYDROELECTRIC POWER PROJECT (Phase II)  
IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC  
JAPAN INTERNATIONAL COOPERATION AGENCY

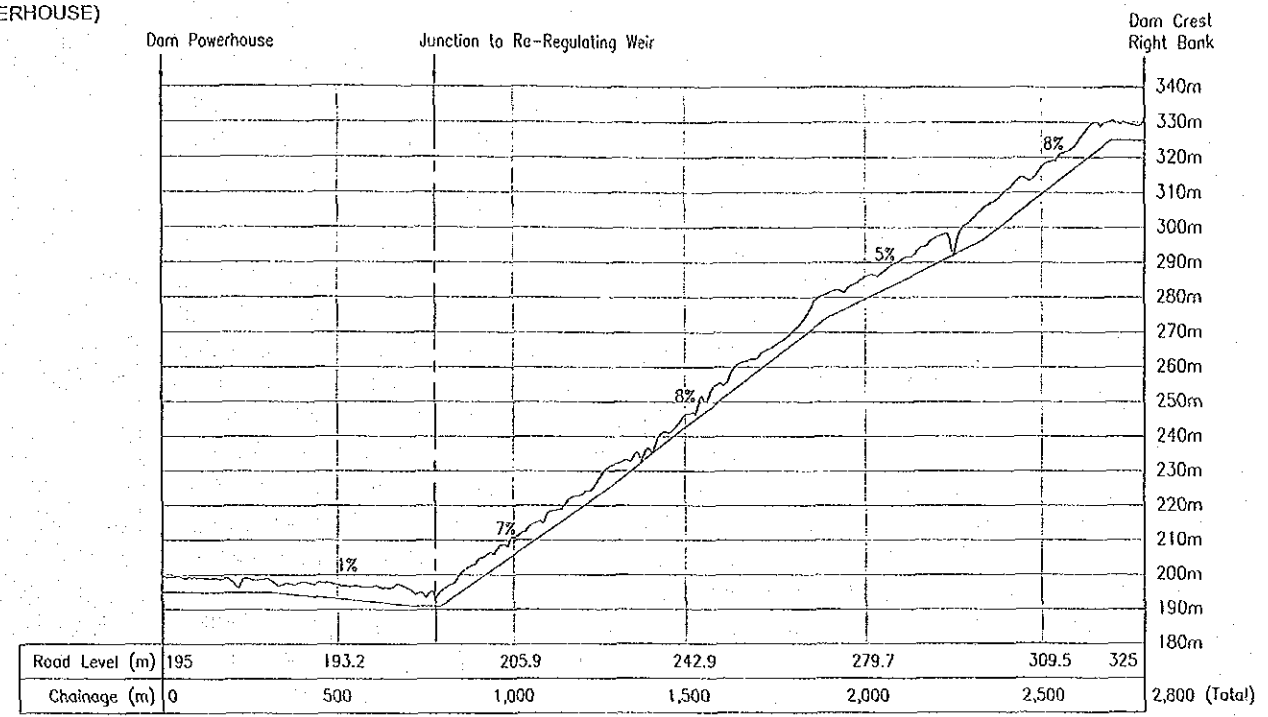
DWG. 02  
Temporary Facilities, General Plan



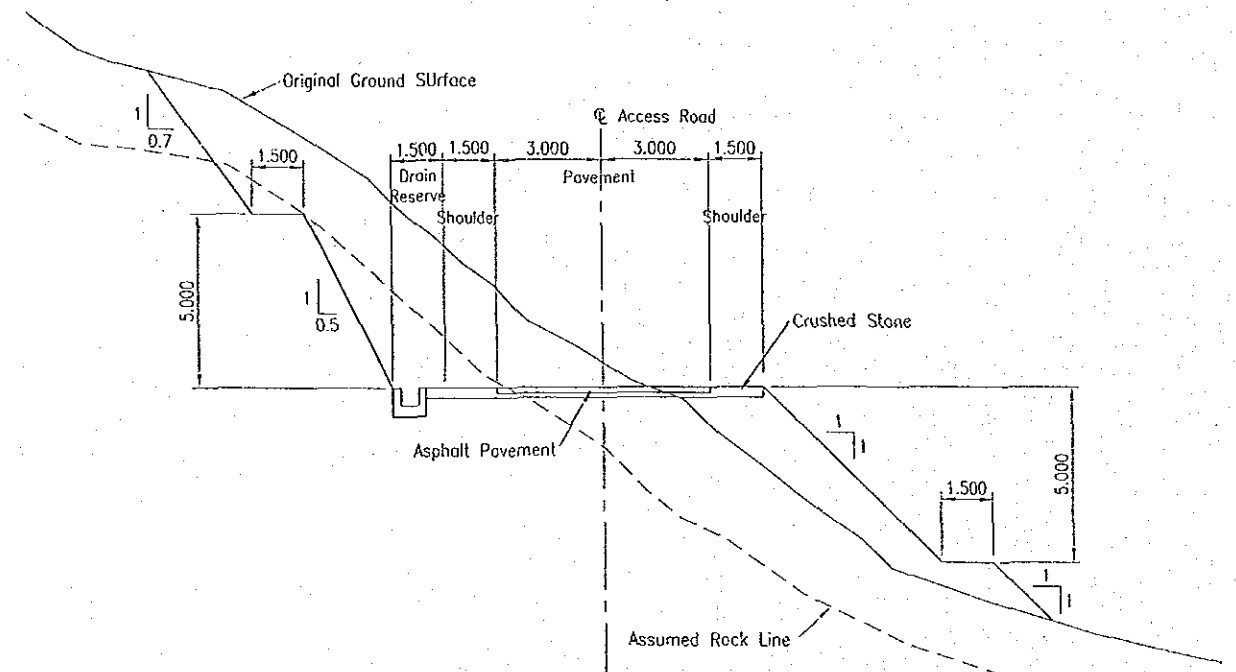
PROFILE (RE-REGULATING WEIR, RIGHT BANK TO DAM POWERHOUSE)  
SCALE A(HORIZONTAL) SCALE B(VERTICAL)



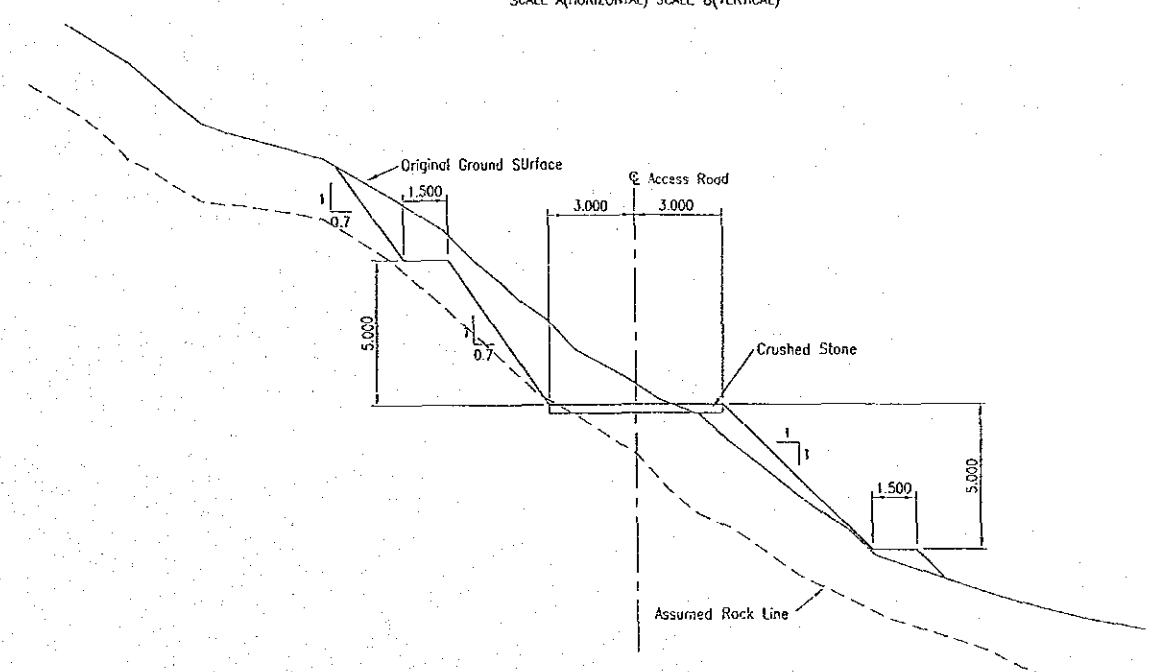
PROFILE (HATGNEUAM VILLAGE TO RE-REGULATING WEIR, LEFT BANK)  
SCALE A(HORIZONTAL) SCALE B(VERTICAL)



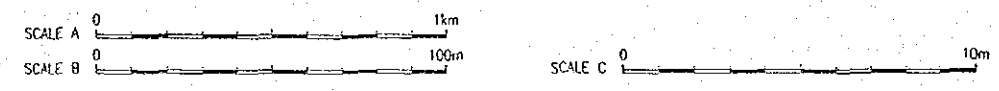
PROFILE (DAM POWERHOUSE TO DAM CREST, RIGHT BANK)  
SCALE A(HORIZONTAL) SCALE B(VERTICAL)



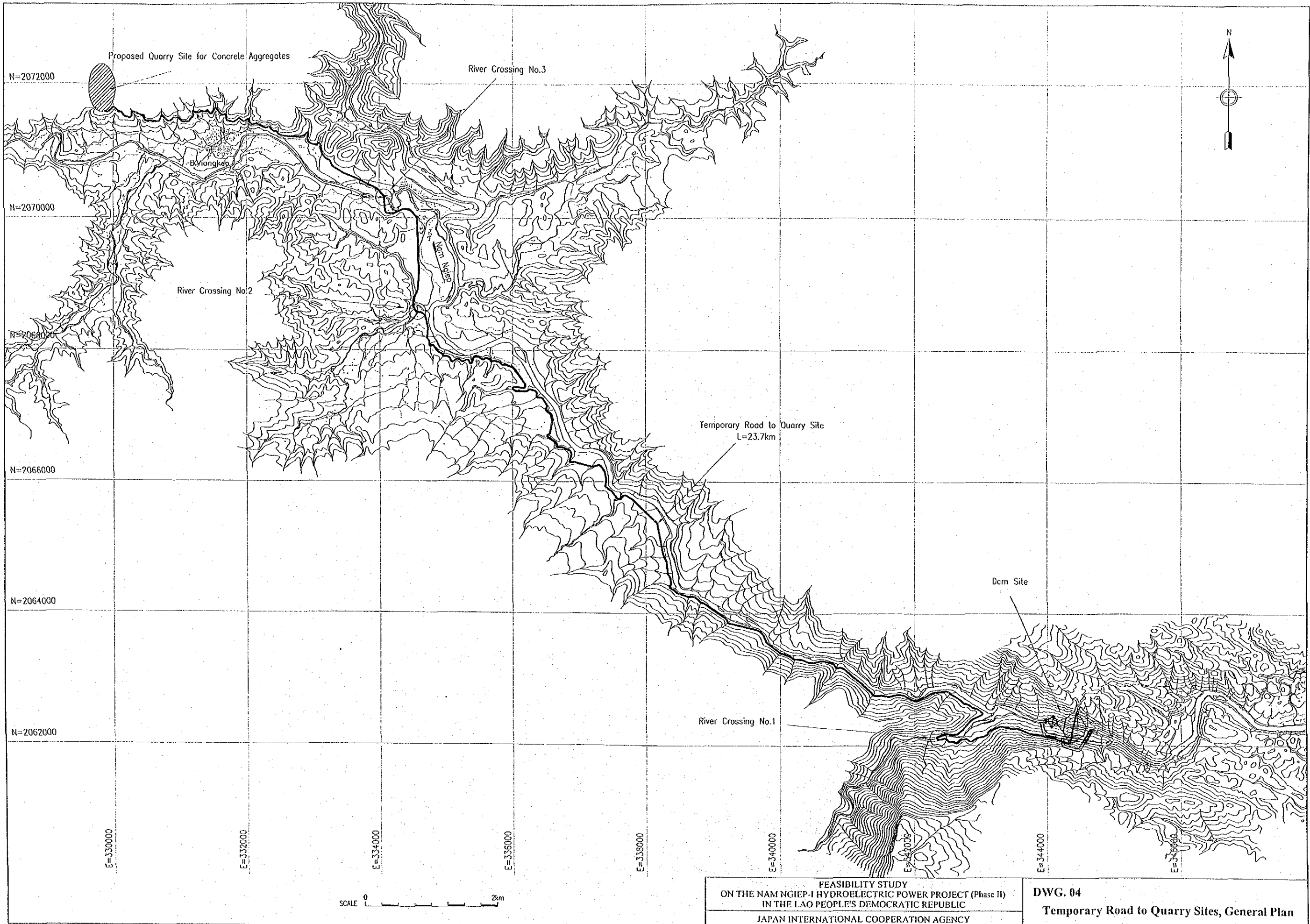
TYPICAL SECTION FOR PERMANENT ACCESS ROAD  
SCALE C



TYPICAL SECTION FOR TEMPORARY ACCESS ROAD  
SCALE C

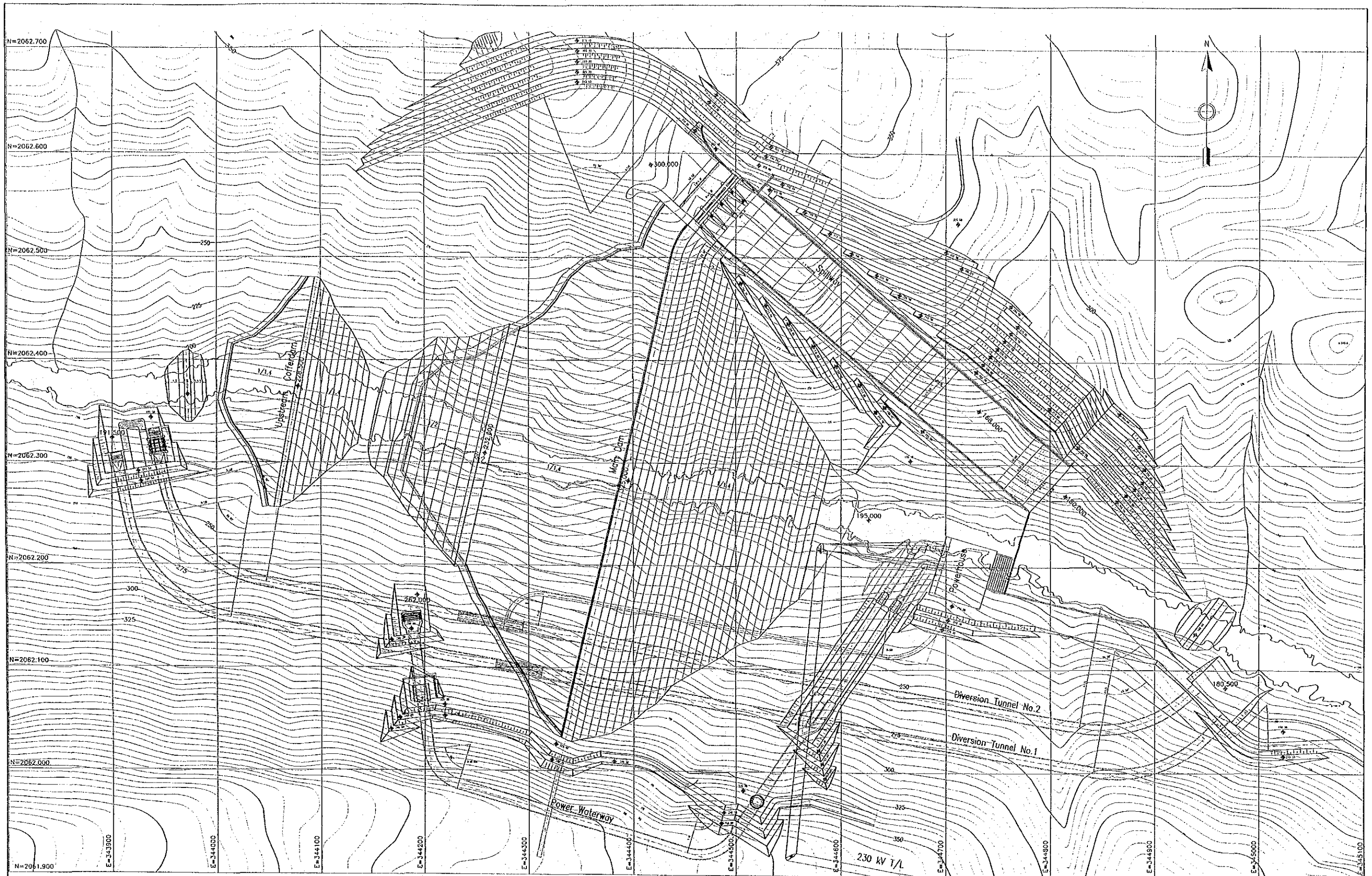


FEASIBILITY STUDY ON THE NAM NGIEP-I HYDROELECTRIC POWER PROJECT (Phase II) IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC JAPAN INTERNATIONAL COOPERATION AGENCY	<b>DWG. 03</b> <b>Access and Temporary Roads,</b> <b>Profiles and Typical Sections</b>
---	--

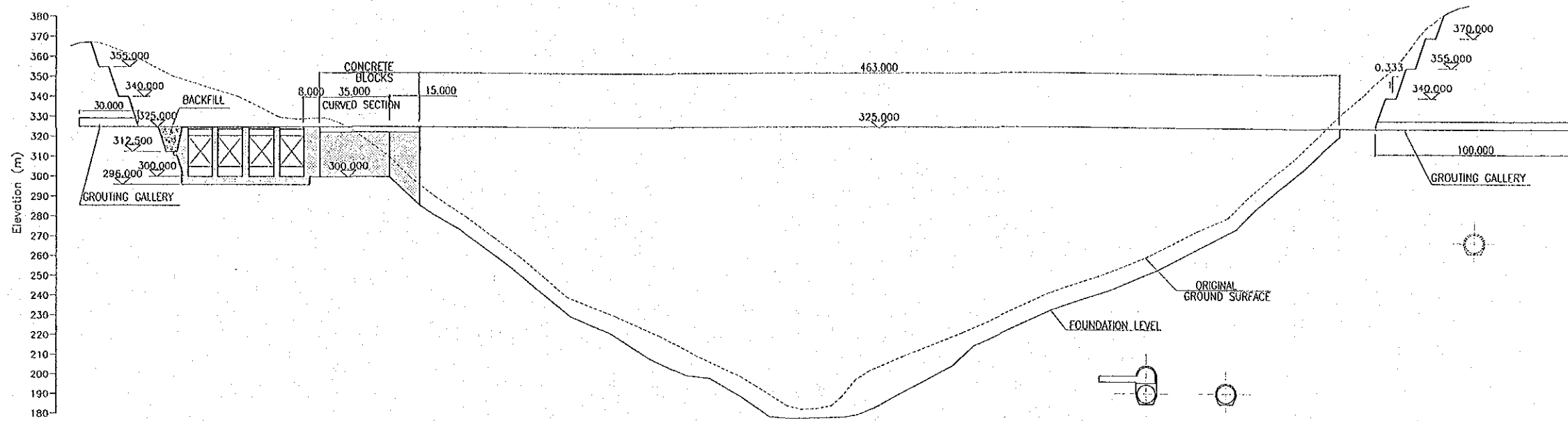


FEASIBILITY STUDY  
 ON THE NAM NGIEP-I HYDROELECTRIC POWER PROJECT (Phase II)  
 IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC  
 JAPAN INTERNATIONAL COOPERATION AGENCY

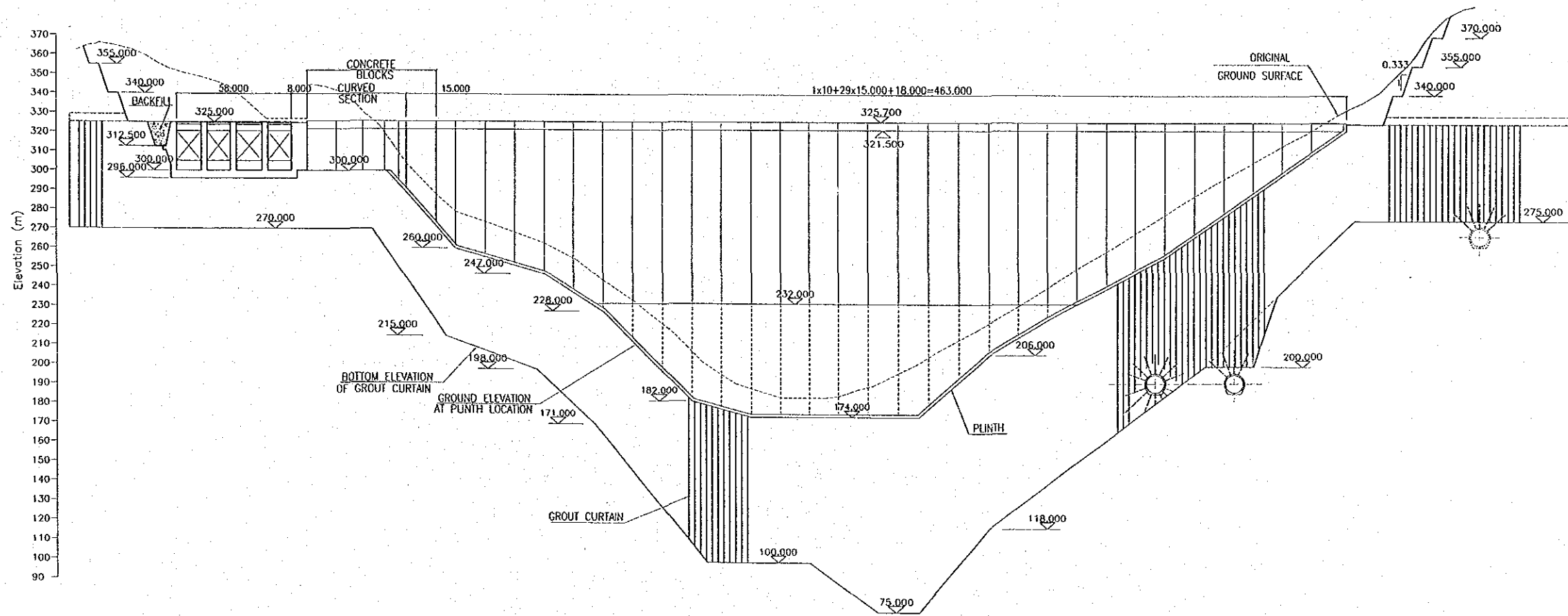
DWG. 04  
 Temporary Road to Quarry Sites, General Plan



FEASIBILITY STUDY ON THE NAM NGIEP-1 HYDROELECTRIC POWER PROJECT (Phase II) IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC JAPAN INTERNATIONAL COOPERATION AGENCY	<b>DWG. 05</b> <b>Main Dam, General Plan</b>
---	---



LONGITUDINAL SECTION ALONG THE REFERENCE LINE



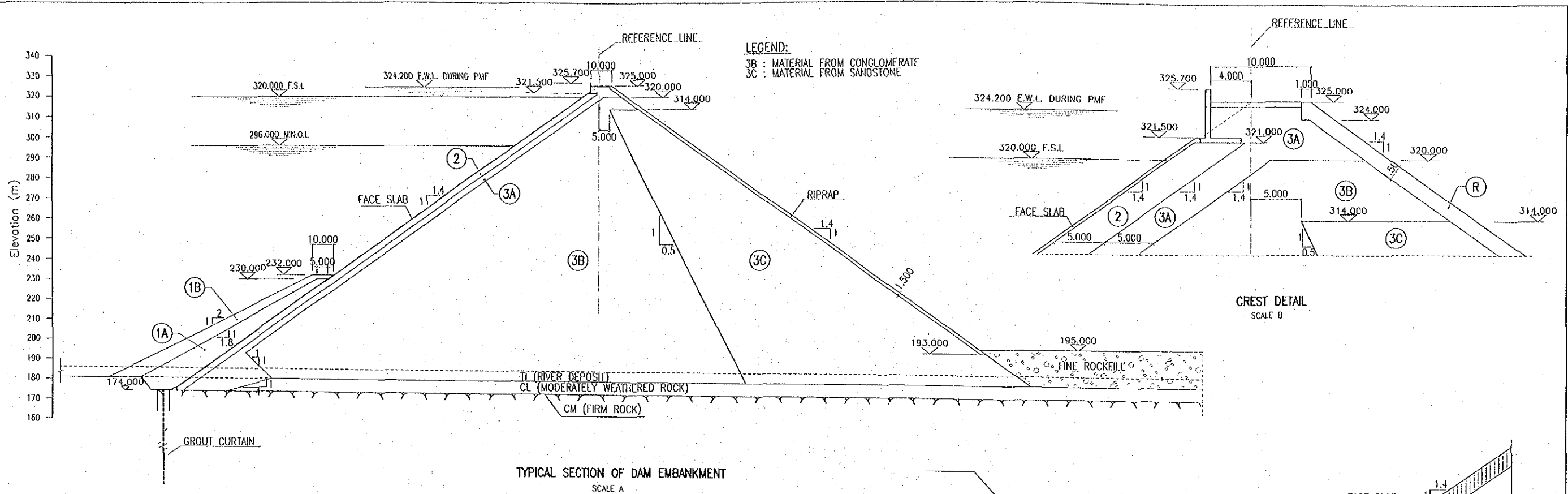
FRONT ELEVATION



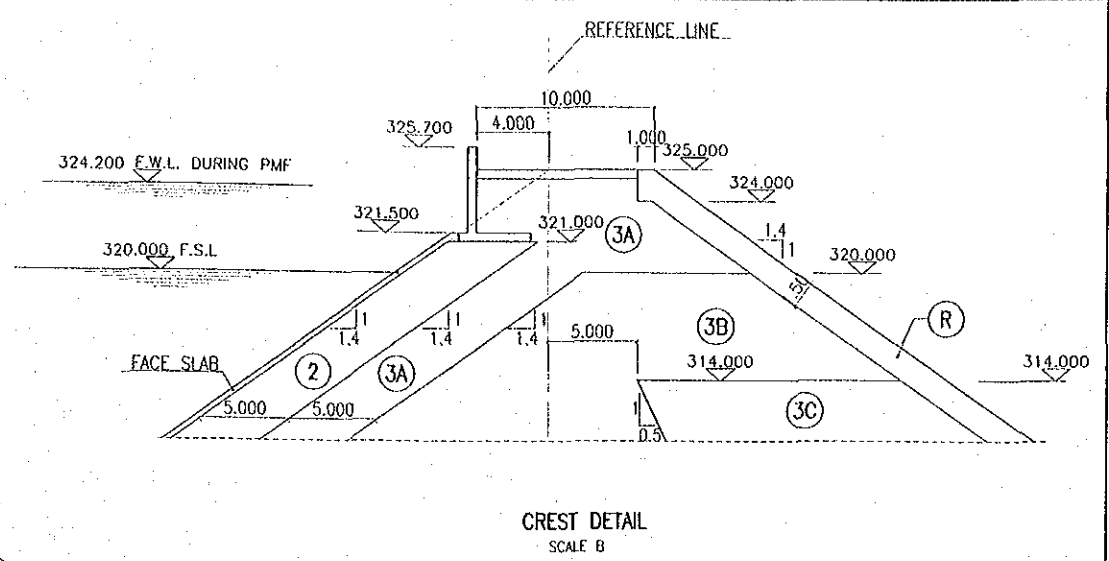
FEASIBILITY STUDY  
ON THE NAM NGIEP-I HYDROELECTRIC POWER PROJECT (Phase II)  
IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC  
JAPAN INTERNATIONAL COOPERATION AGENCY

DWG. 06  
Main Dam, Longitudinal Section  
and Front Elevation

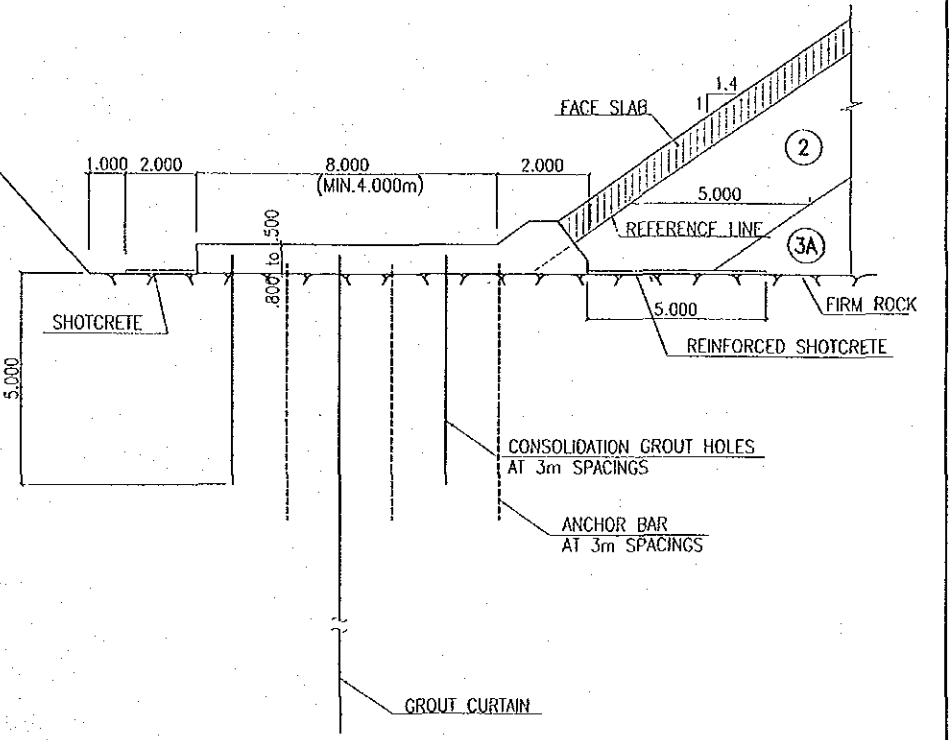




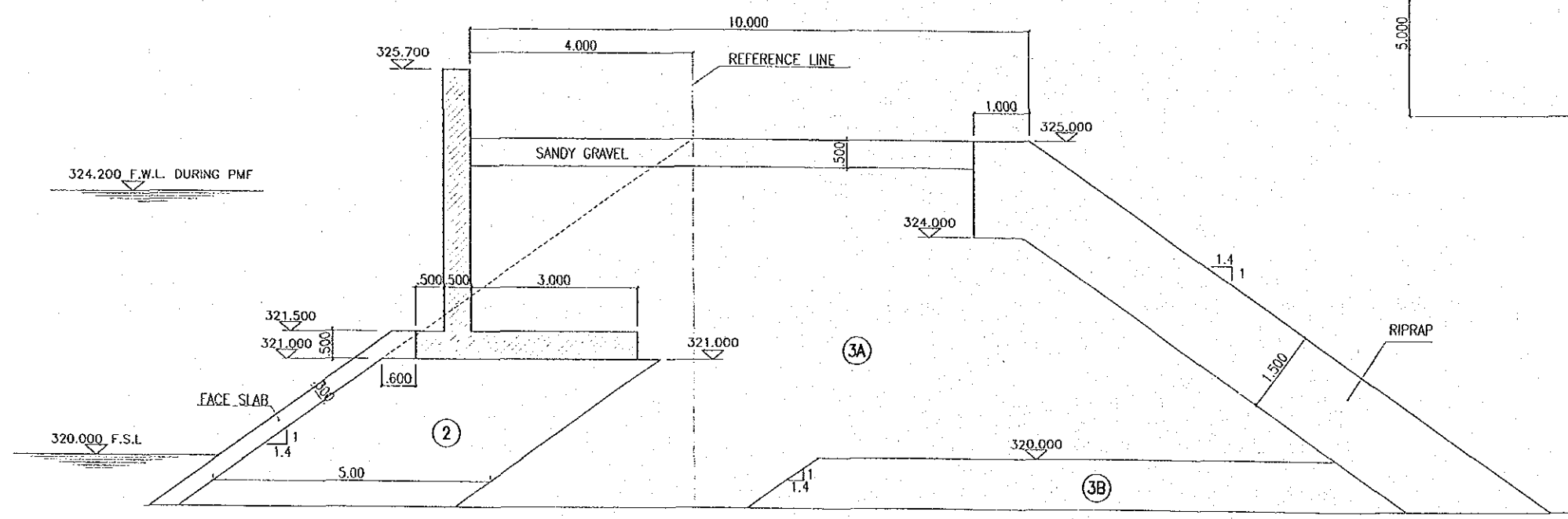
TYPICAL SECTION OF DAM EMBANKMENT  
SCALE A



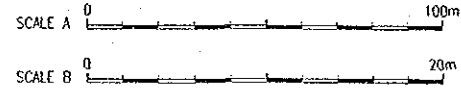
CREST DETAIL  
SCALE B



DETAIL OF PLINTH, LEFT ABUTMENT  
SCALE C

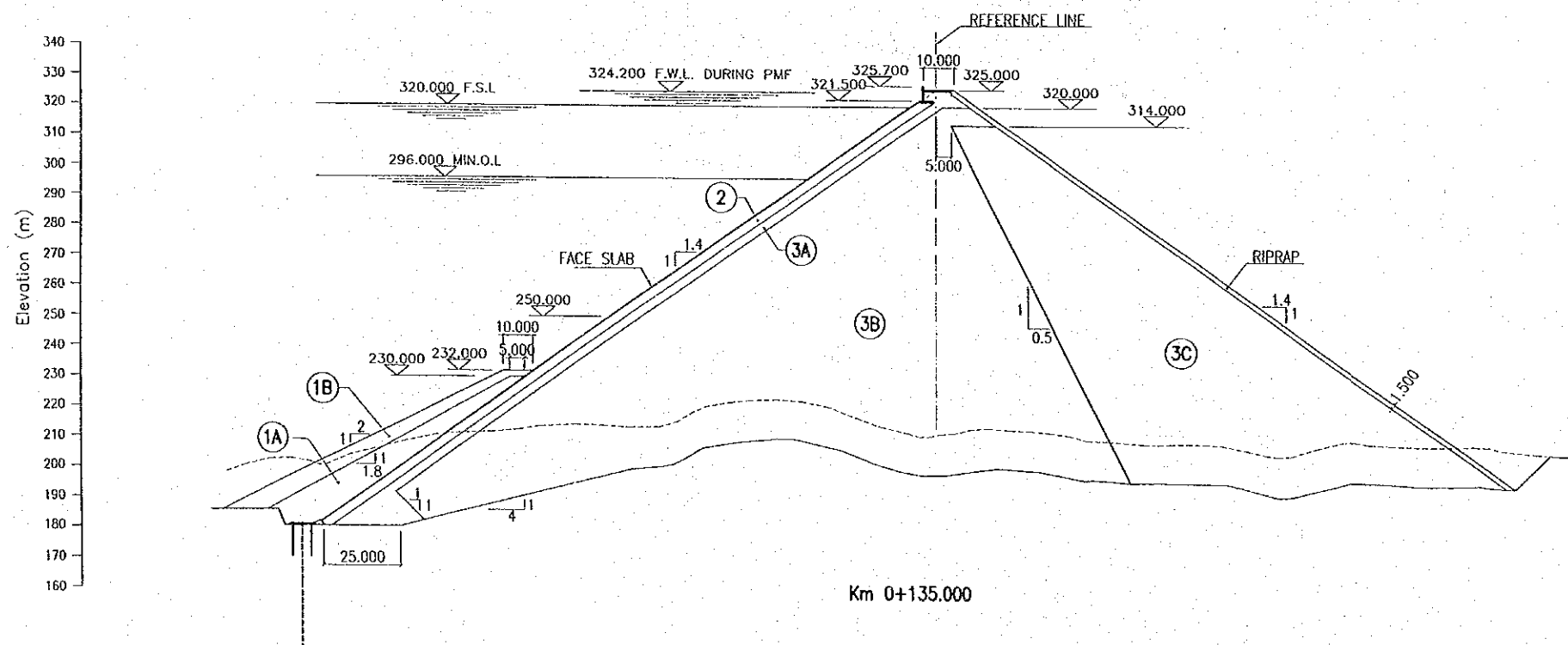
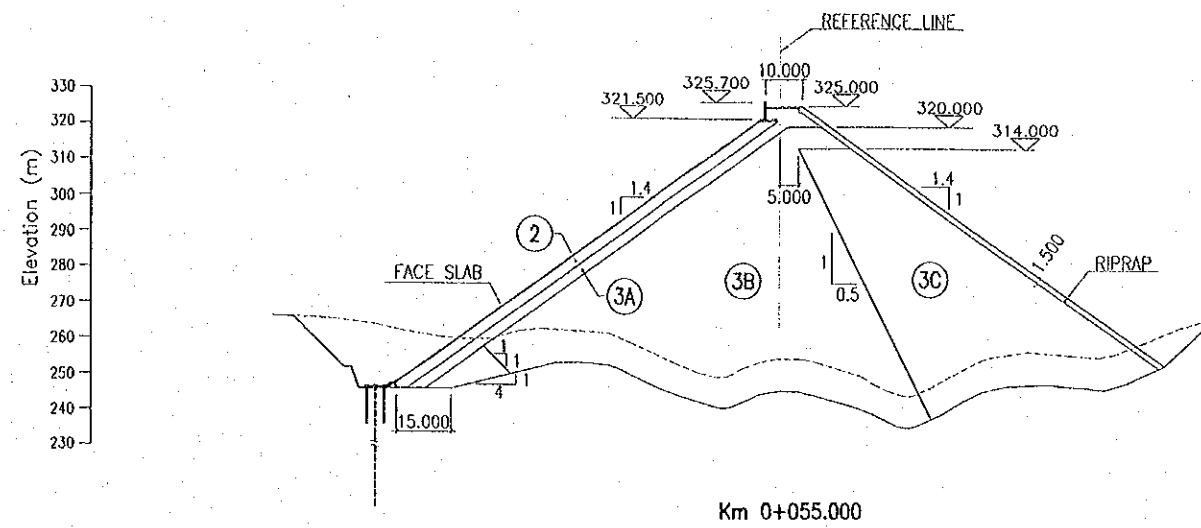
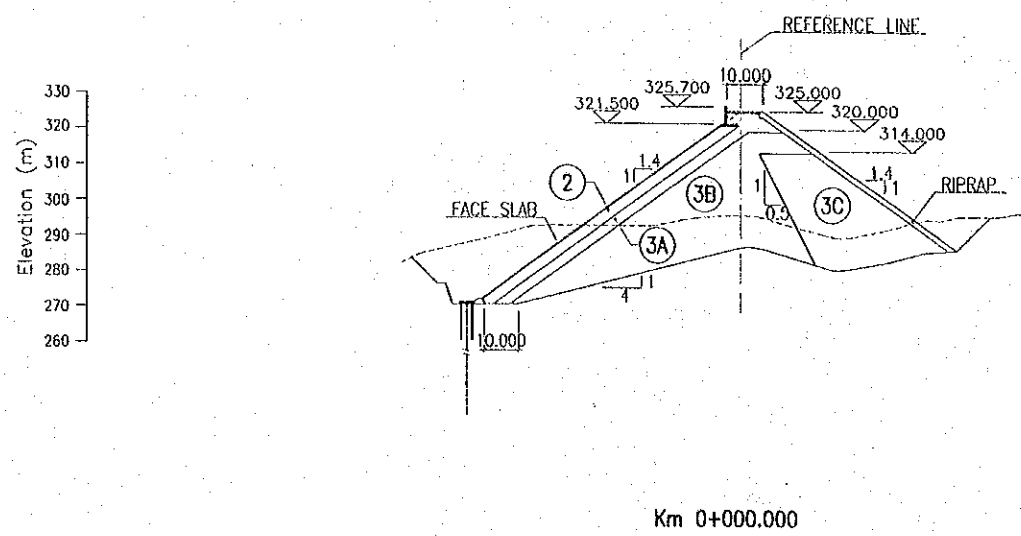


CREST DETAIL  
SCALE D



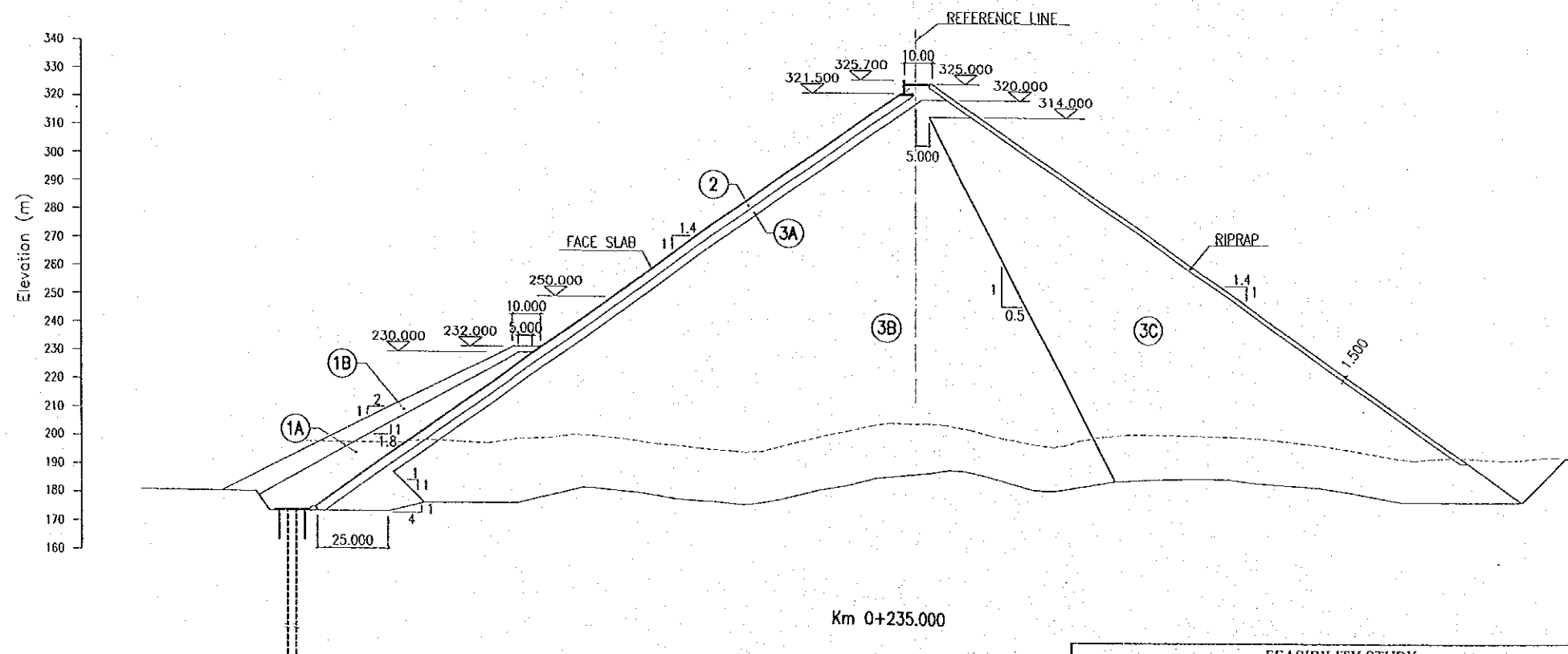
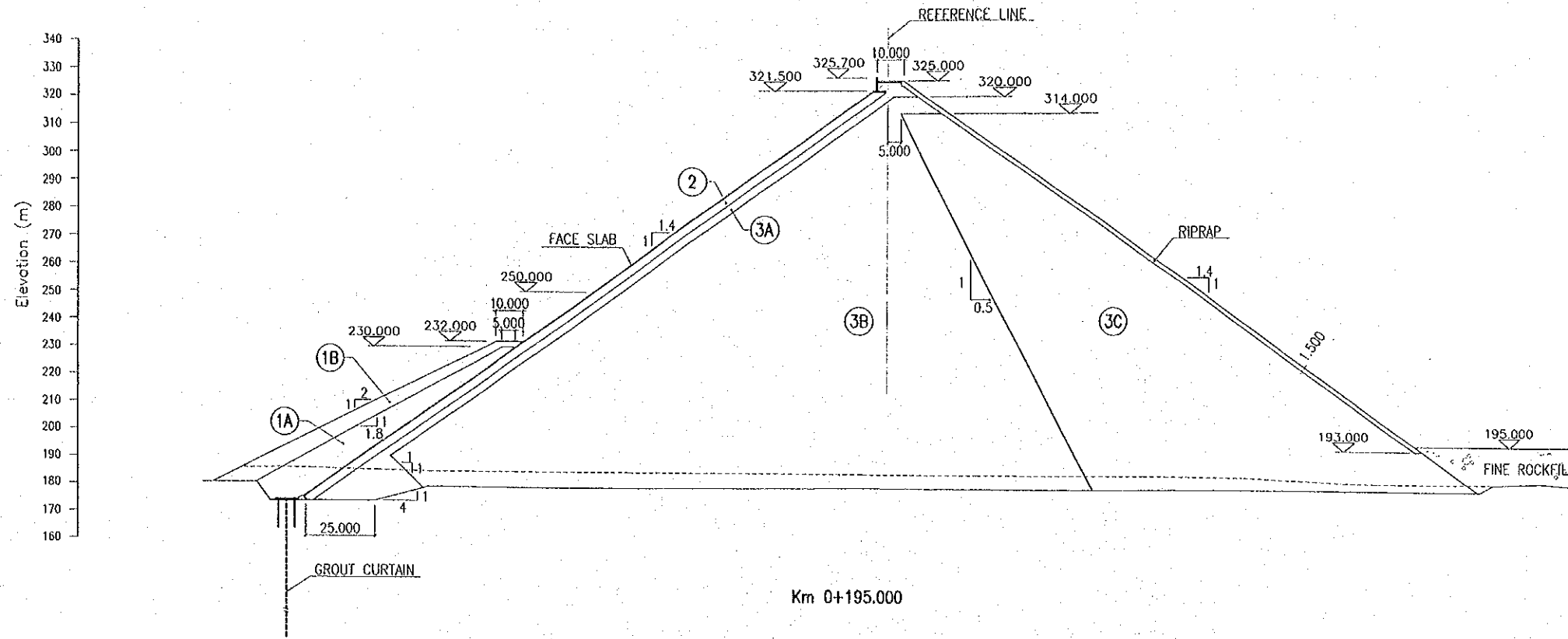
FEASIBILITY STUDY  
ON THE NAM NGIEP-1 HYDROELECTRIC POWER PROJECT (Phase II)  
IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC  
JAPAN INTERNATIONAL COOPERATION AGENCY

DWG. 07  
Main Dam, Typical Section and Details



SCALE 0 100m

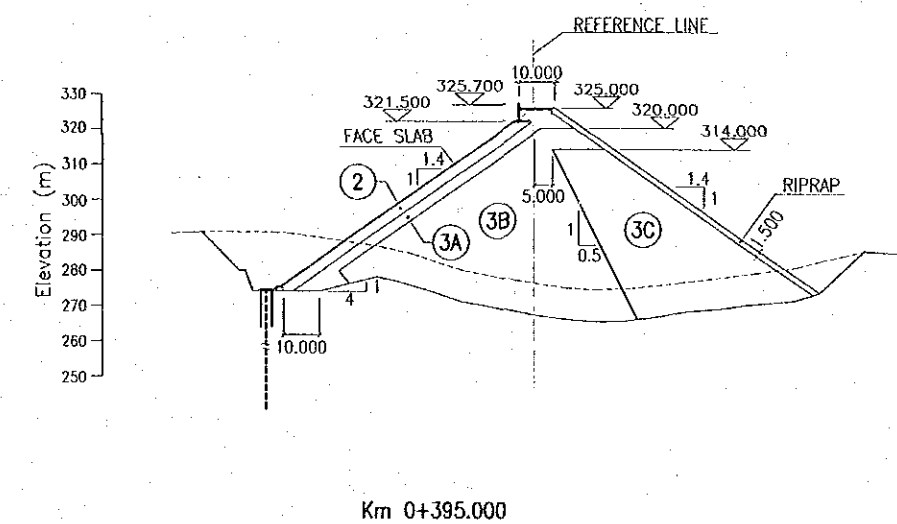
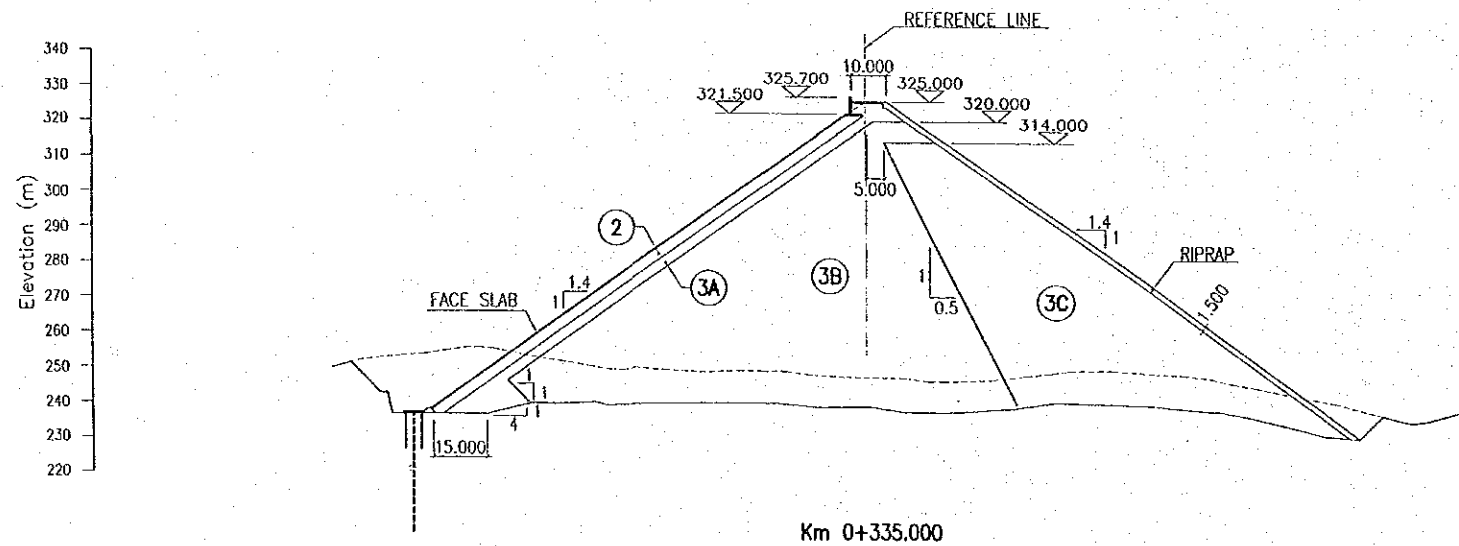
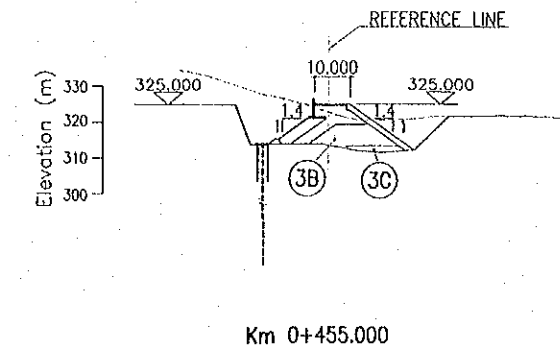
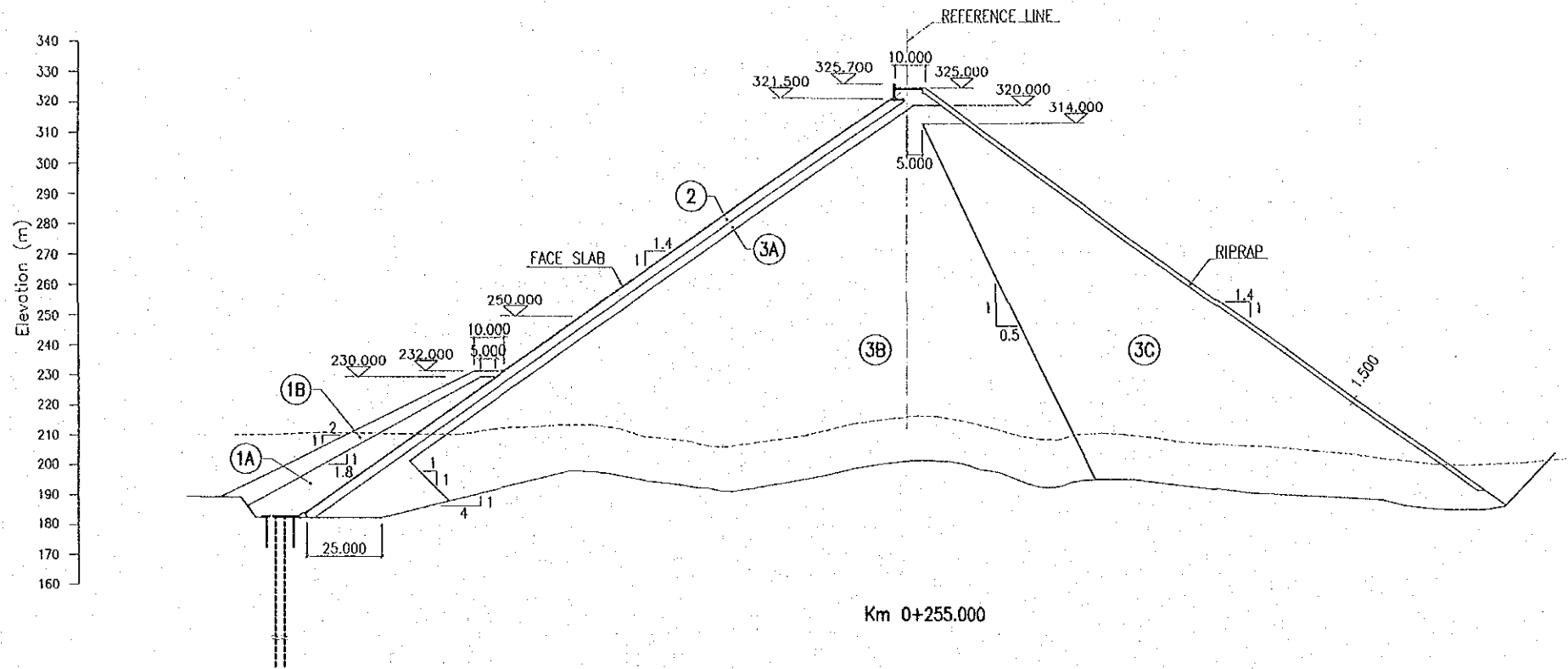
FEASIBILITY STUDY ON THE NAM NGIEP-1 HYDROELECTRIC POWER PROJECT (Phase II) IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC JAPAN INTERNATIONAL COOPERATION AGENCY	<b>DWG. 08</b> <b>Main Dam, Cross Sections (1)</b>
---	---



SCALE 0 100m

FEASIBILITY STUDY  
 ON THE NAM NGIEP-I HYDROELECTRIC POWER PROJECT (Phase II)  
 IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC  
 JAPAN INTERNATIONAL COOPERATION AGENCY

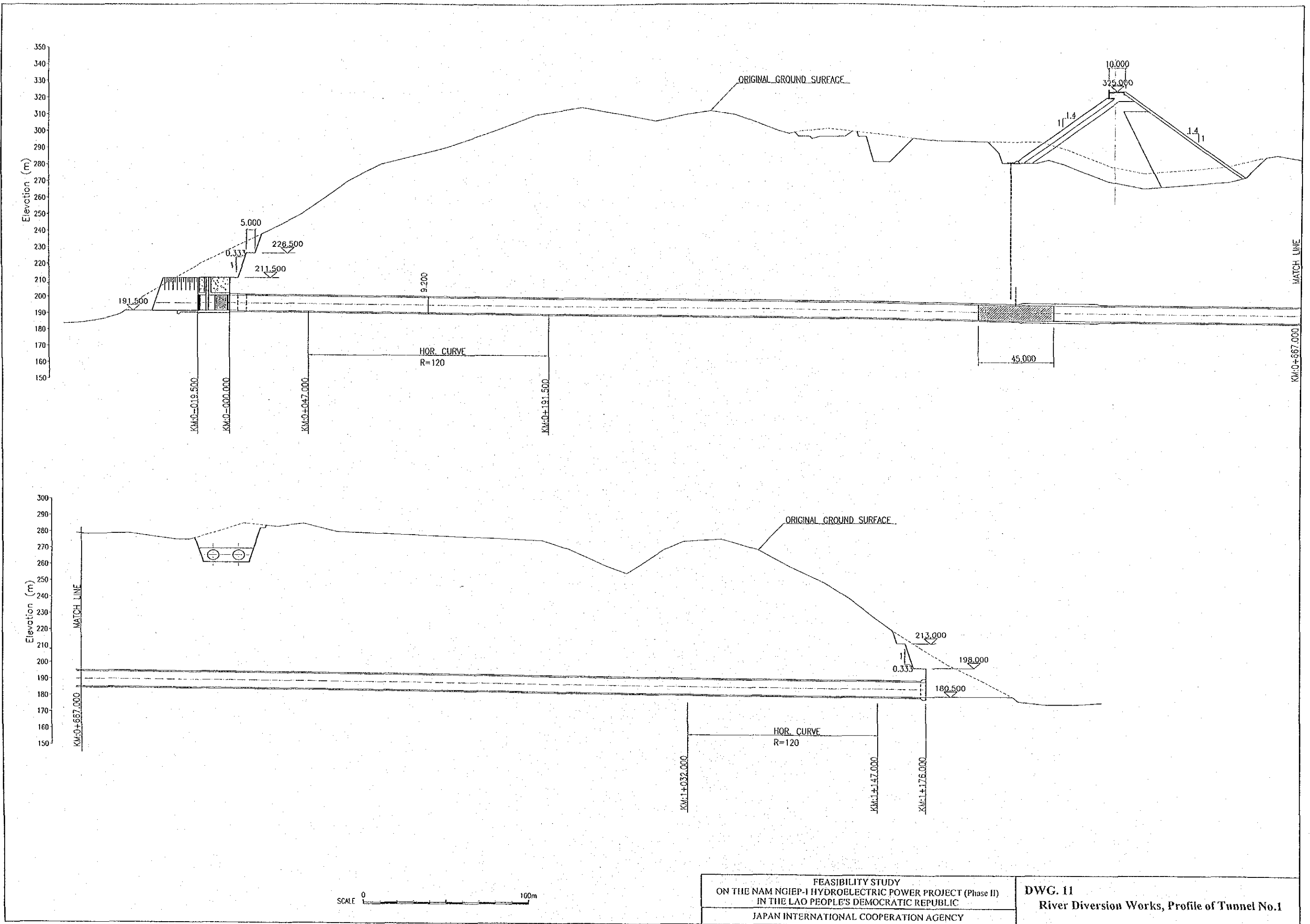
DWG. 09  
 Main Dam Cross Sections (2)

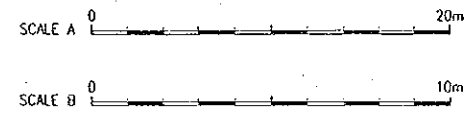
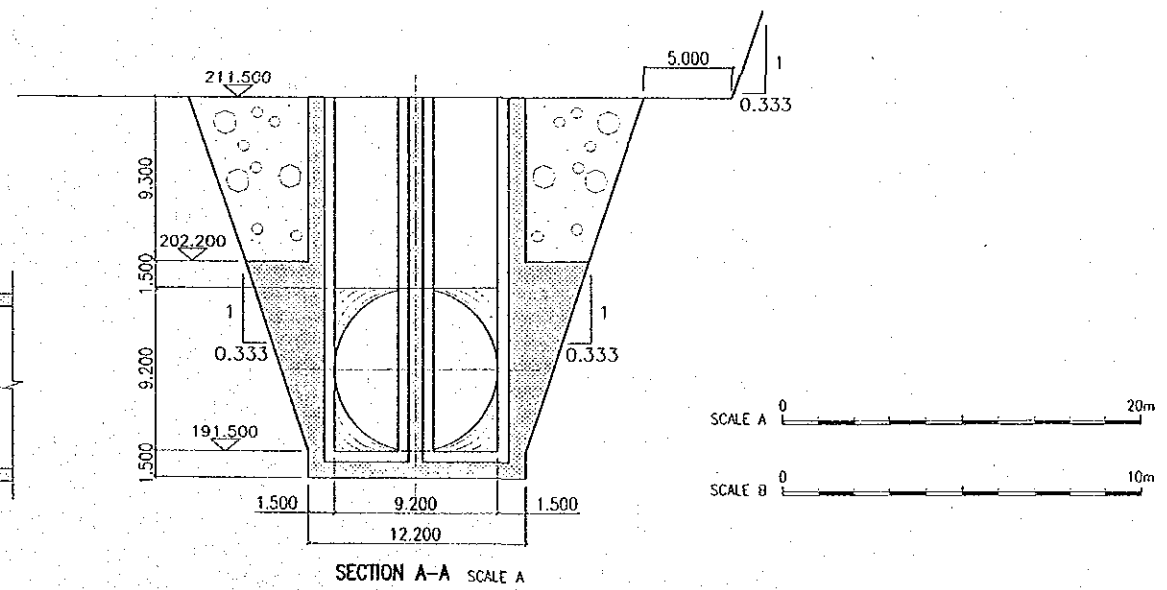
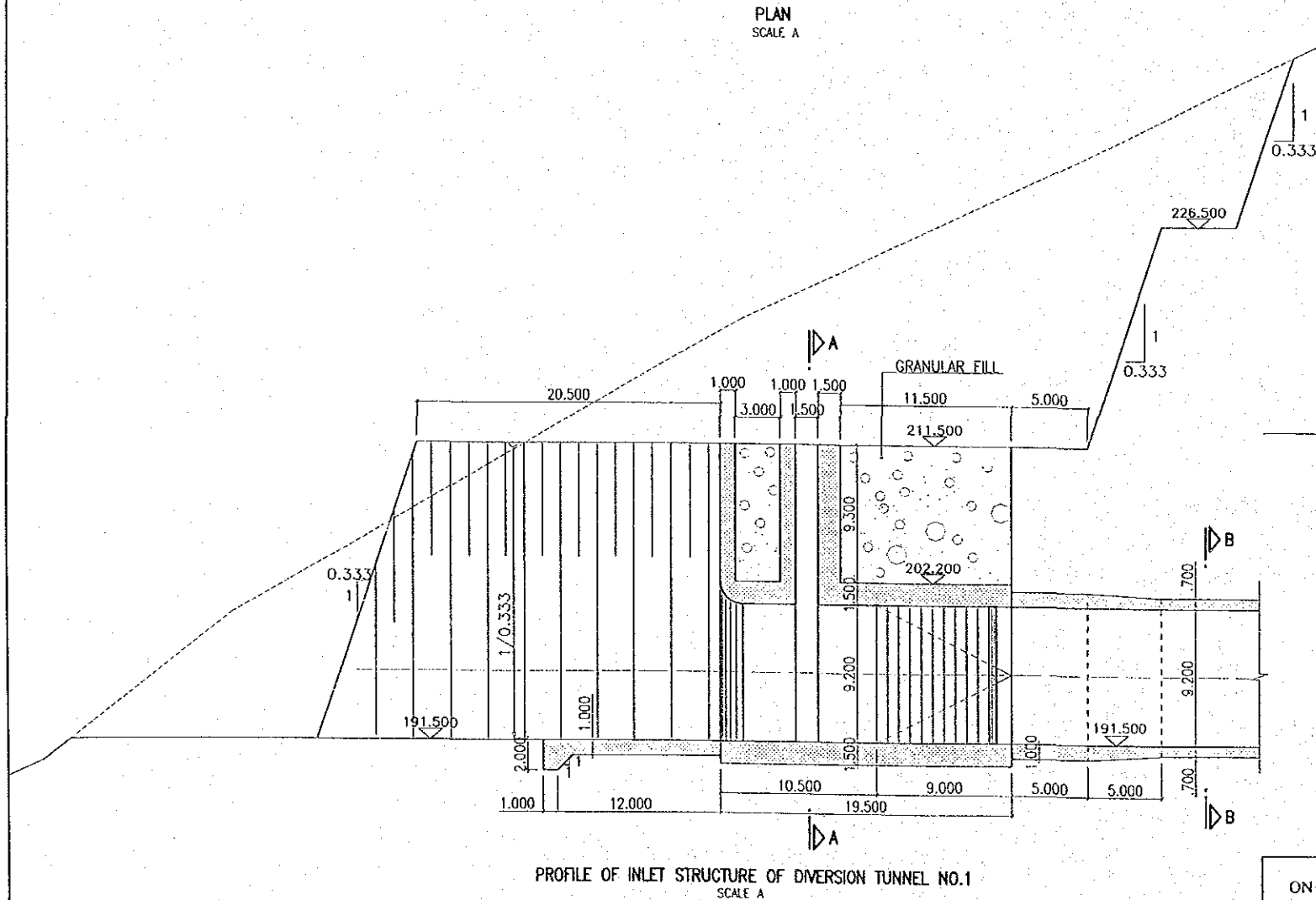
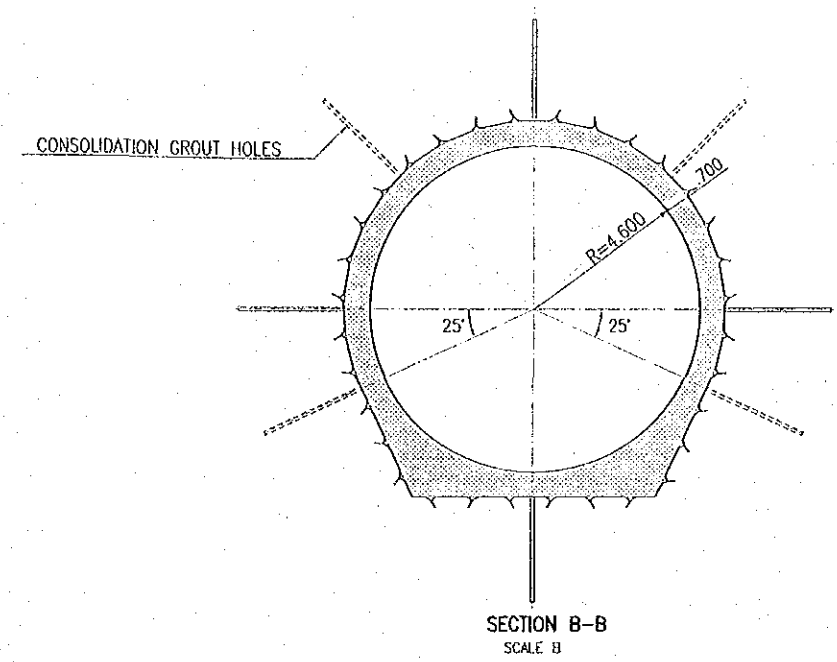
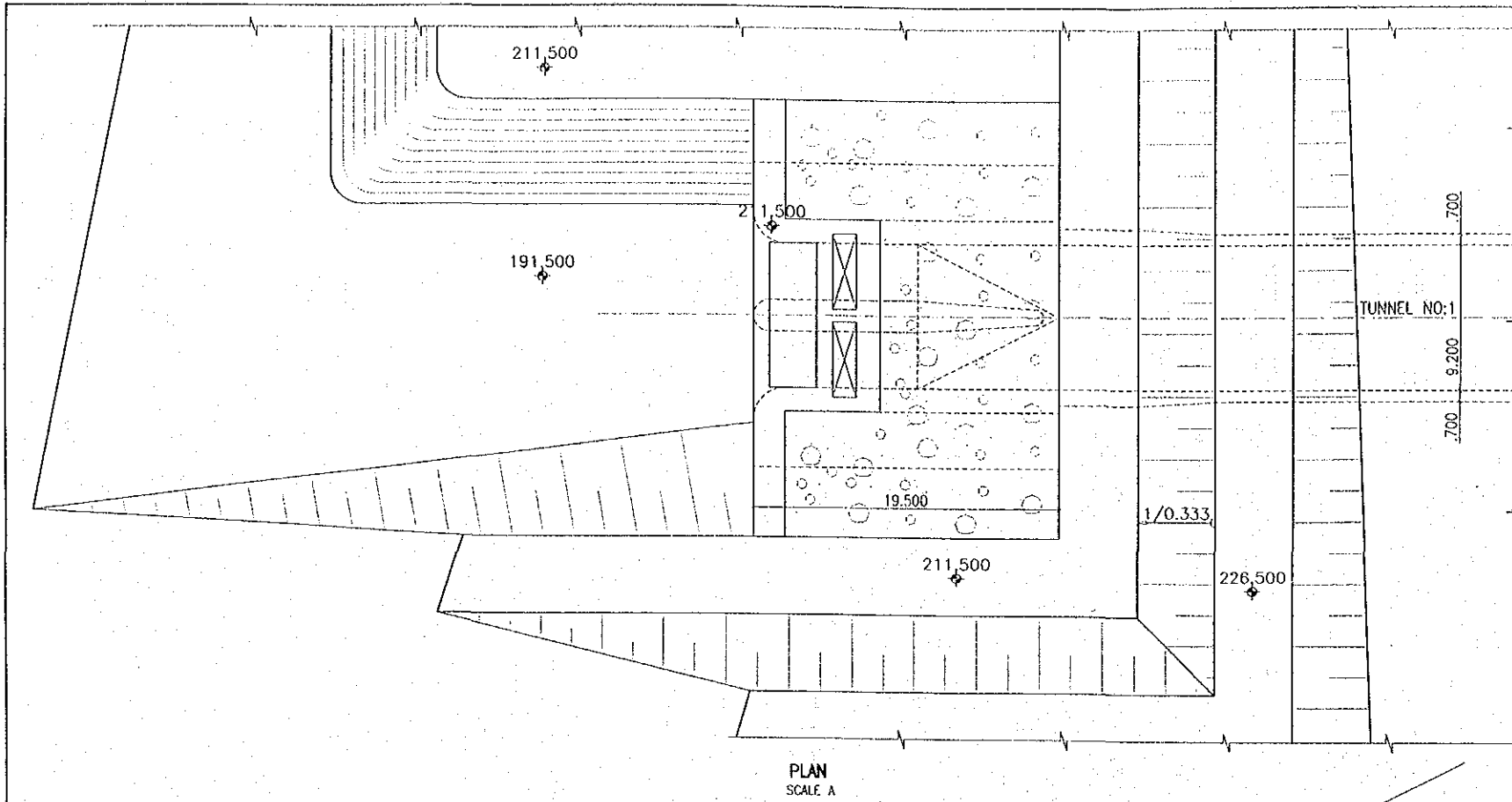


SCALE 0 100m

FEASIBILITY STUDY  
ON THE NAM NGIEP-I HYDROELECTRIC POWER PROJECT (Phase II)  
IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC  
JAPAN INTERNATIONAL COOPERATION AGENCY

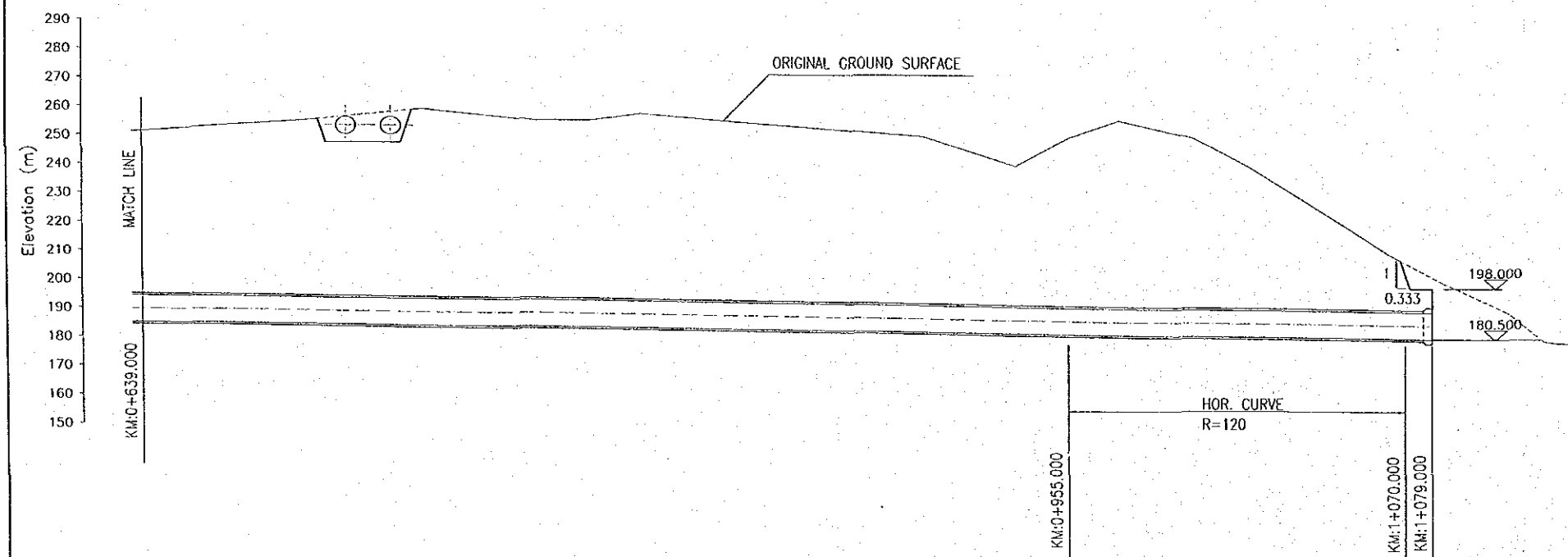
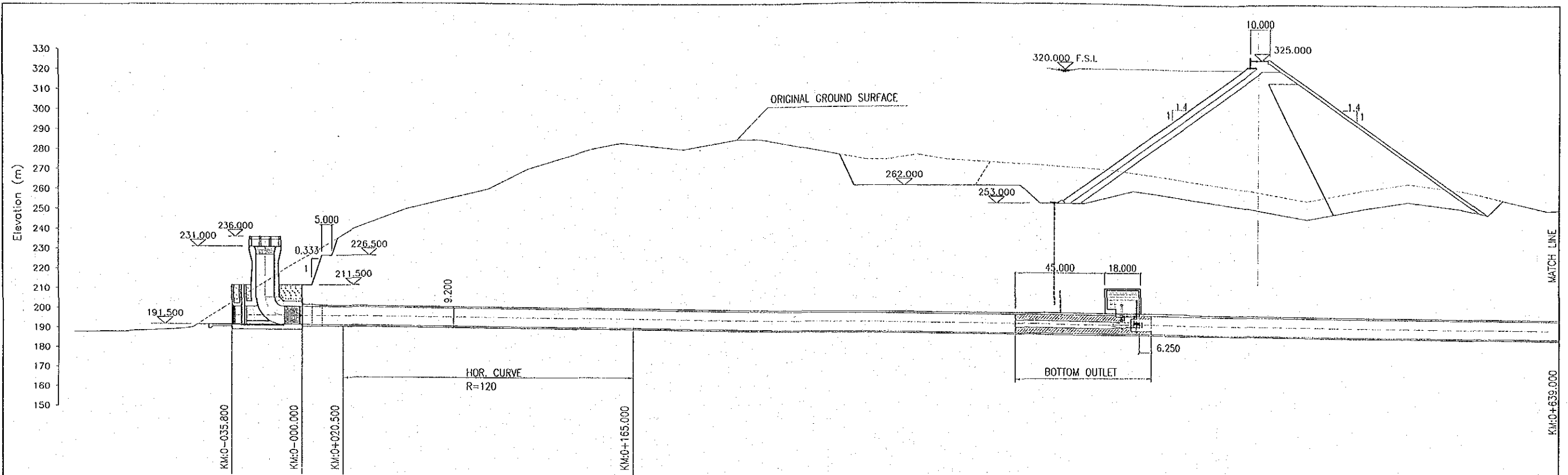
DWG. 10  
Main Dam, Cross Sections (3)





FEASIBILITY STUDY  
 ON THE NAM NGIEP-I HYDROELECTRIC POWER PROJECT (Phase II)  
 IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC  
 JAPAN INTERNATIONAL COOPERATION AGENCY

**DWG. 12**  
 River Diversion Works, Inlet Structure  
 and Section of Tunnel No.1



FEASIBILITY STUDY  
 ON THE NAM NGIEP-1 HYDROELECTRIC POWER PROJECT (Phase I)  
 IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC  
 JAPAN INTERNATIONAL COOPERATION AGENCY

DWG. 13  
 River Diversion Works, Profile of Tunnel No.2