

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

**MINISTRY OF INFRASTRUCTURE
AND DEPARTMENT OF ROADS
THE GOVERNMENT OF MONGOLIA**

**THE FEASIBILITY STUDY
ON
CONSTRUCTION OF EASTERN ARTERIAL ROAD
IN
MONGOLIA**

FINAL REPORT

Vol. I: MAIN REPORT

JUNE 2002

**PACIFIC CONSULTANTS INTERNATIONAL
JAPAN OVERSEAS CONSULTANTS**

The following foreign exchange rate was applied in the study:

$$\text{US\$1.0} = \text{JP¥133} = \text{Tg1,100} \quad (\text{as of January 2002})$$

PREFACE

In response to the request from the Government of Mongolia, the Government of Japan decided to conduct the feasibility study on construction of eastern arterial road in Mongolia and entrusted the study to Japan International Cooperation Agency (JICA).

JICA dispatched a study team headed by Mr. Kenji Maruoka of Pacific Consultants International and consisting of Pacific Consultants International and Japan Overseas Consultants Co., Ltd. to Mongolia, four times between March 2001 and March 2002. In addition, JICA set up an Advisory Committee headed by Mr. Kenichiro OI of Metropolitan Expressway Public Corporation between March 2001 and March 2002, which examined the Study from specialist and technical point of view.

The team held discussions with the officials concerned of the Government of Mongolia and conducted field surveys at the study area. Upon returning to Japan, the team conducted further studies and prepared this final report.

I hope that this report will contribute to the promotion of this project and to the enhancement of friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of Mongolia for their close cooperation extended to the team.

June 2002



Takao Kawakami
President
Japan International Cooperation Agency

June 2002

Mr. Takao Kawakami
President
Japan International Cooperation Agency

Letter of Transmittal

Dear Sir,

We are pleased to submit herewith the Final Report of "The Feasibility Study on Construction of Eastern Arterial Road in Mongolia".

The report contains the results of the study, which has been carried out by Pacific Consultants International in association with Japan Overseas Consultants between March 2001 and June 2002. The report consists of four volumes, Summary, Main Report, Appendix, and Drawings.

The Summary briefly illustrates the findings in the study. The Main Report consists of 17 chapters and presents traffic demand forecast, engineering designs, road maintenance system, environmental impact assessments, project implementation plan, economic and financial analysis and conclusion and recommendations for the project implementation. It recommends that the institutional arrangements for project implementation should be organized as soon as possible.

We wish to express our greatest appreciation to officials of the Ministry of Infrastructure and the Government of Mongolia for their assistance extended to the Study Team, and also to the personnel of your Agency, the JICA Advisory Committee, the Ministry of Foreign Affairs, the Ministry of Land, Infrastructure and Transport, and the Embassy of Japan in Mongolia. The Study Team sincerely hopes that the results of the Study will contribute to the development of the road network in Mongolia.

Yours faithfully,



Kenji Maruoka
Team Leader
The Feasibility Study on Construction of
Eastern Arterial Road in Mongolia

AN OVERVIEW OF EXISTING CONDITIONS ALONG THE EASTERN ARTERIAL ROAD



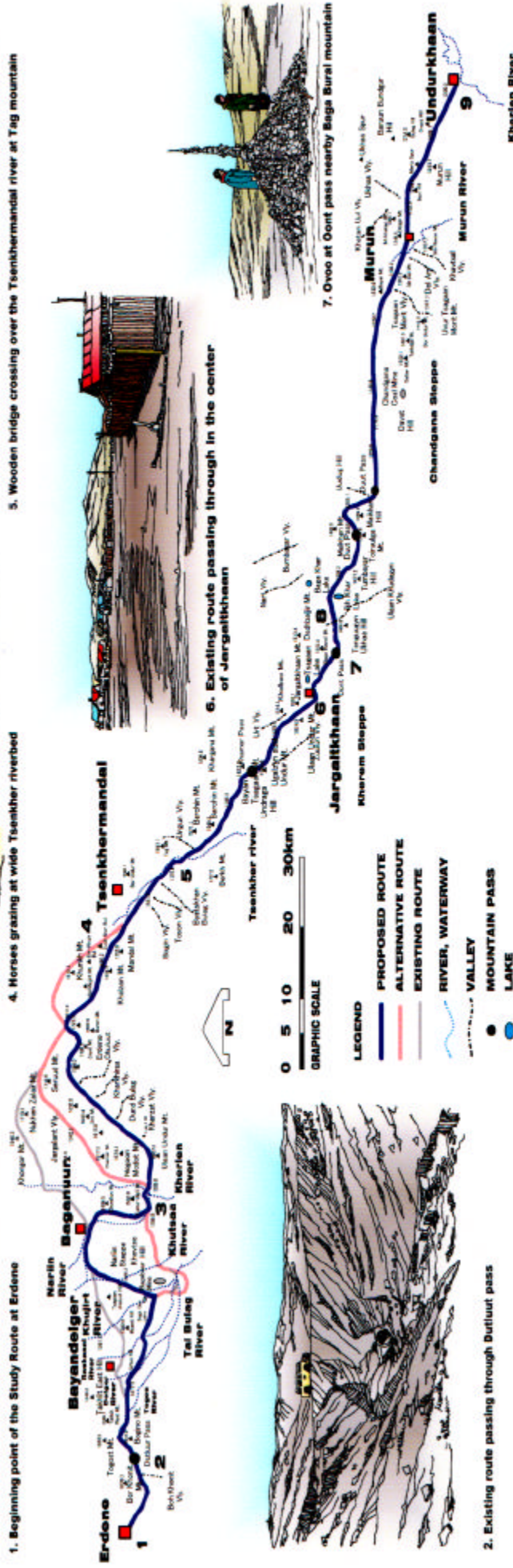
5. Wooden bridge crossing over the Tsenkhermandal river at Tag mountain



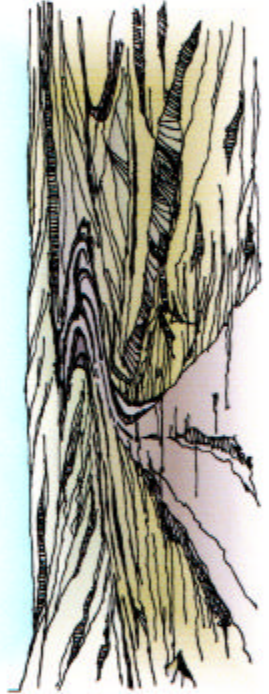
4. Horses grazing at wide Tsenkher riverbed



3. Concrete bridge crossing over the Kherlen river



9. Ending point of the Study Route at Undurkhaan

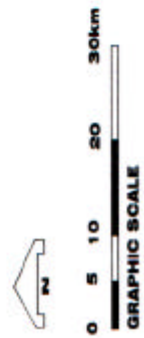
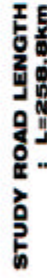
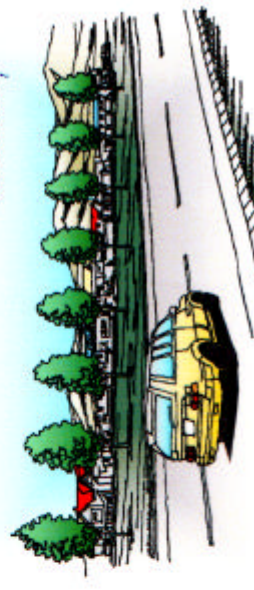
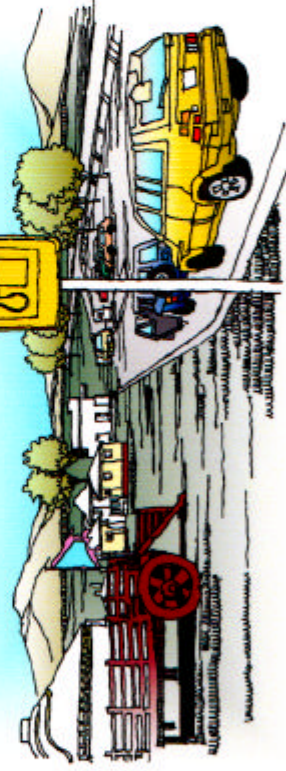
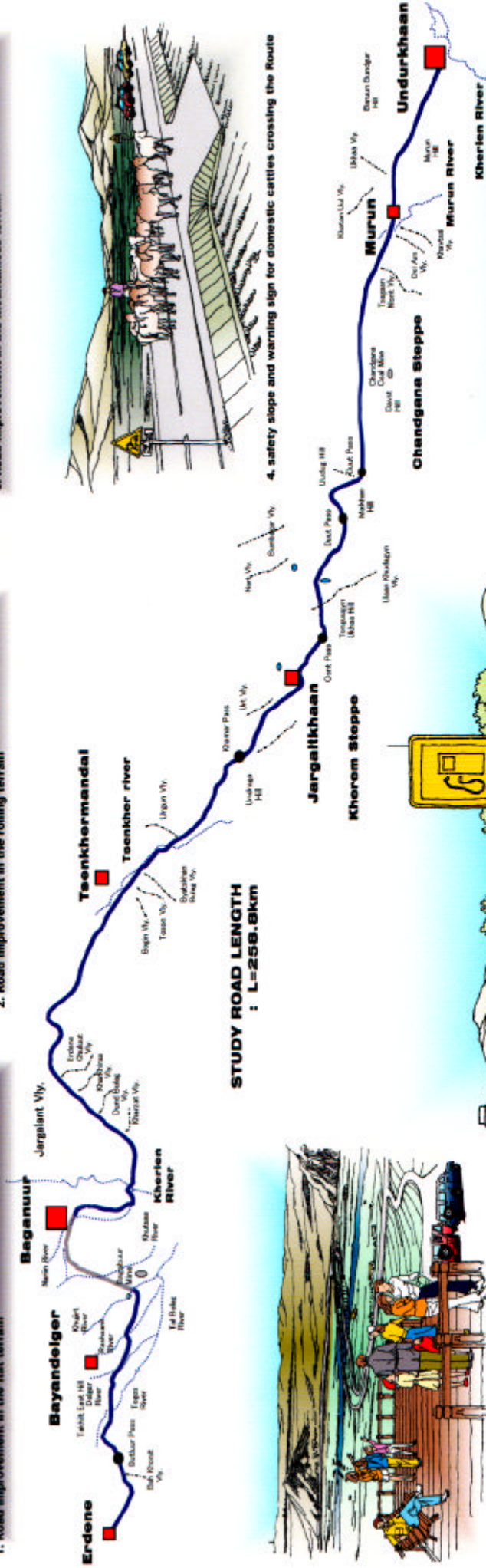
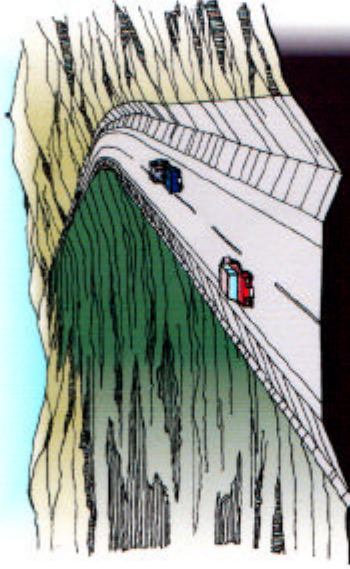
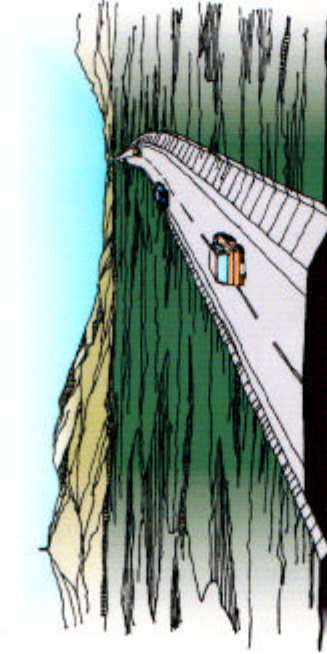


8. Multiple shifting tracks at Ulaan Khudagyn valley

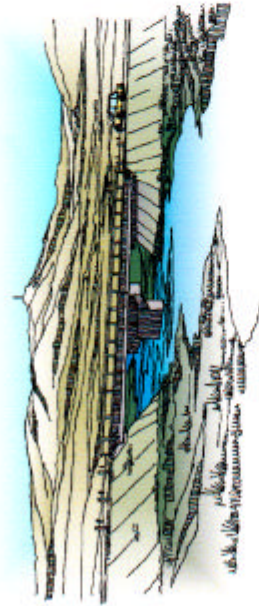


2. Existing route passing through Dutiut pass

PROPOSED IMPROVEMENT PLAN OF ROAD FACILITIES OF THE EASTERN ARTERIAL ROAD



PROPOSED IMPROVEMENT PLAN OF BRIDGES AND STRUCTURES OF THE EASTERN ARTERIAL ROAD



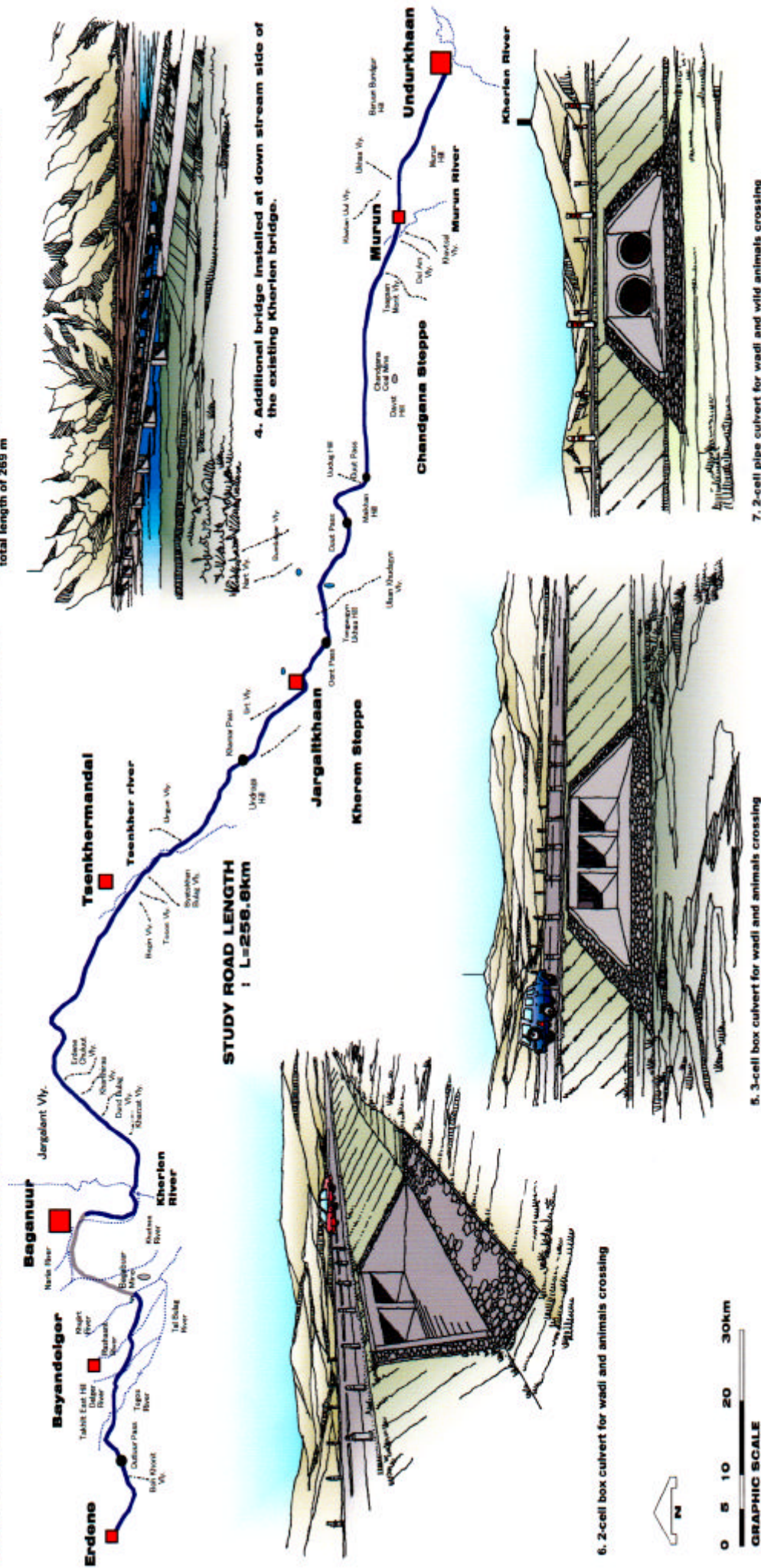
4. Reinforced concrete T-Girder bridge with 2 spans, total length of 35 m



2. Reinforced concrete T-girder bridge with 4 spans, total length of 70 m



3. Additional Kherlen river bridge, prestressed concrete bridge with 8 spans, total length of 269 m



4. Additional bridge installed at down stream side of the existing Kherlen bridge.

6. 2-cell box culvert for wadi and animals crossing

5. 3-cell box culvert for wadi and animals crossing

7. 2-cell pipe culvert for wadi and wild animals crossing