

## 添 付 資 料



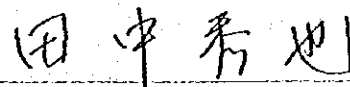
SCOPE OF WORK  
FOR  
THE STUDY  
ON  
THE MAINTENANCE AND REHABILITATION  
OF HIGHWAY BRIDGES  
IN THE REPUBLIC OF TURKEY

AGREED UPON BETWEEN  
GENERAL DIRECTORATE OF HIGHWAYS  
AND  
JAPAN INTERNATIONAL COOPERATION AGENCY

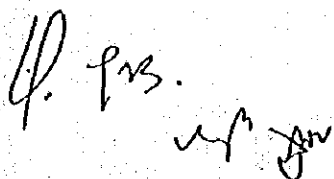
DECEMBER 23rd, 1994



MR. DINCER YIGIT  
DIRECTOR GENERAL  
GENERAL DIRECTORATE OF HIGHWAYS  
MINISTRY OF PUBLIC WORKS  
AND SETTLEMENT



MR. HIDEYA TANAKA  
LEADER  
THE PREPARATORY STUDY TEAM  
JAPAN INTERNATIONAL  
COOPERATION AGENCY



## I . INTRODUCTION

In response to the request of the Government of the Republic of Turkey (hereinafter referred to as "Turkey"), the Government of Japan has decided to conduct the study on the Maintenance and Rehabilitation of Highway Bridges in the Republic of Turkey (hereinafter referred to as "the Study") in accordance with the relevant laws and regulations in force in Japan.

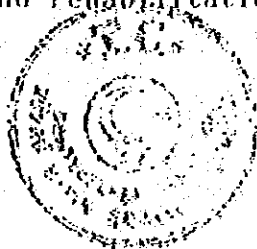
Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programmes of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of Turkey.

The present document sets forth the scope of work with regard to the Study.

## II . OBJECTIVES OF THE STUDY

The objectives of the study are :

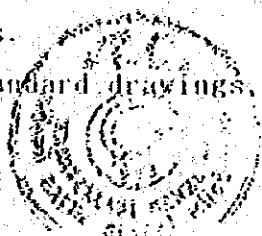
- (1) to provide an overall information of highway bridges by means of visual inspection survey of bridges located on arterial roads.
- (2) to formulate rehabilitation plans for typical damaged highway bridges.
- (3) to prepare manuals of bridge inspection, evaluation maintenance and rehabilitation.



### III. SCOPE OF THE STUDY

In order to achieve the objectives mentioned above, the Study shall cover following items.

1. Review and analysis of existing data and information
  - (1) to collect, review and analyze available data, information, reports and plans relevant to the Study.
    - Socio-economic and traffic data
    - Existing bridge inventory
    - Flood records of the site
    - Axle Load Study data
    - Geographic data
    - Other data necessary for the Study
2. Visual inspection
  - (1) to conduct visual inspection for major superannuated highway bridges located on arterial roads.
  - (2) to evaluate results of visual inspection.
  - (3) to classify bridges according to the damage condition.
  - (4) to provide overall information of highway bridges.
3. Rehabilitation plan for typical damaged bridges
  - (1) to conduct further detailed engineering and technical investigations of typical structural types of bridges.
  - (2) to select priority bridges that need the rehabilitation.
  - (3) to recommend rehabilitation measures (including alternatives) of selected priority bridges.
  - (4) to estimate the rehabilitation cost and conduct economic analysis of rehabilitation measures of selected bridges.
  - (5) to prepare standard drawings, technical design and



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specifications of rehabilitation measures of selected priority bridges.

- (6) to formulate an overall bridge rehabilitation plan.
- (7) to conduct environmental impact assessment.

4. Maintenance management and institution

- (1) to make evaluation and recommendation on institutional and administrative aspects for bridge maintenance management.

5. Preparation of manuals

- (1) to prepare manuals of bridge inspection, evaluation, maintenance and rehabilitation.

IV. STUDY SCHEDULE

The Study will be carried out in accordance with the attached tentative schedule. (Appendix I.)

V. REPORTS

JICA shall prepare and submit the following reports in English to General Directorate of Highways, Ministry of Public Works and Settlement (hereinafter referred to as "KGM").

1. Inception Report (20 copies)

This report shall be submitted at the beginning of the Study.

*G. P. B.*  
*W. M.*  
*John*



*(Handwritten signature)*

2. Interim Report (20 copies)

This report will be submitted within seven(7) months after the commencement of the Study.

3. Draft Final Report (30 copies)

This Report will be submitted within thirteen(13) months after the commencement of the Study.

KGM shall provide JICA with its comments within one(1) month after the submission of the Draft Final Report.

4. Final Report and Manuals (50 copies)

Final Report and Manuals will be submitted within two(2) months after the receipt of the comments.

VI. UNDERTAKING OF THE GOVERNMENT OF TURKEY

1. To facilitate smooth conduct of the Study, the Government of Turkey shall take necessary measures:

(1) to secure the safety of the Japanese study team (hereinafter referred to as "the Team"),

(2) to permit the members of the Team to enter, leave and stay in Turkey for the duration of their assignment therein, and exempt them from foreign registration requirements and consular fees,

(3) to exempt the members of the Team from taxes, duties and any other charges on equipment, machinery and other materials brought into and out of Turkey for the conduct of the Study,

- (4) to exempt the members of the Team from income tax and charges of any kind impose on or in connection with any emoluments or allowances paid to the members of the Japanese study team for thir services in connection with the implementation of the Study,
  - (5) to provide necessary facilities to the Team for remittance as well as utilization of the funds introduced into Turkey from Japan in connection with the implementation of the Study,
  - (6) to secure permission for entry into private properties for the implementation of the Study,
  - (7) to secure permission for the Team to take all data and documents (including permitted photographs) related to the Study out of Turkey to Japan, and
  - (8) to provide medical services as needed. Its expenses will be chargeable on members of the Team.
2. The Government of Turkey shall bear claims, if any arises, against the members of the Team resulting from, occurring in the courses of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willfull misconduct on the part of the members of the Team.
3. KGM shall act as counterpart agency to the Study team and also as coordinatng body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.



4. KGM shall, at its own expense, provide the Team with the following, in cooperation with other organizations concerned:

- (1) available data and information related to the Study,
- (2) counterpart personnel,
- (3) suitable office space with necessary equipment in Ankara,
- (4) identification cards, and
- (5) appropriate number and type of vehicles with drivers.

#### VII. UNDERTAKING OF JICA

For the implementation of the Study, JICA shall take the following measures:

1. to dispatch, at its own expense, the Study team to Turkey, and
2. to pursue technology transfer to the Turkish counterpart personnel in the course of the Study.

#### VII. OTHERS

JICA and KGM shall consult with each other in respect of any matter that is not agreed upon in this document and may arise from or in connection with the Study.

*P. P. S. W. M.*  
*J. M.*



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TENTATIVE STUDY SCHEDULE

	MONTH															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Work in Japan	□			□	□	□				□	□	□				□
Work in Turkey		□	□	□			□	□	□					□		
Report Presentation	IC/R						IT/R						DF/R			F/R

Note : IC/R : Inception Report  
 IT/R : Interim Report  
 DF/R : Draft Final Report  
 F/R : Final Report

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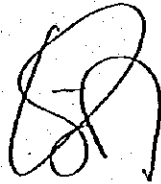


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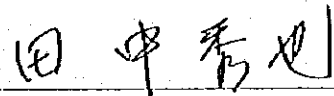
MINUTES OF MEETING  
ON  
THE SCOPE OF WORK  
FOR  
THE STUDY  
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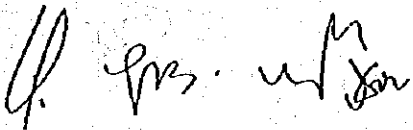
December 23rd, 1994



MR. DİNÇER YIĞİT  
DIRECTOR GENERAL  
GENERAL DIRECTORATE OF HIGHWAYS  
MINISTRY OF PUBLIC WORKS  
AND SETTLEMENT



MR. HIDEYA TANAKA  
LEADER  
THE PREPARATORY STUDY TEAM  
JAPAN INTERNATIONAL  
COOPERATION AGENCY



The Japanese Preparatory Study Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Hideya Tanaka (Manager of Engineering Division, Honshu-Shikoku Bridge Authority) visited Turkey from December 14 to December 23, 1994, in connection with the Study on the Maintenance and Rehabilitation for Highway Bridges in Turkey (hereinafter referred to as "the Study").

The Team had a series of discussions on the Scope of Work of the Study with General Directorate of Highways, Ministry of Public Works and Settlement (hereinafter referred to as "KGM").

The Team had also carried out field survey of several typical bridges.

The first discussion was held on Dec 15th 1994, to finalise the Scope of Work. The attendance list is as attached in Appendix I.

Main items which were agreed upon by both sides are as follows:

1. The Study shall cover bridges on arterial roads which connect Ankara and Istanbul, Izmir, Rize, Bursa, Antalya, except for the motorway.
2. The objective bridge types are the beam bridges or slab bridges made of concrete and steel (including composite type), constructed more than 5 years ago.



3. The maximum number of bridges to be studied shall be as follows:

- 1) visual inspection survey and evaluation .. approx. 200
- 2) detailed investigation and evaluation .... approx. 20
- 3) rehabilitation plan ..... approx. 10

4. Items of field survey are basically as follows:

1) visual inspection survey and evaluation

- pavement
- expansion joint
- railing
- deck slab
- steel or concrete girder
- bearing
- drainage
- pier and footing
- abutment and footing
- approach embankment just behind abutment
- riprap
- paint
- scouring (if possible)

2) detailed investigation and evaluation

- strength and superannuation of concrete
- connections of steel structure
- settlement or inclination of substructures
- scouring
- degree of rust on steel structure
- soil test (if necessary)
- traffic volume on the bridge
- discharge capacity of bridges
- any other survey agreed upon by KGM and the Study team.

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5. The Study of rehabilitation plans shall not include reconstruction of existing bridges.
6. JICA shall prepare fifty(50) copies of inspection, evaluation, maintenance and rehabilitation manuals and submit them at the final report stage.
7. In concerned with Undertaking of the Government of Turkey on Scope of Work, KGM and the Team agreed that the Study team will follow the related laws and regulations in Turkey.
8. The Team requested that an inspection vehicle owned by KGM be provided to the Japanese Study Team as much as possible. KGM answered that one inspection vehicle can be available for the field survey of the Study.
9. KGM shall provide appropriate number and type of vehicles with drivers only for field survey.
10. KGM requested to be provided with examples of drawings of bridge rehabilitation in Japan. The Team answered that JICA shall prepare them as many as possible.
11. KGM requested that the counterpart training in Japan and the seminar in Turkey be held in the course of the Study in order to pursue effective technology transfer. The Team stated that the request would be conveyed to the Government of Japan.

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12. KGM requested to be provided with a personal computer and other instruments which are necessary in the Study, and requested that they be granted to KGM after the completion of the Study. The Team stated that the request would be conveyed to the Government of Japan.

#### APPENDIX I LIST OF ATTENDANCE

##### A. Members of KGM

- |                |  |
|----------------|--|
| 1. D. Yiğit    | Director General                           |
| 2. A. Gürgür   | Deputy Director General                    |
| 3. M. Baltacı  | Head, Bridge Department                    |
| 4. G. Ataman   | Head, Technical Research Department        |
| 5. G. Balkır   | Deputy Head, Bridge Department             |
| 6. E. Ögüs     | Advisor for General Director               |
| 7. E. Sayit    | Director, Bridge Maintenance Section       |
| 8. E. Aksahin  | Director, Bridge Construction Section      |
| 9. T. Sahin    | Director, Bridge Survey and Design Section |
| 10. Y. Gürsu   | Director, Material Laboratories Section    |
| 11. D. Senyay  | Director, Training Section                 |
| 12. E. Arslan  | Chief Engineer, Bridge Maintenance Section |
| 13. K. Yılmaz  | Engineer, Bridge Maintenance Section       |
| 14. I. Korkmaz | Translator                                 |
| 15. B. Ertem   | Translator                                 |
| 16. G. Sungur  | Chief, Translation and Language Training   |

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B. Members of the Team

- |                |                       |
|----------------|-----------------------|
| 1. H. Tanaka   | Team Leader           |
| 2. T. Okutani  | Bridge Maintenance    |
| 3. Y. Ikeda    | Study Planning        |
| 4. Y. Furukawa | Bridge Rehabilitation |

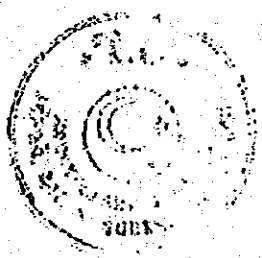
C. Japan Embassy

- |                |                  |
|----------------|------------------|
| 1. M. Sakamoto | Second Secretary |
|----------------|------------------|

D. JICA Experts in KGM

1. S. Okano
2. A. Kobayashi

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TECHNICAL COOPERATION  
BY THE GOVERNMENT OF JAPAN

APPLICATION

By the Government of the Republic of Turkey  
for a Development Study on the Maintenance and Rehabilitation  
of Highway Bridges in Turkey  
to the Government of Japan.

-----  
note: This model form was devised for the general guidance of the Government agencies concerned (Japan) in order to facilitate the supply of relevant information and data necessary to afford an adequate appreciation of the nature of the technical cooperation required. The careful completion of an application in this form will avoid much reference back and lead to speedier action.  
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1. Project digest

- (1) Project Title: The Maintenance and Rehabilitation  
of Highway Bridges in Turkey
- (2) Location: Turkey
- (3) Responsible Agency: Ministry of Public Works and Settlement
- (4) Executing Agency: General Directorate of Highways
- (5) Justification of the Project  
( Beneficiaries, objectives of the Project etc and/or Positioning  
in the National Development Plan )

General Directorate of Highways, Ministry of Public works and settlement of the Republic of Turkey ( KGM ) is in charge of maintenance and operation of around 31,000 km long national highway network which includes more than 3,000 bridges. Most of the highway bridges, more than ninety percent of which are concrete bridges, were designed and constructed years ago with low allowable axle loads. The main problems relating to these highway bridges are;

- 1) Cracked and damaged sub-structures and superstructures
- 2) Damaged expansion joints and bearings
- 3) Scalling and spalling of concrete, and
- 4) Load carrying capacity.

Though the construction of motorways is now going on at a good pace, national highways in Turkey who depends on road traffic for most of passenger and freight transportation are still filling, and expected to keep filling in the future, the important role of statewide and regional main line for the transportation.

Occurrence of severe cracks, concrete deterioration, joints and bearing deformations has necessitated its detailed check, investigation and remedial measures for the safety of these bridges exposed to higher axle loads envisaged for the truck route. Besides since Turkey is in an active seismic zone, actually sustained severe damages by the latest heavy earthquake which hit ERZINCAN city, it is also an inevitable subject to ensure the capacity of these bridges against earthquakes. In view of the increasing number of bridges being "come to age", it is anticipated that systematic inspection, maintenance and rehabilitation shall be required.

These improving activities are required to be carried out promptly as well as appropriately and efficiently under limited funds and staff.

(6) Desirable or scheduled time of commencement of the Project

The study is desired to be commenced as early as possible in fiscal year 1993.

(7) Prospective funding source and/or assistance (including external origin)

Not specified

(8) Other relevant Projects, if any

None

Please describe as concisely as possible the general profile of the project on which the Development Study is required.

2. Terms of Reference of the proposed Study

(1) Necessity/Justification of the Studies

General Directorate of Highways, Ministry of Public Works and Settlement intends to carry out the investigation of important old bridges which have concrete deterioration and cracks. Most of highway bridges were designed and constructed years ago with low allowable axle load for main line in Turkey. The problems relating to these bridges such as cracked and damaged sub-structures and superstructure, damaged expansion joints and bearings, scalling and spalling of concrete, and load carrying capacity necessitates its detailed inspection and remedial measures for the safety of these bridges and the vehicles running on them.

At present, there is no bridge rehabilitation program and experience. Besides there is no proper bridge inspection team. Even if a team is available, it would be expected to cover more than 100 bridges annually. There is no doubt that the inspection and rehabilitation work on the bridges must be done systematically and efficiently in comprehensive manner. It is appropriate for Turkey to initiate a program for the implementation with a view to systematically maintaining, rehabilitating and strengthening all bridges on state highways in an overall bridge management system.

In support this, the Government of Turkey has requested The Government of Japan for technical assistance in preparation of required program for the maintenance and rehabilitation of highway bridges for the further development and implementation.

## (2) Objectives of the Study

The study is aimed at development of a systematic bridge maintenance repair and rehabilitation program which enables a systematic determination of present and future needs for rehabilitation repair and maintenance of bridges.

- a) Provide a overall information of highway bridges for comprehension of bridge inventories and the selection of objective bridges for maintenance repair and rehabilitation.
- b) Systematically evaluates the various type of structural and functional deficiencies and soundness of highway bridges
- c) Recommend rehabilitation measures for typical damaged highway bridges with associated cost estimates, and
- d) Prepare a program for implementation of the maintenance and rehabilitation of highway bridges, including a manual for these activities

## (3) Study Area

The present 31,000 km highway network is shown in Fig.1, which shall be covered by this Study.

The study area will be those around this network.

## (4) Scope of the Study

Phase 1: Review of Existing Data and Selection of Objective Bridges

- a) Data correction and analysis ( national level )
- b) Integration and utilization of data from the existing bridge

inventory records and other data bases, and

- c) Sampling of the bridges for the survey

#### Phase 2: Identification of Overall Condition of Highway Bridges by Visual Inspection Survey

The study shall cover selected major superannuated highway bridges located on the main line.

- a) Checking of the bridges with drawing
- b) Survey of structural deficiencies and structural function
- c) Identification and classification of the forms and grade of deficiencies for each structural type of bridges, and
- d) Inference of nation-wide condition of highway bridges

#### Phase 3: Detailed Field Investigation and Evaluation

Detailed field investigation will conduct for most representative structural type of bridges selected by the result of visual inspection survey.

- a) Measuring static and dynamic behavior of structural members
- b) Material test
- c) Analysis of the measured data and evaluation of deficiency and soundness, and
- d) Judgment of the necessity of improvement according to the type of structures, and type and grade of deficiencies

#### Phase 4: Recommendation of Rehabilitation Measures and Its Feasibility Study

- a) Recommendation of activities such as maintenance, rehabilitation required to enable highway bridges with various type of deficiencies to perform their functions in most cost effective manner
- b) Proposal of rehabilitation measures for typical cases with an alternative, including "minimum acceptable" and "desirable"
- c) Economic feasibility study on proposed rehabilitation work, and
- d) Preparation of standard drawings, technical design and

specifications for typical repair work

**Phase 5: Preparation of Implementation Program for the Improvement**

- a) Preparation of bridge maintenance and repair manual
- b) Preparation of bridge inspection manual
- c) Preparation of guidance of evaluation and judgment, and
- d) Organization and institutional review for bridge maintenance, repair and rehabilitation work

**(5) Study Schedule**

The Study, in principle, will be carried out within 18 months. ( The tentative schedule for the Study is attached. )

**(6) Other relevant information**

None

Please fill the above items in particular on separate sheet, if necessary.

**3. Undertaking of the Government of Turkey**

In order to facilitate a smooth and efficient conduct of the Study, the Government of Turkey shall take necessary measures:

- (1) to secure the safety of the Study team
- (2) to permit the member of the Study team to enter, leave and sojourn in Turkey in connection with their assignment therein, and exempt them from alien registration requirement and consular fees.
- (3) to exempt the Study team from taxes, duties and any other charges on equipment, machinery and other materials brought into and out of Turkey for the conduct of the Study.
- (4) to exempt the Study team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Study team for their services in connection with the implementation of the Study.
- (5) to provide necessary facilitates to the Study team for remittance as well as utilization of the funds introduced in Turkey from Japan in connection with the implementation of the

Study.

(6) to secure permission for entry into private properties or restricted areas for the conduct of the Study.

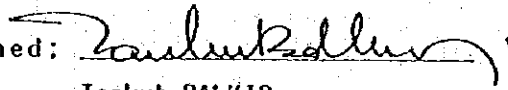
(7) to secure permission for the Study team to take all data, documents and necessary materials related to the Study out of Turkey to Japan.

(8) to provide medical services as needed. Its expenses will be chargeable to members of the Study team.

4. The Government of Turkey shall bear claims, if any arises against member(s) of the Japanese Study team resulting from, occurring in the course of or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the member of the Study team.

5. General Directorate of Highways shall act as counterpart agency to the Japanese Study team and also as coordinating body in relation with other governmental and non-governmental organization concerned for the smooth implementation of the Study.

The Government of Turkey assured that the matters referred in this form will be ensured for a smooth conduct of the Development Study by the Japanese Study Team.

Signed: 

Tankut BALKIR

Title: Deputy Director General Of  
General Directorate Of Highways

On behalf of the Government of the Republic of Turkey.

Date: August 20, 1992

**Correspondence:**

Please indicate person and address to which any correspondence regarding this application can be addressed. The telegraphic address and telephone number should also be given.

Mr. Ertan SAYIT Director,  
Director of Maintenance Bridges  
Division, General Directorate  
of Highways. (Karayolları Genel  
Müdürlüğü, Köprü Bakım Şubesi  
Müdürü)

Yücetepe - ANKARA / TURKEY  
Tel: (90) 4-4182698

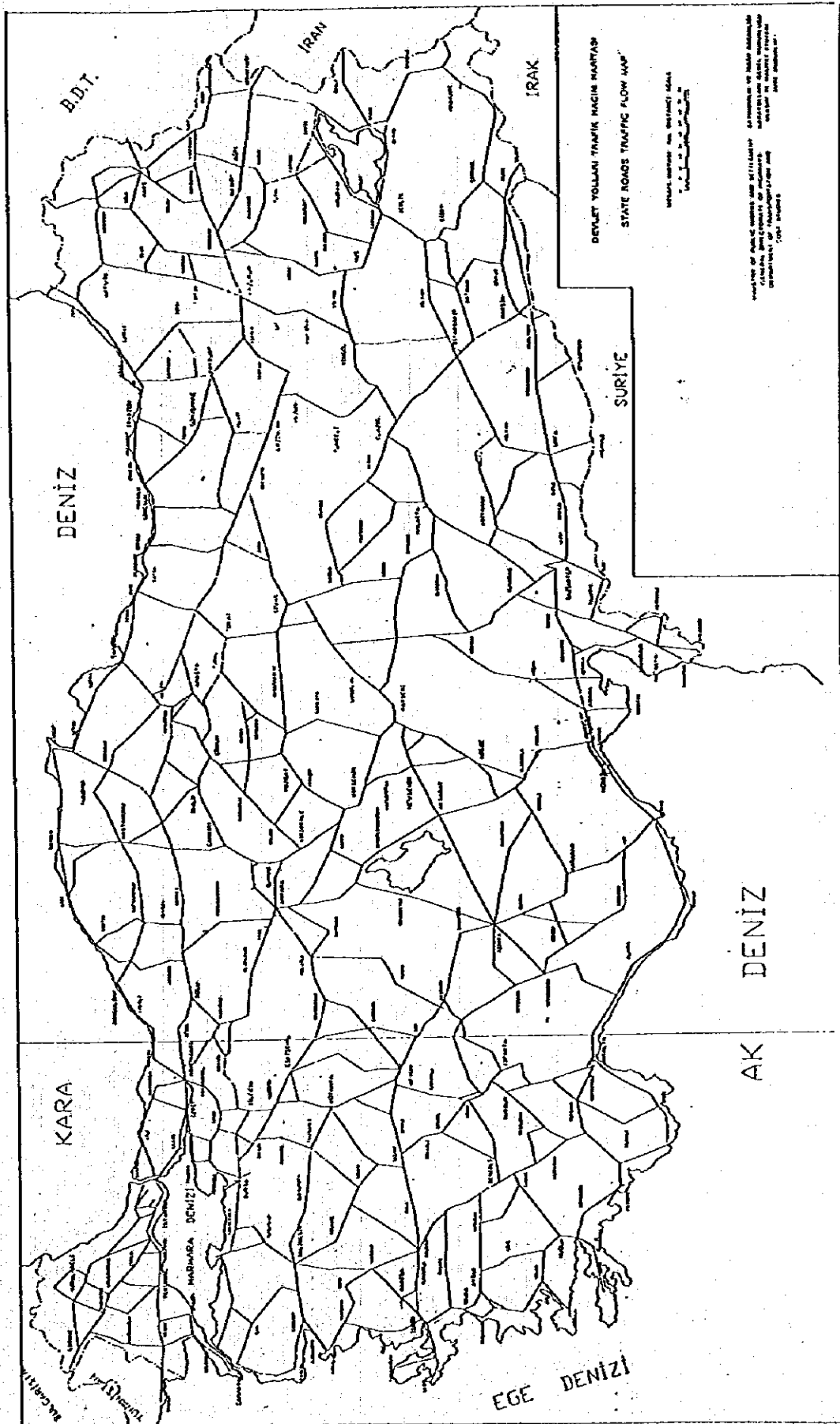


FIG.1 NATIONAL HIGHWAY NETWORK IN TURKEY

TENTATIVE STUDY SCHEDULE

month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Phase 1: Review of Existing Data and Selectio of Objective Bridges																			
Phase 2: Identification of Overall Condition of Highway Bridges																			
Phase 3: Detailed Field Investigation and Evaluation																			
Phase 4: Recommendation of Rehabilitation Measures and Its Feasibility Study																			
Phase 5: Preparation of Implementation Program for the Improvement																			
Submission of reports	△ IC/R								△ IT/R							△ DF/R		△ F/R	

note: IC/R : Inception Report  
 IT/R : Interim Report  
 DF/R : Draft Final Report  
 F/R : Final Report



平成6年12月20日作成

主管部長	文書管理部長	主管部長

情報管理部長	情報部長

資料リスト (収集資料)

地域	調査団名又は専門家氏名	国道橋梁維持、補修及びりハビリティ	調査の種類又は指導科目	作成部署
国名	トルコ共和国	配属機関名	現地調査期間又は派遣期間	担当者氏名
		KGM	1994年12月12日～1994年12月29日	

(注)

番号	資料の名称	形態	版数	ページ数	コピー数	資料の別	部数	長英符号	長英符号	長英符号	利用者の氏名	納入予定日
1	質問表への解答		A4	5	コピー		1	KGM				
2	KGMの組織その他		"	17	"		1	"	トルコ語			
3	同上英文版		"	3	"		1	"				
4	トルコ道路網他		"	7	"		1	"	英語			
5	Annual statistics of Turkish H: ghways 1981-1991		"	114	オリジナル		1	"				
6	Cross Road, Turkey		"	20	"		1	"				
7	1993 YILI SONU DE VLET VE IL YOLLARI KOPRU ENVANteri		"	32	"		1	"	Bridge Summary			
8	PLANLAMA ISTAISTIKLARI EL KITABU		"	17	"		1	"	Plan statistics Hand book			
9	橋梁図面(計4橋)		天地A4	4	焼		各1	"				
10	1994 ROAD MAP OF TURKIYE		-	1	オリジナル		1	"				
11	GENEL BILGILER 1993 GERCEKLESMELERI 1994 BUTCESI VE HEDEFLERI		A4	71	コピー		1	KGM	岡野氏	道路関連、予算と実績		

古川

# 資料リスト (収集資料)

企画部長	企画管理部長	技術情報部長
企画課長	企画管理課長	技術情報課長

地域	調査団名又は専門家氏名	調査の種類又は指称科目	作成部課
国名	配属機関名	現地調査期間又は派遣期間	担当者氏名

(注)

番号	資料の名称	形態	版数	ページ数	オリジナルコピーの部数	枚数	収集先名又は発行機関	外国・個人(他称)の別	取組区分	利用表示	利用者所属氏名	納入予定日	納入確認欄
12	トルコ共和国概要		A4	19	コピー	1	日本国大使館						
13	アンカラ案内		"	11	"	1	"						
14	KARAYOLU ULASTIRMASI		B5	171	オリジナル	1	KGM	Highway Transportation					
15	VII BES YILLIK KALKINMA PLANI ONCESINDE CELISMELER 1984-1988		"	420	"	1	"	第6次5か年開発計画					
16	1994. YILI BIRIM FIAT LISTESI		A4	56	"	1	"	建設工事単価表					
17	トルコ道路地図		大	1	複製	1	"						
18	TRAFFIC AND TRANSPORTATION SURVEY		B4	155+10	オリジナル	1	"						
19	VII BES YILLIK KALKINMA PLANI STRATEJISI (1995-1999)		A4	39	"	1	"	第7次5か年開発計画、概略					
20	KARAYOLU ULASTIRMASI		"	39	コピー	各1	"	Highway Transportation (統計)					
21	1983-1993 ULASTIRMA ANA PLANI		"	491	オリジナル	1	"	1983~1993 主要交通計画					

# 資料リスト (収集資料)

主査部長	文書管理部長	主査部長	情報管理部長
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地域	調査団名又は専門家氏名	調査の種類又は指導科目	作成部課
国名	配属機関名	現地調査期間又は派遣期間	担当者氏名

(注)

番号	資料の名称	形態	版数	ページ数	オリジナルコピーの別	部数	収集先名称又は機関	送附・借入(価格)の別	取扱い	利用政示	利用部課氏名	納入予定日	納入部課
22	YOL KOPRULERI IGIN TEKNIK SARTIYAVE		B 5	78	オリジナル	1	KGM	橋梁設計添削					
23	1993 YILI BIRIM FIYAT LISTESI		A 4	43	"	1	"	道路建設単価					
24	1993 YILI BITUMLU KAPLAMA ISLERI BIRIM FIYAT LISTERI		"	25	"	1	"	アスファルト道路建設単価					
25	BETON PREBEBRIKASYON		"	40	"	1	"	プレキャストコンクリート協会のカタログ					
26	CEVRE KANIRU		"	12	コピー	1	"	Law of Environment					
27	CEVRESEL ETKI DEGERLENDIRMESI YONETMELIGI		"	34	"	1	"	Regulation of environment					
28	EN SON VERILERE GORE HAZIRLANAN TURKIYE DEPREM BOLCELERI HARITASI		"	150	"	1	"	地震関係データ					
29	METEOROLOJ BULTENI		B 4	674	オリジナル	1	"	気象関係データ					
30	ビデオ							高速道路建設					
101	1994 YAYINLAR VE ELEKTRONIK HIZMETLER KATALOGU		B 4	29	オリジナル	1	統計局、借入	統計局刊行物一覧					

# 資料リスト (収集資料)

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番号	資料の名称	形態	版数	オリジナル コピーの別	部数	複製 発行 期間	寄贈・貸与 (価格)の別	取組区分	利用表示	利用態所属氏名	納入予定日	納入部課
102	TURKISH ECONOMY STATISTICS AND ANALYSIS (1994)		A.4	オリジナル	1	統計局購入						
103	SOCIAL AND ECONOMIC CHARACTERISTICS OF POPULATION		"	"	1	"						
104	ENVIRONMENTAL STATISTICS 1991		"	"	1	"						
105	MONTHLY ECONOMIC INDICATORS 1994		"	"	1	"						
106	1991 BUDGETS		"	"	1	"						
107	1992 MOTOR VEHICLE STATISTICS		"	"	1	"						
108	1992 ROAD TRAFFIC ACCIDENT STATISTICS		"	"	1	"						
109	1993 SUMMARY STATISTICS		"	"	1	"						







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