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**U.S. AGENCY FOR INTERNATIONAL
DEVELOPMENT**

MISSION TO PAKISTAN

ROAD RESOURCES MANAGEMENT PROJECT (RRM)

*DISTRICT ROADS REHABILITATION
&
CONSTRUCTION PROGRAM*

(Contract No. 391-0480-C-00-2454-00)

CLOSE - OUT REPORT

**Contract period
April 1992 - July 1994**

July, 1994



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ROAD RESOURCES MANAGEMENT PROJECT
ROAD REHABILITATION AND CONSTRUCTION PROGRAM

C L O S E - O U T R E P O R T

JULY 1993 - JULY 1994

Executive Summary:

1.0 General:

The United States Agency for International Development (USAID) funded Road Resources Management (RRM) Project, in the province of Sindh, aimed at evolving a maintainable network of roads in the province. Besides providing assistance for the district road maintenance works, USAID, under the program, also funded rehabilitation/upgradation of eligible roads in the district road network. Services of Associated Consulting Engineers (ACE) were hired to assist USAID in managing the rehabilitation \upgradation component of the project.

Monthly Reports covering progress for the months of June and July 1992 were submitted to USAID earlier. Since then all pertinent information/data concerning the progress and status of work has been, informally, made available to USAID. First Annual Report covering the activities on the project during the April 1992 to June 1993 period was submitted in July 1993. This report covers the project related activities during the period July 1993 to July 1994.

2.0 Scope Of Work:

ACE's scope of work, as consultant for the project encompassed the entire range of rehabilitation/upgradation related activities. Important among them, were:

- Coordination with District Councils (DCs) to help them identify candidate roads for rehabilitation/upgradation
- Conducting condition survey and traffic counts on candidate roads and to determine their economic feasibility for rehabilitation/upgradation.
- After approval of feasible roads by the District Coordination Committee (DCC), prepare design, cost estimate and tender documents for individual roads.

- Coordinate with DCs to invite tenders and prepare bid evaluation and recommendation for award of work.
- Supervise construction works ensuring acceptable quality of material and workmanship. Verify measurements of approved works, and certify contractors invoices for reimbursements by USAID.

In addition to the above, the scope of work also included review of project documents prepared earlier. The consultant were also required to satisfy reporting and monitoring requirements of the project.

3.0 Home Office Activities:

To efficiently manage the project the consultants had divided their activities between the home office at Karachi, and the two field offices at Hyderabad and Sukkur. All field work for the above activities is handled by the field offices. The home office is responsible for the feasibility analysis, design, cost estimate, tender documents, bid evaluation and recommendation for award of works. Besides these activities, the home office also handles monitoring and reporting requirements of the project. In addition to that it also reviews, updates and supplements project documents that are prepared with an aim to benefit the concerned DC staff.

- 3.1 During the reporting period the consultant home office performed feasibility analysis for a total of 67 candidate roads for FY 1993-94 program. Designs for a total of 32 roads for FY 1993-94 program were completed during the reporting period. Feasibility analysis and design of another road which was included in the FY 1992-93 program was also carried out during the reporting period. Bid evaluation and work award recommendations for 56 schemes (31 for FY 1992-93 program and 25 for FY 1993-94 program) were made during this period.
- 3.2 After reviewing the project documents, revisions in road condition rating criteria to incorporate the nature, extent, and severity of the pavement distresses have been suggested. Criteria for condition survey of unpaved/brick-paved roads have also been suggested. After analysis of more than 90 counts by ACE staff and additional counts by the previous consultants and by DC staff in 6 districts, traffic growth factor for the district roads in the province were derived. An annual growth rate of 10-12% has been recommended. Improvements suggested in the design criteria included standards for design of brick paved and

unpaved roads. Significant changes in the model for economic feasibility analysis were suggested and incorporated in the revised model prepared after approval of proposed changes by USAID. No major changes in the field construction manual were proposed. Missing standards, and specification for new BOQ items were added in the specification.

- 3.3 To review the standards and progress of work, and to keep close coordination with the field staff and the DC staff, the PM and the Design Engineers frequently visited the work sites and the field offices. USAID officials also routinely participated in such progress review meetings and site visits.

Details of home office activities may be seen in Chapter 3.

4.0 Field Office Activities:

Important field office activities included: Condition survey and traffic counts for candidate roads identified for rehabilitation/upgradation by the DCs, topographic survey for feasible roads, construction supervision for quality control, quantity measurement and verification of contractor's invoices for reimbursement by USAID.

- 4.1 During the reporting period the field offices conducted condition surveys and traffic counts for a total of 67 roads, 42 of them by Hyderabad office and 25 by Sukkur office. Topographic survey for 38 roads, 18 by Hyderabad office and 20 by Sukkur office, were completed. Construction supervision services for a total of 43 road rehabilitation/upgradation schemes having a total length of 86.84 km were provided. Of these, 25 were supervised by Hyderabad office and 18 by Sukkur office having a total length of 58.9 kms and 27.94 km respectively. Details of all rehabilitation/ upgradation schemes where construction work has been completed, are given in Chapter 4. This report gives details of construction work on Fiscal Year basis as well as District basis. Section 4.2 covers schemes in the seven Southern districts of Sindh (Badin, Hyderabad, Karachi, Mirpurkhas, Nawabshah, Sanghar and Thatta) controlled by the Hyderabad office. Section 4.3 covers schemes in seven Northern districts of Sindh (Dadu, Jacobabad, Khairpur, Larkana, Nausheroferoz, Shikarpur and Sukkur) controlled by the Sukkur office.

The total length of roads rehabilitated under the project and the amount of money spent on than is summarized below:

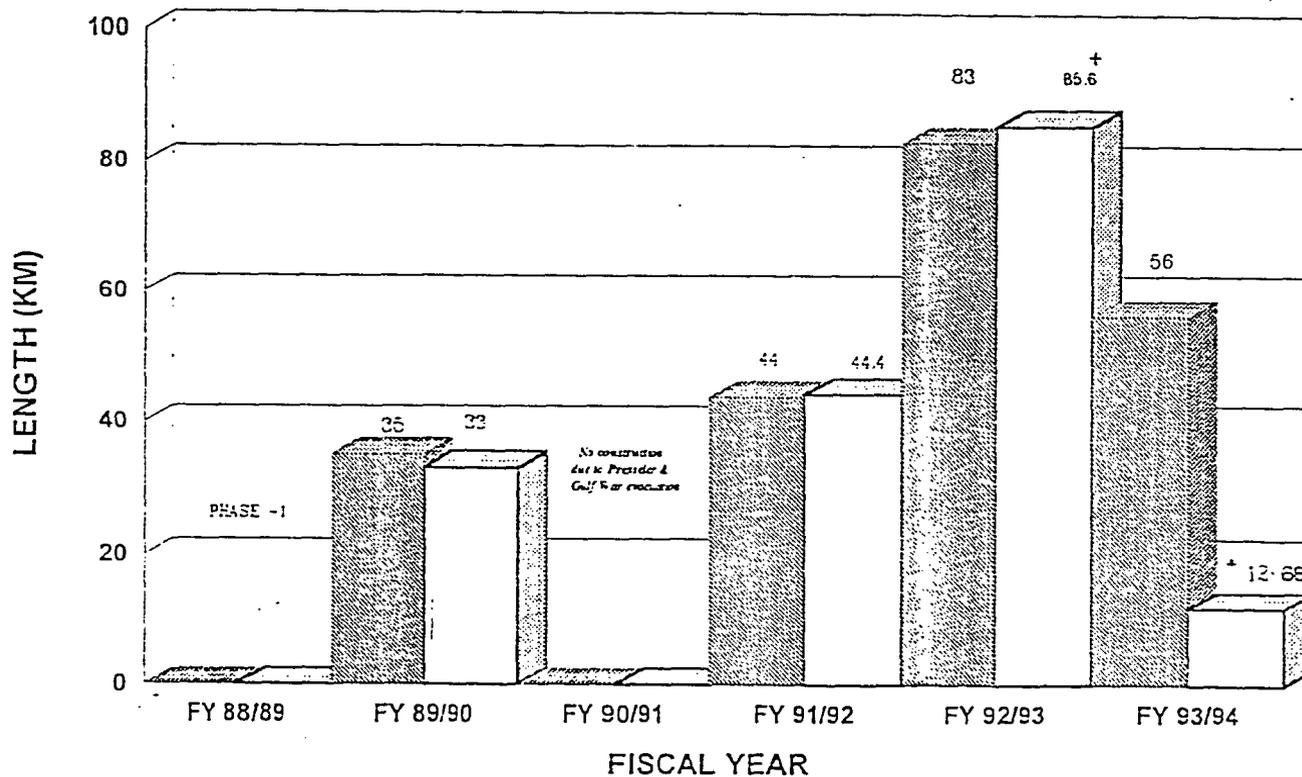
Roads Rehabilitated (Km)	Contract Amount (Rs)
FY 1989-90	21,082,905
FY 1991-92	27,198,451
FY 1992-93	59,172,012
FY 1993-94	9,347,303
Total:	116,800,671

(85.56 KM - Contract Length)

Table EX-1 gives year wise detail of total paved road length in each district, total length eligible for rehabilitation and actual length rehabilitated. Fig. EX-1 graphically shows the target and actual length of roads rehabilitated since 1989 through 1994 under the project. Fig EX-2 gives detail of target amount and the amount actually spent each year for the same (1989 through 1994) period for road rehabilitation under the project. Fig EX-3 shows the total length of roads eligible for rehabilitation target length, and the length actually rehabilitated.

- 4.2 The field supervisory staff, in coordination with the DC staff, made efforts to ensure construction quality control. Contractors were briefed about the project requirements, role of DC staff and supervisory staff, project drawings and specification etc. during the pre-construction conference/meetings. Quality control measures at site included checking/testing of materials especially borrow earth material, base course and asphalt etc. Compaction of earthwork was checked by field density tests and that of the base course by proof rolling. Quality control measures during the surface dressing operation included control of asphalt temperature, rate of spray of asphalt, and ensuring that the aggregates are spread immediately after the spray of asphalt. Required compacting efforts and the number of passes for proper compaction of various earthwork, base course and surface dressing layers were determined and observed at site.
- 4.3 Certification for reimbursement against contractors invoices for a total amount of (app.) Rs.48.88 million (Rs.34.85 million by Hyderabad office and Rs.14.03 million by Sukkur office), were made during July 1993 - 15, July 1994 period.

ROAD REHABILITATION PROGRAM ACTUAL VS PLANNED (1988-1994)



* PROJECT TERMINATED

+ ACTUAL ON JUNE, 1994 = 81.6 km.

PLANNED
 ACTUAL

(D-57 ACPL-1 WBI MS)

FIG. EX - 1

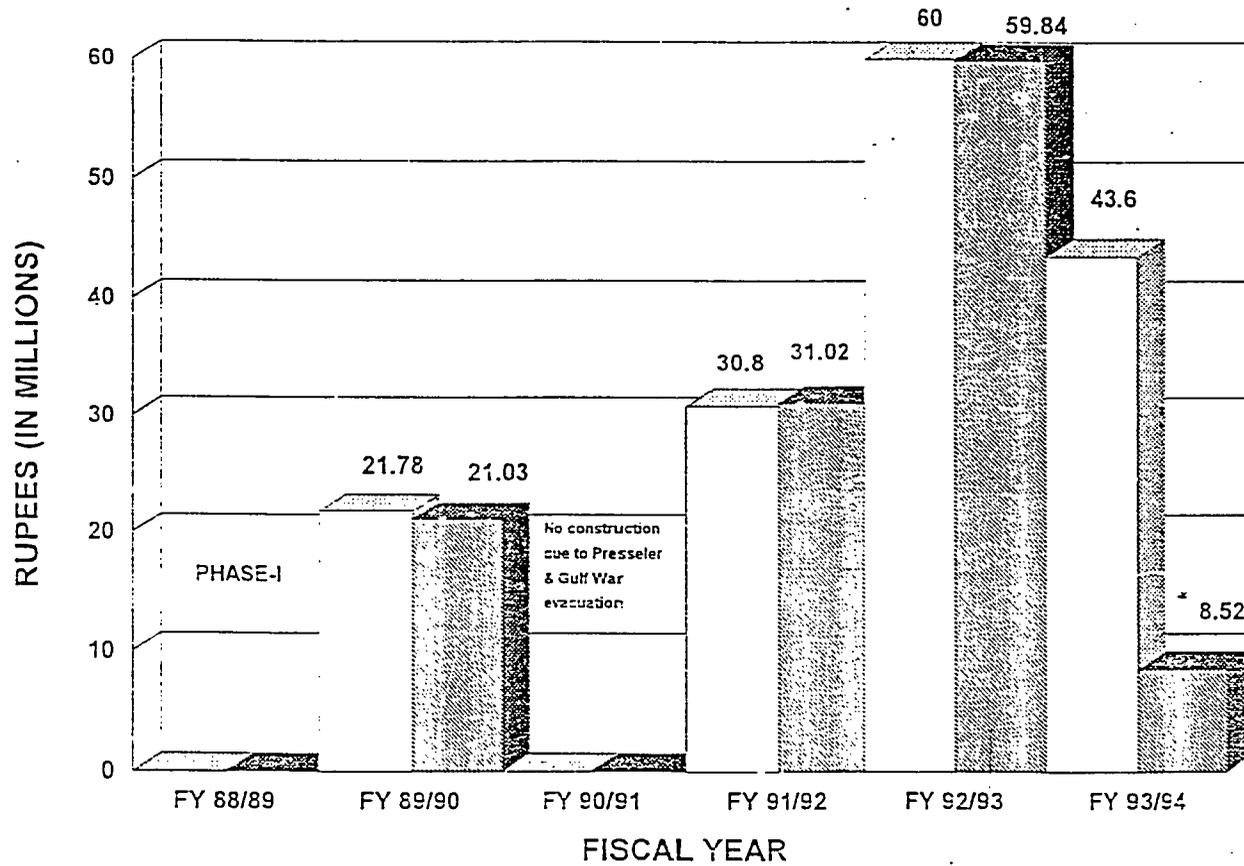
**ROAD RESOURCES MANAGEMENT PROJECT
ROAD REHABILITATION PROGRAMME**

Table-EX-1

DISTRICT WISE STATUS OF ROADS REHABILITATION

DISTRICT	FY 1988-89 PROGRAMME			FY 1991-92 PROGRAMME			FY 1992-93 PROGRAMME			FY 1993-94 PROGRAMME			TOTAL		
	ELIGIBLE LENGTH FOR REHAB. (KM)	TARGET LENGTH (KM)	ACTUAL LENGTH (KM)	ELIGIBLE LENGTH FOR REHAB. (KM)	TARGET LENGTH (KM)	ACTUAL LENGTH (KM)	ELIGIBLE LENGTH FOR REHAB. (KM)	TARGET LENGTH (KM)	ACTUAL LENGTH (KM)	ELIGIBLE LENGTH FOR REHAB. (KM)	TARGET LENGTH (KM)	ACTUAL LENGTH (KM)	ELIGIBLE LENGTH FOR REHAB. (KM)	TARGET LENGTH (KM)	ACTUAL LENGTH (KM)
BADIN	-	2.10	1.05	-	3.30	2.30	-	5.40	4.20	-	2.75	0.00	-	13.55	7.55
DADU	-	1.60	2.64	-	2.50	2.40	-	4.00	3.16	-	2.70	0.00	-	10.80	8.20
HYDERABAD	-	7.50	6.50	-	10.20	14.18	-	18.70	20.35	-	12.70	7.28	-	49.10	48.31
JACOBABAD	-	1.20	1.08	-	1.60	2.66	-	3.00	2.50	-	2.05	0.00	-	7.85	6.24
KARACHI	-	2.20	2.20	-	3.20	0.90	-	5.90	4.00	-	3.10	0.00	-	14.40	7.10
KHAIRPUR	-	2.00	2.30	-	2.40	1.30	-	4.40	3.44	-	3.00	0.75	-	11.80	7.79
LARKANA	-	2.20	2.10	-	3.10	2.20	-	4.60	4.40	-	3.50	0.00	-	13.40	8.70
MIRPURKHAS	-	3.20	3.19	-	4.40	4.60	-	8.00	7.89	-	5.50	0.65	-	21.10	16.33
NAUSHEROFEZ	-	3.90	3.70	-	2.50	3.25	-	4.00	10.00	-	3.10	0.00	-	13.50	16.95
NAWABSHAH	-	-	-	-	2.80	3.00	-	5.00	5.50	-	3.50	0.00	-	11.30	8.50
SANGHAR	-	2.40	2.10	-	3.40	3.50	-	6.30	5.71	-	4.25	3.00	-	16.35	14.31
SHIKARPUR	-	1.30	1.80	-	1.50	1.40	-	2.70	3.28	-	1.85	0.00	-	7.35	6.48
SUKKUR	-	2.70	2.62	-	3.50	2.72	-	6.50	-	-	4.00	0.00	-	16.70	5.34
THATTA	-	2.20	2.15	-	-	-	-	5.70	7.13	-	4.00	1.00	-	11.90	10.28
TOTAL	269.00	34.50	33.43	236.00	44.40	44.41	316.15	94.20	81.56	316.15	56.00	12.68	387.45	219.10	172.08

ROAD REHABILITATION PROGRAM STATUS OF FUNDS (1988-1994)



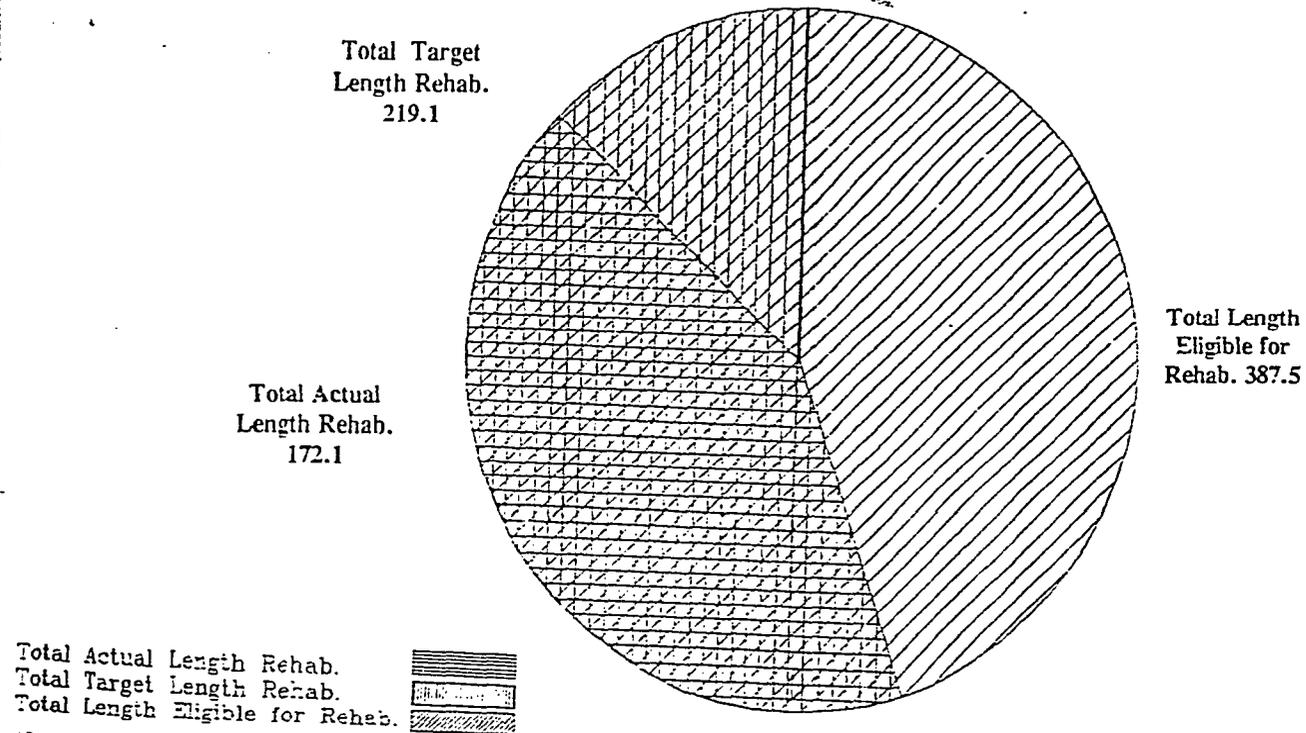
* PROJECT TERMINATED

EARMARKED
 COMMITTED

(0-57) REV-STRIVE (S)

FIG. EX-2

FINAL STATUS OF ROAD REHABILITATION PROGRAM



TOTAL LENGTH ELIGIBLE FOR
REHABILITATION = 387.5 KMS

FIG. EX - 3

5

5.0 Termination of Project:

Speculation about the potential trimming down of USAID activities were going on in the local press for quite sometime. Some idea could also be had from the fact that (funding) commitments for implementation of approved schemes were not forthcoming, the way they were expected, to achieve the project target, and to complete the construction work as per schedule. Official notice of termination for convenience was however, issued by USAID to the consultant on May 19, 1994.

The termination notice required all construction activities to stop on June 30, 1994. The consultant shall remain on board till July 31, 1994. Construction work on 9 out of 11 rehabilitation schemes that were on-going at the time of the issue of the termination notice has been completed. However, only part length of road Nos. NF-KN-04 (Nausheroferoz district) and LA-DI-04 (Larkana district) could be rehabilitated by June 30, 1994. Field measurement for the purpose of verification of contractors invoices is underway and is expected to be completed by July 21, 1994. Efforts are underway to carryout other termination related activities. A close out plan has been submitted to the Project Officer (PO). Inventory of all project related items has been completed and passed on to the PO. Close coordination is being maintained with USAID project officials to ensure timely and proper handing over of all project vehicles, records & documents, and other relevant items.

The consultants field offices and the project home office are scheduled for closure on July 31, 1994. Any left over business pertaining to the completed road rehabilitation schemes is supposed to be handled by the USAID project staff that will be available after July 31, 1994.

6.0 Issues and Recommendations:

A number of issues faced on the project were described, along with recommendation to resolve them in the previous annual report. These issues were divided into pre-construction stage and construction stage issues. The pre-construction stage issues pertained to the identification of roads, drainage design and the contractors lack of understanding of the item rate bidding process. The construction stage issues included the sequence and scheduling of construction work, delay in completion and the reimbursement procedure. As a result of adoption of certain recommendation made by consultant and better stream lining of certain procedures the situation improved somewhat during the

reporting period. The main issue arising out of the early termination of the project is that of schemes that were designed and/or tendered but could not be rehabilitated because of the termination.

(D-66 COR-RRM.WS4 P-6 M.S)

CLOSE-OUT REPORT
ROAD RESOURCES MANAGEMENT PROJECT (RRM)

JULY 1993 - JULY 1994

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CHAPTER - 1

INTRODUCTION

1. INTRODUCTION:

1.1 Background:

The project was a part of United States military and economic assistance package for fiscal year 1982-87 and was taken up under USAID, Economic Support Program in Pakistan. The implementation period of this project as per original plan was 1987-92, which was extended to November 1994. USAID has, however, decided to terminate the project effective July 31, 1994.

The Road Resources management (RRM) Project aimed at establishing a maintainable rural road system in the Sindh Province and identifying the policy, management and financial reform needed to achieve a sustainable road system in the province.

The key components of the program were related to Road Maintenance and Road Rehabilitation and Construction. Whereas the maintenance related activities were handled in house (since late 1990) by USAID, services of consultant were hired for the Road Rehabilitation and construction component of the Project.

1.2 Engagement of Consultants:

For providing technical assistance M/S Construction Control Services Corporation (CCSC) were engaged from May 1988-October 1991 and thereafter, M/S Associated Consulting Engineers-ACE (Pvt) Ltd., who were employed as sub-contractors of CCSC, were engaged for the period, April 1992-November 1994, as per original contract USAID has, however, decided to terminate the project as well as the contract for consultancy services with ACE (Pvt) Ltd, for the convenience of US Government with effect from July 31, 1994.

1.3 M/S ACE (Pvt) Ltd:

M/S ACE (Pvt) Ltd were engaged to provide technical assistance for a period of 32 months i.e. from April 1992 to November 1994 as per original contract. The assignment of the consultants was to provide technical services for the revised target of road rehabilitation and construction component of the programme. A part of this target has already been completed during the period of May 1988- October 1991 with the technical assistance of M/S CCSC and M/S ACE (Pvt) Ltd. (the sub-contractors) and during the intervening period i.e. November 1991- April 1992 when the construction of the roads was directly supervised by the District Council staff and monitored by USAID, Karachi office.

1.3.1 The Contract:

The Contract with M/S ACE (Pvt) Ltd. deal with only Road Rehabilitation and Construction component of the RRM Project. Reduction in the USAID programme in Pakistan as a result of Pressler amendment in 1990 affected the RRM Project like some other USAID Projects in the country. The component which involved rehabilitation and construction of roads in Sindh under the jurisdiction of local District Councils was also reduced accordingly. The tentative targets under the revised road rehabilitation and construction programme were as follow.

	<u>Tentative Target (Km.)</u>
a) Rehabilitation of existing asphalt paved (metalled) and brick paved roads to a maintainable level	200-250
b) Upgrading of selected katcha roads to (asphalt or brick) paved level	20

1.4 Budgeted Amount and Targets for Road Rehabilitation and Construction (Component):

The rehabilitation work on the District Council Roads in Sindh Province under the programme commenced in year 1989.

A total of 21 No Roads, totaling to 33.43 Km in the 13 districts of Sindh Province were taken up for rehabilitation in the fiscal year 1989-90.

As a result of Pressler amendment in 1990, the RRM programme targets were revised. No new road could be taken up for rehabilitation in the year under the project because of delay by GOP in dibursement of funds needed to cover the cost of construction.

An approximate amount of Rs 156.50 million was originally allocated by USAID for rehabilitation and upgradation of district council roads in Sindh Province. The following targets commensurate with the allocated funds were fixed for the respective programme years.

Fiscal Year	Amount in Million	Length in KM
1989-90	21.78	35
1991-92	30.80	44
1992-93	59.95	83
1993-94	<u>43.62</u>	<u>56</u>
	156.15	218

However, as a result of USAID decision to terminate the project in July 1994, actual amount committed/spent on rehabilitation works is Rs.116,800,671.

1.5 Scope of Work:

The Scope of Work for the technical assistance is described in Chapters 3 and 4.

(D-66 CLOSING.RRM/COR-RRM1.WS4 P-3 M.S)

MAP OF SIND PROVINCE

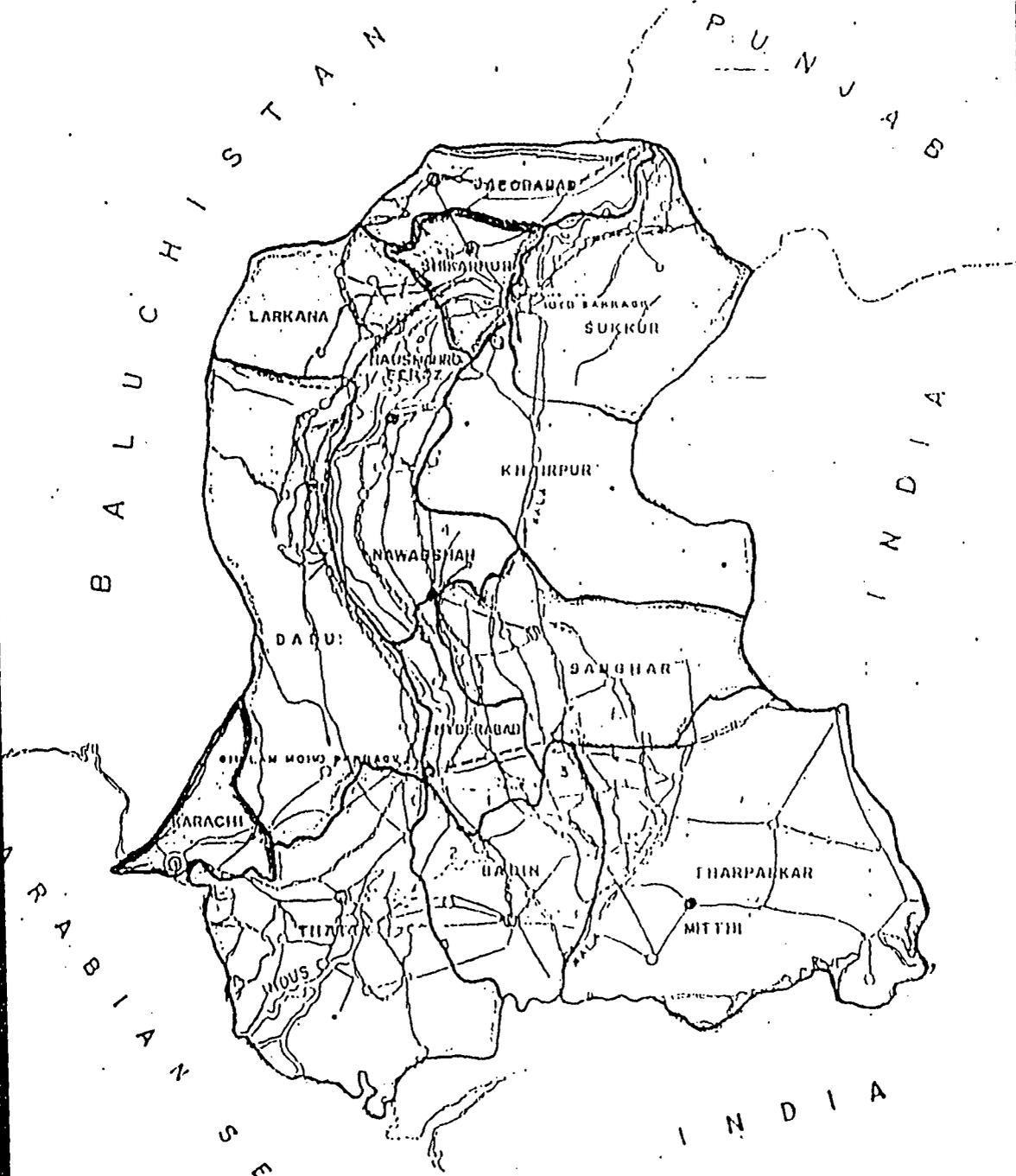


FIG. I-1

DISTRICT

- | | | |
|-------------|------------------|-----|
| 1 JACOBABAD | 8 SANGHAR | |
| 2 LARKANA | 9 THARPARKAR | |
| 3 SHIKARPUR | 10 BADIN | |
| 4 SUKKUR | 11 HYDERABAD | |
| 5 KHAIRPUR | 12 THATTA | |
| 6 DADU | 13 KARACHI | |
| 7 NAWABSHAH | 14 DISTRICT H.Q. | (d) |

US AGENCY FOR INTERNATIONAL DEVELOPMENT
FIELD
ROAD RESOURCES MANAGEMENT PROJECT
DISTRICT MAP OF SINDH PROVINCE
ASSOCIATED CONSULTING ENGINEERS - AGC (P) LTD

CHAPTER - 2

PROJECT ORGANIZATION & MANAGEMENT

2. PROJECT ORGANISATION AND MANAGEMENT:

2.1 General:

This project is funded by USAID Mission to Pakistan. The role of various agencies involved in the implementation of the project, described as follows, may be read with reference to the Institutional Arrangement Chart (Figure No. 2.1) and the Road Rehabilitation Cycle (Fig 2.2)

2.2 USAID Mission to Pakistan:

The USAID mission head office is at Islamabad and regional offices are located in Karachi, Lahore and Peshawar. The project office of this project is within the USAID Regional office, Karachi. The key functions of the office are:

- i. Coordinate with Federal Government agencies including MLGRD, P&D etc, and Provincial Government agencies including LGRD and Provincial P&D for the implementation of project.
- ii. Coordinate with federal/Provincial Government and District Council official and Consultants in identifying the roads to be selected for the rehabilitation/ upgradation.
- iii. Monitor the project, review and approve roads recommended for rehabilitation/ upgradation, review progress of bidding, bid evaluation and recommendation of work, etc. In addition to that review and approval of Government of Sindh (GOS) request for disbursement of payment to construction contractors.

2.3 Federal Rural Development Engineering Cell (FRDEC):

The project was established as a federal project with the Federal Rural Development Engineering Cell (FRDEC), Ministry of local government and Rural Development, which is headquartered in Islamabad. The FRDEC has primary responsibility of supervising and coordinating implementation of the project with other agencies of the Federal Government and with Sindh Provincial Department and District Council officials.

2.4 Local Government and Rural Development Department Government of Sindh:

The overall authority of the programme within the Sindh Government jurisdiction rested with the Local Government and Rural Development Department,

ROAD RESOURCES MANAGEMENT PROJECT INSTITUTIONAL ARRANGEMENT

(PROJECT ORGANISATION & COORDINATION AMONGST EXISTING AGENCIES)

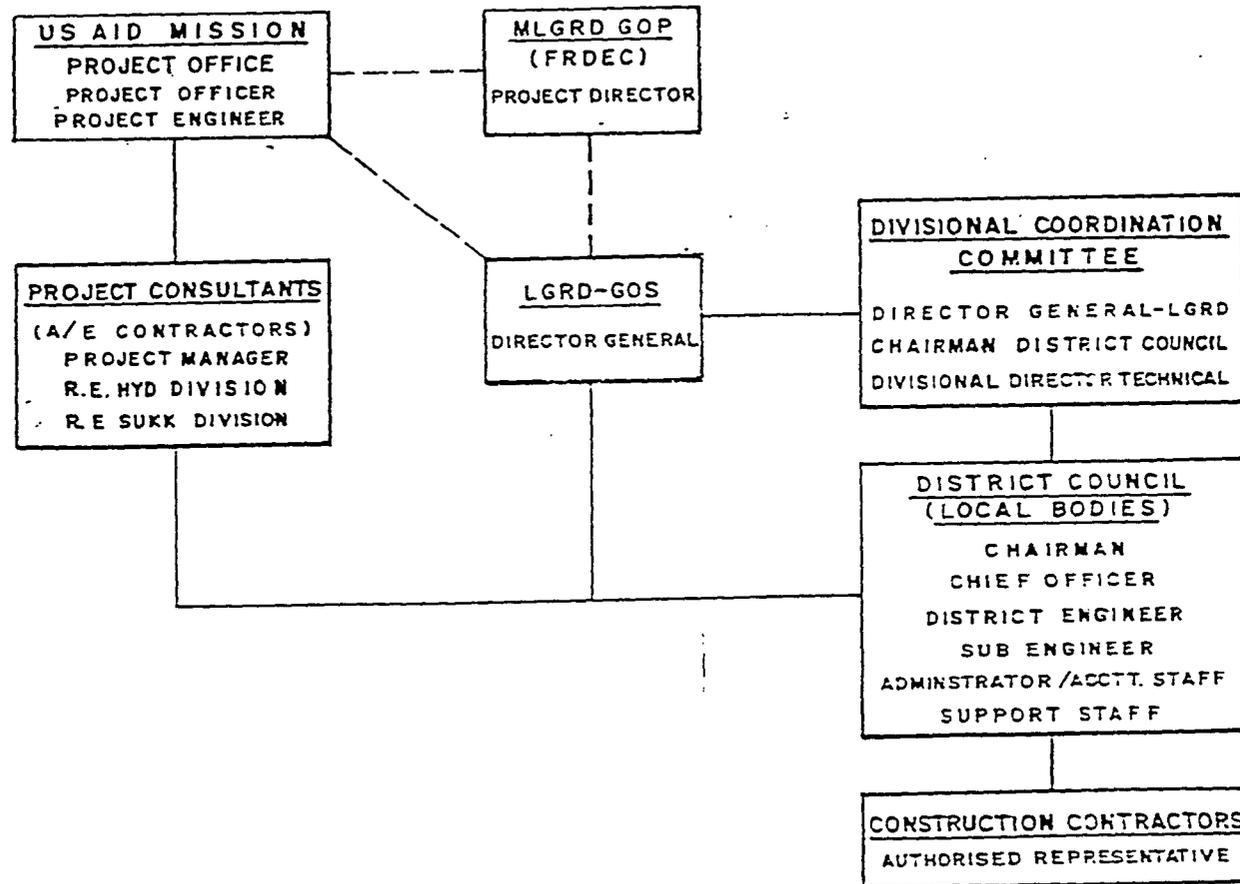
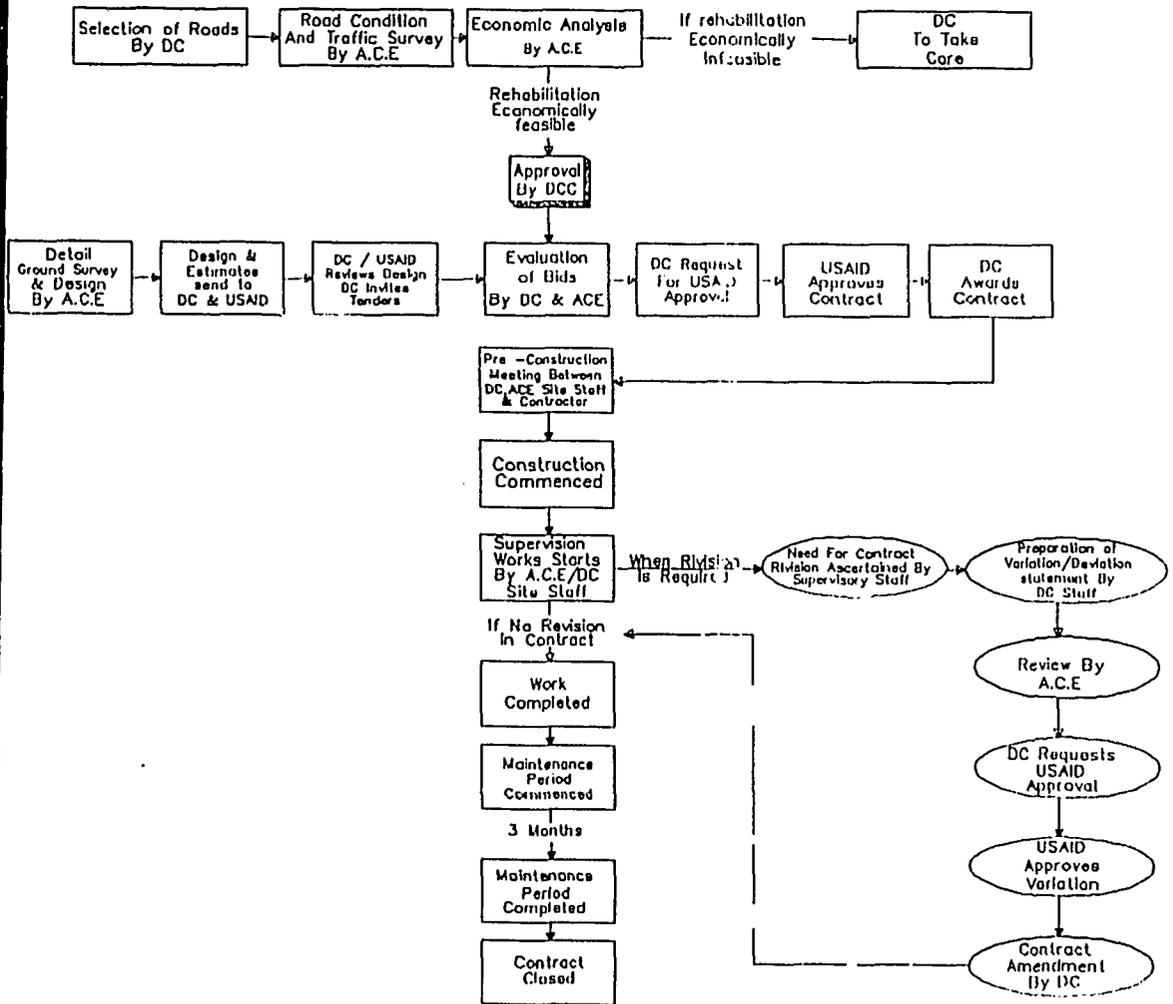


FIG. 2-1

ROAD RESOURCES MANAGEMENT PROJECT

ROAD REHABILITATION CYCLE



Government of Sindh. The office of Sindh Department of LGRD is located in Karachi. This Department is headed by a Director General. The office did not have major involvement in day to day implementation of the project. The primary responsibility of this office was policy implementation, budgeting, and Administrative Control of divisional and district offices.

2.5 Divisional Coordination Committee:

The responsibility for project implementation in each of the division was with the Divisional Coordination Committee chaired by a representative of LGRD of Sindh. The committee comprised the following key members:

- | | |
|---------------------------------------|----------|
| - Director General LGRD | Chairman |
| - Chairman District Council concerned | Member |
| - Divisional, Director Technical | Member |

This Organization served as focal point of coordinating the activities of the divisional office of the department of local government and rural development and the participating District Council. The project roads identified by the District Councils were approved by Divisional Coordination Committee (DCC), for inclusion in the Annual Programme.

2.6 District Councils:

The day to day responsibility for the project implementation rested with District Engineer's office, under the leadership of the Chairman of the District Council and Chief Officer.

2.7 Consultants:

M/S ACE (Pvt) Ltd, Karachi was assigned to provide A/E services for the project from April 1992 to November 1994 as per original contract. The Home office of the Consultants, headed by Project Manager was located in Karachi. Two field offices were also established, one at Hyderabad and the other at Sukkur. Both the offices were headed by Resident Engineers. The home office was mainly responsible for the preparation of design, drawing and Contract Documents for the projects and coordination with client and DCs. The field offices were mainly responsible for representing USAID in the bidding process, construction supervision, verification of contractors invoices and liaison with the district officials.

CHAPTER - 3

HOME OFFICE ACTIVITIES

3.0 HOME OFFICE ACTIVITIES

3.1 General:

The home office operating from Karachi has, after progressive reduction as per project manning schedule, currently, the services of the Project Manager, Deputy Design Engineer and Quantity Surveyor available to it. Fig. 3.1 shows the organizational setup of Home Office during the reporting period. The home office staff primarily had to take care of the design, project coordination and related activities, it also undertook frequent site visits, to gather firsthand information and to help field staff in scrutinizing and resolving issues pertaining to construction site.

3.2 Scope of Work:

The home office activities may broadly be categorized as under:

- Review of Existing Information
- Roads Identification & Selection
- Economic Feasibility of Road Project
- Design of Roads
- Tendering & Evaluation
- Support for Construction Supervision
- Submittals & Reports

3.3 Review of Existing Informations:

Considerable amount of work in connection with data collection and determination of project standards concerning planning, design, tendering, and construction supervision of road rehabilitation had already been done. Review and updating of this work performed already included;

- Review of all existing data, documents, reports, manuals and information related to the rehabilitation and upgradation of roads under the RRM Project. The information included:
 - i) Design criteria for rehabilitation of existing asphalt paved roads and construction of improved Katcha road.
 - ii) Data on:
 - a) Paved road network inventory of the Districts.
 - b) Road condition survey
 - c) Traffic survey and analysis etc.
 - d) Topographic Survey

ORGANIZATION CHART OF ACE CONSULTANTS FOR RRM PROJECT
HOME OFFICE - KARACHI

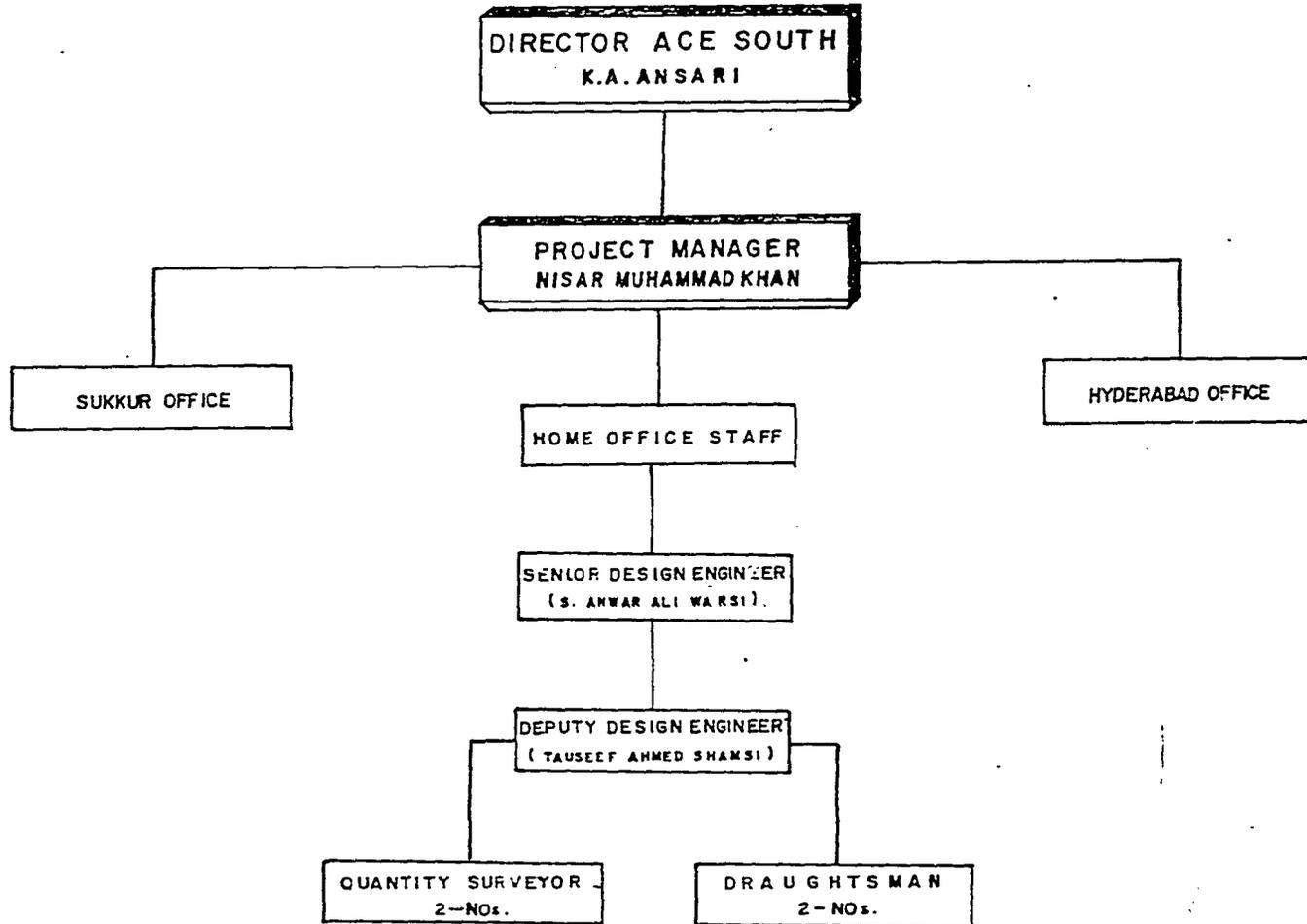


FIG. 3-1

- iii) Model for economic feasibility of road rehabilitation activity.
- iv) Specifications for rehabilitation.

The scope of work required recommendations for improvement in existing standard/criteria and their incorporation in project activities after approval from USAID.

Besides incorporating several minor improvement in the design standards and criteria, improved design standards for upgradation of katcha and brick paved roads were proposed. In this regard, several roads throughout the project area were upgraded incorporating these design standards.

During the reporting period traffic counts for all FY 1993-94 roads were conducted by the field staff. Previously traffic survey data for 3 different sources was available the sources were:

- 1989 traffic counts by CCSC
- 1992 traffic counts by DC (Six Districts)
- Traffic counts for FY 1992-93 roads by ACE

Analysis of the above data carried out at the home office included:

- Comparison of 1988-89 traffic counts (by CCSC) with the ACE 1992-93 counts.
- Comparison of CCSC traffic count results with the DC 1992, traffic counts.
- Recommendation about an appropriate traffic growth rate for the entire province. Because of the small sample size (only one or two roads in each district) and drastic changes in the nature of traffic flow, wide variations in the growth rates within and between the districts were observed. An annual growth rate of 10-12% was recommended.

Concluding all the above results of the latest traffic survey data based on FY 1993-94 programme roads a Traffic Survey Data Analysis Report was prepared and submitted to USAID on August 23, 1993, copy of which is attached with this report as Annexure - B.

No major changes in the field construction manual were felt warranted during the reporting period.

Like the field construction manual, no major changes were made in the specification for road rehabilitation works during the reporting period. However replacement

of well graded crushed aggregate with the gap graded ones, and the revision in the chip size for 1st coat of the DBST, introduced during the previous reporting period were retained.

Certain details were incorporated in the original specifications which were missing earlier (e.g. acceptable limits for various quality test results concerning construction material) in consultation with USAID officials.

3.4 Road Identification and Selection:

The district councils were asked to identify the roads for the year 1993-94 and were assisted by the field offices in Hyderabad and Sukkur. The selection of roads for rehabilitation with the project funds was based on their economic feasibility and their final approval from the District coordination committee (DCC).

The road condition survey and traffic counts as discussed earlier were conducted for all roads identified for the rehabilitation/ upgradation programme. Some of these roads were visited by the design engineers to assess the condition of road pavement, shoulders, embankments, drainage and other relevant features.

The consultants conducted Condition rating surveys (CRS) for all FY roads proposed by all district councils. The CRS for the FY 1991-92 roads were conducted in accordance with the 6 then existing condition rating criteria which classified road in five conditions, with condition 1 characterizing complete failure and condition 5 characterizing road in perfect/ideal condition. Roads in conditions 1 and 2 were, in general, considered eligible for rehabilitation while those having a condition rating of 3 or higher were considered maintainable. It was, however, observed that some roads/road sections despite being in condition 3 have pavement distresses like rutting and settlements and require rehabilitation. The above observations were incorporated in the condition rating criteria after consultation with USAID Project Engineer. Condition survey for all FY 1992-93 and FY 1993-94 roads were conducted in accordance with the revised criteria. During the reporting period CRS for a total number of 67 roads, having a total length of 148.06 kms, for the FY 1993-94 program, were conducted before the DCC meeting in July 1993. Furthermore, some additional roads were proposed for FY 1993-94 rehabilitation programme by the District Councils of Hyderabad, Mirpurkhas and Nawabshah for which condition survey for a total No. of 6 additional schemes having a total length of 19.61 kms after the

DCC meeting CRS for these roads were also conducted. Details of which are attached as Annexure - A roads proposed by the DCs alongwith their priority order (as determined by the DCs) and the eligible roads approved by the DCC are given as Annexure - A. Also included in Annexure - A are the roads proposed by some DCs after the DCC meeting.

Economic feasibility analysis based on approved economic appraisal model mentioned above was carried out. In all 67 road projects were considered for economic feasibility purpose out of which 53 were found Feasible. One (1) feasible road of district Nausheroferoz was included in FY 1992-93 program, having a total length of 8.00 kms. Out of the remaining roads only 6 numbers, 12.68 km in length, were taken up for rehabilitation programme of FY 1993-94 due to the early termination of RRM project.

The basic parameter considered for the economic feasibility analysis included cost of rehabilitation, and benefits quantified as savings in Vehicle Operating Cost (VOC). In case of upgradation schemes, Agricultural Valued Added (AVA) benefits were also included in the analysis. Field input data for the purpose included condition survey and traffic counts. Based on these data, savings that were expected to accrue in terms of reduced VOC over the design life of the scheme were gauntified employing the economic feasibility model. As the economic feasibility analysis generally preceded the detailed design, estimated cost of construction per km, based on prevailing market rates, was used for the analysis.

3.5 Approval of Roads:

After identifications of roads by the DCs, condition rating surveys and traffic counts were conducted. Based on the survey data and an estimated per Kilometer cost of construction and employing the economic feasibility model, the economic feasibility (or otherwise) of the road was established. The results of this excercise were submitted to USAID. The matter was then discussed in the Divisional Coordination Committee (DCC) meeting. During the reporting period a meeting of DCC to approve roads for rehabilitation and upgradation under the FY 1993-94 programme was held in the ACE Sukkur field office, on July 21, 1993. To facilitate a better understanding of these procedures a working paper was prepared by the consultant in consultation with USAID officials the consultant. The working paper was sent to all participants prior to the meeting providing them an overview of the activities being carried out under RRM project and the list of roads recommended by DC's for rehabilitation programme of FY 1993-94. In general

sufficient number of roads were identified by the districts and, therefore, for most of the districts selection of roads for FY 1993-94 was finalized during that meeting. However, in case of 3 districts i.e. Hyderabad, Nawabshah and Mirpurkhas, 6 additional roads were proposed by the district councils, afterwards. A Formal approval for these roads to be included in the FY 1993-94 rehabilitation programme was to be given by DGRD in line with the decision taken in the DCC meeting.

3.6 Design of Roads:

Input for design of roads generally included; condition rating, traffic count, topographic survey details and characteristics of sub-grade soil. The procedure for collection and analysis of data/information related to condition rating and traffic counts, has already been discussed in detail. Following paragraphs describe the procedure for topographic survey and soil investigations.

- For the economically feasible roads, ground surveys were conducted by the field staff. The details collected in the field included cross section and longitudinal sections and the location and type of existing drainage structures. The survey information was used to study the existing conditions and to propose improvements. In general, no change in the alignment were proposed unless where it was absolutely essential over a limited length. In some cases, to avoid inundation during floods, road profiles were raised, again over limited lengths. The most common improvement in cross sectional features was widening of shoulders to bring them to a minimum acceptable width of 4 ft on both sides, subject to availability of space. Besides repair of damaged existing structures, new drainage structures, where required, were proposed. In some case longitudinal lined/paved drains were also proposed to avoid potential damage (from running water) to the pavement. In some cases, especially, in lower Sindh, where terrain is flat, drainage of storm water is a problem. Providing cross drainage structures does not help much and other solutions (e.g, raising embankment or providing slope protection) cost high enough to render most of the rehabilitation/upgradation schemes economically infeasible.
- Soil investigation were conducted by the Design Engineers along with the field staff. The soaked CBR value of the existing sub-grade were assessed by inspection and verified by laboratory tests of

soil samples. Initially at least one sample for each road was being tested. However, during the reporting period at least one sample for each kilometer length of road, where the total length exceeds one kilometer was tested.

- The quarries were already identified and enough test results on (stone) material were performed in the past. Material testing was, therefore, limited to investigation for quality of material delivered on site. For borrow areas some samples were taken for all projects of FY 92-93 and FY 1993-94 road programme. Detailed investigation for borrow material is, however, contractor's responsibility who needs to get the approval of the soil for use in the embankment from the Resident Engineer(s). The borrow samples were taken to have a general idea of the soil within two Kms carriage and to check if that material could be used.

The design of pavement rehabilitation included determination of the overlay thickness which in turn depended on, the residual strength of the (existing) pavement, design traffic, and the subgrade design CBR value. Only commercial vehicles, (Trucks, Trailers, Tractor trolleys and buses) are taken into consideration for the purpose of pavement design. The traffic growth rates as estimated in the economic feasibility model are used for the purpose of traffic projection over the design life of the pavement, which is 10 years in this case.

Road Note 31, a Transport and Road Research Laboratory (TRRL) document, is used as the pavement design guide, in case where equivalent single axle load (ESAL) value was under 2.5 million, where it exceeded 2.5 million, AASHTO design Guide were used. Details of the design procedure may be seen in the Design Report (prepared by CCSC).

Once the plan and profile, pavement thicknesses, and other construction details were finalized, bill of quantities and cost estimates were prepared. Rates for various BOQ items were based on those given in the schedule of rates, Government of Sindh (GOS), 1983, after adding yearly escalation in prices. The rates thus arrived at were frequently checked by comparing them with prevailing market rates and any adjustments, if necessary, were made.

Specifications covering all items of work were also included in the tender documents package prepared for the DC to enable them to call tenders for any scheme. The specification enclosed with the tender documents, besides containing the general project specifications

also included supplemental specifications, if need be. This generally happened when a new item of work, not covered by the general specification, was included in the BOQ.

The complete set of tender documents sent to the DC for tendering purpose included:

- Location maps, showing exact position of the road.
- Final plan (if realigned) and profile with grade lines.
- Details and cross sections showing proposed improvement in the roadway cross section and pavement. Details concerning drainage structures were also included, where required.
- Details of work areas clearly identifying extent and nature of work in each segment of the road being rehabilitated.
- Unpriced BOQ on standard format including description of items, space for the bidder to quote his rates, and total cost for each item of work.
- Specification for all items of work including supplemental specifications, if required.
- Recommended total period of construction.
- A range of the estimated cost of project.

A similar package including all the above documents with rate analysis and estimated cost including contractors overhead and project were also submitted to USAID Project Engineer for all rehabilitation/ upgradation projects.

A total of 35 feasible road projects were taken up for design under FY 1992-93 programme. However, 2 schemes from Sukkur District were left out due to the inability of DC to call tenders within the stipulated time period. One (1) scheme in Khairpur (Road No. KH-GM-10) could not be implemented because of DCs inability to resolve the ROW acquisition problem.

Thus, a total of 33 schemes having a total length of 85.56 kms were launched into construction phase for FY 1992-93 programme.

A total of 32 feasible road project were taken up for design under FY 1993-94 program totalling to a length of 67.12 kms. Out of the 32 roads, one road of

Nausheroferoz District i.e. NF-KN-04, having a length of 8.00 km, was included in the FY 1992-93 programme. Designs for all other roads were completed by February 1994. Table 3.1 gives details of the status of design/other pre-construction activities for the FY 1993-94 roads.

3.7 Tendering and Evaluation:

The designs were dispatched to the DC's for review and advertisement of bids in newspapers with the condition that the bids will be opened in the DC's office in presence of the interested bidders and ACE (RRM) representative to ensure compliance with the requirements as per USAID handbook 11. Rest of the procedure was as follows.

- After evaluation of bids by DCs. A copy of the bids was dispatched by our RE's at Hyderabad/Sukkur to ACE Home Office. Bid evaluation was carried out by the Senior Design Engineer and the Project Manager who checked that the bids were balanced and the rates were acceptable.
- In case if any clarification and/or additional information concerning the bids were required, the matter was communicated to the District Engineer. This happened on several occasions and most of the DE's were helpful to quickly respond to the queries.
- The outcome of the entire tendering and evaluation exercise, handled by the DC and the consultants jointly, was to finalize the recommendation for award of work. The DCs prepared a comparative statement which was scrutinized by the consultant. This practice was aimed encouraging the district councils to evaluate bids independently after the completion of RRM Project.

3.8 Construction Supervision:

After the approval for award of work is given by the Director General Rural Development (DGRD) and the PIL issued by USAID, the DC issued work order to the contractor. The project consultant arrange a meeting with the District Engineer (DE) and the contractor at the project site where the contractor was asked to bring samples of construction materials for testing in laboratory. During the meeting the level of existing pavement and embankment were recorded jointly which was concurred by the contractor and was used as a reference for the further measurement of contractor's work. Once the construction work started at site the consultants field staff assumed the responsibility for

Table-3.1

ROAD RESOURCES MANAGEMENT PROJECT (RRMP)
STATUS OF DESIGN ACTIVITIES UNDER FISCAL YEAR 1993-94 PROGRAMME
AS OF APRIL 04, 1994

SR. NO.	DISTRICT (ALLOCATION)	BALANCE FUNDS OF FY 1994	ROAD NO./NAME/TARGET LENGTH	REHAB. LENGTH (IN KM)	ESTIMATED COST (Rs.)	TENDER DOCUMENT DISPATCHED	BID OPENING	BID RECEIVED BY ACE	TENDER AMOUNT (Rs.)	PIL AMOUNT (Rs.)	EVALUATION OF BIDS	REMARKS
A	2,741,052	(863,318)	DISTRICT BADIN: 2.75 KM.									
1			BA-M5 Haji Sawan Bus Stop To (PHASE-IV) Sami Ji Kabir Village.	1.00	2,522,998	08-12-93	25-1-94 / 16-3-94	27-1-94 / 17-3-94	3,604,370			After retendering, evaluation of bids underway.
B	2,038,922	(246,370)	DISTRICT DADU: 2.70 KM									
1			DA-DA-07 Paragoth-Phulp station Rd To Darshahani Panwar.	1.05	845,673	2-1-94	26-1-94	1-02-94	845,987		6-02-94	Bid recommended to DC for award of work.
2			DA-KI-06 Indus Highway to Garwan (Partly K.R. (1.16 KM)	2.20	1,441,786	2-1-94	26-1-94	1-02-94	1,439,305		6-02-94	Bid recommended to DC for award of work.
				3.25	2,290,459				2,285,292			
C	9,534,837	939,858	DISTRICT HYDERABAD: 12.70 KM									
1			HY-HA-15 National Highway to Panjmo. HY-HL-25 Hoot Sayal	2.55	1,819,081	05-10-93	30-11-93	01-12-93	1,880,427		12-12-93	PIL awarded
2			HY-MT-02 Masu Bhurghan to Jandal Kot HY-HL-08 Village	4.23	2,976,522	28-10-93	30-11-93	01-12-93	3,020,844	3,020,589	12-12-93	PIL Received
3			HY-TM-26 Hyderabad Math Road to TM-26 Wazid Duno Jagi	1.70	1,454,928	25-10-93	30-11-93	01-12-93	1,230,990		12-12-93 / 25-12-93	Second lowest bid has been recommended for award of Contract
4			HY-MT-03 Uderolal to Uderolal Dargah HY-HL-14 (4.43 KM B.P.)	6.80	672,126	25-11-93	30-11-93	01-12-93	730,818		12-12-93	PIL awarded
5			HY-TM-30 Tando Fazal Lined Rd. to TM-30 Lined Channel Rd. 137.	3.00	1,795,253	25-11-93	30-11-93	01-12-93	1,731,816	1,731,114	12-12-93	PIL Received
				12.37	8,670,940				8,594,979	4,752,643		
D	1,575,955	(1,033,015)	DISTRICT JACOBABAD: 2.06 KM									
1			JA-GK-01 M.Union Council To Larkana at Ghulam Shah. (K.R.)	2.00	2,427,457	11-11-93	21-2-94	22-2-94	2,608,970		24-2-94	Lowest bid has been recommended to DC for award of contract.

(D-56 REF: PRO/DS-93 WK4: PREP BY TAS)

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ROAD RESOURCES MANAGEMENT PROJECT (RRMP)
STATUS OF DESIGN ACTIVITIES UNDER FISCAL YEAR 1993-94 PROGRAMME
AS OF APRIL 04, 1994

SR. NO.	DISTRICT (ALLOCATION)	BALANCE FUNDS OF FY 93/94	ROAD NO. NAME TARGET LENGTH	REHAB. LENGTH IN KM	ESTIMATED COST (Rs.)	TENDER DOCUMENT DISPATCHED	BID OPENING	BID RECEIVED BY ACE	TENDER AMOUNT (Rs.)	PIL AMOUNT (Rs.)	DATE PREPARED		REMARKS
											EVALUATION OF BIDS		
E	3,004,752	3,004,752	DISTRICT KARACHI: 3.7KM										
F	2,271,777	(1,074,628)	DISTRICT KHAIRPUR: 3.0 KM										Comments from USAID on recently surveyed roads awaited.
1-a)			KH-KI-07 Ahmedpur Kharpur Road to Bhayoon Via Mithan: (Phase-I) (E.P.)	0.42	359,159	14-02-94	16-02-94	17-02-94	351,762			22-02-94	Lowest bid has been recommended to DC for award of contract.
1-b)			Phase-II) (E.P.) Gurus Village etc	0.91	658,430	14-02-94	16-02-94	17-02-94	677,080			22-02-94	- do -
2			KH-KJ-01 Ahmedpur Road to Dost (Phase-II) Muhammad Azeo Village (K.R.)	1.90	1,591,837	01-12-93	15-12-93 16-02-94	19-12-93 17-02-94	1676059			20-12-93 27-02-94	After re-tendering lowest bid has been recommended to DC for award of contract.
3			KH-GM-02 Setharja Bah road To (PHASE-II) Hungoria Mirsar (K.R.)	0.750	611,702	01-12-93	15-12-93	19-12-93	641,504	641,504		26-12-93	PIL Received
				3.98	3,231,128				3,346,405	641,504			
G	2,867,519	1,321,961	DISTRICT LARKANA: 3.5 KM										Identification of more roads by DC through DGFD is required
1			LA-DI-2c Road from Hazoon Tunoo Gul Muhammad Tunoo (K.R.)	1.20	1,519,921	15-11-93	13-02-94	15-02-94	1,276,808			16-02-94	Lowest bid 16% below the estimate, consultant asked for the rate analysis.
2			LA-DI-3c Moenjodaro Eateji Rd. To Village Dhand (K.F.)	0.250	342,629	15-11-93	13-02-94	15-02-94	268,750			16-02-94	Lowest bid 21.5% below the estimate, consultant asked for the rate analysis.
				1.45	1,862,550				1,545,558				

ID-56 F.F.M PRODS-93 WK4: PREP. BY TAS

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ROAD RESOURCES MANAGEMENT PROJECT (RRMP)
STATUS OF DESIGN ACTIVITIES UNDER FISCAL YEAR 1993-94 PROGRAMME
AS OF APRIL 04, 1994

SR. NO.	DISTRICT (ALLOCATION)	BALANCE FUNDS OF FY 93-94	ROAD NO./NAME/TARGET LENGTH	REHAB. LENGTH IN KM	ESTIMATED COST (Rs.)	TENDER DOCUMENT DISPATCHED	BID OPENING	BID RECEIVED BY ACE	TENDER AMOUNT (Rs.)	PIL AMOUNT (Rs.)	DATE PREPARED			
											EVALUATION OF BIDS	REMARKS		
H	2,327,131	(3,211,780)	DISTRICT NAUSHERO FEROZ: 3.1 KM											
			** NF-KN-04 NHW Kotri Kabir to Khanwan NA-24	8.00	4,511,046	15-11-93	24-11-93	25-11-93	5,241,795	5,241,795	09-12-93	Included in the Fy 92/93 Program PIL received		
			NF-KN-14 Kotri Kabir to Mehrapur NF-K-13K	2.32	1,872,167	14-10-93	04-11-93	06-11-93	1,946,027		17-11-93	PIL awaited		
1	2,629,607	116,921	DISTRICT NAWABSHAH: 3.5 KM	NF-MO-05 Link rd. Dibaqa to VII Malak	3.50	3,512,561	26-01-94	30-01-94	01-02-94	3,562,884		06-02-94	Lowest bid has been recommended to DC for award of contract.	
					5.82	5,384,728				5,538,911				
1	2,629,607	116,921	DISTRICT NAWABSHAH: 3.5 KM	NA-NA-14 KAZI AHMED TO BUCHERI NA-20 (PHASE-III)	3.00	2,409,565	05-11-93	17-11-93/ 18-01-94	18-11-93/ 19-01-94	1894544/ 2,612,636		23-01-94	Bid recommended to DC for approval.	
J	3,210,033	(2,282,637)	DISTRICT SANGHAR: 4.25 KM	SA-SA-05 Sanghar Klupro Road To SA-5M To Village Talit Junejo	0.63	605,916	11-11-93	15-11-93/ 15-02-94	16-11-93/ 16-02-94	533,761		20-11-93		
				SA-SH-04 Shidapur Road To Lundo SA-SH-22M Via Soomer Faqr Hungoro	3.00	2,251,991	16-10-93	15-11-93	16-11-93	2,462,271	2,462,272	20-03-94	20-11-93	Bid recommended to DC for approval
				SA-SA-05 Tande Mitha Khan to Vill Bakar SA-3M	1.00	2,310,553	23-01-94	15-02-94/ 23-03-94	16-02-94/ 24-03-94	2,496,704 2,795,439		02-03-94	20-11-93	PIL Received
				7.63	6,195,460				5,492,670	2,460,202				
K	1,399,992	(219,808)	DISTRICT SHIKARPUR: 1.85 KM	SH-SH-01 Shikarpur To Bonyanapar Via Janoo SH-69 Jano (PHASE-III)	1.800	1,146,721	26-10-93	28-02-94	02-03-94	1,143,879		17-03-94	Bid recommended to DC for approval.	
				SH-SH-05 Shikarpur Jacobabad Road To Dargha Humayoon Sharif (B.P)	0.450	495,730	15-11-93	28-02-94	02-03-94	475,921		25-03-94	Bid recommended to DC for approval	
					2.25	1,642,451				1,619,800				

ROAD RESOURCES MANAGEMENT PROJECT (RRMP)
STATUS OF DESIGN ACTIVITIES UNDER FISCAL YEAR 1993-94 PROGRAMME
AS OF APRIL 04, 1994

SR. NO.	DISTRICT (ALLOCATION)	BALANCE FUNDS OF FY 93/94	ROAD		ESTIMATED COST (Rs.)	TENDER DOCUMENT DISPATCHED	BID OPENING	BID RECEIVED BY ACE	TENDER AMOUNT (Rs.)	PIL AMOUNT (Rs.)	EVALUATION OF BIDS	REMARKS	
			NO./NAME/TARGET LENGTH	REHAB. LENGTH IN KM									
L	3,317,593	(1,008,777)	DISTRICT SUKKUR: 4.0 KM										
1			SU-GT-04	Baren Khanpur Road To Jwanghai Via Pir Bux Pirafli (B P)	3.73	2,506,246	23-11-93	12-12-93/ 16-03-94	20-03-94	2,775,301		02-04-94	Bid recommended to DC for Approval.
2			SU-38	Kandra Village To Begnagi (PHASE-II) (K.R.)	0.50	519,909	23-11-93	12-12-93/ 16-03-94	20-03-94	558,069		03-04-94	Bid recommended to DC for Approval
					4.23	4,026,155				4,326,370			
M	4,134,804	701,470	DISTRICT MIRPURKHAS: (5.5 KM)										
1			MK-MK-02	Sattelite Town To Mir Sher THR-3 M Village (0.2 KM) (K.R.)	0.65	829,867	22-10-92	15-02-93	16-02-93	877,490		25-02-93	Construction in Progress.
2			MK-MK-11	Zamundar Cotton Factory To Village Rasool Bus Dal	2.05	1,529,239	25-10-93	24-02-94	27-02-94	1,255,940 @		03-03-94	Asked for retendering, as the lowest bid is 17.6% below the estimate
3			MK-MK-17	5th M. Daulat Laghan To Village THR-MP-35 Rasool Bus Dal	1.9	1,729,354	23-11-93	24-02-94	27-02-94	1,525,904 @		03-03-94	Asked for retendering, as the lowest bid is 20.7% below the estimate
					4.60	4,088,460				3,433,334 *			
N	2,946,026	195,384	DISTRICT THATTA: (4.0 KM)										
1			TH-MS-10	National Highway Towards Pirdno Baloch Goth	2.00	1,451,712	30-11-93	06-12-93	07-12-93	1,155,115			Bid Evaluation in process. (Consultants ask for rate analysis from Contractors on 22nd Dec.)
2			TH-TH-17	National Highway To Model Village Sonda	1.00	659,713	30-11-93 *	06-12-93	07-12-93	627,747	640,747	14-12-93	PIL received
3			TH-SB-22	Bus Stop Stal. Yakeek To Dargha Shah Yakeek	0.95	969,669	30-11-93 #	06-12-93	07-12-93	914,772		14-12-93	Lowest bid recommended to DC for Approval
					3.95	3,081,094				2,750,634	640,747		
	44,000,002	(3,659,977)			59.12	49,196,450				39,334,682	7,853,612		

NOTE

+ - Projected dates
* - Tentative estimates
@ - Will be Retendered

NOTE

Length of I.R. = 9.40 KMS
Length of E.P. = 10.01 KMS
Total upgradation length = 19.41 kms

ABBR :

I.R. = Katcha Road
E.P. = Brick Paved

STATUS SUMMARY

TOTAL ROAD IDENTIFIED :
DESIGN DISPATCHED :
PROJECT TENDERED :
RECOM. FOR AWARD OF WORK :
UNDER CONSTRUCTION.

NUMBER LENGTH (KMS)

10 59.12
16 59.12
10 59.12
25 44.36
1 0.65

(D-56 RRM PRODS-93 WK-4 PREP. BY TAS)

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construction supervision. However, whenever required, office support was provided by the home office which included:

- Preparation and issuance of new/revised drawings wherever changes during construction were required. In general the need for change(s) was pointed out by the field staff. The Design Engineers visited the site if need be, and after discussion with the field staff finalize the revised drawings/details.
- Preparation and issuance of additional design details and/or drawing if details/drawings already provided needed to be supplemented.
- Review of invoices certified by the field engineers to ensure accuracy and completeness of all documents. This was considered necessary to ensure compliance with USAID requirements concerning approval and reimbursement of committed funds.

3.9 Submittals & Reports:

Besides the above activities, the home office was mainly responsible for the reporting requirements concerning all the project activities related to site supervision and design office.

During the last one year the Home office prepared & submitted the following submittal/reports related the project activities.

- 1 Analysis of the traffic survey data based on FY 1993-94 programme submitted on August 23, 1993. (ACE/RRM/1356).
- 2 DCC meeting for FY 1993-94. Input for working paper submitted on July 7, 1993.

Including methodology for and results of the economic analysis for FY 1993-94 roads.

- * Design Procedures
- * Typical economic analysis sheet
- * Typical project drawings & sketches.

- 3 Schedule of design activities for the completion of design work for FY 1993-94 programme roads, submitted on September 20, 1993.
- 4 Revised/updated schedule of design activities October 5, 1993

5 Monthly progress status of design and field office activities.

Alongwith the above mentioned activities, home office and field office staff continued to keep close coordination with USAID officials and GOS officials in addition to the DC officials. Furthermore, the home office of the consultant also assisted USAID officials for several of their in-house presentation as well as presentation to GOS/GOP officials regarding different project related activities.

CHAPTER - 4
FIELD OFFICE ACTIVITIES

4.0 FIELD OFFICE ACTIVITIES:

4.1 General:

To better control the overall project related field operations and to supervise the construction of the project roads, two field offices, one each in Hyderabad and Sukkur, had operative since April 1992. Each field office was headed by a Resident Engineer, who was assisted by four (4) Inspectors/Surveyors. The administrative support staff at each field office comprised one Administrative Officer/ Accountant and an Office Secretary. Project vehicles (10 nos. - 5 for each field office) were provided by USAID. Figs 4.1 and 4.2 show the organizational setup of Hyderabad and Sukkur field offices, respectively.

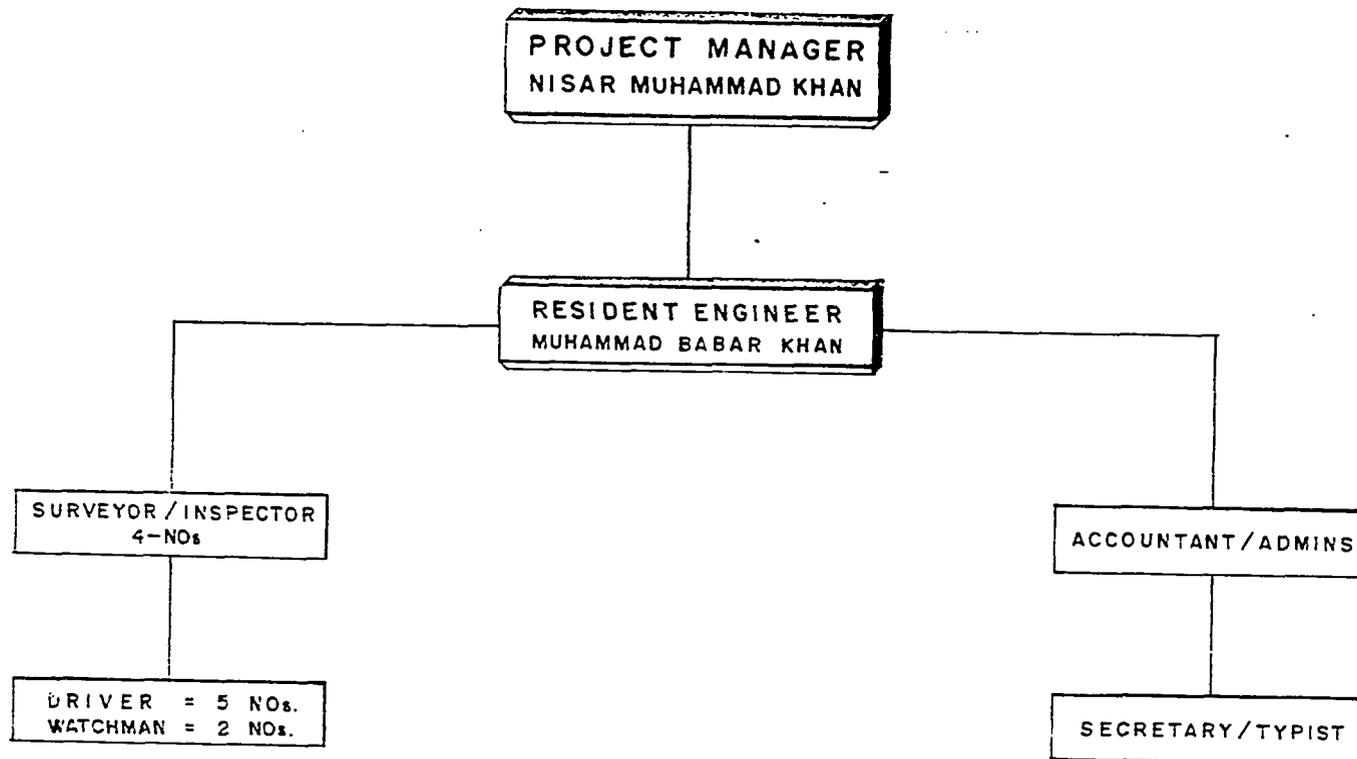
The scope of work for the field offices as per contract included:

- a. Re-adjusting the layouts and/or designs if such re-adjustments are considered necessary with prior USAID approval.
- b. Ensuring that the work is being carried out in strict accordance with final approved drawings, specifications and contract documents and in a diligent manner within the time schedule as approved by DCs and USAID.
- c. Communicating directly with the District Councils (DCs) to resolve all problems which may arise during the construction including but not limited to problems with locals and right-of-way issues.
- d. Ensuring proper selection and use of road construction materials in accordance with the approved specifications. Establishing testing program of materials of completed works, to be carried out at the approved materials testing laboratory or conducted by the Consultant staff and DC staff at the site.
- e. Recommending material substitution for DCs and USAID approval. This would include calculating the cost of such materials and keeping track of credits to be allowed in favor of DC or the construction contractor. Making appropriate adjustments in design, if necessary, due to such substitutions. Adjustments having a cost impact require advance written approval of DC and USAID.
- f. Holding meetings with DCs, GOP officials, USAID and construction contractor as and when required.

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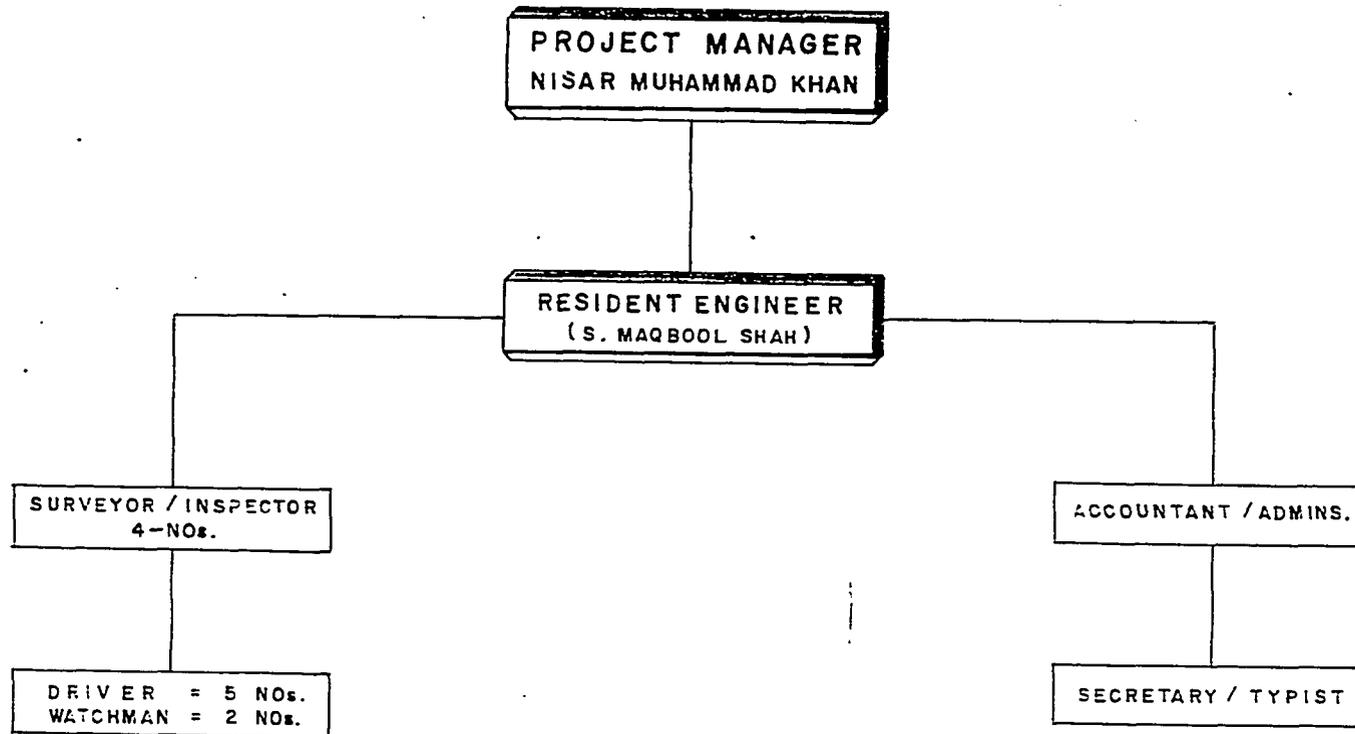
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ORGANIZATION CHART OF ACE CONSULTANTS FOR RRM PROJECT
(HYDERABAD DIVISION)



ORGANIZATION CHART OF ACE CONSULTANTS FOR RRM PROJECT

(SUKKUR DIVISION)



- g. Recommending to the DCs, suspension of the construction whenever plans and specifications are not being accurately implemented and suggesting action to be taken against defective construction.
- h. Ensuring the proper implementation of agreed to construction time schedule as per contract. Recommending to DCs and USAID, instances where time extensions are considered justified. In cases where the delays occur without justifications, recommend disallowances of time extension.
- i. Participate in the pre-construction conferences to be held by the DCs after the contract is awarded at which, the material and equipment requirements, construction quality standards, District Engineer and Consultant's supervisory role over the construction, Contractor's actual daily work have been discussed with the construction contractor. Prior to construction, cross section of existing road, if considerable time has elapsed since the survey for design, was taken also recorded.
- j. The Consultant's Resident Engineer and field staff shall meet with the Districts staff and construction contractor (or his authorized representative) periodically as required to agree on the work to be done in accordance with the terms and conditions of the construction contract.
- k. Maintaining a log of each site visit, giving brief descriptions of construction progress, meetings held, decisions recommended to District Engineer and other important events related to construction work.
- l. Maintaining a monthly record of work progress, per line item of the Bill of Quantities, and reviewing construction Contractor's progress payment invoices and recommending approval for payment.
- m. Monitor all measurements conducted by the District staff and the construction contractor of all completed work to be billed. Assisting the District Engineer in the preparation of all necessary documentation for claiming reimbursement from USAID.
- n. Preparing and recommending approval of construction contract's change order to DC and USAID. Ensuring the need for such change order and preparation of cost estimates based on the construction contract depending on the nature of the required change.

- o. Ensuring that the quality and quantity of personnel and equipment as assigned by the construction contractor to various tasks is commensurate with the job requirements.
- p. Providing continuous on-site supervision of construction to guard against defects and deficiencies in the working of the construction contractor.
- q. Assuring that the work has been completed in accordance with the requirements of the construction contracts and to the satisfaction of DC and USAID.

The above scope of work was aimed at ensuring proper quality control of all field construction activities and to maintain necessary progress monitoring and documentation standards. One of the project goals was to involve the District Council staff in all activities to achieve the above objectives. The field offices activities may, therefore, be broadly classified as:

- Coordination with concerned District Council staff.
- Construction quality control and verification of contractors invoices.
- Field support for home office:

4.1.1 Coordination with District Councils:

The District Councils are elected institution with an elected Chairman responsible for the overall functioning of the District Councils. To assist the Chairman of the DCs the Provincial Ministry of Local Government deposes certain staff in the field of administration, development works and finance etc. the Chief Officer is the administrative incharge of the district council. The District Engineer looks after the technical aspect of all development and maintenance works. The Finance Officer is responsible for the management of the District finance. The consultant's field staff had to coordinate with all of the above officials to varying extents. The key figure, however, was the District Engineer whose involvement and cooperation was essential for the smooth running of the project in the District.

Coordination with DCs had to starts at the early stage of roads identification. After establishing the economic feasibility and approval by the DCC,

design of roads were finalized and tender documents despatched to the DC(s) from the home office. The district Engineer would then invite tenders for the job. The Resident Engineers alongwith the DC staff informally briefed the interested bidders about the work, the project specifications, the procedure for measurement and payment and the quality control standards to be observed. The bids were opened in the presence of the consultant's representative. The DE(s) would prepare a comparative statement and forward it to the consultant's home office where the bid evaluation process was finalized and recommendation made about the award of work. If any clarifications and/or additional information was required, the field office staff would coordinate with the home office and the DC staff in that matter. After consultants evaluation of bids, DE(s) were required to recommend the bids for approval of USAID through the Director General Rural Development (DGRD). Subsequent to the issuance of Project Implementation Letter (PIL) by USAID work order for the job, was issued by the DC.

After award of work the Resident Engineer concerned used to arrange a preconstruction meeting in coordination with the District Engineer and other concerned DC staff to brief the contractor about the material and equipment requirements, construction quality standards, and the role of consultants and DC staff in connection with the handling of the project. The pre-construction meeting was generally followed by a joint visit to the project road site by all concerned.

After the pre-construction meeting the survey marks were shown to the contractor or his representative by the DE or his sub-engineers. The layout and extent of various field works were marked by the contractor and verified by the field staff. Re-adjustments in the layout and/or extents of works, where required, were noted by the field staff and were submitted to USAID through the home office. Such changes were incorporated in the Project documents and executed at site after USAID approval. During the past year a total of 43 road rehabilitation schemes went into construction phase out of which 2 required re-adjustments in project lengths/layouts and/or extent of various item of work. Most of these re-adjustments/changes were caused by circumstances out of control of all concerned parties.

For example stationing of Road No. HY-TM-02 had to be revised to include some deteriorated portion of the road and to exclude some length of the road near the end point that was maintained by the District Council. Similarly profile of a portion of road No. HY-TA-12, in Hyderabad District had to be revised to avoid potential flooding and some approaches to better connect the local streets with the project road had to be added on the demand of local residents.

In general ensuring compliance with the project drawings and specifications has been less difficult than achieving scheduled rates of progress at site. Several roads took longer than scheduled time to complete. A common trend observed in this connection is that the actual progress of work is achieved during the last phase of the contract with the contractors maintaining a very low level of activity during the initial stage of the contract. To discourage this practice, a formula to fix the time of construction was devised based on a one month per kilometer rate of construction, with a minimum construction period of 2 months. Several contracts for the FY 1992-93 program and all of 1993-94 program contracts were awarded on the basis of this time schedule. The practice helped reduce the delays to some extent.

Little problems with the locals were experienced. The project in general had a remarkable acceptance among the locals because of better quality control (than what is observed on jobs of other agencies) maintained on RRMP funded schemes. Some rehabilitation schemes that were economically feasible had to be abandoned because of Right of way problems. Some road rehabilitation and/or upgradation schemes had to be abandoned even after the design were ready on account of ROW problems. No such problem was, therefore, observed on schemes that were cleared for construction. Disputes concerning borrow material from areas adjacent to the roads were not uncommon, especially, if the land was cultivated. Progress sometimes did suffer to certain extent on this account but with the cooperation of DC staff and as a result of the field staff efforts the matter was resolved before it went out of hand. In some cases, again in cultivated areas, locals demanded cross drainage structures (pipe or box culverts) in larger nos. than were provided in the design. Such cases were reviewed on the basis of merit and

where justified and feasible, were referred to USAID for extra funds or were recommended to the DC for doing it with its own funds.

For the first few month of the project, services of a Material Engineer (ME) were available at the home office who visited most of the road sites identified for rehabilitation/upgradation by the DCs to locate sources of acceptable borrow earth material. Visits were also made to all the quarries in the province. Samples of soils and materials from all sources and quarries were tested in approved laboratories to establish their suitability (or other wise) for the project. Recommendations for use (or otherwise) of all construction materials were given on the basis of laboratory test results. The Resident Engineer and other concerned field staff also remained involved in the exercise and have, therefore, a sufficiently good idea of what is acceptable for the project. To ensure availability of suitable embankment material within reasonable haul range it was decided that the identification of sources for borrow material will be contractor's responsibility but the use of material from any source will be subject to the Resident Engineer's approval which in turn depends on laboratory test results. As all the quarries had already been identified and their material tested, no new quarry identification was involved for individual schemes. Samples of quarry material delivered at site were, however, required to be tested for quality control purpose.

Tests were also performed on completed works to ensure compliance with specification. Field density and drive cylinder methods were employed to test the compaction of earthwork. The frequency and acceptable limits of results were as described in the project specifications. Manufacturers certificates were considered sufficient for the quality control of manufactured items like cements, reinforcing steel and bitumen, etc.

To maintain close coordination with the DC staff the field staff routinely visited the DC offices. Meetings with other concerned Government of Sindh (GOS) officials were also arranged as and when needed. To ensure the project monitoring requirements close contacts with USAID Officials were maintained. Frequent progress review meetings were held at the field offices between the field office staff and USAID officials. Project Manager and other Senior home office staff also regularly participated in such meetings. On the average,

such meeting were held once a month at each field office. Telephonic contacts were much more frequent and help seek guidance from USAID officials on matters requiring their approval/involvement.

In the initial phase of the project there have been occasions when the contractors failed to comply with the project requirements and despite instructions to rectify some unacceptable works, required results could not be obtained. In such cases, as per relevant contract clauses, the Resident Engineer recommends suspension of work at site till such time that the defective work is rectified to acceptable standards. A more frequent occurrence was that of dumping unacceptable material at site. The Resident Engineer at his discretion got a sample of such material tested at the Laboratory and if found unsuitable advised the DC to ask the contractor to remove such material from the site. The DC in such cases were generally responsive and took timely action. However, there have been instances where the DCs were not able to take prompt or strong enough action against such contractors. The Resident Engineers did not certify payment for such works. However, during the last year of the project, things improved considerably and such instances became very uncommon.

Construction time during the initial phase of the project was determined by the District Councils as per their own procedures. As already explained, delays in completion were frequently observed. It was not a common practice in DCs to have contractors applying for formal extensions. The consultants repeatedly asked the DCs to formalize the process and were successful to a certain extent. Not only did the number of Schemes experiencing delays was reduced, the magnitude of such delays was also, in general became lesser than what was experienced before. Most of the contractor and the DC staff also complied the requirements for formalizing the procedure for extension in construction time.

A daily report register was maintained by both Resident Engineers to monitor the daily progress of work at Site. The daily report exclusively covered the entire range of activities at each road site. All Inspectors were required to submit daily reports to the Resident Engineer. The daily reports summarized the progress at site, and any other relevant information related to the projects.

Monthly progress of work on the basis of Bill of Quantity items was maintained by the Resident Engineers. The Resident Engineers also reported the progress on weekly basis to the Home Office, and the information was further passed on to USAID. These weekly progress reports gave weekly status of completed and acceptable work at site as percentage of total contract cost.

An important assignment for the supervisory staff was to monitor and verify measurements of all completed works to be billed. To avoid duplication of efforts and any potential disagreement, joint measurements with the DC staff and contractors were conducted in several cases. The billing procedure for reimbursement from USAID involved preparation of various necessary documents. The DC staff required assistance from the consultant's field staff in the preparation of those documents which was routinely provided. The supervisory staff also coordinated with the USAID officials in case if any clarification were required by them. With the DC staff having handled several contracts under the RRM Project, the process, in general, become well streamlined.

In some cases because of some unforeseen circumstances and/or change in conditions at site, revisions in the contractor's scope of work become necessary. These revisions were in the form of variation in quantities of one or more BOQ items and/or addition or deletion of one or more items in the BOQ. During the past year a total of Deviation Statements were prepared by the DEs and Resident Engineers and recommended for approval to the DC and USAID. In general the field supervisory staff, after assessing the requirements for such revisions/change orders intimated the consultants home office and USAID. In general, the excess quantities were paid at the contractors bid rates. It is the amount in excess of the original contract amount for which the DEs & REs prepared a change order/Deviation statement. In general, the amount of change/deviation used to be such that it was entirely met within the allocated contingency amount. Where it exceeded the contingency amount efforts were made to pursue the DC to arrange the balance amount from their own sources. The instances where change orders were required however, have not been numerous which gave USAID enough confidence not to allocate any contingency amount in the PILs, during the later stage of the project.

The field supervisory staff had to make efforts to ensure that the contractor has acceptable and sufficient human resources and equipment to complete the job in a satisfactory manner within the stipulated time for construction. There have been little complaints about lack of skilled or unskilled manpower, a reasonable number of which remained available, in general, where the law and order situation was not bad. It was, however, the supervisory and managerial level of human resources where some deficiency is felt but this was compensated to a considerable extent by the personal presence of the contractors at site, most of the time. In general, road rehabilitation work under RRM Project was labour intensive, which is fairly logical given the size and amount of contracts. The main piece of equipment employed on these jobs was the road roller, at least one of which was present at all sites for the compaction of earthwork, base course and surface dressing coats. Tractor trolley was another versatile piece of equipment which used to be employed for a number of activities ranging from haulage of borrow material to initial compaction of shoulders. Asphalt heating and spraying devices were also used at all sites. Most of the contractors owned the Asphalt heating and spraying devices, a sizable number of them had their own tractor trolleys and some had their own rollers and trucks. Self owned or hired, availability of these machines had seldom been a problem.

Members of supervisory staff regularly visited roads under construction, and no important construction activity was allowed to proceed without prior intimation to them and/or without their presence. Supervision started from the day contractors unloaded and stock piled material at site. The quality of material since then onward was closely watched throughout the construction work. Identification of borrow area was contractor's responsibility but the material prior to its use at site was required to be tested and approved by the REs. Manufacturer's certificate for manufactured/ processed items like cement, reinforcing steel and asphalt were required for approval of their use. Compaction of earthwork was tested by field density/drive cylinder method, both of which were specified as acceptable. Required degrees of compaction for various layers of earthwork were also specified and observed at site. Laying and compaction of base course was thoroughly supervised making sure that no voids were left and there was no excessive crushing of aggregates under the roller drum. Spraying of

asphalt, spreading of chips and subsequent rolling operations were all supervised with even greater care. Proper temperature of asphalt was always maintained, required rate of sprays were ensured and the compaction was carried out for an acceptable duration such that no roller marks were visible after proof rolling.

All the above efforts were aimed at assuring that the work has been completed in accordance with the requirements of the construction contracts, specification, good engineering practice, and to the satisfaction of the DC and USAID. The fact that the roads rehabilitated under the program stand out prominently in the network, and that a vast majority of them has smooth riding quality unexperienced anywhere else on the district roads network, gives necessary confidence about the quality of construction, and that the roads will survive satisfactorily for their entire design life, if properly maintained.

4.2 Hyderabad Field Office Activities:

4.2.1 General:

The Hyderabad field office located in Hyderabad city was responsible for rehabilitation related field operations under the RRM Project in the following Seven (7) DCs in Southern Sindh.

- Badin
- Hyderabad
- Karachi
- Nawabshah
- Mirpurkhas
- Sanghar
- Thatta

As already explained their range of activities covered all field work for design, coordination with DC(s), supervision of construction work for quality control and verification of measurements and invoices prepared by the DCs for reimbursement by USAID.

4.2.2 Activities During July 1993 - July 1994:

In July 1993, four (4) roads of FY 1991-92 programme and ten (10) roads of FY 1992-93 programme were under construction. Work orders for four (4) roads of FY 1992-93 programme were issued but the construction work was yet to be started. Another three (3) schemes of FY 1992-93 programme were in various pre-construction stages.

Construction on all these schemes started later in the reporting period.

Based on the information provided by the field offices, feasibility analysis of the candidate roads was carried out by the home office the results of which were summarized in the working paper prepared for the Divisional Coordination Committee (DCC) meeting held on July 21, 1994 at Sukkur. After the DCC approval field office staff carried out detailed/topographic survey of the selected roads design for which were prepared by the home office staff and were dispatched to the respective DC for tendering. After tendering and bid evaluation the recommendations were forwarded to USAID for commitment of funds. USAID commitments are issued in the form of Project Implementation letter, (PIL). After receiving the PIL the respective DC issues work order to the successful bidder.

Details of activities of the Hyderabad field office on Financial Year as well as District basis are given in the following sub-sections.

4.2.3 Activities on Financial Year Basis:

The activities on Financial Year (FY) basis may be grouped as follows:

- FY 1989-90 Program
- FY 1991-92 Program
- FY 1992-93 Program
- FY 1993-94 Program

FY 1989-90 Program:

A total of 21 schemes with a total length of 33.17 km were approved for rehabilitation/upgradation under the FY 1989-90 program. By July 1993, all 12 schemes falling in districts supervised by Hyderabad office were completed. Table 4.1 gives details of these schemes and the final status.

FY 1991-92 Program:

A total of 21 schemes with a total length of 44.906 km were approved for rehabilitation/upgradation under FY 1991-92 program. Of these, 12 schemes with a total length of 28.63 kms were in districts being supervised by Hyderabad office. By June 1993, construction work on a total of eight (8) roads of the FY 1991-92 program has been completed, the remaining roads were under construction and were completed in the following

TABLE-4.1

ROAD RESOURCES MANAGEMENT (RRM) PROJECT,
391-480
STATUS OF REHABILITATION PROGRAM FY 1989-90

NAME OF DISTRICT	ROAD NO.	ROAD NAME	REHAB. LENGTH (KM)	CONTRACT AMOUNT	STATUS
Sanghar	SA-7H	Jamraohead-Chak No.4	1.00	754,225	Contract Closed
	SA-24K	SGR SHDour road - Khairo Kalio	1.10	531,059	Contract Closed
		Total Sanghar	2.10	1,285,284	
Mirpurkhas	MHR-13	Mirwah Kot - Hashia Bhurgari	1.55	607,276	Contract Closed
	MHR-2	MPK - Mirsher H. Village	0.80	678,917	Contract Closed
	MHR-15	Umar Kot Chore Rd - Barghah Syed	0.84	470,496	Contract Closed
	Total Mirpurkhas	3.19	1,756,689		
Badin	BA-M-5	H.S. Bus stand - Sami Ji Kabar	1.05	1,264,284	Contract Closed
Dadu	DA-D6	NHWY - Dadu Munder Naka	2.64	1,716,174	Contract Closed
Hyderabad	HY-HL-24	NHWY - Ilyas Abrejo	1.40	1,210,556	Contract Closed
	HY-HL-7	Hala SHDour Rd. - Karan Mizamani	3.55	2,058,044	Contract Closed
	HY-HL-1	Jandoodan Rd. - Sher M. Ichora	1.55	956,529	Contract Closed
	Total Hyderabad	6.50	4,225,129		
Karachi	KA-6	Internal Rd. - Ibrahim Hyderi	0.60	201,294	Contract Closed
	KA-8N	Razakabad - Lashari Village	1.60	1,556,766	Contract Closed
	Total Karachi	2.20	1,758,060		
Larkana	LA-1	Hatti-Mud Bahu	2.10	1,299,049	Contract Closed
Khairpur	G-4	Nigorja Sagyoan - Mau Goth	2.30	1,458,886	Contract Closed
Shikarpur	SH-1	Takhi - Wazirabad	1.80	550,070	Contract Closed
Thatta	TH-SU-12	Sujawal Bye-Pass-Village Bhatti	2.15	1,377,539	Contract Closed
Hausherotero	HA-23	Xandiaro - Xawal Mehsar	3.70	2,175,520	Contract Closed
Sukkur	SU-163	NHWAY - Sardar M. Goth	2.62	1,559,465	Contract Closed
Jacobabad	JA(H)5	Buxapur Post - Dewbki Rice Mill	0.50	305,487	Contract Closed
	JA(H)6	Kashmore Rd. - Village Hano	0.55	273,740	Contract Closed
	JA(H)8	Ihull Rd. Village chandan	0.23	124,671	Contract Closed
	Total Jacobabad	1.08	653,898		
Total			35.43	21,077,867	Overall progress 100%

(D-66 COR-141.WK1 K.S.)

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months. Table 4.2a gives details of these schemes and their status. Invoices amounting to Rs.19,760,272/- were certified for reimbursement against FY 1991-92 funds by the Hyderabad office uptill June 1994.

FY 1992-93 Program:

A total of 35 schemes with a total length of 90.19 km were approved for rehabilitation/upgradation under FY 1992-93 program. However, 33 schemes with a total length of 85.56 actually went for construction. 18 of these schemes with a total length of 54.78 km were in districts to be handled by Hyderabad office. By June 1993, construction work on one (1) of these roads has been completed, construction for ten (10) roads was on-going. Work orders for four (4) schemes have been awarded but construction work was yet to start. Another three (3) were in various pre-construction stages. Construction work on all these FY 1992-93 programme roads started in the following months and was completed before June 1994. Table 4.3a gives details of these schemes and their current status. Invoices amounting to Rs.33,311,350/- were certified for reimbursement against FY 1992-93 funds by the Hyderabad office uptill June 1993.

FY 1993-94 Program:

A total of 55 roads were identified by the Seven (7) District Councils handled from Hyderabad. After condition Survey and Traffic Count, 35 out of them were found feasible. All feasible roads were approved by the DCC meeting held at Sukkur on July 21, 1994.

A total of 16 roads having a total length of 35.55 km were taken up for detailed design - The Hyderabad field office staff carried out topographic surveys of these road which were used for design purpose by the home office staff. No roads in Karachi District could be designed because of the inability of the DC to identify roads free of land acquisition and utility relocation problem. The roads designed included: One (1) in Badin, five (5) in Hyderabad, three (3) in Mirpurkhas, One (1) in Nawabshah, three (3) in Sanghar and three (3) in Thatta districts. Design for all above roads were dispatched by Dec.93/June 1994. District Councils tendered/retendered all of these 16 roads. After bid evaluation recommendation for award of work were made by the consultants for eleven (11) roads: 5 in Hyderabad, 1 in Nawabshah, 2 in Sanghar, 1 in Mirpurkhas and

2 in Thatta district. Total length of these road recommended for award of work by the consultant was 21.6 km. PILs for five (5) of these roads. 2 in Hyderabad and one each in Mirpurkhas, Sanghar and Thatta district, having a total length of 11.95 km were issued by USAID. Construction of all these roads was completed by/before June 30, 1994. Tabel 4.3(c) gives details of these Schemes and their status.

4.2.4 . Activities on District Basis:

District Badin:

7.55 km length of road No. BA-M5, has been rehabilitated in the district under the RRM program. The rehabilitation work was undertaken in three phases. In Phase-I 1.05 km length of road was rehabilitated under FY 1989-90 program. Work on Phase-I was already completed when ACE took over in April 1992. Another 2.30 km length was rehabilitated (Phase-II) under FY 1991-92 program. This road was partially supervised by the supervisory staff of Hyderabad office. A length of 4.2 km of the same road was taken up for rehabilitation under FY 1992-93 program. Work on all Phases has been completed. Another 4.0 km of the same road no. BA-M5 was taken up for rehabilitation under FY 1993-94 programme. Preconstruction activities for the road were going on when USAID decided to terminate the project. Table 4.4 gives details of RRMP funded work in the district.

District Hyderabad:

A total length of 48.31 km comprising 17 roads has been rehabilitated under the RRM Program in the District. Of these three (3) roads totalling 6.50 km were rehabilitated under FY 1989-90 program, and another six (6) roads totalling 14.18 km were taken up for rehabilitated under FY1991-92 Programe. Under FY 1992-93 program six (6) roads with a total length of 20.40 km were rehabilitated. Two (2) roads with a total length of 7.23 km were rehabilitated under FY 1993-94 programme. Recommendation for award of work for another three (3) roads (5.14 km) were made but construction could not start because of USAID decision to terminate the project. Table 4.5 gives details of RRMP funded works in the district.

District Karachi:

A total length of 8.70 km comprising 6 roads has been taken up for rehabilitation under the RRM

ROAD RESOURCES MANAGEMENT (RRM) PROJECT
(HYDERABAD OFFICE)

Table-4.2a

PROGRESS STATUS OF ROAD REHABILITATION ACTIVITIES
UNDER FY 1991-92 PROGRAM

(UPIILL 30TH JUNE 1994)

DATE PREPARED
14 July 94

NAME OF DISTRICT/ ALLOCATION	ROAD NO./ PROJECT LENGTH (KM)	ESTIMATED COST (Rs)	BID OPENING DATE	USAID APPROVAL PIL DATE/AMOUNT (Rs)	D.C AWARDS CONTRACT DATE/AMOUNT (Rs)	CONSTRUCTION PERIOD	CURRENT PROGRESS STATUS/ (COMPL. DATE)	REMARKS
SANGHAR (2,241,186)	SA-24H PHASE-II (3.50)	2,011,558	24-Apr-91	01-Apr 2,470,130	19-Apr 2,352,505	06 Months	Completed. 21-Oct-93	Contract Closed
MIRPURKHAS (2,886,847)	THR-MP21 (4.75)	2,558,777	20-May-91	01-Apr 2,832,718	18-Apr 2,697,827	06 Months	completed. 03-Mar-93	Contract Closed
BADIN (2,200,000)	BA-M5 PHASE-II (2.30)	1,667,507	16-Jun-91	04-Dec 2,113,669	29-Dec 1,921,517	04 Months	completed. 02-Feb-93	Contract Closed
HAMABSHAH (1,835,944)	HA-20 (3.00)	1,643,926	15-May 07-Aug	01-Apr 1,894,779	19-Apr 1804551	06 Months	completed. 15-Mar-93	Contract Closed
KARACHI (2,097,863)	KA-8N KA-1 (0.90)	 290,329	 05-May	 05-Nov 355,479	 24-Nov-92 338,551	 01 Month	 completed May 1994	Completed before ACE took over. Rehabilitation work has been completed.
HYDERABAD (6,657,049)	HY-HY-8(I) (3.00)	1,240,753	16-Jan-92	01-Apr 1,616,040	15-Apr 1,539,086	06 Months	completed. 07-Mar-93	Contract Closed
	HY-HY-8(II) (1.35)	711,616	09-Feb-93	12-May-93 728,137	728,137	04 Months	completed April 1994	Rehabilitation work has been completed.
	HY-HY-9 (2.40)	1,407,497	16-Jan-92	01-Apr 1,758,862	15-Apr 1,657,107	06 Months	completed. 07-Mar-93	Contract Closed
	HY-3N (2.35)	1,355,515	16-Jan-92	01-Apr 1,534,061	22-Apr 1,461,582	06 Months	completed. 16-Aug-93	Rehabilitation work has been completed.
	HY-6N (0.88)	530,867	16-Jan-92	01-Apr 649,346	15-Apr 618,425	03 Months	completed. 14-Dec-92	Contract Closed
	HY-15N (4.20)	1,514,229	05-Jul-92	20-Oct 1,969,540	26-Oct 1,875,752	04 Months	completed. 15-Aug-93	Contract Closed

ROAD RESOURCES MANAGEMENT (RRM) PROJECT
(HYDRABAD OFFICE)

Table-4.3a

PROGRESS STATUS OF ROAD REHABILITATION ACTIVITIES
UNDER FY 1992-93 PROGRAM

(UNTIL 30TH JUNE 1993)

DATE PREPARED
16-Jul-94

RANK OF DISTRICT/ALLOCATION	ROAD NO./PROJECT LENGTH (KM)	ESTIMATED COST (Rs)	BID OPENING DATE	USAID APPROVAL P/L DATE/AMOUNT (Rs)	D.C AWARDS CONTRACT DATE/AMOUNT (Rs)	CONSTRUCTION PERIOD	CURRENT PROGRESS STATUS/ (COMPL. DATE)	REMARKS
SANGHAR (4,373,669)	SH-24N (1.86)	1,517,895	16-Nov-92	07-Feb-93 1,726,457	10-Feb-93 1,644,245	03 Months	Completed 19-Jul-1993	Contract Closed
	SA-2 (0.85)	709,182	21-Dec-92	07-Feb-93 776,787	28-Feb-93 739,797	04 Months	Completed 29-Dec-1993	Contract Closed
	SH-22N (3.00)	1,796,036	14-Feb-93	28-Apr-93 2,015,923	09-May-93 2,015,923	04 Months	Completed 30-May-1994	Completed
MIKPURKHAS (5,633,670)	THR-10 (3.39)	2,292,371	15-Feb-93	30-Jul-92 2,275,997	08-Apr-93 2,275,997	06 Months	Completed 05-Jan-1994	Contract Closed
	THR-S-52 (4.50)	1,430,698	15-Feb-93	30-Jul-92 1,492,121	08-Apr-93 1,492,121	08 Months	Completed May-1994	Completed
BADIN (3,734,683)	BA-N5 (4.20)	3,543,041	12-Dec-92	10-Feb-1993 3,738,571	06-Apr-93 3,560,553	10 Months	Completed May-1994	Completed
NAWAOSHAN (3,582,840)	NA-SA-18 (3.00) (Revised)	1,913,339	13-Dec-93	16-Mar-93 1,825,261	04-May-93 1,825,261	06 Months	Completed 13-Oct-1993	Contract Closed
	NA-20 (2.50)	1,595,925	27-Apr-93	14-Jun-93 1,725,414	23-Jan-1993 1,725,413	04 Months	Completed 03-Jan-1994	Contract Closed
KANACHI (4,093,975)	KA-51 (3.00)	1,448,851	15-Jun-92	18-Oct-92 1,430,896	28-Oct-92 1,347,008	02 Months	Completed May-1994	Completed
	KA-WY-02 (1.00)	658,857	10-Jan-93	28-Apr-93 596,249	12-May-93 596,249	02 Months	Completed May-1994	Completed

{D-66 CON-T43A.WKI H.S}

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ROAD RESOURCES MANAGEMENT (RRM) PROJECT
(HYDERABAD OFFICE)

Table-4.3a

PROGRESS STATUS OF ROAD REHABILITATION ACTIVITIES
UNDER FY 1992-93 PROGRAM

(UNTIL 30TH JUNE 1993)

DATE PREPARED
16-Jul-94

NAME OF DISTRICT/ ALLOCATION	ROAD NO./ PROJECT LENGTH (KM)	ESTIMATED COST (Rs)	HID OPENING DATE	USAID APPROVAL FILE DATE/AMOUNT (Rs)	D.C AWARDS CONTRACT DATE/AMOUNT (Rs)	CONSTRUC- TION PERIOD	CURRENT PROGRESS STATUS/ (COMPL. DATE)	REMARKS
THATTA (4,013,963)	TH-14 (3.50)	2,196,430	22-Apr-93	08-Jul-1993 2,274,166	11-Jul-1993 2,274,164	04 Months	Completed June 1994	Completed
	TH-27 (3.63)	1,769,750	29-Apr-93	08-Jul-1993 1,844,322	11-Jul-1993 1,844,322	04 Months	Completed May-1994	Completed
HYDERABAD (12,991,215)	HY-HY-21 (2.00)	934,485	15-Nov-92	28-Dec-92 1,027,843	03-Feb-93 1,027,843	04 Months	Completed 18-Aug-1993	Contract Closed
	HY-HL-15 (3.00)	1,057,416	15-Nov-92	28-Dec-92 1,162,370	03-Feb-93 1,162,370	04 Months	Completed 01-Aug-1993	Contract Closed
	HY-HY-14 (2.50)	1,398,084	15-Nov-92	28-Dec-92 1,496,012	03-Feb-93 1,496,012	04 Months	Completed 22-Jun-93	Contract Closed
	HY-HL-22 (1.80)	1,708,559	14-Nov-92 09-Feb-93	16-Mar-93 1,299,768	22-Mar-93 1,299,768	04 Months	Completed Dec. 1993	Contract Closed
	HY-TA-12 (8.29)	5,864,355	20-Nov-92	16-Mar-93 6,219,487	22-Mar-93 6,239,487	09 Months	Completed Feb. 1994	Completed
	HY-13N (2.80)	1,783,718	01-Aug-199	08-Sep-1993 1,823,239	25-Oct-1993 1,823,239	06 Months	Completed April 1994	Completed

(D-66 CUR-T43A.WKI H.S)

PROGRESS STATUS OF ROAD REHABILITATION ACTIVITIES
 UNDER FY 1993-94 PROGRAMME
 (IN HYDERABAD OFFICE)

Table-4.3(c)

SR. No.	NAME OF DISTRICT	ROAD No PROJECT LENGTH (KM)	ESTIMATED COST (Rs)	BID OPENING DATE	USAID APPROVAL FILE DATE/ AMOUNT IN (Rs)	DC AWARD CONTRACT DATE	CONSTRUCTION PERIOD (MONTH)	CURRENT PROG. STATUS (COMPL. DATE)	REMARKS
A HYDERABAD									
1		HY-MT-02 (4.225)	2,219,719	30-11-1993	17-FEB-1994 3,020,845	20-03-1994 3,020,845	4	COMPLETED 30-JUN-1994	FINAL MEASUREMENT/ INVOICE UNDERWAY
2		HY-TK-30 (3.05)	2,079,000	30-11-1993	17-FEB-1994 1,731,814	28-03-1994 1,731,814	4	COMPLETED 30-JUN-1994	-DD-
B NIKYUKKAS									
3		TKR-3 (0.675)	827,490	25-01-1993	04-OCT-1993 827,490	30-10-1993 827,490	4	COMPLETED	CONTRACT CLOSED
C SANGHAN									
4		SA-SH-22M (3.0) (11)	2,156,482	15-11-1993	12-FEB-1994 2,460,202	28-02-1994 2,460,202	3	COMPLETED 05-JUN-1994	SECURITY DEPOSIT TO BE RELEASED
D THATTA									
5		TH-TB-17 (1.6)	651,400	06-12-1993	17-FEB-1994 665,422	05-03-1994 665,422	4	COMPLETED 15-JUN-1994	CONTRACT CLOSED
TOTAL 5 Nos. ROAD PROJECTS.					----- 8,705,773 -----				

Program in the District. Of these two (2) roads totalling 2.2 km were rehabilitated under FY 1989-90 program. Another two (2) roads with a length of 2.5 km were taken up for rehabilitation under FY 1991-92 program. Under FY 1992-93 program two (2) roads with a length of 4.0 km were rehabilitated. Work on all these schemes has been completed. The program in this district faced some problems. Roads identified by the DC for the FY 1993-94 programme could not be taken up for rehabilitation because of right of way and utilities problems. The DE was requested to identify other roads in place of them but none were identified. Funds allocated to the district for FY 1992-93 also could not be fully utilized because of lack of identification of feasible schemes by the DC. Table 4.6 gives details of RRMP funded works in the district.

District Mirpurkhas:

A total length of 16.505 km comprising seven (7) roads has been rehabilitated under the RRM Program in the District. Of these, 3 roads with a total length of 3.19 km were rehabilitated under FY 1989-90 program. Another road with a length of 4.75 km was rehabilitated under FY 1991-92 program. For FY 1992-93 program two (2) roads with a length of 7.89 km were rehabilitated. Construction work on all these roads has been completed. Construction work for one (1) FY 1993-94 road has also been completed. Tendering for two roads (3.95 km) was in process when USAID decided to terminate the project. Table 4.7 gives details of RRM project funded roads in the District.

District Nawabshah:

A total length of 8.55 km comprising three (3) roads has been rehabilitated under the RRM Program in the District. Of them one (1) road with a length of 3.0 km was rehabilitated under FY 1991-92 program and two (2) roads with a total length of 5.5 km were rehabilitated under FY 1992-93 program. Construction work on all of these roads has been completed. Recommendation for award of work for one (1) road having a length of 3.0 km under FY 1993-94 programme was made by the consultant when USAID decided to terminate the project. Table 4.8 gives details of RRMP funded rehabilitation works in the district.

District Sanghar:

A total length of 14.3 km comprising seven (7) roads has rehabilitated under the RRM Program in the District. Of these two (2) roads totalling 2.1 km were rehabilitated under FY 1989-90 Program. Another road with a length of 3.5 km was rehabilitated under FY 1991-92 program. For the FY 1992-93 program three (3) roads having a length of 5.7 km were rehabilitated. Work on all of these roads has been completed. Construction work for one (1) of the FY 1993-94 roads having a length of 3.0 km has also been completed. Recommendation for award of work had been issued for one road and another was in tendering process when USAID decided to terminate the project. Table 4.9 gives details of RRM funded roads in the District.

District Thatta:

A total length of 10.28 km comprising 4 roads has been rehabilitated under the RRM program in the District. Of these one road with a length of 2.15 km was rehabilitated under FY 1989-90 program. No funds for rehabilitation of roads in the district were allocated by USAID in FY 1991-92 because the district failed to achieve its target for road maintenance in the previous year. Two roads with a total length of 7.13 km were rehabilitated under the FY 1992-93 program in the district. Construction work on one (1) road of FY 1993-94 road rehabilitation programme has been completed. Two (2) other roads of FY 1993-94 program were in various pre-construction stages when USAID decided to termination the project. Table 4.10 gives details of RRMP funded rehabilitation works in the district.

TABLE-4.4

**ROAD RESOURCES MANAGEMENT (RRM) PROJECT,
STATUS OF REHABILITATION PROGRAM FOR DISTRICT BADIN**

FINANCIAL YEAR	ROAD NO.	ROAD NAME	REHAB. LENGTH (KM)	CONTRACT AMOUNT	STATUS
1989-90	BA-N-5(1)	H.S. Bus stand - Sani Ji Kabar	1.05	1,264,284	Contract Closed
1991-92	BA-N-5(II)	H.S. Bus stand - Sani Ji Kabar	2.30	1,921,517	Contract Closed
1992-93	BA-N-5(III)	H.S. Bus stand - Sani Ji Kabar	4.20	3,560,553	Completed.
1993-94	BA-N-5(IV)	H.S. Bus stand - Sani Ji Kabar	4.00	-	Could not be taken up because of termination of project by USAID.
TOTAL			7.55	6,746,354	

* Only completed length

(D-66 COR-1A44.VK1 N.S)

**ROAD RESOURCES MANAGEMENT (RRM) PROJECT,
STATUS OF REHABILITATION PROGRAM FOR DISTRICT HYDERABAD**

FINANCIAL YEAR	ROAD NO.	ROAD NAME	REHAB. LENGTH (KM)	CONTRACT AMOUNT	STATUS
1989-90	HY-HL-24	MHWY - Ilyas Abrejo	1.40	1,210,556	Contract Closed
	HY-HL-7	Hala SHDpur Rd. - Karam Mizawani	3.55	2,058,044	Contract Closed
	HY-HL-1	landoadaa Rd. - Sher M. Ihora	1.55	956,529	Contract Closed
1991-92	HY-HY-8 (I)	lando M. Khan - Morai Sharif	3.00	1,539,086	Contract Closed
	HY-HY-8 (II)	lando M. Khan - Morai Sharif	1.35	728,137	Completed
	HY-HY-9	R.St.Khatian - Vill.laj Mohammad	2.40	1,657,107	Contract Closed
	HY-SH	Sh.Birkio - Hussain Khan Ibora Vill	2.55	1,461,582	Completed
	HY-6K	Bhanoth - Miranpur	0.88	618,425	Contract Closed
	HY-15H	MHWY - Masu Bhargarhi	4.20	1,875,752	Contract Closed
1992-93	HY-HY-21	Lined Channel-Vill.Moor Khan Chang	2.00	1,027,843	Contract Closed
	HY-HL-15	Wahab Shah St. - Iahir Hingoro	3.00	1,162,370	Contract Closed
	HY-HY-14	Hyd. Mala MHWY - Darya Baig Mughal	2.50	1,496,012	Contract Closed
	HY-HL-22	MHWY - faqir Hoothiani	1.80	1,297,768	Contract Closed
	HY-1A-12	Khesana Mori-Vill.Masarpur Iajpur	8.29	6,239,486	Contract Closed
	HY-13R	Maso Bhurgarhi - Musa Khatian	2.80	-	Completed
1993-94	HY-MI-02	Masu Phurgari to Jandal Kot	4.23	3,020,845	Completed
	HY-IM-30	lando fazil lined Road to Lined Channel Raod 137	3.00	1,731,814	Completed
	HY-NA-15	MHWY to Panjoro Koot Sayal	2.55	-	Could not be taken up because of project termination
	HY-IM-26	Hyderabad Natli rd to W.Dino Jagsi	1.70	-	"
	HY-MI-03	Uderlal to Uderlal Gargah	0.80	-	"
TOTAL			48.30	28,085,357	

* Only completed length.

ROAD RESOURCES MANAGEMENT (RRM) PROJECT,
STATUS OF REHABILITATION PROGRAM FOR DISTRICT KARACHI

FINANCIAL YEAR	ROAD NO.	ROAD NAME	REHAB. LENGTH (KM)	CONTRACT AMOUNT	STATUS
1989-90	KA-6	Internal Rd - Ibrahiah Hyderi	0.60	201,294	Contract Colsed
	KA-8H	Razakabad - Lashari Village	1.60	1,536,766	Contract Colsed
1991-92	KA-1	Pakistan Hotel to Saoo Goth	0.90	338,551	Completed.
1992-93	KA-51	Super Highway to Kathore Village	3.00	1,347,008	Completed.
	KA-W1-02	Dumlottee Road to Memon Goth	1.00	596,249	Completed.
1993-94					No feasible/suitable road identified by the UC.
TOTAL			7.10	4,019,868	

(D-66 COR-146.WK1 N.S)

**ROAD RESOURCES MANAGEMENT (RRM) PROJECT,
STATUS OF REHABILITATION PROGRAM FOR DISTRICT MIRPURKHAS**

FINANCIAL YEAR	ROAD NO.	ROAD NAME	REHAB. LENGTH (KM)	CONTRACT AMOUNT	STATUS
1989-90	IHR-13	Mirwah Kot - Hashim Bhurgari	1.55	601,276	Contract Closed
	IHR-2	MPK - Mirsher H. Village	0.80	678,911	Contract Closed
	IHR-15	Umerkot Chore Rd. - Darghah Syed	0.84	490,496	Contract Closed
1991-92	IHR-MP21	Mirpurkhas to Khan Village.	4.75	2,691,821	Contract Closed
1992-93	IHR-10	Sindhri Rd. to Haji Bishan Brohi	3.39	2,275,991	Contract Closed
	IHR-S-52	Umerkot Rd. to Shadipali	4.50	4,492,121	Completed
1993-94	IHR-3 (MK-MK-02)	Sattalite to Mirsher Village	0.675	821,490	Completed
	MK-MK-11	Zamidar Cottan factory to Village Rasool Bux Ual	2.05	-	Could not be taken up because of project termination
	MK-MK-17	5th mile Uulat Laghari to Village Rasool Bux Ual	1.90	-	Could not be taken up because of project termination.
T O T A L			16.505	12,070,124	

* Only completed length

ROAD RESOURCES MANAGEMENT (RRM) PROJECT,
STATUS OF REHABILITATION PROGRAM FOR DISTRICT NAWABSHAH

FINANCIAL YEAR	ROAD NO.	ROAD NAME	REHAB. LENGTH (KM)	CONTRACT AMOUNT	STATUS
1989-90	-	-	-	-	-
1991-92	NA-20 (I)	Kazi Ahmed to Bucheri.	3.00	1,804,551	Contract Closed
1992-93	NA-SA-18	Sakrand Mehrabpur Rd. - Vill. Mud	3.00	18,252,261	Contract Closed
	NA-20 (11)	Kazi Ahmed to Bucheri.	2.50	1,725,414	Contract Closed
1993-94	NA-20 (111)	Kazi Ahmed to Bucheri.	3.00	-	Could not be taken up because of project termination
TOTAL			8.50	21,782,226	

(D-66 COR-148, WK1 H.S)

ROAD RESOURCES MANAGEMENT (RRM) PROJECT,
STATUS OF REHABILITATION PROGRAM FOR DISTRICT SANGHA..

FINANCIAL YEAR	ROAD NO.	ROAD NAME	REHAB. LENGTH (KM)	CONTRACT AMOUNT	STATUS
1989-90	SA-7M	Jamraohead-Chak No.4	1.00	754,225	Contract Closed
	SA-24M	SGR SHOpur Road - Khairo Kalio	1.10	531,059	Contract Closed
1991-92	SA-24M (11)	SGR SHOpur Road - Khairo Kalio	3.50	2,357,505	Contract Closed
1992-93	SA-24M (11)	SGR SHOpur Road - Khairo Kalio	1.86	1,644,245	Contract Closed
	SA-2	SGR Khipro Rd. - Village Musain Bux Rajar.	0.85	739,797	Contract Closed
	SA-22M	SHOpur Road - Lundo via Soomer Faqir Hingoro	3.00	2,015,925	Completed
1993-94	SA-22M	SHOpur Road - Lundo via Soomer Faqir Hingoro	3.00	2,460,202	Completed
	SA-SA-05	Sanghi Khipro Rd to Village Jalib Junejo	0.63	-	Could not be rehabilitated because of project termination
	SA-SA-03	Lundo Mitha Khan to Village Bakar	4.00	-	Could not be rehabilitated because of project termination
TOTAL			14.31	10,497,956	

(0-66 COR-149.WK1 M.S)

ROAD RESOURCES MANAGEMENT (RRM) PROJECT,
STATUS OF REHABILITATION PROGRAM FOR DISTRICT THATA

FINANCIAL YEAR	ROAD NO.	ROAD NAME	REHAB. LENGTH (KM)	CONTRACT AMOUNT	STATUS
1989-90	TH-SU-12	Sujawal Bye-Pass-Village Bhatti	2.15	1,377,539	Contract Closed
1991-92	-	-	-	-	-
1992-93	TH-14	NHWY - Haji Ramzan Hajib.	3.50	2,274,164	Contract Closed
	TH-27	Thatta Jangshahi NHWY - Gulwando.	3.63	1,844,322	Contract Closed
1993-94	TH-TH-17	N.HWY to Model Village Sowla	1.00	665,422	Completed
	TH-MS-10	N.HWY towards Pirdino Baloch Goth	2.00	-	Could not be taken up because of project termination
	TH-SB-02	Bus Stop Shah Yakeek to Dargah Shah Yakeek	0.95	-	Could not be taken up because of project termination
TOTAL			10.28	6,161,447	-

D-66 COR-1410.WK1 M.S)

4.3 Sukkur Filed Office Activities:

4.3.1 General:

The Sukkur field office located in Sukkur city is responsible for rehabilitation related field operations under the RRM Project in the following Seven (7) DCs in Northern Sindh.

- Dadu
- Jacobabad
- Khairpur
- Larkana
- Nausheroferoz
- Shikarpur
- Sukkur

As already explained their range of activities covers all field work for design, coordination with DC(s), supervision of construction work for quality control, and verification of measurements and invoices prepared by the DCs for reimbursement by USAID.

4.3.2 Activities During July 1993 - July 1994:

The Sukkur field office continued to supervise all on going construction work in the above seven districts of Sindh.

In July 1993 a total of 11 roads (6 of FY 1991-92 programme and 5 of FY 1992-93 programme) were under construction. Work order for 2 of FY 1992-93 programmes were issued but construction was yet to be started. Another ten (10) FY 1992-93 roads were in various pre-construction stages. Most of these schemes came under construction later on.

The field staff also carried out activities concerning the identification and selection of FY 1993-94 Programme roads. The field office staff coordinated with the DC staff to help them identify candidate roads for the FY 1993-94 programme. The staff also carried out traffic survey and condition survey for all these roads. The information was used by the home office staff to determine feasibility of these roads. Based on the results of the feasibility analysis a working paper was prepared for the DCC meeting held on July 21, in Sukkur. Approval for feasible schemes were given by the DCC meeting. Based on the DC priority roads and commensurate with the allocation for the respective districts, roads were taken up for the detailed design. The field

office staff carried out topographic survey for the detailed design. After that the staff coordinated with the DC staff for the timely tendering and award of work of approved roads. Two (2) of the schemes identified during the period went into construction and were completed by June 1994.

4.3.3 Activities on Financial Year (FY) Basis:

The activities on Financial Year (FY) basis may be grouped as follows:

- FY 1989-90 Program
- FY 1991-92 Program
- FY 1992-93 Program
- FY 1993-94 Program

FY 1989-90 Program:

A total of 21 schemes with a total length of 33.17 km were approved for rehabilitation/upgradation under the FY 1989-90 program. Of these nine (9) schemes with a total length of 15.983 km were in districts supervised by the Sukkur office. By June 1993, all these schemes were complete. Table 4.1 gives details of those schemes and their current status. Invoices for a total amount of Rs.1.749 million were certified for reimbursement against FY 1989-90 funds by the Sukkur office.

FY 1991-92 Program:

A total of 21 schemes with a total length of 44.906 km were approved for rehabilitation/upgradation, under FY 1991-92 program. Of these nine (9) were in districts being supervised by the Sukkur office. By June 1993, construction work on a total of six (6) roads of the FY 1991-92 program has been completed, remaining three (3) roads were in various stages of completion. Work on these schemes were completed in the following months. Table 4.2(b) gives details of these schemes and their current status. Invoices for a total amount of Rs.2.426 million were certified for reimbursement against FY 1991-92 funds by the Sukkur office.

FY 1992-93 Program:

A total of 35 schemes with a total length of 90.19 km were initially approved for rehabilitation/upgradation under FY 1992-93 program. 17 of these schemes were in districts to be handled by the Sukkur office. However, later on three (3)

schemes, two (2) in Sukkur district and one in Khairpur were taken out. The roads in Sukkur district were included in the FY 1993-94 programme because the DC failed to call tender for them in time for the FY 1992-93 programme. The road in Khairpur had to be dropped because of right of way problems. Another schemes in Nausheroferoz district identified later was included in the FY 1992-93 programme. That brought the actual number of schemes under FY 1992-93 programme to 33 and those in Sukkur to 15. By June 1993, construction work on five (5) of these roads had started. Work order for another two (2) roads had been issued but construction was yet to start. Remaining eight (8) were in various pre-construction stages. Work on these schemes has been completed. Table 4.3b gives details of these schemes and their current status. Invoices for a total amount of Rs. 11.605 million were certified for reimbursement against FY 1992-93 funds by the Sukkur office.

FY 1993-94 Program:

A total of 39 roads with a total length of 67.17 km were identified by the seven district councils being handled by the Sukkur office. Condition and traffic survey for all of them were carried out by the field office staff. A total of 17 schemes having a total length of 44.32 km were found to be feasible and were approved by the DCC at the meeting held at Sukkur on July 21, 1994.

Design for a total of 15 roads having a total length of 28.76 km were made. Out of these two (2) roads (of Sukkur District) were already designed for 1992-93 programme but were shifted to 1993-94 programme because of DC's failure to call tender for them in time for FY 1992-93 programme. Another road in Nausheroferoz district, although identified for the FY 1993-94 programme was credited to FY 1992-93 programme to utilize funds originally allocated to Sukkur district.

By April 1994, all roads have been tendered/retendered by the DC and recommendations for award of work were issued by the consultant for all but two (2) roads in Larkana district. USAID issued PILS for only two roads, one in Nausheroferoz district (NF-KN-04, 8.00 KM) and the other in Khairpur district (KH-GM-09 0.75 KM). Work on both roads was on going when USAID decided to terminate the project, by June 30, the deadline for completion of construction works. Construction work on road No. KH-GM-09 was completed. Table 4.3(d) give details of this scheme and its current status. Road No. NF-KN-04, however, could not be rehabilitated for

its full length by June 30, 1994. In view of the June 30 deadline the consultants advised the DC staff to ask the contractor to rehabilitate the road to logical cutoff point about 4.6 km for the start point. The contractor however, was able to complete rehabilitation works for about 5.01 km length by June 30, 1994.

4.3.4 Activities on District Basis:

District Dadu:

A total length of 8.20 km comprising (4) four roads has been rehabilitated in the district under the RRM program. of these one (1) road with a length of 2.641 km was rehabilitated under FY 1989-90 program. Another one with a total length of 2.450 km was rehabilitated under FY 1991-92 program. Under FY 1992-93 program two (2) roads with a total length of 3.158 km were being rehabilitated. Work on all these roads has been completed. Recommendation for award work were issued to the DC by the consultant for two roads (3.2 km) under FY 1993-94 programme but the roads could not be rehabilitated because of early termination of the project by USAID. Table 4.11 gives details of RRMP funded work in the district.

District Jacobabad:

A total length of 6.24 km comprising six (6) roads has been rehabilitated under the RRM Program in the District. Of these three (3) roads totalling 1.083 km in length were rehabilitated under FY 1989-90 program, and another two (2) roads with a total length of 2.655 km were rehabilitated under FY1991-92 Program. Under FY 1992-93 program one (1) road with a length of 2.5 km has been rehabilitated. Work on all of these schemes has been completed. Recommendation for award of work for one FY 1993-94 scheme was made but the road (2.60 km) could not be rehabilitated because of USAID decision to terminate the project. Table 4.12 gives details of RRMP funded works in the district.

District Khairpur:

A total length of 7.76 km comprising seven (7) roads has been rehabilitated under the RRM Program in the District. One of these roads with a length of 2.27 km was rehabilitated under FY 1989-90 program. Another one (1) with a length of 1.30 km was rehabilitated under FY 1991-92 program. Under FY 1992-93 program four (4) roads with a total

ROAD RESOURCES MANAGEMENT (RRM) PROJECT
(SUKKUR OFFICE)

Table-4.2b

PROGRESS STATUS OF ROAD REHABILITATION ACTIVITIES
UNDER FY 1991-92 PROGRAM

(UPTILL 30TH JUNE 1994)

DATE PREPARED
14 July 94

NAME OF STRICT/ LOCATION	ROAD NO./ PROJECT LENGTH (KM)	ESTIMATED COST (Rs)	BID OPENING DATE	USAID APPROVAL PIL DATE/AMOUNT (Rs)	D.C AWARDS CONTRACT DATE/AMOUNT (Rs)	CONSTRUCTION PERIOD	CURRENT PROGRESS STATUS/ (COMPL. DATE)	REMARKS
DAOU (1,650,000)	DA-SH-8 (2.40)	1,763,139	23-Jun-91	15-Dec-92 2,052,223	10-Jan-93 1,954,498	06 Months	Completed. 16-Dec-93	Rehabilitation work has been completed.
LARKANA (2,000,000)	LA-1 (2.20)	1,604,775	23-Apr-92	20-Nov-92 1,985,406	24-Nov-92 1,804,915	04 Months	Completed	Contract closed.
KHAIRPUR (1,650,000)	KD-108 (1.30)	890,738	02-Dec-91	27-Jan-92 978,171	03-Feb-92 889,246	04 Months	Completed	Contract not closed.
SHIKARPUR (977,449)	SH-69 (1.40)	864,617	30-Jul-91	20-Nov-91 1,070,244	04-Dec-92 972,949	03 Months	Completed	Contract closed.
SUKKUR (2,316,283)	SU-38 (2.20)	1,598,458	16-Sep-91	21-Apr-92 1,767,920	27-Apr-92 1,683,732	06 Months	Completed	Contract closed.
	SU-1 (0.52)	266,467	16-Sep-91	21-Apr-92 365,941	27-Apr-92 348,515	06 Months	Completed	Contract closed.
SHEROZEROJE (1,624,760)	NA-23 (3.25)	1,974,785	12-Mar-92	01-Apr-92 2,320,561	08-Apr-92 2,210,058	06 Months	Completed	Contract closed.
JACOBABAD (1,100,303)	JA-M-2 (1.205)	893,287	20-Jun-91	04-Dec-91 833,258	17-Dec-91 757,507	04 Months	Completed	Contract closed.
	JA-KM-02 (1.450)	1,275,597	11-Nov-92	20-Jan-93 1,197,681	31-Jan-93 1,140,469	06 Months	Completed. 16-Dec-93	Rehabilitation work has been completed.

ROAD RESOURCES MANAGEMENT (RRM) PROJECT
(SUKKUR OFFICE)

Table-4.3b

PROGRESS STATUS OF ROAD REHABILITATION ACTIVITIES
UNDER FY 1992-93 PROGRAM

(UNTILL 30TH JUNE 1993)

DATE PREPARED:
17-Jul-94

NAME OF DISTRICT/ ALLOCATION	ROAD NO./ PROJECT LENGTH (KM)	ESTIMATED COST (Rs)	BID OPENING DATE	USAID APPROVAL DATE/AMOUNT (Rs)	D.C AWARDS CONTRACT DATE/AMOUNT (Rs)	CONSTRUC- TION PERIOD	CURRENT PROGRESS STATUS/ (COMPL. DATE)	REMARKS
DADU (7,778,031)	DA-DA-13 (2.26)	1,187,235	27-Jun-1993	04-Oct-1993 1,233,539	27-Nov-1993 1,233,539	02 Months	Completed. (April 1994)	Completed.
	DA-K1-02 (0.90)	660,434	27-Jun-1993	04-Oct-1993 723,078	27-Nov-1993 723,078	02 Months	Completed. (April 1994)	Completed.
LARKANA (3,906,994)	LA-2 (3.430)	2,751,019	26-Dec-92	07-Feb-93 2,993,223	23-Feb-93 2,993,223	06 Months	Completed. (August 1993)	Completed.
	LA-D1-04 (1.97)	1,608,993	23-May-93	07-Jul-1993 1,533,481	15-Jul-1993 1,533,481	02 Months	43% Completed.	Contract terminated been of no progress.
KHAIROPUR (3,095,296)	KH-GH-09 (0.880)	625,163	01-Mar-93	28-Apr-93 706,995	12-May-93 706,995	03 Months	Completed. (December 1993)	Completed.
	KH-GH-05 (0.83)	656,728	01-Mar-93	28-Apr-93 736,098	12-May-93 736,098	02 Months	Completed. (December 1993)	Contract Closed
	KH-KH-02 (1.12)	715,218	01-Mar-93	28-Apr-93 779,168	12-May-93 779,168	02 Months	Completed. (December 1993)	Contract Closed
	KH-GH-10 (0.61)	540,813	06-May	08-Jul-1993 507,084	19-Jul-1993 507,084	02 Months	Completed. (March 1994)	Contract Closed
SHIKARPUR (1,907,490)	SH-69 (0.770)	426,725	04-Mar-93	19-May-1993 478,264	19-Jul-1993 478,264	03 Months	Completed. (December 1993)	Completed.
	SH-LK-09 (0.574)	343,316	04-Mar	19-May-1993 387,481	17-Jul-1993 387,481	03 Months	Completed. (30-Jun-1994)	Completed.
	SH-LK-02 (0.885)	458,185	16-Mar-93	08-Jul-1993 533,870	19-Jul-1993 533,870	02 Months	Completed. (March 1994)	Contract Closed
	SH-SH-04 (1.047)	625,000	16-May-93	08-Jul-1993 686,115	19-Jul-1993 686,115	02 Months	Completed. (March 1994)	Contract Closed

(D-66 COR-1438.WK) H.S)

ROAD RESOURCES MANAGEMENT (RRM) PROJECT
(SUKKUR OFFICE)

Table-4.3b

PROGRESS STATUS OF ROAD REHABILITATION ACTIVITIES
UNDER FY 1992-93 PROGRAM

(UPTILL 30TH JUNE 1993)

DATE PREPARED:
17-Jul-94

NAME OF DISTRICT/ ALLOCATION	ROAD NO./PROJECT LENGTH (KM)	ESTIMATED COST (Rs)	BID OPENING DATE	USAID APPROVAL PIL DATE/AMOUNT (Rs)	D.C AWARDS CONTRACT DATE/AMOUNT (Rs)	CONSTRUCTION PERIOD	CURRENT PROGRESS STATUS/ (COMPL. DATE)	REMARKS
SUKKUR	SU-G1-04 (4,520,220);	3,090,824 (2.70);	-	-	-	-	-	DC failed to call tenders. Transferred to FY 1993-94 programme.
	SU-G1-09 (1.76);		-	-	-	-	-	Abandoned
	SU-38 (0.50);	482,533	-	-	-	-	-	DC failed to call tenders. Transferred to FY 1993-94 programme.
NAUSHEROZERO	NF-K-13K (3,170,716);	3,010,745 (5.0);	11-Nov-92	10-Feb-93 3,491,726	11-Feb-93 3,491,726	05 Months	Completed. (Sep. 1993)	Contract Closed.
	NF-KN-04 (8.0);	4,324,000	24-Nov-93	17-Feb-94 5,240,795	24-Feb-94 5,240,795	06 Months	63% Completed. (30-Jun-1994)	Because of project termination only 5 km could be rehab.
JACOBABAD	JA-GK-01 (2,119,029);	2,002,480 (2.50);	28-Apr-93	08-Jul-93 1,891,854	25-Jul-93 1,891,854	06 Months	Completed. (Dec. 1993)	Completed.

(D-66 COR-143B.WK1 M.S)

PROGRESS STATUS OF ROAD REHABILITATION ACTIVITIES
 UNDER FY 1993-94 PROGRAMME
 (IN SUKKUR OFFICE)

Table-4.3(d)

NAME OF DISTRICT	ROAD No PROJECT LENGTH (KM)	ESTIMATED COST (Rs)	BID OPENING DATE	USAID APPROVAL P/L DATE/ AMOUNT IN (Rs)	DC AWARD CONTRACT DATE	CONSTRUCTION PERIOD (MONTH)	CURRENT PROG. STATUS (COMPL. DATE)	REMARKS
KHAIRPUR								
1	KH-GM-09 (0.75) (II)	563,883	15-12-1993	17-FEB-1994 641,540	06-03-1994 641,540	1	COMPLETED 30-JUN-1994	SECURITY DEPOSIT TO BE RELEASED

length of 3.438 km were rehabilitated. Of the three (3) FY 1993-94 programme roads, only one (0.75 km) could be rehabilitated. Recommendation for award of work for the other two roads (3.23 km) were issued to the DC but the roads could not be rehabilitated because of USAID decision to terminate the project. Table 4.13 gives detail of RRMP funded works in the district.

District Larkana:

A total length of 9.504 km comprising four (4) roads has been rehabilitated under the RRM Program in the District. Of these one (1) road with a total length of 2.1 km was rehabilitated under FY 1989-90 program. Another one (1) with a length of 2.0 km was rehabilitated under FY 1991-92 program. For the FY 1992-93 program two (2) roads having a length of 5.404 km were rehabilitated. Two roads (1.45 km) taken up for the FY 1993-94 programme in the district were in tendering stage when USAID decided to terminate the project. Table 4.14 gives details of RRM project funded roads in the District.

District Naushaeroferoz:

A total length of 19.95 km comprising four (4) roads were taken up for rehabilitation under the RRM Program in the District. One (1) of these roads with a total length of 3.7 km was rehabilitated under FY 1989-90 Program. Another one (1) with a total length of 3.25 km was rehabilitated under FY 1991-92 program. For the FY 1992-93 program two (2) roads having a length of 13.0 km were taken up for rehabilitation. Work on all 1989-90 & FY 1991-92 roads has been completed. Work on road no. NF-K-13K, under FY 1992-93 program, has also been completed. Another road taken up for rehabilitation in the district under the FY 1992-93 programme, later in the year was NF-KN-04 having a total length of 8.00 km. By June 30, the deadline timed by USAID in the termination notice only about 5.0 km could be rehabilitated PILs were awarded for the two (2) FY 1993-94 roads (5.82 km) when USAID decided to terminate the project. Table 4.15 gives details of RRM funded roads in the District.

District Shikarpur:

A total length of 6.476 km comprising six (6) roads has been rehabilitated under the RRM program in the District. Of these, one (1) road with a total length of 1.8 km was rehabilitated under FY

1989-90 program. Another road with a length of 1.4 km was rehabilitated under FY 1991-92. Four (4) roads with a total length of 3.276 km were rehabilitated under the FY 1992-93 program in the district. Construction work on all of these road rehabilitation schemes has been completed. Recommendation award of work for the two (2) FY 1993-94 roads were issued but the same could not be rehabilitated because of USAID decision to terminate the project. Table 4.16 gives details of RRMP funded rehabilitation works in the district.

District Sukkur:

A total length of 6.261 km comprising four (4) roads has been rehabilitated under the RRM Program in the District. Of these, one (1) road with a total length of 2.280 km was rehabilitated under the FY 1989-90 program. Another two (2) roads totalling 2.721 km were rehabilitated under the FY 1991-92 program. Three (3) roads with a total length of 5.49 km were taken up for rehabilitation under FY 1992-93 program. Work on the FY 1989-90, FY 1991-92 and one of FY 1992-93 roads has been completed. Two of the FY 1992-93 programme roads with a length of 4.23 km were included to FY 1993-94 programme because of the DC's failure to call tenders for them in time for the programme. Recommendations for award of work for both these roads were already issued when in May 1994, USAID decided to terminate the project. Table 4.17 gives details of RRMP funded rehabilitation works in the district.

**ROAD RESOURCES MANAGEMENT (RRM) PROJECT,
STATUS OF REHABILITATION PROGRAM FOR DISTRICT DADU**

FINANCIAL YEAR	ROAD NO.	ROAD NAME	REHAB. LENGTH (KM)	CONTRACT AMOUNT	STATUS
1989-90	DA-06	NHWY - Dadu Munder Haka	2.64	1,716,174	Contract Closed
1991-92	DA-SM-8	Indus Highway - Mandar Haka	2.40	1,954,498	Completed DC needs funds to closed the contract.
1992-93	DA-DA-13	Indus H.way - Dargah Yar Mohammad	2.26	1,235,559	Completed.
	DA-KI-02	IHY Manjhand R.St. - Manjhand Vill.	0.90	723,078	Completed.
1993-94	DA-DA-07	Piarogoth Phulgi Station Road to Dareshahni Panwar	1.05	-	Could not be taken up because of project termination
	DA-KI-06	Indus Highway Garwari	2.20	-	"
TOTAL			8.20	5,629,289	

* Completed lengths only.

(0-66 COR-1411 N.S)

ROAD RESOURCES MANAGEMENT (RRM) PROJECT,
STATUS OF REHABILITATION PROGRAM FOR DISTRICT JACOBABAD

FINANCIAL YEAR	ROAD NO.	ROAD NAME	REHAB. LENGTH (KM)	CONTRACT AMOUNT	STATUS
1989-90	JA(N)5	Buxapur post - Deabki Rice Mill	0.50	505,487	Contract Colسد.
	JA(N)6	Kashmore Rd. - Village Rano	0.35	723,740	Contract Colسد.
	JA(N)8	Ihull Rd. - Village Chandan	0.23	124,671	Contract Colسد.
1991-92	JA(N)2	JAD. SHIKpur Rd. Vill. Adaa Khan Pan	1.205	757,507	Contract Colسد.
	JA-KN-02	Badani to Gandher	1.430	1,140,469	Completed DC needs fund to close the contract
1992-93	JA-GA-01	M. Union Council - Larkana at Ghulaa Shah	2.50	1,891,854	Completed.
1993-94	JA-GK-01	M. Union Council - Larkana at Ghulaa Shah	2.60	-	Could not be taken up because of project termination by USAID.
TOTAL			6.24	4,445,128	

(D-66 COR-1412 N.S)

TABLE-4.13

ROAD RESOURCES MANAGEMENT (RRM) PROJECT,
STATUS OF REHABILITATION PROGRAM FOR DISTRICT KHAIRPUR

FINANCIAL YEAR	ROAD NO.	ROAD NAME	REHAB. LENGTH (KM)	CONTRACT AMOUNT	STATUS
1989-90	G-4	Hingorja Sagyoon - Nau Goth	2.30	1,458,886	Contract Colised
1991-92	KO-108	National Highway - Hussainabad.	1.30	889,246	Contract Colised
1992-93	KH-GH-09	Setharja Bala Rd. - Hingorja Minor	0.88	706,995	9% Completed.
	KH-GH-05	Kingri Machyoon Rd - Dost M. Abro	0.83	736,098	Contract Colised
	KH-KH-02	MHWY - Warijo Goth	1.12	779,168	Contract Colised
	KH-GH-10	Hingorja Sagyoon Nau Goth Road to Dargah Wadho Wadhan	0.61	507,084	Contract Colised
1993-94	KH-GH-09 (Phase-II)	Setharja Bala Rd. - Hingorja Minor	0.75	641,504	Completed. (30-06-1994)
	KH-KI-07 (Phase-II)	Ahmedpur Khanpur Rd. to Bhatyoon	0.42	-	Could not be taken up because of project termination.
	KH-KI-07 (Phase-II)	Gunia Village	0.91	-	"
	KH-KE-05 (Phase-II)	Ahmedpur Rd. to Dost M. Abro Village	1.90	-	"
TOTAL			7.79	5,718,981	

(0-66 COR-1413 H.S)

**ROAD RESOURCES MANAGEMENT (RRM) PROJECT,
STATUS OF REHABILITATION PROGRAM FOR DISTRICT LARKANA**

FINANCIAL YEAR	ROAD NO.	ROAD NAME	REHAB. LENGTH (KM)	CONTRACT AMOUNT	STATUS
1989-90	LA-1	Hatti - Mud Bahu	2.10	1,299,049	Completed.
1991-92	LA-1 (1)	Hatti - Mud Bahu	2.20	1,804,915	Contract Closed
1992-93	LA-2	Bakrani to Mud Bahu	3.43	2,993,223	Completed.
	LA-01-04	Garello to Umer Bhayo	1.97	1,533,481	43 completed terminated because of no project
1993-94	LA-01-26	Roadpur Haroon Tunio to M. Tunio (K.R)	1.20	-	
	LA-01-30	Moenjodaro Beriji Rd. to Village Dhand	0.25	-	
TOTAL			9.70	7,630,668	

* Completed length only.

TABLE-4.15

ROAD RESOURCES MANAGEMENT (RRM) PROJECT,
STATUS OF REHABILITATION PROGRAM FOR DISTRICT NAUSHERO FEROZE

FINANCIAL YEAR	ROAD NO.	ROAD NAME	REHAB. LENGTH (KM)	CONTRACT AMOUNT	STATUS
1989-90	NA-23	Kandiara - Kamal Mehsar	3.70	2,173,570	Contract Closed
1991-92	NA-23 (11)	Kandiara - Kamal Mehsar	3.25	2,210,058	Contract Closed
1992-93	NA-K-13K	Kotri Kabir to Mehrabpur	5.00	3,491,726	Contract Closed
	NF-KH-04	Kotri Kabir to Khanwan	8.00 (5.00)	5,240,195	63% completed by June 30, 1994
1993-94	NF-KH-14 (NF-K-13K) (Phase-11)	Kotri Kabir to Mehrabpur	2.32	-	PIL were awarded when USAID terminated the project.
	NF-MO-05	Link Road Dibaraja to Village Malak	3.50	-	
TOTAL			16.95	13,115,899	

* Completed length only.

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**ROAD RESOURCES MANAGEMENT (RRM) PROJECT,
STATUS OF REHABILITATION PROGRAM FOR DISTRICT SHIKARPUR**

FINANCIAL YEAR	ROAD NO.	ROAD NAME	REHAB. LENGTH (KM)	CONTRACT AMOUNT	STATUS
1989-90	SH-1	Lakhi - Wazirabad.	1.80	550,090	Contract Closed
1991-92	SH-69	Shikarpur to Booja Napar	1.40	972,949	Contract Closed
1992-93	SH-69 (II)	Shikarpur to Booja Napar	0.77	478,264	Completed
	SH-LK-0Y	Sukkur Shikarpur Rd. - Uodo Goth	0.51	581,481	Completed on June 30, 1994
	SH-LK-0Z	Chak Bagarji Rd. - Vill. Jamachani	0.89	555,872	Contract Closed
	SH-SH-04	Sultan Goth Nian Jo Goth to Ali Muhammad Brohi Village.	1.05	686,115	Contract Closed
1993-94	SH-SH-01 (IR)	Shikarpur to Boojanpar Vill Jando	1.80	-	Could not be taken up because of project termination
	SH-SH-05	Shikarpur Jacobbad Road to Dargha Humayoon Sharif	0.45	-	
TOTAL			6.48	3,608,771	

* Completed length only

(D-66 COR-1416 M.S)

ROAD RESOURCES MANAGEMENT (RRM) PROJECT,
STATUS OF REHABILITATION PROGRAM FOR DISTRICT SUKKUR

FINANCIAL YEAR	ROAD NO.	ROAD NAME	REHAB. LENGTH (KM)	CONTRACT AMOUNT	STATUS
1989-90	SU-163	NHWY - Sardar M. Goth	2.62	1,559,465	Completed.
1991-92	SU-38	Khandra Village - Beguaji Station	2.20	1,685,752	Completed.
	SU-1	National Highway - Dad Loi	0.52	348,515	73% Completed.
1992-93	SU-GI-04	Beriri Khanpur Rd. - Jivangarh Via Pir Bux Pitafi	2.20		Transferred to FY 1993-94 programme.
	SU-GI-09	Bhilni to Shahpur	1.26		Abandoned
	SU-38 (11)	Khandra Village - Beguaji Station	0.50		Transferred to FY 1993-94 programme.
1993-94	SU-GI-04	Beriri Khanpur Rd.- Jivangarh Via Pir Bux Pitafi	2.20	-	Could not be taken up because of project termination.
	SU-38 (11)	Khandra Village - Beguaji Station	0.50	-	
TOTAL			9.30	3,591,712	

* Completed length only.

(D-66 COR-1417.WK1 N.S)

CHAPTER - 5

TERMINATION OF PROJECT

5.0 TERMINATION OF PROJECT:

5.1 General:

FY 1993-94 was the last financial year for the Project. ACE's contract with USAID was to expire on Nov. 30, 1994. All plans for office and field activities were made accordingly. As per original plan design work for 30 roads having a total length of 59.12 km was completed and sent to respective DCs by mid February; DC undertook the tendering process and tenders for all roads were called. Recommendation for award of work for 25 roads having a total length of 44.36 km were already finalized by April 4, 1994. USAID, on their part have however, issued only 6 PILs by then. This has been a cause of some concern and the DC officials had started getting apprehensive about the future of the Project. No official words were, however, available from USAID. On April 4, 1994 the Project Officer called a meeting in his office which was also attended by the two RE besides the Project Manager. During the course of the meeting the PO in a guarded manner referred about the "possible changes in the project schedule", no specific details were, however, available.

5.2 Termination Notice:

The notice for termination of the ACE's contract was issued on May 19, 1994, which briefly stated the US Congress Act to rescind funds from the USAID programme as the reason for the early termination of the contract.

USAID, through the notice informed that:-

- All construction activities on the project funded schemes should be completed by June 30, 1994.
- ACE, as consultant to the project shall remain on board till July 31, 1994.

The termination notice also contained a list of task that the consultants were expected to carry out for the orderly closing out of the project these included:

- Continuation of the construction supervision
- Maintain close coordination with the District Engineer and USAID staff ensuring orderly close out of all on-going Host Country Contracts.
- Ensuring measurements of all works completed up to June 30, 1994.

- Execution of no further sub contracts and order
- Termination of all sub contract and orders
- Tranfering title and deliver to the Government all termination inventory as instructed by the contracting officer.
- Making settlement with sub contractors and suppliers.
- Preparing a settlement proposal if considered necessary, by ACE.

A termination conference was held at USAID Karachi office on May 31, 1994 to discuss termination related issues. The meeting was attend among other, by the USAID Contract office representatives, RRM Project Officials and ACE representatives.

5.3 Status of Work:

When the notice for termination was received, construction work on a total of 11 contracts was on-going. Table 5.1 gives details of these roads. Except for four (4) roads, construction of all other works was delayed with their completion being over due.

The consultant advised the DCs to issue notices for termination of all such contracts giving them a definite dead line for completion of all outstanding works. USAID Project Officer as well as the Project Manager (ACE), informed all DCs (in writing) about the termination of the Project by USAID, explaining that all on going jobs are to be completed by June 30, 1994. The letters also clearly informed that USAID will only pay for such works which are completed in an acceptable manner on or before June 30, 1994 and an verified by the consultants field staff.

The USAID Project officials and the PM also visited on on-going schemes more than once in JUNE 1994 to ensure their timely completion. Field staff were instructed to report progress of work daily to the home office to closely monitor the progress of construction works. As a result of these efforts, nine (9) out of eleven (11) on going schemes were completed by June 30, 1994.

Two roads; Road No. NF-KN-04 in Nausheroferoz and Road No. LA-DI-04 in Larkana district, however, could not be rehabilitated for their full contract lengths.

In case of Road No. NF-KN-04 the contractor continued working till the last moment and was able to rehabilitate approximately 5.00 km out of the total

STATUS OF ON GOING CONTRACTS (UNDER CONSTRUCTION)
AT THE TIME OF TERMINATION NOTICE
(MAY 19, 1994)

Tab 1P-5.1

FISCAL YEAR PROGRAMME	NAME OF DISTRICT	ROAD No PROJECT LENGTH (KM)	ESTIMATED COST (Rs)	BID OPENING DATE	USATU APPROVAL PILL DATE/ AMOUNT IN (Rs)	DC AWARD CONTRACT DATE	CONSTRUCTION PERIOD (MONTH)	CURRENT PROG. STATUS (COMPL. DATE)	REMARKS
FOR FY 1991-92									
FOR FY 1992-93									
	BADIN	BA-M5 (4.20)	3,593,041	12-FEB-1993	10-OCT-1993 3,738,571	08-APR-1993 3,560,553	10	93%	EXPECTED TO BE COMPLETED BY 30, JUNE
	LAHANA	LA-M1-04 (1.974)	1,534,500	23-MAY-1993	07-JUL-1993 1,535,481	15-JUL-1993 1,535,481	03	45%	DC HAS BEEN GIVEN NOTICE FOR EARLY COMPLETED TERMINATION
	MIRPURKHAS	MHR-S-52 (4.50)	4,430,678	17-FEB-1993	30-JUL-1993 4,492,121	08-APR-1993 4,492,121	08	91%	EXPECTED TO BE COMPLETED BY 30, JUNE
	MAUSHKOTRIKOT	MI-KM-04 (8.0)	4,374,000	24-NOV-1993	17-FEB-1993 5,240,795	24-FEB-1993 5,240,795	06	69%	-DO-
	SHIKARPUR	SH-59 (0.77)	426,725	04-MAR-1993	13-MAY-1993 387,481	17-JUL-1993 387,481	03	67%	TERMINATION NOTICE ISSUED TO DC
	THATA	TH-17 (3.50)	2,176,490	22-APR-1993	08-JUL-1993 2,774,165	11-JUL-1993 2,774,166	04	72%	EXPECTED TO BE COMPLETED BY 30, JUNE
FOR FY 1993-94									
	HYDERABAD	HY-M1-02 (3.225)	2,410,719	30-11-1993	17-FEB-1994 3,020,845	20-03-1994 3,020,845	4	37%	-DO-
	HYDERABAD	HY-TH-30 (3.05)	2,079,000	30-11-1993	17-FEB-1994 1,731,814	28-03-1994 1,731,814	4	27%	-DO-
	KANIKYUN	KM-GH-09	565,983	15-12-1993	17-FEB-1994 641,540	05-03-1994 641,540	1	51%	EXPECTED TO BE COMPLETED BY 25, JUNE
	SANGHAR	SA-SH-22A (3.0) (11)	2,156,482	15-11-1993	17-FEB-1994 2,420,202	28-02-1994 2,460,202	3	48%	TO BE COMPLETED BY 15 JUNE
	THATA	TH-TH-17 (1.0)	654,489	06-12-1993	17-FEB-1994 665,477	05-03-1994 665,477	4	46%	-DO-

A total of 11 schemes were under construction phase for RRM Project at the time when termination notice was served to the consultant on 19 May, 1994.

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contract length of 8.00 km. The contractor for Road No. LA-DI-04, however, despite several warnings could only complete only 43% of the contract work. Administrative problems in DC Larkana were the real cause of the failure to rehabilitate full contract length.

On June 30, 1994 a total of 34 contracts were yet to be closed. These included 5 of 1991-92 contracts, three (3) of which could not be closed because of sufficient funds not being available with the respective DCs. This happened because of lack of timely transfer of money to the DCs short of funds from those with surplus funds. The deficient districts include Dadu, Hyderabad and Jacobabad. USAID project officials have been making efforts to get the money transferred to the deficient districts through the DGRD, GOS. Remaining two contract could not be closed because of their delayed completion and are still under 90 days maintenance period.

A total of 23 contract of FY 1992-93 programme were yet to be closed as of June 30, 1994. No such problem as mentioned above for the FY 1991-2 programme roads existed in this case, however, at least in one case, that of road no. HY-TA-12 in Hyderabad district, approval of fund for some additional works has not been given by USAID. Had this not been the case, the contract would have been closed. DC Hyderabad has now been advised to arrange funds for the additional works through its own means and close the contract. Remaining contracts were under maintenance period of documents for contract closure. All six (6) contract of FY 1992-93 programme were yet to be closed on June 30, 1994.

Since June 30, six more contract one (1) of FY 1991-92 and five (5) of 1992-93 contracts have been closed. Table 5.2 give details of contract status as of July 14 1994. A few more contracts are expected to be closed by July 31, 1994, the last day of the consultant contract for the project. It is decided that all contract closure documents will be procured before July 31, 1994 and be made available to the USAID RRM Project Office. After July 31 1994, the DC staff will directly coordinate with the USAID project staff for the contract closure related activities.

5.4 Contract Close Out Plan:

A Contract Close Out Plan (CCOP) was prepared and submitted to the Project Officer on June 14, 1994. The CCOP gave details of consultant plan for invoice certification, closing of contract, inventory of vehicles, equipment and other project belongings. demobilization of field offices and project staff, final/close out report and project record. A copy of the CCOP is attached for ease of reference.

**STATUS OF RRM FUNDED ROAD REHAB. CONTRACTS
AS OF JULY 14, 1994 (CONTRACT NOT YET CLOSED ONLY)**

Table-5.2

SL. NO.	FISCAL YEAR	DISTRICT	ROAD NO.	STATUS OF FINAL MEAS./INVOICE	STATUS OF SECURITY DEPOSIT	REMARKS
A FOR FY 1991-92						
1		DADU	DA-SM-8	COMPLETED/HELDUP	TO BE RELEASED	DC NEEDS FUNDS TO CLOSED CONTRACT
2		HYDERABAD	HY-HY-8 (II)	COMPLETED/HELDUP	TO BE RELEASED	*
3		JACOBABAD	JA-ZM-02	COMPLETED/HELDUP	TO BE RELEASED	*
4		KARACHI	KA-1	COMPLETED/COMPLETED	TO BE RELEASED	WILL BE RELEASED BY 31ST. JULY
				<u>FM/PI = 6/3 Nos.</u>	<u>(SD) 4 Nos.</u>	<u>BALANCE 17 CONTRACTS ALREADY CLOSED</u>
B FOR FY 1992-93						
1		BADIN	BA-M3 (III)	COMPLETED/COMPLETED	TO BE RELEASED	DC TO COORD. WITH USAID FOR CONTRACT CLOSE OUT
2		DADU	DA-KI-02	UNDERWAY/UNDERWAY	TO BE RELEASED	P.INVOICE READY BY 31 JULY
3		DADU	DA-DA-13	UNDERWAY/UNDERWAY	TO BE RELEASED	*
4		HYDERABAD	HY-TA-12	COMPLETED/COMPLETED	TO BE RELEASED	DC TO COORD. WITH USAID FOR CONTRACT CLOSE OUT
5		HYDERABAD	HY-13N	COMPLETED/COMPLETED	TO BE RELEASED	*
6		JACOBABAD	JA-OK-01	COMPLETED/COMPLETED	TO BE RELEASED	*
7		KARACHI	KA-51	COMPLETED/COMPLETED	TO BE RELEASED	*
8		KARACHI	KA-WT-02	COMPLETED/COMPLETED	TO BE RELEASED	*
9		KHAIRPUR	KH-OM-09	COMPLETED/COMPLETED	TO BE RELEASED	*
10		LARKANA	LA-2	COMPLETED/COMPLETED	TO BE RELEASED	*
11		LARKANA	LA-DI-04	UNDERWAY/UNDERWAY	TO BE RELEASED	P.INVOICE READY BY 31 JULY
12		MIRPURKHAS	THR-S52	TO BE COMPL. BY 25 JULY	TO BE RELEASED	DC TO COORD. WITH USAID FOR CONTRACT CLOSE OUT
13		N. PHROZ	NP-KN-04	TO BE COMPL. BY 30 JULY	TO BE RELEASED	*
14		SANOHAR	SA-SH-22M	COMPLETED/COMPLETED	TO BE RELEASED	*
15		SHIKARPUR	SH-69 (II)	COMPLETED/COMPLETED	TO BE RELEASED	*
16		SHIKARPUR	SH-LK-09	COMPLETED/COMPLETED	TO BE RELEASED	*
17		THATTA	TH-14	COMPLETED/COMPLETED	TO BE RELEASED	*
18		THATTA	TH-27	COMPLETED/COMPLETED	TO BE RELEASED	*
				<u>FM/PI = 3/3 Nos.</u>	<u>(SD) 18 Nos. (TBR)</u>	<u>BALANCE 15 CONTRACTS ALREADY CLOSED</u>
C FOR FY 1993-94						
1		HYDERABAD	HY-TM-30	TO BE COMPL. BY 20 JULY	TO BE RELEASED	DC TO COORD. WITH USAID FOR CONTRACT CLOSE OUT
2		HYDERABAD	HY-TM-02	TO BE COMPL. BY 25 JULY	TO BE RELEASED	*
3		KHAIRPUR	KH-OM-09 (II)	TO BE COMPL. BY 25 JULY	TO BE RELEASED	*
4		SANOHAR	SH-SH-24M (II)	COMPLETED/COMPLETED	TO BE RELEASED	*
5		MIRPURKHAS	THR-3	COMPLETED/COMPLETED	TO BE RELEASED	*
6		THATTA	TH-TH-17	COMPLETED/COMPLETED	TO BE RELEASED	*
				<u>FM/PI = 3/3 Nos.</u>	<u>(SD) 6 Nos.</u>	
				<u>FM</u>	<u>PI</u>	<u>SD (TBR)</u>
ABBRV. USED				TOTAL	<u>3 Nos.</u>	<u>11 Nos.</u>
FM = FINAL MEASUREMENT					<u>28 Nos.</u>	
SD = SECURITY DEPOSIT						
PI = FINAL INVOICE						
TBR = TO BE RELEASED						

(D-66 COR-T51.WK4 MS)

CHAPTER - 6

OBSERVATIONS & CONCLUSIONS

6.0 OBSERVATIONS & CONCLUSIONS:

During the tenure of their association with the project the consultant remained deeply involved with the working of the project at every stage. The observations made and conclusions drawn during the period are discussed below:

1. The project successfully addressed the need for the introduction of better planning design, operation maintenance and rehabilitation of the DC roads. These roads, being essentially access roads, linking one or more villages to various: farm to market roads, provincial, and/or national highways are considered to be the lowest in the functional classification of roads. Whereas several large and small projects for the other classes of roads have been taken up by the federal and respective provincial governments, the project class of roads has been relatively neglected. USAID as a donor agency did a great favor to the users of this neglected class of roads.
2. In a country like Pakistan, with deficient infrastructure and low ratio of road length to population and/or land area, there is, and will continue to be for the foreseeable future, need for expansion of the road network. What is equally important, however, is to ensure proper maintenance and rehabilitation of the existing network to realize optimum benefit out of the investment in it. The project rightly focused on the maintenance and rehabilitation of the District Council Roads.
3. The project methodology required close coordination with the line agency - Ministry of Local Government and Rural Development (MLGRD) - through their setup at the District Councils level spread over the entire province. The political leadership to the DCs is provided by the elected representatives. The DCs have limited resources and most of their road works are funded through the MNA/MPA schemes and the development programmes undertaken by various political governments. These funds are, however, almost exclusively used for the construction of new roads. In the absence of a legislative framework to ensure mandatory earmarking of funds for maintenance and rehabilitation, the situation is not expected to change. The DCs do allocate funds for the purpose but these used to be only a token amount, grossly insufficient -for any meaningful maintenance. The project required the DCs all over the province to

progressively increase their allocations for the maintenance of roads, such that in this last year of the project, 1994 100% of the paved road network is maintained by the DC.

The methodology was well thought out and did result in an improvement. The DCs were required to take the maintenance seriously if they want project fund for rehabilitation of roads. The target for the maintenance of 100% of the paved roads, however, could not be achieved as the length of the (paved road) network increased considerably during the project period.

The conclusion drawn here is that unless the political leadership realizes the significance of proper maintenance and rehabilitation, funds for new constructions will continue to get priority over maintenance and rehabilitation.

4. Little realization of the significance of maintenance and rehabilitation was there among the concerned DC officials at the initial stage of the project. The project to a considerable extent, succeeded in this respect, and a better realization of the project objectives can now be observed among the DC officials. How much of this will continue in future years without the project is, however, difficult to predict.
5. Realization of the importance of proper and timely maintenance and rehabilitation among the MLGRD and DC officials was one of the main goals of the project. Tangible goals to monitor the success of the project were also defined in term of targets kms of roads to be maintained and rehabilitated. Whereas success on the first front is hard to monitor, that on the other can easily be determined. The project succeeded in achieving a reasonably good part of its target length of road rehabilitation. It could have well achieved the target 100% had USAID not decided to terminate the project before its scheduled closure.
6. A greater target length of road could have been rehabilitated if all DCs were equally cooperative, USAID insistence to somehow retain activities on-going in all DCs resulted in some loss of time. It would have been better to quickly divert funds from poor performing districts to the better performing ones. This was done eventually, after some loss of time.

7. The project criteria of having candidate roads for rehabilitation identified by the DCs aimed at concerned DC staff closely monitoring the condition of roads. However, on several occasions this did not happen and roads were recommended by the DC officials on political basis. Such roads generally did not qualify as being economically feasible and were hence denied project funding. The concept of economic feasibility needs to be further emphasized and its use made mandatory for all development schemes, to discourage political maneuvering of priorities at the time of allocation of funds.
8. The idea of acquiring sufficient Right Of Way (ROW) does not seem to be very well accepted by some DCs. Several roads in Karachi district despite being heavily trafficked could not be taken up for rehabilitation because of ROW and utility relocation problems. DCs will be better off if sufficient ROW are acquired at the time of construction and any encroachments that may crop up are urgently removed.
9. In some southern districts of Sindh, especially, Badin and Hyderabad, drainage is a problem. The terrain in these districts is flat and these areas are subject to flooding. Once flooded the area remain inundated till the water evaporates. An integrated flood control plan is the eventual solution, cost of keeping such roads operative and free from excessive erosion resulting from prolonged exposure to water is high.
10. Estimates for the project schemes were prepared on item rate basis. Common practice in the DCs is to bid on the basis of schedule of rates where the contractor only quotes a rate for the premium he wants to charge. Even for the item rate bidding it was apparent that several bids were prepared the otherway round i.e. from total estimated cost to item rates. Contractors needed some formal training in this regard.
11. Unavailability of suitable equipment for compaction of narrow (around 4'-0") shoulders was a common problem. Shoulders in general were the most difficult to compact to the required degree of compaction. USAID did get some purpose built drum roller manufactured but these were not self propelled type. Response from the contractors was lukewarm. Self propelled small size drum rollers are needed to realize good compaction of such narrow shoulders.

12. Contractors also need some training in scheduling of their construction operation and to make them realize the loss associated to delay in completion of works. Delay in completion, in general, is not taken seriously either by the contractor or the DC official.
13. Progress of work also suffered to some extent due to the delay in reimbursement to the contractors. Initially funds by GOP were transferred to DC accounts and the DCs used to make payment to the contractors directly. This arrangement worked well at the DC contractor end but reimbursement of funds from USAID to GOP took very long due to poor response of GOS - GOP agencies concerned. Later on GOP was unable to transfer funds to DC accounts. To avoid this problem USAID undertook to make direct payments to the contractors through the DCs. This, however created problems for the contractors as it required 30-45 days for the invoices to be paid by USAID. Another problem was experienced at the final stage of the project with the first mode of payment. Funds that were initially allocated to some districts could not be utilized by them. Some other districts on the other hand required more than what was allocated to them. It, however, remained impossible, to this date to get funds from excess districts transferred to the deficient ones despite USAID repeated and continuous efforts.
14. In general the quality of construction on the project roads was remarkably good. Reasonable rates, strict supervision and guaranteed payment for accepted work were some of the reasons. Cost of construction/rehabilitation was also relatively low in comparison with similar works being executed by other agencies.
15. One issue that has arisen as a result of USAID decision to terminate the project is that more than 59 km of prioritized roads were designed for FY 1993-94 programme and an even greater length was identified by the DCs. Only 12.7 km out of these could be rehabilitated. What will be the fate of these roads is anybody's guess. If possible USAID should consider recommending the already designed roads to any other donor/funding agency and/or recommend GOS to ensure their early rehabilitation.

ANNEXURE - A

**LIST OF ROADS FOR FY 1993-94
PROGRAM**

ROAD RESOURCES MANAGEMENT PROJECT (RRMP)
PROPOSED PRIORITISED LIST OF DISTRICT COUNCIL ROADS
FOR FY1993-94 REHABILITATION & UPGRADATION PROGRAMM

ANNEXURE - A

21-Jul-94

S/L NO.	DISTRICT/ ROAD NO. (NEW NO./OLD NO.)	R O A D N A M E	LENGTH PROP. B DC IN (KM)	LENGTH SURVEE B ACE IN (KM)	ELIGIBLE LENGTH FO REHAB/JUP	ECONOMIC EVALUATION RESULT	BENEFIT COST RATIO (B/C)	CONSULTA PRIORIT RANKING	REMARKS
A	BADIN	(Target length=3.02 km, Feasible road length=8.20 km)							
1	BA-MT-01/BA-M5	Ha i Sa an Bus Stand to Sami i Kabar (PHASE-1V)	7.50	4.00	4.00	Feasible	1.05	2	Rehabilitation of 7.55 km already complid
2	BA-MT-03	Saleh Soomro to Gheno Odeho	2.00	1.75	0.00	Infeasible	0.75		
3	BA-MT-02/BA-M-19	Phulkara Shaikh Birko Road to Talo Farm	4.00	4.20	4.20	Feasible	1.33	1	
4	BA-MT-05/BA-M-24	Matti Phulkara Road to Village Moya	2.20	2.00					Maintainable.
5	BA-TB-01/BA-TB-13	Ra o Khanani Road to Village Yousuf Bunro	1.50	1.38	0.00	Infeasible	0.49		
6	-	Phulkara Shaikh Birko Road to village Chandia	2.00						This road is a part of BA-MT-02
7	-	Saleh Soomro to Village Hero Talpur	2.00	1.80					Maintainable.
8	-	From Dando Road to Dargah Sa an Sa ai	0.50	0.50					Road is incomplete after D+25C
9	-	Tahar Ra o Khanani Road to Village Tayab June o	1.10	1.00					Road is incomplete after D+50C
B	DADU	(Target length=2.62 km, Feasible road length=10.45 km)							
1	DA-KN-	Pacca Road Bunra To Koor Hussain	1.00						Maintainable.
2	DA-DA-07	Piarogoth-Phuli Station Rd To Daresnahan Panh ar.	1.05	2.50	1.50	Feasible	1.45	3	
3	DA-DA-04	Dadu Darro Road To Purgunio	1.05	5.60	1.65	Feasible	1.82	2	Also Feasible previously.
4	DA-KI	Indus Highway To Kar Village	0.50	0.50	0.00	Infeasible	0.65		Previously Infeasible
5	DA-KI-07	Indus Highway To Rest House Amri	0.50	0.50	0.00	Infeasible	0.28		Previously Infeasible
6	DA-KI-06	Indus Highway To Gar ar, (Bit paved +katcha portion)	1.05	7.30	7.30	Feasible	2.77	1	Previously Feasible
7	DA-TB-01	Thano Buia Khan Road To Syed Baqar Shah	1.00	1.00	0.00				Maintainable.
8	-	Indus Highway to Lacha Village	0.75	0.75	0.00	Infeasible	0.75		
C	HYDERABAD	Target length=14.95 km, Feasible road length=28.59 km							
1	HY-HA-16/HY-HL-26	Phul Kaka to Seeranchoon	2.80	2.55	2.55	Feasible	2.05	6	
2	HY-HA-15/HY-HL-25	National Highway to Pan mero Hoot Sayal	2.40	2.40	2.55	Feasible	1.65	7	
3	HY-MT-03/HY-HL-14	Uderola to Uderola Dargha	1.00	0.75	0.75	Feasible	1.09	10	

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ROAD RESOURCES MANAGEMENT PROJECT (RRMP)
PROPOSED PRIORITISED LIST OF DISTRICT COUNCIL ROADS
FOR F 1993-94 REHABILITATION & UPGRADE PROGRAMM

21-Jul-94

SERIAL NO.	DISTRICT/ ROAD NO. (NEW NO./OLD NO.)	ROAD NAME	LENGTH PROPOSED IN (KM)	LENGTH SURVEYED IN (KM)	ELIGIBLE LENGTH FOR REHAB/JUP	ECONOMIC EVALUATION RESULT	BENEFIT COST RATIO (B/C)	CONSULTANT PRIORIT RANKING	REMARKS
4	HY-WT-03/HY-HL-9	Masu Bhurhan to Janda' Kot Village	4.40	4.25	4.25	Feasible	3.75	1	
5	HY-TM-28/TM-26	Hyderabad Matli Road to Wahid Dino Jagsi	2.00	2.00	2.00	Feasible	3.01	3	
6	HY-TA-04/TA-04	Jamro Mon to M. Flour Mill via Chand. Ram	3.00	3.00	3.00	Feasible	1.29	9	
7	HY-TA-07/TA-07	Lapir Chamber to Nazir Farm	3.00	3.10	3.10	Feasible	3.11	2	
8	HY-TA-15/TA-15	Jhanda Man to Ne. Nisabad	2.60	4.10	4.10	Feasible	2.51	4	
9	HY-HY-41/	Hyderabad Tando Mohammad Khan Road To Lakhi Keti	3.00	3.26	3.26	Feasible	1.48	8	
10	HY-TM-30/	Tando Faza Lined Road to Lined Channel Road 137	3.10	3.00	3.00	Feasible	2.06	5	
D	JACOBABAD	Target length=1.92 km Feasible road length=10.55 km							
1	JA-GK-01	Munammadpur Union Council To Meet Road Larkana At Ghulam Shah	3.00	2.85	2.85	Feasible	1.49	3	Katcha Road previously feasible
2	-	Katcha Road From Suhian Road to Village Tang an	3.80	3.80	3.80	Feasible	2.62	1	Katcha Road.
3	-	Katcha Road From Kar - Bux To Village B a' Khan Khoso Taluka Thui	3.90	3.90	3.90	Feasible	1.93	2	Katcha Road.
E	KARACHI	Target length=5.19 km Feasible road length=4.65 km							
1	KA-ET-05/KA-07	Fish Bunder Road To Ibrahim Hyden	0.50	0.70	0.70	Feasible	7.91	1	
2	KA-ET-21/KA-10-N	Shid Goth To Memon Goth Road	3.20	3.75	2.05	Feasible	4.84	2	
3	KA-WT-04/KA-03-K	Gadao To Shan Mureed Road	2.00	0.55	0.55	Feasible	2.53	5	Impractical for design purpose
4	KA-WT-08/KA-B-27	Manghoo' To Baloch Goth Road	1.00	1.15	1.15	Feasible	3.28	3	Impractical for design purpose.
5	KA-ET-12/KA-20	Mittan Para To Ibrahim Hyden	0.30	0.25	0.00	Infeasible	0.29		
6	KA-ET-13/KA-21	Abbar Para Ibrahim Hyden	0.30	0.20	0.20	Feasible	3.16	4	
7	KA-ET-15/KA-22	Movee Para Ibrahim Hyden	0.10	0.10	0.00	Infeasible	0.58		

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ROAD RESOURCES MANAGEMENT PROJECT (RRMP)
PROPOSED PRIORITISED LIST OF DISTRICT COUNCIL ROADS
FOR F 1993-94 REHABILITATION & UPGRADATION PROGRAMM

21-Jul-94

SR. NO.	DISTRICT/ ROAD NO. (NEW NO./OLD NO.)	ROAD NAME	LENGTH PROP. B DC IN (KM)	LENGTH SURVEY B ACE IN (KM)	ELIGIBLE LENGTH FO REHAB./UP	ECONOMIC EVALUATION RESULT	BENEFIT COST RATIO (B/C)	CONSULTA PRIORIT RANKING	REMARKS
F	KHAIRPUR	Target length=2.62 km, Feasible road length=2.10 km							
1	-	Ahmedpur Road To Dost Muhammad Abo Village	2.50	1.10	2.10	Feasible	1.63	1	Katcha Road.
2	-	Ahmedpur Bhatayoon Road To Via Bodli Mahesar Mentani	4.00	4.00	0.00	Infeasible	0.71		Brick paved & Katcha road
G	LARKANA	Target length=3.33 km, Feasible road length=3.35 km							
1	-	Pucca Road Balchar Kahra To Guhar	3.25						
2	LA-DI-10	Pucca Road Kaejur To Mouw Shaikh	1.25	1.00	0.50	Feasible	1.05	4	Bc Pavement from 0+00 to 0+490 Katcha Portion from 0+490 to 1+00
3	-	Pucca Road Mangha Bund To Puranoabad	3.25						
4	-	Pucca Road Baharen To Bhandh	0.35						
5	LA-DI-26	Pucca Road Haroon Tunio To Gul Muhammad Tunio	2.00	2.45	2.30	Feasible	1.09	3	Bc Paved remaining length in condition 4.
6	-	Pucca Rd Larkana Bakrani To Dokh Via Batahal Shah	5.00						
7	-	Pucca Road Hussaabad To Hatth Via Kot Chandko	3.00						
8	LA-WA-09	Badan Waran Road To Mustafabad	0.30	0.30	0.30	Feasible	1.21	2	Katcha Road
9	-	Moendaro Bare Road To Village Dhand	0.28	0.28	0.25	Feasible	1.58	1	Katcha Road
H	MIRPURKHAS	Target length=4.62 km, Feasible road length=9.65 km							
11	MK-MK-02/THR-3	Satte To N To Mir Sher Mohammad village	0.65	0.65	0.65	Feasible	2.19	3	Already designed by ACE for Fy-93/94.
12	MK-MK-17/THR-MP-35	5th Miran Doulat Laganh To Vill Daulat Laganh	1.91	2.00	2.00	Feasible	2.48	2	
13	MK-MK-14	Mirpurkhas To Khan Village Road	1.25	1.25	1.25	Feasible	4.44	1	
14	MK-D-04/THR-17	Tando Jan Mohammad Khudadad Road	0.70	0.70	0.70	Feasible	1.90	6	
15	MK-MK-11	Zamindar Cotton Factory To Village Rasool Bux Dal	1.50	2.05	2.05	Feasible	2.06	5	
16	MK-MK-10	Mirpurkhas Hyderabad Road Ratanabad To Bhattaro	1.60	1.50	1.50	Feasible	1.59	7	
17	MK-GV-01/THR-12	Mirpurkhas Jhujar Road To Mir Khalid Landh	0.70	0.70	0.70	Feasible	1.03	8	
18	MK-MK-08/THR-11	Mirpurkhas Hyderabad Road To Rai Kumar Farm	1.30	1.35	0.00				Maintainable
19	MK-MK-26	Mirpurkhas Dighwan Road To Mir Khan Laganh	0.35	0.35	0.00				Maintainable
20	MK-D-05/THR-18	Tando Ghulam A Den 164	0.90	0.80	0.80	Feasible	2.12	4	

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ROAD RESOURCES MANAGEMENT PROJECT (RRMP)
PROPOSED PRIORITISED LIST OF DISTRICT COUNCIL ROADS
FOR F 1993-94 REHABILITATION & UPGRADATION PROGRAMM

21-Jul-94

SRL NO.	DISTRICT/ ROAD NO. (NEW NO/JOLD NO.)	ROAD NAME	LENGTH PROP. B DC IN (KM)	LENGTH SURVEYED IN (KM)	ELIGIBLE LENGTH FOR REHAB/JUP	ECONOMIC EVALUATION RESULT	BENEFIT COST RATIO (B/C)	CONSULTA PRIORIT RANKING	REMARKS
I MAUSHERO FERDZ			Target length=3.11 km, Feasible road length=1.75 km						
1	NF-MO-02	Ne Jato: Mithani Rd To Sehra (Via Old Jato)	3.00						Maintainable
2	NF-KN-01	Haran Mehrapur Road To Village Mukhtarabad	1.00	1.00	0.00				Maintainable
3	NF-KN-	Mehrapur Sailabad Road To Village Jiando Ra par	1.50	1.50	0.00	Infeasible	0.69		Brick paved Road
4		National Highway C/3 To Village Mirzapur.	0.50						Maintainable
5	NF-KN-04/NA-24	National Highway Kotn Kabir To Khan Wahan	5.00	8.00	6.75	Feasible	2.12	2	Also Feasible previously.
6	NF-KN-15/NF-K-13K	National Highway Kotn Kabir To Mehrapur (Phase-11)	3.00	5.00	5.00	Feasible	3.60	1	Also Feasible previously
J MAWABSHAH			Target length=3.78 km, Feasible road length=6.00 km						
1	NA-NA-14/NA-20	Kaz Ahmed To Buchan Via K.K.O. Mili (Phase-III)	1.50	3.00	3.00	Feasible	1.69	2	Also Feasible previously.
2	NA-SA-18	Sakrand Mehrapur Road To Village Mud (Phase-II)	3.00	3.00	3.00	Feasible	2.19	1	Also Feasible previously.
K SANGHAR			Target length=3.55 km, Feasible road length=7.55 km						
1	SA-SA-05/SA-5W	Sanghar Khirpo Road To Village Tamb June o	0.80	0.55	0.55	Feasible	1.01	2	Also Feasible previously
2	SA-SH-04/SA-SH-22V	Shandadpur Road to Lundo Via Soomar Fakir Hingoro (Phase-II)	6.00	3.00	3.00	Feasible	2.13	1	Also Feasible previously
3	SA-SA-03/SA-3W	Tando Mitna Khan Road To Village Bakar	5.00	4.00	4.00	Feasible	1.01	3	Also Feasible previously.
4	SA-SA-13/SA-10	Peruma Tando Mitna Khan Road To Village Chhimandas	5.00						
5	SA-SJ-05/SJ-15	Khadro Railway Crossing To Jan Mitna Khan	7.00						
6	SA-SJ-05/SJ-11	Khadro To Khadro Railway Crossing	0.90						
7	SA-TA-02/TA-18V	Tando Adam - Tando Alayar Road To Vill M Hassan Man	1.10						
L SHIKARPUR			Target length=2.05 km, Feasible road length=6.12 km						
1	SH-LK-01/SH-01	Lakh Wazirabad Road (Phase-II)	0.57	0.57	0.57	Feasible	1.30	3	Also Feasible previously
2	SH-LK-03/SH-71	Sukkar Shikarpur Road To Mangrani	0.60	0.60	0.00	Infeasible			Previously Infeasible
3	SH-SH-01/SH-69	Shikarpur To Buz Madar Via Jando (Phase-III)	2.83	1.80	1.60	Feasible	1.57	1	Also Feasible previously.
4	SH-GY-01/SH-70	Rato Dero Sherapur Road To Satranpur Village	0.80	0.80	0.00	Infeasible			Previously Infeasible
5	SH-GY-09/SH-12	Rato Dero Sherapur Road To Chutti Dho	0.70						Maintainable

DATE ECONOMIC ANALYSIS LISTED IN (M/S/D/O)

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ROAD RESOURCES MANAGEMENT PROJECT (RRMP)
PROPOSED PRIORITISED LIST OF DISTRICT COUNCIL ROADS
FOR F 1993-94 REHABILITATION & UPGRADATION PROGRAMM

21-Jul-94

SR. NO.	DISTRICT/ ROAD NO. (NEW NO./OLD NO.)	ROAD NAME	LENGTH PROP. B DC IN (KM)	LENGTH SURVEE D IN (KM)	ELIGIBLE LENGTH FO REHAB/JUP	ECONOMIC EVALUATION RESULT	BENEFIT COST RATIO (B/C)	CONSULTA PRIORIT RANKING	REMARKS
6	SH-GY-08/S-4-35	Sukkur Larkana Road To Bund	0.50						Maintainable
7	SH-GY-07/S-4-13	Garhiyasri Ruk Road To Amroto Sharif	0.70						Maintainable.
8	SH-LK-03/S-4-03	Chak Bagar Road To Bhirkhan	0.30						Maintainable.
9	-	Garhiyasri Amroto Road to Gohi Kore a	3.00	3.50	3.50	Feasible	1.54	2	Katcha Road.
10	-	Shikarpur Jacobabad Road to Dargah Hamayoon Sharif	0.33	0.45	0.45	Feasible	1.03	4	
M	SUKKUR	Target length=3.48 km Feasible road length=4.00 km.	4.00	4.00	4.00	Feasible	1.91	1	Also Feasible previously.
N	THATTA	Target length=4.00 km Feasible road length=4.00 km							
1	-	National Highway To Amds Pindho Baloch goth	2.00	8.90	0.00	Infeasible	0.15		After detailed survey the Consultant find this road Economically Infeasible
2	TH-TH-15/TH-15	Khuignato Drain To Dargah La P - Shah	0.50	0.70	0.00	Infeasible	0.37		
3	TH-TH-17	National Highway To Mode Village Sonda	1.00	1.00	1.00	Feasible	2.70	1	
4	TH-SB-02	Bus Stop Shah Yakeer To Dargah Shah Yakeer	0.50	0.95	0.95	Feasible	2.34	2	
5	-	National Highway To Dargah Makhdoom M. Hashim Thari	0.50	0.50	0.50	Feasible	1.02	5	
6	TH-TH-04/TH-4V	National Highway M 63 To Addu an Shah Assabi	0.40	1.00	0.25				Maintainable.
7	TH-SJ-01/TH-SJ-01	Syedpur Band To Piro Para	0.70	1.25	0.00	Infeasible	0.57		
8	TH-TH-05	National Highway To Sonda Village	0.50	0.50	0.50	Feasible	1.90	4	
9	TH-TH-22/TH-1	Edgah Mak M 63 To Naka Thatta	3.00	2.98					Maintainable
10	TH-TH-21	National Highway To Jharak To n	3.00	1.55	1.05	Feasible	2.34	3	
94	Tot 67 Nos Roads Analysis	Tot Target Length=55.48km Tot feasible Length=115.01km	183.03	161.09	117.21	53(F)/14(I)			

NOT - Already analyzed for Fy 92-93
- Target lengths are based on Avg. escalated District se cost/km of Fy 92/93 projects
- Proposed ranking are based on descending order of B/C ratios
- F Feasible if Infeasible

(D-45 ECO/NOV/04/ANAPR...ST93 WK1: M S D D C)

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ROAD RESOURCES MANAGEMENT PROJECT (RRMP)

ANNEXURE-A

DISTRICT ROAD REHABILITATION AND CONSTRUCTION PROGRAMME OF F 1993-94.

PRIORIT-WISE LIST OF ELIGIBLE ROADS PROPOSED BY DISTRICT COUNCILS
AND APPROVED BY THE DISTRICT COORDINATION COMMITTEE ON JUL, 21 1993.

SR. NO.	DISTRICT/ ROAD NO. (NEW NO./OLD NO.)	ROAD NAME	LENGTH PROP. BY DC IN (KM)	LENGTH SURVEYED BY IN (KM)	ELIGIBLE LENGTH FOR REHAB./UP	DISTRICT PRIORIT RANKING	REMARKS
A							
BADIN							
*1	BA-MT-01/BA-M5	Haji Saan Bus Stand to Sami i Kabar (PHASE-1V)	7.50	4.00	4.00	1	
2	BA-MT-02/BA-M-19	Phulkara Shaikh Birkio Road to Talo Farm	4.00	4.20	4.20	2	
B							
DADU							
*1	DA-KI-06	Indus Highway To Garari (Bit paved + katcha section)	1.06	7.30	7.30	1	Previously Feasible.
2	DA-DA-07	Piarogoth-Punj i Station Rd To Dareshahani Panhar.	1.05	2.50	1.50	2	
*3	DA-DA-04	Dadu Darro Road To Pirgunio	1.06	5.60	1.65	3	Also Feasible previously.
C							
HYDERABAD							
1	HY-HA-15/HY-HL-25	National Highway to Panmoro Hoot Sayal	2.40	2.40	2.55	2	
2	HY-MT-03/HY-HL-14	Uderotal to Uderotal Dargha	1.00	0.78	0.78	3	
3	HY-MT-02/HY-HL-9	Masu Bhurgani to Jenda! Kot Village	4.40	4.25	4.25	4	
4	HY-TM-25/TM-26	Hyderabad Matli Road to Mid Dino Jagsi	2.00	2.00	2.00	5	
5	HY-TA-07/TA-07	Lapir Chamber to Nazir Farm	3.00	3.10	3.10	6	
6	HY-TA-04/TA-04	Jamro Mori to M. Flour Mill via Chandri Ram	3.00	3.00	0.60	7	
7	HY-TA-15/TA-15	Jhando Man to Ne Nirabad	2.60	4.10	4.10		Feasible
8	HY-HY-41/	Hyderabad Tando Mohammad Khan Road To Lakhi Ketri	3.00	3.26	3.26		Feasible
9	HY-TM-33/	Tando Faza Lined Road to Lined Channel Road 137	3.10	3.00	3.00		Feasible

(D-46 D-PRY/W TAS/M.SID)

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ROAD RESOURCES MANAGEMENT PROJECT (RRMP)

ANNEXURE-A

DISTRICT ROAD REHABILITATION AND CONSTRUCTION PROGRAMME OF F 1993-94.

PRIORIT-WISE LIST OF ELIGIBLE ROADS PROPOSED BY DISTRICT COUNCILS
AND APPROVED BY THE DISTRICT COORDINATION COMMITTEE ON JULY 21 1993.

SR. NO.	DISTRICT/ ROAD NO. (NEW NO./OLD NO.)	ROAD NAME	LENGTH PROP.B DC IN (KM)	LENGTH SURVEY BY ACE IN (KM)	ELIGIBLE LENGTH FOR REHAB./UP	DISTRICT PRIORITY RANKING	REMARKS
D JACOBABAD							
*1	JA-GK-01	Muhammadpur Union Council To Meet Road Larkana At Gulam Shah (PHASE-II).	3.00	2.85	2.85	1	Katcha Road previously feasible.
2	-	Katcha Road From Karim Bux To Village Bihar Khan Kh.	3.90	3.90	3.90	2	Katcha Road.
3	-	Katcha Road From Suhiani Road to Village Tangari.	3.80	3.80	3.80	3	Katcha Road.
E KARACHI							
1	KA-ET-05/KA-07	Fish Bunder Road To Ibrahim Hyderi	0.50	0.70	0.70	1	
2	KA-ET-21/KA-10-N	Shidi Goth To Memon Goth Road	3.20	3.75	2.05	2	
3	KA-ET-13/KA-21	Abbani Para Ibrahim Hyderi	0.30	0.20	0.20	3	
4	KA-W04/KA-03-K	Gadap To Shah Mureed Road	2.00	0.55	0.55	4	Impractical for design purpose. (Malir river crossing at 2 diff. places).
*5	KA-W08/KA-B-27	Manghooji To Baioch Goth Road	1.00	1.15	1.15	5	Impractical for design purpose. (Utilities relocation and ROW)
F KHAIRPUR							
1	KH-KI-07	Ahmedpur Road To Dost Muhammad Abro Village	2.50	1.10	2.10	1	Katcha Road.
2	KH-KH-01 (B.P+K.R)	Ahmedpur Bhatayoon Road To Via Bodli Mahesar Mehtani	4.00	4.00	4.00		Detailed re-analysis under way.
G LARKANA							
1	LA-DI-10	Pucca Road Kaipur To Moulvi Shaikh	1.25	1.00	0.50	1	Bit. Pavement from 0+00 to 0+490 Katcha Portion from 0+490 to 1+00
2	LA-DI-26	Pucca Road Haroon Tunio To Gul Mohammad Tunio	2.00	2.45	2.30	2	Bit. Paved remaining length in condition 4.
3	LA-DI-30	Moen odara Baire Road To Village Dhand	0.28	0.28	0.25	3	Katcha Road.
4	LA-W09	Badah Khan Road To Mustafabad	0.30	0.30	0.30	4	Katcha Road.

(D-46 D-PRY.M TAS/M.SID)

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ROAD RESOURCES MANAGEMENT PROJECT (RRMP)

ANNEXURE-A

DISTRICT ROAD REHABILITATION AND CONSTRUCTION PROGRAMME OF F 1993-94.

PRIORIT -WISE LIST OF ELIGIBLE ROADS PROPOSED B DISTRICT COUNCILS
AND APPROVED B THE DISTRICT COORDINATION COMMITTEE ON JUL ,21 1993.

SR. NO.	DISTRICT/ ROAD NO. (NEW NO./OLD NO.)	ROAD NAME	LENGTH PROP.B DC IN (KM)	LENGTH SURVE E B ACE IN (KM)	ELIGIBLE LENGTH FO REHAB./UP	DISTRICT PRIORIT RANKING	REMARKS
H MIRPURKHAS							
*1	MK-MK-02/THR-3	Sattelite To n To Mir Sher Mohammad village	0.65	0.65	0.65	1	Already designed by ACE for Fy-93/94 .
2	MK-MK-17/THR-MP-35	5th M. Mir ah Doulat Laghari To Vill.Daulat Laghari.	1.91	2.00	2.00	2	
3	MK-MK-11	Zamindar Cotton Factory To village Rasool Bux Dal	1.50	2.05	2.05	3	
4	MK-MK-14	Mirpurkhas to Khan Village Road.	1.25	1.25	1.25	4	
5	MK-MK-10	Mirpurkhas Hyderabad Road Ratanabad To Bhattaro	1.60	1.50	1.50	5	
I NAUSERO FEROZ							
1	NF-KN-15/NF-K-13K	National High ay Kotri Kabir To Mehrabpur.(Phase-11)	3.00	5.00	5.00	1	Also Feasible previously.
2	NF-KN-04/NA-24	National High ay Kotri Kabir To Khan Man.	5.00	8.00	6.75	2	Also Feasible previously.
J NAABSHAH							
*1	NA-NA-14/NA-20	Kazi Ahmed To Bucheri Via KK Oil Mill (Phase-III)	1.50	3.00	3.00	1	Also Feasible previously.
*2	NA-SA-18	Sakrand Mehranpur Road To Village Mud (Phase-II)	3.00	3.00	3.00	2	Also Feasible previously.
K SANGHAR							
*1	SA-SA-05/SA-5M	Sanghar Khipro Road To Village Talib June o	0.80	0.55	0.55	1	Also Feasible previously.
*2	SA-SH-04/SA-SH-22M	Shandadpur Road to Lundo Via Soomar Fakir Hingoro (Phase-II)	6.00	3.00	3.00	2	Also Feasible previously.
*3	SA-SA-03/SA-3M	Tando Mitna Khan Road To Village Bakar	5.00	4.00	4.00	3	Also Feasible previously.

(D-46 D-PRY.WJ TAS/M.SID)

10/1

ROAD RESOURCES MANAGEMENT PROJECT (RRMP)

ANNEXURE-A

DISTRICT ROAD REHABILITATION AND CONSTRUCTION PROGRAMME OF F 1993-94.

PRIORIT -WISE LIST OF ELIGIBLE ROADS PROPOSED B DISTRICT COUNCILS
AND APPROVED B THE DISTRICT COORDINATION COMMITTEE ON JUL ,21 1993.

SR. NO.	DISTRICT/ ROAD NO. (NEW NO./OLD NO.)	R O A D N A M E	LENGTH PROP.B DC IN (KM)	LENGTH SURVE B ACE IN (KM)	ELIGIBLE LENGTH FO REHAB./UP IN (KM)	DISTRICT PRIORIT RANKING	R E M A R K S
L SHIKARPUR							
*1	SH-SH-01/SH-69	Shikarpur To Bu a Napar Via Jano (Phase-III)	2.83	1.80	1.60	1	Also Feasible previously.
2	-	Bhirkan to Makhdoom Mola.	0.30	0.10	0.07	2	Economic Analysis under ay.
3	-	Garhiyasin Amrote Road to Goth Kore a	3.00	3.50	3.50	3	Katcha Road.
4	-	Shikarpur Jacobabad Road to Dargah Hamayoon Sharif	0.33	0.45	0.45	4	
*5	SH-LK-01/SH-01	Lakhi Mirabad Road (Phase-II)	0.57	0.57	0.57		Also Feasible previously.
M SUKKUR							
*1	-	Qaz' Ji Landi To Sardargarh Garh (Upgrdation)	4.00	4.00	4.00	1	Also Feasible previously. Any other priority list a ited from DC.
N THATTA							
1	-	National High ay To ards Pirdino Baloch goth	2.00	8.90		1	Detailed survey and re-analysis by the Consultant's is under ay.
2	TH-TH-17	National High ay To Model Village Sonda	1.00	1.00	1.00	2	Based on Consultant's priority ranking.
3	TH-SB-02	Bus Stop Shah Yakeek To Dargha Shah Yakeek	0.50	0.95	0.95	3	-do-
4	TH-TH-21	National High ay To Jharak To n	3.00	1.55	1.05	4	-do-
5	-	National High ay To Dragha Makhdoom M. Hasnim Thatvi	0.50	0.50	0.50	5	-do-
6	TH-TH-06	National High ay To Sonda Village	0.50	0.50	0.50	6	-do-
53	Tot. 67 Nos. Roads Analysis		115.94	132.34	112.88		

NOT * -Already analyzed for Fy 92-93.

-Priority- ise ranking are based on Districts priority.

(D-45 D-PRY.W TAS/M.SID)

LIST OF FY 1992-93 ROADS PROPOSED
 AFTER SEP.1992 DCC MEETING &
 APPROVED AT THE DCC MEETING HELD
 ON JULY 21, 1993.

SR. NO.	DISTRICT/ ROAD NO.	R O A D N A M E	TOTAL LENGTH KM	ECONOMIC EVALUATION RESULT
A	DADU			
	DA-DA-13	Indus Highway to Dargha Yar Muhammad	2.26	Feasible
B	HYDERABAD			
	HY-13N	Masu Burghari To Khatian	2.80	Feasible
C	JACOBABAD			
	JA-GK-01	Muhammadpur Union Council to Meet Road Larkana At Ghulam Shah.	5.10	Feasible
D	NAWABSHAH			
	NA-SA-18	Sakrand Mehrabpur Road to Village Mud	3.00	Feasible
E	SHIKARPUR			
	SH-SH-04	Sultankot Mainjo Goth Road to Ali Muhammad Village	1.25	Feasible
	SH-LK-09	Sukkur Shikarpur Road to Dodo Goth.	0.57	Feasible
	SH-LK-02	Chak Bagarji Road to Village Tamachani	0.89	Feasible
F	THATTA			
	TH-14	National Highway Ramzan Hajib	3.50	Feasible
	TH-27	Thatta Jungshahi National Highway to Gulmando.	3.64	Feasible

(D-44 ECONOMIC.ANA\LIST.WK1 M.SIDDIQ)

**DETAIL OF ADDITIONAL ROADS FOR FY 1993-94
REHABILITATION PROGRAMME**

DISTRICT	NAME OF ROAD/ NUMBER	LENGTH (KM)	ESTIMATED COST (Rs)	STATUS
HYDERABAD	Lapir Chamber to Nazir Farm HY-TA-07/TA-07	3.10	2,635,000	Road approved by DCC. To be designed
	Jhando Mari to New Mrabad HY-TA-15/TA-15	4.10	3,280,000	Road approved by DCC. To be designed
	Hyderabad T.M.K Road to Lakhi Ketu HY-HY-14	3.26	2,608,000	Road approved by DCC afterwards
MIRPURKHAS	Mirpurkhas to Khan Village Road MK-MK-14	1.25	725,775	Road approved by DCC. To be designed
	Mirpurkhas Hyd. Rd. Ratanabad to Bhittaro MK-MK-10	1.50	1,050,000	Road approved by DCC afterwards
*NAWABSHAH	Kazi Ahmad to Bucheri NA-NA-14/NA-20 (Phase-IV)	6.40	5,360,000	Road approved by DCC. To be designed
	Total:	19.61	15,658,775	
		=====	=====	

* Already mentioned in the details of additional roads for FY 1993-94 programme conveyed through Fax, on 13 Feb. 1994.

ANNEXURE - B

**TRAFFIC SURVEY DATA ANALYSIS
REPORT**

TRAFFIC SURVEY DATA ANALYSIS
UPDATED TO INCLUDE 1993 TRAFFIC COUNTS

1. INTRODUCTION:

Since 1988, following five traffic counts have been conducted on district roads in Sindh, in connection with the Road Resources Management Project.

- 1988 Counts conducted by M/s Construction Control Services Corporation (CCSC)
- 1989 Counts conducted by M/s Construction Control Services Corporation (CCSC)
- 1992 Counts conducted by M/s Associated Consulting Engineers-ACE (Pvt) Ltd.
- 1992 Counts conducted by District Councils (DC).
- 1993 Counts conducted by M/s Associated Consulting Engineers - ACE (Pvt) Ltd.

Whereas the counts conducted by M/s CCSC and ACE covered roads all over the province, the 1992 DC counts covered only six districts. A comparison of results of the CCSC and DC surveys was submitted in April 1993. Now that a second traffic count exercise by ACE has been completed, the traffic data has been reanalysed to determine growth rates for the traffic on district roads. This exercise, in most cases takes into consideration the CCSC counts and both 1992 and 1993 ACE counts.

2. ANALYSIS AND COMPARISON:

In all traffic data for 34 roads in 10 districts, were analyzed. In four districts: Jacobabad, Khairpur, Larkana and Sukkur no road has been covered in more than one traffic counts. Thus the analysis is limited to the remaining 10 districts in which there are roads that have been covered in more than one traffic counts.

Out of these ten districts, growth rates computed for Dahi, Karachi, and Shikapur were found to be unrealistically low or negative and as such have been excluded from the analysis to determine overall growth rate for the province.

Growth rates observed for the remaining seven districts are summarized below:

Sanghar	4.51%
Hyderabad	7.83%
Mirpurkhas	9.48%
Badin	9.72%
Thatta	11.11%
Nausheroferoz	14.78%
Nawabshah	15.98%

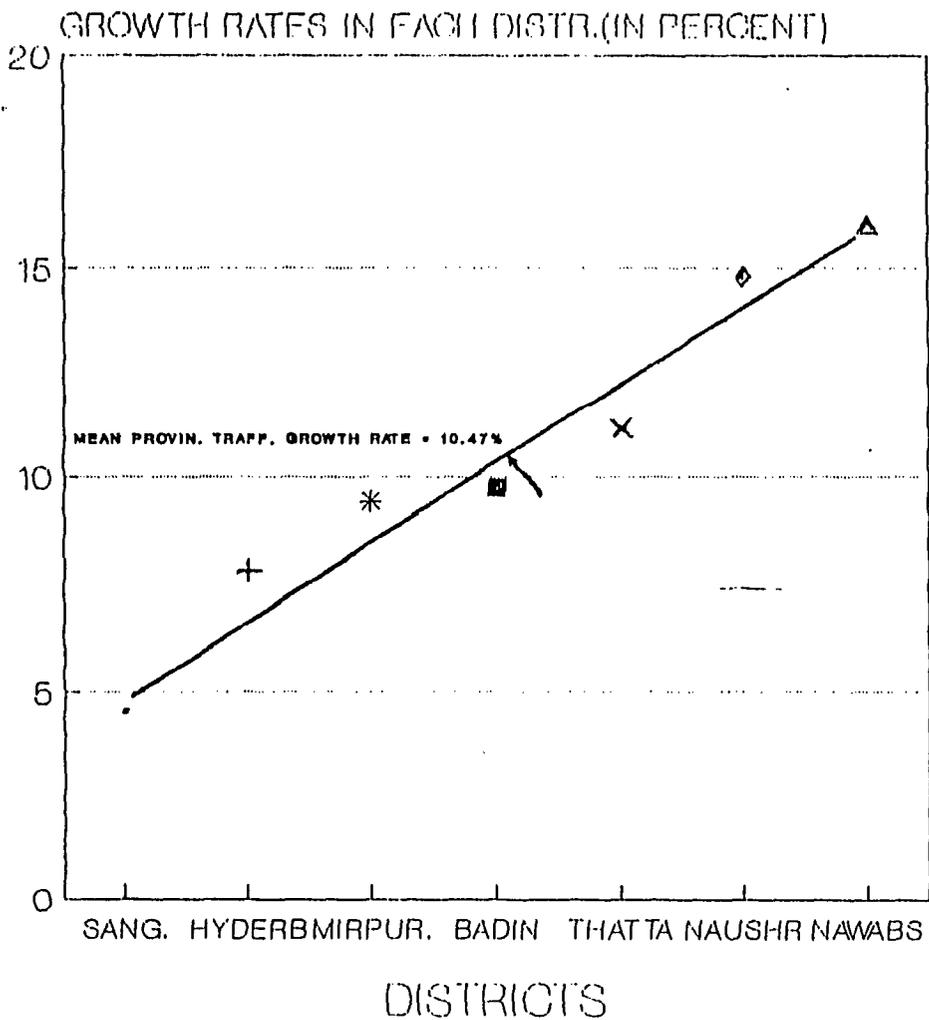
The detailed results of the classified traffic counts in 10 districts may be seen in the attached sheets. The growth rates determined for each district have also been given on the same sheets and are also shown graphically.

3. CONCLUSIONS AND RECOMMENDATIONS:

The overall provincial annual traffic growth rate for the district roads in Sindh based on the above analysis is 10.47%.

It is important to point out here that the above conclusion is based on a relatively smaller sample analysis. More data about traffic volume on district roads and the seasonal variation in traffic flow, are needed to establish the growth rates more realistically.

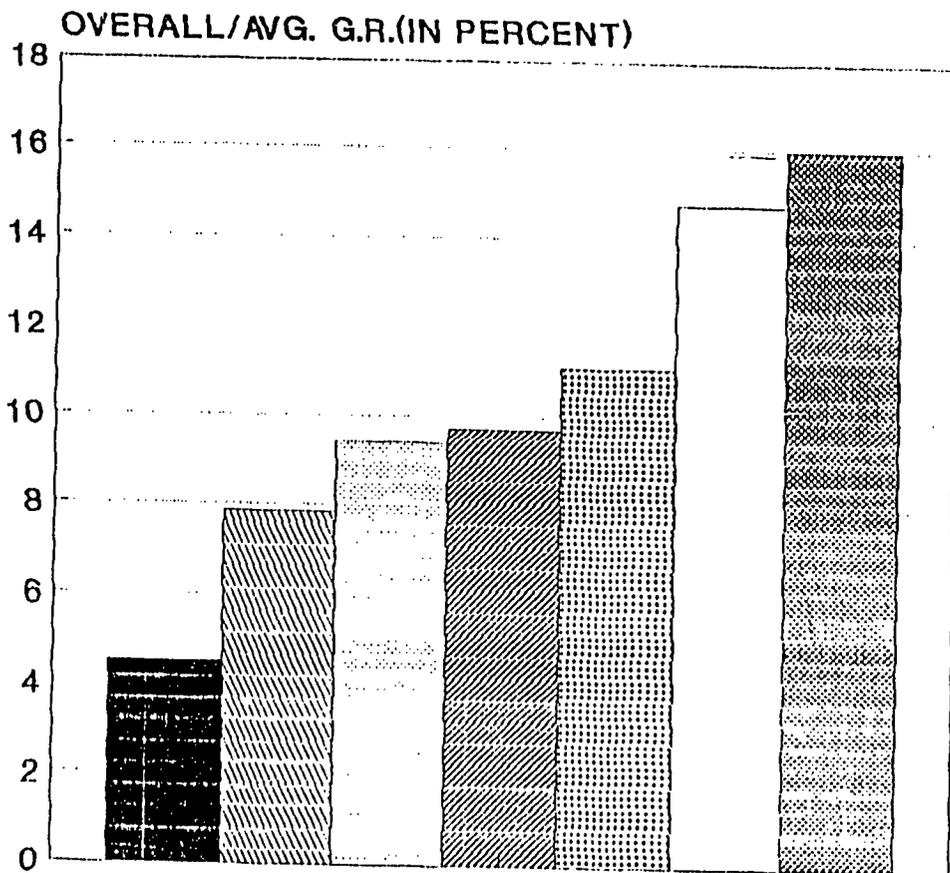
PROVINCE TRAFFIC GROWTH TREND



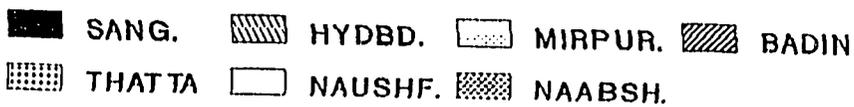
- SANGHA + HYDERA * MIRPUR ■ BADIN
- x— THATTA ◇ NAUSHE ▲ NAWABS

OVERALL PROVINCIAL GROWTH RATE
(Based on the result of seven districts)

DISTRICTS TRAFFIC GROWTH RATES



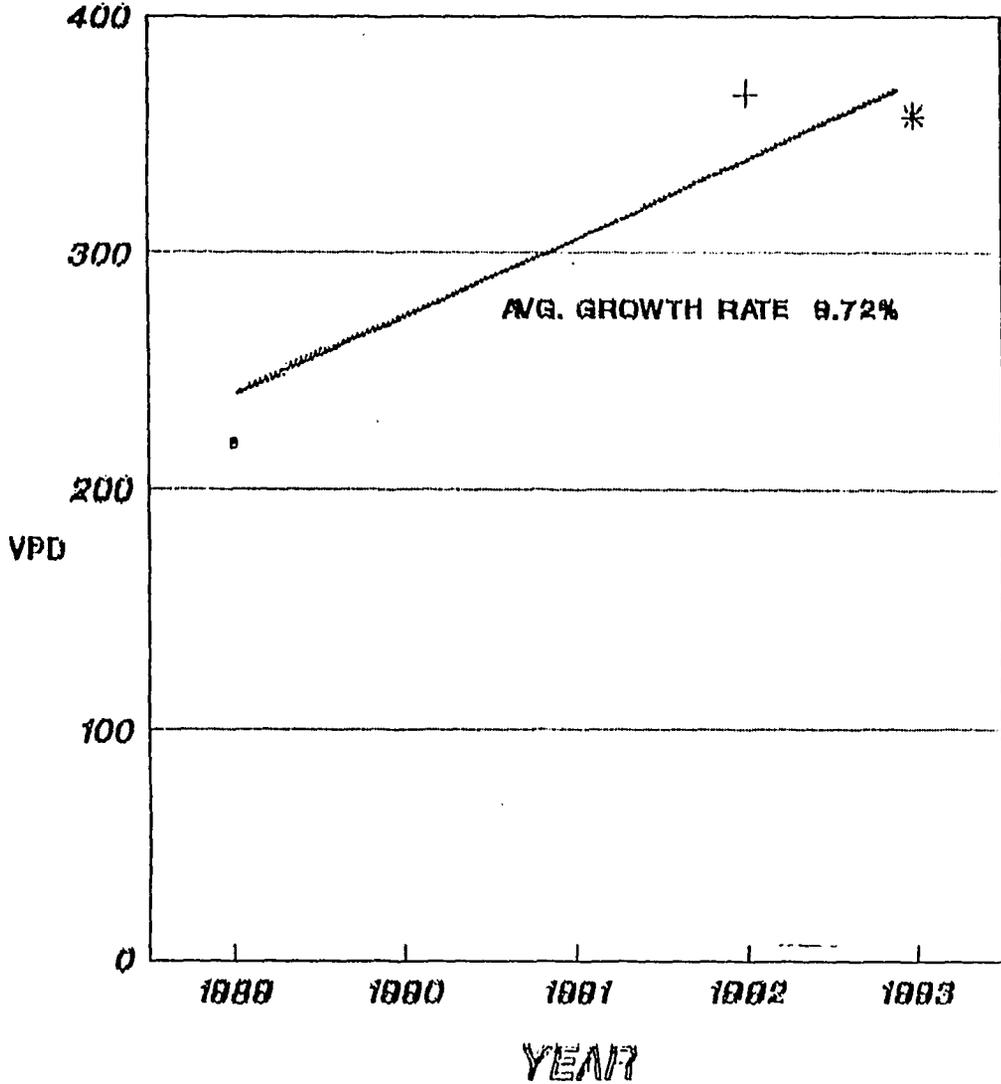
DISTRICTS



OVERALL PROVINCIAL GROWTH RATE
(BASED ON THE RESULT OF SEVEN DISTRICTS)

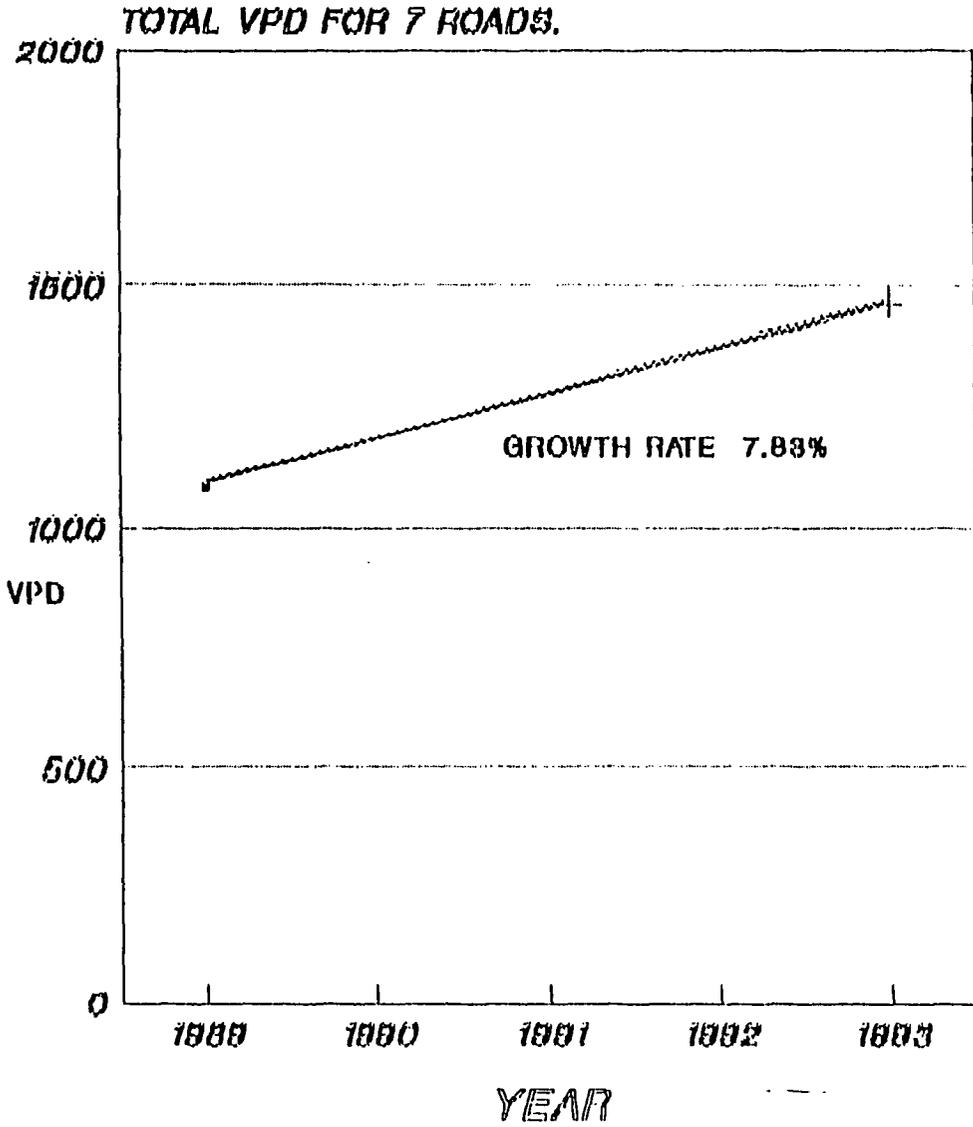
DISTRICT TRAFFIC COUNTS COMPARISON

TOTAL VPD FOR 3 ROADS.



CCSC COUNT
 AGE/DC COUNT
 * AGE COUNT
 DISTRICT BADIN (BASED ON 3 ROADS COUNTS)

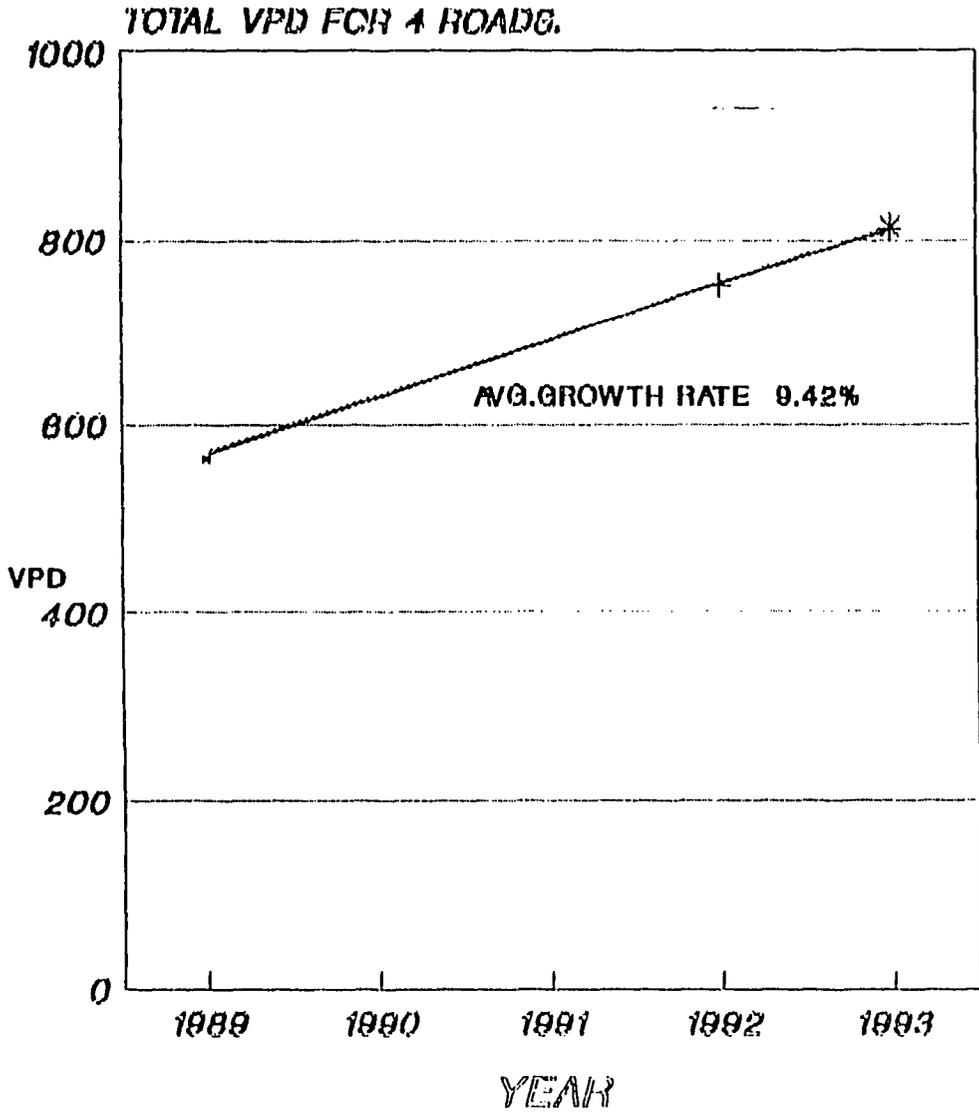
DISTRICT TRAFFIC COUNTS COMPARISON



--- CCS AVG.COUNTS-88 --- ACE COUNTS-93

DISTRICT HYDERABAD BASED ON 7 ROADS COUNT

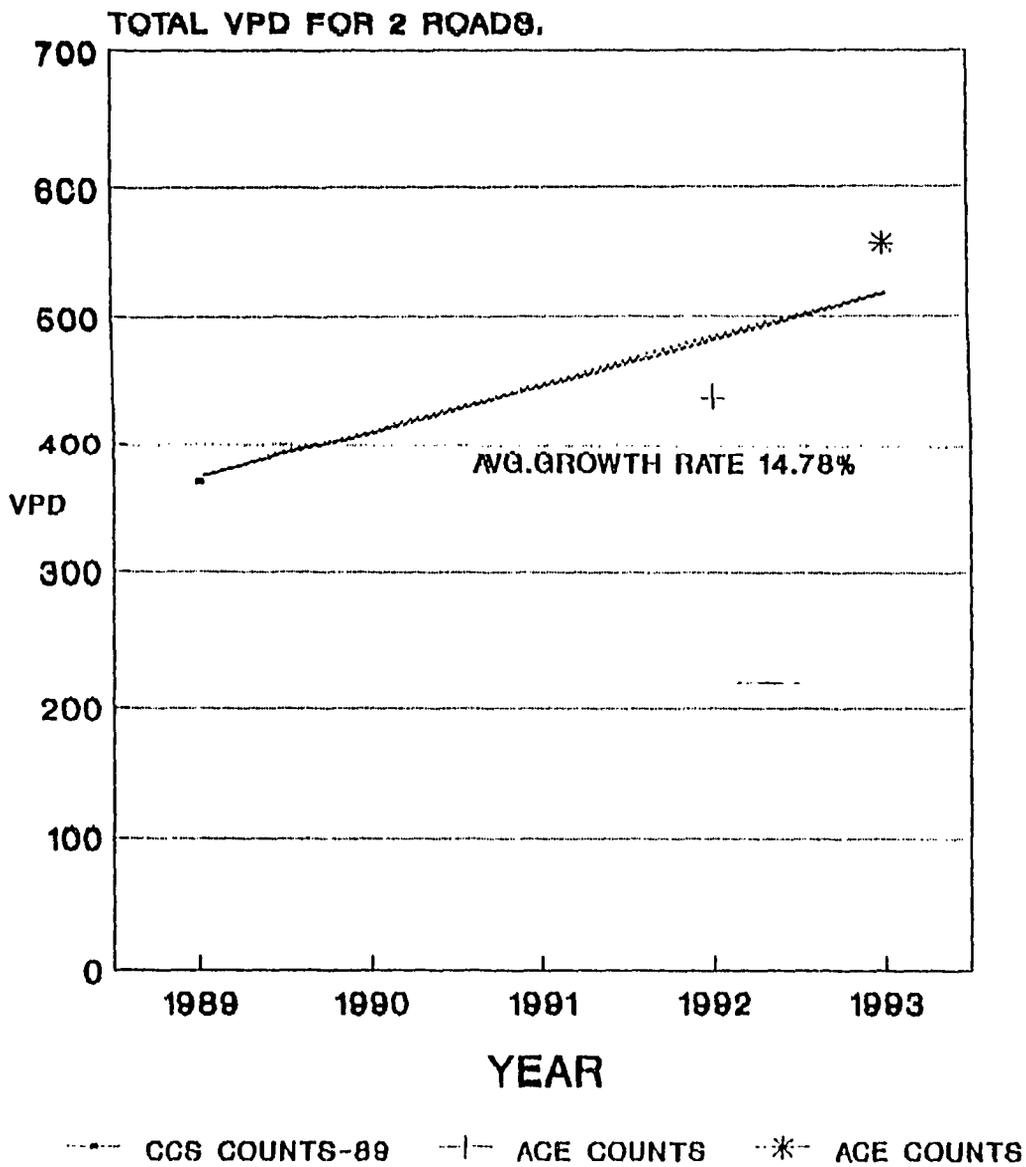
DISTRICT TRAFFIC COUNTS COMPARISON



--- GCS COUNT + AGE/DC COUNTS * AGE COUNT

DISTRICT MIRPURKHAS BASED ON 4 ROADS.

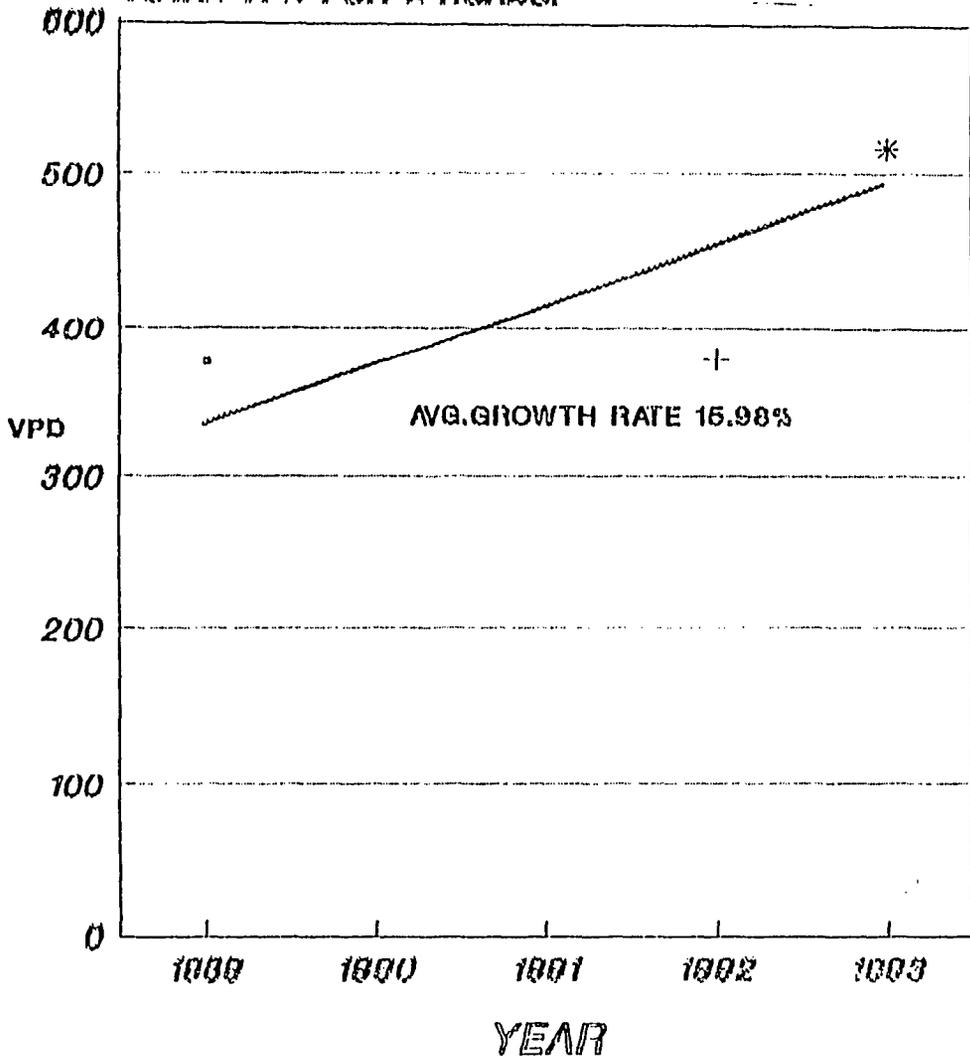
DISTRICT TRAFFIC COUNTS COMPARISION



DISTRICT NAUSHERQEEBQZ BASED ON 2 ROADS

DISTRICT TRAFFIC COUNTS COMPARISON

TOTAL VPD FOR 2 ROADS.

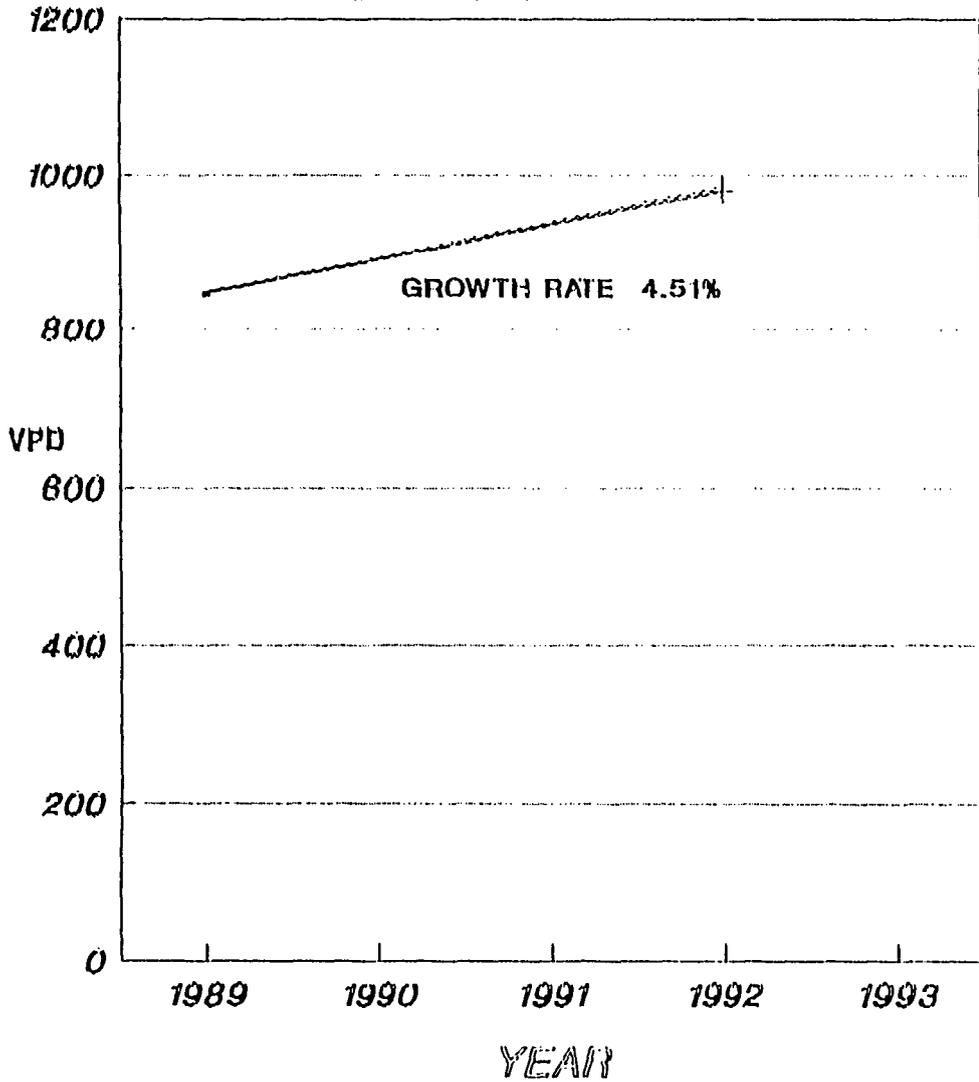


—■— GCS COUNTS-BD —+— AGE COUNTS-BA *— AGE COUNT

DISTRICT, NAVYARSHAH, BASED ON 2 ROADS

DISTRICT TRAFFIC COUNTS COMPARISION

TOTAL VPD FOR 3 ROADS.

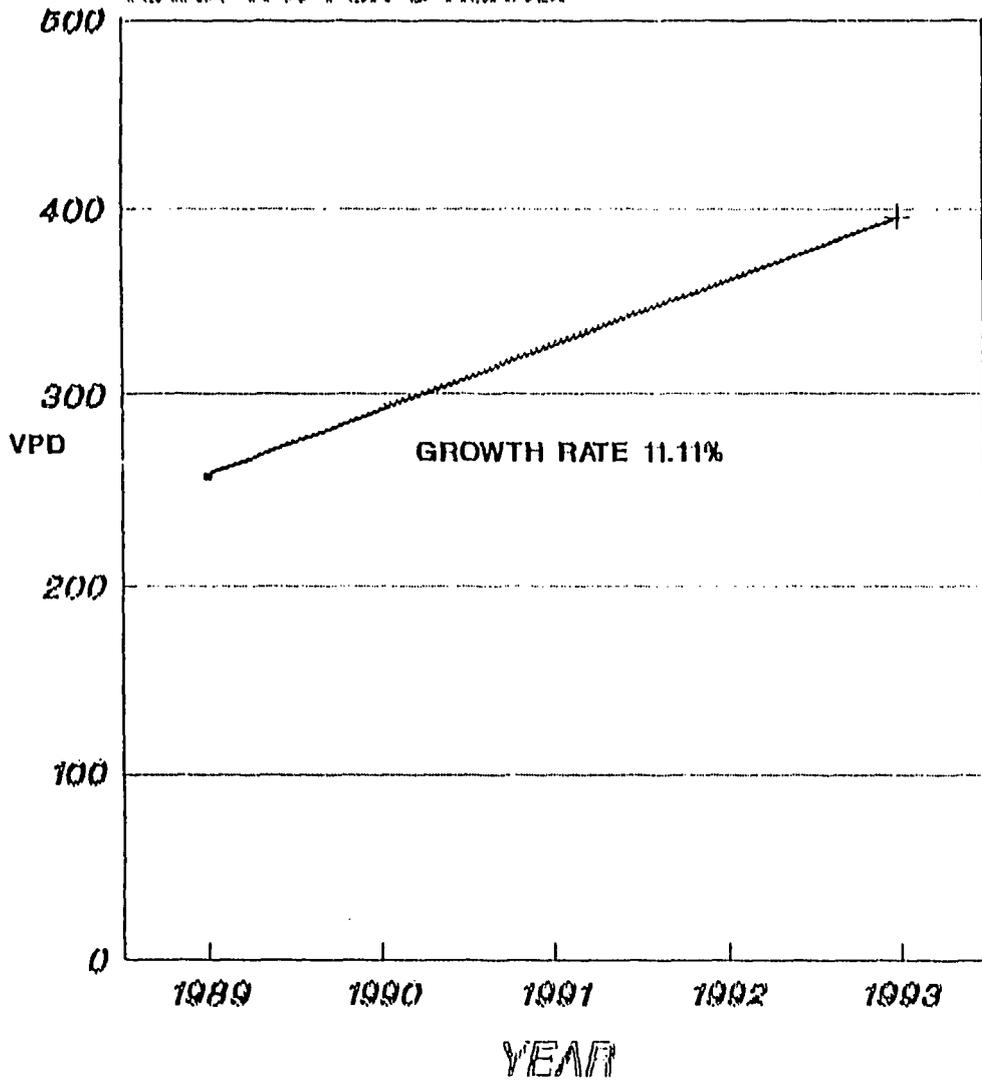


CCS COUNTS-89 | ACE COUNTS-92

DISTRICT SANGHAR BASED ON 3 ROADS

DISTRICT TRAFFIC COUNTS COMPARISON

TOTAL VPD FOR 3 ROADS.



--- CCS COUNTS-89 --- ACE COUNTS-92

DISTRICT THATTA BASED ON 3 ROADS

ROAD RESOURCES MANAGEMENT (RRM) PROJECT
 DISTRICT TRAFFIC CLASSIFICATION COUNTS COMPARISON
 CONDUCTED BY ACE, DC AND CCSC (AVG. OF 1st & 2nd TRAFFIC COUNTS) FOR FY 1993-94 ROADS.
 12-Aug-93

No.	COUNT DATE	METHOD	DISTRICT ROAD NAME	ROAD No.	LENGTH	TYPE OF VEHICLES										TOTAL NO. OF VEHICLES	% OF TRUCKS
						ANIMAL DRAWN	MOTOR CYCLE	MOTOR CAR	BUS	TRUCKS	TRACTOR	OTHERS	TRUCKS	VEHICLES	TRUCKS		
BAMIN DISTRICT																	
1	101-May-89	CCSC	EAST SIVAN BUS STAND TO BAMI BI MARKET	BA-MS	14.00	71	33	23	0	16	6	0	145	18	6.90		
	102-Apr-90	DC		-DC-	14.00	139	56	55	13	18	28	0	356	59	5.36		
	103-Jul-90	ACT		-DC-	14.00	56	36	19	2	0	9	9	151	11	0.06		
	104-Jun-93	ACT		-DC-	14.00	47	37	18	4	15	14	13	138	33	10.57		
2	101-Apr-89	DC	SILVER SOURCE TO GREENE CORNER	BA-M20		43	21	23	3	2	17	0	115	22	1.74		
	102-Jun-90	ACT		-DC-	1.75	44	45	22	12	0	7	0	150	19	0.00		
3	101-May-89	CCSC	KORLEKKA SHALKE BAZIHO ROAD TO TALL FARM	BA-MY-20/BA-M-19	2.00	6	9	4	0	0	0	3	22	0	0.00		
	102-Apr-90	DC		-DC-	2.00	37	25	23	0	14	13	0	113	27	12.39		
	103-Jun-90	ACT		-DC-	2.40	40	28	21	0	20	14	25	152	34	13.16		
4	101-May-89	CCSC	KALSO KHARANI ROAD TO VILLAGE MOUSTI BERING	BA-TS-01/BA-TS-13	1.30	30	14	5	0	0	3	0	52	3	0.00		
	102-Apr-90	DC		-DC-		31	16	15	0	11	19	0	92	30	11.95		
	103-Jun-90	ACT		-DC-	1.38	11	21	17	0	6	0	10	57	6	5.95		

TOTAL TRP FOR TR. 1989 (CCSC COUNTS) = 210 Vehs.
 TOTAL TRP FOR YE. 1990 (ACT/DC COUNTS) = 365 Vehs.
 TOTAL TRP FOR TR. 1993 (ACT COUNTS) = 337 Vehs.

OVERALL PERCENT SHOWS RATE OF BAMI ON THE BASIS OF TRP OF THESE ROAD PRODUCTS IN THE DISTRICT. = 9.70%
 (Comparing CCSC & ACT counts of the year 1989 and 1993.)

NOTE: * Excluded from the analysis.

ROAD RESOURCES MANAGEMENT (RRM) PROJECT
 DISTRICT TRAFFIC CLASSIFICATION COUNTS COMPARISON
 CONDUCTED BY ACE AND CCSC (AVG. OF 1ST & 2ND TRAFFIC COUNTS) FOR FY 1993-94 ROADS.

No.	COUNT DATE	YEAR	DISTRICT ROAD NAME	ROAD No.	LENGTH	TYPE OF VEHICLES								TOTAL NO. OF VEHICLES	% OF TRUCKS
						ANIMAL DRAWS	MOTOR CYCLE	MOTOR CAR	BUS/MINI	TRUCKS	TRICYCLE	OTHER (CCSC)			
MADU DISTRICT															
1	01-May-89	CCSC	MINDO HIGHWAY TO LALEI VILLAGE	101-06	0.58	20	19	20	4	4	11	0	78	19	5.15
	15-Jan-93	ACE	-10-	-10-	0.53	30	5	10	0	0	14	10	53	28	9.00
2	01-May-89	CCSC	MINDO HIGHWAY TO LALEI VILLAGE	101-07	0.87	1	40	17	1	5	13	0	80	23	10.00
	15-Jan-93	ACE	-10-	-10-	0.79	25	10	15	6	4	12	5	80	25	5.00
3	01-May-89	CCSC	MINDO BAKRO ROAD TO PANGENIO	101-08	5.20	97	97	13	4	1	13	0	227	26	0.44
	15-Jan-93	ACE	-10-	-10-	5.60	105	25	25	0	4	20	0	229	64	1.75

TOTAL VPD FOR THE YEAR 1989 (CCSC AVG. COUNTS). = 355 Vehicles

TOTAL VPD FOR THE YEAR 1993 (ACE COUNTS). = 392 Vehicles

OVERALL DISTRICT GROWTH RATE ON THE BASIS OF THREE ROAD PRODUCTS. = 0.45%

NOTE: AS THE DISTRICT GROWTH RATE IS TOO LOW, THEREFORE, EXCLUDED FROM THE OVERALL PROVINCIAL GROWTH RATE COMPUTATION.

(15-49/700/200/200-MADU WITH M.S. SIGNATURES)

ROAD RESOURCES MANAGEMENT (RRM) PROJECT
 DISTRICT TRAFFIC CLASSIFICATION COUNTS COMPARISON
 CONDUCTED BY ACE, DC'S AND CCSC (AVG. OF 1ST & 2ND TRAFFIC COUNTS) FOR FY 1993-94 ROADS.

SER. No.	COUNT DATE	TAKEN BY	DISTRICT ROAD NAME	ROAD No.	LENGTH	TYPE OF VEHICLES							TOTAL NO. OF VEHICLES	COM. % OF TRAFFIC	
						TRUCKS (TRUCKS)	MOTORCYCLES (MOTORCYCLES)	MOTORBUSES (MOTORBUSES)	TRIPS (TRIPS)	TRACTOR (TRACTOR)	OTHER (OTHER)	TOTAL (TOTAL)			
HIRELEAD DISTRICT															
1	101-04-93	CCSC	NEEL NALA SERRAMPUR	HT-11-16/HT-11-06	2.80	11	50	92	1	28	1	0	182	38	21.21
	17-04-93	ACE	-0-	-0-	2.80	15	57	97	0	11	21	15	211	51	2.21
2	101-04-93	CCSC	NATIONAL HIGHWAY TO PANDURU EAST SIDE	HT-11-15/HT-11-05	2.40	4	51	35	0	1	11	1	113	12	0.55
	17-04-93	ACE	-0-	-0-	2.40	11	33	17	0	18	24	22	157	42	11.45
3	101-04-93	CCSC	SHERWALL TO SHERWALL BARRA	HT-11-03/HT-11-14	1.60	26	21	27	0	5	11	5	82	17	0.52
	17-04-93	ACE	-0-	-0-	1.60	21	36	45	0	1	5	28	167	5	0.30
4	101-04-93	CCSC	NEW BUNGHEM TO PENTAL 1ST VILLAGE	HT-11-02/HT-11-9	4.40	14	17	25	11	2	5	5	77	21	0.30
	17-04-93	ACE	-0-	-0-	4.40	21	22	18	15	27	27	21	207	114	11.58
5	101-04-93	CCSC	HIRELEAD BRIDGE TO VE PANDU BIRU JAGGI	HT-11-25	2.80	11	51	43	1	5	17	1	151	27	0.52
	17-04-93	ACE	-0-	-0-	2.80	11	35	21	0	51	11	27	250	25	10.50
6	101-04-93	CCSC	WANG JURI - B. BANGU HILL THE GRANDI DAM	HT-11-04	2.60	11	21	38	7	4	15	5	105	22	0.21
	15-04-93	DC	-0-	-0-	-0-	11	26	15	0	4	26	5	122	22	0.20
	100-04-93	ACE	-0-	-0-	2.60	11	34	24	5	11	15	21	144	21	0.24
7	101-04-93	CCSC	SHIRI BRIDGE TO LAIRI PIRAN	HT-11-07	5.20	15	28	27	4	28	28	5	416	21	0.21
	15-04-93	DC	-0-	-0-	-0-	11	23	21	0	15	28	5	122	22	0.20
	100-04-93	ACE	-0-	-0-	5.20	15	26	25	4	28	28	5	302	22	0.21

TOTAL VEH FOR THE YEAR 1993 (CCSC AVG. COUNTS). = 1062 Vehicles
 TOTAL VEH FOR THE YEAR 1993 (ACE COUNTS). = 1463 Vehicles
 (On the basis of seven roads.)

OVER ALL DISTRICT GROWTH RATE = 7.2%

NOTE: DC COUNTS ARE EXCLUDED FROM THE DISTRICT TRAFFIC ANALYSIS.

ROAD RESOURCES MANAGEMENT (RRM) PROJECT
 DISTRICT TRAFFIC CLASSIFICATION COUNTS COMPARISON
 CONDUCTED BY ACE AND COCO (AVG. OF 1ST & 2ND TRAFFIC COUNTS) FOR FY 1993-94 ROADS.

SER. NO.	COUNT DATE	THRESH. ST	DISTRICT ROAD NAME	ROAD ID.	GROWTH RATE	TYPE OF VEHICLES										TOTALING OF COMM. % OF VEHICLES	GROWTH RATE/ YEAR
						MOTORCYCLE	MOTOR CAR	MOTOR BUS	TROTTER	TRUCK	TRUCK	OTHERS	TRUCK	TRUCK	TRUCK		
MARAZHI DISTRICT																	
1	101-04-93	COCO	TRICH SUNDAR ROAD TO KEMARU HYDERI	12-07/12-07-95	0.99	373	217	336	0	121	3	324	1058	125	11.52	-0.71%	
1	107-04-93	ACE	-0-	-0-	0.70	354	226	337	0	53	0	158	1028	53	5.16		
2	101-04-93	COCO	MARAZHI PASS KEMARU HYDERI	12-01/12-07-93	0.84	72	174	319	36	117	13	46	761	156	15.37	-3.65%	
2	107-04-93	ACE	-0-	-0-	0.20	267	126	216	3	27	4	70	652	23	4.14		
3	101-04-93	COCO	CHALAP TO CHAL SUNDAR ROAD	12-07-04/12-03-91	0.09	0	35	16	1	167	4	37	254	172	155.75	-7.45%	
3	107-04-93	ACE	-0-	-0-	0.09	13	28	36	0	45	5	30	184	50	121.46		
4	101-04-93	COCO	MARAZHI TO BALACH GATE ROAD	12-07-03/12-03-91	1.09	63	101	130	4	64	0	102	363	38	5.65		
4	104-04-93	ACE	-0-	-0-		71	80	55	3	16	0	54	328	13	4.37	21.77%	
4	107-04-93	ACE	-0-	-0-	1.15	62	130	20	0	22	0	28	372	22	19.49		
5	101-04-93	COCO	MARAZHI ROAD TO KEMARU HYDERI	12-06/12-07-91	0.30	74	33	50	5	0	0	2	154	10	1.22	-19.37%	
5	107-04-93	ACE	-0-	-0-	0.36	53	21	11	0	0	0	0	57	0	0.00	-1.93%	

Note: As the overall aggregate growth rate for District Marazhi is negative, the district's counts have been excluded from the overall provincial growth rate analysis.

10-10-93 (10-10-93-10-10-93)

ROAD RESOURCES MANAGEMENT (RRM) PROJECT
 DISTRICT TRAFFIC CLASSIFICATION COUNTS COMPARISON
 CONDUCTED BY ACE .CCSC (AVG. OF 1ST & 2ND TRAFFIC COUNTS) AND DC'S FOR FY 1993-94 ROADS.

SR. No.	COUNT DATE	COUNT ST	DISTRICT ROAD NAME	ROAD No.	DISTRICT	TYPE OF VEHICLES									
						ANIMAL DRAWN (CATTLE)	MOTOR CYCLE	MOTOR CAR (MINI)	BUS	TRUCKS	TRACTOR	OTHERS (TRICYCLE)	TOTAL NO. OF COUNTS OF VEHICLES	AVG. TRUCKS	
MIEPURIHAS DISTRICT															
1	101-Sep-89	CCSC	MIEPURIHAS DISTRICT	MI-17/TER-25	2.40	35	75	55	8	31	29	0	252	58	5.33
	102-Sep-89	DC	-10-	-10-		42	55	105	8	42	80	53	425	130	9.88
	118-Sep-93	ACE	-10-	-10-	1.91	25	48	21	35	25	37	37	226	53	8.85
2	101-Sep-89	CCSC	MIEPURIHAS DISTRICT	MI-31-04/TER-17	0.70	78	36	20	3	11	14	0	162	28	6.70
	107-Sep-89	ACT	-10-	-10-	0.70	55	112	14	3	5	5	3	193	13	2.53
	118-Sep-93	ACT	-10-	-10-	0.70	70	92	44	8	19	15	37	275	43	6.88
3	101-Sep-89	CCSC	MIEPURIHAS DISTRICT	MI-28-01/TER-15	0.70	23	12	24	0	2	9	1	71	11	2.82
	118-Sep-93	ACT	-10-	-10-	0.70	25	28	16	17	15	2	9	116	34	12.93
4	101-Sep-89	CCSC	MIEPURIHAS DISTRICT	MI-31-05/TER-18	0.50	28	15	10	3	5	6	6	77	17	10.30
	107-Sep-89	ACT	-10-	-10-		55	11	16	2	10	13	6	126	25	7.94
	118-Sep-93	ACT	-10-	-10-	0.50	40	43	27	10	35	39	0	195	55	18.46

TOTAL VTD FOR YR. 1989 (CCSC COUNTS) = 552
 TOTAL VTD FOR YR. 1992 (ACE/DC COUNTS) = 749
 TOTAL VTD FOR YR. 1993 (ACE COUNTS) = 813

OVERALL PERCENT GROWTH RATE OF MIEPURIHAS ON THE BASIS
 OF VTD ON THESE ROADS IN THE DISTRICT. = 9.4%
 (Comparing CCSC & ACE counts of the year 1989 and 1993.)

NOTE: Road excluded from the analysis.

(1-49/700, 225/700-MIE.VII TMS/SIP)

12/1

ROAD RESOURCES MANAGEMENT (RRM) PROJECT
 14 HOURS (6.00 A.M TO 8.00 P.M) TRAFFIC CLASSIFICATION COUNTS COMPARISON
 CONDUCTED BY ACE, CCSC (AVERAGE OF FIRST & SECOND TRAFFIC COUNTS) AND DC'S FOR FY 1993-94 ROAD PROJECTS.

S.No.	ROUTE	LANE	DISTRICT	ROAD NAME	R.M. No.	LDRS	TYPE OF VEHICLES							GROWTH RATE/YEAR	REMARKS		
							ANIMAL (BRAIN)	MOTOR (CYCLE)	MOTOR (CAR)	BUS/ (MINI)	TRUCKS	TRACTOR (TROLLEY)	WHEELS (TRUCK-UP)			TOTAL NO. OF VEHICLES	NO. OF TRUCKS
MAHARASHTRA DISTRICT																	
1	SH-847-89	CCSC	NATIONAL HIGHWAY KOTHI LAKE TO	MIRAJ	INF-16/WT-1-151	7.16	72	65	45	0	3	11	0	194	14	1.55	7.34% COMPARISON B/W CCSC & ACT. 92
	SH-847-92	ACT	-10-	-10-	-10-	5.00	80	10	45	4	26	60	20	245	95	10.51	
	SH-847-93	ACT	-10-	-10-	-10-	5.00	43	20	23	4	43	17	40	199	64	122.63	
2	SH-847-89	CCSC	NATIONAL HIGHWAY KOTHI LAKE TO	KHANWAR.	INF-16/WT-24	8.33	47	31	62	0	4	30	0	174	34	2.30	19.95% COMPARISON B/W CCSC & ACT. 93
	SH-847-92	ACT	-10-	-10-	-10-	0.70	60	6	15	6	25	60	20	162	91	0.00	
	SH-847-93	ACT	-10-	-10-	-10-	0.70	115	55	60	4	10	50	45	329	94	2.71	
														15.5% AGG. AVG DISTRICT GROWTH RATE.			

TOTAL VTP FOR FY 1989 (CCSC COUNTS) = 389 Vehs.
 TOTAL VTP FOR FY 1992 (ACT/DC COUNTS) = 457 Vehs.
 TOTAL VTP FOR FY 1993 (ACT COUNTS) = 559 Vehs.

OVERALL AVERAGE GROWTH RATE OF MAHARASHTRA ON THE BASIS
 OF VTP ON 2 ROAD PROJECTS IN THE DISTRICT. 14.72%
 (Comparing CCSC & ACT counts of the year 1989 and 1992-93.)

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ROAD RESOURCES MANAGEMENT (RRM) PROJECT
 DISTRICT TRAFFIC CLASSIFICATION COUNTS COMPARISON
 CONDUCTED BY ACE AND CCSC (AVG. OF 1ST & 2ND TRAFFIC COUNTS) FOR FY 1993-94 ROADS.

S.No.	COUNT DATE	CLASSIFICATION	DISTRICT ROAD NAME	ROAD No.	LENGTH	TYPE OF VEHICLES							TOTAL NO. OF COUNTS OF VEHICLES	AVG. OF TRAFFIC
						(ANIMAL/DRAWN)	(MOTORCYCLE)	(MOTOR CAR)	(BUSA/VEHICLE)	(TRACTOR)	(OTHER)	(TOTAL)		
NAWASEELE DISTRICT														
1	101-May-89	CCSC	HEALTH AGENC TO BUDHARI VIA DE NIDA	NA-05	14.40	37	55	32	3	18	15	179	35	16.00
	111-Aug-91	ACE	-00-	-00-	14.40	35	45	35	2	8	14	147	24	5.44
	100-Jan-88	ACE	-00-	-00-	14.40	45	45	19	5	31	14	193	40	16.99
2	101-May-89	ACE	SAFARI KATHAPPA ROAD TO VILLAGE NTA	NA-24-18	3.00	41	43	38	10	10	15	196	42	6.53
	110-Jan-91	ACE	-00-	-00-	3.00	52	54	45	7	11	8	331	24	4.75
	114-Jan-88	ACE	-00-	-00-	3.00	104	95	45	8	14	8	324	33	4.00

TOTAL TRAFFIC FOR FY. 1989 (CCSC AVG. COUNTS) 375
 TOTAL TRAFFIC FOR FY. 1991 (ACE COUNTS) 378
 TOTAL TRAFFIC FOR FY. 1988 (ACE COUNTS) 517

OVERALL AVERAGE TRAFFIC RATE OF NAWASEELE ON THE BASIS
 OF TRAFFIC ON TWO DAYS IN THE DISTRICT. = 15.982
 (Comparing CCSC & ACE counts of the year 1989 and 1991-92.)

124

ROAD RESOURCES MANAGEMENT (RRM) PROJECT
 DISTRICT TRAFFIC CLASSIFICATION COUNTS COMPARISON
 CONDUCTED BY ACE, DC AND CCSC (AVG. OF 1ST & 2ND TRAFFIC COUNTS) FOR FY 1993-94 ROADS

SR. No.	COUNT DATE	TAHSA ET	DISTRICT ROAD NAME	ROAD No.	LENGTH FT	TYPE OF VEHICLES							TOTAL NO. OF VEHICLES	% OF TRUCKS	
						TRUCKS (TRUCKS)	TRUCKS (TRUCKS)	TRUCKS (TRUCKS)	TRUCKS (TRUCKS)	TRUCKS (TRUCKS)	TRUCKS (TRUCKS)	TRUCKS (TRUCKS)			
SANGHVI DISTRICT															
1	101-May-93	CCSC	SANGHVI RD-10000 WIL SANGHVI RAJIV GANDHI RD	SA-04/SA-04	6.00	28	158	93	2	28	19	0	529	41	3.78
	130-Jun-93	DC	-10-	-10-		31	66	77	44	46	0	102	396	92	12.66
	130-Aug-93	ACE	-10-	-10-	3.00	149	227	98	0	116	117	66	817	189	6.73
	131-Jun-93	ACE	-10-	-10-	3.00	118	145	43	0	51	11	73	464	34	4.85
2	101-May-93	CCSC	SANGHVI RD-10000 WIL SANGHVI RAJIV GANDHI RD	SA-04/SA-04	6.50	44	34	40	1	1	12	0	135	15	1.48
	107-Sep-93	ACE	-10-	-10-	6.55	43	34	28	0	11	0	19	147	22	14.97
	121-Jun-93	ACE	-10-	-10-	6.55	51	17	13	0	0	13	6	75	15	6.00
3	101-May-93	CCSC	SANGHVI RD-10000 WIL SANGHVI RAJIV GANDHI RD	SA-04/SA-04	3.00	33	56	96	1	1	22	0	181	21	1.10
	130-Jun-93	DC	-10-	-10-		17	24	28	2	16	0	26	179	61	21.96
	117-Aug-93	ACE	-10-	-10-	3.00	4	2	1	0	1	1	5	15	1	10.33
	131-Jun-93	ACE	-10-	-10-	4.00	17	24	34	0	11	0	6	77	15	15.58

TOTAL VPD FOR FY 1993 (CCSC COUNTS) = 845 Vehs.
 TOTAL VPD FOR FY 1993 (DC COUNTS) = 577 Vehs.
 TOTAL VPD FOR FY 1993 (ACE COUNTS) = 979 Vehs.
 TOTAL VPD FOR FY 1993 (ACE COUNTS) = 615 Vehs.

OVERALL PERCENT GROWTH RATE OF TRAFFIC ON THE BASIS OF VPD ON THESE ROAD PROJECTS IN THE DIST (Comparing CCSC & ACE counts of the year 1992.)
 1.51%

NOTE: * EXCLUDED FROM THE ANALYSIS.

ROAD RESOURCES MANAGEMENT (RRM) PROJECT
 DISTRICT TRAFFIC CLASSIFICATION COUNTS COMPARISON
 CONDUCTED BY ACE, DC'S AND CCSC (AVG. OF 1ST & 2ND TRAFFIC COUNTS) FOR FY 1993-94 ROADS.

Sl. No.	COUNT DATE	TAKEN BY	DISTRICT ROAD NAME	ROAD No.	LENGTH	TYPE OF VEHICLES							TOTAL NO. OF VEHICLES	% OF TRUCKS	GROWTH RATE/ YEAR	REMARKS
						ANIMAL	MOTOR CYCLE	BUS	TRUCKS	TRACTOR	SCOOTERS	PICK-UPS				
SELEMPUR DISTRICT																
1	01-May-89	CCSC	SELEMPUR TO BWA KAPAR VII JMW	58-58-01/58-89	5.00	350	69	32	0	0	26	9	493	26	0.00	1.42% AGGREGATE AVG. OF THREE COUNTS
	27-Oct-92	DC	-00- (PHASE-II)	-00-	0.77	55	5	10	0	7	28	15	120	35	5.83	
	24-Jan-93	ACE	-00- (PHASE-III)	-00-	1.50	65	10	16	14	10	45	10	164	69	6.10	

(1-48 YCC-SPOT VII M.S. (2010/125))

ROAD RESOURCES MANAGEMENT (RRM) PROJECT
 DISTRICT TRAFFIC CLASSIFICATION COUNTS COMPARISON
 CONDUCTED BY ACE AND CCSC (AVG. OF 1ST & 2ND TRAFFIC COUNTS) FOR FY 1993-94 ROADS.

SE. No.	COUNT DATE	VILLAGE/ST	DISTRICT ROAD NAME	R.M. No.	LENGTH	TYPE OF VEHICLES							TOTAL NO. OF COMM. VEHICLES	% OF TRUCKS	
						ANIMAL DRAWN	MOTOR CYCLE	MOTOR CAR	BUS/Mini	TRUCK	TRACTOR TROLLEY	OTHERS (PICK-UPS)			
THEMTA DISTRICT															
1	01-May-93	CCSC	GATEWAY ROAD TO PISO BAZAR	TE-20-01/TE-20-01	0.70	25	49	55	0	11	12	0	152	33	7.24
	02-Feb-93	ACE		-00-	-00-	1.25	28	32	16	0	8	0	24	108	8
2	01-May-93	CCSC	NATIONAL HIGHWAY TO SUMDI VILLAGE	TE-TE-04	0.40	15	36	35	0	5	1	0	95	6	5.26
	02-Feb-93	ACE		-00-	-00-	0.80	15	59	54	0	2	15	33	191	30
3	01-May-93	CCSC	NATIONAL HIGHWAY TO JERANI TOWN	TE-TE-04	1.00	2	54	55	41	9	0	0	151	50	5.50
	02-Feb-93	ACE		-00-	-00-	2.10	43	80	28	44	4	8	26	205	56

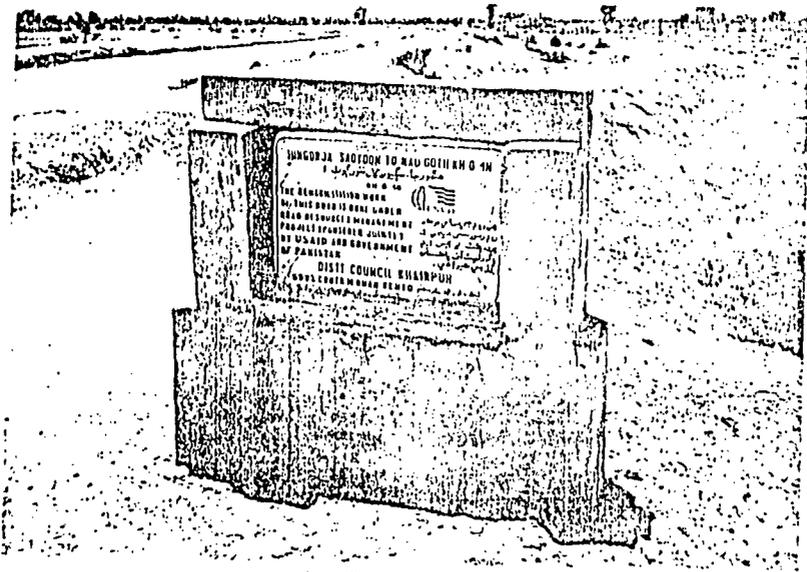
TOTAL TRAFFIC FOR FY 1993 (CCSC COUNTS) = 356 Vehs.

TOTAL TRAFFIC FOR FY 1993 (ACE COUNTS) = 395 Vehs.

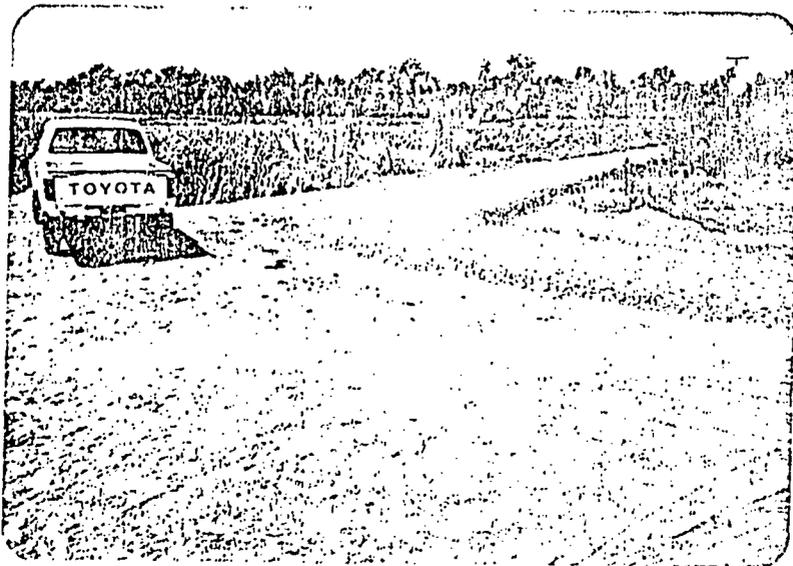
OVERALL PERCENT GROWTH/RATE OF THEMTA ON THE BASIS OF TRAFFIC OF TWO ROADS IN THE DISTRICT. = 11.11%
 (Comparing CCSC & ACE counts of the year 1993 and 1993.)

ANNEXURE - C

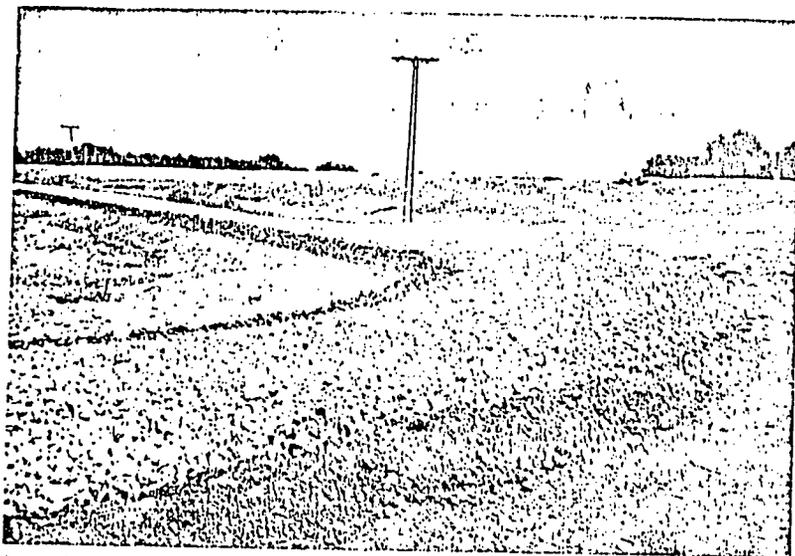
PROJECT PHOTOGRAPHS



1. Sign Board.

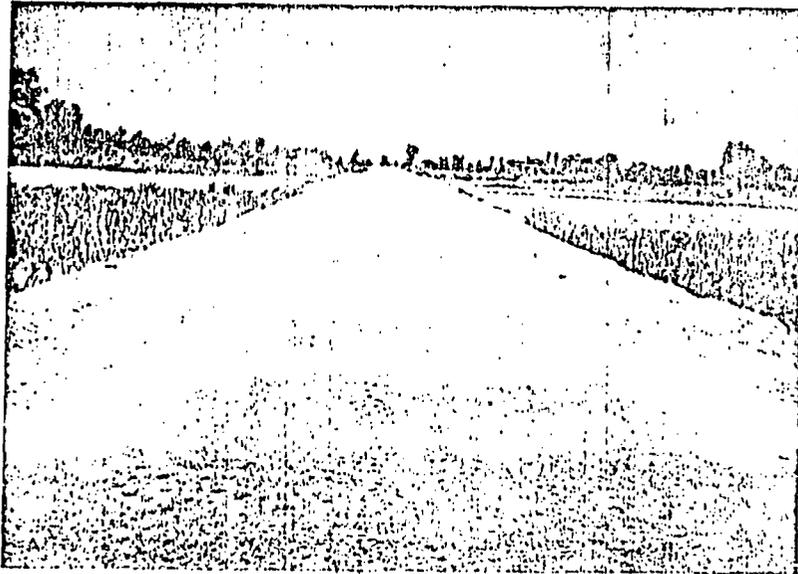


2. Base Course laid on extended portion of KH-G-4N.



3. Base Course laid on the extended portion of road compaction to follow.

BS

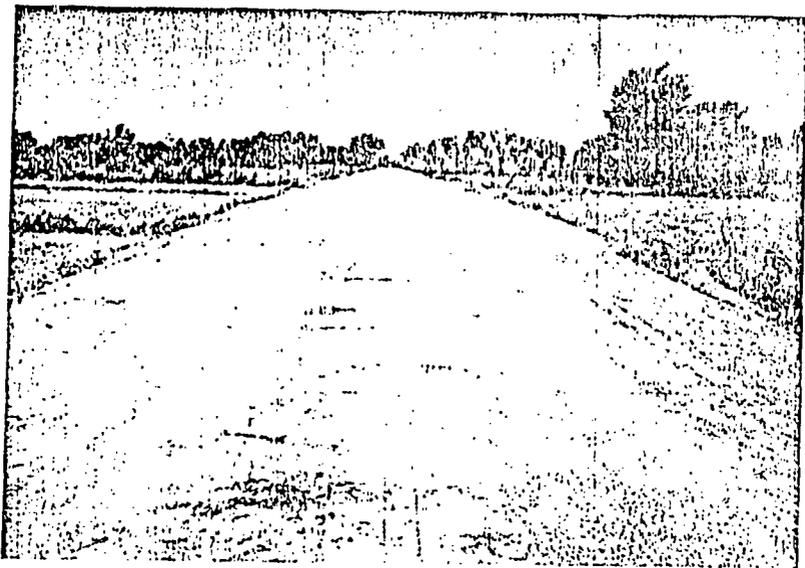


1. A general view of road at starting point.

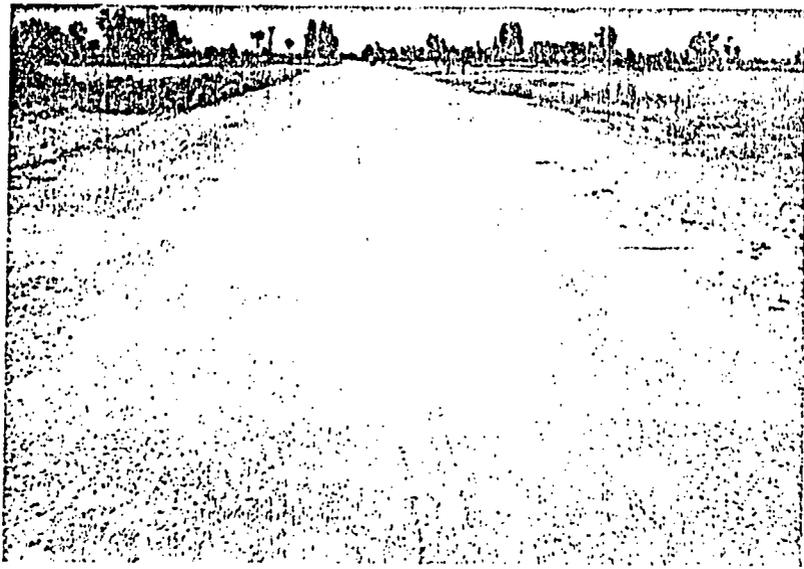


2. Compacted shoulder with proper side slope.

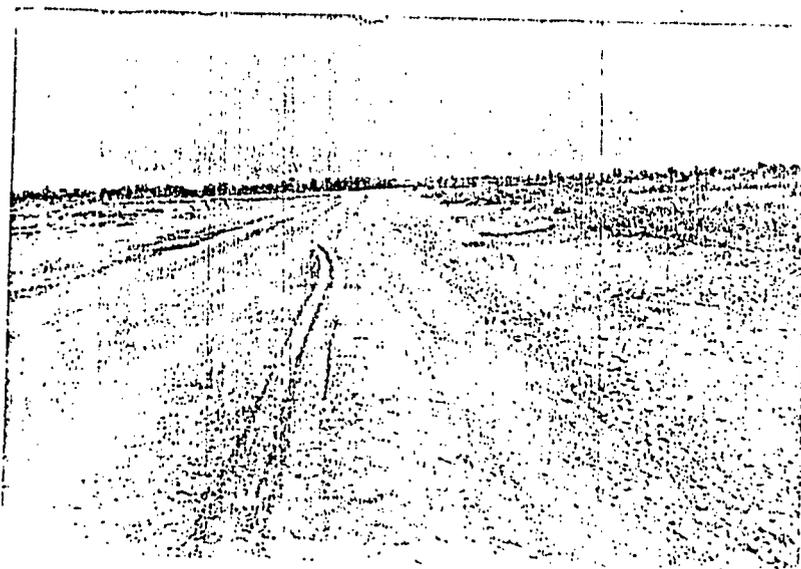
174



3. General view of rectified portion.

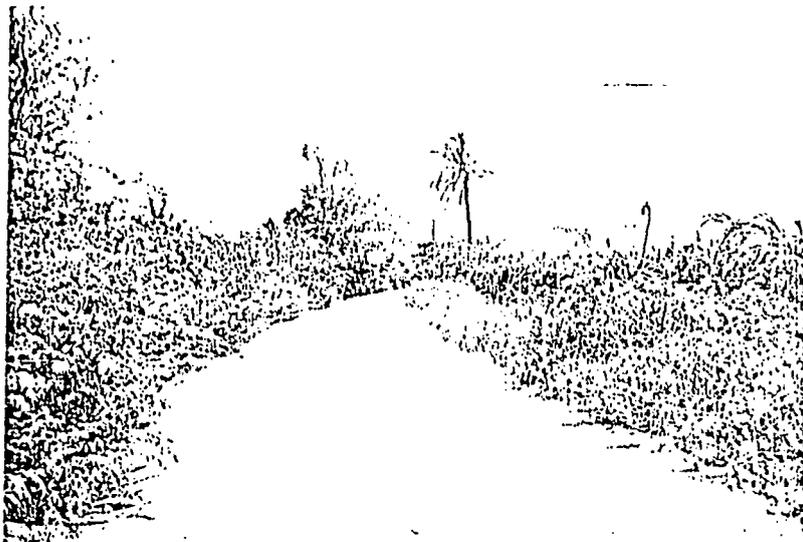


4. A general view of road after rectification.



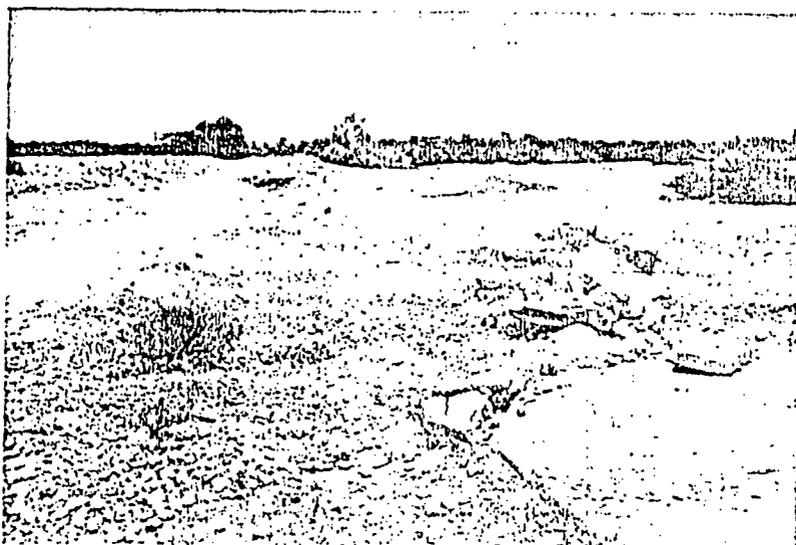
1. Perspective view of completed road after rehabilitation.

DISTRICT KARACHI ROAD NO. KA-1 FY 1991-92

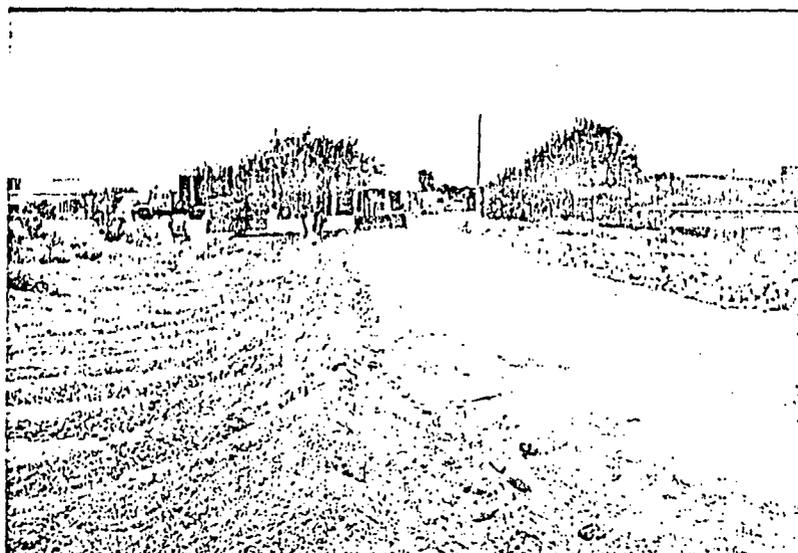


1. A general view of completed road.

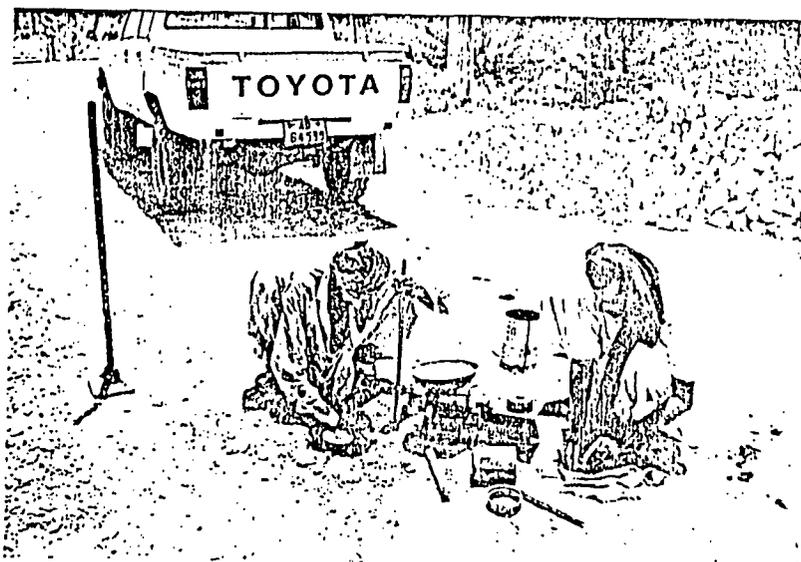
DISTRICT DADU ROAD NO. DA-SM-8 FY 1991-92



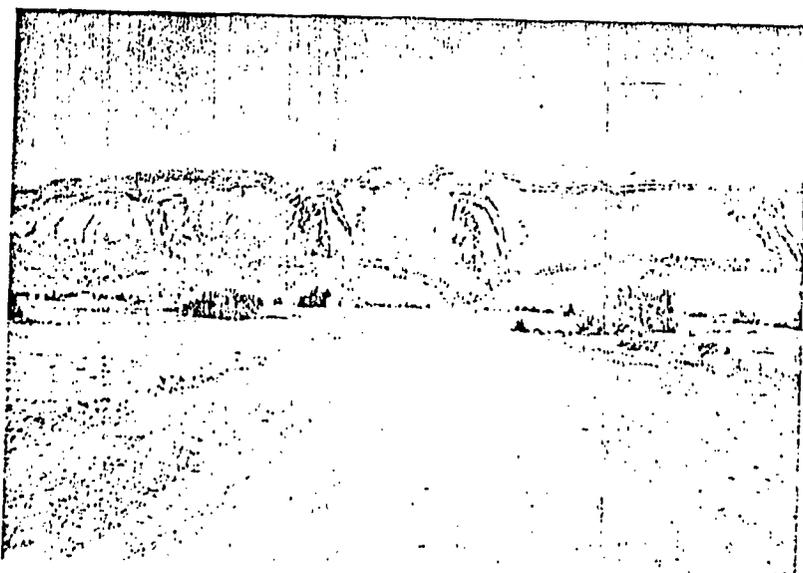
1. A view of damaged cause-way before construction.



2. Raising of existing road levels near start portion is underway.

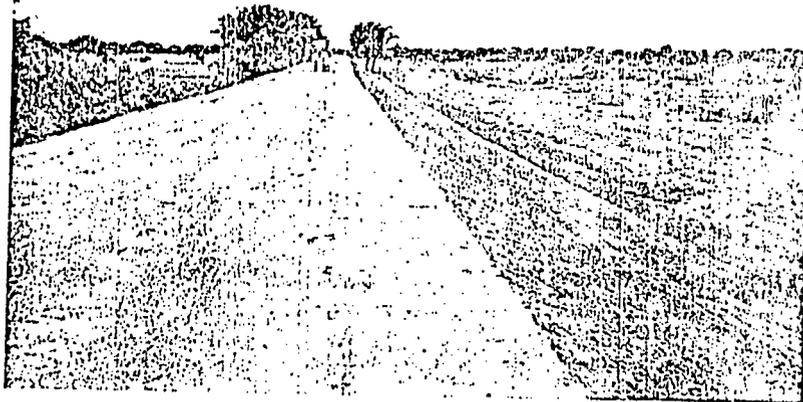


3. Soil compaction test in progress.

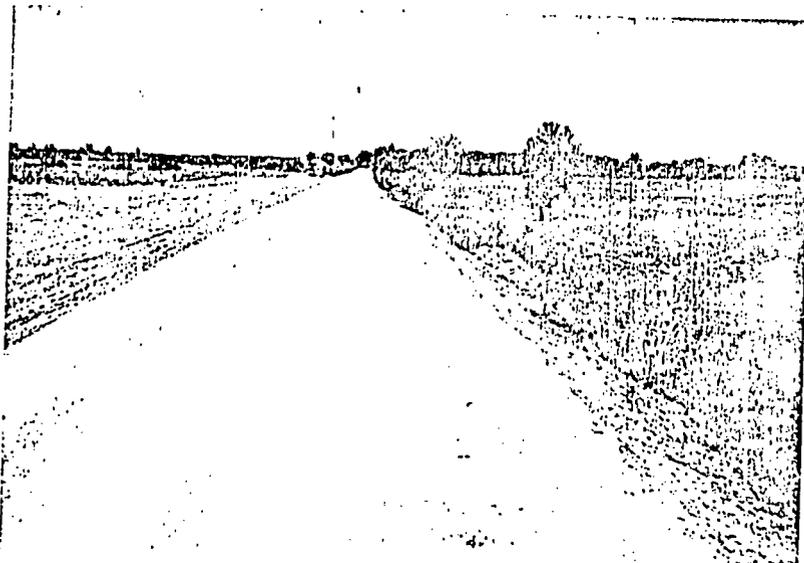


4. A view of road after construction.

DISTRICT HYDERABAD ROAD NO. HY-HL-15 FY 1992-93



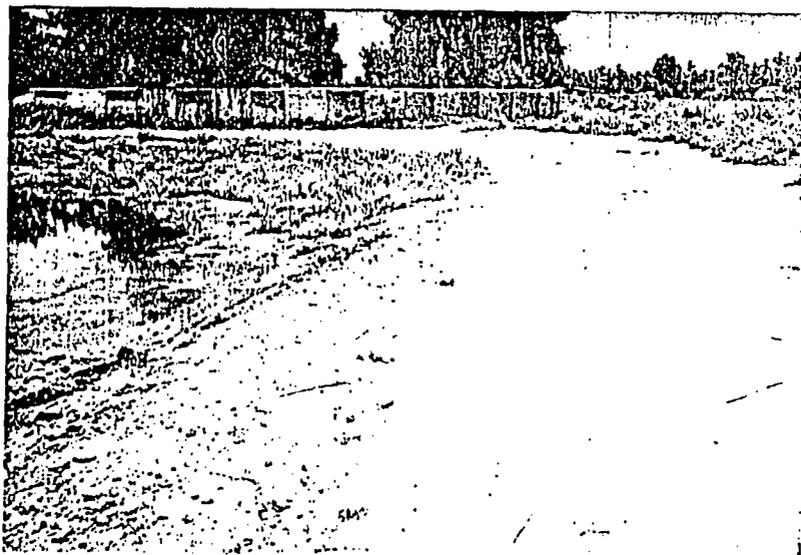
1. Picture showing final surfacing and side slopes are in progress and shoulders are completed.



2. A general view of rehabilitated road and completed shoulders.

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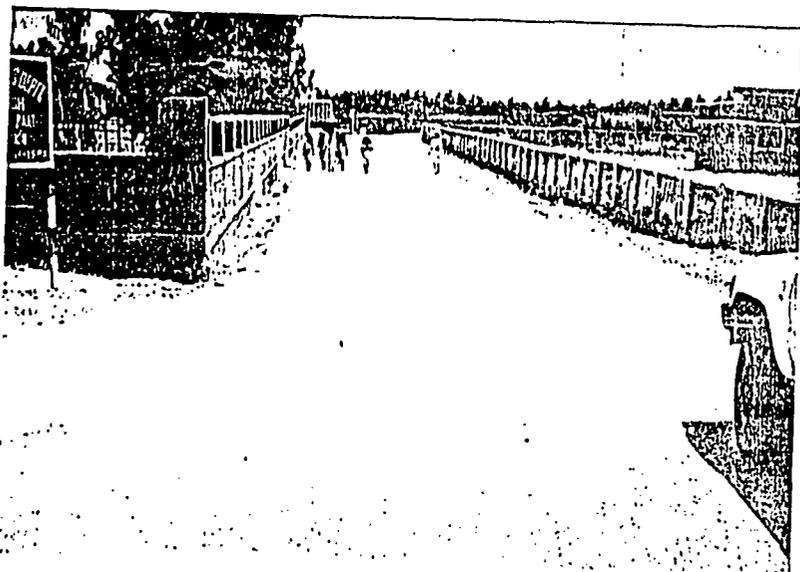
DISTRICT KHAIRPUR ROAD NO.KH-KH-02 FY 1992-93



1. General view of road before construction.

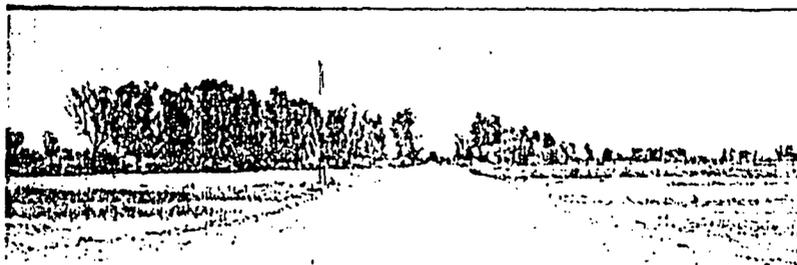


2. Overlay compaction in progress.



3. A pictorial view of completed portion of road.

DISTRICT N. FEROZ ROAD NO. NA-K-13K F.Y. 1992-93



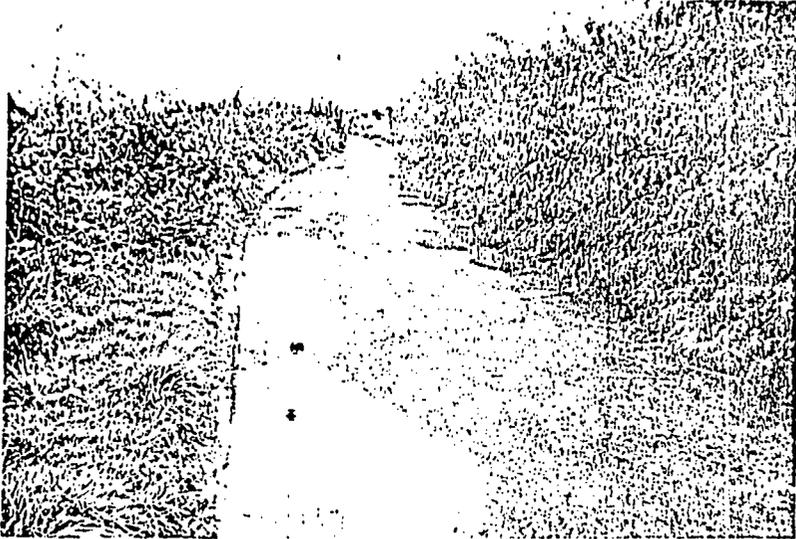
1. A view of newly constructed road from National Highway.



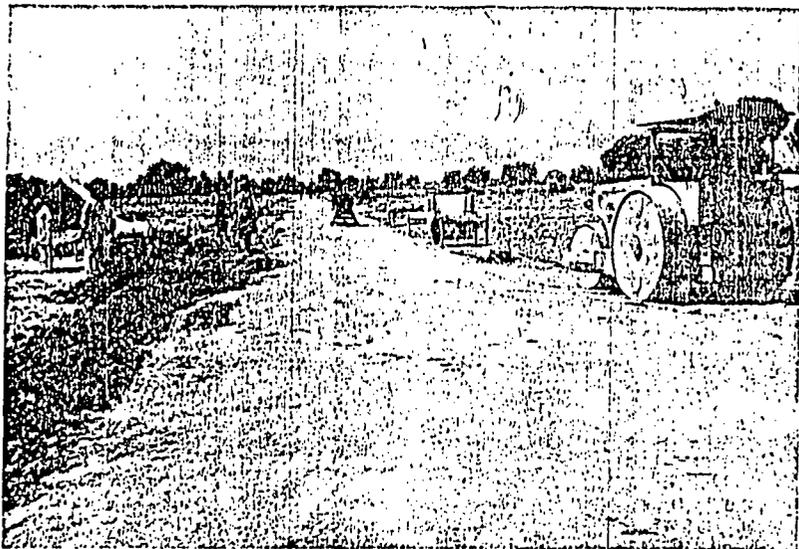
2. Compaction of base course and shoulders work are in progress.



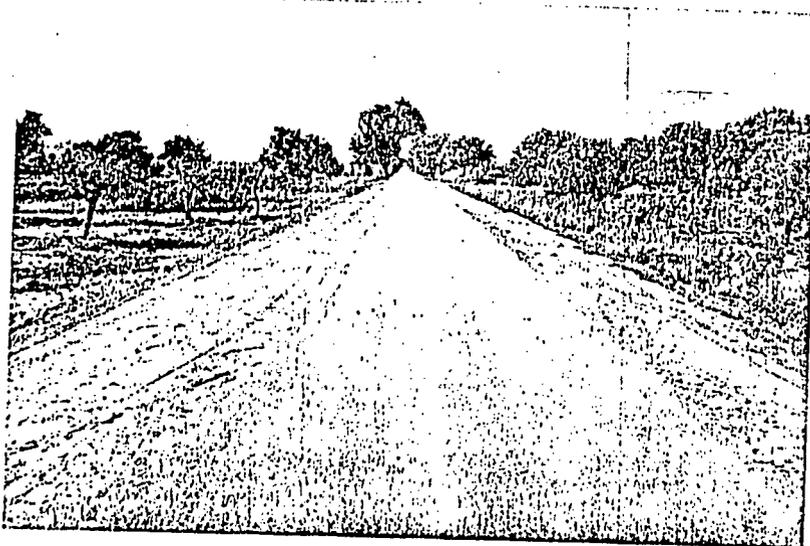
3. A view of compacted base course with shoulder compaction in progress.



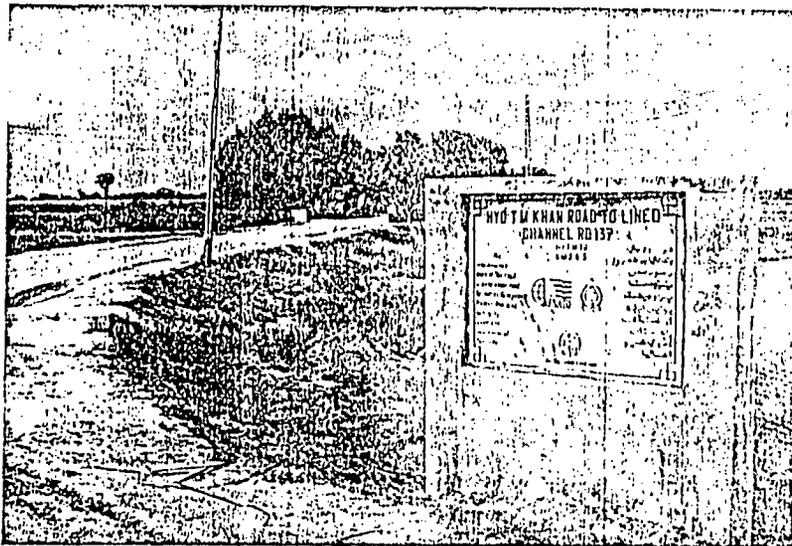
1. Road condition prior to rehabilitation



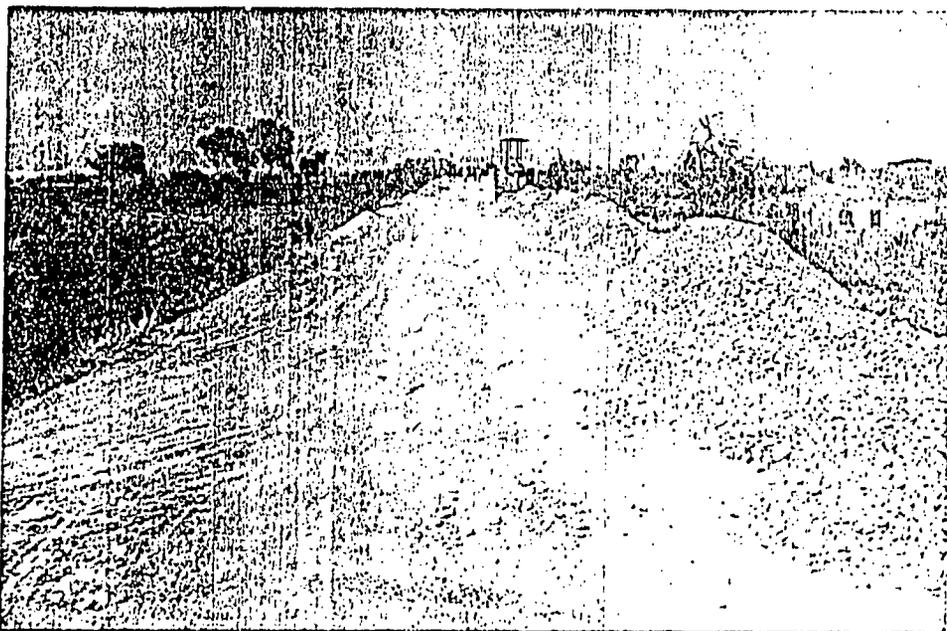
2. Rehabilitation work in progress



3. After completion of rehabilitation works



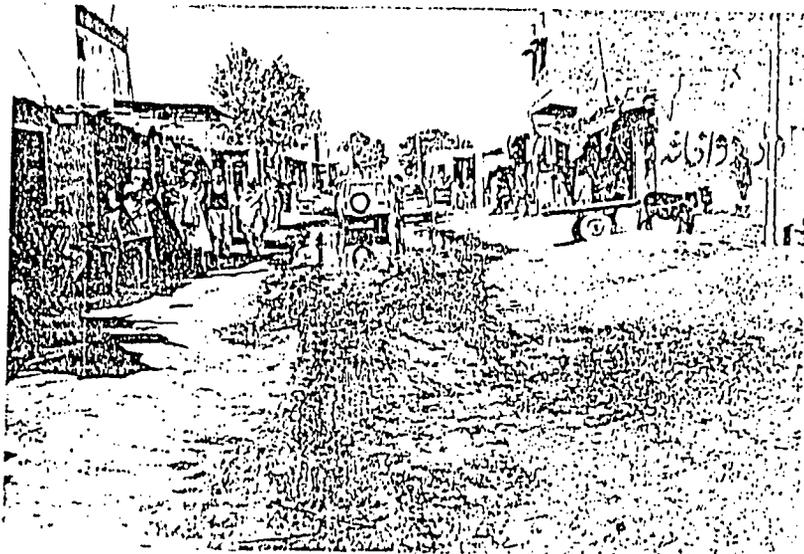
1. Start point and existing surface of road in the back ground



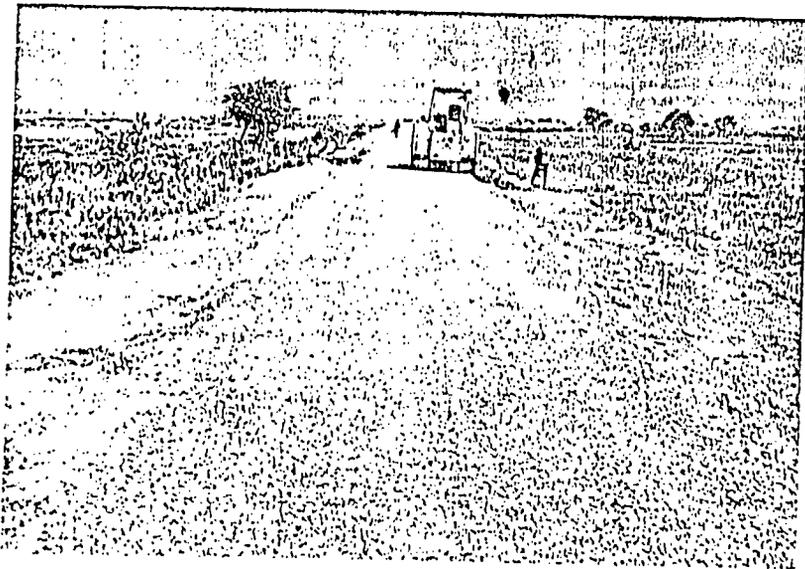
2. Construction work in progress



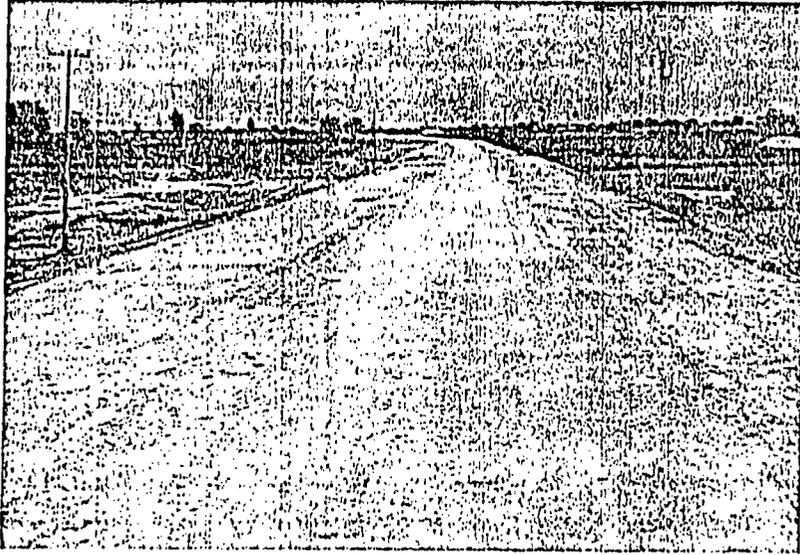
3. Road nearing completion



1. Road condition before rehabilitation



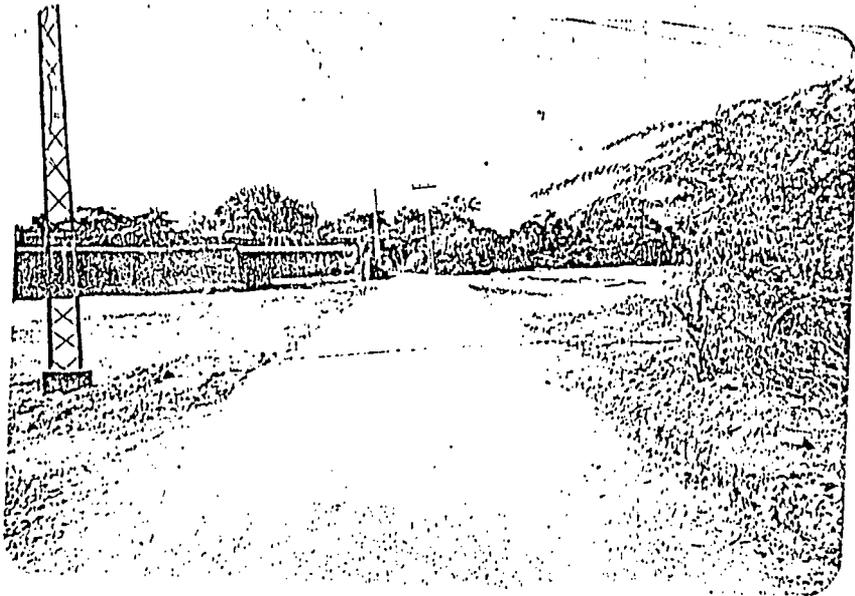
2. Compaction of base course in progress



3. Road after completion of rehabilitation works



1. Road Surface after completion

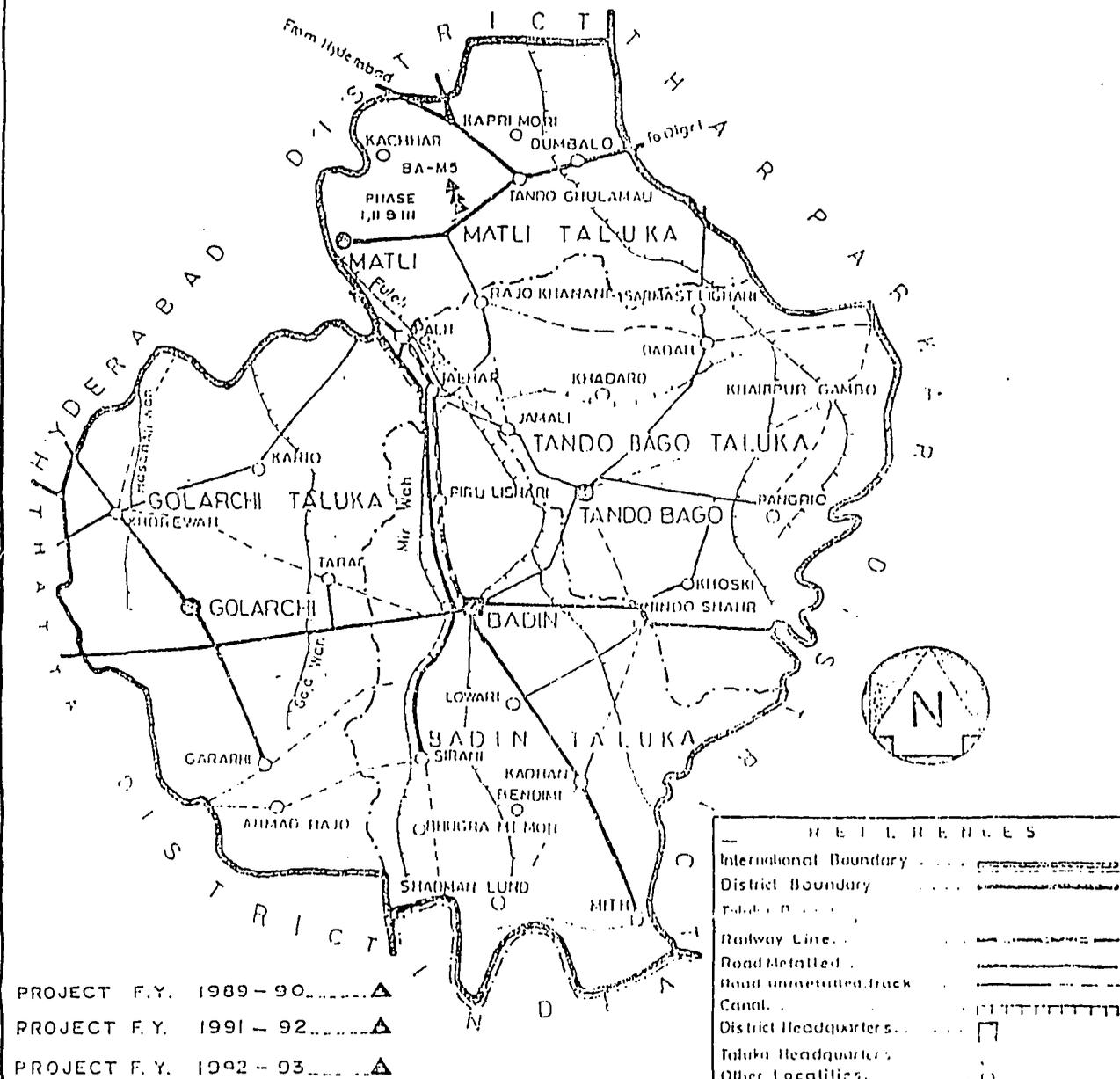


2. Road after completion of rehabilitation work

ANNEXURE - D

DISTRICT MAPS &
LOCATION OF PROJECT ROADS

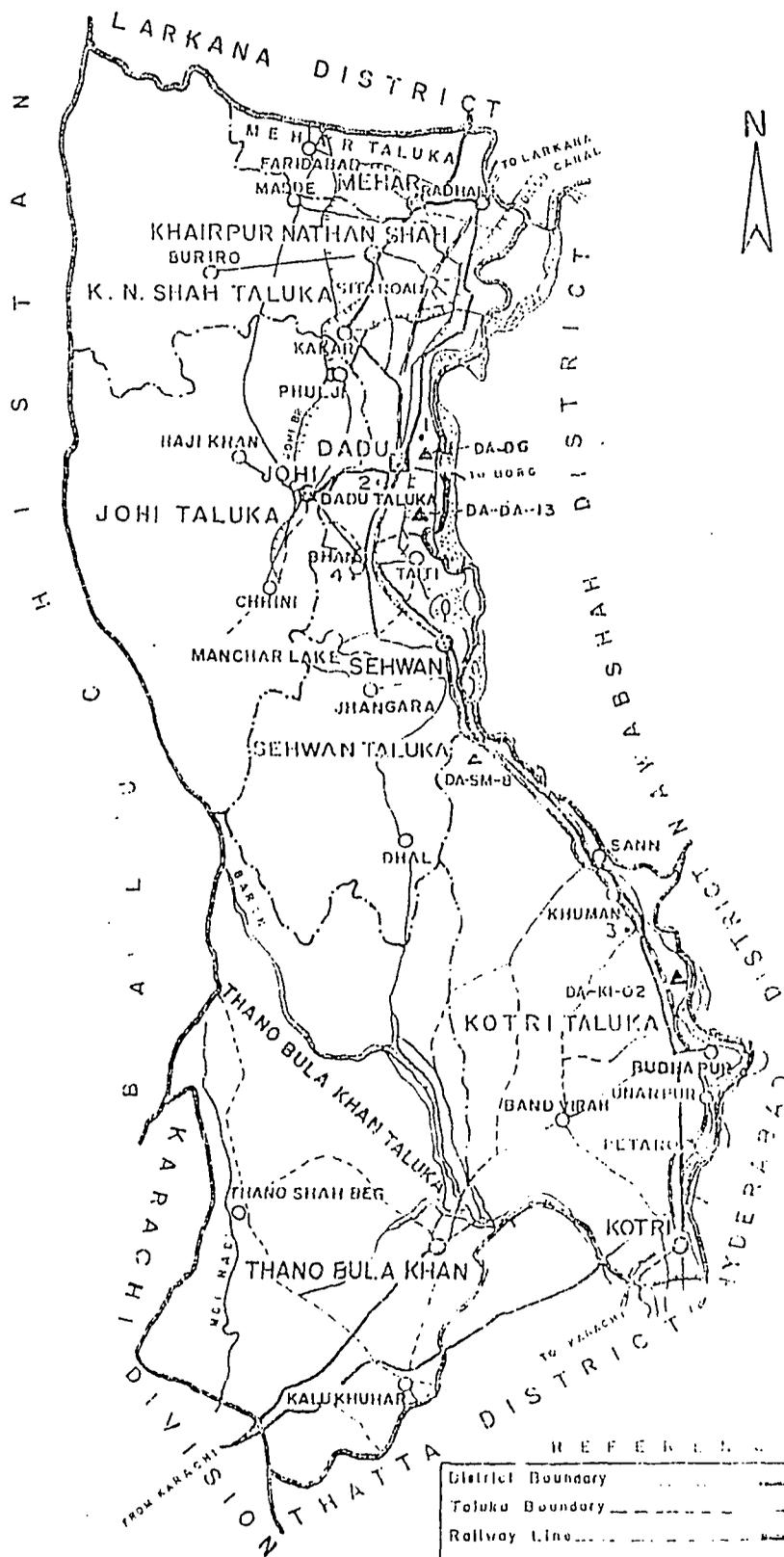
BADIN DISTRICT



PROJECT F.Y. 1989 - 90 ▲
 PROJECT F.Y. 1991 - 92 ▲
 PROJECT F.Y. 1992 - 93 ▲

REFERENCES	
International Boundary	-----
District Boundary	-----
Railway Line	-----
Road Metalled	=====
Road unmetalled track	-----
Canal	-----
District Headquarters	□
Taluka Headquarters	○
Other Localities	○

DADU DISTRICT

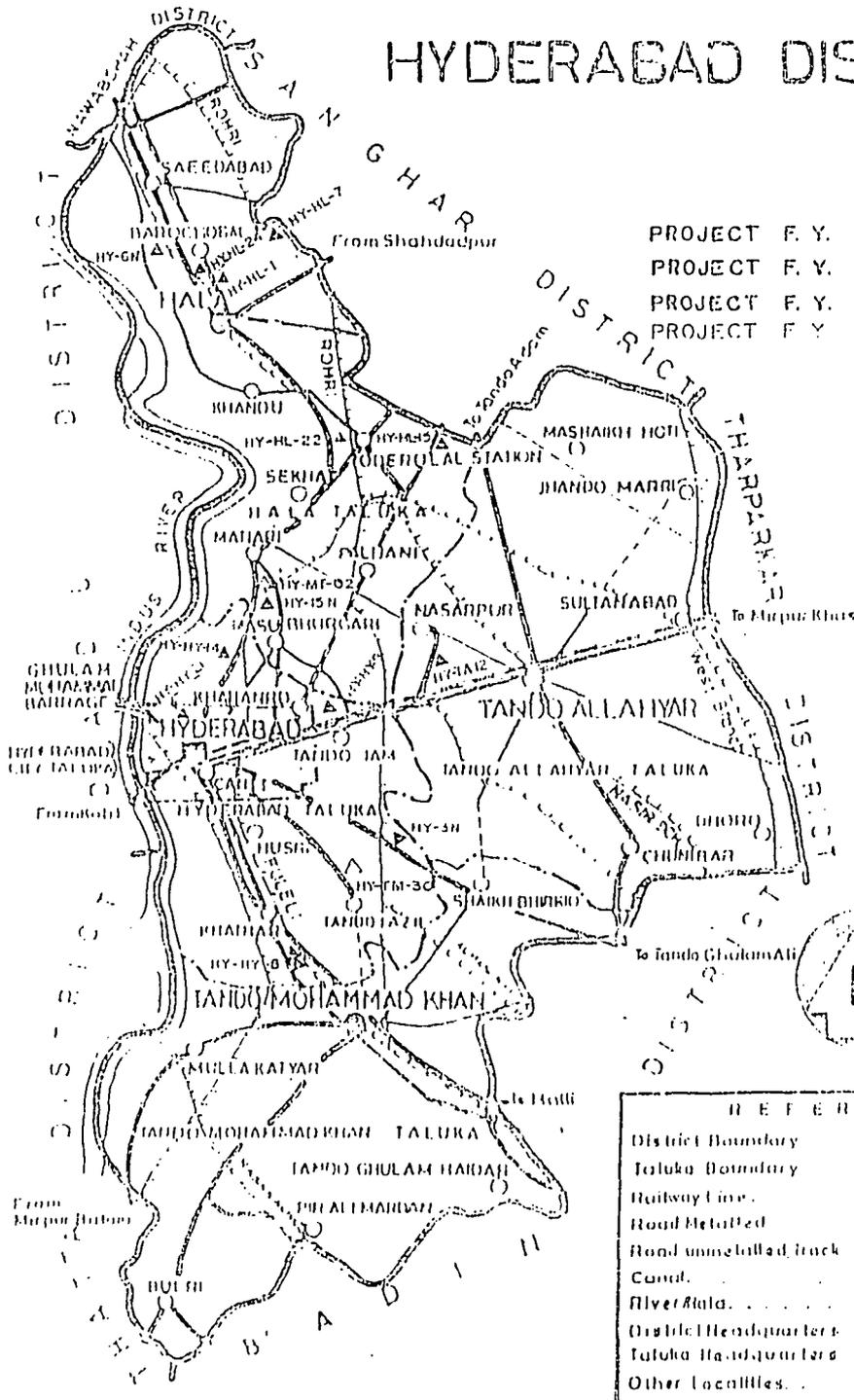


PROJECT F. Y. 1980-80 ▲
 PROJECT F. Y. 1991-92 ▲
 PROJECT F. Y. 1992-93 ▲

REFERENCE	
District Boundary
Taluka Boundary	-----
Railway Line	—————
Road Metalled	—————
Road Unmetalled, Track
Canal	—————
River/Nala	~~~~~
District Headquarters	■

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HYDERABAD DISTRICT



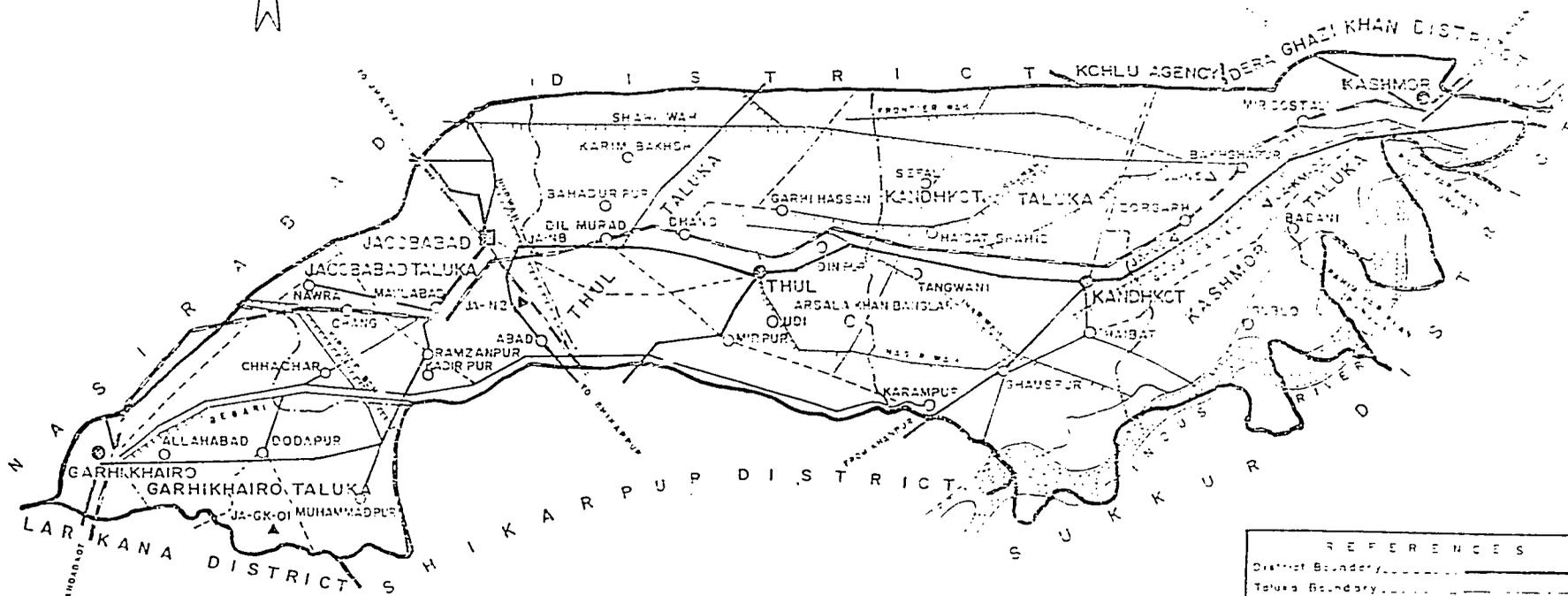
PROJECT F. Y. 1989-90	▲
PROJECT F. Y. 1991-92	▲
PROJECT F. Y. 1992-93	▲
PROJECT F. Y. 1993-94	▲

REFERENCES

District Boundary	—————
Taluka Boundary	—————
Railway Line	—————
Road Metalled	—————
Road unmetalled track	—————
Canal	—————
Plover Slats	—————
District Headquarters	○
Taluka Headquarters	○
Other Localities	○

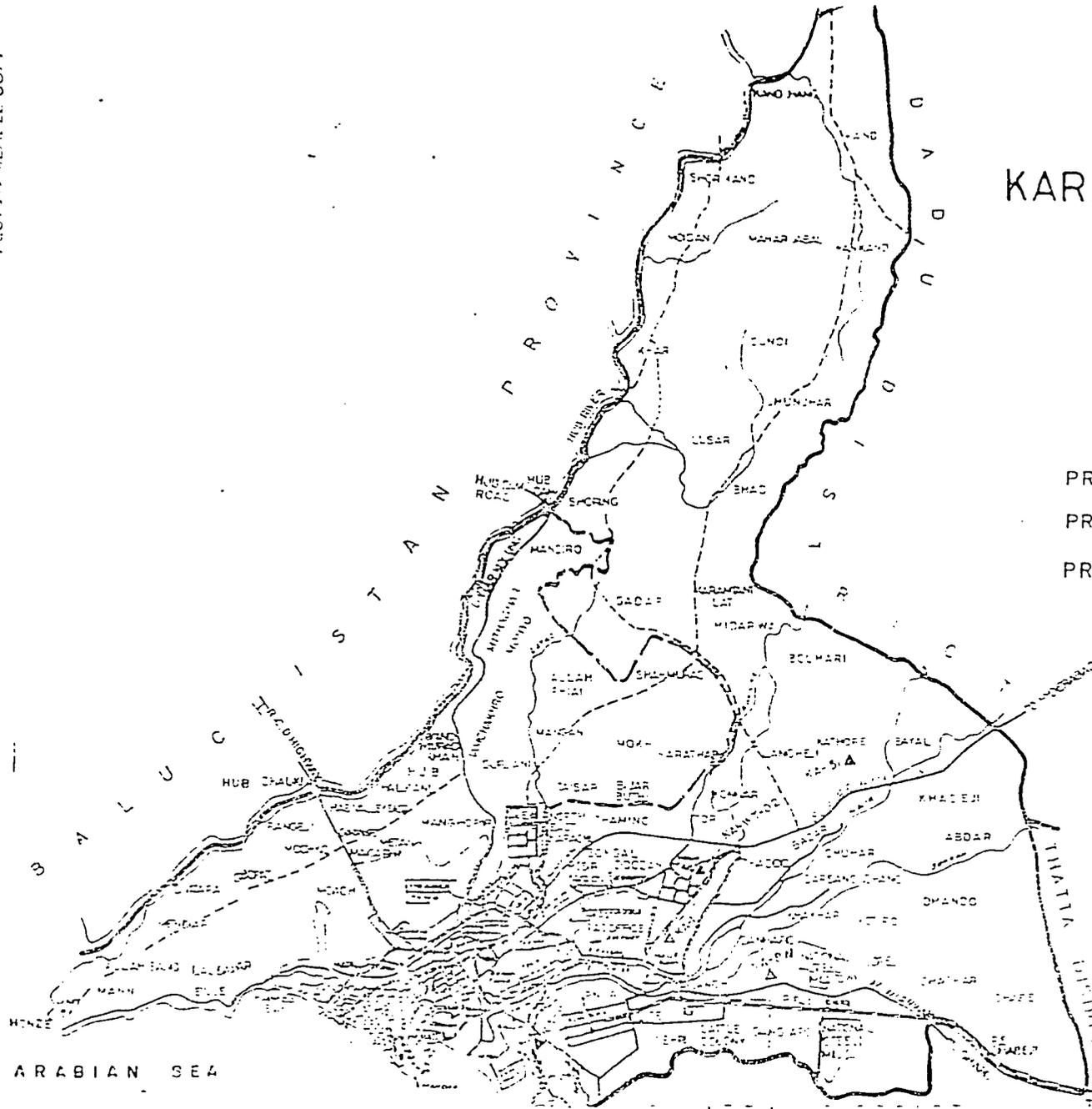
151

JACOBABAD DISTRICT



- PROJECT F. Y. 1939 - 90 ▲
- PROJECT F. Y. 1931 - 32 △
- PROJECT F. Y. 1933 - 34 △

REFERENCES	
District Boundary	—————
Taluka Boundary	-----
Railway Line	—————
Road Metalled	—————
Road Unmetalled	-----
Canal	~~~~~
River/Inundation	~~~~~
District Headquarters	□
Taluka Headquarters	○
Other Localities	●



KARACHI DIVISION

- PROJECT F. Y. 1989 - 90▲
- PROJECT F. Y. 1991 - 92▲
- PROJECT F. Y. 1992 - 93▲

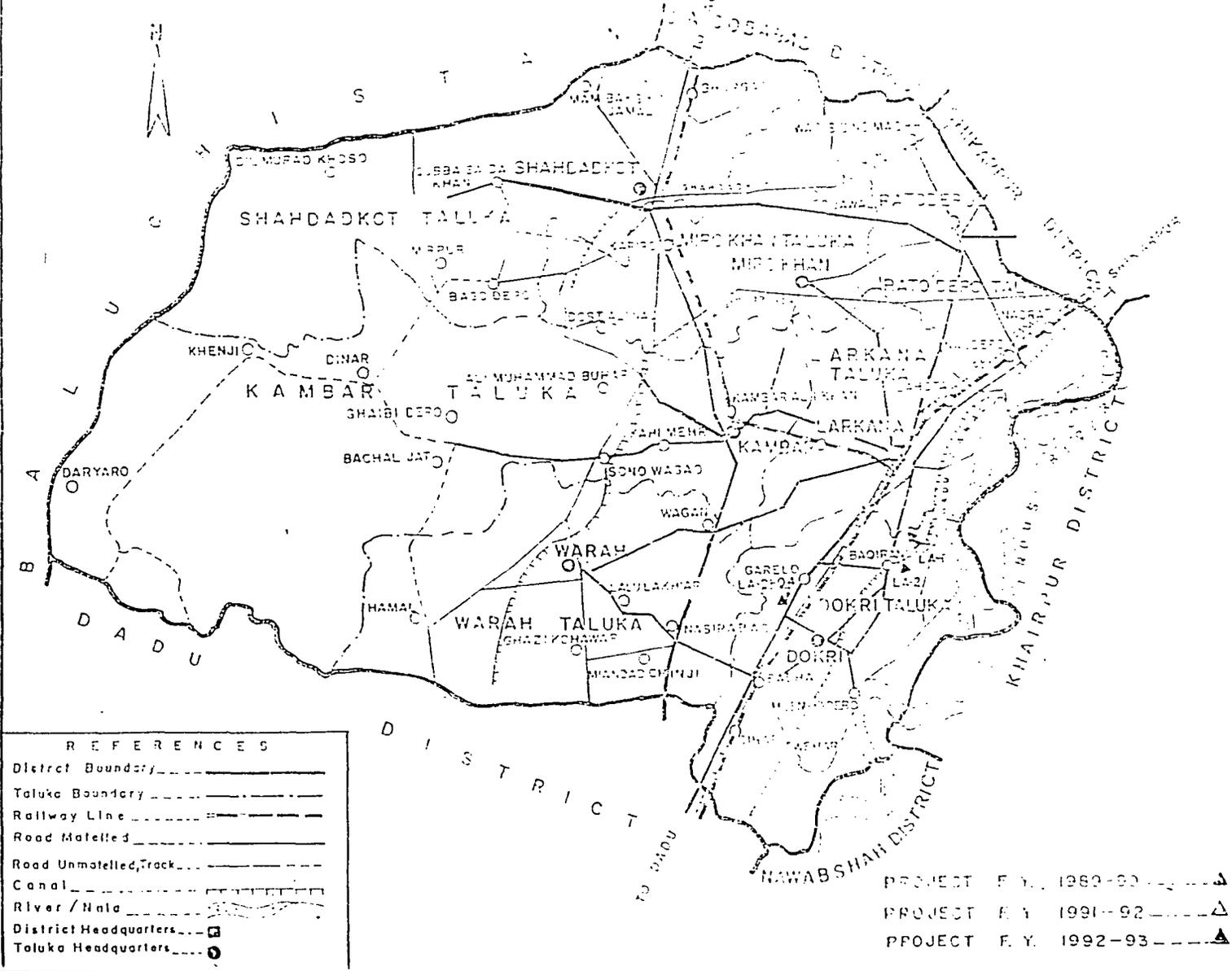


REFERENCES	
District Boundary	—————
District Boundary	—————
Government P. L. Canal	—————
Private Canal or Trench	—————
Railway	—————
Road	—————
Water Course	~~~~~
Water Course	~~~~~

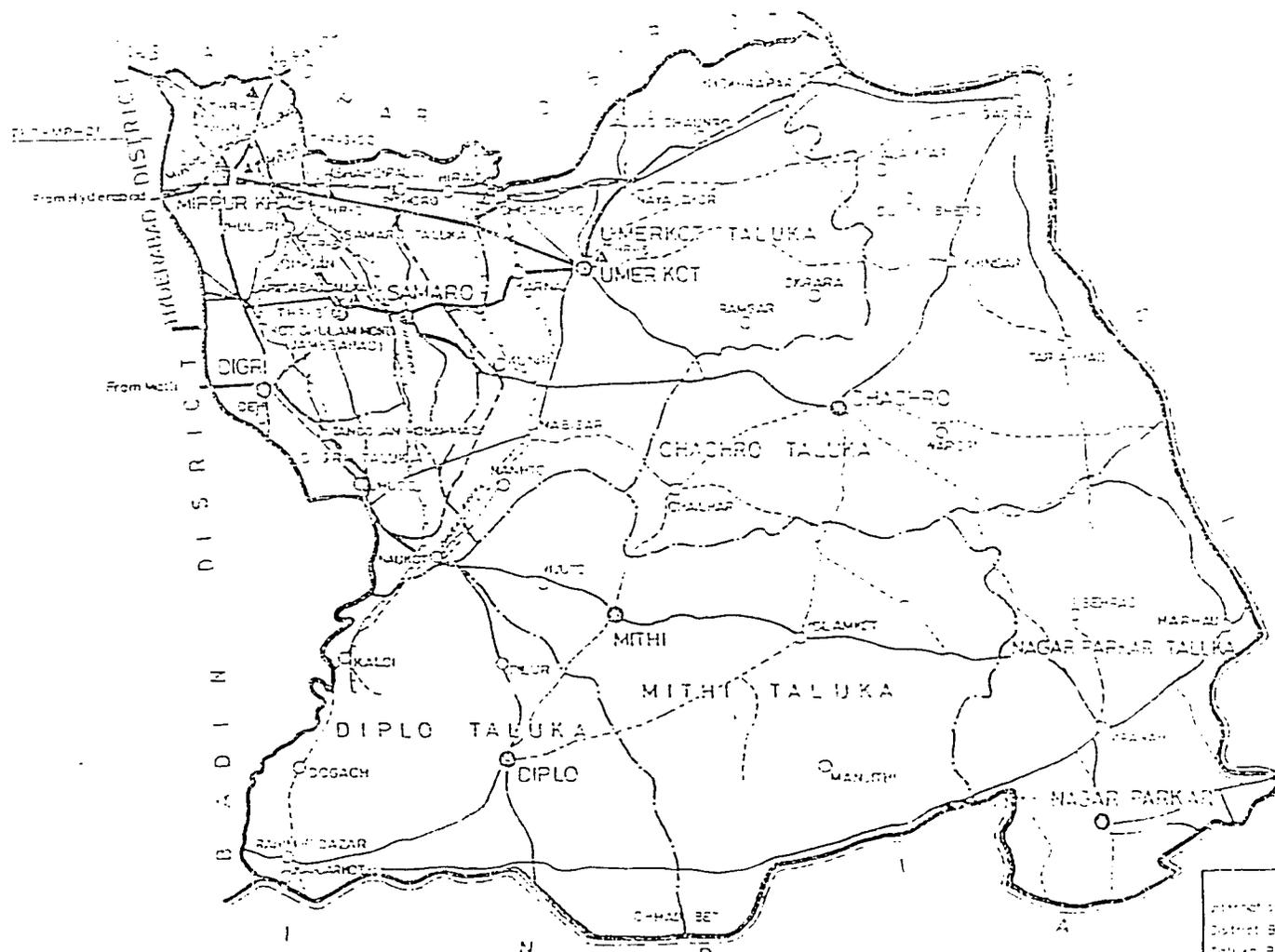
ARABIAN SEA

TO JAMSHEDPUR

LARKANA DISTRICT



THARPARKAR DISTRICT (MIRPUR KHAS)



REFERENCES	
International Boundary	-----
District Boundary	-----
Taluka Boundary	-----
Railway Line	-----
Road Metalled	-----
Road Unmetalled, Track	-----
Canal	-----

PROJECT F. Y. 1939 - 90 
 PROJECT F. Y. 1991 - 92 

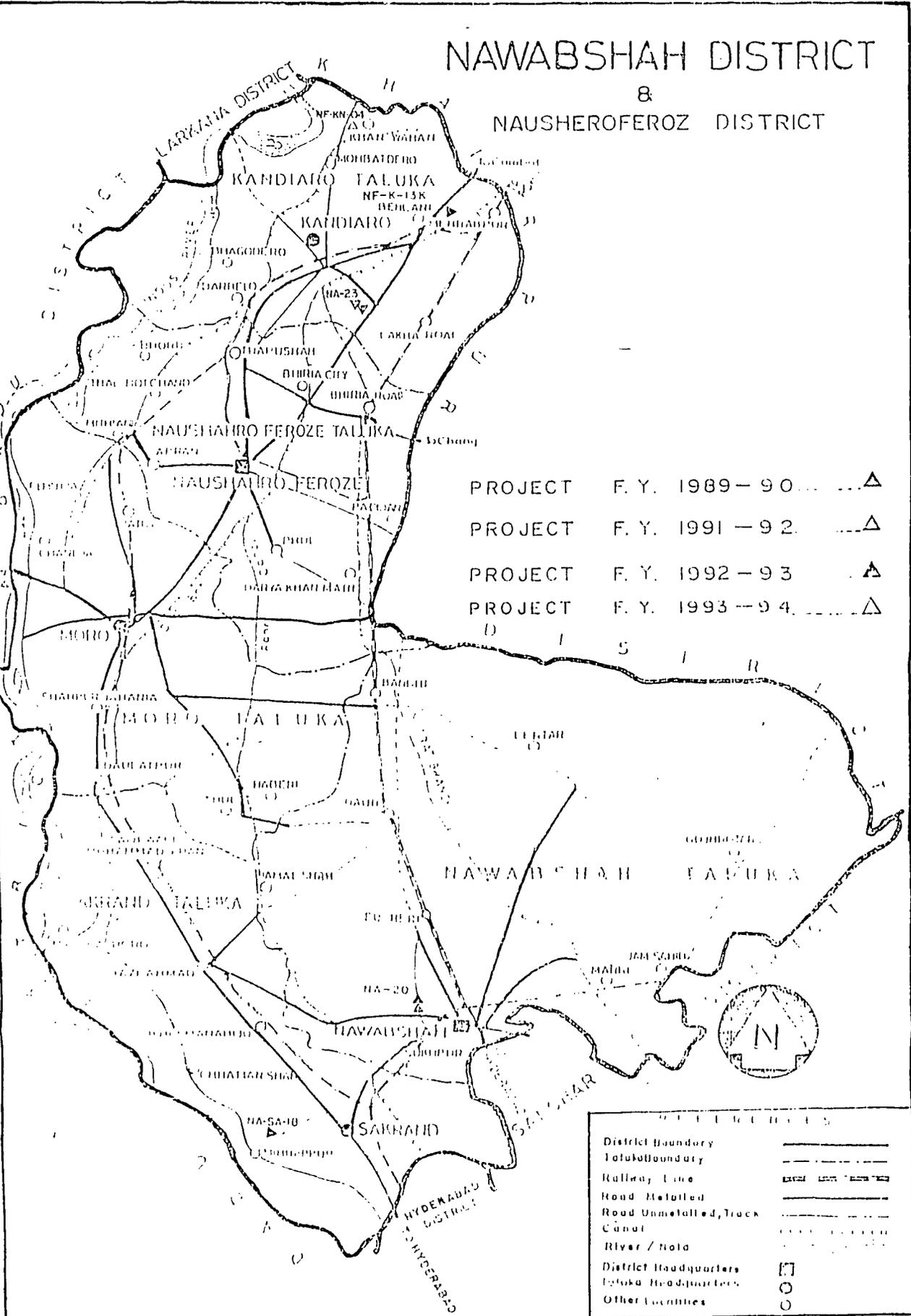
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162

NAWABSHAH DISTRICT

&

NAUSHERO FEROZ DISTRICT

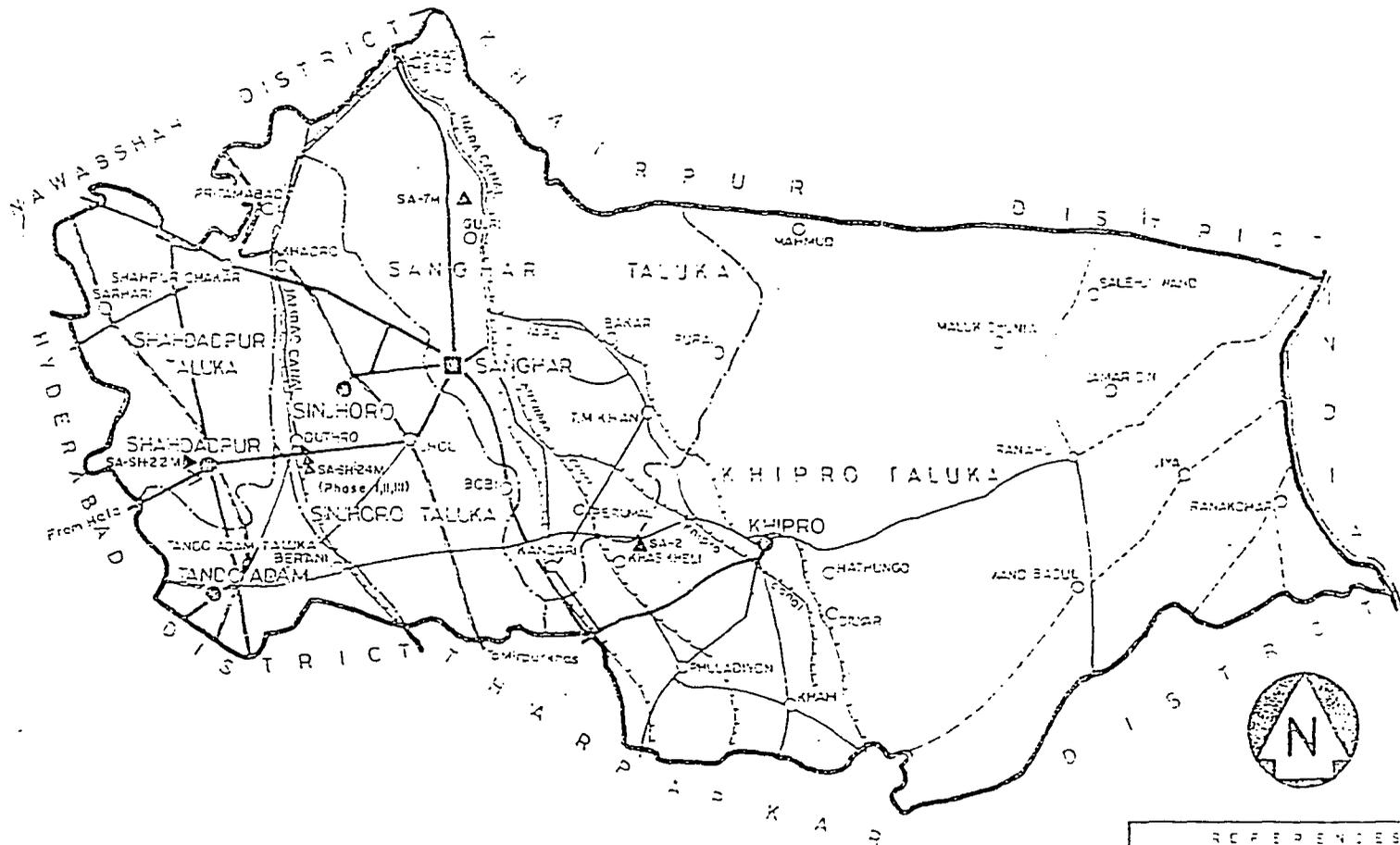


- PROJECT F. Y. 1989-90 ...
- PROJECT F. Y. 1991-92 ...
- PROJECT F. Y. 1992-93 ...
- PROJECT F. Y. 1993-94 ...

SYMBOLS	
District Boundary	
Taluka Boundary	
Railway Line	
Road Metalled	
Road Unmetalled, Truck	
Canal	
River / Nala	
District Headquarters	
Taluka Headquarters	
Other Localities	

SANGHAR DISTRICT

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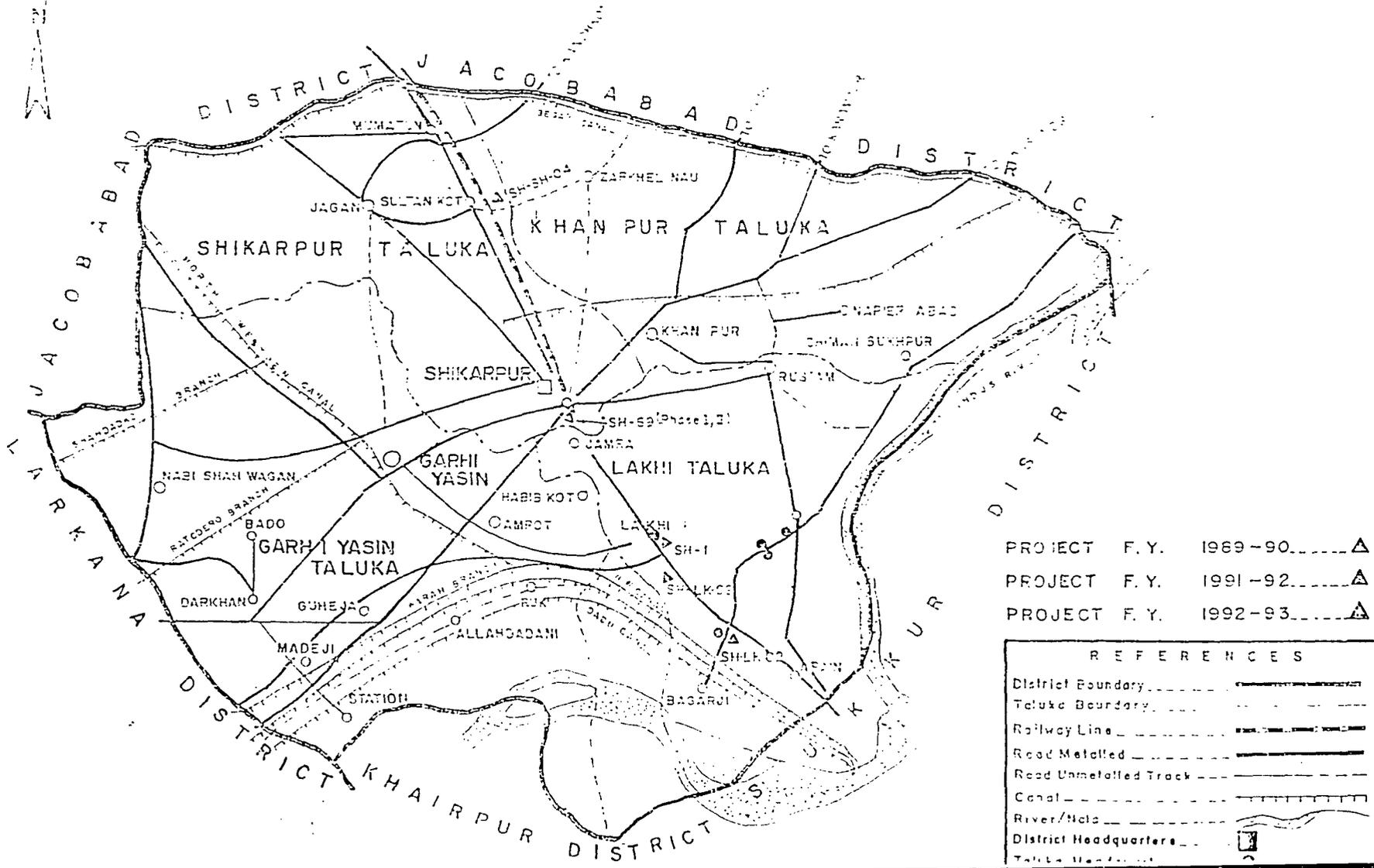
PROJECT F. Y. 1989 - 90 ▲
 PROJECT F. Y. 1991 - 92 ▲

REFERENCES	
International Boundary	-----
District Boundary	-----
Taluka Boundary	-----
Railway Line	=====
Road Metalled	=====
Road unmetalled, Thick	-----
Canal	-----
River/Naib	~~~~~

SANGHAR DISTRICT

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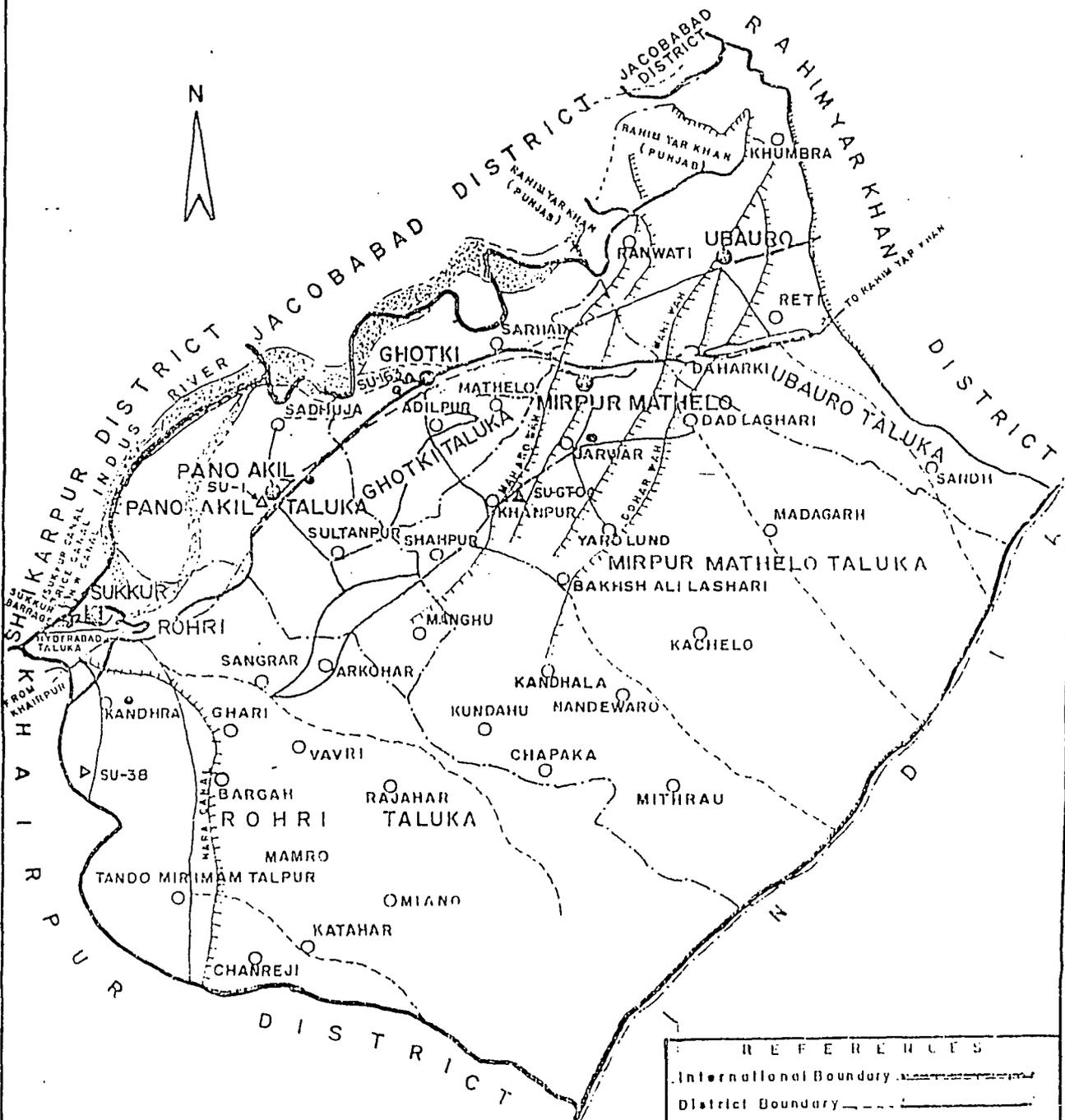
SHIKARPUR DISTRICT



PROJECT F. Y.	1969-90	▲
PROJECT F. Y.	1991-92	▲
PROJECT F. Y.	1992-93	▲

REFERENCES	
District Boundary	—————
Taluqa Boundary	-----
Railway Line	—————
Road Metalled	—————
Road Unmetalled Track	-----
Canal	~~~~~
River/Naib	~~~~~
District Headquarters	□
Taluqa Headquarters	○

SUKKUR DISTRICT

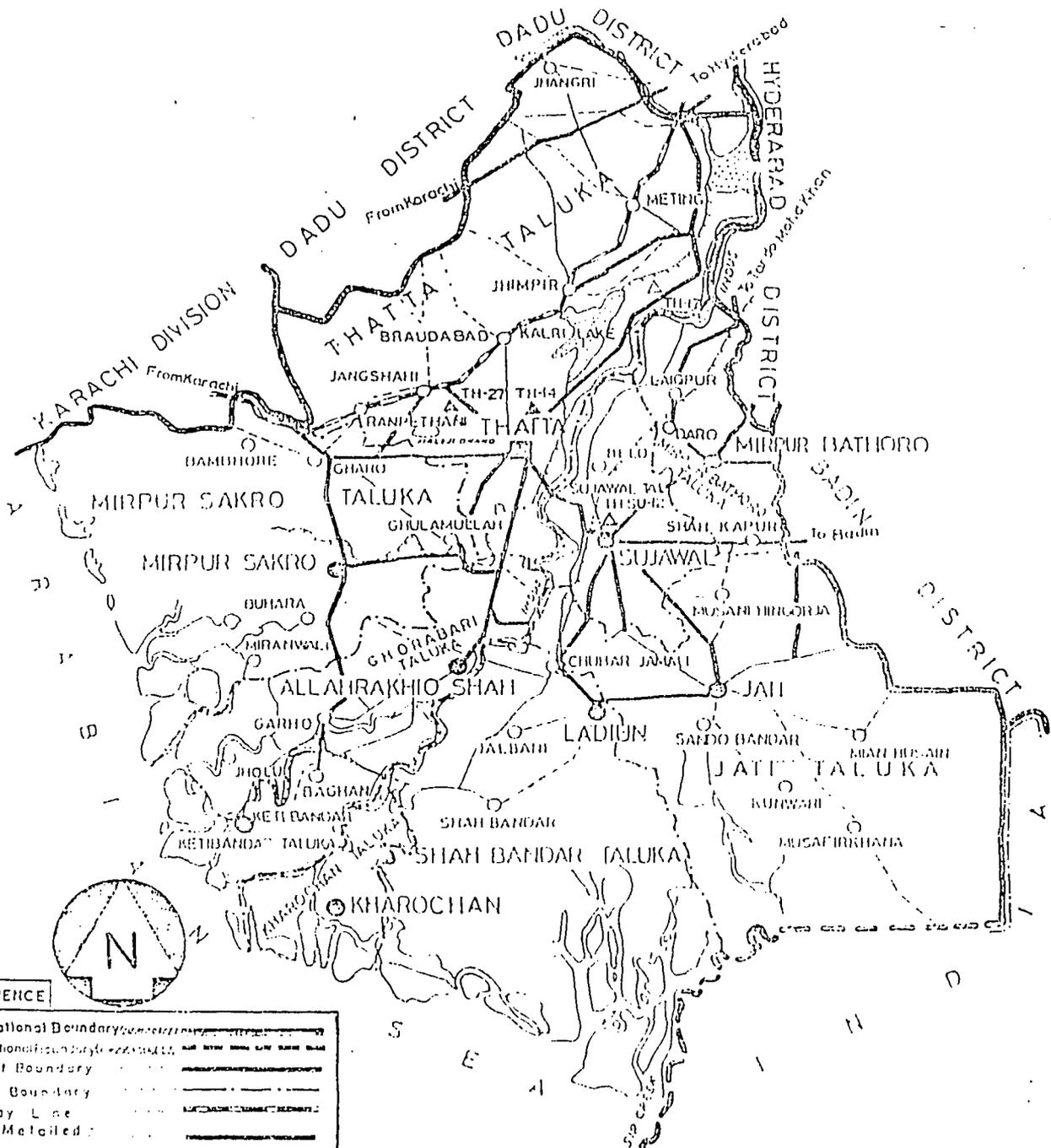


REFERENCES

- International Boundary
- District Boundary
- Taluka Boundary
- Railway Line
- Road Metalled
- Road Unmetalled, Track
- Canal
- River / Nala
- District Headquarters
- Taluka Headquarters

- PROJECT F. Y. 1989-90 ▲
- PROJECT F. Y. 1991-92 ▲
- PROJECT F. Y. 1992-93 ▲

THATTA DISTRICT



REFERENCE

International Boundary	-----
District Boundary	-----
Taluka Boundary	-----
Highway Line	-----
Road Metalled	-----
Road Unmetalled Track	-----
River/Canal	~~~~~
District Headquarters	⊠
Taluka Headquarters	⊙
Other Localities	○

PROJECT	F. Y. 1989 - 90	△
PROJECT	F. Y. 1991 - 92	△
PROJECT	F. Y. 1992 - 93	△
PROJECT	F. Y. 1993 - 94	△