AGENCY FOR INTERNATIONAL DEVELOPMENT

Washington, D. C. 20523

PROJECT PAPER

Pakistan (391-0510)
Balochistan Project

UNCLASSIFIED

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PROJECT PAPER

BALOCHISTAN [redacted]PROJECT
(391-0510)

JULY 1990

UNCLASSIFIED

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE: A = Add, C = Change, D = Delete — [A] — Amendment Number: _____ — DOCUMENT CODE: 3

2. COUNTRY/ENTITY: Pakistan

3. PROJECT NUMBER: 391-0510

4. BUREAU/OFFICE: Europe and the Near East (ENE) [04]

5. PROJECT TITLE (maximum 40 characters): Balochistan Road Project

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM 12 DD 31 YY 96

7. ESTIMATED DATE OF OBLIGATION (Under "B." below, enter 1, 2, 3, or 4): A. Initial FY 90 B. Quarter 4 C. Final FY 92

8. COSTS ($000 OR EQUIVALENT $1 = Rs.21.60)

A. FUNDING SOURCE	FIRST FY 90 B. FX	C. L/C	D. Total	LIFE OF PROJECT E. FX	F. L/C	G. Total
AID Appropriated Total	35,614	50,486	86,100	37,227	52,773	90,000
(Grant)	(35,614)	(50,486)	(86,100)	(37,227)	(52,773)	(90,000)
(Loan)	( )	( )	( )	( )	( )	( )
Other U.S. 1.						
Other U.S. 2.						
Host Country						
Other Donor(s)						
TOTALS	35,614	50,486	86,100	37,227	52,773	90,000

9. SCHEDULE OF AID FUNDING ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE 1. Grant	2. Loan	D. OBLIGATIONS TO DATE 1. Grant	2. Loan	E. AMOUNT APPROVED THIS ACTION 1. Grant	2. Loan	F. LIFE OF PROJECT 1. Grant	2. Loan
(1) ESF	130	820	-	-	-	90,000	-	90,000	-
(2)									
(3)									
(4)									
TOTALS				-	-	90,000	-	90,000	-

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each): 840

11. SECONDARY PURPOSE CODE:

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code	BR	BL	BF				
B. Amount	$22,500	$22,500	$45,000				

13. PROJECT PURPOSE (maximum 480 characters)

To link the Makran Division, Balochistan Province to the national highway network, and to privatize certain road maintenance functions.

14. SCHEDULED EVALUATIONS: Interim MM 05 YY 94 — Final MM 08 YY 96

15. SOURCE/ORIGIN OF GOODS AND SERVICES: [X] 000 [ ] 941 [X] Local [ ] Other (Specify): _____

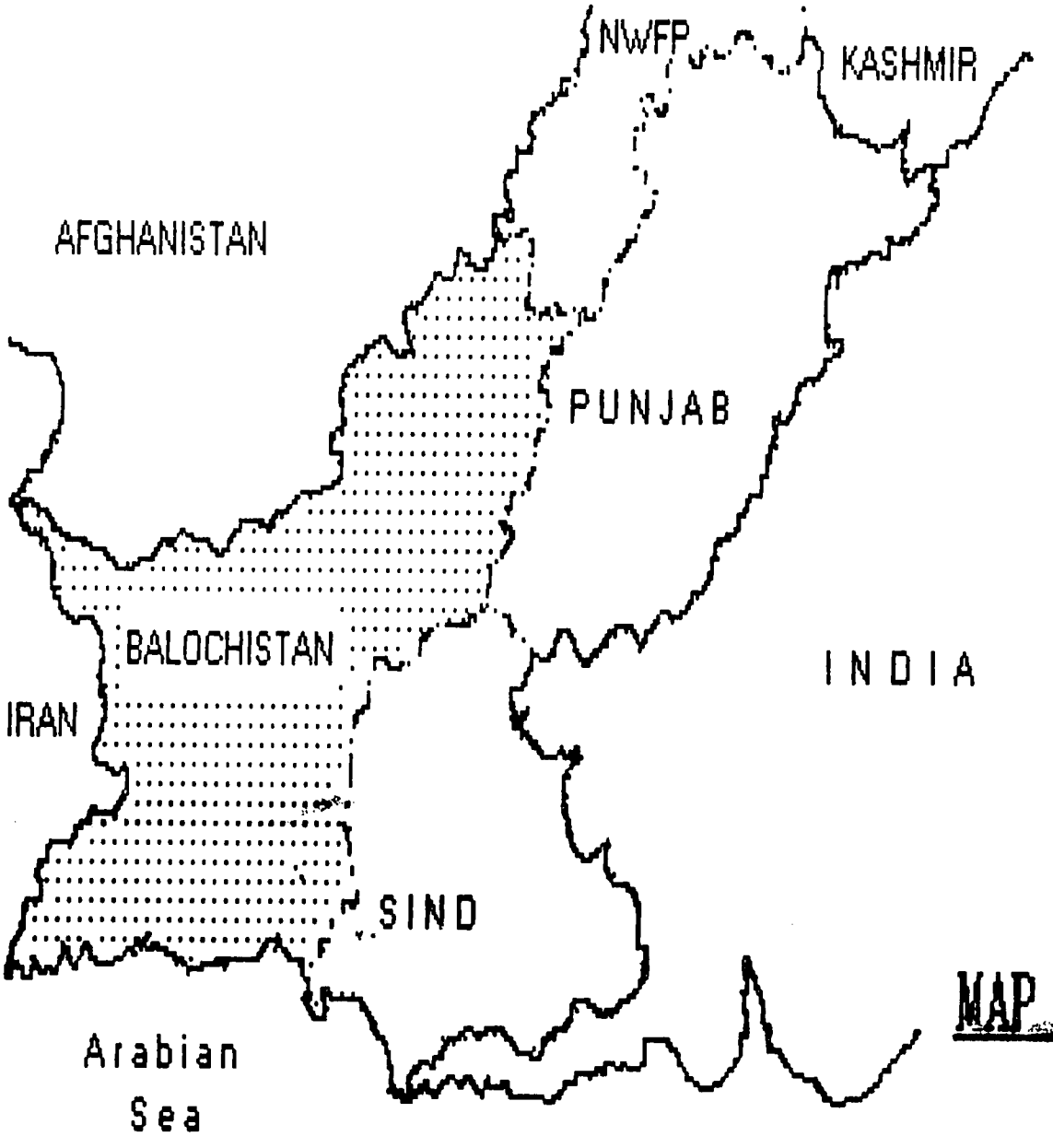
16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a _____ page PP Amendment)

Clearance:OFM:R.McClure

17. APPROVED BY — Signature: James A. Norris — Title: Director, USAID/Pakistan — Date Signed: MM 01 DD 27 YY 90

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION: MM DD YY

AID 1330-4 (8-79)



MAP OF PAKISTAN

MAP OF BALOCHISTAN

PROJECT AUTHORIZATION

PAKISTAN

Balochistan Road
Project No. 391-0510

1. Pursuant to Section 531 of the Foreign Assistance Act of 1961, as amended the (FAA), I hereby authorize the Balochistan Road Project for the Islamic Republic of Pakistan (the Cooperating Country), involving planned obligations of not to exceed Ninety Million United States dollars (US $90,000,000) in Grant funds over a seven (7) year period from the date of authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the Project. The PACD is December 31, 1996.

2. The Project will contribute toward the Government of Pakistan's goal of accelerating the integration of Makran Division into the socio-economic mainstream of Pakistan. The Project purpose is to promote economic growth in Makran by linking Makran to the national highway network; and to privatize certain road maintenance functions. The Project will include (1) construction of the Bela-Awaran-Turbat road, and (2) the establishment of a comprehensive road maintenance system, including development of a toll system and related technical assistance.

3. The Project Agreement(s) which may be negotiated and executed by the officer(s) to whom such authority is delegated in accordance with A.I.D. regulations and Delegation of Authority shall be subject to the following essential terms and covenants and major conditions together with such other terms and conditions as A.I.D. may deem appropriate.

Source and Origin of Commodities, Nationality of Services

Commodities financed by A.I.D. under the Project shall have their source and origin in the United States (A.I.D. Code 000) or Pakistan as their place of nationality, except as A.I.D. may otherwise agree in writing. Except for ocean shipping, the suppliers of commodities or services shall have the United States (A.I.D. Code 000) or Pakistan as their place of nationality, except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under the project shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States.

b. Conditions and Covenants

(1) Conditions Precedent

Except as A.I.D. may otherwise agree in writing, prior to any disbursement of funds under this Project, or to the issuance by A.I.D. of any documentation pursuant to which such disbursement will be made, the cooperating country shall furnish to A.I.D., in form and substance satisfactory to A.I.D:

(i) A written opinion of counsel acceptable to A.I.D. that the project Agreement has been duly authorized and/or ratified by, and executed on behalf of the Grantee, and that it constitutes a valid and legally binding obligation of the cooperating country in accordance with all of its terms; and,

(ii) A written statement setting forth the names and titles of the persons holding or acting in the office of the representative of the cooperating country named in the project agreement and representing that the named person or persons have the authority to act as the representative or representatives of the Grantee, together with a specimen signature of each such person certified as to its authenticity.

(2) Covenants

(i) Road Maintenance Financing

Except as A.I.D. may otherwise agree in writing, the Cooperating Country shall, within three years of the date of execution of the Project Agreement, establish a toll system, acceptable to the Cooperating Country and A.I.D., for financing the cost of maintaining the constructed Bela-Awaran-Turbat road.

(ii) Privatization of Road Maintenance Activities

Except as the Parties may otherwise agree in writing, the Communication and Works (C&W) Department, Government of Balochistan (GOB), shall, within two years of the date of execution of the Project Agreement, establish a system of privatizing road maintenance activities acceptable to the Cooperating Country and A.I.D.

(iii) Annual Allocation for Training in C&W Budget

Except as A.I.D. may otherwise agree in writing, within a year of execution of the Project Agreement and every year thereafter, Communication and Works will allocate an amount in its budget, acceptable to A.I.D. and the GOB, for the training of the new entrants into the maintenance management system established by the technical assistance team.

(iv) Reorganization of Communication and Works Department for Road Maintenance Management

Except as the Parties may otherwise agree in writing, Communication and Works will reorganize the Communication and Works Department for road maintenance management activities, in a manner acceptable to the Cooperating Country and A.I.D., within two years of the date of execution of the Project Agreement.

[X] Approved [ ] Disapproved

James A. Norris
Mission Director

7/19/90
Date

Clearance:

PDM:MHauben (draft)
ENG:GGeorge (draft)
PRO:VMediema (draft)
RLA:TCarter (draft)
OFM:RMcClure (draft)

Drafted - PDM:MSaleem
5140p:aa:sam:6/21/90

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LIST OF ABBREVIATION AND ACRONYMS

A/E	Architectural/Engineering
AASHTO	American Association of State Highway Transportation Officials
ACR	Annual Confidential Report
AIT	Asian Institute of Technology
B&R	Buildings and Roads
B/C	Benefit Cost
BALAD	Balochistan Area Development
BAR	Bela-Awaran Road
BAT	Bela-Awaran-Turbat
BRP	Balochistan Road Project
C&W	Communication and Works
CBD	Commerce Business Daily
CBR	California Bearing Ratio
CDSS	Country Development Strategy Statement
CE	Chief Engineer
CP	Conditions Precedent
CSR	Consolidated Schedule of Rate
DBST	Double Bituminous Surface Treatment
EA	Environmental Assessment
ECNEC	Executive Committee of the National Economic Council
EIRR	Economic Internal Rate of Return
ESF	Economic Support Fund
FAA	Foreign Assistance Act
FHWA	Federal Highway Administration
GOB	Government of Balochistan
GOP	Government of Pakistan
IEE	Initial Environmental Examination
IFB	Invitation for Bid
INSCR	International Narcotics Control Strategy Report
IQC	Indefinite Quantity Contract
IRR	Internal Rate or Return
IT	International Travel
LOP	Life of Project
LTTA	Long Term Technical Assistance
M&F	Monitoring and Feedback
MMS	Maintenance Management System
NHB	National Highway Board
OYB	Operational Year Budget
PACD	Project Agreement Completion Date
PASA	Participating Agency Service Agreement
PC-1	Planning Commission (Report) - 1
PDWP	Provincial Development Working Party
PID	Project Identification Document
PIO/C	Project Implementation Order/Commodities
PIO/P	Project Implementation Order/Participants
PIO/T	Project Implementation Order/Technical Services
POL	Petroleum, Oil and Lubricants
PP	Project Paper

PRC	Project Review Committee
RCC	Reinforced Cement Concrete
RCD	Regional Cooperation Development
RFP	Request for Proposal
RMMI	Road Maintenance Management and Implementation
RMP	Road Maintenance Plan or Program
RMU	Road Maintenance Unit
RNIC	Road Network Identification and Condition
RRM	Road Resources Management
S&T	Science and Technology
SDO	Sub-Divisional Officer
SE	Superintending Engineer
SOW	Statement of Work
SubE	Sub-Engineer
T.A.	Technical Assistance
USAID	United States Agency for International Development
XEN	Executive Engineer

Heretofore, an overextended provincial Communication and Works Department has been attempting to perform nearly all maintenance under force account. Project-funded expertise will assist in designing the maintenance system and, together with relevant training, will improve C&W's contract supervision and quality control capabilities, to ensure adequate oversight over the privatized maintenance operations. Selected equipment pieces will be provided to augment C&W's capacity to respond to emergency maintenance situations.

To render the maintenance program sustainable, serious funding constraints must be overcome. To this end, with project-funded technical assistance, a toll system will be designed and put into place whereby the Government of Balochistan will auction off road toll collection rights to private contractors.

I. Project Issues

1. Toll Roads

The project provides a development of a toll road concept to generate sufficient resources to cover a portion of the road maintenance costs. The Government of Balochistan has the authority to implement toll taxes on roads. This authority has seldom been exercised by the Government to establish a toll road system, although on some of the bridges in Balochistan a toll collection system is in place. The funds generated through toll collection on bridges have proved helpful for the GOB in meeting the maintenance expenses of the bridges. Collection of tolls can provide a substantial amount of money for the routine maintenance of the BAT road which can ease the present government budgetary constraints. In USAID/GOB discussions during the project paper preparation, the Additional Chief Secretary, GOB, agreed, in principle, to the establishment of a toll system for the BAT road. As the road toll system is being established the GOB may face some political and administrative problems.

2. Privatization of Road Maintenance Activities

The road maintenance component of the project will focus on up-grading the capacity of the C&W department to develop and implement a comprehensive road maintenance program through private sector firms as well as force accounts. The Mission firmly believes of privatization of road maintenance will be beneficial for the GOB, and the road users while the concept may be accepted, it may also pose some problems because of the resultant redundancy of some in-house permanent labor as the C&W payrolls engaged to carry out the road maintenance activities.

3. Road Construction

Using AID direct full and open competition procedures, plans are to procure construction services of a U.S. firm as a prime contractor with Pakistani sub-contractors or a U.S. - Pakistani Joint Venture under one contract for the entire 376 km. BAT road. USAID has experienced that local construction contractors lack experience and find it difficult to manage and plan road and bridge construction contracts even of a much smaller size compared with

BAT roads. As this road is of vital importance to the GOB and the people living in the Makran Division, the risk of contracting local construction contractors should not be taken. The entire 376 km. BAT road has been lumped into one construction contract to attract a U.S. firm of good repute. While possibility of delays and management problems cannot be ruled out completely with U.S. construction firms, USAID expects management problems to a lesser extent and looks forward to the completion of the project within limited delays. The unit rates for the estimated cost of road construction have been worked out keeping in mind awarding the construction contract to a U.S. firm, yet with such a long road to be constructed, there is a concern with any increase in unit rates, the overall cost of construction will rise significantly.

4. Reorganization of C&W Department for Road Maintenance Management.

The project provides a covenant that C&W will reorganize its department for road maintenance management activities in a manner acceptable to GOB and USAID. This reorganization will provide an opportunity for the GOB to utilize the maintenance management techniques acquired by the C&W staff in their association with the long term technical assistance team during the project life, and the exposure to in-country and overseas training in road management. This reorganization will also be beneficial to the GOB in planning, programing, monitoring and evaluating long term road maintenance policies. While there can be no argument against the reorganization of C&W department, since change is not easily accepted by all in an organization there might be a problem in effecting this change.

II. PROJECT BACKGROUND

A. Achievements Under BALAD

The ongoing Balochistan Area Development (BALAD) Project was authorized in 1984. The current PACD is December 31, 1991. The Life of Project AID funding level is $45 million. BALAD has focused on construction and improvement of roads and bridges, improvement of traditional karez irrigation systems together with introducing related improvements in agriculture and on-farm water management. The target area has been Makran Division.

The FY 1988 project evaluation found that the project had made significant development contributions, primarily through the provision of infrastructure. In its concluding comment, referring to possible follow-on activity, the evaluation report stated, "The most important intervention is still basic infrastructure, such as the Bela-Awaran-Turbat road, which is central to any follow-on activity... even integrated approaches to rural development are unlikely to be successful unless the basic infrastructure is first in place."

BALAD funds are at this time also being used to assess the prospects for private investment in Makran. The scope of work for this initiative is provided in Annex P.

BALAD initiatives most closely related to the Balochistan Road Project include initiation of a road condition survey procedure to determine maintenance requirements of the various road elements, introduction of traffic counts, implementation, on a trial basis, of a maintenance system for gravel roads in Makran, development of geometric standards for road works (recently approved by the Secretary, Provincial C&W Department), construction of the major Kech River Bridge at the Turbat end of the proposed Bela-Awaran-Turbat (BAT) road, design of the Awaran-Turbat section of the BAT road, and initiation of reconstruction of portions of the Bela-Awaran section of the BAT road.

The basic lack of a systematic road maintenance program was identified as one constraint to further development of Makran during the preparation of the BALAD Project Paper. Since virtually all of the roads under the jurisdiction of Makran C&W are gravel roads, BALAD focussed on developing an approach to maintaining these roads. The efforts concentrated on the technical aspects of a maintenance program, but did not approach the problem from the perspectives of scarce budgetary resources and a rapidly deteriorating equipment fleet that has had little in the way of preventive maintenance. Some degree of success has been achieved in demonstrating that C&W can effectively maintain gravel roads. Two of the most heavily used road segments were placed under the trial motor grader brigade maintenance program, and while the maintenance was being performed, the service level provided was far higher than in the past. However, once project support for the experiment was withdrawn, C&W went back to its previous practices and the road began to deteriorate. The users of the road, having become accustomed to the service level provided during the intervention of the project, have applied pressure to C&W to reinstitute the approach demonstrated under the project. C&W is now going back to that practice.

BALAD project funds were provided for the reconstruction of the 101 km road from Bela to Awaran. An AID direct contract was awarded to a local construction firm in September 1987 with a contract period of 30 months. In June 1989, because of perceived inadequacies in contractor's performance, and the assessment that a partial termination would be the best approach to successful completion of the entire Bela to Turbat Road, a portion of the contract was terminated for convenience in the best interest of the U.S. Government. Thereafter, progress continued at an unacceptably slow pace despite the reduced scope of work. The remaining portion of the work was terminated in mid May 1990.

Although 14% of the contracted work has been completed, this mainly involves preparatory stages of the road work, with the result that not a single kilometer of the road has actually been completed. Hence, the entire length of road remains to be constructed under the Balochistan Road Project. As a result of lessons learned regarding weaknesses of local construction firms, a U.S. firm will be the prime construction contractor under the new project.

III. PROJECT RATIONALE

A. Perceived Problems

Balochistan, the largest Province of Pakistan with an area of 347,190 square kms and a population of 4.31 million, occupies almost 44% of the total area of Pakistan; yet this arid region supports only 4% of the nation's population of 107 million.

Development in the interior of Balochistan confronts formidable obstacles because of disadvantages stemming from the small and scattered population, lack of water, poor infrastructure, distance from major markets and lack of labor skills. The province still lags behind the rest of the country in infrastructure, and as evidenced by other indicators: Education: The combined male/female literacy rate is at a dismal 12%, compared to the national literacy rate which is 26%. Balochistan's literacy is the lowest in the country, reflecting inadequate provision of schooling facilities, as well as social considerations that inhibit female enrollment in educational institutions. In comparison to the national rate of 16% Balochistan female literacy is 4%. Electricity: The scattered nature of the population over a wide expanse makes extension of an electricity grid prohibitively expensive. At present, less than 25% of the province's 5,700 villages have access to electricity. Health: Since only 43% of the province population has access to drinking water, the incidence of water borne disease is high. Medical facilities are grossly inadequate to tackle these diseases. There is only one doctor for over 14,000 persons. The only well equipped hospital in the entire province, in Quetta, provides specialized treatment to patients drawn from all over Balochistan. Roads: There has been improvement in the road network, but the distribution is uneven. The northern parts of the province have a better network of paved roads than the southern and western parts.

The Makran Division of Balochistan has a total area of 5.4 million hectare or 54,000 sq. km. Of this area, however, less than 1% is irrigated. Between 35 and 40% of the total area of Makran is denuded. Rainfall varies from 3 to 7 inches per year. The total population of Makran is approximately 650,000 (around 14% of Balochistan's total). About 95% of the population lives on less than 5% of the land area. The population is concentrated around the irrigated oases along rivers between the mountain ranges that dominate the two northern districts, and along the coast.

Agriculture, especially date cultivation, provides the main economic base for most of the people of Makran as 67% of the total labor force derives a portion of its livelihood from agriculture. Because of the low level of rainfall, dry land farming is a marginal undertaking. In the river valleys, however, an estimated 17,600 hectares are under cultivation. Besides the major crop of dates, wheat, barley, rice, pulses, vegetables, fodder and citrus fruits are grown. Most agricultural produce in Makran is locally consumed. Small land holdings, outdated technology and lack of capability constrain large scale commercial production. All agriculture in Makran, except for fodder and dates, can be characterized as subsistence. A large part of the local vegetable demand is filled by producers from other parts of Balochistan and Sindh, although local vegetable production is increasing every year.

Marine fisheries have the potential to be one of the most important sources of increased income for the people of Makran. Starting about 20 miles west of Karachi and ending at the Iran border to the west, the historic Makran coast stretches for nearly 400 miles. Most of this northern Arabian Sea coast lies in Makran Division, the remainder in Kalat Division. During 1985, marine fish production on the Makran coast was 91,300 metric tons, valued at nearly $15 million. Fishing provides employment to about 20,000 fishermen in Makran. Most of the fleet used for fishing is still non-mechanized and fishing activities are restricted to those which can be undertaken close to shore. The output is, therefore, low. There are no facilities on the coast to process the fish catch. However, during recent years, efforts have been made to modernize the fishing industry in Balochistan. A modern harbor has been constructed at Pasni, another is planned for Gwadar and efforts are underway to provide advanced fishing equipment to local fishermen.

1. Need for the Road

Balochistan Province of Pakistan and, within that province, Makran Division, the project's target area, are among the least developed areas in Pakistan. Economic activity in Makran responds to demand from Karachi, the country's leading industrial city and port. Karachi is also Makran's most important supplier of goods. Road links between Makran, located in the south-west corner of Pakistan on the Arabian sea and the Iranian border, and Karachi are in extremely poor condition. Furthermore, roads within Makran Division linking the important towns are at best gravel tracks. These have ceased to exist in places, having degenerated into vehicle paths in the area's clayey and sandy soils. The state of the road network is a significant impediment to improving agricultural production and resultant economic development in the region.

The total provincial road network of Balochistan is 10,861 kms., of which only 2,112 kms. are paved. Out of 3,320 kms. of road in Makran, only 94 kms. are paved. Most of the paved roads have not been constructed to minimal engineering standards. Drainage on the existing road network is inadequate, resulting in suspension of traffic during the rainy season. The deteriorated condition of the roads deters investment in public transport, and whatever transportation is available is very expensive. At present, travel time from Turbat to Karachi is over twenty-four hours with the heavily laden tracks taking up to three days. In the absence of an efficient road network, there is limited economic activity. Development of non-traditional crops, such as tomatoes, for which Makran has demonstrated an agro-climatic comparative advantage, is constrained by the impracticality of access to the Karachi market. The lack of job opportunities for young educated Makranis, seen as resulting from continued negligence of development in the region, has created resentment among the population.

Strong political imperatives argue for construction of the road. A concrete, physical link to Karachi will, on the one hand, serve to assuage local inhabitants' complaints about federal government neglect. On the other hand, effective land lines of communication will end the target area's physical isolation. Baloch ties to their tribal brethren across both the Iranian and Afghan borders underscore, from the government's perspective, the need to integrate Balochistan into the national mainstream, with road infrastructure seen as a sine qua non to integration.

Physical isolation fosters general lawlessness. The desert wastelands of Makran serve as an avenue through which opium-based narcotics pass on their way out of the country. An end to the areas's isolation will make the conduct of such activities far more difficult.

2. Sustainable Maintenance Program

Protection of investments in road infrastructure will depend on a sustainable maintenance program. Adequate maintenance of the major road to be constructed under this project, as well as other Balochistan roads, is beyond the capacity of C&W to implement, and demonstrably difficult for government to fund.

The same bureaucratic organization within the C&W Department of the Government of Balochistan handles construction and rehabilitation of roads in addition to maintenance. Maintenance, for which there are never sufficient funds, is effectively relegated to the back seat. A systematic approach to identifying actual maintenance requirements for the provincial network is not currently employed; nor is great effort devoted to correlating physical maintenance needs accurately with funding requirements. To simplify matters, yardsticks (resource requirements), have been established to determine the budget requirements for each category of road. Even with adoption of a more systematic approach to maintenance and application of measures to enhance its capabilities, C&W will remain drastically overextended. Contracting private firms to undertake road maintenance instead of the present practice of performing maintenance under force accounts represents a viable solution. C&W's contract supervision and monitoring capabilities would, however, need to be sharpened.

Resource availability is another problem area. Over the past four to five years, budget requests have been filled only to the extent of approximately 50-60% of requirements. As the road network continues to deteriorate, funds are channelled away from road maintenance and into road rehabilitation.

C&W finds itself in a vicious circle as it pays less attention to the existing road network, the rate of deterioration increases and the funds needed to rehabilitate the system escalate tremendously. In the absence of an infusion of maintenance funds, the deterioration will not stop. This project will identify resources to be tapped to finance road maintenance. To this end, the road to be upgraded under this project will be turned into a toll road. Depending on the degree of success of this effort, other roads are expected to be made into toll roads to generate funds for maintenance of those particular segments.

B. Relationship to Government of Pakistan (GOP) Policies and Priorities

A primary objective of the GOP is to achieve the national integration of its diverse peoples and provinces into the mainstream of national life, both economically and socially. The Seventh Five Year Plan prepared by the Planning Commission of the GOP and covering the period from 1988-1993 states, "the most significant challenge to public policy today lies in combatting

the growth of divisive social and political forces within the country which have not so far been mitigated by public policies." In Balochistan, local perceptions of estrangement from national life resulting from geographic isolation, cross border ethnic affinities, and traditional antipathy toward government authority have exacerbated the historically tenuous nature of government control. The Balochistan Road Project responds to these centrifugal forces by forging a physical link between the target area and Karachi, the country's major commercial center.

GOP policy pronouncements urging greater private sector involvement in road maintenance implementation and financing find support in the project's thrust to shift maintenance responsibilities to private contractors and to establish a toll system. The Seventh Five Year Plan, in its Transport and Communications section, includes the following elements pertinent to this discussion:

> "In the road sub-sector, the highway development program will be broadened by the induction of the private sector and the realization of road user charges;"
>
> "Toll roads will be developed and tolls will be collected on all those sections on the National Highway which are either newly constructed or improved;"
>
> "The private sector will be given incentives for participation in the shipping and road sub-sectors."

It is implicitly clear from these statements of strategy articulated by the Planning Commission of the GOP, that road maintenance support cannot adequately be funded from governmental budgets alone and that the Balochistan Road Project's maintenance privatization objective both reflects and addresses GOP efforts to expand their road maintenance resources.

C. Relationship to AID Policy and Strategy

The Project is consistent with the Mission's current Country Development Strategy Statement (CDSS), and will help to achieve the overall development objectives of the U.S. economic assistance program to Pakistan. To help ameliorate the existing gap in development between the country's "lagging areas" and those that have achieved greater economic progress, the CDSS presents a strategic focus on overcoming isolation by providing physical infrastructure. A portion of USAID's planned activities in the lagging areas, therefore, consists of large, highly visible physical infrastructure projects to link these areas with the rest of the country and to stimulate local economic progress. In this connection, the CDSS makes special reference to improving the 376 kilometers Bela-Awaran-Turbat road - the focal activity of this project connecting Makran to Karachi, the country's largest commercial market.

In privatizing certain road maintenance functions, the project will be implementing an important AID policy thrust. Recognizing the shortcomings of the present, public sector approach to maintenance, the government and USAID are collaborating in developing a program that will include private toll collection to finance maintenance operations, as well as use of private maintenance contractors.

IV. DETAILED PROJECT DESCRIPTION

A. Project Goal and Purpose

The goal of the project is to accelerate the integration of Makran Division of Balochistan into the socio-economic mainstream of Pakistan. The project purpose is to link the Makran Division, Balochistan Province, to the national highway network; and to privatize certain road maintenance functions.

B. Achievements and Outputs

At the end of six years, the project is expected to have accomplished the following achievements and outputs:

1. Construction Component

Achievement: Makran is linked with the national highway network and the country's foremost commercial center, Karachi.

Output: 376 kms. of road constructed to American Association of State Highway Transportation Officials (AASHTO) standards for rural roads.

Achievement: Increased external demand for Makran products and increased demand in Makran for consumer and capital goods.

Output: Increased flow of key Makran-produced commodities, viz., livestock and fresh or processed dates, tomatoes, fish to external markets and increased inflow to Makran of consumer goods, agricultural inputs and equipment.

Output: Traffic volume to and from Makran increases by 45 percent to 270 vehicles per day during the first year after completion of construction.

2. Road Maintenance Component

Achievement: A functioning, comprehensive, sustainable road maintenance program

Output: Provincial C&W Department has the capacity to implement a comprehensive road maintenance and management system, including the capacity to produce implementable annual maintenance plans.

Output: At least 25 percent of funds required for maintenance of the BAT road will be generated from private sources.

Output: A privately operated toll system is in place.

Output: Private firms awarded broad maintenance contracts are responsible for all maintenance activity on discrete sections of road for periods of at least one year each, in this manner covering the entire BAT road.

C. Project Components

1. Road Construction

The project will construct the road from Bela to Turbat via Awaran. This 376 km. Bela-Awaran-Turbat (BAT) road will form the principal line of communication to Makran Division. The road consists of two distinct sections: (1) a 136 km. Bela-Awaran Road (BAR) section starting at Bela, and (2) the 240 km. Awaran-Turbat Road (ATR) segment.

The first 35 km. section of the BAR is presently a 4 meter wide double surface treated road constructed by the Government of Balochistan, Communication and Works Department, Lasbella Division. Due to sub-standard construction, the road pavement has deteriorated to such an extent that it needs to be dismantled. A new road pavement will be constructed in this section. The inferior road geometry of this segment, sharp narrow horizontal curves and steep grades, will also be improved for the safety of travelers. The remaining 101 km. section of the BAR begun under BALAD is a gravel and stone track. USAID funded construction work on this section was initiated through a local construction firm in September 1987. Severe construction delays were encountered, resulting in 14% of the work completed during the 30 months of contract time. Initially, USAID reduced the contract from 101 kms. to 56 kms. for the convenience of the U.S. Government. With continued slow progress, USAID decided to obtain a no-cost termination settlement with the construction firm for the reduced contract. The remaining work for this 101 km. segment will be combined with the tender package to be advertized for the other section of the road.

The existing section from Awaran to Turbat is a 4 meter wide gravel track developed from an old camel trail. The existing track follows the natural ground profile with abrupt rise and fall at the numerous stream crossings. In this section, a paved road will be constructed with necessary bridges and culverts.

Near Turbat town, C&W, Makran Division, has paved 22 km. of the road, but this section has prematurely deteriorated to such an extent that the road pavement and culverts need to be dismantled. A new road pavement with new box culverts will be constructed.

2. Road Maintenance

a. Upgrade Capacity of GOB C&W Department

(1) Technical Assistance

Project funds will provide technical assistance and training to the C&W staff responsible for road maintenance. The role of C&W will be redefined, with consultant assistance, to focus on certain aspects of the comprehensive road maintenance program, primarily the development of planning documents and monitoring work to be performed by private sector firms. Initially, assistance will be provided to C&W to develop a procedure to identify the extent of the system and conduct a survey of the different road elements in the network. The information collected will be used to determine which road segments can be

placed into a road maintenance program and which sections have deteriorated to such an extent that maintenance will no longer serve a useful purpose. In addition to the identification effort, kilometer markers will be installed on each stretch of road for which a condition survey has been completed. At the same time, consultants will work with C&W to prepare a simple numbering system for all roads in the inventory of each circle. The effort to collect the necessary information will either be completed with in-house C&W staff or by engaging a local consultant, probably under the host country contracting mode, to do the work on behalf of C&W.

While information on the network is being collected, performance standards for the different road maintenance tasks for routine, periodic and emergency maintenance activities will be developed with consultant assistance. These standards will be developed in considerable detail. The performance standards are expected to identify actual maintenance requirements significantly more accurately than the yardsticks currently employed. The performance standards will form the basis for a comprehensive road maintenance management system. The application of performance standards to derive maintenance costs is discussed in the description of "Private Sector Implementation of Maintenance Activities," Section IV.C.2.b. below.

The project-funded consultants will assist C&W to develop an implementation approach that moves away from traditional means of performing maintenance by force accounts to one of increased privatization through the letting of maintenance contracts to private firms. Monitoring the work performed by the private sector contractors will then assume primary importance, since quality control will depend on continuing oversight. C&W has in place an organizational structure to perform this function. The project will build upon this structure, with slight modifications, to enable the different levels of the organization to provide the necessary control on quality and to feed information back into the system so that adjustments can be made. Project funded technical assistance will recommend organizational modifications perceived as necessary and project funded training will ensure that C&W supervisory personnel are capable of supervising private contractors so that performance standards are effectively applied.

(2) Training

The training effort will focus primarily on in-country, on the job instruction of C&W supervisory staff and private sector personnel involved in maintenance. Training amounting to approximately 53 person months will be provided. In addition, specially tailored courses will be given at regional institutions, such as the Asian Institute of Technology in Bangkok, mainly in the fields of maintenance planning and management for a total of approximately 23 person months of short-term third country training.

(3) Commodities

Project funds have been designated for the procurement of comparatively light pieces of equipment for emergency use by C&W in the road maintenance program, to complement the privatization of major, routine road maintenance

functions. The equipment will be placed in the C&W inventory and will be initially used to train personnel of C&W and private sector firms interested in road maintenance. The amount of equipment to be procured is sufficient for the maintenance of the BAT road, but falls short at the overall requirement for C&W. As the privatization initiative takes hold, the equipment will be transferred to road maintenance programs in other circles. The equipment list is shown in Section IV.D., "Procurement Plan."

b. Private Sector Implementation of Maintenance Activities

The project will depart from the traditional approach employed for routine road maintenance programs by introducing the involvement of private sector firms. Such procedures are already being used by the National Highway Board (NHB) in its maintenance program for the national highway system. Under the NHB effort, private contractors have been identified to maintain certain sections of the national highways. Work under that program has been going on for the past two years with mixed results. The NHB has recognized that there will be a learning period where both NHB and contractors become familiar with what is expected and how to best accomplish the assigned tasks.

Another example of contract maintenance is employed by C&W itself, though the contracts let are usually for periodic and emergency maintenance activities requiring a higher level of expertise than C&W has available. Prime examples of such contract maintenance functions performed are pavement overlays or resealing, bridge and culvert repairs, and maintenance of deteriorating retaining walls. In a third example, the USAID/GOP Road Resources Management (RRM) Project will introduce contract maintenance for the established routine maintenance program in Sindh Province. This effort is in the early stages of implementation and the lessons learned under that project will be incorporated into the effort under this project.

Learning from these three private sector maintenance initiatives, the project will change the traditional approach toward road maintenance employed by C&W from one that relies on force account operations to an approach that increasingly delegates maintenance responsibilities to private contractors. To begin the process, project development funds are being provided to engage the U.S. Federal Highway Administration (FHWA) to review the C&W organizational structure with regard to road maintenance (the complete scope of work for this effort is contained in Annex O). This effort will focus on defining the extent to which privatization of the routine maintenance functions can be undertaken in the project. Because of the nature of the tasks to be performed for the two categories of roads in the C&W inventory, paved and gravel, private sector involvement will be limited initially to the paved road system. Though this represents only about 15% of the total length of roads in the C&W network, the level of investment in paved roads is significantly higher and deserves a higher level of immediate attention.

The generalized methodology to be followed will be similar to that employed for the contract efforts by C&W for periodic (as opposed to routine, on-going) maintenance, with some slight modifications. The definition of what work is to

be performed will come from the performance standards to be developed for routine maintenance and the cost to complete the performance standards will be derived from the estimated resource requirements in terms of material, equipment and labor needed to do the work. The project funded consultants will work with C&W to prepare unit rates for each performance standard. The C&W staff, with assistance from the consultants, will take information on the status of each road from the condition surveys and quantify the minimum level of work that is necessary to satisfy the performance standard requirements. With the quantum of work established and the unit costs estimated for each performance standard, an engineer's estimate can be prepared for the annual routine maintenance work to be performed for a particular road. In consideration of the fact that virtually none of the contractors to be engaged during the first few contracting cycles will have had routine maintenance experience, orientation training will be offered to interested private firms to ensure uniform quality of work. A comprehensive description of the types and extent of the training to be given is contained in the Training Plan (see section IV.D.). In addition, the C&W field staff will continue to be responsible for monitoring the work to ensure proper quality control.

To work toward a system with complete involvement of the private sector in at least routine maintenance for the paved road system, the project will put in place all of the necessary preliminary data gathering and training programs to launch the program for the Bela-Awaran-Turbat road upon its completion. The project consultants will coordinate with groups working with the NHB and the USAID consultants for the RRM project to learn from the experiences of these two activities. Though it is too early to predict how fast this new approach can be put into place, an effort will be made to institute this process for other paved roads in either Makran or Kalat divisions. Potential candidates include the recently completed AID-financed approach roads for the Kech River bridge outside Turbat town. The total length of these approach roads is approximately 4.2 Kms with extensive stone pitching that will need constant attention. A second possibility is the 5 km. stretch of road leading out of Bela going toward the zero point of the BAT road.

c. Road Maintenance Financing

The project will develop systems and mechanisms to plan and implement a comprehensive road maintenance program for paved roads. As indicated in Section II.C., "The Problem", even with adequate systems, trained personnel and private sector firms willing to take on road maintenance responsibilities, the effort will fall short of its objectives if sufficient financing for the program is not provided. To address this concern, the project will institute a toll road system for the BAT road to demonstrate to the GOB that a toll road can generate significant resources to at least cover the recurrent costs of a road maintenance program. C&W has been delegated the authority to levy tolls on roads and bridges under its jurisdiction. Toll collection rights will be auctioned off to private bidders. Toll booth locations and toll rates will be predetermined. A USAID-commissioned survey has shown that transport owners are willing to pay a toll for an upgraded well maintained road, since they will realize significant savings from the improved road.

The question of how much can be expected to be generated from tolls has been examined. The anticipated rates are based on the savings the transport owners will realize from reduced crew commissions as determined by the survey of transport owners that now use the BAT road (see Annex K). A sensitivity analysis, employing a consulting firm's traffic volume projections, determined how much in tolls must be collected to cover the anticipated maintenance costs for the life of the road and compared this with the savings in crew commissions. The results prove that sufficient savings occur to permit the GOB to set toll rates to cover a major portion of the routine maintenance costs. Project-funded experts will assist in finalizing the toll rates for the BAT road and designing the mechanism to engage the private sector in toll collection.

Discussions with the GOB have been encouraging, reflecting government recognition that demands on funds at the disposal of the GOB are greater than funds available and, consequently, alternative resource generation schemes must be employed to meet demand. The GOB has included a discussion of instituting a toll road approach to financing road maintenance in their Project Paper equivalent, the PC-1 document.

D. Cost Estimates and Financial Plan

The total cost of the Balochistan Road Project is $90.0 million of ESF. Table I presents a summary of costs and Table II, summary of cost estimates and a financial plan. This is followed by Table III which presents a detailed project budget. Table IV describes projected expenditures for each fiscal year over the life of the project.

The basic assumptions made in preparing the budget include a compounded 10 percent annual inflation rate for goods and services procured in the United States and a 5 percent compounded per annum inflation rate for dollar financed local currency costs. In calculating this rate, we assumed an inflation rate of 10 percent and an annual devaluation of the rupee of 5 percent, which leaves a net 5 percent inflation rate. In addition, a 7.3 percent contingency factor was selected to cover unexpected changes in the estimated level of services over the life of the project implementation. An exchange rate of one U.S. dollar equals Pakistan Rupees 21.60 was used in budget calculations.

Procurement of goods and services requiring local currency will be handled by both USAID and the implementing contractors. However, USAID will maintain administrative control over funds for technical assistance/contractor costs and training in the third country and traveling in the third country as well as in-country.

Listed below are the major project elements and cost estimates for each item, less inflation and contingency factors:

1. Technical Assistance

The Project will fund the services of two separate contractors, to be selected under AID-direct full and open competition procedures. The first firm, which will provide 80 person months of long-term technical assistance and 16 person months of short-term technical assistance of expatriates and 2,738 person

months Pakistani staff, will be responsible for the construction supervision of a 276 km. of BAT road. The second firm will provide 54 person months of long-term technical assistance and 4 person months of short-term technical assistance of expatriate plus 264 person months Pakistani staff and will be responsible for the Road Maintenance component of the project.

The total estimated cost for technical assistance is $6,000,000, $5,567,450 for long-term technical assistance and $432,550 for short-term technical assistance. The total contract costs will be funded by AID. These contracts will be AID-direct contracts with direct payment and under U.S.G. audit cognizance. In the event the U.S.G. does not audit, funds can be made available from the contingency for non-federal audit.

2. Training

Out of a total budget of $200,000 for training, $133,000 have been allocated to finance short-term courses for 28 participants in the third country on the subjects of Road Maintenance Planning and Road Maintenance Management. Dollars 67,000 will be spent on in-country short training courses in the fields of (1) Road Construction, and (2) Road Maintenance over the life of the Project. Training will be implemented either directly by the USAID or via the AED AID-direct contract.

3. Commodities

Approximately $1,378,000 in commodities will be financed by AID. This amount includes $735,000 to procure 12 pickup trucks, 16 vibro rollers, 16 plate compactor and 6 flatched trucks from offshore and $643,000 to purchase various items of road maintenance equipment from local markets. All commodities will be procured and paid for directly by A.I.D.'s Commodity Management Office and included within the USAID arrival accounting system.

4. Construction

Dollars 62,127,000 have been budgeted to construct 376 km. Bela-Awaran-Turbat road. This 376 km. of road has been divided into three segments: (1) 35 km. Bela-Awaran road, will cost an estimated $5,212,000; (2) 101 km. Bela-Awaran road will cost an estimated $15,202,000; and (3) 240 km. Awaran-Turbat road will cost approximately $41,713,000. AID-direct contracting will be used along with AID-direct payment. Non-federal audit coverage is planned.

5. Other Costs

Dollars 885,000 have been set aside to finance other costs. These include, $112,136 for an interim evaluation to be conducted in FY 1994 and $112,138 for the final evaluation in FY 1996. These evaluations will be AID-direct contracts and support will be provided by USAID.

Two Non-Federal Audits have also been planned: one in FY 1993 at an estimated cost of $55,000 and the second in FY 1995 at a cost of $65,000. Six different types of roads studies will be conducted for a total estimated cost of $540,725 during the life of the project.

This Cost Estimate and Financial Plan reflect sufficient detail for project planning and current cost estimates. USAID has determined that the project concept is feasible and the project cost estimates are reasonably firm for the project elements. Thus the requirement of FAA, Section 611(a) has been satisfied.

TABLE I

SUMMARY OF LIFE OF PROJECT COSTS
BY PROJECT ELEMENTS
($ 000)

Project Line Items	Life of Project
1. Technical Assistance	6,000
2. Training	200
3. Commodities	1,378
4. Construction	62,127
5. Other Costs	885
Sub-Total:	70,590
Inflation	13,276
6. Contingency (7% plus)	6,134
GRAND TOTAL	90,000

TABLE II

SUMMARY OF COST ESTIMATES AND FINANCIAL PLAN

($ 000)

Expense Categories	FY 1991		FY 1992		FY 1993		FY 1994		FY 1995		FY 1996		TOTAL		TOTAL
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX+LC
1. Technical Assistance	419	470	500	593	870	724	942	744	325	240	99	66	3,163	2,837	6,000
2. Training	0	5	16	11	36	24	33	24	15	20	0	16	100	100	200
3. Commodities	0	0	0	0	0	0	0	0	735	643	0	0	735	643	1,378
4. Construction	5,501	8,990	7,500	13,349	5,570	10,820	2,750	5,840	550	1,257	0	0	21,871	40,256	62,127
5. Other Costs	0	0	0	150	55	180	94	79	65	150	94	18	308	577	885
Sub-Total:	5,920	9,465	8,024	14,103	6,331	11,748	3,819	6,687	1,690	2,310	193	100	26,177	44,413	70,590
Inflation	592	473	1,685	1,446	2,162	1,852	1,772	1,441	1,032	638	149	34	7,392	5,884	13,276
Total Including Inflation	6,512	9,938	9,709	15,549	8,693	13,600	5,591	8,128	2,722	2,948	342	134	33,569	50,297	83,866
6. Contingency (7% plus)	475	725	709	1,147	635	993	408	593	199	215	25	10	2,451	3,684	6,134
GRAND TOTAL	6,987	10,664	10,418	16,696	9,327	14,593	6,000	8,721	2,920	3,163	367	144	36,019	53,981	90,000

TABLE III

SUMMARY OF COST ESTIMATES BY COMPONENTS

($ 000)

Expense Categories	FY 1991		FY 1992		FY 1993		FY 1994		FY 1995		FY 1996		TOTAL		TOTAL
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX+LC
1. Road Construction															
a. Technical Assistance	419	470	509	593	595	685	509	590	95	84	0	0	2,127	2,342	4,469
b. Construction	5,500	8,990	7,500	13,350	5,570	10,820	2,750	5,840	550	1,257	0	0	21,870	40,257	62,127
Sub-Total:	5,919	9,460	8,009	13,943	6,165	11,425	3,259	6,430	645	1,341	0	0	23,997	42,599	66,596
2. Road Maintenance															
a. Technical Assistance	0	0	0	0	275	119	433	153	230	156	99	66	1,037	494	1,531
b. Training	0	5	16	11	36	24	33	24	15	21	0	16	100	101	201
c. Commodities	0	0	0	0	0	0	0	0	735	643	0	0	735	643	1,378
d. Other Costs	0	0	0	150	55	180	94	78	65	150	94	18	308	576	884
Sub-Total:	0	5	16	161	366	323	560	255	1,045	970	193	100	2,180	1,814	3,994
Total: 1 + 2	5,919	9,465	8,025	14,104	6,531	11,748	3,819	6,685	1,690	2,311	193	100	26,177	44,413	70,590
Inflation	592	473	1,685	1,446	2,162	1,852	1,772	1,441	1,032	638	149	34	7,392	5,884	13,276
Total Including Inflation	6,511	9,938	9,710	15,550	8,693	13,600	5,591	8,126	2,722	2,949	342	134	33,569	50,297	83,866
6. Contingency (Plus 7%)	475	725	709	1,147	635	993	408	593	199	215	25	10	2,451	3,684	6,134
GRAND TOTAL	6,986	10,664	10,419	16,697	9,327	14,593	6,000	8,719	2,920	3,165	367	144	36,020	53,980	90,000

TABLE IV

EXPENDITURE PROJECTIONS BY EXPENSE CATEGORY AND FISCAL YEARS

(0 000)

Expense Categories	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	TOTAL
1. TECHNICAL ASSISTANCE							
A. Long Term	799	1,012	1,503	1,561	529	165	5,569
B. Short Term	90	90	90	125	36	0	431
Sub-Total: TA	889	1,102	1,593	1,686	565	165	6,000
2. TRAINING							
A. Third Country ST	0	21	48	43	21	0	133
B. In-Country	5	6	12	13	15	16	67
Sub-Total: Training	5	27	60	56	36	16	200
3. COMMODITIES							
A. Vehicles	0	0	0	0	198	0	198
B. Maintenance Equip.	0	0	0	0	1,180	0	1,180
Sub-Total: Commodities	0	0	0	0	1,378	0	1,378
4. CONSTRUCTION							
A. 33 KM Bela-Anaran	1,378	1,849	1,319	578	88	0	5,212
B. 101 KM Bela-Anaran	2,127	4,237	4,528	3,336	974	0	15,202
C. 240 KM Anaran-Turbat	10,985	14,764	10,543	4,676	745	0	41,713
Sub-Total: Construction	14,490	20,850	16,390	8,590	1,807	0	62,127
5. OTHER COSTS							
A. Studies	0	151	180	60	150	0	541
B. Evaluation	0	0	0	112	0	112	224
C. Audit	0	0	55	0	65	0	120
Sub-Total: Other Costs	0	151	235	172	215	112	885
Total: 1 - 5	15,384	22,130	18,278	10,504	4,001	293	70,590
Inflation	1,065	3,131	4,014	3,213	1,670	183	13,276
Contingency	1,200	1,856	1,628	1,001	414	35	6,134
GRAND TOTAL	17,649	27,117	23,920	14,718	6,085	511	90,000

V. IMPLEMENTATION PLAN

A. Implementation Schedule

Commence Action	Action	Responsible Party	Complete Action
March 1989	Final construction plans, specifications, cost estimates for road	Contractor	March 1990
April 1990	PIO/T for A/E for construction supervision and design review	USAID	May 1990
May 1990	PC-1 approved by PDWP	GOB	May 1990
May 1990	PIO/T for A/E services for construction supervision and design review issued	USAID	July 1990
June 1990	Environmental Assessment	IQC	Oct. 1990
June 1990	CBD notice for expression of interest for construction contract	USAID	June 1990
June 1990	PP reviewed	USAID	June 1990
June 1990	Anticipatory approval of PC-1	GOP	July 1990
July 1990	PASA with FHWA for administrative analysis of C&W, GOB	USAID	Sept. 1990
July 1990	Project authorized	USAID	July 1990
July 1990	Grant Agreement signed	USAID/GOP	July 1990
Augest 1990	CBD solicitation notice or request for proposals for A/E services for construction supervision and design review	USAID	Sept.1990
Sept. 1990	PC-1 approved by CDWP	GOB/GOP	Sept. 1990
Sept. 1990	ECNEC approval of PC-1	GOP	Sept. 1990
Oct. 1990	A/E services proposals for construction supervision and design review received	Contractors	Nov. 1990
Nov. 1990	A/E services proposals evaluated	USAID/GOB	Nov. 1990
Dec. 1990	Negotiations and award of A/E contract	USAID	Dec. 1990

Jan. 1991	Design review	Contractor	Mar. 1991
Mar. 1991	PIO/T for construction services	USAID	Mar. 1991
Mar. 1991	CBD notice for construction services published	USAID	Apr. 1991
Apr. 1991	Distribution of RFP/IFB documents	USAID	Apr. 1991
June 1991	Construction proposals/bids received	Contractors	June 1991
July 1991	Construction proposals/bids evaluated	USAID/GOB	July 1991
Augest 1991	Negotiation and award of construction contract	USAID	Aug. 1991
Sept. 1991	Notice to proceed to construction contractor	USAID	Sept. 1991
Sept. 1991	A/E construction supervision	A/E	Sept. 1991
Oct. 1991	Mobilization of construction contractor	Contractor	Apr. 1992
Dec. 1991	Construction of road	Contractor	Aug. 1995
Jan. 1992	First batch of participants receive short-term training in road construction	USAID/Part/ A/E Firm	March 1992
April 1992	Second batch of participants receive short-term training in road construction	USAID/Part/ A/E Firm	May 1991
Oct. 1992	PIO/T for Long-Term Technical Assistance Team (LTTA) issued	USAID	Oct. 1992
Oct. 1992	CBD notice LTTA published	USAID	Oct. 1992
Nov. 1992	Proposals received	Contractors	Nov. 1992
Dec. 1992	Proposals evaluated	USAID	Dec. 1992
Jan. 1993	Contract signed with LTTA	USAID/LTTA	Jan. 1993
Jan. 1993	Third batch of participants receive short-term training in road construction	USAID/Part/ A/E firm	Oct. 1993
Feb. 1993	LTTA mobilized	LTTA	Feb. 1993

March 1993	LTTA starts working with GOB	LTTA	June 1995
March 1993	Short-term training plan for Maintenance Management System (MMS) developed	LTTA	April 1993
April 1993	Fourth batch of participants receive short-term training in road construction	USAID/Part/ A/E firm	May 1993
June 1993	First batch of participants receive training in MMS	USAID/Part LTTA	July 1993
Sep. 1993	Second batch of participants receive training in MMS	USAID/Part LTTA	Oct. 1993
Jan. 1994	Third batch of participants receive training in MMS	USAID/Part LTTA	Feb. 1994
Jan. 1994	Fourth batch of participants receive training in road construction	USAID/Part/ A/E firm	Feb. 1994
April 1994	Fifth batch of participants receive training in road construction	USAID/Part A/E firm	May 1994
April 1994	Develop and clear PIO/C for road maintenance equipment	USAID	May 1994
May 1994	Mid-term evaluation	IQC/USAID	May 1994
May 1994	Prepare procurement documents for road maintenance equipment	IQC/USAID	June 1994
July 1994	Procurement announced in CBD and Bids received	USAID	August 1994
Sept. 1994	Offers evaluated and contracts awarded	USAID	Oct. 1994
Jan. 1995	Equipment delivered	Supplies	May 1995
July 1995	Final field inspection	USAID	July 1995
July 1995	Road maintenance	Contractor	July 1996
July 1996	Close out of contracts	USAID/Cont.	
July 1996	Project completion report	Contractor	July 1996
Aug. 1996	Final evaluation	IQC/USAID	Aug. 1996
Dec. 31, 1996		PACD	

B. Administrative and Monitoring Arrangements

1. AID Responsibilities

The Project Officer, situated in the Office of Engineering, USAID Islamabad, will have overall responsibility for project monitoring and implementation. He will be assisted by a Project Engineer (Construction), situated in the Office of Engineering in USAID Karachi. The Project Engineer will have technical monitoring responsibility for road construction. He will monitor and inspect the road construction and construction supervision activities of the A&E firm, and administratively approve the contractors' invoices. He will also assist the Project Officer with the technical and documentation requirements associated with managing direct AID contracts. Additional technical support will be provided to the Project Engineer from the expertise available in the Infrastructure Division, Office of Engineering. The Project Officer will directly monitor the activities of the technical assistance team selected for the road maintenance development program. He will coordinate with the GOB officials to review and approve road maintenance management schemes, training programs and procurement plans for road maintenance equipment.

Another key contributor will be the BALAD Project Officer. This person, located in Quetta, will be responsible for interfacing regularly with GOB officials at the Additional Chief Secretary, Planning and Development, and Secretary of Finance levels. As the spearhead of the Balochistan development effort, the BALAD Project Officer will maintain a pivotal liaison role between the BRP Project Officer and the planning elements in the GOB.

The Office of Project Development and Monitoring and the Office of Contracting and Commodities will assist the Project Officer in all contracting and procurement transactions under this project.

2. Host Country Responsibilities

The Project Agreement for the Balochistan Road Project will be executed by USAID and the Economic Affairs Division, Government of Pakistan. The technical implementing entity will be the Government of Balochistan C&W Department.

As road construction will be an AID direct contract, the role of C&W will focus on progress reviews and approval of project implementation documents. For the road maintenance program, training programs and road maintenance equipment procurement, the Secretary (C&W) and the Chief Engineer (Design) will work closely with project funded consultants in the process of establishing the maintenance management and toll road systems, and the USAID in procuring the required equipment.

The GOB will contract private firms to undertake various aspects of the maintenance program, including toll collection, road condition surveying and actual maintenance implementation along given road sections.

A provincial level steering committee for the project will also be established by the Government of Balochistan with the Additional Chief Secretary, Planning and Development, as Chairman, and Secretary C&W, Chief Engineer (Design), Chief Engineer, Khuzdar, and Secretary, Finance, as its members. USAID will be represented by the Chief, Office of Engineering, the Chief Engineering Advisor, BRP Project Officer, BALAD Project Officer, and representatives from the Office of Project Development and Monitoring. The committee will meet quarterly or as necessary. The USAID Project Officer will prepare quarterly reports on progress to be reviewed by the Steering Committee. The committee will also review the recommendations of the road maintenance contractor and facilitate the implementation of privatization of maintenance and of toll road operations.

C. Construction Plan Bela-Awaran-Turbat Road

1. Construction of Engineer's Camp

Commence Action	Action	Responsible Party	Complete Action
Oct. 1990	Construction of Engineer's Camp	Contractor	March 1991

2. Road and Drainage Construction

Commence Action	Action	Responsible Party	Complete Action
May 1991	Mobilization	Contractor	Nov. 1991
May 1991	Establishment of temporary camps for staff and labor	Contractor	Sept. 1991
June 1991	Setting out for road construction	Contractor	Oct. 1991
Sept. 1991	Subgrade preparation for road construction	Contractor	Jan. 1994
Oct. 1991	Culverts construction	Contractor	Mar. 1995
Nov. 1991	Sub-base preparation for road construction	Contractor	July 1994
Dec. 1991	Base-course preparation for road construction	Contractor	July 1994
Feb. 1992	Bridge construction	Contractor	Mar. 1995
Aug. 1994	Prime coat for road construction	Contractor	July 1995
Mar. 1995	Double surface treatment for road construction	Contractor	Aug. 1995
July 1995	Clearing and winding up operation	Contractor	Nov. 1995
Aug. 1995	Maintenance period	Contractor	Aug. 1996

D. Acquisition Plan

1. Technical Assistance

a. Design Review and Construction Supervision

Technical assistance will primarily be provided by a firm to be selected under AID direct full and open competition procedures. An A/E firm, possibly a consortium of U.S. and Pakistani firms, will be selected for the review of the road design and the bid documents for construction of the road. (The design and bid documents have been prepared by another joint venture of U.S. and Pakistani A/E firms.) The selected A/E firm will also be responsible for the construction supervision of the works.

b. Road Maintenance

A second contractor will be selected for the road maintenance program by us AID using full and open competition procedures. The selected contractor will have extensive experience in the development and monitoring of road maintenance management systems. The contractor's team will review existing maintenance management practices and will recommend improvement in the system to prolong the sustainability of the existing road network. It may recommend modifications in the C&W organizational structure and position descriptions. It will assist in the development of road maintenance performance standards. It will also develop training programs for the C&W staff to improve their skills in budgeting, planning and programming road maintenance activities, as well as for private sector maintenance contractors. Building upon the FHWA pre-project work, the team will undertake a study of options for the privatization of maintenance activities and will develop procedures to be adopted in contracting for maintenance services. The team will design and assist C&W with the implementation of a practicable toll system to mobilize resources for maintenance.

2. Road Construction Services

The procurement for construction services will be under one contract for the entire 376 Km BAT road. The road construction contractor will be competitively selected by USAID under full and open competition procedures. It is contemplated the contractor will be a U.S. firm as the prime with Pakistani subcontractors, or a US/Pakistani joint venture. Selection criteria will be established to determine the capabilities of the firms participating in the procurement process.

3. Commodities

To support the development of a comprehensive maintenance program, the project will fund commodities in addition to training and technical assistance. The projected budget cost of commodities, including adjustments for inflation and contingencies, totals $2,151,000 thereby absorbing only a modest part of the project budget. The procurement of the commodities is planned for the 4th year of the project so that they will arrive at the end of the road construction period. The purpose of the commodity procurement is to provide the Government of Balochistan's technical implementing agency, the Communication and Works

Department, the wherewithal to augment small local contractors' equipment pools and to perform minor road maintenance tasks. Equipment for road maintenance will be procured directly by USAID/Pakistan in accordance with A.I.D. procurement policies and procedures.

Funds provided under the project will be used to procure pickup trucks, road maintenance vehicles and equipment. These commodities are shown in Annex Q. Much of the equipment to be procured is available locally and within the capacity of local suppliers to service and repair.

With the exception of the project vehicles, it is anticipated that all of the commodities will have their source and origin in the United States or Pakistan. It is also anticipated that the current blanket source and origin waiver for Mission procurement of right-hand drive vehicles (State 083178) will be renewed annually and be in existence during the proposed procurement period.

The major provincial counterpart agency related to the project implementation is the GOB C&W Department. The capacity and experience of this Department to manage construction works as big as the BAT road is not adequate. The premature failure of the first 35 km. paved BAR and the 22 km. paved road between Turbat and Hoshab is an example of the inability of C&W to manage construction works. The experience of the C&W Department to invite bids, evaluate technical proposals, negotiate and manage contracts in accordance with recognized practice is also limited. The USAID Mission in Islamabad has the necessary expertise and experience to complete the procurement.

TABLE V

Proposed Commodity Procurement

Item No.	Nature of Commodity	Quantity	Probable Source	Waiver Requirement	Source Origin	Procurement Responsibility	Proposed Method of Procurement	Advertise
	VEHICLES							
1.	2.5 Ton Pickup Trucks	6	Japan	Blanket Source & Origin to GEO Code 935	935	A.I.D.	RFP	CBD/AID Bullitin
2.	1.5 Ton Pickup Trucks	6	Japan		935	A.I.D.	RFP	CBD/AID Bullitin
3.	1 Ton Vibro Rollers	16	U.S.A		000/391	A.I.D.	RFP	CBD/AID Bullitin
4.	Plate Compactor	16	U.S.A		000/391	A.I.D.	RFP	CBD/AID Bullitin
5.	Flatbed Trucks	6	GEO Code 935	Source & Origin	935	A.I.D.	RFP	CBD/AID Bullitin
6.	Water Trailer, 1000 Gal.	16	Local		000/391	A.I.D.	RFP	CBD/AID Bullitin
7.	Industrial Tractor	16	Local		000/391	A.I.D.	RFP	CBD/AID Bullitin
8.	Bucket for Tractor	6	Local		000/391	A.I.D.	RFP	CBD/AID Bullitin
9.	Blade for Tractor	8	Local		000/391	A.I.D.	RFP	CBD/AID Bullitin
10.	Trolly	16	Local		000/391	A.I.D.	RFP	CBD/AID Bullitin
11.	Asphalt Sprayer, 100 Gal.	16	Local		000/391	A.I.D.	RFP	CBD/AID Bullitin
12.	Asphalt Mixing Plant	16	Local		000/391	A.I.D.	RFP	CBD/AID Bullitin
13.	Concrete Mixer, 1/3 Cy	6	Local		000/391	A.I.D.	RFP Small Value	Not required
14.	Hand Tool Sets	6	Local		000/391	A.I.D.	RFP Small Value	Not required

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E. Training Plan

The training effort under the project will primarily be directed toward entities and individuals involved in the road maintenance program, C&W officials as well as private sector maintenance contractors. C&W supervisory staff will receive primarily in-country, on-the-job training, supplemented by specially tailored short-term courses at regional institutions, such as the Asian Institute of Technology in Bangkok, focusing on maintenance planning and management. The private sector participants will be given in-country seminars offering orientation to the maintenance management system. In addition, the C&W staff associated with road construction and rehabilitation will be exposed to modern construction management methods through on-the-job training at the Bela-Awaran-Turbat construction site.

The specific training needs of C&W staff and private sector contractors to be associated with the maintenance program will be identified in the early stages of the technical assistance effort. As the road maintenance program will follow the course of action developed for the district councils under the RRM project, the training program will be patterned after the plan established for the RRM project. In those instances where there is overlap, the C&W staff will be put through the RRM training program, space permitting. At a minimum, the modules developed under the RRM project can be used with modifications to fit the requirements of this project.

As part of the scope of work for the technical assistance team, a comprehensive training plan will be prepared to address the requirements of C&W and private sector maintenance contractors. Preliminary identification of training needs has resulted in the training program shown in Table VI. The plan will also contain a proposed methodology for conducting the training and institutionalizing the training effort. The intent will not be to create a "training cell" in C&W to handle the training activities, but, rather, to get C&W to budget a certain amount each year for training and prepare an annual training program for new entrants into their system or refresher courses for incumbent staff. In addition, private sector firms will be encouraged to participate in the training program using their own resources to finance their participants. Project funds will initially be provided to launch the training effort for both private and public sector participants on a limited scale. A continued program will be the responsibility of C&W and private contractors interested in participating in the privatization of the maintenance program.

TABLE VI

TRAINING PROGRAM

COURSE/PROGRAM TITLE	LENGTH OF TRAINING (DAYS)	TRAINEES POSITIONS	TRAINING LOCATION & TYPE OF INSTITUTION	DESCRIPTION OF COURSES
In-Country				
Road Maintenance	5 5	CEs, XENs, SDOs, Sub Es + Private Firms	Various sites	Concepts and principles of road maintenance including types, costs, material and equipment estimating and scheduling maintenance tasks.
Road Engineering	3 3	XENs, SDOs & Sub Es	Various sites	Land survey, layout and inspection of rural roads using basic traffic principles. Also includes drainage structures, retaining walls, berms and shoulders information.
Road Drainage Structure & Protective Works	3	XENs, SDOs & Sub Es	Various sites	Topics include precipitation and drainage needs, soil types, types of drains, calculating sizes, layout and maintenance of drainage systems.
Soil Mechanics	3	XENs, SDOs, Engineers & Sub Es	Various sites	Common soil types, soil testing in field and laboratory, compacting procedures, methods and equipment used, planning/ supervising/testing compacting activities.
Management Workshop	2 2	XENs, SDOs, Sub Es + Private Firms	Various sites	Basic management concepts/principles and how to apply them to increase job performance, e.g., communication skills, organization development, performance evaluation and training.
Contract Administration & Quality Control	2 2	XENs, SDOs, Engineers & Sub Es	Various sites	Concepts/techniques of pre-tender and contract planning. Drawing up, reading and interpreting contract drawings and documents plus awarding and monitoring contracts, site tests.

TABLE VI [Continued]

COURSE/PROGRAM TITLE	LENGTH OF TRAINING (DAYS)	TRAINEES POSITIONS	TRAINING LOCATION & TYPE OF INSTITUTION	DESCRIPTION OF COURSES
Preparation of Estimate Documents	2	XENs, SDOs & SEs	Various sites	Concepts and techniques required for estimating. Includes design data, plans, sections, rate schedules for labor, materials, star rates and analysis, formats and preparation.
Bridges & Culverts	5	XENs, SDOs & Sub Es	Various sites	Covers types/differences of common culverts such as box, pipe, masonry arch and reinforced concrete. Also construction supervision of bridges and culverts by contractors.
Road Maintenance Supervision	3	XENs, SDOs, Engineers, SEs & RMU SEs	Various sites	Principles of road inspection to determine condition and maintenance requirements. Preparation of work plans, how to delegate authority, monitor/evaluate work activities.
Third Country				
Road Maintenance - Planning	28	CE, SE, XEN + SDOs	AIT - Asian Institute of Technology	How to plan/design rural roads, to prepare specifications, estimate costs, select materials, improve soil properties, select equipment, maintain equipment using proper techniques for reporting, monitoring and control.
Road Maintenance - Management	21	CE, SE & XEN	AIT - Asian Institute of Technology	How to apply basic management principles, develop maintenance plans, set up implementation schedules, how to develop reporting, monitoring and evaluating systems and developing techniques for efficient use and maintenance of equipment.

CE - Chief Engineer
SE - Superintening Engineer
XEN - Executive Engineer
SDO - Sub Division Officer
Sub E - Sub-Engineer

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F. Evaluation Plan

Two major types of evaluations are planned for the Balochistan Road Project: semi-annual internal reviews and external evaluations. They are described below in terms of the critical issues to be addressed, general types of data required and method of collection, specific criteria to assess progress on private sector initiatives, and the manner in which the evaluations will be implemented. Detailed scopes of work will be developed prior to the actual evaluations. The mid-term evaluation is planned for May 1994, after one year of technical assistance for the road maintenance effort, ε l the final evaluation for August 1996.

1. Semi-Annual Project Implementation Reviews

The monitoring effort for purpose level tracking described in Annex N will provide current progress and performance data with respect to key management and impact indicators and information on the use of project resources. This information will be fed into the semi-annual Project Implementation Reviews. These reviews will be conducted by USAID, in cooperation with the implementing contractor and appropriate GOB representatives. These internal reviews will be coordinated by the Office of Project Development and Monitoring, with assistance from the Project Officer, with the intent to ensure that the implementation of the project is proceeding toward the desired purpose according to plan. The project reviews will examine project progress towards the achievement of purpose level indicators and outputs; and the performance of the implementing contractors and the GOB (C&W) Department in meeting project commitments and requirements. Appropriate actions to resolve any identified problems will be agreed upon at the reviews.

2. External Evaluations

A mid-term external evaluation will examine the project's implementation as it relates to the goal, purpose, outputs and impact on beneficiaries. Mid-term evaluation concerns will include timing, level and quality of major inputs, including technical services, commodities and construction. Immediate and readily measurable outputs will be documented and assessed. This will permit USAID and the GOB to review the actual versus planned progress towards project objectives. Socio-economic impact on the project area, in terms of increased private sector business activity related to construction activities will be examined in this evaluation.

Specifically, this evaluation will measure: (a) efforts on establishing tolls for the BAT Road; (b) drafting and approval by GOB of legislation announcing the tolls; (c) methodology to be used to collect tolls; and, (d) privatization of routine maintenance activities on the approach roads for the Kech River bridge and possibly the 5 Km paved section of the BAT road beginning at Bela.

A final evaluation of the project will summarize the final level of inputs and outputs provided throughout the activity, end-of-project status regarding achievement of objectives, an estimate of the sustainability of development accomplishments (such as movement by C&W to initiate tolls on other major

roads, privatization of road maintenance of the provincial paved road network and modification in the C&W organization to better plan and implement a comprehensive maintenance effort), socio-economic changes in the project area and lessons learned from this particular project as guidance for future similar development activities.

3. Data Collection

It is anticipated that the data collected for the various evaluations will be detailed, comprehensive and allow for comparative analyses. The purpose level monitoring effort will provide information which is based on key variables or indicators that facilitate implementation tracking. This information system includes administrative records and rapid low cost studies. This data will easily feed into semi-annual project reviews as well as providing a chronology for use in external evaluations.

Baseline data for Makran have already been collected under the BALAD Project. This will facilitate comparisons on socio-economic transformations in the project area.

4. Evaluation Implementation

A cooperative approach to evaluations between USAID and the GOB will be employed. This is based on the premise that agreement on direction, progress and possible needs for change is important for all parties to ensure effective implementation.

The two major GOB organizational units that will be represented in the evaluations include the C&W Department and the GOB Planning and Development Department.

VI. SUMMARY PROJECT ANALYSES

Complete technical, administrative, social soundness, economic/financial and energy analyses are contained in Annexes I-M; the following are abstracts.

A. Technical Analysis

1. Road Construction

The project will construct the 376 km. long Bela-Awaran-Turbat (BAT) road which will provide access for Makran Division to Karachi. The overall road consists of two distinct sections: (1) a 136 km. Bela-Awaran Road (BAR) starting at Bela and (2) the 240 km. Awaran-Turbat Road (ATR).

The first 35 kms. of the 136 km. BAR is an existing 4 meter wide road with a Double Bituminous Surface Treatment (DBST) pavement constructed in 1984 by the Government of Balochistan (GOB), Communications and Works (C&W) Department. Because of the existing deteriorated condition of the road, it will be dismantled and new construction provided. The project will fund improvements to upgrade this section. A 6.6 meter paved roadway with 1.5 meter shoulders and a DBST pavement will be constructed and the existing

drainage structures improved. USAID began work on the 101 km. middle section of the road under the first BALAD project, but encountered construction delays. Due to inability of the local construction contractor to complete the project on time, part of the contract was initially terminated for the convenience of the U.S. Government and eventually USAID opted for a no-cost termination settlement agreement with the construction firm for the reduced contract. The remaining work for this 101 km. segment will be combined with the tender package to be advertised for the other section of the road.

The existing 240 km. section from Awaran to Turbat is a 4 meter wide gravel track. Near the town of Turbat, a 22 km. portion of the track has been paved by C&W, Makran Division. Since the 22 km. paved section has deteriorated, the pavement will be dismantled and a new pavement structure will be constructed. The existing box culverts will also be dismantled to permit the construction of new culverts. On the existing 4 meter gravel track, construction of a 6.6 meter paved DBST roadway with 1.5 meter hard shoulders is planned.

A joint venture of an American A/E firm and a Pakistani A/E firm has designed the 376 km. BAT road. The roadway geometrics have been designed in accordance with AASHTO standards for rural roads permitting a traveling speed of 55, 65 and 80 km/hr depending on the terrain, with a maximum 8% grade.

The roadway structure standards are based on the AASHTO design guide (1986) for ten years' life; this was the most technically sound design method compared with other alternatives.

2. Road Maintenance

The road maintenance effort is traditionally performed by the C&W Department primarily through force account. The more complicated and costly periodic activities are normally contracted out on a competitive bid basis using local contractors. The organizational structure of C&W provides for the same management, planning and monitoring group to perform not only road maintenance, but also road rehabilitation and construction functions.

The road network is basically defined in terms of gross kilometers of roads in the two primary categories of (1) paved and (2) earth or gravel roads. C&W has established yardsticks for the financial requirements for each type of road on a per kilometer basis, irrespective of the road condition.

Under the Balochistan Road Project, the implementation of the road maintenance program will deviate from the traditional approach of C&W to carry out the maintenance tasks with inhouse staff. The project will shift the responsibility for implementation of the road maintenance program from the C&W direct staff to the private sector with C&W continuing to ensure quality control and managing the road maintenance program. Privatization of road maintenance will follow established practices utilized by C&W in contracting for road rehabilitation or upgrading work.

3. Toll Financing of Road Maintenance

The financial demands the improved BAT road will place on GOB resources available for road maintenance have spurred USAID to look at other means of generating funding for maintenance. The current practice is for the recurrent costs to come from the provincial treasury; the traditional approach to budget requests has been to use the yardstick methodology. USAID has reviewed alternatives to generating additional revenues for road maintenance in general and for the BAT road specifically. The approach that is technically the most feasible, considering the present situation in Pakistan, is toll financing, using the private sector to collect and manage the toll process. This was confirmed by a USAID-commissioned study on establishing a toll system for the BAT road. From the information on (1) traffic density and configuration, (2) the cost to maintain the BAT road, and (3) the ability of transporters to pay, toll rates can be established for the road which will be used to determine the floor price for the GOB to auction the rights to collect tolls on the BAT road.

B. Administrative Analysis

1. Operational Structure of the Provincial Communications and Works Department

The C&W Department is the Government of Balochistan body responsible for the development of buildings and roads in Balochistan Province.

The C&W Department is administratively headed by a Secretary subordinate to the Minister, a political figure, and is divided into three sections, the first two corresponding to geographical areas of responsibility, the third to a functional specialty. (A diagramatic sketch showing the organization is given in Annex J). Each section is headed by a Chief Engineer. The two geographic sections are composed of "circles" headed by Superintending Engineers who, in turn, supervise district-level Executive Engineers. The third section is responsible for design.

Funds for provincial roads are generated within the province from taxes. Complementary allocations are provided from the national treasury to cover shortfalls or fund special programs. The funds are authorized by the Balochistan Provincial Assembly and administered through the GOB Ministry of C&W with the concurrence of the GOB Ministry of Planning and Finance.

2. Maintenance Organization of the C&W Department

Road maintenance has long been the poor sister to road rehabilitation and new construction in not only the Balochistan C&W Department, but virtually every line agency charged with responsibility for road maintenance activities. C&W is a hierarchical organization with career opportunities accorded to the qualified graduate engineers who enter the service. In the organization, one's chance of promotion, once a vacancy surfaces, is more a function of longevity of service than capabilities and reward for good performance. The annual confidential reports written for the Executive Engineers and the Sub-Divisional Officers, in

particular, focus on accomplishments related to completing the road rehabilitation and construction program planned for that particular year, with virtually no mention of how close the person came to achieving the road maintenance objectives. Routine maintenance is carried out by direct labor while the detailed periodic functions are awarded to contractors. There is a total C&W workforce of approximately 6,000 for road maintenance activities. Discussions with the various officials revealed that only a small portion are doing the work intended. Administratively, C&W possesses the basic organizational structure to accommodate the road maintenance program proposed under this project. The modifications required are primarily function oriented in nature with minimal additional manpower needed.

C. Economic/Financial Analysis

1. Economic

The BR Project is primarily a road building activity with a complementary effort to protect the investment in the BAT Road in particular, and in other GOB road infrastructure investments in general. As such, the economic analysis compares the economic costs of constructing and maintaining the road with the resulting economic benefits of the BAT road. The parameters used in the analysis focus on the road, both in terms of initial investment and recurrent costs, and the benefits to be derived from an improved road.

The categories of benefits used in the analysis concentrated on typical economic savings one expects as a result of an improvement made to a road. These included: (1) user cost savings, which are the sum of operating and time cost savings for the vehicles and individuals using the improved road; (2) maintenance cost savings; and (3) loss avoided on perishable fruits and vegetables. Thus a conservative approach to benefit estimation was taken since no effort was made to capture the benefits resulting from increases in economic activity in the Makran that are due to the improved road.

Concentrating on these three benefit streams, a benefit-cost ratio and an internal rate of return for the BAT road were calculated. The results of the study are sufficiently favorable for the Mission to move forward with the project. The economic Internal Rate of Return (IRR) and Benefit-Cost (B/C) ratio for the complete road are as follows:

Economic	IRR - 16.38%
	B/C ratio - 1.261

In addition to these analyses, a series of sensitivity tests were performed for the road. Even under the least favourable conditions, the results are satisfactory, yielding EIRRs in the range of 13.5% - 15.7%. For the full details of this work, see Annex K, Financial and Economic Analyses.

2. Financial

The key financial issue confronting the BAT Road Project relates to the ability of likely toll revenues to cover projected road maintenance costs. Assuming that

buses, trucks, and other vehicles are willing to pay tolls ranging between Rs. 20, Rs. 20, Rs. 5, and Rs. 30, Rs. 30, Rs. 10, respectively for the Bela-Awaran road segment and between Rs. 30, Rs. 30, Rs. 10, and Rs. 40, Rs. 40, Rs. 18, for the Awaran-Turbat road segment, then projected net toll revenues are likely to cover about 73%-106% of estimated maintenance costs for the entire road. The actual ability of toll revenues to cover maintenance costs will clearly depend inter alia on the tolls put into effect and the price paid to the GOB by the private sector for the toll collection franchise. Nevertheless, the estimates presented here suggest that realistic tolls will likely yield revenues to the GOB equal to a significant fraction of road maintenance costs. (For more details, see Annex K).

D. Social Soundness Analysis

1. The Socio-Economic Environment

a. Social Organization and Leadership

Although members of all major Baloch tribes are found scattered in Makran, there are no exclusive tribal territories nor tribal social organization. The Makran population is divided into the following social categories: (1) The former ruling and dominant classes or tribes called Hakim. These tribes include Gichki, Nausherwani, Mirwari and Bezanjo. (2) The middle land owning class, referred to as Baloch. There are many Baloch tribes, but the main are Rind, Hot, Kalmati, Rais, Sangur, Rakhshani and Askani. (3) The lower class called Hizmatgar. Hizmatgar literally means the servant class and these consist of Meds along the coats and Nakib/Darzadag, Lori and Golam in Kech/Turbat and Punjgur areas of Makran.

Although significant changes in social organization and leadership have taken place in recent years, the traditional leadership system based on the above classification still plays an important role. The most recent socio-economic changes originating from the availability of job opportunities in and travel to the Middle East and Karachi etc. have also resulted in changes in traditional leadership patterns.

b. Economic Organization

Makran has a total of 5.5 million hectares of land and a 400 kilometer long coast on the Arabian sea. The land and the sea provide livelihood to a majority of the Makran population. The Rakhshan river in Punjgur District and Kech/Nihing rivers in Turbat District are the sources of most irrigated agriculture in Makran. The majority of Makran's population is engaged in crop production, fishing and animal husbandry. Smaller numbers are engaged in trade and a smaller but economically important segment of the Makrani population works mainly in the Arab Gulf countries of the Middle East.

2. Social Feasibility

a. An existing part camel-track, part gravel road has for centuries served as the southern route between Sind/Hind (India) and Iran and the Middle East. In general its socio-political feasibility has never been in doubt.

b. Makran has always been a surplus date and fish producer but a deficit area in almost everything else. To obtain a fast and least cost access to markets where dates and fish could be sold and other necessities of life could be purchased has always been a concern of Makranis. The Awaran/Kolwa area seems to have a comparative advantage in barley production and almost all the produce is exported to Karachi.

c. The benefits of Bela-Awaran-Turbat road will not be confined to the Awaran-Makran region, the entire southern, south central and western regions of Balochistan, which are the least developed in Balochistan, will benefit.

d. Obstruction, if any, to the successful implementation of the project could come from the provincial government of Balochistan but likely not from the people of the area.

e. During the 1960s and 70s the Baloch nationalist movement opposed opening up Balochistan through road construction as this would provide easy access for "enemy" military operations. Insurgents in Jhalawan at times stopped movement on the road. But both the intensity and direction of this movement have changed during the last decade. There is little opposition to road construction at this stage.

f. In the absence of employment opportunities in Makran many local people engage in smuggling of narcotics etc. Direct and indirect employment opportunities will provide alternative sources of income.

g. Large numbers of Makranis working in the Middle East and Karachi would find more attractive investment opportunities in Makran once road is constructed.

h. In Makran, racial, linguistic and religious prejudices are almost non-existent. Punjabi farmers in Punjgur and non-Makrani businessmen throughout Makran have not experienced any prejudices. There is no likelihood of significant resentment against investment from outside.

i. With a good road and the resulting commercialization of the area, there is a possibility of some environmental degradation. As happened in other areas of Balochistan, commercial scale exploitation of such local resources as trees for fuel wood and timber, dwarf palm for ropes, mats and charpoy knits etc., may take place after the construction of the road. Similarly, raising of larger flocks for market, overgrazed pastures and general pressure on scant natural resources of the area may result.

j. There may be a negative impact on the traditional social institutions of cooperation and community solidarity, as exposure to the outside world will bring in more commercial and individualistic attitudes.

k. Both the construction phase and ongoing maintenance activities should provide contract and employment opportunities on an fair and equitable basis amongst the concerned local social, linguistic and religious groups.

l. In the event a toll tax is instituted, the road may be divided in at least two sections; the Bela-Awaran section benefitting Makran as well as Jhalawan populations, and the Awaran-Turbat section mainly benefitting the Makran region. However, it may be more difficult to convince a Jhalawan tribal to pay a toll tax.

3. Social Impact on Beneficiaries

The primary beneficiaries would be the communities living in Jhal Jhao, Awaran and Makran areas. The primary benefits would accrue to the majority of local farmers and animal raisers in the form of direct employment opportunities and improved access to outside markets for local inputs and products. Improved living standards would result from higher incomes and better access to and availability of educational and health facilities. The secondary beneficiaries would be the populations living in the entire southwestern region of Balochistan extending to Kharan and Chagai Districts in the northwest and Kalat and Khuzdar Districts in central Balochistan. The secondary benefits would also mainly accrue in the form of increased employment opportunities, availability of productivity enhancing inputs and improved markets and prices for products. Improved educational and health facilities will benefit the entire region. The multiplier effects would include; higher land values and higher incomes to the businessmen resulting from higher employment, higher consumption and higher demand for goods and services.

While landowners will gain substantially from ready access to inputs and markets, poorer segments of society will also benefit significantly. They will benefit not only because they constitute the overwhelming majority of the local population, but also because they are presently the least capable of affording the now difficult access to health and education facilities, to new technology and inputs and to markets for their products.

E. Women in Development Statement

The project will have a major impact on the local economy by improving access to markets in Karachi and Quetta, thereby stimulating agricultural and fish production. This will benefit men and women equally, in so far as house-hold incomes are anticipated to increase. To the extent to which women participate in fish and date processing, livestock and crop production and other activities such as weaving and sewing, improved access to markets may well have significant direct impact.

Women in Makran occupy a stronger position than women in other parts of Balochistan. Muslim laws of inheritance are followed and women, therefore, receive a portion of their parent's property and are entitled to a share in their husband's property, if he predeceases them. Relatively higher bridal prices are paid for Makrani women who retain full control over what is acquired from their husbands. Women in Makran, therefore, frequently have more economic strength than their sisters in other parts of Pakistan.

It is unknown at this time whether increased household income and increased mobility due to road construction will tend to liberalize attitudes toward women in the project area or will provide further reason to keep women at home and out of the fields and markets.

Construction of the BAT road will increase access of area residents (male and female) to services including markets, health facilities, schools and communications. Balochistan statistics show female literacy at 4% compared to the national female literacy rate of 16%. Malnutrition rates for children under the age of five in Balochistan are 75%, compared to 57% for the entire country, whereas child immunization rates in the province are only 27%, compared to the national average of 80%. Although the health statistics are not disaggregated by gender, it can be safely assumed that female malnutrition and immunization rates are lower than those of males, because of the females' position in the family and their poorer access to health services.

F. Environmental Analysis

An initial Environmental Examination (IEE), provided as Annex H, recommends a positive environmental action. As the project consists of reconstruction of the paved section of the road and upgradation of the remaining gravel track, which will involve some realignment to conform the road to highway design standards, it has been recommended that an Environmental Assessment (EA) be conducted as an integral exercise, which must be completed as soon as possible, but not later than the commitment of funds for the construction activity.

The various environmental parameters to be examined during the EA are listed in the IEE. The IEE recommends that a scoping session be conducted in Turbat, Balochistan, to identify the environmental problems and to develop a scope of work for the EA. The consultants hired to perform the EA should be involved from the scoping session stage so that they are present to identify t' environmental problems and concerns. This will subsequently be of help to them during the EA stage.

G. Energy Analysis

The project purpose is to promote economic growth in Makran by linking Makran to the national highway network; and to privatize certain road maintenance functions. In attempting to achieve this purpose, the major road link to the target area, Makran, will be upgraded to a standard equivalent to other provincial level roads in Balochistan. The implications for energy consumption patterns resulting from successful completion of the road and achievement of the project purpose were reviewed. The road design calls for improving the geometric standards on the existing alignment or modifying the alignment to effect additional improvements. The improvements introduced will reduce vehicle operating costs to the users of the road, which can be translated into reduced energy consumption directly from improved fuel efficiency and indirectly from lower consumption of spare parts, including tires, that are locally manufactured items using considerable energy to produce. The project's focus on a comprehensive road maintenance program will provide the longer term continued benefit created by the improved road. The road improvement and maintenance program development approach is considered to be in accordance with the Agency's policy of supporting energy conservation initiatives.

H. Narcotics Impact Statement

The Balochistan Road Project is not designed specifically to influence the supply of, or demand for, illegal drugs in Pakistan. The project area, Makran, is not agro-climatically suited to the growing of opium poppies, although opium-based narcotics produced elsewhere traverse Makran on their way out of Pakistan. The project can be expected to complement GOP efforts at minimizing the attraction of the poor to involvement in such illicit activities as the transportation of illegal substances, by providing support to alternative sources of income resulting from an improved road infrastructure. The provision of a viable road infrastructure by means of the Balochistan Road Project will enhance GOP efforts at providing producers with greater access to existing markets and services, thereby improving the probabilities of their success in marketing legitimate agricultural crops or pursuing profitable legal business opportunities. The increased visibility of Makran through its further integration into the national road network and resultant improvement in its accessibility to law enforcement authorities should also act as a deterrent to illegal opium smuggling activities. An appropriate "Opium Poppy Clause" will be included in the Project Agreement.

VII. Conditions and Covenants

A. Conditions Precedent

Except as A.I.D. may otherwise agree in writing, prior to any disbursement of funds under this Project, or to the issuance by A.I.D. of any documentation pursuant to which such disbursement will be made, the Grantee shall furnish to A.I.D., in form and substance satisfactory to A.I.D.:

1. A written opinion of counsel acceptable to A.I.D. that th Agreement has been duly authorized and/or ratified by, and executed on behalf of the Grantee, and that it constitutes a valid and legally binding obligation of the Grantee in accordance with all of its terms; and,

2. A written statement setting forth the names and titles of the persons holding or acting in the Office of the Grantee and representing that the named person or persons have the authority to act as the representative or representatives of the Grantee, together with a specimen signature of each such person certified as to its authenticity.

B. Covenants

1. Road Maintenance Financing

Except as A.I.D. may otherwise agree in writing, the Cooperating Country shall, within three years of the date of execution of the Project Agreement, establish a toll system, acceptable to the Cooperating Country and A.I.D., for financing the cost of maintaining the constructed BAT road.

2. Privatization of Road Maintenance Activities

Except as the Parties may otherwise agree in writing, the C&W Department, GOB, shall, within three years of the date of execution of the Project Agreement, establish a system of privatizing road maintenance activities acceptable to the Cooperating Country and A.I.D.

3. Annual Allocation for Training in C&W Budget

Except as A.I.D. may otherwise agree in writing, within four years of execution of the Project Agreement and every year, thereafter, C&W will allocate an amount in its budget, acceptable to AID and the GOB, for the training of the new entrants into the maintenance management system established by the technical assistance team.

4. Reorganization of C&W Department for Road Maintenance Management

Except as the Parties may otherwise agree in writing, C&W will reorganize the C&W Department for road maintenance management activities, in a manner acceptable to the Cooperating Country and AID within four years of the date of execution of the Project Agreement.

VIII. ANNEXES

ACTION AID INFO AMB DCM ECON AREP/S --

ANNEX A
page 1 of 5 pages

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14-MAR-90 TOR: 01:42
CN: 65173
CHRG: AID
DIST: AII
ADD:

ACTION
Due Date 3/15
Action Taken Mission Plan
Date 18/3
Initial

ARD/ENG 18/3

OFFICIAL FILE	ACTION	OFFICE
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		EXO

AIDAC FOR DIRECTOR JIM NORRIS

E.O. 12356: N/A
TAGS:
SUBJECT: PAKISTAN - BALOCHISTAN AREA DEVELOPMENT PROJECT (391-0510) - PID APPROVAL AND PP GUIDANCE

REFERENCE: ISLAMABAD 02679

1. THE PROJECT REVIEW COMMITTEE (PRC) MET ON JANUARY 12 TO REVIEW THE SUBJECT PID. BASED ON THE PRC REVIEW AND RECOMMENDATIONS, APPROVAL OF THE PID IS PROVIDED AND AUTHORITY IS DELEGATED TO THE MISSION DIRECTOR TO APPROVE A PROJECT PAPER, SUBJECT TO THE SPECIFIC GUIDANCE PROVIDED IN THIS CABLE. AID/W SHOULD BE CONSULTED, PRIOR TO PROJECT AUTHORIZATION, IF SIGNIFICANT DEVIATIONS FROM THE FOLLOWING GUIDANCE ARE FOUND NECESSARY.

RECEIVED MAR 14 1990

2. THE PRC PROVIDES THE FOLLOWING DISCUSSION ON KEY ISSUES FOR GUIDANCE TO THE MISSION FOR PREPARATION OF THE PP.

DR. ADLEMAN RECOGNIZES THAT THIS PROJECT ADDRESSES IMPORTANT POLITICAL OBJECTIVES OF THE GOVERNMENT OF PAKISTAN WHICH THE USG SEEKS TO SUPPORT. LIKE THE

TRIBAL AREAS PROJECT, BALAD IS NOT ROOTED IN THE ANE DEVELOPMENT MATRIX OF OPEN MARKETS AND OPEN SOCIETIES.

RECEIVED 14 MAR 1990

WITH THIS PROJECT, AS WITH OTHERS WHICH FALL EXPLICITLY OUTSIDE THE ANE POLICY FRAMEWORK, WE HAVE TWO OBJECTIVES:

A). KEEP THE ACTIVITY SIMPLE AND WELL FOCUSED ON ITS KEY POLITICAL OBJECTIVE. WE DO NOT NEED QUOTE WINDOW DRESSING UNQUOTE ACTIVITIES TO OFFER A SPURIOUS SENSE OF STRATEGIC FIT.

B). MAXIMIZE EXTERNAL MANAGEMENT OF THE PROJECT. THE U.S.A.I.D. SHOULD DEVOTE AS MUCH U.S.D.H. AND FSN TIME AS POSSIBLE TO PROJECTS WITHIN THE ANE FRAMEWORK. WE CANNOT EXTERNALIZE A.I.D. ACCOUNTIBILITY, BUT WE CAN REDUCE TO THE BAREBONES MINIMUM THE AMOUNT OF CREATIVE ENERGY, AND NON-ESSENTIAL MANAGEMENT WHICH GO INTO THESE ACTIVITIES.

MH

IN THIS CONTEXT THE PROJECT SHOULD NOT FINANCE THE ANALYTIC WORK FOR FUTURE PRIVATE SECTOR PROJECTS. IF THE MISSION'S CORE AGRIBUSINESS AND PRIVATE SECTOR PROGRAMING LEAD TO ACTIVITIES IN THE MAKRAN (OR INTO TADP AREAS) THEY WILL BE CARRIED BY THOSE PROJECTS. THERE IS NO NEED TO BUILD ANY OF THESE NON-INFRASTRUCTURE ELEMENTS INTO BALAD. THIS WILL SERVICE BOTH OBJECTIVE (A) SIMPLE PROJECT FOCUS AND OBJECTIVE (B) MANAGEMENT SIMPLIFICATION.

A. OPEN MARKET IMPLICATIONS OF THE PROJECT:

- AFTER DISCUSSION, THE PRC CONCURRED THAT THE PROJECT HAS OPEN MARKET POTENTIAL IN THE MAKRAN DIVISION OF BALOCHISTAN AND OTHER CONTIGUOUS REGIONS. FOR EXAMPLE, USUAL-Y WHEN A NEW ROAD IS CONSTRUCTED, ONE RESULT IS COMPETITION AMONG FARMERS TO PRODUCE GOODS FOR MARKET. THE ROAD PROVIDES ACCESS TO THE MARKETPLACE AND CAN REDUCE LOSSES THAT SMALL FARMERS WOULD OTHERWISE INCUR WITHOUT AN EFFECTIVE TRANSPORTATION SYSTEM.

DURING PREPARATION OF THE PP, THE MISSION SHOULD CONDUCT ANALYSES TO IDENTIFY ECONOMIC AND COMMERCIAL MARKET OPPORTUNITIES IN THE MAKRAN DISTRICT AND TO ESTAB,ISH A COMPREHENSIVE ECONOMIC BASELINE FOR THE DISTRICT. EXAMP-ES OF VENTURES TO BE CONSIDERED COULD INCLUDE DATE PROCESSING, HORTICULTURE VENTURES AND FISHERIES. AN ACTION P-AN TO EXPLOIT THESE OPPORTUNITIES SHOULD BE COORDINATED WITH THE ON-GOING BALAD PROJECT. THE BUREAU

EXPECTS THAT ANY CONTINUATION OF THE BALAD II PROJECT BEYOND THE ROAD CONSTRUCTION WOULD BE A SEPARATE MARKET-LED PROJECT.

B. ACCEPTABILITY OF A PRIVATE SECTOR ROLE BY THE HOST GOVERNMENT:

- DURING DEVELOPMENT OF THE PP, THE MISSION PROJECT STAFF SHOULD FULLY EXPLORE THE PROPOSED PRIVATE SECTOR ROLES WITH THE GOVERNMENT OF BALOCHISTAN (GOB). THE PRC STRONGLY ENDORSES MISSION PLANS TO APPROACH THE GOVERNMENT OF BALOCHISTAN ON THE ROAD AS A TOLL ROAD OPERATED BY THE PRIVATE SECTOR. WITH THE PRIVATE SECTOR BECOMING INCREASINGLY INVOLVED IN WHAT WAS FORMERLY THE EXCLUSIVE PROVINCE OF PUBLIC WORKS, THEIR POSSIBLE INVOLVEMENT IN FINANCING, BUILDING AND OPERATING - HAS GIVEN TOLL ROADS A NEW LEASE ON LIFE. THE PP SHOULD IDENTIFY THE SPECIFIC APPROACH TO BE USED DURING IMPLEMENTATION SUCH AS A PUBLIC - PRIVATE PARTNERSHIP OR A COMPLETELY PRIVATE TOLL ROAD OPERATION. ADDITIONALLY, THE PP SHOULD PRESENT AN EVALUATION SCHEDULE AND A LIST

OF SPECIFIC CRITERIA TO ASSESS PROGRESS TOWARDS MEETING THESE PRIVATE SECTOR OBJECTIVES.

THE PP DESIGN TEAM SHOULD EXAMINE A FULL RANGE OF OPTIONS FOR REVENUE GENERATION TO SUPPORT MAINTENANCE OF THE ROAD. COMPLETION OF A FEASIBILITY STUDY FOR THE TOLL ROAD CONCEPT SHOULD BE AN EARLY PRIORITY FOR THE MISSION - POSSIBLY DURING THE PP DESIGN PHASE. A THOROUGH FINANCIAL ANALYSIS OF THE OPERATION OF A TOLL ROAD COULD GO A LONG WAY TOWARD CONVINCING THE GOVERNMENT OF BALOCHISTAN THAT A TOLL ROAD IS THE MOST VIABLE OPTION FOR MAINTENANCE. PRIVATE SECTOR TOLL ROAD OPERATIONS ARE MUCH BETTER ABLE TO RESOLVE PROBLEMS OF MAINTENANCE, NOT ONLY BECAUSE THEY HAVE THE DUTY, BUT ALSO BECAUSE IT IS TO THEIR ADVANTAGE TO MAINTAIN ALL THEIR FACILITIES AT FULL EFFICIENCY OVER THE YEARS. DURING THE PP DESIGN PHASE, THE MISSION SHOULD ALSO EXPLORE THE POTENTIAL ROLE OF THE PRIVATE SECTOR IN THE CONSTRUCTION COST FINANCING, I.E. PARTIAL OR COMPLETE FINANCING THROUGH THE TOLL ROAD CONCEPT. APPROPRIATE MODELS OF PRIVATE SECTOR INVOLVEMENT IN SUCH INFRASTRUCTURE MAY BE FOUND IN INDONESIA AND MALAYSIA.

C. ECONOMIC INTERNAL RATE OF RETURN (EIRR):

AID/W SHARES MISSION CONCERN THAT THE EIRR FOR THE ROAD IS LOWER THAN PREVIOUSLY ESTIMATED. UNDER OTHER CIRCUMSTANCES WE MIGHT RECONSIDER APPROVAL OF THE PROJECT OR SEEK TO LOWER PROJECT COSTS. HOWEVER, IN THIS CASE, GIVEN THE SPECIAL POLITICAL CONSIDERATIONS WHICH CONTRIBUTE TO THE ACHIEVEMENT OF OVERALL U.S. FOREIGN POLICY OBJECTIVES, WE ARE PREPARED TO GO AHEAD WITH THE PROJECT.

D. ADDITIONAL PROJECT DESIGN/IMPLEMENTATION CONCERNS:

1. INCORPORATION OF PRIOR MISSION EXPERIENCE IN BALOCHISTAN.

GIVEN PRIOR EXPERIENCE, THE PRC STRONGLY ENDORSES THE MISSION'S PLAN TO USE A DIRECT AID CONTRACT FOR THE PROPOSED CONSTRUCTION. WE NOTE THE STRONG INTEREST EXPRESSED IN THE ROAD CONSTRUCTION WORKS BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA ON BEHALF OF MEMBER FIRMS. THE SELECTION CRITERIA FOR THE CONTRACTOR AND SUBCONTRACTORS MUST BE SUFFICIENTLY RIGOROUS AS TO PREVENT RECURRENCE OF PREVIOUS PROBLEMS.

THE PP SHOULD HAVE A THOROUGH COMMODITY PROCUREMENT PLAN FOR THE ROAD MAINTENANCE EQUIPMENT WHICH COMPLETELY DEFINES LOCAL PROCUREMENT FEASIBILITY, EXPLORES OFF-THE-SHELF ITEMS, AND DESCRIBES PROPOSED U.S. EQUIPMENT SUPPLY. THE INTEREST OF SUCH MAJOR EQUIPMENT SUPPLIES AS CATERPILLAR, JOHN DEERE AND NAVISTAR IN SUPPLYING ROAD MAINTENANCE UNITS TO PAKISTAN SHOULD ASSURE AN ADEQUATE SOURCE OF U.S. EQUIPMENT.

THE MISSION SHOULD ALSO PREPARE A PLAN FOR DEVELOPING THE ROAD MAINTENANCE CAPABILITY OF LOCAL CONTRACTORS.

2. POTENTIAL POLITICAL/LOCAL GOVERNMENT IMPACT ON PROJECT IMPLEMENTATION SCHEDULE.

THE PROJECT PAPER SHOULD PRESENT PROJECT MANAGEMENT ALTERNATIVES TO COPE WITH POTENTIAL POLITICAL INTERRUPTIONS OF PROJECT IMPLEMENTATION ACTIVITIES.

3. SEPARATION OF THE PROPOSED ACTIVITY FROM THE ORIGINAL BALAD BELA-AWARAN ROAD.

ONE SECTION OF THE PROPOSED ROAD CONSTRUCTION ACTIVITY UNDER BALAD II INCLUDES THE 101 KM BELA-AWARAN ROAD PORTION BEGUN UNDER BALAD, BUT NOW INCLUDED IN THIS PROJECT. THE MAGNITUDE OF THE FUNDS, THE COST ESTIMATES FOR THE COMPLETION OF THE BELA-AWARAN ROAD, AND THE USE OF RESIDUAL FUNDS WITHIN BAAAD WERE DISCUSSED BY THE PRC.

THE MISSION SHOULD PREPARE AN ANALYSIS OF THE FUNDING SITUATION FOR THE BELA-AWARAN ROAD SECTION AND SHOULD DELINEATE THE USE OF THE CONSTRUCTION FUNDS BOTH WITHIN BALAD AND BALAD II (ESPECIALLY FOR THE BELA-AWARAN ROAD).

4. SCOPE AND CONTENT OF THE REQUIRED ENVIRONMENTAL ASSESSMENT.

- THE INITIAL ENVIRONMENTAL EXAMINATION (IEE) PROVIDED IN THE PID RECOMMENDED A POSITIVE DETERMINATION FOR THE PROJECT. THE MISSION PROPOSES TO CONDUCT AN INDEPENDENT ENVIRONMENTAL ASSESSMENT OF THE PROJECT AND WILL CONDUCT A SCOPING SESSION IN TURBAT TO IDENTIFY THE SCOPE OF WORK FOR THE ENVIRONMENTAL ASSESSMENT AND THE SOCIAL SOUNDNESS ANALYSIS. THE IEE PROVIDED A LIST OF ENVIRONMENTAL PARAMETERS THAT SHOULD BE EXAMINED DURING THE ASSESSMENT.

THE ENVIRONMENTAL AND SOCIAL SOUNDNESS ASSESSMENTS SHOULD BE CONDUCTED AS AN INTEGRATED EXERCISE. THE ENVIRONMENTAL ASSESSMENT MUST BE COMPLETED AS SOON AS POSSIBLE, BUT NOT LATER THAN COMMITMENT OF FUNDS FOR THE TOTAL CONSTRUCTION ACTIVITY. DURING THIS PROCESS, THE MISSION SHOULD ALSO INVESTIGATE: (A) ROAD ALIGNMENT ALTERNATIVE ANALYSES, WHERE POSSIBLE; (B) THE HIGH INTENSITY SEASONAL RAINFALL AND RELATED CONSTRUCTION AND MAINTENANCE REQUIREMENTS; (C) THE SUSTAINABLE NATURE OF THE FISHERIES INDUSTRY AT PASNI; AND (D) SCHEDULING ADDITIONAL SCOPING SESSIONS AFTER THE ARRIVAL OF THE ENVIRONMENTAL AND SOCIAL SOUNDNESS TEAM TO DETERMINE THE ISSUES OF THE ASSESSMENT. THE MISSION IS ALSO ENCOURAGED TO INCLUDE, ON THE ASSESSMENT TEAM, PAKISTANI EXPERTS TO BUILD HOST-COUNTRY CAPABILITY.

THE BUREAU ENVIRONMENTAL COORDINATOR SHOULD PARTICIPATE IN DISCUSSIONS RELATED TO THE COMPOSITION OF THE ASSESSMENT TEAM AND THE ISSUES TO BE ADDRESSED IN THE SCOPING SESSION(S).

5. GENDER DISAGGREGATED BENEFICIARIES.

THE MISSION IS COMMENDED FOR THE EXTENT OF THE GENDER DISAGGREGATED DATA USED IN THE BASELINE ECONOMIC DATA. THE PRC WISHES TO REMIND THE MISSION THAT REGULATIONS REQUIRE THAT DATA COLLECTION ACTIVITIES DURING PROJECT DESIGN AND IMPLEMENTATION INCLUDE GENDER VARIABLES.

SUCH FACTORS AS ECONOMIC BENEFITS FROM THE ROAD, ACCESS TO SCHOOLS, MEDICAL TREATMENT, ETC. SHOULD BE ANALYZED USING THE GENDER DISAGGREGATED DATA. BAKER
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5C(1) - COUNTRY CHECKLIST

Listed below are statutory criteria applicable to: (A) FAA funds generally; (B)(1) Development Assistance funds only; or (B)(2) the Economic Support Fund only.

A. GENERAL CRITERIA FOR COUNTRY ELIGIBILITY

1. FY 1989 Appropriations Act Sec. 578(b). Has the President certified to the Congress that the government of the recipient country is failing to take adequate measures to prevent narcotic drugs or other controlled substances which are cultivated, produced or processed illicitly, in whole or in part, in such country or transported through such country, from being sold illegally within the jurisdiction of such country to United States Government personnel or their dependents or from entering the United States unlawfully?

   It has not been so certified.

2. FAA Sec. 481(h); FY 1989 Appropriations Act Sec. 578; 1988 Drug Act Secs. 4405-07. (These provisions apply to assistance of any kind provided by grant, sale, loan, lease, credit, guaranty, or insurance, except assistance from the Child Survival Fund or relating to international narcotics control, disaster and refugee relief, narcotics education and awareness, or the provision of food or medicine.) If the recipient is a "major illicit drug producing country" (defined as a country producing during a fiscal year at least five metric tons of opium or 500 metric tons of coca or marijuana) or a "major drug-transit country" (defined as a country that is a significant direct source of illicit drugs significantly affecting the United States, through which such drugs are transported, or through which significant sums of drug-related profits are

   (a) Yes

   (b) The President has so determined in the INSCR March

laundered with the knowledge or complicity of the government): (a) Does the country have in place a bilateral narcotics agreement with the United States, or a multilateral narcotics agreement? and (b) Has the President in the March 1 International Narcotics Control Strategy Report (INSCR) determined and certified to the Congress (without Congressional enactment, within 45 days of continuous session, of a resolution disapproving such a certification), or has the President determined and certified to the Congress on any other date (with enactment by Congress of a resolution approving such certification), that (1) during the previous year the country has cooperated fully with the United States or taken adequate steps on its own to satisfy the goals agreed to in a bilateral narcotics agreement with the United States or in a multilateral agreement, to prevent illicit drugs produced or processed in or transported through such country from being transported into the United States, to prevent and punish drug profit laundering in the country, and to prevent and punish bribery and other forms of public corruption which facilitate production or shipment of illicit drugs or discourage prosecution of such acts, or that (2) the vital national interests of the United States require the provision of such assistance?

3. 1986 Drug Act Sec. 2013; 1988 Drug Act Sec. 4404. (This section applies to the same categories of assistance subject to the restrictions in FAA Sec. 481(h), above.) If recipient country is a "major illicit drug producing country" or "major drug-transit country" (as defined for the purpose of FAA Sec 481(h)), has the President submitted a report to Congress listing such country as one (a) which, as a matter of government policy, encourages or facilitates the production or distribution of illicit drugs; (b) in which any senior official of the

(a) No
(b) No
(c) No
(d) No

government engages in, encourages, or facilitates the production or distribution of illegal drugs; (c) in which any member of a U.S. Government agency has suffered or been threatened with violence inflicted by or with the complicity of any government officer; or (d) which fails to provide reasonable cooperation to lawful activities of U.S. drug enforcement agents, unless the President has provided the required certification to Congress pertaining to U.S. national interests and the drug control and criminal prosecution efforts of that country?

4. FAA Sec. 620(c). If assistance is to a government, is the government indebted to any U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies, (b) the debt is not denied or contested by such government, or (c) the indebtedness arises under an unconditional guaranty of payment given by such government or controlled entity?

(a), (b) and (c):

We are aware of no such liability.

5. FAA Sec. 620(e)(1). If assistance is to a government, has it (including any government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities?

We are aware of no such liability.

6. FAA Secs. 620(a), 620(f), 620D; FY 1989 Appropriations Act Secs. 512, 550, 592. Is recipient country a Communist country? If so, has the President determined that assistance to the country is vital to the security of the United States, that the recipient country is not controlled by the international Communist conspiracy, and that such assistance will further promote the independence of the recipient country from international communism? Will assistance be provided

No
No
No
No

either directly or indirectly to Angola, Cambodia, Cuba, Iraq, Libya, Vietnam, South Yemen, Iran or Syria? Will assistance be provided to Afghanistan without a certification, or will assistance be provided inside Afghanistan through the Soviet-controlled government of Afghanistan?

7. FAA Sec. 620(i). Has the country permitted, or failed to take adequate measures to prevent, damage or destruction by mob action of U.S. property? — It has not.

8. FAA Sec. 620(l). Has the country failed to enter into an investment guaranty agreement with OPIC? — It has not.

9. FAA Sec. 620(o); Fishermen's Protective Act of 1967 (as amended) Sec. 5. (a) Has the country seized, or imposed any penalty or sanction against, any U.S. fishing vessel because of fishing activities in international waters? (b) If so, has any deduction required by the Fishermen's Protective Act been made? — (a) It has not. (b) It has not.

10. FAA Sec. 620(q); FY 1989 Appropriations Act Sec. 518. (a) Has the government of the recipient country been in default for more than six months on interest or principal of any loan to the country under the FAA? (b) Has the country been in default for more than one year on interest or principal on any U.S. loan under a program for which the FY 1989 Appropriations Act appropriates funds? — (a) No. (b) No

11. FAA Sec. 620(s). If contemplated assistance is development loan or to come from Economic Support Fund, has the Administrator taken into account the percentage of the country's budget and amount of the country's foreign exchange or other resources spent on military equipment? (Reference may be made to the annual "Taking Into Consideration" memo: "Yes, taken into account by the Administrator at time of approval of — Yes.

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Agency OYB." This approval by the Administrator of the Operational Year Budget can be the basis for an affirmative answer during the fiscal year unless significant changes in circumstances occur.)

12. FAA Sec. 620(t). Has the country severed diplomatic relations with the United States? If so, have relations been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption?

It has not.

13. FAA Sec. 620(u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the A.I.D. Administrator in determining the current A.I.D. Operational Year Budget? (Reference may be made to the "Taking into Consideration" memo.)

U.N. has not determined the country to be in arrears.

14. FAA Sec. 620A. Has the President determined that the recipient country grants sanctuary from prosecution to any individual or group which has committed an act of international terrorism or otherwise supports international terrorism?

We are aware of no such action.

15. FY 1989 Appropriations Act Sec. 568. Has the country been placed on the list provided for in Section 6(j) of the Export Administration Act of 1979 (currently Libya, Iran, South Yemen, Syria, Cuba, or North Korea)?

No.

16. ISDCA of 1985 Sec. 552(b). Has the Secretary of State determined that the country is a high terrorist threat country after the Secretary of Transportation has determined, pursuant to section 1115(e)(2) of the Federal Aviation Act of 1958, that an airport in the country does not maintain and administer effective security measures?

He has not

17. FAA Sec. 666(b). Does the country object, on the basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. who is present in such country to carry out economic development programs under the FAA?	It does not.
18. FAA Secs. 669, 670. Has the country, after August 3, 1977, delivered to any other country or received nuclear enrichment or reprocessing equipment, materials, or technology, without specified arrangements or safeguards, and without special certification by the President? Has it transferred a nuclear explosive device to a non-nuclear weapon state, or if such a state, either received or detonated a nuclear explosive device? (FAA Sec. 620E permits a special waiver of Sec. 669 for Pakistan.)	FAA Section 620E permits a special waiver for Pakistan through April 1, 1991
19. FAA Sec. 670. If the country is a non-nuclear weapon state, has it, on or after August 8, 1985, exported (or attempted to export) illegally from the United States any material, equipment, or technology which would contribute significantly to the ability of a country to manufacture a nuclear explosive device?	It has been determined and was waived by the President on January 15, 1988.
20. ISDCA of 1981 Sec. 720. Was the country represented at the Meeting of Ministers of Foreign Affairs and Heads of Delegations of the Non-Aligned Countries to the 36th General Assembly of the U.N. on Sept. 25 and 28, 1981, and did it fail to disassociate itself from the communique issued? If so, has the President taken it into account? (Reference may be made to the "Taking into Consideration" memo.)	It was no represented, but it disassociated itself from the communique.
21. FY 1989 Appropriations Act Sec. 527. Has the recipient country been determined by the President to have engaged in a consistent pattern of opposition to the foreign policy of the United States?	No.

22. FY 1989 Appropriations Act Sec. 513. Has the duly elected Head of Government of the country been deposed by military coup or decree? If assistance has been terminated, has the President notified Congress that a democratically elected government has taken office prior to the resumption of assistance? — No.

23. FY 1989 Appropriations Act Sec. 540. Does the recipient country fully cooperate with the international refugee assistance organizations, the United States, and other governments in facilitating lasting solutions to refugee situations, including resettlement without respect to race, sex, religion, or national origin? — Yes.

B. FUNDING SOURCE CRITERIA FOR COUNTRY ELIGIBILITY

1. Development Assistance Country Criteria — No.

FAA Sec. 116. Has the Department of State determined that this government has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, can it be demonstrated that contemplated assistance will directly benefit the needy?

FY 1989 Appropriations Act Sec. 536. Has the President certified that use of DA funds by this country would violate any of the prohibitions against use of funds to pay for the performance of abortions as a method of family planning, to motivate or coerce any person to practice abortions, to pay for the performance of involuntary sterilization as a method of family planning, to coerce or provide any financial incentive to any person to undergo sterilizations, to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning? — No.

2. Economic Support Fund Country Criteria — It has not been so determined.

FAA Sec. 502B. Has it been determined that the country has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, has the President found that the country made such significant improvement in its human rights record that furnishing such assistance is in the U.S. national interest?

FY 1989 Appropriations Act Sec. 578(d). Has this country met its drug eradication targets or otherwise taken significant steps to halt illicit drug production or trafficking? — Yes.

5C(2) - PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A includes criteria applicable to all projects. Part B applies to projects funded from specific sources only: B(1) applies to all projects funded with Development Assistance; B(2) applies to projects funded with Development Assistance loans; and B(3) applies to projects funded from ESF.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT? Yes.

A. GENERAL CRITERIA FOR PROJECT

1. FY 1989 Appropriations Act Sec. 523; FAA Sec. 634A. If money is sought to obligated for an activity not previously justified to Congress, or for an amount in excess of amount previously justified to Congress, has Congress been properly notified? Yes, a Congressional Notification has beer submitted.

2. FAA Sec. 611(a)(1). Prior to an obligation in excess of $500,000, will there be (a) engineering, financial or other plans necessary to carry out the assistance, and (b) a reasonably firm estimate of the cost to the U.S. of the assistance? [a] Yes [b] Yes

3. FAA Sec. 611(a)(2). If legislative action is required within recipient country, what is the basis for a reasonable expectation that such action will be completed in time to permit orderly accomplishment of the purpose of the assistance? No further legislativ action is required.

4.	FAA Sec. 611(b); FY 1989 Appropriations Act Sec. 501. If Project is for water or water-related land resource construction, have benefits and costs been computed to the extent practicable in accordance with the principles, standards, and procedures established pursuant to the Water Resources Planning Act (42 U.S.C. 1962, et seq.)? (See A.I.D. Handbook 3 for guidelines.)	N/A
5.	FAA Sec. 611(e). If Project is capital assistance (e.g., construction), and total U.S. assistance for it will exceed $1 million has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability to maintain and utilize the project effectively?	Yes, Mission Director 611(e) certification is included in the Project Paper.
6.	FAA Sec. 209. Is Project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.	The project is highly specific to Balochistan within Pakistan and hence is not susceptible to execution as a part of a regional project but could support such programs through the provision of an improved road infrastructure.
7.	FAA Sec. 601(a). Information and conclusions on whether projects will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free laborunions.	(a) Yes. The improvements in road infrastructure will link Makran with the national highway thereby expanding the flow of goods and services between this region and international markets. (b) Yes. Improved road will attract private enterprise into Makran. Specific project efforts will focus on involving private enterprise in road maintenance activities. (c) No. (d) Yes. The improved access to Makran provided by the roads will increase the number of businesses eligible to compete for existing and new business. (e) Yes. The provision of sound infrastructure such as roads enables private enterprise to compete more efficiently. (f) No.
8.	FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).	U.S. private enterprises as suppliers of both goods and services under this project.

9. FAA Secs. 612(b), 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars.	This is an ESF funded project. USAID monitors the adequacy of the G development budget and where necessary negotiates acceptable sector levels of local currency support.
10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?	There is no excess U.S. owned foreign currency in Pakistan.
11. FY 1989 Appropriations Act Sec. 521. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity?	N/A
12. FY 1989 Appropriations Act Sec. 549. Will the assistance (except for programs in Caribbean Basin Initiative countries under U.S. Tariff Schedule "Section 807," which allows reduced tariffs on articles assembled abroad from U.S.-made components) be used directly to procure feasibility studies, prefeasibility studies, or project profiles of potential investment in, or to assist the establishment of facilities specifically designed for, the manufacture for export to the United States or to third country markets in direct competition with U.S. exports, of textiles, apparel, footwear, handbags, flat goods (such as wallets or coin purses worn on the person), work gloves or leather wearing apparel?	No
13. FAA Sec. 119(g)(4)-(6) & (10). Will the assistance (a) support training and education efforts which improve the capacity of recipient countries to prevent loss of biological diversity; (b) be provided under a long-term agreement in which the recipient country agrees to protect ecosystems or other	[a] No [b] No [c] No [d] No

wildlife habitats; (c) support efforts to identify and survey ecosystems in recipient countries worthy of protection; or (d) by any direct or indirect means significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas?

14. FAA Sec. 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (either dollars or local currency generated therefrom)? N/A

15. FY 1989 Appropriations Act. If assistance is to be made to a United States PVO (other than a cooperative development organization), does it obtain at least 20 percent of its total annual funding for international activities from sources other than the United States Government? N/A

16. FY 1989 Appropriations Act Sec. 538. If assistance is being made available to a PVO, has that organization provided upon timely request any document, file, or record necessary to the auditing requirements of A.I.D., and is the PVO registered with A.I.D.? N/A

17. FY 1989 Appropriations Act Sec. 514. If funds are being obligated under an appropriation account to which they were not appropriated, has prior approval of the Appropriations Committees of Congress been obtained?

18. State Authorization Sec. 139 (as interpreted by conference report). Has confirmation of the date of signing of the project agreement, including the amount involved, been cabled to State L/T and A.I.D. LEG within 60 days of the agreement's entry into force with respect to the United States, and has the full text of the agreement been pouched to those same offices? (See Handbook 3, Appendix 6G for agreements covered by this provision).

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria — This is an ESF Financed Project.

a. FY 1989 Appropriations Act Sec. 548 (as interpreted by conference report for original enactment). If assistance is for agricultural development activities (specifically, any testing or breeding feasibility study, variety improvement or introduction, consultancy, publication, conference, or training), are such activities (a) specifically and principally designed to increase agricultural exports by the host country to a country other than the United States, where the export would lead to direct competition in that third country with exports of a similar commodity grown or produced in the United States, and can the activities reasonably be expected to cause substantial injury to U.S. exporters of a similar agricultural commodity; or (b) in support of research that is intended primarily to benefit U.S. producers? — N/A

b. FAA Secs. 102(b), 111, 113, 281(a). Describe extent to which activity will (a) effectively involve the poor in development by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, dispersing investment from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward a better life, and otherwise encourage democratic private and local governmental — N/A

institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries.

c. FAA Secs. 103, 103A, 104, 105, 106, 120-21; FY 1989 Appropriations Act (Development Fund for Africa). Does the project fit the criteria for the source of funds (functional account) being used? N/A

d. FAA Sec. 107. Is emphasis placed on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)? N/A

e. FAA Secs. 110, 124(d). Will the recipient country provide at least 25 percent of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)? N/A

f. FAA Sec. 128(b). If the activity attempts to increase the institutional capabilities of private organizations or the government of the country, or if it attempts to stimulate scientific and technological research, has it been designed and will it be monitored to ensure that the ultimate beneficiaries are the poor majority? N/A

g. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental processes essential to self-government. N/A

h. FY 1989 Appropriations Act Sec. 536. Are any of the funds to be used for the performance of abortions as a method of family planning or to motivate or coerce any person to practice abortions? N/A

Are any of the funds to be used to pay for the performance of involuntary sterilization as a method of family planning or to coerce or provide any financial incentive to any person to undergo sterilizations?

Are any of the funds to be used to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning?

i. FY 1989 Appropriations Act. Is the assistance being made available to any organization or program which has been determined to support or participate in the management of a program of coercive abortion or involuntary sterilization? N/A

If assistance is from the population functional account, are any of the funds to be made available to voluntary family planning projects which do not offer, either directly or through referral to or information about access to, a broad range of family planning methods and services?

j. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise? N/A

k. FY 1989 Appropriations Act. What portion of the funds will be available only for activities of economically and socially disadvantaged enterprises, historically black colleges and universities, colleges and universities having a student body in which more than 40 percent of the students are Hispanic Americans, and private and voluntary organizations which are controlled by individuals who are black Americans, Hispanic Americans, or Native Americans, or who are economically or socially disadvantaged (including women)? N/A

l. FAA Sec. 118(c). Does the assistance comply with the environmental procedures set forth in A.I.D. Regulation 16? Does the assistance place a high priority on conservation and sustainable management of tropical forests? Specifically, does the assistance, to the fullest extent feasible: (a) stress the importance of conserving and sustainably managing forest resources; (b) support activities which offer employment and income alternatives to those who otherwise would cause destruction and loss of forests, and help countries identify and implement alternatives to colonizing forested areas; (c) support training programs, educational efforts, and the establishment or strengthening of institutions to improve forest management; (d) help end destructive slash-and-burn agriculture by supporting stable and productive farming practices; (e) help conserve forests which have not yet been degraded by helping to increase N/A

production on lands already cleared or degraded; (f) conserve forested watersheds and rehabilitate those which have been deforested; (g) support training, research, and other actions which lead to sustainable and more environmentally sound practices for timber harvesting, removal, and processing; (h) support research to expand knowledge of tropical forests and identify alternatives which will prevent forest destruction, loss, or degradation; (i) conserve biological diversity in forest areas by supporting efforts to identify, establish, and maintain a representative network of protected tropical forest ecosystems on a worldwide basis, by making the establishment of protected areas a condition of support for activities involving forest clearance or degradation, and by helping to identify tropical forest ecosystems and species in need of protection and establish and maintain appropriate protected areas; (j) seek to increase the awareness of U.S. government agencies and other donors of the immediate and long-term value of tropical forests; and (k)/utilize the resources and abilities of all relevant U.S. government agencies?

m. FAA Sec. 118(c)(13). If the assistance will support a program or project significantly affecting tropical forests (including projects involving the planting of exotic plant species), will the program or project (a) be based upon careful analysis of the alternatives available to achieve the best sustainable use of the land, and (b)/take full account of the environmental impacts of the proposed activities on biological diversity? N/A

n. FAA Sec. 118(c)(14). Will assistance be used for (a) the procurement or use of logging equipment, unless an environmental assessment indicates that all timber harvesting operations involved will be conducted in an environmentally sound manner and that the proposed activity will produce positive economic benefits and sustainable forest management systems; or (b) actions which will significantly degrade national parks or similar protected areas which contain tropical forests, or introduce exotic plants or animals into such areas? N/A

o. FAA Sec. 118(c)(15). Will assistance be used for (a) activities which would result in the conversion of forest lands to the rearing of livestock; (b) the construction, upgrading, or maintenance of roads (including temporary haul roads for logging or other extractive industries) which pass through relatively undegraded forest lands; (c) the colonization of forest lands; or (d) the construction of dams or other water control structures which flood relatively undegraded forest lands, unless with respect to each such activity an environmental assessment indicates that the activity will contribute significantly and directly to improving the livelihood of the rural poor and will be conducted in an environmentally sound manner which supports sustainable development? N/A

P. FY 1989 Appropriations Act. If assistance will come from the Sub-Saharan Africa DA account, is it (a) to be used to help the poor majority in Sub-Saharan Africa through a process of long-term development and economic growth that is equitable, participatory, environmentally sustainable, and self-reliant; (b) being provided in accordance with the policies contained in section 102 of the FAA; N/A

(c) being provided, when consistent with the objectives of such assistance, through African, United States and other PVOs that have demonstrated effectiveness in the promotion of local grassroots activities on behalf of long-term development in Sub-Saharan Africa; (d) being used to help overcome shorter-term constraints to long-term development, to promote reform of sectoral economic policies, to support the critical sector priorities of agricultural production and natural resources, health, voluntary family planning services, education, and income generating opportunities, to bring about appropriate sectoral restructuring of the Sub-Saharan African economies, to support reform in public administration and finances and to establish a favorable environment for individual enterprise and self-sustaining development, and to take into account, in assisted policy reforms, the need to protect vulnerable groups; (e) being used to increase agricultural production in ways that protect and restore the natural resource base, especially food production, to maintain and improve basic transportation and communication networks, to maintain and restore the renewable natural resource base in ways that increase agricultural production, to improve health conditions with special emphasis on meeting the health needs of mothers and children, including the establishment of self-sustaining primary health care systems that give priority to preventive care, to provide increased access to voluntary family planning services, to improve basic literacy and mathematics especially to those outside the formal educational system and to improve primary education, and to develop income-generating opportunities for the unemployed and underemployed in urban and rural areas?

q. FY 1989 Appropriations Act Sec. 515. If deob/reob authority is sought to be exercised in the provision of DA assistance, are the funds being obligated for the same general purpose, and for countries within the same general region as originally obligated, and have the Appropriations Committees of both Houses of Congress been properly notified? N/A

2. Development Assistance Project Criteria (Loans Only) This is an ESF Financed Project.

a. FAA Sec. 122(b). Information and conclusion on capacity of the country to repay the loan at a reasonable rate of interest. N/A

b. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete with U.S. enterprises, is there an agreement by the recipient country to prevent export to the U.S. of more than 20 percent of the enterprise's annual production during the life of the loan, or has the requirement to enter into such an agreement been waived by the President because of a national security interest? N/A

c. FAA Sec. 122(b). Does the activity give reasonable promise of assisting long-range plans and programs designed to develop economic resources and increase productive capacities? N/A

3. Economic Support Fund Project Criteria

a. FAA Sec. 531(a). Will this assistance promote economic and political stability? To the mazimum extent feasible, is this assistance consistent with the policy directions, purposes, and programs of Part I of the FAA?	(a) Yes. This project will provide an improved road system which will directly link Makran with the national highway network thereby fostering the social and economic integration of this region with the rest of Pakistan and clearly promoting the GOP's goals of economic and political stability. The assistance is consistent with the policy directions, purposes and programs of Part I of the FAA.
b. FAA Sec. 531(e). Will this assistance be used for military or paramilitary purposes?	No
c. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?	N/A

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
MISSION TO PAKISTAN

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Islamabad, Pakistan

ANNEX C-1

BALOCHISTAN ROAD PROJECT (391-0510)

FAA SECTION 611(a) DETERMINATION

I, Gene V. George, Chief, Office of Engineering of the Agency for International Development in the Islamic Republic of Pakistan, do hereby determine pursuant to section 611(a) of the Foreign Assistance Act of 1961, as amended, that:

(1) engineering, financial, and other plans necessary to carry out the proposed Balochistan Road Project, and a reasonably firm estimate of the cost to the United States Government of providing such assistance, have been completed; and

(2) no further legislative action is required within the Islamic Republic of Pakistan.

5/28

Gene V. George

Gene V. George, Chief
Office of Engineering
USAID/Pakistan

May 28, 1980
Date

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
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THE DIRECTOR

ANNEX C-2

BALOCHISTAN ROAD PROJECT (391-0510)

FAA Section 611 (e) Certification

I, James A. Norris, the principal officer of the Agency for International Development in the Islamic Republic of Pakistan, having taken into account, among other things, the maintenance and utilization of projects in the Islamic Republic of Pakistan previously financed or assisted by the United States, do hereby certify, pursuant to Section 611(e) of the Foreign Assistance Act of 1961, as amended, that, in my judgement, the Islamic Republic of Pakistan has both the financial capability and the human resources capability to effectively implement, utilize and maintain the proposed Balochistan Road Project.

This judgement is based upon the project analyses as detailed in the Balochistan Road Project Paper and is subject to the conditions imposed herein.

[X] Approved [ ] Disapproved

James A. Norris
Mission Director

7/19/90
Date

ANNEX D

بسم الله الرحمن الرحيم

No. 1(17)US-I/83
Government of Pakistan
MINISTRY OF FINANCE AND
ECONOMIC AFFAIRS
(ECONOMIC AFFAIRS DIVISION)

Islamabad, the 18th July, 1990.

Telegram : ECONOMIC
Telex : ECDIV No 05-634

FROM: JOINT SECRETARY,
TELE: 821682

SUBJECT:- BALOCHISTAN ROAD PROJECT(BELA-AWARAN-TURBAT ROAD).

Dear Mr. Norris,

The ongoing Balochistan Area Development Project for which USAID have provided grant assistance of $ 45 million has made substantial contribution towards betterment of the kutcha roads in Makran, improved agricultural practices and increased stable water supply for the farming community.

To improve the standard of living of the people of Balochistan by making the markets more accessible the Government of Pakistan formally requests the US Government to provide grant assistance of $ 90 million to finance the subject project which will involve, a major infrastructure undertaking in the construction/improvement of the road linking Makran, the remote project area to the national highway network.

With best regards,

Yours sincerely,

(Saad Ashraf)

Mr. James A. Norris,
Director,
USAID Mission,
Islamabad.

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ANNEX E

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Project Title and Number: Balochistan Road Project

Life of Project:
From FY 1990 to FY 1997
Total U.S. Funding $87 million
Date Prepared: May 20, 1990

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal: The broader objective to which this project contributes: To accelerate the integration of Makran Division of Balochistan into the socio-economic mainstream of Pakistan.	Measures of Goal Achievement: 1. Makran incomes in same range as rural Pakistan average. 2. Development indicators for Makran in line with rest of rural Pakistan: (a) literacy rate (b) infant mortality (c) kms of paved road 3. Greater exposure of Makran to the nation (travel, outside investment)	1. Income survey. 2. GOP statistics.	Assumptions for achieving goal targets: 1. Increased trade with and investment in Makran will result in higher incomes. 2. Continued GOP commitment to development of Balochistan through adequate budget and staff support.
Project Purpose: To link the Makran Division, Baluchistan Province, to the national highway network and to privatize certain road maintenance functions.	Conditions that will indicate purpose has been achieved: End of project status 1. Makran is linked with the national highway network and Karachi. 2. Increased external demand for Makran products and increased demand in Makran for consumer and capital goods. 3. A functioning, comprehensive sustainable maintenance program.	1. Field observation. 2. Surveys of Turbat bazar, transport survey. 3. T.A. consultant reports, GOP reports, field observation.	Assumptions for achieving purpose: 1. Road to Karachi will spur agricultural/fishery production and investment in Makran. 2. Private sector is willing and capable of performing physical maintenance and toll operations.
Outputs: 1. Road constructed to AASHTO standards connecting Turbat to Karachi highway. 2. Increased flow of produce, and capital and consumer goods from and into Makran, respectively. 3. Increased traffic volume to Makran. 4. Balochistan C&W capacity to implement comprehensive road maintenance system. 5. Funds for maintenance of BAT road generated from private sources. 6. Privately operated toll system. 7. Private firms awarded maintenance contracts.	Magnitude of Outputs: 1. 376 kilometers road. 2. Livestock, dates, fish, tomatoes from Makran; agricultural inputs and equipment and consumer goods to Makran. 3. 270 vehicles per day upon completion of road. 4. Includes ability to produce annual maintenance plans and to supervise private maintenance contracts. 5. Atleast 25% of requirement. 6. Atleast one, i.e., on BAT road. 7. Long-term (one year or more) contracts covering atleast BAT road.	1. Field observation. 2. Surveys of trucking firms. 3. Traffic counts. 4. T.A. consultant reports, training statistics, review of plans. 5. T.A. consultant reports, GOP reports. 6. Field observation. 7. Review of contracts.	Assumption for providing outputs: 1. Necessary contracts are awarded and implemented in a timely manner. 2. Truckers pass transportation savings on to customers. 3. GOB recognizes need for privatization of maintenance.
Inputs: Construction Construction supervision Maintenance T.A. Studies, Evaluation, Audit, etc. Training Equipment Inflation & Contingency	Implementation Target (Type & Quantity) 62,127 ($ 000) 4,500 1,500 885 200 1,378 19,410	AID records and financial documents.	Assumptions for providing inputs: Funding approved as proposed.

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THE DIRECTOR

BALOCHISTAN ROAD PROJECT (391-0510)

USAID/PAKISTAN MISSION DIRECTOR'S WAIVER FOR A.I.D. PAYMENT OF INTERNATIONAL PARTICIPANT TRAVEL COSTS

A.I.D. Handbook 10, Chapter 16A1, provides that the cost of international travel, including incidental costs en route as well as the cost of travel between the participant's city and the points of departure and return in the participant's home country, shall be paid by the host government or other sponsor unless, in the case of Mission-funded programs, the Mission Director has justified and authorized full or partial waivers and has so notified S&T/IT.

Training and institution-building are important components of the $2.280 billion economic assistance program negotiated between the Governments of the U.S. and Pakistan. USAID/Pakistan's experience, however, has been that the Government of Pakistan (GOP), due to serious foreign exchange and budgetary constraints, has been historically unable to fund internatior travel costs for short-term training programs. The consequences have be at Pakistani participants have, on numerous occasions, been denied v ile and much needed training, inhibiting the achievement of project

I have carefully reviewed the advisability of requiri P funding for travel costs for participant training of one year or the alternative of funding such travel with grant and loan funds p through USAID/Pakistan to the GOP. Recognizing the es of many of our projects and the fact that project success will be enhanc encouraging opportunities for short-term training, I have determined that it would be prejudicial to U.S. interests to require that the GOP pay the entire international participant travel costs for training programs of one year or less.

Therefore, on all Mission-funded training programs up to and including one year, USAID/Pakistan shall be responsible for the entire cost of the round-trip economy class air ticket and other necessary incidental costs en route. Where a PIO/P has been originally written for a program of one year or less, but, after the participant has initiated his or her program, the program is extended so that it exceeds one year in total, USAID/Pakistan shall also fund the round-trip ticket. The justification for funding programs that are extended is to minimize administrative problems which are otherwise likely to occur.

On the basis of the above justification and pursuant to handbook 10, Chapter 16C2, I, James A. Norris, principal officer of the Agency for International Development in Pakistan, do hereby waive the requirement that the host government fully fund international travel for training courses of one year or less and authorize payment with USAID/Pakistan loan and grant funds for travel costs as specified above.

[X] Approved [ ] Disapproved

James A. Norris
Mission Director

7/19/90
Date

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THE DIRECTOR

ANNEX G

BALOCHISTAN ROAD PROJECT (391-0510)

Certification for Compliance With Gray Amendment

I, James A. Norris, the principal officer of the Agency for International Development in the Islamic Republic of Pakistan, do hereby certify that the acquisition plan in the Project Paper was developed with full consideration of maximally involving Minority and Women-Owned Firms, or Gray Amendment Organizations, in the provision of required goods and services. Set-aside opportunities for such organizations to participate in this project have been assessed and deemed inappropriate at this stage. However, such organizations are encouraged to compete for contract awards, and prime contractors are expected to make an effort to sub-contract, as appropriate, with these entities. During the course of implementation, opportunities for such organizations to participate in the project will be further considered.

[X] Approved [ ] Disapproved

James A. Norris
Mission Director

7/19/90
Date

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INITIAL ENVIRONMENTAL EXAMINATION (IEE)
FOR

Balochistan Road Project
(391-0510)

1.	Project Country	:	Islamic Republic of Pakistan
2.	Project Title & Number	:	Balochistan Road Project (391-0510)
3.	Project Funding	:	The LOP funding will be $37 million
4.	Life of Project	:	FY 1990 - FY 1997 (7 Years)
5.	Reviewed and Concurred by:		Gene V. George, Chief Office of Engineering and Environment Signature Gene V George Date MARCH 26, 1990
6.	Recommended Environmental Action:		Positive Determination
7.	Mission Director's Concurrence:		Signature James A. Norris James A. Norris Date 3/26/90
9.	Decision of Environmental Coordinator, Bureau for Asia and the Near East:		Approved D. Rox Disapproved _____ Date 4-5-90

ESE:CLAII
IEEBALAD:12/12/89
REV:3/22/90

INITIAL ENVIRONMENTAL EXAMINATION (IEE)
FOR
Balochistan Road Project
(391-0510)

1. Project Country : Islamic Republic of Pakistan

2. Implementing Agency : Communication and Works Department, Government of Balochistan

3. Project Title & Number : Balochistan Road Project (391-0510)

4. Life of Project : FY 1990 - FY 1997 (7 Years)

6. Project Funding

The LOP funding will be $87 million ESF Grant.

7. Goal and Purpose of the Project:

Goal — The goal of the project is to accelerate the integration of Makran Division of Balochistan into the socio-economic mainstream of Pakistan.

Purpose — The purpose of the project is to improve the quality of life in Makran through improving essential infrastructure.

8. Project Description:

The project will focus on the construction and improvements of the road from Bela to Turbat via Awaran and the establishment of a road maintanance program. There are three distinct sections that comprise the road:

a. The 35 kms Bela-Awaran Road (BAR) section starting at Bela.

b. The 101 kms BAR section beginning from the end of the first section and ending at Awaran; and

c. The 240 kms Awaran to Turbat segment.

9. Environmental Impacts:

The reconstruction of the road consists of an improvement of the existing paved road in the 35 kms Bela-Awaran Road section, up-grading of a gravel track to paved road in the 101 kms BAR section and 240 kms of the Awaran to Turbat segment. There will be some realignment of the road to conform it to highway design standards. The road will pass through an area that is currently sparsely settled due to the lack of proper infrastructure. The new road could result in new settlements cropping up along the road. This could result in an impact on the ecology of the area. The following environmental parameters should be examined:

a. Project Location:

i. Disruption to hydrology
ii. Resettlement
iii. Depreciation/Appreciation of nearby land values
iv. Environmental aesthetics degradation
v. Inequitable locations for rural roads
vi. Loss of terrestrial ecology including wildlife
vii. Preservation of archaelogical, cultural and historical sites.

b. Construction Phase:

i. Silt runoff from cut-and-fill areas
ii. Safety of workers from construction accidents
iii. Communicable disease hazards including enteric diseases, malaria and the typical problem of the sand fly in the project area.
iv. Slum creation
v. Cultural differences
vi. Uncontrolled escape of hazardous materials into the environment
vii. Escape of air pollutants (including dust)
viii. Noise and vibrations
ix. Disruption of utilities along the road
x. Disruption of traffic along the road

c. Project Operations:

i. Noise disturbance
ii. Vibration and disturbance
iii. Air pollution
iv. Continuing climatic erosion
v. Highway runoff contamination
vi. Highway spills of hazardous materials
vii. Uncontrolled sanitary wastes
viii. Congestion at access/exit points
ix. Inadequate highway maintenance
x. Groundwater pollution from fills

d. Others

i. Road alighnment alternate analyses, where possible
ii. The high intensity seasonal rain fall and related construction and maintenance requirements
iii. The sustainable nature of fisheries industry at Pasni
iv. Points identified during scoping session.

10. Recommendations:

a. We recommend that a scoping session be conducted in May 1990 in Turbat to identify the environmental problems and to develop a scope of work for the environmental assessment and social soundness analysis.

b. We recommend that the environmental and social soundness assessment be conducted as an integral exercise. The EA must be completed as soon as possible, but not later than commitment of funds for the total construction activity.

c. We recommend that after developing the scope of work, a consultant be hired to perform the following:

i. Make an assessment to delineate the significant environmental effects of the project.

ii. Describe and quantify the effects.

iii. Describe feasible mitigation measures for minimizing, eliminating, or offsetting unavoidable adverse effects.

iv. Recommend the most appropriate mitigation and/or enhancement measures.

This recommendation is consistent with AID Regulation 22 CFR Part 216, Section 216.3(d)(viii)

d. We recommend that Pakistani experts should also be included in the Environmental Assessment Team to build host country capability. It is recommended that Pakistani experts should be involved right from the scoping session stage. That way they will be instrumental for developing the SOW and would be more effective during the environmental assessment phase. We also recommend that as soon as the consultants are hired and they are in Pakistan, they should schedule additional scoping sessions to determine the issues for the environmental assessment.

11. Recommended Environmental Action : Positive Determination

12. Prepared by : Chaudhary Laiq Ali
Mission Environmental Engineer

Signature
Date 3/25/90

13. Reviewed and concurred by : Pervaiz Gani, Chief
Infrastructure Division
Office of Engineering

Signature
Date 3/26/90

Raja Rehan Arshad
Project Engineer
Office of Engineering

Signature
Date 3/26/90

Karim Nayani
Project Officer (BALAD)

Signature
Date 3/26/90

ENG:CLAli
IEEBALAD:
(Rev)3/22/90

TECHNICAL ANALYSIS

1. Road Construction

Background

The Makran Division of Balochistan province in Pakistan is virtually isolated from the other areas of the province and the market center of Karachi. The road network leading to and running throughout the Division is deficient. The existing roads are gravel and silty tracks with few bridges over waterways. The lack of transportation facilities is a serious constraint to development in Balochistan. The principal link into and out of the Makran division is the 376 km. long Bela-Awaran-Turbat (BAT) road, which also passes through the neighboring Kalat Division. This road provides access for the Makran Division to the commercial market center of Karachi. The project will focus on the construction of the road from Bela to Turbat via Awaran. The overall road segment is comprised of two distinct sections: (1) a 136 km. Bela-Awaran Road (BAR) section starting at Bela and (2) the 240 km. Awaran Turbat Road (ATR) segment.

Section I: Construction and Improvement required to upgrade the existing 136 kms. BAR

The first 35 kms. of this section is an existing 4 meter wide road with a Double Bituminous Surface Treatment (DBST) pavement constructed in 1984 by the Government of Balochistan (GOB), Communications and Works (C&W) Department. Because of inferior design standards and poor engineering, the condition of this section is such that the existing pavement structure, surfacing and base-course will need to be dismantled and new construction provided. The road embankment has eroded in places and the roadway structures have deteriorated significantly. The project will provide improvements for this section to upgrade it. In plain areas a 6.6 meter paved roadway with 1.5 meter shoulders and a DBST pavement will be constructed. The existing drainage structures were evaluated to make improvements for an efficient drainage.

USAID began work on the 101 km. middle section of the road under the BALAD project, but encountered construction delays. A direct AID contract was awarded to a local construction firm in September 1987 with a contract period of 30 months. In June 1989 a portion of the contract was terminated for convenience in the best interest of the U.S. Government. The contract size was reduced from 101 kms. to 56 kms. Despite the reduced scope of the contract, progress continued at an unacceptably slow pace. Nearing the planned completion date of May 29, 1990, the reduced contract was only 29 percent complete. Keeping in mind the inability of the local construction firm to complete the project on time, USAID opted for a no-cost termination settlement agreement with the construction firm.

The remaining work for this 101 km. segment will be combined with the tender package to be advertised for the other section of the road.

Section II: Construction of the 240 km. Awaran-Turbat Road

The existing section from Awaran to Turbat is a 4 meter wide gravel track developed from an old camel trail. The track is being maintained by C&W Makran. The existing track follows the natural ground profile, with steep grades at places where the track crosses stream beds. In addition, there are numerous stream crossings requiring some form of drainage structure. Near the town of Turbat, about 22 kms. of the track have been paved by C&W, Makran Division. Unfortunately, the paved section was not properly designed in accordance with basic engineering principles. The vertical profile drops off abruptly at some stream crossings where drainage structures have not been provided and in some sections bridges and culverts have been built. Since the 22 km. paved section out of Turbat was neither properly designed nor constructed, the pavement will be dismantled and a new pavement structure will be constructed. The 62 existing box culverts will likewise be dismantled to permit the construction of new culverts.

On the existing 4 meter gravel track, construction of a 6.6 meter paved DBST roadway with 1.5 meter hard shoulders is planned. Twenty-nine bridges in addition to 250 box and pipe culverts will be constructed.

USAID plans to award the construction of 376 km. BAT road in one package. The invitation for bidding (IFB) documents for the construction services is planned to be issued immediately after the review of the design is completed by the selected A/E firm, November 1990.

Design Standards and Analysis for Road and Bridge Construction

A joint venture of an American A/E firm and Pakistani A/E firms was contracted by USAID in March 1986 for the design of 101 kms. of Bela-Awaran Road. Later, in March 1989 another JV of US/Pakistani A/E firms (hereafter referred to as previous JV) was contracted for the design of the existing 35 kms. Bela-Awaran Road (BAR), and 240 kms. Awaran-Turbat Road.

The design standards recommended by the previous JV and approved by the Government of Balochistan and USAID are as follows:

Section I: 136 Km. BAR

- Roadway Geometrics

The horizontal and vertical alignment of the road has been designed in accordance with AASHTO standards for rural roads. A 6.6 meter paved DBST roadway with 1.5 meter hard shoulders on each side will be constructed. It

will permit traveling speed of 50, 65 and 80 kms./hr depending on the terrain with a maximum 8% grade. In the mountainous areas of BAR, similar AASHTO standards for rural roads have also been adopted with a design speed of 50 km/hr. It is not economically justified to maintain AASHTO standards for rural roads in the 3.5 km. extreme mountainous stretch, km. 12+500 to km. 16+00. The design standards in this mountainous stretch have been lowered in accordance with AASHTO standards for "local" rural roads. The paved width in the mountainous section is reduced to 6.1 meters with a design speed of 30 km/hr and minimum horizontal curve radius of 30 meters. In general the vertical grade is limited to 8%. There is a steep grade up to 15 percent at one location. Ten percent grades will also occur in a few locations for short stretches.

An analysis of geometric design prepared by the A/E firm is given in the Materials Report which is in the USAID/ENG files.

- Roadway Structure (pavement)

In the first 35 km. of the BAR the existing pavement structure, surfacing and base-course are to be dismantled, and to be provided with 24 cms. aggregate base course and 14 cms. sub-base. In the remaining portion, a new road will be constructed with a pavement section of DBST with aggregate base course 22 cms. thick and a sub-base of 10 cms.

The standards of the roadway structure are based on AASHTO design guide (1986) for ten years life. As an alternative, the pavement was also designed in accordance with AASHTO Institute Method (MS-1), which was not approved because of the increased thickness of pavement and corresponding increase in cost.

The design is based on a minimum of 8 percent CBR value of sub-grade and a 1.23 million standard axle load. The A/E firm carried out a traffic survey in March-April 1989, which indicated an existing average daily traffic of 135 vehicles. A generated traffic of 20%, a diverted traffic of 15% and development traffic of 10% was added to the existing traffic count. A subsequent 10% annual increase in traffic during the 10 years service life of the road was considered.

An analysis of equivalent axle/load applications and structural thickness requirement is given in the Materials Report of the A/E firm, which is in USAID/ENG files.

Drainage Structures

A. First 35 Kms. of BAR Existing Paved Road

There are five existing bridges in this section; one large bridge at approximately km. 1+477 has recently been constructed by C&W, and another bridge near

Goko is under construction by C&W. Out of the three other existing bridges, two will be widened to match the 6.6 meters paved width of the road. One of the existing bridges will have to be dismantled due to approach alignment changes.

The existing 54 box culverts will remain in place, widened to meet the requirement of new roadway width and erosion control provided around wing walls and downstream ends.

There are 11 existing on-grade low water crossings. Ten of these will be converted to pipe or box culverts. For the one low water crossing a side ditch will be constructed to divert the water to the nearby box culvert.

There are approximately 2,535 linear meters of existing retaining walls of which 10-15 percent will be repaired or replaced.

B. Remaining Portion of BAR

In the lower portion of the BAR, 14 bridges, 29 box-culverts and 147 pipe culverts will be constructed. The discharge in the bridges ranges from 6,000 cusecs to 150,000 cusecs. The bridge foundations are a combination of a cast in place RCC piles and spread foundation. The average depth of piles is 9 meters. Boring logs for bridges and design parameters for piles foundation are given in the Materials Report prepared by the A/E firm, which is in the USAID/ENG files.

Section II: 240 km. Awaran-Turbat Road

- Roadway Geometrics

The horizontal and vertical alignment of the road is in accordance with AASHTO standards for rural roads. This will provide a 6.6 meter paved DBST roadway with 1.5 meter hard shoulders on each side. It will permit a traveling speed of 80 km/hr. The analysis of the geometric design is similar to that of the 136 km. BAR, and is given in the Materials Report of the A/E firm, which is in the USAID/ENG files.

The existing horizontal alignment crosses numerous depressions approximately 4 to 14 meters deep. Such gorges occur at about 29 locations. There are only small discharges in most locations.

There will be two construction alternatives for the vertical alignments at the gorges:

- Alternative 'A': When the distance between the two gorges is less than 800 m. continuation of profile grades will occur at the gorges. This will involve significant amount of filling and inclusion of longer lengths of culverts at most locations.

Alternative 'B': When the distance between the two gorges exceeds 800 km. the design will call for the introduction of crest vertical curves in the approach profile grade on each side of the gorge, and a sag vertical curve located at the bottom of the gorge. This will reduce the dipping or roller coaster effect. Compared with the existing alignments the dips will be reduced, and culvert lengths compared with Alternative A will also be reduced.

Roadway Structure (pavement)

A pavement section of DBST with aggregate base-course 24 cms thick will be constructed. Sub-base is not required, because fill material is available with CBR greater than 30 percent. The fill will act as a sub-base.

The recommendations for the road pavement are based on the AASHTO design guide for a ten year life. The design is based on a minimum 30 percent CBR value of sub-grade and a 1.12 million standard axels. The existing daily traffic was counted as 121 vehicles. The standard axels were calculated keeping the same considerations as for the 35 kms. BAR design.

For the existing 22 km. paved road between Turbat and Hoshab, the existing pavement structure will be dismantled because the original C&W design has no provision of a base course. The new pavement structure will also be applicable in reconstructing the existing road.

Pavement design analysis is similar to that of the 35 km. BAR and is given in the Materials Report of the A/E firm, which is in the USAID/ENG files.

- Drainage Structures

29 RCC bridges in addition to 250 box and pipe culverts will be constructed. The spans of the bridges range from 40 m to 250 m. All the bridge foundations are on cast in place RCC piles, average depth 12 meters.

On the existing structures of the 22 km. paved Awaran-Turbat road section, the 62 existing box culverts will be dismantled. The existing culverts are away from the design centre-line, so extensive widening is required at all locations. In addition, the existing culverts do not possess the quality of workmanship to allow continued use. There is evidence of slab failures.

Boring logs for bridges, design parameters for pile foundations and a list of drainage structures giving the sizes and discharges of various structures are given in the Materials Report of the A/E firm, which is in the USAID/ENG files.

2. Road Maintenance

A. Maintenance Operations

The road maintenance effort has traditionally been performed by the C&W Department primarily through force account. As described in the Administrative Analysis section of the project paper the organizational structure of C&W provides for the same management, planning and monitoring group to perform not only road maintenance, but road rehabilitation and construction. As one gets down to the lower levels in the organization, only then are there separate positions and individuals assigned to the different activities. Though force account is used for much of the road maintenance effort, it primarily focuses on routine maintenance activities (Table _ is an indicative list of these activities). The more complicated and costly periodic activities (also see Table _ for these activities) are normally contracted out on a competitive bid basis using local "petty contractors" (this term usually describes companies with little in the way of in-house technical expertise and only minimal equipment resources). Working within this general framework, the C&W plans annual road maintenance programs for each division. The general approach used in arriving at a plan and budget to perform the plan proceeds in the following manner:

1. The road network is basically already defined in terms of gross kilometers of roads in the two primary categories of paved and earth or gravel roads. C&W has established yardsticks for the financial requirements for each type of road on a per kilometer basis. The yardstick approach, a common planning tool used in many countries in Asia as indicated in the keynote address presented by Louis Y. Pouliquen, Director and Asif Faiz, Highway Advisor, Infrastructure Department, World Bank, at the Sixth Conference, Road Engineering Association of Asia and Australia held March 4-10, 1990 in Kuala Lumpur, Malaysia, takes an on-average figure for road maintenance for a road network that is somewhat uniform in nature and has the bulk of the maintenance requirements in the routine maintenance category. The percentage of roads on either side of the average, i.e. some better, some worse than average, are assumed to be similar and will balance out in the average figure. The XEN for a particular district takes the yardstick figures for each type of road and applies these to the road inventory under his control to prepare a budget request. This figure is then passed on to the C&W Department at Quetta to be incorporated into the overall C&W budget request for the upcoming financial year. The road maintenance budget is identified in the request as a distinctly separate part of the overall budget and at this stage is not commingled with the C&W request for funds to conduct the road construction and rehabilitation program.

2. Budget allocations are then received as a result of the provincial budget exercise and only then does the XEN truly begin to plan which roads will be placed in the road maintenance program for that particular year. The specific

roads to receive road maintenance funds are identified and the yardstick figures applied to the length of road. The "gangs" are then dispatched to the worksite and begin to work on the road. In the absence of specific road maintenance programs geared towards the requirements of the road as a result of detailed road condition surveys, the road maintenance program is not effective.

This is unlike the planning process used for road construction or rehabilitation. The budget request prepared by the XEN does contain the name of the road intended to be constructed or rehabilitated, though again rule of thumb figures are used to determine how much the construction or rehabilitation costs will be for a particular road. Once the budget allocations are received and a specific road has been selected to be included in the program, then the XEN's staff visit the road and prepare a PC-1 which contains the "details" for the construction or rehabilitation work to be undertaken on the road. The XEN applies the Consolidated Schedule of Rates (CSR), which are a government approved series of unit rates for the various items of work to be performed, to the quantities of work identified to be completed under the tender and ends up with a government estimate for the work for that particular road.

Traditions are difficult to break especially when one has lived with a system for such a long time and there are inherent benefits to keeping the existing process in place. On the other side of the coin is the growing realization that the present set of procedures do not accomplish what is intended and there are growing expressions of dissatisfaction from the populace served because their infrastructure is deteriorating at an accelerated pace. Donor investments are now in place in other provinces and on the national level that aim at addressing the same sustainability concerns expressed by the rural people of Balochistan. Innovative approaches to diverge from traditional methodologies to provide the routine and periodic road maintenance services are being instituted. The project will build on the experiences of these efforts to create a road maintenance program that is responsive to the technical and financial maintenance requirements of the road to be constructed under the project in particular, and the overall paved and gravel road network throughout Balochistan.

In looking at any road maintenance system there are basically four steps involved in the entire process:

1. Road Network Identification and Condition (RNIC) to determine the extent of each type of road (paved, gravel, etc.) and the condition of each element of the road for every segment. The effort is initially intensive, then as the road maintenance program extends to the entire network, the flow of information on the system is accounted for in step 4 below. However until reaching that point, the RNIC is extremely important.

2. Road Maintenance Plan or Program (RMP) which involves the preparation of maintenance tasks to be performed and the application of these activities to a particular road segment. Over many years, the frequency of performing the different tasks is determined so a precise allocation of resources can be established. This effort leads into the preparation of proposed annual road maintenance budgets.

3. Road Maintenance Management and Implementation (RMMI), is the on ground execution of the RMP for each division or circle. This involves putting in place the required resources as needed and available to actually perform the tasks identified in the RMP.

4. Monitoring and Feedback (M&F) is the information flow aspect of any program to feed into the system to determine how the work is progressing both in terms of quality and accomplishment of planned outputs. This all important step will provide the necessary information to make required adjustments to the RMP that will contribute to revising budgetary requirements for future years.

- Road Network Identification and Condition

It is recognized by any group dealing with an expansive infrastructure network that in the absence of reliable information on the extent and condition of the system, there is little hope of intelligently preparing a comprehensive maintenance program. Efforts are now underway under the AID funded BALAD project to develop an inventory and condition survey methodology to be used to define the parameters of the network under the control of C&W in the Makran circle (which corresponds to the political Makran Division) and to identify the condition of the road elements. Lessons learned from the AID financed Road Resources Management (RRM) project being implemented in the thirteen rural district councils in the Sindh have also been incorporated into the methodology being employed under BALAD.

Under the Balochistan Road Project the effort will focus on using a contract team such as a local private sector architect and engineering (A/E) firm to inventory every kilometer of each road segment in the Kalat Division (the network for the Makran Division will be conducted under BALAD). This team will work in close coordination with the C&W staff under the S.E. at the division level, especially in the initial identification of the road system. The information compiled will then be reviewed by C&W for accuracy, omissions or additions, and a detailed condition survey will then be undertaken. This second phase will concentrate on recording the actual condition of the road at the time of the survey as well as putting in place kilometer markings to be used as basic reference points along the roads. It is recommended these activities be supervised by the S.E. to minimize the manipulation of the information to enhance the budget of a district.

The process will continue until the entire road network is placed into the comprehensive RMP which will for all practical purposes take some time. The information provided by each iteration of the condition survey will feed into long term planning documents. Each survey is another snapshot of an element of road segment and the particular roads to be included in the survey the second or third time around are those that have had no maintenance during the previous year. The rate of deterioration or lack thereof will be determined by the information gathered. As a result, decisions on allocation of scarce resources can be made with the C&W able to predict with an ever increasing degree of accuracy the potential effect of not maintaining a particular road segment.

- Road Maintenance Planning

Information gathered through the surveys will initially be analysed to determine which road segments are in such a state that these can be placed in a comprehensive maintenance program. Experience from the RRM project has shown there is usually no clear cut distinction that one complete segment can be economically maintained. More often than not the condition survey reveals the deterioration of the road is not uniform with some sections requiring rehabilitation or reconstruction while others can be immediately placed into a maintenance program. Uneven deterioration is more the case with the paved road system than with the gravel road network.

To ensure that everyone associated with the maintenance effort is familiar with what has to be done for a particular task, "performance standards" will be established for each maintenance function to be completed. Performance standards identify what has to be done, quantifies the resource requirements (manpower types and levels, materials, equipment and finances) and describe the methodology to be employed to complete the described task. Table 1 contains a list of typical performance standards used in developing countries for similar types of networks. As can be seen from the footnote on the table, the items have been taken from the list prepared for the RRM project. In defining the maintenance activities a number of terms are commonly used, i.e. routine maintenance, periodic maintenance, and emergency maintenance. From the information provided by the RNIC, the application of the performance standards by type and frequency is planned. Since the process will in effect be new to C&W, it is very difficult to predict how often a routine or even periodic activity should be performed on a particular road segment or element. However over the life of the project information gathered during the M&F phase of the maintenance effort will be used to adjust the RMP to accommodate the determined needs.

- Road Maintenance Management and Implementation (RMMI)

As in any system with tight budgets, the implementation of planned programs usually requires early-on and midcourse adjustments to account for the

unpredictable flow of funds. To accommodate or account for actual budgets less than requested or even allocated during a particular year, a road maintenance prioritization scheme will be prepared. This effort will involve listing in descending order of importance the road segments in each category of road. The relative rank ordering will be determined through the application of set criteria established in consultation with C&W at the central and divisional levels. Finally decisions about the actual allocations during a particular year will be left up to the discretion of the XENs in a division following the prescribed criteria, though in reality some flexibility will be included to provide for unpredictable or unforeseen circumstances.

Implementation of the road maintenance program will deviate from the traditional approach normally employed by C&W. The basic methodology currently used is to employ coolies, mates, work munshies and SDOs to perform the maintenance tasks (for a more complete description of the existing maintenance organization see Annex J). These individuals are on the permanent payroll of C&W. This tends to contribute to less than satisfactory performance. The project will shift the responsibility to execute a road maintenance program from the C&W direct staff to private sector firms with C&W continuing as the enforcers of quality control and management of the road maintenance program. The management functions for road maintenance will extend to overseeing the work of the contractors, approving invoices for payment and making payments to the contractors. The existing staff can more than adequately take on the revised roles. Therefore, there does not appear to be any need for C&W to increase the workforce for the privatization of the maintenance system. The contrary is the case in that using the direct labor approach as the road network is either expanded or improved, additional staff would be needed to a greater extent if the work were to be performed by directly employed labor.

Privatization of the road maintenance effort will follow established practices utilized by C&W to contracting for road rehabilitation or upgrading work. The road maintenance plan for a particular road will be used to prepare a tender for that road. The performance standards will describe the work to be done as well as the number of times the activity will have to be performed. Thus the performance standards will represent an item of work and the number of time the item has to be executed will represent the "units" of work for that particular effort. Since there will not be any approved unit rates for these activities, the technical assistance team will prepare a unit rate in consultation with C&W. The unit rates will be based on the resource allocations defined in the performance standards which will primarily be for the labor, material and equipment requirements. The contractors to be employed under the program will be exposed to on-the-job type training to prepare the firms for what is expected from them. The equipment requirements are not extensive with much of the equipment is available for rent either from the C&W or from the local market. In addition, for those contractors who wish a continued involvement in the maintenance program, the purchase of the equipment is within the means of even the smaller contractors.

The shift from force account maintenance to contract maintenance will be initiated early on during project implementation, but it is acknowledged there will be a transition period during which C&W will have to continue to bear the burden of maintaining the maintainable roads. The SDOs and work munshies will be trained in the entire road maintenance program. As a result of having performed the maintenance work, these individuals will be better prepared to instruct and oversee the work of private sector firms. Extensive training courses will be developed for the work munshies to prepare them to deal with concerns of contractors and local communities along the road, and to enable them to implement the performance standards. The additional benefit to be derived from initially executing maintenance with the existing C&W staff will be to gather information on the accuracy of the production rates estimated in the performance standards. The drawback is that those working on the maintenance effort, at least at the lower level, will soon be aware they are working themselves out of a job and the results of the information gathered while initially executing the maintenance program may be less than reliable. This problem will be taken up directly with the C&W hierarchy to avoid any major problems.

- Monitoring and Feedback (M&F)

Because of the importance of quality control, there is a continuous need to send information back to the planners on how the maintenance system is performing and what is the current condition of the road network.

In conjunction with the establishment of the performance standards, the project consultant will develop a reporting format to record the accuracy of the production rates estimated in the performance standards. At this time it is envisioned the reports will be prepared by the XEN staff in charge of road maintenance and will be collected by the XEN at the division. The information gathered will then be used to make the necessary adjustments to the performance standards to arrive at a set of standards that correctly reflect what can be accomplished. The effect of this exercise is to permit the XEN to prepare more accurate budget estimates derived from precise production figures.

The M&F function will also be used to adjust programs during implementation as the flow of information will be an on-going operation. As the work progresses throughout the year, programs can be curtailed due to either shortage of funds or insufficient time to complete an operation because of a delayed startup. In either case, the functions can be deferred until the next year and with good information, decisions such as these can be made with confidence that the effect of the delay will not be devastating.

B. Private Sector Financing of Maintenance

The common practice for line departments responsible for road maintenance in most provinces is to use the yardstick approach to budgeting for road maintenance. As the project assists C&W to better plan for maintenance,

including more accurately estimating the costs of maintaining a particular road, financing of road maintenance must also be reviewed.

C&W receives all of its funds from the Government of Balochistan. The source of funds for the provincial government is from the general revenues generated through taxes in addition to funds distributed by the federal government. As discussed in the problem section of this PP, there are insufficient resources to cover the road maintenance requirements even using the discredited yardsticks now being employed. Though the annual per kilometer maintenance costs will be lower for the finished BAT road than under existing conditions, the amounts still exceed those available to C&W. There are a number of methodologies that could be employed to generate the required revenues, but one must move from the theoretical possibilities to the practical alternatives. It is generally accepted that there are four basic means of generating revenue for infrastructure development and recurrent cost financing:

1. General taxation including income, property and sales taxes.

2. Bond financing of infrastructure development employing the floating of bonds to generate funds for road programs.

3. A system of user taxes, e.g. taxes on gasoline, import duties on vehicles and spare parts, and vehicle registration fees.

4. A series of tolls levied on the users of a particular stretch of road.

In the late 1930s and early 1940s most developed countries moved away from tapping the central treasury for infrastructure needs. Taxes on petroleum, oil and lubricants (POL), and sales taxes on vehicle related items represented the bulk of the source of funding for infrastructure expansion. It was during this period that the economic state of the population of most developed countries began to blossom. One evident result, aside from the boom on building individual houses, was that people had access to personally owned motor vehicles and the mobility of the population began to grow. Inherent in this increased mobility has been the need or desire to have an ever expanding infrastructure system to travel on. The funds generated from user fees immediately became insufficient to meet the growing needs of the populace.

To address the immediate needs of the expansion program, bonds were floated to cover the development costs. The bonding approach worked well for a once-and-for-all effort to provide financing for a particular need. It became evident that this approach would not be acceptable for an ongoing infrastructure development effort and is now used primarily to fund specific needs. The case with developing country requirements for infrastructure are more in line with a continuing need as opposed to a one shot deal.

At about the same time (1930s-40s), the first major toll road experiment began with the toll road concept on the Pennsylvania Turnpike. The road was constructed as a high speed limited access highway connecting important commercial centers throughout much of the state of Pennsylvania. The use of the road was quite extensive, which provided a significant increase in the funds available for not only the recurrent costs of this highway, but expansion of the state system. The success of this experiment led many other government organizations to initiate a toll road approach to pay for growing infrastructure requirements.

As other countries began to develop, a need for a far more extensive infrastructure system was created. Pakistan is no exception, as is evidenced by the need for the BAT road. The current thinking on how to finance this requirement and the additional recurrent cost needs created by an expanded road network has received much attention. The most recent thinking is that there are a number of demands on the general treasury and to try to extract more for the costly expansion of the road network would place a burden on the fund beyond its limits. It is also recognized that most developing countries (Pakistan included) do not have the system in place to accurately assess and collect user fees to the extent necessary. Besides, the demands on any funds that go into the general treasury are extensive. The recently announced increase in the POL tax was necessary to provide the central treasury with additional funds to reduce the overall budget deficit. This is a prime example of the problems associated with targeting user taxes in a system that has a limited tax base and where these types of taxes amount to a major portion of a government's revenues.

Initial discussions with the GOB on the possibilities of toll financing of road maintenance have been encouraging. The Planning and Development, and Finance Departments, GOB, recognize the need to identify other sources of funding recurrent costs. The toll concept is not foreign to Pakistan in general and Balochistan in particular. Many major bridges and a number of road links have tolls. At the present time in Balochistan there is a toll collection station on the Hub River bridge with the revenues going to the local government. Until 1986, C&W operated a toll on the Regional Cooperation for Development (RCD) highway between Mandh and Kannar. The RCD highway was transferred to the National Highway Board in 1986 and the toll collection process was discontinued.

The project will build on the experiences to date in Pakistan and will establish the BAT road as a toll road. The normal conditions under which toll roads have been quite successful exist for this road segment. Overland access to the area will be primarily limited to the BAT road and the improved condition of the road will result in considerable savings to the transport operators through reduced operating costs and time savings. USAID financed a "Toll Study" which conducted a survey of transport users on the existing BAT road. The survey results indicated the transporters recognize that savings will be experienced not only in the vehicle operating costs and travel time, but in the crew commissions

as a result of reduced turn-around time. In most instances this amounts to Rs 150-250 per return trip. The willingness to surrender at least some of these types of savings was also studied. In virtually all instances, the response was quite positive, with the range of acceptable toll rates for truck type vehicles in the vicinity of Rs 15-25. Compared with the savings identified by the transporters for lower crew commissions, the expressed level of tolls they are willing to pay appears very low, but not surprising.

Having established the toll concept as one that is being used and an apparent willingness to pay tolls for an improved road, the Mission decided to promote this approach as one means of generating revenues to support the recurrent costs. Theoretically setting a toll is only a minor part of working through the process of how to get it done. There is an established tradition in Pakistan to privatize the collection of user fees. In particular, Octroi (the tax on goods brought into the limits of a municipal corporation) is collected by the private sector. The same is true for the export tax levied by the district councils on goods grown, manufactured or processed in the district council limits and "exported" to other areas. The general procedures followed in these instances are for the individual rates for items to be assessed these taxes to be set by the provincial governments with some authority vested in municipal corporations and district councils to modify the rates within approved limits. These bodies then auction the rights to collect the taxes on behalf of the councils. The offerer that provides the most revenues is accepted and an agreement is entered with the firm submitting the accepted offer. The floor price for the auction is provided by the councils, which is usually established by taking the contract price from the previous year and increasing that by 15%. This is obviously not an accurate means of determining the floor price, but does provide a simplified approach to getting the process moving. The successful firm is supposed to maintain records on how much in the way of goods passed through the collection point. This would provide current reliable information on the starting price of the auction, but it is not in the firm's best interest to be fully accurate for obvious reasons.

Consideration was also given to developing the capability in C&W to establish a toll section to handle the collection of tolls. Initial discussions with C&W and other GOB officials indicated that there is little GOB support for this type of approach. The toll collection function is not one C&W intends to take on and to insist on C&W developing the inhouse capability for the BAT road only is a non-starter. The project, therefore, proposes to follow the established accepted practice of collecting tolls, i.e. privatization of the collection process. Initially, the floor price to be used in the auction will be based on an agreed toll level extended by the number of vehicles per day per category, times 365 days per year. Table 2 below give an estimate of potential revenues to be generated through tolls for rates ranging from Rs 5 to 18 for personal cars to Rs 20 to 40 for busses and trucks.

Comparing this with the recurrent cost to maintain the two sections of road (including the cost to collect the tolls) indicates a gap between what will be generated and what is required. Table 2 compares the required maintenance costs for the two sections with the possible revenues to be generated with different toll rates. The other aspect of the use of tolls is the cost of collecting the tolls. Since the BAT road will not be a limited access road, increased construction cost such as additional lanes for the toll stations will not arise. The only real cost to be accounted for will be that of the firm contracted to collect the tolls and the estimate of these costs is also included in the computations.

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TABLE - 1

PERFORMANCE STANDARDS

Item #	Activity	Type of Maintenance
P-1	Pothole Patching Surface	Routine
P-2	Pothole Patching/Base Repair	Routine
P-3	Shoulder Blading	Routine
P-4	Shoulder Restoration	Routine
P-5	Drainage Ditch Cleaning	Routine
P-6	Drainage Ditch Restoration	Routine
P-7	Culvert Cleaning	Routine
P-8	Culvert Repair/Replace	Routine
P-9	Vegetation Control	Routine
P-10	Structure Repair	Routine
P-11	Repair of Guard Rails and Guard Posts	Routine
P-12	Traffic Signs Repair/ Replacement	Routine
P-13	Field Supervision	Routine
P-14	Field Inspection	Routine
P-15	Resealing Surfaces	Periodic
P-16	Removal of Land Slide and Flood Debris	Emergency Activity

Source of Information - Road Resources Management (RRM) Project

TABLE - 2

VII. COMPARISON OF POTENTIAL REVENUE GENERATED THROUGH TOLLS VERSUS TOTAL MAINTENANCE COSTS

REVENUE GENERATION FROM TOLLS — TEST 1 — 1 of 4 pages

ANNUAL RATES	DAILY TRAFFIC 20	20	BELA-AWARAN ROAD 5		136 KMS		
YEAR	BUSES	TRUCKS	OTHERS	TOTALS	REVENUES	MAINTENANCE	COLLECTION FEES
1993	19	216	36	271	1,781,200	3,400,000	1,872,000
1994	22	248	41	312	2,048,380	3,400,000	1,872,000
1995	25	286	48	358	2,355,637	3,400,000	1,872,000
1996	29	329	55	412	2,708,983	3,400,000	1,872,000
1997	33	378	63	474	3,115,330	12,920,000	1,872,000
1998	38	434	72	545	3,582,629	3,400,000	1,872,000
1999	44	500	83	627	4,120,024	3,400,000	1,872,000
2000	51	575	96	721	4,738,027	3,400,000	1,872,000
2001	58	661	110	829	5,448,732	3,400,000	1,872,000
2002	67	760	127	953	6,266,041	12,920,000	1,872,000
2003	77	874	146	1,096	7,205,947	3,400,000	1,872,000
2004	88	1,005	167	1,261	8,286,840	3,400,000	1,872,000
				TOTALS RS	51,657,770	59,840,000	22,464,000
				REVENUES	51,657,770	TOTAL COSTS	82,304,000

REVENUE GENERATION FROM TOLLS — TEST 2

ANNUAL RATES	DAILY TRAFFIC 25	25	BELA-AWARAN ROAD 8		136 KMS		
YEAR	BUSES	TRUCKS	OTHERS	TOTALS	REVENUES	MAINTENANCE	COLLECTION FEES
1993	19	216	36	271	2,249,495	3,400,000	1,872,000
1994	22	248	41	312	2,586,919	3,400,000	1,872,000
1995	25	286	48	358	2,974,957	3,400,000	1,872,000
1996	29	329	55	412	3,421,201	3,400,000	1,872,000
1997	33	378	63	474	3,934,381	12,920,000	1,872,000
1998	38	434	72	545	4,524,538	3,400,000	1,872,000
1999	44	500	83	627	5,203,219	3,400,000	1,872,000
2000	51	575	96	721	5,983,701	3,400,000	1,872,000
2001	58	661	110	829	6,881,257	3,400,000	1,872,000
2002	67	760	127	953	7,913,445	12,920,000	1,872,000
2003	77	874	146	1,096	9,100,462	3,400,000	1,872,000
2004	88	1,005	167	1,261	10,465,531	3,400,000	1,872,000
				TOTALS RS	65,239,106	59,840,000	22,464,000
				REVENUES	65,239,106	TOTAL COSTS	82,304,000

REVENUE GENERATION FROM TOLTEST 3

ANNUAL RATES	DAILY TRAFFIC 30	30	BELA-AWARAN ROAD 10		136 KMS		
YEAR	BUSES	TRUCKS	OTHERS	TOTALS	REVENUES	MAINTENANCE	COLLECTION FEES
1993	19	216	36	271	2,704,650	3,400,000	1,872,000
1994	22	248	41	312	3,110,348	3,400,000	1,872,000
1995	25	286	48	358	3,576,900	3,400,000	1,872,000
1996	29	329	55	412	4,113,435	3,400,000	1,872,000
1997	33	378	63	474	4,730,450	12,920,000	1,872,000
1998	38	434	72	545	5,440,017	3,400,000	1,872,000
1999	44	500	83	627	6,256,020	3,400,000	1,872,000
2000	51	575	96	721	7,194,423	3,400,000	1,872,000
2001	58	661	110	829	8,273,586	3,400,000	1,872,000
2002	67	760	127	953	9,514,624	12,920,000	1,872,000
2003	77	874	146	1,096	10,941,818	3,400,000	1,872,000
2004	88	1,005	167	1,261	12,583,090	3,400,000	1,872,000
				TOTALS RS	78,439,360	59,840,000	22,464,000
				REVENUES	78,439,360	TOTAL COSTS	82,304,000

REVENUE GENERATION FROM TOLLS TEST 4 2 of 4 pages

ANNUAL DAILY TRAFFIC			BELA-AWARAN ROAD		136 KMS		
RATES	35	35	15				
YEAR	BUSES	TRUCKS	OTHERS	TOTALS	REVENUES	MAINTENANCE	COLLECTION FEES
1993	19	216	36	271	3,199,225	3,400,000	1,872,000
1994	22	248	41	312	3,679,109	3,400,000	1,872,000
1995	25	286	48	358	4,230,975	3,400,000	1,872,000
1996	29	329	55	412	4,865,621	3,400,000	1,872,000
1997	33	378	63	474	5,595,465	12,920,000	1,872,000
1998	38	434	72	545	6,434,784	3,400,000	1,872,000
1999	44	500	83	627	7,400,002	3,400,000	1,872,000
2000	51	575	96	721	8,510,002	3,400,000	1,872,000
2001	58	661	110	829	9,786,502	3,400,000	1,872,000
2002	67	760	127	953	11,254,478	12,920,000	1,872,000
2003	77	874	146	1,096	12,942,649	3,400,000	1,872,000
2004	88	1,005	167	1,261	14,884,047	3,400,000	1,872,000
				TOTALS RS	92,782,859	59,840,000	22,464,000
				REVENUES	92,782,859	TOTAL COSTS	82,304,000

REVENUE GENERATION FROM TOLLS TEST 5

ANNUAL DAILY TRAFFIC			BELA-AWARAN ROAD		136 KMS		
RATES	40	40	18				
YEAR	BUSES	TRUCKS	OTHERS	TOTALS	REVENUES	MAINTENANCE	COLLECTION FEES
1993	19	216	36	271	3,667,520	3,400,000	1,872,000
1994	22	248	41	312	4,217,648	3,400,000	1,872,000
1995	25	286	48	358	4,850,295	3,400,000	1,872,000
1996	29	329	55	412	5,577,839	3,400,000	1,872,000
1997	33	378	63	474	6,414,515	12,920,000	1,872,000
1998	38	434	72	545	7,376,693	3,400,000	1,872,000
1999	44	500	83	627	8,483,197	3,400,000	1,872,000
2000	51	575	96	721	9,755,676	3,400,000	1,872,000
2001	58	661	110	829	11,219,028	3,400,000	1,872,000
2002	67	760	127	953	12,901,882	12,920,000	1,872,000
2003	77	874	146	1,096	14,837,164	3,400,000	1,872,000
2004	88	1,005	167	1,261	17,062,738	3,400,000	1,872,000
				TOTALS RS	106,364,195	59,840,000	22,464,000
				REVENUES	106,364,195	TOTAL COSTS	82,304,000

REVENUE GENERATION FROM TOLLS TEST 1

ANNUAL DAILY TRAFFIC			AWARAN-TURBAT ROAD		240 KMS		
RATES-RS	20	20	5				
YEAR	BUSES	TRUCKS	OTHERS	TOTALS	REVENUES	MAINTENANCE	COLLECTION FEES
1993	23	191	157	371	1,848,725	6,000,000	1,872,000
1994	26	220	181	427	2,126,034	6,000,000	1,872,000
1995	30	253	208	491	2,444,939	6,000,000	1,872,000
1996	35	290	239	564	2,811,680	6,000,000	1,872,000
1997	40	334	275	649	3,233,432	22,800,000	1,872,000
1998	46	384	316	746	3,718,446	6,000,000	1,872,000
1999	53	442	363	858	4,276,213	6,000,000	1,872,000
2000	61	508	418	987	4,917,645	6,000,000	1,872,000
2001	70	584	480	1,135	5,655,292	6,000,000	1,872,000
2002	81	672	552	1,305	6,503,586	22,800,000	1,872,000
2003	93	773	635	1,501	7,479,124	6,000,000	1,872,000
2004	107	889	730	1,726	8,600,992	6,000,000	1,872,000
				TOTALS RS	53,616,108	105,600,000	22,464,000
				REVENUES	53,616,108	TOTAL COSTS	128,064,000

REVENUE GENERATION FROM TOLLS TEST 2

ANNUAL DAILY TRAFFIC	25	25	8		AWARAN-TURBAT ROAD		240 KMS	
RATES-RS								
YEAR	BUSES	TRUCKS	OTHERS	TOTALS	REVENUES	MAINTENANCE	COLLECTION FEES	
1993	23	191	157	371	2,411,190	6,000,000	1,872,000	
1994	26	220	181	427	2,772,869	6,000,000	1,872,000	
1995	30	253	208	491	3,188,799	6,000,000	1,872,000	
1996	35	290	239	564	3,667,119	6,000,000	1,872,000	
1997	40	334	275	649	4,217,186	22,800,000	1,872,000	
1998	46	384	316	746	4,849,764	6,000,000	1,872,000	
1999	53	442	363	858	5,577,229	6,000,000	1,872,000	
2000	61	508	418	987	6,413,813	6,000,000	1,872,000	
2001	70	584	480	1,135	7,375,885	6,000,000	1,872,000	
2002	81	672	552	1,305	8,462,268	22,800,000	1,872,000	
2003	93	773	635	1,501	9,754,608	6,000,000	1,872,000	
2004	107	889	730	1,726	11,217,800	6,000,000	1,872,000	
				TOTALS RS	69,928,530	105,600,000	22,464,000	
				REVENUES	69,928,530	TOTAL COSTS	128,064,000	

REVENUE GENERATION FROM TOLLS TEST 3

ANNUAL DAILY TRAFFIC	30	30	10		AWARAN-TURBAT ROAD		240 KMS	
RATES-RS								
YEAR	BUSES	TRUCKS	OTHERS	TOTALS	REVENUES	MAINTENANCE	COLLECTION FEES	
1993	23	191	157	371	2,916,350	6,000,000	1,872,000	
1994	26	220	181	427	3,353,803	6,000,000	1,872,000	
1995	30	253	208	491	3,856,873	6,000,000	1,872,000	
1996	35	290	239	564	4,435,404	6,000,000	1,872,000	
1997	40	334	275	649	5,100,714	22,800,000	1,872,000	
1998	46	384	316	746	5,865,822	6,000,000	1,872,000	
1999	53	442	363	858	6,745,695	6,000,000	1,872,000	
2000	61	508	418	987	7,757,549	6,000,000	1,872,000	
2001	70	584	480	1,135	8,921,181	6,000,000	1,872,000	
2002	81	672	552	1,305	10,259,359	22,800,000	1,872,000	
2003	93	773	635	1,501	11,798,262	6,000,000	1,872,000	
2004	107	889	730	1,726	13,568,002	6,000,000	1,872,000	
				TOTALS RS	84,579,013	105,600,000	22,464,000	
				REVENUES	84,579,013	TOTAL COSTS	128,064,000	

REVENUE GENERATION FROM TOLLS TEST 4

ANNUAL DAILY TRAFFIC	35	35	15		AWARAN-TURBAT ROAD		240 KMS	
RATES-RS								
YEAR	BUSES	TRUCKS	OTHERS	TOTALS	REVENUES	MAINTENANCE	COLLECTION FEES	
1993	23	191	157	371	3,593,425	6,000,000	1,872,000	
1994	26	220	181	427	4,132,439	6,000,000	1,872,000	
1995	30	253	208	491	4,752,305	6,000,000	1,872,000	
1996	35	290	239	564	5,465,150	6,000,000	1,872,000	
1997	40	334	275	649	6,284,923	22,800,000	1,872,000	
1998	46	384	316	746	7,227,661	6,000,000	1,872,000	
1999	53	442	363	858	8,311,810	6,000,000	1,872,000	
2000	61	508	418	987	9,558,582	6,000,000	1,872,000	
2001	70	584	480	1,135	10,992,369	6,000,000	1,872,000	
2002	81	672	552	1,305	12,641,225	22,800,000	1,872,000	
2003	93	773	635	1,501	14,537,408	6,000,000	1,872,000	
2004	107	889	730	1,726	16,718,020	6,000,000	1,872,000	
				TOTALS RS	104,215,317	105,600,000	22,464,000	
				REVENUES	104,215,317	TOTAL COSTS	128,064,000	

ADMINISTRATIVE ANALYSIS

Maintenance Organization of the C&W Department

Road maintenance has long been the poor sister to road rehabilitation and new construction in not only the Balochistan C&W Department, but virtually every line agency charged with the responsibility for road maintenance activities. This point is amply reflected in the organizational arrangement for road maintenance within C&W Department.

As described above, C&W is a hierarchical organization with career opportunities accorded the qualified graduate engineers who enter the service as Assistant Engineers usually in the position of Subdivision Officers (SDO). The aim of every SDO is to be promoted to Executive Engineer (XEN) which is the pivotal position in C&W. As with road rehabilitation and construction, a great deal of authority is vested in the position of XEN for the planning and execution of the road maintenance program in his area. As the highest C&W official at the district level (this unit of area is the geographic breakup of the province by C&W and corresponds to the political districts) the XEN's powers extend from budget preparation and eventual allocation for specific maintenance activities to personnel actions for the people under his supervision. Though the XEN is supervised by the Superintendent Engineer (SE), there is little the SE can or usually does to control, direct or reprimand the XEN for his actions. The system does provide for an annual review of performance in the form of an Annual Confidential Report (ACR) prepared by the immediate supervisor of the employee (i.e. the SE for the XEN, XEN for the SDO and so on) and this is countersigned by the next two higher levels of authority.

The report is in fact used as the basis for promotion opportunities, but only carries the weight of restricting a person's ability to be promoted if one receives a less than favorable ACR. It does not carry the threat of separation from service or termination of employment. The creation of any new position(s) must go through a fairly lengthy process that is primarily driven by budget availability. Upward mobility is thus limited to promotion opportunities through openings created by the departure of individuals filling higher level positions, which triggers a domino effect. For instance, as a Chief Engineer retires, a vacancy is created. The files of the SEs who have been in that position for 3-4 years or more are reviewed and one person is selected. This creates a vacancy for SE and the XENs with at least 8-10 years service are reviewed and again a person is selected to fill that position and likewise for the vacant XEN position, the personnel files of SDOs with a minimum of 6 years service are reviewed for promotion to the XEN position. As was discovered for other aspects of the C&W organization, the process was originally prepared with some degree of logic to be responsive to the organizational needs of the C&W, but has

encountered the same shortcomings of many bureaucratic institutions as implementation of the system has taken on a different path. The one basic problem with the process, as can be inferred from this discussion, is that one's chance of promotion once a vacancy surfaces is more a function of longevity of service than capabilities and reward for good performance.

There is a direct relationship between the career mobility process described above and focus or lack thereof on road maintenance. In looking at the C&W administrative setup, again the point about road maintenance taking the backseat is very evident. The ACRs written for the XEN and SDOs, in particular, focus on accomplishments related to completing the road rehabilitation and construction programs planned for that particular year with virtually no mention of how close the person's group came to achieving the road maintenance targets set. One prime example that will be elaborated on below is the lack of fiscal control to ensure funds budgeted for road maintenance in fact actually end up for the purposes intended or allocated.

In carrying out the road maintenance functions, two methodologies are presently employed. For the more basic activities normally referred to as routine maintenance, direct labor is employed while for the more complicated or detailed periodic maintenance functions, contracts are awarded to petty contractors (usually smaller firms located in the general vicinity of the work and these firms have little equipment or technical expertise in their organizations) who work under the direct supervision of the C&W staff.

The direct labor or force account work depends on a basic unit of labor commonly referred to as road gangs comprised of five laborers termed "coolies." Again as a byproduct of the yardstick approach, one person is allocated for two miles of road (in C&W they refer to the allocation of coolie time as one-half person per mile) so the five person road gang is in charge of ten miles of road. The person charged with the responsibility to manage this road gang is a "mate." This individual is generally more educated than the other members of the gang and it is not uncommon for individuals to move from being coolies to mates. With the allocation of work as described above, i.e. ten miles for one gang, it would be extremely difficult for the SDO who is ultimately in charge of all work in his subdivision to directly supervise these groups, therefore an intermediary level of management has been established. Three gangs are controlled by a road inspector or "work munshie." This individual is to keep track of the work performed by the road gangs to ensure acceptable levels of production and quality control of work completed. For the entire road network in the Balochistan Province of 10,861 kms. of road (around 2,112 kms. of paved road and 8,749 kms. of earth/gravel roads) there is a total workforce of approximately 6,000 including coolies, work munshies and road inspectors. This figure is quite impressive, but does not reveal the entire picture. Though difficult to substantiate, discussions with various officials revealed that though the province does in fact pay the salaries of this number of people, there is

good reason to believe the functions performed by these individuals in no way relates to road maintenance. The ultimate effect is to pay a workforce charged with the responsibility of maintaining the provincial road network; yet only a small portion are doing the work intended. Traveling around Balochistan will immediately reveal the effects of this problem. The road system, though not heavily used, exhibits signs of considerable accelerated deterioration.

The procedure of using local contractors to perform periodic type maintenance follows the established practices created for road rehabilitation and construction. The XEN and his staff prepare a particular document for an activity for a specific road or road segment. The document is commonly referred to as a scheme. The scheme is then floated (advertised) as a tender and qualified contractors are permitted to participate in the bid. Competitive bids are received, evaluated and contract awards made to the lowest bidder. The selected contractor proceeds to perform the work described in the contract and is supervised by the SDO and his staff. Payment requests are processed through the XEN who actually makes the payments to the contractors.

In dealing with the system described above for road maintenance, the problem areas do not relate to any lack of technical training as the work to be performed is not very complicated in terms of technical requirements, but the tasks do need significant management input and attention especially during work execution. Administratively, C&W has the basic organizational structure to accommodate the road maintenance program proposed under this project. The modifications required are primarily function oriented in nature with minimal additional manpower needed. The extent of the modifications are yet to be thoroughly determined. AID project development funds have been provided to finance a pre-project, in depth study by the Federal Highway Administration (FHWA) of the required changes. Annex O is the scope of work to be performed by the FHWA team. The timing of the study is such it will provide the needed information in the first year of project implementation which will result in a proposal to be considered by the Government of Balochistan for a revised C&W organization for road maintenance. In addition, the FHWA team will draft a scope of work for a technical services team to implement the recommendations prepared by the FHWA and accepted by the GOB.

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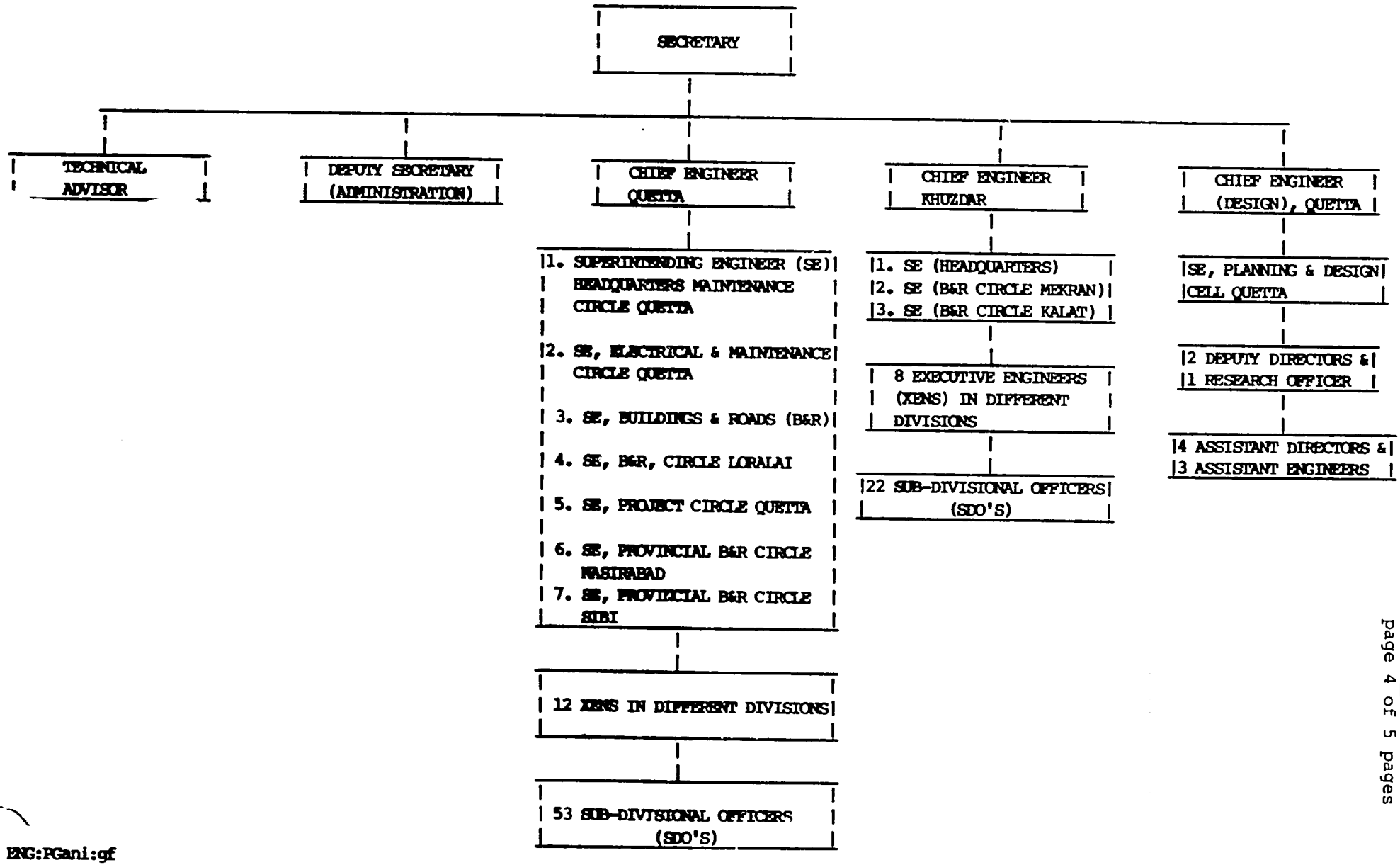
ORGANIZATION CHART OF COMMUNICATIONS & WORKS (C&W), PHYSICAL PLANNING AND HOUSING DEPARTMENT



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ECONOMIC AND FINANCIAL ANALYSES

Overview

USAID contracted with a local consulting firm to carry out economic and financial analyses of the BAT road. Its report, which is available from USAID/ENG, is summarized below. Both the economic and financial analyses of the BAT road are based on the same underlying methodology. That is, the costs of constructing and maintaining the new road are compared with the benefits expected to result over the road's ten year life time. These benefits, which are described in greater detail below, include: user cost savings, maintenance cost savings, avoided spoilage of perishable fruits and vegetables, and (for the financial analyses) potential toll revenues. This represents a rather conservative approach to benefit estimation since no effort was made to quantify the benefits of increased economic activity which might develop as a result of improved road transport in the Makran region.

Appropriate shadow pricing has been used where necessary in the economic analysis. Specifically, taxes and duties were excluded from both cost estimates and from estimates of cost savings resulting from the improved road. Similarly, potential toll revenues were not included in the economic analysis since they are simply another form of transfer payment.

Data on vehicle traffic, vehicle operating costs on existing and improved road surfaces, road maintenance costs, and fruit/vegetable spoilage were either collected by the consultants themselves or obtained from other sources of transport - related data produced by the World Bank, the National Transport Research Center, or the Government of Balochistan.

B. Economic Analysis

The economic costs of the BAT road consist of construction and maintenance costs. Construction costs are incurred over a four year period (1991-94), while maintenance costs are incurred during each year that the road is in use.

On the benefit side, the improved road results in user cost savings since the overall consumption of fuel, oil and tires is reduced, while the costs of vehicle maintenance and depreciation are also lowered. These cost savings have been estimated by vehicle type for each year during the lifetime of the road.

Given the existing road's poor condition, maintenance costs of about Rs. 85,000 per km. are required to keep the road in useable condition. Routine maintenance costs will be only Rs. 25,000 per year for the improved road (although overlay costs of Rs. 165,000 per km will also be incurred after the new road has been in use for five years). The avoided maintenance costs of Rs. 85,000 per km are another category of economic benefit attributable to the new road.

Finally, the improved road provides economic benefits in the form of avoided spoilage of fruits and vegetables being transported from Karachi to Turbat. Specifically, it is estimated that about 25 percent of such fruits and vegetables suffer a 50 percent loss involve due to the current bumpy road, while 15 percent are completely spoiled and hence worthless due to the long travel time.

Overall economic costs and benefits for the Awaran - Turbat and Bela - Awaran road segments are summarized in Tables 1 and 2 respectively. These Tables also summarize the EIRRs for the investments in these road segments. These returns are approximately 17.9 percent and 2.3 percent respectively. Table 3 summarizes economic costs and benefits for the entire BAT road. The EIRR for the road is estimated to be approximately 16.4%, which demonstrates that there is a strong economic justification for the road, especially since a very conservative approach to benefit measurement has been taken.

Finally, a variety of sensitivity analyses were undertaken. Each analysis incorporates a parameter change (such as delaying project construction by a year, or lower time and fuel cost savings) which reduces the economic return on the investment in the BAT road. Neverthless, the EIRRs, which are summarized in Table 4, range between 13.5 percent and 15.7 percent and thus indicate that the economic return to this investment remains relatively high even under less than optimal conditions.

C. Financial Analysis

A widespread problem throughout Pakistan is the lack of adequate spending on road maintenance (as well as on the maintenance of other types of infrastructure). For example, annual maintenance spending on the existing BAT road is only about Rs. 12,000 per km., as compared to the estimated Rs. 54,000 per km. which would be required for adequate maintenance. Given the improved design standards for the new BAT road, routine annual maintenance cost would be reduced to Rs. 25,000 per km., with an expenditure for an overlay of Rs. 165,000 per km in the fifth year of operation. While these maintenance costs are considerably lower than for the existing road, they nevertheless remain significant within the context of the GOB's budget. Moreover, if the BAT Road Project is to provide maximum benefits to the Makran, adequate funding of maintenance must be ensured.

In the project design, USAID proposes that tolls be collected on the BAT road, with the resulting revenues being applied against road maintenance costs. Thus the key financial issue confronting this project relates to the ability of projected toll revenue to cover maintenance costs. To address this issue, USAID contracted for an in-depth toll study of the proposed BAT road. Results of this study indicate that vehicles using the improved BAT road are apt to save between Rs. 150-250 per round trip and would, in general, be willing to pay one

way tolls of at least Rs. 5 - 30 and Rs. 10 - 40 between Bela - Awaran and Awaran-Turbat. Using these estimates of willingness-to-pay for tolls, together with traffic projections by vehicle type over the life of the BAT road, one can estimate toll revenues. These estimates (net of toll collection costs, which are assumed to equal roughly 10-20 percent of toll revenues) can then be compared with estimated road maintenance costs to determine to what extent tolls can finance required maintenance costs. Results of such an analysis are summarized in Table 5. These results indicate that toll revenues are apt to equal 73-106 percent of average annual maintenance costs. Thus there appears to be a real and viable opportunity for the project to mobilize private sector resources to finance most of the BAT road maintenance costs.

Since toll concessions will be sold to private enterpreneurs by the GOB, the actual revenues from tolls available to the GOB depend upn the sale price of the concessions. Hopefully, competition between enterprenuers will ensure that sale prices are, in fact, high enough to transfer the bulk of toll revenues to the GOB.

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ECONOMIC ANAYLSIS OF THE PROJECT — EXIBIT 5.1
AMARAN - TURBAT ROAD

(RUPEES IN MILLIONS)

YEAR	CONSTRUCTION COST	MAINT. COST	TOTAL COST	OPERATING COST SAVING	USER TIME COST SAVING	LOSS AVOIDED	EXISTING MAINT.	SALVAGE VALUE	TOTAL BENEFITS	NET BENEFITS
1990										
1991	178.689	-	178.689							-178.689
1992	205.609	-	205.609							-205.609
1993	197.335	-	197.335							-197.335
1994	29.662	-	29.662	26.221	20.602	38.143	20.400		105.366	75.704
1995		7.860	7.860	30.147	23.674	39.821	22.440		116.082	108.222
1996		8.415	8.415	37.731	27.232	41.573	24.684		131.220	122.805
1997		9.000	9.000	43.422	37.330	43.402	27.152		151.306	142.306
1998		9.634	9.634	47.385	49.874	45.312	29.868		172.439	162.805
1999		68.040	68.040	54.497	57.370	47.306	32.854		192.027	123.987
2000		11.030	11.030	62.678	65.995	49.387	36.140		214.200	203.170
2001		11.803	11.803	71.950	80.618	51.560	39.754		243.882	232.079
2002		12.629	12.629	82.858	95.664	53.829	43.729		276.080	263.451
2003		13.513	13.513	99.763	113.180	56.197	48.102	183.388	500.630	487.117
PRESENT VALUE	482.764	54.304	537.268	196.313	192.957	180.310	119.709	42.028	731.317	194.049

NPV	194.049
B/C Ratio	1.361
EIRR	17.90%

0.000

FILE NAME: BASCASE1.WK1 ... DISK: (CHANGE RECOMMENDED)

ECONOMIC ANAYLSIS OF THE PROJECT — EXIBIT 5.3

ECONOMIC ANAYLSIS OF THE PROJECT — EXIBIT 5.3
BELA - AMARAN ROAD

(RUPEES IN MILLIONS)

YEAR	CONSTRUCTION COST	MAINT. COST	TOTAL COST	OPERATING COST SAVING	USER TIME COST SAVING	EXISTING MAINT.	SALVAGE VALUE	TOTAL BENEFITS	NET BENEFITS
1990									
1991	24.907	-	24.907						-24.907
1992	28.851	-	28.851						-28.851
1993	27.305	-	27.305						-27.305
1994	5.188	-	5.188	0.682	1.195	3.780		5.658	0.470
1995		1.227	1.227	0.789	1.377	4.158		6.324	5.097
1996		1.313	1.313	0.908	1.585	4.574		7.067	5.754
1997		1.405	1.405	0.669	2.389	5.031		8.089	6.684
1998		1.503	1.503	0.342	3.398	5.534		9.274	7.771
1999		11.530	11.530	0.391	3.918	6.088		10.397	-1.133
2000		1.721	1.721	0.454	4.514	6.697		11.665	9.944
2001		1.841	1.841	0.520	5.179	7.366		13.065	11.224
2002		1.970	1.970	0.601	5.962	8.103		14.666	12.696
2003		2.108	2.108	0.691	6.855	8.913	25.875	42.334	40.226
PRESENT VALUE	67.970	8.834	76.804	2.532	12.253	22.181	5.930	42.896	-33.908

NPV	-33.908
B/C Ratio	0.559
EIRR	2.31%

0.000

FILE NAME: BASCASE1.WK1 DISK: (CHANGE METHODOLOGY)

FINANCIAL ANAYLSIS OF THE PROJECT EXIBIT 5.4

FILE NAME: BASCASE2.WK1

TABLE - 3

ECONOMIC ANAYLSIS OF THE PROJECT
BELA - TURBAT ROAD

EXIBIT 5.5

(RUPEES IN MILLIONS)

YEAR	CONSTRUCTION COST	MAINT. COST	TOTAL COST	OPERATING COST SAVING	USER TIME COST SAVING	LOSS AVOIDED	EXISTING MAINT.	SALVAGE VALUE	TOTAL BENEFITS	NET BENEFITS
1990										
1991	203.596	-	203.596							-203.596
1992	234.460	-	234.460							-234.460
1993	224.640	-	224.640							-224.640
1994	34.850	-	34.850	26.904	21.797	38.143	24.180		111.024	76.174
1995		9.087	9.087	30.936	25.051	39.821	26.598		122.406	113.319
1996		9.728	9.728	38.639	28.817	41.573	29.258		138.287	128.559
1997		10.405	10.405	44.091	39.719	43.402	32.184		159.396	148.991
1998		11.137	11.137	47.727	53.272	45.312	35.402		181.713	170.576
1999		79.570	79.570	54.888	61.288	47.306	38.942		202.424	122.854
2000		12.751	12.751	63.132	70.509	49.387	42.836		225.864	213.113
2001		13.644	13.644	72.470	85.797	51.560	47.120		256.947	243.303
2002		14.599	14.599	83.459	101.626	53.829	51.832		290.746	276.147
2003		15.621	15.621	100.454	120.035	56.197	57.015	209.264	542.965	527.344
PRESENT VALUE	550.734	63.338	614.072	198.845	205.211	180.310	141.890	47.958	774.213	160.141

NPV	160.141
B/C Ratio	1.261
EIRR	16.38%

8.000

F.Name: EXHIBITS.WK1 Disk: (AWARAN - 2)

SUMMARY OF SENSITIVITY
TEST RESULTS

Bela - Turbat

Exhibit 6.9

	TEST-1 *	TEST-2 **	TEST-3 +	TEST-4 ++
ECONOMIC				
- NPV (Rs. Million)	81.539	73.555	132.095	51.797
- B/C Ratio	1.134	1.120	1.215	1.084
- I R R, %	14.020	14.130	15.710	13.530
FINANCIAL				
- NPV (Rs. Million)	(389.146)	(360.386)	(337.240)	(402.861)
- B/C Ratio	0.691	0.715	0.734	0.682
- I R R, %	6.820	6.600	6.970	5.810

* Construction of the project is delayed by one year
** Passenger time cost saving is excluded

+ Price change in the cost of fuel @ 5% per annum
++ Test-2 and Test-3 occur simultaneously

TABLE - 5

Projected 10 Year Net Toll Revenues vs Maintenance Costs (Rs. 10^6)

ROUTE	Revenues			Maint. + Collection Costs	Rev/Cost (%)		
	Case 1 a/	Case 2 b/	Case 3 c/		Case 1	Case 2	Case 3
Bela-Awaran	51.7	65.2	78.4	71.1	73	92	110
Awaran Turbat	84.6	104.2	120.5	116.8	72	89	103
Bela-Turbat	136.2	169.5	199.0	187.9	72	90	106

Tolls for buses, trucks, and other vehicles respectively are:

a/ Case 1: Rs. 20, 20, 5 for Bela- Awaran and Rs. 30, 30, 10 for Awaran-Turbat

b/ Case 2: Rs. 25, 25, 8 for Bela- Awaran and Rs. 35, 35, 15 for Awaran-Turbat

c/ Case 3: Rs. 30, 30, 10 for Bela-Awaran and Rs. 40, 40, and 18 for Awaran-Turbat

PRO:MMGellerson:tas:2657h

SOCIAL SOUNDNESS ANALYSIS
BALOCHISTAN ROAD PROJECT

I. INTRODUCTION

A. The Project

The Balochistan Road project aims at improving a 376 kilometer road that extends from Bela on RCD Karachi - Quetta Highway to Turbat near the Iranian border. The road follows a traditional and ancient camel track that historically formed the southern route linking the Indian sub-continent with Iran and the middle East. Although nominal vehicular traffic existed between Awaran and Turbat, a traffic over the 150 kilometers between Bela and Awaran was started for the first time in 1962 during the Ayub regime. At that time Regional Cooperation for Development (RCD) was formed between Pakistan, Iran and Turkey. Part of this effort was to link the three countries by a modern road system. The Pakistan portion was to pass through Karachi, Bela, Awaran, Turbat and Mand at the Iran border. For political reasons this project was dropped. Subsequently, the RCD highway was built between Karachi and Quetta. The proposed Bela Awaran Turbat road follows the same route as proposed for the original RCD highway. The purpose of this report is to assess the socio-cultural soundness of the Balochistan Road Project. In assessing the social feasibility of the Project, the existing socio-economic environment in the Makran and Jhal Jao/Kolwa regions and the project's potential impact on various socio-economic groups will be discussed.

B. Methods of Investigation

In order to develop this social soundness assessment, published and unpublished documents on Balochistan, Mekran and Jhal/Jao/Kolwa regions were collected and reviewed. Such documents were obtained from USAID Islamabad and Quetta offices and from libraries and personal resources. Government of Balochistan Publications and office records were also studied. An informal questionnaire for field investigation was developed based on the scope of work provided and after discussion with the USAID office of Engineering staff at Islamabad. Field site investigations were started on June 8 and continued up to June 23, 1990. The places visited during the trip included Khuzdar, Bela, Jhal Jao, Awaran, Turbat, Jiwani, Gwadar, Pasni, Ormara and Panjgur. In these areas farmers, shepherds, fishermen, government employees, businessmen, industrialists, community leaders and members of local, provincial and national councils/assemblies were interviewed. Traveling by road, the availability, present uses and state of conservation and depletion of various natural resources were also observed.

II. SOCIO-CULTURAL AND ECONOMIC ENVIRONMENT

The history as well as socio-economic and political conditions of Jhal Jao/Kolwa region, through which about 300 kilometers of the road passes are somewhat different from that of the Kech/Makran area. Therefore a separate description of the two areas will be offered wherever necessary.

A. Social and Political History

1. Balochistan

Balochistan has an area of 347,000 square kilometers. It is Pakistan's largest but least developed province. It borders the Arabian sea to the south, the Iranian Province of the same name to the west, Afghanistan to the north and the Pakistani provinces of Sind and Punjab to the east. Balochistan has historically served as a corridor for conquerors, traders, religious, cultural, and linguistic influences, passing between the Indian sub-continent on the one hand and Iran, the Middle East and the West on the other. Balochistan is largely arid and semi-arid and the carrying capacity of the land is very low so that a population of 4.3 million represents only 4% of the Pakistan total. Balochistan's low level of development is reflected in its low income levels and inefficient infrastructural base. The province's per capita income Rs.3,000 is equal to the country's absolute paverty level and less than half of Pakistan's average. There are few industries in the province and mineral resources largely remain undeveloped. The ratio of 0.0009 kilometer of road way per square kilometer is the lowest by for of all provinces in Pakistan. A large part of Balochistan's population lives in dispersed and isolated settlements and is still predominantly nomadic and tribal.

Most of Balochistan inhabitants belong to various Baloch and Pushtun tribes, although minority ethnic groups of Iranian, Afghan, Sindhi and Punjabi origin are also found. While Pushtu is the main language spoken by Pushtun tribes, Balochi and Brahvi are the main languages spoken by the Baloch populations of the province. According to provincial government statistics 35% of province's population speak Balochi. 25% speak Pushtu, and 20% speak Brahvi. The rest speaking Farsi, Sindhi and Punjabi etc.

There is no authentic written history of the Baloch people but it is generally believed that various Baloch tribes lived in the western and central Asia before migrating to the present day Balochistan. The account of the movement of various Baloch tribes from Iranian Makran and Kirman to Balochistan in the 16th century is the first documented piece of Baloch history. Perhaps the greatest Baloch personality of this time was Chakar Khan, the Chief of Rind tribe, who ruled in the present day Sibi and surrounding areas during the middle of sixteenth century. Tribal wars ended his domination and after a period of anarchy and inter tribal feuds another Baloch tribe, Mirwari, came into prominence. One of its clans, the Ahmadzai, established a Khanate at Kalat. Naseer Khan, one of the Ahmadzai Khans, for the first time in Baloch history brought all Baloch areas from Iran to the Indus under his domination around the middle of the 18th century. When the British entered Balochistan 100 years later they found a weaker Khan of Kalat with a much contracted tribal empire. Under their so called "Forward Policy," the British divided Balochistan into two administrative regions. In the first region, the areas bordering Afghanistan were combined to form British Balochistan under a direct British administration. In the second region, comprising areas from Quetta to the Arabian sea in the South and Iran in the West, the Khan was

allowed to continue his rule while recognizing British dominance and control of external affairs. At the Partition of India in 1947 both the British and Khan ruled Balochistans became part of Pakistan. Balochistan attained provincial status in 1970.

2. Makran

Makran, a former princely state, is now one of the six administrative divisions of Balochistan and is located in the south western corner of the province. Makran has a geographical area of 55,000 square kilometers and a population of 650,000 according to the 1981 census. Makran, along with a region by the same name in adjacent Iranian Balochistan, has a distinct historical position. The name of the area is said by some to be derived from Mah Karran (Shore of sea) and by others, from Mahi Khoran (fish eaters). Because of its location on the main corridor between the Indian sub-continent and the Middle East and the West, Makran has historically been the most important part of Balochistan.

In Iranian history Makran is referred to as an important province under various empires. The armies of Alexander the Great passed through Makran in 325 B.C. Makran was part of the Sassanian empire during 5th and 6th centuries. About the middle of the 7th century Muslim Arabs conquered Makran and made it a part of their expanding empire. Various Iranian, Turkish, Afghan, and Mongol invaders brought Makran temporarily under their control. However, probably because of its harsh physical environment and relatively poor resource base they could not hold on to it for long. The Ahmadzai rulers of Kalat first invaded Makran in 1715 but it was not until the time of Naseer Khan in the Middle of 18th century that Makran was finally subjugated and brought under the dominance of Kalat. From that time until the creation of Pakistan, Makran remained under the rule of the Khans of Kalat. In 1947, along with other Kalat states, Makran became part of Pakistan. In 1976 it became a separate district under the Kalat division and in 1986 it was made into a full fledged administrative division of Balochistan.

Makran civil administration is headed by a Commissioner with one Deputy Commissioner in each of the three districts of Turbat, Panjgur and Gwader. As regards educational facilities, Makran Division has 318 primary, 60 middle and 34 high schools besides 258 mosque schools. The enrollment respectively is 13,835, 11,180, 14,799 and 9,150. Makran also has two degree colleges at Turbat and Panjgur with a total enrollment of over 600 students. Makran division has three government hospitals, 31 dispensaries and 42 basic health units. But most of the hospitals and dispensaries are without doctors and medicines due to Makran's remote location and inaccessibility.

3. Jhal Jao/Kolwa/Awaran Region

Jhal Jao/Kolwa/Awaran Region has historically been either part of Makran or the Kaikan (Khuzdar Jhalawan) region and has less political importance of its own. But 300 kilometers of the road passes through this region. It is the largest rainfed agricultural tract in the region and appears to have much potential for economic development. The entire region in different administrative zones has an estimated area of 15,000 square kilometers and a population of 200,000. The

Awaran administrative sub-division has an area of about 3,000 square kilometers and a population of 110,000. Between Bela and Awaran the only significant area of interest is the valley of Jhal Jao. Jhal Jao (meaning lower Jao) is a sub-tehsil of Awaran sub-division. Unlike the rest of Awaran sub-division which has been part of Makran in the past, Jhal Jao has always been part of Jhalawan (Khuzdar) country. The main population and economic center of the valley is Sar Jao (upper Jao) or the village of Pelar 68 kilometers to the north. Although part of Jhalawan socioculturally and linguistically, it is more akin to Awaran/Kolwa and Makran. Jhal Jao sub-tehsil has a population of 29,000. The main tribe living here is Bezanjo, although Channal Mirwari and Mohammad Hasani are also found. Jao has one high and one middle school, a hospital and a rural health center.

Kolwa/Awaran valley starts from the town of Awaran and continues up to Hoshab 150 kilometers to the west. Administratively the first 88 kilometers of the road to Maadag-i-Kalat lie in Khuzdar district of Kalat Division, the remaining portion of 62 kilometers lies in the Turbat District of Makran division. Awaran Tehsil has a population of 43,000. Before the British arrived in this region Kolwa was part of Jhalawan country. In 1891 it was made part of Makran and in 1976 a part of Kolwa was again annexed to Jhalawan (Khuzdar district).

Kolwa's historical importance lies in that Mir Chakar, the hero of Baloch Ballads was born at Ashale Kalat near Rodkan in Kolwa during the eastward migration of Baloch around 1500. As a result of a 15th century war between the Brahuis and Jadgals of Bela, the victorious Mirwari tribe received Awaran as their share. During the 18th and 19th centuries the Mirwari, Nausherwani and Bezanjo tribes fought for the control of agricultural lands. The Nausherwani tribe, with the help of the Gichkis won most of the wars and lands but Mirwari and Bezanjo tribes later acquired some of these lands through purchase and marriage. The various tribes living in the entire vicinity of the road are Balochi speaking and include Bezanjo, Mirwani, Nausherwani, Rakhshani Mohammad Hasani Samalani Jarozai and Darzadag tribes. The main villages/settlements in Kolwa are Awaran, Chambur, Pirandar, Mashi, Bedi, Malar, Hor, Gishkaur, Maadagai Kalat and Tank. Awaran has two high schools, two middle and fifteen primary schools. Awaran has a hospital, and Gishkaur and Malar have health centers.

B. Social Organization

Social organization has been and still is somewhat different between the Jhal Jao/Awaran/Kolwa region and in the Kech/Makran valley. A separate description for each of the above regions is therefore offered.

1. Jhal Jao/Kolwa/Awaran Regions

In recent times, these areas have been under different administrative units but have historically been part of Jhalawan ruled by representatives of the Khans of Kalat. Although Bezanjo, Mirwani, Mohammad Hasani and Rakshani group make up the bulk of the population, sections of Kalandarani, Kahodai, Sangur, Kolwai, Sajidi, Channal, Somalani and Jihandani are also found. Each tribe (Qaum) is divided into clans (Takar/Shakh) which are in turn divided into

sections (Tall/Tabar/Log). Here for centuries a relatively egalitarian based tribal system existed. Tribesmen owned allegiance to their clan and section heads who themselves owed alliance to the Sardars. The Sardar was sometimes independent and at other times under the overlordship of the Khan of Kalat. The system was relatively egalitarian because only the chiefs and sometimes section head's families were highly placed in the society, all other tribesmen being equal in status. The Sardar received voluntary contributions called Bijar from tribesmen and generally no coercion was involved. It is only recently that a tribesman was required to pay a fixed portion (usually 1/6th) of his produce to the chief. Most land in Jhal Jao and Kolwa was owned by Mirwari, Bezenjo, and Nosherwani Sardars. As a result of 1972-1976 land reforms introduced by the then Bhutto regime, most land is in the possession of owner cultivators. There is still tribal solidarity and co-operation at the local level. Marriages still take place principally within the tribe and elders settle inter-tribal disputes. However, with the reduced power of the main player, the Sardars traditional social organization is also in decline.

2. Makran

In Makran there is an almost complete absence of organized tribes and tribal social organization. The society in Makran has historically been stratified and class ridden. There are three main social strata in Makran; the Hakims, the Baloch, and the Hizmatgar. The Hakims are the traditional ruling elites of the area and include Gichki, Nausherwani, and Bezanjo. These three tribes have smaller numbers resident in Makran. The Gichki were the most recent rulers of Makran. Their members are widely dispersed in Makran, hold property and are also part of the modern leadership in Makran. The former Nawab of Makran now spends more time in Karachi and Quetta than in Makran but is still probably the wealthiest person in Makran. He is not without political power. The Bezanjos are genealogically Brahvi and live in a vast area between Bela Hoshab and Khuzdar. The Bezanjo chief lives in Naal 40 kilometers from Khuzdar. The Nausherwani are the former rulers of Kharan state, Makran, and Kolwa. Residents of the main branch of Nausherwanis still live in Kharan.

The groups referred to as Baloch in Makran are either animal raisers or small land holders. Although they belong to various Baloch tribes who may be organized tribally elsewhere, no such organization exists in Makran. A Kahudai/Komash/Mastar could be a village or area elder who is the traditional leader of all area residents but has himself recognized the authority of the ruler whether he was a Gichki or Nausherwani or Bezanjo. The main Baloch tribes found in Makran are Hot, Kalmati, Rind, Kahudai, Rais, Sangar, Puzh, Wadela, Kashani, Mullazai, and Kinagizan.

The Hizmatgar were formerly considered an inferior race and consist of Nakib/Darzadag, Med, Lori, and Golam tribes. The Nakib/Darzadag have been landless agricultural laborers and were considered skilled and hard working farmers. The Med are fishermen and live along the length of the Makran coast. The Loris have traditionally been carpenters, black smiths, and musicians. the Golam, which means slave, are people of mainly African origin who were slaves

until the first part of this century. They have since either migrated to Karachi and other places or continue working as domestic help and maids mostly with their former masters.

With modern education and exposure to the outside world all in Makran consider themselves Baloch and equal in status. Upward mobility among farmer lower classes is not only possible but has actually been achieved in numerous cases.

C. Leadership

1. Kolwa/Awaran/Jhal Jao

In the region neither tribal organization nor traditional leadership patterns are as strong as in other areas of Balochistan in the North. Yet tribal social organization and a hierarchical leadership system exist. The tribe is headed by a Sardar while each clan, section and family under him is headed respectively by a Motabar/Mir, Takri/Kahudai, and Spetrish. Since the incorporation of the State of Kalat in Pakistan and the demise of the Khan of Kalat as Chief of Chiefs, the traditional Sardari system in this region has weakened considerably. The Bhutto land reforms of 1972-76 which abolished Shashak (1/6th of produce owed to the chief) and the ensuing Sardar vs. tribesmen conflicts further weakened the system. The conflicts also resulted in the tribesman uniting under their local, sub-tribal, and sectional leaders against the Sardars, most of whom also lived outside the area. The Bezanjo chief lives in Naal near Khuzdar while the Nowsherwani chiefs live in Kharan hundreds of kilometers away. Tribal solidarity was evident when Mr. Majeed Bezanjo won election to the provincial assembly. Mr. Bezanjo is the nephew of an assassinated pro-Bhutto land reform and anti-sardar leader, and now a Minister in the Balochistan Government. The Mirwari tribe chief, Sardar Qadir Buksh, lives in Mangoli Kalat about 40 kilometers from Awaran. In general, the chiefs and their families still command some respect and following, but traditional authority has been seriously challenged and undermined during the last few years.

2. Makran Area

Most recently, Gichkis and to a lesser extent Nausherwani and Bezanjo provided traditional leadership in Makran. These families still own most of the productive land in Makran and being richer also have better access to educational facilities and to positions of authority in Government and business. Significant changes in local class structure and leadership patterns have taken place during the last two - three decades. Job opportunities in the Arab Gulf countries attracted more young Makranis from the poor and formerly inferior classes. As a result, mainly of higher wages and incomes from the Gulf, traditional economic leadership is fast slipping away from the former ruling classes to the middle and lower classes. So there is a newly emerging economic, political, and social leadership in Makran.

There is a continuous struggle between those offering a traditional leadership and those offering a new alternative. In spite of recent attempts, religious leadership could not get a foothold in the region. Young leadership demanding

provincial rights have won provincial and national assembly seats throughout Makran during past elections. This is in stark contrast to the rest of Balochistan where either traditional tribal or religious leaders won most of the assembly seats. Grass roots leadership in Kolwa as well as Makran is provided by elected members and chairmen of local councils. Throughout the region local government officials (Naib Tehsildar, Tehsildar, and Assistant Commissioners etc) are normally local people with knowledge of the socio-cultural environment and have, in most situations, a harmonious relationship with the people.

D. Economic Organization

Makran has a total of 5.5 million hectares of land with a 400 kilometer coast along the Arabian sea. Most of the Makran population extracts a subsistence living from these resources. In the northern most district of Punjgur 90% of the population is dependent upon irrigation from the Rakhshan semiperennial river. A similar percentage of the central Turbat District population is dependent upon the Kech, Nihing and Dasht River systems. Water from these river systems is used for both irrigation and drinking. The main agricultural produce of Makran is dates. In 1989 an area of 7,000 hectares produced about 64,000 tones of dates. 17% of the Makran population lives in Gwadar district and is mainly dependent upon fishing and related activities. During 1988, some 95,000 metric tons of fish valued at 417 million rupees were produced in Makran. A relatively smaller portion of the Makran population engages in dry land farming, animal husbandry, trade and services. The number of Makranis working in the Persian Gulf countries is not large, but their wages, sometimes up to 50 times as high as in Makran, make them an important economic class in Makran.

The Jhal Jao/Kolwa/Awaran region has a different resource base and topographical conditions than Makran. Under the circumstances people have to exercise all survival strategies possible. In the mountains of Jhal Jao and Kolwa people mainly raise sheep and goats. Low rainfall and grazing capacity mitigates against large flocks. Normally people must supplement incomes by cutting and selling local dwarf palm (Peesh) or by engaging in seasonal work. In the valleys of Jhal Jao and Kolwa/Awaran, people mainly engage in dry land farming. In the Eastern areas of the valley Mashkai and Doraski are the two river systems which flood the dry arable land. The areas in the center and the West of the valley are basins of closed drainage and only the locally collected flash flood waters are used for cultivation. In areas around Awaran Town where both surface and underground water resources are relatively abundant, there is irrigated agriculture. The main crop in the region is barley. Earlier the main staple, barley is now produced primarily for market not for home consumption. It is estimated that one of Khuzdar districts 8735 hectares of land producing 5520 tons of barley grain comes from Jao/Kolwa and adjacent areas. Barley has a lower production cost than wheat, serves as a better green fodder, and sells for at least as much per unit. This combined with soil and conditions more suitable for barley production make it the most profitable crop. The main market for barley is Karachi.

III. SOCIAL FEASIBILITY

The project aims at improving an existing road system and at fulfilling one of the most important needs of the people of south western Balochistan. Therefore, in general the project is feasible and in the interest of the people of the area. But the construction of a major road system which links a vast region of Balochistan with the main Pakistani markets on the one hand and with markets in Iran and, the Middle East on the other will have important socio-cultural, economic and political consequences for the local population. Some of the issues related to social feasibility are discussed below:

A. Socio-economic Considerations

1. Over 70% of the Balochistan territory and 30% of its population lives in the region which lies west of the RCD highway and lacks any quality road system. The road and railways linking Quetta to Iran were constructed by the British for strategic and political reasons and even today have far less socio-economic importance than the Bela Turbat road for various reasons. In Pakistan the 600 kilometer long rail and road system passes through the Chagai district, a desert waste with a population no larger than the Awaran sub-division's 110,000. Ascross the border in Iran in the area bordering Makran, there is a larger population and production centers as well as good quality roads. As a consequence the potential socio-economic and trade benefits of the road for Pakistan are very high compared to any other road system linking Pakistan with Iran.

2. Due to certain socio-economic and climatic factors Makran as well as Kolwa/Awaran have become areas where dates, fish and barley are produced in large enough qualities to produce a surplus for export whereas almost all necessities must be imported. Trade is being carried out now at great disadvantage to the Makran population because of the high costs of transportation due to lack of a quality road system.

3. Given the absence of employment opportunities in Makran, many people engage in narcotics smuggling. New job opportunities resulting from establishment of a modern road system will enable many of these people to choose more respectable undertakings to make a living.

4. Thousands of Makranis working in Karachi and in the Middle East have accumulated capital resources, but to date have had no profitable investment opportunities in Makran. The local market being very small, any investment in agriculture, fisheries, animal raising and in other areas could only be profitable if reasonable cost access to outside markets is possible. This road will provide that opportunity.

5. Forced by economic necessity, many Makranis and Kolwas have been working in the Middle-East. These countries virtually require single-status employment. The result is social disruption and split families. There are alarming reports of widespread drug addiction among children and teenagers in Makran. This is a new phenomenon and may be a direct consequence of the long absence of the father. A number of persons working in the Gulf were interviewed in Turbat these indicated that road construction and subsequent investment and employment opportunities will lure many workers back to Makran.

6. Based upon the experience of the past 4-5 years, most of the initial investors would be expatriate Markanis themselves. Makranis have been emigrating since the early part of this century but most have maintained contacts with families and relatives in Makran. Among them are industrialists and businessmen both in Karachi and the Middle East. These people likely would be the first to invest. But Makranis, in general, have been an open-minded and non-xenophobic people. As an example, one of Makran's most important elected leaders during the 1960s and 70s was a Sindhi. In the 1989 election a politician of Punjabi origin defeated a Baloch candidate to become an MPA. There are non-Baloch landlords, farmers, businessmen and traders all over Makran. In Makran social, linguistic and religious prejudices are almost non-existent.

B. Political Considerations

1. Makran and the adjacent areas of Kharan and Jhalawan have remained the most neglected and least developed areas of Balochistan. It is due to this sense of deprivation that Baloch nationalism and a secessionist movement attracted most of its adherents from this part of Balochistan. It is in the best interest of the region's stability that the people of this area are made partners in Pakistan's socio-economic development. The construction of an efficient road system will be an important step in this direction.

2. If the road were proposed in the sixties and seventies there would likely have been tough resistance by the Baloch nationalist movement as happened in case of the RCD highway. Although mild political opposition to various Federal Government policies remain today, USAID activities are not considered inimical and against Baloch interests. In this respect, a dozen or so Makranis educated in the U.S. have returned recently are doing a very important job of removing misunderstandings and spreading goodwill for the U.S.

3. A road toll tax for maintenance is feasible, but rates and modes of implementation should be thoroughly discussed with local people and government officials. A few years back a toll tax was imposed on the RCD highway and the contract was auctioned off to a Mengal tribesman from Wadh area. The contractor kept a gun in his office and on occasion used it against violating drivers of vehicles who attempted to avoid the toll. To avoid law and order problems the administration finally abolished the toll tax.

C. Environmental Considerations

1. Makran's arid and semi-arid environments are precarious. Without access to and the use of modern technology, the rates of exploitation of natural resources such as water, soil and vegetation as well as fish are generally consistent with naturally sustainable growth rates. However, the Baloch over the years developed socio-economic and political institutions which, among other things, regulate the use of local resources of rangeland, fuel and timber trees. The animal raisers in Jhal Jao have institutionalized rotational grazing of common rangelands. In Makran new karez developers must keep a specified distance from existing Karezes. Similarly, in coastal areas, use of certain

fishing gear is prohibited. Fishermen in Pasni and Ormara are prohibited catching small fish as this depletes sustained yield since they serve as food for the larger fish that the fisherman prefer to catch. In Kalmat, 90 kilometers from Pasni, catching of shrimp is banned during May and June. All of the above conservation methods are institutionalized social arrangements aimed at utilization of resources at levels consistent with sustainable yield. With more exposure to outside influences and market forces these institutions will come under increasing pressure.

2. The Gazetteer of Balochistan published in 1906 says "as a grazing ground Makran compares favorably with other parts of Balochistan owing to the large uncultivated tracts which it contains, in most of which fodder is plentiful." However, In June 1990 the price of meat is 40% higher in Turbat than in Quetta an indication of a worsening of the rangeland resource. One government official who grew up in Turbat says that in 1960 there was a dense forest in the Kech bed just outside of Turbat where wild animals could be seen. The Kech river in the same vicinity had numerious deep lakes. Neither exists today.

As has happened in the developed countries of the world, productivity of the rangeland and the forests can be revived with the use of modern technology. But if that is not done, easy access to outside markets provided by the road may result in further depletion of Makran's natural resources. After using and discarding plastic bags and wraps for over a decade in Makran, people have only now realized that this was a costly business. The plastic bags in thousands accumulated in Karez wells and clogged their discharge and channel flow. The cost of cleaning the Karezes are higher than ever before. The lesson is that consequences of introduction of even basic and simple technologies should be well understood before they are adopted.

IV. BENEFICIARIES AND DISTRIBUTION OF BENEFITS

The primary beneficiaries would be the people of Jhal Jao Awaran/Kolwa and Makran areas. The primary benefits would accrue to the local farmers, animal raisers, businessman and fisherman in the form of direct employment opportunities and improved access to outside markets for inputs and products. Improved living conditions would result from higher incomes, lower costs of living, and better access to and availability of educational and health facilities and other amenities of life. The Secondary beneficiaries would be the communities living in the entire south-western regions of Balochistan extending to Kharan and Chagai Districts in the north west and Kalat and Khuzdar Districts in central Balochistan. Secondary benefits would accrue in the form of increased employment opportunities, availability of productivity enhancing inputs and improved access to markets. Improved income levels and better access to social services will benefit the entire region directly and through trickle down effects. The multiplier effects would include higher land values, production of high value crops, animals, and fish; high profits to the businessman resulting from higher employment; higher incomes, higher consumption levels, and higher demand for goods and services.

As far as the distribution of benefits is concerned, the following shows how residents of the area will benefit.

1. As mentioned earlier all necessities of life including staple grain in Makran are imported from outside, mainly from Karachi. While there is little question small land owners will benefit from a reduced price for inputs and better areas to markets, the poor spend a disproportionately higher percentage of their income on imported necessities and high costs of transportation hurt them the most. Accordingly, the construction of an efficient road system and consequent lower costs of transport would benefit both landowner and the poor.

2. Until recently a form of absentee landlordism existed in Kolwa region under which a few Sardars owned all agricultural and grazing land. The cultivators then were tenants who could be evicted at will. This situation has now changed and the former tenants have themselves become owners who cultivate their lands themselves in Makran, the holdings have always been small. According to best estimates, in the entire region the average land holding is two hectares of irrigated land or 20 hectares of rainfed land. The rangelands are under common ownership and the size of flocks are at or below subsistence level. Fishermen belong mostly to the poor coastal Med tribe coast and barely make a subsistence living. The above are specific groups who will have better access to both inputs and markets for their products.

3. The construction of the road would provide greater mobility to agricultural and other labor. Scarcity of agricultural labor and higher wages in recent years in Makran have mainly been due to competition for labor from the Middle East. But studies in Khuzdar and Naal area indicate that agriculture labor have benefited significantly from the construction of the RCD Highway. Until the mid-seventies a share-cropper was paid 1/5th of fruit crop and 1/4th of all other crops. Now-a-days the share is 1/4th and 1/3rd respectively. The change is due to increased mobility of labor made possible by the construction of the road.

4. Land and water rights and in some cases even fishing boats in Makran are also owned by women. Therefore improved access to inputs and markets will equally benefit women. Women will naturally benefit from better availability of social services and from general improvement in the living standards of the people of the area. The women will especially benefit when their products including leather and cloth embriodery work and peesh (dwarf palm) products have improved access to markets.

V. CONCLUSIONS

It may be concluded on the basis of the preceding discussion that the Bela-Awaran-Turbat road project is socially feasible. There will be no social or cultural impediments to the successful implementation of the project. Similarly there is no likelihood of rapid and unmanageable social change nor of any radical disruption of the existing social organization. The road is a basic felt need of the areas population and its importance is well understood by the local

population. In fact, the construction of the road is considered by the majority of the population a sine qua non for the development of the area and for improvement in their living standards.

As would be in case of any project opening an area to modern influences, markets and technologies, there are genuine concerns over possible alterations in the environment. The BAT road design provides for adequate measures to alleviate problems associated with stagnant water, litter, soil erosion and slides etc. as a result of the construction work. Issues related to the possible enhancement of the natural resource depletion can be addressed through a combination of socio-economic and technological measures. The discussions during the Environmental Scoping session held in Quetta on June 25, 1990 revealed that the people and the Government of Balochistan are aware of and concerned about environmental degradation and are keen to adopt mitigating measures in this regard. On the positive side, the road will make it easier to introduce techniques and technologies for the improvement of the environment. Depleted rangeland, forest and water resources can be revived and replenished. According to UNICEF and GOB health department figures, diarrhoea and other cases related to unsafe water cause thousands of deaths, mainly among children in Balochistan. An efficient road system will make it easier for the government and domestic and international social organizations to provide cleaner drinking water as well as relevant education to the people of the area.

ENERGY ANALYSIS

The project purpose is to link the Makran Division, Baluchistan Province, to the national highway network and to privatize certain road maintenance functions." In attempting to achieve this purpose the major road link to the target area, Makran will be upgraded to a standard equivalent to other provincial level roads in Balochistan. The primary focus of this effort is to provide a safe, reliable and economically affordable means of all weather access to Makran. In looking at the universe of means of providing this access for all aspects of life in Makran, i.e., transport of essential consumer goods, export of produce of the area, and movement of the populace in the division, a number of alternatives had to be considered. The consideration took into account the existing infrastructure, options available that are exceptable tc the government and people, and degree of reliability to be expected. Of the choices considered, i.e., improving the existing road, building an entire rail link with a connection to at least the national highway system at Bela, improving sea transportation or increasing air service, the road offered the most advantageous alternative.

Once this decision had been made, the implications on the energy consumption patterns as a result of the successful completion of the road and achievement of the project purpose was reviewed. The road design calls for improving the geometric standards on the existing alignment or modifying the alignment to effect additional improvements. The horizontal and vertical standards are to be upgraded to conform to AASHTO rural roads and local rural roads specifications. The design also includes the construction of drainage structures at the numerous annual and perennial rivers and streams along the alignment. The improvements introduced will reduce the vehicle operating costs to the users of the road which can be translated into reduced energy consumption directly from improved fuel efficiency and indirectly from lower consumption of spare parts, including tires, that are locally manufactured items using considerable energy to produce.

The traffic count figures indicate the bulk of the vehicles that use the road are either buses or trucks. The energy consumed by these types of vehicle, especially under loaded conditions, is proportional to the vertical grades, turning radii of curves and number of transitions (slowing down and starting up again at such points as river crossings) the vehicles have to encounter along the stretch of road travelled. To this end the design effort will introduce improvements in the geometrics for both vertical curves and radii of curves. In addition, by including the construction of bridges, culverts and low water crossings for the streams and rivers, the number of transitions will be reduced significantly. The net effect will be to more efficiently utilize the primary energy source for these types of vehicle, namely high speed diesel and to a lesser extend, petrol.

The project's focus on putting in place a comprehensive road maintenance program will provide the longer term continued benefit created by the improved road. The savings to be experienced will be short lived in the absence of an annual road maintenance program to retard the rate of deterioration of the improved road. The effort to have in place such a program by the end of the construction period will provide the means to prolong the benefits to be derived from the road. This also relates to the benefits by way of more efficient use of fuel. The riding surface of the road is the element most susceptible to deterioration, which will reduce traveling speeds and introduce additional transitions, the end result being higher fuel consumption patterns.

In summary, the road improvement and maintenance program development approach is considered to be in line with the Agency's policy of supporting energy conservation initiatives.

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Road Maintenance Program

1. Government of Balochistan Commitment

   a. Total road budget; percent of budget earmarked for maintenance

   b. Total actual expenditures; percent of budget expended for maintenance

2. Organizational Strength of the C&W

   a. Organizational Strength Index: rating of the C&W in such areas as staff strength, budgeting, planning and monitoring capabilities

   b. Training: C&W's annual Rupee allocation for training and the number actually trained

3. Financial Sustainability - Progress made towards the establishment of a toll system

4. Road Maintenance Work

   a. C&W maintenance contracts awarded to private firms: number of firms receiving contracts, number of kilometers maintained under the contracts, total value of contracts awarded

   b. Traffic count: percentage increase in traffic for roads maintained by C&W and those maintained through private contracts

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SCOPE OF WORK TO BE PERFORMED BY FHWA TEAM:

A. The consultant shall perform, but not be limited to the following:

1. Identify the present role of the C&W Department, Government of Balochistan and specify its objectives and activities.

2. Study the existing organizational structure of the Balochistan C&W Department and identify the major impediments to its effectively fulfilling its assigned role.

3. Assess the potential of C&W Department to manage activities related to design, construction, and maintenance of roads through private sector architect and engineering (A/E) and construction firms.

4. Examine C&W's budgeting practices, methods of contracting, in-service and other available training opportunities.

5. Identify the present levels and extent of authority/responsibility and the chain of command within the C&W Department.

6. Recommend institutionalized changes in the C&W Department for more efficient functioning to achieve its assigned role and to conform with the goals and objectives of Balochistan Road Project (BRP). The recommendations should cover all aspects related to the operation of C&W Department such as but not limited to: staffing pattern, levels of authority, budgeting practices, methods of contracting, training, construction and maintenance practices etc.

7. Recommend a timetable for the implementation of the recommendations proposed keeping in view the implementation schedule of the proposed BRP project.

8. Study the prevalent road maintenance practices in the C&W Department. Recommend strategies to improve C&W's capacity to plan and manage a comprehensive maintenance program. Investigate the potential to privatize the maintenance effort for major paved roads.

B. Develop the Scope of Work and the estimated cost to engage a long term consultant team to establish an efficient Road Maintenance Management System suitable to the local working conditions. The system will work toward privatization of the tradional C&W role in road maintenance.

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PRIVATE INVESTMENT CLIMATE ASSESSMENT

OF

BALOCHISTAN PROVINCE AND MAKRAN DIVISION

SCOPE OF WORK

The private investment climate assessment is currently in progress. It is financed with BALAD Project funds. This effort intends to identify investment opportunities that may be supported under a future BALAD II activity that would spur market-driven development in selected areas of Balochistan, including the influence area of the Bela-Awaran-Turbat road.

STATEMENT OF WORK

I. Objective

To undertake an assessment of the private sector investment climate in the Balochistan Province of Pakistan, in general, and the Makran Division, in particular.

II. Background

The Government of Pakistan (GOP) formulated a Special Development Plan for the Balochistan Province in August 1980 to attract foreign donor support to participate in the economic development of the area. The Balochistan Area Development Project (BALAD) is USAID's principal effort to support development in Balochistan. The on-going BALAD project is due to be completed in December 1990. A proposed BALAD-II project is under consideration to strengthen the activities started under BALAD-I.

The Project Committee, in its recent review, has recommended that the Mission conduct analyses to identify potential open market opportunities to be pursued under the proposed BALAD-II Project Paper. The analyses require an in-depth assessment of the private sector investment climate in Balochistan, in general, and Makran, in particular.

The following scope of work takes into account the peculiarities of Makran and Balochistan and recognizes the current limitations on private investment in those areas due to the harsh physical environment, political and security concerns, and lack of infrastructure for development. It attempts to provide a means to address the need for an overall assessment for the purposes of the Project Paper for BALAD-II, based on a limited level of effort and utilizing existing current secondary research to a high degree. However, it also provides for more extensive efforts to investigate potential investment opportunities and to perform primary research to analyze economic and financial policy issues as a part of a longer, concerted effort during the implementation of the BALAD-II Project.

III. Scope of Work

A. Phase I

This phase shall consist of a general overview of the private sector investment climate in Balochistan and Makran. It shall describe and analyze the following factors:

1. Political stability and business confidence including an analysis of these factors for both Pakistani and foreign investors. The contractor should also present a sensitivity analysis of investor confidence in investment

in Balochistan based on a limited survey of local and foreign business and banking executives in Pakistan.

2. Industrial development policy reviewing the GOP's policies for industrial development including the legal and regulatory framework for private investment in Pakistan, in general and, Balochistan, in particular. Topics to be covered include the investment code, foreign exchange policies and repatriation of earnings, taxation, customs duties on raw materials and finished products, and other relevant government policies which either encourage or discourage private investment.

3. Credit and financial policies including a description of credit sources and availability for investment in Balochistan, credit terms and financial constraints on investments. The contractor should also provide a brief review of provincial sources of finance for investment in Makran and Balochistan with recommendations for further study.

4. Labor relations including national and provincial labor laws and policies; it should also analyze labor availability, rates of compensation, and political issues relative to labor in Makran.

5. Transportation reviewing the current modes and volume of transportation for people and goods to and from Makran, as well as types of goods currently transported, and the potential impact of the completion of the Bela-Awaran-Turbat road.

6. Current private investment in Balochistan and Makran. This shall present an overview of current private sector industries operating in Makran, including types of industries and size of operations, distribution channels, financial participation by companies outside Makran, and restraints on private investment due to unfair public sector competition or government policies. The contractor shall present available baseline data on this topic and recommend further research to collect additional baseline data, as necessary.

7. Potential for increased private investment in Makran reviewing geographical, topographical, climatic and societal, and infrastructure constraints and presenting potential investment opportunities. This analysis should also review the potential effects of current foreign donor projects in Makran and Balochistan to improve the investment climate there.

8. Comparative analysis of private investment potential in Makran relative to other parts of Balochistan and to Sind. This should include an analysis of markets in Balochistan, Sind and Iran for current and potential

exports of agricultural produce, fish, and other industrial products.

9. Any other factors which impact upon private investment in Makran and Balochistan.

B. Phase II

This phase shall continue the process and build upon the research performed during Phase I, but will involve in-depth investigations and analyses of the following elements.

1. Appraisal of key potential private investment projects in Makran including prospects for success, potential sources of finance, availability of resources, constraints, timetables for implementation and potential rates of return.

2. Informal sources of finance for private investment in Makran including a survey of various sources of income for residents of Makran and Balochistan.

3. Existing trade links between Balochistan, Iran and Afghanistan and their effect upon trade in Makran. The contractor should analyze how GOP policies affect this trade.

4. Linkages between Makran and the Gulf States reviewing the potential for encouraging investment by either citizens of those states or by Makrani's working in the Gulf.

5. Potential for investment by U.S. investors based upon the analyses performed under #1 above with consideration of constraints on assistance by USAID for certain types of productive investments.

6. Recommendations for Policy Changes by the GOP and Balochistan Provincial Government to improve the private investment climate in Makran and Balochistan.

7. Other Research recommended by the consultants or USAID during Phase I.

IV. Level of Effort

A. Phase I

Phase I shall require the services of two senior expatriate consultants for 30 workdays; 1 day shall spent in briefings in Washington, DC, 4 days for travel, and 25 days performing the research and analysis in Pakistan and writing the report. A senior local consultant shall be retained by the Mission to

participate in the collection and analysis of data for 25 days in Pakistan.

The consultants shall be based in Islamabad, but will travel to Quetta, Makran and Karachi to interview government and private officials there. A partial listing of documents to be reviewed is found in Annex 1.

B. Phase II

Phase II shall be dependent upon approval of the scope of work for that phase by the Project Committee which reviews the Project Paper for BALAD-II. Upon approval, Phase II shall require the services of 2 senior expatriate consultants for a total of 18 months (1 for 12 months and a second for 6 months). It shall also require 1 senior local consultant for 12 months to participate in research, interviews and analysis. 3 additional local consultants shall be required to interview respondents in Makran and other parts of Balochistan for a total of 6 months (2 months each). All local consultants shall be supervised by the Contractor.

The two expatriate consultants and senior local consultant shall be based either in Islamabad or Karachi, but shall travel extensively to Quetta and Makran and to other areas as necessary to conduct interviews and supervise the local interviewers. The three local interviewers shall be based in Makran.

V. Qualifications

A. Phase I

One expatriate consultant shall be an expert in private sector development in developing countries with experience in market research. The other expatriate shall be an expert in investment finance and government regulation of private industries in developing countries. Both should have experience working in Pakistan. The local consultant should have held a senior position either in government or private industry and be familiar with private investment in Pakistan, local and export markets for Pakistani products and government regulation of industry. The local consultant should also be Baloch or have experience working in Balochistan.

B. Phase II

The 12-month expatriate consultant should be an expert in private investment in developing countries and, preferably, experience working in Pakistan. The 6-month consultant should be an expert in agricultural development and marketing of agricultural products. Both should have at least 5 years experience working in developing countries.

The local senior consultant should have the same qualifications

as the local consultant during Phase I. It would be preferable to have the same person in both phases to provide continuity. The 3 local interviewers should be Makrani's, have a university degree and be familiar with interviewing techniques.

VI. Reporting

A. Phase I

The contractor shall prepare and submit a workplan to O/ARD for approval within 5 days of the arrival of the consultants in Pakistan.

The contractor shall present a draft report to O/ARD at least 2 days prior to departure. The consultants shall attend a debriefing on their consultancy the day before departure from Pakistan.

A final report shall be submitted by the contractor within 2 weeks of the departure of the consultants, incorporating any comments of the Mission at the debriefing session.

B. Phase II

The contractor shall deliver reports on each of the 7 elements listed under the scope of work for Phase II according to a schedule to be determined and agreed upon by the consultants and O/ARD. This schedule shall be part of a workplan submitted by the contractor within 1 month of the arrival of the first expatriate consultant in Pakistan.

VII. Technical Direction

(Both Phase I and II)

The contractor will work under the technical direction of the Chief, Office of Agriculture and Rural Development (O/ARD) or his designee.

ANNEX 1

PARTIAL LIST OF DOCUMENTS FOR REVIEW BY PHASE I TEAM

Note: This is a partial list of documents which should provide considerable assistance to the consultants for Phase I of the consultancy. There appears to be a good deal of recent research available which reviews the national climate for public investment, particularly in agro-industries. Good studies at the provincial level are more difficult to find. Hence the need to make a more specific study of Balochistan for the purposes of the BALAD-II Project. However, one study was identified which was published in July 1988 titled "Industrial Development Opportunities for Baluchistan," which was written for the Pakistan Banking Council and presents good information which the Phase I team should be able to build upon. That study is cited below, amongst others.

1. "Project Paper, Baluchistan Area Development (BALAD)," USAID, July 1984

2. TvT Associates, "Interim Evaluation of the Baluchistan Area Development Project," USAID, December 1987

3. Financial and Management Services (Pvt) Ltd., "Industrial Development Opportunities for Baluchistan," Pakistan Banking Council, July 1988

4. Buzdar, Nek, "Socio-Economic Survey of the Makran Division of Baluchistan," USAID, July 1987.

5. Upreti, Bedh P., "Agriculture and Society in Makran," USAID, March 1989.

6. Bashir, Jawaid, "Agrobased Industries - Fish Industry of Balochistan, Director/Fisheries - Balochistan, (Undated, but with 1987 data)

7. Various reports by Chemonics (Food Security Management, EAN) and RONCO (Ag Sector Support Program) dealing with constraints and opportunities for private sector investment at the national level and focusing on agro-industries

8. Produce Studies Ltd., "Pakistan: Fruit and Vegetable Export Marketing Study," (Draft) ADB, December 1989

9. Ministry of Commerce, "Trade Policy 1987-89, Vol. II Export Policy," Government of Pakistan, 1989.

10. Louis Berger, Inc. and Robert R. Nathan Associates, Profile of Private Sector Cross-Border Trade Between Afghanistan and Pakistan," USAID, (Phase I report - Aug. 1989, Phase II draft report expected in April 1990.)

COST DATA FOR FINANCIAL PLAN

Level of Efforts

Person Months

	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96	Total
A. Construction Supervision							
1. US LT TA	12	20	24	20	4	-	80
2. US ST TA	4	4	4	4	-	-	16
3. Pakistani Staff	476	684	804	736	38	-	2,738
Sub Total A:	492	708	832	760	42	-	2,834
B. Road Maintenance							
1. US LT TA	-	-	12	24	12	6	54
2. US ST TA	-	-	-	2	2	-	4
3. Pakistani Staff	-	-	33	99	99	33	264
Sub Total B:	-	-	45	125	113	39	322
Total TA	492	708	877	885	155	39	3,156

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SUMMARY OF CONSTRUCTION SUPERVISION TA TEAMS
($ 000)

Expense Categories	PM	FY 1991		FY 1992		FY 1993		FY 1994		FY 1995		TOTAL		TOTAL
		FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX+LC
A. LT TA	80	336	156	426	165	512	142	427	192	95	63	1,795	718	2,513
B. ST TA	16	83	7	83	7	83	7	83	7	0	0	332	28	360
C. Local Staff	2,738	0	307	0	421	0	455	0	392	0	21	0	1,596	1,596
Total:	2,834	419	470	508	593	595	605	509	591	95	84	2,127	2,342	4,469

LONG TERM TECHNICAL ASSISTANCE TEAM
CONSTRUCTION SUPERVISION - BAT ROAD
80 PERSON MONTHS
(Dollars)

Expense Categories	FY 1991		FY 1992		FY 1993		FY 1994		FY 1995		TOTAL		TOTAL
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX+LC
A. Annual Recurrent Costs													
1. Salaries (@ $5,980/Month)	71,760	0	119,600	0	143,520	0	119,600	0	23,920	0	478,400	0	478,400
2. Fringe Benefits (35% of B. Salaries)	25,116	0	41,860	0	50,232	0	41,860	0	8,372	0	167,440	0	167,440
3. Post Differential (25% of B. Salaries)	17,940	0	29,900	0	35,880	0	29,900	0	5,980	0	119,600	0	119,600
4. Sunday Differential (5% of B. Salaries)	3,588	0	5,980	0	7,176	0	5,980	0	1,196	0	23,920	0	23,920
5. F.I.C.A. (7.51% of B. Salaries)	5,389	0	8,982	0	10,778	0	8,982	0	1,796	0	35,928	0	35,928
6. D.B.A. (4.25% of B. Salaries)	3,050	0	5,083	0	6,100	0	5,083	0	1,017	0	20,332	0	20,332
7. Overhead (100% of 1.+2.)	96,876	0	161,460	0	193,752	0	161,460	0	32,292	0	645,840	0	645,840
8. Storage of HHE in U.S.($150 p/month)	1,800	0	3,000	0	3,600	0	3,000	0	600	0	12,000	0	12,000
9. Education Allowance	10,400	0	10,400	0	10,400	0	10,400	0	10,400	0	52,000	0	52,000
Sub-Total: A	235,919	0	386,265	0	461,438	0	386,265	0	85,573	0	1,555,460	0	1,555,460
B. Allowances													
1. Foreign Transfer	6,680	0	0	0	0	0	0	0	0	0	6,680	0	6,680
2. Education Allowance	4,000	0	0	0	0	0	0	0	0	0	4,000	0	4,000
Sub-Total: B	10,680	0	0	0	0	0	0	0	0	0	10,680	0	10,680
C. Travel and Transportation													
1. International Travel													
a. Travel to Post	15,200	0	0	0	0	0	0	0	0	0	15,200	0	15,200
b. Travel from Post	0	0	0	0	0	0	0	7,600	0	7,600	0	15,200	15,200
c. Medical Travel	0	0	0	3,800	0	0	0	3,800	0	0	0	7,600	7,600
d. Emergency Travel	0	0	0	3,800	0	3,800	0	0	0	0	0	7,600	7,600
e. R&R Travel/Home Leave	0	0	0	30,400	0	0	0	30,400	0	0	0	60,800	60,800
f. Travel to/from Post H.O.	0	0	0	0	3,973	0	0	0	0	0	3,973	0	3,973
2. International Per Diem													
a. Arrival	1,840	0	0	0	0	0	0	0	0	0	1,840	0	1,840
b. Departure	0	0	0	0	0	0	920	0	920	0	1,840	0	1,840
c. Medical	0	0	600	0	0	0	600	0	0	0	1,200	0	1,200
d. Arrival/Departure H.O.	0	0	0	0	397	738	0	0	0	0	397	738	1,135
3. International Shipments													
a. UAB to Post	5,600	0	0	0	0	0	0	0	0	0	5,600	0	5,600
b. UAB from Post	0	0	0	0	0	0	0	2,800	0	2,800	0	5,600	5,600
c. POV to Post	6,000	0	0	0	0	0	0	0	0	0	6,000	0	6,000
d. POV from Post	0	0	0	0	0	0	0	3,000	0	3,000	0	6,000	6,000
e. POV Inland trans. to/from	0	80	0	0	0	0	0	40	0	40	0	160	160
f. HHE to Post	28,800	0	0	0	0	0	0	0	0	0	28,800	0	28,800
g. HHE from Post	0	0	0	0	0	0	0	14,400	0	14,400	0	28,800	28,800

Expense Categories	FY 1991 FX	FY 1991 LC	FY 1992 FX	FY 1992 LC	FY 1993 FX	FY 1993 LC	FY 1994 FX	FY 1994 LC	FY 1995 FX	FY 1995 LC	TOTAL FX	TOTAL LC	TOTAL FX+LC
4. Other Direct Costs													
Visas, vaccines, taxis, etc.	1,200	0	0	0	0	0	0	0	0	0	1,200	0	1,200
5. In-Country Travel													
a. Travel ($200/each/month)	0	2,400	0	4,000	0	4,800	0	4,000	0	800	0	16,000	16,000
b. Per Diem ($30/day - 7 days-travel/mon)	0	2,520	0	4,200	0	5,040	0	4,200	0	840	0	16,800	16,800
Sub-Total: C	58,640	5,000	600	46,200	4,370	14,378	1,520	70,240	920	29,480	66,050	165,298	231,348
Total: A+B+C	305,239	5,000	386,865	46,200	465,808	14,378	387,785	70,240	86,493	29,480	1,632,190	165,298	1,797,488
Fixed Fee (10%)	30,524	500	38,686	4,620	46,581	1,438	38,778	7,024	8,649	2,948	163,219	16,530	179,749
TOTAL: A+B+C+Fixed Fee	335,763	5,500	425,551	50,820	512,389	15,816	426,563	77,264	95,142	32,428	1,795,409	181,828	1,977,237
D. Logistic Support Costs													
1. One Time Costs													
a. Housing Costs	0	50,000	0	0	0	0	0	0	0	0	0	50,000	50,000
b. Office Start-up Costs	0	10,240	0	0	0	0	0	0	0	0	0	10,240	10,240
2. Recurrent Costs													
a. Rent (2 houses @ $1000/house/month)	0	12,000	0	20,000	0	24,000	0	20,000	0	4,000	0	80,000	80,000
b. Utilities (@ $220/house/month)	0	2,640	0	4,400	0	5,280	0	4,400	0	880	0	17,600	17,600
c. Fumigation (@ $10/house/month)	0	120	0	200	0	240	0	200	0	40	0	800	800
d. Maintenance Leasehold (@ $162/house/mon)	0	1,944	0	3,240	0	3,888	0	3,240	0	648	0	12,960	12,960
e. Maintenance Equipment (@ $250/house/mon)	0	3,000	0	5,000	0	6,000	0	5,000	0	1,000	0	20,000	20,000
f. 24 hours Guard (@ $360/house/month)	0	4,320	0	7,200	0	8,640	0	7,200	0	1,440	0	28,800	28,800
3. Office Costs													
a. Office Supplies (@ $130/month)	0	1,560	0	2,600	0	3,120	0	2,600	0	520	0	10,400	10,400
b. Utilities (@ $285/month)	0	3,420	0	5,700	0	6,840	0	5,700	0	1,140	0	22,800	22,800
c. Telephone (@ $275/month)	0	3,300	0	5,500	0	6,600	0	5,500	0	1,100	0	22,000	22,000
d. Postal & other charges ($300/month)	0	3,600	0	6,000	0	7,200	0	6,000	0	1,200	0	24,000	24,000
4. Vehicle Expenses (15)											0		
a. Fuel/Oil (@ $233/vehicle/month)	0	41,940	0	41,940	0	41,940	0	41,940	0	13,980	0	181,740	181,740
b. Maintenance @ $70/vehicle/month)	0	12,600	0	12,600	0	12,600	0	12,600	0	4,200	0	54,600	54,600
Sub-Total: D	0	150,684	0	114,380	0	126,348	0	114,380	0	30,148	0	535,940	535,940
TOTAL: LT TA (A+B+C+Fixed Fee+D)	335,763	156,184	425,551	165,200	512,389	142,164	426,563	191,644	95,142	62,576	1,795,409	717,768	2,513,177

SHORT TERM TECHNICAL ASSISTANCE
CONSTRUCTION SUPERVISION - BAT ROAD
16 PERSON MONTHS
(Dollars)

Expense Categories	FY 1991		FY 1992		FY 1993		FY 1994		FY 1995		TOTAL		TOTAL
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX+LC
A. Annual Recurrent Costs													
1. Salaries (@ $5,980/Month)	23,920	0	23,920	0	23,920	0	23,920	0	0	0	95,680	0	95,680
2. Fringe Benefits (35% of B. Salaries)	8,372	0	8,372	0	8,372	0	8,372	0	0	0	33,488	0	33,488
3. Post Differential (25% of B. Salaries)	3,837	0	3,837	0	3,837	0	3,837	0	0	0	15,349	0	15,349
4. Sunday Differential (5% of B. Salaries)	1,196	0	1,196	0	1,196	0	1,196	0	0	0	4,784	0	4,784
5. F.I.C.A. (7.51% of B. Salaries)	1,794	0	1,794	0	1,794	0	1,794	0	0	0	7,176	0	7,176
6. D.B.A. (4.25% of B. Salaries)	1,017	0	1,017	0	1,017	0	1,017	0	0	0	4,066	0	4,066
7. Overhead (100% of 1.+2.)	32,292	0	32,292	0	32,292	0	32,292	0	0	0	129,168	0	129,168
Sub-Total: A	72,428	0	72,428	0	72,428	0	72,428	0	0	0	289,711	0	289,711
B. Travel and Transportation													
1. International Travel													
a. Travel to Post	2,000	0	2,000	0	2,000	0	2,000	0	0	0	8,000	0	8,000
b. Travel from Post	0	2,000	0	2,000	0	2,000	0	2,000	0	0	0	8,000	8,000
c. International Per Diem (roundtrip)	460	0	460	0	460	0	460	0	0	0	1,840	0	1,840
d. Other Direct Costs	460	0	460	0	460	0	460	0	0	0	1,840	0	1,840
2. In-Country Travel & Transportation													
a. Travel (@ $200/month)	0	800	0	800	0	800	0	800	0	0	0	3,200	3,200
b. Per Diem (@ $30/day)	0	3,600	0	3,600	0	3,600	0	3,600	0	0	0	14,400	14,400
Sub-Total: B	2,920	6,400	2,920	6,400	2,920	6,400	2,920	6,400	0	0	11,680	25,600	37,280
Sub-Total: (A+B)	75,348	6,400	75,348	6,400	75,348	6,400	75,348	6,400	0	0	301,391	25,600	326,991
Fixed Fee on A+B (10%)	7,535	640	7,535	640	7,535	640	7,535	640	0	0	30,139	2,560	32,699
TOTAL: Short Term TA (A+B+Fixed Fee)	82,883	7,040	82,883	7,040	82,883	7,040	82,883	7,040	0	0	331,530	28,160	359,690

LOCAL PROFESSIONAL, ADMINISTRATIVE & SUPPORT STAFF
CONSTRUCTION SUPERVISION - BAT ROAD
(Dollars)

Expense Categories	FY 1991		FY 1992		FY 1993		FY 1994		FY 1995		TOTAL	
	PM	LC	PM	LC	PM	LC	PM	LC	PM	LC	PM	LC
A. Professional Staff												
1. Site Engineer - $1157/month	12	13,884	12	13,884	12	13,884	12	13,884	4	4,628	52	60,164
2. Materials Engineer - $1157/month	8	9,256	12	13,884	12	13,884	8	9,256	0	0	40	46,280
3. Bridge Engineer - $1157/month	6	6,942	12	13,884	12	13,884	10	11,570	0	0	40	46,280
4. Chief Survey Engineer - $1157/month	12	13,884	12	13,884	12	13,884	8	9,256	0	0	44	50,908
5. Chief Engineer - $950/month	12	11,400	12	11,400	12	11,400	12	11,400	2	1,900	50	47,500
6. Material Inspectors (4) - $500/month	32	16,000	48	24,000	48	24,000	32	16,000	0	0	160	80,000
7. Site Inspectors (4) - $500/month	32	16,000	48	24,000	48	24,000	48	24,000	0	0	176	88,000
8. Lab. Technicians (4) - $400/month	32	12,800	48	19,200	48	19,200	32	12,800	0	0	160	64,000
9. Surveyors (4) - $500/month	48	24,000	48	24,000	48	24,000	32	16,000	0	0	176	88,000
10. Bridge Inspectors (2) - $500/month	6	3,000	24	12,000	24	12,000	20	10,000	0	0	74	37,000
Sub-Total: A	200	127,166	276	170,136	276	170,136	214	134,166	6	6,528	972	608,132
B. Administrative/Support Staff												
1. Secretary/Typist - $500/month	12	6,000	12	6,000	12	6,000	12	6,000	4	2,000	52	26,000
2. Draftsman - $425/month	0	0	12	5,100	12	5,100	6	2,550	0	0	30	12,750
3. Accountant - $600/month	12	7,200	12	7,200	12	7,200	12	7,200	0	0	48	28,800
4. Accounts Assistant - $400/month	12	4,800	12	4,800	12	4,800	12	4,800	0	0	48	19,200
5. Admin. Assistant - $400/month	12	4,800	12	4,800	12	4,800	12	4,800	0	0	48	19,200
6. Gardners - $100/month	24	2,400	24	2,400	24	2,400	24	2,400	4	400	100	10,000
7. Drivers (15) - $200/month	60	12,000	120	24,000	180	36,000	180	36,000	4	800	544	108,800
8. Guards (20) - $150/month	120	18,000	180	27,000	240	36,000	240	36,000	16	2,400	796	119,400
9. Cooks (2) - $150/month	24	3,600	24	3,600	24	3,600	24	3,600	4	600	100	15,000
Sub-Total: B	276	58,800	408	84,900	528	105,900	522	103,350	32	6,200	1,766	359,150
Total: A+B	476	185,966	684	255,036	804	276,036	736	237,516	38	12,728	2,738	967,282
Overhead on A+B (50%)	0	92,983	0	127,518	0	138,018	0	118,758	0	6,364	0	483,641
Fixed Fee (10%)	0	27,895	0	38,255	0	41,405	0	35,627	0	1,909	0	145,092
TOTAL: Local Staff	476	306,844	684	420,809	804	455,459	736	391,901	38	21,001	2,738	1,596,015

SUMMARY OF ROAD MAINTENANCE TA TEAMS
($ 000)

Expense Categories	PM	FY 1993 FX	FY 1993 LC	FY 1994 FX	FY 1994 LC	FY 1995 FX	FY 1995 LC	FY 1996 FX	FY 1996 LC	TOTAL FX	TOTAL LC	TOTAL FX+LC
A. LT TA	54	275	106	401	111	198	114	99	53	973	384	1,358
B. ST TA	4	0	0	32	4	32	4	0	0	64	9	73
C. Local Staff	264	0	13	0	38	0	38	0	13	0	100	100
Total:	322	275	119	433	153	230	156	99	66	1,037	493	1,531

LONG TERM TECHNICAL ASSISTANCE TEAM
ROAD MAINTENANCE - BAT ROAD
54 PERSON MONTHS
(Dollars)

Expense Categories	FY 1993		FY 1994		FY 1995		FY 1996		TOTAL		TOTAL
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX+LC
A. Annual Recurrent Costs											
1. Salaries (@ $4,500/Month)	54,000	0	108,000	0	54,000	0	27,000	0	243,000	0	243,000
2. Fringe Benefits (35% of B. Salaries)	18,900	0	37,800	0	18,900	0	9,450	0	85,050	0	85,050
3. Post Differential (25% of B. Salaries)	13,500	0	27,000	0	13,500	0	6,750	0	60,750	0	60,750
4. Sunday Differential (5% of B. Salaries)	2,700	0	5,400	0	2,700	0	1,350	0	12,150	0	12,150
5. F.I.C.A. (7.51% of B. Salaries)	4,055	0	8,111	0	4,055	0	2,028	0	18,249	0	18,249
6. O.B.A. (4.25% of B. Salaries)	2,295	0	2,839	0	1,419	0	710	0	7,263	0	7,263
7. Overhead (100% of 1.+2.)	72,900	0	145,800	0	72,900	0	36,450	0	328,050	0	328,050
8. Storage of HHE in U.S.($150 p/month)	1,800	0	3,600	0	1,800	0	900	0	8,100	0	8,100
9. Education Allowance	10,404	0	20,808	0	10,404	0	5,202	0	46,818	0	46,818
Sub-Total: A	180,554	0	359,358	0	179,679	0	89,839	0	809,430	0	809,430
B. Allowances											
1. Foreign Transfer	6,680	0	0	0	0	0	0	0	6,680	0	6,680
2. Education Allowance	4,000	0	0	0	0	0	0	0	4,000	0	4,000
Sub-Total: B	10,680	0	0	0	0	0	0	0	10,680	0	10,680
C. Travel and Transportation											
1. International Travel											
a. Travel to Post	15,200	0	0	0	0	0	0	0	15,200	0	15,200
b. Travel from Post	0	0	0	0	0	7,600	0	7,600	0	15,200	15,200
c. Medical Travel	0	0	0	3,800	0	0	0	0	0	3,800	3,800
d. Emergency Travel	0	0	0	0	0	3,800	0	0	0	3,800	3,800
e. R&R Travel/Home Leave	0	0	0	30,400	0	30,400	0	0	0	60,800	60,800
f. Travel to/from Post H.O.	0	0	3,973	0	0	0	0	0	3,973	0	3,973
2. International Per Diem											
a. Arrival	1,840	0	0	0	0	0	0	0	1,840	0	1,840
b. Departure	0	0	0	0	600	0	600	0	1,200	0	1,200
c. Medical	0	0	600	0	0	0	0	0	600	0	600
d. Arrival/Departure H.O.	0	0	397	738	0	0	0	0	397	738	1,135
3. International Shipments											
a. UAB to Post	5,600	0	0	0	0	0	0	0	5,600	0	5,600
b. UAB from Post	0	0	0	0	0	2,800	0	2,800	0	5,600	5,600
c. POV to Post	6,000	0	0	0	0	0	0	0	6,000	0	6,000
d. POV from Post	0	0	0	0	0	3,000	0	3,000	0	6,000	6,000
e. POV Inland trans. to/from	0	80	0	0	0	40	0	40	0	160	160
f. HHE to Post	28,800	0	0	0	0	0	0	0	28,800	0	28,800
g. HHE from Post	0	0	0	0	0	14,400	0	14,400	0	28,800	28,800

Expense Categories	FY 1993 FX	FY 1993 LC	FY 1994 FX	FY 1994 LC	FY 1995 FX	FY 1995 LC	FY 1996 FX	FY 1996 LC	TOTAL FX	TOTAL LC	TOTAL FX+LC
4. Other Direct Costs											
Visas, vaccines, taxis, etc.	1,200	0	0	0	0	0	0	0	1,200	0	1,200
5. In-Country Travel											
a. Travel ($100/each/month)	0	1,200	0	2,400	0	1,200	0	600	0	5,400	5,400
b. Per Diem ($13/day - 7 days-travel/mon)	0	1,092	0	2,184	0	1,092	0	546	0	4,914	4,914
Sub-Total: C	58,640	2,372	4,970	39,522	600	64,332	600	28,986	64,810	135,212	200,022
Total: A+B+C	249,874	2,372	364,328	39,522	180,279	64,332	90,439	28,986	884,920	135,212	1,020,132
Fixed Fee (10%)	24,987	237	36,433	3,952	18,028	6,433	9,044	2,899	88,492	13,521	102,013
TOTAL: A+B+C+Fixed Fee	274,862	2,609	400,760	43,474	198,307	70,765	99,483	31,885	973,412	148,733	1,122,145
D. Logistic Support Costs											
1. One Time Costs											
a. Housing Costs	0	50,000	0	0	0	0	0	0	0	50,000	50,000
b. Office Start-up Costs	0	10,240	0	0	0	0	0	0	0	10,240	10,240
2. Recurrent Costs											
a. Rent (2 houses @ $1000/house/month)	0	12,000	0	24,000	0	12,000	0	6,000	0	54,000	54,000
b. Utilities (@ $220/house/month)	0	2,640	0	5,280	0	2,640	0	1,320	0	11,880	11,880
c. Fumigation (@ $10/house/month)	0	120	0	240	0	120	0	60	0	540	540
d. Maintenance Leasehold (@ $162/house/mon)	0	1,944	0	3,888	0	1,944	0	972	0	8,748	8,748
e. Maintenance Equipment (@ $250/house/mon)	0	3,000	0	6,000	0	3,000	0	1,320	0	13,320	13,320
f. 24 hours Guard (@ $360/house/month)	0	4,320	0	8,640	0	4,320	0	2,160	0	19,440	19,440
3. Office Costs											
a. Office Supplies (@ $130/month)	0	1,560	0	1,560	0	1,560	0	780	0	5,460	5,460
b. Utilities (@ $285/month)	0	3,420	0	3,420		3,420	0	1,710	0	11,970	11,970
c. Telephone (@ $275/month)	0	3,420	0	3,420	0	3,420	0	1,710	0	11,970	11,970
d. Postal & other charges ($300/month)	0	3,600	0	3,600	0	3,600	0	1,800	0	12,600	12,600
4. Vehicle Expenses (2)											
a. Fuel/Oil (@ $233/vehicle/month)	0	5,592	0	5,592	0	5,592	0	2,796	0	19,572	19,572
b. Maintenance @ $70/vehicle/month)	0	1,680	0	1,680	0	1,680	0	840	0	5,880	5,880
Sub-Total: D	0	103,536	0	67,320	0	43,296	0	21,468	0	235,620	235,620
TOTAL: LT TA (A+B+C+Fixed Fee+D)	274,862	106,145	400,760	110,794	198,307	114,061	99,483	53,353	973,412	384,353	1,357,765

SHORT TERM TECHNICAL ASSISTANCE
ROAD MAINTENANCE - BAT ROAD
4 PERSON MONTHS
(Dollars)

ense Categories	FY 1993		FY 1994		FY 1995		FY 1996		TOTAL		TOTAL
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX+LC
Annual Recurrent Costs									0	0	
									0	0	
1. Salaries (@ $4,500/Month)	0	0	9,000		9,000	0	0	0	18,000	0	18,000
2. Fringe Benefits (35% of B. Salaries)	0	0	3,150	0	3,150	0	0	0	6,300	0	6,300
3. Post Differential (25% of B. Salaries)	0	0	450	0	450	0	0	0	750	0	750
4. Sunday Differential (5% of B. Salaries)	0	0	450	0	450	0	0	0	900	0	900
5. F.I.C.A. (7.51% of B. Salaries)	0	0	676	0	676	0	0	0	1,352	0	1,352
6. D.B.A. (4.25% of B. Salaries)	0	0	383	0	383	0	0	0	765	0	765
7. Overhead (100% of 1.+2.)	0	0	12,150	0	12,150	0	0	0	24,300	0	24,300
Sub-Total: A	0	0	26,258	0	26,258	0	0	0	52,517	0	52,517
B. Travel and Transportation											
1. International Travel											
a. Travel to Post	0	0	2,000	0	2,000	0	0	0	4,000	0	4,000
b. Travel from Post	0	0	0	2,000	0	2,000	0	0	0	4,000	4,000
c. International Per Diem (roundtrip)	0	0	460	0	460	0	0	0	920	0	920
d. Other Direct Costs	0	0	400	0	400	0	0	0	800	0	800
2. In-Country Travel & Transportation											
a. Travel (@ $100/month)	0	0	0	200	0	200	0	0	0	400	400
b. Per Diem (@ $30/day)	0	0	0	1,800	0	1,800	0	0	0	3,600	3,600
Sub-Total: B	0	0	2,860	4,000	2,860	4,000	0	0	5,720	8,000	13,720
Sub-Total: (A+B)	0	0	29,118	4,000	29,118	4,000	0	0	58,237	8,000	66,237
									0	0	
Fixed Fee on A+B (10%)	0	0	2,912	400	2,912	400	0	0	5,824	800	6,624
TOTAL: Short Term TA (A+B+Fixed Fee)	0	0	32,030	4,400	32,030	4,400	0	0	64,060	8,800	72,860

LOCAL ADMINISTRATIVE & SUPPORT STAFF
ROAD MAINTENANCE - BAT ROAD
(Dollars)

Expense Categories	FY 1993		FY 1994		FY 1995		FY 1996		TOTAL	
	PM	LC	PM	LC	PM	LC	PM	LC	PM	LC
Administrative/Support Staff	--	--	--	--	--	--	--	--	--	--
1. Secretary/Typist - $500/month	4	2,000	12	6,000	12	6,000	4	2,000	32	16,000
2. Accountant - $600/month	4	2,400	12	7,200	12	7,200	4	2,400	32	19,200
3. Admin. Assistant - $400/month	4	1,600	12	4,800	12	4,800	4	1,600	32	12,800
4. Drivers (2) - $200/month	8	1,600	24	4,800	24	4,800	8	1,600	64	12,800
Sub-Total	20	7,600	60	22,800	60	22,800	20	7,600	160	60,800
Overhead (50%)	10	3,800	30	11,400	30	11,400	10	3,800	80	30,400
Fixed Fee (10%)	3	1,140	9	3,420	9	3,420	3	1,140	24	9,120
TOTAL: Local Staff	33	12,540	99	37,620	99	37,620	33	12,540	264	100,320

TRAINING COSTS

(Dollars)

Training Categories	# Participants	Duration	FY 1991 FX	FY 1991 LC	FY 1992 FX	FY 1992 LC	FY 1993 FX	FY 1993 LC	FY 1994 FX	FY 1994 LC	FY 1995 FX	FY 1995 LC	FY 1996 FX	FY 1996 LC	TOTAL FX	TOTAL LC	TOTAL FX+LC
I. THIRD COUNTRY TRAINING																	
A. Road Maintenance Planning	14	28 Days	0	0	16,400	4,800	20,500	6,000	20,500	6,000	0	0	0	0	57,400	16,800	74,200
B. Road Maintenance Management	14	21 Days	0	0	0	0	15,000	6,000	12,000	4,800	15,000	6,000	0	0	42,000	16,800	58,800
Sub-Total: Third Country Training	28		0	0	16,400	4,800	35,500	12,000	32,500	10,800	15,000	6,000	0	0	99,400	33,600	133,000
II. IN-COUNTRY TRAINING																	
A. Road Construction																	
1. Contract Administration and Quality Control	10	2 Days	0	1,000	0	1,000	0	2,000	0	1,000	0	0	0	0	0	5,000	5,000
2. Bridges and Culverts	10	5 Days	0	2,000	0	2,000	0	2,000	0	0	0	0	0	0	0	6,000	6,000
3. Road Engineering	10	3 Days	0	1,000	0	1,000	0	1,000	0	1,000	0	0	0	0	0	4,000	4,000
4. Soil Mechanics	10	3 Days	0	1,000	0	1,000	0	1,000	0	1,000	0	0	0	0	0	4,000	4,000
5. Road Drainage, Structure Protective Works	10	3 Days	0	0	0	1,000	0	2,000	0	1,000	0	0	0	0	0	4,000	4,000
B. Road Maintenance																	
1. Road Maintenance	10	5 Days	0	0	0	0	0	2,000	0	4,000	0	10,000	0	10,000	0	26,000	26,000
2. Management Workshop	10	2 Days	0	0	0	0	0	1,000	0	2,000	0	2,000	0	2,000	0	7,000	7,000
3. Preparation Estimate Documents	10	2 Days	0	0	0	0	0	1,000	0	1,000	0	1,000	0	2,000	0	5,000	5,000
4. Road Maintenance Supervision	10	3 Days	0	0	0	0	0	0	0	2,000	0	2,000	0	2,000	0	6,000	6,000
Sub-Total: In-Country Training	90		0	5,000	0	6,000	0	12,000	0	13,000	0	15,000	0	16,000	0	67,000	67,000
TOTAL : TRAINING			0	5,000	16,400	10,800	35,500	24,000	32,500	23,800	15,000	21,000	0	16,000	99,400	100,600	200,000

PROJECT COMMODITIES

(Dollars)

Items or Commodities	Quantity	Estimated Unit Price FX	Estimated Unit Price LC	Estimated Total Price FX	Estimated Total Price LC	TOTAL FX+LC
A. Vehicles						
1. 2.5 Ton Pickup Trucks	6	18,000		108,000		108,000
2. 1.5 Ton Pickup Trucks	6	15,000		90,000		90,000
B. Road Maintenance Equipment						
1. 3 Ton Vibro Roller	16	12,000		192,000		192,000
2. Plate Compactor	16	3,000		48,000		48,000
3. Flatbed Trucks	6	25,000		150,000		150,000
4. Water Trailer, 1000 G	16		7,000		112,000	112,000
5. Industrial Tractor	16		11,000		176,000	176,000
6. Bucket for Tractor	6		3,000		18,000	18,000
7. Blade for Tractor	8		1,000		8,000	8,000
8. Trolley	16		1,800		28,800	28,800
9. Asphalt Sprayer, 100	16		4,000		64,000	64,000
10. Asphalt Mixing Plant	16		5,000		80,000	80,000
11. Concrete Mixer 1/2 CY	6		3,600		21,600	
12. Road Tool Sets	6		1,000		6,000	6,000
Sub-Total: A + B				588,000	514,400	1,102,400
Spare Parts (25% of Equipment Cost)				147,000	128,600	275,600
TOTAL: COMMODITIES				735,000	643,000	1,378,000

CONSTRUCTION COSTS

($ 000)

Expense Categories	FY 1991		FY 1992		FY 1993		FY 1994		FY 1995		TOTAL		TOTAL
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX+LC
1. 35 KM Bela-Awaran Road	524	854	666	1,183	448	871	184	394	29	59	1,851	3,361	5,212
2. 101 KM Bela-Awaran Road	808	1,319	1,525	2,712	1,539	2,989	1,068	2,268	295	679	5,235	9,967	15,202
3. 240 KM Awaran-Turbat Road	4,169	6,817	5,309	9,454	3,583	6,960	1,498	3,178	226	519	14,785	26,928	41,713
TOTAL: CONSTRUCTION	5,501	8,990	7,500	13,349	5,570	10,820	2,750	5,840	550	1,257	21,871	40,256	62,127

Note: At the last minute, item III of the O. Costs was shifted to the TA line item. This will be reflected in the ProAg as well as expenditure projections.

OTHER COSTS BUDGET
(Dollars)

Expense Categories	FY 1992 FX	FY 1992 LC	FY 1993 FX	FY 1993 LC	FY 1994 FX	FY 1994 LC	FY 1995 FX	FY 1995 LC	FY 1996 FX	FY 1996 LC	TOTAL FX	TOTAL LC	TOTAL FX+LC
I. PROJCECT EVALUATIONS (TWO) 2 PERSON TEAMS FOR 3 MONTHS EACH													
A. Compensation													
1. Salaries (2 X 78 da	0	0	0	0	39,000	0	0	0	39,000	0	78,000	0	78,000
2. Sunday Differential (5% sala	0	0	0	0	1,950	0	0	0	1,950	0	3,900	0	3,900
3. FICA (7.51% of salaries)	0	0	0	0	2,929	0	0	0	2,929	0	5,858	0	5,858
4. OBA (4.25% of salaries)	0	0	0	0	1,658	0	0	0	1,658	0	3,315	0	3,315
5. Multiple (100% of salaries)	0	0	0	0	39,000	0	0	0	39,000	0	78,000	0	78,000
Sub-Total: A	0	0	0	0	84,536	0	0	0	84,536	0	169,073	0	169,073
B. Travel & Transportation													
1. International Travel ($3800	0	0	0	0	7,600	0	0	0	7,600		15,200	0	15,200
2. International Per Diem ($46	0	0	0	0	920	0	0	0	920		1,840	0	1,840
3. In-Country Travel	0	0	0	0	0	1,000	0	0		1,000		2,000	2,000
4. In-Country Per Diem ($96 X 2	0	0	0	0	0	17,280	0	0		17,280		34,560	34,560
5. Other Direct Costs ($400 X 2	0	0	0	0	800				802		1,602	0	1,602
Sub-Total: B	0	0	0	0	9,320	18,280	0	0	9,322	18,280	18,642	36,560	55,202
Sub-Total: (I) - Costs of Two Eval	0	0	0	0	93,856	18,280	0	0	93,858	18,280	187,715	36,560	224,275
II. EXTERNAL AUDITS													
A. Non-Federal Audit of Projec	0	0	55,000	0	0	0	0	0	0	0	55,000	0	55,000
B. Non-Federal Audit - Financi	0	0	0	0	0	0	65,000	0	0	0	65,000	0	65,000
Sub-Total: II - Costs of Two Audi	0	0	55,000	0	0	0	65,000	0	0	0	120,000	0	120,000
III. STUDIES													
A. Road Inventory	0	80,000	0	0	0	0	0	0	0	0	0	80,000	80,000
B. Condition Survey	0	50,000	0	0	0	0	0	75,000	0	0	0	125,000	125,000
C. Kilometer Post Markings	0	20,725	0	0	0	0	0	0	0	0	0	20,725	20,725
D. Traffic Surveys	0	0	0	20,000	0	20,000	0	20,000	0	0	0	60,000	60,000
E. Baseline Data Collection	0	0	0	20,000	0	0	0	0	0	0	0	20,000	20,000
F. Maintenance Financing	0	0	0	140,000	0	40,000	0	55,000	0	0	0	235,000	235,000
Sub-Total: III - Costs of Studies	0	150,725	0	180,000	0	60,000	0	150,000	0	0	0	540,725	540,725
TOTAL: I+II+III - OTHER COSTS	0	150,725	55,000	180,000	93,856	78,280	65,000	150,000	93,858	18,280	307,715	577,285	885,000

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