

Feasibility Study for a Road  
Construction and Training Programs  
For the Lesotho Ministry of Works

I. Objectives

The proposed AID project has as its objectives the following:

1. To upgrade the capability of the Lesotho Ministry of Works (MOW) to a level which will permit it to design, construct, and maintain a national road network.
2. To provide the MOW with the basic facilities, equipment, and organization to carry out the maintenance and improvement of existing and newly constructed roads and to repair and maintain the equipment provided under this program.
3. To assist the Government of Lesotho in the construction of a road from Mohale's Hoek to Mpiti which will provide an adequate means of transport and communication through the most populous part of the country and its best agricultural land, thereby assisting in the economic development of Lesotho.

II. Method

To carry out the objectives in Section I AID desires to examine the feasibility of letting a single contract which will include the following tasks:

1. A training program to train road design engineers, road construction and maintenance supervisory personnel, skilled road construction and maintenance workers, equipment maintenance technicians, and management staff needed to manage an efficient road construction and maintenance organization.
2. Construction of workshops and storage facilities for the proper care of equipment, materials, and spare parts and for the repair and maintenance of road building and road maintenance machinery.
3. Construction of a road from Mohale's Hoek to Mpiti, near Qacha's Nek as an important link in the country's road network. Part of the training program would be implemented through participation of selected trainees in

on-the-job training during the construction work.

A separate task not to be included in the above contract would be the financial assistance by AID in the procurement of road maintenance equipment, spare parts, and equipment for the workshops.

### III. Scope of Work for the Feasibility Study

The feasibility study contractor shall:

1. Examine and inventory the existing physical facilities (buildings, equipment, repair shops, etc.) of the MOW and report on their condition and suitability.
2. Make a detailed assessment of the requirements of the MOW over the next 10 years in road maintenance equipment and in equipment repair and maintenance facilities based on the existing road network and on the MOW plans for future construction and improvements over the same period.
3. Assess the total manpower requirements of the MOW in all phases of road engineering, construction, and maintenance, except for unskilled labor; and develop a program for the training of personnel to include:
  - (a) training in-country and abroad of professional staff in engineering and managerial skills including any preliminary preparation required in language, mathematics or other preparatory studies;
  - (b) in-country and on-the-job training of supervisory construction and maintenance staff, equipment operators and repair mechanics.
4. Prepare a Scope of Work for a training contract to be included in the bid documents for construction of the Mohale's Hoek to Mpiti road so that the construction contractor will be responsible for the training program as part of his contract.
5. Prepare a time and cost estimate for carrying out the proposed training program.

#### B. Equipment

The contractor shall prepare equipment lists for road maintenance workshops, and storage facilities based on the requirements of III.A.2 and a cost estimate and suggested delivery schedule. It is expected that equipment purchases will be direct competitive bidding and will not be part

of the construction contract.

C. Road Construction

The contractor shall:

1. Review the road alignment and standards for the Mohale's Hoek to Mpiti road proposed by the MOW and described in general terms in the Lesotho Road Assessment of March 24, 1977 prepared by REDSO/EA. If the contractor does not approve of the alignment or standards, he shall propose modifications suited to the development and political needs of the area served by the road.
2. Provide a detailed cost estimate for construction of the road based on the use of U.S. goods and services for the construction work.
3. Prepare an economic and financial analysis of the road construction project. The economic analysis shall be in two sections:
  - (a) a classic benefit/cost analysis based on user benefits and quantifiable direct and indirect benefits to the economy. The contractor may use existing traffic growth projections prepared by the U.K. firm of Roughton and Partners in 1974. If these are deemed inadequate or require updating the contractor will assemble the data and prepare his own projections; and
  - (b) a presentation of the long range political and economic benefits to Lesotho from construction of the proposed road. Although these benefits may not be quantifiable they should be listed if there is a sufficiently strong indication that they can be achieved in the context of a general national development plan. Where possible, examples may be given of road construction projects in developing countries where the initial benefit/cost analysis indicated a doubtful project but the existence of the road brought later benefits which eventually, justified its construction.

→ Thus, this part of the economic analysis should consider the catalytic effect of the road on the agriculture and industrial development of the area it serves. Such factors as the improvement in health and educational services should be considered.

On the other hand, the negative effects of easier migration to urban centers and to work in neighboring countries should also be addressed.

4. Prepare a Scope of Work for a design engineering contract for the road.

