Proj: 492029
PD-AAF-045-B1

UNCLASSIFIED

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D.C. 20523

315p

PROJECT PAPER

Proposal and Recommendations
For the Review of the
Development Loan Committee

PHILIPPINES - RURAL ROADS II

AID-DLC/P-2282

UNCLASSIFIED

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

UNCLASSIFIED
AID-DLC/P-2282
March 7, 1978

MEMORANDUM FOR THE DEVELOPMENT LOAN COMMITTEE

SUBJECT: Philippines - Rural Roads II

Attached for your review are the recommendations for authorization of a loan to the Government of the Philippines of not to exceed Twenty Four Million United States Dollars ($24,000,000) to help in financing certain foreign exchange costs of goods and services required for the project.

This loan is scheduled for consideration by the Development Loan Staff Committee on Wednesday, March 15, 1978, at 2:30 p.m., in Room 3886 New State. If you are a voting member a poll sheet has been enclosed for your response.

Development Loan Committee
Office of Development Program Review

Attachments:
Summary and Recommendations
Project Analyses
Annexes A - M

UNCLASSIFIED

RURAL ROADS PROGRAM II

TABLE OF CONTENTS

APPENDICES

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT PAPER FACESHEET

1. TRANSACTION CODE: A (A = ADD, C = CHANGE, D = DELETE)

PP

2. DOCUMENT CODE: 3

3. COUNTRY/ENTITY: **PHILIPPINES**

4. DOCUMENT REVISION NUMBER:

5. PROJECT NUMBER (7 digits): 492-297

6. BUREAU/OFFICE: A. SYMBOL: ASIA; B. CODE: 04

7. PROJECT TITLE (Maximum 40 characters): **RURAL ROADS PROJECT II**

8. ESTIMATED FY OF PROJECT COMPLETION: FY 81

9. ESTIMATED DATE OF OBLIGATION: A. INITIAL FY 78; B. QUARTER; C. FINAL FY 80 (Enter 1, 2, 3, or 4)

10. ESTIMATED COSTS ($000 OR EQUIVALENT $1 -)

A. FUNDING SOURCE	FIRST FY B. FX	FIRST FY C. L/C	FIRST FY D. TOTAL	LIFE OF PROJECT E. FX	LIFE OF PROJECT F. L/C	LIFE OF PROJECT G. TOTAL
AID APPROPRIATED TOTAL	12000		12000	24000		24000
GRANT	( )	( )	( )	( )	( )	( )
LOAN	(12000)	( )	(12000)	(24000)	( )	(24000)
OTHER U.S. 1.						
OTHER U.S. 2.						
HOST COUNTRY		5000	5000		17800	17800
OTHER DONORS						
TOTALS		5000	17000	24000	17800	41800

11. PROPOSED BUDGET APPROPRIATED FUNDS ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE C. GRANT	PRIMARY TECH. CODE D. LOAN	E. 1ST FY 78 F. GRANT	E. 1ST FY 78 G. LOAN	H. 2ND FY 79 I. GRANT	H. 2ND FY 79 J. LOAN	K. 3RD FY 80 L. GRANT	K. 3RD FY 80 M. LOAN
1. FN	B289		250		12000		7,500		4,500
2.									
3.									
4.									
TOTALS									

A. APPROPRIATION	N. 4TH FY ___ O. GRANT	N. 4TH FY ___ P. LOAN	Q. 5TH FY ___ R. GRANT	Q. 5TH FY ___ S. LOAN	LIFE OF PROJECT T. GRANT	LIFE OF PROJECT U. LOAN
1.						
2.						
3.						
4.						
TOTALS						

12. IN DEPTH EVALUATION SCHEDULED (MM DD YY):

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN THE PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PHP FACESHEET DATA BLOCK 12? IF YES ATTACH CHANGED PID FACESHEET

[1] 1 = NO, 2 = YES

14. ORIGINATING OFFICE CLEARANCE

SIGNATURE: William Sommers

William Sommers

TITLE: Assistant Director for Provincial Development

DATE SIGNED: MM 02 DD 23 YY 77

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

PART 1 - Summary and Recommendation

B. Recommendations

It is recommended that a loan be authorized to the Government of the Republic of the Philippines (Borrower) to be used to implement the Rural Roads II Project for $24,000,000. The total amount of the authorized loan is to be obligated one-half in FY 78 and one-half in FY 79 with the following proposed terms:

Terms: 1. Maturity: twenty years including a ten-year grace period.

2. Interest: two percent per annum during the grace period and three percent per annum thereafter.

3. Currency: interest and principal repayable in U.S. dollars

4. Release of funds: The obligation of the second tranche will depend upon analysis of the implementation of the project under the first tranche.

C. Description of the Project

The basic intention of the Rural Roads Project II (RRP II) is to continue to build an administrative, organizational capacity for provincial development within an on-going line department; in this case DLGCD. Concurrently, the program at the province level will foster the generation of a capability to organize for, plan, manage financially and implement development projects. A marked evolution toward these ends was witnessed over the life of RRP I. As explained in more detail in Part 2B, below the demonstrably successful PDAP staff is now being phased into the DLGCD as a first step toward dissemination of the PDAP principles to units of local government throughout the Philippines.

Rural Roads II will follow the pattern of RRP I by concentrating on road linkages, (including required structures), chosen according to standard criteria developed during previous phase. While expansion of the program beyond the scope of RRP I is built into concept, construction will be limited to provinces and Rural Service Centers (RSCs). Chartered cities in the Philippines fall into two basic categories; the large urban, industrialized city, often tied to an urban network (such as Metro Manila and Cebu), and the smaller agriculturally based and isolated (in the sense that it is not tied to an urban network) city which serves essentially rural populace. It is the latter that have demonstrated both the capacity to select, plan and construct

rural roads and the ability to raise local taxes to finance further construction within a well conceived road network plan, which have been named Rural Service Centers (RSCs). (If further exploration of the nature of the RSC is desired, please see the Project Paper for Rural Service Centers.)

The loan for RRP II is set for $24 million with authorization being made in 1978. Reimbursement to the GOP would extend over a three year period -- FY 79 through FY 81.

Financial design for RRP II is identical to that for Phase I, including the requirement that construction be financed initially through province or RSC funds. When construction is completed, the province will receive the Fixed Amount Reimbursement (FAR) not to exceed 75% of the estimated total cost of the approved project. [1]

The estimated cost of this phase will be ₱335 million, including that portion to be offset by the $24 million loan. The GOP will provide ₱28.8 million pesos as a grant of working capital; DLGCD will pay on estimated ₱13.4 million for local services to monitor, inspect and certify completion of individual projects and another 14.4 million for general support. Local governments are expected to contribute from their own budgets the remaining ₱86.4 million to cover overhead and other expenses.

Under the RRP II it is estimated that 650 kilometers of all-weather rural roads and 6,000 linear meters of bridges will be constructured. Technical details appear in Part 3A.

1. See part 2, Section B2 for exceptions.

The evaluation of RRP I shown as Annex L to this Project Paper coupled with the commitment to carry out RRP II through identical procedures is evidence that the USAID inputs to the project will result in the forecast outputs and achievement of the project purpose. An audit of RRP I conducted by the Office of the Area Auditor General East Asia found and reported:

> "that the Rural Roads Project has contributed to the development of participating provinces institutional capability by setting minimum standards for provincial participation in the project, and through required adherence to a prescribed system of administrative procedures ..
>
> ... For all subprojects reviewed, we found complete files and timely reports, indicating that prescribed implementation requirements are being followed."

Conditions within the target area and population group, as noted in the evaluation, depict a representative sample of the impact of RRP I and the expected impact of RRP II. That transportation costs to the rural poor are lowered by rural road programs of this type and that the population of the influence area is provided greater access to rural service centers for marketing, social services, education and recreation is borne out by the attached evaluation and on-site observations.

D. Summary Findings

1. Technical

The program includes the improvement and rehabilitation of about 640 km. of feeder roads of which 20% are impassable trails. Each project will include all required drainage structures to insure that the road is passable under all weather conditions.

The project roads are located mostly in areas with significant but largely unrealized agricultural potential. Recent agrarian development efforts, which have so dramatically increased agricultural production along good roads, have largely bypassed the inaccessible small farms. Road improvements will enable these subsistence farmers to become acquainted with new agricultural technology, and are expected to increase the value of agricultural production and farm income by 20-30 percent or more.

As demonstrated by the RRP I, the project is within the capabilities of the provinces and DLGCD with regard to project identification, preparation, and implementation. Design standards used for roads and bridges will basically follow those established by the DPH, though the standards for low traffic roads (AADT's less than 50) will be relaxed to allow surfacing widths of less than 6.1 meter (down to 2.5 meter), and to allow one-lane bridges and spillways.

Maintenance of the roads will be crucial to the realization of the expected benefits. Local funding for maintenance is deemed

adequate, but management needs strengthening; the project, therefore, includes training in the management of maintenance.

2. Financial and Economic

Provincial road revenues derive from local taxes and loans from the national government. A ten year study (1965-1974) of the revenues accruing to all roads revealed an increase from ₱373 million to ₱1,582 million over that time span with that part going to national roads showing a six fold increase and accounting for 82.5% of the total funds for road construction.

Provincial revenues cover approximately 75% of provincial road costs (construction and maintenance) with the remaining 25% coming from aids and loans from the national government. The total is broken down as follows; 19.8% for construction, 74.0% for maintenance and 6.2% for administrative costs.

The Department of Public Highways forecasts that by the year 2000 government revenues accruing to the highway system will rise four times the revenue for 1974. Sixty percent of this revenue will be derived from user taxes and the remainder from general revenue sources. The expected rise in road user taxes and the anticipated increase in local government revenues will insure the continuation of infrastructure development after the conclusion of RRP II.

Analysis of the tax base and budget commitments of the PDAP provinces indicates that only one has insufficient potential revenues to meet road maintenance requirements. The aggregate of real property taxes for the 28 provinces in RRP I in 1975 was ₱123 million, or 3.6 times the aggregate local funding requirement (₱34 million) for maintenance.

The labor component for road maintenance reveals a ratio of 2.5 men per kilometer. With an annual average payroll of ₱455 per man, the 12,075 kilometer provincial road inventory for the 28 PDAP provinces would apparently require a labor force of 30,187 and involve a labor cost of ₱13.7 million which with materials and overhead, including equipment operation and maintenance, totals ₱95.9 million. However, the government formula for maintenance costs on that kilometerage requires the budgeting of ₱102 million. This suggests that the actual maintenance requirements may be less than the fixed sum allotment and thereby be less than the implied burden on local revenues.

Costs for a representative 1 kilometer gravel road and a 30 linear meter bridge, (under force account), indicate that RRP II would provide employment for 23,092 men and generate a total payroll of ₱24.6 million, which represents 12.8 % of the total construction costs. Since RRP funding is a net addition to regular road construction in each province, its effect on local payrolls can be interpreted as a net gain in ordinary employment.

Annual unit user cost savings of ₱86.69 have been calculated for an average vehicle.

A distribution of these savings according to the number of kilometers reconstructed in each province furnishes only a partial benefit-cost analysis as vehicle counts are not known. The benefits are seen to be distributed 69.7% to income groups below ₱5,000, 88.6% to those below ₱10,000 with the remaining 11.4% going to the above ₱10,000 category.

3. Social

Rural roads are socially feasible, indeed necessary, for lowland Filipino culture communities. Their vital functions include, (1) bringing farmers into the orbit of a growth market-oriented economy, (2) accommodating social interests and cultural practices of the project beneficiaries, (3) providing access to off-the-farm seasonal employment, and (4) conversely, allowing access into rural communities for governmental line agencies and social development programs.*

Highland cultures will benefit less than their lowland brethren from the construction of rural roads. Construction of rural roads may be initially disruptive, to traditional cultures. Inasmuch as feasibility studies, emphasizing economic benefits determine subproject selection, only very rarely is construction warranted in a slash and burn area of the semi-sedentary upland people.

*Rural roads which are designed primarily to serve the special interests of corporate mining, lumber, and farming groups, will not be eligible for AID financing. Further, a detailed social analysis must be completed prior to the construction of penetration roads in cultural minority areas.

The economic benefits are substantial (See Part 3C) and accrue in bulk to the rural poor. To the rural population, rural roads are highly desirable and socially feasible.

E. Project Issues

The following issues (questions) were raised during the preparation and presentation of the Rural Roads Program II documentation (See Annex A). Mission response is as follows:

1. Is the Department of Local Government and Community Development prepared to expand this program to include additional provinces if USAID deems this appropriate at this time?

Yes. Provincial Development Assistance Program concepts and procedures have gained wide recognition and acceptance. There is significant pressure from non-participating provinces for expansion. USAID, under RRP II and the Rural Service Center Project will more than double present participation. The GOP has endorsed and sponsored considerable training for expansion in the last two years. See Part 2B for additional description of this effort.

2. Fully justify involvement in the project on the basis of developing the institutional and technical capability for self-sustained rural roads construction: demonstrate provincial development capability ...

This is interpreted to be a question regarding primarily the financial capability of the provinces inasmuch as the technical capability is demonstrated by the accomplishments of RRP I. As such the "justification" is addressed in Part 3D.

3. Demonstrate (a) the encouraging of international lending institutions and other financial support for rural roads projects, (b) outline GOP strategy for institutionalizing the program for continuing project without AID financial assistance.

(a) World Bank (IBRD) representatives here indicated a strong interest in funding rural roads projects in the Philippines. In December 1976 an IBRD officer in a meeting with USAID personnel stated the readiness of the Bank to consider for 1978 a program of about $10 million ($5 million loan and the same amount in pesos) as a "pilot program". The IBRD official stated he would then like to include a rural roads component of approximately $20 million, $10 million loan matched by $10 pesos, in the fourth IBRD package, with DLGCD being the responsible central government agency but with implementation being handled by the provincial governments.

USAID/Philippines personnel have been meeting frequently with Asia Development Bank officers concerning that institution's involvement in rural roads (called feeder roads by ADB) construction. Currently ADB is building rural roads in two PDAP provinces. USAID efforts are toward ADB designation of DLGCD as responsible agency for roads funded by that bank. After considerable contact with DLGCD, the ADB final report on its initial effort in this field recommends consideration of the USAID recommendation in further activity.

(b) RRP I involves no direct dollar costs in the Philippines. The GOP is reimbursed directly and in pesos. In November 1976, President Marcos approved a system whereby heavy equipment suitable for rural road construction and maintenance will be purchased with credits accruing under the SLC.[1] This equipment will be sold to provincial governments on preferred terms. Payments will go into a revolving account to provide loans to provinces for continued rural road construction. See Part 2B for detailed description of GOP effort to expand the DLGCD procedures.

4. With regard to beneficiaries Project Paper should:

(a) quantify small farmer/rural poor and women to be affected by project with specific attention to income levels;

(b) how are benefits of new or improved rural roads passed along to the small farmer/rural poor and women; and

(c) extent that Rural Roads II project will be coordinated with land reform programs.

See Evaluation - Annex L for (a) and (b) above. As pointed out in Part 3D, the Rural Roads II project is not coordinated with land reform programs.

---

[1] Direct reimbursement in pesos has replaced the SLC.

PART 2 Project Background and Detailed Description

A. Background

1. Evolution of the Provincial Development Assistance Program

Traditionally government in the Republic of the Philippines has been of a unitary nature; that is for all intents and purposes there has been only a single governmental unit - the national government - with local government functioning only as a very weak local appendage. The Local Government Center of the College of Public Administration, University of the Philippines has gone as far as stating that local government is only, "a 'creature' of the national government, therefore each is empowered to exercise only the functions assigned by the latter". The Local Government Center goes on to state, "while numerous services are performed at the provincial level, the province merely acts as administrative overseer for the national government and that it merely coordinates these services in the different municipalities. Therefore, it is not hard to imagine why the quality of local government, and the services it delivers, traditionally have been of very poor quality".

Concurrent with the traditionally low political standing and priority of local government in the general scheme of activity in the Republic of the Philippines was the low standing and priority of rural development (e.g. development of the country outside of the three or four major urban areas). Starting in the

late 1950's a shift began to occur in the Philippines' view of the role of local government. A series of decentralization laws were promulgated granting local government increasingly more important areas in which it may act in a manner independent of the national government - but the primary source of power and responsibility remained with the national government. With almost all power and resources remaining with the central government in Manila, development of the rural sector remained haphazard and often resulted in projects which did not respond to the needs of the local entities. Since local government's function remained that of administrator, it had no input into planning, hence, inadequate development of the rural sector was perpetuated.

In the mid 1960's this situation began to change in a positive manner. The primary emphasis in development began to shift from capital intensive industrialization concentrated in urban areas to social and economic development of the rural sector, in an effort to close the continually worsening disparity between urban and rural living conditions. But the neophyte local governments, unaccustomed to the responsibilities of development and strapped by both inadequate management and physical resources, proved to be a poor medium through which to execute the Philippines' new direction in development.

USAID's early efforts at rural development in early and mid 1960's had less than fruitful results when it attempted to work through the central government mechanism. It had fallen prey to the same problem that had plagued the central government's centrally planned projects: execution by the mechanisms of the central government, with little to no input in planning, or feedback during implementation, from the local governments; thereby often resulting in projects that did not meet or inadequately met local needs. As a result USAID/Philippines became convinced that nothing was going to be accomplished until it started to work directly with local government, and until local government was given more freedom to select and carry out its own projects. In 1965 several governors approached USAID/Philippines and the National Economic Council (the central planning board of the GOP at the time) about the possibility of direct aid from USAID in improving their capability to effectively participate in the formulation of provincial as well as national development plans. This was the seed of what was to become a major commitment on the part of USAID/Philippines to the development of the capacity of local government to effectively manage its resources, improve the quality of public services and perform in a positive manner in the nation's overall development effort. The NEC made a formal request for such assistance, and "Operation Spread" was born.

"Operation SPREAD" (or Systematic Programming for Rural Economic Assistance Development) was initiated in the provinces of Tarlac and Laguna on a two year (1966-1968) pilot basis. "Its underlying objective was to gauge the value of a direct field assisted provincial development program to identify the concepts, systems and inputs crucial to the local development process, and to establish a rational basis and effective technique for future extension of development assistance efforts to other provinces". The Philippine Government was so impressed with the results gleaned from the SPREAD concept that in 1968 it established the Provincial Development Assistance Project (PDAP) as an agency of the National Economic Council to deal specifically with the development of local government capacity. "The formation of PDAP represented a significant shift of program emphasis in that a specific agency of the Government of the Philippines was established to coordinate and extend pilot efforts aimed at upgrading the administrative capabilities of local governments.

When "Operation SPREAD" came to a successful completion on January 2, 1968, USAID/Philippines, at the request of the NEC, continued its assistance in the development of local governmental capacity through the Provincial Development Project. The Provincial Development Project provided USAID advisors, commodities, and training assistance in an effort to develop local government capacity, but now this assistance was channeled through a central

government mechanism - PDAP - instead of being supplied directly to the provinces, as was the case with "Operation Spread". PDAP's efforts begain in the provinces of Palawan, Leyte and South Cotabato. By the time the Provincial Development Project had drawn to an end in FY 74, PDAP was working with sixteen provinces spread evenly throughout the country and had successfully begun work in three major areas: development of a central planning capacity through the creation of the Provincial Development Council, the Provincial Development Staff, the Capital Improvement Plan (the five year plan for infrastructure development) and the Annual Implementation Plan; improvement of budgetary and fiscal management; and improved capacity to plan and implement capital improvement projects.

In July and August of 1972, the island of Luzon (where over a third of the total Philippine population lives) was devastated by typhoon-fed rains causing the worst flooding in the country during this century. Congress responded to a request from the Philippine Government for assistance by voting a $50 million Disaster Recovery Grant. PDAP was allocated $10.8 million dollars of the Relief Funds to reconstruct infrastructure (roads, bridges, and small-scale irrigation systems) in the eleven worst hit provinces. The flooding of July/August 1972 proved to be a blessing in disguise for the eleven Flood Rehabilitation Provinces. The PDAP/USAID "Flood Rehabilitation Program" was a major turning point for development

of local governmental capacity, for out of it came improvements in five major program areas that have enhanced the ability of local government to serve its constituency. These include upgrading of engineering planning and implementation capacity; establishment of the Equipment Pool Development Program and initiation of the U.S. Excess Equipment Program; establishment of engineering quality control facilities; compilation of Equipment Pool Operations Manuals; and the institutionalization of Fixed-Amount Reimbursement procedures. But probably the most important benefit of the "Flood Rehabilitation Program" was that it proved the provinces can act as effective partners of the national government in development. This was most evident in the dramatic improvement in the capabilities of the Provincial Engineering Offices to plan and implement major infrastructure projects. President Marcos had made it quite clear that he wanted the provinces to share to a greater extent in the technical responsibilities and financial burdens of implementing development programs; the floods of 1972 gave him the chance to implement his wish. This was the major reason for the $10.8 million allocated to PDAP for relief work. The "Flood Rehabilitation Program" changed the Provincial Engineering Offices from a second rate organizations, into competent engineering, planning and implementation arms of local government.

In July of 1973 the "Special Infrastructure Program" was started to capitalize on the engineering capabilities molded under

the "Flood Rehabilitation Program" and to maintain the momentum gained in improving the ability of local government to aid in the development efforts of the national government. Under the "Special Infrastructure Program" (SIP), the participating provinces, for the first time, embarked on a planned program of quality farm to market road construction designed to meet the needs of the province, particularly the agricultural sector.

At the same time the SIP came into existence, the Provincial Development Project was phased out and replaced by the Local Development Project. Under the Local Development Project, goals established under predecessor programs were further refined to include meeting the needs of local government (and the first serious work was done on a pilot basis), in improving the collection, assessment, and records management of the real property tax (the primary source of revenue for local governments in the Philippines).

In March of 1976 work began on the "Rural Roads Program", which is similar to the SIP but with more stringent controls over planning and implementation, thereby requiring the participating provincial governments to meet higher standards of quality control and planning. This program has had economic and social benefits for the rural areas it has serviced to date, as shown in Annex L, and has sharpened the abilities of the Provincial

Engineering Offices in the participating provinces to the point where they rival the Department of Public Highways in quality but with much fewer resources.

The PDAP experience has been extremely rewarding and of great importance to the Philippines. PDAP now operates in twenty-eight provinces. Many of the programs developed under PDAP (e.g., the Capital Improvements Plan, the Annual Implementation Plan, the Development Councils and Staffs, the Excess Property Program, the Equipment Pool Development Plan, and many of the training programs) have already spread to non-PDAP provinces and to the chartered cities-either as a requirement of law, by petition of the local government concerned or under the plans of PDAP to expand its operation nation-wide.

The Rural Roads Project I which is financed, in part, by AID Loan 492-T-035 was implemented in 15 provinces and will embrace 26 provinces in 1978, its final year. Under RRP I, 475 kms. of road and 4,750 linear meters of bridging were to be constructed. In the PRP it was noted that "some delays" had been implemented in RRP construction. Acceleration in early 1977, however, shows promise of return the project to schedule with completion as anticipated.

B. Project Description

1. General

The National Economic and Development Authority (NEDA) stresses the importance of roads linking rural production areas with rural service centers including markets, storage, processing centers and/or main roads. These road linkages will facilitate the provision of government services such as health, nutrition, and education to enhance the social welfare of the people.

It is estimated that an additional 125,000 kms. of rural roads are required throughout the Republic. However, in the previously mentioned Four-Year Infrastructure Development Plan the GOP exhibits special concern over the construction/improvement/rehabilitation of rural roads, mostly feeder roads, aggregating approximately 23,000 kilometers. These are the vital links between production areas and markets that provide the opportunity to increase rural incomes and social standards.

The Rural Roads Project II, as did the initial phase, involves the construction and/or improvement of selected roads/bridges that have been identified by Local Governments as both critical and feasible and meet the criteria for selection under the requirements established by USAID/DLGCD. The new project will include non-PDAP provinces and selected Rural Service Centers described above that meet the qualification standards

for participation in the program. A projected expansion to several additional qualified provinces and 15 RSCs over the life of the project will result in more than doubling the local governments adopting PDAP procedures.

2. Loan Procedures and Cost

It is proposed that this project would be financed in accordance with the terms and procedures setforth in the RRP I loan agreement. Under these procedures, the DLGCD would give the local government an agreed Fixed Amount Reimbursement (FAR) for each project completed in accordance with approved plans and specifications. An amount equivalent to the FAR would be provided by AID as reimbursement. (See Part 3B, following).

The amount of the loan would not exceed 24 million dollars. The allocation of the $24 million would be made in FY 78, and would be used to reimburse the GOP over the three-year period -- FY 79 through FY 81.

The total cost of RRP II is estimated at ₱335 million, including the portion to be offset by the $24 million loan. The GOP will provide 28.8 million pesos as a grant for seed money (working capital), DLGCD will pay an estimated ₱13.4 million for A&E fees for monitoring, inspection, and certification of completion of subprojects and another ₱14.4 million for general support. Local governments are expected to contribute the remaining ₱86.4 million for overhead and other expenses.

One inherent disadvantage in FAR procedures is the requirement that local funds be utilized to finance construction. Consequently, restricted budgetary resources may prevent participation of needy provinces in project activities. Further, provinces may alsc be slow to serve some of the poorer areas for which the economics of sub-projects may be comparatively less attractive than activities in other areas.

It is therefore contemplated that sub-projects in provinces with the least resources or designed to serve the most needy localities may receive advance payments for the fixed amount reimbursement (FAR) portion of sub-project costs if the proper administrative mechanism for evaluating requests for such advances is developed and approved by the Philippine Government and AID. The proposed Fund for Local Government Development (FLGD) Project (492-0318) is being developed to provide such a mechanism. If the FLGD or other mechanism is approved, advances for Rural Roads sub-projects otherwise eligible under the Rural Roads Loan will be funded from the Rural Roads Loan.

The RRP II project will thus finance the construction/improvement of approximately 650 kilometers of all-weather rural roads and 6,000 linear meters of bridges in those rural production areas to be linked to market centers and sources of government services. There are very specific guidelines that determine the eligibility of a road subproject, including but not limited to:

- Subproject must be constructed/improved solely with local funds.[1]
- It must be all or part of a continuous road system linking an agricultural area of predominantly small farmers or fishermen with nearest market/poblacion.
- It must link on at least one end to a road of equal quality to the nearest market/poblacion.
- Acceptable engineering standards.
- Economic feasibility established.

Joint DLGCD/USAID technical assistance for the critical aspects of project development will continue to be provided to participating local governments. It is anticipated that with the ongoing USAID/PDAP technical assistance and training efforts, together with close monitoring of the provincial development staff the DLGCD will foster successfully the institutionalization of a local government capability to identify, plan, implement, and evaluate subprojects.

1. For exceptions, see above.

Preparations, including active planning in the designated provinces, for the expansion of the RRP to qualified non-PDAP provinces and RSCs are underway and will be accelerated in the first 6 months of 1978. An important feature of the preparation is the earmarking of specific GOP funds for continuation of RRP. President Marcos has endorsed such a plan. Heavy construction equipment purchased with the RRP I loan proceeds will, by presidential decree, be sold to the provinces. Receipts from these sales will be placed in a revolving fund to be used exclusively for further rural road and bridge construction

3. Expansion of PDAP Concepts

(a) The CIP

Beyond the expansion of PDAP concepts and procedures integral to phases I and II of the Rural Roads Program, appreciable spread of PDAP activities has occurred. In the area of administrative and planning capabilities, two key products of the PDAP experience have made themselves felt beyond the bounds of the PDAP provinces; these are the Capital Improvement Plan (and the concurrent Annual Implementation Plan), and the Development Staff. The Capital Improvement Plan (CIP), a five-year development plan for capital improvements which is amended yearly by the Annual Implementation Plan (AIP), has proved extremely valuable in improving the plan-

ing capabilities of local government in capital development programming.

Starting in October of 1975, a major effort was launched to spread the CIP concept to all city, provincial and municipal governments in the Philippines. PDAP/DLGCD personnel were trained in October of 1975 as trainors in the preparation of CIPs. These trainors in turn returned to their home provinces and "echoed" their training to the Provincial and City Development Officers in their region, who in turn "echoed" the methodology of CIP development to the pertinent provincial and city personnel. The provincial personnel in turn held "Echo Seminars" for the municipalities in their provinces, sometimes with the assistance of PDAP personnel. Through this "echo" process local governments in the Philippines were instructed in CIP methodology during CY 1976.

On February 10, 1976, the Secretary of the DLGCD issued Memorandum Circular No. 76-14 addressed to "all Provincial Governors, City and Municipal Mayors, Barangay Captains, Regional Development Directors, Provincial and City Development Officers, Municipal Development Officers, Barangay Development Workers and all others concerned". The Circular made the CIP mandatory for all local governments (provincial, city, municipal and barangay) wishing to avail themselves of PD-144 monies.

(b) Development Administration Training and Development Staff Concept

In past years, USAID has sent participants from local governments to the University of Connecticut's "Development Administration Training Program" to improve the capability of local government to plan and administer development programs in their respective jurisdiction. Last year this program was transferred to the University of the Philippines at Los Banos (UPLB) with the return of trainors trained at the University of Connecticut. To date, training in the "Development Administration Training Program" has been restricted to PDAP and PDAP provinces. But on November 15/16, 1976, PDAP held the "Orientation Course on Development Administration" (OCDA) at University of the Philippines at Los Banos for 7 non-PDAP provinces. As a result of the course, all have signified interest in sending participants to the second "Development Administration Training Program in the Philippines" (DATPP) to be held at UPLB starting March 1, 1977. By 1980 PDAP expects to have trained participants from every city and province in the Philippines. This training is an important first step in improving the quality and rationality of development planning and administration at the local government level, and is the nucleus for the development of sound development staffs.

To date the Development Staff concept developed under PDAP has not been made mandatory outside of PDAP, but it has had widespread effect throughout the Philippines. DLGCD Memorandum Circular No. 74-20 (dated March 11, 1974) strongly urged the creation of a City Development Council and City Development Staff in every city in the country. The response has been strongly favorable, with almost every city in the Philippines having created, in one form or another, an operational City Development Staff and City Development Council.

In September of 1975 an attempt was made to extend, on a mandatory basis, the Development Staff concept to all local governments. A draft Memorandum Circular was issued on September 23, 1975, proposing mandatory establishment of Development Councils and Development Staffs in every local government and the standardization of minimum staff size, duties, etc. To date no positive action has been taken on the draft Memorandum Circular Despite this situation, many non-PDAP provinces and cities have adopted the concept and are employing development councils and staffs in the planning and administration of development activities.

(c) Equipment Pool Development Plan

PDAP has established a pilot project in three provinces (Marinduque, Misamis Occidental and Davao del Sur) and in six cities (San Pablo, Batangas, Tagaytay, Lipa, Gingoog and General Santos) for the extension of the Equipment Pool Development Plan (EPDP). Under EPDP, personnel from these three provinces and six cities have been and are being trained in maintenance, preventive maintenance, equipment pool management, construction and operation of equipment pools, etc., to efficiently run the provincial/city equipment pools. In addition these provinces and cities are receiving and will continue to receive excess property equipment to meet projected needs. (See Chart A below). This pilot project has been so successful to date that DLGCD is including fifteen more provinces and eleven cities in the program in the current year.

Pilot Equipment Pool Development Plan Assistance
(For the year ending December 31, 1976)

	Provinces	Cities	Pieces of Equipment Allocated	Delivered	Due for delivery
Pilot Projects	3	6	24	15	9
Proposed Pilot Projects	15	11	50	18+	32
Total	18	17	74	33	41

+Delivered under PDAP Equipment assistance to non-PDAP provinces program not included in chart below.

PDAP Equipment Assistance to Non-PDAP Provinces & Cities
(For the Year Ending December 31, 1976)

	No.	Allocated	Delivered	Due for Delivery
Provinces	57	38	15	23
Cities	43	11	8	3
Total	100	49	23	26

In late 1976 Region IV held a one week region-wide seminar workshop preparatory to the introduction of EPDP to provinces and cities in the region. Similar workshops are currently planned for the other regions. In addition since December 10, 1976, teams of PDAP/USAID personnel have been conducting a nation-wide inventory to determine the equipment requirements of non-PDAP local government units. The exact date when all non-PDAP local government units will be brought into the EPDP is not yet known, but the foundation for such a move will be firmly in place by the end of 1977.

4. Maintenance

The capability of the provinces to adequately maintain the rural road system is of special concern to USAID and DLGCD officials. The major requirements for maintenance include:

- Sound engineering management
- Trained and motivated personnel
- Adequate and operable equipment
- Sufficient funds

Consequently, to ensure that these requirements are met, the following steps have been taken:

- Close technical assistance by USAID/PDAP/DLGCD engineers rendered to provincial engineering offices.
- Intensive training programs in all phases of engineering management and operation and maintenance of equipment.
- Acquisition of road equipment from U.S. excess property sources.
- Programmed financing from central government sources. Close collaboration has been effected between USAID/PDAP/DLGCD and officials of the provincial engineering offices in participating provinces to formulate a sound program for the timely and efficient maintenance of rural roads. Such a program has been designed and is being implemented. The program is reinforced in two specific ways, i.e.,
- Teams of USAID/PDAP/DLGCD engineers are visiting each provincial engineer's office, providing needed technical assistance to plan, program, and monitor the maintenance program.
- Training of provincial staff in all phases of engineering management is being conducted throughout the life of the project.

The provincial road maintenance program has been given strong support by the national government. Republic Act 917 was

amended by presidential decree and provides for the provinces to receive additional funds for the maintenance of provincial (including rural) roads. To qualify for national funds, the province must prepare an annual road maintenance program for its entire road network. The maintenance program is further strengthened by the availability and acquisition of excess property from U.S. sources. Under the RRP procedures, funding for the maintenance of roads takes priority over new road construction or improvement. As a part of the Bicol River Basin Secondary and Feeder Road Project, maintenance training by a US consulting firm will be offered. DLGCD and staff will be included in both the initial training of trainors six month course and in the guided echo training to follow. (See Part 3A, for further details on Maintenance).

5. Conclusions

Unquestionably, the PDAP provinces are achieving the capability to carry out future road and bridge projects without continued outside technical or financial assistance. Some evidence of this progress has been expressed in a recent draft audit report prepared by AAG/EA Manila which states in part:

"We found that the Rural Roads Project has contributed to the development of participating provinces' institutional capability by setting minimum standards for provincial participation in the project, and through re-

quired adherence to a prescribed system of administrative procedures which includes six handbooks covering all aspects of subproject implementation".

While the total number of kilometers of road in RRP I (470) and RRP II (650) appears small in relation to the need it should be kept in mind that the basic intention is to develop units of local government with the capability to continue the program. The success of the effort is evident in the attraction of other agencies to its' principle. Further, economic and social gains, as evidenced in the evaluation attached as an annex, have been substantial even at this point.

Since 1968 the USAID/Provincial Development, as co-architect with PDAP, has guided and assisted in the achievement of provincial capability to identify, plan, implement, and evaluate rural road/bridge subprojects. These skills are being shifted to DLGCD which will administer the future local government infrastructure programs.

During the period of this project, the DLGCD will continue to provide meaningful training sessions in the broad spectrum of development administration. The conduct of key studies, such as socio-economic profiles, road network development, statistical research, personnel administration, provincial comprehensive planning and equipment utilization and maintenance, with particular

emphasis on capital improvement programs, will be taught both as basic and refresher courses.

PART 3 - Project Analyses

A. Technical

1. General Description

Under this project, approximately 640 kilometers of rural roads and 6100 linear meters of bridges will be constructed. Final decision on subproject selection rests with the province. The experience under Rural Roads I to date suggests that the projected figures are reasonably accurate. Feasibility studies, as indicated in Annex K, further determine subproject priorities. In all cases subprojects link or represent a phase of ultimate linkage of production to market areas.*

The majority of the subprojects will involve extensive upgrading of existing roads, with vertical and horizontal realignment of short segments to meet design standards. Work will result in all weather surfacing, generally gravel but on occasion

---

* The RRP II Project Review Paper notes that Rural Service Centers in PDAP Provinces, along with the province themselves, are potentially eligible to participate in the program. The capabilities described in Part 3A are largely those of the PDAP provinces. It should be understood that while RSCs are considered potential participants, it is only when all conditions precedent for construction and maintenance in PDAP provinces are also extant in RSCs that actual construction will be undertaken. Further RRP II will involve an expansion of the RRP into non-PDAP provinces that meet the criteria for participation.

macadam or concrete. Penetration roads, representing approximately 20% of the total, will replace existing trails where changing settlement patterns have created a demonstrable need. Side ditches, drainage structures and markers will be included as required.

Bridges will be primarily concrete structures but timber will be utilized where appropriate. Reinforced Concrete Deck Girder (RCDG) structures from 6 to 40 meters in length will make up the bulk of the bridge subprojects. Longer span structures from 60 to 120 meters were constructed under RRP I, and some are included under the Provincial 5 Year Plans of which this program is a part. All structures must be of a standard equal or superior to the road of which it is a part.

Approximately 50 kilometers of the road subprojects and 600 linear meters of the bridges will be located in RSCs and will be maintained by the unit of government in which they are located. The remainder of the subprojects will be classified as provincial roads, and maintenance will be the responsibility of the provincial governments. Maintenance training for DLGCD maintenance engineers, who in turn will become trainers of provincial maintenance personnel, will be provided by U.S. specialists in 1977. RSC maintenance engineers will be included in the training. This training will upgrade existing maintenance expertise that was developed under RRP I. National (GOP) matching funds for maintenance of

provincial roads are now received by the provinces on a regular and timely basis.

PDAP standards and procedures are being followed in the establishment of maintenance organizations in the RSCs. Participation by RSCs will be contingent upon development of an adequate maintenance capability.

In late 1976 three teams of engineers (one each from USAID, DLGCD and PDAP) visited four provinces which constructed a significant kilometerages of roads under RRP I and predecessor programs, (Flood Rehabilitation and Special Infrastructure Program). The survey clearly indicated that the provinces are doing a satisfactory job of maintaining roads that were constructed in accordance with proper engineering standards.

2. Technical Capability of Provinces and DLGCD

a. Provinces

At the close of FY 76, the first year of implementation of RRP I, the participant provinces had constructed 595 kilometers of road and 6,625 linear meters of bridge under the Flood Rehabilitation, Special Infrastructure and RRP I Programs. Road projects included concrete, double bituminous surface treatment, macadam and gravel surfaces, while both concrete and timber bridge construction were successfully carried out.

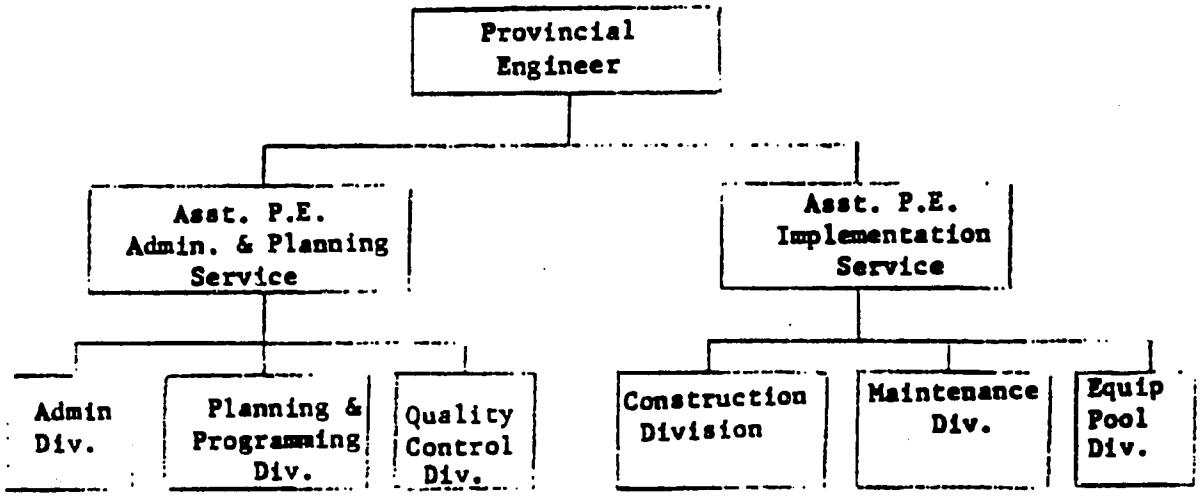
Provincial Development Staffs (PDS) in all participant provinces posses the capability to identify, determine feasibility of, plan and implement, in conjunction with the Province Engineer's Office, each type of subproject mentioned above. All participating provinces have the following technical personnel assigned to the Province Development Staff (PDS):

Coordinator
Deputy
Project Analyst
Agriculture Analyst
Fiscal Analyst
Researcher

PDS offices are adequately staffed, with one employing in excess of 60 persons, while most number 25 to 35 employees. The basic staff in all but extremely rare cases is composed exclusively of college graduates. Further, most now have considerable experience and have received quite sophisticated DLGCD/PDAP training in their respective areas of speciality. For example all PDAP province engineering offices have sent participants, along with the Project and Infrastructure Analyst, to PDAP/USAID Road Network Development Plan training. This course of over 90 hours of instruction is taught by a USAID contract employee with a Ph.D in planning. Feasibility study training is equally advanced. All coordinators and deputies have completed the Development Administrators Training Program (DATP) at the University of Connecticut or its equivalent -

DATP - Philippines. Cycled training in budget, accounting, and documentation is provided annually. Training of designated PDS members in contract administration has allowed the successful completion of some construction on a contract basis. Although the PDAP provinces are well prepared to carry out subproject construction by force account contract work is now being stressed with considerable success. In the initial year less than 10% of the subprojects were done by contract while in the current year (FY 77) 40-50% will be implemented by contract.

PDAP has developed a model organization and functional chart for the PEO. During initial training programs the provinces are encouraged to adjust their PEO organization to conform in general to the model. The model organization includes 16 engineers divided between two services, each under the supervision of an Assistant Provincial Engineer. The two services are separated along the general lines of office and field engineering as follows:



The Construction Division performs force account construction. The Quality Control Division provides the survey, materials quality control and construction inspection personnel for both planning and construction activities. It provides field personnel for both contract and force account construction to insure that each project is carried out in accordance with the plans and specifications.

The Province Engineer's Office in each PDAP province has now established a Quality Control Division, as shown in the chart above. The existence of a Quality Control Laboratory, equipped and staffed, is a pre-requisite for entry into the PDAP. Training in quality control designed by PDAP/USAID, is provided the member provinces. The Quality Control Facility, (Materials Laboratory) includes equipment for testing soils, aggregate and portland cement concrete. An asphalt testing section will be added. Currently contractors on Asia Development Bank and Philippine Department of Public Highways projects use, for a fee, the PDAP facilities when working in or near PDAP provinces.

The 28 provinces in the RRP II will start the program with a total equipment inventory of 1909 pieces, most of which were acquired through the USG Excess Property Program. The original acquisition cost of this equipment was more than $17,145,371 million. The Province Engineering Offices have demonstrated

in RRP I that this equipment level, when combined with labor intensive construction methods and some contracting, is sufficient to meet subproject implementation schedules. It should also be noted that before initiation of, or early in the course of RRP II, new equipment, purchased with the proceeds of the RRP I loan, will begin to arrive to upgrade the extant equipment pools. It is also noteworthy that over the life of RRP I only one province was temporarily disqualified (for one fiscal year), for allowing the equipment deadline rate to rise above the 20% maximum allowable level. Funding for future equipment needs is included in each province CIP.

b. DLGCD

DLGCD was organized under Presidential Decree and has been fully staffed in the period of its involvement with RRP I. In 1978, the final year of RRP I, PDAP will be discontinued and its technical personnel absorbed by DLGCD. This was anticipated, and over the preceding two years, the technical staff received training and acquired experience in conducting and evaluating feasibility studies, planning and project execution.

Representatives of DLGCD, titled Province Development Officers (PDOs), each with an adequate staff, are resident in all provinces. Again through a planned process the PDO's have been given increasing responsibility in the development and implementation of subprojects. Province Development Office (PDO),

the provincial office of DLGCD, now acts as an equal partner with the Province Engineer's Office and the PDS in execution of RRP subprojects.

3. Project Implementation

The GOP through the Department of Local Government and Community Development, operating in turn through their provincial offices will be the implementing agency. As in RRP I, DLGCD will forward to participating provinces for acceptable subproject construction agreed amounts on a grant basis. When subprojects have been completed and accepted by USAID, DLGCD will petition the National Economic Development Authority (NEDA) to request reimbursement from USAID.

DLGCD will appoint a project manager to serve directly under the Undersecretary of DLGCD. The former PDAP organization is being absorbed into DLGCD, adding a complement of thirty specialists in planning, finance and engineering, thus providing the Department with all of the expertise that carried RRP I plus the greatly developed capability of its own staff. The Project Manager and his appointed staff, assisted by the respective DLGCD Province Offices, will oversee all subproject selection, technical planning/cost estimating, budgeting, implementation and evaluation. Further DLGCD will contract with an Architect/Engineering (A&E) firm or

firms to monitor the development of plans and specifications as well as actual subproject construction to assure conformance with RRP standards.

For details of implementation of these activities see Part 4B.

4. Design Standards

The "Highway Construction Guidelines for Provincial Engineering Offices" has been prepared by PDAP and adopted by the Provincial Engineers Association of the Philippines as a first step in standardizing design and construction of highways in all 72 provinces of the Philippines. A copy of this document is with EA/CD for inspection. All eligible PDAP provinces have officially adopted these guidelines.

This has not only standardized the design features of roads and bridges but also the preparation of plans and estimates for projects.

Virtually all of the roads constructed/improved under this Project will have current average daily traffic counts (ADT) below 400. Design standards, given in Table 3, conform closely to those recommended by AASHO for local roads and streets.

All materials used in construction and methods of construction will meet the Standard Specifications for Highways and Bridges of the Department of Public Highways. These standards specifications were adopted from and are similar in detail and quality to

TABLE 3

	DESIGN STANDARDS							
	ANNUAL AVERAGE DAILY TRAFFIC VOLUME							
	BELOW 100		100 to 400		401 to 1000		1000 to 2000	
	Minimum	Desirable	Minimum	Desirable	Minimum	Desirable	Minimum	Desirable
(x) DESIGN SPEED (KPH)								
FLAT TOPOGRAPHY	50	60	60	70	70	80	70	90
ROLLING TOPOGRAPHY	40	50	50	60	60	60	60	70
MOUNTAINOUS "	30	40	40	50	40	50	60	60
MINIMUM RADIUS (M)								
FLAT TOPOGRAPHY	80	120	120	170	170	220	170	290
ROLLING TOPOGRAPHY	50	80	80	120	120	170	120	170
MOUNTAINOUS "	50	50	50	80	50	120	80	120
MAXIMUM GRADIENT (%)								
FLAT TOPOGRAPHY	4	3	3	3	3	3	3	3
ROLLING TOPOGRAPHY	6	5	5	5	5	5	5	5
MOUNTAINOUS "	6	6	6	6	6	6	6	6
NON-PASSING SIGHT DIST. (M)								
FLAT TOPOGRAPHY	60	80	80	90	90	110	90	130
ROLLING TOPOGRAPHY	50	60	60	80	80	90	80	90
MOUNTAINOUS "	40	50	50	60	50	80	60	80
SUPERELEVATION	MAX E - 0.10 M/M. WIDTH OF ROADWAY: E = $.004V^2/R$							
WIDTH OF PAVEMENT (M)	5.0	6.0	6.0	6.1	6.1	6.7	6.7	6.7
WIDTH OF SHOULDERS (M)	1.0	1.5	1.5	1.5	2.5	3.0	3.0	3.0
WIDTH OF ROADBED (M)	7.0	8.5	8.5	9.1	11.1	11.1	12.7	12.7
TYPE OF SURFACING	GRAVEL		BITUMINOUS SURFACE TREATMENT		PORTLAND CEMENT OR BIT. CONCRETE		PORTLAND CEMENT OR BIT. CONCRETE	
WIDTH OF RIGHT-OF-WAY (M)								
RURAL	15	15	15	20	30	60	60	60
NEW BRIDGES								
CLEAR WIDTH (M)	6.1	6.1	6.1	7.2	9.1	11.1	12.7	12.7
DESIGN ROAD	H-15	H-15	H-15	H-20	H-20	H-20	H-20	H-20
VERTICAL CLEARANCE (M)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.5

those of the U.S Bureau of Public Roads. All roads proposed for inclusion in the Project will be subjected to a technical soundness analysis, economic feasibility studies, sample illustrated in Annex K, will be conducted on all subprojects. Subprojects must show a benefit/cost ratio of not less than one, and an IRR of not less than 15%.

It is anticipated that most of the road sections will have gravel surfacing based on a 10-year projected subproject life. Where a more permanent surfacing of asphaltic or portland cement concrete is indicated, the economic analysis will utilize a 20-year project life.

As a general rule, all roads will consist of two lanes having a total surfaced width of 6 meters with 1 to 1½ meter graded shoulders. The roadways will consist of common borrow, selected borrow sub-base course, and aggregate base course designed and compacted to support a 10 ton axle load. For roads below 100 ADT, the aggregate base course will serve as the surface. A double Bituminous Surface Treatment or Macadam will be added when justified. It is anticipated that in a few cases an asphaltic or Portland Cement Concrete pavement may be justified because of higher traffic density, environmental or other technical considerations.

Drainage will be provided by means of side ditches together with reinforced concrete pipe culverts, box culverts or bridges as required to accommodate cross drainage. Although specific site

conditions may dictate some variations, reinforced concrete deck girder (RCDG) bridges will normally be used for spans of more than 6 meters. Spans of less than 6 meters will generally be box or pipe culverts. Bridges will be designed for H-15 loading and will have a clear roadway width of not less than 6.7 meters; however, design for H-20 loading criteria may be justified in specific areas where abnormally heavy truck traffic is prevalent or projected.

5. Maintenance Capability

The PEO is responsible for maintenance of all designated provincial roads. The maintenance capability of the participant provinces greatly enhanced through training and the acquisition of additional excess property. USAID continues to support the maintenance improvement program and additional efforts are planned.

Introduction of the road and bridge maintenance consistent with a labor intensive approach has been undertaken by initiating pilot projects in two, geographically widely spaced, provinces. A USAID local hire engineer is assigned full time to work with the Maintenance Division of the PEOs to implement relatively simple but effective management systems and subsystems adaptable to the PDAP provinces generally.

In mid-1977, a U.S. engineering firm will initiate a 22-month program in maintenance training. PDAP provinces, RDCs and the provinces covered by the Bicol Secondary and Feeder Roads Loan

will participate in this training. Through the training of trainers and the development of training aids and manuals, methods and techniques will be carried to all 72 provinces of the Philippines.

The project agreement between DLGCD and each participating province will contain a provision which requires that any road segment included shall be incorporated into the provincial road system and that the province covenants to take all action necessary to provide funds for, and insure, the adequate maintenance of said road segment.

In the past the provinces had some difficulties in finding sufficient funds to adequately maintain their roads. To address this problem, Republic Act 917, was amended by Presidential Decree No. 17, 130, 320 to specifically provide for an average basic cost per kilometer for maintenance of National Highways. In addition, an amount equal to fifty percent (50%) of the current basic national cost per kilometer for maintenance of each kilometer of provincial road recommended by the Provincial Governor and accepted by the Commissioner of Public Highways to be part of the Provincial System.

The estimated income to the Highway Special Fund, created by the above decree is distributed as follows:

Fixed Deduction - 28%

1. Administrative Expenses 6%
2. Contigency/Emergency 10%

3. Discretionary Portion	10%
4. Preliminary Engineering	2%

Maintenance Aid

1. National Roads	*EMK X Basic Cost
2. Provincial Roads	Length x .50 of Basic Cost
3. City Roads	Length x 33 1/3 of Basic Cost
4. Municipal Roads	Length x .30 of Basic Cost
5. Barangay Roads	Length x 2,500 of Basic Cost

* Equivalent Maintenance Kilometers

The Basic cost per EMK is now 11,342. Thus the amount estimated to be required by each province will be 3/4 of 11,342 multiplied by number of kilometers of provincial road. One half (½) of the basic cost multiplied by the kilometers of provincial road is the amount of aid provided by National Government. The remaining ½ of the basic cost multiplied by the kilometers of provincial road is the local counterpart fund required of the provincial government. The number of kilometers eligible for aid is determind by an annual inventory conducted by the Maintenance Division of the Department of Public Highways. Table 3A summarizes the current inventory and maintenance funds provided by the National

Government during 1976.

6. Maintenance Practices

Each PEO maintenance division is headed by a senior engineer who is assisted by junior engineers, foremen, and employs work gangs led by capataz (sub-foreman) for each category of maintanance work (asphalt patching, bridge repair, drainage repair, etc.). These work gangs are supported by equipment from the Equipment Pool. The basic equipment normally assigned to the Maintenance Division consist of: 1-Jeep for inspection, 2-service trucks to transport men, materials, hand tools; and other maintenance equipment such as dump trucks, road graders, cranes, etc., which are assigned as needed depending on the work to be performed and the work schedule.

The labor requirement for maintenance normally runs to about 50-70% of the total maintenance cost with a maintenance gang of eight unskilled laborers generally being used for every road section of not more than 20 kilometers length. In addition, skilled workers such as masons and carpenters are moved from subproject to subproject as their skills are needed.

The PEOs have sufficient personnel to meet the requirement of normal activities in both maintenance and construction. Equipment inventories are not entirely adequate but needs are being met through the Excess Property Program and purchases with the ptoceeds of the loan. The use of private contractors or suppliers has proved

TABLE 3A

NATIONAL AID MAINTENANCE OF PROVINCIAL ROADS
BASED ON 11,342/EMK

P.D No. 17

Province	Length	Annual Maintenance AID	July-Dec./76 Maintenance AID
(1)	(2)	(3)	(4)
1. CAGAYAN	589.49	₱ 3,342,997	₱ 1,671,498
2. ABRA	423.696	2,402,745	1,201,372
3. LA UNION	248.665	1,410,150	705,075
4. PANGASINAN	878.53	4,982,143	2,491,071
5. QUEZON	451.877	2,562,554	1,281,277
6. ZAMBALES	211.02	1,196,694	598,347
7. BATAAN	175.49	995,203	497,601
8. PAMPANGA	317.898	1,802,754	901,377
9. BULACAN	360.04	2,047,786	1,020,893
10. BATANGAS	650.2	3,687,284	1,843,642
11. CAMARINES SUR	437.107	2,478,879	1,239,439
12. MINDORO OCC.	412.69	2,340,364	1,170,182
13. MINDORO OR.	614.263	3,483,468	1,741,734
14. ALBAY	332.62	1,886,288	943,144
15. SORSOGON	282.26	1,600,696	800,348
16. SAMAR	142.469	807,890	403,945
17. AKLAN	268.288	1,521,415	760,707
18. CAPIZ	454.478	2,577,299	1,288,649
19. ANTIQUE	230.017	1,304,726	652,363
20. ILOILO	845.534	4,795,000	2,397,500
21. LEYTE	577.23	3,273,471	1,636,735
22. MISAMIS OR.	516.763	2,930,545	1,465,272
23. AGUSAN NORTE	208.444	1,182,063	591,031
24. AGUSAN DEL SUR	169.87	963,332	481,666
25. LANAO DEL SUR	343.845	1,949,916	974,958
26. SOUTH COTABATO	1,001.2	5,677,805	2,838,902
27. DAVAO DEL NORTE	460.444	2,611,155	1,305,577
28. PALAWAN	471.26	2,672,515	1,336,257
TOTAL	12,085.738	₱ 68,538,220	₱ 34,269,081

very successful in accelerating production without the need for acquiring additional equipment which may lie idle during periods of normal operation. Private contractors have also provided equipment not available in the Provincial Equipment Pool and have been used to meet deadlines including the threat of monsoon seasons, etc.

For road sections near the Equipment Pool and/or PEO Compound, equipment and personnel are assigned on a daily basis. However, for areas beyond 30 kilometers from the PEO Compound, equipment and personnel are generally assigned on a permanent basis, with personnel being given incentives in the form of field allowances. Supervision is accomplished by periodic inspection (scheduled and unscheduled) on the progress of the work. In cases where unskilled labor can do the work, casual laborers are hired at the job-site to economize on the cost of transportation and other incidental expenses and to provide employment opportunities for local labor.

B. Economic and Financial Analysis

1. The Provincial Road System - Benefit Cost Analysis

The Provincial Road kilometerage in 1974 amounted to 37% of the national road system, which includes national highways, municipal roads and city streets. Construction of provincial roads proceeded rapidly in the period 1966 to 1974, and extended total kilometers by 40%, from 21421 to 30003 km. But the growth of this network lagged the rapid growth in vehicle registrations (See Table 1), which expanded by 115.8% or more than 14% per year.

Paved provincial roads are few, amounting to 3146 kilometers, which represents only 17% of the total paved roads in the country. A comparison is made on Table 2 of all paved roads (national, provincial, municipal, and city streets by geographic region.

2. Road Revenues and Expenditures

Provincial highway revenues and expenditures are shown on Table 3, which indicates the distribution of expenditures between construction, maintenance and administration, for the period 1965 through 1974. For each year, a comparison is made with national road expenditures, showing that provincial road expenditures were 40% of national in 1966, but had decreased to 15% by 1974.

Provincial taxes furnish about 75% of total provincial highway revenues. These revenues derive from property estate, inheritance, gift taxes, and taxes on agricultural products. The ba-

lance of requirements is made up by the central government. Of this revenue, approximately 19.8% is utilized for construction, 74.0% for maintenance and 6.2% for administrative costs. Historically, additional funding furnished by the national government to provinces (via aid and loans) has amounted to about 25% of total requirements. The ability of provinces to sustain higher levels of expenditures on the Phase II Rural Roads Project therefore must take account of the national contributions, and total demands for national highway funds by other road jurisdictions.

Highway revenues accruing to different levels of government road systems (national and local) are shown on Table 4. It may be seen that combined total revenues greatly increased between 1966 and 1974, from ₱373 million to ₱1,582 million (these revenues rose to ₱2,739 million in 1975). Municipal, city, and provincial revenues increased less rapidly than national highway revenues, which rose by almost 6 times during the period, and which by 1974 comprised over 82% of total road revenues.

Road expenditures were less than total revenues by 16.4%; hence, if this total revenues will tend to exceed total expenditures, the comparison year 1974 is typical. Only provincial roads incurred expenditures greater than available (provincial) revenues, and only by the amount of ₱2.9 million which was provided from national highway funds. Highway revenues were expended mainly for construction (₱54.3 million) with maintenance ₱25.6 million and

other administrative costs ₱20.1 million; these ratios reflect mainly the bulk of spending on the national highway system, and show a far greater proportion spent on construction than is spent by provincial departments, and less on maintenance than is spent by provincial departments. One reason for higher relative provincial road maintenance costs lies with a higher proportion of unpaved roads (90%), compared to 62% national, 80% municipal, and 6% city.

3. Projected Road Revenues

National government revenues accruing to the highway system have been forecast to the year 2000 by the Department of Public Highways. It may be seen on Table 5 that total revenues are expected to expand 4 times, to ₱4,818.9 million by year 2000; of this total about 60% derives from road user taxes. Appropriations from general revenues provide about 40% of expected funds, with special foreign loans excluded from this count. Becaue of access to general revenue sources, the availability of road funds to the government would be limited only by the level of competing demands from other sectors. But the ability of the total roads system to sustain a higher level of costs, resulting from the AID provincial roads program, would seem assured by the expected rise in motor vehicle taxes on fuels and oils; by 1980 such taxes derived from road users alone would exceed gross total highway revenues in 1974 by 20%. Moreover, other road user taxes on vehicle regis-

trations and drivers' licenses will amount to P236 million which is greater than the total amount spent by provincial departments on roads in 1974. The projected total revenues from all sources would represent an increase in 1980 of almost 94% over 1974.

In addition to national revenue projections, local government revenues are expected to increase to P514.7 million by the year 2000, representing an increase of 1.86 times the P276.4 million revenues in 1974. It is anticipated that national aid receipts by local governments will in fact rise more rapidly than the rise in local revenues, as shown on Table 6. Historically, the national government has provided about 25% of the needs of the provincial roads system. Table 6 indicates a rising national participation in the revenue needs of all local governments from 32.3% in 1977 to 42% by the year 2000. The impact upon total national revenues will be minimal, representing an increase from 17% of national funds to 18%. At aggregate levels, then, sufficiant funds are available for a continuation of the Rural Roads Program, and the distribution of these funds assures that a traditional base exists for national support of provincial departments.

4. Provincial Road Funding

The existing formula for provincial road maintenance funding identifies P11342 per kilometer as the basis for a distributional split between the National Highway Special Fund and Local Funding. The maintenance cost used as basis is that determined from analysis

of national highway maintenance costs. Fifty percent of this cost is paid to each province by the national highway department for each kilometers of provincial road. Provincial governments must contribute fifty percent of the ₱5671 received from the national government. The total amount available for maintenance is ₱8506.50 per kilometer.

In Table 7 an analysis is made for each of the 28 PDAP provinces scheduled to participate in the Phase II Rural Roads Program. The analysis indicates the amount of national and local funds required for maintenance during 1975. Property taxes are shown to be only one source of provincial road maintenance funding. In some provinces these taxes are not as great as those derived from the combined total of estate, inheritance, gift, and agricultural product taxes; in some provinces they are greater.

Only one province, Abra, fails to cover road maintenance costs thru property taxes alone; in Abra, the total tax base (excluding income tax) was not sufficient to cover maintenance costs.

Real property taxes alone should equal or exceed road maintenance costs to the provinces. These taxes have been computed at the improved Real Property Tax Administration (RPTA) levels which assume a higher collection rate as well as improved assessment standards. Computations are based on 1975 assessments.

While this analysis applies only to the PDAP provinces, it is likely that a similar result would be obtained for selected non-PDAP provinces and certain of the cities included in the Rural Service Center Project. And since Rural Roads II may include other non-PDAP provinces and certain of the Rural Service Center cities, we, at this point, assume comparable relationship would be found.

5. The Labor Payroll as Cost and Benefit

The Structure of Road Maintenance Costs - Maintenance and road construction costs have been analyzed for the representative province of Bulacan. The cost structure for maintenance is shown in Tables 8 and 9. During a 6-month period in 1976, 89 work jobs were accomplished by six work-crews on 361 kilometers of road. The crews included 623 men. Average costs were ₱1592 per job, ₱227.52 per man, and ₱392 per kilometer of work. The average crew was seven per job, and the particular items of work were those shown in Table 9. (According to frequency by type and total job costs, including road and bridge jobs).

The table shows that some jobs involve mainly machine work while others are labor intensive.

This work performance covers half a year only, and did not involve full time employment of each laborer during that period. (Section crew is called to work as needed). An annual maintenance program has been computed in Table 10 to show what the regular

maintenance payroll would be for each province if each road kilometer was maintained at a level equivalent to those in Bulacan, which maintained an employment ratio of 623 men per 360 km of road, or 1.73 men per km. If all crews were employed throughout the year (they also work on construction of roads as the need arises), at the annualized rate received for 6 months (₱227.52/man x 2 = ₱455/man/year), the maintenance of 12,075 kilometers of provincial roads in the PDAP provinces would require 20,889 men, at a labor payroll cost of ₱9.5 million.

The ratio of total costs to labor costs was 7 (see Table 8), so that annual maintenance costs for the 28 PDAP provinces would theoretically amount to ₱66.5 million. However, according to the formula used by the national and provincial highway departments (based on ₱11342/kilometer for national road maintenance costs), the amount budgeted for these roads is ₱102,721,500 or 50% higher.

This analysis suggests that actual maintenance costs may be less than the budgeted amount, and may thus place less of a burden on local provincial tax base than indicated by Table 7. To the extent this analysis is valid, provincial road departments will benefit from the surplus as more funds will be available for routine and special maintenance needs; moreover, extra funds will permit continuation of reconstruction programs begun under USAID Phase II funding. Obviously, maintenance costs for individual road seg-

ments will vary, even within a province, but the above analysis would seem to clearly indicate that sufficient funds are available for maintenance of provincial roads.

6. The Construction Payroll

Phase II funding for 650 km of roads and 6000 linear meters of bridge will amount to US $24 million (₱192 million). The job crews required for road and bridge construction in each of the 28 provinces have been calculated from data compiled from Bulacan Province records of 1976. These data have been condensed and restated to separate road from bridge construction, as shown on Table 11-I and 11-II. Force account road construction employs an average of 435 men per kilometer at an average payroll cost of ₱18.39 per man; most of the personnel are involved in clearing, grubbing, and in handling and laying the aggregate sub-base course (317 out of 435). Bridge construction employs 62 men on a 30 lm. bridge at an average payroll cost of ₱71.16 per man, or ₱2.38 per linear meter.

Based on experience of RRP I costs are estimated at ₱150,000 per kilometer of road and ₱15,000 per linear meter of bridge. Thus ₱150,000 x 650 km = ₱7.5 million and 6100 lm. = ₱91.5 million, per kilometer of road, or 30.78% of the 30 lm. bridge costs shown on Table 11-II (₱33416). Of course, actual river and stream crossings will widely vary by road and by province.

Because RRP Phase II funding is a net addition to regular road construction undertaken in each province, its effect upon labor payroll can be interpreted as a net gain in ordinary employment. Much of this labor will be drawn from local communities. To the extent unemployed are them employed, the shadow price of labor would be very low or zero, but this would not be the basis for valuing labor costs as benefits. The purpose of the program itself is the basis. Improving the living standard of the poor begins with placing money in their hands; the most efficient way to do this is by gainful employment which adds to net economic capital. This goal is achieved thru rural roads construction.

A calculation of the road and bridge construction payroll for 28 provinces under Phase II funding is shown on Table 12. Allocated constructed costs for each province are based upon the relative proportion of earth road kilometers in each province; presuming that improving earth roads to all weather standards is the first priority. The bulk of the rural poor are, in fact, likely to be found in such areas as more productive farms will already be served by all weather roads because economic considerations have dictated earlier road improvements.

With the allocation of construction funds based on earth road kilometers, the number of kilometers which can be constructed is calculated on the basis of ₱295,384.61 per kilometer. Bridge construction averages 9.23 lm per kilometer, which makes it possible to compute total meters of bridge per province. Number of

laborers employed on road and bridge construction, and the labor payroll are then shown for each province. As reconstruction to all weather standards is more likely than new construction, labor costs have been re-computed as one half those of new construction (eliminating labor costs for clearing and grubbing and one half of sub-base course aggregates handling and spreading).

Table 12 reveals that the total labor which may be newly employed on road and bridge construction in Phase II amounts to 23,092 men, with a labor payroll of ₱24,603,000 or 12.8% of total construction costs. That is, initial first-year benefits include a net labor payroll equal to 12.8% of invested costs. These benefits will result from projects which could not have been undertaken in the absence of the program.

7. The Distribution of Benefits

(a) Base Economic Data and User Costs

Under Phase II funding, provinces must undertake economic feasibility studies prior to release of funds for road construction. Before these studies are completed, one may only surmise the findings. By the nature of the requirement, a benefit-cost analysis, portrayed as representative of all roads in 28 provinces, cannot be made.

The preceding cost analysis, which led to labor payroll projections, is based on real experience by local crews, in one province and then related to the total program. Benefits

attributed to reconstruction of a particular road segment are certain to vary more widely than costs, depending on relative sizes of population, local incomes, vehicle traffic, agricultural employment, agricultural production, and kilometers built in each road section. Since these cannot be determined, a priori, Table 13 was developed to indicate some basic economic data for each province as a whole.

It may be seen that these data vary widely; gross personal incomes by province range from ₱10.4 million to ₱1.1 million; vehicle registrations from 38129 to 437, etc. Total agricultural production shown does not indicate land area under cultivation, because other data shows yield per hectare in 72 provinces varies from 14.6 mt per hectare to as little as 0.53 mt.

The distribution of benefits, on the other hand, for every unit of vehicle operating cost savings, can be identified. Table 14 indicates vehicle operating costs per kilometer for passenger and cargo vehicles. These are updated costs, from those used in the project paper for RRP I; the cost change index indicates that most seasonally impassable roads afford a speed level of only 20 Kph, which will increase to 50 Kph with reconstruction to all-weather standards. Although traffic figures are now known, the unit cost change is weighted by a vehicle composition of 35% trucks and 65% passenger vehicles for rural farm roads. Thus,

the unit cost savings per average vehicle is ₱0.6143/km, and being in use 40% of the year during planting and harvesting seasons, furnishes annual savings of ₱89.69 per vehicle. (146 vehicle trips for the hypothetical single vehicle x ₱0.6143/km).

(b) Benefits Valued at Cost

A complete "representative" analysis would require an ADT volume of traffic on the road and the number of kilometers to which the ADT applies, figures which are not yet known. However, we can derive order of magnitude effects for the per unit cost savings and indicate the distribution of these savings between provinces.

Table 15 shows annual savings for the hypothetical vehicle if it undertakes 146 trips over the total number of kilometers of road which the province can construct with the project funds allocated. Road kilometers and bridges reconstructed (as shown on Table 12) are shown as the zone of influence road lengths, for each province. Total unit cost savings for all provinces are ₱58,606 while total Annual Daily Traffic remains unknown as the multiplier.

The zone of influence is defined as the ratio, expressed in %, of kilometers of earth road reconstructed to all-weather standards to total kilometers of road in the province.

Agricultural employment and agricultural output are similarly defined (Ref. Table 13). The precise effect upon either employment or output will depend upon volume, composition market price changes, cost reductions induced by transportation savings on input requirements, and elasticity of consumer demand for the products, etc.

(c) Farm Income and Land Tenure

The savings calculated above are the normal road user cost savings. These benefits are valued at cost which is standard procedure. However, in economics the marginal utility of money increases as income declines. So the benefit is not what was saved, but how it is valued by the recipients. To demonstrate this value, relative income and expenditure levels must be known, as well as the distribution of land between income levels.

Table 16 shows national income classes reporting agriculture as a main source of income in 1971, and those reporting crop shares as a main source of income. 5.7 million families derive income from agriculture and 355,000 from crop shares. In both groups, and in their combined total, lower income classes predominate, although a higher relative proportion of ₱10,000-plus families report crop shares. As a percentage of main source of income earned by class, however,

15.29% of ₱10,000-plus families including all sources of income report agriculture as a main source of income.

Land tenure data of 1971 was the latest available, showing the division (50-50) of crop-shares reported above (for every owner reporting crop shares a tenant is presumed also to share). The expected distribution of land, by area, was made according to income class, using reported data on the percentage of such lands held in ownership or as crop shares (or "other employed in agriculture"). This method permitted a correlation of reported tenure by size of farm, with income earned from agriculture by size of income. It is seen that ownership as a percent by income class does not favor the higher income group. The average for all classes is 74% ownership; but only 68% ownership for the ₱10,000-plus class, and only 65% for the below ₱2000 income class. It is uniquely the middle-income groups (from ₱2000 to ₱10,000), which own the preponderant share of farm lands (60% of the total), for this middle group, 79% of those in the ₱2000-5000 class own their farms, as do 86% of those in the ₱5000-10,000 class.

(d) Benefits Valued by the Receiver

The distribution of the single-vehicle cost savings is made on Table 17, in accordance with the national data developed for families deriving main source of income from agri-

culture, and whether these are owners or tenants. Here, the amount of relative benefits going to each group is distributed; the number of families in each income group would have a distribution the same as the monetary distribution, since this is derived from the national average. The premise is that benefits are shared equally, in proportion to numbers, since all derive income from agriculture proportionate to their size of farm, income class, and imputed number, as calculated on Table 16. The mechanical transmittal of benefits remains the single vehicle, which, shared in proportion to implied income/output, is the means of the distribution of cost savings.

Other premises may be valued for individual road cases; monopoly of vehicle traffic by owners exploiting tenants or transport operators exploiting both and not passing on savings, tax and regulatory policies which deny much cost reduction, etc. Nevertheless, but these are arguments not against the investment, but against the individual case which may be ameliorated by appropriate enterprise and/or civil action. Such cases are not identified in the analysis which assumes as "representative" condition, but only by case studies using real field data.

The elasticity of demand for transport services by income class is shown on Table 18, as calculated for the

Philippines by Norconsult in 1975. This shows the well-known feature of a rising response as income rises, normally used to calculate generated traffic response to cost savings. Low income classes have less responsiveness, and even inelasticity at the lowest income level, because there is only so much demand for transport at these levels that no more will be undertaken even though the trip savings are proportional to trips taken at all income levels. This does not show, however, how the money saved is valued, but rather that the amount saved is not spent on more of the valued, but rather that the amount saved is not spent on more of the same service.

The valuation of savings by beneficiaries is shown on Table 19. This table is constructed from a 1971 income and expenditure analysis (Survey of Households) which showed the excess of expenditure over income (see Column 2) to increase as income declines. The amount of the excess is shown, and a matrix has been constructed to show how each income class values a Peso relative to all other low income classes up to the level of P10,000-plus, where no excess of expenditures over income exists, i.e., where 1 Peso is valued as a multiple of 1.

It is seen that an income shortfall of P229 per person places the value of 1 peso at 6.54 pesos, at the income

level of less than -500 Pesos. This derives from the ratio of ₱229/₱35 -- the level at which break-even occurs (plus ₱10,000). The other values in the same column show how the less than 500 peso income class would value money relative to other income classes; that is, at some multiple over that which that income class values it. This is because money has a marginal utility which rises as income falls.

By reading across the bottom line, it is seen that this valuation tends to decline as the income class (shown at top) tends to rise. This economic method of quantifying the marginal utility theory is then used to support the analysis shown in Table 20, that the Pesos received can be identified with a higher valuation placed on them, according to relative degree of urgency of economic need.

The original cost savings of ₱58,606 -- for one vehicle operating 146 times a year, the length of each project road -- is shown to be valued at the aggregated multiples (average for income classes in four groups) which apply to these groups. The numbers of agriculturally employed (shown on Table 13) are shown here as the 37,721 recipients of these benefits. These numbers are distributed according to the 1971 national percentages in each income class (Table 17), and according to whether owner or tenant (share-cropper) or

"employed" (main source of income).

The benefits are seen to be distributed 69.7% to people in income classes below ₱5000, and 88.6% to people in income classes below ₱5000, and 88.6% to people in income classes below ₱10,000. The upper income group receives only 11.4% of total benefits.

The issue of land tenure and the methods by which owners share cost savings with tenants is partially answered by the fact of the national distribution of land ownership and/or tenancy by income class. While 15% of the plus ₱10,000 income class name agriculture as a main source of income, and only lesser numbers of lower income groups also name agriculture, the absolute and relative distribution of ownership is far greater for income classes below ₱10,000. Nationally, in the Philippines, there were 8.9 times the number of owners of agricultural land in the below ₱10,000 class in 1971 as those owning land in the plus ₱10,000 class. As many as 32% of all tenants (share-croppers) are in the plus ₱10,000 class, indicating that tenant farmers are not all irretrievably poor. The association of tenant farming which poverty, and of land ownership with wealth, are concepts which are somewhat dated, even in the Philippines. (Although there are always cases where this is true, the average national statistics do not support

the generalization). For additional discussion of land tenure and distribution of benefits see Annex L, Evaluation of Selected RRP I Subprojects.

Surveys of conditions in the influence areas of Rural Roads subprojects (including the evaluation included here as Annex L) indicate that in some cases the increased potential of land resulting from road construction or improvement produces competition for legal ownership which may result in its transfer to other than small farmers.

Currently in the remaining period of RRP I steps are being taken to insure that the implementation of subprojects will not result in the dislocation of those owning or farming the influence area at the time of construction. Specifically, prior to subproject approval, identification of tenant tillers and landowners by land size category will be made and recorded on a land use map. These maps will be prepared as an essential part of the feasibility study required for each project.

In regularly scheduled evaluations, plus ad hoc surveys, checks on changes in the recorded land holding patterns will be made. Should this reveal significant changes in ownership prejudicing the position of the small holder action, not excluding curtailment or cessation of project activity in the offending province, may be taken.

TABLE 1

ROAD KILOMETERS BY ADMINISTRATIVE SYSTEM

1966-1974

Year	Total	National Highways	Provincial Rds.	Municipal Roads	City Streets	Vehicle Registr.
1966	57555	16189	21421	15332	4613	310632
1967	58602	16616	22337	14774	5875	362048
1968	60526	17434	22588	15498	5606	413217
1969	63595	18097	23774	16917	5407	446412
1970	66290	19682	25652	13882	6074	458287
1971	73532	20066	27879	18781	6804	474790
1972	74769	21315	28103	18636	6714	516528
1973	78653	22602	29602	19444	7693	571348
1974	80363	22917	30003	19750	7693	670292
1975	-	-	-	-	-	685212
1966-1974 Change						
Kilom.	22808	6728	8582	4418	3080	359660
% Gain	39.6	41.6	40.1	66.8	28.8	115.8

TABLE 2

TOTAL KILOMETERAGE AND PAVED ROADS BY ADMIN SYSTEM

BY REGION - 1975

Region	Total Kms.	PAVED ROAD KILOMETERS									
		Paved Kms.	%	National Kms.	%	Provincial Kms.	%	Municipal Kms.	%	City Kms.	%
I Ilocos	14973	2094	14.0	1067	51.0	487	23.2	369	17.6	172	8.2
II Cagayan	7638	660	8.6	438	66.4	148	22.4	74	11.2	0	-
III Ctrl Luzon	8951	2543	28.4	973	38.2	803	31.6	630	24.8	137	5.4
IV S. Tagalog	13400	1942	22.0	1353	46.0	700	23.8	633	21.5	256	8.7
IVA Manila	2805	2277	81.2	697	30.5	95	4.2	568	25.0	917	40.3
V Bicol	4989	1489	29.9	882	60.0	290	19.5	215	14.4	92	6.1
VI W. Visayas	7402	1443	19.5	704	48.8	212	14.7	217	15.0	310	21.5
VII C.Visayas	11110	1712	15.4	647	37.8	146	8.5	628	36.7	290	17.0
VIII E.Visayas	5697	637	11.2	353	55.4	54	8.5	200	31.4	31	4.7
IX S.W.Minda-nao	4367	349	8.0	258	74.0	10	2.9	6	1.7	76	21.4
X N. Minda-nao	12243	1190	9.7	720	60.5	165	13.9	142	12.0	162	13.6
XI E.Mindanao	15550	658	4.2	339	51.5	31	4.7	200	30.4	88	13.4
XII C.Mindanao	7485	305	4.2	258	84.5	5	1.6	1	.3	41	13.4
Total	116609	18300	100	8698	47.5	3146	17.2	3895	21.3	2573	14.0
%	100	-	15.7	-	7.4	-	2.7	-	3.3	-	2.2

Source: Integrated Highways Plan: Phase II, Dept. Publ. Hwys, Human Settlement Commission. (Undated)

TABLE 3

PROVINCIAL HIGHWAY REVENUES AND EXPENDITURES (1965 - 1974)

AND NATIONAL HIGHWAY EXPENDITURES (1966-1975)

PROVINCIAL Fiscal Year	Revenues Total (₱ 000)	% From Taxes 1/	EXPENDITURES TOTAL (₱000)	Construction (₱000) (%)	Maintenance (₱000) (%)	Admin. (₱000) (%)	National: Expenditures Grand Total (₱000)
1965	66251	78.4	60188	12088 20.1	46082 76.6	2018 3.3	-
1966	77463	60.6	76864	22376 29.1	51624 67.2	2864 3.7	182,200
1967	73149	70.4	68755	11917 17.4	52996 77.4	3541 5.2	273,400
1968	75893	75.9	76176	12191 16.0	60352 79.2	3633 4.8	371,400
1969	101108	79.2	92464	18489 20.0	67653 73.2	6332 6.8	367,000
1970	106983	80.8	103364	20887 19.4	78026 72.7	8450 7.9	506,700
1971	118374	79.0	114502	21328 18.6	83342 72.8	9832 3.6	392,300
1972	148759	80.2	132911	25280 19.0	97517 73.4	10104 7.6	534,700
1973	160100	84.5	127836	21709 17.0	98087 75.2	10040 7.8	802,300
1974	167314	38.3	170246	37324 21.9	113873 66.9	19048 M.2	1066,500
1975	-	-	-	- -	- -	- -	2739,100
Growth Rate Compound (1965 - 1974): %	10.6		12.3	13.3	10.6	28.0	

1/ Other sources: Aid and Loans From National Government.

1974 Decline (52%) in tax component.

Taxes Derive from Property Tax, Estate, Inheritance and Gift, and Tax on Agric. Products.

Source: Consolidated Operations Statement of the Roads and Bridges Fund (All Provinces), Department of Finance; Finance and Management Service, D.P.H.

TABLE 4

TOTAL HIGHWAY REVENUES AND EXPENDITURES

BY LEVEL OF GOVERNMENT

(1966, 1970, and 1974)

(₱ Million)

	Revenues						Expenditures: 1974			
	1966		1970		1974		Total		Const.	Maint.	Other
		%		%		%		%			
National 1/	227.3	60.9	504.5	73.6	1305.6	82.5	1066.6	80.6	669.2	156.1	241.2
Provincial	77.4	20.8	107.9	15.6	167.3	10.6	170.2	12.9	39.3	113.9	19.0
City	34.2	9.2	36.2	5.3	55.8	3.5	47.6	3.6	7.5	34.1	6.0
Municipal	34.1	9.1	38.0	5.5	53.3	3.4	38.8	2.9	4.2	34.1	0.5
Total	373.0	100	685.7	100	1582	100	1323.1	100	718.2	338.2	266.7

1/ Revenues Derive from Motor vehicle taxes, driver's licenses, general and bond appropriations.

Source: Finance and management service, Dept. Public Highways, 1976

TABLE 5

ACTUAL AND PROJECTED HIGHWAY REVENUES OF THE NATIONAL GOVERNMENT (1966-2000)

(₱ Million @ 1975 Prices) 1/

Fiscal Year	Total Highway Revenues	General Fund Appropr.	Taxes: Fuels + Oils	Vehicle Registr. + Dr. Lic.	DPH Special Funds
1966	227.1	33.6	123.6	63.6	6.3
1970	503.8	195.3	189.0	96.8	22.7
1974	1242.3	509.0	480.7	133.2	109.4
Projected:					
1977	2045.6	553.0	1190.7	161.8	140.1
1980	2407.4	709.7	1324.3	189.7	183.7
1985	3010.2	970.8	1546.9	236.0	256.5
1990	3613.1	1232.0	1769.5	328.8	402.0
2000	4818.9	1754.2	2214.7	375.2	474.8
Avg. Annual Share To Total (1977-2000):					
%	100	32.4	51.1	7.9	8.6

1/ Excludes Foreign Loans. Projections by Source.

Source: Integrated Highways Plan: Phase I The Basis for Planning, DPH - Human Settlements Commission

TABLE 6

PROJECTED HIGHWAY REVENUES OF THE LOCAL GOVERNMENTS AND NATIONAL GOVERNMENT (1977 - 2000)

(₱ Million)

	Local Governments:					National:
	Revenues From Local Sources		National Aid Receipts		Total Local Revenues	Revenues All Sources
		As %		As %		
1977	232.5	67.7	110.9	32.3	343.4	2045.6
1980	269.3	66.2	137.8	33.8	407.1	2407.4
1985	330.6	63.8	187.5	36.2	518.1	3010.2
1990	392.0	61.7	243.4	38.3	635.4	3613.1
1995	453.3	59.8	305.4	40.2	758.7	4216.1
2000	514.7	58.0	373.5	42.0	888.2	4818.9
Compound Rate of Growth 1977-2000:						
%	3.5		5.4		4.2	3.8

Source: Integrated Highways Plan: A Draft for Discussion, Dept. of Public Highways, Human Settlements Commission (Undated)

TABLE 7

ROAD MAINTENANCE PROGRAM: 1977 FOR 28 PDAP PROVINCES AND 1975 LOCAL TAX FUNDING COVER

Province	Length Km	Funding: (P000) 1/ Hwy. Spec. Fund	Local Fund 3/	Total Cost	Property Tax 2/ Assessed Values (Pmillion)	Expected Receipts (P000)	All Other Taxes Excl Income Tax (P000)
Abra*	423.7	2402.8	1201.4	3604.2	24.9	280*	563
Agusan N.	208.4	1181.8	590.8	1772.7	143.4	1613	4580
Agusan S.	169.9	963.5	481.7	1445.2	141.1	1587	1533
Aklan	268.3	1521.5	760.8	2282.3	141.4	1591	902
Albay	332.6	1886.1	943.1	2829.2	229.9	2586	1084
Antique	230.0	1304.3	652.2	1956.5	79.1	890	406
Bataan	175.5	995.3	497.6	1492.9	655.9	7379	156524
Batangas	650.2	3687.3	1843.6	5530.9	754.3	8486	107813
Bulacan	360.0	2041.5	1020.8	3062.3	1423.6	16015	27064
Cagayan	589.5	3343.0	1671.5	5014.5	461.6	5193	4123
Camarines Sur	437.1	2478.8	1239.4	3718.2	437.6	4923	1486
Capiz	454.5	2533.5	1288.7	3866.2	282.2	3175	1548
Davao N.	460.4	2610.9	1305.5	3916.4	409.5	4607	9932
Iloilo	845.5	4394.8	2397.4	3192.2	644.6	7252	5435
Lanao Sur	343.8	1949.7	974.8	2924.5	134.7	1515	799
La Union	348.7	1410.4	305.2	2115.6	295.4	3323	3991
Leyte	577.2	3273.3	1636.6	4909.9	419.8	4723	3441
Mindoro Occ.	412.7	2340.4	1170.2	3510.6	109.2	1228	982
Mindoro Or.	614.3	3483.7	1741.8	5225.5	163.0	1834	1179
Misamis Or.	516.8	2930.8	1465.4	4396.2	264.2	2297	1006
Palawan	417.3	2672.7	1336.4	4009.1	120.8	1359	457
Pampanga	317.9	1802.8	901.4	2704.2	635.6	7150	6719
Pangasinan	878.5	4982.0	2491.0	7473.0	1105.3	12435	3525
Quezon	451.9	2562.7	1281.4	1281.4	3844.1	9364	6750
Samar	142.5	808.1.	404.0	1212.1	220.2	2477	2640
Sorsogon	282.3	1600.9	800.5	2401.4	205.3	2310	797
Cotabato S.	1001.2	5677.8	2838.9	8516.7	327.2	3681	1711
Zambales	211.0	1196.6	598.3	1794.9	353.2	3973	1309
Total	12075.7	68481.0	34240.5	10271.5	10955.4	123246	358410

1/ Formula: National Roads Maint. costs as base (P 11342/Km):
N.S.F=.50 x P11342; L.F.=.50x N.S.F.= Total
P 5671 P 2835.50 P 8506.50

2/ Expected Receipts from non-exempt parcels = 1.50% assessed x .01 (Rate) x. .75 (collectible). factor = .01125 x assessed. (exclude cities and property taxes levied by cities).

3/ Amounts required from provincial funds to meet maintenance cost estimates set at % of national.

* The only province failing to meet entire maintenance requirements out of property taxes alone, due to disproportionately high (25%) exempt number of parcels, and low initial base.

TABLE 8

AVERAGE LABOR PAYROLL IN ROAD MAINTENANCE (PROVINCE)

HALF - YEAR 1976

(PROVINCE OF BULACAN: 6-MONTHS' COSTS)

Work No.	Length 1/ Km.	Employment 2/ Total No.	Employment 2/ Mandays	Labor Costs Section Crew 3/ (₱)	Total Job3/ Costs (₱)	AVERAGE PAYROLL Per Job	Per Man	Per Km
19	57.33	133	1144	25447	195621	1339.31	191.33	443.87
10	61.39	70	602	21269	167372	2126.80	303.84	346.46
14	61.46	98	843	28155	188347	2011.07	287.29	458.10
21	61.20	147	1264	21572	157743	1027.24	146.75	338.48
6	61.02	42	361	22042	128730	3673.67	524.81	361.23
19	59.21	133	1144	23261	162956	1224.26	174.89	392.85
89	361.61	623	5358	141746	1000669	1592.65	227.52	391.98
				14.16%	100%			

1/ Gravelled 39.36%; Bituminous 26.97%; concrete 33.67% (89 samples).

2/ Avg size crew = 7 (29 observations) x no. of jobs = total men employed; man-days = total employed x no. days avg. per job = 8.6 (29 observations).

3/ Work included: patching, overlaying, drainage repair, pothole filling, bridge repairs, etc. crews also otherwise employed on road and bridge construction (maintenance not full time employment).

Source: Provincial Engineer's Office: Maintenance Cost Estimates.

TABLE 9

AVERAGE LABOR COMPOSITION BY TYPE MAINTENANCE JOB: ROAD AND BRIDGE

1976 - 1/

(PROVINCE OF BULACAN: REPRESENTATIVE JOB COSTS)

Jobs	Labor Employment No.	Days	Payroll	Total Job Cost	Unit	Frequency (No. of Times
1. Blade and Compact unpaved surface	(Machine Operators)*			1282	1-Km	37
2. Re-shape, machine Ditches	7	included in above		-	1-km	37
3. Replenish unpaved roads/shoulders	7	(Machine Operators)*		2625	1-Km	81
4. Asphalt Patching + Sealing	7	(Bitum. Concrete + Prime Coat)*		5200 573	1-Km 1-Km	40
5. Bridge Painting	4	4	176	-	52 M^2	2
6. Bridge Repair	7	2	192.42	1347.42	20 L.M	10
7. Replace RCCP (Concr. Culvert)	6	2	163.30	595.70	8 L.M	25
8. Dig/Clean Drainage	4	2	122.57	122.57	1-Km	22
9. Riprapping (shldr matls)	7	15	1430	3150	150 M^2	3
10. Pothole Filling	6	2	237.40	N.A.	1-Km	23 280

1/ Not annual costs; typical sample costs by job, Bulacan Province, 6-Month Estimates.

* Accounted as equipment costs, or as materials costs. Specific labor content of job not identified by Payroll Cost in these job categories.

TABLE 10

FORECASTED REGULAR LABOR PAYROLL FOR ROAD MAINTENANCE BY PROVINCE (ANNUAL) MAINTENANCE

Province	Length (Km.)	Total 1/ Crew Employed	Average Job-rate 2/ Payroll	As % Total 1975 Provincial Employment
Abra	423.7	733	333515	1.36
Agusan N.	208.4	360	163800	0.32
Agusan S.	169.9	294	133770	0.32
Aklan	268.3	464	211120	0.53
Albay	332.6	575	261625	0.18
Antique	230.0	298	181090	0.29
Bataan	175.5	304	138320	0.39
Batangas	650.2	1125	511875	0.26
Bulacan	360.0	623	283465	0.17
Cagayan	589.5	1020	464100	0.55
Camarines S.	437.1	756	343980	0.20
Capiz	454.5	786	357630	0.44
Davao N.	460.4	796	362180	0.51
Iloilo	845.5	1463	665665	0.34
Lanao S.	343.8	595	270725	0.37
La Union	248.7	430	195650	0.38
Leyte	577.2	998	454090	0.19
Mindoro Occ.	412.7	714	324870	1.10
Mindoro Or.	614.3	1063	483665	0.89
Misamis Or.	516.8	894	406770	0.44
Palawan	471.3	815	370815	1.08
Pampanga	317.9	550	250250	0.18
Pangasinan	878.5	1520	691600	0.35
Quezon	451.9	782	355810	0.20
Samar	142.5	246	111930	0.06
Sorsogon	282.3	488	222040	0.39
Cotabato	1001.2	1732	788060	0.99
Zambales	211.0	365	166075	0.26
Total	12075.7	20889		

1/ Ratio of total employment (of 6 section crews in Bulacan Province) to total Kms = 623/360 = 1.73 (Multiplier per Km); during 6-month period assumes same size crews employed throughout entire year.

2/ P 227.52 per man per 6-month period x 2 = P 455/year/man payroll for maintenance job-cost payroll only (not full-time).

AVERAGE LABOR PAYROLL IN ROAD AND BRIDGE CONSTRUCTION (PROVINCIAL)

(1-KM GRAVEL ROAD AND 1 BRIDGE OF 30 LINEAL METERS)

1976

(Example: Bulacan Province, 1976 Standard Costs)

I - ROAD CONSTRUCTION

Job	Per Average Kilometer				Crews by Road 1/	
	Crew	No. Days	Job Payroll	Pay Per Man	No. Kms.	No. Of Crews
Clear'g + Grubb'g	100	4	4000	40.00	- 20	1
Drainage Excav.	27	1	320	11.85	- 40	2
Common Borrow	8	1	109	13.63	- 60	3
Common Borrow	20	1	200	10.00	- 80	4
Aggregate, Sub-Base	21	1	286	13.63	- 100	5
Aggregate, Sub-Base	196	1	1960	10.00	- 120	6
Aggr. Base Course	21	1	286	13.63	- 140	7
Aggr. Base Course	28	1	280	10.00		
Concrete Culvert	8	4	320	40.00		
Grouted Riprap	6	4	240	40.00		
Total	435	19	8001	18.39		

II BRIDGE OF 30 LINEAL METERS

Job	Job Unit	Job Crew	No. Days	Payroll	Job Cost
Excav. Structure (wet)	$84M^3$	2	7	190.82	3969
Excav. Structure (Dry)	$20M^3$	2	2	54.52	894
Excav. Structure	$20M^3$	9	2	180.00	4810
Crushed Aggregate	64LM	6	11	660.00	31913
Concrete Piles	120LM	6	10	600.00	26652
Structural Steel	300KG	2	6	120.00	2362
Concr. Railing	30LM	4	3	120.00	3417
Surface Bridge	$35M^3$	3	8	327.12	-
Surface Bridge	$35M^3$	14	8	1120.00	20426
Headwall	$10M^3$	6	8	480.00	4200
Reinf. Steel	1MT	8	7	560.00	9923
Total		62	72	4412.46	108566

Payroll/Man/L.M. = P.2.372 (4412.46/62/30)

1/ Roads in Provinces being constructed, reconstructed, rehabilitated, or improved.
Will be discontinuous and separate. Separation shown here is to allow for this.
Average Road Length of 20 Kms assumes 1 crew needed per every 10 Kms.

2/ Average costs will vary with terrain, soil or rock, vegetation, etc.

Source: Provincial Engineer's Office: Reports of Standard Costs, 1976

TABLE 12

EFFECT ON LABOR PAYROLL OF PDAP EXPENDITURES FOR ROAD AND BRIDGE CONSTRUCTION/IMPROVEMENTS

Province	Earth (Km)	Roads (%)	Construction Costs (₱000) 1/	Construction No. Kms 2/	Construction Bridge Meters2/	Labor Crew No. Employed3/ Roads	Labor Crew Bridges	Labor Payroll4/ On Roads (₱000)	Labor Payroll4/ On Bridges (₱000)
Abra	1502	7.3	14016	47.45	437.96	651	905	568	939
Agusan N.	41	.2	384	1.30	12.00	217	25	5	0.7
Agusan S.	129	.6	1152	3.90	36.00	217	74	16	6.3
Aklan	161	.8	1536	5.20	48.00	217	99	21	11.3
Albay	259	1.2	2304	7.80	72.00	217	149	31	5.3
Antique	85	.4	768	2.60	24.00	217	49	10	2.8
Bataan	27	.1	192	.65	6.00	217	12	3	0.1
Batanges	1854	9.0	17280	58.50	540.00	615	1116	700	1428
Bulacan	151	.7	1344	4.55	42.00	217	87	18	8.6
Cagayan	540	2.6	4992	16.90	156.00	217	322	67	119
Camarines Sur	517	2.5	4800	22.28	205.64	434	425	178	207
Capiz	387	1.9	3648	12.35	114.00	217	235	49	63
Davao N.	490	2.4	4608	15.60	144.00	217	297	62	101
Iloilo	491	2.4	4608	15.60	144.00	217	297	62	101
Lanao S.	1874	9.5	18240	61.75	570.00	868	1178	986	1591
La Union	350	1.7	3264	11.05	102.00	217	211	44	51
Leyte	1157	5.6	10752	36.40	336.00	434	694	290	553
Mindoro W.	124	.6	1152	3.90	36.00	217	74	16	6.3
Mindoro E.	50	.2	384	1.30	12.00	217	25	5	0.7
Misamis E.	1432	6.9	13248	44.85	414.00	651	855	537	639
Palawan	581	2.8	5376	18.20	168.00	317	347	73	138
Pampanga	741	3.6	6912	23.40	216.00	434	446	187	228
Pangasinan	3059	14.8	28416	96.20	888.00	1085	1835	1919	3862
Quezon	229	1.1	2112	7.15	66.00	217	136	29	21
Samar	357	1.7	3264	11.05	102.00	217	211	44	51
Sorsogon	136	.6	1152	3.90	36.00	217	74	16	6.3
Cotabato	3734	18.0	34560	117.00	1080.00	1302	2232	2801	5713
Zambales	95	.4	768	2.60	24.00	217	49	10	2.8
Total	20653	100	192M	653.43	6031.60	10633	12459	8747	15856
						23092		24603 = 12.8%	

1/ PDAP project funds distributed by % distribution of earth roads by province (illustrative only, to describe payroll effects) US$24 million = ₱192 million distributed.

2/ Pro-rated costs ₱192 million/650 km incl. bridges = ₱295,384.61 Per Avg. Km, Bridge Proportion of Total = 6000 L.M./650 km = Avg. 9.23 LM bridge per Km constructed.. Calculation: Total costs/avg. costs = no. kms (x 9.23 = lineal meters of bridges constructed).

3/ Construction crew of 435/km, and 62/bridge (Bulacan Prov.), Adjusted: Rehabil. or improvement roads = 435 x 50% = 217 avg./km; bridges = 62 per 30.L.M. x Labor crew = expected no. in crew. These numbers of total employed per unit (job work) are then calculated per length of total km (x no. of crews needed): Abra = 217 x 3 (crews) as km exceed 2-crew workload.

4/ Road Pay/Man/Km = ₱18.39, per L.M. Bridge = ₱2.37

TABLE 13

ECONOMIC DATA FOR 28 PDAP PROVINCES

Province	Gross 1/ (Personal) Income (P000)	2/ Vehicle Numbers Registr'd	2/ Popula-tion	2/ Agric. Employ-ment	Agric. Product (M.T.)	2/ Total Km Road Network	Local 4/ Budget Expend. as % income
Abra	1674	1172	149311	45548	20157	2054	89.4
Agusan N.	1720	3297	298318	40741	70695	641	90.7
Agusan S.	2540	564	214757	79874	110300	804	83.2
Aklan	1870	2186	292115	67961	46502	637	86.8
Albay	4108	5377	730004	136395	195702	1133	83.6
Antique	2420	1500	307157	89278	105680	766	95.4
Bataan	3264	5683	261478	30757	173458	519	92.4
Batangas	8586	20651	1028121	212854	863535	3778	91.5
Bulacan	10449	18787	891535	87148	169901	1105	81.4
Cagayan	6099	4271	638116	136000	164308	1852	79.7
Camarines Sur	5996	5338	1015182	244288	288944	1347	92.4
Capiz	3056	4220	444292	130066	866843	1047	102.5
Davao N.	4861	4636	585860	129665	170674	1470	82.4
Iloilo	7887	12659	1221630	261247	1438944	1961	83.2
Lanao Sur	1111	437	533998	95766	266693	2894	N.A.
La Union	4116	6106	413254	40741	66311	882	94.5
Leyte	8855	7372	1370403	340583	783355	3950	78.7
Mindoro W.	2032	610	183989	37125	71891	759	91.4
Mindoro E.	3270	1131	387174	85421	152684	1123	93.8
Misamis E.	3504	8554	558127	151613	90876	2408	99.4
Palawan	3258	1652	300513	33572	79205	1827	79.3
Pampanga	6702	38129	1032452	122984	799983	1578	92.7
Pangasinan	9432	11746	1509302	240840	392869	4884	93.0
Quezon	9146	8854	1018709	219182	194160	1383	92.1
Samar	7646	2771	1111239	274262	324134	1542	94.2
Sorsogon	3614	2974	443497	84845	92561	641	86.2
Cotabato S.	5129	9408	580902	119339	472592	8190	85.1
Zambales	2974	14998	411341	33487	105212	755	111.1
Total	135319	205083	18032776	3571582	8578159	51930	84.3

1/ Min. of Finance (1971-1974 Average). 2/ 1975 data 3/ 1971 Data 4/ FY 1972-73: Analysis of total provincial revenues compared to total expenditures.

Sources: Statistical Bulletin Vol. XI, Dec. 1973, Dept. of Finance; Integrated Highways Plan: Phase II

The Basis for planning, Dept. Publ. Hwys, Undated; Finance and Management Service, Dept. Publ. Hwys, 1976.

TABLE 14

VEHICLE OPERATING COSTS PER KILOMETER

(CENTAVOS)

Road Type	SPEED IN KPH: 20	40	60	80	100
	(Passenger Vehicles)				
Earth, Poor	84*	71	67	63	69
Gravel, Good	60	47	43	37*	45
	(CARGO VEHICLES)				
Earth, Poor	168*	145	138	133	141
Gravel, Good	111	90	81	76*	84

1. User Savings With Road Improvement:

   Passenger Veh. From 20 KPH @ 84¢ to 80 KHP @ 37¢ (-47)

   Cargo Veh. From 20 KPH @ 168¢ to 80 KPH @ 76¢ (-88)

2. Weighted Avg. Savings Per Vehicle Per Km. Per Year:

   PSGR Veh. 65% x .47 = .3055

   Cargo Veh 35% x .88 = .3088

   Avg. Savings/Km .6143

   x Annual Days Usage x 146

   Veh.-Km. Annual Savings ₱89.69

3. Forecasted Average Savings: ₱89.69 x no. of kilometers reconstructed

* Cost savings Per Vehicle Annually on each PDAP Road Length.

Average Trip Savings (Linear Settlement of contiguous Farms) = ½ of linear

Road Distance, or ₱44.84 per trip. But round-trip farm-to-market is 12 x 44.84

* ₱89.69, as used in calculations which follow, for local traffic only.

Source: Adapted and adjusted from C.A.P. Philippines Rural Roads Loan (Phase I) Nov. 20, 1974

TABLE 15

ROAD RECONSTRUCTION BENEFITS TO ROAD USERS IN INFLUENCE AREA

(ESTIMATED FOR ILLUSTRATIVE PURPOSES ONLY)

Province	Annual 1/ Savings Per Vehicle	Zone of Influence As % 2/	Agric. Employment Affected	Agric. Output Affected 4/
Abra	4256	2.31	1052	465
Agusan N.	116	0.20	83	141
Agusan S.	350	0.43	387	529
Aklan	466	0.82	555	381
Albay	700	0.69	939	1350
Antique	233	0.34	303	359
Bataan	58	0.12	38	208
Batangas	5247	0.15	3296	1295
Bulacan	408	0.41	359	696
Cagayan	1516	0.91	1241	1495
Camar. S.	1998	1.65	4041	4767
Capiz	1108	1.18	1534	10229
Davao N.	1399	1.06	1376	1809
Iloilo	1399	1.06	1376	15253
Lanao S.	5538	2.13	2043	5680
La Union	991	1.25	513	829
Leyte	3265	0.92	3138	7207
Mindoro W.	350	0.51	191	367
Mindoro E.	117	0.11	99	168
Misamis E.	4023	1.86	2824	1690
Palawan	1632	0.97	334	768
Pampanga	2099	1.48	1824	11840
Pangasinan	8628	1.97	4744	7739
Quezon	641	0.52	1133	1010
Samar	991	0.72	1965	2334
Sorsogon	350	0.61	516	565
Cotabato	10494	1.43	1705	6758
Zambales	233	0.34	115	358
Total	58606	1.26	37721	86290

1/ See vehicle operating costs reference: P89.69 trip costs annually per vehicle per year.

2/ Road Kms as % Total Kms in Province, taken as equivalent to zone of influence.

3/ Zone of influence as equivalent % of total Agric. employment (% unknown used to compute agric. employment, but rounded % shown). Implied time savings to this group (not spendable). transport costs.

4/ Metric Tons calculated on rounded % one of influence. Implied svgs. i_

TABLE 16

APPARENT AGRICULTURE INCOME BY INCOME CLASS: NATIONAL

1971

Income Class (₱)	Number of Families By Main Source of Income				Combined Total	As % Total	Agric. Income As % by Total Class
	Agri-culture	As % Total	Crop Shares	As % Total			
500-2000	1721133	30.00	65214	18.35	1786347	29.33	3.65
2001-5000	2363469	41.20	97211	27.36	2460680	40.40	3.95
5001-10000	1064522	18.56	96901	24.46	1151423	18.90	7.55
10000+	586921	10.24	105977	29.83	692898	11.37	15.29
Total	5736045	100	355303	100	6091348	100	5.83

NATIONAL LAND TENURE DISTRIBUTION: 1971

Income Class	Land Tenure Distribution By Income Class (No. Families)				Farm Tenure 1971 by Size Farm		
	Crop Sharing1/		Other2/ Employed	Primary Owners2/	Size Ha.	% Owner	Families 1971 Main Source
	Tenant	Owner					
500-2000	32607	32607	597750	1123383	.2-3	65.27	1721133
2001-5000	48605	48605	494201	1869268	3-25	79.09	2363469
5001-10000	43450	43450	150311	914211	25-100	85.88	1064522
10000+	52988	52988	186700	400221	100-200+	68.19	586921
Total	177650	177650	1497690	4238364		73.88	5736045

1/ Because these were reported "By Income Class," for every owner there must be a tenant (1960 Data shows fewer), it is taken at face value that tenants may be distributed in same way as total reported income (i.e., as owners also are distributed, as in Table above).

2/ 1971 tenure ratio (right) used to distribute 1971 owner-tenant ratio (both sides of which claim agriculture "as Main Source of Income"). Land reform since 1971 would have favored move of "other employed" to "owner" in lower income/size farm class, and fewer "other employed" in upper income/size farm class. (Example: 73.89% x 5736,045 total = 4238,364 entered at left; with "other employed" = 5736054 minus 4238364 = 1497690

TABLE 17

TRANSPORT COST SAVINGS DISTRIBUTION BY INCOME CLASS AND BY LAND TENURE

Income Class	No. of Familes (National) 1/						Zone of Influence: 2/ Transport Savings/Vehicle/Yr.		
	Total Owners		Employed Or Tenants		Total Employed		Pesos To Owners	Pesos To Tenants	Pesos To Total
	No.	%	No.	%	No.	%			
500-2000	1155990	26.2	630357	37.6	1786347	29.3	11132	6060	17172
2001-5000	1917874	43.4	542806	32.4	2460680	40.4	18440	5222	23677
5001-10000	957661	21.7	193761	11.6	1151423	18.9	9220	1869	11076
10000+	453209	10.3	239688	14.3	692898	11.4	4376	2305	6681
TOTAL	4416014		1675340		6091348		42489	16117	58606
As %	72.50		27.50		100		72.5	27.5	100

1/ Additive from Prior Table: Both tenants and agriculturally employed (Main income).

2/ Total provincial savings (P58606) Per vehicle per year are distributed) to total income classes by % class (from left), then by % total owner or tenant, then 2) by internal % class structure.

TABLE 18

ELASTICITY OF DEMAND FOR TRANSPORT SERVICES

BY RELATIVE INCOME CLASS AND PER CAPITA

Family Income Class	Per Capita Income	ELASTICITIES 1/	
		Total Passgr. Demand	Public Transport Passgr. Demand
1000-2000	175-350	0.5	0.5
2001-3000	351-525	1.0	1.0
3001-4000	526-700	1.3	1.3
4001-5000	710-875	1.7	1.4
5001-6000	876-1050	2.2	1.4
6001-7000	1051-1225	2.2	1.2
7001-9000	1226-1575	2.2	0.9
9001-12000	1576-2100	2.2	0.6
12001- +	2101-	2.2	0.5

1/ Meaning: Amount of response generated by a unit change in transport cost, stated as a multiple (x) or original demand. Elasticity less than 1 is inelastic (response is less than the amount of price change); elasticity = 1 is unitary (equal to % change in price/income; greater than 1 is elastic (response greater than price change). The lessening demand for public transport as income rises reflects growing preference for private cars.

Source: Road Feasibility Studies II, Norconsult, A.S, and Hoff & Overgaard, June 1975.

TABLE 19

VALUATION OF SAVINGS BY BENEFICIARIES

Income Class (₱)	Relative 1/ Income Shortfall	Relative Value of Money By Income Class 2/										
		500	1000	1500	2000	2500	3000	4000	5000	6000	8000	10000
-500	(₱/Person 229	1.00	-	-	-	-	-	-	-	-	-	-
-1000	221	1.04	1.00	-	-	-	-	-	-	-	-	-
-1500	212	1.08	1.04	1.00	-	-	-	-	-	-	-	-
-2000	212	1.08	1.04	1.00	1.00	-	-	-	-	-	-	-
-2500	197	1.16	1.12	1.07	1.07	1.00	-	-	-	-	-	-
-3000	178	1.29	1.24	1.19	1.19	1.11	1.00	-	-	-	-	-
-4000	152	1.51	1.45	1.39	1.39	1.30	1.17	1.00	-	-	-	-
-5000	128	1.79	1.73	1.65	1.65	1.54	1.39	1.19	1.00	-	-	-
-6000	116	1.97	1.90	1.82	1.82	1.70	1.53	1.31	1.10	1.00	-	-
-8000	93	2.46	2.38	2.27	2.27	2.12	1.91	1.63	1.38	1.25	1.00	-
-10000	35	*6.54	*6.31	*6.06	*6.06	*5.63	*5.09	*4.34	*3.66	*3.31	*2.65	*1.00
10000+	0	-	-	-	-	-	-	-	-	-	-	1.00

* Valuation of Money b7 income class relative to 1 for 1 point where income = expenditures (reading across) -

1/ From average expenditure excess over income class (Base = 1.00) compared to all higher income classes.

Measurement is from shortfall in each class as multiple over shortfall in succeeding higher income classes. Final valuations by each income group are compared to each other (Reading across from 10,000 +, where valuation of money is 1 for 1)

TABLE 20

RELATIVE VALUATION BY BENEFICIARIES OF TRANSPORT SAVINGS

ZONES OF INFLUENCE (28 PROVINCES)

TRANSPORT SAVINGS/VEHICLE/YEAR:

Income Class	Pesos Saved	Valuation of Pesos 1/		People Affected		Of Which: 3/ Owners		Employed 4/ or Tenants	
(₱)	(₱)	(₱)	(%)	(No.)	2/(%)	(No.)	(%)	(No.)	(%)
500-2000	17172	107153	42.8	11052	29.3	7214	65.27	3838	34.73
2001-5000	23677	110808	44.3	15239	40.4	12052	79.09	3187	20.91
5001-10000	11076	25696	10.2	7129	18.9	6122	85.88	1007	14.12
10000+	6681	6681	2.7	4300	11.4	2932	68.19	1368	31.81
Total	58606	250338	100	37721	100	27872	73.89	9849	26.11

1/ Average income shortfall for each income class used as multiplier for transport savings column 2: - 2000 = 6.24; - 5000 = 4.68 x; - 10000 = 2.32 x; 10000+ = 1.00 x

2/ In zones of influence: Total agric. employment is distributed according to national distributions of each income class in agric. enterprise.

3/ Distributed according to national % distribution of owners and tenants by income class in agriculture.

4/ Residual of Col. 4 minus Col. 5.

C. Social Analysis - Socio-Cultural Feasibility

1. Definitions of Society and Culture

The socio-cultural feasibility of a development program deals with the relationship of the program to the society and culture it is designed to service, in this case the Lowland and the Upland Filipino Cultures. Following standard anthropological usage, the term "culture" refers to "what is done", and the term "society" to "who does it". "Culture" is also used to designate the totality of behavior patterns and material culture items practiced by a given ethnic group.

Examples of cultural innovations are the steel axes introduced to the Australian Bushmen, the Spanish horse as introduced to Plains Indians of the United States, and American Roads as introduced to the Filipinos. In each case the material culture item had a profound effect on the recipient societies. The steel axe in Australia destroyed the dominance of the old men of Bushmen Society whose monopoly of the stone axe technology had given them a virtual gerontocracy. The Spanish horse metamorphosed small hunting-gathering bands into large warrior societies based on buffalo hunting and raiding.[1/] The introduction of the all-weather, American rural road was correspondingly a

---

1/ The Australian steel axe study was conducted by Dr. Laureston Sharp of Cornell University; the Plains Indian research is associated with Dr. Clark Wissler whose studies conducted from the American Museum of Natural History helped lay the foundations of modern ethnology.

dominant factor in the development of the Lowland Filipino culture.

2. The Rural Road and the Lowland Filipino Culture

The introduction of the all-wather road shortly after the American Occupation in the early 1900's was an instant success in the Lowland Filipino communities. An understanding of the reason for this enthusiasm, which persists to the present time, tells much about the socio-cultural feasibility of the Rural roads. Gleeck describes this reception:

> "Probably the single most important initiative which the American Government undertook in the economic field was road-building ..... Governor General W. Cameron Forbes (1909 to 1912) and his personal secretary (later Bureau Director of Public Works) Warwick Green were both automobile enthusiasts... his policy was described as: 'to construct roads only in those sections where they are most needed for the transportation of crops in cultivated sections ... to develop the products of the population as now distributed, and repair and maintain existing roads rather than open up new territories by constructing new ones.[1]"

> "Though some problems of cultural conflict had to be surmounted, road construction was immediately followed by impressive reductions in the time and cost of transportation and a visible growth in economic activity: "The benefits of these good roads are keenly realized by the people. The completion of a good road is immediately followed by a great increase in traffic and by a demand for broad-tire cart wheels shops for manufacturing which rapidly spring up along the lines of these roads ... the cost of taking sugar from the interior farms over one stretch of road which is now in first class condition is one-fourth (as expensive) ..... in Pangasinan and Ilocos, when road improvement is well advanced, the former cartload is doubled and tripled on the new road and two to three times the former distance is covered in a day.[2] "

---

[1] W. Cameron Forbes. The Philippine Islands. Boston, Vol. II, 1968, p. 141, in Gleeck, Lewis E. Jr., American Institutions in the Philippines (1898-1941). Historical Conservation Society, Quezon City, 1976, p. 208.

[2] Forbes, Op. Cit., Vol. II, 1968, p. 142 in Gleeck, Op. Cit., 1976, p.209.

> "Popular response was promptly forthcoming, showing that the road-building was an effective means of motivating people to engage in activities which would in turn promote further economic development. People were even ready to tax themselves." [1]

It may not be assumed that the roads created the desire for trade and commercial growth, but rather that they fulfilled a long-felt, built-in need of the Lowland Filipino economy. The all-weather American road, a development of the macadam gravel road which was so important in the development of the American West starting a century earlier, was a better mouse trap and it was quickly recognized as such. Also, the better road didn't require changes in the social organization of the culture, but simply accelerated the accepted pattern of socio-cultural interactions. Let us briefly trace the cultural events preceding the introduction of the American rural road.

When the American road builders arrived in the early 20th century, they fell heir to over 300 years of Spanish tutelage of the Filipinos. When the Spanish arrived, the Filipinos lived in small scattered communities:

> "Their chiefs ruled over but few people, sometimes as many as 100 houses, sometimes even less than 30. This tribal gathering is called in Tagalog a barangay. It was inferred that the reason for giving themselves this name arose from the fact (as they are classed by their language, among the other Malay nations) that when they came to this land the head of the barangay, which is a boat, thus called it." [2]

---

[1] Gleeck, Ibid

[2] Plasencia, O.S.F., Juan de. Customs of the Tagalog (Blair and Robertson VII, pp. 173-185) in Jocano, F. Landa (ed.), The Philippines at the Spanish Contact. MCS Enterprises, Manila, 1975, p. 108.

The Spanish organized the Filipinos into the large plantation estates of the Spanish grandees (encomiendas) and their associated barrios and poblacions.

> "The Spanish Friars labored to concentrate the population more than had hitherto been the case, their object being to bring the people 'under the bells' (of the town cathedrals)...roads radiate from the towns proper to various barrios and are lined with houses. ...during the rainy season the roads are passable only on the backs of carabao."[1]

The Spanish also introduced the small fast horse which looks like a blend of Spanish Arab stock and Mongolian ponys and the two-wheeled cart (calesa) which is still found in most communities including Manila. The transportation functions of the calesa were taken over by the jeepney.

The typologically oldest vehicle in use in the Philippines today is the sled drawn by carabao. These were first used in a time period of unknown antiquity when plants and animals were domesticated. It is evident that roads and vehicular transportation by animals have deep aboriginal roots in Lowland Filipino Culture. Today as in the past, the rural roads perform vital functions for the rural community. The interviewees met in Filipino communities show a keen awareness of the role which rural roads play in their lives. This awareness seems part of the folk wisdom of the Filipino.

---

[1] Leroy, James A. "Philippine Life in Town and Country" in the Philippines Circa 1900. Manila, Filipiniana Book Build, 1968, p. 24

Today, as in the past, rural roads are socially feasible, indeed necessary, for Lowland Filipino Culture communities. Their vital functions include (1) bringing farmers into the orbit of a growth market-oriented economy, (2) accommodating social interests and cultural practices of the project beneficiaries, (3) providing access to off-the-farm and seasonal employment, and (4) conversely, allowing access into rural communities for governmental line agencies and social development programs.[1]

3. The Rural Road and the Upland Filipino Cultures

While the rural road is eminently feasible socially and culturally for the Lowland Filipino Culture, it is a revolutionary innovation which often has dire consequences for the Upland Filipino cultures. For generations, the pagan Filipinos have survived as cultures by keeping a hostile world away from them. This was done by being inaccessible in the impenetrable mountains. Roads had no use for them since they are headloaders and backcarries using footpaths. They were largely subsistence farmers living in a barter economy and had no use for markets tied to the money economy. On the contrary, roads let in hostile forces which threated their independence, compromised their autonomy, brought in diseases and eroded values and concepts which attacked

[1] These observations arrived at independently, are paralleled by those of the first social soundness analysis of a rural roads program in the Philippines. USAID/Philippines, Office of Regional Development. Project Paper: Bicol Secondary and Feeder Roads Project Loan, Nov. 1975, p. 90.

the base on which their lives were built. The social services of the outside world had little attraction to them since their world view provided their own panaceas, elixirs and salvations.

The researcher visited a pagan tribe, the Tagbanua of Palawan Island whose territory had been recently opened up in part by a USAID-GOP rural road extending 10 kilometers into the hills from Aborlan.

Physically, the Tagbanua are short-statured (below 5 feet), wirey people with dark features who are Malayan with additional non-Malayan features such as heavy brow ridges, hairiness, and prognathism. In the 1960 census they numbered 5,152. Together with the Palawano (18,000) and Batak they comprise over 10% of the estimated 270,000 population of the island.[1] The Palawano resemble the Tagbanua physically but speak a different language. The Batak are Negritos. These are the pagan tribesman of Palawan for whom the road is threatening rather than promising.

The Tagbanua live in small hamlets of a dozen or so families and build small bamboo and nipa-palm homes shaped like inverted trapizoids They are farmers practicing swidden agriculture, a slah-and-burn technique for producing hill rice. The practice is called Kaingin locally and is one of the most widespread of horticultural practices known to be ecologically viable. It is viewed with grave distrust by the lowland Filipinos because of

---

1 Republic of the Philippines. Philippine Yearbook, 1975, National Economic and Development Authority, National Census and Statistical Office, Manila, p. 131, 140.

the destruction of timber in the preparation of the land. Actually, the circular 1-3 hectare plots are left fallow after a one year crop and the vegetation grows back in 8-10 years when it is ready again for cutting and burning. The yields are low in terms of the labor involved in making a crop, but the Tagbanua as a group want to continue their old way of life. About half of the small group I visited at Cabigaan are reported to be trying Lowland Filipino ways of agriculture - with limited success despite the establishment of an Agricultural College at Aborlan in 1910 to educate and modernize them. There is also an agricultural training project designed to assist them. The whole area around Aborlan was once a Tagbanua reservation (under the American Administration) but its status has since changed and the road is being used to open up the country to development by large corporations.

One interviewee, a Cuyonan (Spanish-Visayan mixture originally from the island of Cuyo) who was a provincial official had been raised with the Tagbanua. He characterized them as a gentle people who had lifelong loyalties to their friends and wanted nothing more than to be let alone to practice their ancient way of life. Often they get "fed up" with "civilization" and retire to the mountains to hunt and gather in the traditional way. They are taken advantage of by the Lowland Filipinos, he said.

The Tagbanua are largely indifferent to the road. One tiny old lady said she appreciated the opportunity to hitching a ride from a passing truck to get to town. She went sometimes to sell garden produce and to buy necessities such as fish and tobacco. But she couldn't afford to pay to ride the tricycle, the only public vehicle, since it cost ₱3, an enormous sum. She also didn't like to walk along the road because of the lack of shade, and the gravel stones hurt her bare feet. She and other Tagbanuans preferred a shady trail which ran parallel to the road. The trail is an ancient footpath used by them from time immemorial.

The rural road has just begun to enter Tagbanuan land which extends through the mountains to the other side. It is the intention of Palawan planners to drive the road through to the western side of the island since there are valuable mines in the mountains. The Tagbanuans are far from finished, however, and when I left them they were planning a cultural festival in which the tribal people in the vicinity were to meet and enjoy traditional cultural activities. The festival planned for a few weeks hence was a new idea for them developed by the barangay captain of Cabigaan.

Table 1 shows the rural roads and bridges planned by Rural Roads Project II in mountainous areas heavily occupied by Upland Filipino Cultures. The data indicates the probability of a

Table I. Rural Roads Project II and the Cultural Minorities[a]

Province	1960 Number Cultural Minorities[c]	Tribal Groups[c]	Roads					Bridges					Roads Km.	Bridges L.M.	Mil. Pesos AIP
			AAN	AAR	ABR	ACR	AAX	CCN	CAN	CBR	CCR	CBN			
Palawan	32,820	9+	5	4			1	4	1	1			40	349	9.3
Misamis Oriental	5,820	3+		10		1			2		8	2	34.6	142.7	11.0
Lanao del Norte	44,004[b]	3+													
Davao del Norte	112,473	15+	9	10				6			8		85	416	19.5
Agusan del Sur	18,689	6+	1	4							2		23	40	3.9
Abra	25,063	2+		9	1						6		39.5	75.2	4.0
Totals	310,125	45	15	37	1	1	1	10	3	1	24	2	222.1	10 22.9	47.7

[a] Source Provincial Summarys, RR Program, FY 77-81. [b] Road connections to Misamis Oriental
Code: 1st Lrs. A-Road, C-Bridge; nd Ltr. Road: A-Gravel, B-Asphalt, C-Concrete; Bridge: A-Timber, B-Culvert C-concrete; 3d Ltr. N-New, R-Improvement, X-Combination. AIP-Annual Implementation Plan.

[b] Yearbook, op. cit., 1975, pp. 130-131

substantially increased impact of undesirable influences brought in by the improved roads situation.

Most cultural minorities have been undergoing acculturation and culture change since before World War II as a result of local government, the Christian Church, the school, trade, and traditional intervillage connections. Some, like the negrito tribes of Luzon (Aeta) have been resettled. They now live near Clark Air Base in Pampanga Province and have given up hunting for the practice of scavengering waste material of Clark Field - under the direction of "King" Alfonso who gets a percentage of the proceeds. Others like the Tagbanua have been protected until recently and are having difficulty in making an adjustment to modern life. Still
[10?] others like the Kankanay (59,230 in 1960) appear to be successfully embarked on the road to modernity.

Bello describes the Kankanay at Bakun in the Mountain Province of Northern Luzon as in the process of a gradual ecological change without apparent trauma since it is taking place in an atmosphere of permissiveness and there is a natural striving for consistency in the culture. A persistant problem in the eyes of the Kankanay is the need for road construction to connect Bakun to urban centers. The Bakun officials feel that roads are the key to development of the whole region and they are trying to get the Provincial Government Public Works to lengthen the present

roads. He writes:

> "Another need, probably more pressing at the moment than the building of roads is the widening of trails between barangays. The present trails are very narrow and they frequently get washed away by landslides during the rainy season. This is a serious problem because when it occurs nearby villages are sometimes shut off from the outside for weeks. Improvement of these trails will facilitate easier traveling and increase contact with settlements within the municipality.[1]

4. Traditional Road Constructing Organization

Prior to the American road building program in the Philippines much of this activity was done by the local communities. At present "self-help roads" are still being constructed by local communities with some help from the municipality. In this case the tools are usually provided, with local materials and labor being given on a voluntary basis by the community. The activity, as with all public works in the barangay, is under the direction of the barangay captain and his councilmen. Travel on such a road is a terrible experience for a road-pampered American. Such a device is a temporary one at best and technically trained and supported road builders are needed if rural roads are to confer the benefits expected of them.

5. Minimum Participants Profile

All in the barangay benefit from the construction of improved rural roads in the Lowland Filipino Culture barangay.

---

[1] Bello, Moises C. Kankanay Social Organization and Cultural Change. Community Development Research Council, University of the Philippines, 1972, p. 173.

As in the case of the Barangay Water Project social analysis report (p. 32, 33), the principal beneficiary is defined as the young. As pointed out in the previous report such a person is probably married with small children and among the poor of the community.

6. Matching Participants and Project

There are no groups who will be adversely affected by the Rural Roads Project II program as applied in Lowland Filipino Culture communities. In the Upland Filipino Cultures, the traditionally minded, usually older people, will be adversely affected or at least not benefited. The younger people may be benefited in that they leave their traditional community for job opportunities in the modernizing towns and lowland communities.

The public roads belong to all who are equipped to use them. The differential benefits are discussed below.

7. Obstacles

In the Lowland Filipino Culture, there are no insurmountable obstacles to the successful installation and utilization of the rural roads. In the Upland Filipino Cultures, there are many obstacles as discussed above in detail.

8. Communication Strategies

It is stressed throughout this paper that rural roads do not have to be "sold" to the Lowland Filipinos. The values of the roads are well known as a kind of "folk wisdom" of long standing.

Public relations techniques, however, are always important in public works projects. It is, therefore, salubrious that Filipino politicians are well aware of the political significance of roads and generally do a good job with public relations.

The Spread Effect: Diffusion of Innovation

A. Spread Effect of Information About Rural Roads in the Lowland Cultures

Since the rural road is not an innovation in the Lowland Culture, but an integral part of the society from early times, the problem is not one of convincing the barangay citizens that roads are "a good thing", but rather how to get the most appropriate road for the transportation problems of the community. The provincial officials seem in close contact with the local communities and their needs and capacities to utilize transportation.[1] There is real need for local "democratic participation" of the barangay citizens in rural road planning. Due to the strong tendency of the average barangay citizen to accept direction from above without apparent questioning, a special problem exists to get barangay participation.

B. Leadership/Authority in the Lowland Filipino Cultures

Behind the non-involvement attitude in the Lowland Filipino Culture barangays is the average citizens view of authority and leadership which is discussed in the Barangay Water Project Social Analysis Paper (pp. 35-38).

---

[1] Provincial Development Staff, Office of the Governor. Socio-Economic Profile; Pangasinan. Lingayen, Pangasinan, August 1975.

Province of Pangasinan, Brief Report on Infrastructure Program. Lingayen, Pangasinan, March 1, 1975.

C. Spread Effect of Information about Rural Roads in the Upland Cultures

Rural roads are an innovation in the Upland Filipino Culture areas, and are often a questionable advantage. It seems a foregone conclusion that this generally hostile or indifferent attitude toward rural roads will change in time. The question is how and when. It would be indeed regretable if the cost of this innovation would be the destruction of the Upland Cultures - an irrevocable loss which would bring credit to neither the GOP or USAID.

Deliberate efforts should be made to associate the road, not with undesirable intrusions like hostile Lowland institutions, military control or culturally inhibiting devices, but actual benefits as regarded by the cultural minorities themselves. What do they want which the road can bring them? The usual answers to this question from the Lowland Filipino viewpoint or the American advisors' viewpoint will not suffice although beneficial, modern forces dependent on the road are beginning to gain a foothold. What can be said to the Tagbanua to assure their interest in rural roads and their cooperation in the development of roads? The question doesn't evoke a ready answer. The Rural Roads Program in Palawan is being geared to transport service for mining and lumbering operations and to the "vast agricultural potential that we have .....There is an urgent need to induce our hill tribes to come down from the mountains and settle in the lowlands and practice

permanent agriculture."[1]

D. Social Consequences and Benefit Incident

1. Socio-Economic Effect of Improved Rural Roads on Lowland Filipino Communities

A comparison of the responses received from farmers and their families on the Mabini road and that on the Iliw-Iliw road show a close correspondence. Farmers anticipating benefits from the road and bridge to be built out of Mabini and actual benefits recounted by farmers on the recently constructed Iliw-Iliw Road were similar. These results in turn faithfully reflect the conclusions reached by Villanueva and his associates in a 1959 study of 48 barrio roads in 24 provinces:[2]

1. Increase in barrio and market price of farm products. This phenomenon was not anticipated in the Mabini sample nor mentioned in the Iliw-Iliw. Villanueva thinks it is due to the passing on of transportation costs.

2. Increase in volume of sales in farm products. The rate of increase averaged 46% on 10 farm products (rice, corn, tobacco, bananas, coconuts, chicken, swine, carabao, cattle and goats).

3. Drop in cost of transportation of farm product to market. A 42% average drop is noted for 8 farm products.

4. An increase in gross income of farm families. An average increase of 55% is noted on 5 farm products.

---

[1] Palawan Economic Development Council. Palawan; Long Range Comprehensive Development Plan. FY 1977-1986, Part I - Policies, Plan. Dec., 1975, Puerto Princesa City, Palawan Provincial Development Staff. pp. 10-14, 55.

[2] Villanueva, Buenaventura M., et al. The Value of Rural Roads. Community Development Research Council, University of the Philippines, Community Publications, Inc., Sta. Ana, Manila, 1959, Chapters V and VI.

5. An increase in the variety of marketable goods. There was a large increase in the introduction of new varieties of vegetables and fruits for sale.

6. An increase in land value. There was an average increase of 53% in the value of 6 kinds of land (Rice, coconut, corn, coffee, residential, uncultivated lands).

7. An increase in economic enterprises in the barrio. These include small stores, rice mills, sugar mills, warehouses, market places, and the like.

8. Increase in school enrolment. An average increase of 59% was noted for primary, intermediate, high school and college.

9. An increase in the flow of social services into the barrio. An average increase of 359% is noted in the number of visits per year of the different governmental and non-government services. Included are: rural health doctor (580%), other doctors (675%), rural health midwife (450%), rural health nurse(540%), sanitary inspector (154%), municipal agriculturist (171%), home
13 home demonstrator (138%), policeman (70%), ACCFA representative (267%), mayor (200%), councilor (283%), district school supervisor (150%), social worker (1000%).

10. Additional services increase. In addition, the following improvements were reported: 25 barrios claimed improved postal services, 9 barrios claimed better newspaper deliveries, 29 barrios cited improved police protection, 25 barrios specified improvements in peace and order.

11. Increase in recreational activities. 47 barrios reported increases in dances (15), parties (10), athletics, cinema, cockfighting, horse racing, drinking (1), fiestas, musical competitions. Certain institutions were stimulated after the construction of the road (e.g., courtship, marriage, baptisms, etc).

It is understood, of course, that the more improved a community's roads are to start with, the less the impact of the improvements of the current rural road project. The above listed benefits apply to

communities that have graduated by virtue of the current improvements from the semi-isolation of barangay roads and trails.

2. The Beneficiaries of Improved Rural Roads

It may be seen from the nature of the economic and social benefits listed above that all members of the community benefit from improved vehicular transportation in the barangay. Since the poor are numerically the greatest portion of the community (an estimated 80%) they benefit proportionately.

Since land reform in 1972, most farmers are able to acquire land for development. Wealthier farmers will be able to take greater advantage initially of the improved road being better able to provide his own transportation, having large production capabilities, and the like. It is also true that, given time, the more enterprising farmers will outstrip the less enterprising in the competitive capitalistic system. Eders' study of San Jose, Palawan, indicates that the top 20% of the farmers earn 3 times more than the bottom 40% after 25 years when they start with nearly equal farming resources. 114

In a sample study of 115 farmers and 35 retailers in 4 barrios in the Bicol River Basin, a USAID study indicated that the poor farmers will derive the greatest share of benefits from the total savings on all project roads. Also, the benefits accruing to farmers is roughly equivalent in time saving, transport saving

and vehicle saving on project roads, with the middlemen savings approximately one-half of theirs.

Weighted values of social benefits of "different beneficiary groups" give farmers 50%, middlemen 20% and vehicle operators 30%.[1] These results show a roughly equal distribution of benefits among the contending beneficiaries. It should be noted that jeepney drivers are often farmers.

3. Groups adversely affected by Rural Roads

No groups have been identified within the Lowland Filipino Culture who are adversely affected by the road. Pagan tribal groups such as the Tagbanua, however, are "taken advantage of" by virtue of rural roads penetrating their traditional territories. Tribal lands are traditionally held communally and the individual farmers do not ordinarily have land titles required by Filipino law for possession. They are readily deprived of their lands or given inadequate compensation by outside interests, such as large farming corporations or mining development companies who follow the roads. Landless farmers are pushed further into the mountainous interior or become laborers in the new corporate enterprises--their aboriginal cultures soon to disapper entirely.

115

4. Social Implications of Rural Roads in Terms of Access to Opportunities and Resources

In the case of the Lowland Filipino communities there appears to be an equal access to opportunities and resources opened up by

---

[1] USAID/Philippines. Bicol Secondary and Feeder Road Project Loan. Nov. 1976, Manila, Tables 14-19.

by the road. In Upland Filipino communities this is not the case. Due to lack of cultural know-how to take advantage of such opportunities the Upland Filipino is usually by-passed in such developments.

5. Employment and Possibility of Displacement

Increased employment may be expected as a result of the rural roads development in all aspects of the economy of the Lowland Filipino Culture communities. When rural roads are built to assist cultural minority communities and not to exploit the area this is also the case. Employment resulting from exploitation of tribal lands by large corporations often causes depressed laborer community development rather than a healthy development of the communities.

6. Migration and Urbanization

Improved rural roads open the world to the people of the barangays and stimulate migration and urbanization initially. This is especially true of the youth groups who migrate for increased opportunities in education and commerce. The development of barangays through improvement of rural roads eventually build-up the local community to encourage citizens to stay and take part in the development. This becomes increasingly true as the urban centers become less desirable by virtue of extreme crowding.

CONCLUSIONS

The following conclusions about Rural Roads Project II are justified on the basis of this study:

1. The project is a continuation of a long and successful history of American-Filipino cooperation in providing rural roads for the Philippines. Rural roads continue to be socially feasible and popular in the Lowland Filipino community. Indeed, they are vital to the development of the culture in its modern phase. The project does not give undue advantage to any particular group, and the poor realize the bulk of the advantages of improved rural roads. The project, therefore is unquestionably socially sound in most Filipino communities.

2. Rural roads are also highly desired and socially feasible in the developing communities of Upland Filipino Cultures (cultural minorities) when rural roads are put to the service of these communities. Some upland roads serve other purposes such as opening tribal territories to the special interests of lumbering, mining, farming corporations or the national interest of hydroelectric dams.[1]

3. In addition to concentrating on cultural minority interests in rural road building, there appears a need for construction of trails and footpaths. These are needed especially in mountainous areas to assist villages to maintain contact with the outside in spite of frequent landslides. Such transportation links are not

1. See Page 9.

present visualized as part of rural roads in deprived, isolated communities.

4. While the Philippines has the technical capability and probably financial capacity to carry on rural road construction on their own, they have not demonstrated an ability to apply the benefits of rural roads for the most effective development of the nation as a whole. This is particularly applicable in the case of cultural minorities. It is to be hoped that Rural Roads Project II will exert the necessary and timely influence in the area of equal socio-cultural benefits of rural roads for all Filipino communities.

PART 4 - Implementation Planning

A. Recipient and AID Administrative Arrangements

1. Recipient

The National Economic and Development Authority (NEDA) will represent the GOP as the borrower. The Department of Local Government and Community Development will be the implementing agency working through the participating provinces. The DLGCD has assigned a well qualified Project Director to administer the project. The Project Director is adequately supported by technical and clerical staff. The DLGCD has a Provincial Development Officer (PDO) and staff resident in each province. With the phase down of PDAP, the PDO has been given steady increases in responsibility and authority (See Part 3D, for details of DLGCD organization).

The participating provinces or RSCs will prepare the plans, specifications and cost estimates for the various road and bridge projects. After approval by DLGCD and USAID, the provinces and RSCs will implement the projects utilizing their own funds along with the 15% (of the Fixed Amount Reimbursable) advanced each subproject by DLGCD.

The Provincial Engineer and his counterpart in the RSCs in each province will be primarily responsible for implementation including day to day monitoring of the projects in their respec-

tive provinces. DLGCD will contract with local A&E firms to provide independent monitoring of the Projects. The A&E firm will be responsible for:

(a) reviewing the design and technical specification for each subproject and recommending to DLGCD the fixed amount reimbursement limit.

(b) inspecting and monitoring subproject construction to assure conformity to previously agreed plans and specifications.

(c) inspecting each subproject after completion and recommending reimbursement or rejection of the project until deficiencies are corrected. The forms and procedures used in project monitoring are detailed and illustrated in the Administrative Procedures.

When a project has been completed and approved by DLGCD, the latter will reimburse the province for the previously agreed fixed amount. Normally, this reimbursement will be about 70-75% of the total project cost. Under the terms of the Loan Agreement, the Government of the Philippines will receive direct reimbursement in pesos from USAID as described above. RRP I has demonstrated the capability of the recipient to implement the project.

2. AID

Implementation, management and monitoring of the project for AID will be the responsibility of the Assistant Director for Provincial Development (AD/PD). The Capital Development Division

will have responsibility for loan negotiations. The general direction of local hire technical personnel (engineers), will be provided by the AD/PD Chief of Infrastructure.

USAID/Philippines anticipates a gradual transition intended to shift the current USAID role to the GOP Department of Local Government and Community Development. The phasing of this transition is not specifically scheduled but will be governed by project progress and the DLGCD response to the increased responsibility.

USAID will have access to all project reports and other documents originating in the provinces, RSCs or implementing agency. All A&E reports will also be routed to USAID. USAID will monitor all activities that relate to reimbursement of local currency costs, including field inspections as required.

B. Implementation Plan

1. Project Description

The basic goal of this project is to stimulate development of rural areas of the Philippines. This project will meet that goal thru the construction of some 640 kilometers of rural (farm to market) roads and 6100 linear meters of bridges in the rural areas of selected provinces of the Philippines. A secondary key objective of the project is the development of local government capabilities to plan and implement development programs on a sustained basis. This objective will be met thru the continuation of on-going training programs developed and administered by agencies of the GOP, as assisted and augmented by USAID and the development of additional training programs.

2. Implementing Agencies

a. Department of Local Government and Community Development (DLGCD)

The Department of Local Government and Community Development (DLGCD) is a line agency of the Government of the Philippines. The Secretary of DLGCD is a member of the Presidential Cabinet. The DLGCD is divided into three operating bureaus: (1) Bureau of Local Government, (2) Bureau of Community Development and, (3) Bureau of Cooperative Development. The role of DLGCD, inter-alia, is to provide

for the administration and management of local governments (provincial, municipal and barangay) including policy and financial control and direction on a wide range of local government functions and activities. It coordinates at the highest level with other national agencies, including the Department of Public Highways, on policy and administrative matters, particularly in relation to Presidential Decrees.

Directly under the Office of the Undersecretary for Local Government, the Rural Roads Program is headed by a Project Director with the overall and primary responsibility for project implementation. Separate divisions are responsible for the operational and administrative needs of the program, including monitoring.

113

In addition, a Rural Roads Program Committee acts as the consultative/policy determining body which formulates guidelines for systematic and effective program implementation.

At the provincial level, the DLGCD is represented by a Provincial Development Officer (PDO). Among other things the PDO reviews the provincial development plans funded under Presidential Decree #144, which provided, inter-alia, that 20% of the collections from national internal revenue taxes not otherwise accruing to special accounts in the general fund shall accrue to local governments for development pur-

poses. The PDO coordinates closely with the PDS on all appropriate developmental activities and particularly so in PDAP participating provinces. Under the rural roads program, the PDO has been assigned specific review and processing responsibilities regarding all projects proposed in his province.

b. Provincial Development Assistance Project (PDAP)

The Provincial Development Assistance Project (PDAP), an agency, erstwhile, within the Office of the Executive Secretary to the President which is now under the administrative control of DLGCD by virtue of LOI 46 dated August 18, 1976, is responsible for developing and field testing the system, techniques and procedures needed to improve and enhance the management and administrations of local government (the provinces, the municipalities and the barangays) throughout the Philippines. PDAP coordinates closely with the DLGCD and ultimately will become, in effect, a part of the DLGCD organizational structures. The goal of PDAP is to improve the effectiveness of the various agencies of local government in serving their people and in attaining national and local objectives, particularly in general development planning and programming, infrastructure construction and maintenance and fiscal management. The project is designed to

assist provincial and local governments to respond effectively to rural needs for lowered transportation costs, access to markets, equitable taxation, extended public investments and improved rural employment opportunities through efficiently maintaining, upgrading and constructing planned, standardized and internetted provincial road systems using both force account and contract construction. To attain its goal and objectives, PDAP provides four basic types of assistance to the participating local governments: first, technical assistance, including engineers, equipment specialists, and area specialists all having an extensive monitoring and advisory capability; second, training, including a wide-range of both formal and informal training courses and programs relating to all facets of provincial engineering as well as equipment pool operations; third, commodity assistance, both with regard to excess property for equipment pools as well as specialized office equipment and quality control equipment for the Provincial Engineers Office; and fourth, limited loans for construction of equipment pool facilities.

The PDAP organizational structure includes 18 engineers, 4 supervisory or area engineers and 14 field engineers, as well as 8 area specialists. PDAP is continuing to strengthen

its engineering capability by recruitment, training and on-the-job experiences. It is anticipated that PDAP will continue to provide technical assistance to the Rural Roads Program.

c. Assistant Director for Capital Development

The Office of the Assistant Director for Capital Development is a line office of the USAID Mission to the Philippines. The Assistant Director for Capital Development (AD/CD), who also serves as Mission Engineer, is directly responsible to the Mission Director for the design, planning, programming and coordination of activities relating to rural electrification, water resources, and other general engineering programs. The staff consist of both loan officers and engineering personnel. For purposes of the Rural Roads Loan, the AD/CD serves as Chairman of the Loan Committee assisted by other key AD/CD personnel including the Capital Loan Officer and Assistant Mission Engineer. The Capital Loan Officer will be responsible for monitoring all documentation and will serve as an advisor to AD/PD, as appropriate, on matters relating to the loan or its implementation.

d. Assistant Director for Provincial Development

The Office of the Assistant Director for Provincial Development is a line office of the USAID Mission to the Philippines. The Assistant Director for Provincial Development is directly responsible to the Mission Director for the design, planning, programming and implementation of programs, projects and activities designed to assist appropriate agencies of the GOP to respond to rural needs for lower transportation costs, access to markets, equitable taxation, expanded public investments and rural employment opportunities. The AD/PD American Staff consists of two managers, six area specialists, three equipment specialists, and six technical specialists, including one for infrastructure. The AD/PD Filipino staff of 13 includes one office engineer and two field engineers. The Office of the AD/PD is in effect the USAID counterpart of PDAP.. Both share the goal setforth in the PROP. The AD/PD provides, through its infrastructure and engineering personnel, an American project manager and five Filipino engineers to assist the DLGCD in the design, planning, and execution of the Rural Roads Program. Further, the AD/PD Training Officer and the Plans and Training Section Chief both have and will provide extensive training backstopping, including the coordination of specific training seminars and programs, in

direct support of the Rural Roads Program.

e. Provincial Development Staff (PDS)

The Provincial Development Staff (PDS) is a planning and programming agency located within the Office of the Provincial Governor. Under the provisions of Executive Order No. 121, all provincial governments are required to organize a Provincial Development Committee (PDC) which consists of representatives from all national and local agencies and the private sector involved in socio-economic development in the province. The PDC, in theory, provides the policy guidance and overall coordination for the development of the province, both in the private and public sectors. The Governor is the ex-officio Chairman of the PDC. Under Executive Order No. 121, he is further directed to establish a Provincial Development Staff (PDS) which will serve as a staff agency for the PDC. While no standard organization plan or structure is suggested in Executive Order No. 121 for either the PDC or the PDS, PDAP has established the requirement for PDAP participating provinces to include on their PDS personnel with six specified skills as follows:

(1) Provincial Development Coordinator

(2) Project Analyst

(3) Fiscal Analyst

(4) Agricultural Analyst

(5) Infrastructure Analyst and

(6) Researcher/Statistician.

All six are provided extensive training by PDAP. More specifically, the Infrastructure Analyst serves as the staff officer who closely monitors all facets of the provincial infrastructure program and related activities and assists in coordinating such activities with other staff and line agencies within the provincial government, including the PDC. He also maintains records and prepare reports and documents relating to a wide range of engineering and infrastructure activities. As a key member of the PDS, the Infrastructure Analyst provides a high level of professional competence in backstopping, monitoring and coordinating provincial infrastructure activities at the staff level, including those related to the Rural Roads Program.

119

f. Provincial Engineer's Office

The Provincial Engineer's Office (PEO) is an office of the Provincial Government which is directly responsible to the Provincial Governor for the design, planning and implementation of construction and maintenance activities. Its principal officer is the Provincial Engineer. The PEO is

staffed in accordance with an organization chart which covers administration, design, plans and programs, road and bridge construction and maintenance, and quality control and inspection. The size and composition of the PEO staff depends largely upon the provincial budget and the overall road network program, but in almost every province, it is by far the largest provincial office both in terms of manpower and funding. Each PEO has technical staff with competence in surveying, design, drafting, cost estimating, implementing and monitoring/inspection of road and bridge projects.

An important component of the PEO is the Provincial Equipment Pool which provides vehicles and heavy equipment for both new construction and maintenance activities. The PEOs (with PDS assistance) of PDAP participating provinces must meet a number of planning and operating criteria including, inter-alia, the preparation of an Equipment Pool Development Plan, an Equipment Operations Manual, a Road Network Development Plan, construct and operate a Quality Control Laboratory and maintain an equipment deadline rate of less than 25%. The PEO will have primary responsibility for the planning and implementation of the Rural Roads Program.

3. Implementing Activities

a. The implementation of the Rural Roads Program generally involves:

(1) The selection of subprojects by the provincial government involved.

(2) The preparation of detailed engineering plans, specifications, and cost estimates for each subproject.

(3) The physical construction of each project.

(4) Evaluation and control of the subproject selection process, the design process and the construction process.

b. The detailed procedures by which each of the implementation activities are to be performed are included in a document titled "Rural Roads Program Administrative Procedures". These procedures were originally developed by PDAP/USAID for the implementation of a Flood Rehabilitation Program under which USAID assisted certain provinces in rehabilitating flood damaged provincial roads and bridges.

With refinement based on experience gained in the Flood Rehabilitation Program and a follow-on Special Infrastructure Program (SIP), these Administrative Procedures provide detailed, step by step procedures by which the agencies involved will implement the project, including specific check points at which the progress can be determined. These Administrative Procedures are included by reference as part of the Basic Agree-

ment for project implementation between DLGCD and the Provinces and are thus the basic rules governing project implementation. These Administrative Procedures provide the following:

(1) Using criteria that ensure that subprojects will be economically sound and that the primary beneficiaries will be small farmers, the provinces select subprojects to be included in an Annual Implementation Plan (AIP). The Plan is submitted to DLGCD for review and approval.

(2)* DLGCD will review AIPs as submitted by the provinces and will reserve funds in the amount of the total estimated reimbursable costs of approved subprojects. Reimbursement to the provinces will be made upon satisfactory completion of each subproject.

(3) The provinces will prepare detailed engineering plans, specifications and cost estimates for each subproject and submit them to DLGCD for review and approval.

(4) DLGCD will employ independent A&E firm(s) to review detailed plans, specifications and estimates and to monitor construction of subprojects.

---

*These funds will be provided from the Presidential Discretionary Fund established by Presidential Decree No. 144 and specifically allocated to this Program by Presidential Letter of Instruction No. 302 as submitted to USAID in satisfaction of the Conditions Precedent Section 3.01 (c) USAID Loan No. 492-T-035.

(5) The provinces will construct the subprojects in accordance with approved plans and specifications either by utilization of its own construction forces or by contract. In either case the province will assume full responsibility for quality control of the construction. The DLGCD A&E firm(s) will monitor the construction work to the extent necessary to certify that the construction is performed in accordance with the approved plans and specifications.

(6) Upon completion of each subproject and certification by the A&E, DLGCD will reimburse the province the previously agreed upon amount.

(7) DLGCD will periodically submit to NEDA a listing of completed subprojects and request NEDA to make application to USAID for direct reimbursement in pesos for the amount of the Fixed Amount Reimbursable for the listed subprojects.

123

During implementation USAID, as represented by AD/PD, will work with DLGCD to institutionalize project procedures. This effort will involve formal training programs developed and administered by PDAP/USAID/RRP, to be followed up with day to day assistance and instructions as work progresses. This day to day involvement will provide ample opportunity for monitoring the program to the extent necessary to satisfy the

requirements of both the GOP and USAID.

USAID, thru AD/CD will provide loan office and engineering expertise for backstopping and monitoring of the program, which will include review and approval of conditions precedent, subproject plans, specifications and estimates, A&E contracts, certain construction contracts and the monitoring of subproject construction.

4. An Immediate Implementation Requirement

The approval process will involve the following:

a. The Administrative Procedures require that utilization of private contractors for subproject construction be approved by DLGCD.

b. During the first quarter of CY 79, PDAP/USAID/RRP-DLGCD/ Engineers will review the capabilities of each province to perform both maintenance on the existing provincial road network and new construction.

c. Priority will be given to the performance of road and bridge maintenance.

d. Experience indicates that the primary constraint to roadway and bridge maintenance and construction is the availability of equipment.

e. Labor is abudantly available.

f. The necessary equipment and labor to perform adequate maintenance on the existing provincial road inventory will be

reserved for this purpose.

g. Equipment inventory will be used to determine the construction capabilities of provinces. All subprojects requiring support exceeding the estimated equipment availability of the province will be approved on a contract or equipment rent basis. Labor intensive methods will also be considered in determining the overall construction capabilities of provinces.

5. Training

Training is an integral component of the PDAP approach to local government development, particularly as related to the three major functions of comprehensive planning, fiscal management and infrastructure development. All three of these functions are closely interlinked and thus relate to the successful planning and implementation of the Rural Roads Program. Training in the broad sense, as well as specific formal training, has contributed materially to the growth of the PDAP provinces. A partial listing of the major on-going or completed FY 76A and part of CY 1977 PDAP training courses for designated provincial personnel includes the following:

Real Property Tax Administration Seminar
Equipment Pool Management Seminar
Seminar in Data Gathering for Comprehensive Planning
Engineering Management Seminar
Feasibility Studies Seminar
Standard Files & Reports Seminar
Rural Roads Administration Procedure Seminar
Provincial Development Coordinator Conference
PDAP Evaluation Conference

Capital Improvement Planning (CIP) Seminar
Municipal Capital Improvement Planning (MCIP) Seminar
Provincial Road Network Plan Seminar
Annual Budget Preparation Meeting
Construction Contract Administration Training

In addition to formal seminars, selected Provincial Governors, Provincial Assessors and Provincial Development Coordinators received special training abroad under the PDAP. Also all of the provinces eligible to participate in the Rural Roads Program have sent one or more qualified engineer(s) or technician(s) to undergo quality control training at the Bureau of Public Highways, preparatory to meeting the PDAP requirement for the establishment of a Quality Control Laboratory within the Provincial Engineer's Office. Finally, a province by province training schedule on preventative maintenance and equipment pool operations has been conducted in twenty one provinces by PDAP/USAID personnel for equipment pool operating and administrative personnel.

Not reflected in the above is the hundreds of hours of on-the-job training provided by the PDAP/USAID and related DLGCD personnel in the course of their normal functions as advisor and trainors. This on-the-job follow up by the PDAP/USAID/RRP-DLGCD field technician has been an extremely effective tool for monitoring the impact of training efforts and ensuring that project objectives are met.

Future training plans, particularly training activities relating directly to the requirements of the Rural Roads Program, are being formulated. Many of these activities will be second generation training seminars similar to prior seminars. However, new seminars have been proposed and are being prepared including:

Equipment Pool Management Seminar
Road & Bridge Maintenance Program Planning Training
Road & Bridge Maintenance Operations Training
Basic Administrative Management Seminar
Road Surveying Seminar
Quality Control Seminar
Construction Inspection Seminar
Traffic Engineering Seminar
Project and Program Scheduling Seminar

C. Evaluation

Please see Admin Procedure No. 7. This is a separate booklet on Evaluation Procedures.

D. Conditions, Covenants, and Negotiating Status

127

The major conditions precedent required of the Borrower and/or the DLGCD, in addition to the standard CP's, prior to any disbursement of loan funds are recommended as follows:

1. Written assurance from the Bureau of Public Highways, endorsed by the Borrower (GOP), that all roads and bridges improved/constructed under this project will be eligible for classification as Provincial Roads and, therefore, eligible for annual maintenance funds as specified in Presidential Decree 17 and 320.
2. Written assurance from the Borrower (GOP) that annual maintenance funds will be provided as specified in Presidential Decrees 17

and 320 for each road improved/constructed under the Project.

3. DLGCD will be required to provide AID with a three year implementation plan, including a projection of funds for contracting with local A&E firms.

4. DLGCD will contract with a local A&E firm, with the concurrence of USAID to provide review and monitoring services.

5. Conditions Precedent are outlined in more detail in the draft Loan Authorization attached as Annex J.

ANNEX: 1 A

INFO OCT-01 EB-08 EA-12 IGA-02 L-03 SP-02 /059 R

DRAFTED BY ASIA/PD/EA:JSCHNEIDER:EB
APPROVED BY ASIA/PD:ARLOVE
ASIA/PD/EA:MMPEHL (DRAFT)
GC/ASIA:MMORRIS (DRAFT)
ASIA/PT:DRYBAK (DRAFT)
ASIA/TR:JBRADY (DRAFT)

---------- 129458 2308222 /41

P 222353Z DEC 77
FM SECSTATE WASHDC
TO AMEMBASSY MANILA PRIORITY

UNCLAS STATE 305542

AIDAC

E.O. 11652: N/A

TAGS:

SUBJECT: RURAL ROADS PROJECT II (RRP II) - PROJECT NO. 492-0297

1. PROJECT COMMITTEE REVIEWED THE PP FOR RRP II ON OCTOBER 25, 1977. (REPORTING OF THE RESULTS WAS DEFERRED PENDING DISCUSSION WITH CODY WHICH NOW HAS TAKEN PLACE.) THE COMMITTEE AGREED THAT THE PP SHOULD BE STRENGTHENED WITH ADDITIONAL ANALYSIS PRIOR TO APAC REVIEW. SINCE THE PROPOSED PROJECT IS A FOLLOW-ON TO RRP I, THE COMMITTEE EMPHASIZED THAT PROJECT DOCUMENTATION AND JUSTIFICATION SHOULD BE STRUCTURED, TO A GREATER DEGREE, ON DATA GENERATED FROM SELECTIVE EVALUATION OF EARLIER ROAD CONSTRUCTION ACTIVITIES. PARTICULAR ATTENTION SHOULD BE FOCUSSED ON SECTIONS OF THE PP DEALING WITH ECONOMIC, SOCIAL AND ADMINISTRATIVE/INSTITUTIONAL IMPACT OF ROAD CONSTRUCTION ACTIVITIES. THE MISSION SHOULD, THEREFORE, REVISE, AND CLARIFY, APPROPRIATE PORTIONS OF THE PP ON ABOVE BASIS. THE ADDITIONAL ANALYSIS REQUESTED SHOULD ALSO ADDRESS THE FOLLOWING SPECIFIC ISSUES/QUESTIONS:

(A) RRP II APPARENTLY WILL INCLUDE NON-PDAP PROVINCES SINCE THE OBJECTIVE OF THE PDAP PROGRAM WAS TO DEVELOP ADMINISTRATIVE/TECHNICAL ORGANIZATIONS CAPABLE OF MANAGING SUBPROJECTS SUCH AS RRP II, COMMITTEE BELIEVES SELECTED PDAP-TYPE ACHIEVEMENTS SHOULD BE REQUIRED AS CONDITION TO APPROVAL OF SPECIFIC SUBPROJECT ACTIVITIES. IF NOT, WHAT ADMINISTRATIVE/TECHNICAL QUALIFICATIONS WOULD BE REQUIRED (AND HOW WOULD THEY BE CERTIFIED) FOR PROVINCES OR CHARTERED CITIES TO PARTICIPATE IN PROJECT ACTIVITIES?

(B) DOES THE MISSION ANTICIPATE UTILIZING THE ECONOMIC ANALYSIS METHODOLOGY DEVELOPED UNDER RRP I AS THE BASIS FOR THE SUBPROJECT ANALYSES REQUIRED UNDER RRP II? IF SO, THE MISSION SHOULD SUBMIT AN EVALUATION OF THE RRP I ANALYSIS; SPECIFICALLY, WERE THE UNDERLYING ASSUMPTIONS MADE FOR THAT ANALYSIS VALID?

(C) SINCE CONSTRUCTION COSTS AND POSSIBLE SITE LOCATIONS ARE NOT DISCUSSED IN THE PP, ON WHAT BASIS DOES THE MISSION CALCULATE DOLS 24 MILLION FOR PROJECT COSTS?

(D) MISSION SHOULD SUBMIT AND JUSTIFY DETAILED KILOMETER COSTS OF CONSTRUCTION PER ROAD AND BRIDGE TYPE. THE PP SHOULD ALSO INCLUDE A SUMMARY COST ESTIMATE AND FINANCIAL PLAN AS WELL AS TIMING OF BUDGETARY REQUIREMENTS.

(E) GIVEN THE MISSION'S RECENT EXPERIENCE WITH ROAD CONSTRUCTION ACTIVITIES AND THE RESULTING AVAILABILITY OF INFORMATION COLLECTED UNDER RRP I, EXPLICIT SITE SELECTION CRITERIA, AS WELL AS PRE-SELECTION CRITERIA USED TO SCREEN SITES PRIOR TO CONDUCTING MORE COSTLY SELECTION ANALYSIS, SHOULD BE PROVIDED IN THE PP.

(F) PLEASE CLARIFY PP SECTION ON MAINTENANCE. IN PARTICULAR, HOW DOES THE HIGHWAY SPECIAL FUND OPERATE? PLEASE UPDATE DISCUSSION OF THIS IN RURAL ROADS I PP.

(G) RRI PP INDICATES THAT THE PROJECT IN SOME INSTANCES MAY BE BENEFICIARY-NEGATIVE BY CAUSING SOCIAL DISLOCATION AND EXPLOITATION OF UPLAND TRIBAL GROUPS. WHAT PLANS, IF ANY, DO THE MISSION AND THE GOP HAVE TO PROTECT THOSE GROUPS AND AVOID ADDITIONAL NEGATIVE EFFECTS?

(H) ON WHAT BASIS WAS A NEGATIVE ENVIRONMENTAL IMPACT DETERMINED, PARTICULARLY IN LIGHT OF POTENTIALLY DETRIMENTAL CULTURAL EFFECTS AND TOPOGRAPHICAL CHANGES REQUIRED BY PENETRATION-ROAD CONSTRUCTION?

(I) THE SOCIAL ANALYSIS SECTION WILL REQUIRE FURTHER DETAILED DISCUSSION OF DIRECT IMPACT ON PROJECT BENEFICIARIES; ADDITIONAL EMPIRICAL EVIDENCE SHOULD BE DRAWN FROM EVALUATION OF RRP I EXPERIENCE SIMILAR TO THAT PROVIDED IN ANNEX L.

(J) THE PP SHOULD INCLUDE A SECTION ON HOW THE PROJECT WILL BE USED TO ENHANCE THE ROLE OF WOMEN AS DEVELOPMENT AGENTS.

(K) WHAT TYPES OF CONSTRUCTION EQUIPMENT ARE REQUIRED; HOW ARE THEY BEING FINANCED, AND WHAT PROVISION WILL BE MADE FOR SPARE PARTS?

(L) THE LOAN MATURITY (PP, P. 2) WILL BE TWENTY YEARS.

(M) PROJECT CONDITIONS (PP, P. 129) ARE NOT PROVIDED IN THE DRAFT PROJECT AUTHORIZATION. PROVISION FOR THE EVALUATION PROPOSED (PP, P. 2) IS ALSO REQUIRED. THE COMMITTEE SUGGESTS THAT THE MISSION, INCLUDING THE RLA, REVISE AND RESUBMIT DRAFT PROJECT AUTHORIZATION CONTAINING APPROPRIATE CONDITIONS, COVENANTS AND NEGOTIATING STATUS.

(N) ANNEX K IS ILLEGIBLE IN AID/W COPIES OF PP; PLEASE PROVIDE A CLEAR COPY.

2. IF THE MISSION DESIRES ASSISTANCE WITH PP REVISION, WE WILL PROVIDE SERVICES OF AID/W PROJECT DEVELOPMENT OFFICER. VANCE

1 - ODM/PE RLA
OC
C&R

UNCLASSIFIED

FOR AID USE ONLY

TO - AID/W

TOAID A 21 X

DATE SENT Feb. 2,1978

FROM - MANILA
E.O. 11652
SUBJECT - Rural Roads Project II (RRP II)-Project No. 492-0297
REFERENCE - A) STATE 305542/1; B) MANILA 20292

1. Mission response to reftel contained in this airgram. While reftel asked that we strengthen selected portions of the PP, our response has been directed to the specific issues and questions raised in body of reftel. We have, however, expanded answers where appropriate to address the more general subject area in the PP thus responding, as well, to the requests in reftel, Part 1.

2. The substantial appendix of information is correlated to the text. Further, we are pouching with this airgram three pertinent sections of the Rural Roads Administrative Procedures which bear on our discussion: Booklet 1 and 8. The third booklet is a copy of the Cost Standards Booklet of the Province of Bulacan illustrating the commentary in para D below.

3. The commentary which follows is geared, para by para, to that of the reftel:

A. Mission concurs with Project Committee that "PDAP-type achievements should be required" for entry into RR II and, in fact, new provinces and cities will face same criteria as applied to provinces in RRP I. Considerable progress already made in extending PDAP concepts and requirements to the non-PDAP provinces. Latter are already participating in Capital Improvement Program (CIP), Road Network

PAGE 1 OF 11 PAGES

DRAFTED BY WASommers/ REFlaspohler/ppc/cjg/ | OFFICE AD/PD | PHONE NO. 432 | DATE 1-27-78 | DOCUMENT NO. ODM: PMCody, Director

ODM:CCChristian PC RLA OC
AD/CD:

UNCLASSIFIED

Development Planning (RNDP), Equipment Pool Development and similar PDAP-Rural Road requirements. Particular examples, illustrating the extension of PDAP procedures to so-called non-PDAP provinces and particularly those scheduled for RRP II, follow:

1. Development Administration Training Program: Provinces of Catanduanes, Marinduque, Davao Sur, Misamis Occidental, Nueva Ecija, Southern Leyte, Cebu plus cities of Roxas and Cagayan de Oro.

2. Equipment Pool Development: Marinduque, Davao Sur, Misamis Occidental.

3. Quality Control Procedures: Eight weeks training attended by 20 non-PDAP provinces among whom are prospective Rural Roads II participants.

As part of the pre-preparation phase, provinces and cities slated to enter RRP II have attended Radio Operators Course (18 days), Joint Work Plan Seminar (5 days), RRP Orientation (2 days), Engineering Management Seminar (3 days) and Equipment Pool Mechanics Training (10 days). Cities in the Rural Service Center project scheduled for RRP participation are included in the necessary RRP II training courses and are subjected to uniform requirement scrutiny. In short, Project Committee concern is our concern which is presently being addressed in practice.

B. Mission intends use of economic analysis approach in RRP II begun under RRP I but with change in direction and emphasis based on recommendations of the 1977 PDAP Evaluation Report (Local Development Project Evaluation, May, 1977, PIO/T 492-256-3-70023) which included a section on RRP.

Focused on the Rural Roads economic analysis system and the training of provincial planning specialists in feasibility studies, the report, apropos of the questions raised in reftel, notes in part that

> the time is...right to prepare PDS staff for a more sophisticated application of project evaluation. This approach stresses the quantification, via the use of appropriate shadow prices, of social rather than financial costs and benefits. Such an approach....enables

> the explicit taking into account of the impact of the project on the distribution of income within a province, both between investment and consumption between rich and poor. The social benefit/cost ratios derived in this way would also be of great value in the presently difficult and almost unmanageable task of prioritizing the projects... It would ensure that project benefits would have the desired impact of raising the incomes of the rural poor.

Excerpts of pertinent sections of the Evaluation Report are included here in Appendix I-A.

The Mission has made serious efforts to effect these recommendations in proposed revisions of Administrative Procedures, Booklet No. 2. In addition, Provincial Development has an economic-social analyst now on the local hire staff to effect the recommendations, revise the methodology and supervise both the training of provincial staff and the preparation of feasibility studies. We have also provided that a first drawdown on the proposed loan will fund a similar position in DLGCD/PDAP.

A more detailed description of the present and proposed methods being used on the economic and social benefit analysis for feasibility studies is included as Appendix I-B.

35 C. The project cost of $24 million was based on

1. Experience in RRP, including construction costs of roads and bridges and an estimate of the absorptive capacity of the participating provinces.

2. The addition of non-PDAP provinces and Rural Service Center cities.

3. Variations in provinces inclusion based on GOP policy.

The absence of possible site locations in the PP will be addressed at the end of this exposition.

Turning to basis for determining costs, experience in RRP shows that essential caveats have to be inserted first. The primary difficulty in establishing nationwide, standard costs stems from the country's diverse topography and the distribution of natural resources which affects road and bridge construction even as between provinces. Cement, for example,

costs more in the Visayas and Mindanao than in Luzon because of transport costs while road aggregates are more plentiful in Mindanao. Initial experience with RRP I elicits the following average costs:

Average Costs for RRP I

	Roads (per km)	Bridge (per lm)
Luzon	₱114,000	₱11,660
Mindanao	98,700	13,500
National Average	106,350	12,580

The provinces have been encouraged to switch more and more to contract construction so that more attention via force account can be focused on maintenance. As a consequence, road and bridge costs for 1977 and 1978 will probably increase.

Absorptive capacity also plays a role in fund allocation. New provinces are given smaller amounts at the beginning to test their abilities, improve management techniques and allow time to train crews in road and bridge building. Under RRP I this "training period" was directed through the Special Infrastructure Program (SIP) financed from PL 480 funds. Although the latter will not be available for RRP II, a similar approach will be used for new provinces and cities by holding allocation to levels of not more than five or six hundred thousand pesos unless capacity is demonstrated based on prior construction programs, e.g. flood rehabilitation. On the other hand, provinces moving from RRP I to RRP II can absorb larger allocations. Finally, in the planning stages of RRP II, the GOP, along with our own Embassy, wanted more effort in selected Mindanao provinces if conditions improved. We included three new Mindanao provinces in our early planning but have had to shift to other provinces, at least in the first years, thus changing projected allocations.

The reftel mentions the absence of "possible site locations" in the PP. The reason lies in the nature of the PDAP-RRP planning process. Each province has a five-year Capital Improvement Program which is revised annually. This is linked to a similar document at the municipal level. Here the road and bridge projects, among others, are listed in priority order with rough costs estimates directly related to the provincial Road Network Development Plan. Provinces in the RRP program go to the CIP to select roads and bridges for inclusion in the Annual Implementation Plan (AIP). Final selection is preceded by a feasibility and engineering survey of from five to ten of the projects listed in priority in the CIP. The finalists are then included in the AIP. Because of this process, it is not possible to list site locations and construction projects from the CIP as actual subprojects in the PP. Such a listing would not be accurate and would

distort the manner in which the CIP listings are further refined for inclusion in the AIP.

Based on cost estimates, absorption, AIP experience and related to the mix of "new and old" provinces, the Mission together with DLGCD has produced a tentative priority listing of allocations by province and city, including a training and construction schedule upon which to base the $24 million RRP II loan. Details are listed as parts A and B of Appendix II.

D. While data in the preceding answers, in part, questions raised in reftel, para D, cost factors vary greatly throughout the country, even between provinces, so that uniform, countrywide costing as a norm for decision-making or comparisons - is neither feasible nor valid. The Project Committee should remember that an important characteristic of RRP (indeed of PDAP itself) is the building of processes, procedures and systems that can be extended and used by other provinces under a variety of circumstances. Respecting the Project Committee's request for detailed kilometer costs of construction - and justification - the RRP procedures require each province to do just that by compiling a detailed COST STANDARDS booklet which is incorporated as part of the Administrative Procedures, Booklet No. 3. Accompanying this airgram is a copy of the Cost Standards Booklet for the Province of Bulacan which shows the detail of cost estimating process.

37 Each participating province and city prepares its own "Estimate of Cost Standards" which is updated every six months. The cost estimate simplifies procedures, makes the province responsible and establishes a cost-base for each province against which the fixed cost figure can be examined.

These cost standards are incorporated into the process as follows. Plans and specifications must be submitted with the Annual Implementation Plan (AIP) by October in the year preceding construction. Armed with the Cost Standard booklets, Mission and DLGCD engineers review the provincial plans and specifications for accuracy, appropriateness of design and estimated costs. The province cost standards are applied to the estimates. That the process works is evidenced by a change order frequency of less than 1%.

Included as Appendix III is the Financial Plan with charts showing the timing of budgetary requirements as requested in reftel.

E. Mission questions Project Committee requirement that various designated criteria "should be provided in PP." While the RRP I experience has sharpened requirements for site location, pre-selection criteria, etc. the harvest of trial and error is contained in detail in the Administrative Procedures which are the guidelines and norms by which the Rural Roads program operates. They constitute eight weighty and detailed booklets and are being constantly reviewed by the provinces, A&E contractors, USAID and the DLGCD to reflect actual practice. In any event, Administrative Procedures are included by reference in the PP and will be referenced in the loan document.

However, notwithstanding we have provided a summary of the site selection criteria in Appendix IV, taken from Administrative Procedures, Booklet No. 2.

F. With respect to the Highway Maintenance Fund operation, the GOP annually appropriates to a Highway Maintenance Fund which is apportioned to local governments through the Department of Public Highways according to a set formula not unlike that used by many states in the U.S. The road kilometers in each jurisdiction are certified for maintenance by the District Engineer of Public Highways Department and must, to qualify for maintenance, be constructed according to DPH standards. The money goes for the maintenance of local roads, i.e. Province, City and Barangay, and is allocated through the Treasury to the designated jurisdictions. The latter, in turn, must file maintenance plans and a schedule of expenditures. Recent revisions in the formula and procedures (Presidential Decree No. 1108 and Letter of Instruction 519), are aimed at getting money to the local units quicker and have also incorporated features patterned after the Rural Roads program.

Presidential Decree (PD) 1108, enjoins the Department of Public Highways (DPH), the Department of Local Government and Community Development (DLGCD) and the Department of Finance (DOF), to share monitoring and funding responsibilities in the maintenance of local roads with specific implementation procedures are detailed in Letter of Instruction (LOI) 519. LOI 519 increases the Equivalent Maintenance Kilometerage (EMK) from ₱8,018 to ₱11,342 per km. for provincial roads and puts DOF in charge of monitoring expenditures from the Highways Special Fund (HSF) affecting the provinces. Circular 155, a Memorandum of Agreement among DPH, DOF and DLGCD, sets out road maintenance guidelines and enjoins the three departments to train local employees in road maintenance.

The genesis of these recent revisions comes, in part, through the PDAP-RRP experience. Commissioner Jaime C. Laya of the Budget Commission, speaking at the 1977 PDAP Evaluation Conference, made special mention of the way these revisions came about:

> ....a third area which the President has been reiterating is something that is again close to the hearts of all local officials, even national officials, and, this is the matter of road maintenance. And, I think, you are already familiar with the Presidential Decree that the President signed last week, in which he streamlined the release of national roads maintenance funds which facilitates also the expenditure of local funds on road maintenance. This was accompanied by a letter of instruction in which he spelled out the procedure even more fully. Again, the thinking here is that the national government budget must, in addition to local government budgets, be a tool for development at the local levels.
>
> And, I must tell you in the drafting of this road maintenance decree, the President reiterated several times that he wanted to follow the PDAP formula. He repeated it three or four times and, I think this is indicative not only of the awareness but of the great reliance that the President is placing in the PDAP provinces and in the PDAP approach. So this is embodied in that particular LOI and, we have discussed this with PDAP officials - Director Ingeniero, who pointed out many shortcomings in the original draft. We incorporated all of their suggestions so that, in fact, the road maintenance program would follow a PDAP philosophy.

139

A more detailed explanation of the Fund's operation is contained in Appendix V, together with PD 1103, LOI 539 and Circular 155.

G. While the PP for RRP I indicated the project might have certain negative dislocation effects indicated in retrofit, practice has proved otherwise. For the most part, the rural roads program applies to the lowlands, commencing on existing cart tracks and trails for its penetration component while improving low standard, badly drained feeder roads through reconstruction, drainage implacements and bridge installations. Careful application of the pre-selection criteria and

feasibility studies have been successful in eliminating projects with potentially dislocating effects. Consequently, only one substantive instance of negative effects has occurred out of a total of 372 subprojects. This particular case mentioned in the social benefit section of the RRP II PP, was corrected through remedial action instituted by DLGCD officials in the province. The former further agreed to suspend all RRP funding in the offending province if other cases occur.

Realizing, however, that such possibilities may occur, the revised Administration procedures in Booklet No. 7 require that subproject submissions contain a land use map showing property holdings covering the influence area of the subproject. This will be thoroughly examined for evidences of potential dislocation so that revisions can be made prior to approval. Evaluation procedures also provide a series of the road after construction to examine land ownership pattern and dislocation effect. Should other problems not previously anticipated become evident, reimbursement can be withheld until the problems are equitably adjusted. In addition, USAID/DLGCD field staff, have been instructed as they carry on site inspections to be alert to potential dislocation problems noted in reftel.

The IEE for RR II was prepared by Asia/TR/SDP. A full copy of the determination is included as Appendix VI. The determination was based on findings in the paragraph titled IDENTIFICATION AND EVALUATION OF ENVIRONMENTAL IMPACTS. The analysis bears out the experience of Rural Roads I, namely, that since no new roads as such were constructed, environmental and cultural dislocation were practically non-existent. This applies equally to RRP II since in this respect at least no change is contemplated.

In response to reftel, para 1, we have included as Appendix VII a detailed project impact study of a partially completed road network system in the Province of South Cotabato, Mindanao. The study is empirically based and combines economic and social benefit factors evidencing the revised feasibility and evaluation methods being introduced into the Rural Roads project. Included as well is an article carried in HORIZONS, the USIS/Philippine magazine, which highlights the Sapali Bridge. Two shorter pieces on Iloilo and Cebu follow.

Women benefit from the Rural Roads project in three ways:

a. Professional employment in PDAP-RRP at the province and central level;

b. Increased earnings of the family which may serve the needs and desires of the household in which women make important decisions;

c. Opening areas of social benefit: village women find it easier, less expensive to travel to poblacions and thus can receive health and social services, attend adult classes and become more aware of opportunities.

PDAP is placing increasing stress on professionalization of the Provincial Development Staff through the use of qualified economists, financial experts, social analysts, etc. But the provinces, having a limited labormarket for such skills within their boundaries, have begun hiring qualified women to fill these jobs with good results. The PDAP provinces boast four women governors, five women serving as provincial coordinators or consultants, and over 40 women in key technical jobs related to the RRP program. A recent PDAP survey shows that nearly one-third of the employees in the provincial development staffs are women. Consistent with this trend is the fact that the DLGCD Director of the Rural Roads Program is Attorney Lucy Espino.

A penetration road from a market town to an otherwise isolated or nearly inaccessible barrio soon reduces the cost of travel, makes cash crops and handicrafts more easily marketable and tends to increase family cash income. These incomes are important to Filipina women since they shoulder much of the burden of marketing and commerce associated with sale of farm produce and play an important role in decisions on how the family spends its money. The likelihood is that a rise in income from Rural Roads Project will/also afford greater access to the amenities of life for the house, the household and the women of the household. Moreover, better transport reduces reliance on manual labor, for women, as well as men, who might have to carry by cart or by back-pack agricultural products and supplies from home to market and return. But with/gender leisure the resultant woman will tend toward self-improvement. In the PDAP survey on Woman in Development, 86% of the married women interviewed wanted more education opportunities while 68% of the single women expressed a similar desire. With the coming of a road into the community, the rise in income and the small but significant increase in leisure gives woman a better chance for varied adult training. In many cases, the enhancing of road transport will allow one or two female members of the family to journey to the nearby poblacion, stay with friends while getting their adult training and return on weekends.

Originally, province equipment for PDAP and RRP provinces was acquired through the excess property program. The provinces paid a proportion of the original acquisition cost (OAC) for transport, rehabilitation and for spare parts through deposit to a special fund. The program peaked during and shortly after the Vietnam involvement but has slacked off since, especially in providing rollers, graders, bulldozers and cranes. Many provinces also equipped their maintenance shops with lathes, welding machines and lubricating units garnered through excess property. To date 805 pieces of rolling stock have been delivered to the provinces with another 150 under repair in PDAP contractor shops or awaiting shipment to the provinces. As the excess property boom subsided, the Rural Roads project changed by emphasizing contracting over force account work. This is a policy shift, as well, which encourages provinces to concentrate on maintenance with less effort on direct construction. The basic equipment package consisting of dozers (D-6 or smaller),

graders, rollers, compactors, cranes, loaders and trucks, is important for force account work. But this package can be reduced in size and scope for maintenance needs. Although some requirements can still be supplied under the PDAP-operated excess property program, the provinces must turn increasingly to the purchase of new or fully reconditioned equipment. The Rural Roads project serves this need as well. President Marcos has approved a plan by which proceeds from the RRP I loan will be used for new equipment. Under an Equipment Development Loan Program, the units will be sold at cost to present RRP provinces and to provinces and cities who will enter RRP II. The funds can buy either a

1. "Maintenance package" for the purchase of lighter equipment including graders and dump trucks; or a

2. "Construction package" of yet undetermined size to be sold to more remote provinces where there are no private contractors.

While the above program is limited to RRP provinces, Letter of Instruction (LOI) 633, dated 29 November 1977 attempts to service non-RRP provinces and cities by requiring the Philippine National Bank and the Development Bank of the Philippines to devise a Local Government Acquisition Loan Program with concessionary amortization for road maintenance and building equipment. Copies of the Equipment Development Loan guidelines and LOI 633 are reproduced in Appendix VII. A few provinces are going out on the private loan market borrowing from three to fifteen million pesos for the purchase of road equipment. 14

PDAP provinces who have purchased excess property or have participated in the Rural Roads Program are party to a Special Development Deposit Fund set aside for spare parts acquisition. The Fund is supported by a mandatory contribution of 10% of the amount paid for the excess property and 10% of the province's reimbursement when it completes a RRP subproject. This money is credited to the provincial or city's account from which it can draw to purchase spare parts. In addition, a requirement for participation in PDAP-RRP project is appropriation in the current budget of a specified amount for spare parts acquisition. In some cases, the PDAP Excess Property Program will, with the cooperation of USAID/ Logistics, order spare parts for the province which then deposits the costed amount or draws down on spare parts fund for payment. Since USAID/PDAP/NEDA maintain a special trust fund to convert pesos into dollars for excess property purchase, the process can be accomplished with little difficulty.

Mission acknowledges concurrence of loan terms to twenty years.

Attached as Appendix IX are the items for the draft project authorization as requested.

4. This was sent via pouch to AID/W as noted in reftel (B).

5. Mission appreciates offer of assistance but hopes that foregoing will satisfy requirements of Project Review Committee. In addition, Assistant Director for Provincial Development, William A. Sommers, will be on TDY to AID/W c/a February 13 to discuss Rural Roads II proposal.

NEWSOM

ATTACHMENTS:

Appendix I thru IX

43

ANNEX: 2 A

145

DEPARTMENT OF STATE

TELEGRAM

CHRON

Proj # 297
ANNEX 2 A
2005

INCOMING:
Amembassy, MANILA

CN:

ACTION:
AID-12

INFO:
AMB
DCM
POL
POL/R
CONS
DAO
ECON
LGAT
LO
[illegible]
L&S
CPRP
JMAG
CEBU
AID
ADB
AGR
DAF
DISP
EDC
HU
IU
PEC
R
[illegible]
[illegible]
RSO
CRO

C O N
C O N F I R M
17

UNCLASSIFIED
Classification

	ACT	INFO
INV		
DDM		
PD		
TO		
DES		
CMD		
CSO		
GSO		
LOG		
PER		
OC		
AD		
CD		
HPA		
FFP		
NTR		
NARC		
POP		
PD		
AG, EA		

19 NOV 1976
11:22 AM

RECEIVED
Nov 19 1 38 PM '76
USAID/C&R

P 190047Z NOV 76
FM SECSTATE WASHDC
TO AMEMBASSY MANILA PRIORITY 1405
BT
UNCLAS STATE 284180

AIDAC

E.O. 11652: N/A

TAGS:

SUBJECT: RURAL ROADS II PROJECT

REF: STATE 194883

1. ASIA PROJECT ADVISORY COMMITTEE (APAC) APPROVES PROJECT PRP AND RECOMMENDS DEVELOPMENT OF PP. HOWEVER, APAC EXPRESSED CONCERN OVER GOP CAPACITY/COMMITMENT TO SUSTAIN PROJECT FINANCING AFTER AID FUNDING TERMINATES AND THEREFORE, REPLICABILITY OF PROJECT. SINCE THIS CONCERN IS EQUALLY RELEVANT TO BARANGAY WATER AND REAL PROPERTY TAX ADMINISTRATION PRP'S, SEPTEL WILL PROVIDE GUIDANCE ON THIS GENERAL ISSUE AID REQUEST INTERIM RESPONSE BY USAID PRIOR TO SUBMISSION OF PP'S. SINCE THE PP SHOULD EXPAND AND ELABORATE ON SEPTEL ISSUES, ADDITIONAL GUIDANCE IS PROVIDED BY THIS CABLE. APAC REQUESTS THAT THE MISSION ADDRESS THE FOLLOWING ISSUES AND RECOMMENDATIONS IN DEVELOPING THE PROJECT PAPER:

(A) THE MISSION SHOULD ADDRESS SENATE APPROPRIATIONS COMMITTEE CRITICISM OF RURAL ROADS, REFTEL, AND AUGMENT RESPONSE TO CONGRESSIONAL CRITICISM PRESENTED IN REVISED PRP (ATTACHMENT C). DISCUSSION SHOULD FULLY JUSTIFY INVOLVEMENT IN THIS PROJECT ON THE BASIS OF DEVELOPING THE INSTITUTIONAL AND TECHNICAL CAPABILITY FOR SELF-SUSTAINED RURAL ROADS CONSTRUCTION; DEMONSTRATING PROVINCIAL DEVELOPMENT CAPABILITY AND ENCOURAGING INTERNATIONAL LENDING INSTITUTIONS AND OTHER FINANCIAL SUPPORT FOR RURAL ROADS PROJECTS.

(B) IN THIS REGARD, APAC WAS ALSO CONCERNED WITH THE REPLICABILITY OF THIS PROJECT. THE MISSION SHOULD OUTLINE GOP STRATEGY FOR INSTITUTIONALIZING THIS PROGRAM AND FOR CONTINUING PROJECT WITHOUT AID FINANCIAL ASSISTANCE. THIS STRATEGY SHOULD INCLUDE PROJECTIONS FOR THE PHASING OUT OF AID FINANCE CONSTRUCTIONS AND THE PHASING IN OF LOCAL AND

CENTRAL GOVERNMENT, INTERNATIONAL LENDING INSTITUTIONS, AND OTHER SOURCES OF FINANCIAL SUPPORT FOR PROJECTS. SINCE THE PROVINCIAL AND CENTRAL GOVERNMENT FINANCIAL CONTRIBUTIONS ARE ESSENTIAL TO THE FEASIBILITY OF THE PROGRAM, THE MISSION SHOULD ALSO DESCRIBE THE MECHANISMS THAT WILL BE DEVELOPED TO ASSURE SUFFICIENT FINANCIAL AND PROJECT CONTRIBUTIONS FROM THE PROVINCES AND CENTRAL GOVERNMENT ARE MADE IN TIMELY MANNER.

(C) PROJECT PAPER SHOULD SUBSTANTIALLY AUGMENT THE PRP TREATMENT OF BENEFICIARIES OF RURAL ROADS PROJECT. PP SHOULD QUANTIFY SMALL FARMER/RURAL POOR AND WOMEN TO BE AFFECTED BY PROJECT WITH SPECIFIC ATTENTION TO INCOME LEVELS. MISSION MAY WISH TO USE REPRESENTATIVE LOCATIONS OF RURAL ROADS I PROJECT OR PROPOSED REPRESENTATIVE AREAS OF RURAL ROADS II PROJECT FOR THIS ANALYSIS.

CONCERN ALSO WAS EXPRESSED AT THE APAC MEETING THAT THE BENEFITS OF THE RURAL ROADS PROGRAM WOULD BE CAPTURED BY SMALL ELITE MINORITY OR POWER GROUPS TO THE DETRIMENT OF THE INTENDED SMALL FARMER/RURAL POOR AND WOMEN BENEFICIARIES. THEREFORE, APAC RECOMMENDS THAT THE PP BENEFICIARY STATEMENT INCLUDE AN ANALYSIS OF HOW BENEFITS OF NEW OR IMPROVED RURAL ROADS ARE PASSED ALONG TO THE SMALL FARMER/RURAL POOR AND WOMEN. AS ONE ASPECT OF THIS ANALYSIS, PP SHOULD TREAT LAND TENURE AND TENANCY ARRANGEMENTS. ANALYSIS SHOULD BE CARRIED OUT OF TENANT FARMER: 1) RENTAL PAYMENT AGREEMENTS/COVENANTS; 2) SECURITY OF LAND TENURE OR OTHER ARRANGEMENTS WHICH COULD AFFECT PERMANENCY ON LAND; 3) OTHER ARRANGEMENTS BETWEEN TENANT AND LANDLORD WHICH COULD PROHIBIT OR ALTER THE PROJECT BENEFITS FROM BEING PASSED ALONG TO THE INTENDED BENEFICIARIES. PROJECT PAPER SHOULD ALSO OUTLINE EXTENT THAT RURAL ROADS II PROJECT WILL BE COORDINATED WITH LAND REFORM PROGRAMS.

(D) CONCERN WAS EXPRESSED AT THE APAC MEETING THAT THE KILOMETER CONSTRUCTION COSTS FOR RURAL ACCESS ROADS APPEARED HIGH. THE MISSION SHOULD JUSTIFY THE KILOMETER COSTS FOR RURAL ROADS CONSTRUCTION CONSIDERING SUCH FACTORS AS EVENTUAL MAINTENANCE REQUIREMENTS, TRAFFIC PROJECTIONS AND THE SPLIT IN NEW VERSUS IMPROVED ROADS.

(E) THE TECHNICAL ANALYSIS SECTION OF THE PROJECT PAPER SHOULD DEMONSTRATE THAT LABOR INTENSIVE ROAD CONSTRUCTION AND MAINTENANCE TECHNIQUES ARE BEING MAXIMIZED.

(F) THE PROJECT PAPER SHOULD DEAL WITH THE IMPACT OF THE RURAL ROADS PROGRAM ON PROVINCIAL AND CENTRAL GOVERNMENT ROAD MAINTENANCE BUDGETS AND DEMONSTRATE IN PP THAT SUFFICIENT FUNDS WILL BE AVAILABLE TO COVER MAINTENANCE COSTS.

4. APAC ALSO DISCUSSED FINANCIAL PLAN WITH T. ROSE AND SUGGESTS THAT THE MISSION REVIEW THE POSSIBILITY OF FUNDING PROJECT DOLS. 9.0 MILLION FY 1978, DOLS. 12.0 MILLION FY 1979 AND DOLS. 3.0 MILLION FY 1980.

5. ASIA/TS/SDF WILL SUBMIT A REVISED ISE FOR THIS PROJECT RECOMMENDING NEGATIVE DETERMINATION.

6. PER DISCUSSION WITH T. ROSE REGARDING LOG FRAME PURPOSE AND STAGE ONE OUTPUTS, MISSION WILL SUBMIT A REVISED LOG FRAME FOR THIS PROJECT PRIOR TO SUBMISSION OF PP. MISSION
FI
#4180

E /

149

ANNEX: B

Please note that this annex refers to training in maintenance to be a part of the Bicol Feeder Road Project and is not a contract funded under the proposed RRP II loan.

MAINTENANCE TRAINING

Scope of Consulting Services

A. General -- The Consultant will:

1) Familiarize himself with DLGCD/PDAP procedures and operations.

2) Study PEO and CEO operations in several provinces selected by PDAP.

3) Review the maintenance program developed for the DPH by Kampso-Berger and assure that the training program developed for PEOs and CEOs will be compatible.

4) Develop a work plan for the project including the organization, manpower requirements and schedule of inputs from various organizations.

5) Concurrently with 3) and 4) above, review the list of maintenance equipment to be purchased for the PDAP provinces for adequacy and appropriateness.

6) Submit the work plan to DLGCD/PDAP and AID for review and approval.

7) After approval the consultant will operate pilot project provinces with DLGCD/PDAP cadre teams. One of the provinces involved in the Bicol River Basin program will be included.

8) Train DLGCD/PDAP teams.

9) Develop training manuals, operating procedures, lesson plans and other required documentation.

10) Supervise DLGCD/PDAP teams in the start of follow-on projects in other provinces. The remaining Bicol River Basin province will be included.

11) Leave a permanent record of material developed in terms of a final Report including training manuals, lesson plans operating procedures, training aids and other documentation required to develop and operate the training program.

B. Phase I - 4 Months

The consultant will first review the R&B maintenance programs underway in several provinces. He will examine current management systems and sub-systems and work operations carried out by the PEOs. Items to be taken into consideration by the consultant will include but not necessarily be limited to the following:

1) The Organization, the Manpower and its duties and responsibilities.
2) The equipment on hand and its utilization.
3) Field inspection methods and data gathering procedures for
   a. the inventory and classification of roads and bridges;
   b. analysis and classification of roadway deficiencies;
   c. determination of repair requirements and other relevant statistics for roads, bridges and drainage structures.
4) Office recording methods.
5) Data utilization methods.
6) Priority analysis and rating systems.
7) Estimates of cost and work requirements.
8) Materials used and repair methods applied to the basic types of road surfaces:
   a. Unsurfaced earth
   b. Gravel

c. Asphalt

d. Concrete

9) Programming, executing and controlling work routines or schedules for:

a. Routine maintenance (surface grading, potholes, vegetation control, clearing of side ditches and culverts.)

b. Periodic maintenance (recharge gravel surfaces, resurface pavement sections, drainage repairs and improvements, embankment and bridge repairs).

c. Major improvements, road reconstructions and bridge repairs.

d. Emergency repairs.

10) PEO evaluation techniques and practices for determining how to efficiently carry out its yearly maintenance program by:

155

a. Force account

b. Contract, or

c. A combination of both.

During its analysis of the current PEO operations the consultant will also observe operating procedures of DLGCD/PDAP/USAID. The consultant will familiarize himself with the DLGCD organization, training procedures and techniques used and other operating procedures to the extent necessary to assure that the maintenance training program developed can be successfully integrated into the DLGCD system.

At the same time the consultant will review the maintenance program developed for the DPH by Kampso-Berger to assure that the training program for the PEOs and CEOs will be compatible.

Following its analysis of the current PEO operations the consultant will, within the framework of the terms of reference, prepare and submit a report to PMO, DLGCD/PDAP and USAID for review and approval.

The report will:

1) Present the consultant's findings and evaluation of PEO maintenance operations with the above and other items taken into consideration;
2) Present the consultant's recommendations;
3) Describe arrangements made and others proposed for the conduct of his work;
4) Include the consultant's proposed work plan with appropriate manpower and implementation schedules. The plan will also include PMO and DLGCD/PDAP support requirements in terms of manpower, materials and other logistics.

C. Phase II -- 12 Months

Following approval of the Work Plan by PMO, DLGCD/PDAP and USAID the consultant will implement the approved plan in the PEO of or concurrently in two provinces, as a pilot project. In conducting the pilot project the consultant will:

1) Organize, execute and control the work.
2) Train several DLGCD/PDAP cadres (at least two teams) in

conducting the work with the support and assistance of DLGCD/PDAP personnel. The consultant will phase DLGCD/PDAP cadre into the work as they are trained.

3) Develop training manuals, lesson plans, operating procedures, training aids, OJT training procedures and other documents required to manualize training procedures into a written training program.

4) Develop operations manuals for the PEO Maintenance Division to be left in the PEO for day to day reference after training.

D. Phase III -- 6 Months

The consultant will assist and monitor DLGCD/PDAP cadre teams in the start of pilot projects in other provinces. The consultant will:

57

1) Complete the phase-in of DLGCD/PDAP cadre and phase-out of consultant personnel in active participation in the training program.

2) Monitor DLGCD/PDAP training functions and provide assistance as necessary.

3) Refine and revise the program and manuals as needed.

4) Provide a final report which will include all training documents, operating procedures, manuals, etc., as a permanent record for PMO, DLGCD/PDAP and USAID.

Personnel Requirements

A. It is estimated that the project will require a consultant team of two members. All team members must have been permanent members of the consultant firm for at least five years. The consultant will submit biographical data of each proposed team member to PMO, DLGCD/PDAP and USAID for review and approval prior to assignment of that member to the team. The consultants team will include:

1) One member who is qualified to develop and provide a program of training for the PEO maintenance operations field staff in the supervision and performance of maintenance work. This member should be experienced in the direct supervision of field maintenance activities and be able to train PEO personnel in the proper work procedures to consistently obtain a high quality in the maintenance work performed for the various types of road and bridge structures.

B. The DLGCD/PDAP manpower support requirement is estimated to be two teams of senior civil engineers. These engineers should be experienced in highway construction, maintenance or operations who can be reasonably expected to remain in the DLGCD/PDAP program for a minimum of two years. These engineers will work with the consultant during development of the training program and will be trained by the consultant to provide the training to other provinces as part of the continuing DLGCD/PDAP program.

Contract Period

It is estimated that the project will require about 22 months broken down into program phases as discussed in Section 4.

A. Phase I -- Reconnaissance and report on provincial operation, prepare and submit a work plan with recommended organization needed and PMO/DLGCD/PDAP support of requirements for the pilot project ..... 3 months

PMO, DLGCD/PDAP, and USAID review and approval and notice to proceed with the approved plan .... 1 month

B. Phase II -- Organize and implement training program in pilot projects preparation of training manuals, operating procedures, lesson plans, etc. .....12 months

159

C. Phase III-- Phasing out of consultant and phasing in of PDAP training teams, monitor start of PDAP pilot project in other provinces ..... 6 months

Total .....22 months

Reports and Manuals

A. Monthly Progress Reports

The consultant will submit written monthly progress reports to PMO PDAP/DLGCD and USAID. The reports will be submitted on or before the tenth day of the month following the reporting period

in copies. These reports will present details of the consultant's activities during the month reported and a summary of the overall progress to date. They will include a thorough discussion of any problems encountered and activities resulting therefrom. Certain monthly reports will contain specific information as follows:

1) The first monthly report will provide details of the consultant's mobilization activities and the consultant's work plan for completing Phase I of the project.

2) The third monthly report will comply with the requirements of Section 4.B of these terms of reference. It will present the consultant's analysis of PEO maintenance operations and the consultant's recommended Work Plan for Phase II of the project. The Work Plan will be subject to review and approval by PMO, DLGCD/PDAP and USAID.

3) The last monthly report will be a final report and will include all training documents, operating procedures, manuals, etc., as a permanent record for PMO and DLGCD/PDAP.

B. Manuals and Training Documents

1) Training Manual

The consultant will produce a written manual of the training program as developed. The manual will provide detailed procedures to be followed by DLGCD/PDAP in providing the training to other provinces including lesson plans, training aids, operating procedures and any order training documentation.

2) PEO Maintenance Division Operations Manual

The consultant will prepare Maintenance Division Operations Manuals designed to provide PEO personnel with a complete reference source in support of maintenance operations.

Logistics and Other Support

A. Funding

1) U.S. Dollar costs of the project will be provided from AID Loans Nos. 492-T-035 (Rural Road Program Loan) and/or No. 492-T-041 (Bicol Road Project). The total U.S. dollar cost of the maintenance training project is estimated to be not more than $264,000. This estimate includes 44 man months of U.S. consultants at $6,000 per man month.

2) Philippine Peso cost of the consultant's contract will be provided by the GOP. It is estimated that this cost will be not more than ₱15,000 per consultant man month for a total of not more than ₱660,000.

161

B. PMO/DLGCD/PDAP Support

PMO/DLGCD/PDAP will support the work of the consultant by providing adequate office space, office supplies, reproduction facilities, etc., and clerical staff necessary for producing the required reports, manuals, lesson plans, training aids and other documentation required to conduct the project.

PMO/DLGCD/PDAP will provide vehicles and other in-country transportation requirements of the consultant in performing the work of the project.

DLGCD/PDAP will provide training cadre of the number and with the qualifications specified in the approved work plan.

C. PEO Support

The PEO of the various provinces included in the program will provide all records of past and current road and bridge maintenance operations. The PEOs will assist the consultant to develop a full understanding of current PEO maintenance management system and operating procedures and cooperate with the consultant in execution of the approved work plan.

ANNEX: C

INITIAL ENVIRONMENTAL EXAMINATION

Project Location: Philippines

Project Title: Rural Roads Project II

Funding: $24 Million Loan - FY 78

Life of Project: Three Years

IEE Prepared by: Alan B. Jacobs, ASIA/TR/SDP
November 10, 1976

Environmental Action Recommended: Negative Determination

Concurrence/Clearance:

T. C. Clark, Jr., Director, ASIA/TR — 11-12-76 Date

A. R. Love, Director, ASIA/PD (Jonathan R. McCabe for) — 11/XI/76 Date

165

Threshold Decision by Assistant Administrator, Bureau for Asia
(Approval/Disapproval of Negative Determination recommended on page 1 of IEE):

Approval: _____
Donald D. Cohen, A-AA/ASIA

Disapproval: _____

Date: 11/30/76

ANNEX: D

Project Title & Number: RURAL ROADS PROJECT NO. II

Total U.S. Funding $24m

Date Prepared: May 19, 1978

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal: The broader objective to which this project contributes: (A-1) To provide a strong local capability to deliver public and private services to the low income and rural poor families, throughout the Philippines, thus improving their perceived quality of life.	**Measures of Goal Achievement: (A-2)** 1. Government services reaching a significant majority of low income and rural poor families. 2. Public opinion indicates strong support for national government efforts. 3. Families in the low income and rural poor areas perceive an increase in quality of life.	**(A-3)** 1. Government statistics and monthly/annual reports. 2. News media measured by editorials, opinions, and extent of program coverage. 3. Support of provincial agencies, baseline data for upward or outward migration, and provincial stability.	**Assumptions for achieving goal targets: (A-4)** 1. The GOP continues to place high priority on this effort. 2. The rate of inflation does not prohibit the general population from being able to participate. 3. The balance of payments and debt service commitments does not preclude making the initial investment of funds available.
Project Purpose: (B-1) a. Development of the capability of selected Local Governments to properly select, plan, design and construct rural roads and bridges. b. To provide the rural poor with lower cost transportation and greater access to social services, educational institutions and recreational facilities.	**Conditions that will indicate purpose has been achieved: End-of-Project status. (B-2)** a. Existence of Local Government Offices with the capability to plan, design and program the implementation of improvement/construction of roads and bridges. b. Expanded social/economic services for the rural poor within the influence area of roads constructed under this project.	**(B-3)** a. Projects implemented according to approved plans and specifications on a timely basis. b. In depth analysis of evaluation subprojects in each participating province.	**Assumptions for achieving purpose: (B-4)** a. No adverse changes in the organization of Local Governments. b. Public transportation will utilized improved road system.
Project Outputs: (C-1) All-weather rural roads in agriculture areas of predominantly small farms.	**Magnitude of Outputs: (C-2)** 1. Roads Gravel 194 km 208 km 219 km Asphalt 4 km 4 km 4 km Concrete 3 km 3 km 4 km TOTAL 201 km 215 km 226 km 2. Bridges Timber 113 lm 128 lm 140 lm Culvert 51 lm 52 lm 52 lm Concrete 1256 lm 1326 lm 1386 lm Spillway 500 lm 529 lm 555 lm TOTAL 1920 lm 2035 lm 2133 lm	**(C-3)** 1. BLGCD/USAID records of approved final inspections. 2. Monthly Progress Reports. 3. Annual Report. 4. Field Visits.	**Assumptions for achieving outputs: (C-4)** 1. No significant change in the National Government financial support for Local Governments.
Project Inputs: (D-1) A. AID 1. $24 million Rural Roads Loan to reimburse the GOP up to but not more than 75% of estimated cost for the construction/improvement of approximately 650 km. of road 6000 linear meters of bridges. B. GOP (Million) 1. P192 million reimbursements 2. P28.8 million grant-in-aid, (seed money) 3. P13.4 million A&E for monitoring and inspection. 4. P14.4 million for BLGCD program support. C. Provincial Government 1. P38.4 million for overhead and other expenses.	**Implementation Target (Type and Quantity) (D-2)** 1. AID (Million) FY 78 - $24 2. GOP (Million) FY 79 FY 80 FY 81 PD-144 P53.0 P63.0 P76.0 CTA 5.0 5.4 11.4 A&E 3.7 4.4 5.3 BLGCD 3.8 4.8 5.7 3. Provincial Governments FY 79 FY 80 FY 81 P24 P28 P14.4	**(D-3)** 1. USAID USAID executed Development Loan 2. GOP a. Provincial Budget Income Statements b. BLGCD reimbursement report c. A&E Contract Records d. Field observation 3. Provincial a. Provincial Budgets b. Provincial Treasurer's financial report	**Assumptions for providing inputs: (D-4)** 1. USAID Excess Property (Construction Equipment) will continue to be available.

ANNEX: E

171

CRITICAL PERFORMANCE INDICATOR (CPI) DESCRIPTION

RURAL ROADS PROJECT II

CPI DESCRIPTION

1,2,3,4 & 5 - Completion of construction of the lengths of road and bridges shown according to the specification of the Rural Roads Project. All subprojects inspected and approved for reimbursement by DLGCD at dates indicated. Figures shown are cumulative.

6,7,8 & 9 - Reimbursable amounts spent by participating provinces in subproject construction. Reimbursable figures include costs of labor, materials and POL, but no overhead expenses incurred in design and construction.

10, 11 & 12 - Cumulative figures for DLGCD reimbursement, from PD-144 Funds, to provinces for road and bridge subprojects completed, inspected and accepted.

13, 14 & 15 - USAID reimbursement to the GOP Treasury to the account of DLGCD.

POST ACTIONS - #12 - Construction of subprojects will end by December 31, 1981. Acceptance and processing of requests for reimbursement will require approximately 30 days.

#15 - Following DLGCD final reimbursement to provinces, processing of applications to USAID for final drawdown will require approximately 90 days.

COUNTRY	PROJECT NO.	PROJECT TITLE	DATE	☐ ORIGINAL REVISION # ____	APPROVED

OR FY / CY — 79 — 80 — 81

MONTH — 0 — 12 — 24 — 36

PRIOR ACTIONS

–1– 15 km rd; 100 linear meters of bridge

–2– 115 km rd; 1100 linear meters of bridge

–3– 300 km rd; 3000 linear meters of bridge

–4– 470 km rd; 4500 linear meters of bridge

–5– Completion of Construction — 642 km rd; 6800 linear meters of bridge

POST ACTIONS

–6– $25 million Cumulative expenditure

–7– $75 million Cumulative expenditure

–8– $130 million Cumulative FAR expenditure

–9– $192 million Cumulative FAR expenditure

–10– $64 million Cum. reimburs.

–11– $117 million Cum. reimburs.

–12– $192 million Cum. reimburs. — 1–31–82

–13– $ 7 million (cum.)

–14– $ 15 million (cum.)

–15– $ 24 million (cum.) — 4–31–82

ANALYSIS SCHEDULE: PROGRESS VS FINANCIAL

EVALUATION SCHEDULE

AID 1020-35 (6-78)

CRITICAL PERFORMANCE INDICATOR (CPI) NETWORK

ANNEX: F

177

STATUTORY CHECKLIST

A. GENERAL CRITERIA FOR PROJECT

1.	App. Unnumbered; FAA Sec. 653(b) (a) Describe how Committees on Appropriations of Senate and House have been or will be notified concerning the project; (b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than $1 million over that figure plus 10%)?	(a) Committees on Appropriations of Senate and House have been notified via the Congressional Presentation submitted by USAID (b) Yes
2.	FAA Sec. 611(a)(1). Prior to obligation in excess of $100,000, will there be (a) engineering, financial, and 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 further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?	N.A.
4.	FAA Sec. 611(b); App. Sec. 101. If for water or water-related land resource construction, has project met the standards and criteria as per Memorandum of the President dated Sept. 5, 1973 (replaces Memorandum of May 15, 1962; see Fed. Register, Vol. 38, No. 174, Part III, Sept. 10, 1973)?	N.A.
5.	FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all $1 million, has Mission Director certified the country's capability effectively to maintain and utilize the project?	
6.	FAA Sec. 209, 619. Is project susceptible of execution as part of regional or multilateral project? If so why is project not so executed? Information and conclusion whether assistance will encourage regional	N.A.

development programs. If assistance is for newly independent country, is it furnished through multi-lateral organizations or plans to the maximum extent appropriate?

7. FAA Sec. 601(a); (and Sec. 201(f) for development loans). Information and conclusions whether project 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 labor unions. — N.A.

8. FAA Sec. 601(b). Information and conclusion 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). — N.A.

9. FAA Sec. 612(b); Sec. 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 to meet the cost of contractual and other services. — All local contractual and other services will be paid out of local currencies contributed by either the GOP or the U.S.

10. FAA Sec. 612(d). Does the U.S. own excess foreign currency and, if so, what arrangements have been made for its release? — No

B. FUNDING CRITERIA FOR PROJECT

1. **Development Assistance Project Criteria**

a. FAA Sec. 102(c); Sec. 111; Sec. 281a. Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production, spreading investment out from cities to small towns and rural areas; and (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions?

(a) The roads constructed under this program are farm to market roads and so inherently will have a profound effect on the poor, especially the rural poor. Roads of this type under the on-going Rural Roads Project have proven to have a profound effect on the income of the rural poor affected and has enable a whole host of services to reach them.

b. FAA Sec. 103, 103A, 104, 105, 106, 107. Is assistance being made available: (include only applicable paragraph -- e.g., a, b, etc. -- which corresponds to source of funds used. If more than one fund source is used for project, include relevant paragraph for each fund source.)

(b) N.A.

(1) (103) for agriculture, rural development or nutrition; if so, extent to which activity is specifically designed to increase productivity and income of rural poor; (103A) if for agricultural research, is full account taken of needs of small farmers;

103 funding for nutrition

18/

c. FAA Sec. 110(a); Sec. 208(e). Is the recipient country willing to contribute funds to the project, and in what manner has or will it provide assurances that it will provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or has the latter cost-sharing requirement been waived for a "relatively least-developed" country)?

Rural Roads Project II is a loan project therefore in the long run the entire cost of the project will be borne by the recipient. In the short term the recipient is contributing 42% of the cost of the project. The local governments that will be the end recipients of the aid have already committed themselves to the construction of the planned roads by including said roads in their Capital Improvement Plans.

d.	FAA Sec. 110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing?	N.A.
e.	FAA Sec. 207; Sec. 113. Extent to which assistance reflects appropriate emphasis on; (1) encouraging development of democratic, economic, political, and social institutions; (2) self-hlep in meeting the country's food needs; (3) improving availability of trained worker-power in the country; (4) programs designed to meet the country's health needs; (5) other important areas of economic, political, and social development, including industry, free labor unions, cooperatives, and Voluntary Agencies; transportation and communication; planning and public administration; urban development, and modernization of existing laws; or (6) integrating women into the recipient Country's national economy.	The roads constructed under this project will facilitate the flow of agricultural products from farm to market and the flow of good and services from market to farm and so reflects appropriate emphasis on;(1)self-help in meeting the country's food needs; (2) programs designed to meet the country's health needs, and (3) other important areas of economic, political, and social development.
f.	FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country's intellectual resources to encourage institutional development; and supports civic education and training in skills required for effective participation in governmental and political processes essential to self-government.	The roads that are to be constructed under this program are being constructed in response to the needs articulated by those who will use them. These roads will facilitate the flow of goods and services to and from the greatest number of people. The technology being employed in this project is such that it is totally within the capacity of the local governments which will build or supervise building of roads.

18

g.	FAA Sec. 201(b)(2)-(4) and -(8); Sec. 201(e); Sec. 211(a)(1)-(3) and -(8). Does the activity give reasonable promise of contributing to the development: of economic resources, or to the increase of productive capacities and self-sustaining economic growth; or of educational or other institutions directed toward social progress? Is it related to and consistent with other development activities, and will it contribute to realizable long-range objectives? And does project paper provide information and conclusion on an activity's economic and technical soundness?	Yes. The project will contribute to the on-going Rural Roads program, and National Governments programs in agricultural and industrial development and the national roads program. The Project Paper will provide information and conclusions on the economic and technical soundness of the project.
h.	FAA Sec. 201(b)(6); Sec. 211(a)(5), (6). Information and conclusion on possible effects of the assistance on U.S. economy, with special reference to areas of substantial labor surplus, and extent to which U.S. commodities and assistance are furnished in a manner consistent with improving or safeguarding the U.S. balance-of-payments position.	N.A.

183

2. Development Assistance Project Criteria (Loans only)

a.	FAA Sec.201(b)(1). Information and conclusion on availability of financing from other free-world sources, including private sources within U.S.	IBRD has expressed interest in possibly extending $5 million of credit for road construction of the type being done under this project in certain selected sites.
b.	FAA Sec. 201(b)(2); 201(d). Information and conclusion on (1) capacity of the country to repay the loan, including reasonableness of repayment prospects, and (2) reasonableness and legality (under laws of country and U.S.) of lending and relending terms of the loan.	(1) GOP is fully capable of repaying loan, repayment prospects are very reasonable. (2) Lending and relending terms of loan very reasonable and pose no problem under either U.S. or Philippine Law.

c.	FAA Sec. 201(e). If loan is not made pursuant to a multilateral plan, and the amount of the loan exceeds $100,000, has country submitted to AID an application for such funds together with assurances to indicate that funds will be used in an economically and technically sound manner?	Yes.
d.	FAA Sec. 201(f). Does project paper describe how project will promote the country's economic development taking into account the country's human and material resources requirements and relationship between ultimate objectives of the project and overall economic development?	Yes.
e.	FAA Sec. 202(a). Total amount of money under loan which is going directly to private enterprise, is going to intermediate credit institutions or other borrowers for use by private enterprise, is being used to finance imports from private sources, or is otherwise being used to finance procurements from private sources?	N.A.
f.	FAA Sec. 620(d). If assistance is for any productive enterprise, which will compete in the U.S. with U.S. enterprise, is there an agreement by the recipient country to prevent export to the U.S. of more than 20% of the enterprise's annual production during the life of the loan?	N.A.

3. Project Criteria Soley for Security Supporting Assistance

FA Sec. 531. How will this assistance support promote economic or political stability?	N.A.

ANNEX: G

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT
Manila, Philippines

Ramon Magsaysay Center
1680 Roxas Boulevard

Telephone: 59-80-11

ANNEX G

CERTIFICATION PURSUANT TO SECTION 611 (e)
OF THE FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED

I, PETER M. CODY, the principal officer of the Agency for International Development in the Philippines, having taken into account, among other things, the maintenance and utilization of the projects in the Philippines previously financed or assisted by the United States, do hereby certify that, in my judgment, the Philippines has both the financial capability and the human resources capability to effectively maintain and utilize the proposed Rural Roads Project II loan.

187

Peter M. Cody

PETER M. CODY
Director
USAID/Philippines

ANNEX: H

AIRGRAM

DEPARTMENT OF STATE

UNCLASSIFIED
CLASSIFICATION

AID/PD-3 OC
ODM CD
PO C&R
ECON

For each address check one ACTION | INFO

PROJ# 291
" 297
298
ANNEX H

DATE REC'D.

DISTRIBUTION
ACTION

INFO.

TO - AID/Washington TOAID A 25 X

DATE SENT
FEB. 7,1977

FROM - MANILA
SUBJECT - Replicability and Long-Term Financial Viability of RR II, Barangay Water and Real Property Tax Administration Projects
REFERENCE - STATE 291155

1. Para 1 reftel expresses general concern on replicability and long term financial viability common to all three projects, i.e. Real Property Tax Administration (RPTA), Rural Roads II (RRP II) and Barangay Water (BW). While these concerns are dealt with more specifically in Para 2, 3 and 4 below, response has been made to these general concerns by way of introduction.

a) Desire to define appropriate end point for AID financing of these provincial/local activities.

The specific end points for each of the three projects are indicated in the PRPs, to wit:

1. Rural Roads Project II: 1981
2. Real Property Tax Administration: 1980
3. Barangay Water: 1980

Technical assistance, provided either through the loans or as residual activities under the Rural Service Center (RSC) project, would end in FY 81. Present estimates are that RRP II will be the last request for AID financing in this project area since Department of Local Government and Community Development (DLGCD) will be fully capable of extending program to other than Provincial Development Assistance Project (PDAP) provinces. Both ADB and World Bank have already expressed interest in taking up where RRP II leaves off. Septel will discuss ADB and World Bank potential interest in Rural Roads continuance. RPTA will not need further AID efforts

PAGE 1 OF 7 PAGES

DRAFTED BY	OFFICE	PHONE NO.	DATE	APPROVED BY:
WASommers:ppc	AD/PD	432	2-2-77	ODM: Peter M. Cody, Director

A. I. D. AND OTHER CLEARANCES
PO [illegible] AD/CD: [illegible] ODM/PE: [illegible]
ODM:CCChristian: [illegible]

UNCLASSIFIED
CLASSIFICATION

AID-5-38 (10-71)

(Do not type below this line)

PRINTED 12-71

CAUTION-Remove protector sheet before typing--replace when typed

after the proposed loan expires since the project will be sufficiently demonstrated as to potential while provinces and cities will have gained ample experience for extension to remaining municipalities and districts. Moreover, GOP will be able to use Special Letter of Credit (SLC) from the three loans to finance additional services or commodities necessary to expand these programs in accordance with DLGCD policy approved by President (see Para 3 below).

Initial response to BW, however, indicates pent up demand and a desire by provinces to commit increased resources. Should actual program sustain initial momentum USAID may propose extension. But this will hinge directly on the successful completion of the loan and, especially, on ability of DLGCD and provinces to field local organizations of water users capable of managing these systems.

b) Long-term strategy of GOP in sustaining project activities after AID-financing terminates

This strategy, evidenced by documents, actions and policy statements is based on:

1. DLGCD's demonstrated efforts to extend PDAP experience to other provinces.
2. Use of Presidential Decree 144 (PD 144) discretionary funds as a continuous basis for financing programs for local development.
3. Use of SLC resulting from the three loans to establish a revolving fund to carry on reimbursable funding of local infrastructure through sale of SLC-purchased commodities to local governments.
4. Use of expanded provincial tax base to fund development in concert with 1, 2 and 3 above.

Strategy envisages GOP's continued use of PD 144 discretionary funds on a program basis, funneling through the DLGCD in support of local government programs i.e. rural roads, barangay water, etc. Provinces will be able to increase their participation as tax revenues increase, matching the latter with funds made available through DLGCD. Provinces which already have participated in PDAP and loan-supported programs, having increased revenues and needing equipment for the maintenance of infrastructure, can purchase new equipment offered through the loan-generated SLC. Purchase monies, in turn, will be available to finance additional provincial infrastructure and will compliment the PD 144 discretionary funds.

2. Replying to issues raised in para 2(A) of reftel, we point out that construction is financed by the provinces and reimbursed by the central government agency, DLGCD, out of appropriated PD 144 funds. While the province initially funds the construction out of its own resources, especially in rural roads, 15% of of the project cost is grant from the central government. The province is then reimbursed up to 75% of the project cost through the DLGCD. But the Department

does not receive a direct reimbursement through the loan. Therefore, insofar as the DLGCD is concerned, its participation in loan projects represents a direct expenditures from its available, appropriated resources. But the loan, through the SLC, supports and strengthens the program by making it possible to purchase needed commodities to be sold to the provinces, the receipts from which will support a revolving fund to be used for additional infrastructure projects. (See Section 3 below and Attachment A).

Turning to the question asked at the end of para 2(A) reftel, when the province appropriates funds from own sources, it is actually using some funds allocated to it from the central government as well as from local sources for the province financial picture is a kaleidoscope of centrally distributed general and categorical grants, shared-taxes, redistributed collections and locally raised revenues. An analysis of selected budgets shows that 64% of provincial revenue comes from the central government while 36% is raised from local sources, i.e. property tax, fees and fines, receipts from local enterprises or operations, etc. Thus the "provincial share" includes a portion of central government funds. However, this is not a paper transaction since the revenues are given according to an overall formula without appreciable restraint on their use. Consequently, the central government, though contributing considerably to the provincial budget, does it, in the same manner as general revenue sharing in the United States, to encourage local choice and to strengthen the capacity of local governments to determine their own objectives. In fact, then, significant progress has been accomplished to develop and encourage a routine of GOP budgeting and funding for provincial development activities and USAID/PDAP have made substantial contributions in this area.

93

3. Para 2(B) of reftel breaks down into three questions which we shall deal with separately.

a) What assurances do we have that the fund, once activated, will remain an effective channel of central government support after the AID loan terminates?

The assurances we have are based on the present view of the Budget Commission (BC) and the policy guidelines enunciated by DLGCD. The BC, which plays a major role in the allocation of discretionary money, has endorsed the four proposed projects submitted by DLGCD/PDAP, i.e. RRP II, BW, RPTA and RSC, and has allocated twenty million pesos to the DLGCD for FY 77 to fund non-reimbursable "start-up" costs, e.g. training, survey and planning, seed monies for RSC projects, while continuing support for the reimbursable and grant portions of Rural Roads I. Further, the BC has endorsed the "program" oriented approach of the DLGCD/PDAP/USAID proposals against the scattered "project" application that has been heretofore used in allocation of this discretionary fund.

The President has approved DLGCD's proposal to use the SLC under the RRP I loan to create a revolving fund for local infrastructure development. Using the SLC, DLGCD would purchase construction equipment in the United States, sell the equipment to eligible provinces at cost and deposit the funds received to a special account reserved for the future financing of rural infrastructure projects. We will be working toward establishment of the same principle in the RRP II, BW and RPTA loans as well. These actions represent substantial commitments by the GOP to continue the impetus gained under AID supported projects and give concrete assurance in the form of policy decisions of the intent to use available funding, including the discretionary portion of PD 144, in support of provincial development activities. Copies of the BC allocation document and DLGCD's policy paper on the use of SLC with the Presidential Endorsement are being pouched with this airgram. (Attachment B)

A further evidence of the commitment, or at the least DLGCD's effort to obtain commitment from the BC is shown as Attachment C. This chart shows DLGCD needs for PD 144 funds to support the proposed USAID/DLGCD projects, i.e. RRP II, RPTA/RSC and BW for FY 1977-1982. The chart was submitted to BC by DLGCD as part of their budget submission and, as noted, BC granted the 1977 portion.

b) Should we seek a GOP commitment or addition of special language to the Decree that governs use of the funds?

We do not advise either of these proposed actions. We believe that commitment by BC and the presidential endorsement of the SLC discussed above augur well for the future and would prefer to strengthen these actions through contacts and exchanges-of-understanding as the projects proceed.

The decree which sets up the discretionary fund, PD 144, is mainly concerned with the formula by which central funds are distributed as general grants to all local governments; it was signed only after a long process of discussions and trade-offs between various factions. An amendment of the kind proposed by AID/W would reopen old wounds, and retrace the bargaining on internal issues which, in the end, could be detrimental to the process incorporated in the present decree.

However, we will seek a definite commitment in the loan agreement by which results from the RPTA are tied directly to continuance of the RRP II, BW and RSC. The GOP, and particularly the Department of Finance (DOF), should commit itself to an operating policy of increasing local tax collections within agreed upon goals. Thus, for example, if actual collections from the property tax are not within acceptable levels, then the loans and grants affecting Rural Roads II, Barangay Water and the Rural Service Center would be reduced, or eliminated, accordingly.

This requirement may be difficult to include in the loan document and would probably emerge couched in more general language. Nevertheless, we feel it important to use a stipulation of this nature to elicit a definite commitment on the part of the GOP, particularly the Department of Finance, that generation of local taxes is an integral part of all three of these projects.

c) Can we reasonably expect provincial demand for central government funding to be an effective means of sustaining this resource flow?

Yes. Given the BC's commitment referred to previously and the presidential endorsement of DLGCD's policy statement, provincial demand, in this context, will be a most effective means of sustaining the flow of resources. This is particularly true if requestsare made and projects presented on a program basis. And the whole approach of USAID, PDAP and the DLGCD is geared to that end.

4. Para 2(C) in reftel has raised questions on the use of the discretionary fund and its relation to the absence or presence of local administrative capacity. We preface our response with some background on the discretionary fund.

95

PD 144 was passed in 1973. The decree sets up a formula by which internal revenue collections are redistributed to the local governments in much the same way as our own General Revenue Sharing Act operates. The formula in PD 144 is a revision of previous methods used for the apportionment of monies to the local governments and, as noted, was the result of arduous negotiations. However, a new feature of the apportionment, contained in Section 7, is the reservation of 5% of these collections from national internal revenue taxes for use, at discretion of the President, as financial aid to local governments. This "discretionary fund" was not invoked until the following year, i.e. FY 74 and thus has a very short history of operations. At the same time, the BC went through its own reorganization and only in the latter half of 1976 did a reconstituted BC come to the fore. Under its new look, the BC created a Bureau of Local Government which has since became the Presidential guide in allocating these discretionary funds. RRP I was one of the first programs to receive fund allocations through DLGCD, providing "seed money" and reimbursable funds to participating provinces. In allocating additional funds the BC has struggled with establishment of criteria to judge what projects should be funded. It was during this period that DLGCD and PDAP made their representation to BC for support of the four projects. Presented as complete programs, these requests harmonized with the BC's desire to eliminate individual allocations based on hundreds of small projects submitted helter-skelter by individual provinces, cities and municipalities.

The restricted use of the discretionary fund has been due largely to its fledgling character, the reorganization of the BC, the difficulty of establishing suitable

criteria to sift through individual project applications and the reluctance of the BC to grant funds in an uncoordinated, unprogrammed manner. But the BC responded favorably when DLGCD/PDAP presented their program approach to service the developmental needs of local governments, demonstrating that local governments have the administrative capacity to carry out individual projects if they were tied together under an interlocking, well conceived program bolstered by a system of coordination and local capacity building.

We conclude, therefore, that the issues raised in para 2 (C) have already been successfully addressed in practical terms directly with BC and DLGCD/PDAP.

5. AID/W question regarding demonstration of real and substantial additional resources made available by AID loan is, we believe, answered in the PRPs for the three projects which have gone into detail on these resources respecting, technical assistance, vehicles, equipment, tax map improvement, training, organizational development, operating manuals, etc. If there are more specific areas that AID/W wants covered, we would be glad to respond. Respecting resources to be made available by GOP, these have been translated into funding requirements as projections for the years 1977 to 1981 and are shown on Attachment D. This data, too, is based on the PRP submissions. Included as well is funding for the reimbursable portion of each of the three loans based on the justification as real expenditures included in Para 2 above. However, the projected increases in property tax revenues, contained in the PRP for RPTA, are not included as such. We expect that in the latter years of the projects much of this will be used in funding the provincial costs shown while the province payments for SLC equipment may also be furthered by property tax revenues and are thus, in theory, contained in the projects for SLC revolving fund deposits.

We expect that between now and the conclusion of the PPs and negotiations for inclusion of these details into the loan agreements the figures submitted may change. We shall, at that time, make the necessary revisions in our estimates.

6. We appreciate the concern our AID/W colleagues have shown in these projects. We are also mindful of AID/W assistance in giving us PDS contractors to assist in developing the PRPs and the PPs. However, we hope that AID/W will also consider the cumbersome nature of the new programming process which has taken the combined time of nearly all the assigned technicians and program managers in Provincial Development, since last spring when this involved and complicated process was started. During this time we have been intermittently involved in the actual work of development, in servicing ongoing projects and laying operational foundations for the new projects. We tremble to face the cascade of paper work, guidance, questions and tracking system maintenance that will unfold when the PPs are submitted and

fear for the result when we place our real work once more in limbo as we treat with the totality of documentation.

While we understand the demands that management has placed on the program process, the need for better project design with more detail and quantifiable data, the process has been so expanded that it is a burden, not a help. In short, the "front lines" of development are being strewn with obstacles of our making. Can't we simplify the procedure so we can get on with the work at hand?

Attachments: a/s

1947

Cody
SULLIVAN

ANNEX: I

ANNEX I

PROJECT DESCRIPTION PROPOSED FOR PROJECT AGREEMENT

Rural Roads II will follow the pattern of RRP I by concentrating on road linkages, (including required structures), chosen according to standard criteria worked out and verified through the experience of the previous phase. While expansion of the program beyond the scope of RRP I is built into concept, construction will be limited to provinces and RSCs that have demonstrated both the capacity to select, plan and construct rural roads and the ability to raise local taxes to finance further construction within a well conceived road network plan.

The loan for RRP II is set for 24 million dollars with allocation being made in 1978. Reimbursement to the GOP would extend over a three year-period -- FY 79 through FY 81.

Financial design for RRP II is identical to that for Phase I, including the requirement that construction be financed initially through province or RSC funds. When construction is completed, the province will receive the Fixed Amount Reimbursement (FAR) not to exceed 75% of the estimated total cost of the approved project.

201

The estimated cost of this phase will be ₱335 million, including ₱192 million to be offset by the $24 million loan. The GOP will provide 28.8 million pesos as a grant of working capital; DLGCD will pay an estimated ₱13.4 million for local services to monitor, inspect and certify completion of individual projects and another 14.4 million for general support. Local governments are expected to contribute from their own budgets the remaining 86.4 million to cover overnead and other expenses.

Under RRP II it is estimated that 650 kilometers of all weather rural roads and 6,000 linear meters of bridges will be constructed. Technical details of this construction appear in Part C, A.

ANNEX: J

ANNEX J

PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS

Philippines

Rural Roads Project II
No. of Project: 492-0297

Pursuant to Part I, Chapter I, Section 103 of the Foreign Assistance Act of 1961, as amended, I hereby authorize a loan to the Government of the Philippines (GOP) of not to exceed twenty four million United States Dollars ($24,000,000) to help in financing certain foreign exchange costs of goods and services required for the project as described in the following paragraph, and to reimburse the Government of the Philippines by Direct Amount Reimbursement for a portion of local currency costs. The Project consists of constructing and/or improving selected roads/bridges that have been identified by Local Governments as both critical and feasible and meet the criteria for selection under the requirements established by USAID/DLGCD. The new project will include non-PDAP provinces and selected Rural Service Centers that meet the qualification standards for participation in the program. A projected expansion to several additional qualified provinces and 15 RSCs over the life of this project will result in more than doubling the local governments adopting PDAP procedures for infrastructure development.

205

I approve the total level of A.I.D. appropriated funding planned for this project of not to exceed $24,000,000 United States Dollars authorized above, during the period CY 1978 through CY 1981. I hereby authorize the initiation of negotiation and execution of the Project Agreement by the officer to whom such authority has been delegated in accordance with A.I.D. regulations and Delegations of Authority 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:

a. Interest Rate and Terms of Repayment

The cooperating country shall repay the Loan to A.I.D. in United States Dollars within forty (40) years from the date of first disbursement of the Loan, including a grace period of not to exceed ten (10) years. The Cooperating Country shall pay to A.I.D. in United States Dollars interest from the date of first disbursement of the loan at the rate of (a) two percent (2%) per annum during the first ten (10) years, and (b) three percent (3%) per annum thereafter, on the outstand-

ing disbursed balance of the Loan and on any due and unpaid interest accrued thereon.

b. Source and Origin of Goods and Services

Goods and services financed by A.I.D. under the project shall have their source and origin countries included in A.I.D. Geographic Code 941 except as A.I.D. may otherwise agree in writing.

c. Prior to the date of execution of the Project Agreement, borrower shall furnish in form and substance satisfactory to A.I.D. that a Memorandum of Agreement has been signed by both the Department of Finance and the Department of Local Government and Community Development (DLGCD) stating that they will fully implement and pursue the RRP II project as proposed in the Project Paper.

d. Prior to any disbursement, or the issuance of any commitment documents under the Project Agreement, borrower shall furnish in form and substance satisfactory to A.I.D., (1) fulfillment of the standard conditions precedent pertaining to the opinion of the Secretary of Justice and statement of names of the borrower's representative.

Signature _____

120

_____

Typed Name of Authorizing Officer

_____

ANNEX: K

PROVINCE OF BATANGAS
DEPARTMENT OF LOCAL GOVERNMENT AND COMMUNITY DEVELOPMENT

ANNEX K

RURAL ROADS PROGRAM

Project No. 24 - 05 - AAR - 7701R
Prov. CIP No. 73124
Mun. CIP No. 73303

PROJECT JUSTIFICATION

DESCRIPTION OF PROJECT: CALICA - MADALINOT ROAD, PHASE II

ESTIMATED TOTAL PROJECT COST					₱ 972,000.00
ESTIMATED COST THIS PHASE					₱ 405,000.00
ESTIMATED REIMBURSEMENT THIS PHASE					₱ 900,000.00
EST. ANNUAL MAINT.	0	-	5	Yrs.	₱ 4,000.00
	6	-	10	Yrs.	₱ 12,000.00

PURPOSE OF PROJECT:

1) To provide an all weather road that will help small farmers of the influence area to transport their agricultural production to the nearest market.

2) To upgrade the socio-economic conditions of the area.

EXPECTED BENEFITS

1) Incremental marketable crop production leading to increase net income to small farmers.

2) Social Benefits.

	Name	Title	Date
PREPARED BY:	[illegible] I. [illegible]	Project Analyst	19 October 76
REVIEWED BY:	[illegible]	Provincial Engineer	19 October 76
APPROVED BY:	[illegible] LEVISTE	GOVERNOR	20 October 76
CONCUR	[illegible]	DLGCD/PDO	20 October 76

DL-32-66

FORM DL-01

PROVINCE OF BATANGAS
DEPARTMENT OF LOCAL GOVERNMENT AND COMMUNITY DEVELOPMENT

RURAL ROADS PROGRAM

Project No. 24 - 06 . AAR - 77013
Prov. CIP No. 73124
Mun. CIP No. 73303
Planned Completion Dec 78

I. ESTIMATED CURRENT TRAFFIC COUNT

CARS	TRUCKS	OTHERS	ADT
6	2	10	18

II. ACTUAL TRAFFIC COUNTS

DATE	TIME		METHOD	TOTAL	CARS	TRUCKS	OTHERS	ADT
	FROM	TO						

Location: _____

III. PROJECTED TRAFFIC COUNTS

PROJECT COMPLETION	DATE	CARS	TRUCKS	OTHERS	ADT
Plus one Month	Jan. 79	6	2	10	18
Plus one Year	Dec. 79	7	3	11	21
Plus three Years	Dec. 81	9	5	13	27
Plus five Years	Dec. 83	11	7	15	33
Plus ten Years	Dec. 88	17	13	25	55

	Name	Title	Date
PREPARED BY:	[illegible]	Project Analyst	19 Oct. 1976
REVIEWED BY:	[illegible]	Provincial Engineer	19 Oct. 1976
APPROVED BY:	J. [illegible] C. LEVISTE	Provincial Governor	20 Oct. 1976

DL-01-02

FEASIBILITY STUDY OF CULEBRA-BALBOUT ROAD

Introduction:

a. Objective and Purpose of the Study:

The government is not financially capable of implementing simultaneously the necessary infrastructure projects in the province. So to be fair to all in prioritizing projects and derive direct economic and social benefits the benefit/cost ratio and the Internal rate of return of projects lined up for implementation are very necessary, hence this feasibility study was undertaken.

b. Rationale for the Projects

The Culebra-Balbuot road penetrates deep into the northern section of the municipality of Culebra. It traverses rich agricultural areas farmed by small and industrious farmers. This road will not serve only Balabuot but also the neighboring barrios of Tabad, Batipuk, Putingbuhay, Pahles and Diawa (see Map 1 on page 6 for location of project).

c. Total Inventory of Resources necessary to complete the Project:

The manpower needs of the project are: one project engineer, one construction supervisor, one construction foreman, six equipment operators, truck drivers, one instrument man, two watchmen and twenty laborers. The necessary equipment are: bulldozers, dump trucks, payloaders, road rollers and water trucks. These manpower and equipment need are within the capability of the Office of the Provincial Engineer of Culebra.

Financially speaking, the province has no problem yet.

d. Expected Output from the Project:

The project is a construction road. It will open to vehicular traffic that portion of Culebra which up to this time the chief means of transportation is horseback only. The quantifiable benefit is the utilization of idle and under utilized lands. The unquantifiable benefit are: better social services due to easier access to health, and other social and cultural facilities and act as a supervision of

...ssistant traction technicians who is indispensable to ...ssible farming operations.

... ...ject Area Profile:

The whole project was divided into three phases. The first and the second phase, both measuring 2.25 kilometers, will be implemented in 1977 and the third being a length of 1.5 kilometers will be constructed in the early part of 1978.

I. ...ject Description:

a. ...isting Road Characteristics:

In reality there is no road, what is existing is ... but a trails. Earlier survey and inspection of the area reveals that the ...posed road will traverse rich agricultural area where farming is highly diversified in the northern section of the municipality of Ulaca (See Map II on page 7.)

b. ...posed Constructions:

The total length of the penetration road is 6 kilometers. The plans and specifications provided for the grading and base course pavement. The roadway is 6 meters and the shoulders and canals are 1.5 meters each.

214

c. ...plementation Aspects:

Implementation of the whole project will be by Force Account. The amount of P72,000 necessary for the purpose will be fully provided for in the 1977 annual budget of the province.

d. Maintenance Aspects:

The maintenance cost of the road was estimated at the standard ... of provincial roads, that is P2,000. The total amount of P6,000 will be appropriated annually during the existence of the road for its maintenance.

e. Selection Criteria:

The beneficiaries were selected among others for the following factors:

a. It is located in the municipal and provincial capital

Improvement Programs (CIP No. 73124)

2. It will be constructed by purely local funds

3. It will op— the northern agricultural section of the Municipality of Calaca.

4. The inhabitants of the influence area could not produce perishable cash crops like tomatoes that thrive very well therein due to hardship of marketing.

5. The landowners whose lands are to be traversed by the road have already signed the Deed of Donation donating to the Government the 15 meters wide right-of-way.

III. Economy:

A. Economic Aspects:

The influence area was determined by the use of a provincial map having a scale of 1:100,000, ocular survey and inspection, and personal interview with the inhabitants along the route.

The population in 1975 of the barrios to be traversed per enumeration of the Bureau of Census and Statistics Office was 1,406. The present and projected population of the influence area is shown in Table I on page 8.

The terrain of the influence area is gently rolling and fringed on the east and west by rivers. The important crops are rice, corn, coconut, sugarcane, fruits, vegetables and tomatoes. (See Tables II and III on pages 9 and 10 for land use and crop productions, respectively. Data therein was obtained from the Municipal Development Coordinator of Calaca, the Farm Management Technician of BAEI assigned in the Municipality and the farmers of the influence area.)

B. Existing Transportation Facilities:

Horses are the common means of transportation. Agricultural products are brought to town or existing roads on horseback.

C. Factors That Demand the Construction of the Projects

The main reason in including this project in the top bracket for implementation are as follows:

1. Hardship of transporting agricultural input and output from the northern interior of the municipality of Calaca.

2. The farmers therein could not maximize production for they have the sad experience that much of bountiful crops goes to waste only for lack of transportation facilities.

3. Student in the secondary level have to walk the whole distance to town morning and evening.

4. Production Technicians, social workers and social services seldom find the place.

D. Anticipated benefits:

The benefits to be derived from the road are enumerated hereunder:

1. Farmers will be induced to produce more and cultivate idle lands.

2. Production of under utilized lands will be maximized.

3. Farmers will plant second crops like tomatoes that thrives best in that area and devote larger areas to sugarcane the most important cash crop. (See Table IV on page 11, for incremental production)

4. Social services, social workers and government agricultural production technicians could be availed of easily.

5. Sick persons can be brought immediately to medical institutions, as with other emergency cases that need authorities attentions.

6. Peace and order will improve considerably for it will be easier for peace officers to patrol the area.

7. The very young and old could also go easily to Urban centers for physical, social, cultural or spiritual needs.

8. There will be better communication with the influence

2.1.6

201

and surrounding areas and the outside world.

IV. Benefit/Cost Ratio and Internal Rate of Return Calculations:

The present value of the benefits and the costs of the project were evaluated using the discount rate of 15 percent, an approximate measure of the opportunity cost of capital in the Philippine economy. At this discount rate the benefit/cost ratio is approximately 1.19. (See table V on page 12 for calculations.)

The internal rate of return of the project when calculated at the discount rates of 15 and 20 percent was about .19 or 19 percent. The calculation is shown on table VI on page 13.

With the above benefit/cost ratio of 1.19, and internal rate of return of .19 or 19 percent which are within the minimum economic criteria, the project, therefore, is economically feasible.

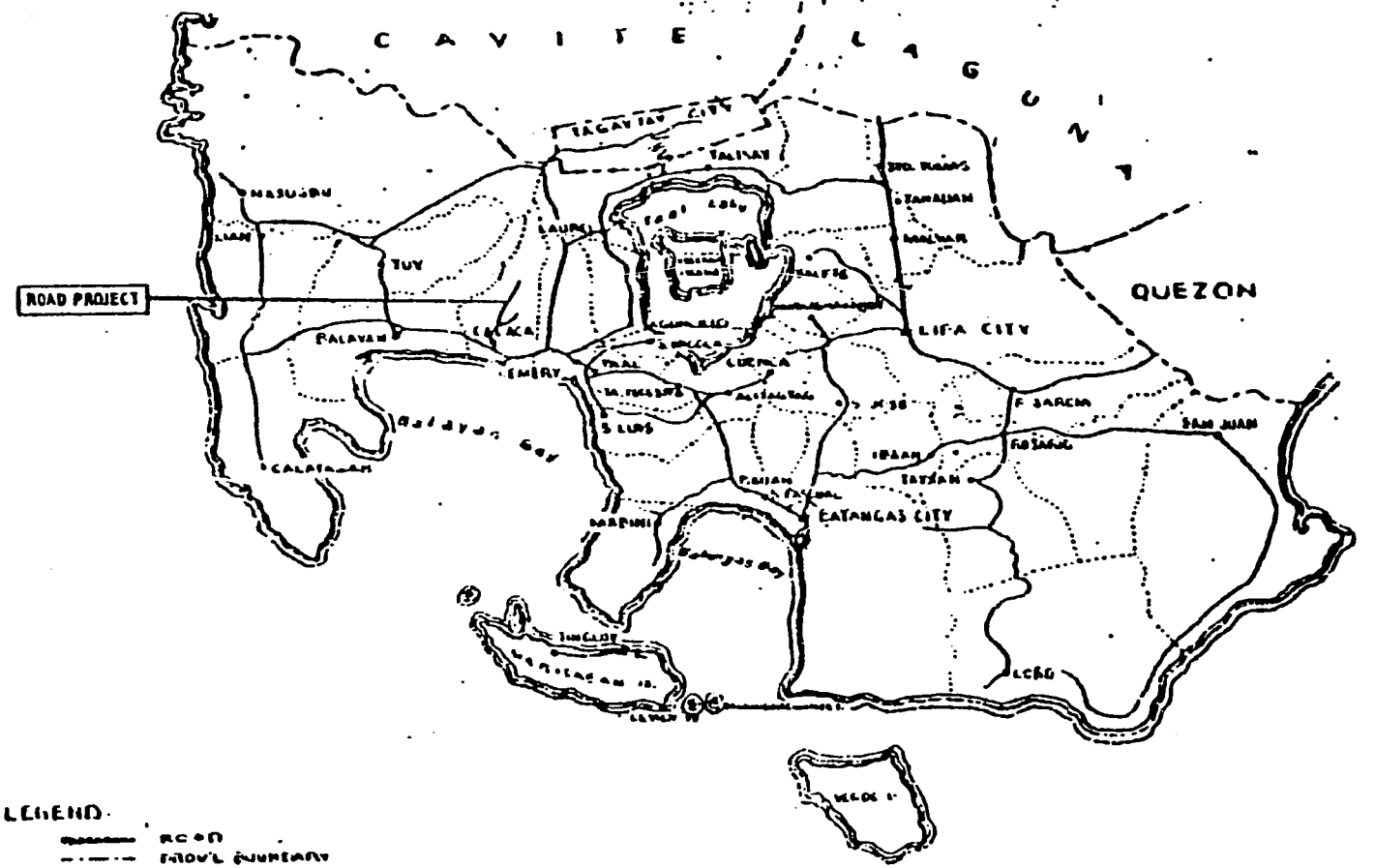
217

MAP - I

BATANGAS PROVINCE

Page 6

PROJECT LOCATION MAP



MAP-II

MAP OF CALACA

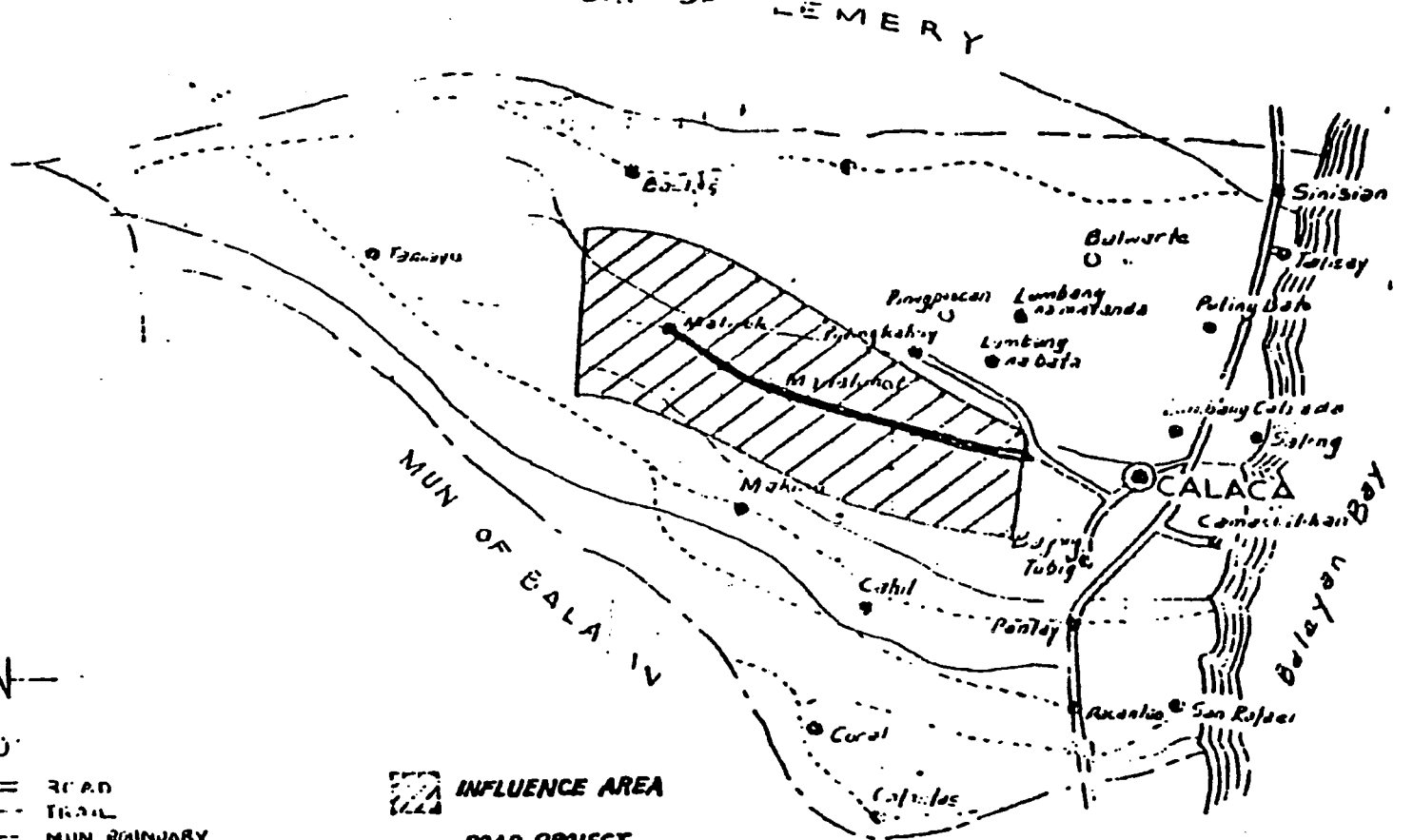


Table I

PROJECTED POPULATION OF HIS IMMEDIATE AREA

Page 8

	1975 Base Year	1977 (0)	1978 (1)	1979 (2)	1980 (3)	1981 (4)	1982 (5)	1983 (6)	1984 (7)	1985 (8)	1986 (9)	1987 (10)
Nadaluaot	795	816	837	859	882	905	928	953	978	1003	1030	1057
Patipok	611	627	643	660	678	695	714	732	751	771	791	812
T O T A L	1,406	1,443	1,480	1,519	1,560	1,600	1,642	1,685	1,729	1,774	1,821	1,869

Source of data: Ontarian City - Growth rate of population is assumed to be 2.62% per annum

PRESENT LAND USE OF INFLUENCE AREA OF THE CALACA-MABALUNOT-BATIDOK ROAD

Table II Page 9

	RICE	CORN	COCONUT	SUGARCANE	VEGETABLE	FRUIT TREE	BANANA	COFFEE	IDLELAND
Mabalunot	189	210	84	70	28	35	14	7	63
Batidok	80	20	28	4	18	10	6	4	30

PROJECTED LAND USE OF INFLUENCE AREA OF CALACA-MABALUNOT-BATIDOK FARM-TO-MARKET ROAD

	RICE	CORN	COCONUT	SUGARCANE	VEGETABLE	FRUIT TREE	BANANA	COFFEE	TOMATOES*	IDLELAND
Mabalunot	200	210	84	130	28	35	14	7	15	2
Batidok	80	20	28	34	18	10	6	4	10	

NOTE: Data used was obtained from ICC and FMR, Inc. in Calaca

* Planted after rice is harvested

Table III

[illegible] PRODUCTION OF [illegible] AREA

	Area Planted (Ha.) 1/	Average Yield Per Ha. 2/	Total Annual Production 3/	Value in Pesos (per Kg. or Measure) 4/	Total Value in Pesos of Production 5/
Subsistence					
Rice	100	40 cavans/50 kgs.	7,000	55	415,000
Corn	210	30 cavans/50 kgs.	6,300	50	315,000
Coconut	84	8,401 nuts	705,600	0.30	211,680
Sweetpotato	70	50 metric tons	3,500	90	314,000
Vegetables	26	110 kilos	1,070	40	147,840
Fruit Trees	33	110 kilograms	3,350	16	61,600
Cassava	14	1,050 bushels	14,700	3	44,100
Coffee	7	120 cavans	840	80	67,200
Tobacco	2	2 metric tons	4	1,000	4,000
[illegible]					
Rice	80	40 cavans/50 kgs.	3,200	55	176,000
Corn	20	30 cavans/50 kgs.	600	50	30,000
Coconut	21	8,401	235,200	0.25	58,800
Sweetpotato	4	50 metric tons	200	90	18,000
Vegetables	10	110 kilos	1,100	45	95,040
Fruit trees	7	110 kilograms	1,120	15	16,500
Cassava	7	1,050 bushels	7,350	3	22,050
Coffee	4	120 cavans	480	80	38,400

Note: 1/ = 1/ X 2/
5/ = 4/ X 3/

INCREMENTAL PRODUCTION IN PESOS 1/

Table IV

Abdalmoti	1977 (0)	1978 (1)	1979 (2)	1980 (3)	1981 (4)	1982 (5)	1983 (6)	1984 (7)	1985 (8)	1986 (9)	1987 (10)
Pico				24,200	30,250	48,400	48,400	48,400	48,400	48,400	48,400
Guayacana				113,400	168,750	225,000	225,000	225,000	225,000	225,000	225,000
Tordillo		30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000

Petrolera	1977 (0)	1978 (1)	1979 (2)	1980 (3)	1981 (4)	1982 (5)	1983 (6)	1984 (7)	1985 (8)	1986 (9)	1987 (10)
Guayacana				67,500	101,250	135,000	135,000	135,000	135,000	135,000	135,000
Tordillo		30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
TOTAL		30,000	30,000	254,100	350,250	438,400	438,400	438,400	438,400	438,400	438,400

1/ See appendices A, B, C, for calculation.

Benefit/Cost Ratio Calculation
(In Thousand Pesos)

Table V

	1977 (0)	1978 (1)	1979 (2)	1980 (3)	1981 (4)	1982 (5)	1983 (6)	1984 (7)	1985 (8)	1986 (9)	1987 (10)	L	C	B/C Ratio
A. Gross Benefit														
1. Incremental Production	-	50	50	354	350	458	458	458	458	459	459			
2. Salvage Value of RO Slope Culvert	8													
B. Maintenance Cost		48	48	48	48	48	48	48	48	48	48			
C. Discount Factor at 15%	1.000	0.870	0.756	0.658	0.572	0.497	0.432	0.376	0.327	0.284	0.247			
D. Gross Benefit at 15% Discount Factor	8	44	38	167	200	228	199	172	150	130	113	1449		
E. Maintenance Cost at 15% Discount Factor		42	36	32	27	24	21	18	16	14	12			
F. Construction Cost	972												1214	1.19

INTERNAL RATE OF RETURN CALCULATION
(In Thousand Pesos)

Table VI

	1977 (0)	1978 (1)	1979 (2)	1980 (3)	1981 (4)	1982 (5)	1983 (6)	1984 (7)	1985 (8)	1986 (9)	1987 (10)	l_p	l_q	PV	IRR
A. Gross Benefits															
1. Incremental production		150	150	354	350	458	458	459	458	459	459				
Salvage Value of R.C. 2. Pipe Culvert	8														
B. Maintenance Cost		148	148	148	148	148	148	148	148	148	148				
C. Net Benefit		2	2	206	202	310	310	310	310	311	311				
D. Discount Factor at 15%	1.00	.87	.76	.66	.57	.50	.43	.38	.33	.28	.25				
E. Discounted Net Benefit	8	1.74	1.52	136	173	205	176	156	135	115	109	1309	972	337	
F. Discount Factor at 18%	1.00	.85	.72	.61	.52	.44	.37	.31	.27	.22	.19				
G. Discounted Net Benefit	8	1.7	1.44	126	157	150	153	127	111	90	78	1032	972		
H. Discount Factor at 20%	1.00	.83	.69	.58	.48	.40	.33	.28	.23	.19	.16				
I. Discounted Net Benefits	8	1.7	1.4	120	145	156	135	115	94	78	66	928	972	-44	.19

$$\text{IRR} = .15 + (.20-.15) \quad \left(\frac{337}{337 + 44}\right)$$

$$= .15 + (.05) \left(\frac{337}{381}\right)$$

$$= .15 + .04$$

$$= .19 \text{ or } 19\%$$

It was assumed that eleven (11) and fifty (50) hectares of the subclass of Medium soil will be cultivated and planted to rice and sugarcane, respectively. The subclass of Latiyok influenced by the road will also be converted to sugarcane farm.

The subclass will start producing at the third year of operation of the project. The first and second years are devoted for land preparation. The production yield will start at 50 percent of the present production increasing by 25 percent until it levels off with the current production in the locality that is 40 cavans for rich and 50 tons for sugarcane.

Incremental production of Rice

Year	Area (ha)	Ave. Yield per Ha/ Palay	Annual Prod. in Metric Ton	Value in Pesos per Metric Ton	Total Value in Pesos
1978	11	LAND PREPARATION			
1979	11	LAND PREPARATION			
1980	11	2	22	1100	24,200
1981	11	2.5	27.5	1100	30,250
1982	11	4	44	1100	48,400
1983	11	4	44	1100	48,400
1984	11	4	44	1100	48,400
1985	11	4	44	1100	48,400
1986	11	4	44	1100	48,400
1987	11	4	44	1100	48,400

224

Incremental Production of Rice Areas

Kadiluat

Year	Area In Ha.	Ave. Yield/Ha In Metric Ton	Annual Prod'n In Metric Ton	Value in Pesos Per Metric Ton	Total Value In Pesos
1978	Base Production				
1979	Base Production				
1980	50	25	1250	90	112,400
1981	50	37.5	1875	90	16,875
1982	50	50	2500	90	225,000
1983	50	50	2500	90	225,000
1984	50	50	2500	90	225,000
1985	50	50	2500	90	225,000
1986	50	50	2500	90	225,000
1987	50	50	2500	90	225,000

Katipol

227

Year	Area In Ha.	Ave. Yield/Ha In Metric Ton	Annual Prod'n In Metric Ton	Value in Pesos Per Metric Ton	Total Value In Pesos
1978	Base Production				
1979	Base Production				
1980	30	25	750	90	67,500
1981	30	37.5	1125	90	101,250
1982	30	50	1500	90	135,000
1983	30	50	1500	90	135,000
1984	30	50	1500	90	135,000
1985	30	50	1500	90	135,000
1986	30	50	1500	90	135,000
1987	30	50	1500	90	135,000

Tomatoes are planted in the riceland after harvesting the rice crop.

Medalmot

Y e a r	Area Planted (Ha)	Average Yield/ Ha. M.T.	Annual Yield in M.T.	Value in Pesos /M.T.	Total Value in Pesos
1978	15	2	30	1,000	30,000
1979	15	2	30	1,000	30,000
1980	15	2	30	1,000	30,000
1981	15	2	30	1,000	30,000
1982	15	2	30	1,000	30,000
1983	15	2	30	1,000	30,000
1984	15	2	30	1,000	30,000
1985	15	2	30	1,000	30,000
1986	15	2	30	1,000	30,000
1987	15	2	30	1,000	30,000

Bulalakaw

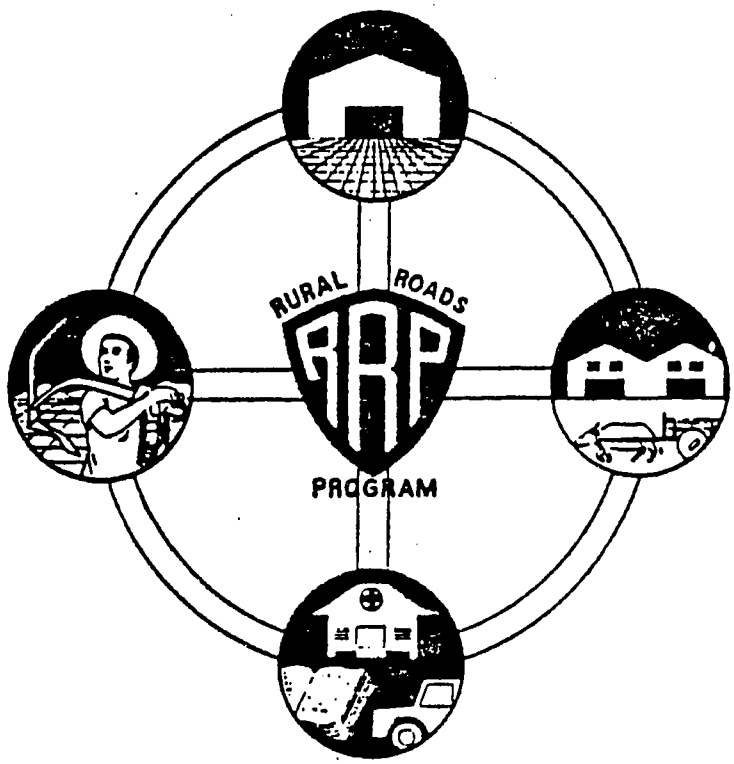
Y e a r	Area Planted (Ha)	Average Yield /Ha. M.T.	Annual Yield in M.T.	Value in Pesos /M.T.	Total Value in Pesos
1978	10	2	20	1,000	20,000
1979	10	2	20	1,000	20,000
1980	10	2	20	1,000	20,000
1981	10	2	20	1,000	20,000
1982	10	2	20	1,000	20,000
1983	10	2	20	1,000	20,000
1984	10	2	20	1,000	20,000
1985	10	2	20	1,000	20,000
1986	10	2	20	1,000	20,000
1987	10	2	20	1,000	20,000

22

ANNEX L

Department of Local Government and Community Development

RURAL ROADS PROGRAM



231

EVALUATION OF SELECTED RRP I SUBPROJECTS

(AS OF MAY 1977)

EVALUATION OF SELECTED RRP I SUBPROJECTS

1.0 Introduction

1.1 This brief report is in response to comments (issue No. 1: Beneficiary Impact) made by Roland E. Bobel, PPC/DPRE/PR on the Philippine Rural Roads Program II Project Paper dated October 8, 1976.

In essence, his comments covered the following three major areas:

(1) There should be an analysis of who receives the benefits of the program and the manner by which they are distributed.

(2) An analysis should be made of the land tenure arrangements in the provinces to be assisted by the program.

(3) Evaluation for the program should pay close attention to the beneficiary impact question and the baseline data should include information relevant to this question.

These three concerns are interrelated, and they focus on the important issue of how the benefits generated by rural road projects will be distributed between the rich and the poor.

1.2 To answer these comments, field data were collected and an analysis was made of what benefits rural road projects have generated, and how these benefits were distributed. Used as test cases were road projects completed under the Rural Roads Program I (RRP I). In addition, field data were collected on the road project impact on land tenure. For various reasons discussed below, these before and after studies presented only limited and somewhat inconclusive

evidence on the measurable beneficial impact of feeder road improvement. Therefore, considerable secondary data from other sources, including the USAID sponsored farm to market road study in the Bicol River-Basin (Philippines) and a recently completed feeder road economic feasibility study conducted under the auspices of the ADB, were analyzed to present further insight into benefit distribution.

1.3 Because of the recent construction dates and, therefore, the short time during which road projects completed under RRP I were able to influence the socioeconomic environment in the road's zone of influence, data collected concerning increased agricultural production and beneficial changes in income, health, and other aspects were not conclusive. The economy simply has not yet had time to react to improved accessibility. In addition, because of the provinces cash flow problems, most of the road improvement projects were too short (sometime less than 1 km.) to have made a measurable change in the socioeconomic environment. Finally, without an adequate control group of roads (roads that were not improved) it was difficult to distinguish between changes attributable to non-road improvement related factors (such as introduced by the energy crisis) from bona-fide changes attributable to road improvement.

234

2.0 Findings

2.1 Passenger and freight fare reductions due to road improvement, direct evidence

Two of the roads projects completed under the RRP I program were long enough to enable measurement of a significant difference in road transport charges. One of the projects, the El Salvador-Dalayep road in Misamis Oriental, Mindanao, was an improvement project. The formerly dirt road in bad to very bad condition was improved to a road with an all-weather pavement consisting of 2.6 kms cement and 4.2 kms gravel. Before the improvement, the transportation cost from the endpoint of the road to the local market junction on the national highway was about ₱3 per passenger and ₱70 per ton of shelled corn. Very shortly after the improvement the transport cost dropped to ₱1.20 per passenger and ₱30 per ton of shelled corn, or a reduction of about 60 percent. In addition, the frequency of service of jeepneys serving the barrio gradually increased from 1 trip per day to 4 trips per day. This data, though scanty, was the only information collected directly on a road <u>improved</u> under AID's rural road program that supported the hypothesis that road improvement results in reduced transport costs, and that these costs are substantially passed on to the users of the vehicles.

235

The other long road was a <u>penetration</u> road newly constructed in Palawan under the IAD rural roads program. Before, only a footpatch existed, and this was replaced by an all-weather gravel road. Since no motorized transport existed on the road prior to improvement, no before and after data could be collected on changes in vehicle transportation price. However, the cost of animal transport before road improvement for the barrio of Cabigaan, 10 kms. from the

local market at the road junction, is estimated at 6 pesos per sack of 50 kilos (See Table 1.1). This can be compared with the present motor vehicle rate of only ₱1.50 per sack, and represents a reduction in transport cost of about 75%.

This data, does support the hypothesis that road improvement results in reduced transportation costs, and that the savings are passed on substantially to vehicle users in the form of lower prices. The next section describes the considerably more extensive indirect evidence supporting the hypothesis.

2.2 Farmer Share of Transport Benefits

The best indirect evidence that improvement of a road leads to reductions in transport charges lies in the simple observation that transport charges over equal distances are higher for poor roads than for good roads. For example, in rolling terrain, the vehicle operating cost of a 12-ton truck operating on a bad gravel road will be about 40% higher than for the same truck operating over a good gravel road. This is a well known fact in the field of transportation economics dealing with road user charges and the economic evaluation of road improvement projects, and the subject need not be belabored in this paper.

23C

In several countries, the truckers and middlemen have such monopoly power that transport savings are not passed on to the farmer. Fortunately, this does not seem to be the case in the Philippines at this time. For example, Leon Mears in his book "The Rice Economy of the Philippines" analyzed the degree of centralization of the trucking

TABLE 1.1: PRICES OF CARGO TRANSPORT BY ANIMAL FOR 22 ISOLATED VILLAGES IN MINDANAO, PHILIPPINES

Barrio	Distance to Local Market (Km.)	Transport Cost (Pesos Per Ton)
Dampil	5	50
Bunal	8	100
Aclan	2	5
Tabon	5	50
Alicapawan	8	96
Manaligao	8.5	106
Bagocboc	26	400
Awang	13	182
Patag	4	20
Tingalan	29	812
Dahilig	15	240
Mapua	8	96
Kauswagan	10	100
Lawaan	15	210
Bal-asan	16	240
Santiago	2	4
Lawit	12	144
Libon	10	100
Libertad	11	132
Tawan-Tawan	5	30
San Pedro	2	6
Mimbuntong	7	98

237

industry in the year 1972 and found that the condition of perfect competition was closely approximated. Entry was easy and transport savings were quickly passed on to customers. But the truck operation he studied were those located in populated lowland rice growing areas on the island of Luzon, and where the truckers were engaged in transporting palay from lowland farmers to rice mills. Since these conditions might not be true for upland farmers in less populated areas, data were collected on how transport savings might be passed on in the upland areas.

Figures 1.1 and 1.2 show the relationship between the difference in transport price and the difference or gap between farmgate and market price for rice, corn and copra. This data were collected for about 50 barrios in Sultan Kudarat and South Cotabato. Some of the barrios were located on good feeder roads, other barrios were located on poor roads. Also, some barrios were close to the market, others were far away. Thus, a wide range of barrio accessibility was covered. The figured shows the strong relationship that exists between transport price and the difference between farmgate price and market price. In general, and as expected, the lower the transport price, the smaller the difference. It is surprising, however, that the gap between farmgate and market price diminishes much faster than the rate at which transport price cost reduces.

239

Table 1.2 shows how the gap between farmgate price and market price decreases as transport price decreases. Since the local market price is fairly constant for each crop, the increase in farmgate price is simply equal to the reduction in the gap between farmgate price and market price. The dramatic increase in farmgate price as transport price decreases strongly supports the proposition that savings in transport and other costs are passed on to the farmer. The increase in farmgate price is most pronounced for copra. For South Cotabato, the farmgate price of copra was found to increase by about ₱4.30 per ton for each peso per ton decrease in transport price.

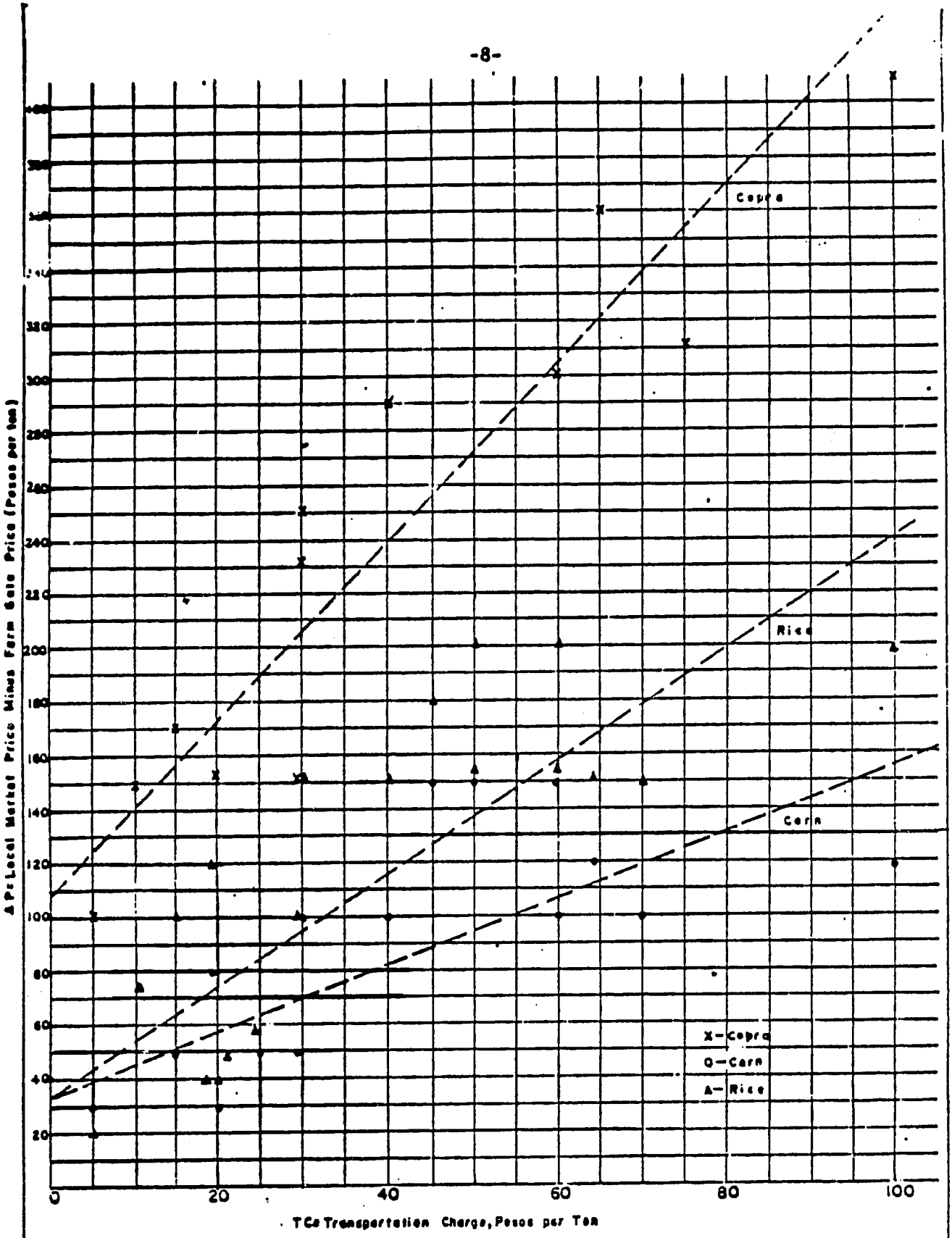
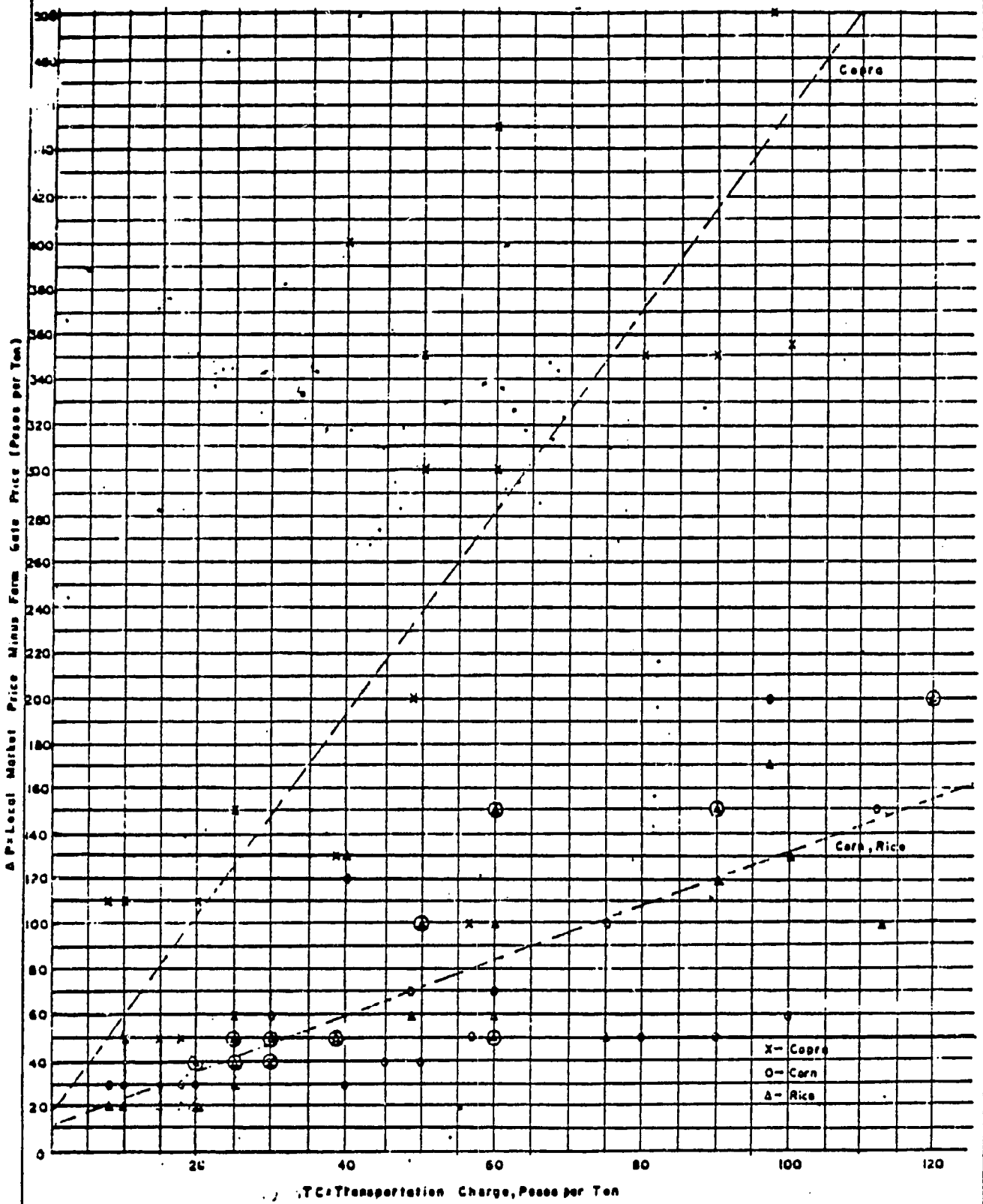


Fig 1.1: Relation Between Price Differential (Price at Local Market Minus Farm Gate Price and Transport Price

SULTAN KUDARAT



241

Fig 1.2: Relation Between Price Differential (Price at Local Market Minus Farm Gate Price and Transport Price

SOUTH COTABATO

For Sultant Kudarat, the increase in farmgate price for copra is ₱3.28 per ton for each peso per ton decrease in transport price. For rice and corn the increase in farmgate price, is more closely related to the decrease in transport price, and for each peso per ton reduction in transport price the farmgate price was found to increase by about ₱1.20 per ton.

The fact that the increase in farmgate price, especially for copra, exceeds the decrease in transport price indicates that other factors besides transport are involved. One such factor is the middlemen. In general, the degree of monopoly power that the middleman can exert will be highly correlated with the quality of road, and therefore trnasport price. The worse the road, the more the copra buyer can depress the farmgate price. In addition, when roads are bad, buyers must include important other costs in addition to transport costs. For example, one important cost is the risk of spoilage of his purchased goods because of delays caused by the poor road, or the risk of loss of his vehicle. All these costs will be drastically reduced after road improvement, and the increase in farmgate price levels can therefore be expected to exceed the reduction in transport price.

24

TABLE 1.2 - OBSERVED INCREASE IN FARMGATE PRICE FOR A ONE PESO PER TON REDUCTION IN TRANSPORT PRICE, FOR RICE, CORN, AND COPRA IN SULTAN KUDARAT AND SOUTH COTABATO

PROVINCE	INCREASE IN FARMGATE PRICE, PESOS/TON
Sultan Kudarat	
Rice	2.08
Corn	1.21
Copra	3.28
South Cotabato	
Rice	1.20
Corn	1.20
Copra	4.41

243

3.0 Accounting for Beneficiary Impact in the Evaluation

3.1 There are at least ten groups of beneficiaries that will gain from road improvement and that can easily be identified.

These include:

(1) Squatters and tribal minorities

(2) Tenant Farmers

(3) Lessee Farmers

(4) Small owner operators, less than 7 has.

(5) Large owner operators, more than 7 has.

(6) Large commercial plantation operators

(7) Transporters

(8) Middlemen

(9) Passengers of Public Transport

(10) Passengers of Private Transport

Each of these groups can be placed in a fairly well defined income class, and the relative size of these groups will vary distinctly between roads. Major feeder roads already in fairly good condition will have a small proportion of the beneficiaries in group 1 and perhaps 2. Minor feeder roads in upland areas will have some beneficiaries in group 1 and fewer in group 4. Penetration feeder roads will have a large proportion in group 1 and few in the other groups. At present the Provincial Development Staff (PDS) that were trained and developed under the Provincial Development Assistance Program (PDAP) do not take into account the distribution of benefits between the beneficiary groups. Implicitly, the

benefits are valued equally between groups. Thus, an additional peso accruing to a low income tenant farmer is valued the same as a peso accruing to a rich landowner. This approach is consistent with traditional economic evaluation methodology that has been used extensively and is still being used by international lending organization such as the IBRD and ADB. This approach ignores the "equity" or income distribution objectives of the government, and results in low priorities for the minor feeder road running into the upland areas. Rather, the high priority goes to the large rural roads in already fairly well developed and affluent lowland areas. This was observed to occur with road projects evaluated under the AID sponsored SIP and RRP I programs (another reason for the low priority and sometimes unfeasibility of minor feeder roads were the unrealistically rigid minimum DPH design standards adopted by the studies such as a 6 meter pavement width).

245

Starting in the late 1960's, the basic ideas of social benefit cost analysis were developed in landmark publications such as the "Manual of Industrial Project Analysis" (Paris; OECD 1969) and "Guidelines for Project Evaluation" (UNIDO, 1972). Social benefit cost analysis explicitly takes into account the project impact on income distribution and thereby includes the equity objective in the analysis.

In the simplest terms, this is accomplished by specifying distribution weights to be assigned to each beneficiary income group.

Rigid derivation of these weights is complex, and is an activity that cannot be performed on a project by project basis. Rather, it is the function of the central government planning agency (such as NEDA in the Philippines) to develop these weights for the various geographic regions and income groups. In the absence of scientifically derived weights (NEDA is in process of developing distribution weights but progress is very slow), weights derived for use in previous studies may be used in the interim. For example, the Project Paper for the Bicol Secondary and Feeder Roads Project Loan, November 1975 includes a social soundness analysis that addresses the incidence of benefits, and suggests the following weights:

TABLE 3.1: DISTRIBUTION OF WEIGHTS BY INCOME GROUP (1965)

Beneficiary Group	Family Mean Income	(1) Ratio	Weight
Low Income	₱1,436	1.77	1.77
Middle Income	₱4,191	.61	1.17
High Income	₱9,500	.27	1.00

(1) Ratio - ratio of mean income of group to mean income of the Philippines (₱2,541 in 1965)

This table can be updated to reflect 1977 income levels by applying the same ratio in column 3 to the estimated 1977 average income level of ₱5,000. Table 3.2 shows the results.

TABLE 3.2 DISTRIBUTION WEIGHTS BY INCOME GROUPS (1977)

Beneficiary Group	Mean Family Income	Ratio	Weight
Low Income	₱ 2,826	1.77	1.77
Middle Income	₱ 8,247	.61	1.17
High Income	₱18,693	.27	1.00

As shown in Table 3.3, the application of these distributional weights can have a marked effect on the benefit/cost ratio. Without the distributional weights the B/C ratio is only 0.8, and normally this hypothetical project would be rejected. With distributional weighting the B/C ratio improves to 1.12, an increase of 40 per cent, and the project would become feasible. Other examples can be conceived illustrating the reverse, i.e., where a project favoring the high income groups would be economically feasible without distributional weighting but would become infeasible after the application of distributional weights.

247

TABLE 3.3 ILLUSTRATIVE TABLE SHOWING INCREMENTAL INCOME DUE TO ROAD IMPROVEMENT ACCRUING TO VARIOUS BENEFICIARY GROUPS, THE DISTRIBUTIONAL WEIGHTS, AND THE WEIGHTED INCOMES

Road	Barrio	Tenant Farms		Leasehold Farms		Amortizing Owner Farms	Public Transport Users	Private Transport Users	Commercial Truck Users	Total	B/C(3) Ratio
		Tenant Share (Pesos)	Owner(1) Share (Pesos)	Tenant Share (Pesos)	Owner(2) Share (Pesos)	(Pesos)	(Pesos)	(Pesos)	(Pesos)		
	1	8000	12000	9000	4500	3000	1000	500	750		
	2	6000	9000	8000	4000	2000	2000	1000	500		
	3	4000	6000	6000	3000	1000	3000	1500	250		
	4	2000	3000	5000	2500	500	4000	2000	200		
Unweighted Incremental Income by beneficiary group		20000	30000	28000	14000	6500	10000	5000	1700	115,2000	$\frac{115,200}{144,000}$=0.8
Average Per Capita Annual Income by Beneficiary Group		500	3000	700	3000	1000	600	4000	1000		
Distributional Weight by Beneficiary Group		1.77	1.0	1.77	1.0	1.17	1.77	1.00	1.17		
Weighted Income by Beneficiary Group		35400	30000	49560	14000	7605	177000	5000	1989	161,254	$\frac{161,254}{144,000}$=1.12

(1) Owner share assumed at 60% of total farm income
(2) Owner share assumed at 33% of total farm income
(3) Assumed cost of project is 144,000

4.0 Feeder road Improvement and Land Tenure

Where feeder roads are improved or constructed there is considerable danger that, in the absence of covenants protecting the tenure of small farmers and ethnic minorities, powerful interest groups may end up capturing the benefits of the road improvement. This is especially true for penetration roads. For example, after a recently constructed (under AID auspices) penetration road in Palawan running from the poblacion of Aborlan into the foothills and ending in Kabigaan (about 10 kms. long), the land titles of about 10 ethnic minority title holders were cancelled in favor of lowlanders. In addition, there are 120 minority farmers that hold no title to their ancestral land, and are in danger of suffering relocation.

249

Table 4.1 shows the inverse correlation between tenurial status in a barrio and the accessibility of the barrio. In a recently conducted survey of feeder roads, it was found that farmers tilling land within easy access to the poblacion on local market are more likely to be tenants than farmers tilling land in more remote areas. For example, the table indicates that about 40% of the land in the barrio closest to the poblacion is tilled by tenants, whereas only 9% of the land in remote barrios is tilled by tenants. The conclusion to be drawn from this data is that feeder road improvement making barrios more accessible would have a regressive impact on the small farmer tenure in the roads zone of influence.

This conclusion drawn from a limited survey of 5 feeder roads is also supported by the much more ambitious survey in 1975 made by the Social Services Research Unit of the Bicol River Basin Council. And, they state that, without vigorous enforcement of the current land reform laws, the improved areas and greater value of land due to feeder road improvement will encourage the wealthier and better educated landlord class to move in, purchase land, and establish a tenancy relationship.

It will therefore be necessary to, concurrent with or prior to road construction, support vigorous implementation of land reform along the feeder-roads proposed for improvement. Though neglect of land reform implementation will not decrease the expected increase in land productivity, it will reduce the beneficial impact feeder road improvement may have on income distribution.

.25(

TABLE 4.1: AMOUNT OF LANDOWNERSHIP OF BARRIOS ALONG FEEDER ROADS VERSUS BARRIO ACCESSIBILITY

Measure of Barrio Accessibility	% of Land Operated By Tenants
Easy access (transport cost less than 2 pesos per passenger trip)	38
Medium access (transport cost between 2 and 4 pesos per passenger trip	24
Difficult access (transport cost between 4 and 6 pesos per passenger trip)	18
Very difficult access (transport cost more than 6 pesos per passenger trip	9

251

From a survey of 40 barrios in Misamis Oriental and South Cotabato May 1977.

ANNEX M

PROJ # 29

ANNEX M

REPUBLIC OF THE PHILIPPINES
NATIONAL ECONOMIC AND DEVELOPMENT AUTHORITY
P.O. Box 1116, Manila

Tel. 50-39-71
Cable Address: NEDAPHIL

August 15, 1977

RECEIVED
AUG 17 11 04 AM '77
USAID/C&R

Mr. Peter M. Cody
Director, USAID Mission
M a n i l a

Dear Mr. Cody,

I wish to refer to USAID letter of May 9, 1977 presenting the project paper for the Rural Road II Project.

255

I endorse the project and its component and hereby request a development loan of $24.0 million.

DIV.	A. I.	INF
O' M		✓
PE		
LA		
PO		✓
TD		
OEO		
CMO		
CSD		
GSO H		
GSO S		
LOG		
PER		
OC		
AO		
CD		✓
HRD		
PD	✓	
RD		
IIS		
AAG EA		
THV		

It is my understanding that the cost figures indicated in the project paper are planning figures and that these will be subject to refinements when a more detailed calculation of requirements for each activity shall have been determined.

Sincerely yours,

GERARDO P. SICAT
Secretary of Economic Planning
(Director-General)

ACTION TAKEN	
NAN ✓	Other
Type	No.
Dated	Initials

DATE ANSWER DUE 8-24-77

RECEIVED 8/17 Provincial Development

APPENDICES

LOCAL DEVELOPMENT PROJECT

EVALUATION PROJECT NO. 492-11-995-256

Appendix IA

PREPARED BY: USAID Philippines

May 1977

II. SUMMARY OF FINDINGS AND RECOMMENDATIONS

The following is a summary of findings and recommendations concerning the Local Development project.

259

12. It is suggested that the present approach to economic feasibility analysis using financial (or market) prices be upgraded to an approach using economic shadow prices and including distributional weighting of incomes and consumption. This social benefit cost analysis approach would significantly enhance the economic feasibility and priority of projects aimed at benefiting the rural poor. This would ensure that the results of the feasibility analysis are consistent with regard to the national and provincial objectives on income distribution.

13. A need for additional training and more intensive follow-up in connection with feasibility studies was identified. PDAP should consider holding seminars utilizing case studies of recent feasibility studies which could be critically analyzed and evaluated. Such seminars to be held under the guidance of a senior planning consultant.

V. ANALYSIS AND EVALUATION

8. Economic Analysis

In the economic analysis or project preparation area it now appears that the PDS staffs of the more senior PDAP provinces have learned the rudiments of project justification. This, by itself, is a very significant step towards the rational selection of projects for the provinces development plan. And, PDAP can be quite confident that the benefits of selected projects will exceed the costs. This is especially true since, during the next few years, the highest ranking projects will have B/C ratios and IRR's that are quite high, and that may have B/C levels exceeding 5 and IRR's larger than 50 per cent. With such highly feasible projects the inaccuracies inherent in applying only the simplest techniques of project justification will not seriously disturb the efficiency of the development program. However, the time is perhaps right to prepare the PDS staff for a more sophisticated application of project evaluation. This approach stresses the quantification, via the use of appropriate shadow prices, of social rather than financial costs and benefits. Such an approach (and it can be applied using similar simplifying techniques as are now being applied by the PDS staff) enables the explicit taking into account of the impact of a project on the distribution of income within a province, both between investment and consumption and between rich and poor. The social benefit/cost ratios derived in this way would also be of great value in the presently difficult and almost unmanageable task of priorizing the projects proposed for the PCP. It would ensure that project benefits would have the desired impact of raising the incomes of the rural poor.

261

9. Training

A need for additional training in connection with feasibility studies was identified during the field visits Consideration should be given by PDAP to establishing seminars where the PDS planning specialists of all PDAP provinces meet, and where, under the guidance of a senior planning consultant, a case study of one or more recent economic feasiblity studies prepared by a PDS is critically discussed and evaluated. It was noted that after a PDS completed and submitted a feasiblity study in partial fulfillment of the requirements of getting a project approved under the fixed reimbursement scheme, the feasibility study would be filed without careful review and without any feedback to the PDS staff about possible deficiencies that needed correction or suggestions how the analysis could be improved. Thus, once having received training, the PDS staff level of competence would remain somewhat static rather than growing. This is especially detrimental in view of the fact that the PDS staffs do not have the technical libraries containing reference texts and periodicals that could be used for self-improvement and home study. A typical example of a procedural error in the economic feasibility studies reviewed by the consultant, and these were all road projects, were those dealing with road maintenance cost savings resulting from

road im... ...metimes these savings were ignored, sometimes they were double counted, and sometimes these savings were treated as a cost rather than a benefit. Thus, it is clear that in the otherwise excellent training course, the treatment of maintenance cost savings was not adequately presented. With review of all feasibility studies by a development economist, and a follow-up via a review seminar attended by all PDS staff involved in project preparation, such procedural errors can be gradually eliminated. Another problem area that could be corrected during review seminars is teaching the use of economic costs and benefits rather than the financial prices as are used now.

APPENDIX I-B: ANALYSIS AND EVALUATION OF ECONOMIC ANALYSIS METHODOLOGY IN RRP I AND REVISIONS FOR RRP II

A. General

The titled methodology was formulated during 1976, the first full year of RRP I operation, as part of the Administrative Procedures Booklet No. 2 (May 1975); continuous review and field changes resulted in a complete revision published in May, 1977. Major revisions in method are summarized:

1. The survey instrument (questionnaire) used for gathering primary data on the economic aspects has been expanded to include all types of produce-farming, poultry, fishponds, etc. Pricing and transport costs are likewise required for the five previous years as well as the current year.
2. Determinations of the "area of influence" for each road is now effected with greater technical accuracy. For example, determination now takes into consideration:
   a) relevant topographical features - rivers, mountain ranges and other natural barriers which may limit the influence area.
   b) the existence of other roads within the area under construction.
   c) the availability of other modes of transport, especially water, which may tend to compete.
   d) knowledge of resident's preference for the road.

Further, access has been gained to the RPTA aerial photos and topographic maps to assist in determining land use patterns. Field surveys also have demonstrated that residents of more distant barangays whose access to the road understudy is through the barangays lying along the road are also influenced by construction or improvement of rural roads.

3. Annual daily traffic count now reflects not only the average number of vehicles using the road, but also the direction of the trips, through a simplified origin-destination survey.
4. Revised methodology described in Booklet No. 2 gives essential details required for feasibility studies which will set pattern for project priority. Training courses based on the revision were

held in June and July 1977 for participating provinces; additional sessions are scheduled in 1978. Future training to cover RR I and RR II provinces and cities.

5. The revised methodology is also incorporated in PDAP's Road Network Development Planning (RNDP) activity which is a sine qua non for RRP participation.

B. The Methodology

Our basic approach is a comparison of road development benefits relative to costs, 1) without the road project, and 2) with the road project (improvement and/or construction). This procedure has four major steps:

1. Initial screening of projects according to the selection criteria as contained in Booklet No. 2, pp 1-16.
2. Subjecting 5 to 10 projects that survived initial screening to an engineering analysis.
3. Determination of the economic feasibility of subproject proposals on the basis of either one of the two commonly used measures in cost-benefit analysis: the Internal Rate of Return (IRR) or the Benefit Cost (B/C) ratio.
4. Ranking the project proposals first on basis of their IRR's (or B/C ratios) and then on the basis of their socio-economic benefits, e.g., increased access to health, educational welfare, population centers, nutrition outreach and other social service facilities, as well as access to planned provincial development projects. A short description on the potential involvement of women related to the road improvement will also be required.
5. More particularly the "analysis of impact and beneficiaries" is now being field-tested and will be incorporated in a further revision of the Administrative Procedures. However, our present methodology is summarized as follows:

264

a) Conduct social mapping of project areas identifying:

1) Socio-economic levels of area residents

2) Breakdown of resident land holding size

3) Geographic location of socio-economic levels and land holding size groupings in relation to the road.

b) Gather descriptive and quantifiable data for the use of roads completed under Rural Roads I.

1) Identification of road users.

2) Description of categories or types or road use in areas of economic, education, health, social services, and other activities.

3) Time allocation for road related activities.

4) Road related migration or mobility.

c) Discern the quantitative and qualitative impact of roads through:

1) In addition to collection of hard data through feasibility study also survey users' memory of situation without road or road improvement.

2) Investigate items under B for a similar area currently without a road.

3) Attempt to various facets of road impact, e.g., changes in trips to poblacion; access to services and employment transportation costs; school enrollment for students from project area.

265

C. The Economic Analysis

Determination of economic feasibility of each subproject requires comparison of total benefits to total costs. The total costs include the project cost, maintenance/operating expenses and salvage value of the project after its economic life has elapsed. The expected or assumed benefits also depend on the classification of the road, i.e., Major, Penetration or Minor Rural Road. Among the expected economic benefits

are: transport cost savings (for both passenger and agricultural trucks trips), incremental production from better use of idle and under-cultivated agricultural lands, reduction in road maintenance cost. Past experience (See PP Anex L) shows that transport cost savings are passed to small farmers and rural poor in the form of reduced transport rates because of decreases in vehicle operating costs and, in most cases, abolition of transport monopoly servicing the route. These are computed using the methodology suggested in an IBRD study (Road Feasibility Studies II)*, which also serves as a model to estimate average annual/daily traffic generated in the influence area.

Better use of idle and under-cultivated lands results in increased production and direct benefits to the rural poor. Diversity in perishable crop production may rise as a result of easier access to the market centers.

The incremental production is determined by projecting the production within the influence area of the road from the existing under-utilized agricultural and idle lands and valuing these at current market prices.

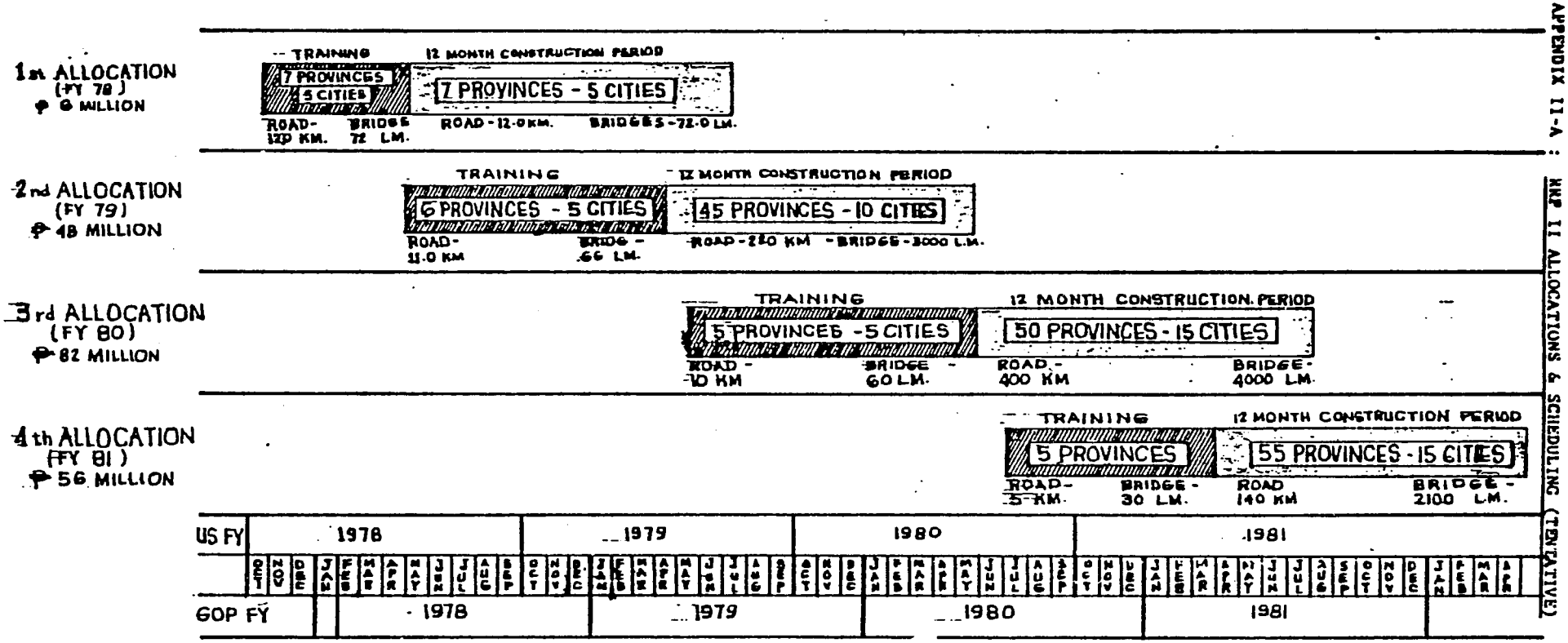
These two expected benefits (expressed in terms of pesos) are totaled, and then divided by the total cost to obtain the B/C ratio.

266

*"Road Feasibility Study II, "by Norconsult A.S. and Hoff and Overgaard, June 1975, Manila

RRP II - $ 24 M
CONSTRUCTION SCHEDULING

16 JANUARY 78



APPENDIX 11-A : RRP II ALLOCATIONS & SCHEDULING (TENTATIVE)

APPENDIX II-B

DEPARTMENT OF LOCAL GOVERNMENT AND COMMUNITY DEVELOPMENT
RURAL ROADS PROGRAM
TENTATIVE ALLOCATION
Schedule CY 79 - CY 81

Provinces	1978	1979			1980			1981		
	RRP	Capability	RRP II	Other Donor	Capability	RRP II	Other Donor	Capability	RRP II	Other Donor
1. Iloilo			1.0			2.0			1.0	
2. South Cotabato			1.5			3.0			1.0	
3. Pangasinan			1.5			3.0			1.0	
4. Bataan			1.0			1.5			1.0	
5. Pampanga			1.0			1.5			1.0	
6. Bulacan			1.5			3.0			1.0	
7. Batangas			1.0			1.5			1.0	
8. Camarines Sur			1.0			1.0			1.0	
9. Palawan			1.0			1.5			1.0	
1. Mindoro Oriental			1.0			2.0			1.0	
2. Davao del Norte			1.0			3.0			1.0	
3. La Union			1.0			1.5			1.0	
4. Zambales			1.0			1.0			1.0	
1. Leyte			1.5			2.0			1.0	
2. Misamis Oriental			1.0			1.0			1.0	
3. Tarlac			1.5			3.0			1.0	
4. Nueva Ecija			1.5			3.0			1.0	
5. Laguna			1.5			2.5			1.0	
6. Albay			1.0			1.0			1.0	
7. Samar			1.0			1.0			1.0	
8. Aklan			1.5			1.5			1.0	
9. Capiz			1.5			1.5			1.0	
10. Agusan del Norte			1.0			1.5			1.0	
1. Sorsogon			1.0			1.0			1.0	
2. Cebu			2.0			3.0			1.0	
3. Cagayan			1.0			2.0			1.0	
4. Quezon			1.0			1.5			1.0	
5. Mindoro Occidental			.5			1.0			1.0	
6. Antique			.5			1.0			1.0	
7. Agusan Sur			1.0			1.5			1.0	
8. Lanao del Sur			.5			1.0			1.0	
9. Abra			.5			1.0			1.0	

Total RRP II _____
" Other _____
" Donor _____

DEPARTMENT OF LOCAL GOVERNMENT AND COMMUNITY DEVELOPMENT
RURAL ROADS PROGRAM
TENTATIVE ALLOCATION
Schedule CY 78 - CY 81

Provinces	1978			1979			1980			1981		
	Capa-bility	RRP II	Other Donor	Capa-bility	RRP II	Other Donor	Capa-bility	RRP II	Other Donor	Capa-bility	RRP II	Other Donor
1. Davao del Sur		.6			1.0			1.5			1.0	
2. Marinduque					.5			1.0			1.0	
3. Negros Occidental		.8			2.0			3.0			1.0	
4. Misamis Occidental		.5			1.0			1.0			1.0	
5. Zamboanga del Norte		.5			.5			.5			1.0	
6. Sulu								.5			.5	
1. Zamboanga del Sur		.5			.5			1.0			1.0	
2. Basilan								.5			.5	
3. Isabela					.5			1.0			1.0	
4. Bohol					.5			1.0			1.0	
5. Surigao del Sur								.5			.5	
6. Camarines del Norte					.5			1.0			1.0	
7. Catanduanes		.6			1.0			2.0			1.0	
1. Lanao del Norte								.5			.5	
2. Sultan Kudarat								.5			.5	
3. Ilocos del Sur					.5			1.0			1.0	
4. Southern Leyte					.5			1.0			1.0	
5. Tawi - Tawi											.4	
6. Masbate		.5			.5			1.0			1.0	
1. Negros Oriental											.3	
2. Benguet											.3	
3. Nueva Vizcaya											.3	
4. Kalinga Apayao											.3	
5. Bukidnon											.3	
6. North Cotabato											.3	
7. Maguindanao											.3	
SUB-TOTAL		4.			43.5			75.			5.0	

Total RRP II _____
" Other _____
" Donor _____

APPENDIX III: FINANCIAL PLAN AND BUDGETARY REQUIREMENTS

COSTING OF PROJECT OUTPUT/INPUT
($000)

PROJECT PAPER

PROJECT # 492-T-0297 RURAL ROADS II X New / Rev.

PROJECT INPUTS	Project Outputs		
	Roads Constructed	Bridges Constructed	Total
AID Appropriated			
Direct Amount Reimbursement	14000 1/	10000	24000
Host Country			
Program Support (DLGCD)	1080	720	1800
Program Support (Local)	1680	1120	2800
Engineering Services	1005	670	1675
Seed Money	2160	1440	3600
Local Government Share-construction	4667	3333	8000
TOTALS	24592	17283	41875

271

1/ $12,000.00 earmarked for local consultancy services.

DEPARTMENT OF LOCAL GOVERNMENT AND COMMUNITY DEVELOPMENT
TENTATIVE ALLOCATION
CY 79 - 81
RSC

ID NO.	CITY	1978	1979	1980	1981
AD	Dagupan	0.4	0.5	0.5	0.4
AQ	Puerto Princesa	0.4	0.5	0.5	0.4
AV	Legaspi	0.4	0.5	0.5	0.4
AY	Roxas	0.4	0.5	0.5	0.4
CE	Cagayan de Oro	0.4	0.5	0.5	0.4
AW	Iriga		0.4	0.5	0.4
AL	Lipa		0.4	0.5	0.4
BX	Zamboanga		0.4	0.5	0.4
AJ	Olongapo		0.4	0.5	0.4
AI	Angeles		0.4	0.5	0.4
BC	Calbayog			0.4	0.4
AR	Lucena			0.4	0.4
AK	Batangas			0.4	0.4
BY	Butuan			0.4	0.4
CH	Gen. Santos			0.4	0.4
	SUB-TOTAL	2	4.5	7	6

OVERALL	1978	1979	1980	1981	=	
TOTAL	6.0	48	82	56	=	192 M

SUMMARY COST ESTIMATE AND FINANCIAL PLAN
($000)

	AID-LOAN FX	HOST COUNTRY LC	TOTAL
Construction Services - Roads	-	18667 1/+ 2/	18667 1/+ 2/
Construction Services - Bridges	-	13333 1/	13333 1/
Engineering Services	-	1675	1675
Seed Money (Grant in-aid)	-	3600	3600
Project Support	-	4600	4600
Direct Amount Reimbursement	24000	-	24000
Sub-Total	24000	41875	65875
Delete DAR/Non-adds		24000 1/	24000 1/
Total	24000	17875	41875

1/ Combined GOP inputs in those categories total $32 million which is offset by AID issued Direct Reimbursement Authorization (DRA) in the amount of $24 million.

2/ $12,000.00 earmarked for local consultancy services.

RURAL ROADS II
FINANCIAL PLAN
(1978 - 1981)
($000)

	YEAR 1		YEAR 2		YEAR 3		YEAR 4		ALL YEARS		
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	TOTAL
AID APPROPRIATED:	1000	-	6625	-	7875	-	8500	-	24000	-	24000
Direct Amount Reimbursement	1000 1/	-	6625 1/	-	7875 1/	-	8500 1/	-	24000 1/	-	24000 1/
HOST COUNTRY:		728	-	4957	-	5825	-	6365	-	17875	17875
Construction Services Road & Bridges	-	1333	-	8833	-	10500	-	11334	-	32000	32000
Engineering Services	-	67	-	462	-	550	-	596	-	1675	1675
Seed Money	-	144	-	1000	-	1175	-	1281	-	3600	3600
Project Support	-	184	-	1287	-	1475	-	1654	-	4600	4600
Direct Amount Reimbursement from AID		(1000)	-	(6625)	-	(7875)	-	(8500)	-	(24000)	(24000)
TOTALS	1000	728	6625	4957	7875	5825	8500	6365	24000	17875	41875

1/ - $3,000.00 earmarked annually for local consultancy services. Total amount is $12,000.00

APPENDIX IV: SUMMARY OF PRE-SELECTION & SITE CRITERIA

A. Pre-Selection Criteria

The following are the criteria followed by the provinces by which road and bridge projects are screened for further selection processing. (Taken from items 4, 5, & 6, Administrative Procedures, Booklet #2, Revised May, 1977, p. 1-13).

1. The project must be all or part of a continuous road system linking an agricultural area of predominantly small farmers or fishermen with the nearest market or poblacion. This eliminates projects where -

   a) roads are isolated from the main provincial transport network.

   b) the roads serve only or predominantly, those who are economically better off.

2. The project must link up with a road of equal or higher quality which in turn connects with roads of at least equal quality that lead to the nearest market or poblacion.

3. Structures which are components of the road between the project and the nearest market or population centers, following the normal traffic route between the two locations, must be of at least equal capacity to the highest standard to be erected within the system or are programmed for replacement under this program.

   - Criteria 2 and 3 ensure that movement in and out of the area to the larger urban areas will be more regular. It would, for example, be wasteful to construct a reinforced concrete deck bridge if that bridge site cannot be reached from the market town because of poor road sections not included in the subproject.

275

B. Site Selection Criteria

In addition to the above listed criteria, it is also required that the Provincial Engineer's Office conduct an engineering study of at least 10 projects which passed the initial selection criteria. The study determines whether the terrain, soil and topography will permit implementation of the project considering the present capability of the province in terms of construction equipment and techniques available. For others, the following should be established:

1. Present condition of the proposed project
2. Quality of construction
3. Nature of the Project
4. Traffic count
5. Plans and Specifications
6. Cost Estimates
7. Project Phasing - if the total system as noted in A-1 above, can't be completed in a year's time.

APPENDIX V: OPERATION OF THE HIGHWAY SPECIAL FUND

I. Policies and Rules on the Implementation of the Highway Special Fund (RA 917) as amended by PD 17, 130, 320 and 1108)

Republic Act 917, otherwise known as the Highway Act of 1953, was enacted "to provide for an effective highway administration, modify the apportionment of highway fund, and give aid to provinces, chartered cities and municipalities in the construction of roads and streets and for other purposes".

Under this Act, accruals to the Highway Special Fund are used for the construction, improvement and maintenance of public roads - the national, provincial, city and municipal roads.

In October 1972, RA 917 was amended by Presidential Decree No. 17, and the result is now known as the "Revised Philippine Highway Act". The Revised Act provides:

A. Control in the disposition of all funds accruing to the Highway Special Fund;

B. The manner of apportionment and conditions under which such apportionment shall be released;

C. The selection and designation of highways or highway projects to receive national aid;

D. The expenditures for the administration, maintenance,

improvement, betterment and rehabilitation on highway projects;

E. The classification of highways;

F. The widths, acquisition and use of rights-of-way.

Disposition of Highway Revenue

The Act provides that "monies collected shall be deposited as a special trust account in the National Treasury to constitute the Highway Special Fund, which shall be apportioned and expended in accordance with the provision of the Revised Philippine Highway Act".

In accordance with the provisions of PD 17 as amended by PD 130, 320 and 1108, the Highway Special Fund will be apportioned and expended as follows:

A. Fixed Deductions - 28%

1. Administrative Expenses - 6%
2. Preliminary Engineering - 2%
3. Contingent Emergency Exp.-10%
4. Discretionary Fund - 10%

B. Maintenance Fund

1. National Roads - The national highway maintenance fund shall be apportioned to all Districts and Cities to be determined on the basis of the sum of the total equivalent maintenance kilometers (EMK) of national

roads, multiplied by the basic maintenance cost per kilometer, of a standard equivalent maintenance kilometer, at current prices or wages.

2. National Aid-Highway Maintenance Fund

The Revised Philippine Highway Act, provides that the apportionment of national aid for maintenance of local roads shall be determined as follows:

(a) Provinces shall receive fifty per centum of the current basic cost of maintenance per equivalent maintenance kilometer of national road, for each kilometer of actual physical length of provincial road whose existence is recommended by the Provincial Governor and accepted by the Commissioner (Secretary) of Public Highways.

279

(b) National Aid for city roads shall be thirty three and one-third per centum of the current basic maintenance cost per equivalent maintenance kilometer of national road, for each kilometer of city road and street established by the City Council and approved by the Commissioner.

(c) National Aid for municipalities shall be thirty per centum of the current basic maintenance cost per equivalent maintenance per kilometer of national road, for each kilometer of municipal road whose existence is established by the Municipal

Council and approved by the Commissioner (Secretary) of Public Highways or his designated representative.

(d) In order to qualify for national aid for said maintenance, provinces, cities and municipalities shall be required to submit for approval by the Secretary of the Department of Public Highways, an annual maintenance program, two months prior to the start of each new financial year, for the entire network of roads under their jurisdiction. Provincial, city or municipal treasurers shall submit to the Department of Public Highways a quarterly certification of counterpart road and bridge maintenance funds for their respective municipality, city or province. Certifications made by municipal treasurers shall be attested to by their respective provincial treasurers.

The President may set the level of counterpart road and bridge maintenance funds to be appropriated by local government units. These shall be initially at least equal to one-half of the amount of national aid in the case of provincial roads; at least twice the amount of national aid for city roads; and at least two-thirds of national aid for municipal roads: PROVIDED, that the President may set local counterpart maintenance requirements for barangay roads which shall be appropriated by the municipalities or cities concerned".

(e) Notwithstanding these provisions to the contrary, provinces, cities and municipalities whose road and bridge funds are insufficient as certified by the provincial, city or municipal treasurer concerned, to provide the road maintenance counterpart, if all the legally required local road and bridge funds of the municipality, city or province were applied to road maintenance to the extent required to complete their approved maintenance program, may upon certification of the Secretary of Finance, be granted assistance from national funds by the President, subject to an absolute limit on financial assistance and national aid of three halves the national aid share for provinces, three times the national aid share for cities and five-thirds the national aid share for municipalities.

281

(f) The funds provided for under this section shall be released immediately at the beginning of each quarter, and it shall be unlawful for any fiscal officer to withhold or cause withholding of national aid maintenance funds except for the following causes:

(aa) Failure to prepare an acceptable road maintenance program. In this event the allotment

shall be reserved for two subsequent quarters at which time if no acceptable program is prepared the allotment shall revert to the discretionary fund.

(bb) Failure to appropriate counterpart funds. In this event the allotment shall be reserved for two quarters pending such appropriation by local government, in the absence of which it shall revert to the discretionary fund.

(cc) Failure to expend national aid and counterpart, funds appropriated for maintenance in accordance with the approved maintenance program or approved revisions thereto during the previous quarter. In this event, the national aid funds for the subsequent quarter will be reduced by the amount of the unexpended balance of national aid maintenance funds or of the misapplied national aid maintenance funds, the local authority must satisfy the uncompleted requirement of the approved program or replace the misapplied funds in order to claim the release of the portion withheld. At the end of the fiscal year, all the unexpended national aid portion shall revert to the discretionary fund.

(dd) Failure to properly account for the national aid money received. The amount not properly accounted shall be withheld from the subsequent re-

leases of national aid maintenance funds, pending proper accounting. In the event of failure to furnish proper accounting within three months, the funds withheld shall be forfeited and returned to the Bureau of Public Highways, Discretionary Fund.

(ee) Failure to pay outstanding obligation to the Bureau of Public Highways (now Department) within thirty days from receipt of invoice. In this event the outstanding amount of the obligation shall be deducted from the next release of national aid maintenance funds, and the entire national aid share to local road maintenance shall be deemed to have been paid for purposes of future accounting.

283 (g) If the sum total of national aid and counterpart funds provided to any local government exceeds the approved maintenance program the program may be expanded to include rehabilitation, betterment, and improvement works on roads within the jurisdiction of said local government, as approved by the Secretary of Public Highways, or his designated representative.

"SEC. 11. Supervision and control of projects financed by the national government. - The provisions of any existing law, rule or regulation to the country notwithstanding, all highways work projects

financed by the national government through the Department of Public Highways expenditure program shall be under the control and supervision of the Department of Public Highways, subject to such laws, rules and regulations governing the prosecution of public works projects; PROVIDED, That local government projects supported by the national government through the Department of Public Highways expenditure program, whether for maintenance, rehabilitation, betterment or for improvement, shall be under the direct control and supervision of the respective local government units; PROVIDED, HOWEVER, that the Department of Public Highways shall set maintenance standards, planning requirements and control procedures governing the approval and release of national aid funds as necessary to carry out the requirements of Section eight of this Act, and for this purpose, may inspect the financial accounts, work records and maintenance sites of local authorities; PROVIDED, FURTHER, That the Department of Public Highways shall adopt the necessary procedures for monitoring the financial and physical aspects of road maintenance activities of local governments, to be augmented by appropriate mechanisms for reporting on such maintenance activities which may be separately established by the Department of Finance and the Department of Local Government and Community Development in the exercise of their respective jurisdictions over local governments, as authorized by law."

284

II Rules and Regulations governing the determination as to what local roads (Provincial, City and Municipal) recommended by the local authorities shall be approved or accepted by the Commissioner of Public Highways for purposes of allocating and programming "national aid" funds for maintenance pursuant to the revised Philippines Highway Act as amended.

1. That it is an existing, unabandoned Provincial, City or Municipal road/street that is actually serving motor vehicle traffic. (For this purpose, tricycles and bicycles are not considered as included under "Motor Vehicle Traffic").

2. That the road/street shall have a minimum Right-of-Way of:

   Fifteen (15) meters in the case of Provincial Roads/ Streets.

   Ten (10) meters in the case of City Roads/Streets.

   Ten (10) meters in the case of Municipal Roads/Streets

   The Local Government concerned shall take steps to acquire the minimum Right-of-Way required, within three (3) Fiscal years from fiscal year 1973-1974 to fiscal year 1975-1976. Beginning fiscal year (1976-1977), local roads with Right-of-Way less than the minimum required shall not be entitled to aid for maintenance EXCEPT in cases of roads/streets in urban areas (as distinguished from rural areas) where the Local Government concerned, in spite of steps actually taken to acquire it because of high costs that it cannot yet meet or because of undecided court cases involved, in which case the subject road/street involved may be temporarily included in the computation of "national aid" for maintenance PROVIDED it has at least EIGHT (8) meters Right-of-Way.

285

3. That the road/street is declared as a Provincial road/street, or City road/street, or Municipal road/street, by the Provincial Board, City Council, or Municipal Council concerned upon the recommendation of the Provincial Governor, the City Mayor, or Municipal Mayor as the case may be.

4. That the road/street satisfies at least one (1) of the following requirements:

   (a) The road/street is in the poblacion or urban area.

   (b) It connects a Municipality with another Municipality.

   (c) It leads to a public railway station, wharf or airport.

   (d) It serves production areas, or points of interest (like a tourist spot).

   (e) It connects the poblacion with a Barrio.

   (f) It connects with poblacion with a National or Provincial Road.

   (g) It connects a Barrio with a National or Provincialroad.

   PROVIDED that a road/street satisfying any one (1) of the requirements (a) to (g) above has a travelled-way suitable for its motor vehicle traffic under ordinary or normal conditions, including drainage facilities (roadside drainage and cross-drainage structures).

5. In order that a Provincial, City or Municipal road/street shall be included in the determination of "national aid" for maintenance, it shall satisfy Conditions No. 1, No. 2,

No. 3, and at least one (1) of the requirements (a) to (g) of No. 4 together with the requirements about the travelled-way and drainage facilities. However, Provincial, City and Municipal roads/streets that are existing, unabandoned and actually serving motor vehicle traffic as required in No. 1 above and declared as Provincial, City or Municipal road/street as required in No. 3 above may be considered for aid for maintenance during the Fiscal Year 1973-1974 even if the other conditions mentioned above are not yet satisfied. In subsequent fiscal years, however, beginning fiscal year 1974-1975, a road/street that does not satisfy Conditions Nos. 1 to 4 shall not be eligible for inclusion unless otherwise stated above.

287

MAINTENANCE OF ROADS UNDER PD 1108

SYSTEM CLASSIFIED	TOTAL EXISTING & UNABANDONED KMS. (A)	UNIT COST (B)	TOTAL MAINTENANCE REQUIREMENT (C)	H S F (D)	LOCAL FUND (E)	REMARKS (F)
1. National Roads		₱ 11,342/EMK	(A) x (B) = C	C	None	3/4 of EMK
2. Provincial Roads		8,506.50km	(A) x (B) = C	2/3 (C)	1/3 (C)	
3. City Roads		11,342/km	(A) x (B) = C	1/3 (C)	2/3 (C)	
4. Muncipal Roads		5,671/km	(A) x (B) = C	0.60(C)	0.40(C)	

1. Provincial Roads - The national aid for the maintenance of provincial roads is equivalent to 50% of the basic cost of maintenance per equivalent kilometer of national road, or ₱11,342 = ₱5,671.00/Physical kilometer. The amount to be provided by the Provincial Government is equivalent to 1/2 of the national aid or ₱2,835.50/physical kilometer. This gives therefore a total unit cost of ₱8,506.50/physical kilometer.

2. City Roads - For the maintenance of City Roads, the amount of national aid is equivalent to 1/3 of the unit cost/EMK or ₱3,780.66/physical kilometer. The counterpart fund is equivalent to twice the national aid or ₱7,561.32 or a total of ₱11,342/physical kilometer.

3. Municipal Roads - The national aid for the maintenance of Municipal Roads is 30% of the basic maintenance cost/EMK or ₱3,402.60/physical kilometer. The Municipal Government provides a counterpart equivalent to 2/3 of the national aid or ₱1,134.20/physical kilometer. The aum of these two funds or ₱5,671.00 will be the unit cost of maintaining a physical kilometer of municipal road.

HSF - Highway Special Fund

APPENDIX V-B

MALACAÑANG
MANILA

LETTER OF INSTRUCTIONS NO. 519

RELATIVE TO NATIONAL GOVERNMENT ASSISTANCE
IN THE MAINTENANCE OF LOCAL ROADS

TO: The Secretary of Public Highways
The Secretary of Finance
The Secretary of Local Government and Community Development
The Acting Commissioner of the Budget
All Heads of Local Government Units

WHEREAS, the proper maintenance of the country's highways and roads is essential to national economic development;

WHEREAS, it is necessary to adopt a more efficient system of allocating and releasing funds to improve and accelerate the execution of the road maintenance program;

NOW, THEREFORE, I, FERDINAND E. MARCOS, President of the Philippines, hereby direct the following:

289

1. Local government units are authorized to spend local funds for road and bridge maintenance prior to the release of National Government aid: PROVIDED, That such expenditures are duly certified to and reported to the Department of Finance and the Department of Public Highways.

2. The national aid for local roads maintenance shall be understood to cover the maintenance of local bridges or local roads.

3. Local government units shall use the approved EMK as basis for funds programming for the local counterpart in local roads maintenance. For this purpose, the Department of Finance in coordination with the Department of Public Highways, shall notify at the appropriate time, local governments of the EMK figure they should use for the incoming budget year.

4. The Department of Public Highways may release in the first quarter of the calendar year the full national government contribution to local road maintenance pertaining to the Quarter, even pending the certification as to the appropriation of local counterpart funds by the Treasurer of the local government unit concerned.

5. The Department of Finance shall monitor actual expenditures of local government units for local road maintenance, which shall be made the basis for releases of national roads and bridge maintenance aid by the Department of Public Highways subsequent to the first quarter release.

6. Local government units which are financially distressed and which cannot establish all or part of the local counterpart fund for the maintenance of local roads may, upon certification by the Department of Finance to this effect, be entitled to the full release of the national aid for local road maintenance. For this purpose the Department of Finance shall prepare annually a list of depressed local government units which are unable to establish local counterpart maintenance funds, which list shall be reviewed periodically and certified by the Secretary of Finance and made the basis for the release of the national aid for maintenance of local roads.

7. The Department of Public Highways shall establish a mechanism for independently monitoring physical performance on the maintenance of provincial and city roads.

8. The Department of Local Government and Community Development and the various Provincial Governments shall establish a mechanism for independently monitoring physical accomplishments in the maintenance of municipal and barangay roads: PROVIDED, that barangay roads in cities shall be monitored by City Engineers.

9. The findings of the District, Provincial and City Engineers in items Nos. 7 and 8, above, with respect to compliance by local governments with approved physical standards of maintenance and with the utilization of local counterpart maintenance funds, shall determine the rate of release of national aid funds for maintenance of local roads, following such rules and regulations as shall be jointly promulgated by the Department of Public Highways, Department of Local Government and Community Development and the Department of Finance.

10. The Commission on Audit shall review the cost estimates for the various types of roads, with the aim of reducing the existing cost per equivalent maintenance kilometer (EMK).

11. The Budget Commission shall review the over-all requirements for road maintenance and transfer from Projects 4.1 and 4.2 of the DPH budget under P.D. No. 1050, to the highway maintenance fund, such amounts as maybe necessary to cover any deficiency in national and local roads maintenance funds.

12. All heads of local governments shall extend full support and assistance to National Government authorities concerned in carrying out the directives under this Letter of Instructions.

13. This Letter of Instructions shall take effect immediately.

DONE in the City of Manila this 22nd day of March, in the year of Our Lord, nineteen hundred and seventy-seven.

291

(SGD) FERDINAND E. MARCOS

CERTIFIED COPY

(SGD) MELQUIADES T. DELA CRUZ CESC II
Presidential Staff Director

TRUE COPY

MALACAÑANG
Manila

PRESIDENTIAL DECREE NO. 1108

AMENDING FURTHER THE REVISED PHILIPPINE HIGHWAY ACT, AS AMENDED, TO FACILITATE THE MAINTENANCE OF LOCAL ROADS.

WHEREAS, the allocation and use of funds for the maintenance of the country's network of roads and bridges is prescribed in the Revised Philippine Highway Act, as amended;

WHEREAS, it has become necessary to improve procedures for funding the maintenance of local roads and bridges to ensure fully effective local road maintenance programs by local governments; and

WHEREAS, it is desirable to improve the capability of local governments to carry out their road maintenance programs in consonance with the concept of local autonomy;

NOW, THEREFORE, I, FERDINAND E. MARCOS, President of the Philippines, by virtue of the powers vested in me by the Constitution, do hereby order and decree:

SECTION 1. The provisions of Section 8(d), Article IV of Republic Act 917, as amended, are further amended to read as follows:

293

"SEC. 8. National Aid-Highway Maintenance Fund. - The apportionment for national aid for maintenance of local roads shall be determined as follows:

"(d) In order to qualify for national aid for said maintenance, provinces, cities and municipalities shall be required to submit for approval by the Secretary of the Department of Public Highways, an annual maintenance program, two months prior to the start of each new financial year, for the entire network of roads under their jurisdiction. Provincial, city or municipal treasurers shall submit to the Department of Public Highways a quarterly certification of counterpart road and bridge maintenance funds for their respective municipality, city or province. Certifications made by municipal treasurers shall be attested to by their respective provincial treasurers.

The President may set the level of counterpart road and bridge maintenance funds to be appropriated by local government units. These shall be initially at least equal to one-half of the amount of national aid in the case of provincial roads; at least twice the amount of national aid for city roads; and at least two-thirds of national aid for municipal roads: PROVIDED, That the President may set local counterpart maintenance requirements for barangay roads which shall be appropriated by the municipalities or cities concerned."

SECTION 2. Section eleven of the same Act is hereby amended to read as follows:

"SEC. 11. Supervision and control of projects financed by the national government. - The provisions of any existing law, rule or regulation to the country notwithstanding, all highways work projects financed by the national government through the Department of Public Highways expenditure program shall be under the control and supervision of the Department of Public Highways, subject to such laws, rules and regulations governing the prosecution of public works projects: PROVIDED, That local government projects supported by the national government through the Department of Public Highways expenditure program, whether for maintenance, rehabilitation, betterment or for improvement, shall be under the direct control and supervision of the respective local government units; PROVIDED, HOWEVER, That the Department of Public Highways shall set maintenance standards, planning requirements and control procedures governing the approval and release of national aid funds as necessary to carry out the requirements of Section eight of this Act, and for this purpose, may inspect the financial accounts, work records and maintenance sites of local authorities; PROVIDED, FURTHER, That the Department of Public Highways shall adopt the necessary procedures for monitoring the financial and physical aspects of road maintenance activities of local governments, to be augmented by appropriate mechanisms for reporting on such maintenance activities which may be separately established by the Department of Finance and the Department of Local Government and Community Development in the exercise of their respective jurisdictions over local governments, as authorized by law."

294

SECTION 3. Changes in Procedure. - The President may change the procedural requirements and waive in whole or in part, local counterpart requirements for financially distressed local government units, which are prescribed in the Revised Philippine Highway Act (Presidential Decree No. 17, as amended), for the purpose of achieving the timely release of National Government funds intended as aid to local government for local maintenance and generally to ensure the efficient maintenance of local roads.

SECTION 4. Repealing Clause. - The provisions of laws, decrees, orders, rules and regulations or parts thereof which are inconsistent with the provisions of this Decree are hereby repealed or modified accordingly.

SECTION 5. Effectivity. - This Decree shall take effect immediately.

DONE in the City of Manila, this 22nd day of March, in the year of Our Lord, nineteen hundred and seventy-seven.

By the President:

(SGD) JUAN C. TUVERA
Presidential Assistant

CERTIFIED COPY:

295

(SGD) MELQUIADES T. DE LA CRUZ, CESO II
Presidential Staff Director
Malacañang Records Officer

TRUE COPY

APPENDIX V-C

Republic of the Philippines
Department of Public Highways
OFFICE OF THE SECRETARY
M a n i l a

October 26, 1977

C I R C U L A R)
NO. 177)
X— — - - - - -X

TO ALL: Bureau Directors
Highway Regional Directors
Directors and Chiefs of Services
District and City Engineers
and Project Engineers.
This Department

For your information and guidance, quoted hereunder is the Memorandum of Agreement covering guidelines for the implementation of P.D. No. 1108 and LOI No. 519 relative to National Government Assistance in the Maintenance of Local Roads and Bridges as follows:

"MEMORANDUM OF AGREEMENT

KNOW ALL MEN BY THESE PRESENT:

This Memorandum of Agreement is entered into by and between:

The Department of Public Highways, a government entity created in accordance with the laws of the Republic of the Philippines, represented herein by Honorable BALTAZAR AQUINO, Department Secretary, hereinafter referred to as DPH;

217

The Department of Local Government and Community Development, a government entity created in accordance with the laws of the Republic of the Philippines represented herein by Honorable JOSE A. RONO, Department Secretary, hereinafter referred to as DLGCD;

- a n d -

The Department of Finance, a government entity created in accordance with the laws of the Republic of the Philippines represented herein by Honorable CESAR VIRATA, Department Secretary, hereinafter referred to as DOF;

- W I T N E S S E T H -

WHEREAS, national policy calls for concerted efforts on the proper maintenance of the country's highways and roads as these are essential to national economic development;

WHEREAS, it is not only necessary that there is a more efficient system of allocating and releasing funds to improve and accelerate the execution of local roads maintenance program, but also effective control methods should be formalized to effectuate proper expenditures of these allocated and released maintenance funds to attain the intended objectives;

WHEREAS, in line with the requirements of P.D. 1108 and its LETTER OF INSTRUCTIONS No. 519, the THREE (3) Departments, DPH, DLGCD and DOF, sharing in these concepts and ideas met to reconcile ideas and eliminate all loopholes in the proper implementation of the Maintenance of Local Roads Program and to formulate a practical and workable scheme in that direction.

NOW, THEREFORE, for and in consideration of the foregoing premises, the parties herein have mutually agreed with each other as follows:

1. To jointly establish a mechanism which will include the issuance of implementing guidelines and the preparation of a relevant format for independently monitoring the physical performance and financial status of the maintenance of local roads.

2. To jointly make representations with all heads of local governments to extend full support and assistance to the National Government Authorities concerned in carrying out the directive under the Letter of Instructions No. 519.

3. To jointly inform the local government units that they are authorized to spend local funds for road and bridge maintenance prior to the actual release of the national-aid maintenance allocation by the National Government, provided that such expenditures are duly certified to and reported to the Department of Finance and the Department of Public Highways.

4. To jointly advise all local government units that the national-aid maintenance allocation for all local roads is understood to cover the maintenance of local bridges along local roads.

5. To jointly notify at an appropriate time all local government units the amount of the national-aid maintenance allocation for each system classification of all local roads based on the percentages provided for under P.D. No. 17, as amended, of the approved basic cost per EMK of national highways. This amount of the national-aid maintenance allocation plus the local counterpart shall be the basis for funds programming in the preparation of the budget of all local government units for the incoming year.

6. To jointly conduct seminar-workshops among Provincial Engineers; Provincial and City Treasurers; and Highway Regional Maintenance Engineer, Highway District and City Engineers, provided that the travelling expenses to be incurred by the participants shall be for the account of the respective mother agencies.

298

7. The Department of Public Highways, for its part, shall provide and/or undertake the following:

   a. The basic cost per Equivalent Maintenance kilometer (EMk) to be used for the incoming budget year.

   b. The yearly apportionment of the national-aid maintenance allocation for provincial, city municipal and barangay roads of each province, city and municipality, including the required local counterpart.

   c. The full release of the first quarter allocation of the calendar year of the national-aid maintenance fund for all local roads even pending the submission of the certificate of availability of the required local counterpart fund.

   d. The monitoring of the physical performance and financial status on the maintenance of all local roads by preparing the following:

      1. Procedures and/or guidelines.

      2. Preparation of an appropriate format to facilitate submission.

   e. The technical expertise in road maintenance.

299 f. The approval of the program of road maintenance in accordance with DPH standards.

   g. The supervision and monitoring of the actual maintenance performance in accordance with the approved program of work.

8. The DLGCD, for its part shall:

   a. Assume the responsibility, thru its local government agencies, to submit the required annual maintenance program of work at least two months before the beginning of each fiscal year to the DPH Secretary or his authorized representative, the Highway Regional Director, for approval. (The Provincial Engineer of each province shall prepare his own program and all the program of the municipalities in his province. The City Engineer shall prepare his own.)

   b. Instruct local governments to provide for the required counterpart in their respective budgets after having been informed of their national-aid maintenance allocation.

c. Require local government agencies to submit a quarterly report on the physical accomplishments in the past quarter of the maintenance work not later than the 10th day of the first month of the succeeding quarter to the Secretary, Department of Public Highways or his representative, the Highway Regional Director, on the prescribed form.

d. Require all local government agencies to submit an updated and honest inventory of roads in their locality not later than May 31, each year, to the Secretary, DPH for his approval; the additions which shall only be accepted are those which were constructed in compliance with DPH Standards.

In these inventories adherence to the following requirements are strictly enjoined:

1. Existing roads

2. Unabandoned roads

3. Roads being used by vehicular traffic, the least unit of which is a jeep.

e. Monitor the implementation of local roads maintenance.

f. Foster the professional growth and advancement of the officials and employees of the Provincial Engineer's office and other local engineering office.

g. Instruct local government officials to coeperate with DPH Officials on the verification if the road maintenance fund is expended in accordance with the program of work and to accompany them in checking actual physical accomplishments on their roads.

10. The DOF for its part shall:

a. See to it that Provincial, City and Municipal Treasurers submit to the Department of Public Highways a quarterly certification of counterpart road and bridge maintenance funds for their respective province, city and municipality. Certifications made by Municipal Treasurer shall be attested to by the Provincial Treasurer concerned.

b. In coordination with Department of Public Highways shall adopt appropriate mechanics for monitoring financial aspect of road maintenance activities of local government.

c. In coordination with the Department of Public Highways, inform at the appropriate time local road maintenance to the Department of Public Highways

d. Monitor actual expenditures of local government units for local road maintenance to the Department of Public Highways.

e. Prepare annual list of financially distressed local government units which cannot provide in full or part the required local counterpart fund for the maintenance of local roads and shall certify such condition to the Department of Public Highways.

f. See to it that provincial, city and municipal government provide in their respective infrastructure fund budgets the required local counterpart fund for local roads and bridge maintenance.

Implementing guidelines for the Memorandum of Agreement shall be prepared and issued by and between the DPH, DLGCD and DOF.

This shall take effect immediately upon signing.

Done and signed at Manila this ____ day of _____, 1977.

(SGD.) JOSE A. ROÑO
Secretary
DLGCD

(SGD.) CESAR VIRATA
Secretary
DOF

301

(SGD.) BALTAZAR AQUINO
Secretary
DPH

Signed in the presence of:

(SGD.) NESTOR A. QUINTO
Asst. Secretary
for Administration
DPH

(SGD.) PEDRO M. ALMANZOR
Undersecretary

(SGD.) SALVADOR P. SOCRATES
Undersecretary
DLGCD

Attached herewith is the implementing guidelines in the submission of reports on Physical Performance and Financial Status on the maintenance of all local roads.

Please be guided accordingly.

BALTAZAR AQUINO
Secretary

LGT/ems4

MONITORING THE PHYSICAL PERFORMANCE AND FINANCIAL STATUS ON THE MAINTENANCE OF ALL LOCAL ROADS

1. Objective

Item 7 of LOI No. 519 directed the Department of Public Highways to establish a mechanism for independently monitoring the physical performance on the maintenance of provincial and city roads in order to periodically be appraised of the proper utilization of the national-aid maintenance allocation for the maintenance of such roads which are essential to the national-economic development, and to improve and accelerate the efficient execution of the road maintenance program.

2. Procedures/Guidelines

2.1 Type of Report - A quarterly report (FORM DPH/BCM/MD No. _____'77) consisting of eight (8) clear and legible copies, on the physical performance and financial aspects of all provincial, city, municipal and barangay roads shall be prepared.

303

2.2 Coverage of the Report

2.2.1 The Highway District Engineer shall prepare the quarterly report for all provincial, municipal and barangay roads in eight (8) clear and legible copies, retaining two (2) copies and submitting six (6) copies by courier to reach the Highway Regional Director concerned on or before the 15th of the month immediately following the end of the quarter under report.

The City Engineer shall prepare the quarterly report for all city proper and city

barangay roads in eight (8) clear and legible copies, retaining two (2) copies and submitting six (6) copies by courier to reach the Highway Regional Director concerned on or before the 15th of the month immediately following the end of the quarter under report.

2.2.3 The Highway Regional Director concerned shall, in turn, submit five (5) copies of same, together with his comments and recommendations, to reach by courier the DPH Central Office (Attention: Bureau of Construction and Maintenance for Provincial, Municipal and City roads, and to the Bureau of Barangay Roads in the case of Barangay roads) on or before the end of the month immediately following the end of the quarter under report. One (1) copy shall be retained by him.

30r

2.3 Pertinent Information/ Data Required

(a) Total national-aid maintenance allocation for the calendar year.

(b) Total required local counterpart.

(c) Total national-aid maintenance allocation received (cumulative) from the beginning of the calendar year up to the end of the Quarter under report.

(d) Total amount of local counterpart fund actually provided and made available for expenditure (cumulative) from the beginning of the calendar year up to the end of the Quarter under report, attaching a copy of the approved Road and Bridge Budget.

(e) Total cumulative expenditures incurred from the national-aid maintenance allocation and from the total counterpart funds, and balances as of the end of the Quarter under report.

(f) Maintenance activities undertaken on the road sections and structures if in accordance with the approved Programs of Work.

(g) Were all the materials actually used in the maintenance work undertaken.

(h) Determine if the work performed is satisfactory and reasonably commensurate with the expenditures incurred.

(i) Conditions of the roads as of the end of the Quarter udner report if:

1. Roads are in good fair condition.
2. If not, determine what road sections are in bad conditions, their respective defects and why,

(j) Remarks on the availability or non-availability of equipment.

(k) Total man-days utilized.

305

3. Forms

To facilitate submission of the quarterly report, FORM DPH/BCM/MD No._____'77 for this particular purpose is enclosed, consisting of two (2) sheets, Letter designating each column correspond to item 2.3 above.

FORM BPR/BCR/LR No. _____ '77 (Sheet 1 of 2)
Province/City of _____
Highway Regional Office at _____ (Municipality)
Region _____
Classification of Roads: _____
(State if Prov'l., City, Municipal, or Barangay roads)

MONITORING THE PHYSICAL PERFORMANCE AND FINANCIAL STATUS ON THE MAINTENANCE OF
ALL LOCAL ROADS
(For the Quarter Ending _____)

Total National-aid Maintenance Allocation for the Calendar Year (P) (a)	Total Required Local Counterpart (P) (b)	Total National-aid Maint. Allo. Received (Cumulative) From Beginning of CY up to End of Quarter (P) (c)	Amount of Local Counterpart Actually Provided and Made Available for Expenditure (P) (d)	Total Cumulative Expenditures Incurred (e)		Nature of Maintenance Activities Undertaken (f)
				From the National-aid Maintenance Allocation (P)	From the Local Counterpart (P)	

NOTE: Letters designating each column correspond to item 2.3 under the write-up.

REMINDERS:
1. Attach to the First Quarter Report a copy of the approved Road & Bridge Budget.
2. In Column (f), state also if activities performed are in accordance with the approved Program of Work.
3. In Column (i); if not in good/fair condition, state specific road sections in bad condition, their respective defects, and why.

SUBMITTED BY:

_____
(Highway Dist/City Engineer)

Date: _____

FORM DPR/BCR/iD No. _____ '77 (Sheet 2 of 2)
Province/City of _____
Highway Regional Office at _____ (Municipality)
Region _____
Classification of Roads: _____
(State if Prov'l., City, Municipal, or Barangay roads)

MONITORING THE PHYSICAL PERFORMANCE AND FINANCIAL STATUS OF THE MAINTENANCE OF [illegible]

(For the Quarter Ending _____)

Remarks if all the Materials are Actually Used in the Maintenance Work Undertaken (g)	Remarks if the Work Performed is Satisfactory and Reasonably Commensurate with the Expenditures Incurred (h)	Remarks as to the Condition of the Roads as of the End of the Quarter (i)	Remarks on the Availability or Non-Availability of Equipment (j)	Total Man-days Utilized (k)

NOTE: Letters designating each column correspond to item 2.3 under the write-up.

REMINDERS:

1. Attach to the First Quarter Report a copy of the approved Road & Bridge Budget.
2. In Column (f), state also if activities performed are in accordance with the approved Program of Work.
3. In Column (i); if not in good/fair conditions state specific road sections in bad condition, their respective defects, and why.

SUBMITTED BY:

_____
(Highway Dist./City Eng'r.)

Date: _____

APPENDIX VI

OR [illegible] 1.76

Mr. Richard Dangler
AD/CD
USAID/Manila
APO SFO 96528

Copy of IEE signed 11/30/76 - For your information.

ASIA/TD, Mr. A. R. Love

12/2/76

Re Rural Roads II Project, Philippines - FY 78

Attached for your official project file/environmental annex is signed IEE with Threshold Decision on above project.

309

cc with conv:
Mr. Richard Dangler - USAID/AD/CD, Manila

Office of Alan B. Jacobs
ASIA/TR/SDP

— 16 RPC 58049

Nov 26 3 01 AH '76

MEMORANDUM November 24, 1976

TO: DAA/ASIA, Mr. Donald D. Cohen

FROM: ASIA/TR, T. C. Clark, Jr. TCC

SUBJECT: Rural Roads II Project, Philippines - FY 78
Initial Environmental Examination (IEE)

REF: Action Memorandum, same subject, 11/10/76 (attached below)

Your question on this particular IEE concerned the rationale involved in recommending a Negative Determination for the Philippine Rural Roads II project in view of the fact that in another IEE for a Pakistan project of similar title (Rural Roads) an Environmental Assessment had been recommended.

The major difference between the two projects lies in the fact that the Pakistan project involves construction and repair of new road networks, whereas the subject project involves essentially road improvements to an existing rural network. The Pakistan project clearly raises the issue of whether a given geographical area can absorb road networks, while the Philippines project simply points to a minimal impact resulting from an extremely modest road improvement of short sections.

For these reasons, we request your reconsideration and approval of the AID/W IEE's recommendation for a Threshold Decision of Negative Determination.

Attachments:
Action Memo and AID/W IEE for approval (signature)
A - USAID/Manila IEE
B - Philippine Rural Roads PRP

ASIA/TR/SDP:RLGoodrich:jd:11/23/76 235-8949

Nov 15 4 38 PM '76

November 10, 1976

ACTION MEMORANDUM FOR THE AA/ASIA

FROM: ASIA/TR, T. C. Clark, Jr. TCC

SUBJECT: Rural Roads II Project, Philippines - FY 78
Initial Environmental Examination (IEE)

Problem: This office does not concur in the reasons supporting USAID/Manila's recommendation for Threshold Decision in their IEE (TAB A) submitted with the Project Review Paper dated September 15, 1976.

Discussion: A new IEE has been prepared representing items that would be more acceptable in support of the recommendation for Negative Determination.

3/3 Recommendation: That you approve a Threshold Decision for Negative Determination on the basis of the IEE prepared in AID/Washington.

Attachment:
AID/W IEE for approval (signature) on
Threshold Decision
A - USAID/Manila IEE

ASIA/TR/SDP:ABJacobs:jd:11/9/76 235-8949
ASIA/A-AD: DCOHEN

NOTE: This was returned 11/22/76 with question by Mr. Cohen.

INITIAL ENVIRONMENTAL EXAMINATION

Project Location: Philippines

Project Title: Rural Roads Project II

Funding: $24 Million Loan - FY 78

Life of Project: Three Years

IEE Prepared by: Alan B. Jacobs, ASIA/TR/SDP
November 10, 1976

Environmental Action Recommended: Negative Determination

Concurrence/Clearance:

T. C. Clark, Jr., Director, ASIA/TR — 11-12-76 Date

A. R. Love, Director, ASIA/PD — 11/11/76 Date
(Jonathan R. McCabe for)

315

Threshold Decision by Assistant Administrator, Bureau for Asia (Approval/Disapproval of Negative Determination recommended on page 1 of IEE):

Approval: _____
Donald D. Cohen, A-AA/ASIA

Disapproval: _____

Date: 11/30/76

INITIAL ENVIRONMENTAL EXAMINATION

Rural Roads II Project - Philippines

I. Examination of Nature, Scope, and Magnitude of Environmental Impacts

Description of Project*

The Rural Roads Project II is an expansion of the existing Rural Roads Project I, which is currently drawing to an end. Rural Roads II will have a life span of three years. The project will construct or repair, in the rural areas of the 28 PDAP provinces, approximately 650 kilometers of all-weather roads (with penetration and feeder) and approximately 5,000 linear meters of bridges. All projected road construction/repair is designed to complement the national road network. These roads will serve the goals of facilitating access of government services (both local and national) to the rural areas, and of acting as a catalyst in improving the socioeconomic level of the rural people served by the roads.

Identification and Evaluation of Environmental Impacts

Road construction in the context of this project means short sections of road improvement at hundreds of locations in an existing rural network. The project does not support new road networks and involves practically no new roads. Certainly some environmental impact occurs during construction of this nature, but it is minimal, being confined to relatively small existing road locations.

317

The important environmental problems related to how rural road systems affect development cannot be addressed by this project. The AID assistance is a very small part of an established pattern which may have good and bad elements from an environmental viewpoint; but there is no way that this can be assessed from the standpoint of the AID project. There would be no reason for AID to examine the whole Philippine road network, since the Agency could not properly recommend modifications.

There are standard environmental measures written into the construction projects that will be a part of this overall project.

II. Recommendation for Environmental Action

Since this project has only a minor effect on an existing large road network which AID cannot properly examine, a Threshold Decision of Negative Determination is recommended. It is noted that specific protection measures will be called for in contract documents for construction projects.

*Based on PRP dated 9/15/76.

APPENDIX VII: SOCIO-ECONOMIC IMPACT STUDY

Contents

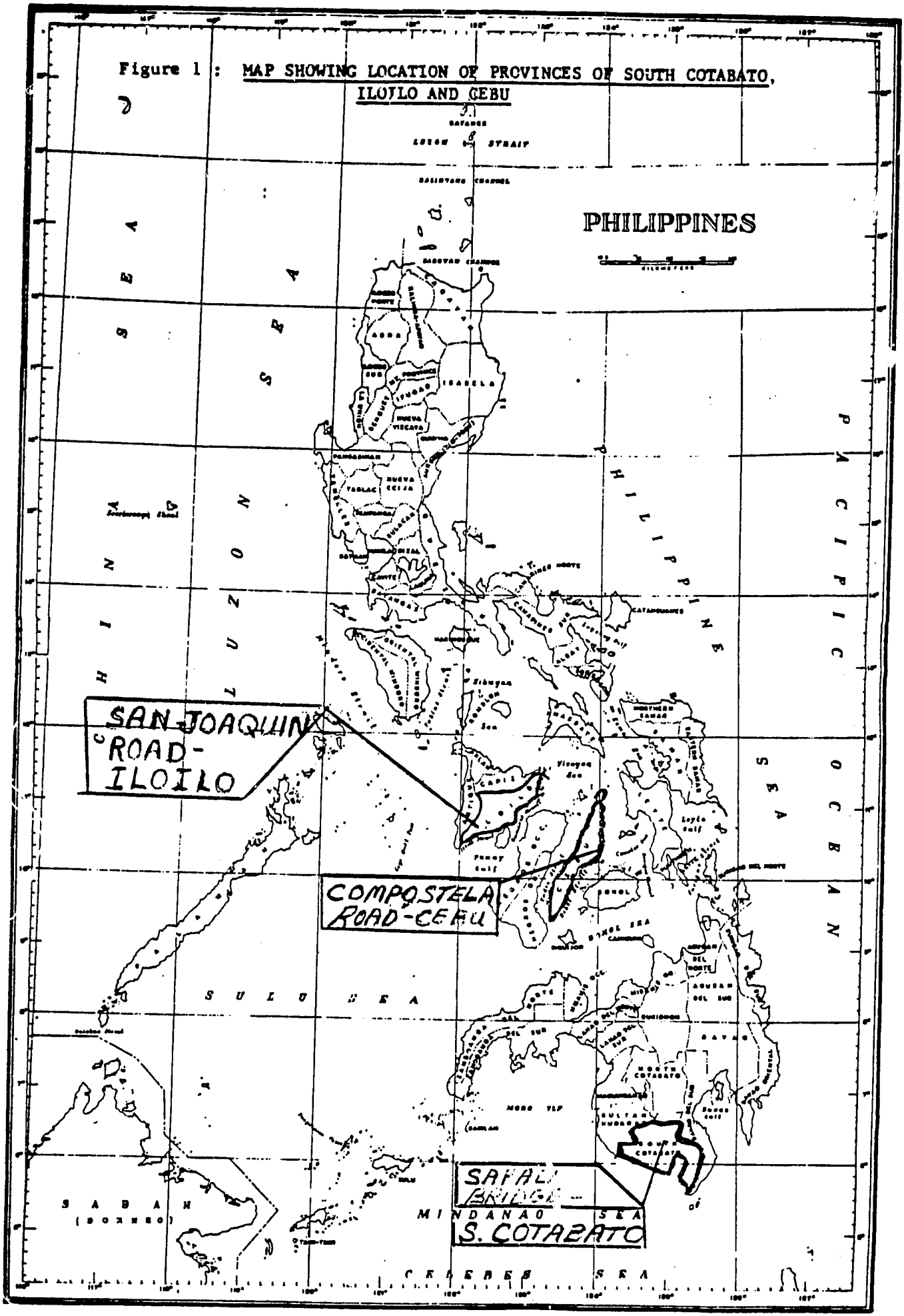
Introduction

The Rural Roads Project, authorized in late 1975, targeted 372 subprojects for completion by December 31, 1978. The first achievement--a bridge--was completed in March, 1976 and in the intervening two years subproject construction has grown steadily as provinces geared to operate a project that invested them with new responsibilities. By July, 1977 about 90 subprojects--roads and bridges--were either completed or in the final stages of construction. The bulk of the subprojects are slated to be finished in two construction periods: 136 by March, 1978, 101 by December, 1978. As the RRP I expanded more emphasis was placed on the construction within a road network schema. Provinces were required to submit road systems that might encompass up to ten or twelve kilometers with construction spaced over a two or three year period. Thus aggregate results of the RRP I cannot be thoroughly evaluated until the systems are completed--sometime in early 1979; this point was emphasized in the evaluation report submitted as Annex L in the RRP II project paper. Evaluation is presently limited to small bridge units, selected road sections and a few nearly completed road systems.

But empirical data is coming in and the Mission has started to assemble case studies, before-and-after comparisons as the road systems near completion. In response to AID/W's query we are submitting an empirical overview based on three vantages. The first and most detailed shows results in a nearly completed road system in South Cotabato; the second is an interview with members of an household living on a partially completed road section in Iloilo Province, Panay Island; the third piece comes from a feasibility analysis of a road in Cebu Province being considered for inclusion in RRP II. The South Cotabato write up is supplemented by an article from USIS/Philippines' Horizon Magazine which highlights the Sapali Bridge construction--one component of the Banga Road System.

321

Figure 1 : MAP SHOWING LOCATION OF PROVINCES OF SOUTH COTABATO, ILOILO AND CEBU



APPENDIX VIIA: Socio-Economic Impact Study-- Banga-Lamba-Lampan Road, Banga Municipality, South Cotabato Province

Setting

The Banga-Lamba-Lampan road is located in Banga municipality, South Cotabato Province at the southern tip of Mindanao Island in the Philippines (See Figure 1 for South Cotabato's location and Figure 2 for Banga's area and road mark up). The road is the only link between farmers and their markets, between people and the social services. Beginning in the center of Banga municipality at the junction of the concreted National Highway, the road passes through the market town winding through four small villages until it dead ends at Barangay Lampan, twenty four kilometers from its beginning.

The road's influence area covers well over 2,000 hectares devoted to rice and corn agriculture. Six thousand people live in the vicinity and 90% gain their livelihood from agriculture. Land reform has transformed the ownership pattern to a small holders area with 122 owner-cultivators and 553 former tenants who are now amortizing their small plots. About fifty hectares lies idle as non-tillable land. The six barangays support four elementary and two high schools while two rural health units service the well being of the six barangays. Not surprising the main recreational activity in the poblacion is the cockpit while every village sports a well used dirt basketball court.

Before the advent of RRP to Banga, the road connecting the six villages was ungraveled, dusty and a slippery collection of water soaked potholes in the rainy season. While the topography through which the road travels is generally flat, its course is punctuated by small brooks and streams which have worn steep inclines in the road surface. Eventually the road meets the wide Sapali River which becomes a raging torrent at flood tide isolating five of the barangays until its wrath is satiated and a bed crossing can be made. One ancient, run down wooden bridge grudgingly spanned the largest creek while the smaller streams were crossed via rough bridges of coconut tree trunks laid side by side in corduroy style.

Transportation ran a close parallel to road conditions. Maintenance costs were high and so were the rates which averaged ₱2.50 per passenger for a ten kilometer jaunt from Banga to Lamba. Jeepneys charged this rate when they ran which was not often since only three operators braved the harsh conditions. In the rainy season such transport ceased and everyone who could shifted to ox and buffalo sleds. When the Sapali river rose, some

villages were cut off for as long as two weeks. Schools suffered understandable truancy while farmers had to pay more to sell for less. The details of these economic and social losses are specifically delinated in the accompanying charts and explained as before-and-after comparison in the succeeding sections. Suffice it to say that conditions were less than unsatisfactory. Nor were the conditions kept under wraps. Villagers made frequent representations to the municipal mayor who relayed his dilemma to the Governor and the provincial staff. This resulted in well meaning efforts to upgrade maintenance and to invest the road with stop-gap measures like filling the water pot holes with stone and digging ditches to draining off the more devastated sections. But even maintenance was difficult for the provincial forces to handle and the road deteriorated.

When South Cotabato entered the PDAP program one of the first candidates for the newly organized capital improvement program (CIP) was the Banga road. With start-up of the Rural Roads Project, the Banga road was transferred from the CIP to the Annual Implementation Program (AIP) and on January 22, 1976 work began on the first structure, the Cabuling bridge, as part of a twelve kilometer system spaced for construction over the next three years. The total cost of the 12 kilometers and 280 linear meters of bridge was three and a half million pesos. Phase one started in 1976 and included two box culverts, five concrete bridges and one overflow box culvert. This was followed in 1977 with the transformation of ten kilometers of earth road into an all-weather gravelled road. A complex undertaking it included the widening of a twenty meter right of way, building a 6 meter travelled way with 2 meter-wide shoulders. The uneven elevations caused by ununding streams were levelled to travel grade. The last recently completed phase involves the concreting of a 1.2 kilometer stretch from the National Highway to the poblacion. While concrete roads are rarely invoked in RRP, ecological demands plus the passage of 900 vehicles every day through the poblacion justified the pavement.

The Results

Although the road and bridge construction on the Banga Road is only now settling into place, the previous conditions were so difficult that even the smallest success in amerlioration might bring immediate and discernible results. And, indeed, this is the case. The Mission's evaluation team visited the influence area and with the assistance of provincial and municipal officials conducted 124 interviews, investigated new business, collected data on transportation, market and sales prices focused on a variety of social and level of living benefits--stemming from the road. The quantifiable results are listed as data in Table I covering some thirty five items or indicators. What follows is a narrative examination and comparison of the data.

A. Economic Benefits

1. Reduction in transport cost. Before road improvement transport operators were charging ₱2.50 per passenger for the 10-kilometer ride from Banga center to Lamba. Only three jeepneys serviced the route supplemented by 20 tricycles which went only to the first barrio, three and a half kilometers from Banga center with constant breakdowns. Because of the bad road, vehicle maintenance costs were abnormal and a relatively high rate of 25 centavos per kilometer resulted. This exceeded by far the Board of Transportation legal rate of four centavos per kilometer. Travel time took at least 30 minutes after waiting up to an hour for a jeepney. Operators charged up to ₱5.00 for the same route during the rainy season.

   With the RRP road improvement, transportation has become more reliable and cheaper. Now it costs only ₱1.50 to negotiate the same 10-kilometer stretch and one can choose among 18 jeepneys and 30 tricycles who vie for service along the route. Although the legal transport rate has shot up by 87% since 1975 the road has induced an actual reduction of two thirds. The thirty tricycle operators now service the entire route, not just the 3.5 kilometers as before. With the improved road one can drive from Lamba to Banga in fifteen minutes and the waiting time is down to zero--or nearly so. Transport lingers available up to 8 o'clock in the evening in contrast to a close out at sunset on the old road. Produce transport enjoys the same comparative advantage as people--a 50 kilo sack of corn, like Juan dela Cruz, saves one peso per kilometer over the ten klick ride.

325

2. Increase in Production. Average production in the influence area for rice and corn was 75 and 35 cavans per hectare when the road was a dirt track. Now the same hectare yields 97 and 52 cavans for rice and corn, respectively, an increase of 29% and 49%. While the good road didn't, per se, increase production it helped by improving farm-to-market transport, easier access to agricultural extension services and cheaper costs for other production inputs. Under-utilized and idle lands were also brought into cultivation. Interestingly, the Mindanao Irrigation System project of the ADB slated for start-up in September will be encouraged and enhanced by the road improvement.

3. Increase in Farmgate and Market Prices. The farmgate price of corn has increased by 100% and rice by 43%. Market prices for corn and rice have increased by 67 and 43% respectively. These figures mean more than a flat increase; they show that with road improvement the farmer need not sell at his farm site to a middleman who holds a stacked deck; the cultivator can bargain in the market place because transport cost are no longer controlling.

   Based on the 124 household interviews, prior to the road improvement 90% sold their produce to middlemen at the farm site; only 4% went to the market place. With the road improvement 69% clung to the middlemen but 31% took their produce to the market, a significant breakthrough in market place enterprise. These shifts naturally found their expression via income. In 1975, the average gross annual income of the 124 households was ₱7,000*; after the road improvement the figure jumped to ₱9,700 an increase of 30%.

4. Decrease in Production Costs. Pre-road cost per hectare was ₱561.00. But by 1978 annual production cost dropped to ₱548.00 per hectare. Although the decrease is only 2 per cent it becomes significant when measured against significant increases in chemicals and fertilizers prices during the last year.

5. Entreprenurial Increase. The good road brings transport which moves more people to and fro. And this induces the small entrepreneur. Sari-sari stores (variety) increased by 75% followed by a new village market in San Jose where dry goods are available every Friday. Thus the Dela Cruz family need not go all the way to Banga center. The old market at Lamba is in a renaisance with plenty of sea foods available two market days a week. While this may be a happy amenity, the Lamba barangay leader pointed out that in an area where goiter problems were common currency, the sea food advent may prove even more significant as a public health measure. Increases have also been noted in the

326

*This is slightly below the country's poverty threshold level of ₱7,738 for a family of six calculated in 1974. See Measuring Philippine Development, Mahar Mangahas, Development Academy of the Philippines, 1976, p. 266.

number of grain mills and in buying stations, a growth related to increased agricultural production.

Finally, we come to the odd-lot merchant, in this case the "bottle buyer," whose entrance on the Banga scene is tied directly to the road. His business flourishes as he journeys the length of the Banga road buying bottles by the score, packing his jeepney and hieing them to the factories, canneries and bottling works for re-use. He is the merchant-environmentalist whose work would descend to disaster without the smooth road surface, the assured bridge passage and customers who can now buy and transport bottled consumer goods.

B. Social Benefits

While examining the economic advantages of the reconstructed and refurbished Banga road, our evaluation team gave equal emphasis to social benefits and made every effort to quantify through interviews the before-and-after changes. Here are some of the findings.

1. Increased Mobility

327

Before the road was improved villagers left their homesites on an average of 67 times (days) in any one year; after 1977 they traveled outbound an average of 106 times a year. While the pre-RRP trips concentrated on the dry season, the 1977 figures were evenly distributed throughout the year, an expected and obvious result.

2. Accessibility to Health Services

Farm folk rely on the herbolarios for their medical needs. In many cases "official" health professionals rarely come to the barrio. At the same time the herbolario is a trusted village friend and counsel readily available to examine and prescribe for health or medicinal problems.

But roads make a difference. While villagers before RRP visited health personnel 14 times a year as compared with 18 times for herbolarios, the former increased to a frequency to 19 while the latter fell to 15. Though the hospital and health clinics are in the Banga center, villagers increased their visits from 17 to 20. This is further underlined by the interview result showing a change in

health consultation site. In pre-RRP 1975 62% took place at the village but in 1977 72% occured at the poblacion. Rural health personnel have, correspondingly, increased their village visits from a previous once every two weeks to twice a week.

3. Improved Accessibility to Educational Facilities

School attendance shows some remarkable change directly attributable to the road. In 1975, for example, total enrollment of the four public elementary schools and two private high schools 2,423 students; in 1977 enrollment increased by nearly 200. Significantly the Provincial School Superintendent reports a 76% decrease in dropouts in the Banga public schools. In fact the private high school at the road's terminus, Notre Dame of Marbel-Lamba, was set to close back in 1976 because of low enrollment and poor attendance. But with the road improvement, many students returned and the school has stayed in operation. The principle attributed the initial problem to the road which forced parents to send their children to schools where roads were better. The solution, likewise, came through road improvement. Lamba's Barangay Captain noted that students can now commute to the secondary schools and colleges in Koronadal, twenty kilometers away, while previously students would have to board in Koronadal, adding to the cost. And now teachers are willing to teach in schools beyond the Banga center, since commuting is possible. Newspaper, magazines and books liven village life, afford a window on the outer world and heighten the awareness of many. Accessibility to the printed word rose from 76 in 1975 to 126 in 1977.

328

4. Increased Engagement in Recreational Activities

Recreation plays an important role in all our lives. In the villages recreation and mobility are linked since the happy lack of such solitary recreations as TV focus on convivial social interplay.

In the pre-RRP era, Banga people engaged in recreational activities 28 times a year compared to 40 times after the road. The respondents also noted that better transportation

facilities increased visits between relatives and friends. Musical and athletic competitions between barrios has increased, especially among the young. Even the Mayor of Banga Municipality noted that: "Two years ago we were only celebrating barrio fiestas for every barangay, but now, aside from the barrio fiesta, we also celebrate the foundation day of the municipality. And today's fiestas are livelier with more participants coming from nearby towns."

5. Road Safety

According to the Mayor of Banga municipality: "Before this road was improved, vehicular accidents occurred at least once a week. With the road's treacherous grade, slippery road surface and with no bridges and culverts over the small creeks and brooks, accidents and vehicle breakdowns were very common. No one would dare drive on the road after dark. But accidents are rare now with most charged to reckless driving."

6. Availability of Government Services

329

An example of how the improved road brings more goverment services to the village is shown via the Farm Management Technicians of the Bureau of Agricultural Extension who now can see the farmers almost daily. Though provided with motorcycles, prior road conditions made visits to Banga a losing proposition. Visits by rural health personnel in the influence area similarly increased in some cases over 300% since the road was improved. Postal services also became more reliable. Before RRP, mail took weeks, sometimes months to reach the people; now mail is delivered to the villages within two days.

Conclusions

In this short, cursory study of the effects of the road improvement on the people in the influence area, all indicators point toward consistently high social and economic returns to the people. Their lives are visibly changed for the better, new dimensions of family living through a rise in cash income and the opening up of health, school, recreation and media contact seem evident; a disjointed, separated hinterland becomes unified and in contact with itself and the outside world. The poor are being reached directly and have a substantial opportunity to share in the benefits limited only by their application and identification. Not to be overlooked is the rise in entreprenurial activity, of the free market of competition that may inure to the people in ideas as well as economic returns. Longer range effects on health, life style and social

amenities may be greater and of even more significance. But the pattern of growth in all phases of the influence seems well established with a positive direction.

While we await a more systematic, scientific analysis of the effects of RRP I based on aggregation of a variety of completed road systems, the results here, as they are exampled in other delineations carried in the PP and in the next two vignettes, justify the application of RRP II to the same social and economic vein.

TABLE I

SUMMARY SHEET
SOCIO-ECONOMIC SURVEY

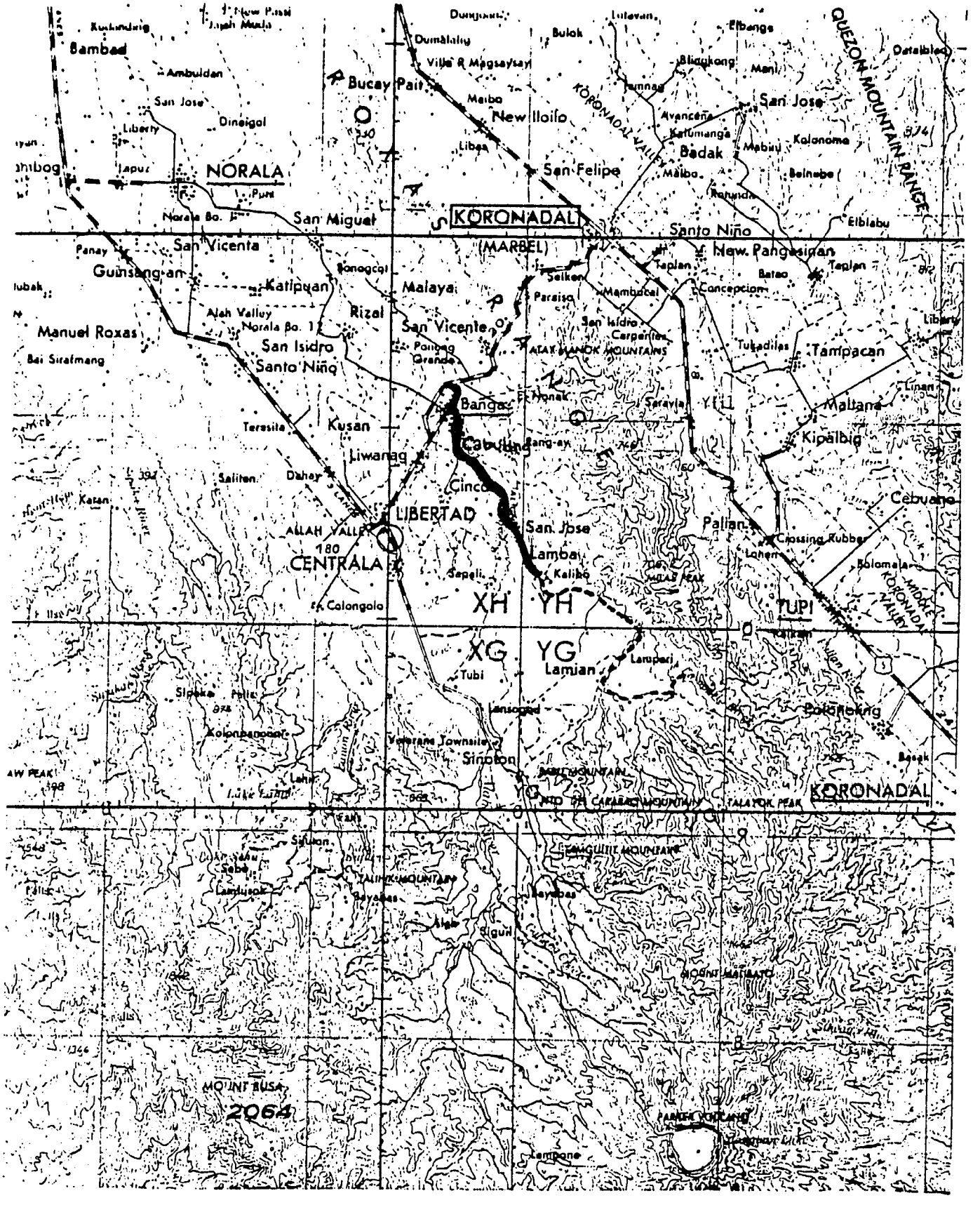
DESCRIPTION OF DATA	BEFORE	AFTER	INCREASE (DECREASE)	PERCENTAGE
1. Transportation				
a. Number of units				
1) Jeepney	3	18	15	500
2) Tricycles	20	30	10	50
b. Rate (pesos/kilometer)	0.25	0.15	(0.10)	40
c. Travelling time (minutes)	30	15	(15)	50
d. Period of Operation (hours)	10	15	5	50
2. Production				
a. Average annual production (cavans/hectares)				
1) Rice (Palay)	75	97	22	29.3
2) Corn (Shelled)	35	52	17	48.6
b. Prices of Marketable Major Crops (pesos/kilo)				
1) Farmgate Price - Rice	0.65	0.97	0.32	49.2
Corn	0.25	0.45	0.20	80
2) Market Price - Rice	0.70	1.00	0.30	42.9
Corn	0.30	0.50	0.20	66.7
c. Production Cost (Pesos per ha.)	561	548	(13)	2.3
1) Fertilizer	372	368	(4)	1.1
2) Chemicals	129	122	(7)	5.4
3) Seeds	60	58	(2)	3.3
3. Marketing Practices (Percentage)				
a. Sold at Farm	95.5	69.37	(26.13)	
b. Sold at Market	4.5	30.63	26.13	
4. Economic Enterprises				
a. Sari-sari stores	20	35	15	75
b. Drug Store	1	3	2	200
c. Tailoring/Dress Shops	3	10	7	23.3%
d. Rice/Corn Mills	3	5	2	66.7%
e. Grains Buying Station	2	5	3	150
f. Markets	1	2	1	100

331

TABLE I (Cont'd)

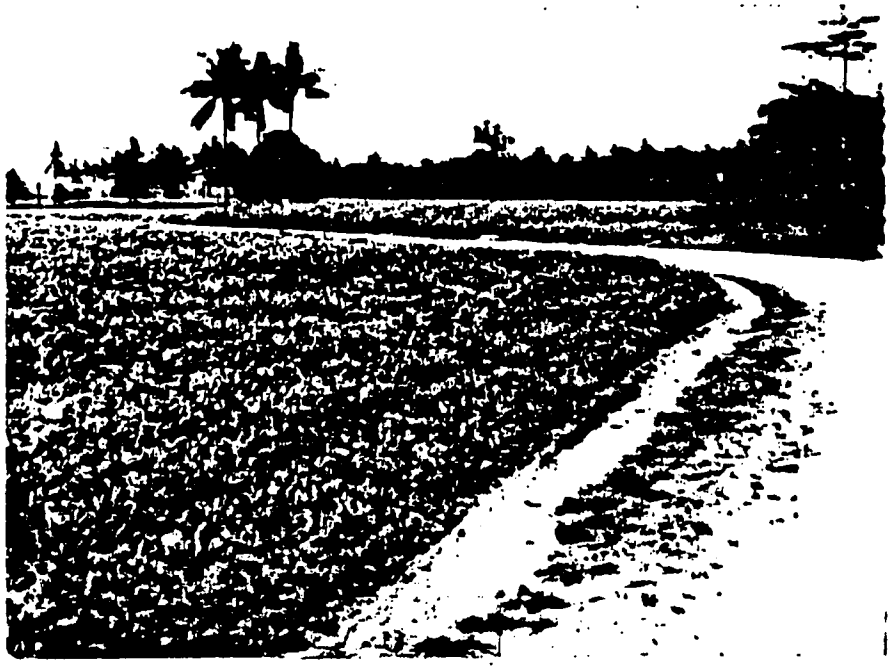
DESCRIPTION OF DATA	BEFORE	AFTER	INCREASE (DECREASE)	PERCENT-AGE
5. Average Gross Annual Household Income (pesos/year)	7,488	9,732	2,244	30
6. Frequency of Trips to Places Outside of Barrio	67	106	39	58.2
7. Health Services:				
a. Frequency of Consultation with: (no. of times/year)				
1) Doctors/Midwives	13.6	18.7	5.1	30.2
2) Herbolarios	18.0	15.5	(2.5)	13.9
b. Frequency with which people avail of services of hospitals and clinics (times/year)	16.9	19.8	2.9	17.1
c. Place of consultation (percentage)				
1) At Barrio	62.1	28.5	(33.6)	
2) At Poblacion	37.9	71.5	33.6	
d. Frequency of visits by rural health personnel (gov't) - no. of times/year	26	104	78	300
8. Educational Services				
a. Enrollment	2,423	2,600	177	7.3
b. Number of drop-outs	34	8	(26)	76.5
9. Frequency of engagement in recreational activities (no. of times per year)	27.8	40.1	12.3	44.2
10. Frequency with which publications are available (no. of times per year)	75.8	125.9	50.1	65.9

Figure 2 - Map showing location of Banga-Lamba-Lampari Road



The Municipal Hall of Banga which is 1.2 kilometers away from the start of the project. It is now 50% cheaper and 50% faster to get to Lamba from here.

Part of the 12 kilometer former dirt road which was improved to an all weather gravel road at a cost of 3.482 M under the Rural Roads Program.

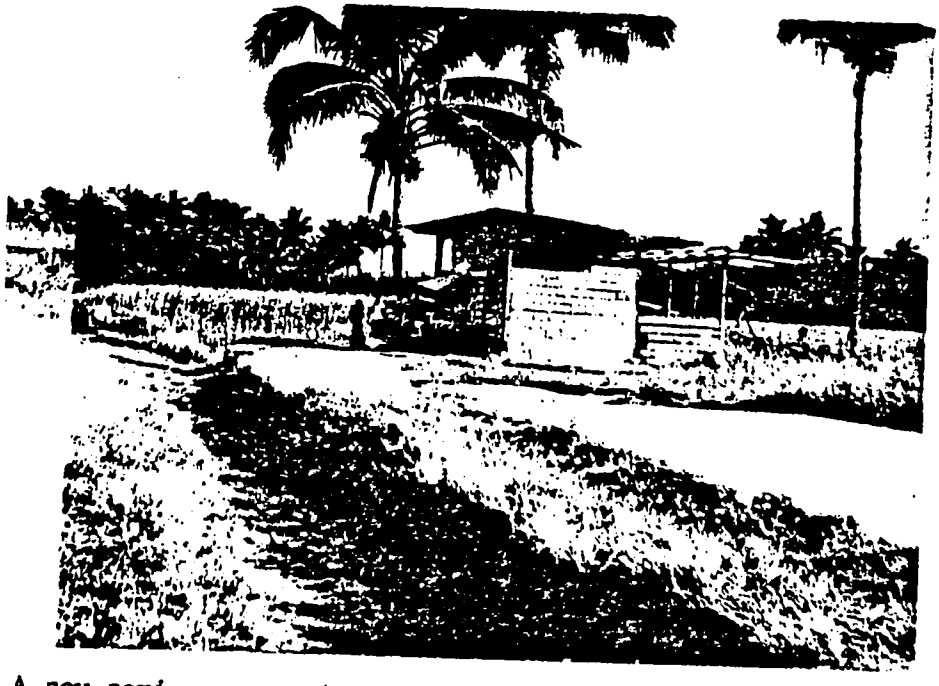


The road cutting through the area's corn lands, which had a 48.6% increase in average annual production per hectare since the improvement of the road.

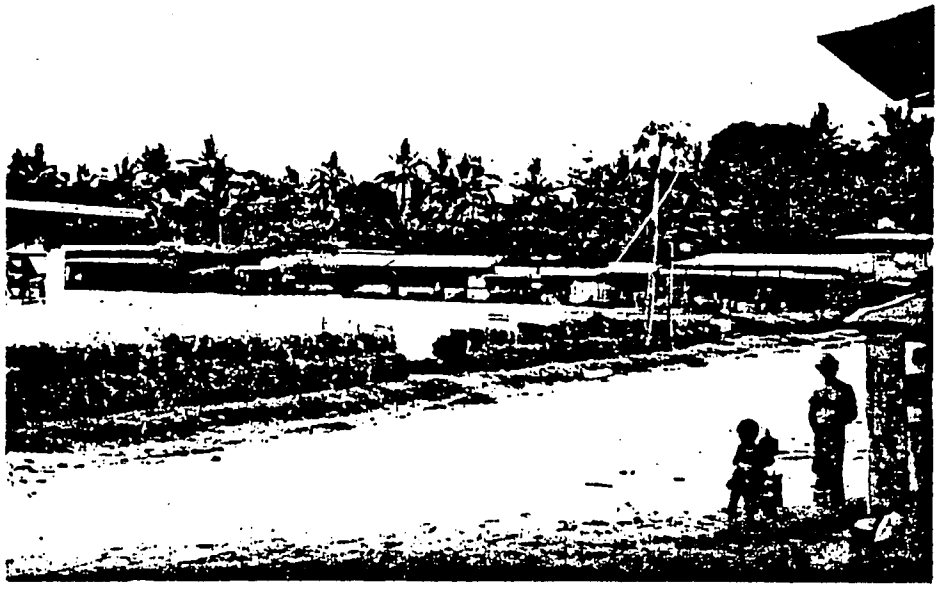
335

The rich rice lands traversed by the road. There has been a 29.3% increase in the average rice production per hectare in the area from 1975-1977.

These stalls are being used as part of the new market (1 year old) at San Jose every Friday. Available here are dry goods and merchandise which are normally available only at the poblacion.



A new semi-concrete house undergoing construction by the roadside. Take note of the sari-sari store - their number has increased by 75% during the last two years.



The barrio site of Barangay Lamba which now costs 40% less to reach from the poblacion. The barrio has now a year-round access to the market and the rest of the world.

APPENDIX VII-B: SOCIO-ECONOMIC IMPACT STUDY, SAPALI BRIDGE, BANGA MUNICIPALITY, PROVINCE OF SOUTH COTABATO.

A Bridge to Opportunity

By Danilo P. Supe

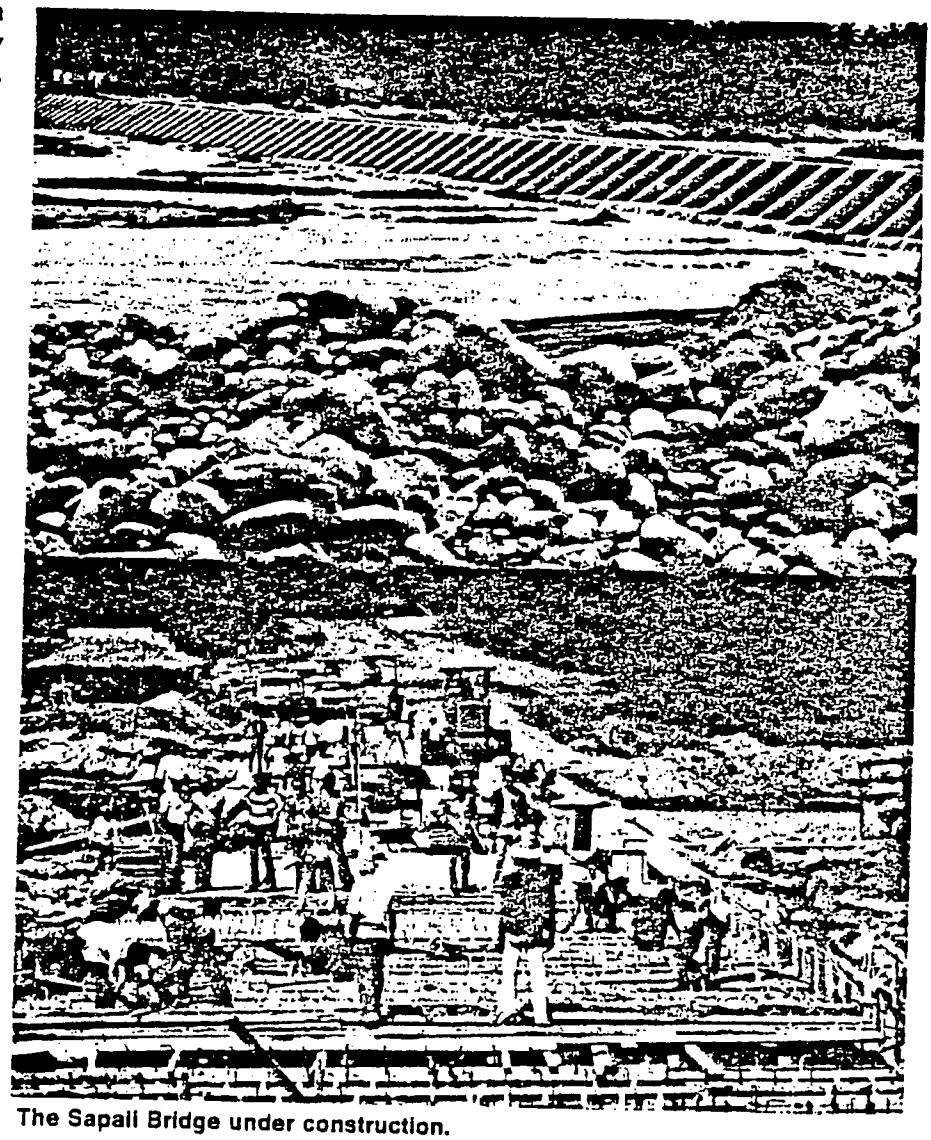
With the coming of the rainy season in South Cotabato province, the sleepy Sapali River becomes a raging torrent. In the past it became a barrier cutting off the 7,100 people of five remote barrios from the outside world.

A combination of Filipino ingenuity and courage, with highly-developed managerial skills, has ended the isolation, bridging the Sapali with a low cost, innovative overflow bridge.

The total cost of the bridge was 790,000 pesos, less than half the cost of a conventional bridge, but the effect is to give the residents of Lamba, San Jose, Cabuling, Lambinge and Lampari year-round access to the market town of Banga and from there to the rest of the world. Farmers can get better prices for their products while paying less for agricultural inputs. And all the people can now visit with friends and relatives in other barrios and take advantage of the cultural, recreational and shopping advantages of larger towns in the area. Bus service has become more reliable, and is expected to be less costly.

339

In the old days, before the bridge was completed in December 1976, barrio residents would just have to wait at home during the rainy season until the waters of the Sapali had dropped enough to allow them to find a crossing on its bed. There was no way around the Sapali and no way over, only straight through.



The Sapali Bridge under construction.

The Sapali Bridge is just one project in the implementation of the rural roads program of South Cotabato, but it offered the provincial engineers a stiff test of their engineering skills, their ability to plan for contingencies in a crisis and their ability to pull together resources from a number of sources for a cooperative effort. The locally designed structure is a simple one, no more than a long series of box culverts covered with a road bed. The box culverts serve as a passageway for the river during low water, but when waters are high the bridge is designed to permit the water to flow over the structure without damage. Even when the floods are rolling over the bridge, it is almost always passable.

The South Cotabato provincial engineers who designed it estimated it would take six months to build and scheduled completion for Dec. 31, 1976. The crisis came during the last week of September. Nothing had been done. Construction had not started, and the 31 kilometers of steel rods, 4,900 bags of Portland cement, 3,000

cubic meters of gravel, earth movers and other equipment needed had not even been delivered.

Provincial Engineer Diosdado Non knew that under the terms of the Rural Roads Program of the Department of Local Government and Community Development, if the job was not completed on time the province would not receive a 75% reimbursement of its expenses in building the bridge. South Cotabato was ill prepared to sacrifice the 790,000 pesos required, but neither did the province want to lose the project altogether, which would have been the result had nothing been done. Even if he could get the materials quickly, unpredictable weather could stop construction at any time.

In the course of urgently held meetings between Provincial Engineer Diosdado Non, Provincial Development Coordinator Cesar V. Baptista and consulting engineers Alfredo Cruz and Oscar Quebral, all angles were explored to provide a complete picture of the situation so the Governor could make a decision: Go or no go?.

Both Non and Baptista were uniquely equipped for getting the project done. Non is a seasoned engineer while Baptista had been one of the first group of graduates of the Development Administrators Training Course which the Provincial Development Assistance Program set up last year at Los Banos to develop efficient project managers.

The course was set up with the help of USAID and the University of Connecticut in the United States as a successor to an AID/PDAP program to send key development personnel to the University of Connecticut for six months of developmental administration training. In order to lower costs of the program and permit a greatly increased number of project engineers and managers to attend, Filipino and American specialists working together at the University of Connecticut developed a 2 to 6 month modular course to be administered directly by PDAP right in the Philippines.

So with this background, Coordinator Baptista was able to approach the problem methodically. What resources are now available? What additional resources are needed?

A new rush schedule was drawn up on a time-scaled PERT/CPM chart, the first time this sophisticated management tool had ever been used in the province. The chart illustrated graphically the various timetables and interrelationships of activities. It also detailed what progress would have to be made on each aspect of the job each day if the deadline was to be met. The PERT/CPM proved the job could be done on time, in theory at least, but only if additional manpower, adequate construction equipment and needed materials arrived right away.

The final decision, however, rested on the shoulders of Governor Sergio B. Morales. He was briefed on the major issues, particularly on the need of having continuous and sufficient logistical support if the project was to be completed on time. He knew that the risks involved were great. Yet, provincial pride finally won and the decision was made to go for broke. The Governor immediately instructed the Provincial Development Staff, the Provincial Engineer's Office, and other provincial offices concerned to be fully committed and provide all means to insure timely completion of the project. He wanted the job to be done and would do everything he could to achieve this.

Raymundo Sucayan, who had been instrumental in the completion of the Melchor Bridge in four months time, was pulled off the Lebas Bridge project and given the Sapali job. It was clear that this project held priority over all others in the rural roads program, but when Sucayan got to the project site and looked at the wide river through an ominous overcast, and realized that in less than three months he had to span it, he had second thoughts.

It was October 8 before the pouring of the foundation could begin, and for the first two weeks everything proceeded at a snail's pace. A lack of oil and gasoline at the provincial engineer's office was keeping the trucks carrying the needed materials off the road.

The days that followed, however, ushered in a spirit of optimism as the needed fuel was obtained and the site churned with activity. Yellow bulldozers turned the riverbed into a series of dikes. The payloader, crane and mixer and all of the workers were working fulltime. Even at night the stillness was broken by the rasping, grating and sharp sounds of steel workers preparing their cables. By mid-November the gurgling waters of the Sapali river crowded the openings of the newly completed string of thirty concrete box culverts.

But there was no road on top and no approaches to the culverts, and only 45 days left before the bridge had to be opened to traffic. The race continued and the pace increased even more. At last, with no time to spare, the job was done, and the province could pay its bills.

When a Rural Roads project is completed the DLGCD reimburses the province for 75% of the cost of materials, labor and fuel. Then DLGCD gathers up the bills from all over the country and gives them to USAID which issues letters of credit in increments of U.S. $500,000 to reimburse DLGCD.

USAID has budgeted a total of $39,000,000 in low-interest long term loans to the Philippines which will be used in rural roads projects through the year 1981.

The first phase of the rural roads program winds up in 1978, with a total of 25 participating provinces completing 326 projects including 461 km of farm-to-market feeder roads and 3801 lineal meters of bridges.

The Sapali Bridge is the centerpiece of a 24 km road which runs from Barrio Lampari to the large market barrio of Banga where it connects to a farm to market road that in turn connects with a national highway which has just been improved and concreted under a World Bank loan.

Thus farmers and other villagers can now go easily from Lampari all the way to Koronadal, the provincial capital, to the airport, or even to General Santos city.

Progress comes in small steps, like the simple Sapali Bridge. ■

APPENDIX VII-C: SOCIO-ECONOMIC IMPACT STUDY - SAN JOAQUIN ROAD, SANTO TOMAS MUNICIPALITY, PROVINCE OF ILOILO, PANAY ISLAND.

San Joaquin, a multi-phase penetration road of 3.5 kms, including a 14.0 meter bridge is located in Santo Tomas Municipality, Iloilo Province, Panay Island. The total FAR for the road and bridge will be ₱502,000.00. Previously, no road existed to service the inland villages. The bridge, completed in 1976, immediately increased foot and carabao sled traffic. Tricycles (see photo) have began to regularly ply the completed portion of the road.

On January 9, 1977, an interview with a family, living on a small farm on the San Joaquin Road in Iloilo Province revealed highlighted benefits of road improvement that generally go unnoticed. The farm fronting on the project road, consists of two hectares of moderately rich soil. In 1976 an irrigation project was completed nearby which connected to the farm. In 1977 the family produced two full crops of rice. The parents, six children and one cousin live in a two room nipa but without electricity or water. Electricity will be available within a few months and the family looks forward to have the house wired.

The farm lies in the foothills of the mountains which form the boundary between Iloilo and Antique. About 1 3/4 hectares is planted in rice. The remaining quarter hectare is on the mountain slope and could not be used. But with the advent of irrigation water and a passable road the family turned to terrace the idle land and started growing vegetables. Irrigation makes year round production possible and the road allows highly perishable vegetable to reach the market quickly. In one year the vegetable land, under the direction of the wife, yielded enough profit to have the wife's cousin move in with the family to help in vegetable cultivation from which he expects to earn ₱1,500 plus subsistence in the next twelve months.

APPENDIX VII-D: SOCIO-ECONOMIC PRE-IMPACT STUDY - COMPOSTELLA-GUIMBAL-DAPDAP ROAD, PROVINCE OF CEBU

Approximately 20 kms. north of Cebu City lies the Municipality of Compostella. From the poblacion of Compostella, west to the mountains forming the spine of Cebu Province, a narrow unsurfaced road, in many places only a track represents the only avenue of transportation for an area about 17 kms wide. The residents expressed strong desire for a road and noted that in the rainy season no vehicular traffic exists. Under the RRP, Cebu has selected this as the penetration road to be constructed in 4 phases beginning in 1978. The FAR on the total, including 3 structures will total over ₱3,000,000.

The Compostella-Guimbal Dapdap Road will involve improvement of an existing 4 km. gravel penetration road. The present road is barely passable to auto traffic and is neither wide nor flat enough to accommodate passenger buses. A few jeepneys and cargo trucks are vehicles commonly seen on the road. During the rainy season the road is impassable such that access to the market in Compostella Municipality on the road's eastern end is often inaccessible to barangay residents living in the road's influence area. Similarly, a secondary market center at the road's western terminus is often cut off from supplies which must be trucked in.

The road's influence area includes ten barangays with a total population of 4,698 persons. The area contains primarily corn, sugar and cassava lands, with 60% of the farmers working as tenants and 40% being owner-cultivators. Of the tenants most have small private plots on which they grow corn, vegetables, and cassava.

Of the ten barangays, approximately one-half lie on the road itself. Residents of the other five must walk from 2 to 5 kms. to reach it. At that point, they may wait up to 1½ hours for transport. This means that for residents of these barangays it takes up to two hours to go from one's house to the Compostella market, especially if one is carrying produce for sale. In the five barangays located on the road, access to the market is more convenient. Most people, however, go to town only once a week on market day because of the distance and difficulty of travel.

The road improvement will have differing effects on the respective barangays depending on their location relative to the road. Land use maps and socio-economic profiles indicate that what minor differences exist between barangays with respect to literacy rates, supplemental agricultural activity (e.g., livestock), availability of health services, amounts of uncultivated land, and differences in village facilities are

directly related to the barangay's location vis-a-vis, the present penetration road. Specifically, services, higher literacy rates, higher overall educational levels, more infrastructure and fuller utilization of arable lands cluster in barangays located on the road. The area's only rural health unit is in barangay Canamucan situated on the road's north shoulder. The area's only primary schools are located in Panangban and Bagalna which also lie adjacent to the road.

As one moves further back from the road, the existence of houses with toilet facilities and individual pump wells diminishes rapidly. In barangays Tubigan and Buluan, located 2 to 5 kms. from the road, there are no chapels, schools, midwives, or potable water systems. Infrastructure in these villages is limited to a barrio stage and a dirt basketball court. Whereas in Canamucan and Panangban livestock raising totals close to 1,000 head of pigs, cows, goats, and chickens in each village, Tubigan and Buluang raise few hogs or goats and have only 100-200 chickens in each barangay. The prevalence of wood and concrete as housing materials is also higher in Panangban and Canamucan than in Tubigan and Buluang. Out of 140 families in the latter two barangays, only three use concrete building materials, 21 use wood and the remainder use nipa/cogon roof. Of the 341 families living in Panangban and Canamucan, 32 have concrete houses and 83 have houses built of wood.

As part of the area's socio-economic profile, farmers felt the road would stimulate several changes:

34

1) They would be willing to bring idle corn and cassava land in the most remote barangays under cultivation. This would amount to between 10-15 hectares in the project influence area.[1/]

2) They would be willing to allow their children to attend school longer than the present 3-4 year average. They might also permit their children to attend high school in Compostella Municipality.

3) They might increase livestock raising if a better water source also becomes available.

4) They would visit town more often.

The provincial development staff also projects that areas both adjacent to and removed from the road would enjoy better access to health services with the probable creation of another health center and better provision of supplies to those centers. Also, extension services would be more accessible to farmers as extension workers would be able to reach barangays more easily. Finally, with Canamucan scheduled to be electrified soon, it would assist the local electric cooperative in expanding services further up the penetration road to Bagalna and Panangban.

[1/] Transport costs should decrease according to the feasibility study by 30%-50% depending upon the barangay served

APPENDIX VIII-A

RURAL ROADS

Office of the President of the Philippines
Malacañang

November 15, 1976

2367-76
MEMORANDUM to -

Secretary Jose A. Roño
Department of Local Government
& Community Development

I am transmitting to you, for your information and guidance, the attached Memorandum on the utilization of loan proceeds of the Rural Roads Program Development Loan, attention being invited to the hand-written instruction of the President approving the proposed measures contained therein.

345

Please submit a report on the implementation of such measures for the President's information.

JUAN C. TUVERA
Presidential Assistant

/pso

.INT OF LOCAL GOVERNMENT AND COMMUNITY DEVELOPMENT

QUEZON CITY

MEMO FOR THE PRESIDENT	CLASSIFICATION:
JOSE A. ROÑO Secretary	DATE November 5, 1975

SUBJECT: UTILIZATION OF LOAN PROCEEDS OF THE RURAL ROADS PROGRAM DEVELOPMENT LOAN

Approved

1. On March 24, 1975, the Philippine Government signed with representatives of USAID and the United States Government a $15 M development loan agreement for the construction of rural roads and bridges. The guidelines for this program identified the Department of Local Government and Community Development (DLGCD) as the implementing agency. The program is to be under a scheme of reimbursement. By the "reimbursement scheme", the participating local governments (initially eleven (11) and twenty-four (24) provinces by the end of the program) undertake the planning, the funding, and the implementing phases of the project, using its own local resources. When the participating provinces would have been able to implement the project, and completed the same in accordance with the approved plans and specifications, the DLGCD will now reimburse the province with the agreed upon "reimbursible cost" which is approximately 70%-75% of the total cost. (Attached copy of Loan Agreement)

347

2. In order to initially assist the participating local governments in the prosecution of the identified projects, the DLGCD initially releases an amount equivalent to 15% of the total project cost. This is provided for in LOI 302, which set aside the corresponding amount from out of the Presidential Discretionary Fund under PD 144. Also, the amount of P100M, source of the Department's reimbursement money, is contained in the same LOI.

3. It is the feature of this Loan Agreement that the $15 M loan does not come into the picture until after the DLGCD will have reimbursed local governments in amounts not less than $500,000.00. It is also the feature of this loan agreement that the dollar does not come into the country as dollar, but in the form of "commodities" to be acquired by the Philippines from the United States by means of an irrevocable Special Line of Credit (SLC) which will be opened in any bank to be selected by the Philippine Government, the amount to be charged against the $15 M loan proceeds.

4. At this time the DLGCD, working with the different local governments, have seen to the completion of twenty-one (21) projects and reimbursed them for the total amount of P4.45 M. We are in the process now of perfecting documentation requiring USAID to open the Special Line of Credit (SLC) and allowing the Philippine Government to purchase the needed "commodities".

5. The Department has proposed, and is now proposing, that these loan proceeds of $15 M be utilized for the acquisition and purchase of road construction equipments to be distributed as loans to local governments on a program basis, which shall be amortized by the recipient local units with the DLGCD. Eventually, the proceeds will be used as a continuing revolving fund for local governments for purposes of development, to be administered by DLGCD. It might interest His Excellency to know that this Department, realizing the need of upgrading the capabilities of local governments for project implementation, has gone out to non-PDAP provinces and cities for the establishment and operation of an equipment pool development plan. This, along with the development programs evolved by local governments, shall be among the bases and criteria for the allocation and distribution of these equipments to the local units. 34

6. Considering that these amounts from the dollar loan will now be available for use by the Philippine Government, it is now respectfully requested that the DLGCD be allowed to consider and program the matter of equipment acquisition, utilizing the loan proceeds of the RRP Loan Agreement. DLGCD will submit a program for the kind of equipments to be acquired, and the distribution and allocation scheme based on the criteria mentioned above, as well as other information related to developmental efforts being worked out by DLGCD with local government. A nation-wide equipment pool inventory is now going on at the level of provinces and cities precisely for the determination of the equipment pool needs in relation to local government program.

JOSE A. ROÑO
Secretary

cc: da

APPENDIX VIII-B

MALACAÑANG
Manila

LETTER OF INSTRUCTION NO. 633

T O : The Secretary of Local Government and Community Development
The Secretary of Finance
The President Philippine National Bank
The Governor Land Bank of the Philippines
The Governor Development Bank of the Philippines

Under the Rural Roads Program now being implemented by the Department of Local Government and Community Development by virtue of a Loan Agreement between the Republic of the Philippines and the United States of America, the proceeds of this rural development loan shall be utilized for the acquisition and purchase of brand new construction and/or maintenance equipment to be allocated, on a programmed-amortization scheme to participating provinces, and principally aimed at accelerating infrastructure development thereat.

In line therefore, with my enunciated policy of countryside development, through a number of projects such as expanded credit and technological support to agriculture, compact farming, rural irrigation and feeder roads; and in order to provide depressed and lagging areas with a package of basic infrastructure inputs, there is need for immediate national government assistance to upgrade equipment capability of local governments for project implementation, upon which accelerated infrastructure development is principally anchored on.

349

In view of the foregoing, it is hereby directed that:

1. The Philippine National Bank, the Development Bank of the Philippines, and the Land Bank of the Philippines, devise a LOCAL GOVERNMENT EQUIPMENT ACQUISITION LOAN PROGRAM with concessionary and liberal amortization schemes for provinces, cities, municipalities, which are not beneficiaries of the proceeds of the rural development loan of the Rural Roads Program.

2. The Secretary of Local Government and Community Development and the Secretary of Finance, in coordination with the Philippine National Bank, the Development Bank of the Philippines, and the Land Bank of the Philippines, shall immediately formulate the guidelines and procedures that they may deem necessary in carrying out effectively their respective areas of responsibility in the proper implementation of this Letter of Instruction.

Done in the City of Manila, this 29th day of November in the year of our Lord, nineteen hundred and seventy seven.

(SGD.) FERDINAND E. MARCOS
President
of the Philippines

A TRUE COPY

RRP:LAS
CC/hqj

APPENDIX IX: DRAFT PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUND

Pursuant to Part I, Chapter I, Section 103, of the Foreign Assistance Act (FAA) of 1961, as amended, I hereby authorize a Loan to the Government of the Philippines, (the "Cooperating Country") of not to exceed Seven Million United States Dollars ($7,000,000) (the "Authorized Amount"), to help in financing certain foreign exchange and local currency costs of goods and services required for the project as described in the following sentence. The project consists of the construction of approximately 600 kilometers of rural roads and 6,000 linear meters of bridges.

I approve the total level of A.I.D. appropriated funding planned for this Project of not to exceed Twenty-four Million United States Dollars ($24,000,000) Loan, including the funding authorized above, during the period FY 1978 through FY 1981. I approve further increments during that period of Loan funding up to $17 million subject to the availability of funds in accordance with A.I.D. allotment procedures.

I hereby authorize the initiation of negotiation and execution of the Project Agreement by the officer to whom such authority has been delegated in accordance with A.I.D. regulations and Delegations of Authority 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:

A. Interest Rate and Terms of Repayment

The Cooperating Country shall repay the Loan to A.I.D. in United States Dollars within twenty (20) years from the date of first disbursement of the Loan, including a grace period of not to exceed ten (10) years. The Cooperating Country shall pay to A.I.D. in United States Dollars interest from the date of first disbursement of the Loan at the rate of (a) two percent (2%) per annum during the first ten (10) years, and (b) three percent (3%) per annum thereafter, on the outstanding disbursed balance of the Loan and on any due and unpaid interest accrued thereon.

B. Source and Origin of Goods and Services

Except for ocean shipping, goods and services financed by A.I.D. under the Project shall have their source and origin in the Cooperating Country or in the United States or in countries included in A.I.D. Geographic Code 941 except as A.I.D. may otherwise agree in

writing. Ocean shipping financed under the Loan shall be procured in any eligible source country except the Cooperating Country.

C. Prior to any disbursement, or the issuance of any commitment documents under the Project Agreement, Borrower shall furnish in form and substance satisfactory to A.I.D.: (1) written assurance that sufficient funds will be made available for the purpose of promptly reimbursing Participating Provinces; (2) a copy of an executed contract or contracts, with a firm or firms satisfactory to A.I.D., to perform engineering services for the Project; and (3) an implementation plan for the Project.

D. Borrower shall covenant that sufficient funds will be made available for the purpose of promptly reimbursing Participating Provinces.