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UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D.C. 20523

PANAMA

PROJECT PAPER

PRIVATE SECTOR LOW COST SHELTER

AID/LAC/P-340

Loan Number:525-HG-013
Project Number:525-0287

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AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE: A (A = Add, C = Change, D = Delete) — Amendment Number: ______

DOCUMENT CODE: 3

2. COUNTRY/ENTITY: PANAMA

3. PROJECT NUMBER: 525-HG-013 525-0287 (G)

4. BUREAU/OFFICE: LAC 05

5. PROJECT TITLE (maximum 40 characters): Private Sector Low Cost Shelter

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM 0 9 DD 3 0 YY 9 0

7. ESTIMATED DATE OF OBLIGATION (Under 'B.' below, enter 1, 2, 3, or 4)
A. Initial FY 8 6 B. Quarter 4 C. Final FY 9 0

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

A. FUNDING SOURCE	FIRST FY 86 B. FX	C. L/C	D. Total	LIFE OF PROJECT E. FX	F. L/C	G. Total
AID Appropriated Total						
(Grant) DA	(500)	( )	(500)	(675)	( )	(675)
(Loan)	( )	( )	( )	( )	( )	( )
Other U.S. 1. Housing Guaranty	22,400		22,400	25,000		25,000
Other U.S. 2.						
Host Country & Priv. Fin. Inst.					18,400	18,400
Other Donor(s) Beneficiaries					4,800	4,800
TOTALS	22,900		22,900	25,675	23,200	48,875

9. SCHEDULE OF AID FUNDING ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE 1. Grant	C. 2. Loan	D. OBLIGATIONS TO DATE 1. Grant	D. 2. Loan	E. AMOUNT APPROVED THIS ACTION 1. Grant	E. 2. Loan	F. LIFE OF PROJECT 1. Grant	F. 2. Loan
(1) HG	723		860				25,000		25,000
(2) SD	723	860				675		675	
(3)									
(4)									
TOTALS						675	25,000	675	25,000

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each): 862 | 867 | 864

11. SECONDARY PURPOSE CODE:

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

A. Code	BU	TECH					
B. Amount	25,000	675					

13. PROJECT PURPOSE (maximum 480 characters)

To increase the delivery of low-cost shelter financed through private sector institutions thereby expanding and strengthening the role of the private sector in meeting the shelter needs of Panama's low income urban population.

14. SCHEDULED EVALUATIONS
Interim MM 1 2 YY 8 7 | MM YY | Final MM 0 7 YY 9 0

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

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

CONFORMED COPY

17. APPROVED BY
Signature: Ronald D. L
Title: Ronald D. Levin, Director, USAID/Panama
Date Signed: MM 0 7 DD 2 6 YY 8 6

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION: MM 1 0 DD 1 5 YY 8 6

AID 1330-4 (8-79)

GUARANTY AUTHORIZATION

PROJECT No. 525-HG-013

PROVIDED FROM: Housing Guaranty Authority

FOR: The Banco Panameño de la Vivienda, Banco General, Caja de Ahorros and Primer Banco de Ahorros and Other Financial Institutions That May Become Eligible under the Private Sector Low Cost Shelter Program.

Pursuant to the authority vested in the Assistant Administrator, Bureau for Latin America and the Caribbean, Agency for International Development, by the Foreign Assistance Act of 1961, as amended (FAA), the delegations of authority issued there under, I hereby authorize the issuance of guaranties pursuant to Section 222 of the FAA of not to exceed Twenty Two Million Four Hundred Thousand Dollars ($22,400,000) in face amount, assuring against losses (of not to exceed one hundred percent (100%) of loan investment and interest) with respect to loans including any refinancing thereof by eligible U.S. investors (Investor) acceptable to A.I.D. made to finance housing projects in Panama.

These guaranties shall be subject to the following terms and conditions:

1. Term of Guaranty: The loans may extend for a period of up to thirty years (30) from the date of disbursement, may include a grace period of up to ten (10) years on repayment of principal and a grace period on payment of interest, and may include such terms and conditions as shall be acceptable to A.I.D. The guaranties of the loans shall extend for a period beginning with the disbursements of the loans and shall continue until such time as the Investor has been paid in full pursuant to the terms of the loans.

2. Interest Rate: The rate of interest payable to the Investor pursuant to the loans shall not exceed the allowable rate of interest prescribed pursuant to Section 223 (f) of the FAA and shall be consistent with rates of interest generally available for similar types of loans made in the long-term U.S. capital market.

3. Fee: The fee of the United States shall be payable in dollars and shall be one-half percent (1/2%) per annum of the outstanding guarantied amount of the loans plus a fixed amount equal to one percent (1%) of the amount of the loans authorized or any part thereof, to be paid as A.I.D. may determine upon disbursement of the loans.

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4. <u>Other Terms and Conditions:</u> The guaranties shall be subject to such other terms and conditions as A.I.D. may deem necessary.

N.B. We will limit the Caja de Ahorros to participate only when the GOP's position regarding the Caja's participation is clarified. RL 9/24/86

Ronald D. Levin
Director
United Stated Agency for
International Development Mission
to Panama

Sept. 26, 1986
Date

Clearances:

DD/USAID/Panama:RRifenberg RJR	Date Sept 17/86
ODR:MHacker MH	Date 9/17/86
ODP:BMasters	Date 9/17/86
PSD:FSkowronski	Date 9/17/86
CONT:DLarson	Date 9/17/86
RCO:MKenyon MK	Date 17/9/86
GC/H:ISMYRE (Phone clearance)	Date: 9/16/86
RHUDO:WGelman	Date: 9/25/86

PROJECT AUTHORIZATION

Name of Country:	Panama
Name of Project:	Private Sector Low Cost Shelter
Number of Project:	525-0287

1. Pursuant to Section 106 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Private Sector Low Cost Shelter Project for Panama involving planned obligations not to exceed Six Hundred and Seventy Five Thousand United States Dollars ($675,000) in grant funds ("Grant") over an eighteen (18) month period from the date of authorization, subject to the availability of funds in accordance with AID OYB/allotment process to provide foreign exchange and local currency costs for the project. The planned life of the Project is thirty-six (36) months from the date of initial obligation.

2. The project ("Project") consists of support to strengthen the role of the private sector in meeting the shelter needs of Panama's low income urban population by providing financing for (i) long-term technical assistance to coordinate studies required to address policy and institutional issues, (ii) short-term technical assistance and training to improve weaker private sector housing finance institutions, and (iii) assessing the private sector's role in low cost shelter.

3. The Project Agreement, which may be negotiated and executed by the officer to whom such authority is delegated in accordance with AID regulations and Delegations of Authority, shall be subject to the following essential terms and major conditions together with such other terms and conditions as AID may deem appropriate.

Source and Origin of Commodities, Nationality of Services

Commodities financed by AID under the Grant shall have their source and origin in Panama or in the United States, except as AID may otherwise agree in writing. Except for ocean shipping, the suppliers of commodities or services financed by AID under the Grant shall have Panama or the United States as their place of nationality, except as AID may otherwise agree in writing. Ocean shipping financed by AID under the Grant shall be financed only on flag vessels of the United States, except as AID may otherwise agree in writing.

Ronald D. Levin
Director

Sept 26, 1988
Date

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I. RECOMMENDATIONS

Based upon the information presented in this paper, USAID/Panama recommends that a $25.0 million Housing Guaranty (HG) Loan be authorized to assist Panamanian mortgage banks and other private financial institutions to meet the shelter needs of low income inhabitants. Those institutions will provide counterpart resources according to a mutually agreed upon formula (the amount is tentatively estimated to be $18.4 million).

It is recommended that $675,000 in Development Grant Assistance be provided to complement the HG resources. These resources will finance the technical assistance required to address long-term development issues, to strengthen the savings and loans, cooperatives and the credit union system, and to help establish the institutional structure recommended in this Program.

Amount of Guaranty: $25.0 million

Interest Rate: The interest payable to the U.S. Investor shall not exceed the allowable rate of interest prescribed by the Administrator of A.I.D. pursuant to section 223(1) of the FAA.

Borrowers: The borrowers will be the mortgage banks, private housing finance, and other credit institutions who will lend to Program beneficiaries. Participating institutions will guaranty repayment to the U.S. Investor.

Implementing Agency: The implementing agency will be a Trust Fund managed by a Trustee as selected by the Borrowers and A.I.D. from among the banks licensed in Panama who can engage in the management of trusts.

The implementation of the Program without a government guaranty departs from the current HG Program procedures. The pros and cons of the basic approach required for effective and efficient implementation are laid out in this paper, particularly with respect to the key issues raised in the PID guidance cable, State 158916, shown in Annex A.1.a. Annex A.1.a. briefly outlines the major conclusions reached on those issues.

II. PROGRAM RATIONALE AND DESCRIPTION

A. Background

A.1. Panama's Socioeconomic Conditions

A.1.a. Economy

Between 1980 and 1985 the Panamanian economy grew by 2.6 percent per annum compared to an average 6.6 percent annual growth in the 1970s. This relative stagnation had direct impacts on employment (15 percent open unemployment in the Metropolitan Area of Panama in 1985) and on per capita income which dropped during 1983-84. Panama is now faced by a significant challenge to reverse these trends and has entered into agreements with the International Monetary Fund (IMF) and International Bank for Reconstruction and Development (IBRD) to: 1) reduce the enormous public debt and costly public bureaucracy; 2) promote private activity through incentives for private investment and less GOP competition with private sector activity; and 3) phase out protective tariffs and eliminate other constraints for private sector productivity.

Within the above context, the construction sector assumes special importance to the economy. Between 1973 and 1982 construction accounted for an average of seven percent of GDP, nutured by large scale public works projects and the construction of an extraordinary number of office buildings and luxury apartments. Moreover, construction impacted on the performance of other economic sectors such as manufacturing, finance, warehousing, and transportation. During the early 1980s the sector's participation dropped to a modest 4.7 percent. Internal gross capital formation fell by almost 40 percent between 1982 and 1984 ($289.3 million in 1982 compared to $177.8 million in 1984, in constant dollars). Decreases of 50.3 percent in non-building construction (public works) and 34.4 percent in non-residential construction (offices, commercial space) during the early 1980s were the major causes of the sector's poor performance during the period. Housing construction increased by 1.2 percent (in constant value) and was able to maintain its contribution to the sector. As the most labor intensive construction activity, housing construction has softened the 18 percent drop in construction sector employment during the past two years.

At this juncture, only the housing construction component of the sector is susceptible to immediate reactivation without creating distortions within the economy. Extensive public works construction would require new indebtedness, and demand for other types of construction is not forthcoming. However, there is substantial unattended demand for housing for middle and lower income families since these markets over the last decade have not been served by the private sector or were served poorly by the public sector.

The HG-013 Program, therefore, can have important multiplier effects and can accomplish the following: 1) strengthen private sector activity; 2) prevent a further drop in construction activity; 3) increase levels of employment; and, 4) target new private sector investment activity toward lower income families where substantial unsatisfied demand exists. If resources can be channeled through the private sector additional public sector indebtedness need not be incurred.

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A.1.b. Housing Conditions

A large but unattended market for low-cost housing exists in Panama. Estimates of cumulative housing deficits in Panama range from 150,000 to 183,000 units.1/ To reduce this backlog and to meet the shelter needs of new households roughly 15,000 new units are required each year in urban areas and another 10,000 in rural areas.2/ Total formal shelter production during the decade of 1973-1983 averaged only 6,000 units per year. One half of that production was channeled through the private sector for luxury housing and about 3000 solutions were produced for the A.I.D. target group. The potential market for HG-013 solutions in the Panama Metropolitan Area alone in 1986 was estimated at 17,000 units by the PP Team. (See Annex D.) As noted in Annex A.1.a., the effective demand for low cost housing has been demonstrated under the Preferential Interest Rate Mortgage Law. The mortgage banks and developers are aware of this demand but long-term financing needs to be made available to expand the supply of low cost housing.

A.2. USAID Strategy

The $25.0 million authorization requested in this PP constitutes the third tranche (Phase III) of the $75.0 million HG Program approved in 1979 as part of the economic package of the Panama Canal Treaty.

A.2.a. Status of A.I.D.'s Previous Housing Programs

The institutional framework for Phases I and II of the Program focussed on the public sector: the National Mortgage Bank (BHN) as the principal finance institution, the Ministry of Housing (MIVI) as the implementing institution, and the Ministry of Planning and Economic Policy (MIPPE) which provides the planning and budgeting coordination between BHN and MIVI and assists in the provision of urban services and community facilities.

Phase I of the HG Program (525-HG-011) was initiated in August, 1979 with a total amount of resources of $31.25 million: $25.0 million HG; $6.25 GOP counterpart. A total of 8,942 units were built with A.I.D. disbursements to date of approximately $23.0 million in HG resources and $3.0 million in GOP counterpart, or 84 percent of the total as of May 15, 1986. These resources were channeled through the BHN to MIVI for different types of low-cost shelter solutions: Core units and <u>piso-techo</u> units in the San Miguelito District (contiguous to Panama City

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1/ MIVI, "Plan Nacional de Desarrollo Urbano y Vivienda, 1985-1990".

2/ Robert Nathan, Inc. "Urban Development Assessment: Panama", Jan. 1985.

and the largest squatter settlement in the country); low rise apartment units for families living in tenements in the center of Panama City; and home improvement loans for families living in urban areas throughout the country.

On August 19, 1983, the LAC Bureau authorized Phase II, a $25.0 million HG Program (525-HG-012) which, with a GOP counterpart of $6.25 million, will finance four sub-programs: 1) 3,000 urban renewal units; 2) 5,500 home improvement loans; 3) 450 units in reverted areas; and 4) 680 "reception area" (serviced site) solutions. These funds are being channeled through BHN to expand MIVI activities initiated in Phase I. This second tranche was structured so that MIVI would focus its attention on those families whose incomes fall in the lowest quartile of income distribution. Contracting of the first $10.0 million was concluded in August, 1986.

A.2.b. New USAID Strategy

One of the objectives stated in the LAC Bureau's FY 1985 Congressional Presentation is to increase the rate of construction of low-income housing in Central America by 25 percent by the end of 1989. USAID/Panama believes that with the help of Panama's private sector this goal will be met before 1989. There has already been an increase in production of low cost, owner occupied housing in Panama due to USAID/Panama's initiatives under the Housing Guaranty Program. However, future low cost housing programs will be affected adversely by the GOP's fiscal deficit problems. Addressing Panama's housing deficits requires a change in strategy. If indebtedness is to be incurred it should be shifted to the private sector. In addition, greater emphasis must be placed in strengthening the resource base for housing investment through private savings.

The shift in strategy is already underway. The Ministry of Housing has already begun to target all current and new program activities to address the needs of families in the lowest income groups. With the exception of the urban renewal projects in the inner city, MIVI is directing its efforts almost exclusively to sites and service projects, home improvement loans, and other very low cost solutions that meet the needs of the lowest income groups. Moreover, the BHN is consolidating its financial position as a result of GOP policy decisions to strengthen the institution and the bank's own decisions to improve portfolio management and administration. This will permit the BHN to continue providing resources to sustain low cost housing programs.

However, the private sector must increase its role in producing and financing housing for low income groups as well. Recent changes in legislation (See Annex C on the Preferential Interest Rate Mortgage Law) coupled with the saturation of the high cost housing market have created an environment which is more conducive to private initiatives in low and moderate cost housing. Nevertheless, private banks are still very cautious about committing their own short-term resources to finance low cost housing, and developers are concerned about how to make adequate profits in serving these markets. The principal private sector constraints that need to be addressed are: 1) low income housing markets are perceived by banks as high risk ventures; 2) housing production is inefficient (i.e., building materials cost much more in Panama than in neighboring countries and labor inputs are costly) and construction standards are excessive resulting in housing costs that are beyond the reach of most low income families; and 3) the policy environment needs to be improved by eliminating unfair competition between the public and private sectors in low-cost housing development.

This Program will address these constraints principally by providing capital assistance to build low cost housing enabling the banks gain experience in new markets and by providing technical assistance to lower housing costs to consumers.

Capital assistance will permit mortgage banks to work with private developers to fully explore the potential and profitability of addressing the shelter needs of families whose incomes fall from around the median to the 20th percentile of the urban income distribution. This represents a clientele that has never been served by mortgage banks because other markets appeared to be more profitable and dynamic. Now that market conditions have changed, the banks are more receptive to addressing new markets and the HG resources will encourage them to experiment with low income families. For example, prior to the prospect of the HG Program, banks and developers did not perceive a low cost housing market. The construction of the first low cost projects developed by Econoplade, a private developer, has demonstrated a demand that far exceeded even the most optimistic predictions. The project will also demonstrate that low income families as well can and will pay mortgage loans and that they represent a new clientele as depositors and for consumer loans. The project will serve to address the misconceptions and prejudices that private sector institutions have long had at a critical time when mortgage banks must change market orientation to continue to expand. It is expected that the banks will continue to expand low cost housing investment.

Technical assistance will be designed to address, among other things, excessive housing costs. By reducing housing costs to consumers more low income families will be able to afford housing. Technical assistance will provide the analytical framework to reduce urbanization and building standards, to make code enforcement and mortgage registry less costly and to lower production costs. These topics have attracted much dialogue over the past year and the technical assistance proposed will provide the analytical basis for change and an organizational structure to implement it.

The policy environment is being addressed through this project as well as through other A.I.D. projects. Through a grant for housing policy studies and previously authorized HG projects with MIVI

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and BHN, public sector interventions into the marketplace are being restricted to home improvements loans, sites and service solutions and urban renewal apartments which private banks are not yet willing to address. The private banks will address a void in the housing market no longer subject to public sector intervention and competition. If that void is filled by the mortgage banks and other housing finance institutions, the public sector will continue to be more specific in targeting its limited resources to the lowest income brackets.

A.3. Other Donor Activity

The principal source of external assistance for the purposes of financing and producing low cost housing has been A.I.D. IBRD provided the Ministry of Housing and Caja de Ahorros with funding for the development of a 2000 unit project in Colon as a component of the Colon Integrated Development Project in 1980-81. In 1985 the Inter American Development Bank (IDB) reassigned loan funds from a poorly designed municipal development project to a squatter upgrading project in Metropolitan Panama, Las Mañanitas. The IDB followed USAID/Panama's suggestions about the use of market interest rates and the institutional arrangements of the program. Currently, the IDB is negotiating a $26.0 million loan to promote a significantly expanded sites and services program with MIVI and BHN. The design of this program is to build approximately 6,000 very low cost fully serviced lots for very low income families over the next several years. The interest rate spreads for the BHN, as advocated by USAID, will help strengthen the financial position of BHN. This will clearly complement the new HG Program.

B. Private Sector Shelter Program Description

B.1. Program Goal and Purpose

The Program goal is to improve the quality of life for below median income urban families through increased access to affordable shelter and employment opportunities in the construction industry.

The Program purpose is to increase the delivery of low-cost shelter financed through private sector institutions, thereby expanding and strengthening the role of the private sector in meeting the shelter needs of Panama's low income urban population.

B.2. Detailed Program Description

The proposed Program will provide $25.0 million in Housing Guaranty funds which will be borrowed by mortgage lenders and placed in a Trust Fund. The HG and counterpart funds will be used to finance long-term mortgage loans. Another $675,000 in Development Grant funds will be used to finance technical assistance to address various policy and institutional issues which, if addressed, can promote increased private sector involvement in the production and financing of low cost shelter.

The preferred implementation structure is one whereby the mortgage lenders are also Borrowers of HG funds which are deposited in a Trust Fund. The Trustee protects A.I.D.'s and the Borrowers' interests, manages the resources, channels Program resources to the private sector, and passes repayments to U.S. Investors.

B.2.a. The Implementing Institution

The Program will be administered through a Trust Fund, with a first line commercial bank selected as Trustee by the Borrowers and A.I.D.. The trust fund mechanism is particularly attractive from an institutional development standpoint since the Fund could evolve into an efficient, simple way to mobilize investment resources for low cost housing. Also, it is of interest to the commercial banks who view the trust fund mechanism as a banking service that would strengthen Panama's role as a banking center. Since 1984 several trusts have been established, but none has been designed for purposes of development.

Section III provides a description of how the Trust will function, including: The purpose of the Trust; the Trustee's roles and responsibilities; the criteria and procedures to be used in selecting a trustee; criteria and procedures to be utilized for selecting participating mortgage lenders; and management of trust resources. Annex G contains a draft Trust Agreement along with other draft agreements related to the Program.

B.2.b. The Borrowers

The Borrowers of the HG loan, at least as the Program begins, will be a consortium of Panamanian mortgage banks, three private (Banco General, Primer Banco de Ahorros, and Banco Panameño de la Vivienda) and one public (Caja de Ahorros). The savings and loan associations and cooperative organizations such as FEDPA do not qualify as borrowers at this time, but will be considered as potential borrowers or users of portions of the HG Loan at subsequent stages of Program implementation. At least two, and possibly several borrowings are expected under the Program.

As Borrowers, each of the above financial institutions will sign a loan agreement for a discrete, though not necessarily equal share of each loan disbursement and in turn be responsible for repaying the same. The HG resources contracted will be deposited directly in the Trust Fund by the U.S. Investor by order of the Borrowers. The participation of the Caja de Ahorros will be limited to no more than $10.0 million in HG resources for two reasons: 1) so that the largest mortgage banks do not utilize all the HG resources thereby allowing for a broken base of institutional participation; and 2) the Caja's status as a

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public institution even though it is subject to the same market forces as the private banks. (See Guidance Cable, Annex A.1.f.)

B.2.c. Mortgage Lenders

The mortgage lenders will be the four mortgage banks mentioned previously (who will also serve as Borrowers) with, perhaps, the savings and loan institutions and cooperatives such as FEDPA and Cooperativa Ancon participating in latter stages of the Program. However, the entire amount of the HG funds can easily be absorbed by the mortgage banks alone. Technical assistance will be provided to other, weaker housing finance institutions so they can ultimately participate in this Program. An analysis of these institutions is provided in Annex H.

Overall guidelines for lending, disbursements, collections, and institutional eligibility will be established by the Trustee according to A.I.D.'s criteria. Each participating institution will follow normal operating procedures for the Program's mortgage lending operations. The mortgage lenders will have control over the technical approval and supervision of the projects and the qualification of home buyers in accordance with Program beneficiary criteria. Since the mortgage lenders will guaranty repayment of HG resources, they will be responsible for credit checks and monitoring the quality of construction. If defaults occur the mortgage lenders will have to substitute mortgages in the same price range to ensure the quality of the collateral that backs the notes to the Trust Fund.

B.2.d. Project Developers

A variety of small, medium, and large sized construction companies are developing residential projects in Panama. The Preferential Interest Rate Mortgage Law (PML) has caused a shift in the upper income housing markets served by the private sector to houses costing \$20,000-\$50,000. This HG Program is expected to stimulate the production of housing solutions for even lower income groups (i.e., solutions ranging from \$6,000 to \$16,000).

Production capacity is not a problem in Panama. Panama's construction sector has been resuscitated recently by the PML, but it is still operating at a level well below the late 1970s and early 1980s. Moreover the decline in both public works and office construction has expanded the supply of contractors disposed to build housing. There is also substantial underutilized capacity that exists within the building materials industry. Therefore, increased production through HG-013 can be absorbed without major distortions.

Private sector project developers and builders will be responsible for purchasing sites and for preparing project plans. They will also follow the normal approval process for residential construction, obtaining permits from all of the required institutions. Each developer will be responsible for securing construction financing.

This is readily available and should present no problems once long-term financing has been reserved through a standard pre-qualification process. The developer will also be responsible for the sale of units, although the credit department of the lending institution must qualify buyers. One problem that has affected the efficiency and profitability of building has been the approval process for building and urbanization, as well as the standards and codes. Zoning standards for permissible densities can add as much as $2,500-$3,000 to the cost of a $20,000 unit. The application of other inflated norms and standards for infrastructure also increases costs by about the same amount.

C. Inputs

C.1. Program Financial Plan

The following inputs are planned for the 525-HG-013 Program:

Financial Inputs

Component	HG Loan	USAID Grant	Institut. Counterpart	Benefit Downpayment	Total
New units	$25.00	-	$18.40	$4.8	$48.2
TA, Evaluat.	-	$0.675	-	-	$ 0.675
Totals	$25.00	$0.675	$18.40	$4.8	$48.88

C.2. Capital Inputs

C.2.a. Housing Guaranty Funds

Up to $25.0 million in Housing Guaranty funds will be made available to provide the long-term mortgage financing required by the Program. These funds will come from the U.S. capital market to a consortium of Borrowers consisting of the mortgage lenders eligible to comprise the Trust. The loan will be made at the prevailing commercial interest rates and be backed by the full faith and credit guaranty by the U.S. government for repayment. It is expected that a variable interest rate will be contracted since the Panamanian mortgage finance system uses variable rate mortgages. Based on the experience of the last seven years, the cost of a variable rate loan is two to three percent lower than one with a fixed rate.

C.2.b. Mortgage Lender Participation

Private sector counterpart funds will be provided by the primary lending institutions on a sliding scale related to the affordability of the housing units to be financed, as follows:

draft scopes of work for savings, building standards, lending criteria, and other analyses, and will coordinate the implementation of these studies and work with the appropriate agencies to implement recommendations. (Estimated cost $365,000).

b. <u>Short-Term Technical Assistance and Training ($200,000)</u>

(1) Establishing Trust Fund Mechanism.

Short-term legal and financial technical assistance will be required to start up the Program. For example, various Program agreements such as loan and trustee agreements, model mortgage documents and other such legal documents will be required to establish the trust mechanism and protect A.I.D.'s interests. In addition, financial reporting systems will have to be designed to permit the Trustee to monitor Program implementation. (Estimated cost $20,000)

(2) Reduce housing production costs.

Technical assistance and training will be provided for this aspect of the Program as follows:

- Emphasis will be given to the dialogue between the private sector and public regulatory agencies to: 1) change shelter and infrastructure norms and standards related to socioeconomic target groups and geographic regions; and 2) revise procedures for obtaining project approvals to provide better coordination and to reduce the time required to initiate construction. This will require a series of studies to determine to what degree housing costs may be reduced through revised standards and how project design and development procedures vis-a-vis permits may be streamlined.

  Another factor affecting the cost of housing production is the cost of building materials themselves. Alternative strategies will be developed to reduce the cost of these primary inputs into housing production.

- Another aspect that will be reviewed is mortgage registry procedures and delays from the time units are built to the time property is registered and repayments begin.

- Training will be provided to private developers in project planning and site design so that further unit cost reductions can be promoted. (Estimated cost $100,000)

(3) A detailed study of the beneficiary population will be undertaken to analyze the effects of credit requirements of lending institutions on Program participants, the extent to which such practices exclude potential beneficiaries and how policies may be established to increase the accessability of low income families to the Program. (Estimated cost $20,000)

(4) An analysis of national savings patterns will be prepared which looks at past savings trends, how and why they have changed, whether the mass of savings has increased, and how mortgage lenders may increase savings captured from low and middle income groups. Profiles and motivations of savers will be examined and recommendations will be made on an operational strategy for the mortgage lenders. (Estimated cost $30,000)

(5) Short-term technical advisors will work with the savings and loans and FEDPA to help them to qualify for the HG Program. They will provide services to facilitate conversion from mutual to stock companies, recommend strategies to raise capital, improve operational procedures, etc. Also training for the mortgage banks and other financial institutions will be provided. (Estimated cost $30,000)

c. Evaluations and Audits $110,000

Mid-term and final evaluations will be carried out on the Program. These evaluations will document the Program's experience and provide information to assess the private sector's continuing role in low cost shelter. The mid-term evaluation will be conducted at the time of the first disbursement of HG funds and will be submitted to LAC for review. In particular, the interim evaluation will focus on: 1) the efficiency of the Trust Fund mechanism and its potential for continuation and expansion with other resources; 2) the effectiveness of the Program's incentives to finance very low cost housing solutions; and 3) the utilization of accumulated liquidity for reinvestment in a new loan program for low cost housing. Also, two audits of the Trust Fund will be carried out.

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D. Program Outputs

D.1. Physical Outputs

New housing units will be financed under the Program. While market considerations will dictate the final distribution of resources among income groups, the counterpart requirements provide incentives to develop a broad range of solutions which serve the lower income families from the 20th income percentile up to those with median incomes. Mechanisms will be studied during program implementation to create conditions even more favorable to the production of low cost solutions (e.g., lowering housing production costs). Moreover, during the first two years of the Program up to $1.0 million will be set aside to finance a pilot project of very low cost solutions. If this pilot project fails to materialize, the resources will be used to finance other elegible units.

For illustrative purposes, assuming an average cost of about $13,500 per unit an estimated 3,500 new housing units will be produced by the time the HG resources are disbursed. Current mortgage terms in Panama range from 15 ' · 25 years. However, most residential mortgage loans are prepaid, i.e., within a 12 to 15 year time period. Since the HG loan will carry a 30 year repayment, about 8000 new units could be financed with the loan based upon cash flow estimates over the next 30 years.

In addition, we expect that after the third year of the Program, the mortgage banks will allocate a minimum of five percent of their loan investments to low cost housing. It is estimated that such an annual level of investment would produce approximately 2000 units per year by 1990, and that level of production would continue to increase since the mortgage banks are growing substantially faster than the banking sector. The S & L associations are expected to triple investments in light of their current reorganization and expansion plans. About 60 percent of their production is estimated to be for low cost solutions. Production would be 360 units for a total of 2,360 units financed by the private sector as compared to the past range of about 400 units. This represents a sixfold increase. Public sector investment would be targetted to the lowest income groups and formal sector production figures would increase from 1000 to 4000 per annum. Therefore, it is estimated that unit production figures will increase annually to about 6500 units to meet the needs of 10,000 urban low income households each year. Attaining an annual production level of 6,500 probably would address effective demand since, we estimate, approximately one third of the households in need of shelter may chose not to satisfy that need. The production of low cost housing would double through this Program since private sector investment will displace public investment in moderate cost housing (i.e. for families in the 20th to 50th percentile range), and public sector investment will be targetted exclusively to lowest cost solutions, thereby affecting more families with the same level of investment. Consequently, this Program will have a very significant impact on closing the housing gap.

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In addition to new shelter, the $48.2 million in shelter investment is conservatively estimated to create about 3,600 new direct jobs in the construction industry and indirectly another 1,800 jobs in related industries during the next two years.[3]

D.2. Institutional Outputs

a) Involvement of mortgage banks in low cost shelter for the first time. Four mortgage banks are expected to participate. Participating institutions will provide their own funds in order to obtain HG financing. Since mortgage banks control about 52 percent of all passbook savings accounts, it is expected that once these banks become accustomed to serving below median income families and see that their lending risk is kept within reasonable limits, additional local resources will be channeled into this housing market. Mortgage banks will allocate five percent of investments to low cost housing.

b) Strengthening of weaker housing finance institutions. The Program will attempt to involve the savings and loans system and cooperatives because their clientele is drawn essentially from low income families, and they serve the interior of the country where the banks have few branches. However, the success of the Program is not predicated on their participation. Should the savings and loan associations be able to qualify the Program will provide them with access to a new source of long-term funds to intensify lending operations and improve their financial position. Technical assistance will be provided to S&L institutions and cooperatives to improve their administrative structures so that they may become eligible for this Program. Assistance will also focus on their capacity to capture new savings and expanding housing finance activities. This would result in stimulating the dormant associations, institutions which have had a tradition of lending to lower income families but have had limited impact because of management constraints. Savings and loans will triple their volume of lending and 60 percent of the solutions will be low cost.

c) Mobilize Resources for Low Cost Housing. The Trust Fund can serve as a source of low cost housing investment in the future. The Trust Fund mechanism is designed to promote reinvestment of HG reflows in low cost housing. If this mechanism proves to be efficient, it could offer the potential to channel additional resources to sustain low cost housing production. For example, the Fund could ultimately raise capital and make available its own resources to add to the funds

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[3] These estimates are based on a USAID analysis of the construction industry which found that about 75 job opportunities are created for every $1.0 million in construction permits. See J. Fearon, April 1983. CAPAC uses higher estimates of 100 direct jobs and 50 indirect jobs for every $1.0 million invested.

that are being made available through the HG Program. These resources could be leveraged with those private financial institutions to sustain investment in low cost housing.

Technical assistance will support the efforts of the participating financial institutions to promote additional local savings from the target groups. This, in turn, will provide additional resources for the mortgage lenders to continue lending for low cost housing.

d) More Efficient Production of Low Cost Housing. Among other things, the Program's technical assistance activities will address norms and standards for social interest housing and the process for permits and approvals which is currently handled by many different institutions, as well as the inefficient production of local building materials. While these factors do not significantly affect the feasibility of the proposed Program, modifications in the production system could encourage and facilitate more efficient production, thereby lowering costs to consumers, and promoting greater private sector involvement with lower income groups over the long-term.

e) The Trust as a Development Tool. An important innovation of HG-013 is the establishment of a Trust Fund which will allow private finance institutions to participate in this low cost housing Program in a flexible, efficient manner. It will result in the application of trust legislation involving a large amount of money to promote a banking service which could enhance Panama's banking center.

E. Program Beneficiaries

In the first instance, some 3,500 Panamanian families whose incomes fall below the median income are expected to benefit from this Program. The Program will finance new units for families with incomes between the 20th and the 50th percentiles. This percentile range corresponds to household incomes which vary from $208 to $585 per month in the Panama Metropolitan Area. Most of the financial institutions which are expected to participate in the Program have indicated that they would be reluctant to finance units much below the $10,000 level. And while we expect a $10,000 unit to be the lower limit for some of the participating institutions of the Program, we will promote units for very low income families by setting aside $1.0 million for those units affordable to families at the 20th percentile. This pilot program will introduce the private sector to a new market covering a broad range of income groups below the median income.

Most new units will probably be built in the Panama Metropolitan Area although developers are not limited to that area. Some have expressed interest in tapping the market in secondary cities, and there are financial institutions which could support such initiatives. Two S&Ls and branch offices of several mortgage banks operate in secondary cities.

III. INSTITUTIONAL ANALYSIS

This section of the PP provides an overview of the private sector finance system in Panama, the preferred organizational structure for the Program, and the conditions under which financial institutions can participate in this Program.

A. Private Sector Finance System

A.1. The Banking Structure

Panama is a recognized center of international finance. In 1982 the 107 banks which operated within the finance sector contributed 5.8 percent to GDP and employed 9,000 workers (more than the Panama Canal Commission). The "sui generis" nature of Panama's monetary system is one of the key factors in the country's economic life. The Constitution of the Republic prohibits the emission of a paper currency. The U.S. Dollar serves as legal tender, and financial operations may be transacted in U.S. Dollars or Balboas, the nominal currency.

The banking business expanded dramatically after 1970 when a new, liberal banking law was written. Market forces now determine the cost of money and the overall supply of credit. Additional incentives have been provided to stimulate banking, e.g., no capital controls, no tax on offshore income, confidentiality of individual accounts, no reserve requirements on offshore deposits, etc. The overall operation of the banking system is supervised and governed by the National Banking Commission, which is chaired by the Minister of Planning and composed of members from the GOP and the largest local banks.

Three types of banking licenses exist: 1) national (both domestic and international); 2) international (offshore business only); and 3) representational. Over half of the banks (70) have national licenses, and two are owned by the GOP: the Banco Nacional de Panama (BNP), founded in 1904, with some quasi-Central Bank functions; and the Caja de Ahorros, or Savings Bank, founded in 1934.

Panama's National Banking System (NBS) includes those national and international banks registered and licensed by the Banking Commission to operate in Panama. Within this rubric fall two types of banks: commercial banks and mortgages banks. The NBS has increased its share of Panama's banking activity in recent years compared with offshore banking, growing from 60 percent the size of international banking operations in 1980 to 73 percent in 1985, with an even higher participation (76%) in total deposits. (See Tables 1-3, Annex B for consolidated statistics on the NBS during the period of 1980-85.) The banks are highly liquid (over 23% of assets in cash) and have steadily growing portfolio (69% of total assets in 1985 compared with 64% in 1980). Local bank participation grew from 17 percent of total banking operations in 1980 to 20 percent in 1985. This expansion reflected both a growth in portfolio (from 17% to 23%) and in deposits (from 11% to 15%).

A.2. The Housing Finance System and Laws

With respect to housing finance, the existing banking law (Decreto No. 238, 2 de Julio 1970) contains two provisions which are of particular interest:

- Article 33 requires that commercial (non-mortgage) banks invest not less than 50 percent of any local savings deposits which they receive in residential mortgage loans with a term of at least 10 years, or in interest earning mortgage certificates or bonds issued by the National Mortgage Bank (BHN). The Banking Commission, in consultation with the Ministry of Housing (MIVI), is responsible for determining the portion of that 50 percent which should be directed at loans for low cost housing ("social interest" housing).

- Article 2(o) requires that mortgage banks maintain 75 percent of their portfolio in mortgage loans with a term of at least five years. The other 25 percent may be in commercial and consumer loans.

These regulations provide a clear legal mandate for channeling savings to finance housing in general, as well as for the mobilization of commercial bank resources in support of national housing policy. However, thus far the Banking Commission has not acted to direct such resources systematically toward the low income housing market.

On the other hand, the commercial banks have more than met the obligation to invest 50 percent of their local savings in housing. As of December 31, 1985 their residential mortgage portfolio reached $301.7 million with total savings deposits at $166.0 million; thus, housing investment represented 3.6 times the banks' legal obligation.

In the case of the mortgage banks, while a majority of their activities are directed toward mortgage loans, no specific requirements exist concerning housing loans per se nor the socioeconomic groups to be targetted. However, in actual practice the mortgage banks have provided an important source of housing investment.

A.3. The Role and Characteristics of the Mortgage Banks

A.3.a. The Mortgage Banking System

Despite its relatively small size and fairly recent creation, the mortgage banking system experienced rapid growth during the 1980-1985 period (See Table 4, Annex B.), with assets growing by 161

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percent and deposits by 155 percent This growth compared favorably to the National Banking System's rates of 45 percent and 55 percent for assets and deposits respectively for national operations. Together, the mortgage banks, with U.S.$863.1 million in assets and U.S.$765.5 million in deposits, represent a solid and solvent group of housing finance institutions.

Table 5 of Annex B provides a profile of the types of deposits within the National Banking System (NBS) as a whole, compared with the Mortgage Banking System (MBS) during the period 1980-85. Summary data on the structure of deposits at the beginning and end of the period is shown below:

Deposit Structure of Banking System

	1980		1985	
	NBS	MBS	NBS	MBS
Checking Accounts	22%	5%	18%	8%
Savings Deposits	17%	43%	15%	30%
Time Deposits	61%	52%	67%	62%
TOTAL	100%	100%	100%	100%

Although mortgage bank deposits grew in all categories, the most significant growth took place in time deposits and not in savings, generally the major resource for housing finance. (See Tables 10 and 11, Annex B.) However, it is important to note that in 1985 the value of savings deposits in the mortgage banks was greater than that in the rest of the NBS for the first time.

Table 6 of Annex B presents a profile of the loan portfolio of the NBS and the MBS. The evolution of the MBS housing portfolio showed growth throughout the period, passing from U.S.$465.9 million in 1980 to U.S.$706.0 million in 1985. As of 1983, the mortgage banks assumed the leadership role in residential mortgage lending. The table below shows the annual increase in the housing portfolio (loans) of the NBS as compared to commercial and mortgage banks. (See also Table 12, Annex B.)

Percent Change in Mortgage Portfolio
by Type of Finance System

	80/81	81/82	82/83	83/84	84/85
NBS	10.0%	7.7%	11.7%	5.9%	8.06%
*CB	6.4%	.02%	7.4%	2.0%	(1.35%)
MBS	14.6%	16.9%	16.1%	9.7%	16.3%

*Commercial Banks

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The diminished participation of the commercial banks in residential mortgage lending may well have been the result of the saturation of the upper income housing market, their traditional market. This would suggest potential problems for the construction sector of the economy if the mortgage banks were not able to mobilize sufficient resources to compensate for the shortfall in commercial bank residential mortgage financing. During 1985, however, the mortgage banks were able to attract resources and the level of MBS housing investment exceeded 1984 levels.

Panama's Mortgage Banking System (MBS) consists of four banks, one public and three private. While the public bank, Caja de Ahorros, was founded in 1934, the private mortgage banks are of fairly recent creation and include: Banco General (1955); Primer Banco de Ahorros (1963); and Banco Panameño de la Vivienda (1980). The Caja de Ahorros is autonomous and has 30 branch offices compared with a total of 23 for the three private mortgage banks. It provides significant national coverage compared to the concentration of the private mortgage banks in the metropolitan area of Panama City, although Banco General is now expanding into the interior.

As potential borrowers and users of the HG-013, all of the mortgage banks, private and public, demonstrate the operational capacity and solvency required to effectively utilize the HG resources and to guaranty prompt repayment of loan funds.

A.3.b. Comparative Behaviour of the Public and Private Mortgage Banks

A review of the comparative performance of the Caja de Ahorros and the private mortgage banks in the period 1980-85 indicates that the private mortgage banks have replaced the Caja as the leaders of the MBS: Total assets of the private mortgage banks grew 245 percent compared to 85 percent for the Caja de Ahorros. (See Tables 8 and 13, Annex B.) The private mortgage banks' accumulated assets increased to a level 1.7 times greater than the Caja's. The private mortgage banks residential loan portfolio grew to almost four times that of the Caja.

Both the private mortgage banks and the Caja performed poorly vis-a-vis savings. Time deposits grew dramatically for the private mortgage banks (303%) and the Caja de Ahorros (102%) during the period, while savings grew by only 95 percent and 50 percent respectively.

In summary, during the last five years the mortgage banking system has shown significant strength and growth. During the period, the Caja has targetted a relatively large level of investment to finance housing costing less than $20,000, while the private mortgage banks have continued to finance units above that level. It is because of the vitality and capacity of the mortgage banking system that A.I.D. would like to see its efforts redirected to financing low cost housing for the urban poor.

A problem which requires some attention is the shift in the liability structure from savings to time deposits, which may limit housing finance in the future. Time deposits are market sensitive and can be withdrawn within rather short periods of time, requiring the mortgage banks to retain relatively high levels of liquidity. This has occurred because the Banking Commission has increased access of small savers to time deposits. This change of policy needs to be evaluated in terms of its impact on the mass of savings and liability structure. Technical assistance is being proposed to examine this issue (See Section II C.3.b.(4)). See Tables 14-16 for data on individual private mortgage banks.

A.3.c. Caja de Ahorros

The Caja is recognized officially by the National Banking Commission as a Panamanian Mortgage Bank and subject to all regulations as set out in the general banking laws. By law it is an autonomous, state institution with its own legal constitution. For over fifty years it has maintained its character as a financial intermediary subject entirely to the conditions of the marketplace. Originally capitalized by the government with $150,000, its capital has grown to $9.1 million entirely through earnings from internal operations.

The Caja competes with the other mortgages banks in virtually all respects (e.g., interest paid). The only advantage that the Caja enjoys from its public character is a tax exempt status, but in fact, the entire mortgage banking system receives a series of tax benefits so the Caja's tax status does not distort market conditions.

The Caja differs from private mortgage banks in two respects. It maintains a more liberal policy on expenses than other mortgage banks. It has established a broad network of branches which, while not highly profitable, provide services to communities that might otherwise not be able to obtain banking services. Second, in recent years it has promoted the development of progressively lower cost houses, thereby exercising leadership among the mortgage banks and establishing a precedent for private sector mortgage banks addressing housing needs of low income groups. Since 1980, approximately 45 percent of the Mortgage Banking Systems assets are controlled by the Caja.

Unlike most other public institutions, the Caja is managed exclusively by a private sector board. Also unique is the tradition of stability tha has surrounded the management of the institution. Since its founding there have been only four managers and each was highly qualified and drawn from the private sector. Its board traditionally has been equally stable and qualified.

As has been observed in the analysis A.3.b., the Caja experienced certain problems in its recent operations influenced by rapid changes in interest rates, higher operational costs, and tremendous competition from the mortgage banks. Thus, the Caja has been growing but less rapidly than its private sector competitors.

B. Analisis of Alternative Implementation Structures for HG-013

Usually both the guarantor and/or borrower of HG resources are designated representatives of a host government. This A.I.D. policy was reinforced by the September 9, 1985 guidance issued by PRE/H.

> "Effective immediately on any uncontracted HG loans, including those already authorized and for which IAs have been signed, HG borrower must be an institution which is already involved in such transactions and which has ready access to the dollars needed to repay the HG loan. Ideally, the institution should be the one which manages foreign currency loans for the government of the country, typically either the Ministry of Finance or the Central Bank. It is the borrower who retains and uses the dollars who must bear the foreign exchange risk as well."

In the case of the HG-013 Private Sector Program, the Government of Panama has been ruled out as borrower or guarantor. The Mission and the private mortgage lenders all concur that government involvement would undercut the Program's objectives. Since Panama has a dollar based economy, the foreign exchange risk is effectively eliminated and USAID/Panama believes other risks can be adequately addressed through the design of the Program. The options that were examined considered who should borrow HG resources and how A.I.D.'s interests could best be protected if the GOP acted as neither the borrower nor guarantor. Each of the alternative options is briefly described below.

Option A: Trust Fund or Trustee as HG Borrower

The option of the trust fund or the trustee as the Borrower of the HG funds was examined and eliminated because: 1) the trust itself is not a legal entity which can borrow under Panamanian law; and 2) while the trustee could borrow in his own name for the trust, none of the four first line banks who were contacted would consent to borrow and assume the repayment obligation. Furthermore, while the repayment obligations could be limited to the proceeds of sub-loans made by the trust to the mortgage lender, this would probably create an unacceptable cloud on the

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HG notes and otherwise unduly complicate repayment obligations. As an option, the trustee could be protected by insurance, but such insurance, if available, would increase the cost of HG resources to a level that would be unattractive to any participating mortgage lenders. Moreover, the insurance companies would require such onerous collateral guaranties that the participating mortgage banks would lose interest in the Program. Finally, none of the three major insurance companies contacted would be interested in issuing such a guaranty, regardless of cost, since the nature of the HG Program was so unusual.

Option B: Participating Mortgage Lenders as HG Borrowers

Under this option, each of the participating mortgage lenders would be the HG Borrowers. Each would be obligated to repay a certain proportionate share of the total amount borrowed, based on the amount which each institution expected to use for financing its own eligible mortgages.

The loan funds, however, would not flow directly to the mortgage lender. Instead, they would pass through the trust, which would add on its spread and loan the funds to the mortgage lenders against eligible mortgages. The mortgage lenders would service the debt to the trust which, in turn, would repay the HG loan.

The advantages of this alternative were: 1) a direct obligation for HG loan repayment between mortgage lenders and the HG investor would exist; 2) the trust would protect A.I.D.'s interests in that the collateral is assigned to the trust and reverts to it in the event of default by, or intervention of, the mortgage lender; and 3) the trust would generate new resources and reserves which could be reinvested in mortgages or used to back bonds to sustain investment.

Option C: Shell Corporation as HG Borrower

Under this option, a group of "founder" mortgage lenders would establish a shell corporation for the sole purpose of borrowing HG funds to be placed in the trust. Any mortgage lender found eligible under Program criteria could borrow from the trust against eligible mortgages. The mortgage lender would sign a note for the amount borrowed and maintain the appropriate mortgage collateral to back the note. The note itself could be made payable to the trust, the HG investor, or A.I.D. Alternatively A.I.D. could still require a guaranty from the mortgage lenders.

This option was considered too complicated, if not infeasible. The disadvantages were as follows: 1) the repayment obligation of the mortgage lenders with respect to the HG loan was more indirect, as their obligation would be to the trust not to A.I.D.; and 2) as a separate corporation there was a problem of collective responsibility, i.e., determining who the real stockholders were and adding an institutional layer that was not really necessary.

<u>Option D:</u> <u>Corporation Owned by Mortgage Lenders as Borrower and Administrator</u>

Under this Option, the Corporation established by the mortgage lenders would not be a shell, but would have operating responsibilities. It would, in effect, substitute for the trust in on-lending the HG funds, taking back repayment from the mortgage lenders and managing the mortgage collateral. Advantages include the following: 1) such a structure would place control of the Program in participating banks which would be shareholders of the corporation; 2) this would eliminate trustee expenses, although the corporation would also have operating expenses; and 3) administrative complexity of passing funds through a corporation to the trust could be reduced.

The disadvantages of this option appear to outweigh the advantages in the following ways: 1) security for A.I.D. would be reduced since the Corporation would not have fiduciary responsibility for managing the trust fund and collateral on behalf of the Investor and A.I.D.; 2) the corporation would be thinly capitalized and sub-borrowers would still have to guaranty the HG loan; 3) the institutional impact of the trust fund would be lost; and 4) there is no particular advantage over individual HG borrowing by mortgage lenders except that the corporation might have some contractual duties in managing the mortgage portfolios.

<u>Option E:</u> <u>Individual Mortgage Lenders as HG Borrowers without a Trust</u>

Under this option, each individual mortgage lender would borrow directly from the U.S. investor against eligible mortgages. The borrower would commit itself to maintain a portfolio of eligible mortgages over the life of the HG loan or would prepay the loan. As a condition of the HG borrowing under this scenario, the mortgage lender would be required to provide some type of liquid collateral (e.g., cash), and some type of administrator or trust mechanism would be required to hold the collateral.

The pros were as follows: 1) the repayment obligation of the mortgage lender would be direct; 2) each participating mortgage lender would control its own resources and decide how long to stay with the Program; 3) the interest of the mortgage lender in utilizing Program funds would be maximized - since there would be escrow costs involved otherwise; and 4) continuation of the Program would be market driven.

The disadvantages were that: 1) A.I.D. would have to monitor the portfolio over 30 years to assure compliance with Program requirements; 2) the option would not provide for a fiduciary to manage mortgage collateral unless A.I.D. would appoint an administrator in case of default; 3) there would be no liquidity reserve to minimize cash flow problems; and 4) the borrowers would be unlikely to earmark liquid assets and deposit them in favor of A.I.D.

C. Description of Recommended Institutional Structure for HG-013

Option B, which describes a consortium of participating mortgage lenders as HG Borrowers, is the recommended structure for the Program. The resources would flow to a Trust Fund set up to manage the HG resources. A trustee, appointed under Panama's Trust Law, appears to offer the best way of providing an on-site agent that has the authority and ability to protect the interests of A.I.D. while achieving Program objectives. This entity would be created by the transfer of the loan proceeds to the trustee in accordance with the provisions of Panama's Trust Law. While the borrowers would own the funds, A.I.D. would be the first beneficiary of the trust with rights the trustee is obligated to protect, as specified by the trust deed and the primary loan agreement. The U.S. investor and the borrowers (mortgage lenders), would also be named as beneficiaries, but their rights would be subordinate to A.I.D.'s.

The trustee would draw on any accumulated reserve in the trust to repay overdue amounts and would demand substitute collateral, should that assigned be considered inadequate. Additionally, the trustee would hold a first lien on collateral and could foreclose or renegotiate the mortgages. A.I.D. is lending only 50 percent of the loan amount for higher cost units, and 90 percent at the lower income levels. A.I.D.'s interests appear well protected since the full amount of the mortgage is collateral. An added security is the home buyer's mortgage insurance which may be partially assigned by the home owner to the trustee.

In addition to the statutory penalities for noncompliance, the trust law also contains conditions requiring a "guaranty of good management" from the trustee in favor of the beneficiaries. Therefore, we would require that the Trustee have a net worth of no less than $8.0 million, 20 percent of the total Program loan in the event that a suit for bad management is necessary. Moreover, the Trustee will be subject to presenting periodic financial reports on trust operations which will be reviewed by the Banking Commission, A.I.D., and the participating mortgage lenders.

A.I.D.'s interest is protected in several ways. First, the Borrowers themselves provide a direct guaranty for the sums contracted; second, in case of insolvency, the mortgages can be transferred to another institution to administer; and third, in the extreme case that a bank becomes insolvent and repayments on loans are also poor, foreclosures on property can be initiated. This last is unlikely to be needed, but it should be noted that the value of the property will far exceed the level of HG financing involved, therefore, the units represent an extremely solid guaranty.

D. Criteria for Eligibility of Mortgage Lenders and for Selecting the Trustee

D.1. Criteria for Selecting Mortgage Lenders

Because the institutions borrowing under this Program will be directly responsible for repaying the HG Loan, only institutions that demonstrate solvency and sound financial management will be eligible to participate. Moreover, the philosophy of the Program is to concentrate resources on strong housing finance institutions which can reorient their operations to low cost housing. Therefore, the Program will include institutions which have the following characteristics:

1. Finance institutions that capture savings and lend resources for housing;
2. Highly solvent financial institutions which have been operating for at least five years; and
3. Sufficient size and range of financial operations to be able to absorb HG lending without affecting normal operations.

<u>Detailed Criteria</u>

The following specific selection criteria have been established for finance institutions:

a) At least 75 percent of its portfolio in long-term housing loans in accordance with the law;
b) Paid in capital in accordance with the law;
c) evidence of having operated profitably for at least the last two consecutive years; and
d) The sum taken in loan from the HG Investor not exceed twice the institution's capital or 25 percent of the deposits of the public.

D.2. <u>Selection of the Trustee</u>

Along with criteria for qualifying participating institutions which will form part of the Trust Agreement, selection criteria for the Trustee are also needed in order to ensure a quality operation. The two basic characteristics which will be looked for in the Trustee are:

- Sufficient operational capacity and experience in finance/banking to provide reasonable assurance that the Program's resources will be well managed.

- A good credit record and stable financial situation which provides adequate protection for the Trust Fund.

More specifically, the following criteria will be applied in the selection of the Trustee for HG-013:

1. Institutional capacity: The Trustee will be a private bank with a general banking license.

2. Financial status: The Trustee will have a minimal level of assets of $125.0 million which is five times the amount of the HG resources being channeled to the Trust Fund. In addition, the Trustee's net worth should equal $8.0 million, or approximately 20 percent of the total Program.

3. Technical capacity: A license as trust fund administrator will be a requirement of the Program. Experience in administering trust funds will be taken into account, although this is not a requirement since trust funds are new in Panama. However, the institution will need to demonstrate experience with loan portfolio management, and in particular with mortgage loan portfolios.

The last three years of operations will be taken into account when selecting the Trustee. Also, the bank's operations will be monitored during Program implementation to ensure that the institution does not fall below any of these standards.

IV. FINANCIAL ANALYSIS

The purpose of this section is to demonstrate the financial feasibility of the Program. As a point of departure, the financial analysis must look at the cost of HG resources from the U.S. Investor, the cost of resources to the mortgage lenders, how the benefits of the Program (rollover features of the HG loan) are to be allocated, and the attractiveness of HG resources in Panama. The cash flow analysis of two alternative approaches is provided in Annex F. Each alternative assumes a different spread for the Trust Fund to establish a reserve and capitalization fund and to pay operating expenses.

Several key observations are important to the discussion:

1. Interest rates on loans in Panama are not determined by a public institution (e.g., a Central Bank), but rather are freely established by banks based on market conditions;

2. Loans in the Program will be established in U.S. Dollars, so there is no question about currency risk; and

3. Eligible Program loans will be based on variable rates so there is no interest rate risk.1/

A. Cost of HG Resources

The cost of HG resources from the U.S. Investor is a function of conditions in U.S. capital markets. Resources may be contracted at variable or fixed rates. In the case of Panama and this Program it is assumed that a variable rate will be contracted for two reasons: 1) for the past seven years, the cost of a variable rate loan is two to three percentage points below a fixed rate, and the lower rate would enhance the financial feasibility of the Program; and 2) since Panama's private sector mortgage loans are variable, there is no interest rate risk. The current estimated cost of a variable rate HG Loan is 6.45 percent with Lender fees included. The cash flow analysis however, was calculated assuming an eight percent rate, approximately one and one-half points over the current market rate, because we chose to be quite conservative. The A.I.D. fee would add .5 percent.

1/ For the past several years rates have fluctuated from 11 percent to 16 percent due to volatility of international capital markets.

B. Financial Spreads

The financial structure of the Program and cash flow analyses are predicated on the following interest rate assumptions:

- Interest Rate from Lender	8.0%	(variable)
- A.I.D. Commission	0.5%	(fixed)
- Other Financial Costs	0.3%	(fixed)
- Interest Rate to Trust Fund	8.8%	(variable)*
- Market Interest Rate	12.75%	(variable)
- Gross Spread	3.95%	(average gross spread)

The gross spread of 3.95 percent must cover the following costs: a) Trustee fee; b) Liquidity Reserve and capitalization; and c) a minimum spread for the participating mortgage lenders. While this differential is less than the mortgage banks obtain on their current lending, it is still adequate. In developing the financial plan, the following assumptions were used:

1. An operating margin of at least 2.25 points had to be earned by the mortgage banks. This equals the lowest spread registered by the banks in 1985 and is required in order for the banks to make a net profit on their operation;

2. The establishment of the margin for the Trustee permits more flexibility and depends on the nature of the Trust Fund and the Trustee's responsibilities. Simple administration of resources requires only a small margin to cover the management costs which is well below the estimate in the PID;

3. Trust Fund solvency is an issue if a government guaranty is eliminated. Therefore, a spread is required which may be used to cover potential liquidity problems;

4. Institutionalization of the Trust Fund to sustain low cost housing investment is among the principle concepts of this Program. This will be accomplished primarily by reinvestment of rollovers by the

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* This figure would be 7.3 percent at current rates leaving a 5.45 percent gross spread of which as much as 2.7 percent or 3.2 percent might go to the Fund depending on the spreads allocated to the mortgage lenders.

participating mortgage lenders. (See Section G of this section.) But a modest spread for the Fund should be designated for capitalization to generate new resources at moderate cost to the participating mortgage lending institutions as well. This capitalization can be leveraged with counterpart resources of the Fund's owners to generate new loans.

While several of these assumptions could change slightly depending on market conditions and other factors, a 2.25 percent minimum spread for the mortgage lenders is a must. Also, ensuring a minimum level of solvency for the Trust Fund requires a spread of at least 1 percent to cover Trustee fees and Liquidity Reserves. Therefore, an estimated .70 percent is left for capitalization of the fund.

C. Rollover Features of HG Loan and Controls on Reinvestment

The 10 year grace period on interest and the 30 year term of the HG Loan will have the greatest impact on the production of low cost housing beyond the initial estimated $43.4 million. The 30 year term of the HG Loan is its most attractive feature since the loans to Program Beneficiaries will have a 20 year term. It was decided that the mortgage lenders should benefit from this difference in terms as well as the grace period on principal. They will receive resources from the Fund for a 30 year term with a ten year grace period. The reasons for this decision were:

1. The mortgage lenders will borrow and repay HG resources over a 30 year time frame and, therefore, they should have the responsibility of reinvesting the reflows;

2. Early cash flow analyses pointed out the complexity of managing reinvestments from reflows and that such reinvestments could add substantially to the administrative costs of the Trustee;

3. Even if the mortgage lenders receive benefits from the rollover they are required to reinvest them in lending activities to low income families. The issue that had to be considered was who could more efficiently place these rollovers in new housing investment, the primary lenders, whose job it is to do so, or a Trustee who may have to develop a capacity to intervene and broker in the market place and at perhaps some considerable cost. The Program purpose is accomplished by reinvestment in low cost housing irrespective of whether the Trustee or the primary lenders do it; and

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4. In the cases where a bank does not want to, or is unable to reinvest reflows in new loans, it can buy qualified mortgages from one or several other mortgage lenders.

Monitoring the use of reflows can be a relatively simple task because, as loans are paid, the mortgage lender must pay off the note held by the Trustee. In the case of pre-payment, the lender would substitute a new note backed by a new low cost mortgage for the one being retired. The Trust Fund will maintain control of all financial operations through an information system to record and verify financial operations of the Fund and mortgage lenders which will be shared among the parties.

D. Why Mortgage Lenders will Participate

Prior to describing the process and results of the cash flow analysis, the issue of incentives for the mortgage lenders will be addressed. For the mortgage lender to guaranty repayment of the HG Loan, regardless of the level of repayment from Program Beneficiaries, the Program has to present financial opportunities. Those opportunities or incentives include the following: a) a 2.25 percent spread will be the minimum that the mortgage lender will receive thus guarantying a profit; b) retention of the rollover feature (difference in loan terms) constitutes an incentive to the mortgage lender to reinvest in low cost housing and gain additional profits; c) the closing costs for the mortgage are three percent of the value of the loan which accrue to the lender; d) the home buyer must deposit savings in the institution financing the loan; and e) the resources will enable the banks to experiment with new housing markets while attracting new clients to the banks. The estimated cost of the resources to the Trust Fund is 8.8 percent, and 10 to 10.5 percent to the borrowers, for a 30 year loan. This compares very favorably to the 10 percent the banks were paying on eight year deposits in Panama. Not only is the term longer by a factor of 3.75, but the rate itself is attractive, since there are no administration costs to capture the HG resources, and the one to two percent spread to capitalize the Fund and provide liquidity ultimately goes to the mortgage lenders.

E. Cash Flow Analysis

Annex F provides a Cash Flow Analysis for the HG-013 Program. Two separate assumptions were made: a) that the Trust Fund would receive a total spread of 1.2 percent; and b) the spread would be 1.7 percent. In projecting the two hypotheses we came up with the following findings:

Hypothesis A (1.2% spread)

At the end of the first ten years of the Program there would be $2.9 million in the Liquidity Reserve. This would represent three times the amount required to meet a semiannual payment. Approximately $107,000 would be available to pay the Trustee expenses each year which is more than adequate.

During the next 20 years of the 30 year HG loan the interest rate spread continues, but the gross income earned is less than the first ten years because principal as well as interest must be repaid. By the end of the 30 year period we have a grand total of $9.8 million in the Trust Fund and operating expenses of the Trustee will have been covered.

Hyphothesis B (1.7% spread)

With the greater spread, the Liquidity Reserve would have grown to $4.5 million over the first ten years; 55 percent more than Hypothesis A. The remuneration available to the Trustee would be $112 thousand per annum, more than in Hypothesis A.

The grand total of resources in the Fund increases to $16.0 million by year thirty, of which $3.0 million is in the Liquidity Reserve and $13.0 million is available for investment. The detailed analyses of these two hypotheses is attached in the Cash Flow Analysis in Annex F.

F. Analysis of Liquidity Reserves

The purpose of the Liquidity Reserve is to provide resources that would minimize the risk of default on the debt service of the HG Loan. The precise level of liquidity required is not easily predetermined; however, due to the characteristics of the Program three criteria may be considered:

1. The risk is not concentrated in one institution, but will be shared by several Borrowers. Therefore, a total loan default is not probable.

2. Part of the Liquidity Reserve should be held in cash to cover payments on any defaults.

3. The Trustee will manage the Liquidity Reserve and the account will remain separate from the participating mortgage lenders.

The purpose of the Liquidity Reserve is to maintain a reasonable level of cash, since the solvency of the Program is guarantied ultimately by the mortgage collateral in the event that all else fails. It seems adequate to keep a "cash" reserve equal to one semiannual debt service payment. Under the assumption of a total default of all Borrowers, the

Trustee would have six months to put other liquid reserves into cash, to seize assets, and to assume or transfer collection responsibilities of the portfolio.

Establishing the Cash Reserve

The capitalized surplus accumulated each semester under Hyphotheses A and B were determined to be:

Hypothesis A: $21,775
Hypothesis B: $33,562

As indicated in the cash flow analyses in Annex F, these amounts are based on an assumed contracted loan amount of $5.0 million. The semiannual debt service amount is $212,500. Based on a capitalization rate of 7.75 percent compounded semiannually, the Liquidity Reserve will be equal to the semiannual debt service payment in five years under Hypothesis A and in three and a half years under Hyphothesis B. A.I.D. will attempt to negotiate the assignment of liquid assets with the mortgage lenders in an amount equivalent to one semiannual payment until the Liquid Reserve reaches the "cash" reserve minimum. These assets of the mortgage lender will earn a yield to be paid to them by the Trustee and will be returned when the minimum level is achieved. The accumulation of resources in the Reserve Fund are shown below:

Semester	Hypothesis A	Hypothesis B
0	Start of the Program	
1	$21,775.00	$33,562.00
2	44,394.00	68,495.00
3	67,889.00	104,638.00
4	92,295.00	142,255.00
5	117,646.00	181,329.00
6	143,980.00	221,918.00
7	171,334.00	
8	199,748.00	
9	229,264.00	

After reaching the minimum cash reserve level, A.I.D. may opt to either discontinue the capitalization of the Liquidity Reserve or continue it. Should it be discontinued, the Trustee will begin to generate a loan portfolio with the accumulating resources.

G. Anticipated Impact of Reinvestment Program

The reinvestment of the funds generated by the distinct types of repayments anticipated by the HG-013 design will substantially increase the final impact of the Program beyond that of the initial loan amount. Two primary sources of reinvestment are contemplated by the Program design: 1) reinvestment of reflows from individual mortgage repayments; and 2) new investments of the Liquidity Fund.

Since the real life of mortgage loans will normally be less than the contracted term, the figures presented below represent only an estimate based upon some reasonable assumptions. The analysis indicates that each of the two types of reinvestment will produce important multiplier effects on the HG-013 Loan.

G.1. Grace Period on Capital (first 10 years)

The mortgage lenders will be responsible for reinvesting the individual mortgage reflows which they receive during the period in new mortgage loans to income families. Individual mortgage loans with a 20 year term at a 12.75 percent interest rate would produce the following results:

° Anticipated reflows from individual loans:	$6,861,250.00
° Repayments from reinvestment of above reflows:	$ 463,750.00
Total	$7,325,000.00

G.2. Period of Repayment of HG Loan (second 10 years)

During this period the initial portfolio should be completely repaid with a net gain resulting from the original HG loan. A conservative estimate of repayments without any prepayments of the Loan by the mortgage lenders produces the following results:

° HG balance at year 20:	$17,421,735.00
° Minimum mortgage portfolio required in guaranty by the Program:	21,777,168.00
° Projected individual mortgage balance:	5,060,680.00

- Estimated total investment: $24,031,488.00
- Value of new programs: $26,701,653.00 (includes downpayments)

G.3. Liquidity Fund Investment

The following assumes a 1.7 percent spread for the Liquidity Fund.

° Funds generated by the Program:	$13,000,000.00
° Funds with counterpart included:	$16,250,000.00
° Value of new portfolio (downpayments included)	$18,055,555.00

G.4. Impact of Reinvestment Program on HG Program

The two types of reinvestment programs produce the following results:

- Original Program $48,200,000.00
- Total Reinvestments $44,757,208.00

Grand Total $92,957,208.00

The total value of the Program is 3.7 times the initial Loan of $25.0 million.

V. TECHNICAL CONSIDERATIONS

A. Production Capacity of Construction Sector

In real terms Panama's construction sector achieved its maximum production levels in 1973, declined steadily thereafter, and had a resurgence from 1979-1982. (See Table 21, Annex B.) This growth of the early 1980s was followed by another decline in activity from which the sector has only recently begun to emerge. In 1985 the construction sector grew by approximately 18 percent. Assuming optimistically that the sector's recovery will continue over the life of the HG Program, it is expected that the 1982 production level could be matched or even exceeded when the Program's new resources flow into the sector. However, given the potential of the sector as demonstrated in the construction levels achieved in the 1970s, it can be assumed that HG-013 will be easily absorbed by the sector.

A review of the production levels in the country's building materials industry yields similar results. Table 22 in Annex B presents production and sales levels for a selected number of building materials between 1972-1983. The peaks and valleys of the building materials industry parallel those of the construction sector, and currently production is well below the levels seen in the 1970s. For example, in 1983 the production of concrete blocks was 14 percent below the peak production year, 1973. Therefore, it can be expected that increased production for HG-013 projects can be achieved without difficulty. Building materials constitute a significant percentage of the total cost of a dwelling unit. In the case of the proposed HG-013 housing solutions, approximately 40-45 percent of the cost of the unit is attributable to the cost of building materials.

Many developing countries are currently experiencing severe inflationary pressure on the cost of building materials. Fortunately, this is not the case with Panama. Table 23 in Annex B shows the variations in the cost for a group of selected building materials for the period 1980-85. With only one exception (domestic floor tiles), has the annual increment for the five-year period exceeded five percent. In fact, for several products (asbestos-cement roofing, PVC pipe and domestic lumber), the cost has actually decreased. It is anticipated that the price stability in Panama's building materials industry will continue over the life of the HG-013 Program.

Although the prices of building materials have remained relatively stable over the past five years, the prices of certain materials have been maintained artificially high due to Panama's protectionist tariff policies. For example, a bag of cement in Costa Rica costs $1.56, while in Panama the same product costs from $4.87 to $6.00 depending on location. This issue is currently being analyzed in the housing policy studies financed by USAID/Panama and will be addressed as part of the technical assistance program on construction costs.

A.1. Costs and Availability of Labor

Employment figures in the Economic Analysis Section would indicate that there is a substantial surplus of labor available to the construction sector which can fill any needs generated by the HG-013 Program. Labor is also a major component of the total cost of a dwelling unit. In the case of the proposed HG-013 housing solutions, labor constitutes approximately 30-35 percent of the total cost of the dwelling unit.

Minimum wage rates in Panama's construction sector are established through two distinct mechanisms. (See Table 24, Annex B.) The first method is a minimum legal wage established by government decree. Minimum wages for the construction sector have been increased twice since 1974, the last time being in 1983. The minimum wage for the highest grade of carpenter or mason (journeyman) under this system currently stands at $10.24 per day, while a laborer receives $7.28 per day. The government's minimum wage for the construction sector has increased at approximately two percent per annum since 1974.

The second method for establishing a minimum wage for the construction sector is based on the collective bargaining agreement between the Panamanian Chamber of Construction (CAPAC) and the Panamanian trade union SUNTRACS. The minimum wage for the construction sector's various skill levels is adjusted annually. Minimum wages were recently increased in July, 1986 to $16.00 per day for a journeyman carpenter or mason and $12.16 for a laborer. Annual increases for the period 1980-1986 equal approximately six percent.

Even though labor has historically been employed at the higher of the two minimum wage rates, the CAPAC-SUNTRACS wage scale has increased at a moderate rate when compared to the Wholesale Price Index. Since this collective wage agreement is normally established for a period of several years, private developers are able to undertake future programming with the confidence that estimated wage bills will not change dramatically. This aspect, along with constant or even falling building materials prices, has brought relative stability to Panama's construction sector which is unknown in many other developing countries.

A.2. Land

The price of raw land, along with site preparation and on-site infrastructure costs, is one of the three main components of urbanization cost. Raw land prices are related to location and topographical conditions, as well as the proximity to trunk infrastructure networks. The current prices of raw land in the Panama Metropolitan Area have forced new lower income residential development to the periphery of the built-up area. The analyses of Annex E, Section C assumes raw land values in the range of $1-4 per square meter. These analyses show that this range of land values is the maximum which is still affordable to A.I.D.'s below median income target group. However, the residential land values presented in the following table clearly indicate that low land prices will be difficult to find within the city's built-up area.

ESTIMATED RESIDENTIAL LAND VALUES
PANAMA METROPOLITAN AREA

STANDARD	PRICE RANGE (B/./m^2) MINIMUM	MAXIMUM
Serviced High Income	B/.72	B/.104
Unserviced High Income	64	96
Serviced Medium Income	32	64
Serviced Low Income	12	32
Unserviced Low Income	8	28

Source: Urban Development Assessment: Panama, R.R. Nathan Associates, Inc. and Urban Institute, January, 1985.

Raw land costs suitable for HG-013 projects imply peripheral locations currently outside of existing water and sewerage networks. While the initial cost of land will be relatively low in these peripheral areas, the final cost of urbanization can be quite high due to the lack of or inability to serve these areas with trunk infrastructure.

Current government programs for the servicing of vacant land with trunk infrastructure will greatly affect the city's development over the next 10-15 years. Government currently does not plan to extend infrastructure networks to serve vacant land in the vicinity of Tocumen Airport. On the other hand, plans are quite advanced to serve the area between Arraijan and Chorrera to the west of Panama City. Extension of infrastructure networks within this area will tend to stimulate future development.

A.3. Project Approval Procedures and Land Title Registration

Significant increases in the financial and economic costs of housing production can result from delays in the regulatory framework that rules the approval of project plans, field inspections, the approval of "planos de inscripción", and the registration of land titles.

The procedures for project approval are contained in the document "Normas de Desarrollo Urbano para la Ciudad de Panamá"1/. The process of project approval is divided into three stages:

Preliminary approval

Preliminary approval requires the submission of documents including registered land title, brief description and location of project, preliminary plans and designs, etc. to MIVI for its review and comments. MIVI must provide either preliminary project approval or any required changes or modifications within 30 days. Preliminary approval provides guidance for detailed project design, but does not authorize any type of construction.

Approval of Final Construction Drawings

Within one year from the date on which a project received preliminary approval, the owner of the proposed project must submit a complete set of final construction drawings for MIVI approval. These plans must normally have prior approval of IDAAN, IRHE and MOP. Under certain circumstances, MIVI itself can request the approval of these other institutions. In addition, the Ministry of Health must approve subdivisions outside the limit of waterborne sewerage networks. Although the law requires MIVI to respond within 30 days to a final request for project approval, in many cases this period can take up to six months depending on the person or firm submitting the project and/or the degree to which the proposed project departs from established design practice (i.e., requests application of a more liberal zoning classification or lower standard infrastructure).

1/ Normas de Desarrollo Urbano para la ciudad de Panamá, Resolution No. 150-83, Ministerio de Vivienda y Direcciones de Ingenieria Municipal of the Districts of Panama and San Miguelito, October 1983.

• Approval and registration of "planos de inscripción"

Following the completion of construction and the prior approval by IDAAN and MOP of the infrastructure network, MIVI must authorize final approval of all or part of the project. Without this MIVI approval ("planes de inscripción"), sales agreements and land registration cannot be finalized.

In addition to the bottlenecks in the project approval process, the "Registro Civil's" lack of capacity to process the registration of land titles on a timely basis creates delays in project finalization. Under the Preferential Interest Rate Mortgage Law (PML), a mortgage loan cannot be closed until the land title is registered in the name of the project beneficiary. This process, which can take up to three months, delays the date on which the developer can effectively be "taken out" of his short-term investment in construction financing. A delay of even a month in this process can signify an additional project expenditure of many thousands of balboas in interest payments. The technical assistance provided under HG-013 will examine ways to rationalize the project approval process and the registration of land titles at the "Registro Civil".

B. Relevant Project Experience of Private Developers

The Project Paper team interviewed a sample of four private developers who are currently developing projects with units costing $20,000 or less to assess their experiences to date. The companies and the low cost projects they are now developing are shown below.

Companies and Projects Fitting HG-013 Profile

Company	Project	No. Units	Aver. Unit Cost
Econoplade	Vista Alegre	1,200	$9,490
"	" " (Future)	1,200	$9,500
"	" " (Future)	300	$14,900
Díaz y Guardia	Colonias del Prado	126	$18,000
SUCASA*	Altos de las Acacias	400	$20,000
" "	Residencial Las Lomas	40	$19,000
URBAVIP	Villa Lucre	1,200	$20,000

* SUCASA has four additional projects underway with a total of 451 units, and with unit costs ranging from $23,000 - $50,000.

In terms of relevant experience for the HG-013 Program, the experience of Econoplade is the most interesting. This company, with

Caja de Ahorros' financing, is constructing a 1,200 unit project west of the Metropolitan Area of Panama in Arraijan with an average unit cost of $9,500. This very low unit cost was achieved through lower raw land costs due to the project's outlying location, and to reductions in urbanization norms and standards negotiated with MIVI and MOP because of the areas's classification as "semi-rural". Given the extraordinary demand evidenced for this project, an identical project of 1,200 units is being initiated, and a third project with 300 units at a slightly higher sales price of $14,900 is being designed. (See Section VI.B.2. on Effective Demand.)

The other developers who were interviewed indicated that they have targetted a small percentage (10-15 percent) of their housing production within the Panama Metropolitan Area to units with a selling price of less than $20,000. They also said, however, that until financing is available for lower cost units, they will continue to concentrate on units costing close to $20,000 or above because that is a market that banks will support.

C. Potential Constraints on Private Developers

While developers expressed interest in expanding their activities into the low income market, they qualified that interest citing the constraint of the norms and standards regulations that govern residential construction. Developers said that they are able to build units in the $18-$20,000 range in Panama City using existing norms and standards. They are able to build lower cost solutions in peripheral areas where raw land costs are still relatively low. They conceded that cost reductions could be achieved by reducing the lot size, the level of finishing, and by constructing semi-detached units. They did, however, express substantial concern about their ability to provide housing solutions in the $10,000-$15,000 range in the Panama Metropolitan Area because of the high urbanization norms which are applied and the high cost of land.

Norms and standards are not applied uniformly in the Metropolitan Area of Panama. For instance, parcels of land outside the built-up area of Panama City, on the road to Tocumen, are classified as "urban", requiring the same high norms and standards (classification R-1) as are applied to units built in the city center. Meanwhile other parcels which are equidistant from the center of Panama City, such as Econoplade's project in Arraijan, are classified as "semi-rural" and have much less restrictive norms and standards (R-E or Residencia Especial classification). See Annex E for a detailed analysis of the differences between R-1 and R-E subdivision categories.

The varying norms and standards for a project can make a difference of about $5,500 in the final sales price of the unit. (See analysis comparing private sector projects built under R-E and R-1 norms, Annex E, pp. 18-20.) Half of this cost difference is due to the higher densities allowed in projects classified as R-E. If the Ministry of Housing, which is required to approve residential projects, applies the flexible R-E standards available for low cost projects, smaller lot sizes can be designed which greatly affect the final cost of the unit. The R-E norms allow a number of other adjustments to the R-1 standards for high cost projects which also reduce costs.

The Ministry of Public Works (MOP) establishes norms and standards for roads and drainage. These are almost as important in the total cost picture of projects as MIVI's residential classification. For instance, if MOP approves surface drainage versus underground systems, allows smaller pipes, and reduces road surfacing requirements, about $2,500 per unit could be saved, or almost half of the cost difference mentioned above.

Norms and standards for water and sewerage and for electricity are established respectively by IDAAN (National Water and Sewerage Institute) and IRHE (Institute for Hydro Electric Resources). While modifications in these norms and standards could produce modest savings in unit construction, most savings will be made in modifying MIVI's and MOP's requirements.

The principal issue is the need for the broad based application of reduced zoning and infrastructure norms and standards for lower income development within the Panama Metropolitan Area without having to resort to the current time consuming negotiations with the appropriate ministries. Achieving these lower standards will require a concerted effort by institutions like CAPAC and MIPPE to establish dialogue and reach agreements with MIVI and MOP. Use of the special subdivision norm R-E granted by MIVI, and achievement of reductions in infrastructure standards, especially for roads and drainage, would have the most effect on lowering per unit costs. Analyses (See Annex E, Section C.5.) show that a 2 bedroom unit on a $147m^2$ lot (R-E zoning for duplex units) is affordable to households in the 40th to 45th percentile, even at a market interest rate of 12.75 percent, if lower standards are applied. The preferential interest rate (7.75 percent) allows families at the 35-40 percentile to purchase this same type of solution.

In addition to the public regulatory agencies' flexibility in the application of reduced norms and standards, further cost reductions can be achieved by using land more efficiently. Costs can be lowered by reducing the percentage of total area devoted to circulation, and obtaining a higher marketable area through the use of "cul-de-sac" streets, collective parking and a combination of vehicular and pedestrian paths. With such careful site planning, a developer can produce a two bedroom unit on a $147m^2$ lot which is affordable to households at the 35th percentile at nine percent interest rate, and at just above the 40th percentile at a 12 percent interest rate.

D. Characteristics of HG-013 Solutions

Private developers realize that the housing unit required to serve A.I.D.'s below median income target group will differ significantly from the current solution types being built for the $20,000-$30,000 market. In order to reach this lower income group, developers will no longer be able to provide a fully finished unit on a 200-300 square meter lot according to prevailing construction norms. Even though their first experiences show a very strong demand for low cost units, some developers are concerned about the characteristics of this new shelter solution and whether it will be marketable, since people's expectations may be greater than what they can really afford. (See Social Soundness Analysis, Section VI.B.) It is expected that the reduction of unit costs to meet the affordability criteria of lower income target groups will be gradual and tested by market acceptance. Some guidelines for reducing costs are contained in Annex E, Section C.5. These will assist private developers in designing lower cost units, as will technical assistance provided as part of the HG-013 Program.

D.1. Affordable Selling Prices

Private developers will be encouraged to produce a wide range of shelter solutions under HG-013 on the basis of market and demand factors. The Preferential Interest Rate Mortgage Law (PML) will significantly increase the ability of Panama's below median income household families to purchase units which the developers will build.

Panama's current market lending rate is 12.75 percent. This rate is variable and is reevaluated quarterly on the basis of institutional borrowing rates. Banks normally offer mortgage loans for 20 years and require a minimum downpayment of 10 percent. The current preferential rate (PML) for mortgages of less than $20,000 is 7.75 percent, that is, five points below the market rate.

The following table presents a range of selling prices for solutions which are affordable to A.I.D.'s target group, using both market and PML rates. Analyses are included of 15, 20, and 25 percent of household income to repay their mortgage debt which approximates the percentages which are applied by the Caja de Ahorros and other private sector financial institutions. By applying a 7.75 percent preferential rate, units can be built which range in cost from $7,200 for families at the 20th income percentile to $19,800 for families at the 50th income percentile in the Panama Metropolitan Area. It is expected that households in the lower stratum of this income range (20th-30th percentiles) will benefit from the $1.0 million set aside for the first twenty four months to finance very low cost shelter solutions costing around $6,000-$7,000.

The maximum unit cost affordable by a family earning the urban median income of $585 per month would be $19,800 using the PML

Table
Range of Affordable Selling Prices by Interest Rate and Percentage of Household Income Spent on Loan Repayment1/
HG-013
June 1986

Income Level (Panama City)	Annual Interest Rate 12.75%			Annual Interest Rate 7.75%		
% of Household Income for Loan	15%	20%	25%	15%	20%	25%
20th Percentile ($210/month)						
Monthly Mortgage payment ($)	32	42	53	32	42	53
Total Mortgage Amount ($,20yrs)	2,773	3,640	4,593	3,898	5,116	6,456
Sales Price ($, 10% Downpayment)	3,081	4,044	5,103	4,331	5,684	7,173
30th Percentile ($325/month)						
Monthly Mortgage payment ($)	49	65	81	49	65	81
Total Mortgage Amount ($,20yrs)	4,247	5,633	7,020	5,858	7,771	9,684
Sales Price ($, 10% Downpayment)	4,720	6,259	7,800	6,509	8,634	10,760
50th Percentile ($585/month)						
Monthly Mortgage Payment ($)	88	117	146	88	117	146
Total Mortgage Amount ($,20yrs)	7,627	10,140	12,654	10,719	14,252	17,784
Sales Price ($, 10% Downpayment)	8,474	11,267	14,060	11,910	15,836	19,760

1/ The range of 15 to 25 percent of household income spent for loan repayment was selected because it approximates the percentages applied by the Caja de Ahorros and private sector financial institutions.

rate (7.75 percent interest), a 20 year amortization period, and 25 percent of household income as a monthly payment. During the PID review, it was suggested that the maximum unit cost be established on the basis of the market rate of interest (currently 12.75 percent even though the PML would result in a 7.75 percent cost to the Program beneficiary. Using the current market interest rate a maximum unit cost is estimated at approximately $14,000 for a household earning the median income. Based on selling prices of $17,500-$19,000 for units currently produced by the private sector and on subsequent negotiations with local financial institutions, a maximum solution cost of $16,000 was established for HG-013. This solution cost is affordable by a family whose income falls around the 40th percentile for the current preferential rate.

Depending on market and demand factors, private developers will have great flexibility in providing new solution types affordable to A.I.D.'s target group. Several private developers are already producing at the upper limit of the affordability range. Another developer has achieved a significant cost breakthrough by successfully negotiating the approval of lower urbanization standards for a rural site at the edge of the Panama Metropolitan Area.

D.2. Illustrative Solution Types

This section presents illustrative solution types which comply with the maximum unit selling price established for the HG-013. The first illustration (see Annex B) shows the market-tested two-bedroom, single family unit on an urbanized lot which meets all the requirements of government's development agencies. A reduced selling price of $15,000 can be achieved by locating the unit on moderately priced land found at the periphery of the Panama Metropolitan Area, by reducing the size of the dwelling unit and lot, and by decreasing the level of finishings on the unit. In order to reach a $15,000 selling price, the false ceiling, bath tiles, kitchen and bedroom cabinets, and interior finishing have been removed from this solution type. Figure 1 in Annex B provides the characteristics and costs for this unit.

To achieve a reduced selling price of $10,000-$10,500, significant reductions in urbanization norms and standards must be achieved. The second example assumes that the storm drainage system is designed on the basis of surface runoff of stormwater and that streets will be paved with asphalt over a base of "tosca". Neither of these reductions in urbanization standards is currently acceptable to the responsible government agency (Ministry of Public Works) within the Panama Metropolitan Area, In addition, the illustration assumes a semidetached unit on a smaller lot with a similar level of finishings to the first example. Over $1,000 in cost savings can be achieved by eliminating the costs associated with one of the exterior walls of a semidetached unit. Figure 2 in Annex B presents illustrative designs and costs.

E. Environmental Considerations

The HG-013 Program will undertake the financing of housing solutions in small to medium size construction projects in urban areas throughout the country. It is expected that most resources will be used to finance projects in the Metropolitan Area of Panama, but secondary cities will be included if strong demand for housing is identified. The Initial Environmental Examination carried out at the time of the PID indicated that adverse environmental impact will happen only where land will be cleared and prepared for new construction. (See Annex A.1.d.)

Based upon the finding of the environmental examination of the proposed HG-013 Program, it has been concluded that these activities do not significantly impact on the human environment. Therefore, a Negative Determination is warranted for the proposed A.I.D. Housing Program.

VI. SOCIAL SOUNDNESS ANALYSIS

A. Identification and Characteristics of Target Population

Panama is characterized by primacy of the capital, Panama City. Almost half (49 percent) of the country's estimated 1980 population of 1.8 million lives in the Panama-Colon metropolitan corridor. Other urban areas, principally David in the west and Santiago and Las Tablas in the center account for another eight percent. The rural areas contain 43 percent of the population. While the country as a whole experienced a growth rate of 2.5 percent per annum during the 1970-1980 decade, the rate in Panama City was 3.7 percent. Though the growth rate of the capital is expected to taper off slightly during the next two decades, by 2000 the Metropolitan Area is projected to contain over 60 percent of the country's population. Rural to urban migration is expected to continue unabated as perceived opportunities in the rural area keep diminishing.

A.1. Household Incomes

The following table presents the estimated incomes for families earning at the median income and below in various urban areas of Panama. It will assist in the definition of USAID/Panama's target group for the current HG-013 Program.

	MONTHLY HOUSEHOLD INCOME ($/month)		
PERCENTILE (%)	METROPOLITAN PANAMA	COLON	OTHER URBAN
15	$151	$143	$86
20	208	198	118
25	265	252	150
30	326	309	184
35	386	367	219
40	450	427	255
45	512	486	290
50	585	528	339

Source: MIPPE, adjusted by PP Team

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The median defines the upper limit for all HG Programs. Since the Ministry of Housing (MIVI) serves the lowest income groups, it is useful to review its current projects. A recent sites and services project financed by the Inter-American Development Bank serves families with incomes between $90 and $350 per month and provides lots up to a basic core unit of 25m^2. The upper limit falls at about the 30th percentile.

For purposes of the HG-013 Program the primary target group is defined as those households earning between the 20th and 50th percentiles. This percentile range corresponds to household incomes which vary from $208 to $585 per month in Panama City. It is unlikely, even with the reductions envisaged for norms and standards, that the private sector will produce and finance a large number of shelter solutions affordable to households between the 20th and 30th percentiles within the Panama Metropolitan Area. However, a special line of credit of $1.0 million is being made available for those institutions willing to experiment with very low cost solutions.

A.2. Employment Characteristics

The popular conception of the employment characteristics of the low income economically active population is that it works primarily in the informal sector. However, because the urban economy in Panama is relatively sophisticated compared to many other developing countries, the opposite phenomenon is more true, i.e., the majority of low income urban wage earners work at low paying formal sector jobs. A 1980 MIVI study of the typical low income squatter community of Nuevo Veranillo in the San Miguelito area showed that 55 percent of the heads of households held permanent, salaried positions while 45 percent held irregular employment or were unemployed. This profile is not substantially different from that of the country as a whole where the unemployed and underemployed represent almost half of the workforce.

In Panama City itself, the percentage of permanent salaried workers is estimated to be even higher due to the greater employment opportunities. MIVI's 1982 survey of the urban renewal areas showed that only 30 percent of the heads of household worked in small commercial and artesanal activities.

B. Potential Market and Demand for HG-013 Solutions

B.1 Potential Market

Annex D provides estimates of the number of families earning between $200-$600 per month who potentially comprise the market for HG-013 solution types within the Metropolitan Area of Panama, considered the principal target area for the Program. Households characterized by the following are considered to be the best market for the HG Program:

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- Households in "Improvised" dwelling units;
- Households in "Rooming Houses";
- Households in overcrowded conditions;
- Five percent of households in permanent dwelling units; and
- Twenty percent of households in rental units.

Based on those assumptions, the potential market for HG-013 solutions in the Metropolitan Area in 1986 is estimated at 17,000 units. Over 70 percent of this potential market currently resides in Rooming Houses or in overcrowded housing conditions.

B.2. Effective Demand

Available information does not permit a detailed analysis of effective demand. However, interviews with private developers indicate that demand for all the private sector initiatives mentioned in the previous section has been overwhelming. For example, in the case of Econoplade's Arraijan development, the sales program which began in June, 1985 included just one week of advertising in the local newspapers. This minimal advertising campaign plus word of mouth communication generated over 10,000 inquiries. Out of 5,000 qualified applicants, 1,200 applications were processed and a waiting list of 500 was established. This project was completely sold out in less than one year, even before half of the construction was completed. This overwhelming demand is the reason that another 1,200 unit project will be constructed for the same income group, plus a 300 unit project at a slightly higher level.

C. Factors Affecting Capacity to Pay

C.1. Share of Family Income for Housing

Normally residential mortgage loans in Panama are conceded for a twenty year term with monthly payments calculated at 25 percent of family income. Under the Preferential Interest Rate Mortgage Law, a family can borrow about 40 percent more than it could under market interest rates. For example, a family earning \$550 per month could buy a house worth \$13,000 at 12.75 percent interest, and the same family could buy a house valued at about \$18,500 at 7.75 percent. The law has significantly expanded demand for home ownership by increasing accessibility. However, in determining credit capacity, the banks build in certain additional restrictions which help to guaranty the capacity of families to pay over time. Instead of 25 percent of household income for debt service, only 20 percent might be taken into account, or payment capacity may be calculated as though interest rates were two points higher. In effect this lowers the total amount loaned. Our illustrative family could purchase a unit worth about \$15,400 given the bank's added restrictions. This provides a hedge against interest rate variations in future years. Through such adjustments the banks protect the solvency of their mortgage portfolio over time, since the interest rate for users could climb to eleven percent and the reference rate to 16 percent without adversely affecting the health of the mortgage credit.

C.2. Downpayments and Closing Costs

Downpayments and closing costs are of considerable relevance to HG Program beneficiaries. The downpayment is normally a minimum of ten percent. Occasionally, a valuation will exceed the sales value of a unit, thus permitting the bank to finance more than 90 percent of unit cost, but such cases are exceptions to the rule.

Closing costs are similar across the sector and as follows:

Bank Commission	3 percent on the loan
Property Insurance	First year in advance
Mortgage Life Insurance	First year in advance
Monthly Payment Deposit	One month minimum
Documentation Preparation	According to established rates
Title Registration	" " "
Other Legal Costs	" " "

These costs usually represent 6.5 percent to 7.5 percent of the value of the mortgage. When added to the ten percent downpayment, the resultant 17 percent of the value of the house required up-front can be onerous for low income families. Two covenants have been prepared to address this issue. (See Section VIII, B.1.e.)

The sales departments of the principal private sector developers have noted the lack of savings as a major constraint to serving lower income households since many families do not have the minimal savings needed for downpayment and closing costs. These out-of-pocket costs can be $1,500 to $2,700 for the range of units expected to be financed under HG-013.

To reduce these costs and better serve low income families, the Caja de Ahorros lowered its individual mortgage commitment fee from the normal three percent to one percent . Also, a few developers have identified short-term financing (3-4 years) to finance up-front expenditures. Nevertheless, demand for low cost housing is so strong that applicants for the Program will be found.

During the implementation of HG-013, USAID/Panama will work with private developers and financial institutions to reduce the impact of downpayment and closing cost requirements. The possibility of reducing bank commissions and other closing costs will be investigated. A more effective alternative would be to finance closing costs. This mechanism could improve access to mortgage credit without causing a major increase in the monthly payment. For example, if the $1,200 closing costs of one developer's $15,400 mortgage are capitalized as part of the loan, monthly payments would increase by less then $10.

C.3. Other Beneficiary Selection Criteria

Credit institutions analyze several other factors in determining the credit risk of a family. Direct financial solvency is established by the existence of a regular and stable source of income, usually requiring a minimum of two years in present employment. Indirect financial solvency is established through a review of past performance in meeting credit obligations, and the stability of the family structure. The stability of the family structure has particular importance irrespective of whether the head of household is a woman or a man, or a couple has an informal union.

Family income level is established by considering all regular income generated by the individuals who will be permanent residents of the house. Normally 25 percent of total household income is utilized in determining affordability, although 20 percent and 30 percent have also been applied in some institutions.

D. Participation of Female Heads of Household

Nationwide, 21 percent of all households are headed by women; in some low income communities, this proportion is twice as high. For example, a study of the Nuevo Tivoli tenement area conducted by MIVI in 1981 revealed that 39 percent of the families were headed by females. Similarly, a 1981 study of the Nuevo Veranillo low income area of San Miguelito indicated that 38 percent of the families were headed by females.

Women also represent a significant percentage of informal sector workers, a group which is often precluded from obtaining formal credit because of irregular income and the preconceptions about credit worthiness within the financial community. However, women have increasingly been qualified as buyers for recent projects constructed by the private sector in Panama. For example, in the previously mentioned Arraijan project under construction west of the Metropolitan Area, over 25 percent of the buyers were households headed by females.

E. Employment Generation

In addition to new shelter solutions, the $48.2 million investment under the Program has been conservatively estimated to create about 3,600 new direct jobs in the construction industry and indirectly another 1,800 jobs in related industries. If, as expected, the HG loan is rotated once over its 30 year period its impact on job creation will at least double. If one applies the higher estimates of the CAPAC (100 direct jobs and 50 indirect jobs for every $1.0 million of construction), the HG Program could create as many as 4,400 direct jobs and 2,200 indirect jobs.

VII. ECONOMIC ANALYSIS

A. Overview

During the decade of the 1970s Panama experienced rapid and sustained economic growth, which was translated into high levels of per capita income. The principal motors of that growth were public investment on one hand, and Panama's monetary and legal situation on the other. While providing substantial economic development benefits, Panama's economic policy was affected by three basic weaknesses:

1. Continued and growing public indebtedness without the generation of local economic surpluses for servicing the debt;

2. An emphasis on social expenditure rather than economic development investment and an unparalleled growth in the level of state apparatus; and

3. Lack of concern for private sector development which might balance and support the growth of the public sector.

Nevertheless, Panama's traditional service oriented economy grew, in part due to the rapid expansion of the banking sector and the Free Zone of Colon. Growth during the 1970s was a result of special monetary policies which converted Panama into a supply and purchasing center for countries with over valued currency and liberal import policies, and a major source of dollar credit. Both the limitations and the risks inherent in these policies became apparent when the government's saturation point in capacity to borrow coincided with the onset of an economic crisis in the region. The two primary stimuli for growth were severely curtailed and Panama's economic crisis began. In addition, a period of serious destabilization in the Central American region occurred which further affected and continues to affect Panama.

Panama's GDP, which grew at an average annual rate of 6.6 percent during the decade of the 1970s, fell to an average of 2.6 percent between 1980 and 1985. As indicated in Table 25 (Annex B), the pattern of growth during the period was irregular, with zero growth in 1983 and negative growth in 1984.

Despite the above problems, the circumstances during the period 1980-1985 were not all negative. While real growth during the period was low, it was at least comparable to the rate of demographic growth and the quality of life of Panamanian families was not severely affected compared to other countries in the region. Furthermore, during 1985 the economy showed signs of reactivation.

The fact that the U.S. Dollar serves as the legal monetary unit in Panama has permitted the country to live with recession without suffering the severe inflation which has affected other countries in the region. Two aspects of the economy which will place significant constraints on Panama's future development are the GOP's fiscal deficit and high unemployment. These are discussed below, along with the prospects for the future adjustment and growth.

A.1. The Deficit Situation of the Central Government

Panama has a classic structural deficit, the budget has been in deficit every year for as far back as our data goes. However, at the same time the current account has always shown positive; i.e., a surplus before capital investment spending. The 1985 government deficit was some $100 million, down by two-thirds from the previous year, and well within the IFM ceiling of $160 million.

Public Sector Revenues and Expenditures
(in millions of dollars)

	1982	1983	1984	1985
Revenues	1,265	1,387	1,395	1,503
(taxes)	615	662	635	689
(non-taxes)	650	725	760	814
Expenditures	1,727	1,652	-1,699	-1,622
(ordinary)	1,209	1,245	1,334	1,374
(capital)	518	407	365	248
Net Excluded Items	-2	+17	+8	+16
Deficit	-464	-243	-296	-103

In 1985 revenues dropped considerably with the only positive element being tax revenues which clearly depend on the effectiveness of economic reactivation.

A.2. Employment Conditions

In previous years, the government has been the primary source of employment, trying to control unemployment through the direct provision of jobs as well as a series of indirect measures. In the period 1982-1984, the employment situation in the country was as follows:

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	1982	1983	1984
NATIONAL			
Economically Active Population	612,566	661,564	681,196
- Employed	561,064	597,345	613,608
- Unemployed	51,502	64,219	67,588
- % unemployed	8.4	9.7	9.9
METROPOLITAN REGION			
Economically Active Population	352,887	378,428	389,384
- Employed	317,333	333,983	342,083
- Unemployed	35,554	44,445	47,301
- % unemployed	10.1	11.7	12.2

The above table shows the seriousness of the unemployment problem which is growing more rapidly than employment. In this regard, the most critical situation exists in the Metropolitan Area where unemployment grew by 20.8 percent in a two year period, reaching 12.2 percent in 1984.

A.3. Prospects for Economic Change and Growth

Various legislative changes have been made which may affect the agricultural, industrial, and labor sectors (e.g., labor law, industrial incentives legislation, etc.). However, the real impact of these changes is not yet clear. For example, the industrial incentives law1/ designed to stimulate production and export was promulgated in March, 1986 for application in August. However, industrialists throughout the country are opposing the new legislation, and to date no regulations have been published to implement these new laws. Future growth will depend on the commitment of Panama's government to a series of difficult political decisions to rectify problems stemming from past policies.

B. The Economic Situation and the Housing Sector

The construction sector has traditionally played an important role in the economic life of the country. Construction in general, and residential construction in particular, is labor intensive and maintains strong backward linkages to other economic sectors such as manufacturing, financial services, warehousing, and transportation. For example, a Mission study in 1983 found that approximately one third of manufacturing activity was tied to the construction industry.

1/ Incentivos para el Fomento y Desarrollo de la Industria Nacional y de las Exportaciones.

Between 1973 and 1982 the contribution of the construction sector to GDP averaged levels in excess of seven percent. (See Table 26, Annex B.) These levels, among the highest in Latin America, resulted from large scale public works projects, and the extraordinary number of office buildings and luxury apartments which were built in Panama City during the boom period. However, in 1983 the construction sector began a steady drop (in constant values) and represented only a modest 4.7 percent of GDP in 1985, a figure which can be considered quite low given the level of per capita income in Panama. The sector's gross internal capital formation fell by 38.5 percent between 1982 and 1985 (See Table below), with the most severe decline in non-residential construction, which dropped by 50 percent. The sector's unemployment picture is equally grave. In 1982 the construction sector contributed 15 percent of the total employment of the key sectors in the table; that participation declined to eleven percent in 1984.

Gross Domestic Product (Selected Economic Sectors)
(Millions of U.S.$ - 1970)

	1982	%	1983	%	1984	%	1985	%	% 82/85
Agriculture	185.2	31.8	191.0	35.2	191.4	36.2	196.9	36.6	6.3
Mining	4.1	0.7	3.4	0.6	2.6	0.5	2.5	0.5	(26.5)
Manufacturing	179.9	30.8	176.7	32.6	175.7	33.2	177.4	33.0	(1.4)
Electric, Gas & Water	59.2	10.2	64.9	12.0	64.7	12.2	68.1	12.6	15
Construction	154.7	26.5	106.4	19.6	94.4	17.9	93.4	17.3	(39.6)
Total	583.1	100	542.4	100	528.8	100	538.3	100	(7.7)

Formation of Gross Internal Capital
Construction Sector
(Millions of U.S.$ - 1970)

	1982	1984	% 82/84
Total Construction	289.3	177.8	(38.5%)
Total Public Sector	109.8	87.3	(20.5%)
Total Private Sector	179.5	90.5	(49.6%)
% Participation-Private Sector	62%	51%	--

Private Construction Sector
(Millions of U.S.$ - 1970)

	1982	1984	%
- Housing	35.1	36.2	3.1
- Other Buildings	63.7	41.5	(34.6)
- Other Constructions	80.7	12.8	(84.1)

The decline in construction is being led by a decline in private sector investment and a sharp drop-off in non-residential and infrastructure construction. Government spending dropped due to the fiscal deficit which, in turn, caused a major reduction in private sector construction of roads, bridges etc. The diminished demand for offices, hospitals, etc., resulted from the general economic crisis facing the country. Changes in these trends depend on external factors and will be slow in coming. The only component of the construction sector which currently has ample capacity to absorb and productively utilize resources is housing.

Housing was the only segment of the construction sector which grew during the period, in part due to the new laws promulgated to stimulate housing activity and the strong housing demand. Housing maintained its contribution to the sector and softened the decline in the manufacturing and construction sectors. Since housing construction is labor intensive and depends largely on unskilled labor it can help create short-term employment. Housing construction also can help in the reactivation of the larger economy due to its linkages with other sectors.

Substantially increased levels of housing investment and development are clearly the key to sustaining the construction industry over both the short and medium term future. The availability of adequate levels of resources for this purpose will be critical. Now that high income markets are saturated, efforts are needed to mobilize resources on a large scale to finance housing for middle and lower income groups where demand exists. Public indebtedness is such a serious problem that the private sector will need to lead the way. The net effect of the Preferential Interest Rate Mortgage Law (See Annex C), has been to achieve an initial reorientation of housing finance resources and private developer activities. An analysis of the potential demand for the solution types proposed under this Program is presented in Annex D.

The HG-013 Program will be crucial in the reorientation process. It represents an important injection of resources which can be used over the short-term to promote private sector investment in low cost housing. This will strengthen housing finance institutions and help in the recovery of the construction sector. Together with its effect on employment, the targetting of resources to families below the median income level will have a substantial social impact, and will open up new and significant markets for the private sector.

Finally, as was mentioned in the last section the $48.2 million HG Program will create about 3,600 jobs directly, and 1,800 indirectly2/. Equally important, it will provide a total of $9.3 million of revenue to the GOP through direct and indirect charges. For these reasons it seems logical to seek rapid approval and implementation of the HG Program, whose potential positive impacts are particularly relevant to Panama at this moment.

2/ CAPAC estimates of employment generation in the construction sector.

VIII. IMPLEMENTATION ARRANGEMENTS

A. Responsibilities of Participating Agencies

A.1. Borrowers

The Borrowers will be the mortgage lenders who participate in the Program. Institutional guaranties of Borrowers will be required in lieu of a Government of Panama guaranty. Borrowers will repay the HG Loan regardless of the repayments of beneficiaries. For A.I.D.'s protection all institutions that are permitted to borrow funds will have to meet solvency and performance criteria as established in Section III.D. of this Project Paper. In addition to institutional guaranties, borrowers must establish a trust which will serve to protect A.I.D.'s interests and issue notes to the same for the amount of funds to be borrowed. These notes will be backed by the mortgages generated by the Program.

A.2. Trust

The Trust will be established by the Borrowers and A.I.D. and will serve the following purposes: to protect A.I.D.'s interests; to coordinate and manage overall financial operations of the Program; to act as a repository of funds that accumulate to the Program for purposes of a liquidity reserve and capitalization; to manage as profitably and securely as possible such resources; to channel resources to mortgage lenders; to qualify mortgage lenders in addition to "founder banks"; to pay U.S. Fiscal Agent; and to manage Program implementation matters at the request and convenience of A.I.D. and the mortgage lenders.

A.3. Trustee

The Trustee will carry out the responsibilities of the Trust on behalf of A.I.D. and the Borrowers. The Trustee has a fiduciary obligation to perform, and can be sued under Panamanian law for mismanagement of resources. No guaranty will be required of the Trustee beyond the obligations required as part of Panama's trust legislation.

A.4. Participating Mortgage Lenders

Participating mortgage lenders are those institutions who are licensed to operate in Panama, can engage in mortgage lending, are eligible to become part of the Trust and borrow HG resources, and will comply with the terms and conditions of the Program. Mortgage lenders will provide mortgage financing to eligible beneficiaries, qualify beneficiaries, substitute new eligible mortgage for non-performing assets, collect mortgage payments, remit them to the fund, and reinvest rollover resources.

A.5. A.I.D.

A.I.D. will guaranty the HG Loan, establish certain criteria for the Program's operation, and select, along with the Borrowers, the Trustee. Periodic evaluations of the Program, the Trustee and the participating mortgage lenders will be conducted. A.I.D. will also manage the technical assistance component of the Program.

A.6. Project Developers

The project developers will obtain construction financing, design projects, and obtain permits to build and market units. They will have no role in the institutional structure of this Program.

B. Contractual Structure of the Program

B.1. Implementation Agreement

An Implementation Agreement drafted by A.I.D. will be signed between A.I.D. and the HG Borrower(s) as is the practice of the HG Program. The agreement will contain a program description, the financial commitment of the parties, the conditions under which resources will be contracted and disbursed, and the conditions under which the agreement may be modified.

The program description shall reflect the purposes, outputs, inputs, incomes of the eligible families, maximum cost of eligible units to be financed, the responsibilities of the Borrowers (mortgage lenders), Trust, and A.I.D., and the basis for amending the program description (e.g., changes in family income criteria in future years).

The financial commitments of the parties will be spelled out, including counterpart requirements by unit cost.

The conditions for making disbursements will be described. Some of those conditions are as follows:

a) Conditions Precedent to the First Disbursement

1) The Trustee will be selected and the Trust Agreement signed in accordance with functions, requirements, and obligations (See model agreement in Annex G);

2) The Trust Fund will be constituted and functioning, including the financial procedures of the fund, operating policies, how and where reserves will be kept, accounting formats to be used, kinds of investments to be made, etc.;

3) The Trustee shall have obtained tax exempt status for the Trust Fund as provided for under Panamanian Law.

4) An individualized program and plan that complies with the Implementation Agreement for the use of the funds acceptable to the Trustee will be submitted by each participating institution;

5) The Loan Agreement between the Trust and mortgage lender shall be drafted and accepted by A.I.D. and the participating mortgage lending institutions;

6) The model mortgage document shall be drafted and accepted by A.I.D.

7) Evidence that mortgages have been issued in an amount that justifies the funds to be borrowed;

8) The Trustee shall have obtained an opinion from the Controller General of the Republic that the Caja de Ahorros' debt incurred under the Program is guarantied by the Government of Panama; and

b) Conditions Precedent to Second Disbursement

1) An evaluation of the application of the preceding HG disbursements will be carried out and submitted to A.I.D.;

2) An evaluation of the performance of the Trust Fund and the Trustee will be carried out and submitted;

3) An evaluation of new potential borrowers will be carried out; and

4) The Trustee shall have obtained a legal opinion as mentioned in section B.1.a.3.

5) Evidence that mortgages have been issued in an amount that justifies the funds to be borrowed;

c) Conditions Precedent to Succeeding Disbursements.

1) Evidence that mortgages have been issued in an amount that justifies the funds to be borrowed.

2) The Trustee has obtained necessary legal opinions mentioned above should the Caja borrow additional HG resources.

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d) Conditions Precedent to the Last Disbursement

In addition to the previous conditions mentioned in B.1.c. above, an evaluation shall have been conducted which analyzes the impact of the Program on low cost housing delivery; the effectiveness of the incentives to build very low cost housing; the effect of credit qualification criteria on low income families; the efficiency of the trust mechanism; the potential for the trust mechanism to continue and under what conditions; and the prospects to attract additional investment capital to the fund.

e) Covenants

1) Closing costs will be collected only one time during the life of the mortgage; and

2) Mortgage lenders will make their best effort to keep closing costs as low as possible, and finance part of the closing costs.

B.2. Loan Agreement with the U.S. Investor

This agreement will be signed by the Borrower(s) and the U.S. Investor and approved by A.I.D. This agreement will be drafted by the counsel of the Investor, reflecting the terms and conditions of the loan to be made including the portion of the loan to be used by each participating institution.

B.3. Trust Agreement

This document will cover all of the operational aspects included in the Implementation Agreement, as well as operational requirements for monitoring and reporting during the life of the Program.

The Trust Agreement also will include the basic obligations and duties of the Trustee as follows:

In relation to Program resources, the Trustee will carry out four kinds of activities: a) receiving HG resources and allocating them as quickly as possible to participating institutions on the basis of the presentation of qualified loan portfolios; b) maintaining the collateral for the Program at an appropriate level and quality; c) providing prompt repayment to U.S. Fiscal Agent and A.I.D.; and d) monitoring the Liquidity Reserve Fund and seeking the most profitable return for surplus funds;

In relation to participating mortgage lending institutions, the Trustee will qualify institutions for participation and will continue to monitor the financial status of these institutions during the life of the Program.

The Trust Agreement will clearly establish the socioeconomic conditions of beneficiary families and the type of guaranties required for a mortgage portfolio to qualify for the Program. The Trustee is responsible for applying those criteria and updating information, as needed, on changes in family income, etc.

The Trust Agreement will specify the legal responsibilities of the Trustee, the rights of A.I.D. and the Borrowers, and the procedures which will be used if those rights need to be applied. Also, the agreement will include the operational and financial conditions to be followed by the Trustee. It will also establish the causes and conditions for replacing the Trustee.

B.4. Loan Agreement with Trust Fund

Under this agreement, the participating banks will receive Program resources from the Trustee. This agreement will include: a) recognition of the Borrower's debt to the Trust and the conditions and obligations for repayment and reinvestment of reflows; b) statement that the bank has presented eligible mortgages under the Program and which support the value of the disbursement; c) provisions for the guaranty of the eligible portfolio; d) the conditions under which substitutions will be made for the original portfolio of loans; and e) the procedures by which the Trustee would foreclose on the mortgages if needed for the servicing of debt of the Program.

B.5. Assignment of Mortgages

Mortgages generated under this program will be assigned to the Trust on behalf of A.I.D. A notarial deed recorder at the Public Registry Office as well as changes in the Loan Agreement will be the vehicles to protect A.I.D.'s rights to the assets of the Trust in the event an institution is insolvent or default occurs. (See Annex G)

C. Methods of Implementation and Disbursements

C.1. HG Loan Resources

HG resources will be disbursed based upon the certification by the Trustee of the presentation of eligible mortgages. No advances will be made to participating mortgage lenders. The conditions for first and subsequent disbursements are contained in Section B.

Tentatively, HG resources will be contracted several times during the Program, in June, 1987, in June, 1988, and in November, 1988, although this schedule is subject to modification.

C.2. Grant Funds

The USAID grant funds will finance a total of 30 person months of long-term and 20 person months of short-term technical assistance through an Institutional contract as agreed with MIPPE and/or other public or private institutions. Grant monies will also finance training. USAID Mission project management and administrative support are included in the Grant funding, as well as short-term assistance for evaluations and two audits.

Grant funds will also be used to finance certain contractual services and training for project components. USAID will contract and procure training through the Latin American Training Center.

Method of Implementation	Method of Financing	(Thousands)
Tech. Asst. Contractor	Direct Payment	465
Training	Direct Payment	100
Audits and Evaluations	Direct Payment	110
TOTAL		675

C.3. Controller's Certification

The USAID/Panama Controller has reviewed and approved the detailed assessment of methods of implementation and financing for the activities included in the Project Paper as summarized above.

DS Larson
Controller, USAID/Panama

9/25/86
Date

D. Cost Estimates and Financial Plan

The total cost of this three year Program is estimated to be U.S.$48.88 million. USAID will finance U.S.$25.0 million in housing investment with a HG loan and U.S.$675 million with a Development Grant for technical assistance and training. The Panamanian private sector will finance an estimated $18.4 million in housing investment. Program Beneficiaries will provide an estimated $4.8 million through downpayments. In addition, Trust Fund expenses will be paid primarily from the income generated by the Program's financial operation.

Financial Plan by Program Input
(in U.S.$ millions)

	USAID		Private Finance	Beneficiaries	Total
	Grant	Loan	Institutions		
Technical Asst.	.465				.465
Training	.100				.100
Housing Finance		25.0	18.4	4.8	48.2
Audits & Evals.	.110				.110
TOTALS	.675	25.0	18.4	4.8	48.88

E. Implementation and Monitoring Plan

The Program Implementation Plan (Annex A.2.b.) is detailed for the first year of execution. The plan concentrates on the organization and management requirements of project startup and includes the achievement of both pre- and post-loan implementation activities by USAID in collaboration with the participating mortgage banks. The types of activities to be carried out are related to: 1) Implementation and Loan Agreements; 2) Trust Fund Organization and Development; 3) Technical Assistance Recruitment and Implementation; and 4) Annual Planning and Implementation.

F. Evaluation and Audit Plan

Mid-term and final evaluations will be carried out on the Program. The mid-term evaluation will be carried out at the time the first disbursement has been made and will be submitted to LAC for review. This evaluation will document the Program's experience and provide information to assess the private sector's continuing role in low cost shelter. The final evaluation will focus on: 1) The efficiency of the trust fund mechanism and its potential for continuation and expansion with other resources; 2) the effectiveness of the Program's incentives to finance very low cost housing solutions; and 3) the utilization of accumulated liquidity for reinvestment in a new loan program for low cost housing. Two audits of the Trust Fund will also be carried out.

ANNEX A

USAID EXHIBITS

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ANNEX A

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ACTION: AID-2 INFO: [illegible]

VZ [illegible]
[illegible]
[illegible] RUEHC #3316 2540725
[illegible] RUEHDU [illegible]
[illegible] 110724Z SEP 86
FM SECSTATE WASHDC
TO AMEMBASSY PANAMA PRIORITY 3780
BT
UNCLAS STATE 283316

LOC: 527/8/9 753
11 SEP 86 1238
CN: 30594
CHRG: AID
DIST: AID

AIDAC

E.O. 12356: N/A
TAGS:
SUBJECT: PRIVATE SECTOR SHELTER PROGRAM HG

REF: STATE 158916

1. THE INSTITUTIONAL/FINANCIAL ANALYSIS SECTIONS OF THE SUBJECT PAPER WERE REVIEWED ON AUGUST 21, 1986. BASED ON THIS REVIEW, AA/LAC HEREBY REDELEGATES AUTHORITY TO THE MISSION DIRECTOR TO APPROVE THE PP AND TO AUTHORIZE HOUSING GUARANTEES IN AN AMOUNT UP TO DOLS 22.4 MILLION IN FY 1986 AND UP TO DOLS 2.5 MILLION IN FY 1987, SUBJECT TO AVAILABILITY OF LEGISLATIVE AUTHORITY AS CONFIRMED BY FM/LMD.

2. BORROWING AND ADMINISTRATIVE ARRANGEMENTS. THE REVIEW DETERMINED THAT THE PROPOSED BORROWING AND ADMINISTRATIVE ARRANGEMENTS ARE SATISFACTORY. SPECIFICALLY, THE PROPOSED ARRANGEMENTS FOR A TRUST ADEQUATELY PROTECT A.I.D.'S INTEREST.

3. QUALIFICATION OF BORROWERS. THE CRITERIA FOR DETERMINING ELIGIBILITY OF BORROWING INSTITUTIONS ARE ADEQUATE. HOWEVER, THE MISSION SHOULD ASSURE THAT ADEQUATE TECHNICAL ASSISTANCE IN ADMINISTRATION AND FINANCIAL RESTRUCTURING IS PROVIDED TO THOSE INSTITUTIONS WHICH CURRENTLY ARE INELIGIBLE FOR HG BORROWINGS BUT WHICH THE MISSION PROPOSES TO INCLUDE AT A LATER DATE, E.G., S&LS AND FEDPA. ANOTHER PURPOSE FOR THIS TECHNICAL ASSISTANCE IS TO ADVISE A.I.D. IF AND WHEN THESE INSTITUTIONS BECOME QUALIFIED TO PARTICIPATE IN THE PROGRAM.

4. PARTICIPATION OF A PUBLIC INSTITUTION. REGARDING PARTICIPATION OF THE QUOTE CAJA DE AHORROS UNQUOTE, THE MISSION NEEDS TO CAREFULLY CONSIDER A.I.D. POLICY GUIDANCE ON PRIVATE ENTERPRISE. UNDER THIS GUIDANCE, THE CAJA MIGHT BE ELIGIBLE FOR PARTICIPATION IN THIS PROGRAM PROVIDED IT OPERATES ACCORDING TO MARKET PRINCIPLES AND COMMERCIAL PRACTICES AND ENTERS INTO A POLICY DIALOGUE WITH A.I.D. ON POSSIBLE DIVESTITURE OF THE CAJA. AS ONE APPROACH TO A DIALOGUE, THE A.I.D. MISSION MIGHT CONSIDER FINANCING A MANAGEMENT/EFFICIENCY

OFF	ACT	INF
DIR		✓
DEP		✓
ODP		
ODR		✓
CONT		✓
EXO		
RLA		
RCO		
AGR		
PSD		
ENG		
RHUDO	✓	
ODR/SAT		
C&R		

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STUDY OF THE CAJA, INCLUDING THE POTENTIAL BENEFITS AND MEANS OF PRIVATIZING SOME OR ALL CAJA FUNCTIONS. THE CAJA SHOULD NOT RECEIVE A DISPROPORTIONATE SHARE OF RESOURCES OF THIS PROGRAM WHICH IS CHARACTERIZED AS A PRIVATE SECTOR PROGRAM. AS WITH PRIVATE BANKS, THE PROGRAM SHOULD LEVERAGE THE ALLOCATION OF ADDITIONAL RESOURCES TO LOWER INCOME BENEFICIARIES.

5. PROGRAM MONITORING. THE PROPOSED PROGRAM ATTEMPTS TO DIRECT THE EFFORTS OF PANAMA'S FINANCIAL SYSTEM, PARTICULARLY MORTGAGE BANKS, TOWARD FINANCING OF LOWER COST HOUSING WITHOUT THE INTERVENTION OF OR GUARANTEE BY THE GOVERNMENT OF PANAMA. IT IS AN INNOVATIVE APPROACH WHICH WE WISH TO STRONGLY ENCOURAGE. AT THE SAME TIME THE INNOVATIVE NATURE OF THE PROGRAM GENERATES SOME CONCERN ABOUT ITS EFFECTIVENESS AND FUTURE POTENTIAL. IN LIGHT OF THE MISSION REPRESENTATIVE'S ESTIMATE THAT UP TO DOLS 15 MILLION WILL BE BORROWED DURING THE FIRST 9-12 MONTHS AFTER AUTHORIZATION, THE AA/LAC IS REDELEGATING AUTHORITY FOR THE FULL DOLS 25 MILLION, RATHER THAN A LESSER AMOUNT, PROVIDED THE MISSION EVALUATES PROGRAM IMPLEMENTATION AFTER THE QUOTE FIRST ROUND UNQUOTE OF BORROWINGS. PLEASE INFORM AID/W OF THE EVALUATION RESULTS TO ALLOW FOR COMMENT PRIOR TO INITIATING A SECOND ROUND OF BORROWING IN THE U.S. MARKET. IN ADDITION, WE REQUEST THAT THE MISSION PROVIDE DETAILED REPORTING ON PROGRAM IMPLEMENTATION IN ITS SEMI-ANNUAL PORTFOLIO REPORTS.

6. DA GRANT. BY SEPTEL, LAC HAS ADVISED MISSION OF BUDGET ALLOWANCE FOR DOLS. 500,000 SDA GRANT FOR
SHULTZ
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ACTION: USAID-2 INFO: DCM ECON CHRON

VZCZCPNO786
PP RUEHZP
DE RUEHC #8918/01 1401553
ZNR UUUUU ZZH
P 201551Z MAY 86
FM SECSTATE WASHDC
TO AMEMBASSY PANAMA PRIORITY 3115
BT
UNCLAS STATE 158918

LOC: 354 4793
20 MAY 86 1534
CN: 02329
CHRG: AID
DIST: AID

AIDAC

RECEIVED MAY 20 1986

RHUDO

E.O. 12356: N/A
TAGS: N/A
SUBJECT: PID REVIEW - PANAMA PRIVATE SHELTER PROGRAM (525-HG-013)

OFF	ACT	INF
DIR		✓
DEP		✓
ODP		
ODR		✓
CONT		
EXO		
RLA		
RCO		
AGR		
PSD		
ENG		
RHUDO	✓	
C&R		

1. SUMMARY. THE DAEC REVIEW FOR SUBJECT PID WAS HELD MAY 8, 1986. DAEC DISCUSSIONS FOCUSSED ON THE PROPOSED BORROWING ARRANGEMENTS, THE USE OF A TRUST FUND, TRUSTEE SELECTION, SAVINGS MOBILIZATION, AND PROJECT BENEFICIARIES. THE DAEC APPROVED THE PID FOR INTENSIVE REVIEW. PROJECT APPROVAL WILL BE DELEGATED TO THE MISSION PROVIDED THAT NO MAJOR ISSUES ARISE DURING THE AID/W REVIEW OF THE PROJECT'S PROPOSED FINANCIAL STRUCTURE INCLUDING THE NATURE OF THE TRUST ARRANGEMENT AS DISCUSSED BELOW UNDER PARA 4.

2. IN PRELIMINARY DISCUSSIONS, AID/W AND MISSION PERSONNEL AGREED THAT: (A) THE MISSION WOULD ASSUME A MORE ACTIVIST ROLE THAN WAS DESCRIBED IN THE PID IN PROGRAM DEFINITION AND IN DEVELOPING ELIGIBILITY CRITERIA FOR PARTICIPATING INSTITUTIONS AND FINAL BORROWERS. AND (B) WHILE NORMS AND STANDARDS ARE A POLICY DIALOGUE CONCERN, THESE ARE NOT MAJOR OBSTACLES TO PROGRAM IMPLEMENTATION AND CONDITIONALITY ON NORMS AND STANDARDS IS NOT WARRANTED FOR A PRIVATE SECTOR HG.

3. THE FOLLOWING GUIDANCE, RESULTING FROM THE DAEC REVIEW, IS PROVIDED FOR PP PREPARATION.

4. BORROWING AND ADMINISTRATIVE ARRANGEMENTS. ALTHOUGH THE MISSION'S PROPOSAL TO CARRY OUT THE SUBJECT PROGRAM ENTIRELY THROUGH THE PRIVATE SECTOR WITHOUT A GOVERNMENT GUARANTEE WOULD DEPART FROM CURRENT HG PROGRAM IMPLEMENTATION PRACTICES, IT REPRESENTS AN INNOVATIVE APPROACH WORTHY OF CONSIDERATION. IN DESIGNING THE PROJECT, HOWEVER, THE MISSION SHOULD ANALYZE CAREFULLY THE PROS AND CONS OF THE SELECTED APPROACH WITH SPECIAL ATTENTION TO THE FOLLOWING:

(A.) WHO IS THE BORROWER? CAN THE TRUST BE THE BORROWER UNDER PANAMANIAN LAW? WHO OWNS THE TRUST? IN THE EVENT OF DISSOLUTION HOW WOULD ANY REMAINING ASSETS BE DISTRIBUTED?

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(B.) HOW IS A.I.D.'S INTEREST PROTECTED? WE ARE PARTICULARLY CONCERNED ABOUT THE LACK OF A GOP GUARANTEE IF HG RESOURCES ARE CHANNELED THROUGH A TRUST FUND (OR A CONSORTIUM OF PRIVATE FINANCIAL INSTITUTIONS) AS PROPOSED IN THE PID. IT WAS AGREED THAT THE LACK OF A GOP GUARANTEE WOULD NOT POSE A LEGAL PROBLEM FOR PROGRAM APPROVAL. THE PP SHOULD DESCRIBE THE MECHANISMS THAT WOULD BE BUILT INTO THE PROGRAM TO PROTECT AID IN CASE OF DEFAULT BY PRIVATE BORROWERS AND ASSESS THEIR LEGAL AND OPERATIONAL FEASIBILITY. SOME MEASURES PROPOSED AT THE DAEC REVIEW, E.G., HAVING MORTGAGES PASS TO THE TRUST IN THE EVENT OF FAILURE OF A PARTICIPATING INSTITUTION AND LEGAL RECOURSE AGAINST THE TRUST MANAGER, MAY NOT BE IMPLEMENTABLE.

(C.) HOW ARE PARTICIPATING INSTITUTIONS QUALIFIED? GIVEN THE CURRENT WEAKNESSES IN THE S&L SYSTEM, THE CRITERIA THAT WOULD BE USED TO SELECT PARTICIPATING FINANCIAL INSTITUTIONS SHOULD BE CLEARLY DESCRIBED.

(D.) DEMAND FOR PROJECT RESOURCES. GIVEN THE RELATI... HIGH LIQUIDITY WHICH EXISTS IN PANAMA'S FINANCIAL SYSTEM AT THIS TIME, THE MISSION SHOULD ASSESS EFFECTIVE DEMAND FOR PROJECT RESOURCES NOT ONLY BY FINAL BORROWERS BUT ALSO BY THE INSTITUTIONS WHICH MIGHT PARTICIPATE IN THE PROGRAM.

(E.) CAPITALIZATION OF THE TRUST FUND. A PURPOSE OF THE TRUST FUND STATED IN THE PID IS TO CREATE A PERMANENT MECHANISM TO FINANCE LOW INCOME HOUSING. IT IS NOT EVIDENT THAT THE PROCEEDS FROM THE SPREAD ON THE HG LOAN WILL DO MUCH TO CAPITALIZE THE TRUST. CAN THE TRUST BORROW FROM OTHER FUNDS? IS IT IMPORTANT TO CAPITALIZE THE TRUST FUND OR WILL THE PURPOSE OF THE TRUST BE ACHIEVED AND THE TRUST BECOME REDUNDANT AFTER BORROWING INSTITUTIONS LEARN TO PARTICIPATE IN THE LOW-COST HOUSING MARKET IN RESPONSE TO MARKET INCENTIVES?

GIVEN THE IMPORTANCE OF THESE CONCERNS, THE MISSION IS REQUESTED TO SUBMIT FOR AID/W REVIEW THE PART OF THE PROJECT PAPER DEALING WITH THESE ASPECTS OF THE PROGRAM DESIGN INCLUDING THE FINANCIAL AND ADMINISTRATIVE ANALYSES WHICH SUPPORT THE FEASIBILITY OF THE PROPOSED DESIGN.

5. RESOURCE MOBILIZATION. THE DAEC EXPRESSED CONCERN THAT THE PROGRAM AS PROPOSED DOES NOT INCLUDE A PROVISION TO MOBILIZE ADDITIONAL SAVINGS TO FINANCE LOW-COST HOUSING. THE DIRECTOR EXPLAINED THAT THE PROBLEM IN PANAMA IS THAT LONG TERM RESOURCES ARE NOT

AVAILABLE EVEN THOUGH THERE IS CONSIDERABLE LIQUIDITY IN THE FINANCIAL SYSTEM AND THAT FOR THIS REASON THE PROGRAM WILL NOT INCLUDE A SAVINGS MOBILIZATION COMPONENT. THE DAEC NOTED THAT THE PID INCLUDED DOLS 70,000 TO FINANCE A STUDY OF PANAMA'S SAVINGS MARKET AND DOLS. 60,000 FOR SAVINGS MOBILIZATION. THE PP SHOULD ANALYZE WHETHER A RESOURCE MOBILIZATION COMPONENT IS NEEDED. FOR EXAMPLE, IF SAVINGS MOBILIZATION IS NOT A PROBLEM, WHAT IS THE PROBLEM THAT RESTRICTS THE FLOW OF RESOURCES TO FINANCE LOW-COST HOUSING?

6. PROJECT BENEFICIARIES. THE PID STATES THAT A SLIDING CO-FINANCING SCALE IS PROPOSED TO PROVIDE INCENTIVES TO PRIVATE FINANCING OF LOW COST HOUSING. CONCERN WAS EXPRESSED THAT NO OTHER MECHANISMS WERE PROPOSED TO TARGET GROUPS SIGNIFICANTLY BELOW THE MEDIAN INCOME. USE OF A VARIABLE RATE MORTGAGE FOR LOW INCOME FAMILIES ALSO GENERATES A SIGNIFICANT DEGREE OF RISK. IN ORDER TO FURTHER ENCOURAGE LOW INCOME FAMILIES TO PARTICIPATE IN THE PROGRAM AND TO MITIGATE SOME OF THE RISK ATTACHED TO VARIABLE RATE MORTGAGES IT WAS AGREED THAT THE INCOME AFFORDABILITY CALCULATIONS WILL BE BASED ON THE MARKET RATE OF INTEREST (CURRENTLY 13 PERCENT) RATHER THAN THE RATE PRODUCED BY THE APPLICATION OF THE MORTGAGE INCENTIVE LAW (CURRENTLY EIGHT PERCENT)

7. IMPACT OF THE SUBSIDY. IT WAS AGREE THAT THE MORTGAGE INCENTIVE LAW REPRESENTS A SUBSIDY TO THE PROJECT BENEFICIARIES. GIVEN THE CURRENT ECONOMIC ENVIRONMENT IN PANAMA, ESPECIALLY THE NEED TO GENERATE

MORE EMPLOYMENT IN THE SHORT TERM, WE CONCUR WITH UTILIZATION OF SUBISIDIZED INTEREST RATES. WE NOTE THAT THE MORTGAGE TAX INCENTIVE MECHANISM WILL NOT LEAD TO DECAPITALIZATION OF THE PARTICIPATING HOUSING FINANCE INSTITUTIONS AND THAT, GIVEN THE CURRENT INTEREST RATE STRUCTURE, ARE STILL SIGNIFICANTLY POSITIVE IN REAL TERMS. HOWEVER, DURING PP DEVELOPMENT THE MISSION IS REQUESTED TO ASSESS THE ADDITIONAL TAX REVENUES GENERATED BY STIMULATING HOUSING ACTIVITY THROUGH THE HG PROGRAM COMPARED TO THE COST TO THE GOP OF THE SUBSIDY AS A RESULT OF THE HG PROGRAM.

8. TECHNICAL ASSISTANCE. GIVEN THE AVAILABILITY OF RHUDO/FSA STAFF TO WORK WITH THE SELECTED HOUSING FINANCED INSTITUTIONS, THE MAGNITUDE OF THE TECHNICAL ASSISTANCE PROGRAM, ESPECIALLY THE NEED FOR A LONG TERM RESIDENT ADVISOR, AND THE RELATED FUNDING REQUIREMENTS SHOULD BE CAREFULLY ASSESSED DURING PP DEVELOPMENT THE MISSION DIRECTOR CLARIFIED THAT THE FUNDING FOR REQUIRED TECHNICAL ASSISTANCE WOULD BE PROVIDED FROM USAID/PANAMA'S ESTABLISHED DA LEVEL.

9. REDELEGATION OF AUTHORIZATION AUTHORITY. UPON RECEIPT OF THE FINANCIAL ANALYSIS, DISCUSSED IN PARA 4 OF THIS CABLE, A DAEC WILL BE HELD AND A FORMAL REDELEGATION DETERMINATION WILL BE MADE. AUTHORITY TO APPROVE THE PP AND AUTHORIZE USE OF HG AUTHORITY WILL BE

GRANTED, UNLESS MAJOR ISSUES ARE IDENTIFIED WHICH WOULD MERIT AN AID/W REVIEW OF THE FULL PP. SHULTZ
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GUIDANCE RESPONSE

The implementation of the Program without a government guaranty departs from the current HG Program procedures. The pros and cons of the basic approach required for effective and efficient implementation are laid out in this paper, particularly with respect to the key issues raised in the preceding PID guidance cable, State 158916. The issues, which Washington desired to be addressed, are outlined below with references to where in the text or annexes they are discussed:

4(A) Who is the Borrower? Can the Trust be the Borrower? Who owns the Trust? How would assets be distributed? Project Paper p. 1 and p. 54.

4(B) How is A.I.D.'s interest protected? Annex A.1.a. pp. 10-12.

4(C) How are participating institutions qualified? Clearly describe institutional selection criteria. Project Paper p. 25 and A.1.a. p. 12.

4(D) Demand for project resources...given high liquidity in Panama's financial system...by borrowers and by institutions. Project Paper p. 30, pp. 45-46, and Annex A.1.a. pp.7-9.

4(E) How will the Trust Fund be capitalized? Can it borrow? Will it become redundant after borrowing institutions learn to participate in the low cost housing market? Project Paper pp. 13-14, pp. 30-34 and Annex A.1.a. pp. 12-13.

A. Demand for Program Solutions and Resources

A.1. Potential Market for HG-013 Solutions

An extensive and largely unattended demand exists for housing solutions in the income range targetted by the Program. (See Section VI and Annex D.) Private developers recognize the potential market and have expressed substantial interest in increasing their production of units in the $10,000-$20,000 price range. However, the limited availability of mortgage financing is one of the key constraints which they face.

In that regard, in 1985 the Preferential Interest Rate Mortgage Law had a substantial impact on the availability of private mortgage financing and resulted in an unparalleled level of effective demand from middle and lower income groups. (See Annex C.) Of a total of 4,270 loans approved by mortgage banks under the Law, approximately 54 percent were for housing solutions costing less than $20,000, with 33 percent, or 1,407 loans, for units in the $15,000-$20,000 range. Twenty percent of all loan activity was below the $15,000 unit cost, and this was handled exclusively by the public mortgage bank, the Caja de Ahorros. This shift in market orientation by the Caja occurred primarily because of the prospect of the HG-013 Program which USAID has been discussing with the mortgage banks for the past year.

The effective demand for the above mentioned housing has been overwhelming, particularly in the lower price ranges. Five thousand applicants were qualified for a 1,200 unit project financed by the Caja de Ahorros (whose unit costs ranged between $9,500 and $14,000). The project was sold out before construction was completed and planning was immediately begun for another project of similar size.

A.2. Demand for Resources

The Program contemplates the participation of three types of mortgage lenders: Mortgage banks, the savings and loan associations, and the cooperatives. Each of these groups is interested in the HG Program for different reasons, offers a unique potential to the Program, and will require a different strategy to secure and maintain their effective participation.

A.2.a. Mortgage Banks

The private mortgage banks are interested in HG resources because of the 30 year term for repayment and the ten year grace period on principal. Such long-term resources are highly suitable for mortgage lending and make the HG resources attractive, even though the mortgage banks are highly liquid and solvent. (See Section IV.D.) These banks are precisely the institutions that A.I.D. would like to see engaged in low cost housing finance because they provide most of the mortgage financing in Panama and must become involved in financing lower cost housing to address the longer term shelter needs in Panama. However, because of the savings and time deposits they attract and their financial strength and independence, the Program design must provide the necessary conditions (See Financial Analysis Section IV.D.) to motivate their participation, including:

1) Maximum Unit Cost

During the PID review, LAC suggested that the maximum unit cost be derived by using a market interest rate even though

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the Preferential Interest Rate Mortgage Law would result in a significantly lower rate to the Program beneficiary. Using a rate of 12.75 percent (the rate in the PID), the maximum allowable unit affordable by a family earning the urban median income of $585 would be $14,000. Under the Preferential Interest Rate Mortgage Law (7.75 percent interest over 20 years and a 25 percent family income payment), the maximum unit price would be $19,400.

A $14,000 unit ceiling is considered too low for this Program. Since the private mortgage banks are only financing units above $19,000, dropping the maximum unit cost figure by approximately $5,400 represents a substantial shift in unit type and a drop of almost 28 percent in sales price. If the mortgage banks are forced to make too radical a change in their market orientation at the outset of the Program, they are expected to lose interest, and a unique opportunity to involve these strong and solvent private sector institutions in low cost housing finance operations would be lost. Therefore, a higher maximum unit cost of $16,000 has been negotiated with them, which is still well within the capacity to pay of A.I.D.'s target population.

In order to assure that funds are available for very low cost units, $1.0 million will be set aside for the first 24 months to finance solutions costing around $6,000.

2) Trust Fund Design

The trust fund mechanism has stimulated substantial interest in the public and private banking community as it would enable the trust legislation to be used to channel large amounts of resources for housing investment. In order to ensure the effective participation of the mortgage banks, the trust mechanism design must be simple, inexpensive, and permit the participating mortgage lenders at least a 2.25 percent spread for lending. It should also provide the Borrowers with some control over the investment of reflows.

A.2.b. S&Ls, Cooperatives and FEDPA

The savings and loan associations do not enjoy the liquidity of the mortgage banks so the prospect of HG resources is even more appealing. With the recent changes in the S&L System's lending regulations, the HG resources could help the associations to expand their lending capability. The associations need both capital assistance and technical assistance from A.I.D. to improve management and to make them a more significant component of Panama's housing finance system. Some cooperatives and FEDPA, the Federation of Savings and Credit Cooperatives, also may be interested in using long-term HG resources. However, since this loan will not be guaranteed by the Government of Panama, credit worthiness of the Borrowers of the HG resources is an important consideration vis-a-vis A.I.D.'s risk. The savings and loans associations, cooperatives and FEDPA need to make a series of institutional adjustments to qualify as borrowers at this time. (See Section III.A.4. and A.5.) The trust fund mechanism will permit most of the associations to be considered as potential borrowers or users of portions of the HG Loan at subsequent stages of Program implementation as they reorganize into stock corporations, are capitalized, and improve their financial performance. FEDPA has substantial capital, but must address certain financial and administrative problems prior to participating.

B. Implementation Arrangements

Several alternative implementation structures were analyzed. The preferred arrangement involves the mortgage lenders as Borrowers of HG funds which are deposited in a Trust Fund, with a first line commercial bank selected as Trustee by the Borrowers and A.I.D. The Trustee protects A.I.D.'s and the Borrowers' interests, manages the resources, channels them to the mortgage lenders and passes repayments to the U.S. Fiscal Agent.

Section III analyzes the alternative implementation schemes, and describes the Trust's functions and establishes the criteria for the qualifying Borrowers and selecting the Trustee. Section IV contains a financial analysis of the Trust Fund. Annex G contains a draft Trust Agreement, along with other draft agreements related to the Program. The proposed response to two key concerns of the PID cable, guaranties and capitalization, are discussed below:

B.1. Guaranties

Usually the HG resources are channeled through a central finance institution such as a central bank or Ministry of Finance which assumes U.S. Dollar repayment obligations. In the case of the HG-013 Program, the Government of Panama has been ruled out as borrower or guarantor because the mortgage banks did not want the public sector involved. Therefore, it was necessary to design a program that would provide reasonable security of recovery for A.I.D. and the U.S. Investor.

The Trustee will make payments to the U.S. Fiscal Agent without restriction or intervention of third parties. A.I.D.'s risk has been addressed in the following ways:

a) Since Panama's economy is dollar based and financial operations will be denominated almost exclusively in U.S. Dollars there is no exchange risk. Moreover, interest rate risk is obviated by the adjustable interest rate system used by the mortgage lenders.

b) The Borrowers, who are the mortgage lenders, will provide a direct guaranty to the Investor for the sums respectively contracted. The solvency of the mortgage lenders will be determined prior to their borrowing under the Program. (See Criteria, Section III.D.)

c) The mortgage lenders will guaranty the Trust for the sums received in loans in the form of notes assigned to the Trust.

d) The portfolio assigned to service the debt will represent the collateral of the mortgage lenders. That is, the $25.0 million loan will be collateralized by a $48.2 million investment (including estimated counterpart financing and downpayments).

e) A cash guaranty will be represented by the Program's steadily growing Liquidity Reserve Fund, held by the Trustee to cover any possible liquidity problems over the 30 year period. An up front cash deposit equal to one semiannual payment in an interest bearing account will be negotiated with the mortgage lenders to cover the period before the Trust Fund achieves an adequate level of reserves.

f) The mortgages will be drafted to provide the Trust with access to the assets generated by the Program.

The sole function of the Trustee is to ensure the timely and effective implementation of its functions and to respond legally for its performance. This fiduciary obligation is provided for by Panamanian law and represents a guaranty of responsible management through recognition and correction of trust related problems. The obligation is enforceable through local courts. Trustee performance will be monitored by the National Banking Commission, A.I.D. and the mortgage lenders.

With regard to the question raised in the DAEC Guidance Cable of how remaining assets of the Trust would be distributed should the Trust be dissolved, they will first be used to repay any outstanding obligations of any Panamanian mortgage lender to the U.S. lender or A.I.D., and thereafter they would be transferred to the Panamanian mortgage lenders in the same proportion that each has contributed to those assets. The owners of the Trust are the settlors, the Panamanian mortgage lenders, and A.I.D., and the U.S. investors (beneficiaries). A.I.D. would be the first beneficiary with rights the Trustee is obligated to protect. Rights of other parties would be subordinated.

The Caja de Ahorros's obligations as Borrower and user of HG Program resources will be guaranteed by the government, since the GOP has subsidiary responsibility under law (Article 20 - Ley No. 87, 23 Nov. 1960) to guaranty all operations of the Caja.

B.2. Growth of the Trust Fund

Section IV demonstrates the financial feasibility of the Program and examines alternative operating, reserve and capitalization options. Growth of the fund will depend on financial spreads in lending. The spreads in the Program will be limited, and therefore, a rapid capitalization of the Trust Fund is not expected. Good financial management of the differentials established by mutual consent of the Borrowers and A.I.D., however, will permit the potential to create a Liquidity Reserve Fund as well as a Reinvestment Fund. Cash flow analyses of the Program's financial structure show that substantial sums may be accumulated over time which can provide the Trust with resources for additional housing investment.

Based upon initial discussions with the mortgage lenders, at least a 2.25 percent spread for their operations is required. It is estimated that between 1.2 and 1.7 percent may be an acceptable spread for the Fund. The funds contributed by participating mortgage lenders and downpayments made by beneficiaries will expand the effect of the HG from $25.0 to $48.2 million, or 1.93 times the size of the original loan. The HG loan provides for a ten year grace period on repayment of principal which will benefit the Program. Also the different velocities of amortization between the time loans are repaid by low income families to the banks (average 12 years) and the 30 year term of the HG loan should permit rotation of the total loan and a total investment level of almost $100.0 million, or almost four times the original Housing Guarantee Loan.

The organization and structure of the Trust Fund will create a new, efficient vehicle for channeling additional funds to low cost housing development. The Borrowers and the Trustee will monitor and evaluate new opportunities which might be of interest to them. For example, new loans with the same or new mortgage lenders may be made, and with the consent of the mortgage lenders, mortgage bonds may be issued in the future. In such cases new negotiations with the Trustee would be required.

C. Mobilization of Popular Savings

As mentioned in the PID review, it has been possible to attract resources for housing investment in Panama because of the country's open banking system and the private sector's variable mortgage rates. However, the weak performance of savings mobilization and the strong growth of time deposits in the mortgage banks in recent years suggest that the cost of money will rise and that the savings issue should be addressed by the Program. The mobilization of popular savings by the mortgage lenders is important because it provides a more stable and less costly resource. This can help profitability and reduce borrowing costs by consumers. Furthermore, a greater proportion of savings in relation to time deposits provides greater financial stability.

Moreover, as the mortgage lenders enter new housing markets they can begin to improve their performance in mobilization of savings among the new clients they serve. This will be accomplished partly as a result of the fact that residential mortgage lending to low income families will perforce attract savings. In addition, a comprehensive study of the profile and motivations of the low income saver will be implemented in order to provide the mortgage lenders with the information needed to develop realistic operational strategies and personnel training programs consistent with the expansion of popular savings.

D. Program Beneficiaries

The PID guidance cable raised some issues about Program beneficiaries and risk and recommended that a maximum unit cost allowable under this Program be derived by assuming a market interest rate. This, it was felt, would encourage greater low income participation in the Program. We expect that the low income families will, during the first two to three years, be exposed to the risk of higher monthly payments should interest rates rise. However, after the first few years of the Program we expect that family income will have risen to a level that will enable beneficiaries to meet increased mortgage payments should they occur. Since 1980 for example, despite Panama's economic problems GDP has risen by an average annual rate of 2.6 percent.

Moreover, the participating mortgage banks have indicated that as the Program begins they will issue credit using rather conservative criteria because of the new clientele they will be serving. (See Social Soundness Analysis, Section VI.C.1.) For example, Program beneficiaries are likely to be required to dedicate 20 percent rather than 25 percent of their income for mortgage payments. Therefore, if interest rates rise they would have more discretionary income available to meet such a contingency. This credit policy should reduce the impact on capacity to pay caused by interest rate increases should they occur. Since the Program addresses low income families special emphasis will be placed on analyzing who the Program Beneficiaries are, how credit requirements are affecting such families, the experience of the lenders with such low income groups and what credit policies need to be reexamined to enhance low income family access to low cost housing.

A substantial rise in interest rates in the next two to three years is unlikely, and changes of two to three points should not affect the feasibility of the Program. If rates were to rise by two percent monthly payments would increase by $18 for a $14,000 mortgage. This represents three percent of the income of the target family. A.I.D.'s experience shows that low income families are among the most responsible where repayments are concerned if their property rights are involved. Moreover, should interest rates increase even more radically it is unlikely that mortgage rates would rise as rapidly as commercial loan rates. Past experience in 1981 and 1982 showed that mortgage rates lagged behind commercial loan rates with the former peaking at 16 percent while the latter rose to 20 percent. Under such abnormal conditions banks tend to adjust rates and policies to avoid foreclosure as it is not in their interest to have to dispose of property, especially when financial conditions are so erratic.

E. Impact of Preferential Interest Rate Mortgage Law (PML)

An analysis of the impacts of the Preferential Interest Rate Mortgage Law was carried out as part of PP development. (See Annex C.) The Law was promulgated in 1985 to stimulate housing construction which would provide multiple employment and economic benefits to the nation as a whole, tax equity, and benefit eligible families by greatly increasing their purchasing power.

After one year of operation indications are that the Law is achieving the desired effects. For example, in 1985 the value of housing loans by the mortgage banks more than doubled over the previous year, a 135 percent increase over 1984. The availability of lower cost housing together with the lower interest rates resulted in an unparalleled level of effective demand from middle and lower income groups.

Given these important positive effects the additional tax revenues generated by stimulating housing activity through the Law were assessed and compared to the cost to the GOP from lost tax revenues. The following conclusions were reached:

1) In terms of actual cash flow, when the credits of the first year are compared to the fiscal revenues generated by housing investment, the GOP experiences a net income gain.

2) The total value of fiscal credits given over a ten year period as established by law is greater than the revenues generated by the housing investments at the end of the period. This phenomenom, or changeover, is produced between the seventh and ninth years. However, this negative effect is virtually eliminated when one recognizes that there is a tendency for families to prepay mortgages. After the tenth year benefits expire under the law.

3) If the construction generated by the law over the first year is maintained, with its corresponding positive annual cash flows to the GOP, it would substantially contribute to the reactivation of the economy in general, and a reactivation of the private sector in particular, which is obviously a high priority in Panama given the present socio-economic situation.

4) The surge in residential construction has been so pronounced that there is a strong possibility that the GOP will extend indefinitely the benefits of the law even though it was intended to last only for five years from the date of the original legislation.

F. Technical Assistance Requirements

The issue of a long-term advisor was raised in the guidance cable. (See Annex A.1.a.) A long-term contractor is needed primarily to coordinate the extensive technical assistance to be directed at addressing two important housing problems: 1) the institutional weaknesses of credit unions, cooperatives, and savings and loans; and 2) the inefficient and costly construction of housing which reduces the home ownership options of low income families. The contractor will assume an active role in addressing these two complex problems. Along with coordinating short-term technical assistance, the contractor will monitor the Program implementation and direct evaluation efforts.

G. Adjustment in Program Design

The PID proposed that home improvement loans as well as new shelter solutions be financed under HG-013. The improvement loans were targetted to reach the lowest income groups. After reviewing the home improvement component from a conceptual and operational perspective, we recommend that only new units be financed through HG-013 for the following reasons:

1) This Program is proposing to establish a mortgage based Trust Fund. The collateral represented by the mortgage is one of the principal features of the Program. Home improvement loans do not provide the same level of guaranty as a mortgage.

2) The tax exemption which applies to foreign investments in housing projects of social interest is not applicable to improvement loans which would require the establishment of two distinct financial structures within the Program.

3) The Preferential Interest Rate Mortgage Law which governs credit for housing does not cover loans for home improvement, nor do the other tax laws which govern the housing sector.

4) The principal mortgage lenders have growing short-term personal loan operations which can be used for home improvement lending. As mortgage lenders gain experience with lower income families we expect that such loans will be made.

5) Given the substantial effective demand for new housing solutions within the beneficiary groups targetted by HG-013, efforts to orient the mortgage lenders to make home improvement loans does not seem to be a very useful purpose, especially since the public sector is increasing its efforts to provide low cost home improvement loans. This will continue under the HG-012 Program and the Inter-American Development Bank's $26.0 million sites and services and home improvement program with the National Mortgage Bank and the Ministry of Housing.

The HG-013 Program will therefore be focussed on mortgage lending for new units. In Panama City at a market rate of 12 percent and without changes in subdivision and infrastructure standards, new low cost units may be produced which are just affordable by families below the medium income level. (See Section V, Technical Considerations.)

ANNEX A.1.b.

CERTIFICATION PURSUANT TO

Section 611 (e) of the

FOREIGN ASSISTANCE ACT

As Amended

I, Ronald D. Levin, the principal officer of the United States Agency for International Development in the Republic of Panama, do herewith certify that in my judgement. the Panamanian financial institutions to participate in the Program have the financial capability and human resources to maintain and utilize effectively goods and services procured under the capital assistance project entitled Private Sector Shelter Program.

This judgement is based upon the record of implementation of the mortgage banks and other finance institutions in the Republic of Panama and the results of the consultations undertaken during intensive review of this new project.

Ronald D. Levin 1/26/83

Ronald D. Levin Date

Director, USAID/Panama

THE HOUSING GUARANTY PROGRAM

STATUTORY CHECKLIST

PANAMA

PROJECT NO.525-HG-013

ANSWER YES OR NO PUT PP PAGE REFERENCES AND/OR EXPLANATIONS WHERE APPROPRIATE

A. General Criteria Under HG Statutory Authority.

Section 221(a)
Will the proposed project further one or more of the following policy goals?

(1) is intended to increase the availability of domestic financing by demonstrating to local entrepreneurs and institutions that providing low-cost housing is financially viable; — Yes

(2) is intended to assist in marshalling resources for low-cost housing; — Yes

(3) supports a pilot project for low-cost shelter, or is intended to have a maximum demonstration impact on local institutions and national; and/or; — Yes

(4) is intended to have a long run goal to develop domestic construction capabilities and stimulate local credit institutions to make available domestic capital and other management and technological resources required for low-cost shelter programs and policies? — Yes

Section 222(a)
Will the issuance of this guaranty cause the total face amount of guaranties issued and outstanding at this time to be in excess of $2,183,100,000? — No

Will the guaranty be issued prior to September 30, 1986? — Yes

Section 222(b)
Will the proposed guaranty result in activities which emphasize:

(1) projects providing improved home sites to poor families on which to build shelter and related services; or — Yes

(3) Is the project designed and planned by A.I.D. so that at least 90 percent of the face value of the proposed guaranty will be for housing suitable for families below the median income, or below the median urban income for housing in urban areas, in the host country? — Yes

(4) Will the issuance of this guaranty cause the face value of guaranties issued with respect to the host country to exceed $25 million in any fiscal year? — No

(5) Will the issuance of this guaranty cause the average face value of all housing guaranties issued in this fiscal year to exceed $15 million? — No

Section 238(c)
Will the guaranty agreement provide that it will cover only lenders who are "eligible investors" within the meaning of this section of the statute at the time the guaranty is issued? — Yes

B. Criteria Under General Foreign Assistance Act Authority.

Section 620/620A

1. Does the host country meet the general criteria for country eligibility under the Foreign Assistance Act as set forth in the country eligibility checklist prepared at the beginning of each year? — Yes

2. Is there any reason to believe that circumstances have changed in the host country so that it would now be ineligible under the country statutory checklist? — No

INITIAL ENVIRONMENTAL EXAMINATION

Project Location: Panama

Project Title: Private Sector Low-Cost Shelter

HG	$25.00 million
Counterpart/Downpayments	18.40
TA (Grant)	.67
Total	$44.07 million

IEE Prepared By: Alvaro Saborío, RHUDO/PSA

Recommended Threshold Decision: Negative Determination

Date: December 23, 1985

I. EXPLANATORY NOTE

This proposed project represents the third of three proposed tranches of a $75.0 million multi-year Housing Guarantee Program for Panama negotiated as part of the Panama Canal Treaty Package in 1978-1979. An IEE was prepared in the original Project Paper in 1979 for the entire $75.0 million program and a negative determination was granted at the time. Since the activities proposed in this third $25.0 million tranche are an extension of those of the first and second tranches, the IEE will essentially update the original IEE.

II. DESCRIPTION OF THE PROPOSED HOUSING ACTIVITIES

The proposed USAID Housing Guaranty (HG) Loan of $25.0 million to the Government of Panama (GOP) will seek to expand the delivery of low-cost housing through the private sector. The Program contemplates establishing a mechanism to provide access to mortgage discount for loans originated by primary lending institutions, such as Caja de Ahorros, the savings and loan associations, and mortgage and commercial banks in general. Program financing will be used to construct a range of housing solutions, thus improving the quality of life of a large number of low income families who need shelter, while at the same time increasing the participation of the private sector in the production of housing.

The projects to be financed will comply with eligibility criteria that will assure the provision of urbanizable land infrastructure, and an adequate supply of building materials; comply with GOP priority determinations; and reflect market oriented credit terms and conditions.

III. DISCUSSION OF ENVIRONMENTAL IMPACTS

The Program will undertake the financing of housing solutions in small to medium-size construction projects in urban areas throughout the country. It is expected that most resources will be used to finance projects in the Metropolitan Area of Panama, but secondary cities will be included if strong demand for housing is identified. Adverse environmental impact will happen only where land will be cleared and prepared for new construction. The potential impacts have been identified through the use of an Impact Identification and Evaluation Form, as follows:

A. Land Use: The construction preparation will obviously change land characteristics principally when medium sized projects are built. These projects would foreclose other uses while the small projects will have reduced land use impacts. Applying a proper selection criteria will assure that other land uses as important as low-cost housing will be considered.

B. Water Quality: Water quality is not expected to be a problem in urban areas since most cities have integrated systems with treatment plants. Provisions will be made to minimize water pollution because of the use of Imhoff and septic tank sewerage system that will be constructed in less urbanized areas.

C. Atmospheric: The program will cause no adverse environmental impact on air or noise.

D. Natural Resources: The program will not affect natural resources at all.

E. Cultural: Current urbanization standards provide for generous lot sizes, wide streets and pedestrian walkways, areas for comunal use and extensive park areas. Since in most cases, these are beyond the paying capacity of most low income families, new urbanization standards are being drafted which will modify current regulations to allow for less costly but still adequate provisions.

MIVI and the Comisión Nacional de Medio Ambiente (CONAMA) have entered into an agreement by which the terms of cooperation between the two institutions are defined with the purpose of "formulating, establishing and refining environmental guidelines for the use of MIVI and the issuance of general guidelines for environmental protection measures in shelter projects" (generally). Both government agencies are committed to: (a) preparing a work plan on specific aspects of the technical assistance sought to be developed starting during November, 1985; (b) incorporating environmental awareness into all stages of project planning; (c) establishing strong focal points for environmental responsibility within MIVI at different levels within the national territory; (d) providing technical assistance and constant monitoring in order to ensure that environmental protection measures as well as natural resources management techniques are being applied and periodically evaluated.

IMPACT IDENTIFICATION AND EVALUATION FORM

A. Land Use.

1. Changing the character of the land through:

a.	Increasing the population	L
b.	Extracting natural resources	N
c.	Land clearing	L
d.	Changing soil character	N

2.	Altering natural defenses	N
3.	Foreclosing important uses	L
4.	Jeopardizing man or his work	N

B. Water Quality.

1.	Physical state of water	M
2.	Chemical and biological status	L
3.	Ecological balance	L

C. Atmospheric.

1.	Air additives	N
2.	Air pollution	N
3.	Noise pollution	N
4.	Hurricanes	M

D. Natural Resources.

1.	Diversion, altered use of water	N
2.	Irreversible, inefficient, commitments	N

E. Cultural.

1.	Altering physical symbols	L
2.	Dilution of cultural traditions	L

F. Socio-Economic.

1.	Changes in economic/employment patterns	L
2.	Change in population	L
3.	Changes in cultural patterns	L

Impact Areas and Sub-Areas

G. Health.

1.	Changing a natural environment	L
2.	Eliminating an ecosystem element	N

H. General

1.	International impacts	N
2.	Controversial impacts	N
3.	Larger program impacts	N

The following symbols used:

H - High environmental impact
U - Unknown environmental impact
N - No enironmental impact
L - Little environmental impact
M - Moderate environmental impact

IV. ENVIRONMENTAL ACTION RECOMMENDED

Based upon the finding of the environment examination on the proposed Panama Housing Guaranty Program, it has been concluded that these activities do not represent a major action which will significantly impact the human environment. Therefore, a Negative Determination is warranted for the proposed AID housing program.

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT LAC/DR-IEE-79-25
WASHINGTON, D.C. 20523
REVISED

ASSISTANT
ADMINISTRATOR

ENVIRONMENTAL THRESHOLD DECISION

~~Kessler~~
File Panama 011
PP Preparation

Location : Panama, 525-HG-011

Project Title : Shelter and Community Upgrading

Funding : FY 79-83 U.S. HG $75.00 million; DG - .63 million; Panama GOP - $20.4 million; Beneficiary Contributions - $8.6 million

Life of Project: Five Years

Mission Recommendation:

Based on the Initial Environmental Examination, the Mission has concluded that the project will not have a significant effect on the human environment and therefore recommends a Negative Determination.

The Development Assistance Executive Committee of the Bureau for Latin America and the Caribbean has reviewed the Initial Environmental Examination for this project and concurs in the Mission's recommendation for a Negative Determination.

AA/LAC Decision:

Pursuant to the authority vested in the Assistant Administrator for Latin America and the Caribbean under Title 22, Part 216.4a, Environmental Procedures, and based upon the above recommendation, I hereby determine that the proposed project is not an action which will have a significant effect on the human environment, and therefore, is not an action for which an Environmental Impact Statement or an Environmental Assessment will be required.

[signature]
Assistant Administrator for
Latin America and the Caribbean

July 6 1979
Date

Clearances:
LAC/DR:Environmental Advisor:ROtto Otto
DAEC Chairman:MBrown SB

República de Panamá

Ministerio de Planificación y Política Económica

Despacho del Ministro

OFF	ACT	INF
DIR	—	✓
DEP		✓
ODP	✓	
ODR		✓
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RHUDO		✓
ODP/SAT		
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23 de septiembre de 1986
DM-129-86

Señor
Ronald Levin
Director
Agencia de los Estados Unidos
para el Desarrollo Internacional
E. S. D.

Señor Levin:

El Gobierno de la República de Panamá está interesado en la solución de los problemas relacionados con la vivienda de interés social, particularmente en el desarrollo de programas financiados con los recursos pactados en los Tratados Torrijos-Carter y otros recursos financieros.

Con relación a los estudios de mercado y los temas de política habitacional, en su oportunidad sometimos una carta solicitando la consideración de un programa de asistencia técnica financiado con recursos de donación provenientes de USAID.

A través de la misión recibimos el borrador de entendimiento relacionado con este acuerdo de donación, el cual el Gobierno Panameño objeta el componente relativo a la asistencia técnica destinada a la Caja de Ahorro y sus operaciones. Esta objeción fue puesta en conocimiento del subdirector de la misión el pasado 19 de septiembre.

El Gobierno Panameño desea considerar este acuerdo donación por B/.675,000 solamente si el punto (6) del

.../...

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borrador de acuerdo propuesto se elimina totalmente y se excluye en su totalidad, estudios relativos a las operaciones de la Caja de Ahorro de los términos de referencia del mismo.

En espera que nuestra solicitud sea considerada y aprobada por Usted, lo saluda muy atentamente,

DR. RICAURTE VASQUEZ M.
Ministro

República de Panamá

Ministerio de Planificación y Política Económica

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13 de enero de 1986
DPEyS/D-03

Señor
Ronald Levin
Director de la Agencia para
el Desarrollo Internacional
E.S.D.

Señor Director:

La presente tiene por objeto manifestarle el interés de nuestro Gobierno en que la Institución que Usted dirige inicie los estudios relativos al diseño de un proyecto para el financiamiento y construcción de vivienda de interés social que incluya la participación del sector privado.

El mencionado proyecto, se apoyaría en el mecanismo de Hipotecas Garantizadas (HIG) y propiciaría la creación de un fondo para el financiamiento a largo plazo para viviendas para la población de escasos recursos incorporándose en este esfuerzo al sector privado, aprovechando las ventajas que ofrece la legislación vigente sobre intereses para este sector.

En nuestra opinión, de lograr cristalizarse este proyecto en corto plazo, su impacto sería altamente beneficioso en la generación de empleo y la atención masiva de una necesidad vital en la población menos favorecida económicamente.

Atentamente

RICAURTE VASQUEZ M.
Ministro

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15 JAN 1986
US AID/PANAMA
C&R SECTION

c.c. Dr. Roberto Velásquez - Ministro de Vivienda
Lic. Jaime Simons - Gerente del Banco Hipotecario Nacional

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BANCO GENERAL, S.A.

FEDERICO HUMBERT JR.
PRESIDENTE

13 de febrero de 1986

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Señor
William Gelman
Jefe de la Oficina de
Vivienda y Programas Urbanos
para Panamá y Sur América
USAID/Panamá
Edificio Cemento Panamá
Panamá, R. P.

Estimado señor Gelman:

Le agradezco su interés en participar en la búsqueda de soluciones a los problemas habitacionales de nuestro país. El interés de la Oficina de Vivienda y Programas Urbanos para Panamá y Sur América USAID/Panamá de considerar traer a Panamá un préstamo de garantía para vivienda utilizado a través del sector hipotecario privado presenta una alternativa positiva que respaldamos con nuestro interés en participar en dicha operación.

Nosotros hemos atendido parte de la demanda de vivienda durante 31 años y actualmente somos el banco privado con la mayor cartera de préstamos para vivienda. Sin embargo, nuestra participación se incrementaría si contáramos con recursos externos contratados a largo plazo que respalden nuestra base de depósitos a corto y mediano plazo.

Esperamos con mucho interés el desarrollo de este proyecto y nos ponemos a sus órdenes para participar en los estudios o en la obtención de datos estadísticos que ustedes puedan requerir.

Atentamente,

BANCO GENERAL, S.A.

Federico Humbert Jr.
Presidente

FHJR/agp

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primer banco de ahorros
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8 de febrero de 1986.

Señor William Gelman
Jefe de la Oficina de
Vivienda y Programas Urbanos
para Panamá y Sur América
USAID/PANAMA
Edificio Cemento Panamá
Panamá, R. de P.

Estimado señor Gelman:

Con relación a las conversaciones sostenidas con usted en las que nos manifestó el interés de esa oficina de traer a Panamá un préstamo de garantía para vivienda para ser utilizado a través del sector hipotecario privado, deseamos manifestarle nuestro interés, en principio, en participar en dicha operación.

La posibilidad de contar con recursos externos de largo plazo puede constituir un incentivo importante para una mayor cobertura de las necesidades habitacionales del país, a las que el sector privado, y en especial la banca hipotecaria, ha dado una ininterrumpida atención.

Quedamos pues a la espera de información adicional sobre las condiciones del programa reiterándole nuestro positivo interés en el mismo.

De usted atentamente,

RALPH J. LINDO
PRESIDENTE-JUNTA DIRECTIVA
PRIMER BANCO DE AHORROS, S. A.

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18 FEB 1986
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C&R SECTION

ANNEX A.1.e.

BANVIVIENDA
BANCO PANAMEÑO DE LA VIVIENDA, S.A.

Panamá, Septiembre 17 de 1986
GG-348-86

Señor
WILLIAM GELMAN
Jefe Oficina Regional de Vivienda y
Desarrollo Urbano para Panamá y Sur América/**AID**
Ciudad

Estimado señor Gelma:

Tiene la presente por objeto acusar recibo de su nota del 11 de Septiembre del 86, con la cual nos remitió el Programa HG-013, de Préstamo de Garantía para Vivienda.

Aprovecho para reiterarle el interés de nuestra institución en participar en esta iniciativa. En este orden de idea nos proponemos estudiar la documentación que ustedes nos han facilitado, con el fin de hacerle nuestra observación si procedería.

Aprovechamos para informarles que el señor Francisco García Sosa, Sub-Gerente General de Banvivienda asistirá a la reunión del Grupo de Bancos Hipotecarios que usted ha convocado para el próximo 26 de Septiembre.

Reciba un cordial saludo de su servidor y amigo,

MARIO L. FABREGA AROSEMENA
Gerente General

edem

c.c. Sr. Francisco García

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SET. 22 1986
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VIA ESPAÑA Y CALLE 50 APARTADO 8639 PANAMA 5, R. DE P. TELEFONOS: 69-5464 64-6633
CALLE 50 Y CALLE 73 SAN FRANCISCO – TELEFONOS: 26-2340 – 26-6059

ASOCIACION NACIONAL DE AHORROS Y PRESTAMOS
ahorros ANAP
LOS ANGELES, EL PAICAL – APARTADO 8746 – PANAMA 5, REP. DE PANAMA
CABLE "ASONAL" – TELEFONOS 60-3211 – 60-3805

ACTION
TO RHUDO
DUE 02/24/86
TAKEN VAN 1/6/86

Panamá, 5 de febrero de 1986

Señor
William Gellman
Director de la Oficina
de Vivienda
USAID - Panamá

Apreciado Gellman:

Luego de su visita y posteriores conversaciones respecto a las necesidades de financiamiento de vivienda en Panamá, veo con satisfacción los esfuerzos que tanto usted como sus colaboradores realizan para calibrar la situación real y proponer alternativas.

Por ello permítame felicitar al equipo que comanda y a reiterarle que en ANAP podemos y debemos lograr financiamientos encaminados a la atención de bajos y medios-bajos recursos. Como entiendo que existe la posibilidad de que USAID canalice al sector privado involucrado en estos financiamientos, fondos internacionales, aprovecho la ocasión para reiterarle el interés de ANAP en participar de estos programas como en ocasiones anteriores.

Con toda consideración,

José F. Cardona M.
Presidente Ejecutivo

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C&R SECTION

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NUESTRO INTERES ES SU MAYOR INTERES

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LINAAP

Liga Nacional de Asociaciones de Ahorros y Préstamos.

ACTION
TO RHUDO
DUE 02/24/86
TAKEN

Panamá, 5 de febrero de 1986

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Señor
William Gellman
Director de la Oficina
de Vivienda
USAID - Panamá

Estimado señor Gellman:

En muchas ocaciones usted, sus colaboradores y el suscrito hemos conversado sobre el déficit habitacional y específicamente las necesidades de los sectores de más bajos ingresos a quienes se les dificulta el financimaiento a largo plazo. El promedio del préstamo hipotecario en el sistema de nuestras asociaciones es de B/.15.700 aproximadamente, lo que revela la atención a familias pobres, no atendidas en sus necesidades habitacionales por otros sectores bancarios.

De allí que vemos con buena voluntad, cualquier posibilidad de recursos financieros internacionales como los que USAID canaliza, encauzados a través del sistema nacional de Ahorros y Préstamos para la Vivienda, sobre todo si ellos contribuyen a ofrecer mejor oportunidad de habitación a los grupos sociales que tradicionalmente servimos.

Con el deseo que sus gestiones materialicen en resultados positivos, quedo de usted.

Atentamente,

José F. Cardona M.
Presidente

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US AID/PANAMA
C&R SECTION

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PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

(INSTRUCTION: THIS IS AN OPTIONAL FORM WHICH CAN BE USED AS AN AID TO ORGANIZING DATA FOR THE PAR REPORT. IT NEED NOT BE RETAINED OR SUBMITTED.)

Life of Project:
From FY 87 to FY 91
Total U.S. Funding $25,675
Date Prepared: August, 1986

Project Title & Number: Private Sector Shelter Program

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal: The broader objective to which this project contributes: (A-1)	Measures of Goal Achievement: (A-2)	(A-3)	Assumptions for achieving goal targets: (A-4)
Increase equity and broad participation in development.	A doubling of low cost housing production by the year 1990.	GOP Statistics	- GOP support to private sector initiatives. - Investment climate adequat to attract private sector investment.

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PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 87 to FY 91
Total U.S. Funding $25,675
Date Prepared: August, 1986

Project Title & Number: Private Sector Shelter Program

PAG

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Purpose: (B-1) To increase the delivery of low-cost shelter financed through private sector institutions, thereby expanding and strengthening the role of the private sector in meeting the shelter needs of Panama's low income urban population.	Conditions that will indicate purpose has been achieved: End-of-Project status. (B-2) EOPS: - A mechanism in place capable of providing long term financing or eligible mortgages per year from a minimum of three private sector finance institutions. - Increase of 3,500 units built from 1987 to 1990 financed by mortgage banks and savings and loan associations. - At least three savings and loan associations are reorganized and eligible to participate in the Trust Fund.	(B-3) - GOP Statistics - Evaluation - Reports of institutions	Assumptions for achieving purpose: (B-4) - No major changes are experienced in interest rates which would negatively offset affordability of new housing solutions. - Inflation and constructic costs continue to remain relatively stable.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Project Title & Number: Private Sector Shelter Program

Life of Project:
From FY 87 to FY 91
Total U.S. Funding $25,675
Date Prepared: August, 1986

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NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Outputs: (C-1)	Magnitude of Outputs: (C-2)	(C-3)	Assumptions for achieving outputs: (C-4)
1. A trust fund for discounting or financing eligible private sector loans and mortgages for families with incomes below the median. 2. New and improved shelter solutions affordable to families with incomes below the median. 3. Revised norms, standards and laws which govern low income housing according to socio-economic, strata and geographic region. 4. Savings and loan associations are reorganized and strengthened. 5. The role and level of savings deposits are strengthened in mortgage lending institutions.	1. By 1990 the mortgage banks are financing approximately 2,000 low cost houses each year. 2. By 1990 S & L associations are financing 360 low cost houses each year. 3. Revised norms and standards approved by the GOP lowering costs of construction for low-income housing. 4. "Closing costs" for low-income housing are financed, or at a level of no more than 4% of housing cost. 5. Savings Deposits increase their percentage share of total liability structure of mortgage lending institutions.	- Reports of institutions - Annual project reviews - USAID Project Files - Evaluation - GOP "Gaceta Oficial"	- First experience with low-income clientele will indicate that lending risk is within parameters of participating institution. - Promoters will continue to show interest in developing and marketing good quality projects for the target population. - A public/private sector dialogue of building regulation has been carried out leading to recommendations for more efficient and less costly housing production for the poor. - Appropriate changes in financing or lowering "closing costs" have taken place. - Effective demand exists for the housing solutions to be carried out. - Regulations for the conversion of the savings and loan associations as stock companies are promulgated. - The overall economic situation does not deteriorate.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Project Title & Number: Private Sector Shelter Program

Life of Project:
From FY 87 to FY 91
Total U.S. Funding $25,675
Date Prepared: August, 1986

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NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Inputs: (D-1) - HG Loan $25,000,000 - Private Sector Counterpart $18,400,000 - Beneficiaries Downpayment 4,800,000 -U.S. Grant $ 675,000 Total Project $48,875,000	Implementation Target (Type and Quantity) (D-2) - HG approval - Participation of private institutions - Grant approval - Hiring Consultants - LT - 30 PM (PSC) - ST - 20 PM - Evaluations in years 1, 3	(D-3)	Assumptions for providing inputs: (D-4) - HG loan is for 30 years at market rates. - Private participating institutions will find terms attractive.

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IMPLEMENTATION SCHEDULE

The Project Implementation Plan covers the period required for the disbursement of the total HG Loan of $25.0 million and is estimated at 30 months from the approval of the Project Paper and the authorization of the Program. An illustrative schedule for Program Implementation is shown below:

Activity	Month
°PP Approved and Program Authorized	Sept. '86
°Grant Agreement signed	Sept. '86
FY 87:	
°Implementation Agreement Prepared and Signed	Oct. '86
°Recruitment Begun TA Contractor	Oct. '86
°Mortgage Banks Prepare Preliminary Program and Plan	Nov./Dec. '86
°Trust-Mortgage Lender Loan Agreement Format Prepared/Approved	" "
°Model Mortgage Document Prepared/Approved	" "
°Trust Agreement Prepared	Dec. '86
°Bids Solicited from Commercial Banks for Trustee Function	Dec. '86

Activity	Month
°Trustee Selected and Trust Agreement Signed	Jan. '87
°Long-Term Advisor Posted	Jan. '87
°Trustee Organization/Management Policies, Procedures and Staffing Established	Feb./Mar. '87
°TA Provided to S&Ls and FEDPA to Qualify Them as Borrowers	Feb. '87
°Mortgage Lenders Finalize Program/Plan and Submit Qualified Mortgage Portfolios for Trustee Approval	Mar. '87
°Advertisement for U.S. Investor	Mar. '87
°Loan Agreement Prepared/Signed by Borrowers and U.S. Investor	May '87
°Mortgage Lenders Present First Mortgage Packages for Financing	
°First Disbursement Received by Trustee	June '87
°Trust-Mortgage Lender Loan Agreements Signed	June '87
°First Evaluation Implemented: First disbursement; Trust Fund and Trustee; and, New Potential Borrowers	Jun. '87
°Training Provided to Private Developers to Improve Project Design	Aug. '87
FY 88	
°Audit of Trustee Implemented	Oct. '87
°Mortgage Lenders Prepare Program and Plan for Second Disbursement	Oct. '87
°Technical Assistance Provided to Improve Project Approval Process and Procedures	Oct. '87
°New Borrowers Qualified	Oct. '87
°Mortgage Lenders Finalize Program/Plan and Submit Qualified Mortgage Portfolios for Trustee Approval	Nov. '87

TECHNICAL ASSISTANCE AND TRAINING PLAN

Grant support of $675,000 will complement the HG resources and finance an integrated program of technical assistance and training. The following table lists the TA and training activities which will be carried out during a three year period, in support of the Program's goals and objectives.

I. Technical Assistance Plan

A total of $465,000 in grant funds will finance a total of 30 months of long-term and 10 person months of short-term technical assistance (TA) through an institutional contract issued by the Mission as agreed upon with MIPPE and/or other public and private institutions involved in the HG-013 Program.

A long-term specialist will be funded under the institutional contract for 30 person months. In addition to assisting in the Program's startup and monitoring its outputs, this advisor will be responsible for coordinating short-term technical assistance activities related to long-term development issues and policies to strengthen the savings and loan associations. The specialist will also provide direct assistance to the savings and loan associations and FEDPA to enable them to qualify as participants in this Program. He/she will be responsible for developing the scopes of work for the discrete short-term assistance required and will assist in identifying the disciplines and types of short-term specialists required.

Short Term Technical assistance will be focussed on:

a) Trust Fund Organization and Management Support: Development of legal documents and financial monitoring and reporting systems and procedures to protect USAID's interests.

b) Reduction in Housing Production Costs: Revision of development norms and standards; building materials development; project approval and title registry systems and procedures; and, project planning and design.

Activity	Month
°Advertisement for U.S. Investor for Second Disbursement	Mar. '88
°Mortgage Lenders Present First Mortgage Packages for Financing	May. '88
°Loan Agreement for Second Disbursement Prepared/ Signed by Borrowers and U.S/ Investor	Jun. '88
°Second Disbursement Received by Trustee	Jun. '88
°Trust-Mortgage Lender Loan Agreements Signed	Jun. '88
°Study on Savings Mobilization Implemented	April '88
°Training and TA provided to Mortgage Lenders for Savings Mobilization	June '88
°Study Implemented on Improving Credit Criteria	July '88
°New Borrowers Qualified	Aug. '88
°Mortgage Lenders Prepare Program Plan for Third Disbursement	Aug. '88
°Mortgage Lenders Finalize Program/Plan and Submit Qualified Mortgage Portfolios for Trustee Approval	Sept. '88
°Second Trust Fund Audit Implemented	Sept. '88
°Advertisement for U.S. Investor for Third Disbursement	Sept. '88

FY 89

°Loan Agreement for Third Disbursement Prepared/Signed by Borrowers and U.S. Investor	Nov. '88
°Third and Final Disbursement Received	Dc '88
°Trust-Mortgage Lender Agreements Signed	Jan. '89
°Mortgage Lenders Present First Mortgage Packages for Financing	Feb. '89
°Final Evaluation/Audit Conducted	Mar. '89

HG-013 PRIVATE SHELTER SECTOR PROGRAM

TECHNICAL ASSISTANCE AND TRAINING PLAN

ACTIVITY	TOTAL PERSON MONTHS	TOTAL COSTS	PERSON MONTHS AND COSTS ($1,000) BY YEAR FY 87		FY 88		FY 89	
			PM	$	PM	$	PM	$
I. TECHNICAL ASSISTANCE								
Long-Term:								
°Program Management Advisor	30	365	9	110	12	145	9	110
Short-Term:								
°Trust Fund Development Support	2	20	2	20				
°Housing Production Costs	5	50	3.5	35	1.5	15		
°Mortgage Credit Policies	2	20	2	20				
°Popular Savings Mobilization	1	10			1	10		
°Evaluations and Audits	NA	110				50		60
SUB-TOTAL	40	575	16.5	185	14.5	220	9	170
II. TRAINING EVENTS								
°LATC Operations		20		12		8		1
°Housing Production	4	32	3	24		8		
°Savings Mobilization Promotion	2	16		8		8		
°S&L Operations and Management	3	24		16		8		
SUB-TOTAL	10	100		60		40		
GRAND TOTAL	50	675	16.5	245	14.5	260	9	170

c) Mortgage Credit Qualification Criteria: Revision of practices and policies in order to increase accessability of low income families to the Program.

d) Popular Savings Mobilization: Analysis of trends and motivations and the development of recommendations and strategies to assist mortgage lenders in promoting increased levels of popular savings.

e) Savings and Loan Associations and FEDPA Support: Assistance to qualify these institutions for participation in the Program; policy, operational and management support.

f) Evaluation and Audits: Mid-term and final evaluatons of the Program; review of Trust Fund effectiveness and long-term potential; and, Trust Fund audits.

II. Training Plan

A total of $100,000 has been allocated to the development and implementation of short training seminars and workshops as an integral part of Program implementation. The Latin American Training Center (LATC) will be responsible for the organization and management of the training effort. Approximately eight seminars/workshops will be implemented over a three year period.

Training events will parallel and complement the technical assistance effort and be directed to supporting improvements in the policy and institutional framework required to sustain private sector finance and production of low cost housing. The table provides an illustrative listing of needs. The specific designs and substantive content of the seminars/workshops will be defined during Program implementation by LATC in coordination with the Long-Term Program Management Advisor.

III. Technical Assistance and Training Contracting Plan

Type of Assistance	Method of Selection	Contract Mode	Contract Type
1. Program Management Advisor	Fully Competitive	Direct A.I.D.	Institutional
2. Short-Term TA	Fully competitive	Direct A.I.D.	Institutional,
3. Training	Fully competitive	"	Various
4. Audit & Evaluations	Fully Competitive	"	IQC

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Cost Estimates and Financial Plan

The total cost of this three-year Program is estimated to be U.S.$48.88 million. USAID will finance U.S.$25.0 million in housing investment with a HG loan and U.S.$.675 million with a Development Grant for technical assistance and training. The Panamanian private sector will finance an estimated B/18.4 million in housing investment. Program beneficiaries will contribute about B/.4.8 million through downpayments. In addition, Trust Fund expenses will be paid primarily from the income generated by the Program's financial operation.

Financial Plan by Project Input

(in U.S.$ millions)

	USAID		Private Finance Institutions	Beneficiaries	Total
	Grant	Loan			
Technical Asst.	.465				.465
Training	.100				.100
Housing Finance		25.0	18.4	4.8	40.200
Audit & Eval.	.110				.110
TOTALS	.675	25.0	18.4	4.8	48.88

ANNEX B

STATISTICAL APPENDIX

ANNEX B

TABLE OF CONTENTS

<u>Project Paper Section</u>

V. Technical Considerations

VII. Economic Analysis

Table 1

INTERNATIONAL BANKING CENTER OF PANAMA
ACCOUNT BALANCES
(US$ Millions)

I

	ASSETS					LIABILITIES			
Year	Liquid Assets	Credit Portfolio	Investments in Commercial Paper	Other Assets	Total	Deposits	Obligations	Other Liabilities	Capital & Reserves
1980	12,444.	22,956.5	1,625.7	1,413.4	38 439.6	33,899.2	2,147.8	1,469.5	923.1
1981	11,840.6	30,579.2	1,708.3	2,231.8	46 359.9	39,683.1	2,918.4	2,626.	1,132.4
1982	12,401.3	32,639.1	1,731.6	2,230.6	49,002.6	40,331.8	4,076.1	3,052.1	1,542.6
1983	12,890.2	26,380.7	1,526.8	1,987.1	42,785.6	34,195.7	4,271.9	2,727.	1,591.
1984	10,493.6	23,753.7	1,424.6	2,315.1	37,987.	29,769.2	4,152.9	2,402.6	1,662.3
1985	11,526.5	23,752.	1,583.3	2,108.	38,969.8	32,026.6	2,868.1	2,385.6	1,689.5
Δ % 80/82	- (0.3)	42.2%	6.5%	57.9%	27.5%	19.%	89.8%	107.7%	67.1%
Δ % 82/85	- (7.05)	(27.2%)	(8.6%)	(5.5%)	(20.5%)	(20.6%)	(29.6%)	(21.8%)	9.5%

Table 2

NATIONAL BANKING SYSTEM
ACCOUNT BALANCES
(US$ Millions)

II

Year	ASSETS Liquid Assets	Credit Portfolio	Investments in Commercial Paper	Other Assets	Total	LIABILITIES Deposits	Obligations	Other Liabilities	Capital & Reserves
1980	6,114.2	15,278.	646.7	1,025.8	23,064.7	21,144.9	233.	1,037.6	649.2
1981	6,967.	20,445.7	904.2	1,590.3	29,907.2	27,242.	462.3	1,460.7	742.2
1982	8,463.5	21,232.9	1,290.5	1,598.5	32,585.4	28,986.9	735.8	1,836.9	1,025.8
1983	9,057.1	18,367.8	1,174.2	1,502.8	30,101.9	26,059.7	1,005.6	1,964.9	1,071.7
1984	7,940.7	17,028.7	1,152.9	1,703.9	27,826.2	23,809.3	1,217.7	1,730.7	1,068.5
1985	8,482.	17,197.8	1,151.2	1,461.5	28,292.5	24,324.2	1,069.9	1,751.4	1,147.
Δ % 80/82	38.4%	39.%	99.6%	55.8%	41.3%	37.1%	215.8%	77.%	58.%
Δ % 82/85	(0.2%)	(19.%)	(10.8%)	(8.6%)	(13.2%)	(16.1%)	45.4%	(4.6%)	11.8%
II/I 80	49.%	67.%	40.%	73.%	60.%	62.%	11.%	71.%	70.%
II/I 85	74.%	72.%	73.%	69.%	73.%	76.%	37.%	73.%	68.%

Table 3

NATIONAL BANKING SYSTEM
INTERNAL RESOURCES - ACCOUNT BALANCES
(US$ Millions)

III	ASSETS					LIABILITIES				
Year	Liquid Assets	Credit Portfolio	Investments in Commercial Paper	Other Assets	Total	Deposits	Obligations	Other Liabilities	Capital & Reserves	External Contri-butions
1980	1,053.8	2,530.6	41.4	310.3	3,9 6.1	2,406.	3.7	253.7	649.2	623.5
1981	1,500.3	3,146.	48.1	368.4	5,062.8	3,201.5	14.3	362.4	742.2	742.2
1982	1,557.8	3,350.9	50.7	385.2	5,344.6	3,526.8	13.9	402.	1,025.8	376.1
1983	1,250.7	3,533.4	53.9	342.9	5,180.9	3,364.8	19.6	287.7	1,071.7	437.1
1984	1,145.9	3,763.5	52.3	366.8	5,328.5	3,371.	22.9	306.3	1,068.5	559.8
1985	1,347.9	3,923.4	50.1	391.1	5,712.5	3,710.6	38.4	342.5	1,147.	474.
III/II 80	15%	17%	6%	30%	17%	11%	2%	34%		
III/II 85	16%	23%	4%	27%	20%	15%	4%	20%		

Table 4

MORTGAGE BANKING SYSTEM (MBS)
ACCOUNT BALANCES
(US$ Millions)

IV	ASSETS					LIABILITIES			
Year	Liquid Assets	Credit Portfolio	Investments in Commercial Paper	Other Assets	Total	Deposits	Obligations	Other Liabilities	Capital & Reserves
1980	68.6	233.5	10.9	17.3	330.3	300.5	0.7	12.3	16.8
1981	90.4	276.	17.4	20.	403.8	367.7	0.6	12.1	23.4
1982	125.	321.5	26.6	22.8	495.9	447.4	8.6	12.3	27.6
1983	144.7	374.	35.9	27.1	581.7	518.2	12.1	19.6	31.8
1984	186.4	429.5	40.4	32.8	689.1	618.3	15.8	21.6	33.4
1985	301.2	500.8	25.4	35.7	863.1	765.5	28.2	29.1	40.3
IV/III 80	9.%	9.%	26.%	6.%	8.%	12.%	19.%	5.%	3.%
IV/III 85	16.%	11.%	77.%	9.%	13.%	18.%	69.%	6.%	3.%

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Table 5

INTERNAL PRIVATE DEPOSITS
(US$ Millions)

	1980			1981			1982			1983			1984			1985			80/85	
	NRS	MRS	%	NRS	MRS	%	NRS	MRS	%	NRS	MRS	%	NRS	MRS	%	NRS	MRS	%		%
Checking Accounts	329.3	14.	4	353.6	20.2	18	375.4	21.9	6	356.3	31.3	9	383.9	38.7	12	414.0	51.1	12	25.7	265
Savings Deposits	248.5	111.2	45	256.5	112.3	44	278.1	127.6	46	292.8	135.4	46	310.8	149.0	48	346.9	180.0	52	39.6	41.9
Time Deposits	898.8	135.5	15	1,130.8	184.	16	1,296.	255.7	20	1,346.7	301.5	22	1,402.8	349.6	30	1,535.2	369.5	24	70.8	172.7
TOTAL	1,476.6	260.7	18	1,740.9	316.5	18	1,949.5	405.2	21	2,005.8	468.2	23	2,177.5	537.3	2.5	2,296.1	600.6	26	55.5	130.4

Table 6

INVESTMENT OF INTERNAL PORTFOLIO
(US$ Millions)

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Housing Loans	465.9	203.8	44	512.5	233.5	46	552.1	273.	49	616.0	317.0	51	653.4	347.6	53	706.1	404.4	57	51.6	[illegible]
Construction Loans	96.9			147.4	0.1		150.5			164.2			159.3			135.0			39.2	
Other Loans	1,967.7	29.7	2	2,486.0	42.3	2	2,648.3	48.3	2	2,752.4	56.9	2	2,950.7	81.7	3	3,082.3	96.3	3	56.6	223.8
TOTAL PORTFOLIO	2,530.5	233.5	9.2	3,145.9	275.9	8.8	3,350.9	321.3	9.6	3,533.4	373.9	10.6	3,763.4	429.3	11.4	3,923.4	500.7	13	55	114.4

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Table 7

CAJA DE AHORROS
(000 US$)

ASSETS	1980	%	1981	%	1982	%	1983	%	1984	%	1985	%
Liquid Assets	26,307.-	15.2	34,766.-	18	53,631.-	23.9	62,138.-	24.3	71,876.-	24.8	78,243.-	24.4
Investments	522.-	0.3	861.-	0.4	1,588.-	0.7	2,000.-	0.8	1,650.-	0.6	1,374.-	0.4
Mortgage Loans (Net)	127,295.-	73.7	136,675.-	70.4	144,683.-	64.5	156,977.-	61.3	173,021.-	59.6	190,667.-	59.5
Other Loans	10,593.-	6.1	12,011.-	6.2	12,788.-	5.7	19,333.-	7.6	25,703.-	8.8	30,547.-	9.5
Other Assets	8,113.-	4.7	9,903.-	5	11,638.-	5.2	15,431.-	6	17,772.-	6.2	19,376	6.2
TOTAL	172,830.-	100%	194,216.-	100%	224,328.-	100%	255,879.-	100%	290,022.-	100%	320,207.-	100%

LIABILITIES	1980	%	1981	%	1982	%	1983	%	1984	%	1985	%
Checking Accounts					409.-		1,751.-	1	7,341.-	2	10,208.-	3.2
Savings Accounts	80,722.-	47	87,663.-	45	98,340.-	44	95,369.-	37	107,790.-	37	120,710.-	37.7
Time Deposits	73,035.-	42	88,806.-	45	104,027.-	46	130,404.-	51	141,377.-	49	147,893.-	46.2
Mortgage Bonds	6,194.-	4	6,441.-	3	8,279.-	4	10,320.-	4	13,104.-	5	22,087.-	6.9
Other Liabilities	5,207.-	3	5,403.-	3	5,118.-	2	9,470.-	4	11,619.-	4	10,168.-	3.2
Capital and Capitalization	7,672.-	4	7,903.-	4	8,155.-	4	8,565.-	3	8,791.-	3	9,141.-	2.8
Total	172,830.-	100%	194,216.-	100%	224,328.-	100%	255,879.-	100%	290,022.-	100%	320,207.-	100%

Table 8

SISTEMA HIPOTECARIO PRIVADO
(000 US$)

ASSETS	1980	%	1981	%	1982	%	1983	%	1984	%	1985	%
Liquid Assets	42,293.-	27	55,634.-	27	71,369.-	26	82,562.-	25	114,524.-	28	223,000.-	41.1
Investments	10,378.-	7	16,539.-	8	25,012.-	9	33,900.-	10	38,750.-	10	24,000.-	4.4
Mortgage Loans (Net)	76,480.-	48	96,857.-	46	128,387.-	47	160,018.-	49	174,616.-	44	213,758.-	39.4
Other Loans	19,132.-	12	30,292.-	14	35,157.-	13	37,672.-	12	56,160.-	14	65,790.-	12.1
Other Assets	9,187.0-	6	10,262.-	5	11,650.-	5	11,669.-	4	15,028.-	4	16,345.-	3
TOTAL	157,470.-	100%	209,584.-	100%	271,575.-	100%	325,821.-	100%	399,078.-	100%	542,893.-	100%

LIABILITIES	1980	%	1981	%	1982	%	1983	%	1984	%	1985	%
Checking Accounts	14,700.-	9	22,[illegible]00.-	11	21,591.-	8	30,349.-	9	31,959.-	8	42,692.-	7.9
Savings Accounts	30,478._	19	24,637._	12	29,260.-	11	40,031.-	12	41,210.-	11	59,290.-	11
Time Deposits	95,371.-	61	139,253.-	66	185,497.-	68	209,976.-	65	275,519.-	69	384,707.-	70.8
Mortgage Bonds												
Other Liabilities	7,793.-	5	7,297.-	7	15,782.-	6	22,230.-	7	25,781.-	6	25,045.-	4.6
Capital and Capitalization	9,128.-	6	15,497.-	7	19,445.-	7	23,235.-	7	24,609.-	6	31,159.-	5.7
TOTAL	157,470.-	100%	209,584.-	100%	271,575.-	100%	325,821.-	100%	399,078.-	100%	542,893.-	100%

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Table 9

NATIONAL SAVINGS AND LOAN SYSTEM

SAVINGS PORTFOLIO

No. Accounts	1983	1984	1985	Δ% 84/85
TOTAL	93,039	100,752	104,357	3.6%
Metropolitan Area	78,153	83,144	85,867	3.3%
Interior	14,886	17,608	18,490	5%
% Int/Total	16%	17%	18%	
SAVINGS TOTAL (000$)				**Δ% 84/85**
TOTAL	42,900	45,989	48,906	6.3%
Metropolitan Area	37,082	39,912	40,781	2.2%
Interior	5,818	6,077	8,125	33.7%
% Int/Total	14%	13%	17%	
AVERAGE VALUES				
TOTAL	461.1	456.46	468.6%	
Metropolitan Area	474.48	480.03	474.9%	
Interior	390.84	345.13	439.4%	
% Int/Total	82%	72%	94%	

Table 10

STRUCTURE OF THE SAVINGS PORTFOLIO

NATIONAL BANKING SYSTEM

Savings Accounts	1984			1985			Δ 84/85		
	Number	Total Value	Average Value	Number	Total Value	Average Value	Number	Total Value	Average Value
More than 500	502,702	59,896	119.1	572,580	69,685	121.70	13.9	16.3	2.2
500-999.99	38,617	27,015	700.5	42,238	30,293	717.20	9.4	12.1	2.4
1,000-4,999.99	43,301	100,754	2,326.8	46,950	108,902	2,319.5	8.4	8.1	(0.3)
5,000-9,999.99	7,418	53,238	7,176.9	8,274	58,385	7,056.5	11.2	9.7	(1.7)
10,000 & more	4,023	69,825	17,356.4	4,567	79,629	17,435.7	13.5	14	0.5
TOTAL	596,061	310,763	521.4	674,609	346,894	514.2	13.2	11.6	(1.4)

PERCENTAGES						
Less than 500	84	19.3	23	85	20	24
500-999.9	6.5	8.7	134	6.3	8.7	139
1,000-4,999.99	7.5	32.4	446	7	31.5	451
5,000-9,999.99	1.3	17.1	1376	1	16.8	1372
10,000 & more	0.7	22.5	3329	0.7	23	3391
TOTAL	100	100	100	100	100	100

Table 11

THE SAVINGS MARKET & THE MORTGAGE BANKING SYSTEM

COMPARING GROWTH

1 - Total Savings Market (U.S.$ Millions)	1984	1985
- National Banking System	310.8	346.-
- Mortgage Banks	149.-	180.-
% MB/NBS	48%	52%

2 - Private Banking		
a - Private Banks - Total Savings	175.8	189.8
b - Private Mortgage Banks - Total Savings	34.4	59.3
Total Savings		
% b/a	20%	31%

3 - Distribution of Savings in the Mortgage Sector

	1984		1985	
- Total Savings	149.-	100%	180.-	100%
- Caja de Ahorros	114.6	77%	120.7	67%
- Private Banks	34.4	23%	59.3	33%

Table 12

COMPARATIVE ANALYSIS 1980/1985
(000 US$)

ASSETS	1980	1983	1985
a - National Banking System	4,325,800	7,407,000	7,854,300
b - Mortgage Banks	318,224	563,649	856,796
% b/a	7%	8%	11%
LOANS			
a - NBS	2,530,600	3,533,400	3,923,400
b - MB	231,752	370,830	499,201
% b/a	9%	10%	13%
DEPOSITS			
a - NBS	2,406,000	3,364,800	3,710,600
b - MB	292,270	521,747	745,722
% b/a	12%	16%	20%
CAPITAL FUNDS			
a - NBS	649,200	1,071,700	1,147,000
b - MB	16,428	30,204	41,967
% b/a	3%	3%	4%

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Table 13

GROWTH OF MORTGAGE BANKS

ASSETS (000 US$)	TOTAL						AVERAGE As Percentages		
	1980	1983	%-80/83	1985	%-83/85	%-80-85	1980	1983	1985
Banco General	63,764	140,945	121%	264,719	88%	315%	20%	25%	31%
Pribanco	81,630	151,058	85%	248,533	64%	204%	26%	27%	29%
Ban Vivienda		15,766		23,337	48%			3%	3%
Caja Ahorros	172,830	255,880	48%	320,207	25%	85%	54%	45%	37%
TOTAL	318,224	563,649	77%	856,796	52%	169%	100%	100%	100%
LOANS									
Banco General	50,729	95,112	87%	142,046	49%	180%	22%	26%	28%
Pribanco	43,134	92,186	14%	123,222	34%	186%	19%	25%	25%
Ban Vivienda		7,222		11,263	56%			2%	2%
Caja Ahorros	137,889	176,310	28%	222,670	26%	61%	59%	47%	45%
TOTAL	231,752	370,830	60%	499,201	35%	115%	100%	100%	100%
DEPOSITS									
Banco General	63,764	140,945	121%	238,481	69%	274%	22%	27%	32%
Pribanco	74,749	140,302	88%	228,051	63%	205%	26%	27%	31%
Ban Vivienda		12,976		20,109	55%	55%		2%	3%
Caja Ahorros	153,757	227,524	48%	259,081	14%	68%	52%	44%	34%
TOTAL	292,270	521,747	79%	745,722	43%	155%	100%	100%	100%
CAPITAL									
Banco General	4,450	8,403	89%	14,834	77%	233%	27%	28%	35%
Pribanco	4,306	10,757	150%	15,160	41%	252%	26%	36%	36%
Ban Vivienda		2,479		2,832	14%			8%	7%
Caja Ahorros	7,672	8,565	12%	9,141	7%	19%	47%	28%	22%
TOTAL	16,428	30,204	84%	41,967	39%	155%	100%	100%	100%

Table 14
RELEVANT STATISTICS ON MORTGAGE BANKS

BANCO GENERAL

		1983	% 2/1	1984	% 2/1	1985	% 2/1
A	BALANCE INDICATORS						
1	AVERAGE TOTAL ASSETS	136,133		165,217		220,413	
2	AVERAGE PRODUCTINE ASSETS	132,202	0.97	160,157	0.97	214,366	0.97
1	AVERAGE DEPOSITS	124,417		150,973		199,741	
2	AVERAGE PRODUCTIVE ASSETS	132,202	1.06	160,157	1.06	214,366	1.07
1	AVERAGE DEPOSITS	124,417		150,973		199,741	
2	AVERAGE CAPITAL	8,453	0.07	10,318	0.07	12,783	0.06
	AVERAGE CHECK ACCOUNTS	15,031	12%	17,559	11%	21,928	11%
	AVERAGE SAVINGS ACCOUNTS	18,002	14%	20,967	13%	25,578	13%
	AVERAGE TIME DEPOSITS	91,384	74%	121,631	76	152,235	76%
	AVERAGE MORTGAGE LOANS	69,339	79%	86,867	81%	106,596	81%
	AVERAGE OTHER LOANS	18,906	21%	20,653	19%	24,931	19%
B	ANALYSIS OF RESULTS						
	TOTAL INCOME	16,672		22,234		26,216	
	TOTAL INCOME = 100	100		100		100	
	FINANCIAL INCOME	90		93		90	
	FINANCIAL EXPENSES	(58)		(66)		(59)	
	FINANCIAL RESULTS	32		27		31	
	GENERAL EXPENSES	(25)		(20)		(24)	
	OTHER INCOME			7		10	
	OTHER EXPENSES	10					
	OPERATING RESULTS	17		14		17	
	INCOME TAXES	(4)		(8)		(2)	
	NET RESULTS	13		10		13	
			% 2/1		% 2/1		% 2/1
1	AVERAGE LOAN PORTFOLIO	88,245		107,520		130,987	
2	INTEREST EARNED	11,635	13.2	15,258	14.2	17,334	16
1	INTEREST BEARING DEPOSITS	109,386		142,598		177,813	
2	INTEREST PAID	9,630	8.8	14,655	10.3	15,562	8.8
1	AVERAGE PRODUCTIVE ASSETS	132,202		160,157		214,366	
2	GENERAL EXPENSES	4,149	3.1	4,426	2.8	6,262	2.9

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Table 15
RELEVANT STATISTICS ON MORTGAGE BANKS

PRIBANCO

	A BALANCE INDICATORS	1983	% 2/1	1984	% 2/1	1985	% 2/1
1	AVERAGE TOTAL ASSETS	144,756		175,315		224,052	
2	AVERAGE PRODUCTIVE ASSETS	140,263	0.97	169,817	0.97	217,312	0.97
1	AVERAGE DEPOSITS	131,772		160,200		205,771	
2	AVERAGE PRODUCTIVE ASSETS	140,263	1.06	169,817	1.06	217,312	1.06
1	AVERAGE DEPOSITS	131,772		160,200		205,771	
2	AVERAGE CAPITAL	9,749	0.07	11,721	0.07	13,923	0.07
	AVERAGE CHECK ACCOUNTS	9,177	7%	11,533	7%	13,569	7%
	AVERAGE SAVINGS ACCOUNTS	22,789	17%	25,199	16%	29,272	14%
	AVERAGE TIME DEPOSITS	99,806	76%	123,468	77%	162,930	79%
	AVERAGE MORTGAGE LOANS	68,498	82%	79,577	83%	93,339	84%
	AVERAGE OTHER LOANS	15,269	18%	16,434	17%	18,125	16%
B	ANALYSIS OF RESULTS						
	TOTAL INCOME / TOTAL INCOME = 100	18,015 / 100		21,850 / 100		24,451 / 100	
	FINANCIAL INCOME	90		92		93	
	FINANCIAL EXPENSES	(57)		(63)		(61)	
	FINANCIAL RESULTS	33		29		32	
	GENERAL EXPENSES	(20)		(18)		(18)	
	OTHER INCOME	10		8		7	
	OTHER EXPENSES						
	OPERATING RESULTS	23		19		21	
	INCOME TAX	(5)		(3)		(4)	
	NET RESULTS	18		16		17	
1	AVERAGE LOAN PORTFOLIO	83,767	% 2/1	96,011	% 2/1	111,464	% 2/1
2	INTEREST EARNED	11,468	13.7	12,836	13.4	14,529	13
1	INTEREST BEARING DEPOSITS	122,595		148,667		192,202	
2	INTEREST PAID	10,337	8.4	13,764	9.3	14,927	7.8
1	AVERAGE PRODUCTIVE ASSETS	140,263		169,817		217,312	
2	GENERAL EXPENSES	3,536	2.5	3,882	2.3	4,439	2

Table 16

RELEVANT STATISTICS ON MORTGAGE BANKS

BAN-VIVIENDA

		1983	1984	% 2/1	1985	% 2/1
A	BALANCE INDICATORS					
1	AVERAGE TOTAL ASSETS		18,104	0.98	21,890	0.98
2	AVERAGE PRODUCTIVE ASSETS		17,730		21,363	
1	AVERAGE DEPOSITS		15,179	1.17	18,745	1.14
2	AVERAGE PRODUCTIVE ASSETS		17,730		21,363	
1	AVERAGE DEPOSITS		15,179	0.17	18,745	0.15
2	AVERAGE CAPITAL		2,567		2,744	
	AVERAGE CHECK ACCOUNTS		2,115	14%	1,904	10%
	AVERAGE SAVINGS ACCOUNTS		742	5%	947	5%
	AVERAGE TIME DEPOSITS		12,322	81%	15,894	85%
	AVERAGE MORTGAGE LOANS					
	AVERAGE OTHER LOANS					
B	ANALYSIS OF RESULTS					
	TOTAL INCOME		2,047		2,294	
	TOTAL INCOME = 100		100		100	
	FINANCIAL INCOME		94		94	
	FINANCIAL EXPENSES		(62)		(59)	
	FINANCIAL RESULTS		32		35	
	GENERAL EXPENSES		(25)		(29)	
	OTHER INCOME		6		6	
	OTHER EXPENSES					
	OPERATING RESULTS		13		12	
	INCOME TAXES		(1)		(1)	
	NET RESULTS		12		11	
1	AVERAGE LOAN PORTFOLIO		8,723	% 2/1	10,744	% 2/1
2	INTEREST EARNED		1,241	14.2	1,485	13.8
1	INTEREST BEARING DEPOSITS		13,064	9.7	16,841	8
2	INTEREST PAID		1,270		1,357	
1	AVERAGE PRODUCTIVE ASSETS		17,730	2.9	21,363	3.1
2	GENERAL EXPENSES		511		658	

Table 17

RELEVANT STATISTICS ON MORTGAGE BANKS

CAJA DE AHORROS

		1983	% 2/1	1984	% 2/1	1985	% 2/1
A	BALANCE INDICATORS						
1	AVERAGE TOTAL ASSETS	240,103		272,951		304,787	
2	AVERAGE PRODUCTIVE ASSETS	226,568	0.94	256,473	0.94	286,112	0.94
1	AVERAGE DEPOSITS	215,150		253,728		286,541	
2	AVERAGE PRODUCTIVE ASSETS	226,568	1.05	256,473	1.01	286,112	1
1	AVERAGE DEPOSITS	215,150		253,728		286,541	
2	AVERAGE CAPITAL	8,360	0.04	8,678	0.03	8,966	0.03
	AVERAGE CHECK ACCOUNTS	1,080	1%	4,546	2%	8,774	3%
	AVERAGE SAVINGS ACCOUNTS	99,571	46%	101,580	40%	117,668	41%
	AVERAGE TIME DEPOSITS	114,499	53%	147,602	58%	160,099	56%
	AVERAGE MORTGAGE LOANS	150,760	90%	165,073	87%	182,863	86%
	AVERAGE OTHER LOANS	16,130	10%	23,665	13%	29,072	14%
B	ANALYSIS OF RESULTS						
	TOTAL INCOME	27,112		32,736		33,568	
	TOTAL INCOME = 100	100		100		100	
	FINANCIAL INCOME	91		91		90	
	FINANCIAL EXPENSES	(57)		(59)		(57)	
	FINANCIAL RESULTS	34		32		33	
	GENERAL EXPENSES	(41)		(40)		(42)	
	OTHER INCOME	9		9		10	
	OTHER EXPENSES						
	OPERATING RESULTS	2		1		1	
	INCOME TAXES						
	NET RESULTS	2		1		1	
1	AVERAGE LOAN PORTFOLIO	166,890	% 2/1	188,738	% 2/1	211,935	% 2/1
2	INTEREST EARNED	19,177	11.5	22,076	11.7	24,292	11.5
1	INTEREST BEARING DEPOSITS	214,070		249,182		277,767	
2	INTEREST PAID	14,458	6.75	19,365	7.8	18,994	6.84
1	AVERAGE PRODUCTIVE ASSETS	226,568		256,473		286,112	
2	GENERAL EXPENSES	11,237	4.96	13,146	5.12	14,223	4.97

Table 18

RELEVANT STATISTICS ON SAVINGS AND LOANS INSTITUTIONS

LA INVERSIONISTA

		1983	1984	% 2/1	1985	% 2/1
A	BALANCE INDICATORS					
1	AVERAGE TOTAL ASSETS		17,131	0.67	15,110	0.70
2	AVERAGE PRODUCTIVE ASSETS		11,418		10,503	
1	AVERAGE DEPOSITS		13,848	0.82	13,530	0.78
2	AVERAGE PRODUCTIVE ASSETS		11,418		10,503	
1	AVERAGE DEPOSITS		13,848	0.03	13,530	0.02
2	AVERAGE CAPITAL		421		336	
	AVERAGE CHECK ACCOUNTS		---		---	
	AVERAGE SAVINGS ACCOUNTS		2,570	19%	2,710	20%
	AVERAGE TIME DEPOSITS		11,278	81%	10,820	80%
	AVERAGE MORTGAGE LOANS		3,547	47%	4,127	51%
	AVERAGE OTHER LOANS		4,024	53%	4,017	49%
B	ANALYSIS OF RESULTS					
	TOTAL INCOME		1,830		1,708	
	TOTAL INCOME = 100		100		100	
	FINANCIAL INCOME		83		82	
	FINANCIAL EXPENSES		(71)		(63)	
	FINANCIAL RESULTS		12		19	
	GENERAL EXPENSES		(31)		(34)	
	OTHER INCOME		17		18	
	OTHER EXPENSES		(3)		(3)	
	OPERATING RESULTS		(5)			
	INCOME TAXES					
	NET RESULTS		(5)		---	
1	AVERAGE LOAN PORTFOLIO		7,571	% 2/1	8,144	% 2/1
2	INTEREST EARNED		1,172	15.5	1,216	14.9
1	INTEREST BEARING DEPOSITS		13,848	8.9	13,530	7.5
2	INTEREST PAID		1,237		1,018	
1	AVERAGE PRODUCTIVE ASSETS		11,418	5	10,503	5.6
2	GENERAL EXPENSES		567		584	

Table 19

RELEVANT STATISTICS ON SAVINGS AND LOANS INSTITUTIONS

ASOCIACION NACIONAL DE AHORROS Y PRESTAMOS PARA LA VIVIENDA

		1983	1984	% 2/1	1985	% 2/1
A	BALANCE INDICATORS					
1	AVERAGE TOTAL ASSETS		11,923		13,438	
2	AVERAGE PRODUCTIVE ASSETS		9,683	0.81	11,036	0,82
1	AVERAGE DEPOSITS		9,227		10,854	
2	AVERAGE PRODUCTIVE ASSETS		9,683	1.05	11,036	1.02
1	AVERAGE DEPOSITS		9,227		10,854	
2	AVERAGE CAPITAL		(401)	(0.04)	(494)	(0.05)
	AVERAGE CHECK ACCOUNTS					
	AVERAGE SAVINGS ACCOUNTS		2,791	30%	3,264	30%
	AVERAGE TIME DEPOSITS		6,436	70%	7,590	70%
	AVERAGE MORTGAGE LOANS		7,773	92%	8,979	94%
	AVERAGE OTHER LOANS		6,428	8%	532	6%
B	ANALYSIS OF RESULTS					
	TOTAL INCOME		1,577		1,495	
	TOTAL INCOME = 100		100		100	
	FINANCIAL INCOME		72		71	
	FINANCIAL EXPENSES		(55)		(64)	
	FINANCIAL RESULTS		17		7	
	GENERAL EXPENSES		(44)		(51)	
	OTHER INCOME		28		29	
	OTHER EXPENSES					
	OPERATING RESULTS		1		(15)	
	INCOME TAXES					
	NET RESULTS		1		(15)	
1	AVERAGE LOAN PORTFOLIO		8,415	% 2/1	9,511	% 2/1
2	INTEREST EARNED		974	11.6	945	10
1	INTEREST BEARING DEPOSITS		9,227		10,854	
2	INTEREST PAID		595	6.4	720	6.6
1	AVERAGE PRODUCTIVE ASSETS		9,683		11,036	
2	GENERAL EXPENSES		698	7.2	768	6.9

Table 20

RELEVANT STATISTICS ON SAVINGS AND LOANS INSTITUTIONS

LA CHIRICANA DE AHORROS Y PRESTAMOS PARA LA VIVIENDA

		1983	1984	% 2/1	1985	% 2/1
A	BALANCE INDICATORS					
1	AVERAGE TOTAL ASSETS		6,587	0.86	7,353	0.88
2	AVERAGE PRODUCTIVE ASSETS		5,634		6,466	
1	AVERAGE DEPOSITS		4,334	1.3	5,172	1.25
2	AVERAGE PRODUCTIVE ASSETS		5,634		6,466	
1	AVERAGE DEPOSITS		4,334	0.16	6,466	0.12
2	AVERAGE CAPITAL		682		798	
	AVERAGE CHECK ACCOUNTS					
	AVERAGE SAVINGS ACCOUNTS		1,610	37%	1,971	38%
	AVERAGE TIME DEPOSITS		2,724	63%	3,200	62%
	AVERAGE MORTGAGE LOANS		3,912	86%	4,464	87%
	AVERAGE OTHER LOANS		616	14%	650	13%
B	ANALYSIS OF RESULTS					
	TOTAL INCOME		831		866	
	TOTAL INCOME = 100		100		100	
	FINANCIAL INCOME		74		85	
	FINANCIAL EXPENSES		(48)		(48)	
	FINANCIAL RESULTS		26		37	
	GENERAL EXPENSES		(37)		(38)	
	OTHER INCOME		26		15	
	OTHER EXPENSES					
	OPERATING RESULTS		15		14	
	INCOME TAXES					
	NET RESULTS		15		14	
1	AVERAGE LOAN PORTFOLIO		4,528	% 2/1	5,114	% 2/1
2	INTEREST EARNED		473.9	10.5	381.5	10.1
1	INTEREST BEARING DEPOSITS		4,334	7.2	5,172	6.5
2	INTEREST PAID		310		338	
1	AVERAGE PRODUCTIVE ASSETS		5,634	5.4	6,466	5.1
2	GENERAL EXPENSES		306		326	

Table 21

Volume of Construction in Panama City 1/

1971-1985

Year2/	Construction Volume (in $ millions) Residential	Non-residentalL	Total (in $ millions) Nominal	Real3/
1971	NA	NA	56.00	53.10
1972	NA	NA	64.40	56.30
1973	NA	NA	96.50	76.40
1974	30.00	12.20	42.20	25.60
1975	12.50	15.80	28.20	15.00
1976	15.60	13.50	29.10	14.40
1977	16.30	7.10	23.40	10.80
1978	21.60	12.10	33.70	14.80
1979	33.40	37.00	70.30	27.10
1980	35.40	65.60	101.00	33.60
1981	52.70	47.00	99.70	30.40
1982	52.50	106.40	159.00	44.40
1983	21.40	61.80	83.10	22.60
1984	59.20	44.10	103.30	27.80
1985	80.10	47.40	127.40	32.70

1/ Based on estimated construction cost at time of issuance of building permits.

2/ 1971-73 and 1981-1985 figures from Camara Panameña de la Construccion (CAPAC); 1974-1980 figures from Contraloria General de la Republica.

3/ Adjusted by the Wholesale Price Index.

Table 22

PRODUCTION (THOUSAND UNITS) AND SALES ($ MILLION) OF SELECTED BUILDING MATERIALS

1972-1983

YEAR	CONCRETE (m^3) (Pre-Mix) PRODUCTION	CONCRETE (m^3) (Pre-Mix) SALES	CONCRETE BLOCK (000's) PRODUCTION	CONCRETE BLOCK (000's) SALES	LUMBER (FT^2) PRODUCTION	LUMBER (FT^2) SALES	FLOOR TILES (m^2) PRODUCTION	FLOOR TILES (m^2) SALES	ALUM. WINDOWS/DOORS (c.u.) PRODUCTION	ALUM. WINDOWS/DOORS (c.u.) SALES	NAILS (kg) PRODUCTION	NAILS (kg) SALES
1972	177.2	6,341.1	18.3	2,638.7	19,831.2	3,045.9	563.0	1,225.3	NA	3,262.0	1,077.6	341.1
1973	380.1	7,770.6	23.8	3,933.8	24,051.8	4,269.9	533.3	1,258.0	NA	3,770.8	848.3	349.1
1974	360.6	9,158.2	20.7	4,133.7	22,468.0	4,804.9	646.5	2,104.4	NA	4,251.8	914.3	679.9
1975	350.4	9,024.3	17.6	3,963.1	15,669.3	4,111.5	410.3	1,578.9	NA	4,358.8	509.2	494.4
1976	279.5	8,656.9	15.2	3,576.0	18,499.4	5,146.9	317.3	1,314.3	NA	4,337.3	544.3	612.6
1977	204.8	9,042.9	17.0	4,108.9	20,126.3	5,427.7	[illegible]	1,252.4	NA	4,250.0	733.4	665.2
1978	177.0	7,604.0	19.0	4,782.7	18,876.7	6,172.4	[illegible]	2,170.6	NA	3,845.1	954.1	828.3
1979	258.2	9,762.3	16.0	4,818.6	22,612.4	7,864.1	335.2	2,032.7	NA	4,649.5	1,046.7	965.1
1980	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1981	243.7	14,856.5	13.5	5,850.3	20,112.6	9,800.1	232.9	1,665.7	NA	7,152.2	1,264.0	1,014.4
1982	250.0	15,854.6	13.4	7,169.1	21,691.0	11,508.3	555.7	1,098.3	NA	6,983.7	NA	NA
1983	212.9	13,716.2	13.3	5,692.7	20,412.8	11,906.0	596.7	3,883.1	NA	7,275.6	836.3	780.2

Source: Contraloria General de la Republica.

TABLE 23

PRICE VARIATION FOR SELECTED BUILDING MATERIALS

1980-1985

ITEM	UNIT	COST(B/.) 1980	1981	1982	1983	1984	1985	ANNUAL VARIATION 1980-1985 (%)
1. Cemento	Bag	B/.3.95	B/.4.52	B/.4.52	B/.4.52	B/.4.52	B/.4.52	2.73
2. 4" Cement Block (10 x 20 x 45cm)	Block	0.39	0.39	0.45	0.46	0.46	0.46	3.36
3. Reddy-mix Concrete (3000 psi)	YD^3	49.92	49.92	49.92	53.86	56.46	56.46	2.49
4. Domestic Floor Tile (30 x 30cm)	m^2	6.50	7.90	8.25	9.00	9.63	9.63	8.18
5. Asbestos-Cement Roofing (3' x 8' x 4mm)	Sheet	13.50	9.45	10.50	10.50	10.50	10.50	-4.90
6. Aluminum Window (0.94 x 0.97cm)	m^2	38.00	38.00	38.00	64.17	47.50	47.50	4.56
7. PVC Pipe (3/4" x 20')	Pipe	5.40	5.40	5.40	3.20	3.08	3.08	-10.62
8. Domestic Lumber (for formwork)	FT^2	0.38	0.43	0.37	0.36	0.36	0.36	-1.08
9. Latex or Vinyl Paint (interior)	Gallon	6.68	6.68	6.68	7.65	7.65	7.65	2.75
10. Mineral Fiber Ceiling Tile (5/8" x 23 3/4" x 47 3/4")	Tile	4.25	4.25	4.50	4.50	4.50	4.50	1.15

Source: CAPAC

TABLE 24

MINIMUM DAILY WAGE FOR SELECTED OCCUPATIONS*

FROM PANAMA'S CONSTRUCTION SECTOR 1/

OCCUPATION LEVEL	MINIMUM LEGAL WAGE (B/.) MAY 1974	SEPT. 1979	FEB. 1983	JULY 1986	Annual Variation 1974-86 (%)	MINIMUM WAGE (B/.) - COLLECTIVE AGREEMENT CAPAC-SUNTRACS 1980	1982	1984	1986	Annual Variation 1980-86 (%)
Journeyman	B/.8.40	B/.9.28	B/. 0.24	B/.10.24	1.66	B/.11.60	B/.13.68	B/.14.80	B/.16.00	5.51
Apprentice	6.00	6.64	7.60	7.60	1.99	9.20	10.96	12.00	12.96	5.88
Laborer	5.60	6.32	7.28	7.28	2.[illegible]1	8.40	10.16	11.20	12.16	6.36

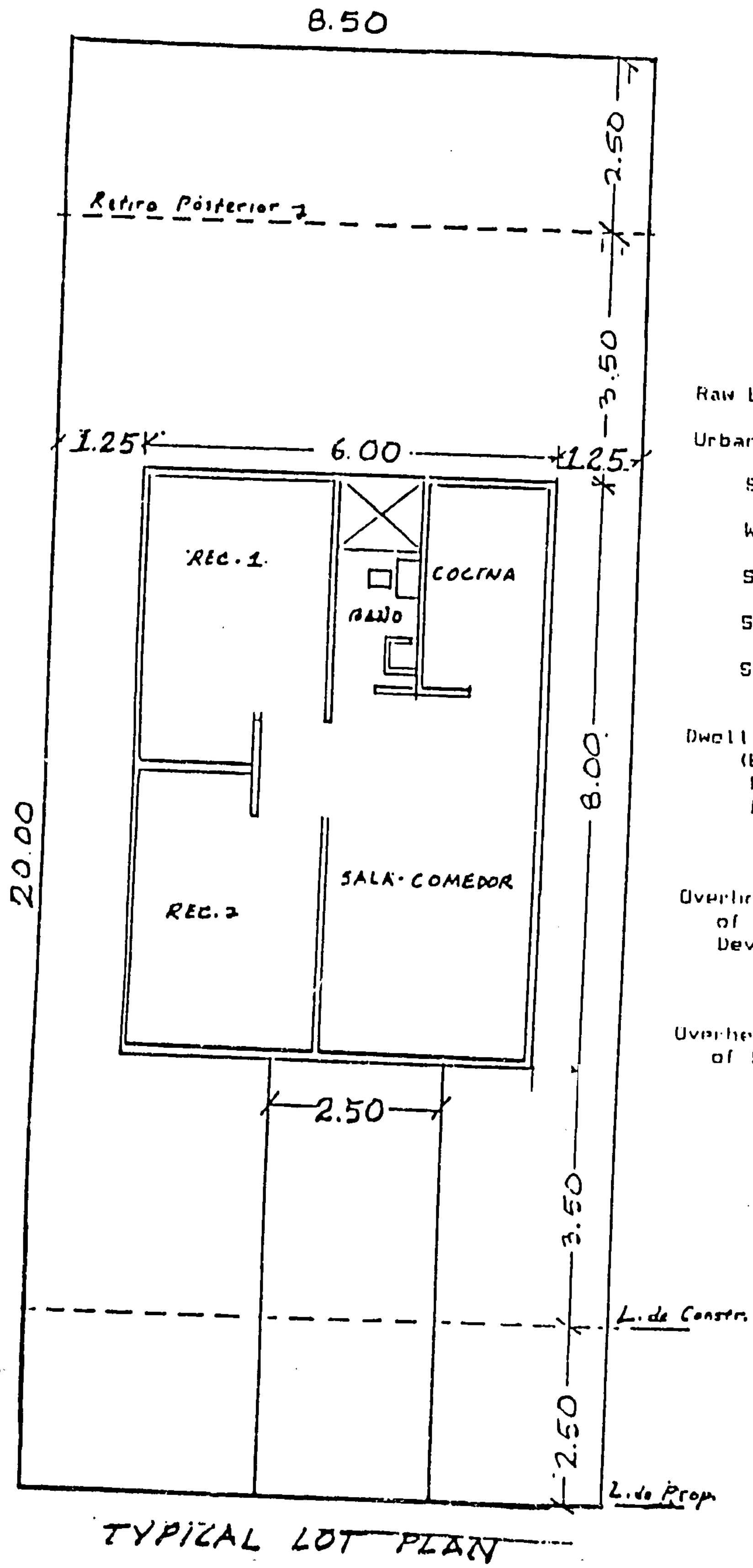
*Mason, Carpenter, Ceramic Tile, Ironman (places reinforcing rods)

1/ Districts of Panama, San Miguelito, La Chorrera, Arraijan, Capira, Chepo, Taboga, Balboa and Colon.

Source: CAPAC

FIGURE 1

Illustrative Solution Type #1
HG-013
Lot Size = 170m^2
Unit Area = 48m^2

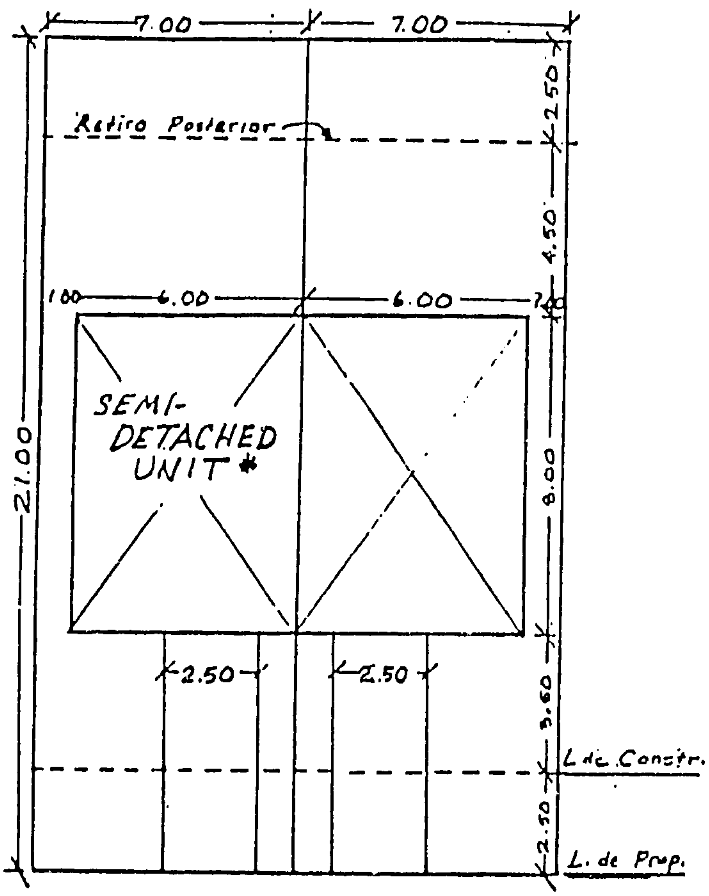


COST BREAKDOWN

Raw Land - 170m^2 @ \$2.50/m^2		\$425
Urbanization (net)		
Site Preparation	@ \$3.75/m^2 = \$637	
Water Supply	@ 2.25/m^2 = 383	
Sewerage	@ 1.50/m^2 = 255	
Storm Drainage	@ 3.00/m^2 = 510	
Streets	@ 7.50/m^2 = 1275	3,060
Sub-total	18.00/m^2	
Dwelling Unit - 48m^2 @ \$135/m^2 (Excludes false ceiling, Kitchen/B.R., cabinets, interior rendering		6,480
	Direct Constr. Cost	\$9,965
Overhead, Int. Financing, Profit (25% of urbanization + D.U. costs) of Developer		2,785
	Total Development Cost	\$12,750
Overhead, Fin. Commitment Fee, Profit of Sales Office (20% of T.D.C.)		2,479
	Total Sales Price	\$14,[illegible]

FIGURE 2

Illustrative Solution Type #2
Semi-detached Unit
Lot Size = 147m²
Unit Area = 48m²



TYPICAL LOT PLAN
SCALE 1:200

COST BREAKDOWN

Raw Land - 147m² @ $1.50/m²		$220
Urbanization (net)		
Site Preparation	@ $3.80/m² = $558	
Water Supply	@ 1.70/m² = 250	
Sewerage	@ 1.55/m² = 228	
Storm Drainage	@ 0.75/m² = 110	
Streets	@ 2.20/m² = 324	1,470
Sub-total	$10.00/m²	
Dwelling Unit - 48m² @ $114/m² (Excludes false ceiling, kitchen/B.R., cabinets, interior rendering, and cost reductions associated with common party wall		5,472
Direct Constr. Cost		$7,162
Overhead, Int. Financing, Profit (25% of urbanization + D.U. costs) of Developer		1,736
Total Development Cost		$8,898
Overhead, Fin. Commitment Fee, Profit of Sales Office (20% of T.D.C.)		1,780
Total Sales Price		$10,678

* Same as Solution Type #1.

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Table 25

GROSS DOMESTIC PRODUCT IN MARKET PRICES

(In Millions of Dollars - 1970)

SECTOR	1981	1982	1983	1984	1985
Agriculture	188.1	185.2	191.0	191.4	196.9
Mining	3.8	4.1	3.4	2.6	2.5
Manufacturing	176.1	179.9	176.7	175.7	177.4
Electricity, Gas & Water	56.2	59.2	64.9	64.7	68.1
Construction	128.3	154.7	106.4	94.4	93.4
Commerce	252.9	251.0	239.4	240.9	243.2
Transport, Storage & Communication	404.9	455.8	496.1	476.3	500.8
Financial Services, Insurance, Property, & Services to Enterprises	243.5	252.6	262.7	270.3	276.3
Other Services	150.1	163.3	168.8	176.8	181.3
Less the Commissions of the Banking Sector	(54.2)	(68.2)	(76.4)	(77.3)	(77.7)
Government Services	222.9	232.1	240.6	248.3	260.9
Domestic Services	18.5	19.3	19.4	20.0	20.7
Import Rights	27.7	29.6	32.7	33.3	36.4
GDP in Market Prices	1,818.8	1,918.6	1,925.7	1,917.3	1,980.2
% Interannual	4.2	5.5	0.4	(0.4)	3.3

Source: Contraloría General de la República de Panamá

Table 26

TOTAL GROSS DOMESTIC PRODUCT AND THE CONSTRUCTION SECTOR

1973-1985 (1970 Prices)

Years	GDP	% of Growth	GDP Construction	% of Growth	Participation of Construction in GDP
1973	1,233.5	--	99.6	--	8.1
1974	1,263.7	2.4	87.9	(11.7)	7.0
1975	1,285.7	1.7	96.9	10.2	7.5
1976	1,307.1	1.7	99.6	2.8	7.6
1977	1,321.4	1.1	73.8	(25.9)	5.6
1978	1,450.8	9.8	102.5	38.9	7.1
1979	1,516.3	4.5	102.4	(0.1)	6.8
1980	1,745.8	13.1	124.3	21.4	7.1
1981	1,818.8	4.2	128.3	3.2	7.1
1982	1,919.0	5.5	154.7	24.0	8.3
1983	1,925.6	0.4	106.4	(31.2)	5.5
1984	1,917.3	(0.4)	94.4	(11.3)	5.0
1985	1,980.2 (P)	3.3	93.4	(1.1)	4.7

(P) Provisional

ANNEX C

ANALYSIS OF THE IMPACTS OF THE PREFERENTIAL INTEREST RATE MORTGAGE LAW

Prepared by Pedro Lasa

July 7, 1986

EXECUTIVE SUMMARY

A. Overview

A.1. Origin and Purpose

The GOP has always recognized the substantial positive social and economic benefits of housing and has provided special incentives to stimulate its development, particularly for the acquisition of individual family residences. Two of the major incentives which affect the decision of Panamanian households to buy a house are:

- Exemption from the payment of property taxes on new housing for periods of up to 20 years.
- Fiscal deductions from income taxes, through tax credits for the interest payments on first mortgages.

While all Panamanian families have generally benefited from the first incentive, until fairly recently not all families could take advantage of the second incentive. In order to utilize the fiscal deduction, an individual must make a declaration of income and then a tax credit is given for the following year. Most workers cannot take advantage of this credit since their taxes are automatically deducted from their wages and they do not have additional sources of income to which the tax credit can be applied.

The Preferential Interest Rate Mortgage Law (PML) was promulgated in order to remedy this situation and to provide tax equity. At the same time it was argued that the law, in benefitting eligible families by greatly enhancing their purchasing power, would also generate social, employment and economic benefits for the nation as a whole.

A.2. Operational Characteristics

The law authorizes the Banking Commission to establish each quarter the amount of fiscal credit which can be granted to mortgage lending institutions which participate under the program. A credit is received by the finance institution which transfers it to borrowers in the form of lower interest rates. The current market lending rate is 12.75% and it is variable in all cases. The Banking Commission has established a credit equal to four points for mortgages from $20,000 to $50,000 and to five points for mortgages of less than $20,000. While contractually the borrower has a rate of 12.75%, he actually pays an amount equivalent to 8.75% (7.75% for mortgages below $20,000). At the end of the year, the Ministry of the Treasury will transfer to the participating lending institutions Certificates of Tax Credit which have a value equal to the difference between the payments of borrowers and the amount they would have received at the market rate. These Tax Certificates can be used directly by the institution to apply to their annual taxes, or they can be freely sold on the market or used as guarantees.

The Legislative Assembly limited the period for granting preferential mortgage rates to five years. It also established that the duration of the benefits is for ten years. In other words, a 20 year loan with a preferential rate which is granted in 1986 will have tax credits and preferential monthly payments until 1996 at which time the borrower will have to begin to make payments at the market rate.

Since variable interest rates are used throughout the banking system, there is little financial risk to the participating institutions. It should also be noted that rates of 7.75 and 8.75 percent are positive rates since the current rate of inflation is only about 2 percent. The passive interest is tied to international markets because the currency of circulation is the dollar and significant linkages exist between international and domestic banking activities.

B. Impact of the Law

In addition to its undeniable effect on social equity within the tax system, the Law also sought to: 1) maintain the levels of housing activity and its impact on a depressed economy; 2) stimulate housing finance activity directed at lower socio-economic groups; and, 3) stimulate the effective demand for housing. After one year, evidence indicates that the Law is producing the desired effects.

B.1. Mortgage and Construction Activity

While the commercial banks have not as yet registered to participate under the Law, both the mortgage banks and the savings and loan associations have registered as participants. The impact of the Law on residential mortgage lending operations is clearly seen in the evolution of the operations of the mortgage banking system between 1981 and 1985.

MORTGAGE BANKING SYSTEM

Year	Housing Loans ($000)	1981=100
1981	72,895	100.0
1982	85,814	117.7
1983	76,307	104.7
1984	59,819	82.0
1985	127,765	175.3

As can be seen, the growth of mortgage lending in 1985 was truly spectacular and there can be little doubt that the Preferential Interest Rate Mortgage Law played the principal role in stimulating that growth.

The behaviour of construction activity between 1981 and 1985 reflects that of the mortgage banks. The data on construction permits in the District of Panama registered by the Construction Chamber (CAPAC) for the period is as follows:

CONSTRUCTION PERMITS

Year	For Housing	1981=100	Total	1981=100
1981	52,720	100.0	99,720	100.0
1982	52,550	100.0	158,960	159.0
1983	21,350	40.0	83,130	83.0
1984	59,190	112.0	103,260	103.0
1985	80,050	152.0	127,410	128.0

During the period housing activity was the most dynamic part of the construction sector and helped to diminish the effects of the overall recession experienced by the construction sector as a whole.

B.2. Impact on the Population

The extensive and largely unattended effective demand for housing solutions by families below the median income level was made quite clear during the past year. Of a total of 4,270 loans approved by the mortgage banks under the Law, about 53% were for solutions costing less than $20,000, with 33% or 1,407 loans for units in the $15,000 to $20,000 price range. Twenty percent of this loan activity was below the $15,000 unit cost and was handled by the public mortgage bank (Caja de Ahorros).

The effective demand experienced in these operations resulted from the simultaneous availability of housing at lower prices than in the past and the lower interest rates possible under the Preferential Mortgage Rate Law. The HG-013 resources would support these trends and stimulate the private mortgage banks to focus their efforts on even lower income households.

C. Impacts on Government Revenues

The analysis of the additional tax revenues generated by stimulating housing activity through the Preferential Mortgage Rate Law compared to the cost to the GOP from lost tax revenues suggests the following conclusions:

1- As actual cash flow, when the credits of the first year are compared to the fiscal revenues generated by the housing investment, the GOP has had a positive income.

2- The total value of fiscal credits over the ten year period established by Law is greater than the revenues generated by the housing investments at the end of the period. This phenomenom or changeover is produced between the 7th and 9th years. Prior to that time, any variation in the conditions of the mortgage would reduce or eliminate the fiscal credit, suggesting the probability that the future disequilibrium will be minimal, or reduced to zero.

3- If the dynamism generated by the Law over the first year is maintained, with its corresponding positive annual cash flows to the GOP, it would substantially contribute to reactivation in general, and a reactivation of the private sector, in particular, which is of highest priority importance given the present socio-economic situation.

ANALISIS DEL IMPACTO DE LA LEY DE HIPOTECAS PREFERENCIALES

A. Origenes

La vivienda en Panamá, en especial la vivienda propia adquirida como residencia familiar, ha recibido siempre el apoyo de los gobiernos por su innegable efecto positivo, en lo social y en lo económico.

Dentro de los incentivos a las familias adquirentes que se han mantenido vigentes por años y que se consideran como normales al tomar la decisión de compra de la casa están:

- Exhoneración del impuesto de inmueble sobre la construcción de vivienda nueva, por periodos que alcanzan los 20 años.
- Clasificación como gasto deducible del impuesto sobre la renta, para los intereses pagados a las instituciones financieras por el préstamo hipotecario obtenido para la compra.

De estas dos herramientas de incentivo, la primera cumplió su función de proveer un beneficio general a las familias, eliminando el gasto que el pago del impuesto hubiera representado, dado que los propios promotores se preocuparon de hacer efectivo dicho beneficio.

No ha sido igual el efecto del segundo incentivo, pues para poder aplicar una deducción como gasto, es necesario hacer declaración de renta, lo que no sucede con la mayoría de la población, que al depender de un salario o renummeración contractual los impuestos le son deducidos directamente de la planilla.

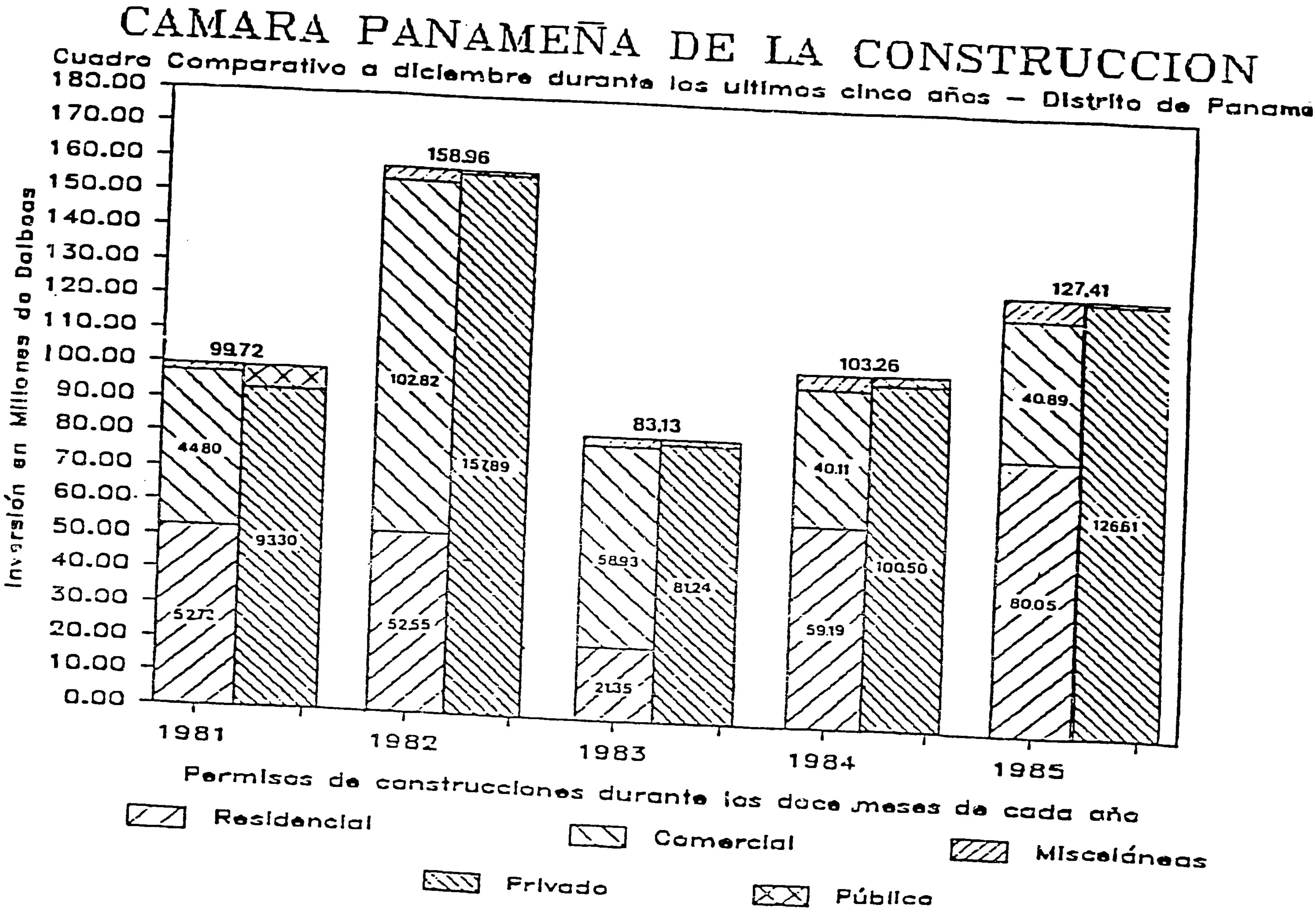
Por lo precedentemente expuesto, resultó que el incentivo sólo produjo beneficios, a una fracción de los potenciales beneficiarios que son los de más alta renta.

Esta situación venía arrastrandose por años, pero hizo crisis en el periodo 82/83, por la confluencía de varios factores.

1 - La violenta caida de la inversión en construcción, y que en el caso de la vivienda aparece reflejada en el gráfico 1, donde de 52.5 millones en 1982, los permisos de construcción caen a 21.4 millones en 1983 es decir un 59% menos.

2 - El aumento de las tasas financieras en el mercado internacional, que llevó hasta el 16% los niveles de interés para préstamo de largo plazo, con el consiguiente efecto en la accesibilidad familiar.

GRAFICO 1


CAMARA PANAMEÑA DE LA CONSTRUCCION
Cuadro Comparativo a diciembre durante los ultimos cinco años – Distrito de Panama
Inversión en Millones de Balboas
180.00
170.00
160.00
150.00
140.00
130.00
120.00
110.00
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
99.72
44.80
93.30
52.72
158.96
102.82
157.89
52.55
83.13
58.93
81.24
21.35
103.26
40.11
100.50
59.19
127.41
40.89
126.61
80.05
1981
1982
1983
1984
1985
Permisos de construcciones durante los doce meses de cada año
Residencial
Comercial
Misceláneas
Privado
Público

C-6

3 - La saturación de los programas de vivienda de lujo, por exceso de oferta, unido a una sería contracción de demanda. Debe recordarse que éste sector es el único que atraves del gasto por intereses en la renta personal, puede compensar el impacto del aumento en la tasa a pagar.

La confluencía de todos estos aspectos planteó al gobierno el dilema de dejar que la vivienda como sector productivo siguiera disminuyendo su importancía con el efecto consiguiente en el empleo, en la demanda agregada, y en el nivel de satisfación social, o buscar algún incentivo que facilitara la accesibilidad, dado que el centro del problema no tanto se consideraba la falta de recursos como la falta de demanda efectiva. Los problemas de accesibilidad por los niveles de costos físicos y financieros existentesresultaban la principal limitante.

Durante 1984, y para hacer frente a ésta circumstancía, se diseño un subsidio al interés vía relación inter-bancaria, que en algo ayudó a lo recuperación pero que resultó de complicado manejo. A este programa se denominó Fondo Especial de Compensación de Intereses (FECI).

En la busqueda de una alternativa permanente, y después de evaluar los incentivos existentes, nació la propuesta y después la promulgación de la ley de hipotecas preferenciales. En su argumentación básica la ley ofrece una alternativa a las familias que no quieren o no pueden acogerse al beneficio de la deducción de intereses en la renta. Esta alternativa es obtener el beneficio de una reducción en la tasa efectiva de interés a pagar al intermediario financiero, diferencia que es suplida por el gobierno vía crédito fiscal, es decir el crédito fiscal que en parte hubiera debido reconocer el gobierno a los usuarios.

Dentro de este marco general la ley contiene ciertas condicionantes, y un marco de operación.

1 -Condicionantes

La ley sólo permite acogerse a este régimen a las hipotecas inferiores a US$50.000, y que hayan sido otorgadas para vivienda nueva.

Además la vigencia de la ley se establece por cinco años, y los beneficios de reducción de tasas de interés sólo se extienden durante los diez primeros años de vida del crédito.

2 -Marco de operación

Los bancos contiuan operando y otorgando los prestamos a la tasa de mercado, sin condicionante alguno.

Trimestralmente, la Comisión Bancaría, en base a los intereses cobrados por los cinco bancos con más actividad hipotecaria, establece la tasa de referencia que es la promedio de los cinco bancos examinados. En base a ella comunica a todos los bancos la tasa preferencial vigente para el siguiente trimestre, que será de hasta cuatro puntas bajo la tasa de referencia para hipotecas entre 20.000 y 50.000 dólares y hasta cinco puntos para hipotecas de valor inferior o los 20.000 dólares.

En la actualidad (Junio-86), la tasa de referencía es de 12.75, y las tasas aplicadas 7.75 y 8.75 respectivamente.

B. Efectos de la ley:

Aparte de innegable efecto de justicía que el mecanismo de los intereses preferenciales trató de lograr, con la ley se buscaban varíos efectos adicionales.

- Mantener los niveles de actividad habiticional por su impacto en una economía deprimida.
- Estimular la oferta de recursos hacía sectores más populares dentro de los parametros socioeconómicos de la ley.
- Estimular la demanda efectiva para vivienda.

Lo anterior puede resumirse en, acelerar la dinámica del subsector vivienda.

Dentro de las limitaciones correspondientes al hecho de que apenás se ha cumplido un año de la promulgación de la ley, todos los síntomas indican que se ha cumplido, los efectos buscados.

De las instituciones financieras se han acogido al régimen los Bancos Hipotecarios y las Asociaciones de Ahorro y Prestamo. Inicialmente la Banca Comercial no se incorporó al mecanismo, pero ya al presente el Chase Manhattan Bank opera proyectos bajo la ley, y otros están evaluando su participación.

La dinamización del sector, a traves de la oferta de recursos, queda revelada al observar la evolución de los créditos para vivienda otorgadas por el Sistema Bancaria entre 1981 y 1985.

SISTEMA DE BANCA HIPOTECARIA

Año	Prestamos Para Vivienda (US 000)	1981=100
1981	72.895	100.0
1982	85.814	117.7
1983	76.307	104.7
1984	59.819	82.0
1985	127.765	175.3

Es verdaderamente espectacular el cambio registrado en 1985, en lo que no hay duda la ley jugó un importante papel.

Curiosamente en 1985, los Bancos Hipotecarios tuvieron un excelente crecimiento operacional, puede resultar oportuno cuando haya transcurrido más tiempo de vigencia de la ley, evaluar si ha habido un efecto positivo de imagen en los bancos hipotecarios, al aumentar su actividad habitacional.

El comportamiento de los bancos guarda paralelo con los registros de la Cámara de la Construcción, sobre los permisos de construcción en el distrito de Panamá durante el mismo período.

VALOR DE CONSTRUCCION
(en millones)

Año	Para Viviendas	1981=100	Totales	1981=100
1981	52.720	100.0	99.720	100.0
1982	52.550	100.0	158.960	159.0
1983	21.350	40.0	83.130	83.0
1984	59.190	112.0	103.260	103.0
1985	80.050	152.0	127.410	128.0

La vivienda es el factor dinámico en el sector de construcción para edificación. De lo espuesto puede afirmarse, que en el ámbito de la vivienda la ley ha cambiado los patrones de crecimiento del sector, creando una dinámica adicional, y que ello ha permitido disminuir los efectos de la recesión del sector construcción.

De parte de los constructores y promotores la respuesta ha sido inmediata como puede verse en la lista de alrededor de 100 proyectos con financimiento comprometido y en casos ya otorgado que aparece como un anexo al informe.

Para tener una idea más cabal de hacía donde se ha orientado este financiamiento el cuadro 1 muestra el destino de los créditos aprobados. Lo más notable es que en el tramo de soluciones de menor costo, es decir entre US$ 8.500 y $25.000 se concentran el 65% de las soluciones financiadas y el 50% de los recursos.

Cuadro I

PROGRAMA HIPOTECAS PREFERENCIALES

(PRESTAMOS APROBADOS)

HIPOTECAS	NUMERO						VALOR (000)					
	BHP	%	CA	%	TOTAL	%	BHP	%	CA	%	TOTAL	%
8.500-9.999	--	--	691	31	691	16	--	--	6.131	14,5	6.131	5
10.000-14.999	--	--	161	7,2	161	4	--	--	1.999	4,7	1.999	2
15.000-19.999	763	36	644	28,9	1407	33	18.370	25,5	11.659	27,6	30.029	26
20.000-24.999	322	25,1	215	9,6	537	12	15.040	21	4.717	11,2	19.757	17
25.000-29.999	393	14,5	260	11,6	653	15	10.460	14,5	7.079	16,7	17.539	15
30.000-40.000	196	8,7	88	4	284	7	8.360	11,6	3.024	7,2	11.384	10
40.000-50.000	366	15,7	171	7,7	537	13	19.810	27,4	7.647	18,4	27.457	24
TOTAL	2040	100	2230	100	4270	100	72.040	100	42.256	100	114.296	100

BHP: Bancos Hipotecarios Privados

CA : Caja de Ahorros

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Esto representa un giro total sobre el comportamiento anterior. Sin embargo en este hecho no participan por igual la Caja de Ahorros y los Bancos Hipotecarios, ya que estos hasta la fecha no han operado en niveles inferiores a los US$15.000 y muy poco por debajo de US$17.500.

La ley ha permitido este cambio, y el apoyo del programa 013 podrá llevar a la Banca Hipotecaria privada a trabajar con el sector más bajo (niveles de $10.000 - $17.000) que hoy aún no ha incorporado plenamente.

C. Efectos en la población

La inexistencia durante años de proyectos masivos de vivienda en los niveles de precios que ahora comprende parte importante de la inversión de los bancos, produjo una desatención y acumulación de déficit como lo prueba la respuesta habida para los actuales proyectos.

Esta respuesta ha tenido una doble expresión interesante en lo que a mercadeo de los proyectos, se refiere:

1. Los proyectos con precios inferiores a US$21.000 se han vendido y están vendiendo, apenás se inicia el programa, con períodos de espera de hasta ocho meses.

2. Los promotores han tenido que suspender las campañas publicitarias para eliminar el exceso de presión de demanda, y crear mala imagen de los proyectos.

Debe quedar bien claro para evitar conclusiones parciales, que la presión de demanda se ha dado por el efecto simultáneo de oferta de viviendas con precios por debajo de lo usual anteriormente, y por el cambio en las condiciones financieras de tasas de interés, sólo integrando ambos hechos, es que puede explicarse adecuadamente el fenómeno mencionado.

La familia popular panameña, responde no tanto al estímulo del precio como de la mensualidad, pues es a través de ella que considera su capacidad de servicio mensual. Si a lo anterior añadimos que el producto ofrecido, a igual mensualidad que antes de la ley, es sensiblemente superior al histórico no es de sorprender el efecto causado en la familia popular.

Para ver esta variación se tomará como población meta, aquella que tiene acesibilidad para adquerir una vivienda de $10.000 en el nivel minimo y de $20.000 el nivel máximo. Aparece así la siguiente comparación de familias con distinta accesibilidad para iguales ingresos y asumiendo que las condiciones normales en plaza son 20 años de termino y 90% de financiamento.

INGRESO FAMILIAR REQUERIDO PARA VIVIENDA

Precio Venta de Vivienda	Sin Ley 12.75%	Con Ley Maximo 7.75%	Practica Usual
10.000	$421	$300	$332
12.500	$526	$375	$414
15.000	$631	$450	$497
17.500	$736	$525	$580
19.998	$847	$600	$663

La diferencía entre las condiciones máximas otorgables según ley y la práctica usual, se debe a que los intermediarios financiarios, por tratarse de familias de ingresos modestos, buscan crear ciertas protecciones para que, caso de varíaciones bruscas en la tasa de interés, no se afecte la capacidad de pago de las familias meta del programa, y con ello se evitan problemas de morosidad.

No hay duda de que aún aplicando la tercera columna, la modificación de las condiciones es extraordinaría y cambia el perfil del mercado, sustancialmente.

Aplicando las condiciones precedentes a la distribución de ingresos resulte.

RELACION INGRESOS

Percentil	Ingreso Familiar Metropolitano	Vivienda Accesible Sin Ley - 3	Vivienda Accesible Con Ley - 3
30.0	326	7.750	9.830
35	386	9.170	11.640
40	450	10.700	13.600
45	512	12.170	15.440
50	585	13.900	17.600

El cambio es importante desde la perspectiva del programa 013, pues de poder trabajar unicamente con un decil, y dentro de una gama limitada de precios de vivienda, se duplican los deciles a atender y lo gama de precio se hace mucho más interesante y más apropiada para la gestión del sector privado, lo que es tanto más importante cuando del éxito del programa 013 se trate.

D. Impactos tributarios

A pesar de todos los puntos positivos, uno de las críticas que se ha hecho a la ley, se basa en la disminución de ingresos efectivos que al gobierno le resulta por los créditos fiscales que de la aplicación de la ley se derivan. Al estudiarse la ley, y reconociendose lo importante de la argumentación, se presentaron dos argumentaciones básicas.

1: El beneficio general que mantener la actividad económica de vivienda positivamente incentivado compensa el gasto fiscal incurrido.

2: Adicionalmente se argumentó, que los ingresos para el estado provenientes de las inversiones adicionales en vivienda, minimizaban cualquier supuesto efecto negativo que se derivase de los créditos fiscales.

Si bien el punto 1, es reconocido y aceptado en forma general, se precisa cuantificar el efecto monetario de la medida, pues para cualquier beneficio, aunque éste sea de la vivienda hay un costo máximo tolerable.

Sobre la base de cuantificar los resultados, al momento de estudiar la ley se hizo un estudio del impacto general de las medidas, resultando estas en general positivas, para los supuestos de efectivo aumento en la gestión habitacional.

Si bien en lo macro el análisis es correcto no es directamente aplicable, al tratar de ponderar en más detalle, los beneficios y costos directos del HG. Esto es así por operar el programa con sectores de ingresos cuya tasa marginal impositiva es baja, y por ende es más sensible a los efectos de la conversión de tasas de interés efectiva.

De otro lado el grupo meta del programa 013, es el beneficiado con la más amplia deducción por intereses y en consecuencia la que proporcionalmente, más crédito fiscal insume.

A efectos de obtener un cálculo aproximado con la realidad, se ha tomado el siguiente ejemplo, de un cliente potencial usuario del programa HG-013.

Ingreso familiar - $500 por mes, $6.000 por año

Asumiendo que decide asignar $100 por mes para pago de casa, y con una tasa en el mercado de 7.75% compra una vivienda de $13.500 con una hipoteca de $12.150 - la aplicación de la ley reflejara la siguiente situación en los primeros 10 años.

AÑO	INTERESES PAGADOS 7.75%	INTERESES CONTRACTUALES 12.75%	CREDITO AL BANCO (Ley 3)	DEDUCCION POTENCIAL AL PRESTATARIO SEGUN LEY	BENEFICIO* ADICIONAL EN BASE LEY-3
1	932.40	1.541.00	608.70	130.60	478.10
2	911.10	1.522.00	610.90	129.10	481.80
3	888.15	1.500.30	612.15	127.50	484.65
4	863.35	1.475.70	612.35	125.65	486.70
5	836.60	1.447.80	611.20	123.60	487.60
6	807.60	1.416.00	608.40	121.20	487.20
7	776.30	1.380.00	603.60	118.50	485.15
8	742.60	1.339.20	596.60	115.45	481.15
9	706.10	1.292.80	586.70	111.90	474.80
10	666.65	1.240.10	573.45	108.00	465.45

* Perdida neta al gobierno.

Como claramente se aprecia en el cuadro precedente, la ley beneficia sustancialmente a los sectores modestos casi triplicando el efecto que generaba la ley tributaria.

El punto ahora por tanto será comparar estos beneficios, con el ingreso recibido por el gobierno. En la presentación de la ley de hipotecas preferenciales a la Asamblea Legislativa, se determinó en un 20%, el ingreso esperada, lo que es casi exactamente igual al estudio efectuado por la Camara de la construcción, como a pago a diversos planes de gobierno, en que se cuantifica este ingreso al Estado, en exactamente 21.14% de la inversión realizada.

Ahora bien, el ingreso del gobierno es por una sola vez, en tanto que los beneficios son por diez años, por ello para hacer comparables los datos, deberan llevarse a valor presente, los beneficios anuales estimados. Para este cálculo se considerarán dos hipotesis, que el cliente no hiciera use del beneficio fiscal anterior (caso A), como sucede con la mayoría de los familias de estos ingresos, y que sí lo hiciera (caso B), en ambos hipotesís la tasa de descuento será la misma de los Bancos (1.75%).

	CASO A		CASO B	
AÑO	CREDITO AL BANCO	VALOR ACTUAL	BENEFICIO ADICIONAL	VALOR ACTUAL
1	608.70	608.70	478.10	478.10
2	610.90	541.80	481.80	427.30
3	612.15	481.50	484.65	381.20
4	612.35	427.20	486.70	339.50
5	611.20	378.20	487.60	301.70
6	608.40	333.90	487.20	267.40
7	603.65	293.80	485.15	236.10
8	596.60	257.50	481.15	207.70
9	586.70	224.60	474.80	181.80
10	573.45	194.70	465.45	158.00
	TOTAL	3741.90	TOTAL	2978.80

Conocido estos datos, se comparan a continuación con el ingreso estimado al Estado

Ingreso Estimado:
- Valor vivienda: 13.500
- Ingreso al Estado: 21.14%

Ingreso: 2.853.90

	CASO A	CASO B
a - valor actual -	3741.90	2978.80
b - ingreso estado -	2853.90	2853.90
% a/b	76.3%	95.8%

En el caso B, los ingresos, equipara casi totalmente los gastos previstos, en el caso A, existe un desfase del 23.7%.

Ahora bien, deben tenerse en cuenta varias cosas al concluir este examen:

1 - En ambos casos el flujo para el gobierno es positivo los primeros años (seis en el caso A, y nueve en el caso B), ya que el ingreso es actual, y el gasto diferido.

2 - Todos los cambios que puedan producirse en estos diez años de vida (amortizaciones adicionales, venta de la vivienda), mejoran la posición del gobierno al reducir o eliminar el crédito fiscal.

3 - El efecto reducido, en mejora del medio ambiente sanidad, delincuencia etc., que el tener debidamente asentada a la mayoría de la población conlleva puede decirse que más que compensa éste reducido gasto potencial.

Visto así el panoramica, y dada la conyuntura macro económica y como política vigente, la evaluación de la ley resulta positiva, el caso individual y sus conclusiones pueden proyectarse al total de los 25 millones del [illegible], que son la sumatoria de los casos individuales.

Anexo

CAJA DE AHORROS

ACOGIDOS A LA LEY DE INTERESES PREFERENCIALES

PROYECTO	NO.	HIPOTECA UNIDAD
Villa Serena	10	32,500.00
Urbanización Teremar	20	19,000.00
Villa Charlotte	15	18,000.00
Urb. Los Alpinos	35	24,500.00
Ubr. Villa Nomé	17	14,000.00
Urb. La Florida	23	16,500.00
Urb. San Mateo	28	19,855.00
Urb. Alto Verde	10	22,600.00
Colinas Dorasol	126	26,875.00
Altos de Santa María	10	36,700.00
Altos del Nazareth	22	27,000.00
Condominio La Alameda	1	50,000.00
Condominio El Carey	44	15,045.00
Condominio Santa Bárbara	15	20,000.00
Condominio Ana María	6	28,900.00
Condominio Avenida "B"	6	28,800.00
Cond. Carmen Edith	16	31,000.00
Cond. La Locería	8	49,400.00
Cond. Hilton Park	16	46,800.00
Resid. Vista Alegre	450	9,190.00
Cond. Plaza San Marcos	26	43,300.00
Condominio Paris	16	21,250.00
Cond. Las Terrazas	34	43,200.00
Villa Lucre	172	19,000.00
Cond. Del Cid	18	21,250.00
Plaza Centro	11	39,200.00
Condominio Maratí	17	29,250.00
Condominio El Condor	12	38,600.00
Res. Villa Vista	6	50,000.00
Urbanización Anasa	5	23,000.00
La Fuente del Chase	60	17,100.00
Urb. La Granja	20	13,050.00
La Providencia	16	18,200.00
La Providencia	20	23,550.00
Urb. Brisas del Valle	17	15,300.00
Altos de Pilar	45	16,700.00
Cond. Montego Bay	96	12,000.00
Campo Linberhg	12	40,800.00
Villas de Bonanzas	20	40,000.00
Las Acacias	50	20,000.00
Cerro Viento	50	27,000.00
Villa San Cristobal	15	15,200.00
Res. Villa Olga	6	37,500.00
TOTALES	1,622	

BANCOS HIPOTECARIOS PRIVADOS
ACOGIDOS A LA LEY DE INTERESES PREFERENCIALES

PROYECTO	NO.	HIPOTECA UNIDAD
Altos Parque Lefevre	36	22,230.00
Condominio Coliseo	22	34,996.00
Residencias Rocio	12	21,500.00
Res. Casa Blanca	15	48,000.00
Altos del Romeral	120	45,000.00
Colonias del Prado	26	16,346.00
Duplex	6	20,700.00
Proy. Colonia del Sol	20	36,000.00
Res. Los Almendros	12	20,790.00
Res. Nuevo Hipidromo	24	23,977.00
Res. Bosques Altamira	14	22,500.00
Urb. Altos del Romeral	50	45,090.00
Urb. Los Robles	144	19,356.00
Residencial Olimpico	131	18,762.00
Campo Linbergh	125	28,301.00
Reparto El Encanto	11	26,550.00
Residencial Los Almendros	10	25,000.00
Ubr. San Gerardo	10	39,738.00
Radial I	10	44,154.00
Urb. Llano Bonito	3	31,117.00
Urb. Llano Bonito	12	29,446.00
Altos de las Acacias	400	18,000.00
Urb. Pedregalito	12	19,700.00
Inversiones Landa	35	22,500.00
Inversiones Landa	85	21,500.00
Res. Campo Verde	30	40,500.00
Urb. Colinas del Rocio	16	50,000.00
Urb. Los Cipreses	6	45,833.00
Residencial Campo Verde	15	34,267.00
Proyecto Alta Vista	58	33,200.00
Villa Lucre	230	19,000.00
Proyecto Alta Vista	58	33,200.00
Villa Lucre	230	19,000.00
Villa Lucre	250	20,000.00
Altos de Cerro Viento	235	25,000.00
Urb. Colinas del Golf	10	24,138.00
Res. Las Lomas	40	17,100.00
Proyecto Villa Elvia	7	18,000.00
Urb. La Florida	10	19,350.00
Condominio Villas Obarrio	10	45,500.00
Edif. Mirador Marbella	4	50,000.00

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Edificio Alvin	4	$49,600.00
Condominio El Baron II	48	41,667.00
Condominio Aventura	30	40,000.00
Edificio Aristi	10	50,000.00
Res. Villa Vista	24	50,000.00
Urb. La Colina	5	46,325.00
Condominio La Alameda	5	50,000.00
Altos de Santa Maria	18	42,644.00
Condominio Demerali	13	48,462.00
Urb. Linda Vista	180	24,250.00
Edif. La Loceria	21	23,919.00
Duplex	2	36,000.00
Proy. Villas Bonanza	13	31,500.00
Res. Dona Villa	2	50,000.00
Altos de Los Sauces	24	39,583.00
Viviendas	8	39,500.00
Condominio Del Pacifico	6	26,000.00
Condominio Evita 50	6	50,000.00
Condominio La Rotonda	15	31,714.00
Condominio Lupe	12	33,333.00
Condominio Mirasol	12	31,050.00
Condominio Olga	7	49,731.00
Cond. San Francisco	10	36,400.00
Desarrollo San Fco.	6	31,450.00
Urb. Residencial San Gerardo	10	39,100.00
Viviendas	3	50,000.00
Condominio Vizcaya	20	50,000.00
Condominio Don Tacho	14	50,000.00

ANNEX D

ESTIMATE OF THE POTENTIAL MARKET

FOR HG-013 SOLUTION TYPES

Prepared by Lee Baker

July 7, 1986

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ESTIMATE OF THE POTENTIAL MARKET FOR HG-013 SOLUTION TYPES

Section VI, Technical Considerations, highlights a series of issues which currently constrain the expansion of private sector activities into A.I.D.'s below median income market. It notes, however, the overwhelming demand for the few projects already developed for this income stratum. The section concludes with a presentation of illustrative solution types which provide an appropriate technical response to the concerns of the private sector.

To address issues raised in the PID and to provide supporting documentation for the Project Paper, it was initially envisaged that several special analyses were to be carried out. One of these studies was to demonstrate the level of effective demand for units within A.I.D.'s price range. A local consultant group was to be sub-contracted to carry out this study. However, in the early stages of Project Paper design, it was decided not to carry out this study because it was believed that sufficient information already existed in Panama on effective demand.

In its place was substituted the idea of carrying out a brief analysis of the potential market for the solution types proposed for A.I.D.'s designated target group. The present annex uses and updates the 1980 census to identify the current living conditions of A.I.D.'s target group and, thereby, to quantify the potential market for the HG-013 Program. This analysis is complemented with several interviews with private sector suppliers of lower cost shelter.

A.I.D.'s target group has been defined in Section VI as those households earning between $200-$600 per month (20th-50th percentiles). This annex estimates the universe of families within this income range which would potentially comprise the market for HG-013 solution types. It discusses the proportion of this market which can actually be served by the HG-013 Program and attempts to identify other private and public sector initiatives which could serve the residual group.

From information readily available from the 1980 Census of Populaton and Housing, the analysis that follows defines the principal target area for HG-013 as the Panama Metropolitan area.1/ For the purposes of this

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1/ "Censos Nacionales de 1980, Resultados Avanzados por Muestra, Volumen 1. Viviendas y Hogares", Republica de Panama, Contraloria General de la Republica, Dirreccion de Estadistica y Censo, May 11, 1980.

analysis, the Panama Metropolitan Area is defined as comprising the Districts of Panama and San Miguelito. The population of these two districts in 1980 was 624,000. It is estimated that this metropolitan population has increased to 734,000 in 1986.2/ Interviews with public and private sector institutions have identified this area as currently experiencing the greatest housing shortages within the extended metropolitan area which also includes Chorrera and Arraijan. In this area is also found the largest demand for mortgage lending. A broader target area would only tend to increase the potential market for shelter solutions financed by HG-013.

The previously cited 1980 Census of Population and Housing serves as the point of departure for the present analysis.3/ Table 3 (located at the end of this annex) presents the results of the methodology described in footnote 3/. This table classifies the 1980 universe of households living in the metropolitan area of Panama and San Miguelito which earn between the 20th and 50th income percentiles according to condition, occupants and number of rooms of the dwelling unit. This table also updates these figures to 1986 based on a 2.74 percent annual growth rate in population and a distribution of total dwelling units among condition categories assuming that 1980 percentages and household sizes remain constant for 1986. Table 1 structures the updating of 1980 Census figures to 1986.

2/ Assuming annual growth rate of 2.74 percent for metropolitan area for 1982-87 projected in Table E-3 of "Urban Development Assessment: Panama", Volume 2, Robert R. Nathan Associates and The Urban Institute, January 1985.

3/ Table V-36, p. 247 of Censos Nacionales de 1980, Resultados Avanzados por Muestra, Volumen 1., Viviendas y Hogares, distributes occupied dwelling units in the Districts of Panama and San Miguelito on the basis of condition, occupants and number of rooms. The present analysis assumes an occupancy rate of one household per dwelling unit. In order to determine the number of households between the 20th and 50th income percentiles (i.e., A.I.D.'s target group) for each sub-set, a cross-tabulation by household income is required. Unfortunately, this cross-tabulation was not available at the Census Office and time did not permit the processing of a new computer run to obtain this information. However, due to the indicative objectives sought for the present exercise, it is reasonable to apply the global household income distribution for the combined districts of Panama and San Miguelito to each sub-set of Table V-36 as a proxy for the required cross-tabulation. This step breaks out A.I.D.'s target group from the global figures. In order to carry out this exercise, the 30 percent of the 1980 census population between the 20th and 50th percentiles was applied to each sub-set to approximate a corresponding target population for 1980.

Table 1

PROJECTIONS OF POPULATION AND NUMBER OF DWELLING UNITS

BY CONDITION 1/

PANAMA METROPOLITAN AREA

1980-1986

POPULATION

DISTRICT	1980 1/ POPULATION	No. of Dwelling Units	Ave. Household Size (persons/D.U.)	1986 (Est.) Population	No. of Dwelling Units
PANAMA	467,715	110,547	4.2	550,071	130,969
SAN MIGUELITO	156,361	30,352	5.2	183,893	35,364
TOTAL	624,076	140,899		733,964	166,333

DWELLING UNITS

DISTRICT	1980 - No. of Dwelling Units 2/	%	1986 - (Est.) No. of Dwelling Units 2/	%
PANAMA	109,300	100.0	129,492	100.0
"Permanente"	46,105	42.2	54,646	42.2
"Semi-Permanente"	4,350	4.0	5,180	4.0
"Improvisada"	1,890	1.7	2,201	1.7
"Apartamiento"	35,780	32.7	42,344	32.7
"Casa de Vecindad	21,175	19.4	25,121	19.4
SAN MIGUELITO	30,315	100.0	35,321	100.0
"Permanente"	24,735	81.6	28,822	81.6
"Semi-Permanente"	2,735	9.0	3,179	9.0
"Improvisada"	1,020	3.4	1,201	3.4
"Apartamiento"	1,340	4.4	1,554	4.4
"Casa de Vecindad	485	1.6	565	1.6

1/ Condition types and population figures from "Censos Nacionales de 1980".

2/ Net of collective living arrangements (jails, hotels, hospitals, etc.) and non-dwelling units used for shelter (shops, garages, etc.).

Source: "Census Nacionales de 1980", Resultados Avanzados por Muestra, Volumen 1., Viviendas y Hogares and elaboration by Project Paper Team.

On the basis of the total number of target group households estimated to be living in the Panama Metropolitan area in 1986, those households in the following conditions are assumed to be the potential market for HG-013 shelter solutions:

* Households in "Improvisada" dwelling units
* Households in "Casa de Vecindad" dwelling units
* Households in overcrowded conditions (four or more occupants per room)
* 5 percent of households in "Permanente" dwelling units
* 20 percent of households in "Apartamiento" dwelling units4/

Tables 1 and 3 are presented as background information so that the reader can replicate the analysis and modify any assumptions as desired.

Table 2 summarizes the potential market for HG-013 housing solutions by market category. The table estimates a potential 1986 market of over 17,000 dwelling units within the Panama Metropolitan area from A.I.D.'s below median income target group. Seventy-three percent of this potential market currently resides in "Casa de Vecindad" and/or

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4/ The Census office defines these housing types as follows:

* "Improvisada" - Substandard units constructed of scrap wood, used zinc roofing sheets, cardboard, etc;

* "Casa de Vecindad" - Deteriorated 2-3 storey multi-family wooden structures with shared sanitary facilities primarily located in the old part of Panama City;

* "Permanente" - Units constructed of durable materials such as reinforced concrete, cement blocks, brick, stone and wood;

* "Semi-permanente" - Units constructed from materials of limited durability such as "quinche", adobe, cane, straw and bamboo (usually found in rural or semi-urban areas of country);

* "Apartamiento" - Units which occupy part of a building with separate sanitary facilities; includes duplex and condominium units.

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Table 2

ESTIMATE OF POTENTIAL MARKET WITHIN A.I.D.'S TARGET GROUP
(20TH-50th percentiles)
FOR HG-013 SOLUTION TYPES
PANAMA METROPOLITAN AREA

MARKET CATEGORY	POTENTIAL MARKET		
	1980	1986	%
1. Households in "Improvisada" Dwelling Units	883	1,040	6.0
2. Households in "Casa de Vecindad" Dwelling Units	6,478	7,619	44.2
3. Households in Overcrowded Conditions (4 or more occupants per room)	4,218	4,961	28.8
4. 5% of Households in "Permanente" and " "Semi-Permanente" Dwelling Units	981	1,154	6.7
5. 20% of Households in "Apartamiento" Dwelling Units	2,093	2,461	14.3
TOTAL	14,653	17,235	100.0

Note: 2.74%/year annual growth in potential market between 1980 and 1986.

Source: Project Pater Team elaboration of 1980 Census data.

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overcrowded housing conditions. It is estimated that the potential market increased at an annual rate of 2.74 percent between 1980 and 1986. For the purposes of this analysis, it will be assumed that this annual growth rate continues for the three-year implementation period of HG-013. The potential market will increase by approximately 1,500 units over the life of the HG Program.

Depending on the average cost of a dwelling unit financed under the $44 million HG Program and the number of times the Program's funds, including the counterpart of the mortgage lenders, are rolled over, approximately 9,000 new units can be financed over the life of the Program. In addition, private sector institutions which have already begun to finance shelter units within A.I.D.'s price range will certainly continue to serve this potential market independently of the HG Program. While this contribution is impossible to quantify at this time, it is expected that once these institutions become more accustomed to serving below median income families additional local resources will be channeled into this housing market. With the exception of some overlap with the lower stratum, of A.I.D.'s HG-013 market, the public sector will continue to serve the country's most needy families with incomes below the 30th percentile. Therefore, the total direct and indirect housing solutions generated by HG-013 can be expected to satisfy approximately 40-50 percent of the potential market within A.I.D.'s target group.

On the basis of available information, this analysis has primarily tried to define the potential market, rather than the effective demand, for HG-013 housing solutions. However, as discussed in the text of the Project Paper, interviews with several private developers indicate an extensive, although largely unattended, demand for housing solutions at this lower end of the housing market. The surveying of private sector developers and financial institutions, as well as potential target group families, will be expanded during project implementation in order to identify and better define the quantity and variety of solution types which are affordable and attractive to this lower income clientele. In the meantime, however, a 1985 report by the Ministry of Housing (MIVI) provides an indication of the current level of effective demand for new units in the Panama Metropolitan area.5/ This report shows that almost 11,000 households with an income of $200-$600 in the Province of Panama alone have registered with MIVI to request a new dwelling unit. Given MIVI's current policy decision to serve only the country's neediest households, it can be expected that a high percentage of these households, particularly at the upper end, would provide the market for the private sector initiative envisaged under HG-013.

5/ "Actual Housing Demand for New Units, Upgrading and Tenure Legalization by Household Income", Office of Social Affairs, Department of Social Analysis, Ministry of Housing (MIVI), April 1985.

Table 3

UNIVERSE OF HOUSEHOLDS LIVING IN PANAMA METROPOLITAN AREA
EARNING BETWEEN 20TH AND 50TH INCOME PERCENTILES
ACCORDING TO HOUSING TYPE AND NUMBER OF OCCUPANTS
1980 AND 1986

(1986 estimates in parentheses)

TYPE OF HOUSING/ NO. OF OCCUPANTS	TOTAL	NUMBER OF ROOMS IN UNIT				
		1	2	3	4	5 & more
"Casa Individual"						
"Permanente"						
1	(1,629)	(613)	(396)	(287)	(211)	(122)
	1,384	521	336	244	179	104
2	(2,379)	(548)	(487)	(629)	(398)	(317)
	2,023	466	414	535	338	270
3	(3,421)	(633)	(617)	(773)	(902)	(496)
	2,910	538	525	658	767	422
4	4,174	652	708	1,054	1,043	717
	3,549	554	602	896	887	610
5	(4,050)	(608)	(623)	(1,029)	(1,040)	(750)
	3,445	517	530	875	885	638
6	(3,306)	(420)	(495)	(818)	(907)	(666)
	2,810	357	421	695	771	566
7	(2,489)	(334)	(390)	(618)	(651)	(496)
	2,118	284	332	526	554	422
8	(1,238)	(334)	(390)	(618)	(651)	(496)
	1,053	130	183	282	239	219
9	(799)	(100)	(154)	(207)	(182)	(156)
	680	85	131	176	155	133
10 & more	(1,282)	(138)	(215)	(338)	(320)	(271)
	1,089	117	183	287	272	230
	21,051 (24,767)					

UNIVERSE OF HOUSEHOLDS LIVING IN PANAMA METROPOLITAN AREA
EARNING BETWEEN 20TH AND 50TH INCOME PERCENTILES
ACCORDING TO HOUSING TYPE AND NUMBER OF OCCUPANTS
1980 AND 1986

(1986 estimates in parentheses)

TYPE OF HOUSING/ NO. OF OCCUPANTS	TOTAL	NUMBER OF ROOMS IN UNIT				
		1	2	3	4	5 & more
"Semi-Permanente"						
1	(347) 296	(240) 204	(87) 74	(16) 14	(2) 2	(2) 2
2	(305) 258	(179) 152	(91) 77	(18) 15	(13) 11	(4) 3
3	(274) 233	(142) 121	(93) 79	(18) 15	(15) 13	(6) 5
4	(351) 300	(193) 164	(97) 83	(30) 26	(20) 17	(11) 10
5	(347) 294	(166) 141	(121) 103	(37) 31	(15) 12	(8) 7
6	(280) 238	(126) 107	(89) 76	(42) 36	(13) 11	(10) 8
7	(228) 193	(99) 84	(80) 68	(22) 18	(18) 15	(9) 8
8	(127) 107	(56) 47	(47) 40	(22) 18	(2) 2	(--) --
9	(79) 67	(34) 29	(21) 18	(18) 15	(4) 3	(2) 2
10 & more	(168) 143	(66) 56	(53) 45	(15) 13	(27) 23	(7) 6
	2,129 (2,506)					

UNIVERSE OF HOUSEHOLDS LIVING IN PANAMA METROPOLITAN AREA EARNING BETWEEN 20TH AND 50TH INCOME PERCENTILES ACCORDING TO HOUSING TYPE AND NUMBER OF OCCUPANTS 1980 AND 1986

(1986 estimates in parentheses)

TYPE OF HOUSING/ NO. OF OCCUPANTS	TOTAL	NUMBER OF ROOMS IN UNIT				
		1	2	3	4	5 & more
"Improvisada"						
1	(186) 158	(151) 128	(27) 23	(2) 2	(2) 2	(4) 3
2	(118) 99	(80) 68	(30) 25	(4) 3	(4) 3	(--) --
3	(140) 120	(77) 65	(50) 43	(11) 10	(--) --	(2) 2
4	(127) 107	(76) 64	(37) 31	(6) 5	(4) 4	(4) 3
5	(125) 106	(66) 56	(45) 38	(10) 8	(2) 2	(2) 2
6	(101) 87	(52) 44	(27) 23	(18) 16	(4) 4	(--) --
7	(104) 88	(46) 39	(38) 32	(16) 14	(4) 3	(--) --
8	(63) 54	(24) 20	(26) 22	(7) 6	(2) 2	(4) 4
9	(27) 23	(10) 8	(9) 8	(6) 5	(2) 2	(--) --
10 & more	(49) 41	(19) 16	(12) 10	(17) 14	(1) 1	(--) --
	883 (1,040)					

UNIVERSE OF HOUSEHOLDS LIVING IN PANAMA METROPOLITAN AREA EARNING BETWEEN 20TH AND 50TH INCOME PERCENTILES ACCORDING TO HOUSING TYPE AND NUMBER OF OCCUPANTS 1980 AND 1986

(1986 estimates in parentheses)

TYPE OF HOUSING/ NO. OF OCCUPANTS	TOTAL	NUMBER OF ROOMS IN UNIT				
		1	2	3	4	5 & more
"Apartamiento"						
1	(1,580)	(330)	(675)	(384)	(122)	(69)
	1,344	281	574	326	104	59
2	(2,248)	(316)	(874)	(662)	(226)	(170)
	1,912	269	743	563	192	145
3	(2,410)	(258)	(891)	(813)	(277)	(171)
	2,050	220	758	691	236	145
4	(2,439)	(193)	(758)	(841)	(437)	(210)
	2,075	164	645	715	372	179
5	(1,843)	(118)	(512)	(682)	(334)	(197)
	1,567	101	435	580	284	167
6	(1,137)	(85)	(268)	(436)	(217)	(131)
	966	72	228	370	185	111
7	(697)	(59)	(172)	(260)	(118)	(88)
	593	50	146	221	101	75
8	(307)	(20)	(76)	(115)	(68)	(28)
	262	17	65	98	58	24
9	(189)	(13)	(42)	(68)	(41)	(25)
	160	11	36	57	35	21
10 & more	(214)	(16)	(63)	(74)	(50)	(11)
	182	14	53	63	43	9
	11,111 (13,064)					

UNIVERSE OF HOUSEHOLDS LIVING IN PANAMA METROPOLITAN AREA
EARNING BETWEEN 20TH AND 50TH INCOME PERCENTILES
ACCORDING TO HOUSING TYPE AND NUMBER OF OCCUPANTS
1980 AND 1986
(1986 estimates in parentheses)

TYPE OF HOUSING/ NO. OF OCCUPANTS	TOTAL	NUMBER OF ROOMS IN UNIT				
		1	2	3	4	5 & more
"Casa de Vecindad"						
1	(1,821) 1,548	(1,600) 1,360	(201) 170	(15) 13	(4) 3	(2) 2
2	(1,366) 1,160	(1,101) 936	(219) 186	(35) 29	(7) 6	(4) 3
3	(1,288) 1,095	(963) 819	(260) 221	(41) 35	(18) 15	(6) 5
4	(1,048) 892	(804) 683	(199) 169	(23) 20	(11) 10	(11) 10
5	(821) 698	(555) 472	(216) 183	(35) 30	(9) 8	(6) 5
6	(515) 439	(336) 206	(147) 125	(23) 20	(7) 6	(2) 2
7	(370) 314	(257) 218	(87) 74	(20) 17	(2) 2	(4) 3
8	(181) 154	(108) 92	(42) 36	(16) 14	(11) 9	(4) 3
9	(92) 78	(62) 53	(20) 17	(4) 3	(4) 3	(2) 2
10 & more	(117) 100	(74) 63	(32) 27	(9) 8	(2) 2	(--) --
	6,478 (7,619)					

Source: Project Paper Team elaboration of 1980 Census data.

ANNEX E

ANALYSIS OF HOUSING NORMS AND STANDARDS

Prepared by: Carlos Linares

Date: June, 1986

ANNEX E

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INTRODUCTION

1. Objectives and Organization

The main objective of this study is to review and assess the technical and regulatory norms and standards that currently influence the production costs and affordability of shelter projects in Panama, and particularly in the principal metropolitan areas of Panama and Colon. This study also estimates the approximate reduction in unit cost which could be achieved through changes in these norms and standards. Based on the information which is gathered, recommendations will be provided on the strategy which should be followed by the Mission with regard to this issue.

This technical annex examines a range of solution types which respond to AID's below median income mandate, and at the same time meet the requirements for private sector involvement. One of the main concerns of the work has been to establish this range of shelter solution types so that:

a) commercial mortgage banks are willing to finance the units (given target group socio-economic characteristics);

b) private developers are willing to produce the units according to technical, economic and market considerations;

c) households below the median income can afford and wish to purchase the units.

The report is divided into three main sections. First, a descriptive review of the norms and standards contained in the regulatory framework of public agencies is presented; second, an illustrative analysis of actual projects developed by public and private institutions is carried out; and third, "generic" project design criteria are used to illustrate the relationships between norms, costs and affordability to below median target households.

The analysis performed in the second and third sections of this work has been facilitated through the use of the PADCO/Bertand Affordability Model. Output tables were generated to determine the cost implications of changes in norms and standards, project design criteria, financial conditions and affordability.

2. Summary Conclusions and Recommendations

a) Conclusions

(1) In Panama City and San Miguelito where zoning, building, and infrastructure standards are subject to stringent control and are believed by many housing specialists to be excessive, the least costly house that can be built at a 12 percent market rate is affordable by families with incomes around the median ($585 per month). In Arraijan, only nine miles from downtown Panama City, different zoning ordinances are applied and building and infrastructure standards are subject to reductions through a negotiated process. There, private developers can produce housing affordable by families whose incomes fall at the 30th percentile of income distribution ($326 per month). Arraijan is experiencing a boom in low cost housing construction because of the way construction and land development norms and standards are applied.

(2) The Preferential Interest Rate Mortgage Law was promulgated to stimulate demand for housing and to overcome the problems of building lower cost housing in the urban fringe between Panama City and Tocumen. By reducing interest rate costs, accessibility to lower income markets was augmented.

(3) If new land development and building standards are applied more uniformly to urban areas in Panama private developers will be able to produce lower cost housing which would be accessible to families whose incomes fall between $300 and $600 per month in the areas of Panama City, San Miguelito, and beyond. Moreover, reduced interest rate costs to compensate for high construction costs will not be as important.

b) Strategy Recommendations

A two-tiered strategy is recommended with regard to achieving reductions in housing norms and standards in order to better serve A.I.D.'s below median income households. Both elements of the strategy can be pursued simultaneously and are already under discussion.

From discussions with public and private sector professionals, it would appear that the time is favorable to move ahead with the dialogue on the reduction of urbanization norms and standards for lower income shelter development. A commission composed of public and private sector institutions has been formed in the Ministry of Housing (MIVI) to address this issue. Furthermore, the Society of Panamanian Engineers and Architects (SPIA) and the Panamanian Chamber of Construction (CAPAC) are planning a series of seminars and conferences over the next several months whose purpose is to raise the level of professional understanding of this topic and to prepare an agenda for the presentation of the private sector's position on this issue. USAID/Panama should make every effort to play an active role in these events and discussion groups.

The first element of this strategy involves working closely with private sector developers and professional societies to achieve substantial cost savings through minimum modifications in current practice. Two aspects on which to focus include improving the design and finishing of dwelling units, and better site planning (percent marketable area, lot size, type of circulation network, etc.).

Training courses and technical assistance should be provided in appropriate project planning and design to private developers during the project preparation stage. Several computer based methodologies (including the PADCO/Bertaud model) have been developed to assist in this process. To complement assistance in project planning and design, new solution types should be tested in market studies to ascertain their affordability and acceptability by the intended beneficiary group.

The second element in reducing urbanization norms and standards must involve an intense dialogue between the private sector and the public sector regulatory agencies. Existing urbanization regulations currently permit lower cost development in Panama's urban areas. However, in actuality, they have rarely been applied.

The goal of this public/private sector dialogue will be to achieve the necessary flexibility in the application of urbanization norms and standards to permit the construction of lower cost housing solutions in the country's principal urban areas, and in particular in the greater Panama Metropolitan Area. USAID/Panama will have to identify the most appropriate mix of public and private sector actors to support in this effort. As a starting point, USAID/Panama should encourage and support the initiative already begun by the SPIA and CAPAC with regard to norms and standards.

The required private/public sector dialogue can be nourished through training exercises similar to those recommended above. Specific inputs from foreign experts can also play an important role in identifying relevant international experience in minimum standards for residential development and in orienting and guiding this dialogue. However, this dialogue must reflect to a great extent the Panamanian reality. International solutions, even where they are appropriate and have performed satisfactorily in other countries, should not be adopted haphazardly for the Panamanian context. The Panamanian construction sector has gained invaluable experience from recent lower standard projects developed by private sector developers (particularly the project in Arraijan). The lessons learned from these projects should be jointly evaluated by SPIA and CAPAC to determine their relevance as a basis for a national policy on minimum norms and standards. USAID/Panama has the opportunity to assist in the design and execution of this exercise.

The training programs and follow up technical assistance in project design should focus on alternative norms and standards which are appropriate in the Panama context and the cost implications of high standard urbanizations and how trade-offs in the design of specific infrastructure components (roads/streets and stormwater drainage) impact on total costs.

A. REVIEW OF SUBDIVISION AND INFRASTRUCTURE STANDARDS

1. Background

Subdivision norms and standards for residential developments in the Panama District are found in the document "Normas de Desarrollo Urbano para la Ciudad de Panamá", prepared by the Urban Development Directorate of the Ministry of Housing (MIVI) in 1978.1/ This document was based on revisions made to the original document "Normas de Desarrollo Urbano para el Distrito de Panamá" of 1967.2/

1/ Normas de Desarrollo Urbano para la Ciudad de Panamá, Resolución No. 150-83, Anexo I, Resumen de Decretos, Leyes, Resoluciones y Acuerdos, sobre Desarrollo Urbano; Ministerio de Vivienda y Direcciones de Ingeniería Municipal de los Distritos de Panamá y San Miguelito; Octubre de 1983.

2/ Normas de Desarrollo Urbano para el Distrito de Panamá; Compilación de Disposiciones y Resoluciones Aprobadas por la Junta de Planificación Municipal del Distrito de Panamá 1960-1965; Departamento de Planeamiento Regional y Plano Regulador de Instituto de Vivienda y Urbanismo; 1967.

The primary reasons for the 1978 revisions were the incorporation of the San Miguelito District into the norms as a result of accelerated urban growth, the acknowledged need to rationalize land uses, increasing densities and the need to introduce greater flexibility in subdivision design. The last update of this document was approved in October 1983.3/ To date, "Normas de Desarrollo Urbano para la Ciudad de Panamá" represents the only standing set for urban development regulations in the entire country.

In 1974, the Ministry of Housing began to prepare a document intended to guide urban development at the national level. The draft document, "Reglamento Nacional de Urbanizaciones y Parcelaciones", has been under discussion since 1976. MIVI has reviewed this document extensively and welcomed comments from other public as well as private institutions and individuals. The final 1985 draft is still awaiting approval.4

MIVI directly controls urban development in Panama City and the rest of the country through its function of originating, directing and regulating the "planes reguladores" --specifying where urbanization may take place, zoning, lotification and issuing of zoning maps. It undertakes these functions either alone or in consultation with the appropriate municipality. All planning is centralized in the Ministry's Panama City office. Municipalities tend to follow the general guidelines set by MIVI, although anecdotal evidence suggests that they may impose additional restrictions at their own discretion.

2. Types of Norms and Standards

It is not the purpose of this section to fully describe what is contained in the regulations, but mainly to highlight the issues relevant to the successful implementation of the HG Program under preparation.

a) Residential

With respect to norms and standards, successful achievement of the Program's objectives will largely depend on two aspects: first, the planning and design of the housing projects under zoning category

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3/ Resolución No. 150-83 de 28 de Octubre de 1983 por la cual se aprueba la modificación y actualización realizada al documento denominado "Normas de Desarrollo Urbano para la Ciudad de Panamá"; Gaceta Oficial No. 19,973, Jueves 12 de Enero de 1984.

4/ Reglamento Nacional de Urbanizaciones y Parcelaciones; Dirección General de Desarrollo Urbano, Ministerio de Vivenda, Panamá 1985.

"NORMA R-E" (Special Residential) versus the high standard "Norma R-1"; and second, the successful negotiations that have to be undertaken with the public agencies in order to take full advantage of the flexibility that this norm contains. The following sections briefly review the major differences between projects designed under R-E and R-1 standards.

"NORMAS" R-E"(RESIDENCIAL ESPECIAL)
and "R-1" (Low Density residential)

Single detached dwellings, Duplexes and Row housing.

	R-E	R-1
Net density up to	400 persons per hectare	200
	80 units/Ha	40 units/Ha
Minimum lot area		
single detached dwellings	$160m^2$	$600m^2$
duplexes	$150m^2$	$300m^2$
row units	$120m^2$	$300m^2$
Maximum lot area	$200m^2$	NA
Minimum lot width (frontage)		
single detached	9.00mts	30.00mts
duplexes	7.50mts	
row units	6.00mts	
Minimum lot depth	17.00mts	30.0mts
Maximum construction height	ground floor and 2 levels	same
Ground occupation area	60% of lot area	50%
Open space	40% of lot area	50%
Built-up area	80% of lot area	same
Frontage set-back	whatever established or 2.50mts from boundary	same
Lateral set-back		
frontage of less than 10mts	1.20mts	1.50mts
more than 10mts	1.50mts	
row units	none	
Backyard (set-back) minimum	2.50mts	5.0mts

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	R-E	R-1
Parking	One parking space per unit.	same
	Collective parking is permitted at a maximum distance of 100mts.	To be determined by MIVI according to project characteristics.

The lot size of $200m^2$ or less for Norm R-E allows the most cost savings. Even lots with less than $120m^2$ will be considered individually by MIVI in coordination with the Municipality according to its merits.

There are no special requirements for shelter unit design or construction specifications other than the signature of a registered architect or engineer on the construction plans. MOP norms only apply to multi-story buildings and large structures. Minimum habitable space, built-up areas and finishes have been largely determined by private developers through experience with effective demand patterns and socio-cultural preference in urban and rural areas. Structural specifications are not high since Panamá is not considered an earthquake-prone area. Responding to climatic conditions seems to have a higher priority in shelter design and construction.

b) Commercial

It is foreseen that these projects will include areas for commercial development which fall under norm C-3. (See Annex 1). Developers do not have problems meeting these norms. They introduce commercial lots not only as part of a marketing strategy and eventual compliance with norms, but also because these lots can be sold at a higher price due to prefered location and purpose within the project.

c) Public Space

Article 6 of "Normas de Desarrollo Urbano"5/ establishes that in all private subdivisions of more than 20 hectares all areas for public circulation will be freely transferred to the Government, according to existing regulations. Furthermore, 5 percent of the remaining residential area will be freely transferred to the government for parks and public buildings. The Private Sector often uses more land for public use, and they do not have problems complying with this norm.

5/ Normas de Desarrollo Urbano para la Ciudad de Panamá, Anexo I, Artículo 6, Pág. 114.

Subdivisions of less than 20 hectares will be subject to individual consideration by the Urban Development Directorate of MIVI to determine the appropriate percentages of total area allocated to circulation, parks and public buildings.

d) Community Facilities

The circumstances under which MIVI will require additional areas for public use are not clear. An equitable system for private developers is established in the new (unapproved) "Reglamento". It states that those areas reserved for public buildings[6] will be purchased by the State through negotiation with the developer according to cadastral value.

In the past MIVI has established and used in its own housing projects, the guidelines for public/institutional use which are provided in Annex 2. The developers did not indicate that there are difficulites in complying with such norms. They are handled on a case by case basis. For example, the Ministry of Education may request that a developer leave space for a primary school if there is need for one in the area.

3. Infrastructure

The principal agencies responsible for the design and control of basic infrastructure norms and specifications are the Ministry of Public Works (MOP), the National Institute for Water and Sewage (IDAAN), and the Institute for Hydro-Electric Resources (IRHE). These agencies maintain personnel at the Municipal Engineering Department for the review and approval of residential developments according to their own institution's technical requirements.

a) MOP/Roads and Drainage

The Ministry of Public Works (MOP) is a national government agency responsible for the design, construction and maintenance of roads, paths and sidewalks in urban and rural areas. MOP is also responsible for the design and approval of road construction and stormwater drainage specifications in private residential developments. These elements along with the residential categories (R-E and R-1) have the most impact on project design and unit cost.

Upon completion, and with the prior inspection and approval of the MOP, the roads, sidewalks and drainage systems are taken over by the MOP for maintenance. During the team's interviews with private

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6/ Schools, health centers, religious and community centers, police stations, fire department, and IRHE, INTEL and IDAAN offices.

developers, maintenance considerations were consistently mentioned as the reason for MOP's enforcement of very high standard road surfacing specifications.7/

The other components of concern which impact cost are the requirements for street widths and underground versus superficial drainage. Norms and specifications for street widths and drainage are found in the document "Normalización de los Servidumbres Viales" (1979), prepared jointly by MOP and MIVI. According to these specifications the utilization of a surface drainage system is allowed. Nevertheless, MOP has in most cases imposed the use of underground pipes, which greatly increase project costs. Private developers also have expressed concern about the excessive requirement to introduce 24" diameter pipes throughout a project. Stormwater runoff analysis shows that a smaller pipe would be adequate in most cases (a 12" pipe at the highest point with gradual increases according to volume of flow).

The typical requirements for street sections found in the document "Normalización de las Servidumbres Viales" applied to residential developments are provided in Annex 3.

According to the specifications applied to local roads, the use of a superficial drainage system requires a wider street, which in turn reduces the area that can be used for lots; a narrower type of street (10mts) requires an underground system which greatly increases project costs. We recommend a review of MOP's Norms and Standards to see if lower standards could be approved for low income groups.

Taken together, the higher requirements for urbanization can increase the urbanization costs by about $2,500 per unit, holding lot size equal. (See Note on p. 19.)

b) IDAAN/Water and Sewage Systems

IDAAN is an autonomous entity of the state responsible for the installation and maintenance of water and sewage systems throughout the country. IDAAN is also responsible for the design and approval of potable water and sewage drainage specifications in private residential developments.

7/ Up to 25cms. in depth of high resistance concrete ("hormigón). Road surfacing is the most expensive item in urbanization cost, evidence suggests that this kind of road surfacing could add $800.00 to the value of the unit.

Norms and specifications for water supply and sewage are found in the document, "Normas Generales para el Diseño y Construcción de Sistemas de Agua potable y Alcantarillado Sanitario, Volumen II," prepared by IDAAN in 1979. The main components of the water supply and sewerage systems are presented in Annex 4.

The capacity of the water system is adequate in the metropolitan area of Panama. The metropolitan area can absorb new developments and still maintain sufficient resources for emergency supply. On the periphery where there are no systems, IDAAN has shown a flexible policy which permits installing communal water taps and allows for the construction of local supply and distribution systems (wells and pumps) in private residential developments.

All construction and strength specifications for these components and their accessories must comply with the American Water and Waste Association standards (AWWA). Many of these components will be approved only if purchased from selected lists of U.S. manufacturers. Cheaper accessories are available and therefore the market for these items should be opened up. However, these do not represent the most critical elements of norms and standards for unit cost reductions.

IDAAN has shown a flexible policy allowing for the construction of communal septic tanks with filtration fields in peripheral urban areas with no regular sewage system.

c) IRHE/Electrical Supply

IRHE is an autonomous agency of the state responsible for the installation, operation and maintenance of electrical systems to urban and rural areas. IRHE is also responsible for the design and approval of electrical supply systems in private residential developments.

Norms and specifications are found in the 1980 document: "Normas de Servicio Electrico"8/. IRHE's technical design criteria for electrical supply systems do not impose unnecessary demands for residential developments. Some examples of IRHE's flexible norms are presented in Annex 5.

8/ Normas de Servicio Eléctrico, Primer Volumen del Manual de Construcción del Sistema de Distribución elétrica, Departmento de Normas y Métodos de la Gerencia Nacional de Distribución y Comercialización del IRHE, Revisión 1980.

4. Procedures for Project Approval and Construction Permit

Significant increases in the financial and economic costs of housing production can result from delays in the legal and regulatory framework that rules the submittal of documentation, field inspections and the approval process itself. Interviews with private developers pointed out that in Panama this process is not a major bottleneck if the firm has experience with these procedures and is well known inside the bureaucracy.

Three principal bottlenecks were identified as critical to the successful implementation of a larger shelter program directed at lower income families:

a) the difficulty of the negotiations that need to take place with MIVI (and MOP) to achieve approval of zoning category R-E and other necessary reductions in norms and standards.

b) the lack of capacity of the "Registro Civil" office to process title registration. Under the Preferential Mortgage Rate Law, the mortgage loan does not become effective until beneficiaries can be provided with proper title. This means that the effective date of the mortgage is contingent upon the completion of title processing and issuance for each individual buyer. During this processing period which can take up to 3 months (for 100 applications), developers cannot convert their finished product into long-term financing. This obviously negatively affects a cash flo..

c) IRHE's procedures let the developer choose between a private contractor and IRHE for the design and construction of the electric supply system. The design of the system must be done according to IRHE's specifications for materials and construction procedures. Many developers have chosen IRHE as the contractor to avoid unnecessary delays in the approval process. This action has back-fired in many cases as IRHE will spend a great deal of time designing the system and waiting for the arrival of imported accessories required by law.

B. ILLUSTRATIVE ANALYSIS OF SHELTER PROJECTS

The analysis contained in this section is based on five actual projects presently being built by private and public sector developers. These projects have been coded in response to the concerns of the private developers' about giving out information, particularly with regard to costs. Within the limitations of data made available, the figures presented are considered reasonably accurate. It should be noted that of the projects used in Table E-1, codes A, B and C are zoned under Norm R-E and codes D and E are zoned under Norm R-1.

1. Land Use Characteristics

Table E-1 summarizes an illustrative analysis of the projects' principal land use characteristics. The projects vary in size between 9 and 151 hectares and between 233 and 2,500 lots. Total project area is divided into marketable and non-marketable areas.

Marketable Area

The percentage of total land devoted to marketable area (residential plus commercial areas) ranges between 51 and 77 percent. The lower and the upper limits correspond to public sector projects. Private sector projects range between 58 and 68 percent.

Residential use takes up most of the marketable area, the highest percentage devoted to commercial use belongs to private project D (5.4%).

Density

Project density is a direct result of the interrelationship between lot sizes, residential area and efficiency in project design. The projects presented in this analysis have in fact very low densities (several times lower than maximum allowed by zoning category R-E: 400 pers/ha. and 80 lots/Ha.). Densities range between 16 and 28 lots/ha. and 82 to 142 persons/ha. Lot sizes are quite large. A public sector project lot size of $300m^2$ responds to the minimum accepted by the Ministry of Health when pit latrines are used. Private sector lots average close to $190m^2$. All these projects use a waterborne sewage system with commercial septic tanks and filtration fields. There has been sufficient market demand for the larger lot sizes currently produced by private developers. Due to this fact, developers have not seen fit to experiment with smaller lots that would increase densities, potentially reduce costs and open up new markets. These lot sizes are well above minimum lot areas contained in Norm R-E of 120 to $160m^2$.

Non-marketable areas

These consist of all areas freely transferred to the government and devoted to circulation, parks and community facilities. Public sector projects have a lower percentage devoted to circulation area as a result of using a combination of reduced vehicular and pedestrian paths. Circulation varies between 17 and 14 percent of total area. Private sector circulation areas are designed exclusively for vehicular circulation. Developers point out that the beneficiaries, at the income

TABLE E-1

LAND USE ANALYSIS

CHARACTERISTICS	PUBLIC SECTOR A	PUBLIC SECTOR B	C		PRIVATE SECTOR D	PRIVATE SECTOR E
PROJECT AREA (Ha.)	151.5	9.0	37.7		35.4	43.0
AV.LOT SIZES (m^2)	300	300	195	234	190	180
NUMBER OF LOTS	2,500	233	994	78	989	1,200
DENSITY (LOTS/Ha.)	16.5	25.8	28.4		27.9	27.9
DENSITY (PERS./Ha.) 1/	82.5	129.4	142.2		139.5	139.5
MARKETABLE AREA (%)	51.5	77.6	62.2		68.3	67.0
NON-MARKETABLE	48.5	22.4	37.8		31.7	33.0
RESIDENTIAL AREA	50.2	77.6	60.7		62.9	67.0
COMMERCIAL	1.3		1.5		5.4	
OPEN/RECREACTIONAL	23.9	3.1	15.0		5.5	6.0
INSTITUTIONAL	7.6	5.6			3.7	2.0
PEDESTRIAN	5.9	2.9	2/		2/	2/
VEHICULAR	10.4	9.7	22.8		22.5	25.0
PARKING	0.7	1.1	2/		2/	2/

1/ OFFICIAL HOUSEHOLD SIZE: 5 PERSONS/FAMILY

2/ INCLUDED IN VEHICULAR AREA

range they are serving, own cars and expect to have them parked in front of the house. Zoning category R-E allows for collective parking at a maximum distance of 100mts from the farthest unit. Circulation areas range between 22 and 25 percent of total area.

Public areas for parks, recreation and institutional use range from 8 to 31 percent of total area for all projects. Private sector projects are well above the required 5 percent of residential area. This is due to the fact that collective septic tanks and filtration fields have taken up large areas classified as open space. Private sector projects D and E show reduced percentages for open and institutional space. These figures were taken from pre-project plans as updated information was not available. We have reason to believe that actual percentages are higher then those indicated.

2. Infrastructure Characteristics

Roads and Drainage

Project A (located by Tocumen Airport)
(Public Sector)

This project uses a combination of streets for vehicular traffic and pedestrian paths with a superficial runoff storm drainage system (open ditches running on both sides of the road.) Street widths vary from a 15mt right-of-way for main penetration roads ("colectoras"), to a 10mt right-of-way and 6mt carriage way ("rodadura") for local distribution roads ("vías locales").

Road surfacing uses a primary material called "tosca" (hardpan) mixed with bituminous material and a 4" thick (10 cms.) double layer of asphalt mixed with stone. Pedestrian paths are made of concrete, 1.50mts wide amd a 4" thick (10 cms.) All drainage ditches are coated with a 2 1/2" thick low-resistance cement mixture ("hormigón simple").

Project B (Located in a secondary city)
(Public Sector)

This project uses a combination of streets for vehicular traffic and pedestrian paths with a superficial runoff storm drainage system (open ditches running on both sides of the road.) Streets have a 12mt right-of-way and a 6mt carriage way. Road surfacing uses compacted "tosca" with a bituminous material and drainage ditches are coated with a cement mixture.

Project C (Located approximately 25 Kms from Panama City center). (Private Sector)

Project C's circulation network is designed exclusively for vehicular traffic with a superficial runoff storm drainage system (open ditches running on both sides of the road.) Street widths range from a 15mt right-of-way for a main penetration road to a 10mt right-of-way and 6mt carriage way for all other local distribution roads. Road surfacing is done with a compacted base course of tosca with bituminous material and a single layer of asphalt mixed with stone. Sidewalks are not paved and drainage ditches are coated with a 2 1/2" thick cement mixture.

Project D (Located near Tocumen Airport) (Private Sector)

This project only uses streets for vehicular traffic with an underground rainstorm drainage system (24" diameter pipes). Street widths range from a 15mt right-of-way for main penetration roads to a 10mt right-of-way and 6mt carriage way on local distribution roads. Road surfacing is done with a compacted priming material and a 6" (15 cms) thick high-resistance concrete bed. Pedestrian paths are also of high-resistance concrete. Stormwater drainage is channeled into a nearby river.

Project E (1.5 Kms from Tocumen Airport) (Private Sector)

The circulation network is designed exclusively for vehicular traffic with an underground stormwater drainage system (24" diameter pipes). Street widths range from a 20mt right-of-way for the main penetration road to a 12mt right-of-way and 6.50mt carriage way on local distribution roads. Road surfacing is done with a compacted priming material and a 6" (15 cms) thick high-resistance concrete bed. Pedestrian paths are also of concrete. Stormwater drainage is channeled into nearby river.

Potable Water Supply Systems

Projects A and B

The potable water supply system is being developed in stages. The first stage contemplates digging 7 wells for an estimated 2500 lots at an average domestic consumption rate of 152 liters/person/day. The second stage involves connection to the main urban system and individual hookups.

The main water distribution system has been designed using a range of pipe diameters from 3" up to 10", with domiciliary connections made of 1/2" up to 3/4" PVC pipe.

Project B's system design is identical to this project's.

Projects C, D and E

All use identical water supply systems including wells which pump to storage tanks and a piped network with domiciliary connections. No breakthroughs were identified except for Project C which does not run pipes under the streets. This reduces excavation depths and additional protection against breakage costs.

Sewage Systems

Projects A & B

Individual ventilated pit latrines at 3mts depth with a concrete slab and toilet seat.

Project C

This project introduces an innovative "back-of-the-lot" easement to collect and carry sewage to 4 large septic tanks with drainage fields located in the lower part of the site.

Avoiding the streets as the normal right-of-way for pipes reduces excavation depth and costly manholes. Easements follow a straight line towards the septic tanks. Whenever necessary manholes are replaced by smaller inspection chambers called "cajas de registro" placed on the sidewalks.

Project D

This project uses a traditional waterborne sewage system with pipes running under the streets with manholes at intersections. This system flows into one large septic tank with a drainage field located in the lower part of the site (along an adjacent river).

Project E

Project E uses a traditional waterborne sewage system with pipes running under the streets with manholes at intersections. This system uses several pumping stations to raise the flow into one "maximum capacity INHOFF" septic tank with drainage field located in the high part of the site. This location follows future plans to connect to the city mains.

Electrical Supply System

All projects include above ground electrical supply with poles and cables and individual/domiciliary connections to the main system. All specifications are standard. Detailed information on these systems was not available.

C. PROJECT PROTOTYPES: Design Criteria for Cost Reductions and Target Group Affordability

This section summarizes the principal components of cost for three generic shelter project types: I. low-cost public sector; II. low-cost private sector; and, III. standard high-cost private sector. The low-cost public sector project (I) is a summary of characteristics from projects A and B described in the previous section; the low-cost private sector project (II) corresponds to project C and uses the R-E zoning characteristics; and the standard high-cost private sector project (III) is a summary of characteristics from projects D and E, and uses the characteristics of an R-1 project.

The analyses and sections are broken down as follows:

(1) direct and indirect urbanization costs;

(2) shelter unit cost analysis;

(3) production costs for both shelter unit and urbanization;

(4) sales price, including financial conditions and basic service tariffs, in order to calculate mortgage payments and affordability; and

(5) criteria for cost reductions to increase affordability.

1. Urbanization Costs Analysis

Direct costs: Direct urbanization cost has 3 main components: raw land, site preparation and on-site infrastructure. Raw land prices are related to location and topographical conditions as well as infrastucture services installed in the area. All the projects analyzed are located on the periphery (outside the reach of urban infrasturcture services) and have regular topography (between 3 and 7% slopes). Average raw land prices in the projects under analysis are $\$1/m^2$.9/

Site preparation is related to topographical conditions. Earthworks (cutting and filling) have an incidence of between 15 and 21 percent ot total direct urbanization cost in the projects analyzed. Site preparation cost (gross/direct) per square meter ranges from $\$0.25/m^2$ to $\$2/m^2$ in the projects analyzed.

9/ $\$1/m^2$ reflects actual purchase cost of raw land, all projects are at an average distance of 20 kms from Panama city center, except for the project in a secondary city (which also estimates raw land value at $\$1/m^2$). Actual raw land costs in the vicinity of Tocumen Airport are reported to range between $4 and $\$7/m^2$.

On-site infrastructure costs are related to the level of norms and standards employed. On-site infrastructure components include: stormwater drainage, circulation network, water supply, sewage disposal and electric supply sytems. The incidence on cost of these components in the projects under analysis shows that for projects in compliance with high standard zoning categories (Norm R-1), road surfacing can reach up to 39% of total direct cost. A low-standard project that replaces concrete road surfacing with an asphalt layer bituminous "tosca" can reduce the incidence of roads to 17 percent of total direct cost. The use of latrines as a sewage disposal system presents the lowest incidence on cost (3.2%). This compares to the higher incidence of a collector network with septic tank system (8 percent of total direct cost). On-site infrastructure costs (gross/direct) per square meter range from $1.27/m^2$ to $10/m^2$ in the projects analyzed.

Indirect cost

All projects analyzed showed variations in indirect costs. Information on these items (sub-components), however, was normally unavailable as developers claim it is confidential. For the purposes of the present study indirect costs are applied in a uniform/consistent manner to all project types, these are:

Physical contingencies	5.0%
Design, supervision and management	10.0%
Interim financing charges (commercial Bank rate corresponds to a p.a. yearly rate of 15%)	7.5%

These indirect costs applied to direct site preparation and on-site infrastructure costs, result in an overall cost increase of 24%, as follows:

Type I: Low-cost public sector project (R-E) (Direct costs only)

	$
Raw land cost/gross m^2	1.00
Site preparation cost/gross m^2	0.24
On site infrastructure cost/gross m^2	1.27
*Developed land cost/gross m^2	2.51
Marketable area (of total project area)	51.50%
*Developed land cost/net m^2	4.87

Low-cost public sector project
(Direct and indirect costs)

	$
Raw land cost/gross m^2	1.00
Site preparation cost/gross m^2	0.30
On-site infrastructure cost/gross m^2	1.58
*Developed land cost/gross m^2	2.87
Marketable area	51.50%
*Developed land cost/net m^2	5.58

Type II: Low-cost private sector project (R-E)
(Direct costs only)

	$
Raw land cost/gross m^2	1.00
Site preparation cost/gross m^2	1.50
On-site infrastructure cost/gross m^2	4.40
*Developed land cost/gross m^2	6.90
Marketable area (of total project area)	62.20%
*Developed land cost/net m^2	11.09

Low-cost private sector projects (R-E)
(Direct and indirect costs)

	$
Raw land cost/gross m^2	1.00
Site preparations cost/gross m^2	1.86
On-site infrastructure cost/gross m^2	5.46
*Developed land cost/gross m^2	8.33
Marketable area	62.20%
*Developed land cost/net m^2	13.40

Type III: Standard high-cost private sector project (R-1)
(Direct costs only)

	$
Raw land cost/gross m^2	1.00
Site preparation cost/gross m^2	2.60
On-site infrastructure cost/gross m^2	9.67
*Developed land cost/gross m^2	13.27
Marketable area (of total project area)	61.00%
*Developed land cost/net m^2	21.75

<u>Standard high-cost private sector project</u>
<u>(Direct and indirect costs)</u>

	$
Raw land cost/gross m^2	1.00
Site preparation cost/gross m^2	3.23
On-site infrastructure cost/gross m^2	12.01
*Developed land cost/gross m^2	16.23
Marketable area	61.00%
*Developed land cost/net m^2	26.61

NOTE:
Given these costs per net m^2 of urbanized land, a standard lot of $192m^2$ for single detached dwellings (9.00mts frontage, according to minimum lot width of zoning category R-E, and a depth of 21.33mts), would cost approximately:

- 192 x $5.58/$m^2$ = $1,071.36 in the lowest standard public sector subdivison;
- 192 x $13.40/$m^2$ = $2,573.80 in the lowest standard private sector subdivison; and
- 192 x $26.61/$m^2$ = $5,109.12 in a standard high-cost (high standards) private sector subdivision.

2. <u>Shelter Unit Cost Analysis</u>

Three types of two-bedroom shelter units are presented here according to level of finish and size. These serve as illustrative solution types built by public and private sector developers in Panama.

Type I: <u>Low-cost public sector project</u>

The lowest cost unit consists of a single detached dwelling with a built-up area of $44m^2$ with the following characteristics:

- exposed concrete block walls with no finishes or paint;
- corrugated metal roof with metal structure without false ceiling;
- wooden doors and windows (no glass louvers)
- simple cement mixture floor - (polished with no tile);
- wash basin and shower;
- toilet is separate (pit latrine);
- electricity.

The approximate direct (materials and labor) cost/m^2 for this shelter unit is $90.00/$m^2$. The direct unit cost is $3,960.00

Type II: Low-cost private sector project

The intermediate cost unit consists of a single detached dwelling with a built-up area of $50m^2$ with the following characteristics:

- plastered and painted concrete block walls;
- galvanized steel roof with metal structure, without false ceiling;
- wooden doors and aluminum frame glass louver windows;
- grey-cement floor tiles;
- porcelain wash basin, toilet and waterproof plaster in shower;
- electricity.

The approximate direct (materials and labor) cost/m^2 for this shelter unit is estimated at \$120.00/m^2. The direct unit cost is \$6,000.00

Type III: Standard high-cost private sector project

The highest cost unit consists of a single detached dwelling unit with a built-up area of $60m^2$ with the following characteristics:

- interior and exterior plastered and painted concrete block walls;
- galvanized steel roof with metal structure includes suspended false ceiling;
- wooden doors and aluminum frame glass louver windows;
- white-cement floor tiles;
- glazed tile in the bathroom;
- porcelain wash basin and toilet;
- electricity and fixtures.

The approximate direct (materials and labor) cost/m^2 for this shelter unit is estimated at \$150.00/m^2. The direct unit cost is \$9,000.00

For the purposes of the present study, the same indirect cost percentages were applied to both urbanization and construction costs as follows:

Physical contingencies;	5.0%
Design, supervision and management; and	10.0%
Interim financing charges	7.5%

3. Production Costs (direct and indirect) for both Shelter Unit and Urbanization

Type I:	low standard public sector unit		
	(2 bedrooms - 44m^2)		$4,917.00
	urbanized land		1,071.36
		Total	$5,988.36
Type II:	low standard private sector unit		
	(2 bedrooms - 50m^2)		$7,450.00
	urbanized land		2,572.80
		Total	$10,022.80
Type III:	high standard unit		
	(2 bedrooms - 60m^2		$11,175.00
	urbanized land		5,109.12
		Total	$16,284.12

Other costs must be factored in as follows:

Profit: 15% over total production costs. This figure was mentioned as the minumum profit at which developers would be interested in participating in the Program.
Closing costs: $300 as a lump sum, sometimes in 2 or more payments. Includes legal expenses and other administrative costs. $500 estimated for lower cost solutions.

Basic public services: $25.00 per month for water, electricity and garbage collection applied to 50 and 60m^2 units, and $16.60 minimum consumption for 44m^2 units.

Life and fire insurance: $7.00 per month applied across the board.

Finance charges: analysis is done at 20 years, and at preferential mortgage rate of 8 percent and market rate of 12 percent.

Once the total sales price was calculated, affordability was estimated based on 25% of household income devoted to mortgage payments.

4. Sales Price and Affordability

Type I: low-cost public sector project (R-E, and other cost reductions)

TOTAL PROJECT COSTS	(values in thousands)	% OF TOTAL
land	1,515	5.41
site preparation	451	1.61
on-site infrastructure	2,389	8.54
shelter construction	19,981	71.40
developer's profit	3,650	13.04
TOTAL	$27,986	100.0

Number of units 4,064

unit production cost	$5,988.36
developer's profit	898.00
unit selling price Type I	$6,887.00

Financial conditions	
downpayment (closing costs)	$500.00
interest rate/year (Preferential Mortgage Law)	8%
loan term	20 years
monthly mortgage payment	$53.42
basic public services	$16.66/month
monthly insurance	$7.00
total monthly payment	$77.08
% of monthly income	25%
household income eligible Type 1 (family below the 30 percentile)	$300.00/month

A second analysis of affordability was done at the market rate of interest as follows:

interest rate at (all other components unchanged)	12%
total monthly payment	$93.98
affordable to households earning	$370.00/month
% of monthly income: (families below the 35 percentile)	25%

Type II: low-cost/reduced standards private sector project (R-E)

TOTAL PROJECT COSTS	(values in thousands)	% OF TOTAL
land	377	2.68
site preparation	702	4.99

on-site infrastructure	2,060	14.63
shelter construction	9,[illegible]9	64.65
developer's profit	1,[illegible]6	13.04
TOTAL	$14,073	100.00

Number of units 1,221

unit production cost	$10,022.80
developer's profit	1,503.00
unit selling price	$11,525.00

Financial conditions (Preferential Mortgage Law)

downpayment (Closing costs)	$800.00
interest rate/year	8%
loan term	20 years
monthly mortgage payment	$89.70
basic public services	$25.00/month
monthly insurance	$7.00
total monthly payments	$121.70
% of monthly income	25%
household income eligible Type II (family below the 45 percentile)	$475.00/month

Market rate of interest analysis:

interest rate at (all other components unchanged)	12%
total monthly payment	$150.08
affordable to households earning	$585.00/month
% of monthly income: (families at the 50 percentile)	25%

Type III: <u>Standard high-cost private sector project</u> (R-1)

TOTAL PROJECT COSTS	(values in thousands)	% OF TOTAL
land	354	1.68
site preparation	1,143	5.43
on-site infrastructure	4,250	20.18
shelter construction	12,568	59.67
developer's profit	2,747	13.04
TOTAL	21,063	100.00

Number of units 1,125

unit production cost	$16,284.12
developer's profit	2,443.00
unit selling price	$18,727.00

Financial conditions (Preferential Mortgage Law)

downpayment	
(closing costs)	$800.00
interest rate/year	8%
loan term	20 years
monthly mortgage payment	$149.95
basic public services	$25.00/month
monthly insurance	$7.00
total monthly payments	$181.95
% of monthly income	25%
household income	$700.00/month
(family beyond 50 percentile)	

Note: This unit is not affordable to A.I.D.'s target population at either 8% or 12%.

5. Criteria for Cost Reductions in Norms and Standards to Increase Target Group Affordability

The basic issue with respect to subdivision and infrastructure norms and standards is the lack of recognition of the interrelationship between urban development expectations, implied costs, and affordability to lower-income groups

The production of affordable housing should be the guiding principle for the preparation of design specifications. Variations should exist (backed by law) with respect to what beneficiaries of different income levels can afford.

Exceptions to existing regulations have been negotiated in the past. This negotiating process which has resulted in lower project costs and increased affordability constitutes a precedent that must be taken into consideration. Changes in norms and standards have not come easily. They are a result of lengthy and costly negotiations with public agencies.

Given the time limitations for the present study there were only a limited number of components and issues that were analyzed. These seemed to be the most important elements for cost reductions which could be applied to HG-013 projects.

The following analysis shows the elements of a unit with a sales price of about $9,000, which would be affordable to a family earning about $400 per month (the 40th percentile).

$9,000 Shelter Unit/40th percentile ($400 per month)

Raw land cost/gross m^2	$1.00 10/
Site preparation cost/gross m^2	$1.50 11/
On-site infrastructure cost/gross m^2	$4.40 12/

The following indirect costs are factored into urbanization and shelter construction costs:

Physical contingencies	5.0%
Design, supervision, and management	10.0%
Interim finance	7.5%

*Developed land cost/gross m^2	$8.33
Shelter unit base cost/gross m^2	$100.00 13/
Direct Construction cost/gross	$4,800.00

Other Assumptions:

Total project area: 30 hectares	
Percentage of total area devoted to circulation:	22.8%.
Percentage of total area devoted to open space, community facilities and institutional use:	15.0%.

10/ Assumes a peripheral location outside of the reach of city water and sewage networks. A raw land cost/gross m^2 of $4.00 will have only a slight effect on project costs and affordability. Holding all other costs equal, the unit would be affordable to a family earning $430 per month, still close to the 40th percentile.

11/ Assumes projects to be developed on sites with regular topography (5% slopes in average).

12/ Assumes reductions in norms and standards similar to those found in private sector project coded C, i.e. substitutes concrete road surfaces with bituminous "tosca" and asphalt; uses roads rights of way of no more than 10mts; avoids sewage pipes under main streets and reduces pipe intersections; and uses open ditches for rainstorm drainage.

13/ This construction cost per square meter can be achieved building duplexes ("vivienda adosada"), with reduced standards similar to those found in private sector project coded C, e.g. eliminates false ceilings, plaster and paint on exterior walls, cement tile on floors; and porcelain bath tiles, among others.

Marketable area:	62.20%
Lot size	$147m^2$
frontage	7.00mts
depth	21.00mts

Number of lots/units: 1,269

Density 42.3 lots/hectare
212 persons/hectare

Density is below maximum density allowed in norm R-E (400 persons/hectar).

lot size	$147m^2$
urbanized cost of land/net m^2	$13.39
cost of urbanized land	$1,968.33
unit construction costs	$5,960.00
total production cost (urbaniz. and unit)	$7,928.33
developer's profit (15% of production cost)	$1,189.25
unit selling price	$9,118.00
Financial conditions	
downpayment	$800.00
interest rate/year	8%
loan term	20 years
monthly mortgage payment	$69.57
basic public services	$25.00
monthly insurance	$7.00
total monthly payment	$101.57
% of monthly income	25%
household income (family below the 40 percentile)	$400.00/month

If the mortgage interest rate is 12% instead of 8% (all other elements remaining constant), this shelter project would be affordable to households earning $490.00/per month.

Another set of cost reductions would result from reducing the percentage of total area devoted to circulation, and obtaining a higher marketable area. This can be achieved through the use of "cul-de-sac" streets, collective parking and a combination of vehicular traffic and pedestrian paths.

With all other cost components held constant, the percent of circulation area was reduced to 18% (represents a 7% reductions over previous developed land/net cost of $13.39/m²), with a developed land cost/net m² of $12.43. The resulting unit selling price is $8,955.00. Given a 12% mortgage interest rate for this solution, it would be affordable to households earning $475.00 per month, or families below the 45 percentile.

Finally, if the infrastructure cost characteristics of a private sector project with high standards are used, along with a reduction in lot size and constructed area (duplex or "adosada") and additional reductions from eliminating finishes, the unit is just affordable to median income households at a 12% interest rate, and affordable to families at the 45th percentile at an 8% interest rate.

The analysis shows the following results:

*Developed land cost/net m2	$26.61
Plot size	147m2
Cost of urbanized land/plot	$3,911.67
Shelter unit construction cost/m2 (gross)	$100.00
shelter unit construction cost	$5,960.00
total production cost	$9,871.67
developer's profit (15% of production cost)	$1,480.75
unit selling price	$11,352.00
interest rate	8%
total monthly payment	$120.26
% of monthly income	25%
household income (family below the 45 percentile)	$480.00/month

Financed at 12%, the project is affordable to households earning $585.00 per month, or families at the 50 percentile.

D. Conclusions and Strategic Recommendations

The previous analysis shows that reductions in lot size and shelter unit area and finishes, without changes in subdivision and infrastructure standards, constitute the upper limit of affordability to the beneficiary group under this program, at a market interest rate of 12% in the Panama Metropolitan Area between Panama City and Tocumen. With no changes in the way land development and building codes are applied, rapid urbanization of Arraijan and Chorrera will continue. Meanwhile, the urbanized land between Panama City and Tocumen, where most of the major urban infrastructure and jobs are located, will not develop nearly as rapidly. Uniform application of norms can promote more efficient use of those areas where a bulk of Panama's urbanization should be targetted.

Moreover, the broad-based application of reduced zoning and infrastructure norms and standards for lower income development without having to resort to the current time-consuming negotiations with the appropriate ministries should reduce housing costs. Achieving lower standards will require a concerted effort by institutions like CAPAC and MIPPE to establish dialogue and reach agreements with MIVI and MOP. Use of the special subdivision norm R-E granted by MIVI, and achievement of reductions in infrastructure standards, especially for roads and drainage, would have the most effect on lowering per unit costs.

In addition to the public regulatory agencies' flexibility in the application of reduced norms and standards, further cost reductions can be achieved by better site planning. A developer that minimizes circulation area and maximizes marketable area can effectively save as much as $2,000 on a 2 bedroom unit on a 147m^2 lot.

Training programs can be used to orient public and private sector technicians in better planning and design processes of shelter projects. Several effective computer-based methodologies for training are the "PADCO/Bertand Model", and the Private Developer's Model".

Annex 1
"NORMA C-3"
COMERCIAL VECINAL O DE BARRIO

Minimum lot area	$250m^2$
Minimum lot frontage	12.00mts
Maximum lot depth	20.00mts
Maximum length	ground floor and one level
Ground occupation area	50% of lot area
Open space	50% of lot area
Built-up area	100% of lot area
Frontage set-back	as indicated in approved site plan
Lateral set-back	According to zoning or 1.50mts. minimum on each side. A fence should be built surrounding the area, height: 1.80mts.
Minimum backyard set-back	2.50mts
Parking	One parking space per $80.00m^2$ of commercial area.

Annex 2
Norms for Community Facilities

School areas	
Kindergarten	$2.0m^2$ per family
Primary Schools	1.2 students per family, $64m^2$ of classroom space per every 40 students, $2.0m^2$ of built-up area per student, $10m^2$ of open space per student.
Secondary Schools	0.17 students per family, $1.3m^2$ of built-up area per student, $10m^2$ of open space per student.
Recreation areas (sports fields and playgrounds)	$15m^2$ per family
Health centers	One health center per every 20-30 thousand people (4,000-6,000 units).

Annex 3
Typical Requirements for Street Design

Collector road
(for penetration into the project - two way transit)

Right of way ("derecho de vía")	15.00mts
Carriage way ("rodadura")	8.00mts
Sidewalk	1.20-1.60mts
Drainage ditch	1.00mt
Road shoulder	0.90-1.30mts

Local road
(for internal distribution and access to the lots - two way transit).

Right of way	
surface drainage	12.00mts
underground system	10.00mts
Carriage way	
surface drainage	3.25mts
underground system	3.00mts
Sidewalk	1.20mts
Drainage ditch (surface drainage on both sides of the road)	1.00mt
Road shoulder	
surface drainage	0.55-0.60mts
underground system	0.80mts

Pedestrian Paths

Right of way	3.00-5.00mts
Concrete walkway	1.20-1.50mts
Grassy area	0.90-1.75mts
Drainage ditch (concrete)	0.90-1.75mts

Annex 4 (Page 1)

Components of Water and Sewerage Systems

Potable Water Supply

Domestic consumption for a population between 2,000 and 5,000 people (urban) 190 liters/person/day; (rural) 115 liters/person/day.

Material for pipes.
Cast iron in Panama and Colon, P.V.C. or asbestos-cement in the periphery of these cities or where indicated by IDAAN; either one in the rest of the country

Minimum pipe diameters
4 inches in urban areas
3 inches in rural areas

Maximum distance between valves
500mts valves will be placed inside concrete "boxes" with a steel lid.

Fire hydrants

Minimum supply pipe diameter:
4" in urban areas
3" in rural areas

Minimum distance between hydrants: 150mts.

Domiciliary connections

Material: copper in Panama City and Colon; P.V.C. can be used in the rest of the country after approval by IDAAN.

Minimum diameters
In Panama City and Colon 1"
In the rest of the country 3/4"

Depth of excavation
1.00mts over the top side of the pipe, whenever the pipe crosses a dirt road or asphalt it should be placed inside a steel pipe to avoid collapse.

Annex 4 (page 2)

Sewage Systems

Minimum pipe diameter: 8" except in special cases and whenever IDAAN approves.

Minimum depth: main collector pipes 1.50mts, average 2.00mts or whatever necessary to collect the discharge from buildings on both sides of the road; pipes located at a less than minimum depth should be justified and adequately protected to avoid damage.

Flow velocity
minimum: 0.60mts per second
maximum: 5.00mts per second for vitreous clay and 3.35mts per second for P.V.C. pipe.

Placement of Manholes
at the end of each section
at every intersection (main)
at distances no longer than 100mts in rectilinear sections for pipes up to 12" in diameter.

Placement of main lines
main lines must be placed along the middle of the streets, except in cases in which other services demand a change in location.

Annex 5
Examples of IRHE Norms

(Page 1)

Type of electrical systems

- above ground (poles and cables) whenever IRHE's secondary supply lines are above ground.
- underground, whenever IRHE's secondary supply is underground and the load is more than 200 amperes.

One-phase service ("monofásico), 120 volts is adequate for residential use and small businesses with loads equal to or less than 2 KW. and engines of 1/2 horsepower up to 2 H.P.

There is an issue of concern with respect to IRHE's operation is contained in item 1.2 of section "Solicitud de Servicio que Requieren Ampliación del Sistema" of its Construction Manual. Essentially, this section states the following: The developer will finance IRHE's construction of the system. In turn IRHE repays the developer through collection of service payments from beneficiaries. If the amount collected by IRHE after two ye--- does not add up to the initial cost, the developer assumes the difference. The developer protects himself against this eventuality by raising his contingency costs.

The actual procedure for project approval and construction permit is contained in the "Normas de Desarrollo Urbano para la Ciudad de Panamá." The following description is taken from the "Gaceta Oficial" publication of January 1984 (See footnote 3):

The process is divided into 3 stages: initial, intermediate and final. Each of these stages contains numerous requirements, both legal and technical.

> The initial stage consists of submittal of a letter of intent to subdivide, property title, pre-project plans and specifications. After documentation is completed and submitted, MIVI has 30 days to resolve and present observations/changes and specific requirements for the second stage to begin.
>
> The second stage consists of the approval of project plans and construction permit. A developer is allowed a maximum of one year to submit the necessary documentation. These plans have to be previously approved by IDAAN, IRHE, and MOP. Whenever deemed

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necessary, MIVI can request approval by other institutions. The Ministry of Health must approve subdivisions outside the limit of the waterborne sewage network. Working drawings containing structural and infrastructure specifications usually amount to several dozen sheets. After documentation is submitted, MIVI will process the permit in no more than 30 days.

The <u>third and final stage</u> consists of approval of works after a field inspection by all responsible agencies. Attorneys will not process titles and municipalities will not issue occupation permits, unless "planos de inscripción" are finally approved by MIVI.

Annex 6 (Page 1)

Norms and Standards for Shelter in Rural Areas

IVU (presently MIVI) recognized in 1968 that specific norms were required for rural subdivisions since the existing high standard norms for urban would be an obstacle to the development of adequate subdivisions in rural areas."1/

Article 1 established that these norms apply to subdivisions located in rural areas, outside of the coverage of water supply and sewage systems. Procedures for project approval and the construction permit are the same as for urban areas (described in Section 6 which follows). The minimum requirements for rural subdivisions as stated in Resolution No. 149 are the following:

Public space	7.5% of residential area
Sewage rights of way	Sewage rights of way should be provided for future construction, these should be determined by IDAAN.
Stormwater drainage	Will be limited to open ditches along the roads and pedestrian paths.
Roads and paths	Can be built with hardpan ("tosca") or other selected materials as approved by MOP.

Road widths

These are given according to number of lots served and type of road (penetration versus local or "cul de sac") they range between:
Right of way ("Derecho de vía") 25.00--11.10mts
Carriage way ("Rodadura") 12.20-6.10mts

1/ Anexo F, Normas para parcelaciones rurales con caracteristicas especiales y Normas Minimas para urbanizaciones rurales, Resolución No. 149, Págs. 117-122, 2 de agosto de 1968.

Annex 6 (page 2)

Permitted uses	Single detached dwellings. Other uses like public buildings and commercial activity as approved by MIVI and Municipal Engineering Directorate.
Minimum lot size	With water supply system and sewage 200-300m^2. Water supply only 600m^2. Inadequate soils require consultation with Ministry of Health to determine lot size.
Maximum density	225 persons/hectare (45 lots/hectare).
Minimum lot frontage	15.00mts.
Minimum lot depth	30.00mts.
Lateral set-back	2.50mts. maximum
Set-back for backyard	5.00mts. maximum
Maximum height	ground floor and one level
Ground occupation area	50% of lot area
Open space	50% of lot area

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ANNEX F

HG-013 CASH FLOW ANALYSIS

Prepared by Pedro Lasa

July 7, 1986

HG-013 CASH FLOW ANALYSIS

This Annex contains a cash flow analysis which shows the effects of two alternative hypotheses. The key assumptions had to do with the amount of spread for the Trust Fund vis-a-vis the mortgage lenders and the level of Liquidity Reserve which would be created by the spread. A U.S. $5.0 million disbursement was assumed. First a repayment schedule was prepared using several assumptions (see Table F-B-1):

- Amount of Repayment Obligation	U.S.$5,000,000
- Term	30 years
(10 years of semiannual interest payments only)	
(20 years of semiannual loan repayments including principal and interest)	
- Interest Rate	8.0%
- A.I.D. Fees and other Commissions	.8%
Final Cost of HG Resources	8.8%

Tables F-B-2 and F-B-3 present two alternative repayment plans to the Trust Fund by the participating mortgage lending institutions (Fund users), with different spread assumptions as follows:

	Hypothesis A	Hypothesis B
- Total HG Loan	U.S.$4,900,000*	U.S.$4,900,000*
- Term of Loan	30 years	30 years
	(Interest payments each semester over 10 years)	
	(Loan repayments each semester over 20 years)	
- Trust Fund Interest Rate	10%	10.5%
- Spread to Banks	2.75%	2.25%

In case A, the Trust Fund operates with a small spread of 1.2% while the banks retain the remaining 2.75%. In case B, the margin of the Trust Fund is increased to 1.7% and the spread to the banks is reduced to 2.25%, the minimum acceptable rate. In summary, the situation with respect to each hypothesis is as follows:

	Hypothesis A	Hypothesis B
- Cost of HG Resources	(8.8%)	(8.8%)
- Market Interest Rate of Banks	12.75%	12.75%
- Gross Spread	3.95%	3.95%
- Margin of Trust Fund	(1.20%)	(1.70%)
- Margin of Banks	(2.75%)	(2.25%)

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* The U.S.$5,000,000 has been reduced by 2% to cover the commissions of A.I.D. and the U.S. Investor.

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Based on the above figures and a U.S.$5,000,000 loan, the following results were projected for each hypothesis:

Hypothesis A (This assumes a 1.20% spread to the Trust Fund.)

a) Grace Period on Capital (10 years or 20 semesters):

- Total Payments to A.I.D. Note Holders	U.S.$212,500 per semester
- Total Payments to Trust Fund	245,000 per semester
- Net proceeds to the Trust Fund	32,500 per semester

The net proceeds or differential would be used to provide: 1) Remuneration to the Trustee, and, 2) the creation of a Liquidity Reserve within the Trust Fund. For the purposes of the following analysis, 33% of the differential was assigned to remuneration, and 67% to the liquidity fund. This will vary once the Trust Fund is in operation.

- Differential each semester	U.S.$32,500
Remuneration of Trustee (33%)	10,725
Liquidity Reserve (67%)	21,775
- Results at end of Period (10 years	
Differential in 20 Semesters	650,000
Remuneration of Trustee (33%)	214,500
Liquidity Reserve (67%)	435,500

The Liquidity Reserve would be invested over the 10 year grace period. With the investment of U.S.$21,775 over the 19 semesters at an annual rate of 7.5% the Fund would grow to a total U.S.$588,028. For the total HG Loan of U.S.$25.0 million, the reserve would reach U.S.$2,940,140 or 11.76 percent of the Loan, for the grace period alone.

b) Period of Capital Repayment (20 years, or 40 semesters):

- Total Repayments to A.I.D. Fiscal Agent	$262,092 per semester
- Total Repayments to Trust Fund	285,563 per semester
- Net proceeds to the Trust Fund	23,471 per semester

The differential over the last 20 years of the loan period would be less because of principal payments, and the respective amount used to provide liquidity would have to be reduced, if remuneration to the Trustee is maintained at about the same level.

- Remuneration of Trustee	$10,562 per semester
- Liquidity Reserve	$12,909 per semester

The investment of the liquidity reserve at a 7.5% annual rate of interest over 39 semesters would result in a growth of the fund to U.S.$1,102,544.57 at the end of the period of 20 years

When applied over the full loan value of U.S.$25.0 million, the total would reach U.S.$5,512,722.85 for the amortization period.

The Liquidity Reserve would be $8.45 million over the life of the Program.

c) Utilization of Available Resources

The Borrowers and owners of the Trust Fund, together with A.I.D., will need to identify a strategy for the use of resource surpluses for the continued capitalization and/or reinvestment through an additional program of loans. The following parameters might be considered as the basis for discussions.

The Liquidity Reserve of U.S.$2,940,140 accumulated over the first 10 years of the loan could be used as a permanent liquidity fund to guaranty A.I.D. repayments. Over the next twenty years the interest earned on this amount plus the surpluses generated from repayments on the capital value of the loan could be used as a reinvestment fund for a new loans as follows:

- Permanent Liquidity Fund	U.S.$2,940,140	
- Reinvestment Fund		
Liquidity Fund Interest (7.5%)		$110,255 per semester
Surpluses in Capital Repayments ($12,909.25 x 5 disbursements)		64,545 per semester
Total Reinvestment each semester	174,800	
Total Reinvestment over 20 years ($174,800 x 39 semesters)	$6,817,200	

The loan operation would generate additional reinvestment effects, so at a minimum, at the end of the 30 year period, the Trust Fund would have a portfolio of at least U.S.$9,757,370, resulting from the addition of the Liquidity Reserve but without use of the new loan portfolio.

<u>Hypothesis B</u> (This assumes a 1.70% spread to the Trust Fund.)

As above, these calculations are based on a disbursement of U.S.$5,000,000.

a) Grace Period on Capital (10 years or 20 semesters)

- Total Payments to A.I.D. Fiscal Agent	U.S.$212,500
- Total Payments to Trust Fund	252,250
- Net proceeds to the Trust Fund	44,750

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The distribution of the net proceeds or differential for remuneration to the Trustee and for reserves would be as follows:

- Differential each semester	U.S.$ 44,750
Remuneration of Trustee (25%)	11,188
Liquidity Reserve (75%)	33,562
- Results at end of Period (10 years)	
Remuneration of Trustee	223,760
Liquidity Reserve	895,000

The productive investment of the Liquidity Reserve over the 10 year period at a 7.5% annual interest rate would result in a total sum of U.S.$906,332 at the end of the period. Projected for the total U.S.$25.0 million program, this liquidity fund would grow to $4.5 million, or 18% of the loan, for the grace period.

b) Period of Capital Repayment (20 years, or 40 semesters):

- Total Repayments to A.I.D. Fiscal Agent	$262,092 per semester
- Total Repayments to Trust Fund	285,403 per semester
- Differential in Favor of Trust Fund	33,311 per semester
- Use of Differential	
- Remuneration of Trustee	$10,993 per semester
- Liquidity Reserve	$22,318 per semester

The investment of the Liquidity Reserve at 7.5% annual interest over the 20 years would bring the reserve to U.S. $1,906,121 at the end of the period, or about U.S. $9.5 million on the total HG operation for the $25.0 million Program. The grand total, therefore, would be $13.0 million (future dollars) for over the life of the Program, as compared to $8.45 million assuming a spread of .5% less.

c) Utilization of Available Resources
Following the criteria described under Hypothesis A for establishing a permanent liquidity fund with $3.0 million, and reinvesting the rest ($1.5 million), the following results were obtained:

- Permanent Liquidity Fund	U.S.$3,000,000
- Reinvestment Fund	
Surplus of the Liquidity Fund	1,531,660
Liquidity Fund Interest (7.5%) ($112,500 x 39 semesters)	4,387,500
Surpluses in Capital Repayments ($111,590 x 39 semesters)	4,352,010
Total	U.S.$10,271,170

At the end of the period, with the inclusion of the Liquidity Fund (which will have grown through reinvestment and capitalization), the effective size of the Trust Fund portfolio will be over U.S.$13 million (future dollars), in addition to the $3.0 million Liquidity Reserve.

The above analysis clearly indicates some interesting possibilities in the management of the financial operations of the Trust Fund and its potential indirect effects. At the end of the 30 years the entire amount of the loan could be invested as no Liquidity Reserve would be required; the HG Loan would have been repaid. Moreover, the effect of the total investment would be approximately $26.7 million if we assume that counterpart requirements would be the same.

It is particularly important to remember that the potential growth of the Trust Fund results from the decision of the mortgage banks to sacrifice their normal spreads. Therefore, it is these banks which should be the direct beneficiaries of the resulting surpluses, through credits which are qualified under the Program. Also, as owners of the Trust Fund, the banks should participate in determining the utilization of these resources and ensure their effective application.

MONTO INICIAL DEL PRESTAMO 4,900,000.00

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	4,900,000.00	245,000.00	40,563.15	285,563.16	4,859,436.85
2	4,859,436.85	242,971.85	42,591.31	285,563.16	4,816,845.54
3	4,816,845.54	240,842.28	44,720.87	285,563.16	4,772,124.66
4	4,772,124.66	238,606.24	46,956.92	285,563.16	4,725,167.75
5	4,725,167.75	236,258.39	49,304.76	285,563.16	4,675,862.98
6	4,675,862.98	233,793.15	51,770.00	285,563.16	4,624,092.98
7	4,624,092.98	231,204.65	54,358.50	285,563.16	4,569,734.47
8	4,569,734.47	228,486.73	57,076.43	285,563.16	4,512,658.05
9	4,512,658.05	225,632.91	59,930.25	285,563.16	4,452,727.80
10	4,452,727.80	222,636.39	62,926.76	285,563.16	4,389,801.03
11	4,389,801.03	219,490.06	66,073.10	285,563.16	4,323,727.93
12	4,323,727.93	216,186.40	69,376.76	285,563.16	4,254,351.18
13	4,254,351.18	212,717.56	72,845.59	285,563.16	4,181,505.59
14	4,181,505.59	209,075.28	76,487.87	285,563.16	4,105,017.71
15	4,105,017.71	205,250.89	80,312.27	285,563.16	4,024,705.45
16	4,024,705.45	201,235.28	84,327.86	285,563.16	3,940,377.57
17	3,940,377.57	197,018.88	88,544.27	285,563.16	3,851,833.29
18	3,851,833.29	192,591.67	92,971.49	285,563.16	3,758,861.80
19	3,758,861.80	187,943.09	97,620.06	285,563.16	3,661,241.74
20	3,661,241.74	183,062.09	102,501.07	285,563.16	3,558,740.68
21	3,558,740.68	177,937.04	107,626.12	285,563.16	3,451,114.56
22	3,451,114.56	172,555.73	113,007.42	285,563.16	3,338,107.13
23	3,338,107.13	166,905.36	118,657.80	285,563.16	3,219,449.34
24	3,219,449.34	160,972.47	124,590.69	285,563.16	3,094,858.65
25	3,094,858.65	154,742.93	130,820.22	285,563.16	2,964,038.43
26	2,964,038.43	148,201.92	137,361.23	285,563.16	2,826,677.20
27	2,826,677.20	141,333.86	144,229.29	285,563.16	2,682,447.90
28	2,682,447.90	134,122.40	151,440.76	285,563.16	2,531,007.15
29	2,531,007.15	126,550.36	159,012.80	285,563.16	2,371,994.35
30	2,371,994.35	118,599.72	166,963.44	285,563.16	2,205,030.91
31	2,205,030.91	110,251.55	175,311.61	285,563.16	2,029,719.30
32	2,029,719.30	101,485.97	184,077.19	285,563.16	1,845,642.12
33	1,845,642.12	92,282.11	193,281.05	285,563.16	1,652,361.07
34	1,652,361.07	82,618.05	202,945.10	285,563.16	1,449,415.97
35	1.449,415.97	72,470.80	213,092.36	285,563.16	1,236,323.61
36	1,236,323.61	61,816.18	223,746.97	285,563.16	1,012,576.64
37	1,012,576.64	50,628.83	234,934.32	285,563.16	777,642.31
38	777,642.31	38,882.12	246,681.04	285,563.16	530,961.28
39	530,961.28	26,548.06	259,015.09	285,563.16	271,946.18
40	271,946.18	13,597.31	271,965.85	285,563.16	-19.66

MONTO INICIAL DEL PRESTAMO 40,563.15

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	40,563.15	2,028.16	335.79	2,363.95	40,227.36
2	40,227.36	2,011.37	352.58	2,363.95	39,874.78
3	39,874.78	1,993.74	370.21	2,363.95	39,504.57
4	39,504.57	1,975.23	388.72	2,363.95	39,115.86
5	39,115.86	1,955.79	408.15	2,363.95	38,707.70
6	38,707.70	1,935.39	428.56	2,363.95	38,279.14
7	38,279.14	1,913.96	449.99	2,363.95	37,829.15
8	37,829.15	1,891.46	472.49	2,363.95	37,356.66
9	37,356.66	1,867.83	496.11	2,363.95	36,860.55
10	36,860.55	1,843.03	520.92	2,363.95	36,339.63
11	36,339.63	1,816.98	546.97	2,363.95	35,792.66
12	35,792.66	1,789.63	574.31	2,363.95	35,218.35
13	35,218.35	1,760.92	603.03	2,363.95	34,615.32
14	34,615.32	1,730.77	633.18	2,363.95	33,982.13
15	33,982.13	1,699.11	664.84	2,363.95	33,317.29
16	33,317.29	1,665.86	698.08	2,363.95	32,619.21
17	32,619.21	1,630.96	732.99	2,363.95	31,886.22
18	31,886.22	1,594.31	769.64	2,363.95	31,116.59
19	31,116.59	1,555.83	808.12	2,363.95	30,308.47
20	30,308.47	1,515.42	848.52	2,363.95	29,459.95
21	29,459.95	1,473.00	890.95	2,363.95	28,569.00
22	28,569.00	1,428.45	935.50	2,363.95	27,633.50
23	27,633.50	1,381.67	982.27	2,363.95	26,651.23
24	26,651.23	1,332.56	1,031.39	2,363.95	25,619.84
25	25,619.84	1,280.99	1,082.96	2,363.95	24,536.89
26	24,536.89	1,226.84	1,137.10	2,363.95	23,399.78
27	23,399.78	1,169.99	1,193.96	2,363.95	22,205.82
28	22,205.82	1,110.29	1,253.66	2,363.95	20,952.17
29	20,952.17	1,047.61	1,316.34	2,363.95	19,635.83
30	19,635.83	981.79	1,382.16	2,363.95	18,253.67
31	18,253.67	912.68	1,451.26	2,363.95	16,802.41
32	16,802.41	840.12	1,523.83	2,363.95	15,278.58
33	15,278.58	763.93	1,600.02	2,363.95	13,678.57
34	13,678.57	683.93	1,680.02	2,363.95	11,998.55
35	11,998.55	599.93	1,764.02	2,363.95	10,234.53
36	10,234.53	511.73	1,852.22	2,363.95	8,382.31
37	8,382.31	419.12	1,944.83	2,363.95	6,437.47
38	6,437.47	321.87	2,042.07	2,363.95	4,395.40
39	4,395.40	219.77	2,144.18	2,363.95	2,251.22
40	2,251.22	112.56	2,251.39	2,363.95	-0.16

MONTO INICIAL DEL PRESTAMO 42,591.31

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	42,591.31	2,129.57	352.58	2,482.14	42,238.73
2	42,238.73	2,111.94	370.21	2,482.14	41,868.52
3	41,868.52	2,093.43	388.72	2,482.14	41,479.80
4	41,479.80	2,073.99	408.15	2,482.14	41,071.65
5	41,071.65	2,053.58	428.56	2,482.14	40,643.09
6	40,643.09	2,032.15	449.99	2,482.14	40,193.10
7	40,193.10	2,009.65	472.49	2,482.14	39,720.61
8	39,720.61	1,986.03	496.11	2,482.14	39,224.49
9	39,224.49	1,961.22	520.92	2,482.14	38,703.57
10	38,703.57	1,935.18	546.97	2,482.14	38,156.61
11	38,156.61	1,907.83	574.31	2,482.14	37,582.29
12	37,582.29	1,879.11	603.03	2,482.14	36,979.26
13	36,979.26	1,848.96	633.18	2,482.14	36,346.08
14	36,346.08	1,817.30	664.84	2,482.14	35,681.24
15	35,681.24	1,784.06	698.08	2,482.14	34,983.16
16	34,983.16	1,749.16	732.99	2,482.14	34,250.17
17	34,250.17	1,712.51	769.64	2,482.14	33,480.54
18	33,480.54	1,674.03	808.12	2,482.14	32,672.42
19	32,672.42	1,633.62	848.52	2,482.14	31,823.89
20	31,823.89	1,591.19	890.95	2,482.14	30,932.94
21	30,932.94	1,546.65	935.50	2,482.14	29,997.45
22	29,997.45	1,499.87	982.27	2,482.14	29,015.17
23	29,015.17	1,450.76	1,031.39	2,482.14	27,983.79
24	27,983.79	1,399.19	1,082.96	2,482.14	26,900.83
25	26,900.83	1,345.04	1,137.10	2,482.14	25,763.73
26	25,763.73	1,288.19	1,193.96	2,482.14	24,569.77
27	24,569.77	1,228.49	1,253.66	2,482.14	23,316.12
28	23,316.12	1,165.81	1,316.34	2,482.14	21,999.78
29	21,999.78	1,099.99	1,382.16	2,482.14	20,617.62
30	20,617.62	1,030.88	1,451.26	2,482.14	19,166.36
31	19,166.36	958.32	1,523.83	2,482.14	17,642.53
32	17,642.53	882.13	1,600.02	2,482.14	16,042.51
33	16,042.51	802.13	1,680.02	2,482.14	14,362.49
34	14,362.49	718.12	1,764.02	2,482.14	12,598.47
35	12,598.47	629.92	1,852.22	2,482.14	10,746.25
36	10,746.25	537.31	1,944.83	2,482.14	8,801.42
37	8,801.42	440.07	2,042.07	2,482.14	6,759.35
38	6,759.35	337.97	2,144.18	2,482.14	4,615.17
39	4,615.17	230.76	2,251.39	2,482.14	2,363.78
40	2,363.78	118.19	2,363.96	2,482.14	-0.17

MONTO INICIAL DEL PRESTAMO 44,720.87

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	44,720.87	2,236.04	370.21	2,606.25	44,350.67
2	44,350.67	2,217.53	388.72	2,606.25	43,961.95
3	43,961.95	2,198.10	408.15	2,606.25	43,553.79
4	43,553.79	2,177.69	428.56	2,606.25	43,125.23
5	43,125.23	2,156.26	449.99	2,606.25	42,675.24
6	42,675.24	2,133.76	472.49	2,606.25	42,202.75
7	42,202.75	2,110.14	496.11	2,606.25	41,706.64
8	41,706.64	2,085.33	520.92	2,606.25	41,185.72
9	41,185.72	2,059.29	546.97	2,606.25	40,638.75
10	40,638.75	2,031.94	574.31	2,606.25	40,064.44
11	40,064.44	2,003.22	603.03	2,606.25	39,461.41
12	39,461.41	1,973.07	633.18	2,606.25	38,828.23
13	38,828.23	1,941.41	664.84	2,606.25	38,163.39
14	38,163.39	1,908.17	698.08	2,606.25	37,465.30
15	37,465.30	1,873.27	732.99	2,606.25	36,732.32
16	36,732.32	1,836.62	769.64	2,606.25	35,962.68
17	35,962.68	1,798.13	808.12	2,606.25	35,154.56
18	35,154.56	1,757.73	848.52	2,606.25	34,306.04
19	34,306.04	1,715.30	890.95	2,606.25	33,415.09
20	33,415.09	1,670.75	935.50	2,606.25	32,479.59
21	32,479.59	1,623.98	982.27	2,606.25	31,497.32
22	31,497.32	1,574.87	1,031.39	2,606.25	30,465.93
23	30,465.93	1,523.30	1,082.96	2,606.25	29,382.98
24	29,382.98	1,469.15	1,137.10	2,606.25	28,245.87
25	28,245.87	1,412.29	1,193.96	2,606.25	27,051.92
26	27,051.92	1,352.60	1,253.66	2,606.25	25,798.26
27	25,798.26	1,289.91	1,316.34	2,606.25	24,481.92
28	24,481.92	1,224.10	1,382.16	2,606.25	23,099.77
29	23,099.77	1,154.99	1,451.26	2,606.25	21,648.50
30	21,648.50	1,082.43	1,523.83	2,606.25	20,124.68
31	20,124.68	1,006.23	1,600.02	2,606.25	18,524.66
32	18,524.66	926.23	1,680.02	2,606.25	16,844.64
33	16,844.64	842.23	1,764.02	2,606.25	15,080.62
34	15,080.62	754.03	1,852.22	2,606.25	13,228.40
35	13,228.40	661.42	1,944.83	2,606.25	11,283.57
36	11,283.57	564.18	2,042.07	2,606.25	9,241.49
37	9,241.49	462.07	2,144.18	2,606.25	7,097.32
38	7,097.32	354.87	2,251.39	2,606.25	4,845.93
39	4,845.93	242.30	2,363.96	2,606.25	2,481.97
40	2,481.97	124.10	2,482.15	2,606.25	-0.18

MONTO INICIAL DEL PRESTAMO 46,956.92

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	46,956.92	2,347.85	388.72	2,736.56	46,568.20
2	46,568.20	2,328.41	408.15	2,736.56	46,160.05
3	46,160.05	2,308.00	428.56	2,736.56	45,731.48
4	45,731.48	2,286.57	449.99	2,736.56	45,281.49
5	45,281.49	2,264.07	472.49	2,736.56	44,809.00
6	44,809.00	2,240.45	496.11	2,736.56	44,312.89
7	44,312.89	2,215.64	520.92	2,736.56	43,791.97
8	43,791.97	2,189.60	546.97	2,736.56	43,245.00
9	43,245.00	2,162.25	574.31	2,736.56	42,670.69
10	42,670.69	2,133.53	603.03	2,736.56	42,067.66
11	42,067.66	2,103.38	633.18	2,736.56	41,434.48
12	41,434.48	2,071.72	664.84	2,736.56	40,769.64
13	40,769.64	2,038.48	698.08	2,736.56	40,071.55
14	40,071.55	2,003.58	732.99	2,736.56	39,338.57
15	39,338.57	1,966.93	769.64	2,736.56	38,568.93
16	38,568.93	1,928.45	808.12	2,736.56	37,760.81
17	37,760.81	1,888.04	848.52	2,736.56	36,912.29
18	36,912.29	1,845.61	890.95	2,736.56	36,021.34
19	36,021.34	1,801.07	935.50	2,736.56	35,085.84
20	35,085.84	1,754.29	982.27	2,736.56	34,103.57
21	34,103.57	1,705.18	1,031.39	2,736.56	33,072.18
22	33,072.18	1,653.61	1,082.96	2,736.56	31,989.23
23	31,989.23	1,599.46	1,137.10	2,736.56	30,852.13
24	30,852.13	1,542.61	1,193.96	2,736.56	29,658.17
25	29,658.17	1,482.91	1,253.66	2,736.56	28,404.51
26	28,404.51	1,420.23	1,316.34	2,736.56	27,088.17
27	27,088.17	1,354.41	1,382.16	2,736.56	25,706.02
28	25,706.02	1,285.30	1,451.26	2,736.56	24,254.75
29	24,254.75	1,212.74	1,523.83	2,736.56	22,730.93
30	22,730.93	1,136.55	1,600.02	2,736.56	21,130.91
31	21,130.91	1,056.55	1,680.02	2,736.56	19,450.89
32	19,450.89	972.54	1,764.02	2,736.56	17,686.87
33	17,686.87	884.34	1,852.22	2,736.56	15,834.65
34	15,834.65	791.73	1,944.83	2,736.56	13,889.82
35	13,889.82	694.49	2,042.07	2,736.56	11,847.74
36	11,847.74	592.39	2,144.18	2,736.56	9,703.57
37	9,703.57	485.18	2,251.39	2,736.56	7,452.18
38	7,452.18	372.61	2,363.96	2,736.56	5,088.23
39	5,088.23	254.41	2,482.15	2,736.56	2,606.07
40	2,606.07	130.30	-2,606.26	2,736.56	-0.19

MONTO INICIAL DEL PRESTAMO 49,304.76

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	49,304.76	2,465.24	408.15	2,873.39	48,896.61
2	48,896.61	2,444.83	428.56	2,873.39	48,468.05
3	48,468.05	2,423.40	449.99	2,873.39	48,018.06
4	48,018.06	2,400.90	472.49	2,873.39	47,545.57
5	47,545.57	2,377.28	496.11	2,873.39	47,049.45
6	47,049.45	2,352.47	520.92	2,873.39	46,528.53
7	46,528.53	2,326.43	546.97	2,873.39	45,981.57
8	45,981.57	2,299.08	574.31	2,873.39	45,407.25
9	45,407.25	2,270.36	603.03	2,873.39	44,804.22
10	44,804.22	2,240.21	633.18	2,873.39	44,171.04
11	44,171.04	2,208.55	664.84	2,873.39	43,506.20
12	43,506.20	2,175.31	698.08	2,873.39	42,808.12
13	42,808.12	2,140.41	732.99	2,873.39	42,075.13
14	42,075.13	2,103.76	769.64	2,873.39	41,305.50
15	41,305.50	2,065.27	808.12	2,873.39	40,497.38
16	40,497.38	2,024.87	848.52	2,873.39	39,648.85
17	39,648.85	1,982.44	890.95	2,873.39	38,757.90
18	38,757.90	1,937.90	935.50	2,873.39	37,822.41
19	37,822.41	1,891.12	982.27	2,873.39	36,840.14
20	36,840.14	1,842.01	1,031.39	2,873.39	35,808.75
21	35,808.75	1,790.44	1,082.96	2,873.39	34,725.79
22	34,725.79	1,736.29	1,137.10	2,873.39	33,588.69
23	33,588.69	1,679.43	1,193.96	2,873.39	32,394.73
24	32,394.73	1,619.74	1,253.66	2,873.39	31,141.08
25	31,141.08	1,557.05	1,316.34	2,873.39	29,824.74
26	29,824.74	1,491.24	1,382.16	2,873.39	28,442.58
27	28,442.58	1,422.13	1,451.26	2,873.39	26,991.32
28	26,991.32	1,349.57	1,523.82	2,873.39	25,467.49
29	25,467.49	1,273.37	1,600.02	2,873.39	23,867.47
30	23,867.47	1,193.37	1,680.02	2,873.39	22,187.46
31	22,187.46	1,109.37	1,764.02	2,873.39	20,423.44
32	20,423.44	1,021.17	1,852.22	2,873.39	18,571.21
33	18,571.21	928.56	1,944.83	2,873.39	16,626.38
34	16,626.38	831.32	2,042.07	2,873.39	14,584.31
35	14,584.31	729.22	2,144.18	2,873.39	12,440.13
36	12,440.13	622.01	2,251.39	2,873.39	10,188.75
37	10,188.75	509.44	2,363.96	2,873.39	7,824.79
38	7,824.79	391.24	2,482.15	2,873.39	5,342.64
39	5,342.64	267.13	2,606.26	2,873.39	2,736.38
40	2,736.38	136.82	2,736.57	2,873.39	-0.20

MONTO INICIAL DEL PRESTAMO 51,770.00

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	51,770.00	2,588.50	428.56	3,017.06	51,341.44
2	51,341.44	2,567.07	449.99	3,017.06	50,891.45
3	50,891.45	2,544.57	472.49	3,017.06	50,418.96
4	50,418.96	2,520.95	496.11	3,017.06	49,922.85
5	49,922.85	2,496.14	520.92	3,017.06	49,401.93
6	49,401.93	2,470.10	546.97	3,017.06	48,854.96
7	48,854.96	2,442.75	574.31	3,017.06	48,280.65
8	48,280.65	2,414.03	603.03	3,017.06	47,677.62
9	47,677.62	2,383.88	633.18	3,017.06	47,044.43
10	47,044.43	2,352.22	664.84	3,017.06	46,379.59
11	46,379.59	2,318.98	698.08	3,017.06	45,681.51
12	45,681.51	2,284.08	732.99	3,017.06	44,948.53
13	44,948.53	2,247.43	769.64	3,017.06	44,178.89
14	44,178.89	2,208.94	808.12	3,017.06	43,370.77
15	43,370.77	2,168.54	848.52	3,017.06	42,522.25
16	42,522.25	2,126.11	890.95	3,017.06	41,631.30
17	41,631.30	2,081.56	935.50	3,017.06	40,695.80
18	40,695.80	2,034.79	982.27	3,017.06	39,713.53
19	39,713.53	1,985.68	1,031.39	3,017.06	38,682.14
20	38,682.14	1,934.11	1,082.96	3,017.06	37,599.19
21	37,599.19	1,879.96	1,137.10	3,017.06	36,462.08
22	36,462.08	1,823.10	1,193.96	3,017.06	35,268.13
23	35,268.13	1,763.41	1,253.66	3,017.06	34,014.47
24	34,014.47	1,700.72	1,316.34	3,017.06	32,698.13
25	32,698.13	1,634.91	1,382.16	3,017.06	31,315.98
26	31,315.98	1,565.80	1,451.26	3,017.06	29,864.71
27	29,864.71	1,493.24	1,523.83	3,017.06	28,340.88
28	28,340.88	1,417.04	1,600.02	3,017.06	26,740.87
29	26,740.87	1,337.04	1,680.02	3,017.06	25,060.85
30	25,060.85	1,253.04	1,764.02	3,017.06	23,296.83
31	23,296.83	1,164.84	1,852.22	3,017.06	21,444.61
32	21,444.61	1,072.23	1,944.83	3,017.06	19,499.78
33	19,499.78	974.99	2,042.07	3,017.06	17,457.70
34	17,457.70	872.89	2,144.18	3,017.06	15,313.52
35	15,313.52	765.68	2,251.39	3,017.06	13,062.14
36	13,062.14	653.11	2,363.96	3,017.06	10,698.18
37	10,698.18	534.91	2,482.15	3,017.06	8,216.03
38	8,216.03	410.80	2,606.26	3,017.06	5,609.77
39	5,609.77	280.49	2,736.57	3,017.06	2,873.19
40	2,873.19	143.66	-2,873.40	3,017.06	-0.21

MONTO INICIAL DEL PRESTAMO 54,358.50

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	54,358.50	2,717.93	449.99	3,167.92	53,908.51
2	53,908.51	2,695.43	472.49	3,167.92	53,436.02
3	53,436.02	2,671.80	496.11	3,167.92	52,939.91
4	52,939.91	2,647.00	520.92	3,167.92	52,418.99
5	52,418.99	2,620.95	546.97	3,167.92	51,872.02
6	51,872.02	2,593.60	574.31	3,167.92	51,297.71
7	51,297.71	2,564.89	603.03	3,167.92	50,694.68
8	50,694.68	2,534.73	633.18	3,167.92	50,061.50
9	50,061.50	2,503.07	664.84	3,167.92	49,396.66
10	49,396.66	2,469.83	698.08	3,167.92	48,698.57
11	48,698.57	2,434.93	732.99	3,167.92	47,965.59
12	47,965.59	2,398.28	769.64	3,167.92	47,195.95
13	47,195.95	2,359.80	808.12	3,167.92	46,387.83
14	46,387.83	2,319.39	848.52	3,167.92	45,539.31
15	45,539.31	2,276.97	890.95	3,167.92	44,648.36
16	44,648.36	2,232.42	935.50	3,167.92	43,712.86
17	43,712.86	2,185.64	982.27	3,167.92	42,730.59
18	42,730.59	2,136.53	1,031.39	3,167.92	41,699.20
19	41,699.20	2,084.96	1,082.96	3,167.92	40,616.25
20	40,616.25	2,030.81	1,137.10	3,167.92	39,479.15
21	39,479.15	1,973.96	1,193.96	3,167.92	38,285.19
22	38,285.19	1,914.26	1,253.66	3,167.92	37,031.53
23	37,031.53	1,851.58	1,316.34	3,167.92	35,715.19
24	35,715.19	1,785.76	1,382.16	3,167.92	34,333.04
25	34,333.04	1,716.65	1,451.26	3,167.92	32,881.77
26	32,881.77	1,644.09	1,523.83	3,167.92	31,357.95
27	31,357.95	1,567.90	1,600.02	3,167.92	29,757.93
28	29,757.93	1,487.90	1,680.02	3,167.92	28,077.91
29	28,077.91	1,403.90	1,764.02	3,167.92	26,313.89
30	26,313.89	1,315.69	1,852.22	3,167.92	24,461.67
31	24,461.67	1,223.08	1,944.83	3,167.92	22,516.84
32	22,516.84	1,125.84	2,042.07	3,167.92	20,474.76
33	20,474.76	1,023.74	2,144.18	3,167.92	18,330.59
34	18,330.59	916.53	2,251.39	3,167.92	16,079.20
35	16,079.20	803.96	2,363.96	3,167.92	13,715.25
36	13,715.25	685.76	2,482.15	3,167.92	11,233.09
37	11,233.09	561.65	2,606.26	3,167.92	8,626.83
38	8,626.83	431.34	2,736.57	3,167.92	5,890.26
39	5,890.26	294.51	2,873.40	3,167.92	3,016.85
40	3,016.85	150.84	3,017.07	3,167.92	-0.22

MONTO INICIAL DEL PRESTAMO 57,076.43

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	57,076.43	2,853.82	472.49	3,326.31	56,603.94
2	56,603.94	2,830.20	496.11	3,326.31	56,107.82
3	56,107.82	2,805.39	520.92	3,326.31	55,586.90
4	55,586.90	2,779.35	546.97	3,326.31	55,039.94
5	55,039.94	2,752.00	574.31	3,326.31	54,465.62
6	54,465.62	2,723.28	603.03	3,326.31	53,862.59
7	53,862.59	2,693.13	633.18	3,326.31	53,229.41
8	53,229.41	2,661.47	664.84	3,326.31	52,564.57
9	52,564.57	2,628.23	698.08	3,326.31	51,866.49
10	51,866.49	2,593.32	732.99	3,326.31	51,133.50
11	51,133.50	2,556.68	769.64	3,326.31	50,363.87
12	50,363.87	2,518.19	808.12	3,326.31	49,555.75
13	49,555.75	2,477.79	848.52	3,326.31	48,707.23
14	48,707.23	2,435.36	890.95	3,326.31	47,816.28
15	47,816.28	2,390.81	935.50	3,326.31	46,880.78
16	46,880.78	2,344.04	982.27	3,326.31	45,898.51
17	45,898.51	2,294.93	1,031.39	3,326.31	44,867.12
18	44,867.12	2,243.36	1,082.96	3,326.31	43,784.16
19	43,784.16	2,189.21	1,137.10	3,326.31	42,647.06
20	42,647.06	2,132.35	1,193.96	3,326.31	41,453.10
21	41,453.10	2,072.66	1,253.66	3,326.31	40,199.45
22	40,199.45	2,009.97	1,316.34	3,326.31	38,883.11
23	38,883.11	1,944.16	1,382.16	3,326.31	37,500.95
24	37,500.95	1,875.05	1,451.26	3,326.31	36,049.69
25	36,049.69	1,802.48	1,523.83	3,326.31	34,525.86
26	34,525.86	1,726.29	1,600.02	3,326.31	32,925.84
27	32,925.84	1,646.29	1,680.02	3,326.31	31,245.83
28	31,245.83	1,562.29	1,764.02	3,326.31	29,481.81
29	29,481.81	1,474.09	1,852.22	3,326.31	27,629.58
30	27,629.58	1,381.48	1,944.83	3,326.31	25,684.75
31	25,684.75	1,284.24	2,042.07	3,326.31	23,642.68
32	23,642.68	1,182.13	2,144.18	3,326.31	21,498.50
33	21,498.50	1,074.93	2,251.39	3,326.31	19,247.12
34	19,247.12	962.36	2,363.96	3,326.31	16,883.16
35	16,883.16	844.16	2,482.15	3,326.31	14,401.01
36	14,401.01	720.05	2,606.26	3,326.31	11,794.75
37	11,794.75	589.74	2,736.57	3,326.31	9,058.17
38	9,058.17	452.91	2,873.40	3,326.31	6,184.77
39	6,184.77	309.24	3,017.07	3,326.31	3,167.70
40	3,167.70	158.38	-3,167.93	3,326.31	-0.23

MONTO INICIAL DEL PRESTAMO 59,930.25

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	59,930.25	2,996.51	496.11	3,492.63	59,434.14
2	59,434.14	2,971.71	520.92	3,492.63	58,913.22
3	58,913.22	2,945.66	546.97	3,492.63	58,366.25
4	58,366.25	2,918.31	574.31	3,492.63	57,791.94
5	57,791.94	2,889.60	603.03	3,492.63	57,188.91
6	57,188.91	2,859.45	633.18	3,492.63	56,555.72
7	56,555.72	2,827.79	664.84	3,492.63	55,890.88
8	55,890.88	2,794.54	698.08	3,492.63	55,192.80
9	55,192.80	2,759.64	732.99	3,492.63	54,459.81
10	54,459.81	2,722.99	769.64	3,492.63	53,690.18
11	53,690.18	2,684.51	808.12	3,492.63	52,882.06
12	52,882.06	2,644.10	848.52	3,492.63	52,033.54
13	52,033.54	2,601.68	890.95	3,492.63	51,142.59
14	51,142.59	2,557.13	935.50	3,492.63	50,207.09
15	50,207.09	2,510.35	982.27	3,492.63	49,224.82
16	49,224.82	2,461.24	1,031.39	3,492.63	48,193.43
17	48,193.43	2,409.67	1,082.96	3,492.63	47,110.48
18	47,110.48	2,355.52	1,137.10	3,492.63	45,973.37
19	45,973.37	2,298.67	1,193.96	3,492.63	44,779.41
20	44,779.41	2,238.97	1,253.66	3,492.63	43,525.76
21	43,525.76	2,176.29	1,316.34	3,492.63	42,209.42
22	42,209.42	2,110.47	1,382.16	3,492.63	40,827.26
23	40,827.26	2,041.36	1,451.26	3,492.63	39,376.00
24	39,376.00	1,968.80	1,523.83	3,492.63	37,852.17
25	37,852.17	1,892.61	1,600.02	3,492.63	36,252.16
26	36,252.16	1,812.61	1,680.02	3,492.63	34,572.14
27	34,572.14	1,728.61	1,764.02	3,492.63	32,808.12
28	32,808.12	1,640.41	1,852.22	3,492.63	30,955.90
29	30,955.90	1,547.79	1,944.83	3,492.63	29,011.06
30	29,011.06	1,450.55	2,042.07	3,492.63	26,968.99
31	26,968.99	1,348.45	2,144.18	3,492.63	24,824.81
32	24,824.81	1,241.24	2,251.39	3,492.63	22,573.43
33	22,573.43	1,128.67	2,363.96	3,492.63	20,209.47
34	20,209.47	1,010.47	2,482.15	3,492.63	17,727.32
35	17,727.32	886.37	2,606.26	3,492.63	15,121.06
36	15,121.06	756.05	2,736.57	3,492.63	12,384.48
37	12,384.48	619.22	2,873.40	3,492.63	9,511.08
38	9,511.08	475.55	3,017.07	3,492.63	6,494.01
39	6,494.01	324.70	3,167.93	3,492.63	3,326.08
40	3,326.08	166.30	3,326.32	3,492.63	-0.24

MONTO INICIAL DEL PRESTAMO 62,926.76

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	62,926.76	3,146.34	520.92	3,667.26	62,405.84
2	62,405.84	3,120.29	546.97	3,667.26	61,858.88
3	61,858.88	3,092.94	574.31	3,667.26	61,284.56
4	61,284.56	3,064.23	603.03	3,667.26	60,681.53
5	60,681.53	3,034.08	633.18	3,667.26	60,048.35
6	60,048.35	3,002.42	664.84	3,667.26	59,383.51
7	59,383.51	2,969.18	698.08	3,667.26	58,685.43
8	58,685.43	2,934.27	732.99	3,667.26	57,952.44
9	57,952.44	2,897.62	769.64	3,667.26	57,182.80
10	57,182.80	2,859.14	808.12	3,667.26	56,374.69
11	56,374.69	2,818.73	848.52	3,667.26	55,526.16
12	55,526.16	2,776.31	890.95	3,667.26	54,635.21
13	54,635.21	2,731.76	935.50	3,667.26	53,699.72
14	53,699.72	2,684.99	982.27	3,667.26	52,717.44
15	52,717.44	2,635.87	1,031.39	3,667.26	51,686.06
16	51,686.06	2,584.30	1,082.96	3,667.26	50,603.10
17	50,603.10	2,530.16	1,137.10	3,667.26	49,466.00
18	49,466.00	2,473.30	1,193.96	3,667.26	48,272.04
19	48,272.04	2,413.60	1,253.66	3,667.26	47,018.39
20	47,018.39	2,350.92	1,316.34	3,667.26	45,702.05
21	45,702.05	2,285.10	1,382.16	3,667.26	44,319.89
22	44,319.89	2,215.99	1,451.26	3,667.26	42,868.63
23	42,868.63	2,143.43	1,523.83	3,667.26	41,344.80
24	41,344.80	2,067.24	1,600.02	3,667.26	39,744.78
25	39,744.78	1,987.24	1,680.02	3,667.26	38,064.76
26	38,064.76	1,903.24	1,764.02	3,667.26	36,300.74
27	36,300.74	1,815.04	1,852.22	3,667.26	34,448.52
28	34,448.52	1,722.43	1,944.83	3,667.26	32,503.69
29	32,503.69	1,625.18	2,042.07	3,667.26	30,461.62
30	30,461.62	1,523.08	2,144.18	3,667.26	28,317.44
31	28,317.44	1,415.87	2,251.39	3,667.26	26,066.05
32	26,066.05	1,303.30	2,363.96	3,667.26	23,702.10
33	23,702.10	1,185.10	2,482.15	3,667.26	21,219.95
34	21,219.95	1,061.00	2,606.26	3,667.26	18,613.68
35	18,613.68	930.68	2,736.57	3,667.26	15,877.11
36	15,877.11	793.86	2,873.40	3,667.26	13,003.71
37	13,003.71	650.19	3,017.07	3,667.26	9,986.64
38	9,986.64	499.33	3,167.93	3,667.26	6,818.71
39	6,818.71	340.94	3,326.32	3,667.26	3,492.39
40	3,492.39	174.62	3,492.64	3,667.26	-0.25

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MONTO INICIAL DEL PRESTAMO 66,073.10

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	66,073.10	3,303.66	546.97	3,850.62	65,526.13
2	65,526.13	3,276.31	574.31	3,850.62	64,951.82
3	64,951.82	3,247.59	603.03	3,850.62	64,348.79
4	64,348.79	3,217.44	633.18	3,850.62	63,715.61
5	63,715.61	3,185.78	664.84	3,850.62	63,050.77
6	63,050.77	3,152.54	698.08	3,850.62	62,352.69
7	62,352.69	3,117.63	732.99	3,850.62	61,619.70
8	61,619.70	3,080.98	769.64	3,850.62	60,850.06
9	60,850.06	3,042.50	808.12	3,850.62	60,041.95
10	60,041.95	3,002.10	848.52	3,850.62	59,193.42
11	59,193.42	2,959.67	890.95	3,850.62	58,302.47
12	58,302.47	2,915.12	935.50	3,850.62	57,366.97
13	57,366.97	2,868.35	982.27	3,850.62	56,384.70
14	56,384.70	2,819.24	1,031.39	3,850.62	55,353.32
15	55,353.32	2,767.67	1,082.96	3,850.62	54,270.36
16	54,270.36	2,713.52	1,137.10	3,850.62	53,133.26
17	53,133.26	2,656.66	1,193.96	3,850.62	51,939.30
18	51,939.30	2,596.97	1,253.66	3,850.62	50,685.64
19	50,685.64	2,534.28	1,316.34	3,850.62	49,369.30
20	49,369.30	2,468.47	1,382.16	3,850.62	47,987.15
21	47,987.15	2,399.36	1,451.26	3,850.62	46,535.89
22	46,535.89	2,326.79	1,523.83	3,850.62	45,012.06
23	45,012.06	2,250.60	1,600.02	3,850.62	43,412.04
24	43,412.04	2,170.60	1,680.02	3,850.62	41,732.02
25	41,732.02	2,086.60	1,764.02	3,850.62	39,968.00
26	39,968.00	1,998.40	1,852.22	3,850.62	38,115.78
27	38,115.78	1,905.79	1,944.83	3,850.62	36,170.95
28	36,170.95	1,808.55	2,042.07	3,850.62	34,128.88
29	34,128.88	1,706.44	2,144.18	3,850.62	31,984.70
30	31,984.70	1,599.23	2,251.39	3,850.62	29,733.31
31	29,733.31	1,486.67	2,363.96	3,850.62	27,369.36
32	27,369.36	1,368.47	2,482.15	3,850.62	24,887.20
33	24,887.20	1,244.36	2,606.26	3,850.62	22,280.94
34	22,280.94	1,114.05	2,736.57	3,850.62	19,544.37
35	19,544.37	977.22	2,873.40	3,850.62	16,670.97
36	16,670.97	833.55	3,017.07	3,850.62	13,653.89
37	13,653.89	682.69	3,167.93	3,850.62	10,485.97
38	10,485.97	524.30	3,326.32	3,850.62	7,159.64
39	7,159.64	357.98	3,492.64	3,850.62	3,667.01
40	3,667.01	183.35	3,667.27	3,850.62	-0.27

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MONTO INICIAL DEL PRESTAMO 69,376.76

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	69,376.76	3,468.84	574.31	4,043.15	68,802.44
2	68,802.44	3,440.12	603.03	4,043.15	68,199.41
3	68,199.41	3,409.97	633.18	4,043.15	67,566.23
4	67,566.23	3,378.31	664.84	4,043.15	66,901.39
5	66,901.39	3,345.07	698.08	4,043.15	66,203.31
6	66,203.31	3,310.17	732.99	4,043.15	65,470.32
7	65,470.32	3,273.52	769.64	4,043.15	64,700.68
8	64,700.68	3,235.03	808.12	4,043.15	63,892.57
9	63,892.57	3,194.63	848.52	4,043.15	63,044.04
10	63,044.04	3,152.20	890.95	4,043.15	62,153.09
11	62,153.09	3,107.65	935.50	4,043.15	61,217.60
12	61,217.60	3,060.88	982.27	4,043.15	60,235.32
13	60,235.32	3,011.77	1,031.39	4,043.15	59,203.94
14	59,203.94	2,960.20	1,082.96	4,043.15	58,120.98
15	58,120.98	2,906.05	1,137.10	4,043.15	56,983.88
16	56,983.88	2,849.19	1,193.96	4,043.15	55,789.92
17	55,789.92	2,789.50	1,253.66	4,043.15	54,536.26
18	54,536.26	2,726.81	1,316.34	4,043.15	53,219.93
19	53,219.93	2,661.00	1,382.16	4,043.15	51,837.77
20	51,837.77	2,591.89	1,451.26	4,043.15	50,386.51
21	50,386.51	2,519.33	1,523.83	4,043.15	48,862.68
22	48,862.68	2,443.13	1,600.02	4,043.15	47,262.66
23	47,262.66	2,363.13	1,680.02	4,043.15	45,582.64
24	45,582.64	2,279.13	1,764.02	4,043.15	43,818.62
25	43,818.62	2,190.93	1,852.22	4,043.15	41,966.40
26	41,966.40	2,098.32	1,944.83	4,043.15	40,021.57
27	40,021.57	2,001.08	2,042.07	4,043.15	37,979.50
28	37,979.50	1,898.97	2,144.18	4,043.15	35,835.32
29	35,835.32	1,791.77	2,251.39	4,043.15	33,583.93
30	33,583.93	1,679.20	2,363.96	4,043.15	31,219.98
31	31,219.98	1,561.00	2,482.15	4,043.15	28,737.82
32	28,737.82	1,436.89	2,606.26	4,043.15	26,131.56
33	26,131.56	1,306.58	2,736.57	4,043.15	23,394.99
34	23,394.99	1,169.75	2,873.40	4,043.15	20,521.59
35	20,521.59	1,026.08	3,017.07	4,043.15	17,504.51
36	17,504.51	875.23	3,167.93	4,043.15	14,336.59
37	14,336.59	716.83	3,326.32	4,043.15	11,010.27
38	11,010.27	550.51	3,492.64	4,043.15	7,517.63
39	7,517.63	375.88	3,667.27	4,043.15	3,850.36
40	3,850.36	192.52	3,850.63	4,043.15	-0.28

MONTO INICIAL DEL PRESTAMO 72,845.59

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	72,845.59	3,642.28	603.03	4,245.31	72,242.56
2	72,242.56	3,612.13	633.18	4,245.31	71,609.38
3	71,609.38	3,580.47	664.84	4,245.31	70,944.54
4	70,944.54	3,547.23	698.08	4,245.31	70,246.46
5	70,246.46	3,512.32	732.99	4,245.31	69,513.47
6	69,513.47	3,475.67	769.64	4,245.31	68,743.84
7	68,743.84	3,437.19	808.12	4,245.31	67,935.72
8	67,935.72	3,396.79	848.52	4,245.31	67,087.19
9	67,087.19	3,354.36	890.95	4,245.31	66,196.24
10	66,196.24	3,309.81	935.50	4,245.31	65,260.75
11	65,260.75	3,263.04	982.27	4,245.31	64,278.47
12	64,278.47	3,213.92	1,031.39	4,245.31	63,247.09
13	63,247.09	3,162.35	1,082.96	4,245.31	62,164.13
14	62,164.13	3,108.21	1,137.10	4,245.31	61,027.03
15	61,027.03	3,051.35	1,193.96	4,245.31	59,833.07
16	59,833.07	2,991.65	1,253.66	4,245.31	58,579.42
17	58,579.42	2,928.97	1,316.34	4,245.31	57,263.08
18	57,263.08	2,863.15	1,382.16	4,245.31	55,880.92
19	55,890.92	2,794.05	1,451.26	4,245.31	54,429.66
20	54,429.66	2,721.48	1,523.83	4,245.31	52,905.83
21	52,905.83	2,645.29	1,600.02	4,245.31	51,305.81
22	51,305.81	2,565.29	1,680.02	4,245.31	49,625.79
23	49,625.79	2,481.29	1,764.02	4,245.31	47,861.77
24	47,861.77	2,393.09	1,852.22	4,245.31	46,009.55
25	46,009.55	2,300.48	1,944.83	4,245.31	44,064.72
26	44,064.72	2,203.24	2,042.07	4,245.31	42,022.65
27	42,022.65	2,101.13	2,144.18	4,245.31	39,878.47
28	39,878.47	1,993.92	2,251.39	4,245.31	37,627.09
29	37,627.09	1,881.35	2,363.96	4,245.31	35,263.13
30	35,263.13	1,763.16	2,482.15	4,245.31	32,780.98
31	32,780.98	1,639.05	2,606.26	4,245.31	30,174.72
32	30,174.72	1,508.74	2,736.57	4,245.31	27,438.14
33	27,438.14	1,371.91	2,873.40	4,245.31	24,564.74
34	24,564.74	1,228.24	3,017.07	4,245.31	21,547.67
35	21,547.67	1,077.38	3,167.93	4,245.31	18,379.74
36	18,379.74	918.99	3,326.32	4,245.31	15,053.42
37	15,053.42	752.67	3,492.64	4,245.31	11,560.78
38	11,560.78	578.04	3,667.27	4,245.31	7,893.51
39	7,893.51	394.68	3,850.63	4,245.31	4,04[illegible]7
40	4,042.87	202.14	-4,043.17	4,245.31	-0.29

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MONTO INICIAL DEL PRESTAMO 76,487.87

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	76,487.87	3,824.39	633.18	4,457.58	75,854.69
2	75,854.69	3,792.73	664.84	4,457.58	75,189.85
3	75,189.85	3,759.49	698.08	4,457.58	74,491.77
4	74,491.77	3,724.59	732.99	4,457.58	73,758.78
5	73,758.78	3,687.94	769.64	4,457.58	72,989.15
6	72,989.15	3,649.46	808.12	4,457.58	72,181.03
7	72,181.03	3,609.05	848.52	4,457.58	71,332.50
8	71,332.50	3,566.63	890.95	4,457.58	70,441.55
9	70,441.55	3,522.08	935.50	4,457.58	69,506.06
10	69,506.06	3,475.30	982.27	4,457.58	68,523.78
11	68,523.78	3,426.19	1,031.39	4,457.58	67,492.40
12	67,492.40	3,374.62	1,082.96	4,457.58	66,409.44
13	66,409.44	3,320.47	1,137.10	4,457.58	65,272.34
14	65,272.34	3,263.62	1,193.96	4,457.58	64,078.38
15	64,078.38	3,203.92	1,253.66	4,457.58	62,824.73
16	62,824.73	3,141.24	1,316.34	4,457.58	61,508.39
17	61,508.39	3,075.42	1,382.16	4,457.58	60,126.23
18	60,126.23	3,006.31	1,451.26	4,457.58	58,674.97
19	58,674.97	2,933.75	1,523.83	4,457.58	57,151.14
20	57,151.14	2,857.56	1,600.02	4,457.58	55,551.12
21	55,551.12	2,777.56	1,680.02	4,457.58	53,871.10
22	53,871.10	2,693.56	1,764.02	4,457.58	52,107.08
23	52,107.08	2,605.35	1,852.22	4,457.58	50,254.86
24	50,254.86	2,512.74	1,944.83	4,457.58	48,310.03
25	48,310.03	2,415.50	2,042.07	4,457.58	46,267.96
26	46,267.96	2,313.40	2,144.18	4,457.58	44,123.78
27	44,123.78	2,206.19	2,251.39	4,457.58	41,872.39
28	41,872.39	2,093.62	2,363.96	4,457.58	39,508.44
29	39,508.44	1,975.42	2,482.15	4,457.58	37,026.29
30	37,026.29	1,851.31	2,606.26	4,457.58	34,420.03
31	34,420.03	1,721.00	2,736.57	4,457.58	31,683.45
32	31,683.45	1,584.17	2,873.40	4,457.58	28,810.05
33	28,810.05	1,440.50	3,017.07	4,457.58	25,792.98
34	25,792.98	1,289.65	3,167.93	4,457.58	22,625.05
35	22,625.05	1,131.25	3,326.32	4,457.58	19,298.73
36	19,298.73	964.94	3,492.64	4,457.58	15,806.09
37	15,806.09	790.30	3,667.27	4,457.58	12,138.82
38	12,138.82	606.94	3,850.63	4,457.58	8,288.18
39	8,288.18	414.41	4,043.17	4,457.58	4,245.02
40	4,245.02	212.25	4,245.32	4,457.58	-0.31

MONTO INICIAL DEL PRESTAMO 80,312.27

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	80,312.27	4,015.61	664.84	4,680.45	79,647.43
2	79,647.43	3,982.37	698.08	4,680.45	78,949.34
3	78,949.34	3,947.47	732.99	4,680.45	78,216.36
4	78,216.36	3,910.82	769.64	4,680.45	77,446.72
5	77,446.72	3,872.34	808.12	4,680.45	76,638.60
6	76,638.60	3,831.93	848.52	4,680.45	75,790.08
7	75,790.08	3,789.50	890.95	4,680.45	74,899.13
8	74,899.13	3,744.96	935.50	4,680.45	73,963.63
9	73,963.63	3,698.18	982.27	4,680.45	72,981.36
10	72,981.36	3,649.07	1,031.39	4,680.45	71,949.97
11	71,949.97	3,597.50	1,082.96	4,680.45	70,867.02
12	70,867.02	3,543.35	1,137.10	4,680.45	69,729.92
13	69,729.92	3,486.50	1,193.96	4,680.45	68,535.96
14	68,535.96	3,426.80	1,253.66	4,680.45	67,282.30
15	67,282.30	3,364.12	1,316.34	4,680.45	65,965.96
16	65,965.96	3,298.30	1,382.16	4,680.45	64,583.81
17	64,583.81	3,229.19	1,451.26	4,680.45	63,132.54
18	63,132.54	3,156.63	1,523.83	4,680.45	61,608.72
19	61,608.72	3,080.44	1,600.02	4,680.45	60,008.70
20	60,008.70	3,000.43	1,680.02	4,680.45	58,328.68
21	58,328.68	2,916.43	1,764.02	4,680.45	56,564.66
22	56,564.66	2,828.23	1,852.22	4,680.45	54,712.44
23	54,712.44	2,735.62	1,944.83	4,680.45	52,767.61
24	52,767.61	2,638.38	2,042.07	4,680.45	50,725.53
25	50,725.53	2,536.28	2,144.18	4,680.45	48,581.36
26	48,581.36	2,429.07	2,251.39	4,680.45	46,329.97
27	46,329.97	2,316.50	2,363.96	4,680.45	43,966.01
28	43,966.01	2,198.30	2,482.15	4,680.45	41,483.86
29	41,483.86	2,074.19	2,606.26	4,680.45	38,877.60
30	38,877.60	1,943.88	2,736.57	4,680.45	36,141.03
31	36,141.03	1,807.05	2,873.40	4,680.45	33,267.62
32	33,267.62	1,663.38	3,017.07	4,680.45	30,250.55
33	30,250.55	1,512.53	3,167.93	4,680.45	27,082.63
34	27,082.63	1,354.13	3,326.32	4,680.45	23,756.30
35	23,756.30	1,187.82	3,492.64	4,680.45	20,263.66
36	20,263.66	1,013.18	3,667.27	4,680.45	16,596.39
37	16,596.39	829.82	3,850.63	4,680.45	12,745.76
38	12,745.76	637.29	4,043.17	4,680.45	8,702.59
39	8,702.59	435.13	4,245.32	4,680.45	4,457.27
40	4,457.27	222.86	4,457.59	4,680.45	-0.32

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MONTO INICIAL DEL PRESTAMO 84,327.88

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	84,327.88	4,216.39	698.08	4,914.48	83,629.80
2	83,629.80	4,181.49	732.99	4,914.48	82,896.81
3	82,896.81	4,144.84	769.64	4,914.48	82,127.17
4	82,127.17	4,106.36	808.12	4,914.48	81,319.06
5	81,319.06	4,065.95	848.52	4,914.48	80,470.53
6	80,470.53	4,023.53	890.95	4,914.48	79,579.58
7	79,579.58	3,978.98	935.50	4,914.48	78,644.09
8	78,644.09	3,932.20	982.27	4,914.48	77,661.81
9	77,661.81	3,883.09	1,031.39	4,914.48	76,630.43
10	76,630.43	3,831.52	1,082.96	4,914.48	75,547.47
11	75,547.47	3,777.37	1,137.10	4,914.48	74,410.37
12	74,410.37	3,720.52	1,193.96	4,914.48	73,216.41
13	73,216.41	3,660.82	1,253.66	4,914.48	71,962.76
14	71,962.76	3,598.14	1,316.34	4,914.48	70,646.42
15	70,646.42	3,532.32	1,382.16	4,914.48	69,264.26
16	69,264.26	3,463.21	1,451.26	4,914.48	67,813.00
17	67,813.00	3,390.65	1,523.83	4,914.48	66,289.17
18	66,289.17	3,314.46	1,600.02	4,914.48	64,689.15
19	64,689.15	3,234.46	1,680.02	4,914.48	63,009.13
20	63,009.13	3,150.46	1,764.02	4,914.48	61,245.11
21	61,245.11	3,062.26	1,852.22	4,914.48	59,392.89
22	59,392.89	2,969.64	1,944.83	4,914.48	57,448.06
23	57,448.06	2,872.40	2,042.07	4,914.48	55,405.99
24	55,405.99	2,770.30	2,144.18	4,914.48	53,261.81
25	53,261.81	2,663.09	2,251.39	4,914.48	51,010.42
26	51,010.42	2,550.52	2,363.96	4,914.48	48,646.47
27	48,646.47	2,432.32	2,482.15	4,914.48	46,164.32
28	46,164.32	2,308.22	2,606.26	4,914.48	43,558.05
29	43,558.05	2,177.90	2,736.57	4,914.48	40,821.48
30	40,821.48	2,041.07	2,873.40	4,914.48	37,948.08
31	37,948.08	1,897.40	3,017.07	4,914.48	34,931.01
32	34,931.01	1,746.55	3,167.93	4,914.48	31,763.08
33	31,763.08	1,588.15	3,326.32	4,914.48	28,436.76
34	28,436.76	1,421.84	3,492.64	4,914.48	24,944.12
35	24,944.12	1,247.21	3,667.27	4,914.48	21,276.85
36	21,276.85	1,063.84	3,850.63	4,914.48	17,426.21
37	17,426.21	871.31	4,043.17	4,914.48	13,383.05
38	13,383.05	669.15	4,245.32	4,914.48	9,137.72
39	9,137.72	456.89	4,457.59	4,914.48	4,680.13
40	4,680.13	234.01	-4,680.47	4,914.48	-0.34

MONTO INICIAL DEL PRESTAMO 88,544.27

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	88,544.27	4,427.21	732.99	5,160.20	87,811.29
2	87,811.29	4,390.56	769.64	5,160.20	87,041.65
3	87,041.65	4,352.08	808.12	5,160.20	86,233.53
4	86,233.53	4,311.69	848.52	5,160.20	85,385.01
5	85,385.01	4,269.25	890.95	5,160.20	84,494.06
6	84,494.06	4,224.70	935.50	5,160.20	83,558.56
7	83,558.56	4,177.93	982.27	5,160.20	82,576.29
8	82,576.29	4,128.81	1,031.39	5,160.20	81,544.90
9	81,544.90	4,077.25	1,082.96	5,160.20	80,461.95
10	80,461.95	4,023.10	1,137.10	5,160.20	79,324.85
11	79,324.85	3,966.24	1,193.96	5,160.20	78,130.89
12	78,130.89	3,906.54	1,253.66	5,160.20	76,877.23
13	76,877.23	3,843.86	1,316.34	5,160.20	75,560.89
14	75,560.89	3,778.04	1,382.16	5,160.20	74,178.74
15	74,178.74	3,708.94	1,451.26	5,160.20	72,727.47
16	72,727.47	3,636.37	1,523.83	5,160.20	71,203.65
17	71,203.65	3,560.18	1,600.02	5,160.20	69,603.63
18	69,603.63	3,480.18	1,680.02	5,160.20	67,923.61
19	67,923.61	3,396.18	1,764.02	5,160.20	66,159.59
20	66,159.59	3,307.98	1,852.22	5,160.20	64,307.37
21	64,307.37	3,215.37	1,944.83	5,160.20	62,362.54
22	62,362.54	3,118.13	2,042.07	5,160.20	60,320.46
23	60,320.46	3,016.02	2,144.18	5,160.20	58,176.29
24	58,176.29	2,908.81	2,251.39	5,160.20	55,924.90
25	55,924.90	2,796.25	2,363.96	5,160.20	53,560.95
26	53,560.95	2,678.05	2,482.15	5,160.20	51,078.79
27	51,078.79	2,553.94	2,606.26	5,160.20	48,472.53
28	48,472.53	2,423.63	2,736.57	5,160.20	45,735.96
29	45,735.96	2,286.80	2,873.40	5,160.20	42,862.55
30	42,862.55	2,143.13	3,017.07	5,160.20	39,845.48
31	39,845.48	1,992.27	3,167.93	5,160.20	36,677.56
32	36,677.56	1,833.88	3,326.32	5,160.20	33,351.23
33	33,351.23	1,667.56	3,492.64	5,160.20	29,858.59
34	29,858.59	1,492.93	3,667.27	5,160.20	26,191.32
35	26,191.32	1,309.57	3,850.63	5,160.20	22,340.69
36	22,340.69	1,117.03	4,043.17	5,160.20	18,297.52
37	18,297.52	914.88	4,245.32	5,160.20	14,052.20
38	14,052.20	702.61	4,457.59	5,160.20	9,594.61
39	9,594.61	479.73	4,680.47	5,160.20	4,914.14
40	4,914.14	245.71	4,914.49	5,160.20	-0.36

MONTO INICIAL DEL PRESTAMO 92,971.49

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	92,971.49	4,648.57	769.64	5,418.21	92,201.85
2	92,201.85	4,610.09	808.12	5,418.21	91,393.73
3	91,393.73	4,569.69	848.52	5,418.21	90,545.21
4	90,545.21	4,527.26	890.95	5,418.21	89,654.26
5	89,654.26	4,482.71	935.50	5,418.21	88,718.76
6	88,718.76	4,435.94	982.27	5,418.21	87,736.49
7	87,736.49	4,386.82	1,031.39	5,418.21	86,705.10
8	86,705.10	4,335.26	1,082.96	5,418.21	85,622.15
9	85,622.15	4,281.11	1,137.10	5,418.21	84,485.05
10	84,485.05	4,224.25	1,193.96	5,418.21	83,291.09
11	83,291.09	4,164.55	1,253.66	5,418.21	82,037.43
12	82,037.43	4,101.87	1,316.34	5,418.21	80,721.09
13	80,721.09	4,036.05	1,382.16	5,418.21	79,338.94
14	79,338.94	3,966.95	1,451.26	5,418.21	77,887.67
15	77,887.67	3,894.38	1,523.83	5,418.21	76,363.85
16	76,363.85	3,818.19	1,600.02	5,418.21	74,763.83
17	74,763.83	3,738.19	1,680.02	5,418.21	73,083.81
18	73,083.81	3,654.19	1,764.02	5,418.21	71,319.79
19	71,319.79	3,565.99	1,852.22	5,418.21	69,467.57
20	69,467.57	3,473.38	1,944.83	5,418.21	67,522.74
21	67,522.74	3,376.14	2,042.07	5,418.21	65,480.66
22	65,480.66	3,274.03	2,144.18	5,418.21	63,336.49
23	63,336.49	3,166.82	2,251.39	5,418.21	61,085.10
24	61,085.10	3,054.26	2,363.96	5,418.21	58,721.15
25	58,721.15	2,936.06	2,482.15	5,418.21	56,238.99
26	56,238.99	2,811.95	2,606.26	5,418.21	53,632.73
27	53,632.73	2,681.64	2,736.57	5,418.21	50,896.16
28	50,896.16	2,544.81	2,873.40	5,418.21	48,022.76
29	48,022.76	2,401.14	3,017.07	5,418.21	45,005.68
30	45,005.68	2,250.28	3,167.93	5,418.21	41,837.76
31	41,837.76	2,091.89	3,326.32	5,418.21	38,511.43
32	38,511.43	1,925.57	3,492.64	5,418.21	35,018.79
33	35,018.79	1,750.94	3,667.27	5,418.21	31,351.52
34	31,351.52	1,567.58	3,850.63	5,418.21	27,500.89
35	27,500.89	1,375.04	4,043.17	5,418.21	23,457.72
36	23,457.72	1,172.89	4,245.32	5,418.21	19,212.40
37	19,212.40	960.62	4,457.59	5,418.21	14,754.81
38	14,754.81	737.74	4,680.47	5,418.21	10,074.34
39	10,074.34	503.72	4,914.49	5,418.21	5,159.85
40	5,159.85	257.99	5,160.22	5,418.21	-0.37

1	97,620.06	4,881.00	808.12	5,689.12	96,811.94
2	96,811.94	4,840.60	848.52	5,689.12	95,963.42
3	95,963.42	4,798.17	890.95	5,689.12	95,072.47
4	95,072.47	4,753.62	935.50	5,689.12	94,136.97
5	94,136.97	4,706.85	982.27	5,689.12	93,154.70
6	93,154.70	4,657.74	1,031.39	5,689.12	92,123.32
7	92,123.32	4,606.17	1,082.96	5,689.12	91,040.36
8	91,040.36	4,552.02	1,137.10	5,689.12	89,903.26
9	89,903.26	4,495.16	1,193.96	5,689.12	88,709.30
10	88,709.30	4,435.47	1,253.66	5,689.12	87,455.64
11	87,455.64	4,372.78	1,316.34	5,689.12	86,139.30
12	86,139.30	4,306.97	1,382.16	5,689.12	84,757.15
13	84,757.15	4,237.86	1,451.26	5,689.12	83,305.88
14	83,305.88	4,165.29	1,523.83	5,689.12	81,782.06
15	81,782.06	4,089.10	1,600.02	5,689.12	80,182.04
16	80,182.04	4,009.10	1,680.02	5,689.12	78,502.02
17	78,502.02	3,925.10	1,764.02	5,689.12	76,738.00
18	76,738.00	3,836.90	1,852.22	5,689.12	74,885.78
19	74,885.78	3,744.29	1,944.83	5,689.12	72,940.95
20	72,940.95	3,647.05	2,042.07	5,689.12	70,898.87
21	70,898.87	3,544.94	2,144.18	5,689.12	68,754.70
22	68,754.70	3,437.73	2,251.39	5,689.12	66,503.31
23	66,503.31	3,325.17	2,363.96	5,689.12	64,139.36
24	64,139.36	3,206.97	2,482.15	5,689.12	61,657.20
25	61,657.20	3,082.86	2,606.26	5,689.12	59,050.94
26	59,050.94	2,952.55	2,736.57	5,689.12	56,314.37
27	56,314.37	2,815.72	2,873.40	5,689.12	53,440.97
28	53,440.97	2,672.05	3,017.07	5,689.12	50,423.89
29	50,423.89	2,521.19	3,167.93	5,689.12	47,255.97
30	47,255.97	2,362.80	3,326.32	5,689.12	43,929.64
31	43,929.64	2,196.48	3,492.64	5,689.12	40,437.01
32	40,437.01	2,021.85	3,667.27	5,689.12	36,769.73
33	36,769.73	1,838.49	3,850.63	5,689.12	32,919.10
34	32,919.10	1,645.96	4,043.17	5,689.12	28,875.93
35	28,875.93	1,443.80	4,245.32	5,689.12	24,630.61
36	24,630.61	1,231.53	4,457.59	5,689.12	20,173.02
37	20,173.02	1,008.65	4,680.47	5,689.12	15,492.55
38	15,492.55	774.63	4,914.49	5,689.12	10,578.06
39	10,578.06	528.90	5,160.22	5,689.12	5,417.84
40	5,417.84	270.89	5,418.23	5,689.12	-0.39

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
2	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
3	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
4	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
5	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
6	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
7	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
8	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
9	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
10	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
11	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
12	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
13	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
14	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
15	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
16	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
17	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
18	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
19	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
20	5,000,000.00	212,500.00	0.00	212,500.00	5,000,000.00
21	5,000,000.00	212,500.00	49,591.90	262,091.91	4,950,408.10
22	4,950,408.10	210,392.35	51,699.56	262,091.91	4,898,708.54
23	4,898,708.54	208,195.11	53,896.79	262,091.91	4,844,811.74
24	4,844,811.74	205,904.50	56,187.40	262,091.91	4,788,624.34
25	4,788,624.34	203,516.54	58,575.37	262,091.91	4,730,048.97
26	4,730,048.97	201,027.08	61,064.82	262,091.91	4,668,984.15
27	4,668,984.15	198,431.83	63,660.08	262,091.91	4,605,324.07
28	4,605,324.07	195,726.28	66,365.63	262,091.91	4,538,958.44
29	4,538,958.44	192,905.74	69,186.17	262,091.91	4,469,772.27
30	4,469,772.27	189,965.32	72,126.58	262,091.91	4,397,645.68
31	4,397,645.68	186,899.94	75,191.96	262,091.91	4,322,453.72
32	4,322,453.72	183,704.29	78,387.62	262,091.91	4,244,066.10
33	4,244,066.10	180,372.81	81,719.10	262,091.91	4,162,347.01
34	4,162,347.01	176,899.75	85,192.16	262,091.91	4,077,154.85
35	4,077,154.85	173,279.08	88,812.82	262,091.91	3,988,342.03
36	3,988,342.03	169,504.54	92,587.37	262,091.91	3,895,754.66
37	3,895,754.66	165,569.57	96,522.33	262,091.91	3,799,232.33
38	3,799,232.33	161,467.38	100,624.53	262,091.91	3,698,607.80
39	3,698,607.80	157,190.83	104,901.07	262,091.91	3,593,706.72
40	3,593,706.72	152,732.54	109,359.37	262,091.91	3,484,347.35
41	3.484,347.35	148,084.76	114,007.14	262,091.91	3,370,340.21
42	3,370,340.21	143,239.46	118,852.45	262,091.91	3,251,487.76
43	3,251,487.76	138,188.23	123,903.67	262,091.91	3,127,584.09
44	3,127,584.09	132,922.33	129,169.58	262,091.91	2,998,414.51
45	2,998,414.51	127,432.62	134,659.29	262,091.91	2,863,755.22
46	2,863,755.22	121,709.60	140,382.31	262,091.91	2,723,372.91
47	2,723,372.91	115,743.35	146,348.56	262,091.91	2,577,024.36
48	2,577,024.36	109,523.54	152,568.37	262,091.91	2,424,455.99
49	2,424,455.99	103,039.38	159,052.53	262,091.91	2,265,403.46
50	2,265,403.46	96,279.65	165,812.26	262,091.91	2,099,591.20
51	2,099,591.20	89,232.63	172,859.28	262,091.91	1,926,731.92
52	1,926,731.92	81,886.11	180,205.80	262,091.91	1,746,526.12
53	1,746,526.12	74,227.36	187,864.55	262,091.91	1,558,661.58
54	1,558,661.58	66,243.12	195,848.79	262,091.91	1,362,812.79

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
55	1,362,812.79	57,919.54	204,172.36	262,091.91	1,158,640.43
56	1,158,640.43	49,242.22	212,849.69	262,091.91	945,790.74
57	945,790.74	40,196.11	221,895.80	262,091.91	723,894.94
58	723,894.94	30,765.54	231,326.37	262,091.91	492,568.57
59	492,568.57	20,934.16	241,157.74	262,091.91	251,410.83
60	251,410.83	10,684.96	251,406.95	262,091.91	3.88

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1 — 40.5 → N.P 40.5.

2 - 42.6 +1 → NP

3 - 43. +2 → ND ..

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
55	1,449,415.89	72,470.80	213,092.36	285,563.16	1,236,323.53
56	1,236,323.53	61,816.18	223,746.98	285,563.16	1,012,576.55
57	1,012,576.55	50,628.83	234,934.33	285,563.16	777,642.23
58	777,642.23	38,882.11	246,681.04	285,563.16	530,961.18
59	530,961.18	26,548.06	259,015.10	285,563.16	271,946.09
60	271,946.09	13,597.30	271,965.83	285,563.16	-19.77

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No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
2	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
3	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
4	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
5	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
6	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
7	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
8	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
9	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
10	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
11	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
12	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
13	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
14	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
15	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
16	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
17	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
18	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
19	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
20	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
21	4,900,000.00	245,000.00	0.00	245,000.00	5,000,000.00
22	4,859,436.85	242,971.85	40,563.15	285,563.16	4,859,436.85
23	4,816,845.54	240,842.28	42,591.31	285,563.16	4,816,845.54
24	4,772,124.66	238,606.24	44,720.88	285,563.16	4,772,124.66
25	4,725,167.74	236,258.39	46,956.92	285,563.16	4,725,167.74
26	4,675,862.98	233,793.15	49,304.77	285,563.16	4,675,862.98
27	4,624,092.97	231,204.65	51,770.00	285,563.16	4,624,092.97
28	4,569,734.47	228,486.73	54,358.50	285,563.16	4,569,734.47
29	4,512,658.04	225,632.91	57,076.43	285,563.16	4,512,658.04
30	4,452,727.79	222,636.39	59,930.25	285,563.16	4,452,727.79
31	4,389,801.02	219,490.05	62,926.76	285,563.16	4,389,801.02
32	4,323,727.92	216,186.40	66,073.10	285,563.16	4,323,727.92
33	4,254,351.17	212,717.56	69,376.76	285,563.16	4,254,351.17
34	4,181,505.57	209,075.28	72,845.59	285,563.16	4,181,505.57
35	4,105,017.70	205,250.89	76,487.87	285,563.16	4,105,017.70
36	4,024,705.43	201,235.27	80,312.27	285,563.16	4,024,705.43
37	3,940,377.55	197,018.88	84,327.88	285,563.16	3,940,377.55
38	3,851,833.27	192,591.67	88,544.28	285,563.16	3,851,833.27
39	3,758,861.78	187,943.09	92,971.49	285,563.16	3,758,861.78
40	3,661,241.72	183,062.09	97,620.06	285,563.16	3,661,241.72
41	3,558,740.65	177,937.04	102,501.07	285,563.16	3,558,740.65
42	3,451,114.53	172,555.73	107,626.12	285,563.16	3,451,114.53
43	3,338,107.10	166,905.36	113,007.43	285,563.16	3,338,107.10
44	3,219,449.30	160,972.47	118,657.80	285,563.16	3,219,449.30
45	3,094,858.61	154,742.93	124,590.69	285,563.16	3,094,858.61
46	2,964,038.39	148,201.92	130,820.22	285,563.16	2,964,038.39
47	2,826,677.15	141,333.86	137,361.23	285,563.16	2,826,677.15
48	2,682,447.86	134,122.39	144,229.30	285,563.16	2,682,447.86
49	2,531,007.10	126,550.36	151,440.76	285,563.16	2,531,007.10
50	2,371,994.30	118,599.72	159,012.80	285,563.16	2,371,994.30
51	2,205,030.86	110,251.54	166,963.44	285,563.16	2,205,030.86
52	2,029,719.24	101,485.96	175,311.61	285,563.16	2,029,719.24
53	1,845,642.05	92,282.10	184,077.19	285,563.16	1,845,642.05
54	1,652,361.00	82,618.05	193,281.05	285,563.16	1,652,361.00
			202,945.11	285,563.16	1,449,415.89

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
1	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
2	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
3	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
4	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
5	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
6	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
7	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
8	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
9	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
10	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
11	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
12	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
13	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
14	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
15	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
16	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
17	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
18	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
19	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
20	4,900,000.00	257,250.00	0.00	257,250.00	5,000,000.00
21	4,900,000.00	257,249.99	38,153.20	295,403.19	4,861,846.80
22	4,861,846.80	255,246.95	40,156.24	295,403.19	4,821,690.57
23	4,821,690.57	253,138.75	42,264.44	295,403.19	4,779,426.13
24	4,779,426.13	250,919.86	44,483.32	295,403.19	4,734,942.80
25	4,734,942.80	248,584.49	46,818.70	295,403.19	4,688,124.10
26	4,688,124.10	246,126.51	49,276.68	295,403.19	4,638,847.42
27	4,638,847.42	243,539.48	51,863.71	295,403.19	4,586,983.72
28	4,586,983.72	240,816.64	54,586.55	295,403.19	4,532,397.17
29	4,532,397.17	237,950.84	57,452.34	295,403.19	4,474,944.83
30	4,474,944.83	234,934.60	60,468.59	295,403.19	4,414,476.23
31	4,414,476.23	231,760.00	63,643.19	295,403.19	4,350,833.04
32	4,350,833.04	228,418.73	66,984.46	295,403.19	4,283,848.58
33	4,283,848.58	224,902.04	70,501.14	295,403.19	4,213,347.44
34	4,213,347.44	221,200.73	74,202.45	295,403.19	4,139,144.98
35	4,139,144.98	217,305.10	78,098.08	295,403.19	4,061,046.90
36	4,061,046.90	213,204.96	82,198.23	295,403.19	3,978,848.67
37	3,978,848.67	208,889.55	86,513.64	295,403.19	3,892,335.03
38	3,892,335.03	204,347.58	91,055.60	295,403.19	3,801,279.43
39	3,801,279.43	199,567.16	95,836.02	295,403.19	3,705,443.40
40	3,705,443.40	194,535.77	100,867.42	295,403.19	3,604,575.99
41	3,604,575.99	189,240.23	106,162.95	295,403.19	3,498,413.03
42	3,498,413.03	183,666.68	111,736.51	295,403.19	3,386,676.52
43	3,386,676.52	177,800.51	117,602.68	295,403.19	3,269,073.85
44	3,269,073.85	171,626.37	123,776.82	295,403.19	3,145,297.03
45	3,145,297.03	165,128.09	130,275.10	295,403.19	3,015,021.93
46	3,015,021.93	158,288.65	137,114.54	295,403.19	2,877,907.39
47	2,877,907.39	151,090.13	144,313.05	295,403.19	2,733,594.34
48	2,733,594.34	143,513.70	151,889.49	295,403.19	2,581,704.85
49	2,581,704.85	135,539.50	159,863.69	295,403.19	2,421,841.16
50	2,421,841.16	127,146.66	168,256.53	295,403.19	2,253,584.63
51	2,253,584.63	118,313.19	177,090.00	295,403.19	2,076,494.63
52	2,076,494.63	109,015.96	186,387.22	295,403.19	1,890,107.41
53	1,890,107.41	99,230.64	196,172.55	295,403.19	1,693,934.86
54	1,693,934.86	88,931.58	206,471.61	295,403.19	1,487,463.25

No	saldo anterior	intereses	amortizacion	semestralidad	saldo actual
55	1,487,463.25	78,091.82	217,311.37	295,403.19	1,270,151.88
56	1,270,151.88	66,682.97	228,720.22	295,403.19	1,041,431.66
57	1,041,431.66	54,675.16	240,728.03	295,403.19	800,703.64
58	800,703.64	42,036.94	253,366.25	295,403.19	547,337.39
59	547,337.39	28,735.21	266,667.98	295,403.19	280,669.41
60	280,669.41	14,735.14	280,668.04	295,403.19	1.37

ANNEX G

DRAFT LEGAL AGREEMENTS

TABLE G

TABLE OF CONTENTS

TRUST AGREEMENT

Trust Agreement dated as of ______________________________ ,1986, by and between ______________________________ ("SETTLOR"), ______________________________ a bank, duly licensed to carry out banking operations in the Republic of Panama, and ______________________________, a bank duly licensed to carry out the trust business in the Republic of Panama ("TRUSTEE").

WHEREAS, "SETTLOR(S)" has entered into a Loan Agreement "Loan Agreement", dated ______________________________, a copy of which has been delivered to "TRUSTEE", whereby "SETTLOR" has borrowed from ______________________________, ______________________________ "INVESTOR(S)" United States Dollars ("DOLLARS") ("the Loan")

WHEREAS the above mentioned amount borrowed by SETTLOR is to be used to provide long term mortgage housing financing for eligible below-median income families ("Homeowners") in the Republic of Panama, all in accordance with an Implementation Agreement ("Implementation Agreement") dated ______________________________, entered into between SETTLOR, and Agency for International Development, copy of which has been delivered to TRUSTEE.

WHEREAS the United States of America, acting through the Agency for International Development ("AID"), has issued its guarantee to secure repayment to "INVESTOR(S)" of the principal, interests and other sums under the "Loan Agreement", in accordance with the terms and conditions of a contract of guarantee ("Guarantee Agreement") dated ______________________, between "AID" and "INVESTOR(S)", a copy of which has been delivered to "TRUSTEE"

WHEREAS, TRUSTEE shall receive from INVESTOR(S) the proceeds of the Loan by order and account of SETTLOR and shall receive repayment from SETTLOR and otherwise administer such sums to secure repayment to INVESTOR(S) of the sums under the "Loan Agreement" and for the benefit of AID, (first beneficiary) and INVESTORS and SETTLOR (secondary beneficiaries), both INVESTORS and AID, collectively referred to hereunder together with the SETTLOR, as BENEFICIARIES.

NOW, THEREFORE, the "SETTLOR" and the "TRUSTEE" hereby expressly agree to enter into a Trust Agreement ("Trust Agreement"), to set up a trust ("the Trust") according to the following terms and conditions:

ARTICLE I

TRUST CORPUS

Section 1.01. The Trust Corpus: The initial trust corpus shall

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be formed by the sum of ______________________ to be disbursed pursuant to the Loan Agreement entered into between INVESTOR(S) and SETTLOR, sum to be delivered in trust by INVESTOR(S) to TRUSTEE by order and account of SETTLOR, pursuant to the Implementation Agreement, and this Trust Agreement.

Section 1.02. Additional Trust Corpus: New sums can be added to the trust corpus with the consent of TRUSTEE, SETTLOR and AID.

ARTICLE II

PURPOSE OF THE TRUST

Section 2:01. The Purpose of the Trust shall be to administer the trust funds so the SETTLOR or other financial institutions can provide long term housing financing required by Homeowners pursuant to a housing program described in the Implementation Agreement ("the Program"); to provide a mechanism for repayment to INVESTORS of sums under the Loan Agreement and to manage collateral and other security to assure such repayment.

ARTICLE III

REVOCABILITY OF THE TRUST

Section 3:01: This Trust is revocable by SETTLOR with the written consent of A.I.D., by giving TRUSTEE written notice of ____________________ days.

ARTICLE IV

DURATION OF THE TRUST

Section 4:01. The Trust shall be effective until all sums administered by TRUSTEE shall have been duly paid to INVESTORS, and AID, for the account of SETTLOR and the remaining sums delivered to SETTLOR with the written approval of AID, unless terminated prior to such date pursuant to Article XIV hereof.

ARTICLE V

TRUSTEE'S OBLIGATIONS IN CONNECTION WITH LOANS

Section 5:01. Receipt of funds by TRUSTEE: TRUSTEE will receive in trust, funds under the Loan Agreement directly delivered to it by order of the INVESTOR(S) for the account of the SETTLOR. Upon receipt of funds TRUSTEE shall deliver to SETTLOR certificates stating the amounts received.

Section 5:02. Use of Funds by TRUSTEE: Upon receipt of funds from INVESTOR(S), TRUSTEE shall immediately loan the funds to the

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SETTLOR or other financial institutions upon presentation of eligible mortgages.

During the time the trust funds are under its control, TRUSTEE must administer them in the most productive manner compatible with the objectives of the Program, and shall profitably invest, in eligible mortgages or other investments such surpluses and other resources as may exist.

Section 5:03. Selection of financial institutions:

TRUSTEE shall select, with the approval of AID, the financial institutions to receive funds to be used to provide mortgage financing to Homeowners according to the following procedure:

a) SETTLOR shall have priority to receive funds up to the amount borrowed by it from INVESTOR.

b) In the event the SETTLOR does not qualify to receive funds or does not wish to use them, in whole or in part, Trustee shall use the available funds received from the account of SETTLOR, to make loans to other financial institutions.

c) Financial institutions approved by AID may receive loans from the trust for the above mentioned purposes against presentation of eligible mortgages.

d) In order to obtain the most effective use of the trust funds, TRUSTEE can propose for the approval of AID new financial institutions to receive funds.

Section 5.04. Loans to financial institutions: When making loans to financial institutions, TRUSTEE shall take into account that:

1. Loans shall be only a percentage of the amount of the mortages subscribed by the Homeowners and offered to TRUSTEE as guarantee for loans at the time loans are requested, according to the terms established under the Implementation Agreement.

2. The conditions of loans shall be the following:

   a) The term of the loan shall be compatible with the source and conditions under which the resources were obtained.

   b) The interest of loans shall be fixed by TRUSTEE according to the cost of money and other related costs.

   c) Payments shall be made every six (6) months.

d) At least _________ days prior to the proposed date for the making of each loan, the borrower shall submit a request for borrowing to TRUSTEE specifying the date and the amount of such proposed borrowing.

e) The following documents shall be enclosed with the request for borrowing:

1. Duly executed mortgage deed granting a first mortgage on the housing solution, duly recorded at the Public Registry Office;

2. Notarial Deed of Assignment of the mortgage(s) ("Deed of Assignment") to the TRUSTEE, as security for the repayment of the requested loan, as per format contained in Annex ____________ hereto;

<u>Section 5.05</u> <u>Analysis and qualification of portfolio:</u> Except as AID may otherwise agree, TRUSTEE shall review the portfolio applicable in guarantee for the corresponding loan to a financial institutions, taking into account:

a. Criteria for the selection of eligible families and house solutions established in the Implementation

Agreement, provided that TRUSTEE shall not be responsible for the review of the individual portfolio except to the extent that he is provided information by the financial institution, according to the Implementation Agreement.

b. Mortages must, in all cases, be first grade mortgages, contracted in dollars of the United States of America.

c. TRUSTEE must be entitled by the Deed of Assignment of mortgages to receive directly the proceeds of the mortgage loans in case of default of the financial institution.

d. The insurance policies obtained according to the mortgage loans shall have been duly issued in favor of the financial institution.

Section 5.06. TRUSTEE as Fiscal Agent for A.I.D. TRUSTEE shall act as Fiscal Agent for A.I.D. pursuant to a Paying and Transfer Agency Agreement signed between AID and Trustee.

Section 5.07. Holding of assigned mortgage portfolio. The TRUSTEE shall hold the assigned mortgage portfolio for collection purposes, and in case it were necessary, to file a legal action against the homeowners in the event of default by the financial institution.

V

Should default by the financial institution occur, TRUSTEE shall file a declaration of default at the Public Registry Office and assume the mortgage portfolio to secure repayments to INVESTOR.

In the event of default, the financial institution must deliver to TRUSTEE the mortgage documentation, together with the insurance policies covering the loans to Homeowner, duly endorsed in favor of TRUSTEE.

<u>Section 5.08.</u> <u>Collection of Loans and Payment to INVESTORS:</u> As one of its essential duties, TRUSTEE must collect the sums owed by the financial institutions. To that effect, TRUSTEE must:

1. Opportunely take all collection steps.

2. Verify the financial adequacy as to level and quality of the financial institution's mortgage portfolio held for debt service, asking for substitute mortgage portfolio as required.

3. The TRUSTEE shall promptly repay to INVESTORS and A I D for the account of the financial institutions those sums owed pursuant to the Loan Agreement.

4. TRUSTEE must at all time maintain the productivity of the remaining sums, once these repayment obligations are fulfilled.

<u>Section 5.09.</u> <u>Liquidity Reserve Fund.</u> TRUSTEE shall establish and maintain in a separate account, a Liquidity Reserve Fund which shall be available to meet repayment obligations to INVESTOR(S) and A I D in the event of default by financial institutions.

<u>Section 5.10.</u> <u>Foreclosure.</u> In the event of default by the financial institution TRUSTEE may initiate and prosecute foreclosure actions on mortgages in default, if default is not cured within thirty (30) days after notice by TRUSTEE to Homeowner. TRUSTEE may, at its discretion, permit a defaulting homeowner to cure any default, after the initiation of the foreclosure action if defaulted amounts are paid together with the reasonable costs incurred by TRUSTEE in initiating the foreclosure action.

TRUSTEE shall, at any foreclosure sale, bid the minimum amount required to acquire any such house but not in excess of the amount then due under the defaulted mortgage plus the costs of the foreclosure proceeding.

If TRUSTEE acquires title to any house, TRUSTEE shall make all reasonable efforts to sell such house and TRUSTEE may offer to interested purchaser financing for a portion of the purchase price of the house by a new mortgage to the extent of an amount not exceeding the unpaid principal amount of the defaulted mortgage.

In the event that any house acquired by TRUSTEE at a foreclosure sale cannot be resold within a reasonable time for an amount equal to the amounts due on the defaulted mortgage plus the costs of the legal proceedings, including foreclosure, TRUSTEE shall consult with AID as to the most productive manner of disposing of the housing facility.

All amounts received by TRUSTEE at or in connection with a foreclosure sale of a property subject to a mortgage shall be applied in the following order of priority:

(1) Toward the payment of reasonable costs of legal proceedings, including foreclosure and resale (including any repairs or minor improvements necessary to put the house in saleable condition) incurred by TRUSTEE;

(2) Toward the payment to INVESTOR and A I D of sums due and owing to INVESTOR.

(3) Any remaining amount shall be paid to the defaulting homeowner.

TRUSTEE shall take all necessary steps to insure that the mortgages are enforced according to their terms and will, as necessary, consult with AID concerning the interpretation of those terms.

Section 5.11. Application and Delivery of sums paid by financial institutions.

Sums paid by the financial institutions to the Trustee shall be applied by it in the following order of priority:

1. Trustee's fees;

2. Any reasonable expenses incurred by TRUSTEE in the administration of the trust;

3. Sums to be repaid to INVESTORS and A I D for the account of SETTLOR(S) according to the Loan Agreement. These sums shall be delivered to INVESTORS free of taxes and deductions, in dollars, legal currency of the United States of America.

4. Sums to the "Liquidity Reserve Fund" pursuant to the

Implementation Agreement.

5. Invest any exceeding amounts in eligible mortgage portfolio, through financial institutions accepted by AID.

ARTICLE VI

TRUSTEE'S OBLIGATIONS IN CONNECTION WITH ITS OPERATIONAL CAPACITY

Section 6.01. Staff and Equipment: TRUSTEE must obtain and keep qualified staff and the technical equipment to secure an effective performance of the Trust.

Section 6.02. Accountings and Records: TRUSTEE must design and implement an independent accounting system. To this effect, TRUSTEE must keep the trust sums as well as the accounting and records of said sums separate from its other assets and from the accounts and records regarding those other assets, all pursuant to sound and generally accepted accounting principles and standards.

Section 6.03. Program information and Reports: TRUSTEE must keep a program information and reporting system.

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TRUSTEE must submit to BENEFICIARIES every six (6) months, accurate written and documented reports regarding the performance of the trust, including:

1. Sums loaned to financial institutions;

2. Payments of principal and interest made by financial institutions pursuant to agreements executed with Trustee;

3. Any event of default by any of the financial institutions or any fact that may be a potential cause of default by any of the financial institutions.

4. New mortgage portfolio generated by the amortization of original loans.

5. Any investments made by TRUSTEE of surpluses or other funds in its possession.

TRUSTEE must also submit to BENEFICIARIES other reports as they may reasonably request.

<u>Section 6.04.</u> <u>External Audit:</u> At least annually TRUSTEE must deliver to BENEFICIARIES an external audit report of the

operation of the trust, performed by reputable auditors approved by AID.

Section 6.05. Exoneration of taxes: TRUSTEE shall verify that INVESTORS are exonerated from income tax as provided in Article 708 m) of the Fiscal Code.

TRUSTEE shall also verify that income derived from investments of trust funds for financing housing programs is exonerated from income tax pursuant to first paragraph of Article 35 of Law 1 of 1984 on Trusts.

ARTICLE VII

SURVEILLANCE BY TRUSTEE OF THE PERFORMANCE OF PROGRAM BY FINANCIAL INSTITUTIONS. STATISTICS.

Section 7.01. Surveillance of program. In s rveying the performance of the Program by financial institutions Trustee shall:

1. Request from financial institutions periodical reports on:

    (a) Social and economic characteristics of the homeowners and the housing solutions financed under the Program.

vb

(b) Statement of payments and prepayments by homeowners of principal and interests of the mortgage loans granted to them;

(c) Collection procedures used by financial institutions in case of default by homeowners.

2. Carry out audits, as requested by AID, through independent auditors appointed by Trustee of books and records of the financial institutions related to the mortgage portfolio assigned to Trustee.

Section 7.02. Statistics on family income. TRUSTEE must update statistics on urban below median family income.

Section 7.03. Periodic determination of interest rates; TRUSTEE shall carry out periodic reviews of the indicators used to determine interest rates variations for the loan in order that participating financial institutions can apply any such variation to their mortgage portfolio.

ARTICLE VIII

CAPACITY OF EXPANSION OF THE TRUST

Section 8.01. Internal Expansion: TRUSTEE must maintain the maximum level of investment in order to increase the actual capacity of the trust funds to fulfill the purposes of the trust, through the following:

a) Capitalization of sums collected by TRUSTEE which exceed the repayments made to INVESTORS, for the purposes of the Program.

b) Reinvestment for the purposes of the trust, of sums resulting from the different velocities of amortizations of loans. Such sums shall be invested in eligible portfolio.

c) Issuance of mortgage bonds against mortgage portfolio generated with surpluses or other funds available in the possession of the Trustee.

Section 8.02. External Expansion: An external expansion of the trust can be obtained by means of:

a) New sums provided by third persons or institutions.

b) Other resources.

In any event, an external expansion constitutes a matter to be negotiated with SETTLOR(S) and A I D.

ARTICLE IX

DUTIES, SCOPE OF AUTHORITY, LIABILITY OF THE TRUSTEE, PROHIBITIONS

Section 9.01. Duties, Scope of Authority:

a) TRUSTEE shall provide competent administrative and financial management and supervision of the trust funds.

b) TRUSTEE shall establish overall guidelines for institutional eligibility, lending, disbursements, and collections, according to AID's criteria.

c) The TRUSTEE'S duties and its authority are limited to those specifically provided in this Trust Agreement. Therefore, no implied duties or authority shall be read into this Agreement.

Section 9.02. Liability:

TRUSTEE agrees that it shall perform its duties in good faith and with the care of a prudent head of a family.

TRUSTEE shall be liable for its own or its employee's negligence or willful misconduct in the performance of any duty to be performed hereunder and will indemnify the BENEFICIARIES against any loss or liability and agrees to pay or reimburse the BENEFICIARIES for any reasonable expense, including counsel fees. incurred by the BENEFICIARIES in connection with the defense against any loss or damage caused by the TRUSTEE'S or its employees' negligence or willful misconduct in the performance of any duty to be performed by the TRUSTEE hereunder.

Section 9.03. Prohibitions:

It is forbidden for the TRUSTEE to apply the trust assets for any purpose other than the purpose of the trust or in conditions not agreed upon in this agreement.

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ARTICLE X

TRUSTEE'S COMPENSATION

The TRUSTEE shall be entitled to compensation paid by SETTLOR(S) as follows:

a. TRUSTEE shall be entitled to receive, in payment for the performance of its duties hereunder, a fee agreed upon, by separate document, with SETTLOR(S) or, as the case may be, with new SETTLOR, financial institutions or third persons.

b. TRUSTEE shall be reimbursed for any reasonably expense in excess of the ordinary costs incurred in the performance of its duties.

ARTICLE XI

RESIGNATION, REMOVAL OF TRUSTEE, APPOINTMENT OF SUBSTITUTE

Section 11.01. Resignation of Trustee: TRUSTEE may resign for just cause, acceptable to AID, by giving a ninety (90) day notice to the BENEFICIARIES of its intention to do so; provided, however, such resignation shall not become effective until:

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1. A successor trustee has been appointed by the SETTLOR(S), or by TRUSTEE itself, with the written approval of AID.

2. Such successor trustee shall have assumed in writing all the obligations of TRUSTEE hereunder, pursuant to the terms and provisions hereof, and;

3. The TRUSTEE shall have executed all such documents and taken all such other steps as may be necessary or appropriate to transfer all the rights and powers of, and any monies held by the TRUSTEE hereunder to the new trustee. All expenses incurred in carrying out the provision of this Section shall be borne by the resigning TRUSTEE.

4. The TRUSTEE shall have delivered to the BENEFICIARIES, in writing, an accurate and documented account of its performance, acceptable to the latter.

<u>Section 11.02.</u> <u>Removal of TRUSTEE:</u> In case of failure or inability of the TRUSTEE to satisfactorily perform its duties under this Agreement in the opinion of the BENEFICIARIES, the SETTLOR(S) may remove the TRUSTEE, with the consent, of AID. Removal shall be effected upon giving TRUSTEE a written ninety

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(90) day prior notice stating the cause thereof. In such event, the conditions set forth in 1 to 4 of Section 11.01 hereof shall apply.

Section 11.03. Substitute Trustee: The SETTLOR(S) may at any time appoint a substitute trustee, with the consent of AID, according to the requirements established for the selection of the Trustee, provided in the Implementation Agreement, to replace the existing TRUSTEE in case of its resignation or removal. In case no qualified substitute or newly appointed trustee can assume the duties of the TRUSTEE, AID may appoint a substitute trustee to temporarily assume the rights and obligations of the TRUSTEE until a new trustee has been appointed by SETTLOR(S) and has assumed its obligations under this Agreement.

Section 11.04. Liability of preceding TRUSTEE. The appointment of a new trustee does not exempt the preceding trustee from liabilities incurred in the performance of its duties during the time he acted as TRUSTEE, and each one of the BENEFICIARIES is entitled to request the preceding trustee, even by means of a legal action before the courts, the amounts it is responsible for and the damages caused by it, as the case may be.

ARTICLE XII

CONTROVERSIES, JURISDICTION, ARBITRATION

Section 12.01. Controversies and Jurisdiction: Any controversy arising from this Trust Agreement must be adjudged by means of summary proceedings, as contemplated in the Judicial Code of the Republic of Panama and shall be subject to the jurisdiction of the courts of said country.

Section 12.02. Arbitration: Notwithstanding the provisions of Section 12.01 above, any controversy or claim between or among the parties hereto can be settled by arbitration in accordance with the rules of the American Arbitration Association.

Any party may serve another party with written notice of arbitration, including therein the designation of one arbitrator. Within ten (10) days of receipt thereof, the two arbitrators so designated shall agree upon a third arbitrator, or if they fail to agree within such period, either party may request the American Arbitration Association to appoint a third arbitrator.

The fees and expenses of the third arbitrator shall be borne equally by the parties to the arbitration proceeding. All other expenses including, without limitation, the fees and expenses of any arbitration counsel, expert or other witness, shall be for the account of the party by whom they were incurred.

The written decision by the arbitration panel shall, in the absence of fraud or serious misconduct, be final and binding, and judgement may be enforced through any court having jurisdiction thereupon.

ARTICLE XIII

RIGHTS OF BENEFICIARIES AND DUTIES OF SETTLOR(S)

Section 13.01. Rights of Beneficiaries: Each one of the BENEFICIARIES shall be entitled to:

1. request from the TRUSTEE, periodically, the delivery of reasonable reports and information as they may deem convenient as per Section 6.03 hereof.

2. have access to the books, records and documentation of the TRUSTEE regarding the trust funds.

3. appoint independent auditors to audit the books, records and documentation used by the TRUSTEE in the performance of the trust.

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4. remove the TRUSTEE with the consent of AID as per Section 11.02 hereof.

Section 13.02. Duties of SETTLOR(S): The SETTLOR(S) shall have the following obligations:

1. To transfer to TRUSTEE, the sums necessary for the performance of the trust.

2. To provide the TRUSTEE with all necessary documents or information as it may reasonably request for the performance of the trust

ARTICLE XIV

TERMINATION OF THE TRUST --- REMAINING ASSETS

Section 14.01. Termination: This Trust Agreement will terminate:

1. Whenever the purpose of the trust has been accomplished by the TRUSTEE and all sums owed to the INVESTORS and AID have been duly paid for the account of the SETTLOR(S), as provided in Article IV hereof.

2. If the performance of the trust becomes impossible due to reasons beyond the control of the parties.

3. In case of revocation of the trust according to Article III of this Trust Agreement.

Section 14.02. Remaining Assets. Any remaining assets after the termination of the trust shall be delivered by TRUSTEE to SETTLOR(S), with the approval of AID.

Section 14.03. Final Account: Upon termination of the trust and delivery of remaining assets Trustee shall render a final account, which must be approved by the BENEFICIARIES.

ARTICLE XV

MISCELLANEOUS PROVISIONS

Section 15.01. Amendments: This Trust Agreement can be amended in writing by the SETTLOR(S) and the TRUSTEE with the written approval of the A I D.

Section 15.02. Notices: Any notice given by any of the parties to this Agreement shall be made in writing and shall be deemed to have been duly given to the party to which it is addressed when delivered by hand or sent by mail or telegram, cable, telefax, radiogram or any other means to reach the other party at the following addresses:

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Section 15.03. Governing Law: This Agreement has been entered into and is to be performed in the Republic of Panama, and shall be performed and construed in accordance with and shall be governed by the laws of said country.

Section 15.04. Domicile: This trust is domiciled in the city of Panama, Republic of Panama.

Section 15.05. Resident Agent: The Resident Agent of this Trust is AROSEMENA, NORIEGA & CASTRO, a law firm domiciled at Elvira Méndez Street No. 10, Interseco Building, second floor, in the City of Panama, Republic of Panama.

Section 15.06. Acceptance by TRUSTEE: The TRUSTEE hereby accepts its appointment as TRUSTEE and the rights and obligations derived therefrom.

IN WITNESS THEREOF, the parties sign and execute this Agreement on this ______________ day of the __________________, 1986 in the City of Panama, Republic of Panama.

THE SETTLOR(S)	THE TRUSTEE
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APPROVED BY A.I.D.

____

Countersigned hereby by Resident Agent

AROSEMENA, NORIEGA & CASTRO

(Notarization)

ARTICLE I

THE LOAN

Section 1.01: Amount of the Loan. The Sub-Borrower does hereby declare to have received on this date from "Trustee" a loan ("The Loan") in the amount of ______________________ dollars, legal tender of the United States of America ("Dollars") to be represented in one or more promissory notes ("Notes").

Section 1.C2. Interests on the Loan. Interests on the Loan shall be paid at the rate and upon the conditions specified in Section 4.01 hereof.

Section 1.03 Security. This Loan shall be secured by Mortgage Notes, signed by the houseowners of the project ("Users"), and duly endorsed by Sub-Borrower to Trustee to this agreement, together with insurance policies obtained pursuant to said Mortgages, which have been also duly endorsed to Trustee.

ARTICLE II

REPRESENTATIONS AND WARRANTIES

LOAN AGREEMENT

LOAN AGREEMENT dated as of ____________ ______ 198___ between ____, a bank duly licensed to engage in the trust business in the Republic of Panama ("Trustee") and ______________________ a bank duly licensed to engage in banking operations pursuant to the laws of said country ("Sub-Borrower").

WHEREAS Trustee has received funds from ______________ ("Borrowers"), certain sums in trust to be used to finance housing projects in the Republic of Panama according to a Loan Agreement by and between "Borrowers" and ______________ __________ "Investors" guaranteed by the Agency for International Development ("A.I.D.").

WHEREAS Sub-Borrower desires to obtain a Loan of a principal amount of ______________________ to be used by Sub-Borrower to finance housing solutions described in Exhibit ______________ to this agreement, which exhibit is incorporated herein by reference and forms integral part hereof.

NOW, THEREFORE, Trustee and Sub-Borrower hereby agree as follows:

<u>Section 2.01</u> Sub-Borrower represents and warrants that:

A. Sub-Borrower is a corporation duly incorporated, validly existing and in good standing under the laws of the Republic of Panama.

B. Sub-Borrower is a bank duly licensed to engage in banking operations in the Republic of Panama.

C. The execution and delivery of this Agreement, the borrowing of money under this Agreement, the issuance of Notes in evidence of such borrowing are within the corporate authority of Sub-borrowers and have been duly authorized by Sub-Borrower by all required corporate action.

D. All documentary stamp taxes and other taxes or fees payable under Panamanian law in connection with this Agreement, have been duly paid.

E. This Agreement constitutes a valid and binding agreement of Sub-borrower enforceable in accordance with its terms.

ARTICLE III

CONDITIONS TO DISBURSEMENT

<u>Section 3.01</u> The disbursement of the Loan under this Agreement is subject to the following conditions:

A - This Agreement, the Mortgages and the Mortgage Notes which serve as security for this Loan are in full force and effect.

B - Sub-Borrower shall have received an opinion, satisfactory to it in form and substance, of Counsel for Sub-Borrower, selected by Sub-Borrower to the effect that:

(i) Sub-Borrower is a corporation duly incorporated, validly existing and in good standing under the laws of the Replublic of Panama.

(ii) Sub-Borrower is a bank duly licensed to engage in banking operations in the Republic of Panama.

(iii) The execution and delivery of this Agreement, the borrowing of money under this Agreement and the issuance of Notes hereunder, are within the corporate authority of Sub-Borrower, have been duly authorized by Sub-Borrower by all required corporate action, and will not violate any provision of law, any order of any court or other agency of the Government of Panama or any political subdivision thereof, or of any agreement to which Sub-Borrower is a party to by which it or any of its property is or may be bound.

(iv) This Agreement has been duly executed and delivered by Sub-Borrower and is a legal, valid and binding agreement of Sub-Borrower enforceable in accordance with its terms, and all documentary stamp taxes and other taxes or fees payable under Panamanian law in connection with such Agreement have been paid.

(v) All payments by Sub-Borrower or the User respectively, on the Notes and Mortgages, shall be made free and clear of all taxes, levies, imposts, deductions and withholdings whatsoever imposed, levied, collected or assessed with respect thereto by the Government of Panama or by any political subdivision or taxing authority thereof.

(vi) No licences or authorizations by Panamanian authorities are necessary to permit Sub-Borrowers to borrow the amounts available hereunder or to authorize Sub-Borrower to remit to Trustee the amounts agreed to be so remitted hereunder.

(vii) The Note(s) to be delivered to Trustee to evidence this Loan has (have) been duly authorized and executed by Sub-Borrower, all documentary stamp taxes or other taxes and fees due and payable under Panamanian law upon or in connection with the issuance, making and delivery of such Note have been paid and, when such Note(s) has (have) been delivered to Trustee to evidence such Loan, such Note(s) will constitute a valid and binding obligation of Sub-Borrower enforceable in accordance with its terms; and

(viii) The Mortgages on the individual homes referred to in Annex ____________ to this Agreement have been duly executed and delivered to Sub-Borrower by the respective mortgagors (who are the respective legal owners of the respective properties), have been registered in the appropriate Public Registry and constitute valid, direct first mortgage liens uppon the properties purported to be subject thereto, as security for the obligations mentioned therein, subject to no prior liens, charges or encumbrances, are legal, valid and binding obligations enforceable in accordance with their terms, and will be held by Trustee in trust for the benefit of Borrowers.

(ix) No re-recording of any Mortgage is at any time required to maintain the lien thereof.

<u>Section 3.02</u> <u>Other Conditions to Disbursement.</u> The obligation of Trustee to make the Loan hereunder is subject to the following further conditions:

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A. The representations and warranties of Sub-Borrower set forth in Section 2.01 shall be true and correct to the same extent as if made on and as of the date of such Loan, Sub-Borrower shall have delivered to Trustee a certificate to that effect signed on its behalf by its legal representative and this Agreement shall then be in full force and effect.

B. Trustee shall have received a Note of Sub-Borrower to evidence such Loan.

ARTICLE IV

COVENANTS

Section 4.01 Sub-Borrower covenants and agrees that from the date hereof until payment in full of the principal of and interest on the Notes:

A. Sub-Borrower will make payments to Trustee, at its principal office in the Republic of Panama, or at such office as Trustee shall specify by written notice given to Sub-Borrower at least 15 days before the first payment to be affected by such notice becomes due, in Dollars of the United States of America as follows:

(i) Sub-Borrower will pay the principal of and interest on the Loan hereunder in not more than 240 consecutive monthly installments, payable on the first day of each calendar month, commencing on the first day of the calendar month next following the calendar month during which such Loan was made. All such payments shall be applied first to the interest then due thereon and then to the reduction of the principal thereof.

Interest shall be paid by Sub-Borrower at the rate of ______________ percent per annum accrued to the respective payment dates of each installment on the unpaid principal amount to such Loan.

(ii) Prepayments on the Loan hereunder and the Notes evidencing such Loan can only be made with the consent of A.I.D.

Prepayments shall not relieve Sub-Borrower from making any monthly payments until the entire balance owing shall have been paid.

(iii) All payments by Sub-Borrower to Trustee will be made free and clear of, and without deduction for, any and all taxes, levies, imposts, deductions and withholdings whatsoever imposed, levied, collected or assessed with respect thereto by the Government of Panama or by any political subdivision or taxing authority thereof. To the extent that any tax, levy, impost, deduction or withholding (herein called a "local tax") is imposed by the laws of Panama or any political sub-division or taxing authority thereof or with respect to any payment hereunder, Sub-Borrower will, on written demand, promptly pay to Trustee, or, in the case of a local tax which Sub-Borrower is required to deduct or withhold, to the proper taxing authority, as additional interest, a sum equal to any and all such local taxes on the amounts payable to Trustee hereunder. Sub-Borrower shall, immediately after the payment by it or any such local tax, transmit to Sub-Borrower a receipt executed by appropriate authorities evidencing such payment of such local tax or other documentary evidence of such payment satisfactory to Trustee.

B. The Sub-Borrower shall keep records relating to each loan to houseowners, including all payments of principal and interest, and on amounts due and unpaid on the corresponding note;

The Sub-Borrower shall furnish Trustee a semi-annual report on the payments received from houseowners, the allocation of payments to principal, including, prepayments, and interest, as well as interest on overdue principal, if any, made on each payment date during the corresponding six month period. Such report shall be made within thirty (30) calendar days counted from the end of the six month period being reported;

The Sub-Borrower will grant authorized representaive of the Trustee and AID access to records maintained according to this Agreement upon reasonable request during regular business hours for the duration of this Agreement and for ________ years following payment in full of the loans made to houseowners. The Sub-Borrowers will send to the Trustee, AID or its designees, copies of such records as Trustee or AID may reasonably request.

C. Sub-Borrower shall do or cause to be done all things necessary to preserve and keep in full force and effect its corporate existence, rights and franchises and comply will all laws applicable to Sub-Borrower, including provision for corporate registration, charter, tax and similar fees, so long as any sum is outstanding.

ARTICLE V

EVENTS OF DEFAULT

<u>Section 5.01</u> <u>Events of Default</u>. The happening of one or more of the following shall constitute an Event of Default:

A. Default in the payment of any principal of or interest on any Note issued hereunder when the same shall become due and payable and the continuance of such default for thirty days, except that in the case of a payment due on the final maturity date of any Note an Event of Default shall be deemed to have occured on such date if the full unpaid balance of principal and interest is not paid on such date.

B. Default in the due observance or performance of any other covenant or condition in this Agreement required to be kept or performed by Sub-Borrower, and the continuance thereof for thirty days after notice specifying such default shall have been received by Sub-Borrower.

C. Any representation or warranty made by Sub-Borrower in this Agreement or any certificate or other document delivered by Sub-Borrower to comply with any condition or fulfill any requirement of this Agreement, shall prove untrue in any material respect.

Section 5.02 Remedies. In the case of the happening of one or more Events of Default, then and in each and every such case, unless the principal of all the Notes shall have already become due and payable, Trustee, by notice to Sub-Borrower, may declare the principal of all Notes then outstanding hereunder to be, and upon any such declaration, without presentment, demand, protest or notice of any kind, all of which are hereby expressly waived.

ARTICLE VI

MISCELLANEOUS

Section 6.01 Notices. Any communication, advice, request, consent, document, notice or direction given, made or sent by Trustee or Sub-Borrower pursuant to this Agreement shall be in writing (in the English language or accompanied by an accurate translation in the English language) and shall be deemed to have been duly received by the party to which it is addressed when it shall be delivered by hand or by mail, telegram, cable or radiogram to such party at the address specified below:

To Sub-Borrower:

To Trustee:

Other addresses may be substituted for the above upon the giving of notice of such substitution.

Section 6.02 Term. The term of this Agreement shall be from the date hereof until the payment in full of the principal of and interest on the Notes.

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Section 6.03 Modification and Waivers. No modification or waiver of any provisions of this Agreement, nor consent to any departure therefrom by Sub-Borrower, shall in any event be effective unless the same shall be in writing, and any such waiver or consent shall be effective only in the specific instance and for the purpose for which it is given. No notice to or demand on Sub-Borrower in any case shall entitle it to any other or further notice or demand in the same, similar or other circumstances. Any failure or delay by Trustee in exercising any right, power or privilege hereunder or under the Notes shall not operate as a waiver thereof nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any right, power or privilege.

Section 6.04 Governing Law. This Agreement has been made and is to be performed in the Republic of Panama, and it and the Notes shall be deemed to be contracts made under the laws of said country and shall be construed in accordance with and shall be governed by the laws of said country.

Section 6.05 Assignment. This Agreement and in the representations, warranties and covenants contained herein shall be binding upon and shall inure to the benefit of the parties, and therefore shall not be assigned by Sub-Borrower without the prior consent of Trustee and AID.

Section 6.06 Trustee's Expenses. Whether or not the transactions contemplated by this Agreement are consummated, Sub-Borrower shall reimburse Trustee for out-of-pocket expenses in connection with the preparation and execution of this Agreement and the making of the Loan hereunder, including but not limited to the reasonable legal fees and disbursements of any Panamanian counsel it may consult with respect to the matters hereby contemplated, all printing costs, the charges for services and disbursements of any representatives of Trustee attending any closing, and all other closing expenses.

Section 6.07 Replacement Notes. Upon receipt of evidence satisfactory to Sub-Borrower of the theft, loss mutilation or destruction of any Note, and in the case of any theft, loss or destruction upon the receipt by Sub-Borrower of indemnity or security reasonably satisfactory to Sub-Borrower (or in the case of any such mutilation upon receipt by Sub-Borrower of the Note), Sub-Borrower will execute and deliver a new Note of like tenor in lieu of such Note.

Section 6.8. Jurisdiction.

Any controversy arising from this Agreement shall be subject to the jurisdiction of the courts of the Republic of Panama.

Section 6.9: Notwithstanding the provisions of Section 4.04 above, any controversy or claim between or among the parties hereto can be settled by arbitration in accordance with the rules of the American Arbitration Association.

Any party may serve another party with written notice of arbitration, including therein the designation of one arbitrator. Within ten (10) days of receipt thereof, the two arbitators so designated shall agree upon a third arbitrator, or if they fail to agre within such period, either party may request the American Arbitration Association to appoint a third arbitrator.

The fees and expenses of the third arbitrator shall be borne equally by the parties to the arbitration proceedings. All other expenses, including without limitation, the fees and expenses of any arbitration counsel, expert or other witness, shall be for the account of the party by whom they were incurred.

The written decision by the arbitration panel shall, in the absence of fraud or serious misconduct, be final and binding, and judgement may be enforced through any court having jurisdiction thereof.

IN WITNESS WHEREOF, the parties hereto have caused this Trustee Agreement to be duly executed as of the day and year first above written.

TRUSTEE

____

SUB-BORROWER

____

AROSEMENA NORIEGA & CASTRO
ABOGADOS - LAWYERS

CARLOS AROSEMENA A
JOSE A. NORIEGA JR
GABRIEL CASTRO S.
GUILLERMO ZURITA
JULIO C CONTRERAS III

RICARDO CUPAS F.
VICTORIA EUGENIA MYERS
FRANCISCO JAVIER MATA
RAOUEL McKAY D.
JOSE E. BARRIA C.
LINETTE A LANDAU B.
JAVIER CARRILLO G
MARIA A. DE DE LA GUARDIA

PANAMA
EDIFICIO BANCO DO BRASIL
CALLE ELVIRA MENDEZ No 10
APARTADO 5246
PANAMA 5 R DE P
TELEFONO 64-3411
FAX No 64-4569
TELEXES
TRT 2193 AROLEX P A
INTEL 3158 AROLEX PG
CABLE AROLEX PANAMA

LONDON
22 GROSVENOR SQUARE
LONDON, WIX 9LF
ENGLAND
TEL. 01-493-5139
FAX No 01-491-7304-LONDON
TELEX 851-22842-AROLON
CABLE AROLON-LONDON

August 26, 1986

Messrs.
Agency for International
Development (A. I. D.)
Panama, Republic of Panama

RECEIVED
AGO. 27 1986
RHUDO

Dear Sirs:

Enclosed you will find the following draft documents:

1. Trust Agreement, containing the last draft discussed with Lic. Pedro Lasa.

2. Notarial Deed containing an assignment of mortgages and antichresis.

There are several ways whereby the trustee could collect sums of a mortgage received in guarantee.

1. An irrevocable power of attorney. An irrevocable power of attorney could be granted by the financial institutions to the Trustee so it could collect from the homeowners the sums owed to the financial institutions in case of default by it in the payment of the sums owed to Investors. The disadvantage of this formula is that it does not grant the Trustee a lien on the mortgaged property.

2. Assignment of Mortgage Notes. Mortgage Notes can be issued according to article 1598 of the Civil Code. The assignment of these notes by the mortgagee transfers the mortgage rights into the assignee without need to register the transfer at the Public Registry Office.

Since in this case we do not want to transfer the mortgage portfolio to the Trustee, but only to give the Trustee the power to collect the sums of the mortgage in case of default by the financial institution, the endorsement should not be a full endorsement but only an endorsement for collection.

Messrs.
A. I. D.
Page 2

The disadvantage of this formula is that the endorsee for collection is only an agent of the endorser, (in this case the financial institution), and the sums collected would have to be delivered to the financial institution. On the other hand, there would be no public record of this endorsement.

3. Mortgage of mortgage rights.

The financial institution as mortgagee, could grant a mortgage on its mortgage rights against the homeowners in favor of the Trustee. This formula is not convenient because the Trustee would have to foreclose on the mortgage rights of the financial institution in order to acquire them and be able to collect from the homeowners.

4. Assignment of Mortgage under suspensive conditions:

It could be stipulated that the assignment of mortgage only become effective in case of default of the mortgagee (financial institution) toward the Investors, so the mortgage portfolio would not be transferred until default occurs.

The assignment of the mortgages under a suspensive condition would be granted in the documents containing the Loan Agreement, by adding certain clauses to that effect.

The Loan Agreement together with the clauses of assignment of mortgage would be contained in a notarial deed recorded at the Public Registry Office.

It does not seem necessary to draft a standard format of mortgage to be issued by all the financial institutions since they have different formats in use which are sufficient to grant them first lien mortgages and authorize the transfer of said mortgages.

It would probably be sufficient for the trustee to receive in guarantee the mortgage portfolio as it exists, subject to substitution of mortgage in case it were needed.

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Messrs.
A. I. D.
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Conclusion: Due to the abovementioned reasons, we consider that the last formula is preferable.

Very truly yours,

AROSEMENA, NORIEGA & CASTRO

José A. Noriega P.

JAN:emr

NOTARIAL DEED NUMBER________________________

WHEREBY ____________ ____________________grants to____________

____________________ a loan guaranteed with an assignment of mortgages and antichresis.

Before me, ______________________________, Notary Public _____ _______________ of the Circuit of Panama........

.... personally appeared mister ___________________ ____________________, male, ________________________, of legal age, ________________________, resident of this city, bearer of personal identification card number ________________, hereinafter named ______________________________ (Financial Institution), and ______________________________________ acting in his capacity as __________________ and legal representative of ______________________________, hereinafter named the ______________________________ (Trustee), persons whom I witness to know, and they requested me to issue a Notarial Deed in order to state the following:

Clause No.___________: The ______________________________ (Financial Institution) does hereby declare to have received on this date from ________________________________ (Trustee), a loan in the amount of ______________________ (US$______________) ("The Loan").

(insert clauses of the Loan Agreement)

Clause No._______: In order to secure the payment of the loan, plus interest, until the total cancelation, ______________________________ (Financial Institution) hereby assigns in favor of ______________________ (Trustee) its rights as mortgagee in the following mortgages, all duly recorded at the Public Registry Office.

(List of mortgages)

Clause No.________: It is hereby declared that the abovementioned assignment of mortgages shall only become effective in the event ______________________ (Financial Institution) is in default regarding any of the obligations under the loan.

Should default by __________________________ (Financial Institution) occur, ___________________________ (Trustee) is hereby empowered to file a declaration of default on behalf of both parties and obtain marginal annotations to the corresponding mortgages at the Public Registry Office, pursuant to Article 1592 of the Civil Code of the Republic of Panama, assume the mortgage portfolio to secure repayment of the Loan, including the power to receive the payments by the homeowners and apply them to the loan, and to foreclose upon the mortgage properties, if necessary, and apply the proceeds also to the payment of the Loan.

In the event of default, ____________________ (Financial Institution) must deliver to ________________ (Trustee) the mortgage declaration together with the insurance policies covering the loans to homeowners, duly endorsed in favor of _________________________ (Trustee).

ANNEX H

SAVINGS AND LOAN SYSTEM

AND

HOUSING COOPERATIVES

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Savings and Loan System and Housing Cooperatives

A. Savings and Loan System

The Savings and Loan System was founded in 1963 and currently has six associations; four are headquartered in Panama City, one in David, and one in Chitre. The Banco Hipotecario Nacional(BHN) was created in 1974 for the principal purpose of financing MIVI housing programs. Its secondary role was regulating the Savings and Loan System. The BHN's responsibilities to the System include: Insuring savings accounts up to $10,000 and mortgage loans up to $16,000; supervising the overall functioning of the associations; and meeting the short-term liquidity needs of the System.

To date, the BHN has not provided many services to the S&Ls. The mortgage insurance system (FHA) of Panama is largely a paper exercise and is not credible in terms of insurance or guarantees for delinquency. Claims on FHA take years to resolve, and many of the associations consider insurance payments to be a subsidy to the BHN. Finally, given that 85 percent of BHN's resources are destined for MIVI each year, the BHN has not been able to provide adequate financial support for the S&L system.

The above problems and others, such as the "mutual" or non-profit character of the S&Ls have historically presented the System with a number of legal and operational restrictions. However, a new law promulgated in early 1984 to govern the System provides the S&Ls with the authority to function as Sociedádes Anónimas (private corporations) and permits substantial flexibility for their expansion. The regulations governing S&L operations under the new law should be issued soon by the BHN as a result of technical assistance provided by USAID. USAID will continue to support the conversion process since it represents an opportunity to inject fresh capital into the S&L System and enables the associations to operate more effectively in Panama's competitive banking environment. An overview of the financial status of the System is provided below, followed by a brief review of its performance in savings and lending between 1980 and 1984.

A.1. Overview of the S&L System's Financial Status

The following table provides a summary of the assets and liabilities of five of the S&L associations. The sixth association, "La Popular", has just begun operations, so it is not included.

One is first struck by the small size of the System. Its assets of $56.3 millon represent just 6.5 percent of the total assets of the mortgage banks. Size in and of itself is not a problem. Rather the

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S&L System's Financial Status *

(as of 12/85)

(in $000's)

(000 $)	CENTRAL	%	INVERSIONISTA	%	ANAP	%	CHIRICANA	%	INTERIORANA	%	TOTAL	%
Assets:												
Productive Assets	10,126.0	71	10,541	72	10,087	70	7,182	94	5,094	94	43,030	76
Other Assets	4,176.0	29	4,109	28	1,256	30	456	6	310	6	13,302	24
TOTAL	14,302.0		14,650	100	14,343	100	7,368	100	5,404	100	56,337	100
Liablilites:												
Deposits	17,072	121	13,706	94	11,853	83	5,291	69	2,974	55	51,096	90
Other	837	6	624	4	3,097	22	1,492	20	2,231	41	8,281	15
Reserves and Profits	(3,807)	(27)	320	2	(607)	(5)	855	11	198	4	(3,040)	(5)
TOTAL	14,302	25	14,050	26	14,343	25	7,638	14	5,404	10	56,377	100
Results - 1985	(740)		(2)		(222)		119		24		(826)	

financial structure of the associations is weak. For example, the three largest associations of the System[1/] have productive assets which are less than their liabilities; all three lost money in 1985. On the other hand, the two smallest associations, in the interior, with $14.0 million in assets, show profits. Thus we have two distinct sets of institutions:

- One group of associations (Central, Inversionista and ANAP), needs to generate profits and to increase their level of capitalization.

- The second group (Chiricana and Interiorana), requires an increased level of capitalization for long-term stability and a larger capital base for expanded borrowing capacity in order to make them important mortgage lenders for their geographic areas.

Given this situation, the associations are planning to increase their capitalization by converting from mutual to stock associations. The Inversionista, ANAP and Chiricana already have been approached by possible stockholders and USAID is providing technical assistance to facilitate the conversion process. These three associations would be the first associations to participate in this HG Program, once adequate levels of capitalization are reached. A.I.D. plans to provide technical assistance to strengthen the management and operation of the System and its individual associations.

A.2. S&L Savings Performance

The consolidated statistics on the System's savings, disaggregated for the Metropolitan Area and the interior of the Republic (See Table 9, Annex B.), indicate that during the period 1983-85 the greatest surge in savings took place in the interior as opposed to the capital city, both in the number of savers and the volume of savings. The System maintained the level of savings in relation to overall growth, but growth rates in 1984 and 1985 were much lower than those of the mortgage banks. (See Table below.) This may be because the S&Ls have fewer branches, smaller operational budgets for savings promotion, and fewer banking services.

Amounts of Savings and Time Deposits
($000)

	1983	1984	1985	Chg. 83/85
Mortgage Banks	$436,900	$498,600	$549,500	26%
S&L System	42,900	45,989	48,906	14%
System's Percentage	9.8%	9.2%	8.9%	

1/ The Central, Inversionista and ANAP associations hold 76 percent of the System's assets.

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By 1985, the system's total number of savings accounts surpassed 100,000, with an average savings balance somewhat lower than that in the overall financial market ($468 to $514). This suggests that the System is serving relatively lower income groups.

A.3. S&L Housing Portfolio

The average loan amounts for the System indicate that it lends to lower income groups than the mortgage banks, although average loan amounts were increasing during the period. The table below also shows the very small lending volume of the system.

S&L Housing Loans 1980-1984

	1980	1981	1982	1983	1984
No. of Loans	211	182	285	253	203
Total Value ($000's)	$2,581.7	$2,309.6	$4,214.4	$4,024.4	$3,695.8
Average Loan Amt.	$12,236	$12,690	$14,780	$15,910	$18,210

The S&Ls in the interior are the newest associations, but their lending already represents 34 percent of the System's total portfolio. This is an indication of their dynamism. The higher average loan amount for the associations of the interior suggests the newness of that portfolio, with middle class families receiving many of the first loans.

Because of the S&Ls' small operations, HG resources could have a major impact on their growth. However, to take advantage of the HG Program all of the associations need to expand their lending market and to increase their liquidity in order to have available the required counterpart funds. Also, several associations show losses on their financial operations which increases the risk involved in committing any significant amount of resources to the S&L System. The S&Ls need to take steps to increase their capitalization and profitability before they can participate meaningfully in the HG Program. At the same time, the experience of the S&Ls with A.I.D.'s target population is considerable and represents a potential force in the low cost housing market.

B. Credit and Housing Cooperatives

B.1. Credit Unions

The Federation of Saving and Credit Cooperatives (FEDPA) has 102 member coops nation-wide, with 63 percent of the total in Panama City. These credit cooperatives represent another type of financial organization in Panama with the potential to mobilize savings for low cost housing production. They also have a low income clientele. In the last ten years, of U.S.$222.0 million in loans, approximately 25 percent has been made for housing related purposes, including home improvement loans, purchase of land, building materials, and furniture. Local lending rates for the cooperatives vary considerably, ranging from 13.5 to 18 percent for short-term loans. Cooperatives borrow from the Federation at 10.5 percent and the rates paid on savings vary from three to six percent, as compared to 4.5 percent in banks and 5.5 percent in S&Ls. Christmas accounts are at 6.5 percent. Time deposits rates are set at two percent less than the market rate for accounts up to $5,000, and one percent less for accounts of more than $14,000. Currently FEDPA would have to address the problem of reducing operating expenses in order to participate in this Program.

B.2. Housing Cooperatives

The housing cooperative movement is well established in Panama. FUNDAVICO (Foundation for Cooperative Housing) was created in the mid-sixties, with A.I.D. assistance, to provide technical assistance to housing cooperatives. The Nuevo Chorrillo Cooperative was an A.I.D. financed project (525-HG-008) in the late 1970s. It has an active production center for building materials which shows the potential within cooperatives for contributing production elements to the Program. Another important cooperative is Cooperativa Ancon.

The Cooperative Housing Foundation (CHF), under a centrally funded A.I.D. grant, will provide technical assistance to both FUNDAVICO and FEDPA focussed on expanding their resource base, upgrading their management information systems, and exploring the potential for linking cooperatives with S&L mortgage lending facilities.