

PD-ABP-099

**REPORT ON THE BENEFICIARY SELECTION PROCESS AND  
AFFORDABILITY OF THE USAID FUNDED AL KARAMA  
TOWERS IN GAZA**

PREPARED FOR:

USAID  
WEST BANK AND GAZA MISSION

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**MANAGEMENT SYSTEMS INTERNATIONAL**

## TABLE OF CONTENTS

	PAGE
I. INTRODUCTION	1
II. BACKGROUND	2
III. PHC BENEFICIARY SELECTION PROCESS	3
A. Point System	4
B. Discussion on Price and Affordability of Units	5
C. Current Housing Market in Gaza	7
IV. OPTIONS	9
Option A	9
Option B	10
Option C	10
Option D	11
V. ISSUES TO BE RESOLVED	11
A. Suggested USAID Actions	11
VI. ADDITIONAL RECOMMENDATIONS	12

## ATTACHMENTS

- A. PHC Beneficiary Questionnaire (English Translation)
- B. PHC Point System (Tables)
- C. Minutes of Meeting with Ali Saffarani, August 28, 1995  
(Description and rationale for Promise to Sell Contract)
- D. Dr. Von Rabenau notes on beneficiary payment schedules
- E. Alternative payment plans (schedules)
- F. FAX Describing formula for deriving graduated payment plans  
developed by Dr. Von Rabenau with additional tables using  
the unrevised cost of the USAID funded units.
- G. Brief description of Al Karama Towers Project

## I. INTRODUCTION

At the present time, most donor assistance in the formal housing sector is being channelled through the Palestinian Housing Council (PHC). The PHC is an independent not-for-profit group organized as the principal implementing agency in Gaza and the West Bank chartered to stimulate new housing construction and other shelter related activities. Donor funds are also being provided through the United Nations Relief and Works Agency (UNRWA) for housing rehabilitation in Gaza. The European Economic Union (EEU) is the largest donor in this sector. To date, a total of \$99.4 million, from all donors, is being invested in new housing construction, home improvement loans, neighborhood upgrading and other shelter related activities:

USAID	\$29,500,000	new construction, home improvement, and neighborhood upgrading.
EEU	\$52,000,000	new construction, rural home construction loans.
JAPAN	\$10,000,000	new construction (police housing).
AUSTRIA	\$ 8,000,000	new construction (civil servants).

USAID's principal investment in traditional housing development is financing and managing the construction of 192 apartments in six high rise building in Jabalya, Gaza, as a part of the Gaza Housing Project (GHP) the project has been named the Al Karama Towers. These apartments, which range in size from 100 to 120 square meters are nearing completion and will be transferred to beneficiaries by the first of next year. The EEU has funded the construction of 224 units of similar design located within the Al Karama Towers project site.

The PHC is currently at various stages of completion of 1200 new apartment's units in Gaza and the West Bank. With the exception of the 192 Al Karama units funded by USAID the apartments are being funded by the EEU.

In addition to the Al Karama project, USAID provided \$4 million for rehabilitation of existing housing in Gaza for a project being implemented through UNRWA. USAID is also funding a \$5 million Home Improvement Loan Program which is being implemented with the PHC through a grant to the Cooperative Housing Foundation, a U.S. Private Voluntary Organization. Finally, a \$2 million grant to Save the Children is funding a neighborhood upgrading program which will work to rehabilitate and upgrade common infrastructure in five disadvantaged neighborhoods in Gaza.

The Al Karama Towers are scheduled for completion at the beginning of 1996 and USAID/GWB is working with the PHC to insure their adherence to the Memorandum of Understanding (MOU) which requires the PHC to inter alia:

g. ...identify and designate those beneficiaries, based on PHC eligibility criteria to be agreed upon with USAID, who are to receive housing units; ensure that the recipients do not own another residence at the time of occupancy; and provide USAID, on a timely basis, a list of approved beneficiaries describing how each meets the eligibility criteria...; and

h. sell these units to deserving beneficiaries on a schedule and pursuant to terms to be generally agreed upon between USAID and the PHC which shall include full financing terms in order to obtain maximum full cost recovery and limitation of capital subsidies to low income groups...or their equivalent; and by such sales through deeds and other appropriate documents, transfer ownership, custody, control, and all rights necessary for the use, habitation, and alienation of such housing units; and, through regulations and policies to govern homeowners' associations....

This report deals most directly with the two MOU items quoted above. As the construction of the Al Karama units are nearing completion, USAID has engaged the PHC in an effort to identify and resolve any outstanding issues regarding this component of USAID housing and shelter related activities in Gaza and the West Bank.

## II. BACKGROUND

Our purpose in this report is to ascertain the progress made by the Palestinian Housing Council in the beneficiary selection process for the 192 Al Karama Towers AID funded units, and to identify some options which might be available to the PHC in order to:

1. optimize their return on the sale of the units;
2. maximize the benefit to the lower income earners in Gaza.

A thorough review of the existing documents relating to the above named project was conducted. We have met with European Economic Union representatives, PHC officials in Jerusalem and Gaza, USAID field staff familiar with the project, and a private property developer in Gaza City. In addition past project actions were reviewed with the RHUDO Office in Tunis. Immediately prior to this assignment the EEU funded technical assistance to the PHC in an effort to assist them in developing models of payment and affordability for their entire project portfolio. This information is currently in the hands of the PHC and is presumably guiding their current actions. Dr. Burkhardt Von Rabenau, the EEU consultant, is a recognized expert in housing finance and has shared with us many of his findings. I remain in touch with him on an informal basis. I believe that his work is useful in guiding AID's ultimate decision regarding the Al Karama Project apartments. A copy of Dr. Von Rabenau's draft report was provided to us by the PHC. The report is on file in the AID office in Tel Aviv. Mr. Fernand Clement of the EEU, whom I have kept briefed, has been extremely cooperative throughout this assignment. The EEU is scheduled to receive a copy of Dr. Von Rabenau's final report

The PHC is extremely cooperative in sharing their information . They however, remain reticent on the matter of the proposed price of the units. The EEU is having equal difficulty in getting similar information from the PHC. Without this information we are hampered in choosing an ideal procedure for disposal of the units. Nonetheless, by using the information currently available to us, it is possible to discuss and develop a number of options which AID can review and use to make preliminary decisions regarding AID's official position on turning the apartments over to the beneficiaries. Final decisions should be made only after formal receipt of PHC plans for the award and financing of the Al Karama units in Jabalya.

There follows a brief discussion on the decisions we believe the PHC has made, and issues currently confronting AID. They are offered in a fashion which attempts to update all concerned on the status of AID's project. There are also some suggestions on how USAID might proceed.

### III. PHC BENEFICIARY SELECTION PROCESS

Our current understanding of this process is based on discussions with Dr. Von Rabenau and PHC officials, particularly Dr. Ishaq al Qutub, Director of Planning and Research for the PHC. The PHC is making decisions on almost a daily basis regarding their final policies and procedures related to all new construction projects under their charge. As the affordability of the units is material to this process a discussion of this issue is included in this section.

The PHC began advertising the availability of up to 1200 apartments, rural housing loans, and home improvement loans approximately 3 years ago. During the period of late 1992 and 1993 the PHC had received approximately 6,000 applications. The questionnaires, developed at that time, were filled out by the applicants themselves. The respondents were ranked according to a point system. This process resulted in identifying 2,000 qualified applicants who were then scheduled for follow up by the PHC. For Gaza alone the PHC has 958 units planned and being built.

Recently, the PHC re-advertised the availability of its various housing solutions in Gaza and the West Bank. These include the PHC constructed apartment projects, housing loans (presumably for existing housing), loans for up to \$30,000 in East Jerusalem, and shelter related loans of up to \$15,000 in rural areas. Applications are being received for specific projects (including Al Karama), and are presently being processed by the PHC. Additionally, the PHC has asked both the original qualified applicants and new applicants to schedule interviews with the PHC. All applicants will then be ranked according to a more detailed point system (attached and discussed later). The interviews will enable the PHC to:

- complete and update earlier information, particularly as it relates to employment and income;
- update and assess the financial capacity of the applicants to make required (20%) downpayment and pay monthly rates and fees;
- rank applicants in relation to newly developed point system;

- inform applicants of the cost and payment options for the apartment; and
- identify the housing location and size of apartment preferred by applicant (s).

The questionnaire is extensive, and in addition to gathering the required financial information will provide the PHC with valuable social data. These data can be put to the useful purpose of determining demand, affordability, and standards for future PHC projects.

In an added effort to gather reliable and valid information the PHC has organized local community committees. The committees are charged with reviewing the applications to verify each applicant's socio-economic condition. Since the program is restricted to first time home buyers the committees will also verify whether or not each applicant or his spouse and or minor children already own a home .

This process, as described by the PHC, appears to be very well thought out. If administered properly it will bring about the highest possible level of assurance that the applicants have not misrepresented their circumstances and are in fact able to pay for the PHC apartments.

**A. Point System:** The PHC has established two categories of applicants, ordinary applicants, and special applicants. Special applicants are those who meet the basic socio-economic criteria, but also can demonstrate that they have suffered from Israeli occupation. Further, the PHC has reserved a total of 25% of all housing units for Special Applicants.

The scoring system will enable the PHC to measure the ability of the applicants to repay the loan. Questions in this category relate to income, savings, and overall ability to repay. The point system also measures need by determining the degree to which the current shelter conditions of the applicants is deficient. The income criteria is weighted heavier and allows for up to 550 out of a 1000 points, while the need category allows for up to 450 points, with special applicants allowed up to 250 additional points.

Currently the PHC believes that it will complete this process for the entire stock of 1200 units located in both Gaza and the West Bank by no later than the end of December. Completion is believed to mean that all beneficiaries will have been selected, downpayments received by the applicants, and a fairly accurate completion date has been established for each of the units.

At this point, USAID has no officially transmitted information on the results of processed applications. This information is needed for USAID's units in order to verify the income of the beneficiaries and finally determine the affordability of units. It will be helpful to have complete results of the PHC's efforts to enable USAID to develop a uniform position with the EEU on the disposition of the 416 units in the Al Karama project.

**B. Discussion on Price and Affordability of Units:** It is interesting to note that the affordability issue has been with this project since its inception. The circumstances which led

to this result are well known and discussed in each document relating to this project, beginning with the Project Paper, prepared by Planning and Development Collaborative (PADCO) and most recently in the 1995 USAID Audit Report. A brief review of how this has been treated until now is useful in determining an appropriate course of action.

The issue of establishing a market rate of interest for the sale of the USAID funded units is long standing. In Annex A, Issues Resolution, of the PP the ANE Bureau's Infrastructure Development Core Group (CG) asked:

**The... report proposes to use an interest rate of five percent for the loan components of the program. How was this interest rate determined? Is it a market interest rate? Is it sustainable?**

**CG Discussion:** Brief clarification that the "five percent interest rate" discussed in the PADCO Report was not really considered to be a true interest rate. The PADCO Team felt that they could not determine any interest rate because of the lack of a money market (and particularly, of a mortgage system and market) in the occupied territories (it was observed that the monetary and lending systems of the West Bank and Gaza are markedly different). Thus the report's five percent "interest rate" was considered conceptually by the PADCO Team to represent a combination of lending fees and a "symbolic interest rate".

A longer discussion was reported in the PP which focused on how a real market related rate of interest might be determined for Gaza and the West Bank. The CG acknowledged that..."Given the relative lack of comparator markets, there is no direct way of establishing a market interest rate...." The discussion progressed to the point where the "...CG would like to avoid the introduction of subsidy elements into the apartment financing packages if at all possible, [but] some subsidy element might be necessary for affordability reasons. The CG agreed that if a subsidy were judged necessary, it should apply to the financing packages' principal amounts, and not to the interest rate". The CG's decision on the issue is worthy of review:

**USAID will negotiate an appropriate interest rate for apartment financing packages (and other GHP "loan elements") with PHC based on recommendations of a USAID financed housing finance specialist, who USAID will undertake to field. The general policy will be not to provide subsidies for Gaza Housing Projects (GHP) financing to beneficiaries. In those cases where subsidies are judged necessary (e.g., for genuine hardship cases or to increase affordability), they will be in the form of grants to reduce principal requirements and will not be used to reduce the interest rate. USAID will attempt to harmonize financing terms for EEC supported housing activities to accord with those established for USAID supported activities.**

Pursuant to the above, AID retained the services of housing finance specialists, Carol

Urban and Balsam Atari, to deal specifically with the questions, of establishing a "market interest rate" and repayment schemes which could be devised. The report is perhaps the most comprehensive review of the current financial and banking systems operating in Gaza today. The study, "Market Based Affordable Housing Finance Loan Terms", was comprehensively executed and offers valuable information about the existing housing finance system in Gaza. Using base data and assumptions based on the market cost of United States dollars the report advised that an interest rate of 9% would be at or close to a real market rate. Based on this assumption the report went on to recommend various repayment and affordability tables. All assumed the applicability of Ottoman Law in force in Gaza and the West Bank. The law caps the interest rate and term so that accumulated interest over the life of the loan does not exceed 100% of the original loan value. The maturity of the loan is a maximum of 20 years, but may be less depending on what the borrower prefers and can afford as well as the impact of the interest ceiling. With this constraint, the report correctly determined that no loan could exceed an 18 year term. This term further limited the potential beneficiary group to Palestinian families earning more than the targeted beneficiary group of families earning less than \$700 per month per family.

The study computed the subsidies required to enable the target beneficiary group to purchase the USAID funded units. In most cases, the subsidy required would be 30%. Using the information available at the time, the report fairly assumes that the Al Karama units are not affordable to the targeted beneficiary group. Recent decisions we believe have been taken by the PHC board may materially change the calculus and the ultimate outcome of this process.

Dr. von Rabenau provided AID with minutes of a meeting he attended with Mr. Ali Saffrani, a property attorney retained by the PHC Board to advise them on the best alternative for transferring "ownership" of its units. The complete notes from that meeting are attached to this report. The attorney advised the PHC to develop a contract (agreement) which is called a "Promise to Sell". This is different than a sale contract: "Title in the case of a Promise to Sell agreement will stay with the PHC, and will not automatically be conveyed to the buyer at the end of the term. However at the end of the term the "buyer" could sue the PHC for ownership and hence, the transfer of title is enforceable.... Basically, the contract would involve a promise by the PHC to sell the housing unit to the other party, i.e. to transfer title, once certain conditions are met." This is essentially a lease arrangement with an option to buy. Dr. Von Rabenau's report outlines the legal framework for the sale of PHC units:

**Buyers in a building will form a cooperative (under a new Palestinian law in Gaza which provides for individual ownership and property registrations, and under old Jordanian law in the West Bank which vests ownership in the cooperative and does not permit individual title registration). PHC enters with the cooperatives in a 'promise to sell' contract which retains title with PHC until the cooperative (or individual in Gaza) has satisfied the terms of the contract. The advantages to this solution are that the PHC (1) retains ownership until the buyer has fully satisfied the terms of the contract, (2) payment is equivalent to a rent (rather than a**

mortgage payment) and will not violate Islamic interest constraints, (3) payments can be denominated in dollars which would not be possible for a sales contract (because payments in foreign currency cannot be registered in the land registration office), and (4) payments can be flexible and rising over time, thus reaching lower income groups.

It is USAID's current understanding that this transfer mechanism will be utilized for all properties being developed by PHC. Rents, viewed in this context, mimic mortgage payments and capture built in interest and administrative costs to the PHC.

This form of finance, allowing a longer term than more traditional mortgages, effectively lowers the required monthly payments to as little as \$235 per month. Rents (payments) at this level would make these units affordable, albeit at the higher end, to USAID's target beneficiary group of Palestinian families earning no more than \$700 a month. It also obviates the need for interest rate subsidies by allowing a 9% interest rate to be calculated into the rent. The Urban/Atari study calculated the market rate at 9%. As a point of comparison, current fixed interest mortgages are available in the United States at 8.1 to 8.2%.

The PHC has reviewed numerous options for transfer of ownership and payment of all the units under its control. Their effort intends to bring about a uniform pricing and financing policy for all of its projects in the GWB.

In most cases it appears that the selling price for the units is based on the actual cost of construction, an administration fee for the PHC, the presumed cost of money during the construction process, and the historical value of the land (price which was paid for the properties). The result is costs that range from \$44,000 per unit for the 100 square meter units to \$48,000 per unit for the 120 square meter units. It is possible that the figures do not reflect an appropriate cost of the USAID funded units. These figures may not reflect a fair cost or price for the units. Costing could be computed with a more even allocation of the costs spread out over the entire site (13 towers), and factoring "artificial" cost rises due to border closings and other factors.

In any event, using these figures, the PHC would regain approximately \$3.5 million from initial downpayments (20% of cost of unit) and approximately \$1.3 million a year in gross revenues from the 416 units in the Al Karama Towers.

Final decisions on the ultimate affordability of the Al Karama Towers units should be made only after a review of the prices charged for the units and the alternative payment schedules being offered by the PHC for the Al Karama units.

**C. Current Housing Market in Gaza:** The Al Karama Towers Project, as well as other PHC projects currently under construction, are not comparable to any past or current housing being offered in Gaza today. The EEU, USAID, Japanese, and Austrian grants have allowed the PHC to introduce a hitherto unavailable product to the Gaza housing market.

The apartments being built at Jabalya and other sites are smaller than the 1987 average unit size in Gaza of 144.5 square meters. In addition, they are high rise structures which until recently were not available.

Unfortunately, the only information gathered is anecdotal and based on a discussion with a private developer in Gaza City and a tour of his most recent project. In fact, little more is known on current housing conditions in Gaza and the West Bank since the Cooperative Housing Foundation conducted its initial analysis of the shelter sector in Gaza and the West Bank in 1992.

The meeting with the developer in Gaza City revealed the following. This developer is currently completing construction of a 15 story apartment building. He is offering for sale 160 -220 square meter apartments with finishes comparable to Al Karama. His costs run considerably lower than the Al Karama units (as much as 30%), but nonetheless is asking prices of \$60,000 for the smaller units up to \$90,000 for the largest units. That said, less than a quarter of his units have been sold, many of them at as much as 15% below his asking price. The developer said that the market is dead. In the mind of this businessman, confidence in Gaza is low and as a result no one is buying. He is presently talking to the Ministry of Housing and the PHC in an effort to swap his units for land with which he hopes to recoup some of his original investment.

We learned that there are close to 300 mid to high rise buildings currently under construction in Gaza. We do not know how many apartments or size of the units this represents. If this is true, and if it is also true that the market is flat, then we can expect a large number of units to come on to the rental market in the near future. Most of these projects are developer financed, and as such may require that the investors start receiving some cash flow from their investment. Under current conditions, there may be a fairly competitive rental market in the making. What effect this will have on the Al Karama and other PHC projects is unknown at this time, but is worthy of PHC monitoring.

While providing some clues as to what the market might be for Al Karama units (quite possibly lower than PHC costs), USAID still has little more reliable information about the Gaza housing market. The PHC with its "Promise to Sell" contract is offering long term financing, private developers do not. The PHC are offering housing of a size and type not being developed or offered by the private sector. While the reasons for this are complex and numerous, and probably include that private developers are not targeting USAID's beneficiary group, they offer little to AID in establishing a position on the current situation.

The selection process now being planned by the PHC will in some way simulate an auction. This process, at its completion, will provide valuable information on the current market for housing in Gaza. The experience gained can guide the planning and development of future projects. The first round of applications may not identify sufficient applicants with the ability or desire to pay for the units. Each subsequent advertisement and flow of applications will presumably surface more qualified applicants. This process could go on until each of the

available units is paired with a qualified applicant. The criteria for qualification is incomplete until such time that a selling price for the Al Karama units is agreed upon by all parties and qualified applicants (those who can afford and choose to pay).

#### IV. OPTIONS

The options discussed below are by no means exhaustive and are offered with a beginning understanding of the intentions of the PHC, the expressed goals of AID, and a rudimentary understanding of market conditions in Gaza and the West Bank. The options assume that 9% is a reasonable interest rate and at least approximates a market rate. The PHC has reviewed many payment arrangements in an effort to come up with what they believe are the most economical, affordable, as well as politically acceptable approaches to the sale or leasing of their units. This analysis respects that process and offers options for USAID to consider and discuss with the PHC. Acceptability of these options to the PHC is an unknown. Basic advantages and disadvantages of each option are offered for review and perhaps to stimulate internal discussions.

**Option A - Capital Subsidy:** The simplest remedy for the affordability issue of the Al Karama units is to allow a one time capital subsidy on the apartments. Lowering the prices of the AID funded units by 15% (which would bring the "selling" price of the units from \$44,000 (100 square meter units) to \$37,000 and \$49,000 (120 square meter units) to \$41,000) and applying the graduated payment program, we currently believe will be adopted by the PHC for its initial apartments, the units become more affordable and within easier reach of AID's target group. It should be noted that the estimated cost and selling prices of the units could be lower after further review of those costs. There may also be an inherent subsidy in selling the units at cost as presumably there may be a negative difference from the actual price these units could command on the open market. This however is difficult to ascertain because of incomplete knowledge of the current housing market in Gaza.

With further analysis of the cost overruns due to border closures and other unavoidable delays, an adjusted construction management fee (the difference between the Louis Berger fee and one which might be charged by a local firm or the PHC) it may be possible to reduce the cost on these points alone. The PP and Memorandum of Understanding with the PHC both allow for a capital subsidy.

The advantages of this option are:

1. positively effects affordability of apartments without the need for interest rate subsidies;
2. lowers the income average of beneficiaries and increases lower income earners opportunities to access higher standard of shelter; and
3. potential acceptability to USAID.

The disadvantages of this option are:

1. artificially establishes a market price for this housing thereby running the risk of market distortion in Gaza;
2. minimizes return to PHC which works against the objective of putting the reflows back into the production of affordable housing solutions for low wage earners in Gaza and the West Bank;
3. unnecessarily raises expectations of potential beneficiaries of future projects;
4. adversely threatens sustainability of the provision of lower cost solutions for lower income families; and
5. may not conform with EEU approach.

**Option B - Raise beneficiary income level: Raising the income ceiling for beneficiaries to \$800 - \$900 per month.**

The advantages to this option are:

1. Significantly increases the pool of potential beneficiaries;
2. Insures higher rate of reflows and future development capital for future PHC projects;
3. Obviates the need for subsidies of any sort and as a consequence will not distort local markets; and
4. May minimize future defaults.

The disadvantages of this option are:

1. Does not meet objective of providing housing for lower income earners; and
2. May cause social and political problems for the PA and PHC given the high level of desire for these units by lower income earners;

**Option C - Add a reasonable profit to the units (10 or 15%) and sell the units on a completely open market.**

The advantages to this option are:

1. as in option B obviates need of any subsidy;
2. will test market and potentially increase capitol pool available to the PHC for future development activities;
3. would provide all parties with a better understanding of housing market; and
4. may encourage private banking community to enter the mortgage market.

The disadvantages to this option are:

1. lack of knowledge of market may result in lower return on original investment which over time will limit future activities of PHC;
2. moves PHC from its stated mission of developing affordable housing for low income families; and
3. possible political fall out of selling these units to the wealthy.

**Option D: Make the units available at cost without subsidies and utilize graduated**

payment plan as is being considered by PHC.

The advantages to this option are:

1. makes units affordable to target group;
2. allows for uniform policy for all PHC properties;
3. the PHC retains value of its original asset by retaining ownership of units until they are fully paid for;
4. does not require any change from established course as described in project documents; and
5. acceptability to USAID.

The disadvantages to this option are:

1. Limits beneficiaries to only the highest income earners of the target group; and
2. may restrict pool of qualified applicants meaning that units will remain vacant; and
3. may have higher default rates because the rents are at higher end of affordability.

## V. ISSUES TO BE RESOLVED

The key issues and missing information here relate to:

1. the lack of consensus on the base sales price of the unit (s);
2. no final decision by the PHC on the payment plans developed with assistance from the EEU (von Rabenau);
3. perhaps most importantly for USAID's purpose, specific information on the income range of the Al Karama applicants;
4. the MOU requirement that the PHC vet the beneficiary selection process and their plans for disposition of the USAID funded units; and
5. lack of formal agreement with EEU on uniform policy towards PHC.

### A. Suggested USAID Actions:

1. Request formally that the PHC advise AID of their beneficiary selection process and firm plans on how the PHC will transfer ownership of the units to the successful applicants (i.e. through a promise to pay, contract sale, or otherwise), along with a thorough explanation of all terms and conditions attendant to the letting (sale or lease) of the units currently nearing completion. This was done by letter from the Mission Director to the PHC on October 5, 1995. Upon receipt of this information request review by RLA Jordan.
2. USAID should meet with the EEU to keep current with their evolving position on the disposition of the units they have funded.
3. Prepare an interim response to AID's audit. This response might include some of the

following points:

- USAID/GWB is currently reviewing the beneficiary selection process being used by the PHC. The lack of data on the effective demand for these types of housing solutions leave both AID and the PHC with little reliable information on the number of applicants who could pay for the AID units. The mission is currently engaged in a process which, over the next few months will reveal a more accurate understanding of income levels of applicants.
- While AID/GWB is pursuing a course with the PHC to ensure that the Al Karama units go to the original beneficiary group, reserve the opportunity to revisit the issue of income limits and/or capital subsidies in the near future.
- It is our current understanding that the buildings will be managed by a cooperative board made up of the tenants of Al Karama Towers. AID has discussed the issue of a maintenance plan with the PHC and will continue to work with them and the cooperative board(s) of the AID funded units until such time that a satisfactory plan is developed.

## VI. ADDITIONAL RECOMMENDATIONS

1. Conduct an internal exercise to determine a cost for the Al Karama units. Ideally, this cost would be computed assuming both local management, and a reliable supply of materials. Then subsequent to the review reconcile the differences, if any, with current estimate and make internal decision on "cost for purposes of this project".
2. After arriving at a consensus with PHC on the above matter, review payment schedules and their affordability for AID's target beneficiary group. The financial officer at the PHC has the capability to run any number of variables to determine alternative payment schedules.
3. When available, review income figures of total applicant pool to better determine the demand of Al Karama type units. It will be necessary to have these figures if at some future date AID chooses to recommend either subsidies or raising the beneficiary cut off income to a higher amount.
4. So that AID might attain a clear understanding of the process used in the development of the various graduated payment schedules being utilized by the PHC, I would encourage that USAID request 4 days of Dr. Von Rabenau's time to provide a description of the process used to develop the payment schedules, an explanation of the how the 9% interest was derived and applied to the PHC units, and if necessary compute appropriate subsidy amounts to be used for Al Karama.

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Attachment A

PHC Beneficiary Questionnaire (English Translation)

THE PALESTINIAN HOUSING COUNCIL  
QUESTIONNAIRE  
UPDATING INFORMATION  
ON APPLICANTS FOR HOUSING UNITS,  
LOANS FOR RURAL HOUSING DEVELOPMENT  
AND JERUSALEM HOUSING

NOTE

*THE INFORMATION GIVEN IN THIS APPLICATION WILL BE KEPT IN A SPECIAL FILE FOR EACH APPLICANT AND WILL BE TREATED AS TOP CONFIDENTIAL AND NO ONE IS ALLOWED TO USE THE INFORMATION FOR PURPOSES OTHER THAN TO BENEFIT FROM THE HOUSING PROJECTS OF THE PALESTINIAN HOUSING COUNCIL.*

Director of the Department of Planning and Research.

Application Serial Number ( \_\_\_\_\_ )  
Date of the Application Day \_\_\_\_\_ Month \_\_\_\_\_ Year \_\_\_\_\_ .

I - BASIC PRINCIPLES

1. PHC HOUSING PROJECTS CONSISTS OF THREE TYPES :
  - A) HOUSING UNITS,
  - B) LOANS FOR RURAL HOUSING DEVELOPMENT ,
  - C) LOANS FOR HOUSING IN JERUSALEM
2. THE APARTMENT UNITS VARY IN SIZE RANGING FROM 80 Sq. TO 120 Sq. IN THE WEST BANK, AND BETWEEN 107 TO 117 Sq. in Gaza Strip. IT CANNOT BE MODIFIED IN THE FUTURE.
3. THE NUMBER OF FLOORS VARY ACCORDING TO THE LOCATION OF THE PROJECT, THE CHOICE OF THE APARTMENT OR THE FLOOR OR THE BUILDING OR THE PROJECT IN THE AREA OR REGION, WILL BE DETERMINED BY PURE CHANCE. IT IS NOT ALLOWED TO APPLY FOR AN APARTMENT OUTSIDE THE AREA OF RESIDENCE OF THE APPLICATION.
4. PHC REQUIRES THAT A DOWN PAYMENT BE MADE BY EACH SUCCESSFUL APPLICANT RANGING BETWEEN 20-30 PERCENT.
5. PHC REQUIRES THAT THE BALANCE OF THE COST OF EACH APARTMENT BE PAID IN MONTHLY PAYMENTS IN AMOUNTS RANGING BETWEEN 25-30 % FROM THE MONTHLY INCOME OF THE FAMILY INCOME.
6. PHC REQUIRES THAT LOANS FOR RURAL HOUSING DEVELOPMENT OR JERUSALEM HOUSING BE PAID IN FULL IN A PERIOD NOT EXCEEDING 20 YEARS.

DO YOU AGREE ON THE ABOVE PRINCIPLES ?

YES \_\_\_\_\_ NO \_\_\_\_\_

IF THE ANSWER IS NO, IT MEANS THAT YOU DO NOT WISH TO BENEFIT FROM THE HOUSING PROJECTS OF THE PHC AND YOU CONSEQUENTLY DO NOT WISH TO CONTINUE WITH THIS APPLICATION. STOP.

INTERVIEW ENDED (Signature of Applicant) \_\_\_\_\_

IF THE ANSWER IS YES WRITE IN YOUR OWN HANDWRITING IN THE SPACE BELOW THAT YOU HAVE REVIEWED THE ABOVE PRINCIPLES , UNDERSTOOD ITS MEANING AND AGREE TO COMPLY WITH ALL OF THEM AND ANY OTHER INSTRUCTIONS GIVEN BY PHC IN THE FUTURE.

I AGREE TO COOPERATE IN LIVING IN HARMONY WITH OTHERS IN THE HOUSING PROJECT IF I WIN AN APARTMENT / OR A LOAN, I WILL COMPLY WITH THE TERMS GIVEN.

-----  
(Name of Applicant) \_\_\_\_\_ (His Signature) \_\_\_\_\_

CD o - Please specify the category of your application :

Loan (1) Apartment (2) Rural Housing Loan (3) Jerusalem Housing

### I. Identification information

(All information in this section refers to the bread winner unless otherwise stated)

ID-1: Passport number  
Place and date of issue

ID-2: ID card number

ID-3: Other nationalities? Yes (if yes answer the following questions)  
No (if no go to ID-5)

ID-4: Name the country

ID-41: Year nationality granted

ID-42: Passport number

ID-5: Date of birth - Month/year

ID-6: Age (years)

Place of birth

ID-7: Country

ID-71: Town/village/camp

ID-8: Sex (1) male (2) female

ID-9: Applicant's marital status  
(1) Married (go to ID-91)  
(2) Not-married  
(3) Widow  
(4) Divorced  
(5) Separated (if you answered 2,3,4, or 5, go to ID-10)

ID-91: Spouse's name Number of children

ID-92: Spouse's ID number

ID-93: Spouse's passport number

ID-94: Spouse's date of birth (month/year)

If the male spouse is married to more than one woman, answer the following:

ID-95: Name of second wife            Number of children

ID-96: Name of third wife            Number of children

ID-97: Name of fourth wife            Number of children

ID-98: Does the family own another house?

(1) Yes            (2) No

ID-10: Number in household (living in present residence) regardless of relationship to applicant

ID-101: Number in immediate family members (husband, wife, children)

ID-102: Number of family members who will benefit from the housing unit if they get one after filling this application (including the breadwinner)

Distribution of individuals in question ID-102 according to age:

ID-103: Less than 18 years of age

ID-104: 18 - 50 years

ID-105: Over 50 years

Distribution of individuals in question ID-102 according to sex:

ID-106: Male

ID-107: Female

### Address

District: (Field worker: Make sure there is an answer for district)

ID-11: Current address (refers to present residence)

ID-111: Permanent address (residence of parents)

ID-12 and ID-121: West Bank: Jenin, Nablus, Tulqarm, Qalqilya, Ramallah, Jerusalem, Jericho, Bethlehem, Hebron, Gaza Strip: Gaza, Khan Yunis, Rafah

ID-13 and ID-131: (Write name of city/town/village/camp)

Street/neighborhood:

ID-14 and ID-141: (write name of street or neighborhood)

**Telephone:**

ID-15 and ID-151: (Home)

ID-16 and ID-161: (Work)

**Fax:**

ID-17 and ID-171: (Home)

ID-18 and ID-181: (Work)

**Post Office Box:**

ID-19 and ID-191: (Home or Work)

**Current and previous address:**

ID-20: For how many years have you been living in the current address non-stop

ID-201: Name and address of previous residence: Town/ Country

**II: Education**

(All information refers to family members over 12 years of age)

ED-01: Highest degree earned by breadwinner, spouse, others

(1) None (below elementary)

(2) Elementary

(3) Preparatory

(4) Secondary

(If any of the above go to third)

(5) Pre-university certificate (go to question ED-02)

(6) Bachelor's

(7) Master's

(8) Doctorate

(If any of the above three go to ED-03)

ED-02: If you answered ED-01 on pre-university certificate, what kind of education?

(1) Academic (2) Vocational

ED-03: If you answered ED-01 on BA, MA, or Ph.D., what is your area of specialization?

**III: List of members who will live in the unit (in addition to the breadwinner)**

Number, name (starting with the oldest), sex (male or female), age (years), relationship to breadwinner (husband, wife, son, daughter, mother, father, brother, sister, others) (from FS-01 to FS-56)

FS-57: Is there in the current family (or residence) members not mentioned in the above list?

- (1) No (Go to question FS-59) (2) yes

FS-58: If Yes, why weren't they mentioned in the list

- (1) Because they belong to another separate family  
(2) To keep the current residence  
(3) For reasons having to do with the area of the expected apartment  
(4) For reasons having to do with the location and kind of work  
(5) Other reasons (specify)

FS-59: If the answer was No, what will become of the current residence

- (1) Will be returned to the owner  
(2) Will be turned over to no residential purposes  
(3) Will be rented out  
(4) Do not know yet

FS-60: Has any other family member filled an application with the PHC

- (1) Yes (2) No (3) Do not know

FS-601: Did the breadwinner or a family member get a housing loan from any party

- (1) Yes (2) No

From the people mentioned in the list above:

FS-61: How many males are enrolled in organized education (regardless of level)?

FS-62: How many females are enrolled in organized education (regardless of level)?

FS-63: How many members (other than the breadwinner or spouse) who have a job (male or female)?

How many are working in the current posts:

FS-631: Government employees

FS-632: Non-government employees

FS-633: Business people or self-employed

FS-634: Construction or agricultural workers

FS-635: Technicians (mechanic, blacksmith, carpenter ...)

FS-636: Farmers

FS-637: Regular employment in other fields

FS-64: Does the wife work for a salary?

- (1) Yes (2) No

FS-65: How many members in the household who are of working age - 15 years or older (not enrolled in organized education), males or females - and are not currently working?

FS-66: Are there any members in the household who have a handicap of any sort?

- (1) No (move to section four - information on work, ownership, and income)  
(2) Yes (answer questions FS-67 to FS-78)

FS-67 to FS-78: Information on handicaps

Name, sex (male or female), kind of handicap (mental, physical, both), degree of handicap: ( 1- light, meaning does not prevent handicap person from carrying out work done by others, 2- middle, meaning handicap person cannot perform all jobs normally done by others, 3- critical, meaning handicap person cannot perform most of the jobs done by others.)

FS-79: Is the handicapped person currently undergoing treatment at a hospital or physician? (1) Yes (2) No

FS-80: Name and address of hospital or physician

#### IV: Work, Ownership and Income Data

(All data in this section is related to the household head unless otherwise stated)

EM-1: What is the main present job condition for the household head?

- 1- Employed (Go to Q. EM-11).  
2- Self employed (Go to Q. EM-21).  
3- Unemployed (Go to Q. EM-31).

EM-2: Main occupation: \_\_\_\_\_

If the Household head works for others.

EM-11: What type of employment?

- 1- Civil Service employee.  
2- Skilled worker.  
3- Unskilled worker.

EM-12: What type of institution you are employed?

- 1- Government of institution.  
2- Non government of institution.  
3- With private sector.

EM-14: What is the address of institution?

City: \_\_\_\_\_

P.O.Box: \_\_\_\_\_

Tel: \_\_\_\_\_

EM-15: What is the number of years in service at the place of present?

EM-16: What is the type of contract?

1- Temporary (Includes daily works or under probation).

2- Permanent.

If the answer in Q. EM-15 is 2-Permanent, does your employee provide you with?

EM-17: Is there pension at the end of service?

1- Yes.

2- No

EM-18: Is there Compensation (in addition pension giver at the end of service)?

1- Yes

2- No

(Go to Q. EM-4)

If the household head is self employment/ or business owner:-

EM-21: What is the main field of business?

1- Commerce.

2- Industry.

3- Profession (Physician, engineer, lawyer ... ).

4- Agriculture.

5- Others.

EM-22: What is the business address?

Country: \_\_\_\_\_ / City: \_\_\_\_\_

P.O. Box: \_\_\_\_\_

Tel: \_\_\_\_\_

(Go to Q. EM-4)

If the applicator unemployed:

EM-31: Is the applicator:-

1- Retired.

2- Unemployed for health reasons.

3- Unemployed because of old age.

4- Unemployed (searching for a job).

5- Housewife.

EM-32: What is the main source of income for the family now?

1- Pension allocations.

2- Previous savings.

3- Income from property.

4- Family supports (including sons and daughters).

5- Support from welfare agencies.

(Go to Q. EM-4)

EM-4: Does the family has other sources of income?

1- Yes.                      2- No

EM-41: What is the total monthly income from all sources? (JD)

EM-42: In case the family was awarded a housing unit or rural housing loan from PHC, what the amount of money the family can allocate monthly to repay the loan?

EM-43: What is the type of guarantee you can provide for this purpose?

1- Trustworthy guarantee.  
2- Property/ Real Estate.

EM-44: Do you have special savings for housing purposes?

1- Yes.                      2- No

EM-45: If the answer yes, what is its current value in JD?

EM-46: Do you have savings in any local or external bank?

1- Yes.                      2- No

EM-47: How do you plan to pay the due monthly installments if you were awarded are apartment or a loan for Rural Housing from PHC? (Explain briefly).

EM-5: Does the family own arable land registered in the name one of family member?

1- Yes.                      2- No

EM-51: If the answer is yes, what is the total area? (Dunum)

EM-52: Does the family own a land for already allocated for building (Within the municipality limits/ local planning)?

1- Yes.                      2- No

EM-53: What is the total area? (Dunum)

EM-54: Is there a formal permission for building issued by the supervising authority?

1- Yes                      2- No

EM-541: If the answer Yes: What is the end date of permission?

EM-55: What is the type of land registered.

EM-56: Does the family has own a building or a part of building?

1- Yes.                      2- No

If the answer Yes:-

EM-57: What is the total area of your property?

EM-58: What is the present use of your building or your own part of it?

- 1- Residence.
- 2- Commercial (Store or other)
- 3- Offices.
- 4- Other.

EM-6: Does the family has properties/ realties of any kind in other location (Outside of West Bank or Gaza)?

If the answer Yes:

EM-61: Write the country name: \_\_\_\_\_.

Its kind: \_\_\_\_\_ And the value in JD: \_\_\_\_\_.

EM-7: Does the family has a car and from any type?

- 1- Yes.
- 2- No

EM-71: If the answer yes, is it:

- 1- Taxi.
- 2- Private.

EM-8: Does the family make payments regularly exceeding 6 months?

- 1- Yes.
- 2- No

If the answer Yes:-

EM-81: What is the total amount of payments expected to be made? (JD)

EM-82: What is the name of creditor?

EM-9: Is the head of household member registered as a housing cooperative society.

EM-91: If the answer is yes, what is the name of the society?

Its register No. \_\_\_\_\_.

## V- CONDITION OF RESIDENCE

HC1 - Type of present residence :

- (a) Apartment in a building
- (b) Detached house (Go to HC-11)
- (c) Old house (Go to HC13 )
- (d) Unauthorized structure
- (e) Tent (Go to HC16)
- (f) Other ( Specify ) -----

HC-2: Relationship with present Residence ?

- (a) Owner
- (b) Living with Relatives
- (c) Tenant (rent)

HC-3: If Tenant, Are you :

- (a) Legally Protected
- (b) Unprotected legally

HC-4: What is the main problem in your present residence?

- (a) The value of the rent
- (b) The deteriorating condition of the house
- (c) Too crowded (limited space)
- (d) Leakage
- (e) Other (Specify) -----

HC-11: If the answer was: Apartment in a Building, what is the number of apartments in this building .

HC-12: What is the number of families living in the Building?

- In your opinion, what is the importance of the following in creating friction and problems among the residence in the building ?

- 1- Very serious                      2- Serious
- 3- Somewhat Serious              4- Not so serious .

HC-121: Maintenance of joint facilities e.g. cleaning stairways, door ways and open spaces.

HC-122: Loud noise, from music, radio, TV etc.

HC-123: Frequent and many visitors

HC-124: Problems with children  
-----

HC-13: What is the area (size) of the present residence which you and your family are living?  
-----

HC-14: What is the number of rooms in the residence ?

Which of the following are available in the residence ?

HC-141: Central Heating

HC-142: Telephone

HC-143: Sun Heater

HC-144: Bath Tub

HC-145: Automatic Wash machine

HC-146: A/C

HC-147: Garden or backyard

-----

HC-15-HC-19: Do the following motivate you to submit your application to the PHC

HC-15: High Rent of present residence

- (1) Yes (Go to HC-15)
- (2) No

HC-151: What is the monthly rent in Dinars ? -----

HC-152: When did you first rented this residence? (Years)----

HC-16: The far geographical distance between the present residence and place of work or basic social services, education, transportation etc.

- (1) Yes
- (2) No

HC-17: Bad social environment surrounding the residence ?

- (1) Yes
- (2) No

HC-18: Insufficient space in the residence compared with the size of the family?

- (1) Yes
- (2) No

HC-19: Other factors (Specify) -----

HC-20: It is known that the PHC Housing projects are located in big cities, if you are living in a village, what your preference ?

- (1) Obtain a loan for Rural House Improvement
- (2) Obtain an Apartment in a Housing Project

If the answer is (1), then :

- HC-21: (1) To buy a real estate to build on it
  - (2) To enlarge the present residence horizontally
  - (3) Complete the structure already started or improve the present house
- (Answers to the above is Yes or No)

HC-22: In your opinion, what is the required amount of fund needed to enable you to other above (Dinar)

Part VI - PREFERENCE IN THE SIZE OF THE  
HOUSE UNIT YOU EXPECT TO GET FROM  
HC - SIZE AND LOCATION

Applicants should respond according to the area they reside in the West Bank and Gaza.

Residence in the West Bank  
-----

The PHC Housing Project consists of buildings each has 4 floors, what is your preference with respect to the floor ?

HU-1: First Floor

HU-2: Second Floor

HU-3: Third Floor

HU-4: Fourth Floor

Each Floor consists of number of apartments which vary in size, what is your preference with respect to the size ?

HU-5: 80 Sq.

HU-6: 100 Sq.

HU-7: 120 Sq.

Residence in Gaza  
-----

The PHC Housing Project consists of buildings each of which consists of several floors, what is your floor preference ?

HU-1: Lower level floors

HU-2: Middle level floors

HU-3: Upper level floors

Each Floor consists of apartment of various sizes, which size of the following you prefer :

HU-5: 107 Sq.

HU-6: 117 Sq.

HU-7: 127 Sq.

-----

SP-1: Do you feel that you have a special circumstances that should make you qualify over others to obtain an Apartment or Rural House Development Loan ?

If Yes, Please explain

-----

SP-3: Is the special circumstance applies to one or more of the following (as a result of the Israeli Military Occupation):  
Imprisonment, Disability while in Person, Death of the Head of the Household or a member of the immediate family, Expulsion of the Head or a member of the Household, Distraction or Closure of the family Residence .

If the answer is Yes move to Section VII

If No Complete the Declaration at the end of the page .

#### DECLARATION

I HERE BY SOLEMNLY DECLARE THAT THE INFORMATION I HAVE GIVEN IS TRUE TO THE BEST OF MY KNOWLEDGE AND I HEREBY DO AUTHORIZE THE PALESTINIAN HOUSING COUNCIL TO VERIFY IN ANY MEANS IT FINDS IT SUITABLE TO INQUIRE FROM ANY SOURCE ABOUT THE INFORMATION GIVEN ABOVE,.

I DO HEREBY BEAR THE FULL RESPONSIBILITY OF ANY MISINFORMATION GIVEN AND THE PHC HAS THE RIGHT TO TAKE THE MEASURES DEEM SUITABLE.

I DO SIGN ACCORDINGLY.

Signature of the Applicant -----

Signature of the Responsible in PHC-----

Signature of the Reviewer of the Application -----

Date of Review -----

VII - SPECIAL CIRCUMSTANCES RELATED TO  
MILITARY OCCUPATION.

SP-4: What is the special circumstances you mentioned in SP#3?

- 1- Imprisonment (arrest) for the Head of Household, or to one of its immediate members. (Go to SP5)
- 2- Injury/handicapped as a result of imprisonment of the Head of the Household or one of its immediate members. ( Go to SP6)
- 3- Death of the Head of the household or any member of his immediate family members (Go to SP7)
- 4- Expulsion of the Head of the Household or one of its immediate family members (Go to SP8)
- 5- Demolishing or closure of the house of the family intervals of imprisonment for all family members ( in months) use 999 for life sentence

SP52- Was the Head of Household ever imprisoned ?

SP53- Is any of the family members still in prison until now ?

SP54- What the duration of imprisonment ? (months)

INJURY OR HANDICAPPED INFLICTED IN PRISON FOR THE HEAD OF  
HOUSEHOLD OR ANY MEMBER OF THE FAMILY

SP-6: Was the Head of the Household or any member of the family injured ?

(1) Yes                      (2) No

SP-61: Is the Head of the Household or any member of the family handicapped as a result of imprisonment ?

(1) Yes                      (2) No

SP-62: What type and extent of injury to any family member?

Type

Degree

-----  
-----

MARTYR OF HEAD OF HOUSEHOLD OR A FAMILY MEMBER

-----

SP-7: Did the Head of Household or a family member die as a result of Military confrontation ?

SP-71: Date of death?

SP-72: Did other family members die from same condition.

Name	Age at death	Date
-----	-----	-----
-----	-----	-----
-----	-----	-----

EXPULSION OF HEAD OF HOUSEHOLD OR A FAMILY MEMBER

-----

SP-8: Was the Head of the Household ever expelled outside the West Bank or Gaza ?  
(1) Yes (2) No

SP-81: What is the date of expulsion ?-----

SP-82: Is he/she still expelled ? -----

SP-83: Were others in the family expelled ? Yes-- No--

Name	Age at Expulsion	Date
-----	-----	-----
-----	-----	-----

DEMOLISHING OR CLOSURE OF THE HOUSE

-----

SP-9: Was the residence of the family destroyed or closed totally or partially ?  
(1) Yes (2) No

SP 91- If the answer is Yes, Is it still closed ?

(1) Yes (2) No

SP 92- Was the family residence totally or partially demolished?

SP 93- If the answer is Yes, was it ever rebuilt?

(1) Yes (2) No

VIII- THIS PART IS FOR INDIVIDUAL LOANS ONLY

Specifications of Construction .

The Location

Name of Location ----- Neighborhood -----

Number of Lot ----- Parcel Number -----

Size

Area of Land ----- Area of Built part -----

Percentage ----- Number of Floors -----

Number of Flats ----- Area of each Flat -----

Zoning Condition

Within the Zoning area ----- Out the Zoning area-----

Usage of Building

Residence ----- Commercial ----- Other (Specify)-----

Classification of Building

Complex ----- Detached ----- Flat ----- Additional Floor--

Upgrading ----- Horizontal expansion.-----

Licensing

Valid License----- Initial approval -----

Registration number ----- Validity -----

Date of Issue ----- Date of expire-----

Is there any problem with the License ? Yes----- No-----

If Yes, please specify ?-----

-----  
-----

Other Remarks:

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Attachment B

PHC Point System (Tables)

Question ID 10 - The number of all family members living in current residence

No.	Item	Maximum 125
1-	6 members	125
2-	5 members	100
3-	4 "	90
4-	3 "	80
5-	2 "	70
6-	7 "	70
7-	8 "	50
8-	9 "	30
9-	10 members and higher	10

Question ED 01 - Highest level of education achieved

No.	Item	For Husband 75	For Wife 25	Maximum 100
1-	MA and above	75	25	
2-	BA/B.Sc.	65	25	
3-	Lower Diploma	55	20	
4-	High School	45	20	
5-	Secondary School	35	10	
6-	Preparatory School	25	5	
7-	Non	10	0	

Question ID 6 - Age

No.	Age	Maximum 75
1-	30 years and lower	60
2-	30 - 34 years	75
3-	35 - 39	65
4-	40 - 44	50
5-	45 - 49	40
6-	50 - 54	25
7-	55 years and higher	10

Question ID 9 - Marital Status

No.	Item	Maximum 100
1-	Married	100
2-	Widowed	60
3-	Divorced	50
4-	Sparated	50
5-	Single	25

Question F 63 - Number of Family members who are working

No.	Item	Maximum 25
1-	1 and more	25
2-	Not working	0

Question FS 64 - Is the wife a wage earner

No.	Item	Maximum 25
1-	Yes	25
2-	No	0

Question FS 66 - FS 77 - Number of handicapped in family

No.	The Handicapped number of the family	Maximum 50
1-	3 and more	50
2-	2	30
3-	1	20

Question EM 11 - Profession/employment of household's Head

No.	Occupation	Maximum 35
1-	Civil Service Employee	35
2-	Skilled Laborer	20
3-	Unskilled Laborer	10
4-	Retired	5
5-	Unemployed	0

Question EM 16 - Type of Contract

No.	Type of contract	Maximum 30
1-	Temporary	0
2-	Premanent	30

Question EM 17 - Retirement

No.	Item	Maximum 30
1-	Has pension	30
2-	Dose not have pension	0

Question EM 18 --Compensation - End of Service

No.	Item	Maximum 30
1-	Compensation is available	30
2-	No Compensation	0

Question EM 21 - Self Employment

No.	Self employed	Maximum 75
1-	Yes	75
2-	No	0

Question EM 31 - Reasons of Unemployment

No.	Item	Maximum 50
1-	Unemployed for health reasons	50
2-	Pensioner	40
3-	Unemployed	30
4-	Housewife	25
5-	Unemployed because of old age	20

Question EM 32 - Source of Income for the unemployed

No.	Item	Maximum 25
1-	Pension	25
2-	Previouds Savings	15
3-	Income from Property	0

Question EM 41 - Deviation from average income

No.	Deviation Degree	Maximum 150
1-	+, - to 1	150
2-	+, - to 2	100
3-	+, -	50
4-	Out	0

Question EM 91 - EM 5

No.	Item	Maximum 125
1-	Possession of various assets	
2-	Will be determined after data-collection-	

Question HC 2 - Relationship with Current Residence

No.	Item	Maximum 50
1.	Tenant	50
2.	Resident with the extended family	25

Question HC 4 - The Most Serious Problem You Face at the Current Residence

No.	Item	Maximum 50
1-	Badly damaged/near falling	50
2-	High rent	40
3-	Insufficient space	25
4-	Leakage	15
5-	Other (Related to one of above)	

Question HC 21 - How do you plan utilize the loan?

No.	Item	Maximum 100
1-	Buying of land	0
2-	Building/ a new apartment	100
3-	Extending of the current house horizontally	50
4-	Extending of the current house vertically/ a new apartment	100
5-	Completion of the present house	75
6-	Repairing of the existing house	25

Seventh: The Special Cases

Question SP 5 - Imprisonment/ Detention

No.	Item	Maximum 50
1-	Life imprisonment	50
2-	10 years and more in prison	40
3-	5 - 9 years and less	30
4-	1 - 4 years	20
5-	1 year and less	10

Question SP 6 - Injury/ Handicapped

No.	Item	Maximum 50
1-	Injury of Householder	
2-	Injury of one of the family members (Use maximum points if the number of injured increases)	

Question SP 7 - Martyrdom

No.	Item	Maximum 50
1-	Martyr one or more from the family	50

Question SP 8 - Expulsion

No.	Item	Maximum 50
1-	The Household Head	50
2-	One or more of the family members (The total should not exceed 50 points)	25

Question SP 9 - House Closure/ Destruction

No.	Item	Maximum 50
1-	Destruction	50
2-	Closure	25

Attachment C

Minutes of Meeting with Ali Saffarani, August 28, 1995  
(Description and Rationale for Promise to Sell Contract)

Minutes of Meeting with Ali Saffarini, August 28, 1995

The purpose of the meeting was to clarify the issues surrounding the sale of land and buildings by various types of agreements, and in particular, to determine the extent to which the enduser finance arrangements proposed to the Board could be implemented.

1. **Legal Situation by Region:** British law as it existed prior to 1948 applies in Gaza, with some minor Egyptian amendments between 1948 and 1967, and subject to major changes in rules and regulations under Israeli occupation.

In East Jerusalem Israeli law applies. On the Westbank Jordanian law as of 1967 applies, plus military codes that significantly have changed the situation with regard to real estate.

2. **Interest:** According to Jordanian law from 1967 interest should not exceed 9 percent per year. However, according to military codes, banks can charge more than 9 percent interest on loans denominated in shekels, but not on Jordanian Dinars. Mr. Saraffini played down the importance of all Islamic interest constraints, as having no basis in law.
3. **Denomination in Dollars:** Dollars are not legal tender. Hence, banks cannot make contracts in dollars. Mortgages cannot be denominated in dollars, in part because all mortgages involving land must be officially registered in the land registration office. Official entries cannot be in dollars. Apart from this, persons are free in their contractual relations with each other and may agree to any condition, provided they are not against public order or against any law.
4. **Basic Types of Contracts:** With regard to three central issues -- denomination of payments in dollars, ease of eviction in case of default, and retention of title in the hands of PHC until final payment has been made -- the following distinctions emerge: We should not structure our contract as a lease contract. The reason is that in the case of non-payment it is impossible to evict a tenant. It should also not be structured as a sale-by-installment contract, for two reasons: The contract would have to be registered in the land registration office, and this makes it impossible to denominate payments in dollars. Furthermore, it is difficult to evict, and title would be with the buyer.

Instead, the contract must be structured as a promise to sell. This is a valid and enforceable contract between PHC and buyer, and it is very different from a sale contract. Title in the case of a promise to sell will stay with PHC, and will not automatically be conveyed to the buyer at the end of the term. However, at the end of the term the buyer could sue PHC for ownership, and hence, the transfer of title is enforceable -- an important consideration to the buyer. Basically, the contract would involve a promise by PHC to sell the housing unit to the other party, i.e. to transfer title, once certain conditions are met. The contract can be notarized but will not be registered in the land registration office and in itself is not the

conveyor of the deed. The latter is important, for otherwise it becomes a sale-by-instalment contract and must be registered.

5. **Payment Conditions, Promise-to-Sell Contract:** Under the promise to sell contract PHC and buyer are free to enter into almost any kind of payment condition. Hence, payments may be denominated in dollars; and payments may remain constant or grow over time at some fixed rate, say 2 or 3 percent per year. It is possible to have a balloon payment at the end of the contract, though this is not required. Finally, the contract may include an option for a balloon payment, which in turn would trigger the sale of the building.

This means in particular, that the fixed and graduated payment plans worked out in the financing proposals to the Board are in line with the law and are enforceable. Similarly, the proposed options for the early payment and transfer of title are permissible and enforceable.

The only exception is indexation. There does not exist a Palestinian price index, and payments should not be linked to an Israeli index. In general, indexation to a foreign index would be difficult to enforce if the contract were challenged at a later point of time. Hence, Mr. Saffarini does not recommend using the price-level adjusted payment plan included in the financing proposals discussed with the Board.

6. **Common Property and Coop Law:** The buildings PHC is going to sell include common property components. Under the old Jordanian law such buildings can only be owned jointly by all tenants together, and Israel has not permitted adjustment to the law. Hence, on the Westbank it will be necessary to form tenant cooperatives. This is not necessary in East Jerusalem, since Israel law does permit holding individual title to flats in apartment buildings. A new Palestinian law will be enacted shortly in Gaza, and this law also will permit holding individual title in apartment buildings.

As a result the intention is to have promise-to-sell contracts with individual beneficiaries in Gaza and East Jerusalem, but such contracts must be with a cooperative society in the Westbank, at least until a new law can eventually be formulated in the future, similar to that in Gaza.

7. **Recommended Arrangements:** For the Westbank the arrangement will therefore be as follows: A cooperative will be formed for each apartment with by-laws that regulate both the relationship between cooperative and PHC, and the rights of the cooperative members. PHC enters into a promise to sell contract with the cooperative society stipulating the conditions under which the building as a whole will be sold to the cooperative. The payments by the cooperative would be the sum of the payments of its individual members. PHC will continue to hold title until such time as the cooperative has fulfilled all the conditions for a sale of the property. At that point the building title will be transferred to the cooperative society (if the current law is still in effect) or to the individual members (if a new cooperative law has been established).

Cooperative membership consists of the beneficiaries identified by PHC. Each member must sign the cooperative by-laws and an individual payment contract. All members pay installments to the society and persons who fail to pay will be evicted by the society. If the society does not evict non-paying members, PHC will have the right to evict.

Mr. Saffarini is currently in the process of preparing all the necessary draft contracts and apparently has given these matters a great deal of thought, and is confident that proposed contractual arrangements will fully protect the interests of PHC. He is the leading expert on property law in the Westbank, and has been retained by the World Bank to work on issues related to equipment leasing arrangements.

Attachment D

Dr. Von Rabenau notes on beneficiary payment schedules

## Beneficiary Payment Schedules

This Annex presents finalized recommended payment schedules for the housing units in three housing projects.

The payment schedules are based on a long series of discussions with the Director of the Board, the General Manager, and the full Board of PHC. Specifically, based on initial discussions with Dr. Shaded, a general model was developed to derive mortgage payment schedules as shown in Annex 10. The results of this model suggested that given Islamic interest constraints, lack of affordability, and difficulties with foreclosure, it would not be appropriate to sell PHC housing units through mortgage finance. Moreover, it became obvious that there would be a need to communicate with beneficiaries through simple tables showing their payment schedules. As a result, a second generation of models was developed shown in Annex 1. These tables focused on lease or rental payments with an option to buy, allowing for a variety of payment schedules, payment terms, and subsidy levels. The various options were presented to the Board in preliminary meetings held in Ramalla and Gaza on August 27 and August 30 respectively. The Board suggested changes in specific parameters, but otherwise approved the lease approach.

A final board meeting on these issues was held on September 5, 1995 suggesting that payments should be based on interest rates that rise over time but average to the desired market rate. Problems with the proposal were discussed in a Note on September 6, 1995, see Annex 1. Various further communications subsequent to this meeting resulted in a "stepped payment plan", which uses a single interest rate, but adjusts payments only every five years, rather than annually. Agreement on this approach was reached on the day of departure, and the payment schedules were prepared at home as described in this annex, and as presented in Appendix 1.

The revised tables are very similar to those presented in Annex 1. However, there are now six tables rather than the original two. Tables 1 and 2 are similar to those in the past, i.e. Table 1 provides the payment parameters and summary results, and Table 2 shows the monthly payments for the duration of the loan. In addition, Table 3 shows the required lump-sum payment the beneficiary would need to make to pay-off the entire debt in favor of immediate ownership. Previously, these results were shown for only three years in the summary table. Instead, they are now shown for the start of each year. Table 4 shows the co-op fee for each year, based on parameters specified in Table 1.

Two additional tables have been provided for the stepped payment plan. Table 5 shows beneficiary payments in constant prices, and Table 6 shows the outstanding debt in constant prices. For reasons discussed below, payment plans should be determined in such a way that the real value of beneficiary payments does not increase, and so that the outstanding debt declines in constant prices. The two tables permit PHC to check that this is the case. The two tables would not be of interest to the beneficiaries, and would not become part of the sales contract.

The following adds further explanatory notes:

1. **Total Payments:** The Board requested that the tables show the total payments a person must make over the life-time of the lease, including the interest paid. This information is now included at the bottom of Table 2. The Board felt strongly that beneficiaries base their decisions on this type of information, even if it is of uncertain value. Beneficiaries may reduce total life-time payments by raising the amount paid in cash up-front, and need never to pay more than the cost of the housing unit, provided they pay off the entire cost of the housing unit in cash. In general, total payments will be the higher the longer payments are postponed. Hence, if payments are constant, then the annual payments are about 2.5 times the loan amount (with 9 percent interest rate and 25 year term). However, they can reach as high as 3.0 times the loan in case of a stepped payment plan, and will be the higher the greater the step increases in the plan.
2. **Stepped Payment Plan:** This is the 'PHC Palestinian' version of the earlier graduated payment plan which I had discussed in Annex 1. The difference to the earlier is twofold: First, payments increase only every few year rather than annually. In the examples shown, the step increase comes every 5 years. Second, payment increases are linear, not geometric as in Annex 1. This is to say, each of the increases has the same size in nominal dollars as the others.

There are advantages and disadvantages to this plan. Among the advantages are its simplicity, and the fact that PHC stands behind it. Both are important, in terms of beneficiary acceptance. Among the disadvantages is its stepped increase and the linearity of its increases. The stepped design means that payments do not follow income as smoothly as they could have, and that payment rises are postponed longer than need be. As always, postponement of payment means higher interest payments, and since beneficiaries in the region dislike interest, this is a disadvantage. Also, each step increase will be larger than if such increases occurred annually, and hence, will be felt harder by the beneficiaries. Finally, the linearity of the step increases is disliked by most analysts, since income rises geometrically, and hence, the burden of the same payment rise will be greater during the early than later years.

Still, not too much should be made of the disadvantages, since they are shared by the most common of all payment schedules -- the fixed, conventional payment plan. Clearly, the stepped payment plan makes housing more affordable than the fixed payment plan, and it is recommended that PHC implement this plan, with the fixed payment plan as an alternative for those to whom affordability is not a constraint.

3. **Implementation of Stepped Payment Plan:** Two parameters determine the design of the stepped plan, shown in Lines 29 and 30 of Table 1. Specifically, Line 29 of Table 1 determines the years between step increases. Line 30 determines size of each step increase, as a percent of the initial payment.

Consider the illustration in Appendix 1. Table 1 shows payment plans with a duration of 15, 20 and 25 years, and spaces payment rises every 5 years. It also shows payment increases of 10 percent and 15 percent of the initial payment. Specifically, for a housing unit that costs \$ 40,000 and carries a 25-year loan of \$ 32,000, a 10 percent payment rise requires initial monthly payments of \$ 242.38. The payments rise after five years by \$ 24.24 to \$266.62, after ten years by another \$ 24.24 to \$ 292.59, and so on (see the payment plan in the second column of Table 2).

4. **Impact of High Step Increases:** There may be a temptation by the Board to make the step increase too high. Higher step increases will lower the necessary initial payments and make housing more affordable. This is desirable. However, there are also dangers. Specifically, the higher the step increase, the greater the amount of negative amortization, and the greater future default risks. Consider each in turn. **Negative amortization** arises when beneficiary payments are smaller than the interest payment needed to serve outstanding debt. In this case total debt rises even though beneficiaries make their monthly payments. The missing interest payments are added to outstanding debt. This is illustrated in Table 3 of Appendix 1 for the case of a 25 year loan and step increases of 15 percent. Debt here first rises for the first six years, and debt remains above initial debt for the first eight years. The phenomenon vanishes for lower step increases and shorter payment terms. For example, with a 20 year payment term, or a 10 percent payment increase, there is no negative amortization.

Negative amortization may not be acceptable to beneficiaries, mainly because they do not accept that debt rises despite their payments, and it may not be acceptable to PHC because it will have relatively little working capital during the early years of loan service. However, negative amortization is not a problem as long as debt declines in real terms. This is the case for step increases as high as 50 or 60 percent, see Table 6.

Consider next default risk. The risk of default rises both with the level and duration of the payment burden. Hence, a payment burden of 35 percent carries a higher default risk than a burden of 25 percent; and each year a burden is extended may add to the default risk, as households find it increasingly difficult to postpone competing non-residential expenditures or continue to draw on the support of their extended family. In general, payment schedules should be designed so that the real payment burden declines rather than increases. Table 5 of Appendix 1 shows payments in constant prices. It shows that with a 3 percent annual inflation rate and a 15 percent step increase, payments always fall in real terms below the first year's payment. This is to say, that if a household's income rises at the same rate as inflation (a big 'if', given exchange rate uncertainties), the household's payment burden will never exceed the initial payment commitment. If they are larger, then the payment burden could rise over time, i.e. a household that initially paid 35 percent of its income towards housing may find, that five years later it must devote 40 percent or more of its income towards housing. This situation should be avoided. Assuming an inflation rate (in dollar terms) of 3 percent per annum, this would limit the step increases to 15 percent, see also Table 5.

5. **Co-op Fees:** The new tables allow for a co-op fee. As I mentioned, I have not investigated the size of this fee, though a fee of 4-5 percent of housing cost is often being suggested as needed for upkeep and maintenance. This could however prove an over- or underestimate for the occupied territories.

At present, the fee is determined through two parameters, shown in Lines 19 and 20 of the Summary Table 1. Specifically, the fee is set as a percentage of the cost of the housing unit for the initial and some subsequent year. In the case illustrated in Appendix 1, the fee is set at 1 percent of cost for the first year, and at 4 percent for Year 5. The model will then interpolate the fee linearly between Years 1 and 5, and will keep the fee at a constant level thereafter. During the first five years there are no inflation adjustments, but payments are inflation adjusted thereafter. For a housing unit that costs \$ 40,000, the fee is \$ 400 during the first year, or \$ 33 per month, rising to \$ 133 by Year 5. In Year 6 it is \$ 155 which in constant prices equals \$ 133, similarly in Year 7 it is \$ 159 which again equals \$ 133 in constant prices, etc.

Because of the continuous uncertainty with regard to the size of the fee, PHC should include some flexibility in its schedule of co-op fees. For example, it should be possible to adjust fees (either upward or downward) to actual need. At the same time, a reserve should be built up for contingencies. Assuming that the cooperative could also borrow to accommodate contingencies, reserve fund equal to 5 percent of the cost of the project would be sufficient.

46

Table D.2 Stepped Rental Payment Plan  
Schedule of Monthly Payments, by Year

Set 1 -- Priced with Land & Adm Cost Subsidies

09/24/95  
PAYSCED.xls

Year		A	B	C	D	E	F
1	1.00	230.05	242.38	254.42	265.86	298.53	308.57
2	1.03	230.05	242.38	254.42	265.86	298.53	308.57
3	1.06	230.05	242.38	254.42	265.86	298.53	308.57
4	1.09	230.05	242.38	254.42	265.86	298.53	308.57
5	1.13	230.05	242.38	254.42	265.86	298.53	308.57
6	1.16	264.56	266.62	292.59	292.45	343.30	339.42
7	1.19	264.56	266.62	292.59	292.45	343.30	339.42
8	1.23	264.56	266.62	292.59	292.45	343.30	339.42
9	1.27	264.56	266.62	292.59	292.45	343.30	339.42
10	1.30	264.56	266.62	292.59	292.45	343.30	339.42
11	1.34	299.07	290.86	330.75	319.03	388.08	370.28
12	1.38	299.07	290.86	330.75	319.03	388.08	370.28
13	1.43	299.07	290.86	330.75	319.03	388.08	370.28
14	1.47	299.07	290.86	330.75	319.03	388.08	370.28
15	1.51	299.07	290.86	330.75	319.03	388.08	370.28
16	1.56	333.57	315.10	368.91	345.62	0.00	0.00
17	1.60	333.57	315.10	368.91	345.62	0.00	0.00
18	1.65	333.57	315.10	368.91	345.62	0.00	0.00
19	1.70	333.57	315.10	368.91	345.62	0.00	0.00
20	1.75	333.57	315.10	368.91	345.62	0.00	0.00
21	1.81	368.08	339.33	0.00	0.00	0.00	0.00
22	1.86	368.08	339.33	0.00	0.00	0.00	0.00
23	1.92	368.08	339.33	0.00	0.00	0.00	0.00
24	1.97	368.08	339.33	0.00	0.00	0.00	0.00
25	2.03	368.08	339.33	0.00	0.00	0.00	0.00
26	2.09	0.00	0.00	0.00	0.00	0.00	0.00
27	2.16	0.00	0.00	0.00	0.00	0.00	0.00
28	2.22	0.00	0.00	0.00	0.00	0.00	0.00
29	2.29	0.00	0.00	0.00	0.00	0.00	0.00
30	2.36	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Payments Made</b>							
Incl Downpayment		97,720	95,257	82,801	81,378	69,795	69,096
as % of Housing Cost		2.44	2.38	2.07	2.03	1.74	1.73
without Downpayment		89,720	87,257	74,801	73,378	61,795	61,096
as % of Initial Debt		2.80	2.73	2.34	2.29	1.93	1.91

Net Present Value @

Actual Rate Used	32,000	32,000	32,000	32,000	32,000	32,000	32,000
Market Rate	32,000	32,000	32,000	32,000	32,000	32,000	32,000

Table D.6 Stepped Rental Payment Plan  
Outstanding Debt, in Constant Prices, by Year

Set 1 -- Priced with Land & Adm Cost Subsidies

09/24/95  
PAYSCED.xls

Year	A	B	C	D	E	F
1	32,000	32,000	32,000	32,000	32,000	32,000
2	31,184	31,040	30,900	30,767	30,386	30,269
3	30,398	30,107	29,822	29,552	28,780	28,542
4	29,643	29,199	28,765	28,354	27,178	26,816
5	28,917	28,315	27,728	27,171	25,578	25,088
6	28,220	27,456	26,710	26,001	23,978	23,356
7	27,205	26,376	25,325	24,577	21,924	21,305
8	26,208	25,311	23,946	23,155	19,852	19,234
9	25,229	24,260	22,569	21,734	17,756	17,140
10	24,265	23,221	21,193	20,310	15,633	15,016
11	23,317	22,193	19,815	18,882	13,479	12,860
12	22,082	20,964	18,102	17,216	10,899	10,399
13	20,852	19,737	16,373	15,534	8,268	7,889
14	19,622	18,510	14,624	13,832	5,578	5,323
15	18,393	17,281	12,851	12,107	2,825	2,695
16	17,161	16,047	11,052	10,355	0	0
17	15,666	14,626	8,938	8,373	0	0
18	14,157	13,190	6,780	6,352	0	0
19	12,630	11,738	4,574	4,286	0	0
20	11,083	10,265	2,316	2,170	0	0
21	9,512	8,769	0	0	0	0
22	7,692	7,091	0	0	0	0
23	5,835	5,379	0	0	0	0
24	3,937	3,629	0	0	0	0
25	1,993	1,838	0	0	0	0
26	0	0	0	0	0	0
27	0	0	0	0	0	0
28	0	0	0	0	0	0
29	0	0	0	0	0	0
30	0	0	0	0	0	0

Table D.1

Stepped Rental Payment Plan  
Parameters and Summary

Set 1 — Priced with Land & Adm Cost Subsidies

09/24/95  
PAYSCED.xls

Line	Item	A	B	C	D	E	F
1	Price of Housing Unit	40,000					
2	Minimum Downpayment						
3	Percent of Cost	20.0%					
4	US Dollars	8,000					
5	Max Payments as % of Income	3.0%					
6	Hypoth Inflation Rate	0.0%					
7							
8	Lease Term (Years)	25	25	20	20	15	15
9	Downpayment as % of Cost	20%	20%	20%	20%	20%	20%
10	Actual Downpayment	8,000	8,000	8,000	8,000	8,000	8,000
11	Cash Grants	0	0	0	0	0	0
12	Unpaid Balance	32,000	32,000	32,000	32,000	32,000	32,000
13							
14	Rental Payments Required (US\$)						
15	Monthly (Net of Coop Fees)	230	242	254	266	299	309
16	Annual (Net of Coop Fees)	2,761	2,909	3,053	3,190	3,582	3,703
17	Suggested Min Monthly Income	637	693	727	760	853	882
18	Coop Fees (% of Cost)						
19	Year	1	1	1	1	1	1
20	Year	5	5	5	5	5	5
21	Coop Fees in Const Prices						
22	Year (\$/Month)	33	33	33	33	33	33
23	Year (\$/Month)	133	133	133	133	133	133
24							
25	Interest Rate						
26	Actual Used	9.0%					
27	Market	9.0%					
28	Step Increase						
29	Years between Step Increases	5.00	5.00	5.00	5.00	5.00	5.00
30	Step Incr, as % of 1st Payment	15.0%	10.0%	15.0%	10.0%	15.0%	10.0%
31							
32	PW Factor						
33	Mortgage Rate	11.592	11.002	10.481	10.030	8.933	8.642
34	Market Rate	11.592	11.002	10.481	10.030	8.933	8.642
35	PW of Payments @						
36	Mortgage Rate	32,000	32,000	32,000	32,000	32,000	32,000
37	Market Rate	32,000	32,000	32,000	32,000	32,000	32,000
38							
39	Interest Subsidies	0	0	0	0	0	0
40	Cash Subsidies	0.000	0.000	0.000	0.000	0.000	0.000
41	Total Subsidies	0	0	0	0	0	0

49

Table D.3

Stepped Rental Payment Plan  
 Purchase Price by Year  
 Remaining Debt at Start of Year

Set 1 -- Priced with Land & Adm Cost Subsidies

09/24/95  
 PAYSCED.xls

Year	Price Inflator	A	B	C	D	E	F
1	1.00	32,000	32,000	32,000	32,000	32,000	32,000
2	1.03	32,119	31,971	31,827	31,690	31,298	31,177
3	1.06	32,250	31,940	31,638	31,351	30,532	30,280
4	1.09	32,391	31,906	31,433	30,983	29,698	29,303
5	1.13	32,546	31,869	31,208	30,581	28,788	28,237
6	1.16	32,715	31,829	30,964	30,143	27,797	27,076
7	1.19	32,484	31,494	30,240	29,346	26,179	25,439
8	1.23	32,233	31,129	29,450	28,478	24,415	23,656
9	1.27	31,959	30,731	28,590	27,532	22,493	21,712
10	1.30	31,661	30,298	27,652	26,500	20,398	19,593
11	1.34	31,336	29,825	26,630	25,376	18,114	17,283
12	1.38	30,567	29,019	25,057	23,831	15,087	14,395
13	1.43	29,729	28,141	23,343	22,148	11,788	11,247
14	1.47	28,816	27,183	21,475	20,313	8,192	7,816
15	1.51	27,821	26,139	19,439	18,312	4,272	4,076
16	1.56	26,736	25,001	17,219	16,132	0	0
17	1.60	25,139	23,470	14,342	13,437	0	0
18	1.65	23,399	21,802	11,206	10,498	0	0
19	1.70	21,502	19,983	7,788	7,296	0	0
20	1.75	19,434	18,000	4,061	3,805	0	0
21	1.81	17,180	15,839	0	0	0	0
22	1.86	14,310	13,192	0	0	0	0
23	1.92	11,181	10,307	0	0	0	0
24	1.97	7,770	7,163	0	0	0	0
25	2.03	4,052	3,736	0	0	0	0
26	2.09	0	0	0	0	0	0
27	2.16	0	0	0	0	0	0
28	2.22	0	0	0	0	0	0
29	2.29	0	0	0	0	0	0
30	2.36	0	0	0	0	0	0

50

Table D.4

Stepped Rental Payment Plan

Set 1 — Priced with Land &amp; Adm Cost Subsidies

09/24/95

Co-op Fee per Month (\$)

PAYSCED.xls

Illustrative Schedule, Based on Illustrative Inflation Rate

Year	Price Inflator	A	B	C	D	E	F
1	1.00	33	33	33	33	33	33
2	1.03	58	58	58	58	58	58
3	1.06	83	83	83	83	83	83
4	1.09	108	108	108	108	108	108
5	1.13	133	133	133	133	133	133
6	1.16	155	155	155	155	155	155
7	1.19	159	159	159	159	159	159
8	1.23	164	164	164	164	164	164
9	1.27	169	169	169	169	169	169
10	1.30	174	174	174	174	174	174
11	1.34	179	179	179	179	179	179
12	1.38	185	185	185	185	185	185
13	1.43	190	190	190	190	190	190
14	1.47	196	196	196	196	196	196
15	1.51	202	202	202	202	202	202
16	1.56	208	208	208	208	208	208
17	1.60	214	214	214	214	214	214
18	1.65	220	220	220	220	220	220
19	1.70	227	227	227	227	227	227
20	1.75	234	234	234	234	234	234
21	1.81	241	241	241	241	241	241
22	1.86	248	248	248	248	248	248
23	1.92	255	255	255	255	255	255
24	1.97	263	263	263	263	263	263
25	2.03	271	271	271	271	271	271
26	2.09	279	279	279	279	279	279
27	2.16	288	288	288	288	288	288
28	2.22	296	296	296	296	296	296
29	2.29	305	305	305	305	305	305
30	2.36	314	314	314	314	314	314

Table D.5

Stepped Rental Payment Plan  
 Payments in Constant Prices, by Year

Set 1 -- Priced with Land & Adm Cost Subsidies

09/24/95  
 PAYSCED.xls

Year	A	B	C	D	E	F
1	230.05	242.38	254.42	265.86	298.53	308.57
2	223.35	235.32	247.01	258.12	289.83	299.58
3	216.84	228.47	239.82	250.60	281.39	290.85
4	210.53	221.81	232.83	243.30	273.19	282.38
5	204.40	215.35	226.05	236.21	265.24	274.16
6	228.21	229.99	252.39	252.27	296.14	292.79
7	221.56	223.29	245.04	244.92	287.51	284.26
8	215.11	216.79	237.90	237.79	279.14	275.98
9	208.84	210.47	230.97	230.86	271.01	267.94
10	202.76	204.34	224.24	224.14	263.11	260.14
11	222.53	216.43	246.11	237.39	288.77	275.52
12	216.05	210.12	238.94	230.48	280.36	267.50
13	209.76	204.00	231.98	223.76	272.19	259.71
14	203.65	198.06	225.23	217.25	264.27	252.14
15	197.72	192.29	218.67	210.92	256.57	244.80
16	214.11	202.25	236.79	221.84	0.00	0.00
17	207.87	196.36	229.90	215.38	0.00	0.00
18	201.82	190.64	223.20	209.11	0.00	0.00
19	195.94	185.09	216.70	203.01	0.00	0.00
20	190.23	179.69	210.39	197.10	0.00	0.00
21	203.80	187.88	0.00	0.00	0.00	0.00
22	197.86	182.41	0.00	0.00	0.00	0.00
23	192.10	177.10	0.00	0.00	0.00	0.00
24	186.50	171.94	0.00	0.00	0.00	0.00
25	181.07	166.93	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00

50

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COST PER UNIT \$ 45,000.00

Table B.2 Graduated Rental Payment Plan  
Schedule of Monthly Payments, by Year

Set 1 -- Priced at Cost Without Subsidies

10/07/95  
LEASE2.xls

Item	A	B	C	D	E	F
1	243.20	212.80	239.34	226.92	285.77	250.05
2	248.07	217.06	264.53	231.46	291.48	255.05
3	253.03	221.40	269.82	236.09	297.31	260.15
4	258.09	225.83	275.22	240.81	303.26	265.35
5	263.25	230.34	280.72	245.63	309.32	270.66
6	268.52	234.95	286.33	250.54	315.51	276.07
7	273.89	239.65	292.06	255.55	321.82	281.59
8	279.36	244.44	297.90	260.66	328.26	287.23
9	284.95	249.33	303.86	265.88	334.82	292.97
10	290.65	254.32	309.94	271.20	341.52	298.83
11	296.46	259.41	316.14	276.62	348.35	304.81
12	302.39	264.59	322.46	282.15	355.32	310.90
13	308.44	269.89	328.91	287.79	362.42	317.12
14	314.61	275.28	335.49	293.55	369.67	323.46
15	320.90	280.79	342.20	299.42	377.07	329.93
16	327.32	286.40	349.04	305.41	384.61	336.53
17	333.87	292.13	356.02	311.52	392.30	343.26
18	340.54	297.98	363.14	317.75	400.14	350.13
19	347.35	303.93	370.40	324.10	408.15	357.13
20	354.30	310.01	377.81	330.59	416.31	364.27
21	361.39	316.21	385.37	337.20	0.00	0.00
22	368.61	322.54	393.08	343.94	0.00	0.00
23	375.99	328.99	400.94	350.82	0.00	0.00
24	383.51	335.57	408.96	357.84	0.00	0.00
25	391.18	342.28	417.13	364.99	0.00	0.00
26	399.00	349.13	0.00	0.00	0.00	0.00
27	406.98	356.11	0.00	0.00	0.00	0.00
28	415.12	363.23	0.00	0.00	0.00	0.00
29	423.42	370.49	0.00	0.00	0.00	0.00
30	431.89	377.90	0.00	0.00	0.00	0.00

Total Payments Made						
Incl Downpayment	127,395	117,096	108,682	100,721	92,321	86,406
Net Present Value @						
Actual Rate Used	36,000	31,500	36,000	31,500	36,000	31,500
Market Rate	36,000	31,500	36,000	31,500	36,000	31,500

VHC (2)

COST PER UNIT \$50,000.00

Table B.2 Graduated Rental Payment Plan Schedule of Monthly Payments, by Year

Set 1 - Priced at Cost Without Subsidies

10/07/95 LEASE2.xls

Item	A	B	C	D	E	F
1	270.23	236.45	288.16	252.14	317.52	277.83
2	275.63	241.18	293.92	257.18	323.87	283.39
3	281.14	246.00	299.80	262.32	330.35	289.05
4	286.77	250.92	305.80	267.57	336.96	294.84
5	292.50	255.94	311.91	272.92	343.69	300.73
6	298.33	261.06	318.15	278.38	350.57	306.75
7	304.32	266.28	324.51	283.95	357.58	312.88
8	310.40	271.60	331.00	289.63	364.73	319.14
9	316.61	277.04	337.62	295.42	372.03	325.52
10	322.94	282.58	344.37	301.33	379.47	332.03
11	329.40	288.23	351.26	307.35	387.06	338.67
12	335.99	293.99	358.29	313.50	394.80	345.45
13	342.71	299.87	365.45	319.77	402.69	352.36
14	349.57	305.87	372.76	326.17	410.73	359.40
15	356.56	311.99	380.22	332.69	418.96	366.59
16	363.69	318.23	387.82	339.34	427.34	373.92
17	370.96	324.59	395.58	346.13	435.89	381.40
18	378.38	331.08	403.49	353.05	444.61	389.03
19	385.95	337.71	411.56	360.11	453.50	396.81
20	393.67	344.46	419.79	367.32	462.57	404.75
21	401.54	351.35	428.19	374.66	0.00	0.00
22	409.57	358.38	436.75	382.16	0.00	0.00
23	417.76	365.54	445.49	389.80	0.00	0.00
24	426.12	372.85	454.40	397.60	0.00	0.00
25	434.64	380.31	463.48	405.55	0.00	0.00
26	443.33	387.92	0.00	0.00	0.00	0.00
27	452.20	395.68	0.00	0.00	0.00	0.00
28	461.24	403.59	0.00	0.00	0.00	0.00
29	470.47	411.66	0.00	0.00	0.00	0.00
30	479.88	419.89	0.00	0.00	0.00	0.00

Total Payments Made Incl Downpayment	- 141,550	130,107	120,757	111,913	102,579	96,007
Net Present Value @						
Actual Rate Used	40,000	35,000	40,000	35,000	40,000	35,000
Market Rate	40,000	35,000	40,000	35,000	40,000	35,000

54

Attachment E

Alternative payment plans (schedules) .

Table B.1

Graduated Rental Payment Plan  
Parameters and Summary

Set 1 — Priced with Land &amp; Adm Cost Subsidies

10/07/95

PPGRAD.xls

Line	Item	A	B	C	D	E	F
1	Price of Housing Unit	48,000					
2	Minimum Downpayment						
3	Percent of Cost	20.0%					
4	US Dollars	9,600					
5	Max Payments as % of Income	35.0%					
6	Graduation Rate	2.0%					
7	Hypothetical Inflation Rate	3.0%					
8							
9	Lease Term (Years)	30	30	25	25	20	20
10	Downpayment as % of Cost	20%	30%	20%	30%	20%	30%
11	Actual Downpayment	9,600	14,400	9,600	14,400	9,600	14,400
12	Cash Grants	0	0	0	0	0	0
13	Unpaid Balance	38,400	33,600	38,400	33,600	38,400	33,600
14							
15	Rental Payments Required (US\$)						
16	Monthly (Net of Coop Fees)	259	227	277	242	305	267
17	Annual (Net of Coop Fees)	3,113	2,724	3,320	2,905	3,658	3,201
18	Suggested Min Monthly Income	741	649	790	692	871	762
19	Coop Fees (% of Cost)						
20	Year	1	1.0%	1.0%	1.0%	1.0%	1.0%
21	Year	5	4.0%	4.0%	4.0%	4.0%	4.0%
22	Coop Fees in Const Prices						
23	Year (\$/Month)	1	40	40	40	40	40
24	Year (\$/Month)	5	160	160	160	160	160
25							
26	Interest Rate						
27	Actual Used		9.0%				
28	Market		9.0%				
29							
30	PW Factor						
31	Mortgage Rate	12.335	12.335	11.568	11.568	10.498	10.498
32	Market Rate	12.335	12.335	11.568	11.568	10.498	10.498
33	PW of Payments @						
34	Mortgage Rate	38,400	33,600	38,400	33,600	38,400	33,600
35	Market Rate	38,400	33,600	38,400	33,600	38,400	33,600
36							
37	Interest Subsidies	0	0	0	0	0	0
38	Cash Subsidies	0.000	0.000	0.000	0.000	0.000	0.000
39	Total Subsidies	0	0	0	0	0	0

56

Table B.2

Graduated Rental Payment Plan  
Schedule of Monthly Payments, by Year

Set 1 — Priced with Land &amp; Adm Cost Subsidies

10/07/95

PPGRAD.xls

Year	A	B	C	D	E	F
1	259.42	226.99	276.63	242.05	304.82	266.72
2	264.61	231.53	282.16	246.89	310.92	272.05
3	269.90	236.16	287.81	251.83	317.13	277.49
4	275.30	240.88	293.56	256.87	323.48	283.04
5	280.80	245.70	299.43	262.01	329.95	288.70
6	286.42	250.61	305.42	267.25	336.55	294.48
7	292.15	255.63	311.53	272.59	343.28	300.37
8	297.99	260.74	317.76	278.04	350.14	306.37
9	303.95	265.95	324.12	283.60	357.14	312.50
10	310.03	271.27	330.60	289.27	364.29	318.75
11	316.23	276.70	337.21	295.06	371.57	325.13
12	322.55	282.23	343.96	300.96	379.00	331.63
13	329.00	287.88	350.84	306.98	386.58	338.26
14	335.58	293.64	357.85	313.12	394.32	345.03
15	342.29	299.51	365.01	319.38	402.20	351.93
16	349.14	305.50	372.31	325.77	410.25	358.97
17	356.12	311.61	379.76	332.29	418.45	366.15
18	363.25	317.84	387.35	338.93	426.82	373.47
19	370.51	324.20	395.10	345.71	435.36	380.94
20	377.92	330.68	403.00	352.62	444.06	388.56
21	385.48	337.29	411.06	359.68	0.00	0.00
22	393.19	344.04	419.28	366.87	0.00	0.00
23	401.05	350.92	427.67	374.21	0.00	0.00
24	409.07	357.94	436.22	381.69	0.00	0.00
25	417.26	365.10	444.94	389.33	0.00	0.00
26	425.60	372.40	0.00	0.00	0.00	0.00
27	434.11	379.85	0.00	0.00	0.00	0.00
28	442.79	387.45	0.00	0.00	0.00	0.00
29	451.65	395.19	0.00	0.00	0.00	0.00
30	460.68	403.10	0.00	0.00	0.00	0.00
<b>Total Payments Made</b>						
Incl Downpayment	135,888	124,902	115,927	107,436	98,476	92,166
as % of Housing Cost	2.83	2.60	2.42	2.24	2.05	1.92
without Downpayment	126,288	110,502	106,327	93,036	88,876	77,766
as % of Initial Debt	3.29	3.29	2.77	2.77	2.31	2.31

## Net Present Value @

Actual Rate Used	38,400	33,600	38,400	33,600	38,400	33,600
Market Rate	38,400	33,600	38,400	33,600	38,400	33,600

51

Table B.1

Graduated Rental Payment Plan  
Parameters and Summary

Set 1 --- Priced with Land &amp; Adm Cost Subsidies

10/07/95

PPORAD.xls

Line	Item	A	B	C	D	E	F
1	Price of Housing Unit	44,000					
2	Minimum Downpayment						
3	Percent of Cost	20.0%					
4	US Dollars	8,800					
5	Max Payments as % of Income	35.0%					
6	Graduation Rate	2.0%					
7	Hypothetical Inflation Rate	3.0%					
8							
9	Lease Term (Years)	30	30	25	25	20	20
10	Downpayment as % of Cost	20%	30%	20%	30%	20%	30%
11	Actual Downpayment	8,800	13,200	8,800	13,200	8,800	13,200
12	Cash Grants	0	0	0	0	0	0
13	Unpaid Balance	35,200	30,800	35,200	30,800	35,200	30,800
14							
15	Rental Payments Required (US\$)						
16	Monthly (Net of Coop Fees)	238	208	254	222	279	244
17	Annual (Net of Coop Fees)	2,854	2,497	3,043	2,663	3,353	2,934
18	Suggested Min Monthly Income	679	594	725	634	798	699
19	Coop Fees (% of Cost)						
20	Year	1	1.0%	1.0%	1.0%	1.0%	1.0%
21	Year	5	4.0%	4.0%	4.0%	4.0%	4.0%
22	Coop Fees in Const Prices						
23	Year (\$/Month)	1	37	37	37	37	37
24	Year (\$/Month)	5	147	147	147	147	147
25							
26	Interest Rate						
27	Actual Used		9.0%				
28	Market		9.0%				
29							
30	PW Factor						
31	Mortgage Rate	12.335	12.335	11.568	11.568	10.498	10.498
32	Market Rate	12.335	12.335	11.568	11.568	10.498	10.498
33	PW of Payments @						
34	Mortgage Rate	35,200	30,800	35,200	30,800	35,200	30,800
35	Market Rate	35,200	30,800	35,200	30,800	35,200	30,800
36							
37	Interest Subsidies	0	0	0	0	0	0
38	Cash Subsidies	0.000	0.000	0.000	0.000	0.000	0.000
39	Total Subsidies	0	0	0	0	0	0

58

Table D.1

Stepped Rental Payment Plan  
Parameters and Summary

Set 1 — Priced with Land &amp; Adm Cost Subsidies

10/07/95  
PPSTEP.xls

Line	Item	A	B	C	D	E	F
1	Price of Housing Unit	44,000					
2	Minimum Downpayment						
3	Percent of Cost	20.0%					
4	US Dollars	8,800					
5	Max Payments as % of Income	35.0%					
6	Hypoth Inflation Rate	3.0%					
7							
8	Lease Term (Years)	30	30	25	25	20	20
9	Downpayment as % of Cost	20%	20%	20%	20%	20%	20%
10	Actual Downpayment	8,800	8,800	8,800	8,800	8,800	8,800
11	Cash Grants	0	0	0	0	0	0
12	Unpaid Balance	35,200	35,200	35,200	35,200	35,200	35,200
13							
14	Rental Payments Required (US\$)						
15	Monthly (Net of Coop Fees)	237	251	253	267	280	292
16	Annual (Net of Coop Fees)	2,843	3,014	3,037	3,199	3,358	3,509
17	Suggested Min Monthly Income	677	718	723	762	800	836
18	Coop Fees (% of Cost)						
19	Year	1	1.0%	1.0%	1.0%	1.0%	1.0%
20	Year	5	4.0%	4.0%	4.0%	4.0%	4.0%
21	Coop Fees in Const Prices						
22	Year (\$/Month)	1	37	37	37	37	37
23	Year (\$/Month)	5	147	147	147	147	147
24							
25	Interest Rate						
26	Actual Usacd		9.0%				
27	Market		9.0%				
28	Step Increase						
29	Years between Step Increases		5.00	5.00	5.00	5.00	5.00
30	Step Incr, as % of 1st Payment		15.0%	10.0%	15.0%	10.0%	15.0%
31							
32	PW Factor						
33	Mortgage Rate	12.381	11.679	11.592	11.002	10.481	10.030
34	Market Rate	12.381	11.679	11.592	11.002	10.481	10.030
35	PW of Payments @						
36	Mortgage Rate	35,200	35,200	35,200	35,200	35,200	35,200
37	Market Rate	35,200	35,200	35,200	35,200	35,200	35,200
38							
39	Interest Subsidies	0	0	0	0	0	0
40	Cash Subsidies	0.000	0.000	0.000	0.000	0.000	0.000
41	Total Subsidies	0	0	0	0	0	0

Table B.2

Graduated Rental Payment Plan  
Schedule of Monthly Payments, by Year

Set 1 --- Priced with Land &amp; Adm Cost Subsidies

10/07/95  
PPGRAD.xls

Year	A	B	C	D	E	F
1	237.80	208.07	253.58	221.88	279.42	244.49
2	242.55	212.24	258.65	226.32	285.01	249.38
3	247.41	216.48	263.82	230.85	290.71	254.37
4	252.35	220.81	269.10	235.46	296.52	259.46
5	257.40	225.23	274.48	240.17	302.45	264.64
6	262.55	229.73	279.97	244.97	308.50	269.94
7	267.80	234.32	285.57	249.87	314.67	275.34
8	273.16	239.01	291.28	254.87	320.96	280.84
9	278.62	243.79	297.11	259.97	327.38	286.46
10	284.19	248.67	303.05	265.17	333.93	292.19
11	289.88	253.64	309.11	270.47	340.61	298.03
12	295.67	258.71	315.29	275.88	347.42	303.99
13	301.59	263.89	321.60	281.40	354.37	310.07
14	307.62	269.17	328.03	287.03	361.46	316.27
15	313.77	274.55	334.59	292.77	368.69	322.60
16	320.05	280.04	341.28	298.62	376.06	329.05
17	326.45	285.64	348.11	304.60	383.58	335.63
18	332.98	291.35	355.07	310.69	391.25	342.35
19	339.64	297.18	362.17	316.90	399.08	349.19
20	346.43	303.12	369.42	323.24	407.06	356.18
21	353.36	309.19	376.80	329.70	0.00	0.00
22	360.42	315.37	384.34	336.30	0.00	0.00
23	367.63	321.68	392.03	343.02	0.00	0.00
24	374.98	328.11	399.87	349.88	0.00	0.00
25	382.48	334.67	407.87	356.88	0.00	0.00
26	390.13	341.37	0.00	0.00	0.00	0.00
27	397.94	348.19	0.00	0.00	0.00	0.00
28	405.90	355.16	0.00	0.00	0.00	0.00
29	414.01	362.26	0.00	0.00	0.00	0.00
30	422.29	369.51	0.00	0.00	0.00	0.00
<b>Total Payments Made</b>						
Incl Downpayment	124,564	114,494	106,266	98,483	90,269	84,486
as % of Housing Cost	2.83	2.60	2.42	2.24	2.05	1.92
without Downpayment	115,764	101,294	97,466	85,283	81,469	71,286
as % of Initial Debt	3.29	3.29	2.77	2.77	2.31	2.31

## Net Present Value @

Actual Rate Used	35,200	30,800	35,200	30,800	35,200	30,800
Market Rate	35,200	30,800	35,200	30,800	35,200	30,800

Table D.2

Stopped Rental Payment Plan  
Schedule of Monthly Payments, by Year

Set 1 — Priced with Land &amp; Adm Cost Subsidies

10/07/95  
PPSTEP.xls

Year		A	B	C	D	E	F
1	1.00	236.92	251.17	253.06	266.62	279.87	292.45
2	1.03	236.92	251.17	253.06	266.62	279.87	292.45
3	1.06	236.92	251.17	253.06	266.62	279.87	292.45
4	1.09	236.92	251.17	253.06	266.62	279.87	292.45
5	1.13	236.92	251.17	253.06	266.62	279.87	292.45
6	1.16	272.46	276.29	291.01	293.28	321.85	321.69
7	1.19	272.46	276.29	291.01	293.28	321.85	321.69
8	1.23	272.46	276.29	291.01	293.28	321.85	321.69
9	1.27	272.46	276.29	291.01	293.28	321.85	321.69
10	1.30	272.46	276.29	291.01	293.28	321.85	321.69
11	1.34	308.00	301.41	328.97	319.94	363.83	350.94
12	1.38	308.00	301.41	328.97	319.94	363.83	350.94
13	1.43	308.00	301.41	328.97	319.94	363.83	350.94
14	1.47	308.00	301.41	328.97	319.94	363.83	350.94
15	1.51	308.00	301.41	328.97	319.94	363.83	350.94
16	1.56	343.54	326.52	366.93	346.60	405.81	380.18
17	1.60	343.54	326.52	366.93	346.60	405.81	380.18
18	1.65	343.54	326.52	366.93	346.60	405.81	380.18
19	1.70	343.54	326.52	366.93	346.60	405.81	380.18
20	1.75	343.54	326.52	366.93	346.60	405.81	380.18
21	1.81	379.07	351.64	404.89	373.27	0.00	0.00
22	1.86	379.07	351.64	404.89	373.27	0.00	0.00
23	1.92	379.07	351.64	404.89	373.27	0.00	0.00
24	1.97	379.07	351.64	404.89	373.27	0.00	0.00
25	2.03	379.07	351.64	404.89	373.27	0.00	0.00
26	2.09	414.61	376.76	0.00	0.00	0.00	0.00
27	2.16	414.61	376.76	0.00	0.00	0.00	0.00
28	2.22	414.61	376.76	0.00	0.00	0.00	0.00
29	2.29	414.61	376.76	0.00	0.00	0.00	0.00
30	2.36	414.61	376.76	0.00	0.00	0.00	0.00
Total Payments Made							
Incl Downpayment		126,076	121,828	107,492	104,783	91,081	89,515
as % of Housing Cost		2.87	2.77	2.44	2.38	2.07	2.03
without Downpayment		117,276	113,028	98,692	95,983	82,281	80,715
as % of Initial Debt		3.33	3.21	2.80	2.73	2.34	2.29

## Net Present Value @

Actual Rate Used	35,200	35,200	35,200	35,200	35,200	35,200
Market Rate	35,200	35,200	35,200	35,200	35,200	35,200

Table D.1

Stepped Rental Payment Plan  
Parameters and Summary

Set 1 ... Priced with Land &amp; Adm Cost Subsidies

10/07/95  
PPSTEP.xls

Line	Item	A	B	C	D	E	F
1	Price of Housing Unit	48,000					
2	Minimum Downpayment						
3	Percent of Cost	20.0%					
4	US Dollars	9,600					
5	Max Payments as % of Income	35.0%					
6	Hypoth Inflation Rate	3.0%					
7							
8	Lease Term (Years)	30	30	25	25	20	20
9	Downpayment as % of Cost	20%	20%	20%	20%	20%	20%
10	Actual Downpayment	9,600	9,600	9,600	9,600	9,600	9,600
11	Cash Grants	0	0	0	0	0	0
12	Unpaid Balance	38,400	38,400	38,400	38,400	38,400	38,400
13							
14	Rental Payments Required (US\$)						
15	Monthly (Net of Coop Fees)	258	274	276	291	305	319
16	Annual (Net of Coop Fees)	3,102	3,288	3,313	3,490	3,664	3,828
17	Suggested Min Monthly Income	738	783	789	831	872	912
18	Coop Fees (% of Cost)						
19	Year	1	1.0%	1.0%	1.0%	1.0%	1.0%
20	Year	5	4.0%	4.0%	4.0%	4.0%	4.0%
21	Coop Fees in Const Prices						
22	Year (\$/Month)	1	40	40	40	40	40
23	Year (\$/Month)	5	160	160	160	160	160
24							
25	Interest Rate						
26	Actual Used		9.0%				
27	Market		9.0%				
28	Step Increase						
29	Years between Step Increases	3.00	5.00	5.00	5.00	5.00	5.00
30	Step Incr, as % of 1st Payment	15.0%	10.0%	15.0%	10.0%	15.0%	10.0%
31							
32	PW Factor						
33	Mortgage Rate	12.381	11.679	11.592	11.002	10.481	10.030
34	Market Rate	12.381	11.679	11.592	11.002	10.481	10.030
35	PW of Payments @						
36	Mortgage Rate	38,400	38,400	38,400	38,400	38,400	38,400
37	Market Rate	38,400	38,400	38,400	38,400	38,400	38,400
38							
39	Interest Subsidies	0	0	0	0	0	0
40	Cash Subsidies	0.000	0.000	0.000	0.000	0.000	0.000
41	Total Subsidies	0	0	0	0	0	0

62

Table D.2

Stepped Rental Payment Plan  
Schedule of Monthly Payments, by Year

Set 1 — Priced with Land & Adm Cost Subsidies

10/07/95  
PPSTEP.xls

Year		A	B	C	D	E	F
1	1.00	258.46	274.01	276.06	290.86	305.31	319.03
2	1.03	258.46	274.01	276.06	290.86	305.31	319.03
3	1.06	258.46	274.01	276.06	290.86	305.31	319.03
4	1.09	258.46	274.01	276.06	290.86	305.31	319.03
5	1.13	258.46	274.01	276.06	290.86	305.31	319.03
6	1.16	297.23	301.41	317.47	319.94	351.11	350.94
7	1.19	297.23	301.41	317.47	319.94	351.11	350.94
8	1.23	297.23	301.41	317.47	319.94	351.11	350.94
9	1.27	297.23	301.41	317.47	319.94	351.11	350.94
10	1.30	297.23	301.41	317.47	319.94	351.11	350.94
11	1.34	336.00	328.81	358.88	349.03	396.90	382.84
12	1.38	336.00	328.81	358.88	349.03	396.90	382.84
13	1.43	336.00	328.81	358.88	349.03	396.90	382.84
14	1.47	336.00	328.81	358.88	349.03	396.90	382.84
15	1.51	336.00	328.81	358.88	349.03	396.90	382.84
16	1.56	374.77	356.21	400.29	378.11	442.70	414.74
17	1.60	374.77	356.21	400.29	378.11	442.70	414.74
18	1.65	374.77	356.21	400.29	378.11	442.70	414.74
19	1.70	374.77	356.21	400.29	378.11	442.70	414.74
20	1.75	374.77	356.21	400.29	378.11	442.70	414.74
21	1.81	413.54	383.61	441.70	407.20	0.00	0.00
22	1.86	413.54	383.61	441.70	407.20	0.00	0.00
23	1.92	413.54	383.61	441.70	407.20	0.00	0.00
24	1.97	413.54	383.61	441.70	407.20	0.00	0.00
25	2.03	413.54	383.61	441.70	407.20	0.00	0.00
26	2.09	452.30	411.01	0.00	0.00	0.00	0.00
27	2.16	452.30	411.01	0.00	0.00	0.00	0.00
28	2.22	452.30	411.01	0.00	0.00	0.00	0.00
29	2.29	452.30	411.01	0.00	0.00	0.00	0.00
30	2.36	452.30	411.01	0.00	0.00	0.00	0.00
<b>Total Payments Made</b>							
Incl Downpayment		137,538	132,903	117,264	114,309	99,361	97,653
as % of Housing Cost		2.87	2.77	2.44	2.38	2.07	2.03
without Downpayment		127,938	123,303	107,664	104,709	89,761	88,053
as % of Initial Debt		3.33	3.21	2.80	2.73	2.34	2.29

Net Present Value @

Actual Rate Used	38,400	38,400	38,400	38,400	38,400	38,400
Market Rate	38,400	38,400	38,400	38,400	38,400	38,400

Attachment F

Fax Describing formula for deriving graduated payment plans developed by Dr. Von Rabenau with additional tables using the unrevised cost of the USAID funded units.

**To:**  
John Wasielewski  
Holiday Inn, Room 1109  
Jerusalem  
Fax: 011-972-3-520 1122 (Holiday Inn)  
Fax: 011-972-3-525 5549 (USAID)  
Tel: 011-972-3-520 1111 (Holiday Inn)  
Tel: 011-972-3-525 5414 (USAID)

**From:**  
Burkhard von Rabenau  
45 East Longview Ave  
Columbus, Ohio 43202  
Tel: 00-1-614-267 0266  
Fax: 00-1-614-267 0131

/projects/westbank/wasiel4

October 7, 1995

Dear John:

Thanks for the info on the consultative group. Thanks also for checking on my spreadsheet calculations. There is always a chance that an error creeps into a formula, and it would not be the first time. However, I always build in a lot of checks and cross-checks to avoid this as best I can. One of the checks is to simply print out all the payments according to the formula, and then take the present value at the 9 percent interest. If it comes to the initial loan amount, the formula and payments are correctly calculated. You will see at the bottom of Table 2 of my various payment plans (A, B, C, D) that the last two numbers confirm this. When one originally sets up the spreadsheet, the two numbers will usually not match, precisely because there is an error somewhere.

Here is my formula for the present worth factor of a graduated payment plan:

$$P(A, r, g, n) = A \frac{1 - \left(\frac{1+g}{1+r}\right)^n}{r-g}$$

where

- $P$  present value of  $n$  payments growing at rate  $g$ , discounted at rate  $r$
- $A$  initial payment at the end of the first year
- $g$  rate of growth in annual payments
- $r$  nominal annual interest rate
- $n$  term of loan (years)

Also, I am attaching two pages on a textbook I wrote (for Nepal, but I am also using it for my students) which derives the formula. Note however, that the stepped payment plan which PHC seems to have adopted since, has yet another formula which is a lot more complicated. Since I probably should document it, I may as well write it up for you. Here it is:

$$P = P_1 + P_2$$

65

where

$$P_1 = A \cdot \frac{(1+r)^{sn} - 1}{r(1+r)^{sn}}$$

$$P_2 = \frac{a}{r(1+r)^n} \left( b - \frac{s-1}{(1+r)^{(s-1)n}} \right)$$

and where

$$b = \frac{(1+\tilde{r})^{s-1} - 1}{\tilde{r}(1+\tilde{r})^{s-1}} (1+\tilde{r})$$

$$\tilde{r} = (1+r)^n - 1$$

with

- $P_1$  Present value of the constant part of the payment plan
- $P_2$  Present value of the step increase every  $n$  years
- $n$  number of years in each period of equal payments
- $s$  number of  $n$ -year periods
- $sn$  term of loan
- $A$  initial payment (during first  $n$  years), in dollars per year
- $a$  size of payment step increase, in dollars per year
- $r$  annual interest rate
- $\tilde{r}$  compound interest rate for  $n$ -year period

You see why I did not want to do the stepped payment plan. It took me quite a while to derive the formulas. However, in all of my plans, including this one, I checked on the spreadsheet, whether the present value of the payments equals the loan. It is, and hence, the payments are correctly calculated. (I can send you my hand-written notes on the derivation of above formulas, if you want them.)

By the way, I sent the stepped plan to Mr. Mohamad Abu Ulaya via e-mail. I divided all my models into portions that are smaller than 100,000 bytes so that I could attach it to my e-mail. This has worked quite well, and I know they have it. Mr. Ulaya's telephone number is 050-386203. I sent the e-mail to a Dr. Amin Tijani who probably is connected to the university at Bir Zeit. His e-mail address is [adijani@birzeit.edu](mailto:adijani@birzeit.edu). With these attachments you can re-calculate the loans to any amount. Meanwhile, I have re-calculated for you the graduated payment plans for \$ 44,000 and \$ 48,000. I am only including the first two pages of each plan, but I could send you the rest of the information if you want it. Is PHC no longer thinking of the stepped payment plan? I am adding the spreadsheets for them.

You mention that you want to inflate your \$ 700. Based on an average inflation rate of about 3 percent, and assuming an effective sale in 1996, this gives you a 9.3 percent boost in the income constraint of your target group, i.e. the new cut-off point is \$764. Several of my plans fall below this amount, including some of the 25 year plans which PHC prefers. However, I have included the 30 year term in the schedules, since I know you may want to use them for the USAID projects, even if PHC does not use them for the EC-financed projects.

I really believe in the auction idea, whether it is a formal or informal auction. This was done for some projects in Egypt (only once!, but it was very successful).

On re-reading your note, I saw that you appear to have access to internet. I believe that I can communicate with it, though I am never very sure. I will be at home all weekend, at 614-267 0266. My e-mail address is vonrabenu.1@osu.edu. It works well, but because we had a storm, somehow my modem is not working right, so I may have to go to the university to pick my e-mail up (if I cannot resolve the problem).

The report is almost done (with my wife reading through it) and I will send it off on Monday. Hope all is well, and give me a call or fax. I am particularly concerned that you should be able to follow the payment calculations, because clearly, they will not be acceptable, if people feel they are not right.

Burkhard

Burkhard.

$$A = PV/Z = 20,000,000/12.46186 = 1,604,897.$$

Hence, the government should charge roughly NR 1.6 million the first year, followed by payments rising about NR 80,000 annually. Hence, the second payment would be NR 1,685,142, the third payment would be NR 1,765,387, etc.

## 6.2 Graduated Geometric Payment Series

An alternative to linear graduation is geometric graduation. In this case payments grow at some rate  $g$  per unit time, see Figure 6.2. There are a number of applications for this. In the case of housing loans, a household may agree to a debt service that rises over time, possibly in line with inflation or growing real household income. In the case of an infrastructure project, demand for project services may be growing, and the project may recover increasing payments over time. In the case of sites and services projects, the decision may be made to sell land at rising real prices.

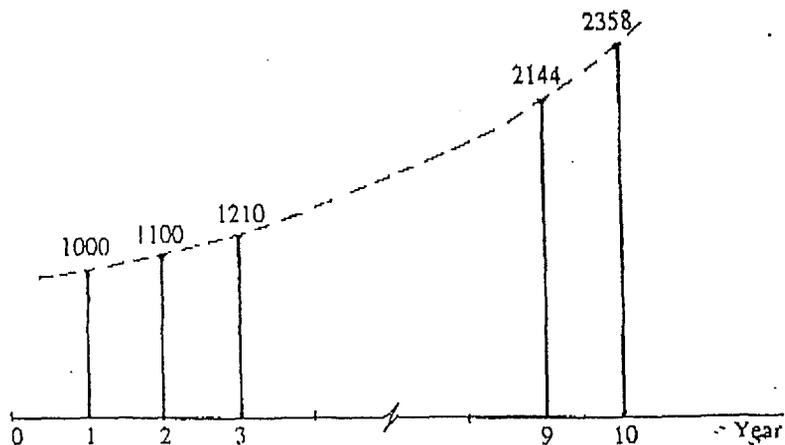


Fig. 6.2 Graduated Geometric Payment Series with  $g = .1$

Consider then a graduated geometric series, where the first payment is NR 1.00, but each subsequent payment exceeds the previous payment at a rate  $g$ . As in the case of the uniform series, the annuity is ordinary in the sense that payments are made at the end of the year. Denote the present value of the series  $(P, A; n, r, g) = b_n$ , then by definition

$$b_n = 1/(1+r) + (1+g)/(1+r)^2 + \dots \\ \dots + (1+g)^{n-2}/(1+r)^{n-1} + (1+g)^{n-1}/(1+r)^n. \quad (6.12)$$

Note that the exponent in the numerator has one less power than in the denominator. The reason is simple. The very first payment is for NR 1.00 and is not graduated, but since it is at the end of the first time period, it is discounted one time period.

To simplify, multiply the entire equation by  $(1+r)$ , so

$$b_n(1+r) = 1 + (1+g)/(1+r) + \dots \\ \dots + [(1+g)/(1+r)]^{n-2} + [(1+g)/(1+r)]^{n-1}, \quad (6.13)$$

then multiply Eq.(6.12) once more, but now by  $(1+g)$ , so

$$b_n(1+g) = (1+g)/(1+r) + [(1+g)/(1+r)]^2 + \dots \\ \dots + [(1+g)/(1+r)]^{n-1} + [(1+g)/(1+r)]^n. \quad (6.14)$$

Subtract Eq.(6.14) from Eq.(6.13) and simplify, to obtain

$$b_n(r-g) = 1 - [(1+g)/(1+r)]^n.$$

Dividing both sides by  $r-g$  yields the present worth factor of a graduated payment series that is discounted at rate  $r$  and grows at rate  $g$ .

$$b_n = \{1 - [(1+g)/(1+r)]^n\}/(r-g) \quad (6.15)$$

Its inverse,  $1/b_n$  is the capital recovery factor of the graduated payment series. It gives the amount that must be paid at the end of the first time period, if the graduated and then discounted payments are to sum to 1.

**Special Case  $r = g$ :** Eq.(6.15) does not have a solution for  $r = g$ , a situation similar to the case when  $r = 0$  in Eq.(5.1) and Eq.(5.4). Observe that when  $r = g$ , then from Eq.(6.13) we can write

$$b_n = \{1+1+1+\dots+1+1\}/(1+r)$$

so that

$$b_n = n/(1+r), \quad \text{if } r = g \quad (6.16)$$

Other extensions are left as an exercise. First, note that the graduated payment series derived in this section includes as a special case the uniform series. Setting  $g=0$  is an exercise asks you to show that the compound amount factor and the capital recovery factor for the uniform series can be derived as a special case from the factors for the graduated series.

Second, it is possible to derive the compound amount and sinking fund factors. Again, this is left as an exercise.

### Problem 6.3:

*A household agrees to a graduated loan repayment schedule. The loan agreement requires (i) payments to rise 6 percent per year; (ii) the interest rate to be 15 percent per year; (iii) the first payment to be NR 2,000 paid at the end of the first year; and (iv) the term of the loan to be 12 years.*

- a) *Determine the amount of the loan.*
- b) *What would the loan be if the payments were uniform, but loan conditions were identical otherwise.*

You mention that you want to inflate your \$ 700. Based on an average inflation rate of about 3 percent, and assuming an effective sale in 1996, this gives you a 9.3 percent boost in the income constraint of your target group, i.e. the new cut-off point is \$764. Several of my plans fall below this amount, including some of the 25 year plans which PHC prefers. However, I have included the 30 year term in the schedules, since I know you may want to use them for the USAID projects, even if PHC does not use them for the EC-financed projects.

I really believe in the auction idea, whether it is a formal or informal auction. This was done for some projects in Egypt (only once, but it was very successful).

On re-reading your note, I saw that you appear to have access to internet. I believe that I can communicate with it, though I am never very sure. I will be at home all weekend, at 614-267 0266. My e-mail address is vonrabenu.1@osu.edu. It works well, but because we had a storm, somehow my modem is not working right, so I may have to go to the university to pick my e-mail up (if I cannot resolve the problem).

The report is almost done (with my wife reading through it) and I will send it off on Monday. Hope all is well, and give me a call or fax. I am particularly concerned that you should be able to follow the payment calculations, because clearly, they will not be acceptable, if people feel they are not right.

*Burkhard*

Burkhard.

Table B.1

Graduated Rental Payment Plan  
Parameters and Summary

Set 1 — Priced with Land & Adm Cost Subsidies

10/07/95  
PPGRAD.xls

Line	Item	A	B	C	D	E	F
1	Price of Housing Unit	48,000					
2	Minimum Downpayment						
3	Percent of Cost	20.0%					
4	US Dollars	9,600					
5	Max Payments as % of Income	35.0%					
6	Graduation Rate	2.0%					
7	Hypothetical Inflation Rate	3.0%					
8							
9	Lease Term (Years)	30	30	25	25	20	20
10	Downpayment as % of Cost	20%	30%	20%	30%	20%	30%
11	Actual Downpayment	9,600	14,400	9,600	14,400	9,600	14,400
12	Cash Grants	0	0	0	0	0	0
13	Unpaid Balance	38,400	33,600	38,400	33,600	38,400	33,600
14							
15	Rental Payments Required (US\$)						
16	Monthly (Net of Coop Fees)	259	227	277	242	305	267
17	Annual (Net of Coop Fees)	3,113	2,724	3,320	2,905	3,658	3,201
18	Suggested Min Monthly Income	741	649	790	692	871	762
19	Coop Fees (% of Cost)						
20	Year	1	1.0%	1.0%	1.0%	1.0%	1.0%
21	Year	5	4.0%	4.0%	4.0%	4.0%	4.0%
22	Coop Fees in Const Prices						
23	Year (\$/Month)	1	40	40	40	40	40
24	Year (\$/Month)	5	160	160	160	160	160
25							
26	Interest Rate						
27	Actual Used		9.0%				
28	Market		9.0%				
29							
30	PW Factor						
31	Mortgage Rate	12.335	12.335	11.568	11.568	10.498	10.498
32	Market Rate	12.335	12.335	11.568	11.568	10.498	10.498
33	PW of Payments @						
34	Mortgage Rate	38,400	33,600	38,400	33,600	38,400	33,600
35	Market Rate	38,400	33,600	38,400	33,600	38,400	33,600
36							
37	Interest Subsidies	0	0	0	0	0	0
38	Cash Subsidies	0.000	0.000	0.000	0.000	0.000	0.000
39	Total Subsidies	0	0	0	0	0	0

71

Table B.2

Graduated Rental Payment Plan  
Schedule of Monthly Payments, by Year

Set 1 — Priced with Land & Adm Cost Subsidies

10/07/95  
PPGRAD.xls

Year	A	B	C	D	E	F
1	259.42	226.99	276.63	242.05	304.82	266.72
2	264.61	231.53	282.16	246.89	310.92	272.05
3	269.90	236.16	287.81	251.83	317.13	277.49
4	275.30	240.88	293.56	256.87	323.48	283.04
5	280.80	245.70	299.43	262.01	329.95	288.70
6	286.42	250.61	305.42	267.25	336.55	294.48
7	292.15	255.63	311.53	272.59	343.28	300.37
8	297.99	260.74	317.76	278.04	350.14	306.37
9	303.95	265.95	324.12	283.60	357.14	312.50
10	310.03	271.27	330.60	289.27	364.29	318.75
11	316.23	276.70	337.21	295.06	371.57	325.13
12	322.55	282.23	343.96	300.96	379.00	331.63
13	329.00	287.88	350.84	306.98	386.58	338.26
14	335.58	293.64	357.85	313.12	394.32	345.03
15	342.29	299.51	365.01	319.38	402.20	351.93
16	349.14	305.50	372.31	325.77	410.25	358.97
17	356.12	311.61	379.76	332.29	418.45	366.15
18	363.25	317.84	387.35	338.93	426.82	373.47
19	370.51	324.20	395.10	345.71	435.36	380.94
20	377.92	330.68	403.00	352.62	444.06	388.56
21	385.48	337.29	411.06	359.68	0.00	0.00
22	393.19	344.04	419.28	366.87	0.00	0.00
23	401.05	350.92	427.67	374.21	0.00	0.00
24	409.07	357.94	436.22	381.69	0.00	0.00
25	417.26	365.10	444.94	389.33	0.00	0.00
26	425.60	372.40	0.00	0.00	0.00	0.00
27	434.11	379.85	0.00	0.00	0.00	0.00
28	442.79	387.45	0.00	0.00	0.00	0.00
29	451.65	395.19	0.00	0.00	0.00	0.00
30	460.68	403.10	0.00	0.00	0.00	0.00
Total Payments Made						
Incl Downpayment	135,888	124,902	115,927	107,436	98,476	92,166
as % of Housing Cost	2.83	2.60	2.42	2.24	2.05	1.92
without Downpayment	126,288	110,502	106,327	93,036	88,876	77,766
as % of Initial Debt	3.29	3.29	2.77	2.77	2.31	2.31

Net Present Value @

Actual Rate Used	38,400	33,600	38,400	33,600	38,400	33,600
Market Rate	38,400	33,600	38,400	33,600	38,400	33,600

Table B.1

Graduated Rental Payment Plan  
Parameters and Summary

Set 1 -- Priced with Land & Adm Cost Subsidies

10/07/95  
PPORAD.xls

Line	Item	A	B	C	D	E	F
1	Price of Housing Unit	44,000					
2	Minimum Downpayment	8,800					
3	Percent of Cost	20.0%					
4	US Dollars						
5	Max Payments as % of Income	35.0%					
6	Graduation Rate	4.0%					
7	Hypothetical Inflation Rate	3.0%					
8							
9	Lease Term (Years)	30	30	25	23	20	20
10	Downpayment as % of Cost	20%	30%	20%	30%	20%	30%
11	Actual Downpayment	8,800	13,200	8,800	13,200	8,800	13,200
12	Cash Grants	0	0	0	0	0	0
13	Unpaid Balance	35,200	30,800	35,200	30,800	35,200	30,800
14							
15	Rental Payments Required (US\$)						
16	Monthly (Net of Coop Fees)	238	208	254	222	279	244
17	Annual (Net of Coop Fees)	2,854	2,497	3,043	2,663	3,353	2,934
18	Suggested Min Monthly Income	679	594	725	634	798	699
19	Coop Fees (% of Cost)						
20	Year						
21	Year	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
22	Coop Fees in Const Prices	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
23	Year (\$/Month)						
24	Year (\$/Month)	37	37	37	37	37	37
25		147	147	147	147	147	147
26	Interest Rate						
27	Actual Used	9.0%					
28	Market	9.0%					
29							
30	PW Factor						
31	Mortgage Rate	12.335	12.335	11.568	11.568	10.498	10.498
32	Market Rate	12.335	12.335	11.568	11.568	10.498	10.498
33	PW of Payments @						
34	Mortgage Rate	35,200	30,800	35,200	30,800	35,200	30,800
35	Market Rate	35,200	30,800	35,200	30,800	35,200	30,800
36							
37	Interest Subsidies	0	0	0	0	0	0
38	Cash Subsidies	0.000	0.000	0.000	0.000	0.000	0.000
39	Total Subsidies	0	0	0	0	0	0

73

Table D.1

Stepped Rental Payment Plan  
Parameters and Summary

Set 1 — Priced with Land & Adm Cost Subsidies

10/07/95  
PPSTEP.xls

Line	Item	A	B	C	D	E	F
1	Price of Housing Unit	44,000					
2	Minimum Downpayment						
3	Percent of Cost	20.0%					
4	US Dollars	8,800					
5	Max Payments as % of Income	33.0%					
6	Hypoth Inflation Rate	3.0%					
7							
8	Lease Term (Years)	30	30	25	25	20	20
9	Downpayment as % of Cost	20%	20%	20%	20%	20%	20%
10	Actual Downpayment	8,800	8,800	8,800	8,800	8,800	8,800
11	Cash Grants	0	0	0	0	0	0
12	Unpaid Balance	35,200	35,200	35,200	35,200	35,200	35,200
13							
14	Rental Payments Required (US\$)						
15	Monthly (Net of Coop Fees)	237	251	253	267	280	292
16	Annual (Net of Coop Fees)	2,843	3,014	3,037	3,199	3,358	3,509
17	Suggested Min Monthly Income	677	718	723	762	800	836
18	Coop Fees (% of Cost)						
19	Year	1	1.0%	1.0%	1.0%	1.0%	1.0%
20	Year	5	4.0%	4.0%	4.0%	4.0%	4.0%
21	Coop Fees in Const Prices						
22	Year (\$/Month)	1	37	37	37	37	37
23	Year (\$/Month)	5	147	147	147	147	147
24							
25	Interest Rate						
26	Actual Used		9.0%				
27	Market		9.0%				
28	Step Increase						
29	Years between Step Increases	5.00	5.00	5.00	5.00	5.00	5.00
30	Strp Incr, as % of 1st Payment	15.0%	10.0%	15.0%	10.0%	15.0%	10.0%
31							
32	PW Factor						
33	Mortgage Rate	12.381	11.679	11.592	11.002	10.481	10.030
34	Market Rate	12.381	11.679	11.592	11.002	10.481	10.030
35	PW of Payments @						
36	Mortgage Rate	35,200	35,200	35,200	35,200	35,200	35,200
37	Market Rate	35,200	35,200	35,200	35,200	35,200	35,200
38							
39	Interest Subsidies	0	0	0	0	0	0
40	Cash Subsidies	0.000	0.000	0.000	0.000	0.000	0.000
41	Total Subsidies	0	0	0	0	0	0

74

Table B.2

Graduated Rental Payment Plan  
Schedule of Monthly Payments, by Year

Set 1 -- Priced with Land &amp; Adm Cost Subsidies

10/07/95  
PPGRAD.xls

Year	A	B	C	D	E	F
1	237.80	208.07	253.58	221.88	279.42	244.49
2	242.55	212.24	258.65	226.32	285.01	249.38
3	247.41	216.48	263.82	230.85	290.71	254.37
4	252.35	220.81	269.10	235.46	296.52	259.46
5	257.40	225.23	274.48	240.17	302.45	264.64
6	262.55	229.73	279.97	244.97	308.50	269.94
7	267.80	234.32	285.57	249.87	314.67	275.34
8	273.16	239.01	291.28	254.87	320.96	280.84
9	278.62	243.79	297.11	259.97	327.38	286.46
10	284.19	248.67	303.05	265.17	333.93	292.19
11	289.88	253.64	309.11	270.47	340.61	298.03
12	295.67	258.71	315.29	275.88	347.42	303.99
13	301.59	263.89	321.60	281.40	354.37	310.07
14	307.62	269.17	328.03	287.03	361.46	316.27
15	313.77	274.55	334.59	292.77	368.69	322.60
16	320.05	280.04	341.28	298.62	376.06	329.05
17	326.45	285.64	348.11	304.60	383.58	335.63
18	332.98	291.35	355.07	310.69	391.25	342.33
19	339.64	297.18	362.17	316.90	399.08	349.19
20	346.43	303.12	369.42	323.24	407.06	356.18
21	353.36	309.19	376.80	329.70	0.00	0.00
22	360.42	315.37	384.34	336.30	0.00	0.00
23	367.63	321.68	392.03	343.02	0.00	0.00
24	374.98	328.11	399.87	349.88	0.00	0.00
25	382.48	334.67	407.87	356.88	0.00	0.00
26	390.13	341.37	0.00	0.00	0.00	0.00
27	397.94	348.19	0.00	0.00	0.00	0.00
28	405.90	355.16	0.00	0.00	0.00	0.00
29	414.01	362.26	0.00	0.00	0.00	0.00
30	422.29	369.51	0.00	0.00	0.00	0.00
<b>Total Payments Made</b>						
Incl Downpayment	124,564	114,494	106,266	98,483	90,269	84,486
as % of Housing Cost	2.83	2.60	2.42	2.24	2.05	1.92
without Downpayment	115,764	101,294	97,466	85,283	81,469	71,286
as % of Initial Debt	3.29	3.29	2.77	2.77	2.31	2.31

## Net Present Value @

Actual Rate Used	35,200	30,800	35,200	30,800	35,200	30,800
Market Rate	35,200	30,800	35,200	30,800	35,200	30,800

15

Table D.2

Stopped Rental Payment Plan  
Schedule of Monthly Payments, by Year

Set 1 — Priced with Land &amp; Adm Cost Subsidies

10/07/95  
PPSTEP.xls

Year		A	B	C	D	E	F
1	1.00	236.92	251.17	253.06	266.62	279.87	292.45
2	1.03	236.92	251.17	253.06	266.62	279.87	292.45
3	1.06	236.92	251.17	253.06	266.62	279.87	292.45
4	1.09	236.92	251.17	253.06	266.62	279.87	292.45
5	1.13	236.92	251.17	253.06	266.62	279.87	292.45
6	1.16	272.46	276.29	291.01	293.28	321.85	321.69
7	1.19	272.46	276.29	291.01	293.28	321.85	321.69
8	1.23	272.46	276.29	291.01	293.28	321.85	321.69
9	1.27	272.46	276.29	291.01	293.28	321.85	321.69
10	1.30	272.46	276.29	291.01	293.28	321.85	321.69
11	1.34	308.00	301.41	328.97	319.94	363.83	350.94
12	1.38	308.00	301.41	328.97	319.94	363.83	350.94
13	1.43	308.00	301.41	328.97	319.94	363.83	350.94
14	1.47	308.00	301.41	328.97	319.94	363.83	350.94
15	1.51	308.00	301.41	328.97	319.94	363.83	350.94
16	1.56	343.54	326.52	366.93	346.60	405.81	380.18
17	1.60	343.54	326.52	366.93	346.60	405.81	380.18
18	1.65	343.54	326.52	366.93	346.60	405.81	380.18
19	1.70	343.54	326.52	366.93	346.60	405.81	380.18
20	1.75	343.54	326.52	366.93	346.60	405.81	380.18
21	1.81	379.07	351.64	404.89	373.27	0.00	0.00
22	1.86	379.07	351.64	404.89	373.27	0.00	0.00
23	1.92	379.07	351.64	404.89	373.27	0.00	0.00
24	1.97	379.07	351.64	404.89	373.27	0.00	0.00
25	2.03	379.07	351.64	404.89	373.27	0.00	0.00
26	2.09	414.61	376.76	0.00	0.00	0.00	0.00
27	2.16	414.61	376.76	0.00	0.00	0.00	0.00
28	2.22	414.61	376.76	0.00	0.00	0.00	0.00
29	2.29	414.61	376.76	0.00	0.00	0.00	0.00
30	2.36	414.61	376.76	0.00	0.00	0.00	0.00
Total Payments Made							
Incl Downpayment		126,076	121,828	107,492	104,783	91,081	89,515
as % of Housing Cost		2.87	2.77	2.44	2.38	2.07	2.03
without Downpayment		117,276	113,028	98,692	95,983	82,281	80,715
as % of Initial Debt		3.33	3.21	2.80	2.73	2.34	2.29

## Net Present Value @

Actual Rate Used	35,200	35,200	35,200	35,200	35,200	35,200
Market Rate	35,200	35,200	35,200	35,200	35,200	35,200

Table D.1

Stepped Rental Payment Plan  
Parameters and Summary

Set 1 ... Priced with Land & Adm Cost Subsidies

10/07/95

PPSTEP.xls

Line	Item	A	B	C	D	E	F
1	Price of Housing Unit	48,000					
2	Minimum Downpayment						
3	Percent of Cost	20.0%					
4	US Dollars	9,600					
5	Max Payments as % of Income	34.0%					
6	Hypoth Inflation Rate	3.0%					
7							
8	Lease Term (Years)	30	30	25	25	20	20
9	Downpayment as % of Cost	20%	20%	20%	20%	20%	20%
10	Actual Downpayment	9,600	9,600	9,600	9,600	9,600	9,600
11	Cash Grants	0	0	0	0	0	0
12	Unpaid Balance	38,400	38,400	38,400	38,400	38,400	38,400
13							
14	Rental Payments Required (US\$)						
15	Monthly (Net of Coop Fees)	258	274	276	291	305	319
16	Annual (Net of Coop Fees)	3,102	3,288	3,313	3,490	3,664	3,828
17	Suggested Min Monthly Income	738	783	789	831	872	912
18	Coop Fees (% of Cost)						
19	Year	1	1	1	1	1	1
20	Year	5	5	5	5	5	5
21	Coop Fees in Const Prices						
22	Year (\$/Month)	1	1	1	1	1	1
23	Year (\$/Month)	3	3	3	3	3	3
24							
25	Interest Rate						
26	Actual Used	9.0%					
27	Market	9.0%					
28	Step Increase						
29	Years between Step Increases	5.00	5.00	5.00	5.00	5.00	5.00
30	Step Incr, as % of 1st Payment	15.0%	10.0%	15.0%	10.0%	15.0%	10.0%
31							
32	PW Factor						
33	Mortgage Rate	12.381	11.679	11.592	11.002	10.481	10.030
34	Market Rate	12.381	11.679	11.592	11.002	10.481	10.030
35	PW of Payments @						
36	Mortgage Rate	38,400	38,400	38,400	38,400	38,400	38,400
37	Market Rate	38,400	38,400	38,400	38,400	38,400	38,400
38							
39	Interest Subsidies	0	0	0	0	0	0
40	Cash Subsidies	0.000	0.000	0.000	0.000	0.000	0.000
41	Total Subsidies	0	0	0	0	0	0

Table D.2

Stepped Rental Payment Plan  
Schedule of Monthly Payments, by Year

Set 1 — Priced with Land & Adm Cost Subsidies

10/07/95  
PPSTEP.xls

Year		A	B	C	D	E	F
1	1.00	258.46	274.01	276.06	290.86	305.31	319.03
2	1.03	258.46	274.01	276.06	290.86	305.31	319.03
3	1.06	258.46	274.01	276.06	290.86	305.31	319.03
4	1.09	258.46	274.01	276.06	290.86	305.31	319.03
5	1.13	258.46	274.01	276.06	290.86	305.31	319.03
6	1.16	297.23	301.41	317.47	319.94	351.11	350.94
7	1.19	297.23	301.41	317.47	319.94	351.11	350.94
8	1.23	297.23	301.41	317.47	319.94	351.11	350.94
9	1.27	297.23	301.41	317.47	319.94	351.11	350.94
10	1.30	297.23	301.41	317.47	319.94	351.11	350.94
11	1.34	336.00	328.81	358.88	349.03	396.90	382.84
12	1.38	336.00	328.81	358.88	349.03	396.90	382.84
13	1.43	336.00	328.81	358.88	349.03	396.90	382.84
14	1.47	336.00	328.81	358.88	349.03	396.90	382.84
15	1.51	336.00	328.81	358.88	349.03	396.90	382.84
16	1.56	374.77	356.21	400.29	378.11	442.70	414.74
17	1.60	374.77	356.21	400.29	378.11	442.70	414.74
18	1.65	374.77	356.21	400.29	378.11	442.70	414.74
19	1.70	374.77	356.21	400.29	378.11	442.70	414.74
20	1.75	374.77	356.21	400.29	378.11	442.70	414.74
21	1.81	413.54	383.61	441.70	407.20	0.00	0.00
22	1.86	413.54	383.61	441.70	407.20	0.00	0.00
23	1.92	413.54	383.61	441.70	407.20	0.00	0.00
24	1.97	413.54	383.61	441.70	407.20	0.00	0.00
25	2.03	413.54	383.61	441.70	407.20	0.00	0.00
26	2.09	452.30	411.01	0.00	0.00	0.00	0.00
27	2.16	452.30	411.01	0.00	0.00	0.00	0.00
28	2.22	452.30	411.01	0.00	0.00	0.00	0.00
29	2.29	452.30	411.01	0.00	0.00	0.00	0.00
30	2.36	452.30	411.01	0.00	0.00	0.00	0.00
Total Payments Made							
Incl Downpayment		137,538	132,903	117,264	114,309	99,361	97,653
as % of Housing Cost		2.87	2.77	2.44	2.38	2.07	2.03
without Downpayment		127,938	123,303	107,664	104,709	89,761	88,053
as % of Initial Debt		3.33	3.21	2.80	2.73	2.34	2.29

Net Present Value @

Actual Rate Used	38,400	38,400	38,400	38,400	38,400	38,400
Market Rate	38,400	38,400	38,400	38,400	38,400	38,400

78

Attachment G

Brief description of Al Karama Towers Project

# AL KARAMA TOWERS

## DESCRIPTION

6 buildings with a total of 192 apartments are being constructed on 22 dunams (approximately 5 acres) at the Al Karama site in Gaza.

The total cost of approximately \$12.5 million includes construction, management, and site works.

A U.S. firm (ABB Susa) and 3 Palestinian firms have been awarded contracts to build the apartment complex. Overall construction management has been contracted to a U.S. firm - Louis Berger International.

## ACCOMPLISHMENTS

- *The apartment construction is expected to be complete by December 1995. Site construction has been affected by border restrictions which limit building supplies. Currently, the project has adequate cement and re-bar, although at higher cost.*
- *While not the primary purpose of the project, there is a modest job creation impact as a result of the construction (estimated at 240 persons per day, employed at various stages of construction). In addition, there is indirect labor generation to Gaza based suppliers of building materials.*
- *The Palestinian Housing Council is gaining valuable experience in planning, construction management, and other areas as a result of involvement in the Project.*
- *USAID will coordinate with the European Union, which is also financing the construction of 220 adjacent apartment units at Al Karama, on property sale arrangements.*

## PROJECT MANAGERS: Louis Berger International Inc. (LBII)

Frank Kowal - Project Manager  
Tasos Velanos - Construction Management Contractor

## CONSTRUCTION CONTRACTORS:

ABB SUSA - American  
El Khoudary - Palestinian  
Ramli - Palestinian