STOCK AND ASSET MANAGEMENT IN PUBLIC HOUSING:

Background Readings From HUD Reports

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Table of Contents

Introduction

This volume contains excerpts from several HUD reports on the topic of stock and asset management in public housing, as well as procedural and methodological information to supplement HUD's recently released report, *Public Housing In A Competitive Market: An Example of How It Would Fare*.[1] The materials are intended to provide background on the above in order to support housing authority professionals who are considering, planning for, or implementing their own stock and asset management assessments.

Background

Shrinking Federal operating and capital subsidies and reduced Federal regulations undoubtedly require modifications in the way affordable housing is provided to low and very-low income households. Among other things, the professionals who manage the Nation's considerable inventory of public housing need, also, to think of themselves as asset managers. Performance will depend both on how well properties are managed *and* on whether continued reinvestment in each property makes good financial sense. Knowing the latter, in particular, requires an expertise and knowledge base that is relatively new to the public housing profession.

To explore the merits of taking an asset management approach to public housing, HUD recently studied how one large public housing authority -- Baltimore -- would fare if it competed in the private housing market.[2] The study involved property-specific financial analyses based on market standards. Determining rents achievable on the open market was a key component. Such rents were based on the desirability of the physical and locational characteristics of each development relative to the market as well as, in some cases, the value to prospective tenants of any associated social services and community facilities. Subsequently, the Baltimore housing authority has found it to their advantage to use much of the data collected for the study for their own stock management purposes. In so doing, they are demonstrating the benefits of having cost and market information, irrespective of policy environment.[3] Moreover, PHA professionals are indicating a growing interest in the issues of stock and asset management.

The Baltimore study was not HUD's first effort to focus on stock and asset management. In 1982, HUD's Office of Policy Development and Research (PD&R) developed an approach for conducting a rigorous, systematic assessment of the public housing stock, development-by-development. The goal was to determine the best future use of each property. "Best" was

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U.S. Department of Housing and Urban Development, April, 1966.

Ibid.

This is as reported by Daniel Henson, Executive Director of the Housing Authority of Baltimore City, and Eric Brown, Deputy Executive Director, at the CLPHA Quarterly Directors' Meeting, June 11, 1996.

defined as balancing the interests of the local authority, the Federal taxpayer, and public housing residents. This approach was then applied to a sample of 556 developments owned by 26 PHAs. An estimate was derived of what the outcomes would likely have been, nationally, if local assessments had been conducted by all PHAs in that year. A final report describing this research was completed but, ultimately, not published.

Following the study, PD&R analysts began to prepare a working paper to give PHAs some ideas for designing their own stock assessments. In addition, an outside contractor, the Real Estate Research Corporation (RERC), was hired to do a reuse/marketability valuation of a small sample of public housing properties and to develop a guidebook to help PHAs carry out or contract for similar market valuations. Because the original study was not published, however, neither the draft working paper nor guidebook were ever fully completed.

Today, there is a broader appreciation of the need for PHAs to do stock assessments and strategic planning. Some are already beginning to apply the market discipline associated with asset management to selected developments. Yet, there is little literature on this topic focused expressly on public housing.

That is why the reports prepared in the early 1980s, which are still valuable and pertinent, are reprinted here as background readings. Included are excerpts from the stock management study and market valuation guidebook, and the entire (uncompleted) draft of the working paper on designing stock management assessments.

The readings are intended primarily as a means of stimulating thought about how to conduct stock assessments. Their value lies more in the basic concepts and framework provided, and less in the specifics -- although many of them remain relevant today. When reviewing these materials, PHA officials should be aware of changes in the law and regulations that have occurred, or are in process of occurring, since the documents were prepared.

In addition to the above documents, this volume includes some materials that supplement the recent Baltimore study. These are also intended to help housing authority professionals think about how to replicate the analysis found in that report.

The four documents included in this volume are briefly described below.

Document 1: Excerpts From HUD's 1982 Stock Management Report

The first document consists of excerpts from Chapters 2 and 3 and Appendix C of HUD's (unpublished) 1982 report entitled, "Improving Public Housing Through Stock Management." The report describes how a rigorous, systematic assessment of the best future uses of each of a housing authority's properties could be reasonably conducted. In addition, it delineates the results of an empirical analysis of the likely outcomes of a stock assessment for the national inventory of public housing, and considers the effects of those outcomes on Federal costs.

The bulk of the report, detailing the empirical analysis, is not relevant in today's setting. The sections that are relevant deal with the nature and concept of stock assessment. They contain an explication of reasons for doing stock assessments, emphasizing the need to assure the effectiveness of investing in modernization and to seek alternatives for chronically troubled or excessively costly developments. As such, the reprinted excerpts provide the conceptual underpinnings for the documents to follow.

Included are: an abstract of the entire study approach; a description of the research design and data collection effort; how estimates of marketability were made; key steps in a stock management analysis; some assumptions required; the range of possible actions that can be taken by a PHA as a result of a stock assessment; and the classification scheme developed in order to group properties by likely outcomes. These materials are reprinted without revision, even though some of the information (such as references to certain laws and regulations) may not be entirely applicable today.

Document 2: HUD's 1983 (Draft) Working Paper On Stock Assessment Procedures

The second document is the complete draft of "A Working Paper on Stock Assessment," originally intended as a companion piece to the stock management report. It was designed to help local PHAs carry out their own systematic, development-by-development reviews. Because the stock management report was not circulated outside of the Department, this paper was never completed. Despite its draft status and date, the paper is still a valuable source book for housing authority officials looking to develop data and procedures for conducting their own stock assessments.

The paper is unique in that it provides an analytic and conceptual framework for making critical decisions about whether to retain, modernize, convert, or retire developments. Topics covered include how to assess: development operating expenses and revenues; tenant characteristics and the impacts of any stock changes on tenants; the physical condition of developments and the costs of making necessary repairs; and neighborhood and site characteristics affecting the viability of developments. In addition, there are useful suggestions on how to: assemble initial development-level information; assess development condition; determine which developments are high cost; and assess tenant impacts resulting from any changes to the stock. For example, the paper indicates how to identify developments that have high costs relative to the cost of an average development or to alternatives like Section 8. (While the paper uses the FMR ceilings for the latter comparison, actual Section 8 costs in any community can be substituted for the FMR in making the comparison.)

Once having provided the reader with the means of identifying high cost developments, the paper then lays out a sequence for determining which action is most appropriate for each development. Some of these actions, like retirement of high-cost developments where residents have access to satisfactory and economical alternatives, are consistent with current HUD policy and pending legislation.

Document 3: Excerpts From HUD's 1983 Market Analysis and Valuation Guidebook

One action a PHA can take, if deemed appropriate, is to retire a property and sell it. If a PHA wishes to consider this option, it needs to determine the best and highest uses and, hence, value of such a property on the open market. The third document consists of excerpts from a market analysis and valuation guidebook prepared by the Real Estate Research Corporation (RERC), under contract to HUD. It is based on their experience, in 1982, in the appraisal and valuation of 20 public housing developments in six diverse PHAs.

The reader is first led through suggestions for the types and sources of information needed to determine possible alternative uses of a property. Potential uses included are: residential rental; condominium conversion; office development; hotel development; and industrial reuse. Three complementary approaches utilized by real estate appraisers for valuation of the property are described: the comparable sales market approach; the replacement cost approach; and the income approach.

Document 4: Materials Supplementing HUD's 1996 Baltimore Study

HUD's recently released report entitled *Public Housing In A Competitive Market: An Example of How It Would Fare* offers a relatively unique perspective for public housing. It describes how the entire public housing inventory of Baltimore, Maryland was comprehensively assessed, development-by-development, as a basis for doing stock and asset management planning. The assessment was a cooperative effort among HUD research analysts, officials of the Housing Authority of Baltimore City, housing researchers from Westat, Inc., and real estate advisors from Robert Charles Lesser & Company. The final document of this volume provides some background methodological material which, together with the methodological endnotes contained in the report itself, may be helpful to housing authority professionals seeking to do similar assessments.

-- DRAFT --
December 1982

Excerpts From:

Improving Public Housing Through Stock Management

Table of Contents

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Chapter 2

THE STUDY APPROACH

Abstract: ..... To assess the best future use of the nation's stock of public housing projects, a large amount of data has been collected for a sample of 556 projects operated by 26 PHAs in 18 states; this sample represents 14 percent of the entire public housing inventory and, although unique in certain respects, can be considered fairly representative of the public housing program. The information includes project-level accounts of expenditures and revenues as well as other tenant, project, and neighborhood characteristics. These data are used to: (1) analyze how and why expenditures for public housing projects vary, both between and within local Authorities; (2) suggest the most appropriate action that might be taken for each of the projects; (3) assess how such actions would affect tenants, PHAs, and Federal costs; and (4) analyze the legal and practical feasibility of undertaking various actions.

In their briefest form, the questions addressed by this research are as follows:

- What is an appropriate method for assessing the current stock of public housing, in order to continue to serve those who depend on the program while controlling costs?

- How and why do public housing expenditures vary from one project to another? What are the implications of these cost variations for the financial condition of PHAs and for the Federal budget?

- Given current Federal policies, what decisions about the future of each public housing project would be consistent with the interests of tenants and PHAs? What numbers and kinds of projects would be candidates for various actions?

- What might be the effects on tenants of carrying out such actions, and what must be done to avoid harmful impacts?

- What would be the effects of these actions on PHA finances and on the Federal budget?

- What is the legal and practical feasibility of carrying out these actions?

Research Approach

To answer these questions, detailed information was collected on the current stock and operating conditions of a diverse group of 26 Public Housing Authorities. This information has been used to conduct a sequence of analyses:

(1) Development of a general method that PHAs could follow to evaluate the public housing stock and develop a strategy for managing that stock wisely.

(2) Analysis of why and how expenditures for public housing projects vary.

(3) Description of a possible strategy to manage the public housing investment.

(4) Assessment of how such a strategy would affect present tenants of public housing.

(5) Estimation of how such a strategy would affect PHA finances and the Federal budget.

(6) Analysis of the legal and practical feasibility of carrying out actions that emerge from a stock management strategy.

The following sections detail the sampling and data collection (field study) procedures used to create the large information base necessary to support such analyses. Subsequent sections briefly describe each of the six steps in the analytical sequence, including the specific questions addressed and the procedures used top answer them.

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The field study. In March, 1982, site visits were made to the 26 PHAs, lasting from three to five days each, by research teams from HUD's Office of Policy Development and Research and Office of Housing. At the same time, information on these PHAs and their projects was assembled from existing files by staff of the Assisted Housing Management branches of HUD Area Offices.

The field visits allowed the research teams to hold structured conversations with the principal staff of each PHA -- including the Executive Director, Finance Director, Occupancy and Tenant Selection Administrator, Chief of Maintenance, and Section 8 Program Administrator. These discussions explored the current operating problems of the PHAs and tapped reactions to various proposals for regulatory and statutory changes in the program. However, the main purpose of these and other data collection efforts was to obtain as much detail as possible about individual projects. For instance, PHA Executive Directors were asked to identify which of their projects had specific problems (e.g., crime, rent delinquency, poor design, inappropriate site, to rate the severity of each problem, and to indicate what actions (ranging

from modernization to sale or retirement) they believed to be appropriate for each project. Discussions were also held with others, including the HUD Area Office Maintenance Engineer (who conducts periodic, on-site physical inspections of all projects), the HUD Area Economist, private sector housing market specialists, public housing tenant organization representatives, legal services attorneys, human services agency staff members, the city's community development director, area housing planners, and others knowledgeable about the local housing market and public housing program.

As a result of the field visits and collection of Area Office file information, an extraordinarily detailed data base was assembled on these 26 PHAs and their 556 projects.[4] Although it is impractical to itemize all of the information here, the major types collected on each project include:

1. Physical characteristics
2. Characteristics of present occupants
3. Occupancy percentage and turnover
4. Physical conditions
5. Repair and replacement needs and dollar estimates
6. Major problem types and severity
7. History of modernization
8. Special management arrangements or actions

Additional data used. Three types of additional data were added to complete the picture of these PHAs and their projects: (1) financial information; (2) estimates of marketability; and (3) neighborhood and area 1980 Census information.

(1) Financial information: PHAs furnished project-level accounts of revenues and expenditures for the most recently completed fiscal year, including spending breakdowns by standard major categories.[5] Such information was available for 531 of the 556 projects, which were in full operation throughout the fiscal year. With the aid of the accounting firm of Coopers and Lybrand, these numbers were carefully examined: (1) to verify expenditures, and not simply a pro-rating of consolidated accounts according to the relative size of each project; and (2) to check for any mathematical or record keeping problems. In Addition, where PHA definitions of "projects," for accounting purposes, different from HUD's project definitions, these discrepancies were identified and reconciled to the extent feasible. In five of the 26 PHAs, most but not all costs and revenues were accounted for on a project-by-project basis; in each of those five PHAs, for one or more revenue or expenditure line items, accounts are kept in "cost centers." (Each

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This number includes 44 New York City projects drawn randomly to represent all of that PHA's projects.

Years differed due to HUD's practice of staggering PHA fiscal years so that some start in each quarter. The fiscal years range from one ending in June, 1980, to one ending in March, 1982. The majority are fiscal years ending in March, June, or September of 1981. All revenue and expenditure figures in this report are adjusted to FY 1981 dollars.

"cost center" contains a small number of projects.) For such PHAs, the study staff gathered whatever additional information about accounting methods, cost variations, and PHA operations was needed to allocate specific revenue or expenditure line items realistically among "projects," as these are defined by HUD. [6] In these PHAs, it was necessary to work with the finance director, maintenance staff, utility engineers, project managers, and others to split cost-center accounts among projects. Although less accurate than project-level accounts, the resulting allocation in all cases provides a reasonable approximation of the relative cost and revenue position of each project when compared to others in or outside its cost center.

The other component of each project's financial information consists of its associated development costs, expenditures for past modernization, as well as the remaining debt and annual debt service payments associated with development and modernization. This information was derived from analysis of Annual Contributions Contracts and records of HUD's Office of Finance and Accounting. Staff of that office assisted in interpreting these files and designing the calculations necessary to separate consolidated financial information into information broken down by individual projects.

These project-level operating revenues, expenses, and debt service data -- not previously assembled for a significant number of projects and PHAs -- were then combined to profile and analyze the financial position of each project, to examine the components of its expenditures, and to see what each project contributes to the PHA's financial position and to Federal expenditures.

(2) Estimates of marketability: Another type of useful information, not previously gathered for a systematic sample of public housing projects, consists of expert estimates of the "marketability" of such projects -- i.e., their rent potential and potential value as real estate. Formal real estate appraisals, when properly conducted, are too costly for a large sample of projects; and they provide more information than is needed for research purposes. However, the expertise of appraisal specialists was found to be useful in estimating what rents public housing projects could command if they were to compete in their local markets.

Initial estimates of market rent potential were obtained for each project during the field visits -- from HUD Area Economists, PHA Section 8 Administrators, and private housing market experts. These estimates were then reviewed in two stages: first, by housing market economists in the research group and, second, by local Area Office multifamily appraisers. In one-half of the PHAs, the averaged set of estimates gathered during the visits was found, at both stages of review, to constitute a reasonable approximation of the market rent potential of each project. In these cases, HUD Area Office appraisers reviewed the numbers and, in a few instances, suggested minor revisions. In the remaining PHAs, it was decided that formal examination of comparable private rental properties by HUD Area Office appraisers was necessary to produce a reliable market-rent estimate for each project. As a result of this work, market-rent estimates were arrived at for the remainder of the 556 projects.

Some PHAs, for internal management purposes, define as "projects" either combinations of, or parts of, what HUD considers to be projects.

While approximate, the market-rent estimates are useful for several research purposes. They indicate each project's attractiveness, in its present condition, relative to the private market -- as represented by local Fair Market Rents for units of the same size. When compared with the rents current residents of the project actually pay, they provide an estimate of the actual value received by tenants per dollar of rent. Also, as a basis for calculating what rental revenue the project could generate as a privately operated property, they provide part of the information needed to estimate each project's sales value as residential real estate.

Aside from these dollar estimates of project market values, opinions were solicited from private sector housing market experts, HUD Area Economists, PHA Executives, and others concerning whether any projects had value for private residential use or non-residential use, or were on potentially valuable sites. Where such projects were identified, additional opinions were solicited until a reliable judgment could be reached as to whether the project or its site had substantial sales value. Although the estimates are not precise, this method was useful in identifying a small number of projects whose sales values for non-residential purposes very likely exceed the amount of the debt still owed for their construction and/or modernization.

(3) Census data: Information from the 1980 Census was used to profile the census tracts in which each of the 556 projects are located. Although the tract is only an approximation of neighborhood boundaries, such data give a rough idea of the current locational characteristics of each project.

In addition, area-wide 1980 Census information was assembled for the localities of the 26 PHAs. This information is useful in analysis of local housing market conditions, as these conditions affect the demand for public housing and the prospects that present public housing tenants could use Section 8 Existing Certificates or similar "housing vouchers" to locate suitable private rental housing.

Steps in the Analysis

The large base of information assembled has many potential applications. Here it has been used, in a six-step series of analyses, to examine the present financial problems of the public housing program and, then, to evaluate the potential consequences and feasibility of residents. The questions to be answered and methods used at each step in the analysis are summarized below.

Step one: developing an approach to stock management. Surprisingly, the idea of a project-by-project assessment of the public housing stock is a relatively new one. This, the first step in this analysis, is to explore and elaborate the idea of a stock management strategy. The kinds of information needed to determine the best action or treatment for, and future use of, each project are identified. Also, the local process by which each project might become a candidate for one or another action is illustrated. This approach is discussed further in Chapter 3.

Step two: analysis of expenditure variation. It has been suggested that a small proportion of all public housing projects may account for the largest part of the current financial problems of some PHAs. However, it is useful to view project-associated expenditures in more than one way. From a PHA standpoint, the difference between a project's operating expenditures and its income (i.e., its operating deficit) indicates its contribution to the PHA's overall balance between expenditures and revenues. From the Federal government's standpoint, a comparison of each project's total associated expenditures (spending for operation plus annual Federal payment to service debt) to the local Fair Market Rent is significant for understanding how a project's costs compare either with the private market or with other Federal housing subsidy approaches such as the Section 8 Existing program.

In step two, then, it is appropriate to look at how and why such measures of cost vary across projects. Among the question addressed are these:

- Do projects with high operating expenditures also typically have high total expenditures (including debt service) or not?
- Are high-cost projects -- by one measure or another -- concentrated in a relatively few PHAs or are they widely dispersed among PHAs?
- What factors are most critical in determining the level of project expenditures?
- What are the typical or average characteristics of high-cost projects and their tenants?
- Can the financial problems of some PHAs be attributed mainly to a small percentage of high-cost projects?

To answer these questions, various measures of projects expenditures are developed and compared. High-cost projects are isolated and profiled in terms of their characteristics and those of their tenants. Results of this analysis and their implications for public housing policy are presented in Chapter 4 of this report.

Step three: illustrating the logic and outcomes of a systematic stock assessment. In the third step of the analysis, the concept of a "stock management strategy" is operationalized and applied to the sample of 26 PHAs, within the limits of the information that can be assembled for a study of this kind.

This step shows what the logic of a systematic review of the public housing stock would be, given the objective of maximizing the availability of standard quality assisted housing in a cost-effective manner, and what actions it would suggest for each project in the 26 PHAs under current Federal policies. Presented in Chapter 5 are the numbers and kinds of projects that would

be plausible candidates for various actions. The set of actions tentatively suggested by such a stock assessment also is the starting point for the next step in the analysis.

Step four: estimating stock management strategies' effects on tenants. If PHAs were to assess their public housing stock and carry out the actions that result from the assessment, what would be the effects on public housing tenants and what can be done to avoid harmful impacts? The answers depend on whether tenants of some projects would need to move out (as in the case of projects that are candidates for sale or retirement) and on how many such tenants can be accommodated in other public housing projects or would be able to find equal or better quality housing in the private market with alternative forms of housing assistance. Thus, in part, PHAs need to evaluate local market conditions to determine whether households of various characteristics, if they were to move from public housing, would be able to find suitable private rental accommodations.

This step of the analysis addresses the question of tenant impacts by examining, on the one hand, the characteristics of tenants who would be affected by any actions suggested by a stock assessment and, on the other hand, the current availability of low-income housing in the metropolitan area of each PHA. Where tenants of a project would not be able to obtain alternative housing of similar or better quality, the tentative outcomes of the analysis in step three are revised accordingly (see Chapter 5), since relocation to other assisted housing resources is not a viable option.

Step five: estimating stock management strategies' effects on PHAs and on Federal finances. If each PHA were to undertake all of the actions suggested by a systematic inventory of its projects, to what extent would this improve its ability to financially support the remaining projects? What would be the savings, if any, to the taxpayer in the form of reduced Federal operating subsidies, outlays for modernization, and future debt service?

The fifth step in the analysis estimates the impact of a strategic approach to stock management on PHA revenues, on the components of PHA and Federal expenditures, and on the PHA's housing stock (see Chapters 6 and 7). For instance, if a project is sold, it is necessary to calculate the cost of rehousing its current tenants, the loss of revenue, any retirement of debt due to sale, the savings in operating expenditures, and so on. If a project is to be retained and modernized, it is necessary to estimate the savings in operating costs due to energy-related improvements, the gain in revenue due to any assumed vacancy reduction, as well as the added Federal expenditure for debt service, resulting from the modernization. The sum of such calculations for each PHA, and then across all 26 PHAs, will reveal the magnitude of the financial impacts that could result from implementing appropriate stock management actions.

Step six: analysis of strategies' legal and practical feasibility. Proposals for change in public housing -- including implementation of a stock management strategy -- may require changes in the statutes governing the program, in Federal regulations, or in the terms of the Annual Contributions Contracts. If such changes are a prerequisite for specific actions, the time involved in obtaining new statutory authority, in developing and adopting new regulations, or in

renegotiating ACC terms, becomes a practical constraint on improving the program. Another set of practical constraints concerns the kinds of information about projects needed for a systematic stock assessment.

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Chapter 3

ASSESSING THE PUBLIC HOUSING STOCK

Abstract: To assess systematically the public housing stock requires not only a variety of specialized information about each individual project but, as well, carefully specified, consistent, and equitable standards for deciding what actions would result in the best future use of each project. This chapter provides a prototype for local stock management assessments, and sets the framework for estimating the probable national outcomes of such assessments; however, it is primarily the people of a given community who can assemble the appropriate information, appreciate the unique circumstances that affect their locale and each project, and take all of this into account when examining the inventory. Implementing the actions suggested by such a stock assessment should result in both an overall improvement in housing quality -- thereby better serving tenant and community interests -- and a more efficient and equitable use of public revenues.

In one sense, both individual PHAs and HUD are continually reviewing the status and future of each public housing project. However, there is a difference between this ongoing review and a systematic assessment of the stock -- whether of one PHA or all PHAs. Such an assessment should apply general criteria to determine the best future use of each project and the actions required for each use. A strategic approach to management of the public housing stock would be an innovation requiring new information and careful specification of the process and standards for deciding what action is most appropriate for each project.

How such an assessment could be conducted and what sort of stock management strategy would result are the topics of this chapter. The concept of a strategic stock assessment is presented in the following sequence: (1) general assumptions; (2) the range of actions or treatments to be considered for each project; (3) the kinds of information needed about projects; and (4) illustrative criteria for classifying projects as candidates for one or more actions.

Assumptions Underlying a Stock Assessment

Four principles serve to guide the development of a systematic approach to strategic management of the public housing stock:

(1) Investment. The existing public housing stock represents an immensely valuable public real estate investment. As with any such investment, it is necessary to evaluate frequently what actions are required for each part of that investment in order to preserve its overall value and to maximize its long-term return -- in this case, to provide satisfactory housing for low-

income people.

(2) Alternatives. Public housing is only one means of providing housing assistance to low-income persons; there are circumstances under which it is not the best means. Accordingly, public housing can be compared with alternatives in order to make the best use of available resources.

(3) Project-level information. Any assessment of the public housing investment ought to consider the future of each project separately. Projects vary greatly -- most obviously, in age and physical characteristics or in types of tenants served but, more importantly, in the quality housing services they deliver and in costs of operation. Detailed information on each project is a prerequisite for an intelligent review of the public housing inventory.

(4) Joint responsibility. The Federal government and local Authorities share responsibility for the present and future condition of public housing. Under the legal terms of the arrangement, neither can impose its will on the other. More positively, both have a great incentive to solve the present problems of public housing. Whether a project-level review is conducted by a PHA on its own or by local Authorities and the Federal government together, successful implementation of actions suggested by such a review can most likely be accomplished by cooperation between PHAs and the Federal government.

Range of Possible Actions

The range of actions which may be taken for any project includes the following:

1. Leave as is: One option is simply to continue operating a project in its current condition as public housing. No immediate capital investment is required to meet the project's major repair and replacement needs.[7]

2. Modernize: Under this option, a project would be retained as public housing but would be rehabilitated, as needed, to meet its major capital repair and replacement needs. Energy-related improvements are assumed to accompany rehabilitation. Modernization would increase the debt and debt service associated with a project bout would reduce future utilities expenditures, relative to what they otherwise would have been if energy-related improvements had not been made.

Projects have been required to meed Federal minimum property standards. These standards are given in Minimum Property Standards for Multi-family Housing (MPS), U.S. Department of Housing and Urban Development (Washington, D.C.: 1979). A 1980 evaluation of the public housing stock estimated that the total capital cost of bringing all public housing up to the MPS level, remedying conditions resulting from deferred maintenance, and preventing major future capital expenditures was $1.5 billion (1980 dollars); this standard for estimating modernization needs is referred to as "Level II." The same study estimated that the total capital cost of making all possible energy-related improvements to public housing was an additional $1 billion. See Perkins and Will, and the Ehernkrantz Group, op. cit. (Note: Since the completion of this report, another survey of modernization is currently underway which should provide more reliable figures on capital improvements for the national inventory.)

3. Modernize and convert occupancy: A third option is to combine needed physical rehabilitation and energy improvements with a change in occupancy. Specifically, some projects appear to be candidates for conversion from family to elderly occupancy, given their design and other considerations.[8]

4. Modernize and take other action: It is likely that some projects will require a combination of actions -- including rehabilitation, possibly a change of occupancy, and perhaps retirement or reconfiguration of some units. This category is intended to allow for combinations of actions uniquely tailored to the problems of particular projects.

5. Sell: In any given year, some public housing projects will naturally reach the end of their useful life as public housing. That is, no combination of actions promises to make their continued operation desirable. One option is to sell these projects, using proceeds of the sale first to retire any outstanding debt on the project. For purposes of this report, it is assumed that such projects would be sold in present condition and unconditionally.[9]

6. Retire: Other projects whose useful life has expired might not be sold immediately. These could either be "mothballed" or torn down, with the land being retained by the PHA. Such action leaves open the possibilities of later reuse or sale of the land and/or buildings.

Hence, a PHA can take a number of possible actions with respect to each of its projects.[10] A consciously integrated set of such actions for all of the projects managed by the Authority would constitute a stock management strategy. Presumably, because the vast majority of projects is viable, they would be retained as public housing after taking steps that most likely would extend their useful lives and enhance their habitability. A small number of projects might be sold or retired because it is not in the tenants' interest nor the public interest that they continue as public housing.

Why has such a strategic approach to stock management not been a feature of the public housing program to date? Two major obstacles are (1) the lack of necessary information about each project; and (2) the absence of clear criteria for deciding on the action most appropriate for each project.

Although the opposite case (conversion from elderly to family occupancy) is also a possibility, there is no evidence to suggest that it represents a practical or desirable option for any significant number of projects.

Sale of a project, or individual units, to their present tenants, or to other residents of public housing, may be a suboption here or a separate option, and is discussed in Chapter 5.

If Federal policies permitted, PHAs might also have the option to raise or lower the rent in each project. NAHRO has proposed giving PHAs this flexibility. In that case, the additional option of changing rents charged to tenants could be combined with actions one through four.

Information Needed for Stock Assessment

To conduct a systematic stock assessment, it is essential to have two kinds of information that most PHAs do not routinely maintain in precise form: (1) what it costs them to operate each project; and (2) what each project's value would be on the private market.

These two kinds of information, when combined with a knowledge of the project's physical condition and characteristics, occupancy, and location-related characteristics, would enable the PHA to decide what set of treatments or actions for its entire inventory would best enable it to control costs while meeting tenants' housing needs. Finally, this information, plus calculation of the outstanding debt and annual debt service associated with each project, would allow for an assessment of Federal costs -- for example, whether it is better to encourage a PHA to modernize and retain a high-cost project or, instead, to retire the project and provide alternative housing assistance to its present tenants.

Most PHAs now use consolidated accounting systems, which do not allow them to measure easily or precisely how and why operating costs vary among projects. Aside from its value as a management tool,[11] project-based accounting of revenues and expenditures is a prerequisite for determining how each project affects a PHA's overall financial position. For instance, under the current Performance Funding System for allocating operating subsidies, any project whose non-utility expenditures exceed the PHA's average for units of that type is generating a Federal operating subsidy smaller than its operating deficit. Other considerations aside, a PHA has a financial incentive to take some action that would change this project's financial balance -- perhaps making improvements to lower operating expenditures or, in extreme cases, possibly selling or retiring the project. Obviously, more information would be required to decide on the best action for a specific project in this category. However, the capacity to measure each project's costs of operation is a minimum condition for conducting a systematic stock assessment.

PHAs have no reason ordinarily to know what rents their units could command on the private market. Such a hypothetical number is useful, however, in classifying a PHA's projects. Any project that could attract occupants and remain full at rents high enough to cover its operating expenditures and debt service would have sales value as private rental housing. This may be useful information if a PHA is contemplating sale as one option for some of its projects. On the other hand, a very low estimated market rental value, relative to the Fair Market Rent, indicates that a project is not as desirable as most others; this is one way of indicating which projects, in their present condition, are not adequately meeting the program's primary goal -- to provide decent, safe, sanitary low-income housing. Something less than a formal real estate appraisal would probably be sufficient to estimate the market rental value of each project in a PHA.

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[11] See Appendix B for a more detailed discussion of project-based budgeting.

If a formal stock assessment were to be conducted on a national scale, then some means would have to be found to produce the two essential types of information now lacking in most places. The next step would be to develop reasonable criteria, using this and other information, to identify the most desirable action or treatment for each project.

The Steps in a Stock Assessment

The above discussion begins to show how information about each public housing project can be used by PHAs to classify projects as candidates for one action or another. Such a process can be broken down into the following sequence:

(1) Classification of projects in terms of different cost criteria that reflect the different financial incentives of PHAs and the Federal government;

(2) Preliminary identification of projects as candidates for specific actions, based on both projects' costs and their other characteristics; and,

(3) Modification of these candidacy decisions in cases where adverse impacts on current public housing tenants seem likely, based upon examination of local housing market conditions and the net effect of other actions on the availability of public housing units.

This sequence is explained in more detail below.

1. Classification by cost criteria. The analysis of variations in project expenditures is more complex than it might first appear to be. Chapter 4 of this report is devoted to looking at various specifications of cost and how these vary among projects, both within and across PHAs. From a Federal standpoint, a high-cost project is one whose combined Federally paid operating subsidy and debt service is high. There are circumstances where cost savings could be realized if a project were sold or retired and alternative forms of housing assistance were provided to its tenants. From a PHA standpoint, a high-cost project is more likely to be defined as one which generates higher expenditures than others relative to its associated revenue (including the Federal operating subsidy). While some projects may be high cost from both local and Federal government perspectives, the extent of overlap matters greatly. To the extent that PHA and Federal financial incentives do not coincide, it may be more difficult to reach agreement on a general stock management strategy or on appropriate actions for specific projects.

2. Preliminary treatment decisions. The next step in a systematic stock assessment makes use of other information about projects to reach tentative judgments about what actions would lead to their best future use. Regardless of cost, nationally (but not necessarily in each PHA) there is likely to be a small group of projects with multiple, hard-to-remedy problems. For instance, some projects may be located on sites that are now ill-suited for residential use. Depending on cost and other considerations, it may be wiser to sell or retire these projects than to invest in their modernization and continued operation. Among the remaining projects, those in

relatively good physical condition and otherwise fulfilling their intended role as public housing will require no special treatment -- i.e., can be left as is. Others will require some degree of modernization. Some also may be ill-designed for their present occupants and, thus, be possible candidates for conversion to elderly occupancy or for major physical alternations.

Once a PHA reaches preliminary judgments about what actions to take for each project, the effects of such actions on tenants would need to be evaluated.

3. Assessing effects on tenants. This report assumes a continuing commitment to provide housing for present tenants of the Public Housing Authority. Anyone occupying a unit that a PHA decides to sell or retire would need to be provided with other public housing or an alternative form of housing assistance. If, for instance, larger families could not easily use a rental certificate or voucher to find accommodations in the private housing market, then a preliminary decision to close a project which housed larger families would have to be reversed. Or, if the conversion to elderly occupancy of units which housed families would create a local shortage of apartments for low-income families, then such a step would not be taken.

For each PHA, the product of a three-stage stock review would be a strategy for its entire inventory of projects. As described above, this strategy is designed to be consistent with the interests of tenants and with local and Federal financial incentives. It is also designed to assure that the largest possible number of public housing units remains viable, while substituting other methods of subsidy for projects that have reached the end of their useful lives as public housing.

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APPENDIX C

METHODS USED TO ESTIMATE THE POTENTIAL EFFECTS OF IMPLEMENTING THE STOCK MANAGEMENT PLAN

Abstract: This appendix provides a technical discussion of the methods used in the study to assess the potential financial effects of implementing the stock outcomes described in Chapter 5. The discussion is organized into six sections, each of which describes the procedures used to estimate: (1) annual operating costs; (2) annual operating revenues; (3) annual operating subsidies; (4) voucher costs for those tenants who would no longer reside in public housing due to sale, retirement or conversion from family to elderly occupancy; and (5) the debt service payments for modernization and development costs.

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Estimating PHA Annual Operating Costs

This section describes the methods used to estimate potential changes in PHA operating costs resulting from implementation of various stock management options. As described in Chapter 5, these options include: (1)retention as is; (2) modernization; (3) conversion to elderly use (with modernization) and partial demolition of some units or buildings; (5) sale of the project to private owners; and retirement from use as public housing.

Retain as Is. For projects considered suitable to remain as is, it was assumed that: (1) they are in good or excellent condition and do not require extensive modernization or energy-related improvements; (2) the tenant composition will remain the same so that rental revenues can be expected to be stable; and (3) the vacancy rate will not change (it is, on average, low). Therefore, such projects should continue to experience the same level of operating costs.[12]

Modernization. The estimation of the effects on operating costs of modernizing a project begins with estimating the costs if the project were left as is (here assumed to be the level of operating costs in FY 1981). These costs were then adjusted because modernizing a project is likely to increase the number of habitable units. This increased occupancy would generate more revenues and greater operating costs than a project with more vacancies. Operationally, the number of new occupied units resulting from modernization must be calculated and the additional costs of operating them estimated. Based on the opinions of PHA officials, it was assumed that operating costs for vacant units would be one-half of the costs of operating an

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In this analysis, the PHA-provided operating cost figures for FY 1981 are the base. For any project to remain as is, it was assumed that operating costs would be equal to these 1981 figures. Obviously, its 1982 costs would be higher simply due to inflation alone.

occupied unit. Thus, the effect of modernization would be additional operating costs for those units previously y vacant, which become occupied.[13]

While modernization may increase operating costs due to additional occupied units, energy-related improvements should decrease utility outlays. The potential decrease in utility costs was estimated by adopting the methodology suggested by Perkins and Will in a study of modernization completed under contract for HUD.[14]

Conversion to Elderly Use. The operating cost effects of this stock change are composed of exactly the same three components as discussed under "modernization" -- (1) the starting "as is position, (2) the increase in costs associated with adding habitable units, and (3) the decrease in costs associated with the effects of energy-related modernization[15] -- plus an additional modification. The data collected for this study suggest that, in general, units occupied by elderly households generate lower operating costs than units occupied by families, although the differences vary significantly among PHA's. It is assumed, therefore, that if a family unit is occupied by an elderly household after conversion, this unit will be less costly to operate, ceteris paribus. For this reason, the average difference in costs between all elderly and all family units was calculated for each PHA separately and was used in estimating operating costs after conversion. The new result was a lower total operating cost than would be the case if the project was modernized but retained it same occupancy.

Modernization Combination. The effects on operating costs of this stock treatment were calculated in the same way as if the project only being modernized, with one modification. It was assumed that unoccupied units in the would be retired; only the occupied units would be modernized with the associated cost savings. Therefore, for the small number of projects slated for this type of action, operating costs would decline because of fewer units after demolition. It was also assumed that tenant composition would remain the same. In assessing the potential financial effects of this stock treatment, it was necessary to make some assumption about the most common set of actions involved in this "residual category" of stock changes. Given the

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The expected number of additional occupied units depends on a combination of the pre-modernization vacancy rate and an evaluation of the physical and social environment of a project. For all projects considered candidates for modernization which were considered to have few external problems, such as vandalism, other crime, a poor location, etc, and which were less than fully occupied (full occupancy being 97 percent of available units), the number of units added was the figure needed to achieve full occupancy. The same calculation was made for those projects with many external problems but for which the vacancy rate was equal to or less than 6 percent.

For projects with severe external problems and for which the vacancy rate was greater than 6 percent, it was assumed that the number of vacancies would only be reduced by one-half since even modernization would not completely alleviate the disincentives of living there caused by the neighborhood problems. Thus, the number of additional occupied units was equivalent to that figure which would reduce the existing vacancy rate by one-half. For all other projects not falling into the above categories, it was assumed that now new occupied units would be created as a result of modernizing the project.

See Chapter 5, p. 62 for a brief discussion of this study.

Two assumptions were made with regard to potential energy saving: 25% and 50% of the estimated maximums in the Perkens and Will study.

characteristics of these projects, in most cases, it was assumed that partial demolition would be appropriate. Therefore, to assess the financial effects of this type of stock action, the loss of some financial effects of this type of stock action, the loss of some units was always assumed; the number which would be lost was assumed to equal the number of currently unoccupied units in the projects. (Most of these projects had substantial vacancies in one or more buildings).

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-- DRAFT --
May 1983

A Working Paper on Stock Assessment

Table of Contents

I. INTRODUCTION

The benefits of the public housing program for low-income households are generally acknowledged. In many places, public housing represents a large proportion of decent, affordable shelter for the poor and, for some families and elderly persons, it is the housing of last resort. At the same time, concern has been expressed over the condition of the public housing stock -- some of which has been identified as "troubled" and particularly expensive to operate and repair.

Public housing projects vary considerably. Some are in very good condition. Some are now over forty years old, and many of these have a backlog of maintenance and modernization needs, including a need for greater energy efficiency. Not uncommonly, in larger cities, neighborhoods in which older projects are located have deteriorated seriously. In addition, households served are of relatively lower income than in the early years of the program and, under legislated rent formulas and eligibility limitations, rents as a proportion of expenses have fallen steadily, leaving little margin for needed improvements. A few projects are troubled by multiple, hard to solve problems such as unsuitable locations, crime and vandalism; others are poorly designed or constructed, all of which may threaten the viability of the remaining public housing stock.

This working paper has been prepared to suggest ways in which a PHA can review the conditions of its housing stock in a systematic fashion and on a project-by-project basis, to help to find possible remedies and alternatives where problems are uncovered. The objectives of such a stock assessment are to maintain the viable public housing stock in good condition, serve tenants in the most suitable and efficient way, assure the effectiveness of any future investment in modernization, and seek alternatives for chronically troubled or excessively costly projects.

There are several underlying motivations for a systematic stock assessment and the management decisions flowing from such an assessment. One is that the public housing stock represents a valuable public investment deserving of efforts to preserve its value and maximize its benefits to tenants and the public. At the same time, the cost of individual public housing projects should be reasonable compared with that of alternative housing assistance programs and compared with that of other similar projects. Furthermore, the decision to invest in modernization of a project should be based upon the prospect of its viability for continued use as public housing at a reasonable cost. It is in the interests of the tenants, government, and the general public that the program be managed in the most cost-effective manner.

With these objectives in mind, a strategy for conducting a stock assessment is intended to determine the best future use of every project and the appropriate actions to be taken to achieve that use. For the purposes of this discussion, the major stock alternatives considered are: to leave the project as-is, i.e., to continue its operation as public housing without immediate capital investment in improvements (it is anticipated that most projects fall into this

category and the next); to modernize the project and retain it as public housing; to modernize and convert occupancy, e.g. from family to elderly occupants; to sell a project to a private owner or to its tenants for residential or other uses; to retire a project for future sale or to demolish it; or to employ a combination of the above stock treatments. Examples of the types of projects that might fall into the various alternative categories are presented in Exhibit l, on p. 5 of this paper.

The strategy presented here represents a conceptual framework for decision-making. At the same time, a methodology for performing the various steps in a project-by-project assessment is spelled out. It focuses on the project-level information needed and the criteria used -- including cost, physical condition, and other considerations -- to select the best and most cost-effective option, project-by-project, recognizing that a range of conditions, resources, and alternatives exist at the local level.

It should not be assumed that appropriate stock assessment decisions can automatically be translated into effective stock management decisions. Implementation of many of the decisions about stock alternatives may be circumscribed by HUD regulations and under current regulations PHAs cannot take actions unilaterally with respect to them. Moreover, it is assumed that actions would not or could not be taken that would displace tenants unless suitable alternative housing and needed housing assistance are available.

Data from a 1982 internal HUD analysis of a national sample of PHAs suggest that nearly all PHAs would benefit financially if a systematic stock assessment were to be carried out. Some local authorities might have somewhat less income as a result of certain actions -- such as sale or retirement -- (because both operating subsidies and rental revenues would decline), but their operating expenses would decrease even more. A decline in operating costs could result from: the utility savings from energy-related modernization; reduced maintenance costs resulting from comprehensive modernization; or the sale or retirement of high-cost projects. The analysis also indicates that, while almost all PHAs would benefit financially from such actions, those authorities now in the worst financial shape would tend to benefit the most.

Undertaking a systematic stock assessment requires a substantial amount of information about each project in a PHA's inventory, including information on costs, tenant characteristics, building conditions, and neighborhood quality. Information on the local housing market, including demand and supply trends, would also be useful. Hence, the following chapter contains a discussion and examples of the types of information that should prove useful for performing and documenting a stock assessment, as well as for deciding upon alternatives, estimating the cost of alternatives, and evaluating impacts on tenants.

The third chapter describes the sequence of decision-making and the use of the criteria developed for each major alternative-use decision. It also discusses briefly some of the related decisions required by particular choices. The fourth chapter touches briefly on some of the considerations that would be involved in the eventual implementation of preferred choices. A

detailed discussion of market analysis and valuation for sale is presented in a separate appendix, followed by a brief bibliography.

Exhibit 1
Illustrations of Types of Projects and Major Stock Alternatives

1. **Leave-as-is.** Projects to be retained as-is are considered in good physical condition, having appropriate designs and locations, and are seen as viable projects in the long-term. Usually their costs are relatively reasonable, or, if their costs are high, they are viewed by the PHA as among their most "successful" projects.

2. **Modernize.** Projects likely to be modernized are not in good physical condition or have excessively high utility outlays but are basically suitable for continued use for the type of occupancy for which they are used currently. Modernization is expected to ensure their future viability.

3. **Modernize and convert.** Projects that might be converted combine modernization needs with a change in occupancy. Specifically, some projects appear to be candidates for conversion from family to elderly occupancy, given their design, density, location, etc. Conversion from elderly to family use is also a possibility but is not expected to be as likely an option for a significant number of projects.

4. **Sale.** Candidates for sale would be excessively high cost and/or troubled projects, whose problems cannot be corrected by modernization or conversion or a combination of alternatives, that can command prices sufficient to make this alternative worthy of consideration. In some cases, untroubled projects may also command relatively high prices for alternative uses, or may be likely candidates for sale to existing tenants.

5. **Retirement.** Projects that are likely candidates for demolition or mothballing are relatively high cost, multi-problem projects, with structures or sites generally not conducive to alternative uses, and cannot be operated efficiently or sold for enough at present to make sale attractive.

6. **Combinations of alternatives.** Larger high cost or problem projects, or large projects with different types of structures, may be suitable for a combination of any or all of the above alternatives applied to the various structures and/or parts of the site.

II. INFORMATION NEEDS FOR STOCK ASSESSMENT

Introduction

A comprehensive stock assessment depends upon the availability of project-level information. This chapter: reviews the project-level information already available to a PHA; considers what additional project-level information is pertinent to performing a systematic stock assessment; and suggests how a PHA could go about collecting that information. The extent and quality of this information is likely to vary greatly among PHAs and, for some, it may take a special effort to assemble appropriate information. However, the result will be an information base that is useful for day-to-day management purposes as well as for determining the most effective long-term strategy for each project.

Cost and condition information are initially useful for addressing the issue of long-term project viability. Financial information is important for distinguishing between those projects that are the most expensive to operate and maintain, and those whose costs are relatively "reasonable", based on the average costs for the PHA. Several different cost comparisons are suggested. Within this financial context, project operating expenses and revenues, the costs of necessary project repairs, the outstanding indebtedness of each project, and the costs of alternative housing assistance payments may all be relevant for particular stock decisions. In addition, long-term viability may require further capital investments; determining whether additional funding is efficient in the long run is an integral part of the financial analysis. The necessary financial information and measures for making these cost estimates are presented, and the specific components that would be included for calculating the costs of each stock decision are listed.

Of equal importance, long-term viability assessments would employ project-level information describing the physical condition, site and design, and the living environment and location of each project. These factors are examined as they relate to the relative viability of each project. This chapter concludes with a section discussing which stock decisions may result in tenant displacement, and methods for assessing whether sufficient alternative housing units can be found for successfully relocating the affected tenants.

For large PHAs where no systematic effort has been made to collect information on individual projects, the PHA may wish to perform a selective stock assessment, rather than devote the resources that would be necessary to implement a full-scale assessment of all of its projects. Very small PHAs may wish to conduct an abbreviated stock assessment; one that requires less detail and/or fewer steps. The less project-level information available, the more uncertain a PHA may be regarding the relative efficiency and viability of individual projects, and the more useful it will be to undertake a stock assessment.

PHA Staff Discussions

One way to begin assessing the public housing stock is by holding informal discussions and meetings with the staff responsible for its daily operation and management. The purpose of these discussions would be twofold. First, it is important to identify the baseline information a PHA already has for each project. Second, such discussions provide an opportunity for project managers, the PHA administrator, and other PHA staff members to discuss openly various problems, exchange ideas, and decide collectively how to proceed with a stock assessment.

Among the factors and related questions that could be addressed for each project in the course of such meetings are the amount of information available on:

- **Operating Expenditures:** What are the costs of utilities and ordinary maintenance for each project? Are there any projects that are draining PHA resources? What is the staff's intuitive feeling about project-level expenditures? Can differences be explained? How do each project's costs compare to Section 8 Existing cost standards?

- **Operating Revenues**: What is each project's yearly income? Other than rent, what other sources of income does each project have? Is rent collection a problem? Are vacancy rates high? Can any estimates be made of the ratio of operating expenses to operating revenues on a project-level basis? Which projects require the highest subsidies? Why?

- **Tenant Characteristics:** What proportion of each project is family versus elderly? What is the average adjusted income of tenants in each project? Is there a concentration of very low (high) income tenants in any one project? Are the current tenants satisfied with their housing units?

- **Physical Condition**: What is the condition of each project? What capital improvements are needed for each? Which projects have received modernization? Is ordinary maintenance uniformly satisfactory? To what extent are vacancies due to construction problems or to lack of sufficient maintenance or modernization funds?

- **Neighborhood/Site**: Are crime, vandalism, etc. causing problems? Is each project located on a site that remains suitable for residential, public housing use? What conveniences and amenities are offered on site or in the immediate neighborhood of

each project (for instance, is there enough parking or adequate play space for children)?

- **Management and Administration:** How centralized/de-centralized is project management? Does the PHA's size or organizational structure preclude the top staff from knowing very much about any one particular project? How much effort would be needed to adopt a more project-level orientation toward information gathering and monitoring? Does administrative and managerial capacity vary greatly within the PHA? Are tenants effectively involved in the governance of the PHA and individual projects?

- **Management and Administration**: Would relocation into other public housing units be practical for tenants displaced through the implementation of various stock management decisions? What is the availability of Sect. 8 certificates? What is available in the private rental market for low-income households? Where are these units located and what is their condition, and size?

- **Other Impacts**: How do local elected officials regard the public housing program? Does the program have community support? Will tenants support the PHA's stock management decisions? Have there been significant changes in the neighborhoods, economy, or population that have altered the program, or the health and safety of particular projects? How are future trends expected to change public housing needs?

Assessing Initial Project-Level Information

The purpose of the initial PHA discussions is to uncover what is already known about each project. The type, breadth, and reliability of the information exchanged in the PHA discussion is likely to vary greatly for each type of information, and among the projects within a PHA. The availability of project-level information may be a function of the number of projects each PHA manages. Certain types of project-level information can be quantified. Other factors may be assessed only subjectively. Beyond identifying where there are information gaps, a PHA should address the quality of the quantifiable data, and whether there is a consensus among staff members with respect to the subjective project-level information. Poor information or a lack of consensus would indicate that further information gathering is appropriate.

Where project-level information is poor, questions may remain regarding the causes of deteriorated physical condition of the stock, wide differences in operating costs, inadequate

housing quality for the targeted population, and the existence of "troubled" projects. Solutions can be designed after examining the characteristics that separate "successful" projects from all others, and such solutions would aim to correct the deficiencies in a systematic fashion to achieve a more balanced public housing operation.

The initial information assessment may serve to strengthen or weaken any preliminary choices the PHA may have already made to maximize the future viability of its projects.[16] Even if no prior consideration has been given to alternative stock treatments (some would argue, especially if this were so), a significant gap in project-level information would hinder a PHA's ability to make sound future project-level decisions. Gaining better project-level information through a comprehensive information-gathering effort may serve to broaden the scope of thinking about the public housing choices available to PHAs in the years to come.

A full-scale assessment (all projects) would allow for the optimal amount of information to use for decision making. Yet, it may be impractical for many PHAs -- particularly those that are the largest. A partial assessment that focused only on those projects that are the most costly to operate, that have the greatest physical and social problems, and/or that have the greatest potential for sale, retirement, or conversion, is one way of narrowing the choice of projects to include in a stock assessment. However, the best future use of individual projects may not be known with certainty until a comprehensive stock assessment is initiated, especially where no project-level information already exists. Differences in PHA size and location, low-income housing markets, past experiences with various stock alternatives, PHA capacity, HUD policy, and local factors all contribute to the evolution of the varied conditions and problems faced by individual PHAs.

The next section will discuss how to go about collecting the necessary project-level information for those projects a PHA chooses to include in a comprehensive stock assessment, in order to make the best decisions on how each project could be treated. The amount of effort that will be required depends upon the extent and reliability of the information each PHA already has, its accounting system, and how each PHA is organized managerially. However, gathering project-level information on expenditures, revenues, outstanding indebtedness, and comprehensive modernization estimates will enable PHAs to develop financial profiles of each project within its inventory. These can be used for distinguishing those projects that are the most costly to operate, and identifying the particular budget items that contribute to a project's high-cost designation. In addition, a project's total annual expenditures (operating expenses plus debt payment) can be measured against the costs of providing alternative housing assistance, for a relative sense of how public housing projects compare to low-income housing in the private market. Both of these measures will address the issue of long-term viability as

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Even if a PHA had not considered alternative stock treatments other than maintaining all projects within the public housing inventory as they operate currently, a stock assessment would still be beneficial, if only to make better choices for allocating future modernization funds and assessing modernization needs and priorities. If alternative treatments have been suggested or proposed by a PHA for some projects, these projects would be obvious candidates to include in the assessment, particularly for the purpose of formulating the most defensible treatment decisions in light of the required subsequent HUD approvals. "Troubled" or "problem" projects would also merit the attention the proposed stock assessment process would provide.

well as indicate target areas where improved managerial solutions may be devised to correct high-cost budget items.

PHAs without existing project-level financial information will need to set up systems for attributing important cost items to individual projects if they are to perform a stock assessment. For those PHAs that currently estimate project costs by the pro-ration method of cost accounting, it is advisable to recalculate the recommended information to reflect actual project expenditures, as explained below.

Because many seasonal factors, such as the variation associated with utility expenses or routine maintenance levels, affect project operating costs, it is advisable to use an entire year as the base period for collecting project information. If only one or two month's costs are used, none of the cost variations that result from seasonal changes and other exogenous factors will be captured.

Determining High-Cost Projects

The first way to identify high-cost projects is to calculate each project's operating expenses.[17] By comparing project-level operating expenses broken down by individual budget items to PHA-wide averages for each operating expenditure item, it is possible to determine which projects are the most costly to operate and, within those projects, to identify the particular cost items that account for high project costs. Exhibit 2, suggests a way of charting the important financial information listed throughout this chapter for use in making project-to-project comparisons, and in measuring each project's financial profile against the corresponding PHA-wide profile. Those projects whose operating costs are substantially higher than the PHA average can be readily identified and thus classified as "high-cost", with respect to operating expenses.

For the purpose of a stock assessment, it will be necessary to break down operating expenditures into the major categories of utilities and non-utilities. Within the non-utility category, the following budget items will also be useful for making project-by-project stock-use decisions. They are:

For the purposes of a stock assessment, the unit of measurement to be calculated for comparing project cost information is the Per Unit Month (PUM) figure. PUM measurements involve calculating the number of unit months available in a project (the total number of units in a project multiplied by 12), and dividing the cost and revenue data for the project by that figure. This results in an average measure of how much each unit in a project costs to operate, and permits project-to-project comparisons. However, in projects with high vacancy rates, PUM measurements may be more accurate if the number of occupied (rather than available) units are used in PUM calculations. PHA averages would be calculated on a PUM basis using the figures reported on the HUD-52599, "Statement of Operating Receipts and Expenditures," for the fiscal year corresponding to the time-frame in which the project-level information is collected.

Exhibit 2: Financial Information (PUM)

INFORMATION ELEMENTS	PROJECT ONE	PROJECT TWO	PROJECT THREE	PHA Avg. in $PUM
I. OPERATING EXPENSES:				
a. UTILITIES				
b. ORDINARY MAINTENANCE				
c. ADMINISTRATION				
d. GENERAL				
e. TENANT SERVICES				
f. PROTECTIVE SERVICES				
g. NON-ROUTINE MAINTENANCE				
h. CAPITAL EXPENDITURES				
i. TOTAL				
II. OPERATING REVENUES:				
a. DWELLING				
b. NON-DWELLING				
c. TOTAL				
III. OPERATING DEFICIT:				
(I.-II .)				
IV. DEBT PAYMENTS:				
a. DEVELOPMENT				
b. MODERNIZATION				
c. TOTAL				
V. TOTAL PUBLIC HOUSING COSTS:				
(I.+IV.)				
VI. FMR:				

- ordinary maintenance;
- administration;
- general expenses;
- tenant services;
- protective services;
- non-routine maintenance; and
- capital expenditures

Various methods for obtaining these operating expenditure items on a per-project basis are described below:

- **Utilities**: Obtaining project-level utility costs should, in most cases, be fairly straightforward since most projects are already equipped with meters to measure monthly utility consumption. For those projects where there are both high-rise and low-rise units and a single utility meter is shared (or where two contiguous buildings share a meter), installation of separate meters might be considered. Utility consumption rates vary widely among projects. The factors that affect utility costs most directly are the type of heating fuel used and its price; the efficiency of each project's insulation, project construction type (i.e. brick, concrete, woodframe) and building type (i.e. high-rise, low-rise, scattered site); and unit size distribution. In addition, projects with features such as air conditioning or elevators will tend to have higher utility costs.

- **Ordinary Maintenance**: The goal of this task is to estimate or approximate the actual cost of providing each project with a basic level of routine maintenance over the course of at least one year. Ordinary maintenance is generally the most significant non-utility operating expenditure. Collecting specific information for each project may pose some degree of effort for PHAs with centralized maintenance pools. These PHAs can log the number of hours spent and the major supply items used per project for routine maintenance chores. For PHAs that contract out some of these ordinary maintenance functions, project or task-oriented accounting records are likely to exist. If not, the contractor may be asked to keep records on a project basis.

Ordinary maintenance costs are likely to differ by project because of the following factors:

- Project condition, structure and building type;
- Site conditions;
- Degree of vandalism;
- Unit turnover rates;
- Age and condition of major appliances and electrical fixtures;

- The share of elderly tenants;[18]
- Household concentration or density; and
- The existence of on-site amenities such as day-care centers, community facilities, and playgrounds -- all of which require maintenance attention in addition to that associated with the housing units only.[19]

The remainder of non-utility operating expenditures may vary by project.

- **Administrative and General Expenses**: For these items, costs variations are likely to be attributable to project size, rather than to specific physical or social factors such as those influencing a project's utility and ordinary maintenance costs. It therefore may be acceptable to pro-rate these budget items by the number of available units per project.[20] However, it is always preferable to attribute expenses to actual projects wherever possible and to pro-rate only those expenditure items that vary primarily with project size.

- **Protective Services**: Expenditures for protective services normally account for only a small proportion of a project's budget. However, high-rise family projects as well as certain others may have higher-than-average needs, and recognition of special or unique problems will enable a PHA to identify projects with above-average expenses in this category. Estimates of individual project expenditures for protective services may be derived by using a project log, whereby on-site protective personnel (if applicable) would record the number of hours spent per project and charge them accordingly. Even if contracted out, estimates of each project's protection costs could be made by this method. These procedures to collect actual or reasonable estimates of protective services costs may only be necessary where there is the belief that certain projects are significantly more in need and, thus, more costly than others with respect to this budget item. For PHAs where the level of protective services provided is believed to be relatively equal among projects, a pro-ration of the consolidated total spent for protective services may be the more practical data collection method.

- **Non-Routine Maintenance and Capital Expenditures**: These budget items, together, account for a very small percentage of the total operating expenses, on average. Yet, there may be a significant degree of variation among projects for these expenditures, particularly on an annual (short-term) basis. Both of these

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Elderly projects have, typically, smaller units and less vandalism than family projects, so that maintenance expenses are lower.

If maintenance expenditures for on-site facilities could be kept separately from the remainder of project maintenance costs, it would yield a truer financial profile to use in future calculations of total project costs.

Available from the annual PHA aggregate total for these budget items as reported on HUD form 52599, "Statement of Operating Receipts and Expenditures."

budget categories imply a certain degree of emergency or special-need funding justification, which cannot be anticipated in advance. Projects requiring extraordinary maintenance and/or capital replacements on a recurring basis, rather than occasionally, will have higher than-average expenditures in these categories.[21] Unless there are projects where this is, indeed, the case, pro-rating these expense items by the number of available units per project is an appropriate method of estimating project-level costs. Otherwise, actual record keeping for these expenditures would be preferred.

Another way to identify high-cost projects is to calculate the operating deficit generated for each project, in order to determine the extent of project cross-subsidization, or, which projects are claiming a disproportionate share of PHA resources. Operating deficits are the difference between a project's operating expenditures and its revenues. Therefore, actual operating revenues will need to be broken down by project.

- *Operating Revenues* are derived from dwelling rents and excess utilities (when applicable) paid by tenants, and from non-dwelling income, such as the interest on general fund investments and grants from state and local authorities. Dwelling rents, of course are the primary source of project income.

Project-level rent collection records should be available for all projects.[22] Because occupancy levels change over time, as do the percentage and amount of collection losses, the project-level information on operating revenues should be kept for a minimum of a one-year period, corresponding to the year for which information on operating expenditures is collected. The difference between operating expenditures and revenues -- the operating deficit -- can thus be calculated to identify projects that currently require the largest operating subsidies, and those that are helping to cross-subsidize others. The extent of rent delinquencies and collection losses within projects should also be examined as a potential source of fiscal disparity among projects. Depending on the source, pro-ration of the non-dwelling income may be an appropriate way to apportion the total. The PHA can make the most logical decision on how best to break down non-dwelling income on a per project basis if pro-ration seems inappropriate.

A third way to identify high-cost projects is to compare total expenditures on a PUM basis, per project, to the locality's Fair Market Rents (FMR's) for units of similar size.[23] This measure provides a way of comparing the "total costs" of public housing (annual operating expenditures plus annual debt service payments) to the costs of comparable private housing[24]

Recognition of such a pattern will help PHAs identify projects that may require more comprehensive modernization efforts.

Where this is not the case, this information should be collected using the HUD form 52295, "Tenant Accounts Receivable."

The Fair Market Rent (FMR) represents a ceiling or maximum rent level for a particular size unit in a given housing market. It is derived by identifying the latest year's estimated rents charged for all existing standard quality units by size of unit within a given market, and calculating the dollar figure at which 40 percent of those units rent below.

and, also, to the cost of assisting tenants through Section 8 certificates.

- *To calculate each project's "total costs," it is necessary to know what the annual payment is to retire the debt for both development and modernization*. This figure, when added to annual operating expenditures, represents a project's "total costs." In estimating the costs of projected occupancy conversions and modernization efforts, the current annual debt service payments would be added to the new capital costs associated with these stock treatments, and to the project's annual operating expenditures, to address whether the treatment will be cost-effective over the long term compared to the cost of alternative housing payments or to Section 8 certificates.

- *The total (as opposed to the annual) outstanding balance on the long-term debt for development and modernization, henceforth referred to as the outstanding debt, can also be calculated for each project*. The outstanding debt figure will be useful for projects being considered for sale, where it can be compared to the sales price offered or expected.

Since the instruments used to finance public housing projects are tax exempt bonds and notes, the procedure for calculating the outstanding debt for each will depend upon the combination of instruments used to finance the project. However, PHAs already receive the necessary documents to cost-out the debt balance remaining on each project, and the suggested technique is relatively simple.[25] If used in combination, these sources provide the necessary information for calculating the outstanding debt for each project.

Consolidated ACCs covering multiple, rather than individual projects are usually set up to allocate funds to develop and modernize public housing projects. However, HUD forms in many cases delineate individual project debts (e.g. on the HUD 9309 and 5402), as well as separate the development debt from the modernization debt. The newer CIAP modernization programs typically allocate a lump sum of modernization funds to cover more than one project. In these cases, individual project debts can be calculated by pro-rating the total current outstanding debt by the percentage of the originally financed amount attributable to each project.

Although generally a good rough measure of the private market cost of operating multi-family rental housing, FMR is a somewhat limited proxy for private market rental housing costs. On the one hand, since it may be sensitive to rent control in some cities, or where housing demand is weak, it may be slightly lower than a true "private market" standard. On the other hand, in those markets where housing demand is very high relative to supply, the FMR may be higher than a standard based only on costs.

To calculate the outstanding debt remaining on each project, a PHA will need to assemble the most recent information from the following sources:

(1) "Requisition for Funds," HUD 9309, (for consolidated note sales)
(2) "Requisition for Funds," HUD 5402, (for individual note sales)
(3) Bond amortization schedules (for any projects whose development was financed by bonds)
(4) Application of Accruing Annual Contributions and unapplied Debt Service Funds," HUD 52939, (for projects financed solely through notes). See also HUD 9202 - quarterly note statement, (for projects in temporary financing which shows the current outstanding balance for each project, and the debt service payments applied to reduce the balance each time the notes roll over).
(5) "Application of Accruing Annual Contributions and Unapplied Debt Service Funds," HUD 52910, (for projects financed by both notes and bonds).

To illustrate the pro-ration calculation, for example, suppose a 1981 901-MOD project allocated a total of $2 million among four projects. Project A was allocated $800,000, or 40 percent of the total. Projects B, C, and D each received $400,000 for modernization, or 20 percent of the funds. As of 1983, the total remaining debt for the 901-MOD project is $1.5 million. Project A's pro-rated outstanding debt is 40 percent of $1.5 million, or $600,000 as of 1983. Using this method, the remaining projects have outstanding debts of $300,000 each. The consolidated amount can be used to calculate individual project debts.

Likewise, the pro-ration method will enable a PHA to estimate what portion of the Annual Contribution payment is attributable to each project. Annual debt service payments can thus be added to annual project operating expenditures to measure the total cost of each project which, in turn, may be used to determine how a project's total costs compare to local Fair Market Rents or to alternative housing assistance payments.

The PUM variation in the remaining debt service among projects is influenced by factors such as the year each project was built (which affects labor costs and interest rates); the land or site cost; construction standards; the size of the units (family units are larger overall, and more expensive to build than elderly or small units); the amount of modernization it has received; and, the amenities each project provides (e.g. handrails and handicapped access equipment increase construction costs).

- *Fair Market Rents will need to be calculated for: distinguishing between high "total cost" projects and others; and comparing the costs of particular stock treatments to alternative housing assistance payments*. In the second case, FMR's will always be added together with the payments on any outstanding debt to arrive at the total cost of the housing assistance payments alternative.

To calculate a weighted FMR for each project, PHAs should use the most current FMR figures by unit size, which are available from the Section 8 program office. The suggested calculation method is explained in the following example. Project A has 100 units: 20 0-Bedrooms; 30 1-Bedrooms; 40 2-Bedrooms; and 10 3-Bedrooms. The FMR's are distributed as follows: 0-BR=$l00; l-BR-$l50; 2-BR=$200; and 3-BR= $250.

The weighted per unit FMR for project A is $17000/100 = $170. The weighted average FMR would then be added to the per unit administrative cost, to estimate each project's FMR most accurately.

Unit size	# Units		FMR ($)
0-BR	20	X	100=2000
l-BR	30	X	150=4500
2-BR	40	X	200=8000
3-BR	10	X	250=2500
Total	100		$17000

The final method of identifying high-cost projects requires examination of the past and future modernization needs of each project. Those projects that have already received a considerable amount of modernization and still require substantial capital improvements to ensure their long-term viability are costly in a different sense.[26] Large past modernization allocations may only be a function of a project's age. The important questions are: whether the repeated use of, or need for, modernization funds is an indication that a project has multiple, hard-to-remedy problems, some of which cannot be reversed through modernization; and whether repair/replacement costs are more expensive than alternative housing costs (or new prototype costs).

Distinguishing among those projects that have recurring modernization needs, yet that remain in relatively poor condition and have high vacancy rates after the infusion of substantial amounts of past modernization funds, will help PHAs in setting allocation priorities among projects for future modernization funds. The Department has emphasized achieving long-term viability and resulting cost savings through modernization; energy-related savings are expected to become an even higher priority in future modernization funding decisions.

Examining the cost dimension of modernization will require:

The Departmental definition of "long-term viability" as it relates to modernization expenditures is very specific. See CIAP Handbook 7485.1 REV-I. p. 2-I.

Long-term viability is described as where the individual project has been experiencing a significant vacancy rate, high turnover, unusually high operating costs, or other manifestations of serious problems. Work items necessary for the long-term viability of the individual project (or particular units) may be approved where necessary to achieve and maintain a 97 percent occupancy rate in accordance with HUD-approved policies for tenant selection and assignment and continued occupancy or to achieve cost savings. Eligible activities include changes in project density, basic design, unit distribution and household type (elderly/non-elderly), as well as demolition or disposition under 24 CFR Part 860.

- identifying the projects that have already received modernization funds;
- determining how these funds were spent;
- calculating the annual debt payment for past modernization expenditures, (see p. 16);
- identifying the projected modernization needs of each project as they relate to long-term viability;
- projecting the annual operating expenditures per project after modernization;
- estimating the annual payment to retire the new modernization debt; and, calculating the projected total costs for each project after modernization.

These steps will enable PHAs to make comparisons between a project's total costs before and after additional modernization investments. The efficiency of additional modernization can be measured by comparing its cost to the cost of alternative housing assistance. (Exhibit 2 on p. 12, can be used to chart these cost comparisons.)

- *Modernization cost estimates should be developed only for those projects where it is believed that the rehabilitation needs and/or problems can be successfully addressed through modernization to achieve long-term project viability*. Certain types of problems may indeed defy resolution through modernization. (These types of problems are discussed in the next section.) If an alternative stock treatment is a more appropriate action to take to correct these problems, the feasibility of tenant relocation would need to be considered.[27]

Although modernization may not be the most cost-effective treatment, it may be the only practical action where tenant relocation is not possible. (Where tenant relocation is feasible, PHAs would estimate relocation costs for the displaced tenants and add these costs to the total cost of implementing the particular stock treatment.)

- *It will be important to make the most reliable and accurate cost estimates of future modernization obligations*. The CIAP application process itself, and other Departmental sources, already provide tools to use in making modernization estimates.[28] Using the Public Housing Modernization Standards Handbook,[29] a

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See footnote #23, on page 28, for information on assessing tenant relocation.

Individual project modernization expenditure information can be collected from the following forms which are explained in the Public Housing Comprehensive Improvement Assistance Program (CIAP) Handbook 7485.1 REV-1, dated May 1982.

CIAP Handbook

Appendix #	HUD Form Number and Name
13	HUD-53003, Modernization Fund Ledger
14	HUD-5079, Modernization List
16	HUD-53009, Modernization Project Amendment to Consolidated Annual Contributions Contract (rental projects)
20	HUD-5402, Requisition for Funds (Modernization Project Notes)*
21	HUD-5402, Requisition for Funds (Modernization Direct Advances)*

PHA may evaluate the physical condition and energy efficiency of its projects to determine their rehabilitation needs and associated costs according to Departmental standards and criteria. It is suggested that the Physical Needs Assessment (Modernization) Survey, the Survey Instruments, and the Project Cost Estimate Work Sheets contained in the Handbook, be used to uniformly assess each project's future physical needs. The Public Housing Conservation Handbook (7485.3) will provide PHAs with guidance in identifying cost-effective energy conservation measures and in conducting energy audits, as required by HUD.[30]

Assessing Project Condition

Overall project condition is an equally important factor to consider when systematically assessing the inventory of public housing projects. Project condition can be addressed using several types of information -- structural, site, locational and environmental -- which influence the long-term viability of projects. Although gathering information on project condition may not be a difficult task for many PHAs, interpretation of the condition-related information is somewhat subjective. The suggested method for assessing project condition assumes that a consensus will be reached among the participants involved in the stock assessment when making judgments about the relative condition and viability of each project. The information that is important for assessing overall project condition in this context is presented below.

One method of assessing project condition is to make initial classifications of each project's overall condition as either satisfactory or unsatisfactory. Projects classified as unsatisfactory could then be reviewed more closely to determine the specific factors or problems that contribute to their unsatisfactory designation. Identification of these particular condition-related problems or characteristics will facilitate making decisions on the most appropriate stock treatments for all projects.

A useful way to integrate the project-level financial and condition information would be to develop a matrix, whereby the extent of overlap between "high cost" and "unsatisfactory condition" projects could be determined. The matrix will be helpful in pinpointing the least

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22HUD-52826, Schedule/Report of Modernization Expenditures

23HUD-52999, PHA Summary Report on all Modernization Approved Before July, 1974

26HUD-52990, Modernization Program Budget

28Sample Output Report; Quarterly Project Listing**

31HUD-53001, Actual Modernization Cost Certificate (For Modernization Programs approved before Modernization as a Separate Project was implemented)

32HUD-53001, Actual Modernization Cost Certificate (For Modernization Programs Approved After Modernization as a Separate Project was Implemented)

* Under consolidated ACCs, these amounts may cover more than one project. Individual project modernization debts can be calculated by pro-rating the total remaining debt by the proportion of the original debt attributable to each project under that ACC (See pp. 15-18).

** Available from the HUD Field Office.

Handbook 7485.2 REV, dated June 1982.

24 CFR Part 865, Subpart C. see paragraphs 6-7.

viable projects, as well as in setting priorities for scheduling the implementation of treatment decisions made as a result of the stock assessment.

Exhibit 3 has been developed to aid in making the initial project determinations with regard to the overall condition of projects and identification of the array of problems associated with each project. Another way to evaluate project condition would be to review the following types of information.

Structural and Site information. The most important questions about each structure and its site are:

- Is its basic physical condition sound? What major repairs/replacements are necessary to meet Minimum Property Standards and to improve energy efficiency?

- Does the condition of the site (terrain, drainage, soil condition, etc.) present some unique problem(s) that jeopardizes the health, safety and living environment of the tenants?

Exhibit 3

Project Cost/Condition Matrix

CONDITION	Reasonable	High
Satisfactory		
Unsatisfactory		

- Are these problems capable of being remedied through modernization or through managerial solutions?

It is likely that serious site or structural design problems are already evident or have surfaced during the preliminary PHA discussions, or in the development of modernization budgets.[31] Identifying projects with multiple, severe, or hard-to-remedy problems due to basic site and structural design flaws will be critical in estimating long-term project viability and cost efficiency, and in choosing the most appropriate stock treatment. If modernization efforts prove to be either infeasible or excessively expensive, other stock treatments such as sale or retirement may be preferable.

Projects should be reviewed to detect those with systemic problems, where certain problems generate others. For example, high vacancies may be attributable to the dilapidated and substandard condition of units, or rent collection problems may occur where rents are withheld on the basis of the poor condition of units. These problems, in turn, may exacerbate security difficulties or threaten the project's image. Wide variations in project operating costs may also point out certain areas of concern with respect to individual budget items such as maintenance or security.

In addition to describing the basic physical characteristics and problems associated with every project, determinations should be made as to how well-suited each project is for its current tenants, or which particular factors may contribute to inconsistencies between structural design and tenant characteristics. The number, size (both square feet per unit and bedroom distribution), configuration of units per project, and density are all relevant to consideration of suitability for the occupancy group being served. In addition, project age, vacancy rates, rent collection rates, construction type, security systems and energy efficiency will be important factors for consideration of other alternative treatments.[32] Projects should also be reviewed for overall health and safety factors such as emergency vehicle access, fire equipment, and environmental hazards. General site features such as parking facilities, pathways, recreational space, lighting, and landscaping should be assessed. General building features such as the adequacy of common areas -- lobbies, laundry facilities, etc.; trash collection; elevator operation (this is a particularly important item as it relates to security, safety, and maintenance issues); and major components (i.e., roofs, electrical and heating systems, plumbing) are also factors that may be used in determining the relative viability of projects.

Some of this information is available on the following documents: Engineering Surveys (required for Field Office monitoring); project Physical Characteristics (HUD-51885); and Physical inspection Report (HUD-92470).

See Occupancy Audits (HUD-52380) and Reports (HUD-52209); Unit Availability Reports (HUD-51230); and Tenant Accounts Receivable (HUD-52295).

Locational and Neighborhood Information. A project's location, safety, and amenities all contribute to the overall housing quality for tenants of public housing. These factors will be especially important where consideration is being given to alternative stock treatments because of the high cost of some projects. Thus, project-level information should be gathered to examine these questions:

- Ë Is the project's location well-suited for residential use?
- Ë Are the project and its surroundings safe?
- Ë Are projects appropriately suited to the needs of their residents, given the tenants' characteristics?

To answer these questions, many types of information will be relevant. First, whether or not the project's surrounding neighborhood is primarily residential must be given consideration. The types of adjacent housing and their condition can be further indicators of a project's suitability for residential use. The amount of surrounding vacant land and/or structures, and future land-use development plans for the area should be reviewed. Second, a project's access to transportation, shopping, medical facilities, sources of employment, schools, and community activities are essential factors that contribute to the quality of the living environment for tenants. In addition, the concept of project viability would include making judgments about the quality of the living environment in each project with respect to safety and security, project amenities, recreation space and facilities, tenant services, maintenance, tenant/management relations, and the harmony among project tenants themselves.[33]

The issue of safety and security of public housing projects is sometimes pervasive. Security is seen by tenants as the most pressing problem in some public housing projects. Providing adequate security measures is very costly for the projects where crime and vandalism threaten the safety of tenants. The image of public housing as unsafe stigmatizes the entire program in certain communities, affecting its present and future viability. As noted previously, security problems can be systemic and spawn other undesirable and costly problems (e.g. capital outlays for sophisticated security systems, maintenance, collection losses, high insurance premiums, and vacancies).

It would be useful to compare the safety conditions of the surrounding neighborhood to the specific conditions within the projects to decipher whether existing crime problems are contained exclusively within the project or if the project is located in an area that is an unsafe living environment for public housing tenants. These distinctions will affect making choices for the treatments or managerial solutions that may be the most effective to ensure project viability over time.

Making decisions about the housing needs of the current tenants, and assessing how

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The PHA staff can rate these factors internally according to criteria developed for this purpose. Tenant surveys may also be helpful in capturing the attitudes of residents with respect to the quality of their living environments.

well-suited the projects are to the resident population of each project, would require gathering project-level information on the tenants' age, sex, income level and sources of income, employment status, household size and corresponding unit size, project occupancy and turnover rates, and racial and ethnic composition. In determining the best future use of a project, a PHA should also consider whether it is well-integrated or totally segregated, both internally and in relation to its surrounding neighborhood. The percentage of family and elderly households per project will be a relevant consideration for all of the alternative stock treatment decisions, and may also serve to explain variations in the financial profiles assembled for each project. Project design, security, amenities and social service needs[34] will differ depending upon the types of households being served.

Knowing the characteristics of the eligible low-income population in the PHAs jurisdiction who are *not* currently being served by the public housing program may be useful for assessing the future demand for public housing and the program's priorities. Sale, retirement, and conversion decisions may be influenced by demographic trends in the locality, as will be the ability to relocate tenants potentially displaced by these choices. Information on Section 8 recipients, waiting lists for public housing and other assisted housing programs, Housing Assistance Plans, and other local government estimates would be useful. It would lend perspective to have a sound overview of prospects for both the demand for and the supply of low income housing.[35] In most cases, continued high demand can be expected where waiting lists for public housing are large, demand for Section 8 certificates is high, and there is a relatively tight housing market.

Tenant Impact Analysis

A PHA's ability to implement initial stock treatment recommendations is contingent upon the findings of a tenant impact analysis. Consideration must be given to the extent to which the implementation of stock assessment decisions would result in the displacement of households residing in the affected projects. Finding acceptable alternative housing units for potentially displaced tenants should precede any stock management actions. If preliminary decisions will have adverse impacts on the households currently served by the program, the treatment decisions on the particular project need either to be reversed or, perhaps, a longer relocation timetable could be designed to ensure a successful effort.[36]

Not all public housing projects offer social services. Examples of the different types of social services that may be provided in public housing projects are: (Family Projects) -- child day care, after school programs, tutoring and remedial education, alcohol/drug abuse counseling, recreation and summer vacation programs, employment and job development, health and prenatal care, and information and referral; (Elderly Projects) -- home delivered meals, adult education, adult day care, transportation, information & referral, community activities, day trips, and medical services. It is important to make distinctions between those social services that are funded by the PHA, from those sponsored by other governmental agencies and non-profit local groups, when developing the project-level cost information. If the shelter costs could be separated from any additional costs of providing social services, the information used in comparing the total cost of public housing to the cost of alternative housing might be more accurate.

For the sales option, considerably more economic and market data are called for and these are discussed in the Appendix.

See the Final Recommendations section on page 48.

Unless the affected projects are unoccupied, tenant displacement could occur if retirement, sale to private owners, or occupancy conversion were recommended. Also, if any project is selected for modernization to reduce density through partial demolition or unit reconfiguration, some portion of tenants would be displaced. Finally, the option of sale to tenants would cause the displacement of non-purchasing households.

To make an assessment of the capacity for relocating tenants, it will first be necessary to estimate the number of acceptable vacant units in other public housing projects, those becoming available due to normal turnover, and those made available for occupancy due to the completion of modernization efforts.[37] If suitable units are not available in public housing, perhaps they are in the private market. However, in investigating how much low-income housing is available in the private market, it is also necessary to assess whether Section 8 certificates are sufficient to accommodate all, or some portion of displaced tenants. Therefore, the availability of both units and rental subsidies are important factors in determining the extent to which displaced tenants can be relocated. Limitations on either factor will affect the final project treatment decisions.

Assuming the availability of Section 8 certificates, or the possibility that some households can afford private market housing without rental assistance, an assessment of available private market units would be necessary.[38] In some jurisdictions, private market rental vacancy rates may be generally acknowledged as either high or low -- and used as a preliminary indicator of unit availability. However, as will be necessary when assessing all types of potential units for displaced tenants, an examination of the characteristics of the displaced tenant households is essential, since this will dictate the exact unit sizes and other required unit specifications. Baseline assumptions regarding vacancy rates using only the number of units necessary to house the corresponding number of displaced households are insufficient evidence upon which to make relocation assessments. The size, configuration, condition, rent, and location of the estimated available alternative housing units identified are critical factors to be considered when assessing the feasibility of relocating displaced

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The substandard or vacant units which become available through rehabilitation can be projected. Estimates depend upon a sequential scheduling of modernization based on need and priority, and the availability of sufficient CIAP funds.

Private market alternatives can be estimated using 1980 Census tract-level data. One method of estimating the capacity to relocate tenants in the private sector is presented as follows: (1) The available and suitable stock of private housing is first narrowed to those Census tracts where median rent is below the county median. This stock approximates lower-income neighborhoods most affordable by public housing tenants; (2) Next the stock within these tracts is divided by its current contract rent into groups that roughly parallel the rents currently paid in public housing; (3) Finally, tracts are divided into those which have predominantly large housing units and those which have predominantly small units to approximate the relative shares of small (0-2 bedroom) versus large (3 and 4+ bedroom) units. Since private rental vacancies are not identified by rent categories, they could be treated as if an equal distribution of vacant units existed across all rents in the selected tracts. However, vacancy rates may well be greater in higher rent and, possibly, in smaller units than in the larger and cheaper units needed for relocation. One indication of the rent versus vacancy issue can be gleaned from the 1980 U.S. Census. Summary Tape Files 3A and 1A allow calculation of the mean contract rent and asking rent for occupied and vacant rental units, a comparison which provides some indication of relative vacancy rates of higher and lower rent units. Families that cannot be placed in other units in the authority would then be allocated to available vacant units in these lower rent tracts. For this purpose, a relocation is assumed to be possible if a vacant unit in the size and rent range, in one of the selected tracts, can be matched with a displaced family having that unit size need and rent-paying ability.

households. Consideration should be given to the success of Section 8 certificate holders in locating housing, and the potential barriers to rental (such as discrimination on the basis of race, sex of household head, presence of children or family size, prior public housing tenancy, lack of private rental references, etc.).

If alternative housing of acceptable size, quality, location and affordability can be found, PHAs will need to develop timetables and schedules for executing relocation plans. Relocation budgets, estimates of necessary cash payments, staffing requirements, and other associated administrative costs would need to be prepared. Finally, these relocation costs would be converted to a PUM basis and added to the total cost of the project, as calculated for each alternative stock treatment. (See pp. 16-19.) Some consideration should also be given to the effects of stock management decisions on the overall availability of housing for low and moderate income households, both now and in the future. The focus should not be restricted to only those households currently being served by the public housing program. Should all forms of acceptable alternative housing units be judged as either inappropriate or unavailable given the characteristics and needs of the projected displaced households, the stock treatment alternatives would then be limited to those that did not create displacement.

III. THE PROCESS OF STOCK ASSESSMENT

The previous chapter addressed the project-level and other information, and their sources, needed to determine the best future uses for individual projects to meet the objectives of maximizing the financial, physical, and social well-being of the stock and of protecting the present tenants and the existing investment in their housing. This chapter describes how the information would be used initially to decide what action is most appropriate for each project.

The criteria for initial decisions combine two major determinants -- "reasonable" costs relative to other projects in the PHA and to the cost of alternative housing assistance and the long-term viability of the project's occupancy, condition and location. The alternative actions to be considered include retention of the project as-is, modernization, conversion from family to elderly occupancy, sale either to private buyers or tenants, retirement, or combinations of these actions for particular projects. The resulting set of decisions constitutes what could be called a stock management "strategy."

These decisions would be made in a sequential order. Decisions about particular best future uses are dependent on the feasibility of relocating displaced tenants in other public housing or in private housing with the use of housing assistance payments. Retention would, of course, not result in tenant displacement; and modernization would result only in temporary displacement, if any at all, and could be scheduled in stages to minimize dislocation. The exception would be modernization that involves reduction in overall project density. The other alternatives would result in varying degrees of displacement and, if relocation is not feasible in such cases, the decision would be reviewed again to find the best alternative -- retention or modernization -- under the particular set of circumstances.

Retention As-Is.

For projects to be considered candidates for retention as-is, the decision would be based on the following steps:

- Determine that the project is in sound physical condition, requiring little or no immediate modernization;
- Determine that operating costs for the project are "reasonable" relative to the PHA average;[39] or
- Establish that the project is extremely "successful" even though it may be classified as having relatively high total costs.

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[39] See pages 13-20 for discussion of relative costs.

AN EXAMPLE OF A PROJECT BEST SUITED FOR RETENTION AS PUBLIC HOUSING, AS IS

A public housing project, constructed in 1973, consists of gardenstyle apartments with just over 200 units, all of which are occupied. The apartments are soundly constructed, well-designed, and blend in nicely with the surrounding neighborhood. They are also maintained very well, with all the utilities and mechanical systems in good working order due to some recent modernization work. Located in an urban renewal area with easy access to many new medical facilities and to public transportation, the project is considered by its tenants to be a very desirable place. Seventy-five percent of the tenants are families; the remaining 25 percent are elderly and handicapped. Over 40 percent have incomes which are less than $3,000. The outstanding debt on the project is high, given its recent construction, but its operating costs are at the PHA average. The PHA which owns the project considers it to be among its most successful.

These projects, thus, fall into two major groups. The first, those that are both inexpensive to operate and in good condition, would be selected according to the criteria listed below. Where project-level information is not available for all projects, it may be possible to identify low-cost projects reasonably accurately as a result of a close day-to-day working knowledge of individual projects.

- Physical condition could be determined by periodic, formal inspections. Condition would also be known from intimate and regular working relationships.

- Ideally, a determination of "reasonable" operating costs will be based on fairly comprehensive and accurate project-by-project operating cost data, which can be compared to the average for the entire PHA. If the PHA operates both family and elderly projects, these comparisons should be made separately for each type of project, where possible.

- If operating cost information is available separately for major cost categories, these should also be examined by categories and by project. It is possible that a project with relatively reasonable costs could benefit from energy-efficiency or other types of modernization that would reduce its future (relative) costs still further. However, depending on the needs of other projects in the PHA, its modernization needs may have a relatively low priority.

- The cost comparisons should be supported by analysis of vacancies. If vacancy

rates are high relative to normal turnover, operating costs should be calculated using occupied units as a basis. This measure may show relatively high per-unit costs. Although this is unlikely for a project in overall good physical condition, such a finding would dictate a re-examination of the project's financial viability. Or, perhaps, part of the project is in poor condition and needs rehabilitation or demolition.

The second type of candidate for retention as-is a project that is also in good physical condition, has high total costs relative to other projects and to the costs of alternatives (housing assistance payments plus payments on the outstanding debt for that project), but is one that the PHA considers among its more "successful." Such a project may be new and so high total costs may be attributable, in large part, to high debt service payments. (If the high cost is due to high operating costs that can be reduced through modernization, this project would shift to the next category for consideration.)

Since protecting the existing investment in public housing is among the major objectives of stock management, a project fitting these criteria would be a logical candidate for retention as-is despite its high total costs. Such a project would be a candidate for retention as-is, even in the unlikely event that total costs exceeded the alternatives. The exception would be if there were no longer any need for a low-income project of this type. In this case, sale might be considered.

Modernization

An efficient approach to modernization would invest the limited resources available in the modernization of projects most likely to remain viable for many years into the future and with future costs, both operating and total costs (operating plus total debt service after modernization) that are reasonable relative to alternative housing assistance. Needless to say, it would be preferable if modernization reduced operating costs and future capital needs significantly. With these objectives in mind, in development of a stock management strategy, projects in poor condition and/or with relatively high operating and/or total costs would be considered candidates for retention with modernization if they met the following criteria:

- The project has no serious trouble with basic site, design and construction standards, and suitability for current tenants;

AN EXAMPLE OF A PROJECT BEST SUITED FOR RETENTION AS PUBLIC HOUSING, WITH MODERNIZATION

Constructed in 1942, a 500-unit public housing project houses families in duplex and fourplex buildings spread over 80 acres. The complex includes several communal facilities and attractive playground areas for the children. The units are occupied primarily by single-parent households with children; close to one-half of the tenants have incomes of less than $3,000. Many of the units are showing signs of deferred maintenance; modernization funds for correcting minor foundation problems and improving energy efficiency would help to assure the long-run viability of the project and reduce its operating costs, which are currently higher than the PHA average.

ËThe project's physical deficiencies could be reversed through rehabilitative modernization and/or that the estimated utility savings achieved through energy-related modernization would bring the total project costs below those of alternative housing assistance; and

- Ë Any problems in management of the project could and would be corrected to ensure future viability.

To support these determinations, there should be evidence that:

- Ë Construction is free of basic faults that cannot be remedied at all or without major reconstruction that would bring total costs to an excessive level as a result of added debt;
- Ë The site is stable and has no major drainage or terrain problems that are not easily correctable;
- Ë The location is acceptable to public housing tenants and applicants and suitable for the occupancy group served;
- Ë The exterior design of the project is acceptable and the interior layouts, room sizes, and storage space are adequate for the occupancy group;
- Ë The projected operating costs, after modernization, will be reasonable relative to the PHA average for the type of project (i.e., family or elderly) as a result of reduced maintenance and/or energy costs. This comparison would be on a per-occupied-unit basis to reflect plans to make vacant units habitable; and
- Ë Total costs after modernization, including payments on the new debt contracted, will not exceed alternative housing assistance.

The above considerations call for reliable estimates of modernization needs and costs, and of projected operating costs after modernization.[40] In addition, the PHA should include in its assessments and cost estimates, plans for correcting any management or security problems that have contributed to the physical and financial problems of the project and the projected savings in operations (and future mod needs) resulting from changes made. Again, comparisons between costs before and after modernization should be made on the basis of costs per occupied unit. If vacancy rates are high, modernization plans should address the reasons. If, for any reason, modernization cannot correct the high vacancy rate, the long-term viability of the project should be re-examined; an alternative option may be the preferred solution. Similarly, if previous modernization outlays have been relatively high, the reasons for additional modernization needs and the long-term viability of the project should be reassessed.

Occupancy Conversion

A project would be considered a candidate for modernization and conversion from family to elderly if there were the following findings:

- The project's location remains suitable for housing;
- The site and the construction of the basic structure(s) are sound;

AN EXAMPLE OF A PROJECT BEST SUITED FOR CONVERSION FROM FAMILY TO ELDERLY OCCUPANCY

Four of five buildings in a high-rise project house families. There are few common areas within the buildings for residents and limited play space available for children. Physical problems include missing door fixtures, broken-down elevators, damaged lighting fixtures, and graffiti-smeared walls. The fifth building, housing elderly tenants, has experienced no such damage. The two-bedroom units in the family buildings, the most common unit size in this project, have a sparse 660 square feet and lack adequate storage. If converted to one-bedroom units, they have adequate storage for smaller elderly households. Such a reduction in bedroom size would also reduce the density in the complex. A private consultant hired by the PHA has recommended conversion of at least some of these family units to elderly units. Most of the families now residing in the project could be housed in other projects owned by the Authority.

These will vary with the particular problem, the corrective action to be undertaken, and the individual structure. Energy Conservation for Housing: A Workbook, prepared for HUD by Perkins and Will and the Ehrenkrantz Group (May, 1982) provides useful information for estimating energy savings as a result of particular improvements. Helpful suggestions for increasing efficiency in management and maintenance may be found in *Exploring New Strategies for Improving Public Housing Management* (HUD, 1979) and *Managing Public Housing: A Guide for Self Assessment*, 1983.

- Current operating costs exceed the PHA average for projects with the same occupancy group;
- The other major problem associated with the project is its unsuitability for its present occupancy group; and
- The conversion to an alternate type of tenant occupancy would ensure the long-term physical and financial viability of the project.

A national sample, conducted as a part of an internal HUD study of public housing properties, suggests that most conversion is likely to be from family to elderly use (or to elderly and other small households) and would involve projects that are either high-rise, very densely populated or both.[41]

Steps in the determination might be as follows:

- The location, site, and basic construction of a project would be assessed to determine its long-term viability as housing;
- The location would be assessed for relative suitability for continued use by either the present tenants or the proposed alternative group. Location is considered a second time because some locations, though adequate for residential use, may not be suitable for the elderly because of their lesser mobility. Elderly persons frequently have a greater need for easy access to transportation and other facilities and services. In addition, some neighborhoods may pose a special problem to their health and safety. Families, on the other hand, have a greater need to be near schools and sources of employment;
- Overall project density and the layout of individual units would be assessed for relative suitability for either the present tenants or the alternative group. For example, project density may be too great for the wear and tear of family use but be suitable for as many, or more, elderly households. Or a project may have too many children relative to the available playground or other common areas. Similarly, unit layouts may be undesirable for family use -- small kitchens and small appliances, inadequate dining space, few and small closets -- but be considered adequate for elderly households;

In some few instances, circumstances might call for the conversion of an elderly project to family occupancy. This might be the case where the project is relatively small, has a fair number of one and two bedroom units, is in a location or neighborhood not attractive to elderly households, and/or there is a more pressing need for family housing than for elderly housing.

- If project density and layout pose problems for continued use by the current occupants, three alternatives might be compared. One is to reduce density and improve layouts through modernization for continued use by the present occupancy group (say, by fewer and smaller families). Presumably, this was considered and rejected for good reasons in the previous step -- perhaps because it failed either the long-term viability or the total cost test or both. The second is to modernize and convert to elderly use. The third, in the case of large or varied projects, is to try a combination of several approaches, possibly including demolition of selected buildings; this is discussed in "Combinations of Alternatives," on pp. 47-48; and

- Although HUD currently places a ceiling on modernization funds at the replacement or prototype-cost level (excluding the costs of management improvements), for conversion to be a cost-effective option under the stock management concept outlined here, total costs after modernization and conversion should not exceed the costs of alternative housing assistance. Projects that are candidates for conversion from family to elderly occupancy are more likely to meet this test where the existing layout is amenable to easy conversion or where the majority of the existing units are not very large and can be reused as elderly housing. For example, very small rooms may be combined by knocking down a wall. Other considerations are length (in case of fire) or width (for wheel chairs) of interior corridors and hallways. Congregate housing, another alternative, requires wide corridors and additional investment in facilities. Or, perhaps, a part of the development could be converted to elderly occupancy and the remainder kept as family housing.

To determine cost and feasibility involves several steps:

- Feasibility of conversion would be established after review of the building plans and inspection of the actual building(s) and the site by an architect and/or engineer;

- Second, ballpark estimates of the cost of conversion would be desirable, before assuming the expense of full plans and specifications, to determine feasibility within the cost limitations discussed above;

- Third, plans would be drawn up and final cost figures would be developed for which HUD approval would be required; and

- Management changes, where called for, would be part of the proposal.

Sale to the Private Sector

A stock management plan might include the sale of excessively costly, problem projects if costs cannot be sufficiently reduced or problems sufficiently corrected through modernization, conversion, or management changes. This would be the case if costs of continued operation exceeded the cost of other forms of housing assistance, such as rental certificates. Sales of such projects may or may not command prices sufficient to pay off outstanding indebtedness; still, there are circumstances in which the PHA may wish to dispose of the project for the highest price it can get; e.g., when applicants will not move into a project because of its problems and image, or when costs are completely out of line.

AN EXAMPLE OF A PROJECT BEST SUITED FOR SALE

A 22-year-old row-house project that houses nearly 300 low-income families sits on a valuable industrial site. Several purchase offers have been received from private developers. Although the project was modernized extensively in the 1970s, it is still in very poor physical condition, with frequent vandalism and other crimes occurring on the site. If sold, the proceeds could be used to pay off the entire outstanding debt for this project as well as that of other projects in the PHA. About one-half of the tenants could be housed more suitably in other public housing units, while the others should be able to locate housing in the private sector if given rental assistance. The annual cost of providing Section 8 certificates or vouchers to these households would be less than the cost of continuing to operate the project and paying the debt service, and the tenants would have better quality housing.

At the same time, PHAs may also be considering the sale of projects able to command high sales prices relative to their debt service costs plus the costs of alternative housing assistance for existing tenants. Proceeds of such sales could be used to assist additional households with rental certificates or to modernize or reduce debt on other projects. There may, of course, be good reasons why such projects should not be sold. For example, there are limitations in any comparison of a one-time sales price received to the costs of housing assistance over the years. Secondly, reduction in the number of public housing units available should be assessed against expected demand; relocation of tenants in available public housing units reduces their availability for additional tenants. However, the opportunity to aid additional households may be an important consideration.

The procedures suggested below would help PHAs arrive at estimates of the values of both types of sale candidates at the best and highest use of structures or sites. (These are indicated in great detail in the Appendix.) However, in the case of high cost, problem projects judged unlikely to command high market prices because of location or other considerations, it may not be worth the time and effort, or cost, of a rigorous market valuation methodology until a final decision to sell is made. It may be more cost-effective and realistic at the initial stages to ask for bids and/or to consult local banks, realtors, or assessors for their ballpark estimates of current or future value. In that case, however, it would be prudent to go through the first steps -- analysis of trends in local economic strengths and weaknesses and in neighborhood characteristics and conditions -- before deciding to short-cut the process. Even in the case of projects judged to be valuable, the subsequent steps might be deferred after assessment of local economic trends if it appears that there are unlikely to be potential buyers in the short-term future until particular events occur; e.g. interest rates drop, the local economy improves, a particular neighborhood improves further, or some localized development in the planning or execution stages is completed. Final market analysis and valuation require expertise. If this is not available within the PHA or local government, contracting for those services might be considered.

The steps leading to valuation include:

- Assessing recent economic and demographic trends in the local community or area and in particular sectors of the economy, e.g. residential, commercial, industrial;

- Evaluating neighborhood characteristics and trends;

- Examining project characteristics for potential reuse for residential purposes, and analyzing particular markets at or near the site to arrive at a judgement about possible alternative uses for the site for residential, commercial or industrial purposes; and

- Estimating the value of the project and/or site for likely alternative use options and determining the highest and best use.

There is some overlap in these steps. For example, the first two could be undertaken simultaneously.

A first task, then, would be to get an overview of recent local economic and demographic trends for the locality and for particular market segments. In addition to the local economic development office, sources of information include:

- the Census;
- the Census of Housing;
- the Annual Housing Survey (in a limited number of SMSA's);

- Housing Assistance Plans (HAPs);
- local employment and unemployment insurance offices;
- local welfare offices;
- school registrations;
- building permit data; and
- newspaper rental ads.

The financial feasibility, and hence market value to a PHA, of a project is closely related to the overall strength or weakness of the local economy as well as to those for particular types of developments. If trends tend to be downward but there is a likelihood of a change in direction in the near future, the PHA may wish to defer more detailed analysis to some later date when trends become clearer. If trends tend to be downward but there are slim or no real prospects for improvement, the PHA would be wise to continue the analysis of feasibility and likely sales prices.

A second task would be the evaluation of neighborhood trends and prospects. This analysis includes many of the same types of information as the first but focuses more intensively on recent land uses and potential land uses in the neighborhood of the project under consideration. This analysis includes trends in land uses and land and building values, the type and volume of recent investment, and trends in occupancy rates. These factors are critical to a determination of the neighborhood's growth potential and the alternative use that would be most suited to the neighborhood environment and the most recent trends in, and adjacent to, the neighborhood.

A third task is to select potential highest and best private market uses of the buildings and/or site. This is initially mostly a question of judgment as to the characteristics of the buildings themselves and the prospects for the site and its surroundings. The project and neighborhood evaluations are reviewed so that a determination of potential uses can be made. A windshield survey of the neighborhood is also most desirable. Then the market for each of these potential uses thought to be viable is examined in greater detail.

In addition to residential, office, hotel and industrial options, consideration might be given to other possible uses of the site. A particular location might be ideal for a hospital or medical facility or for badly needed open space or a recreation center. The local planning office should be consulted about this before any decisions are made.

The approach to a classic market analysis is to evaluate the existing and future supply of a given type of development, as well as probable future demand, to arrive at the price level and time period for absorption into the market place. The specific sources of data and elements of demand and supply are quite different for each land use. Detailed guidelines for use determination and the method of approach for analysis of residential development or redevelopment and for reuse of the site for office, hotel, or industrial purposes appear in the Appendix.

An initial determination to be made is whether the existing buildings are likely to be attractive in the private residential market. If not, reuse of the land for a new development may be a better option. (Demolition of the existing structure would have to be costed-out and included in the feasibility of the projected sale.) If reuse of the project or site for residential rental purposes is a likely option, background information on the local rental housing market should be obtained. For residential reuse, whether the existing structure is to be remodelled or a new building is to be built is of major importance.

Comparable developments in the neighborhood would then be "shopped" to determine the pertinent data on the size and layout, rent levels, amenities, occupancy rates and lease terms and to analyze what rent levels are likely to be obtained at the subject property, by making adjustments to account for the differences between the specific comparable developments and the property under analysis in locations, amenities, attractiveness, size and layout. This process involves a large element of judgment; therefore, experience in making such comparisons and adjustments is important for accurate results. If there are no comparables, a judgment has to be made about what rents prospective tenants would be willing to pay for the units. Absorption is then determined in order to estimate expected cash flows.

The technique for condominium market analysis is similar to that for a rental complex. The key differences in the approach are that sales prices of comparable development are the basis of analysis, rather than comparable rents, and evaluation of the financing packages is of great importance. In addition, a converter will typically pay about 60 percent of the final retail value for a potential condominium building.

If redevelopment of the site for commercial or industrial purpose is a likely prospect, similar procedures are followed in doing the market analysis. These, however, differ in the specifics to be examined. It is most unlikely that the structure(s) of a public housing project would be reused for commercial, hotel, or industrial purposes. Thus, the particular site and the market prospects for these uses on that site become the focus of the analysis. Recent activity in the markets of the potential alternative developments -- whether office, hotel, or industrial -- is examined for estimated rental streams, occupancy rates, operating costs, etc. Various characteristics and size of the site and the particular location are of great importance in the suitability and value of the site for expected returns on such developments. These and other factors, and how they are analyzed, are all discussed at greater length in the Appendix.

A fourth and final task is to test the financial feasibility of the options judged to be potentially the most viable by estimating the value of the properties to be developed or redeveloped. Real estate appraisers use three basic approaches to determine the value of properties. Where applicable, all three approaches are used in the appraisal of a particular property and the results are then reconciled into one appraised value. If one is out of line with the others, they need to be reexamined for basic assumptions and students in order to explain variations.

These three approaches to value can be summarized as follows:

- **Comparable Sales Market Approach**: This method looks at the most recent sales of properties (within five years) of a similar type in similar locations and, after adjusting for any differences, arrives at a value of the property being studied. This approach is particularly useful where the project is to be reused for residential purposes and does not differ much from private apartment developments or where the site is to be reused and is compared with recent sales of somewhat comparable sites.

- **Replacement Cost Approach**: Using this method, the value of the improvements is estimated as the cost to replace them -- construction cost less depreciation. The estimate value of the land (typically derived using the market approach) is then added to the estimated value of the improvements.

- **Income Approach**: For income producing properties, an estimate is made of the net income stream generated by the development. Most commonly, either the income over a period of time is discounted to present value, or a typical one year net operating income is capitalized to obtain a value estimate. This approach treats the property as an investment that produces a return in the form of an income stream, including net operating income and potential appreciation or depreciation in value.

There are several techniques for estimating the value of income properties using the income stream. The three techniques discussed are:

- use of an overall capitalization rate;
- use of an equity divided rate; and
- discounting the projected cash flows to present value.

These are discussed in the Appendix, which also includes an example, using a residential property, to demonstrate the different results that are obtained using the three techniques (see p. 61).

Sale to Tenants

Another option that may be considered is the sale of rental units and projects to their present tenants and other tenants in the PHA. This option is often popular with tenant groups and with advocates of expanded homeownership opportunities for lower-income households. The basic rationale is that homeownership exerts a stabilizing influence on households and neighborhoods because of the incentive for careful use and maintenance. Because such an option, if successfully implemented, would eliminate future operating subsidies to that project, it would reduce future public cost. (However, to the extent that the government assumes the outstanding debt by writing down sales prices to tenants, these savings are reduced.) Sale to

tenants should be approached carefully to protect tenants' interests and investments as well as the administrative workload of the PHA. A potential pitfall in sale to tenants is that costs may escalate faster than tenants' incomes, making actual sales lag behind estimates. If this occurs after title passes, owners may fall into default or be unable to meet current operating costs. Furthermore, because most public housing tenants have very low incomes, it is likely that this is a practical option for relatively few projects. Many PHAs would probably consider carefully before parting with projects that would be among the best candidates for sale to tenants, i.e., better (or newer) projects with relatively low operating costs that are likely to provide many years of low-income rental housing.

In assessing the feasibility of the sale of public housing units to tenants, many of the steps may differ from those suggested for analyzing the sale of projects to private developers or landlords because the criteria used to select projects and to match them to suitable tenants/owners will differ in many respects. Project-level information should be available or developed for tenant characteristics, tenant incomes, project physical condition and any modernization needs, location, project operating expenses, and project outstanding indebtedness in order to assess the viability of this option for each possible candidate.

Steps in the process of assessing the option of sale to tenants are as follows:

- Determine whether there is a clearly expressed desire on the part of a majority of tenants in a particular project, or of individual tenants in a scattered site project, to become homeowners.

- Assess the suitability of the tenant group in residence for ownership. It may be desirable to confine the option to projects with a majority of non-elderly households on the assumption that the elderly have less interest in ownership and less ability to perform needed maintenance.

- Assess the suitability of the project and neighborhood for a conversion to tenant ownership:

  - Physical condition should be good either without modernization or after a modest amount of modernization. There should be a reasonably good chance that no major capital outlays will be required in the foreseeable future.

  - The type of construction, layout-amenities, and the number and size of units, should be amenable to homeownership, i.e., should compare reasonably well with the types of units and structures occupied by owners in the local private housing market.

  - Because of the low incomes of public housing tenants, the time involved in translating a plan to sell into actual sales, and the potential for

relocation needs, good sale candidates are likely to be small projects (probably 100 units or less) in which there are reasonable prospects of sale within a relatively short time frame and with minimum disruption.

- ! The neighborhood in which the project is located should be suitable for homeownership. It should either be stable or improving and, preferably, primarily residential. Some likelihood of appreciation in housing values would be desirable.

Ë Gather and analyze the following financial data for the project to determine the ability of existing tenants, employing a reasonable percentage of their incomes (say 30-35 percent maximum), to cover total project costs or, at minimum, current operating costs plus any necessary modernization needed to maintain the project in good condition and at relatively low operating costs:

- ! incomes of existing tenants;
- ! sources of income (to determine likely stability);
- ! operating expenses for management, maintenance and utilities;
- ! cost of any needed modernization;
- ! estimated replacement reserves needed[42], and
- ! project outstanding indebtedness.

At a minimum, the selected percentage of tenant income to be used for housing should be sufficient to cover operating costs, reserves (and taxes); at maximum, it would cover outstanding indebtedness as well.

Ë Make reasonable assumptions for savings in operating costs likely to occur as a result of tenant assumption of certain types of maintenance costs (painting, for example), depending on the skills of the present tenants. A conservative assumption, however, would be that operating expenses would be roughly the same as under PHA management.

Ë Make the appropriate assumptions, based on assessments of comparable residences in the neighborhood or nearby, about real estate taxes per unit. It would be best to seek the assistance of local assessors in preparing such estimates. Local property taxes -- minus current PHA payments in lieu of taxes on behalf of that project -- have to be factored into the estimates of costs to be borne by prospective homeowners.

If the sale of a particular project seems feasible, based upon the above steps, and is

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A study prepared for HUD by USR & E, Capital Replacement Expenditures in FHA Multifamily Housing Projects: Implications for Addressing the Modernization Needs of Public Housing (1983), suggests that appropriate reserves for public housing modernization needs would be about 18 percent of non-utility operating expenses.

deemed to be desirable by the PHA and the tenants, develop and assess alternative financial strategies and time-tables for sale to tenants. In part, this would depend on the decision, made jointly by the PHA and HUD, as to whether the tenants or HUD assume responsibility for all or part of outstanding indebtedness. If the tenants are to assume any part of the indebtedness, then either downpayments to cover such costs have to be built up over time and on a scheduled basis and/or the PHA has to develop a subsidized loan or mortgage program to cover these costs on an amortized basis. Similar decisions have to be made with respect to any closing costs. A range of possibilities may be assessed here.

Before sales take place, a transition period management plan for the project should be developed with tenants. This plan might include homeownership counseling by the PHA or by an outside group. It might also include several stages in the transfer of responsibility from the PHA to the tenants and, finally, owners, with tenants/owners gradually assuming increasing degrees of management and maintenance responsibilities and operations. There would also have to be a plan for the eventual relocation of tenants not able or not willing to buy. See Tenant Impact Analysis (pp. 27-29) and Implementation (pp. 50-52) sections.

If outstanding project debt is relatively high, and HUD agrees to assume all or a large part of it, consider ways of capturing all or a part of any capital gains -- which in this case might be windfalls -- upon resale of the units. This could be done by adopting a Limited or Low Equity Cooperative form of ownership.[43] There is also a potential for substantial windfalls if purchase price is based upon the incomes of prospective buyers rather than the attributes of particular units. Alternatively, the PHA might want to recapture the units -- at less than current market value -- for resale to other low-income tenants residing in or eligible for local public housing.

In the case of multifamily projects or single family homes with communal grounds, decide upon an organizational plan. Among the possibilities are condominium and cooperative forms of organization and ownership.

Retirement

A project that is not financially or physically viable, that is not likely to be made viable by an investment in modernization or by management changes, and that has little or no sales

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A cooperative housing corporation whose bylaws regulate the resale value of membership shares. The resale price is determined by a formula which considers the original downpayment plus increments for inflation, improvements to the building unit, and a small percentage of blanket mortgage covering the cooperative building.

EXAMPLE OF A PROJECT BEST SUITED FOR RETIREMENT

A large, family project with over 700 units consists of five ten-story buildings that are severely deteriorated. Almost 200 of the 700 units are classified as "uninhabitable" due to their poor physical condition, in spite of the considerable expenditure of modernization funds in the 1970s for new kitchen appliances and other major interior improvements. The five buildings are heavily blighted by boarded-up windows and doors, and two of the buildings are completely closed. The grounds of the project need extensive maintenance; the driving areas and parking lots are full of broken pavement, broken glass, and other debris. There are no usable amenities on site; the playground areas are dilapidated and unused. The project's poor condition has earned it a longstanding reputation as "troubled" and as an undesirable living environment. Although close to two-thirds of the units are vacant, applicants on the PHA's waiting list are not interested in living there unless they are desperate, according to PHA staff. Most of the buildings' tenants could be housed in the PHA's other vacant public housing units or could locate affordable housing in the local rental market, provided they were given housing assistance. The options for private market uses are limited; a real estate analysis suggests no significant demand in the neighborhood for alternative uses of either the site or buildings. Conversion to elderly occupancy does not appear feasible either, at least for the near future, since the elderly projects managed by the PHA have considerable vacancies.

value, is a logical candidate for retirement. PHAs may have a financial incentive to retire such projects when they have above-average operating expenditures under the existing PFS operating subsidy system, since the subsidy reduction due to loss of units would nearly always be less than the net reduction in the operating deficit.

The term "retirement," as used here, covers the options of mothballing and demolition, provided that tenants can be relocated in other public housing units or with alternative housing assistance in private market housing. Holding a project, as opposed to demolishing it, provides for more options sometime in the future.[44]

A PHA may wish to hold a project for subsequent sale when it thinks that it might command a satisfactory price in the not-so-distant future as a result of:

In deciding to hold projects for future sale, estimates of the costs of security during the period of mothballing should be factored into the decision-making.

- Ë an improved rental/condominium housing market;
- Ë improved economic conditions and prospects for reuse of the site;
- Ë improved financing terms; and
- Ë improved conditions in the neighborhood in which the project is located.

The determination that sufficient improvements might occur in one or more of these factors in succeeding years would be based on market trends for alternative uses observed in analyzing the sales alternative in the preceding steps.

Demolition is a likely option for projects that are not physically or financially viable and have no sales value or where there is no continuing need for low-income housing of the type involved and no alternative use. Local contractors would be requested to submit bids for demolition. Demolition costs would vary with different types of construction.[45]

Combinations of Alternatives

In high-cost or "troubled" public housing projects that have multiple buildings, occupancy types, and/or occupy large sites, the appropriate unit of analysis may be sections or parts of the project. The optimum use of such projects may encompass a variety of alternatives (potentially, all alternatives, including thinning-out overall project density) uniquely tailored to meet the problems associated with the project.

Examining the desirability and feasibility of a combination of alternatives is essentially more complex because, ideally, it calls for analysis of at least some of the costs and conditions at sub-project levels. If sale is among the options to be considered, the characteristics of the surrounding neighborhood may also be analyzed for segments of the site. The number of possible variations increases with the size of the project -- with a greater number of units and with larger sites -- and with the number of different building types, by location. In the case of especially large or varied projects, the PHA may find it desirable to request the cooperation of the community development and planning departments or to pay for the services of consultants with expertise in land use and engineering.

Analysis in such cases may focus on factors used in determining whether to keep projects as-is, modernize, convert occupancy, sell or demolish and on some additional factors as well. For example:

- Ë Especially high costs may be associated with particular structures. A high-rise

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See, for example, Marshall Valuation Service, Marshall and Swift Publications. Rough estimates of ranges of costs are available for several types of construction. For example, in December 1980, demolition costs ranged from $1.35 to $3.80 per square foot, depending on the type of construction. These would have to be adjusted for unique construction standards, disposal problems, and appropriate recent inflation factors.

may involve particularly high elevator maintenance costs as a result of the extent of use or vandalism. To determine this, such costs would have to be separated out from maintenance totals. A possible solution might be to convert the high-rise to elderly occupancy, or to reserve the project for elderly persons and small households and relocate large households elsewhere.

- Portions of the project may have serious problems with high vacancies, housing quality, design or location that would call for either demolition, reducing density, or extensive remodeling or occupancy conversion of these sections.

- If overall density is the major problem, demolition of part of the project and replacement with recreational, other public, or commercial facilities may improve the situation. Or, density might be reduced with a view to increasing security and minimizing vandalism and other crimes.

- On a large site, some locations may be in the path of accelerating land values for residential or alternative uses and may be able to command high sales prices. Sale of these sections might improve the image of the remainder of the project and its overall financial viability, or improve gradually the sales potential of adjacent parts of the project.

Final Recommendations

The alternatives of conversion from one type of occupancy to another, sale, retirement, and modernization when it involves some reduction in or changes in the configuration of units would all result in some degree of tenant displacement. Footnote 23 discusses how to estimate the number of these tenants to be relocated in other public housing projects or in the private market, with or without Section 8 assistance. Depending on the findings about the availability of alternative housing, the final decisions about the best future use of each project in the stock assessment may conform to the initial decisions or the latter decisions may have to be altered or reversed.

For example, if all tenants to be displaced can be relocated in suitable housing at affordable prices within a reasonable time period (say, 6 months to a year), the PHA may be able to proceed to implement the decisions. If relocation would take from one to two years, then the PHA may wish to set priorities and proceed with the plan on a longer time-table, project by project. The time-table would take into account the length of time needed for relocation of tenants from each project, according to its size and tenant composition.

If it is not anticipated that it is feasible to relocate tenants to be displaced within a reasonable time, then some of the initial decisions would be abandoned and some or all projects best suited for occupancy conversion, sale or retirement would become candidates for retention as-is or, more likely, modernization. The final decisions with respect to alternatives would be based on the priorities set and the feasibility of relocating the households within an

established time-frame.

IV. IMPLEMENTATION

It is anticipated that PHAs undertaking a stock assessment will find that many projects are in sufficiently good financial and physical condition to be continued in operation as-is. In addition, many PHAs will find that some projects should be modernized in order to continue to serve the same occupancy type as previously. It is expected that only a minority of PHAs will find that the most effective alternatives include occupancy conversion, sale, or retirement of one or more projects in the short run. In addition, implementing decisions to modernize, convert occupancy, sell or retire will require HUD approval

PHAs selecting the alternatives of occupancy conversion, sale or retirement and, to a lesser extent, modernization, may have to take steps that are unfamiliar to them and to develop a plan, or plans, to do so. The following is a checklist of suggestions intended to smooth the implementation process by anticipating steps that might need to be taken and potential problems that may arise. These will, of course, vary considerably from PHA to PHA because of variations in local government structure, state and local laws, the size and resources of PHAs and local governments, and the nature and scope of the alternatives selected.

Some of the following steps will necessarily overlap in their timing. Therefore, the order in which they are listed does not reflect the sequence in which they should be addressed.

Tenant participation. The tenants of the projects under consideration need to be given an opportunity to discuss the alternatives (to keeping the project as-is) under consideration and to air their points of view. This is currently a HUD requirement for modernization, demolition or sale. It is also desirable to hear the views of tenants before making a choice that they may oppose or for which they may have useful suggestions.

Relocation. If there is to be substantial relocation, the PHA must develop a program to effect it as smoothly, speedily, and economically as practicable.[46] Depending on the nature and size of the relocation effort called for, this may involve additional temporary staff or the help of other public offices or local voluntary agencies. The relocation program may be viewed as having several possible components or stages:

- matching tenants to existing vacancies or units becoming available through modernization in other public housing, according to household and unit size and household preference vis-a-vis particular projects and/or locations;

See HUD, Office of Community Planning and Development, Looking Beyond the Walls: A Guide to Relocation, July 1981.

- earmarking Section 8 Existing housing certificates for households about to be displaced; and assisting those households in finding private rental units;
- identifying potential units in other Federally assisted housing for displacees; and
- providing either financial or physical assistance in moving.

Legal barriers. For certain alternatives, in particular sale and, perhaps, demolition, state and local laws should be reviewed for any potential legal barriers to implementation of these alternatives and for the conditions, if any, under which they can be undertaken. For example, if sale of a project is contingent on the provision of replacement housing under state or local law, the PHA may need clarification on the specific terms under which such replacement housing (or housing assistance) would meet the requirement. Or, if a specific local procedure has to be followed in either sale or demolition, information on the procedure would be needed.

Approvals. Even in the absence of state or local legal barriers to the implementation of particular alternatives, HUD approval will be needed for all but continued operation as-is.

In some cases, local government approval will be necessary. Where the housing function is part of a local department of housing and/or community development, this approval will be part of the regular decision-making process. In other cases, local government approval is desirable though not required. Formal or informal approval by the mayor or executive office and by the local legislative body would facilitate the process. Without their support, the proposed actions could face roadblocks of one kind or another.

Where reuse of the site is involved, as in sale for residential or non-residential uses, every effort should be made to secure the involvement and cooperation of the community development or planning offices or both, if both exist, in deciding on the appropriateness of the alternative uses and the conformity with local development plans and zoning. This may actually be a local requirement. Again, where the public housing function is located within a department of local government, such cooperation and approval may flow from regular working relationships.

It may also be desirable to air plans with local neighborhood associations and other groups. These groups often play a role in shaping decisions affecting neighborhood conditions and changes.

Contracting. Where local PHA and government offices are small and staff is limited in numbers and/or expertise, the PHA may wish to consider contracting for services needed. For example, the PHA may wish to contract for the services of realtors or brokers to handle sales and financial arrangements. Even large, well-staffed PHAs may find it of value to contract for evaluation of sales prospects and valuation of the property in order to get objective, independent findings and to free up PHA staff.

Budgets and Time-tables. A budget for costs associated with the alternatives will have to be prepared. Depending on the scope of the proposed alternatives, this may require budgeting over a time frame of several years. If so, a time-table for necessary steps will also be needed. The budget should include any contract and relocation expenses to be incurred and any net receipts from sale or other sources. The budget should be broken down to the project level.

Developing a monitoring system. Finally, it would be desirable to establish procedures and a time-table for:

1. monitoring the implementation progress for those alternatives acted upon;

2. monitoring borderline decisions and changing circumstances that may help in making final determinations of optimum stock uses and their timing; and

3. periodic stock reassessment.

As part of the monitoring and reassessment processes, basic data gathered and methods of analysis may be improved and refined over time.

-- DRAFT --
April 1983

A Guidebook on Market Analysis and Valuation for Sale

Table of Contents

I. INTRODUCTION

The steps leading to valuation of a property for possible sale include:

- assessment of recent economic and demographic trends in the local community or area and in particular sectors of the economy, e.g. residential, commercial, industrial,
- evaluation of neighborhood characteristics and trends;
- examination of project characteristics for potential reuse for residential purposes, and analysis of particular markets at or near the site to arrive at a judgment about possible alternative uses of project or site for commercial, industrial, etc. purposes; and
- valuation of project or site for the likely alternative use options.

There is some overlap in these steps. For example, the first two could be undertaken simultaneously.

A first step, then, would be to get an overview of recent local economic and demographic trends for the locality. Some basic data requirements and suggested information sources are listed in Exhibit 1. In large cities, much of this information should be available from local government planning or economic development offices, building permit offices, and the local tax assessor.

The financial feasibility, and hence market value to a PHA, of a project is closely related to the overall strength or weakness of the local economy as well as to those for particular types of development. A declining economy translates into slow growth, low-level demand for most types of real estate development, and a lack of developer initiative and investment.

An overview of local economic strengths and weaknesses for particular types of developments would include the following:

- Trends in the local industry or industries; evidence of expansion or contraction among these industries, such as plant closings, layoffs, reductions in force; trends in the rate of local unemployment;

Exhibit 1

DATA FOR ANALYSIS OF LOCAL ECONOMY

DATA ITEM	SUGGESTED SOURCES
Population and household counts and characteristics (current and historical) e.g., age and race distribution, average household size. Projections of the same.	U.S. Bureau of the Census (decennial census and *County and City Data Book*). Typically available at tract or jurisdictional level from local or regional planning office. Projections may or may not be available from local/regional public planning offices. Local public utilities often prepare projections of population and housing units.
Housing counts and characteristics (e.g., vacancy, tenure, value, rent levels). Projections.	Same as above.
Income data (current and projections).	U.S. Bureau of the Census or Bureau of Economic Analysis. Estimates and projections might be prepared by the local or regional planning offices.
Employment data (historical trends and projections). Data available by place of employment, typically shown by standard industrial classification, or by place of residence, usually shown by occupation. Unemployment level. Employment projections.	U.S. Bureau of the Census (decennial census). State departments of labor or employment commissions. Typically available also from local or regional planning offices. Projections are often by a regional council of governments or planning commission.
Construction, building permit data (city and region wide).	Local building or planning and zoning departments. Regional planning office will often have it available by jurisdiction. U.S. Bureau of the Census, construction and building permit reports.

- Trends in the composition of the local economy (for example, shifts from a manufacturing-based economy to a finance and service-oriented economy), employment opportunities in the new industries, by type of employment;

- Trends of population and employment dispersion or decentralization; shifts in residential location; clustering of commercial and industrial development in particular locations within the area; declines in other locations;

- Trends in building permit data for the city and region by type of development;

- Trends in income data reflecting expansion or contraction in employment opportunities for local population; evidence of enhanced opportunities for only a limited segment of the local population; and

- Trends in local population by age cohorts.

If trends tend to be downward but there is a likelihood of a change in direction in the near future, the PHA may wish to defer more detailed analysis to some later date when near-future trends become clearer. If trends tend to be downward but there are slim or no real prospects for improvement, the PHA would be wise to continue the analysis of feasibility and likely sales prices.

A second step would be the evaluation of neighborhood trends and prospects. This analysis includes many of the same types of information as the first but focuses more intensively on recent land uses and potential land uses in the neighborhood of the project under consideration. A checklist of factors critical to a neighborhood evaluation would include:

- Characteristics of the resident population: apparent demographic trends, e.g., population loss or gain, shifts in the distribution of population by age groups and income levels within the neighborhood, changes in household size and composition, changes in household formation and rates;

- Characteristics of the surrounding land development: compatibility with the public housing project in terms of use, quality of construction, architectural style, maintenance, and general appearance of surrounding development;

- Market experience of the surrounding real estate, current and historical trends in occupancy rate abandonment, building values, rent levels, sale prices, and the cost of land;

- Evidence of public and private investment in neighborhood residential and business real estate: construction trends. Publicly assisted improvements.

Future new development or renovation plans;

- Locational attributes: access to shopping and employment centers and other complementary land uses. Access to public transit. Visibility. Image of neighborhood (e.g., prestige address, low-income, solid middle class);

- Presence of (and quality of) the infrastructure; and

- Planning and zoning regulations: permitted uses, planned changes in zoning requirements.

This neighborhood evaluation will define the character and market experience of existing development, the level of public and private investor interest in the neighborhood, permitted or planned new development or revitalization efforts, locational attributes, and the nature of the resident population. In sum, these factors are critical to a determination of the neighborhood's growth potential and the alternative use that would be most suited to the neighborhood environment and the most recent trends in, and adjacent to, the neighborhood.

The third step is to select the highest and best potential private market uses of the buildings and/or site. This is initially mostly a question of judgment as to the characteristics of the buildings themselves and the prospects for the site and its surroundings. The project and neighborhood evaluations are reviewed so that a determination of potential uses can be made. A windshield survey of the neighborhood is also most desirable. Then the market for each of these potential uses thought to be viable is examined in greater detail.

In addition to residential, office, hotel and industrial options, consideration should be given to other possible uses of the site. A particular location might be ideal for a hospital or medical facility or for badly needed open space or a recreation center. The local planning office should be consulted about this before any decisions are made.

The approach to a classic market analysis is to evaluate the existing and future supply of a given type of development, as well as the probable future demand, to arrive at the price level and time period for absorption into the market place. Using data on prices that the market can support, the financial feasibility of undertaking the investment is then evaluated. (See step 4.) The specific sources of data and elements of demand and supply are quite different for each land use. The guidelines for use determination and the method of approach for analysis of residential development or redevelopment are discussed below. The discussions for reuse of the site for office, hotel, or industrial purposes appear later in this section.

II. RESIDENTIAL MARKET ANALYSIS

Introduction

An initial determination to be made is whether the existing buildings are likely to be attractive in the private residential market. If not, reuse of the land for new residential construction may be a better option. Demolition of the existing structure would have to be costed out and included in the feasibility of the projected sale.

If reuse of the project or site for residential rental purposes is a likely option, background information on the local rental housing market should be obtained. Most larger cities have apartment leasing guides, published by multifamily housing associations, that are very helpful. Other good sources are statistical information on housing production which are usually published by local newspapers and the local planning or economic development offices. These sources often include household characteristics, population trends, housing starts, etc. Sometimes a local real estate broker or a firm that conducts statistical surveys will do a periodic inventory of rental apartments, their rent levels, and vacancies. If vacancy rates are generally very high, the residential option may not be viable and alternative uses should be analyzed.

For residential reuse, whether the existing structure is to be remodelled or a new building is to be built is of major importance. Several apartment complexes should be chosen in the neighborhood of the site that most closely resembles the type of unit that is expected to be at the site property. Where possible, these buildings should be equivalent in terms of the structure type (high-rise or garden apartment) and the income level or tenant type that is to be attracted to the project. These existing developments would then be "shopped" to determine the pertinent data on the size and layout, rent levels, amenities, and occupancy rates. Then, comparative tables should be prepared, indicating the rent level per square foot for each type of unit and the amenities and features offered at the price levels.

The next task is to analyze what rent levels are likely to be obtained at the subject property. This is done by evaluating the comparable projects and making adjustments to account for the differences between the specific comparable developments and the property under analysis. This process involves a large element of judgment. The types of factors for which adjustment would be made include:

- Location: neighborhood appeal and environment; convenience to shops, work, and transportation; income level of residents;
- Amenities offered: appliances (quality and type); security features; recreational facilities (pools, playgrounds, exercise room or party rooms);
- Attractiveness and quality of the building and units;

- Size and layout of the units; storage space; and
- Lease terms.

If there are no "comparables," a judgment would be made about the rents which prospective tenants might be willing to pay for the units at the property being analyzed. Typically a rent level per square foot is derived from these adjustments, and a monthly rent for each unit type estimated. The rent level per square foot varies inversely with the size of a unit, so a small efficiency apartment of 400 square feet may command a rent of 60 cents per square foot per month while a large three-bedroom apartment unit of 1,400 square feet may rent for only 40 cents per square foot per month. If one apartment complex includes utilities in the rent and another does not, then the cost of utilities should be estimated and the rents adjusted to ensure that what is being compared is similar.

It is important to determine absorption to establish the expected cash flow in the next step. Absorption of the units is defined as the number of units per month that can be expected to be rented over time when a complex opens and can be estimated using the following types of information: the rate at which units in comparable developments were rented up; the overall vacancy rate in the area and at the comparable developments. A tight market with a low vacancy rate of well under 5 percent would indicate that new units could be rented up quickly. (High vacancy rates, on the other hand, would indicate little demand for units and are often tied to lower rent levels and downward pressure on rent levels.)

Once these figures have been developed and the prospects for rental housing development still appear to be good, a financial feasibility study is the next step.

The technique for condominium market analysis is similar to that for a rental complex. The key differences in the approach are to:

- Look at the level of condominium conversions in the past and potential future;
- Identify new condominium projects planned and under construction;
- Choose comparable condominium developments;
- Determine sales price per square foot of the comparables; and
- Evaluate the financing package including the amount of downpayment and the terms of the mortgage, e.g. interest rate, seller buy-downs, special financing arrangements. (In the recent past, with interest rates at very high levels, condominium sales suffered greatly. In response to lagging sales levels, many developers offered special financing packages, lowered interest rates or price levels, or rented the projects. Other developments were foreclosed and units auctioned off at low prices. Care should be taken in evaluating sales under such circumstances and in making assumptions about expectations with lower interest

rates.)

Once the sales prices and rate of absorption of the condominium units are determined, the financial feasibility can be analyzed.

The fourth and final step is to test the financial feasibility of the options judged to be potentially the most viable by estimating the value of the properties to be developed or redeveloped. Real estate appraisers use three basic approaches to determine the value of properties. Where applicable, all three approaches are used in the appraisal of a particular property and the results are then reconciled into one appraised value.

Three Approaches to Valuation

The approaches to value can be summarized as follows:

- **Comparable Sales Market Approach**: This method looks at the sale of properties of a similar type in similar locations and, after adjusting for any differences, arrives at a value of the property being studied.

- **Replacement Cost Approach**: Using this method, the value of the improvements is estimated as the cost to replace them -- construction cost less depreciation. The estimated value of the land (typically derived using the market approach) is then added to the estimated value of the improvements; and

- **Income Approach**: For income producing properties, an estimate is made of the net income stream generated by the development. Most commonly, either the income over a period of time is discounted to present value, or a typical one year net operating income is capitalized to obtained a value estimate. This approach treats the property as an investment that produces a return in the form of an income stream, including net operating income and potential appreciation or depreciation in value.

All three approaches should be used if possible. These three approaches can be good cross checks on each other, to make sure the assumptions used and judgments made are correct. If the results vary widely, the assumptions and judgments should be reviewed for their relative strengths and the results reconciled accordingly.

The comparable sales market approach is valuable as an indicator of what investors are actually paying in the market or, indeed, whether there is any market at all. It is particularly useful where a potential purchaser (or the PHA) is likely to demolish the existing structures. In such cases, it is useful to determine the sales prices per acre of comparable parcels of land, making adjustments for differences in:

- zoning;
- abutting property uses and neighborhood characteristics;
- width and frontage;
- shape;
- contour;
- soil and subsoil characteristics;
- access to public transportation and highways;
- date of the sale;
- any special financing arrangements; and
- leases.

The comparable sales market approach may be difficult to use where public housing projects are quite different from the conventional apartment developments that would serve as comparables. The number and type of adjustments to value required to account for the differences involve judgment and affect the validity of the results. (If adjustments are larger the comparables may not, in fact, be comparable.)

Data on comparable sales can be obtained from several sources, including the local tax assessor's office, appraisers and realtors. It is important to find the most recent sales of properties (within five years) that are similar in size, location, and property description. (Note: It was pointed out earlier that if the purchaser is to be responsible for demolition of the structures, the estimated demolition cost must be subtracted from the estimated value of the cleared site to estimate the value as-is.)

Replacement cost gives another, independent valuation and is especially useful for projects that will be kept for residential reuse. It will typically not be a very useful approach by itself for estimating the value of a public housing project that will be torn down or substantially modified. In such cases, replacement cost would not be a reliable indicator of the price an investor would pay for the project either for redevelopment or for demolition and reuse of the site.

The income approach is valuable because it is based upon specific uses and market responses. The remainder of this section focuses on the income approach to valuation. Many techniques within the broader income approach category are used by professional appraisers to value properties. A complete exposition of these technique is beyond the scope of this report. However, a brief overview of a few of the most important techniques is provided.

Regardless of the specific techniques used, a critical component of the income approach is a realistic estimate of the rental income that can be obtained on the private market. This income may be obtained by renting the project as private apartments (perhaps after rehabilitation) converting the existing building to some other use, or demolishing the existing buildings and replacing them with alternative rental structures. The example below illustrates methods by which the estimated effective gross income is used to determine value for residential uses of the project.

There are several techniques for estimating the value of income properties using the income stream. The three techniques discussed here are:

- use of an overall capitalization rate;
- use of an equity dividend rate; and
- discounting the projected cash flows to present value.

The example used throughout this section is a hypothetical public housing project that could be rented on the private market. This example assumes that a market analysis has determined that gross potential rental income in the first year would be $290,160; that these rents are likely to increase by 6 percent per year; and that vacancy and collection losses are likely to be 25 percent of gross income in the first year, 10 percent in the second year, and five percent thereafter. The estimated effective gross income (potential gross income less vacancy and collection losses) is shown for ten 10 years of operation in the top section of Exhibit 2. This same example is employed to illustrate results using different valuation approaches.

Regardless of the specific technique used, it is necessary to estimate carefully the expenses likely to be attached to operating the development privately. If the PHA has project-based budgeting and the project is expected to be operated as private rental apartments, a good starting point is the actual expenses of the project during the past several years. If data for the project are not available, assumptions have to be made about likely operating costs based upon information that is available. Various industry sources can be used to estimate expenses, usually as a percentage of income or on a per square foot or per room basis. Managers of comparable developments can also provide useful information.

Various adjustments up and down must be made in these figures:

- Estimated real estate and other taxes must be added and any payments in lieu of taxes subtracted from the PHA's expenses;

- Consideration should be given to whether private operating costs would be lower, perhaps because of the need for fewer social services or less expensive security measures or because private management could operate the project more efficiently. Conversely, operating costs could be higher because private management might be less efficient or might maintain the property at higher standards. For private management one would also add a profit factor;

Exhibit 2

HYPOTHETICAL "CASH FLOW PROJECTIONS" TABLE

(This Exhibit is not included in the electronic version of this report.)

- Allowances for replacement reserves for components of the building that are likely to need replacement during the economic life of the structure must also be added; and

- Rehabilitation that a private purchaser would be likely to carry out (for example, improved insulation or installation of individual meters) might also affect operating costs.

Various industry sources can also be used to estimate expenses, usually as a percentage of income or on a per-square-foot or per-room basis. This is particularly useful where a project is likely to be sold for other than continued rental use as apartments or where the PHA does not have project-based budgeting, but it also provides a good check on expenses derived from PHA experience.

The expenses are then subtracted from the effective gross income to determine the estimated net operating income. In the hypothetical example, expenses have been estimated at $153,124 in the first year and are expected to increase at a rate of seven percent per year. The estimated net operating income in the example is quite low in the first year, due to the high vacancy rate, but is projected to be almost $113,000 in the second year.

Use of Overall Capitalization Rate

The first technique, use of an overall capitalization rate (often called a "cap rate"), uses the net operating income in an early stabilized year to estimate the value of the property. A stabilized year is one when a development is fully operational, i.e., has been leased up. This might be two or three years after the initial opening of a development.

Using this technique, the next step is to choose a capitalization rate to apply to a given project and land use. "Capitalization is a process that translates an income projection into an indication of value. The connecting link is a rate that reflects the return necessary to attract investment capital."[47] An overall capitalization rate is essentially net operating income divided by sale price or value. This rate takes account of both the return on investment expected by a purchaser and the anticipated depreciation or appreciation in the value of the property. By reviewing sales of income properties with particular characteristics, appraisers determine overall capitalization rates that reflect the actions of investors in the market place. Each possible land use has differing degrees of risk, and the site location can be more appropriate for one type of use than another. The capitalization rate that is appropriate for a particular public housing project depends on such factors as:

- quality of location for a given land use;

American Institute of Real Estate Appraisers, *The Appraisal of Real Estate*, 1978, p. 364.

- quality of building construction;
- functional utility of the building;
- building condition;
- financing availability and terms;
- tax shelter potential;
- potential for appreciation;
- potential for depreciation;
- payback period for equity investment;
- lease terms for leased buildings;
- subjective perceptions of risk; and
- expectations about inflation.

The first four factors were also taken into account in the estimate of the income stream. A specific purchase agreement affects many of the components of a capitalization rate. The appropriate capitalization rate for public housing projects would vary tremendously, depending on the factors listed above. Choosing an appropriate capitalization rate (or equity dividend rate and discount rate in the examples following) requires experience in the particular market.

In the hypothetical example, a capitalization rate of 10 percent has been determined to be reasonable, and the second year is considered to reflect stabilized conditions.[48] The estimated value is determined by dividing the second year net operating income by the capitalization rate:

$$\$112,970/.10 = \$1,129,700$$

The value estimate is highly sensitive to the cap rate used: for example, a 9 percent rate would result in a value estimate of $1,255,222, or 11 percent higher.

Use of Equity Dividend Rate

This directly takes account of financing rates and terms or of income tax implications of different investments. (These factors are subsumed in the choice of the appropriate cap rate but not accounted for specifically.) One fairly simple technique takes account of these components by using an equity dividend rate or required cash flow, before or after taxes. For example, in the hypothetical example, review of comparable sales may determine that investors require a cash flow after taxes in the stabilized year that is at least eight percent of the invested equity. As with cap rates, the required equity dividend rate will vary with the factors listed above that affect the perceived risk of the investment. Use of this technique requires estimates of the financing that would be available (and therefore the debt service payments that would be required) and the tax effects of the investment. This technique is particularly useful when

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Considering the long projected rent-up period before 95 percent occupancy is expected to be achieved, the third year might also be used.

considerable variation in financing arrangements exists in a particular market.

In this variation of the hypothetical example, it is determined that 15 percent financing could be obtained and that the lender would require the net operating income in the second year to equal at least 1.25 times the debt service. This figure (1.25) is known as the debt coverage ratio. At a 15 percent interest rate, amortized over 25 years, a $588,010 loan would require an annual debt service of $90,377, which is 1.25 times the estimated second year net operating income. Thus, the remainder of the purchase price would have to be invested as equity by the purchaser.

A debt service of $90,377 would result in a before tax cash flow of $22,593 in the second year. As shown in the bottom of Exhibit 2 could also be a tax benefit of $22,727 in the second year, using straight-line depreciation, so that the total after-tax cash flow would be $45,320. If, as discussed above, a purchaser requiring this cash flow to be 8 percent of equity would be willing to invest $566,500 in equity to obtain this equity dividend, calculated as follows:

$$\$45,320/.08 = \$566,500$$

This equity investment is then added to the mortgage amount to obtain the estimated total value of the project:

$$\$556,500+\$588,010 = \$1,154,510.$$

The same calculations, done with different mortgage interest rates, dramatize the effect of interest rate and other financing considerations on value. With 10 percent financing, even with the same equity dividend rate and debt coverage ratio, the estimated value would be $1,358,032 (18 percent higher than the value with 15 percent financing). As with the cap rate, the result is very sensitive to the equity dividend rate. The higher the rate, the lower the value.

Discounted Cash Flow Analysis

The third approach discussed in this section -- discounted cash flow analysis -- is somewhat more complicated and requires many additional assumptions. It cannot be explained in detail here, but essentially it involves projecting forward all of the components of cash flow for a typical holding period (such a ten year projection can be found in Exhibit 2) estimating the proceeds after sale, and then estimating the present value of each expected future cash flow (at a particular discount rate) so that the total present value of the cash flows can be determined. The sum of these values is the amount that an investor is likely to be willing to put up in equity to obtain the future cash flows. This can be added to the mortgage amount at a particular interest rate to determine the value of the property.

This technique requires that an appropriate discount rate be chosen; as with cap rates and equity dividend rates, this will depend on the perceived risk of the investment, inflation expectations, the type of property, and the many other factors cited earlier. In the hypothetical example, it has been assumed that typical investors would use a discount rate of 16 percent to adjust future after-tax cash flows. With a 15 percent interest rate and 1.25 debt coverage ratio, the estimated value using this technique would be $1,137,462. If 10 percent interest rate financing were available, the estimated value would increase 16 percent to $1,319,937. Again, the results are also very sensitive to the discount rate employed.

This technique is in some ways the most sophisticated. It is particularly useful for taking account of anticipated uneven cash flows, long rent-up periods, or wide variations in expected depreciation and/or inflation. However, the results are very sensitive to the projected sales price at the end of the holding period, which is difficult to predict accurately. Typically, the projected cash flow at the time of sale is capitalized to estimate what the future sale price will be, so that the capitalization approach is an integral component of the discounted cash flow analysis (see Exhibit 3).

Exhibit 3

ESTIMATED SALES PROCEEDS AT END OF HOLDING PERIOD
HYPOTHETICAL PROJECT SOLD FOR PRIVATE RENTAL

COMPUTATION OF TAXES DUE UPON SALE	**YEAR 10**
ORIGINAL BASIS	1,129,700
COST OF SALE	99,279
SUB-TOTAL	1,030,421
ACCUM DEPRECIATION	707,533
ADJ BASIS AT SALE	322,877
SALE PRICE	1,985,584
ADJ BASIS	322,877
GAIN	1,662,697
GAIN	1,662,697
CAPITAL GAINS RATE	.20
CAPITAL GAINS TAX	332,539
TOTAL TAX LIABILITY	332,539

COMPUTATION OF REVERSION SALES PROCEEDS	YEAR 10
SALES PRICE	1,985,584
COST OF SALES	99,279
MORTGAGE BALANCE	538,117
PROCEEDS BEFORE TAX	1,348,188
TOTAL TAX LIABILITY	332,539
PROCEEDS AFTER TAX	**1,015,649**

Renovation, Construction and Demolition Costs

Regardless of the technique used, the estimated value must be adjusted to take account of the costs of rehabilitating or renovating the project, if the existing structures are to be retained (as in the hypothetical example); or the cost of demolishing the existing structures and building a new investment property on the site. Most PHAs are familiar with techniques for estimating rehabilitation costs. In general, however, it may be most accurate to obtain informal estimates, from local contractors, of the cost of a possible rehabilitation, demolition, or construction project.

In the hypothetical example, it has been estimated that $180,000 in renovation costs would be required to rent the units in the private market at the rents estimated in the market analysis. If the discounted cash flow approach has been used and the interest rate was expected to be 15 percent, the renovation cost would be subtracted from the estimated value to calculate the as-is value that the PHA would be likely to achieve if the project were put up for sale:

$$\$1,133,462 - \$180,000 = \$957,462$$

Condominium Conversion

There may be cases where the most profitable private use of a project would be to convert it to condominiums. Estimating the likely sales price to a converter requires a somewhat different technique. First, as discussed in the market analysis section, the retail value of the units as condominiums should be estimated.

A converter typically will pay about 60 percent of the final retail value for a potential condominium building in decent condition, in a good location, and in a reasonably stable market. This percentage may have to be lowered if there is a need for excessive rehabilitation, a less-than-ideal location, and/or an unstable market. The determined percentage, applied to the estimated retail value, will provide an estimate of the potential sales price of the project to a condominium converter.

MARKET ANALYSIS AND VALUATION FOR OFFICE, HOTEL, OR INDUSTRIAL REUSE OF SITES

In addition to residential use of the project or its site, the results of the first two steps may indicate that the site may have value for other types of development. An internal HUD study shows that it is unlikely that non-residential reuse will be as viable as a residential use.

The purpose of this section is to outline the methodology that could be used to complete the market analysis and to estimate potential value of office building, hotel, or industrial reuse of the site. In addition to these possible reuses, there are other possibilities not discussed in this guidebook; these might include retail centers, convention centers, hospital or health centers, and public facilities.

The PHA could enlist the services of the local economic development or planning office in reviewing the potential uses of the project or site. These offices might also be of assistance in performing market analyses. Or, if the potential sales value is thought to be substantial the PHA may wish to hire consultants with expertise in particular types of development to assist in the market analysis and valuation. It may also seek the advice of local bankers and realtors. In PHA requests for sale, HUD would currently require an appraisal.

Checklist of factors to be considered in carrying the market analysis process further as well as sources of information are also presented below.

Office Development

Near the central business district or in a suburban business district is the best potential office location. Sometimes land on a major road in a suburban area can be a successful site. Also, sites near major generators of demand for office space, such as a hospital (for medical

offices) or close to a university may be a good location. The zoning potential for rezoning must be considered for the feasibility of development.

The best sources of data on office development trends are the local economic development agencies and commercial brokers. Large brokerage firms often put out periodic newsletters that give information on buildings for rent, the lease rates, and the amount of space leased over the past year as well as the amount of new construction. These newsletters can be easily obtained and, combined with discussions with individual leasing agents, an overview of the existing development scenario can be ascertained. Brokers will be able to provide rent levels, lease terms and deals being made on individual buildings near the subject site.

Local government staff can also assist in obtaining information on development in the pipeline that may be up for rezoning or obtaining a building permit. The level of future development must be adjusted on the basis of the certainty of development. Buildings under construction will be available for occupancy in the near term. Buildings that are obtaining government approvals may be delayed due to financing, leasing or other problems associated with the development process, or the project may never come to completion for any number of reasons.

The major buildings in the area of the site should be visited. The things to look for are:

- The quality and character of the building (quality of materials and furnishings);
- The physical attributes of the building: the number of stories and parking availability and type (surface or underground);
- The number and types of tenants: regional industry and corporate offices, clerical operations for service industries, or local services;
- The total square footage in the building;
- The rent levels and lease terms lease up time, absorption rate; and
- Space availability and vacancy rate.

Once several of these buildings have been visited, the projected characteristics of a building at the project site can be estimated.

The types of data that would be estimated are:

- rent levels;
- size of the building;
- number and type of parking spaces needed;

- absorption (amount of space leased per month at initial lease up); and
- operating costs.

The rent levels and operating costs are usually expressed in dollars per square foot, per year. So typical rent levels may be on the order of anywhere from $9-$30 per square foot, per year (more or less in unusual circumstances). The price is very sensitive to the location of the building and the particular city that is being analyzed. Prime downtown locations usually command the highest rents. Operating costs may run on the order of $2.50 to $5.50 per square foot. These costs can be estimated either by discussions with management companies, or through newsletters published by local real estate associations.

Absorption levels at a given site would also be estimated. This is a matter of judgment because overall economic trends and the construction cycle affect whether a given office building will be rented or not. A look at past trends in the amount of square feet leased per year gives some guidance on what might be expected in the future. If, for example, a given downtown area had average absorption of new space at about 150,000 to 200,000 square feet per year over a three or four year period, then that number can be viewed as a benchmark for the future. Local economic trends may indicate a shift toward service sector employment, much of which uses office space. That shift in employment might signal an increase in the amount of square feet of office space that could be leased per year in the future.

The projected total absorption level can then be compared with the amount of square feet of space that is likely to be constructed and delivered for occupancy at a given date. The quality of the location, the building characteristics and the rent levels that are projected are to be taken into account. The subject building would then be taken into consideration compared to these other competing developments. It would then be determined if the subject building would be competitive and how long it would take to lease it up. An overall occupancy rate, once the building is absorbed, should also be estimated.

Hotel Development

For hotel development to be at all feasible, a good location is important. A central business district location, or one on a major highway is best. It is also advantageous if a site is near a generator of hotel room demand such as a convention center, a major tourist attraction, the local airport, office complexes, or a university or college, etc. In addition, the site usually needs to be in a moderate size category of 3-10 acres. Suburban motel sizes need to be substantially larger than a downtown, high-rise site.

Hotel-market analysis is generally more complex than residential market analysis because the market for hotels is more volatile and is often both seasonal and very sensitive to economic conditions. The detailed market analysis is, perhaps, best left to potential purchasers. However, the method of analysis is laid out briefly below.

Good sources of data include the local economic development office, the local convention and tourism bureau, and guides such as the AAA or Mobil guide for each state. The convention bureau will usually have statistics on the trends in visitors to an area (resort areas are the most seasonal) and the type of visitors. The hotel/motel guides will give a listing of hotels and motels with their number of rooms, room rates, the features they offer and a rating as to the quality of the accommodations.

Another type of important information covers occupancy levels and average daily room rates. Sometimes a local government tourism office may have conducted a study, or data can be obtained from an accounting firm that does work for hotel operations. Other sources of information on occupancy are hotel or motel managers. The managers may not want to reveal exact statistics on their operation, but they will usually provide some general figures and some important qualitative information such as the breakdown of the type of visitor that stays at the hotel (tourists, conventioneers, or business travelers).

Once the overall data is obtained on the hotel market, it must be examined careful to determine the potential for a specific site. If there are other hotels in the vicinity, they must be visited and the hotel managers interviewed to obtain data on:

- occupancy levels;
- types of travelers;
- seasonality (occupancy by month);
- average daily room rates;
- special discounts to groups or conventions; and
- quality and character of the facility.

Some hotels have conference facilities that generate income for the hotel. The number, type and size of their facilities should be examined.

The survey of the facilities should yield a good feel for the type of facility that would be appropriate for the location under study. Most likely, the site will be in a downtown area that usually caters more to convention or business travelers than tourists. The other extreme would be the suburban highway-oriented site. This type of facility would attract the tourist and some limited business travelers.

The factors that must be estimated from the market analysis are the average daily room rates and the occupancy levels when the hotel is established and fully operational. This may take a longer period for hotels than for office buildings, for example. If there is marked seasonality in the local hotel market, it would be best to estimate these either on a monthly or quarterly basis. The peak months in a beach or ski resort would occur at different times of the year and could comprise a two month season or a six month season. Room rates change with the time of year or even the day of the week. Business oriented hotels will typically have weekend special rates. When occupancy levels are low, room rates usually drop with them. All of these issues must be analyzed before a financial analysis is conducted.

Industrial Development

Locations that are surrounded by other industrial uses or commercial uses are usually the best sites for industrial use. Added advantages are access to railroad service, major highways, or a shipping port. Constraints that must be considered are availability of energy, water, sewer and labor. Public housing sites with large areas (over 5 acres) and in neighborhoods that have changed to industrial use are often good prospects for this type of use. Ideally, the site will have level topography and stable soils.

The best general source of data on industrial development is the local economic development office. It will often have brochures on the industrial parks in the area and listings of major industrial users, etc. Other background data that is important to examine are employment trends in the region, particularly in the manufacturing sector and in wholesale trade. These trends should be carefully reviewed, since many cities are experiencing major cutbacks in industrial employment. If the employment trends show some expansion in these sectors, and the locational criteria suggest that industrial development is appropriate, then other factors in the market can be examined. The major locational criteria are:

- Good access to major forms of transportation (one or more): rail, interstate highways, and waterways;
- Compatible surrounding land uses, such as industrial, commercial, or other non-residential uses;
- Flat, easily developed site; nad
- Availability of utilities such as electricity, sewer and water.

The market analysis can then focus on the sources of demand. Demand may come from three sources:

- Replacement of outmoded facilities of existing companies;
- Expansion of existing companies; and
- New companies moving to an area.

If the site is surrounded by industrial uses, it will be important to "shop" these facilities. The purpose of the visit would include ascertaining the following information:

- Whether the buildings are leased or owned;
- The sale price of the property or the rent level;
- The kinds of activities that occur at the site (storage, distribution, manufacturing, etc.);
- Need for expansion in the future;
- Whether the company is planning to move away;
- Whether the company is satisfied with the site and the surrounding

neighborhood; and
- Ë The forms of transportation used in the course of business.

Industrial parks in the area should be evaluated as:

- Ë rent charged;
- Ë land prices;
- Ë utilities or transportation service;
- Ë vacancies in buildings; and
- Ë land sales over time.

The answers to these questions should provide enough information to analyze likely amount of land absorption for the industrial uses in the coming short range future (2-3 years). Interviews with industrial land brokers can indicate the sales prices of land -- usually expressed per square foot, or per acre for very large sites. The other questions that need to be resolved in order to do a financial analysis involve the rate of land absorption at the subject site. Absorption can be estimated either as a share of the regional land absorption, or, if past trend data for the surrounding area is available, the latter information can be used. It is important to evaluate the project site in relation to other sites that may be available. The locational factors are usually the most important, especially access to transportation. Once the pace of absorption and rent or land prices have been determined, the financial analysis is the next step.

Valuation

The techniques for estimating value are generally the same as for residential use of the structure or the site. However, as with reuse of the site for new residential construction, since the value of the site is of great importance, the market sales approach to valuation should be used along with the income approach. Recent sales prices of comparable sites would be used to estimate the current value of the particular site. Again, adjustments would need to be made for differences in location, size of site, suitability for different types of construction, etc. If there have been no recent sales of comparable sites for a particular use, tax assessments of comparable sites could be used as the basis, before adjustments.

Value would be related to the degree of risk, the financing terms available, the cost of construction relative to expected returns, etc. The cost of demolition has to be factored into the equation, either as a reduction in cash return to the PHA or as an expense to the purchaser in preparing the site.

July 1996

Supplemental Procedural and Methodological Considerations Pertaining To:

Public Housing In A Competitive Market: An Example of How It Would Fare

Table of Contents

PUBLIC HOUSING IN A COMPETITIVE MARKET:
An Example of How It Would Fare

SUPPLEMENTAL PROCEDURAL AND METHODOLOGICAL CONSIDERATIONS

This is an annex to the report entitled, *Public Housing In A Competitive Market: An Example of How It Would Fare* (U.S. Department of Housing and Urban Development, April, 1996). It provides additional procedural and methodological detail beyond what is provided in the report, under five headings:

- Determining each development's operating costs;
- Determining each development's immediate-term occupancy rates;
- Determining each development's stabilized occupancy rates, market rents, and surplus/deficit potential;
- The housing authority's response to its fiscal projections; and,
- Enhanced asset management possibilities.

I. Determining Each Development's Operating Costs

To assess the financial effects of possible actions a housing authority can take with its inventory, it is necessary to estimate both the revenues likely to be generated by each individual development and the costs likely to be incurred at each. Parts II and III, below, treat the occupancy and market rent data needed for projecting revenues. This part deals with determining costs.

The Baltimore PHA uses cost-center accounting.[49] Some of the centers consist of individual developments, some consist of multiple developments, and others involve administrative or other costs not directly associated with any particular development. How all costs were allocated to individual properties is detailed below.[50]

Some PHAs maintain only agency-wide books, others group properties into cost centers for accounting purposes, others have project-level accounts, and yet others have some combination of project-level and cost-center accounts. If all costs are posted directly to individual properties, of course, the allocation issue is moot.

There are several methods that can be adopted to allocate both operating costs and central office costs to individual properties. The *Project-Based Accounting Guidebook* (U.S.

Kinds of costs. PHAs have two kinds of costs, regardless of the bookkeeping mechanism employed to account for them. These are: the costs associated with providing services at properties (referred to here as operating costs) including ordinary maintenance and utility expenses; and those associated with administrative functions usually performed out of some central location (referred to here as central costs) including planning, agency-wide financial management systems, the unallocated work of central maintenance and other crews, the executive director's office, etc.

In Baltimore, operating cost accounts are maintained for single-development cost centers in about one-half of the cases, and in multiple-development (two or three property) cost centers in the remainder. The first task was to sub-allocate expenses in multiple-development cost centers to their component properties. Once done, the second task was to allocate central costs to individual properties. These are treated separately below.

Sub-allocating operating costs. Several methods could have been adopted to estimate the contribution of each property of a multi-property cost center to the center's total.[51] These include: a pro-rata method based on total unit distributions; a pro-rata method based on the number of bedrooms at each development; allocations based on the salaries of staff (or full time equivalent (FTE) employees) assigned to individual properties; allocations based on the time spent on various jobs at developments; and allocations based on the known characteristics of certain properties for which cost data were available.[52]

The simplest and quickest method of sub-allocating operating costs to individual properties in a center would have been to base it on each property's share of units. If a particular property had 40 percent of a cost center's units, it would be charged with 40 percent of the cost center's operating expenses. The same could have been done using number of bedrooms in each property, based on the assumption that larger unit sizes mean larger families and higher costs.[53]

Department of Housing and Urban Development, October 1990) prepared by OKM Associates, offers a compilation of methods based on detailed studies at nine PHAs. The report advises that PHAs should carefully weigh the need for information, the costs of obtaining it, and the level of detail necessary as output, and then choose the method most closely approximating what is known about developments and local conditions affecting costs.

It was assumed that last year's (actual) costs were equivalent to the costs for the (next) year being projected. Where this is not likely to be the case, however, adjustments would need to be made based on the best available information as to likely future costs.

See *Project-Based Accounting Guidebook*, *op. cit*.

Ibid, p. 28. The authors contend that "Since operating costs are higher on a per unit basis for larger size family units, the distribution provided by the bedroom allocation method better reflects the relatively higher costs associated with the delivery of on-site operating services at public housing developments comprised of large families and scattered sites."

In some cases or under certain circumstances, either of these would be the method of choice, especially where an agency does not use a project-based accounting system and has only total operating cost data (i.e., for all properties combined). This straightforward pro-rating of operating costs, however, is likely to produce inequitable distributions, especially if it is known that certain properties produce higher, but unknown, costs than others due to locational factors, age of property, tenant characteristics, or other factors. It may be possible to modify this procedure based on the qualitative judgments of PHA staff. For example, on-site property managers might be able to judge that specific properties ought to have a higher distribution of costs, based on their daily observations, than others and, so, judgmentally alter the pro-rated distribution.

An alternative to simply pro-rating on unit or bedroom distributions exists for those PHAs that already have some cost data on a property-specific basis.[54] This was the case for the Baltimore PHA. Since about one-half of their property-related cost centers are for individual properties, the characteristics of these properties permitted the development of a sub-allocation method that could be applied to multi-property cost centers.[55]

In addition to tenant characteristics, Baltimore PHA officials believed their high-rise properties to be more costly than their low-rise developments, and their larger properties (those with more than 500 units) to be more costly than their smaller ones, on a per-unit basis.[56] It made sense, therefore, to use the cost data and the property characteristics of the single-property cost centers (along with the actual number of units at each property) as a basis for sub-allocating operating costs within multi-property cost centers.

All single-property cost centers were arrayed along three-dimensions (high- or low-rise,

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As discussed in *A Working Paper on Stock Assessment*, PHAs without property-specific data might want to begin collecting such information for asset management purposes. For example, such a PHA could begin by pro-rating costs on a per-unit or per-bedroom distribution basis but also have property managers begin to record expenditures and maintenance items separately (for each development under their jurisdictions). In a relatively short period of time, the PHA could then begin to develop a property-by-property operating cost database that would permit greater accuracy in determining the relative contributions of each property to total operating costs.

This method is consistent with information and advice in the *Project-Based Accounting Guidebook*, *op. cit.*, i.e., by determining whether there are characteristics that differentiate among developments with respect to operating costs and, if so, building them into an estimating technique.

For the Baltimore case, these assumptions are verified by calculating and comparing (for those properties in single development cost centers) the average per-unit costs of properties that are high- and low-rise, larger or smaller, and whether families or the elderly comprise the tenant population.

elderly or family, and smaller or larger number of units), and the weighted averages of per-unit month operating costs were calculated for all of the properties in each cell of the array. These averages were then used as weights to estimate and allocate costs for each property in multi-property cost centers, assuming only that the costs associated with the latter were influenced in exactly the same way as they are in single-property cost centers. The following example illustrates the process:

> Assume that a cost center contains a non-high-rise elderly property of 150 units and a non-high-rise family property of 250 units (both considered smaller properties), and has total operating cost of $1,200,000. If the single-property cells for these kinds of properties have weighted average per-unit costs of $195 and $410, respectively, the allocation of costs among the two developments in this cost center is:
>
> **Elderly = 1,200,000*[(150*195)/[(150*195)+(250*410)]],** and
> **Family = 1,200,000*[(250*410)/[(150*195)+(250*410)]]**

In general terms, the formula for a two-property cost center is:

$$\mathbf{Cost_{pi} = CCTotal * N_iPUM_i/(N_1PUM_1 + N_2PUM_2)}$$

where: $Cost_{pi}$ = estimate of cost for property *i*;
$CCTotal$ = total operating costs attributable to cost center;
N_i = number of units at property *i*;
PUM_i = average per-unit month cost for proxy property; and,
$N_1PUM_1 + N_2PUM_2$ = Sum of units times proxy PUM for all properties in cost center.

This method allocates $264,000 of operating cost to the elderly property and the remaining $936,000 to the family development, a significantly different distribution of operating costs from that which pro-rations by units or bedrooms would have yielded. It is also more directly tied to cost factors associated with properties than other possible methods of allocation using FTEs or proportions of salaries paid at properties, and is likely to be more accurate, depending only on the strengths of the assumptions about property characteristics and their relation to operating costs.[57]

Allocating and sub-allocating central costs. The allocation of central costs to property cost centers and the sub-allocation of these to individual properties are different matters. At first glance, it is not obvious that anything needs to be done with these costs -- they are often not directly connected to work done on a daily basis at housing developments. But, meaningful asset management requires that all accrued costs be in terms of the product provided; this includes administrative and other responsibilities not discharged directly for the developments, but that

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See footnote 3 for a list of other alternatives.

are still in support of them.[58]

In many ways, central costs may be treated similarly to operating costs. For example, it is possible to simply pro-rate such costs based on the distribution of either total units or total bedrooms among all properties (the same as the first method described above for operating costs). In those cases where very little information exists about specific central cost items or about how they may relate to properties, this could be the only available option. It is also likely to be the preferred option when a PHA does not have any information about how central costs relate to operating costs and, therefore, cannot use that information to apportion central costs (see below). In fact, the simple pro-rating of central costs based on unit distributions may be the easiest to defend, from a methodological standpoint: it can be argued that properties with more units are likely to command the efforts of support staff in greater proportions than properties with relatively few units.

It is possible (and desirable in some cases) to use the information and relationships developed for allocating operating costs as the basis for allocating central costs, as was done in Baltimore. This required assuming that properties with relatively higher per-unit operating costs also command greater amounts of effort from support staff and, therefore, greater allocations of central expenses. To implement this allocation method, the percentage contribution of each property specific cost center to total operating costs was determined and, then, applied to central expenses. For example, if a cost center accounted for 10 percent of total operating costs, it would be allocated 10 percent of central costs as well.[59]

Some words of caution are appropriate here. If consideration is being given to removing a single property from the inventory, instead of considering changes to the entire inventory, an authority may not wish to consider allocating any portion of central costs to it if they would likely be unaffected by its removal. If enough properties are being considered for reconfiguration or removal, however, then allocation of central costs probably makes sense. In this case, it may be tempting, to reduce costs by both the operating costs experienced at these properties as well as all the central costs allocated to them. The latter is likely to be a mistake in that only some portion of the central costs should be reduced. The argument is that most of the allocated central costs should be reallocated among remaining properties since a good deal of that work would continue anyway.

The methods described for treating central costs are not the only ones that could have been used. Some authorities apportion central costs that are not directly applicable to any one property on the basis of the distribution of salaries paid to staff at each property. The argument is that salaries comprise a large proportion of non-property-related costs, and the distribution of central costs should mirror the distribution of staff salaries at properties. At other authorities, there may be one or two other characteristics that clearly define levels of effort to support housing provision; distributions of those characteristics among properties could be used to allocate non-property-related central costs. One example of this would be an agency that maintains several administrative complexes, each serving an identifiable group of properties. This agency might first want to allocate central costs to each of these entities and then suballocate to the properties under the jurisdiction of each.

Since some of Baltimore's operating cost data were multi-property cost centers, it was necessary to determine the within-cost center distribution of operating costs, apply that distribution to central costs, and then sub-allocate central costs accordingly. In essence, it required implementing two distinct allocation methods.

Variations in allocation methods. There is clearly no one right way to distribute agency costs to individual properties. As in Baltimore, it may be that the number of units, tenant characteristics, and building type (eg., high- or low-rise) are factors that can be used to differentiate among developments in multi-property cost centers, and that the proportion-of-direct-cost method can be used to allocate central costs. However, local circumstances, the detail to which the data are best suited, and the staff resources necessary to assemble data and devise allocation algorithms may dictate that other methods be used.

II. Determining Each Development's Immediate-term Occupancy Rates

If public housing were to be converted from a subsidized to a market system, occupancy characteristics and levels would probably change in many developments from the pre- to post-transition stages, and from the near- to long-term post-transition stages. Such changes need to be estimated and used as a factor in projecting the fiscal impacts of moving to a market-based system. Even where moving to a market system is not the objective, however, the use of market standards to assess the viability of housing developments as part of an asset management strategy still requires estimates of future occupancy.

The method used in Baltimore for estimating the long-term occupancy rates likely to be achieved in a stabilized out-year is described in Part III. This part describes how occupancy levels were estimated for the period immediately following conversion. Reasons for wanting to know about the period associated with reaching a stabilized market scenario are so a housing authority can assess the costs of portfolio management during this phase, and so it can better devise a marketing plan and management strategy for achieving stabilization.

Because public housing occupancy levels are affected by both out-movement and in-movement, occupancy projections require considerable information on potential out-movers and in-movers. In Baltimore, some of this information included moving preferences or, at least, proxies for preferences. To the extent that these preferences are influenced by household composition, income, and rent levels, this information was also gathered for both potential in-movers and out-movers. In addition, because moving involves coming from somewhere and going somewhere, such areas had to demarcated and information on the number, cost, size, and availability of both private market and public housing in these areas had to be collected.

Out-movement. Housing authorities can always gather information about the preference for moving among public housing residents by conducting some sort of market survey. However, because preference data may not always be predictive of actual moving behavior, other types of information can be used as well. Examples include: the observations of housing

authority site management and supervisory staff; patterns of resident moving behavior in the Moving To Opportunity (MTO) program in localities where it operates; past turnover experience in each housing authority development; data on participation and success rates in the Section 8 Existing Housing program; and data on moving patterns associated with relocation occurring under the Uniform Relocation Act as a result of modernization carried out by the housing authority.

At those sites where it is operating, the MTO program provides an especially good approximation of moving behavior under market conditions because the program offers an opportunity to move out of public housing using a Section 8 certificate. MTO generates information on both initial preferences for moving and actual moveouts at targeted developments. It is possible to extrapolate from this information to estimate moveouts from non-targeted developments as long as information on resident preferences in these developments is available or can be gathered. MTO experience was used in Baltimore to derive an initial, base estimate of 83 percent occupancy for the PHA's inventory as of the end of the year following transition to a market system. As discussed below, this estimate was then modified using other data to derive a final first-year estimate.

Initial estimates of likely out-movement are subject to revision to the extent that the availability of appropriate housing has not yet been accounted for. To account for availability, information can be gathered about where residents provided with Section 8 certificates would be inclined to move. Based on program experience in Baltimore, there are several clearly observable areas of Section 8 concentration. In addition, local housing market experts identified some "natural" lines of demarcation that function as market boundaries, within which households tend to confine their housing searches in the absence of specialized counseling or incentives. By taking information on these lines of demarcation into account, combining it with information on Section 8 concentrations, and coupling it with information suggesting that low-income households in Baltimore tend to confine their housing search to the general sub-area of the city where their current unit is located, three major out-mover submarkets were identified and mapped.

Once housing sub-markets were mapped, move-out estimates based on initial preferences were recalculated to account for the availability of appropriate housing in these sub-markets. Residents who are unlikely to find housing in areas where they would be inclined to search, it was assumed, would remain where they were. Such shortfalls were estimated by comparing the number and composition of households likely to move with the number and bedroom sizes of available private housing units at acceptable rents within each out-mover sub-market. Units were not counted as potentially available if their rents exceeded the FMR. Furthermore, since at any given time only a small portion of the rental housing stock of a sub-market will be available to residents seeking units, annual turnover rates were taken into account.

If Section 8 were to be provided to residents of public housing, another factor that might

affect out movement is the availability of a "shopping incentive".[60] Such an incentive comes into play when potential out-movers are dissuaded from moving by realizing a sufficiently large rebate on their rent contribution to give them a financial incentive to stay. Assuming that market rents were to be charged in Baltimore's public housing developments and that a shopping incentive applied, estimates of these rents were used to determine whether a household's contribution to rent would be significantly reduced by remaining in public housing. In some cases, market rents were well below the FMR as well as below the income-based rents that residents were paying. Because of the large rent burden reduction in these developments, it was concluded that many of the residents otherwise inclined to move would end up staying.

In-movement. Many housing market economists believe that non-subsidized in-movers to market-rate public housing would likely come from the immediate vicinity of those developments. Using this criterion, in-mover sub-markets were identified and mapped for each public housing development (or cluster of proximate developments). Using tract-level Census information, neighborhood boundaries took into account the extent to which average incomes in them were in the low-to-moderate range. In-mover markets were smaller than out-mover markets because, unlike out-movers, it was assumed that neighborhood in-movers without a rent subsidy would be more restricted in their housing search area.

Once potential in-mover markets for each development were mapped, the number of households living within their boundaries who would be candidates for moving into a public housing development was estimated. Estimates were based on Census data indicating the extent to which there were low- and moderate-income residents in each in-mover sub-market who could significantly reduce their rent burdens by moving into a neighborhood public housing development, at projected market-rent levels. Rent burden reduction was used as a proxy for the inclination to move into a public housing development. This assumed that only those developments would be found attractive where rent burdens would be significantly reduced.

Final estimates of occupancy. Initial occupancy estimates in Baltimore, based on MTO and other experience, were modified to take into account the extent to which there was a lack of appropriate housing in the market, the financial benefits of staying in public housing given a shopping incentive, and the estimated volume of in-movement. In the immediate post-transition year, final occupancy was projected to be about 93 percent.

III. Determining Each Development's Stabilized Occupancy Rates, Market Rents, and Surplus/Deficit Potential

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A shopping incentive reduces Section 8 tenant contributions to rent to the degree to which they rent housing below the Fair Market Rent (FMR) ceilings for their metropolitan area. Such an incentive was proposed in HUD's *Reinvention Blueprint* at the time that *Public Housing In A Competitive Market: An Example of How It Would Fare* was being prepared, and was therefore incorporated into the Baltimore analysis.

Several steps were involved in ascertaining whether public housing properties would generate surpluses or deficits in the marketplace. Carried out by real estate advisory professionals at Robert Charles Lesser & Company, these included: (1) an initial survey of PHA developments; (2) an identification and survey of comparable private-sector developments; (3) a determination of market rents and stabilized occupancy rates for the PHA developments; and (4) preparation of statements of net operating income/(loss) for individual PHA developments and, ultimately, the PHA's portfolio taken as a whole.

Survey of PHA developments. The real estate advisors participated in extended guided visits of all of the PHA's conventional developments (consisting of clustered high-rise, low-rise, and garden style elderly and family complexes), a representative sample of scattered-site units (individual rowhouses, semi-detached units, single-family homes, etc.), and four converted school sites which are part of the scattered-site inventory. Prior to the visits, PHA and HUD staff provided the real estate advisors with data on general development characteristics, including:

- resident population (family or elderly);
- building type (high-rise, mid-rise, garden apartment and/or townhome);
- unit mix by bedroom type;
- unit size in square feet;
- unit features;
- site plans and elevations;
- information on planned modernization, additions, demolition, disposition or other activities that would affect development condition; and,
- amenities.

Based on these data, direct observation during the visits, and interviews with property managers, each development was evaluated by the real estate advisors. Data were collected systematically on such evaluation criteria as apparent condition of the structure, neighborhood conditions, locational desirability, appearance of the structure, appearance and condition of representative units, appearance and condition of the grounds and/or common areas, unit features and development amenities.

Each of the conventional developments and the converted school sites was assigned four separate qualitative ratings by the real estate advisors, who used a constant five-point scale (with a score of 1 being best, or "very good," and a score of 5 being worst, or "very poor").

- The first quality rating was the neighborhood, which considered factors such as adjacent land uses, relationship of the PHA's development to its surrounding neighborhood, level of street activity, reported and apparent crime and vandalism in the neighborhood, access to public transportation, retail and services, employment opportunities, and places of worship.

- The second was a property rating, which focused on the quality and condition of

the PHA's development itself. It considered factors such as building maintenance and upkeep, grounds maintenance and upkeep, architectural appeal, reported and apparent crime and vandalism at the property, general curb appeal and attractiveness of the development, level of security at the property and quality, diversity and upkeep of community amenities (e.g., playground areas, basketball court(s), day care center, common areas and community recreation facilities, social service programs, etc.), and condition of common areas and interior hallways (where applicable).

- The third was a typical-unit rating, based on an inspection of a sample of units in each development that were in "turnover condition" (renovated condition in which a unit is turned over to a new tenant). It considered factors relative to unit design, adequacy of bedroom and living space, condition and upkeep of bathroom fixtures, tile and flooring, adequacy of kitchen size and condition, adequacy and condition of kitchen cabinet and countertop space, adequacy of closet space, number, size and condition of windows, unit security, etc.

- The final rating represented an overall, blended or average score for the development based on the neighborhood, property and typical-unit ratings.

The information provided by the PHA and HUD, the data collected from the guided visits and real estate professional's qualitative ratings were entered into a uniform property information summary table. A complete set of summary tables was prepared for each of the PHA's conventional developments and the four school sites.

PHA staff provided an estimate of the condition of their scattered-site inventory using the following categories:

- condition similar to, or in need of, comprehensive renovation/modernization;

- condition similar to, or in need of, partial renovation/modernization; or

- condition similar to, or in need of, only minor renovation/modernization.

The real estate advisors then assigned qualitative property ratings to these condition ratings, using the same five-point scale (with a score of 1 being best, or "very good," and a score of 5 being worst, or "very poor").

Identification and survey of comparable private-sector developments. The real estate advisory firm identified relevant *non-subsidized* comparable private sector developments in the marketplace for each of the PHA's conventional developments. Several sources were utilized to identify relevant private sector comparable projects, including: the local HUD Section 8 office; rental apartment guides; newspaper advertisements; interviews with owners and managers of rental apartment communities; and tours through various neighborhoods.

Essentially, the same property characteristics, conditions and ratings were obtained for the private-sector properties as for the PHA's properties, including:

- the apparent condition of the structure,
- neighborhood conditions,
- locational desirability,
- appearance of the structure,
- appearance and condition of representative units,
- appearance and condition of the grounds and/or common areas,
- unit features, and
- community amenities.

Additional data collected on private developments included:

- occupancy rates,
- rents paid by non-Section 8 tenants,
- unit sizes,
- rent concessions,
- any differences in rents between those paid by new and existing tenants, and
- utility information.

The information was entered into a uniform property information summary table for each of the candidate comparables.

The real estate advisors also collected information on individual private sector units (townhomes, rowhouses, and single-family homes) as comparables for the PHA's scattered-site units, including:

- unit location,
- unit type,
- number of bedrooms,
- number of baths,
- unit rent,
- contract terms, and
- concessions.

Survey information was collected from various sources using a combination of techniques, including: property brochures and other collateral material, rental apartment guides, telephone interviews, physical property inspections, on-site interviews, and shopping. Data on these comparable units by community were prepared.

The real estate advisory firm then selected the most comparable non-subsidized private sector development(s) for each of the conventional PHA developments. The selection was based

upon the following priority list:

(1) Rental housing of similar structure type to the public housing development, located in the immediate neighborhood of the development. Project-based subsidized developments (e.g., Section 236, Section 8, etc.) and/or developments that accepted and had a majority of their units occupied by residents with tenant-based subsidies (e.g., Section 8 Certificates) were excluded from the analysis.

(2) If there were not enough comparables that met the first criterion, unsubsidized rental housing of dissimilar structure type, in the immediate neighborhood.

(3) If there were not enough comparables that met the first two criteria, unsubsidized housing (of similar structure type where possible), in as close and/or as comparable neighborhoods as possible.

Typically, three to four and, in some cases, as many as six private market comparables were used for each of the PHA's developments.

Determination of market rents and stabilized occupancy rates. The next step was to prepare adjustment tables to estimate achievable rents for each of the unit types at each of the conventional PHA's developments and for the four converted school sites, based upon rents achieved at the comparables. The adjustments were made to reflect differences between the PHA's developments and the private-sector developments. Adjustments took into account factors such as:

- structure type,
- unit size,
- number of bedrooms and bathrooms,
- utilities,
- unit features and project amenities,
- location,
- community/neighborhood condition, and
- property appearance and condition.

Adjustments assumed either that: (a) the PHA's developments were in "as-is" condition (although modernization work underway at the time was assumed completed); or (b) planned added unit features and project amenities as well as any anticipated overall improvement in property appearance and condition, as enumerated in the PHA's five-year modernization plan, had been completed.

As an example of an adjustment table, the market rent for two-bedroom units at one of the PHA's developments was estimated based on adjustments to market rents achieved for two-bedroom units at three private sector comparables. The process involved several adjustments (both negative and positive) to the private sector developments' rents to make them "comparable"

to the PHA's development. For instance:

- Ë Two-bedroom units in one of the PHA's developments are 580 square feet; two-bedroom units in one of its comparable private developments are 600 square feet. Therefore, a negative adjustment was made in the private comparable's rent to reflect the fact that residents would pay more for the larger unit (in this case $6 per month more). Essentially, the extra value associated with the fact that the private comparable units offer larger two-bedroom units is subtracted from its rent to make it comparable (in terms of unit size) with the PHA's development.

- Ë On the other hand, the PHA's development has more extensive amenities and services than its comparable developments. In this case, positive adjustments are made for the sake of equivalence. If the private comparable development had a playground, community center, day care center, and on-site social services, it could expect to obtain an additional $17 per month for its two-bedroom units.

Each of the private-sector comparable developments was adjusted in this manner for each of the characteristics utilized. Adjustments were made in each case where the subject property differed from a given comparable. The net effect of the positive and negative adjustments were then applied to the current market rent at the comparables. The subject property was assigned the median adjusted rent for all of the selected comparables.

The PHA's scattered-site units were evaluated with respect to how similar, or dissimilar, they were to other private-sector units in their respective neighborhoods. Considered were structure type, number of bedrooms, and condition. Based on the results of the physical inspection and interviews with PHA staff and private-sector property owners and managers, it was determined that the PHA's scattered-site inventory was very similar to private sector units in their respective neighborhoods with respect to structure type and number of bedrooms.[61] However, the condition of the PHA's units ready for new occupancy was generally better than the turnover condition of similar private-sector units.

The following information was used in the analysis of scattered-site units:

- Ë the surveys of comparable scattered-site units,

- Ë data from the 1990 Census, 1991 American Housing Survey, 1991 City and Suburban Areas Rent Surveys, and

- Ë interviews with private sector landlords, management companies, and representatives from various private non-profit development organizations and public agencies.

This is with the exception of four converted school sites, which are also part of the scattered-site inventory.

The real estate advisors determined the average market rent for individual private-sector, non-subsidized townhome/rowhouse units, by bedroom size, for the areas in which the PHA had scattered-site units. Based on an inspection of selected private-sector units (including approximately 25 individual units), the advisors assigned an average property rating of "3" for comparable private-sector units. This rating was applied due to the fact that most of the private sector units were in need of minor renovation/modernization.

Using the above data, adjustments were then made to reflect differences in which utilities and applicances were included, and physical condition compared with similar private-sector units, to determine the market rent for the PHA's scattered-site units, by bedroom size and area. The resulting adjusted market rents for the PHA's developments represent the rents at which "rational" renters in the open market would be indifferent to the PHA's development vis-a-vis comparable, privately owned rental housing options. It is assumed, therefore, that at these rents the PHA's development (in a stabilized year) would achieve occupancy rates consistent with those in the general market. The general market occupancy rate was based upon the average occupancy rate at the most relevant comparable private developments, for each public housing development. In cases where the adjusted rents were significantly below those at the comparables, these occupancy rates were adjusted to reflect evidence from the 1991 American Housing Survey that occupancy rates in the city tended to be lower for lower-rent units. Occupancy rates were adjusted down for a number of the PHA developments.

In general, negative adjustments to market rents achieved at private-sector developments were required to make the PHA's developments comparable from the perspective of potential renters in the market. In the instances where there were private-sector developments that were fairly similar to the PHA's developments in similar neighborhood locations, some negative adjustments to market rents were required to make the PHA's developments comparable -- typically between $100 and $200 per unit per month. In many cases, particularly for the PHA's conventional developments located in closer-in, inner city neighborhoods (that are heavily impacted by public housing and Section 8 housing and for which there are no truly comparable non-subsidized private-sector developments), negative adjustments to market rents were required to make the PHA's developments comparable -- ranging anywhere from $300 per unit per month to as high as $600 per unit per month. In contrast, positive adjustments to market rents were required to make the PHA's scattered-site units comparable to the market, reflecting the generally superior quality and higher level of standard unit features (e.g., kitchen appliances and all utilities included) in the PHA's turnover units.

The most significant adjustments to market rents for the PHA's conventional developments were made to reflect differences in community and/or neighborhood ratings and property condition and upkeep. Other significant adjustments included unit size and number of bedrooms, central air conditioning, and differences in utilities that are included in the rent. A number of the PHA's conventional developments, particularly the elderly high-rise properties, required positive adjustments to market rents to reflect a generally higher level of project amenities (including handrails, emergency call buttons, activities and social service programs

oriented toward seniors, etc.) compared with the private market.

Preparation of statements of net operating income/(loss). The results of the rent adjustment and occupancy analysis were utilized to estimate the gross income that would be realized by each of the public housing developments. This was done assuming properties were marketed in either "as-is" condition or after completion of the PHA's current five-year modernization plan. Each development's gross income was then compared to its operating costs to determine the net operating income/(loss) that would be achieved. The summation of these statements reflected the net operating income/(loss) of the PHA's portfolio taken as a whole.

The real estate advisors also adjusted PHA operating cost data to reflect the addition of reserves for replacement, equal to three percent of revenues or a minimum of $9.00 per month per unit, whichever was greater. This was based on the level of funding for reserves at comparable private-sector developments. A minimum value was established based on the average rent for the portfolio, to reflect the fact that some of the PHA's developments would achieve relatively low revenues and, therefore, would be underfunded for reserves based on a three percent calculation.

Some key assumptions. The income/(loss) analysis is premised upon various critical assumptions. The following is a brief outline of some of them:

- The rent and occupancy estimates assumed a period for stabilization after public housing developments have adjusted to a market-rent system, and assumed that units are in standard turnover condition for the PHA.

- It was assumed that subsidized units do not truly reflect market-based decisions by landlords or residents and, therefore, they were excluded from the analysis of comparables.

- The sample of the PHA's scattered-site units that was evaluated was assumed to be representative of the entire scattered-site portfolio.

- Ratings of the PHA's developments assumed that all units were in turnover condition similar to that observed during the guided visits.

- The rent and occupancy rate estimates were based upon market and occupancy levels as of the 2nd quarter 1995, without including any potential effects of providing rental certificates or vouchers to the PHA's residents. As discussed above, occupancy estimates were not based upon historical occupancy rates at the PHA's developments but, rather, on an estimate of how well-run properties with market rents would attract and maintain tenants.

- It was assumed that a replacement reserve (which is not currently included in the PHA's operating costs) would be adequate to fund future modernization costs;

therefore, no consideration was given to future modernization costs that may be required beyond the PHA's existing five-year plan. (Note, however, that PHA officials suggest that there is a larger unfunded backlog of modernization needs, and that replacement reserve funding would have to be significantly higher than three percent in the early stages of any transition.)

IV. The Housing Authority's Response to Its Fiscal Projections

Once development and total portfolio fiscal projections were available, they were reported to Baltimore housing authority officials who had agreed to use them in an internal, abbreviated strategic planning exercise. The purpose of the exercise was to determine how the housing authority would respond if, in fact, its operating subsidies were terminated and its properties were competing in the marketplace for residents and revenues.

The strategic planning activities took place over several days and involved the senior executives and managerial staff of the housing authority. The results of this process were, then, communicated to the other members of the study team in a series of formal panels. To reinforce the point that such communications between the housing authority and the study team were not part of the normal programmatic relationship between the PHA and HUD, the panels were facilitated by a professional housing research team from Westat, Inc. Westat was also responsible for chronicling the process and its outcomes. Some of their observations are briefly summarized below.

General reactions. Many of the PHA's prior expectations about market rents and projected operating losses seemed to have been fulfilled by the study. Officials had expected that estimated market rents would be relatively low -- even below the $200 to $250 a month perceived to be a reasonable cost for operating a rental dwelling unit. While most of the developments they expected to operate at a loss did, indeed, project a loss, the officials expressed surprise at some such developments. Generally, they were more surprised at the magnitude of projected losses than in the finding that there would be operating losses.

With respect to the market occupancy analysis, PHA officials indicated that the results confirmed expectations that Baltimore households tend to relocate within the same neighborhoods when they move. In a recent relocation effort, it was necessary to relocate households within walking distance of workplaces. This was partly because the resident population tended not to have cars but, more importantly, there was a perception that residents did not want to move from their neighborhood.

Finally, PHA officials commented that the study marked the first time that the housing authority had looked at the cumulative net income or loss across their entire portfolio, because its accounting systems are not set up to give the overall picture. They indicated that the information generated by the market study was valuable, and that the authority had been planning to commission its own rent study or appraisal of its developments (albeit, a less elaborate study).

Strategic considerations. The housing authority began by reviewing their mission, and then considered what they could do to bring their revenues into balance with their costs. The latter involved stock, organizational, and management considerations.

(a) The housing authority's mission and operating objectives. The housing authority's current mission statement commits the authority to:

> ... provide the highest quality of housing and support services to residents, applicants, and the community at large and to provide these services in the highest professional manner. It is also the mission of the PHA to work in partnership with our various stakeholders to create and maintain safe, caring, and affordable environments that foster opportunities for economic growth and self-sufficiency.

Authority officials indicated that, in and of itself, the market rent and operating income analysis would not cause the authority to change its mission. Independently, however, the authority may consider whether or not its focus should be entirely on housing, as opposed to providing housing and building economic self-sufficiency among its residents.

The PHA officials articulated a series of 14 "business operating decisions" that served as guiding principles for reviewing their properties, making portfolio decisions, and considering their organizational and managerial situation. These guiding principals are given in the Exhibit on the following page. Numbers 1, 3, 7, 8, and 14 on the Exhibit were considered to be asset management options for each individual property.

PHA Business Operating Decisions

1. Sell properties which represent the greatest operating losses and which are located on prime real estate. Coordinate the sale with public or private development plans.

2. Invest proceeds from the sale of assets into developments that can generate net operating income once certain physical improvements are made or amenities are added.

3. Generate capital by converting ownership of some developments to limited partnerships.

4. Generate retained earnings.

5. Implement resident recruiting and selection practices to attract working poor persons (those earning between 50 and 80 percent of the area median income).

6. Establish minimum rents and ceiling rents. Peg individual development rents to neighborhood rents and market conditions.

7. Transfer the management of some developments to private management firms.

8. Demolish non-viable properties, because of poor physical conditions, lack of marketability, or poor neighborhood conditions. Replace such housing with dwellings that are marketable.

9. Contract out business functions that are not financially feasible or operationally practical to perform directly by the PHA.

10. Locate more functions at the housing developments; rely less on centralized functions.

11. Streamline central management functions. Limit central functions to those that make the most business sense.

12. Market properties. Do more to increase the Acurb appeal@ of properties.

13. Change PHA's orientation from "property management" to "asset management."

14. Reconfigure (or undertake other major physical improvements for) certain housing developments to make them more marketable.

(b) Portfolio options. On a property-by-property basis, PHA officials considered their initial asset retention or disposition decisions. In addition to "hold, no change," the range of possible decisions encompassed the following options:

1. Sell.

3. Establish a limited partnership.

7. Assign management to a private firm.

8. Demolish the buildings and rebuild on the site.

14. Reconfigure the property, undertake other extensive modernization activity, or undertake other major changes. This involved major physical changes to a property, such as increasing unit size while decreasing the number of units.

After the property-by-property portfolio exercise was completed, several PHA officials came to the conclusion that not all disposition decisions would "make economic sense." Partly because of design limitations of many properties in the inventory, and partly because of relatively low property values, it was concluded that the PHA could not rely wholly on market factors to break even following their portfolio decisions. Without a subsidy, modernization activities might not reach a break-even return on investment. For example:

- Updating utility systems might help the PHA reduce future utility costs, but not result in much revenue impact. Rents appear to be so inelastic in the city that certain changes -- such as converting a system to individual metering -- might have a modest cost impact (estimated by one PHA official to be a five percent reduction in utility costs associated with an increased incentive to conserve), but no revenue impact.

- Changes of immediately benefit to residents -- such as providing air conditioning or enhanced outlets for window air conditioners -- might not result in rent increases that could cover the cost of making physical improvement

costs.

- Selling off assets might result in a net cost to the housing authority. For example, to clear a site and sell off the land would require expenditures for demolition, removal of hazardous material, relocation, and marketing.

(c) Management and organizational options. PHA officials also considered general management and organizational changes that might be desirable or necessary, and reviewed and their possible fiscal impacts. They found it easier to think of such impacts as generating savings or increasing costs in general, as opposed to assigning specific dollar figures or percentage changes. Also, time constraints limited the PHA's ability to identify all the ramifications of management or organizations changes and to cost them out. In the time available, they concluded that it could provide only a "bad best guesstimate" of the cost impact of management and organizational changes without further study.

The following are some of the stock, organizational, and management changes considered by the PHA. The changes correspond to items in the Exhibit, above.

2. Invest proceeds from the sale of assets into developments that can generate net operating income once certain physical improvements are made or amenities are added.

PHA officials expressed concern that asset sales would not yield positive revenues. They believed that many developments would be more likely to generate positive revenues if they were cleared and the sale was of undeveloped land. Selling developed land might impose a responsibility to remove environmental hazards prior to transfer, or require discounting the sales price to reflect the cost of removing such hazards. Baltimore is a community with relatively high awareness of the health hazards associated with asbestos and lead-based paint. Overall, PHA officials did not believe that selling any given property as-is would have much of impact on their total net operating income (or losses).

5. Implement resident recruiting and selection practices to attract working poor persons (those earning between 50 and 80 percent of the area median income).

PHA officials did not expect that rents would be affected by shifting the recruiting focus to working poor households. They did expect, nevertheless, some cost decreases because of lower wear and tear on the properties associated with very low income households. Upon reflection, the officials anticipated that annual operating costs would decrease 25 percent and that annual utilities costs would decline by five percent.

7. Transfer the management of some developments to private management firms.

9. Contract out business functions that are not financially feasible or operationally practical to perform directly by the PHA.

10. Locate more functions at the housing developments; rely less on centralized functions.

11. Streamline central management functions. Limit central functions to those that make the most business sense.

Streamlining central management, transferring some property management functions to private firms, and decentralizing management was seen as possibly reducing central office costs by 35 to 45 percent. The PHA officials felt that some functions should be retained as central functions -- for example, accounting, management information systems, and operations supervision.

It was suggested that properties be clustered into management groups and that administrative functions be established for each cluster -- such as, waiting list management, tenant selection and eligibility determination, rent determination, tenant screening, procurement, personnel hiring, customer service. Virtually all central office functions would be affected. The officials also assigned revised estimated costs and cost savings to their management and organizational reforms. Annual savings would be achieved with reductions in "central office" functions (e.g., applicant intake office, management information systems, fiscal operations, housing management, administrative services, personnel). A further substantial savings from PHA Police Services would occur by eliminating high-rise family developments.

Some of the other topics considered by PHA officials were the following:

(a) The likelihood of obtaining private-sector or other non-Federal government funding. Assuming that there is not (or not sufficient) Federal funding for public housing, PHA officials considered how to obtain private sector or other non-Federal government funding for modernization activities, disposition, and replacement of obsolete housing. The fiscal analysis had made clear that the cost of planned capital repairs and management improvements could not be supported by property cash flow. Many of the PHA officials responded to the projected operating losses by stating the belief that, somehow, HUD or some other governmental entity would simply "have to come through" with the funding.

(b) The costs of relocation and rental assistance. PHA officials considered two categories of residents who would face the prospects of relocation: those permanently displaced under a sell-off or demolition scenario, and those temporarily displaced under a demolition-and-replacement or physical reconfiguration scenario. Although they considered the possibility that the *Uniform Relocation Assistance Act* could be repealed, probably a PHA would need to provide for relocation and replacement housing (e.g., rental assistance) costs associated with the disposition of developments within the portfolio.

(c) The impact of the current waiting list on the strategy. The PHA officials believed that the impacts of having an extensive waiting list on a market-based public housing program

could be both positive and negative. On the positive side, the waiting list could provide a built-in marketing tool with potential benefits in high occupancy rates; the list and application system represent both an available marketing resource and pent-up demand for affordable housing. On the negative side, the waiting list is a potential liability for a PHA. It represents a large concentration of households that may not fit the economic profile that the PHA would like to attract under deregulation of occupancy. A formidable waiting list may be used also for political leverage to compel the PHA to continue the *status quo* policy of serving predominantly very low-income households. If it cannot serve a wider mix of low-income households, PHA officials believe they might not be able to make substantial inroads toward reducing a projected operating deficit.

(d) The provision of supportive services. PHA officials discussed the advantages and disadvantages of continuing to provide the current range of supportive services and maintain current service facilities (e.g., providing meals, social activities, day care) in a market environment. On the one hand, such services could give the PHA a competitive advantage over private-sector housing, especially if the comparable private rental housing carries a low rent or where the service infrastructure is already in place. Also, much of the funding for services is separate from Federal operating subsidies, coming largely from state government sources or other Federal agencies. On the other hand, providing supportive services and the facilities to support them does affect operating costs. PHA officials believed that a more complete costs and benefits analysis would be necessary.

(e) The circumstances under which to continue operating high-cost housing. PHA officials considered several types of contextual issues that would constrain the range of acceptable portfolio decisions available to them. They certainly preferred to operate each property without a loss, but they believed they might have to do so where they are, or feel, constrained from selling, demolishing, or replacing such properties. Such constraints include:

- Prior and current investment in physical improvements. Improvements costing millions or tens of millions of dollars might have already been made recently or are in process in some properties. Under a system of comparable market rents, some of these properties might operate at a loss according to the market operating income (or loss) analysis, but couldn't be considered at this time for removal from active use by public housing tenants.

- Role of the property in neighborhood reinvestment. Properties might be located in neighborhoods that are the targets of concerted redevelopment efforts. By continuing to manage the property and to carry out planned modernization activities, a PHA would support neighborhood redevelopment efforts and, in some circumstances, create job opportunities for neighborhood residents. Other agencies may have other housing rehabilitation projects going on in the neighborhood, projects that might be threatened if the public housing in the neighborhood were not maintained or were demolished.

- Cost of disposition. In certain circumstances, the PHA might retain a property in its portfolio because the cost of selling, demolishing, or replacing it would be too high. For example, some sites would carry a higher sales price if they were cleared of all buildings. Demolition, disposal, and relocation costs might exceed any revenue generated by the land sale.

- Special locational circumstances. In certain circumstances, there is an active resident organization in the development or neighborhood. It may be considered a reasonable political choice to maintain a property that runs an operating loss if removing it would raise sub stantial opposition. Also, there may have been particular social investments in the development -- such as a Aclean sweep@ drug elimination effort or the undertaking of a AStep Up@ modernization or maintenance project involving physical labor provided by young public housing residents. Additionally, some developments might have recently experienced the addition or renovation of a day care center, senior center, or community center.

V. Enhanced Asset Management Possibilities

The market rent and operating cost data used by the Baltimore housing authority in its strategic planning exercise very closely approximates what a private development entity would use for its asset management purposes. The information collection process relied on property observations, identification and observation of comparable housing, and an allocation of agency costs to individual properties. Moreover, the data were comprehensive, covering the housing authority's entire inventory and operations, not just one or two of its properties.

The data collection and strategic planning efforts, however, were completed within a relatively short period of time, dictated by policy research needs. This had some effect on the extent of market comparable data that could be assembled, the amount of effort that could be devoted to refining cost data, and the time that was available for doing strategic planning. Also, uncertainty at the time of the analysis as to the future of the public housing statutory and regulatory environment made it somewhat difficult to know exactly what strategic planning assumptions were appropriate.

Had the timeframe available for this effort been somewhat longer and the policy environment more settled, prediction of future operating performance under market conditions could have been improved and the strategic planning process would probably have involved additional considerations. Some possible enhancements, beyond the Baltimore effort, are discussed below.

(a) An enhanced effort would likely involve a more comprehensive assessment by a housing authority of its organizational strengths and weaknesses. At the beginning of an actual strategic planning process, it is a common practice to make a critical assessment of the organization's strengths and weaknesses -- prior to undertaking a new direction. A skills

inventory and an assessment of strengths and weaknesses in key operating areas (e.g., property management, property marketing, maintenance and rehabilitation operations, unit turnover management, financial systems) could help identify potential barriers to achieving success in the implementation of any portfolio management strategy.

(b) An enhanced effort would likely involve more consideration of the types of costs associated with portfolio management decisions in the time period associated with reaching a stabilized market scenario. During a transition or stabilization period following conversion to a market-based system of public housing, existing residents would move-out, new residents would move-in, a PHA would prepare units for new residents and possibly test market rents until each development reached a satisfactory level of occupancy. At the same time, the authority would incur costs to market and improve its properties, take applications, and complete major modernization projects. Also, rents and operating expenses could fluctuate until stabilized rents and costs were reached. Even a new property built by a private development entity might take from six to 18 months to stabilize (i.e., achieve stabilized occupancy, rent, and operating expense levels). Public housing properties might take longer given the substantial change involved in going from a system of project-based subsidies to a market-based system. And, in the initial stages of the stabilization period, it is likely that public housing would operate with larger operating deficits than would be predicted for the time of stabilized rents, occupancy, and operating costs. It is also likely that, during the stabilization period, revenues would be lower in the face of lower occupancy and transition expenditures.

(c) An enhanced effort would likely involve more consideration of disposition cost scenarios (e.g., demolition, sale, transfer, or replacement) for properties that might be removed from the inventory, and of the estimated sale values of any removed properties (on either a highest-and-best-use or discounted-cash-flow (DCF) basis). This would give PHA officials more complete information with which to make informed hold/sell decisions. The PHA should have an accurate estimate of potential revenues it might receive from sales which, in turn, could be reinvested in operations. Given possible costs involved in site clearance, relocation, marketing, environmental impact analysis, and remediation of environmental hazards, it may be that some properties would be impossible to sell or could be sold only at a loss. Or, in some cases, there may be a need to discount a sales price heavily where environmental hazards are unremediated or infrastructure does not meet current code. A property-by-property DCF and sales analysis would be a prerequisite for ultimate portfolio decisions.

(d) An enhanced effort would likely involve more information on market factors and trends that affect the income side of the analysis. Near- and longer-term housing market trends, and information on mobility dynamics, need to be taken into account in any market-rent and operating-expense analysis. For example, in predicting the behavior of current or potential tenants, focus groups, surveys, or actual demonstrations may add to the knowledge base.

Beyond Baltimore. The data collection, analytic, and strategic planning activities undertaken in Baltimore were based on the assumption that project-based subsidies for public housing would be replaced by tenant-based subsidies. PHA officials had to imagine that the

agency would have to compete with privately owned rental housing to maintain or attract residents. However, these very same types of data collection, analytic, and planning activities can also provide a housing authority operating under program environments other than a market environment with a critical perspective and benchmarks that can improve operations and performance.

By way of summary, the following elements should be considered in any comprehensive analysis of, and planning for, a housing authority's portfolio.

1. A property profile. To identify individual property conditions and aid in locating private-sector comparables, a profile of key characteristics of each public housing development must be assembled and analyzed. Such characteristics include total units, unit mix (by bedroom size), average unit sizes, amenities (e.g., balconies, recreational facilities, meals programs, day care facilities on the premises), and population served.

2. Comparable rents. To the extent possible, selected private properties should be located in the same or similar neighborhood as each public housing development and reflect similar building characteristics. Also, to the extent possible, multiple comparables should be identified for each public housing development. The process should involve identification of such comparables, selection of those that are most similar, making adjustments to account for any differences using appropriate adjustment factors, and combining their rents and occupancy levels to apply to the public housing development. To carry out this process, it may be appropriate to employ an outside appraiser or analyst who would bring to the task a professional detachment, an appreciation of the factors that influence market rents, and a methodology accepted by the real estate industry for adjusting for key housing and locational differences.

3. Operating costs. Allocating operating costs to individual public housing properties will be easier if a housing authority uses true project-based accounting. Even so, however, it may be necessary to allocate central costs or separate out the costs of, say, high-rise and low-rise buildings within the same development. If the authority does not use project-based accounting, cost accounts must be distributed among the various public housing properties using the best possible methodology under the circumstances.

4. A market dynamics analysis. Understanding and projecting local housing market trends and the likely behavior of current or potential tenants is necessary for making occupancy and revenue estimates. To do so requires various kinds of data, both quantitative and qualitative, as well as the expertise of housing market and real estate professionals.

5. A property needs assessment. Knowing the condition of each property, and

estimating future major capital repair and replacement needs is essential for projecting costs and considering portfolio options. This may involve specialized engineering and architectural analysis, performed in light of any future marketing plan being considered for each development.

6. Knowledge and application of real estate business benchmarks. A thorough understanding of, and ability to apply, real estate business practices and standards is also essential. For example, an agency's strategic plan might incorporate a building component replacement reserve account. In private housing, a typical replacement reserve percentage may range from three to eight percent of revenues. In certain years, the reserve contribution may increase in anticipation of an increased need for capital improvements. For analytic purposes, it may also be useful to consider the amortized cost of borrowing funds for physical improvements (including site acquisition, site clearance, demolition, modernization, density reduction, replacement housing construction, etc.) as part of a development's overall operating expenses. This would allow calculation of return on investment as one standard for determining whether modernization of a particular development was an appropriate option.

To support the strategic planning process, the market rent and operating cost analysis should be applied to individual public housing properties and to the portfolio as a whole. Prior to any decision making, it would be helpful to identify characteristics of the separate properties' neighborhoods, residents, prior investment history, or other information (such as environmental or health concerns of taking particular actions) that would constrain individual property retention or disposition decisions. It would also be helpful to define general principles to guide decisions on whether to retain particular properties, on possible agency reorganization, or on improvements to management practices. Even if a professional real estate appraiser or other outside consultant is used to conduct the market rent and net operating income/(loss) analysis, housing authority officials can provide important insights into the neighborhood, regulatory, legal, political, or other environments in which public housing developments exist.

Finally, if time and resources permit, it would be advantageous to design an iterative process -- one that involves multiple, successive rounds of data collection, analysis, and planning. The process of response and reanalysis could continue until the housing authority had developed a final strategic plan.