Contract Number H-2161R

TASK 4

FINAL REPORT ON

Design of a Housing Management Information Center

AND

Information Center Model

January 31,1975

by

The National Center for Housing Management
1133 15th Street N.W., Washington, D.C., 20005

NCHM

for

Office of Policy Development and Research
Department of Housing and Urban Development

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INTRODUCTION

INTRODUCTION

The housing management industry -- made up of individual managers, management companies, government agencies on the local, regional, state and federal levels, as well as many other identifiable groups -- is still in the early stages of its development. The industry must experience growth in order that its personnel might more efficiently assist in efforts to preserve this Nation's resource of multifamily housing. This needed growth will come as a result of increasing the number of those qualified to manage, as well as upgrading the skills of those currently serving in management capacities in the numerous existing multifamily developments. This increase in manpower and the concurrent improvement of management practices will come about only by means of a concentrated effort on the part of many to develop high level training and education pro- grams, to design and implement licensing procedures that will ensure standardized performance levels for newcomers to manage- ment posts and seasoned practitioners and through efforts to promote new research that will expand existing knowledge of management practices and procedures. Another important part of the professionalization process just described is the collec- tion and centralized pooling of information resources developed as a result of such specific field activities as training and education, the setting of standardized performance requirements, new and on-going research and other endeavors. Whether these

resources are in the form of statistical data, such as cost
analyses for individual developments, are identified as
published books and journal articles, or appear as technical
reports produced by government agencies, their contractors,
or private organizations, materials in all these formats and
others contain information that could prove useful to those
individuals, agencies and organizations who make up the
housing management industry today. However, to make this
pool of information readily available to those who need it,
it must be processed, analyzed as to subject content and dis-
seminated in some systematic way. In addition, in order to
keep this dissemination process truly relevant to a variety
of housing management field personnel, those for whom requests
for information are filled must be periodically polled as to
the nature of and the degree of change in their information
needs, as well as how well the materials they were provided
with met those needs. It is to this end that the National
Center for Housing Management performed activities which cul-
minated in the development of a Housing Management Technical
Information Center Model. This Model has been designed to
accommodate currently identifiable information needs of the
entire industry on a national scale, as well as to respond to
changes in and/or additions to the areas of subject interest
that have currently been targeted for collection efforts.

This Model was developed in accordance with the stipulations of Task 4 of contract # H-2161 R with the U.S. Department of Housing and Urban Development. All activities which lead to the development of this Model and the recommendations related to it were performed during the period May 1, 1974 - January 31, 1975. The report itself consists of four parts. Section I - Summary of Project Activities, is a capsule discussion of all work performed under Task 4, including those efforts that related to and served as the basis for development of the contract product -- the Information Center Model. Section II - Survey Design and Analysis, provides a detailed account of the survey working plan and a complete examination of the closed-end responses (with tables), plus the conclusions which may be drawn from these. The Housing Management Technical Information Center Model, is presented in Section III. Alternative strategies for the development of various components of the Model are discussed and then the recommended components design is outlined. Section IV - Recommendations, offers specific suggestions for the implementation of such a model by the agency or organization chosen for this purpose.

After over two years of the successful operation of the Center's own Housing Management Information Center, NCHM is pleased to share the insights it has gained in the course of managing this facility for staff and selected field representatives requesting services. The study of the design and

operation of existing centers functioning in other professional areas carried out as part of this Task, as well as the information and services identified by means of the Survey as being important to selected field target groups, have served to sharpen the Center's perception of the function that an information center for this field would perform.

Section I
SUMMARY OF PROJECT ACTIVITIES

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1.   REPORT ON TASK AND SUBTASKS

On May 1, 1974, the Center began performing on the four tasks which made up a nine month contract with the Department, under the direction of the Office of the Assistant Secretary for Housing Management. Task 4 of this contract called upon the Center to:

DEVELOP, WITHIN ITS INITIAL STAGES, A HOUSING MANAGEMENT INFORMATION CENTER TO COLLECT, EVALUATE, PROCESS, STORE AND DISSEMINATE INFORMATION IN A FORMAT APPROPRIATE TO REACH BROAD AND SELECTED SEGMENTS OF INTEREST IN THE HOUSING MANAGEMENT FIELD.

The four subtasks which contributed to this end were designated as:

Subtask 1 - Design and implementation of the data sampling technique.

Subtask 2 - Design and field testing of data collection device.

Subtask 3 - Providing of information support to Center programs and operations.

Subtask 4 - Perfect the design of the full-scale housing management technical information center.

1.1   SUBTASK 1

Subtask 1 - Design and implementation of the data sampling technique.

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The Center indicated that it would devise a means of surveying selected portions of representative industry groups for available data and/or information in the following sub-set areas of housing management:

    a.   Innovative management practices;

    b.   Experiential data of state housing development and finance agencies;

    c.   State of housing management in general, as this relates to the development of a meaningful information base;

    d.   On-going management training and additional information that related to the Center's training efforts.

In order to understand more fully the information needs existing among housing management field personnel, as well as to get a feel for the quantities of existing, hitherto uncollected field information, the Center chose six key field groups among the wide variety of individuals, agencies and organizations who could, on the basis of past experience, be identified as being a part of the housing management constituency. Target groups chosen represented both government and private sectors and were identified as:

    a.   State housing development and finance agency officials;

    b.   Resident managers, supervisors of resident managers and property managers of:

        1.   Private, government subsidized multi-family housing (e.g., Section 236);

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2. Publicly owned multifamily housing;

3. Privately owned, government financed multifamily housing (e.g., FHA or VA);

4. Privately owned, government financed multifamily housing (e.g., Section 221-d-3);

5. Privately owned, conventionally financed multifamily housing;

c. Officials of housing trade associations, especially those with an expressed interest in housing management training;

d. Officials of management companies or owners/ managers involved in the operation of multifamily housing;

e. Officials of 200 of the larger local housing authorities;

f. Officials in HUD field offices whose work relates in some way to the management process.

1.1.1 SAMPLE DESIGN

A universe was assembled of 12,457 individuals and agency or organizational representatives who were embodied in these six target groups. Mailing lists from various organizations and agencies were acquired for this purpose. Wherever possible, mailing lists that were known to be regularly updated manually or by computer were utilized. Table 1 on the following page is a compilation of sources utilized in the sample design and the various lists provided by each.

Sample size was determined within each target group and its representative lists, rather than being determined by the total universe of all groups combined. Table 2 depicts the

Table 1. Sources for Lists Utilized

The following is a breakdown of the lists included in the sample, by source:

Source	Lists Utilized
I. Center-produced Lists	a. State Housing Development and Finance Agency Officials b. NCHM Training Program Graduates c. Housing Trade Association Officials d. Largest Local Housing Authorities e. Selected HUD Field Office Personnel f. HUD Subsidized Multifamily Housing Developments
II. Lists Obtained from HUD	a. 202/236 Housing for the Elderly Developments b. Approved 202 Senior Citizen Projects
III. Lists Obtained from National Association of Homebuilders	a. Apartment House Council b. Registered Apartment Managers c. Subscriber List to Compendium of Multifamily Housing d. Membership of Assisted Housing Committee e. Membership of Mortgage Finance Committee
IV. National Corporation for Housing Partnerships	a. Management Entities
V. Apartment Owners and Managers Association	a. Builder/Managers
VI. Real Estate Management Brokers Institute	a. Certified Real Estate Managers
VII. National Society of Professional Resident Managers	a. Membership
VIII. National Apartment Association	a. Affiliated Associations Presidents or Directors
IX. Institute of Real Estate Management Directory (1974 Directory of Professional Real Estate Management)	a. Certified Property Managers b. Accredited Management Organizations

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Table 2. The Universe, Random Start, Interval, Number of Respondents, and Response Rate for Each Target Group

Target Group	Universe	Random Start	Interval	Sample Size
I. State Housing Dev. & Finance Agency Officials	71	NA	NA	NA
II. Resident Managers Supervisors of Resident Managers and Property Managers	3,518	6	10.05	350
III. Housing Trade Association Officials	148	NA	NA	NA
IV. Management Company Officials and Owner/ Managers	8,220	27.980	33.827	246
V. Largest Local Housing Authorities	200	2	2	100
VI. Selected HUD Field Office Personnel	300	1.39	2	100

TOTAL SAMPLE   1,015

universe, random start and sample size for each target group included in the survey mailing. For additional back-up material on the nature of the sample, as well as a complete description of the survey design and analysis of results, see Section II of this report.

1.2 SUBTASK 2

Subtask 2 - Design and field testing of data
collection device.

The survey instrument was designed with the assistance of representatives of Westat, Inc., a nationally recognized social science research firm which specializes in survey design and implementation.* Among the bases for the survey design were the following:

a. knowledge of target group activities which was acquired by the Center in contacts made and relationships established with individual members of these groups in the course of operating the staff Information Center over the past two years. These contacts were of two kinds:

1. Center requests to target group representatives for publications and other information;

2. target group requests made to the Information Center for publications and other information.

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* Westat, Inc. has been involved, as a contractor or sub-contractor in numerous housing surveys over the years, several of which were being conducted by agreements with the Department. Currently, Westat is directing for HUD a study of housing subsidies.

b. knowledge of target group activities acquired by other Center staff in the course of conducting earlier and on-going research projects.

In addition to these bases for design, the survey was constructed so as to provide answers to the following key questions:

1. What kinds of information (e.g., statistical data, technial reports, published materials, etc.) do housing management field personnel currently use in carrying out job-related functions?

2. What additional kinds of information could these field participants use, if they were made more readily available to them?

3. What kinds of information do these individuals/organizations/agencies produce in the course of performing work-related functions that might be of assistance to other field personnel, if they were pooled and made accessible?

The collective survey design knowledge of Center staff, as well as that of Westat representatives, was brought to bear in the creation of the survey instrument. Only relevant, specific questions were included and all possible requests for information that was readily available through other more conventional means were removed. (For the text of survey itself, see Section II, Appendix A - Survey of Individuals, Agencies and Organizations Involved in Management Aspects of Multifamily Housing.)

1.2.1 Pre-test

The pre-test of the survey instrument took two forms.
First, the relevance of question content was discussed in meetings with officials of several housing trade associations and management groups with headquarters in the Washington, D. C. metropolitan area. Among the organizations called upon to provide such input were the National Association of Homebuilders, the National Society of Professional Resident Managers and the National Apartment Association. Valuable comments and suggestions were offered by representatives of these groups, which were considered and, where valid, were incorporated into the final instrument design. The second pre-test involved those Center staff with management experience and backgrounds similar to those of the target groups included in the survey. They were asked to participate in a more conventional pre-test of the instrument. Minor flaws in the questionnaire were discovered in the course of this exercise and appropriate corrections were made.

1.2.2 Follow-up Techniques

Two devices were designed to handle non-response.
The first, a letter, was to be mailed approximately one and one half weeks after the initial questionnaire mailing. The second was a double postcard with a self-addressed, postage paid portion which the receiver was asked to mail after he had

indicated whether he had already responded, would respond (in which case he was asked to provide the latest possible response date), or did not intend to respond. This follow-up instrument was to be mailed one week after the first follow-up device. (See Section II, Appendix C - Survey Follow-up Devices.)

1.2.3   Respondent Reporting Burden

On the basis of the information pre-test conducted with Center staff members whose backgrounds in management, as well as government and conventional housing programs closely resemble those of a cross-section of individuals chosen for target group samples, it was estimated that the survey would require at most 10 to 15 minutes of a respondent's time. In addition, no one group within the sample was asked to answer more than 15 explicit questions. Therefore, while the instrument appears at first glance to be lengthy, it required a minimum amount of time for adequate response. Government agency officials included in the sample were requested to provide more information than individual or private organizations.

1.2.4   Cover Letter

Potential respondents were asked to participate in the sample by means of a letter which accompanied the question-naire. This letter explained the need for the collection of

such information, the potential value of such information to the respondents themselves and the value of this effort to the field as a whole. (See Section II, Appendix A - Survey of Individuals, Agencies and Organizations Involved in Management Aspects of Multifamily Housing.)

1.2.5   Submission of Instrument for OMB Clearance

On September 5, 1974, multiple copies of the survey instrument and cover letter, as well as a narrative document which explained the justification for the survey and characteristics of the survey design, were formally submitted to the Department. (See Section II, Appendix C - Clearance Documents: Survey of Individuals, Agencies and Organizations Involved in Management Aspects of Multifamily Housing.) Notification that the survey had reached the OMB Clearance Officer was received on October 20, 1974. Notification by HUD of survey clearance and the clearance number assigned to the instrument were received by the Center on December 2, 1974.

1.2.6   Field Implementation of Survey

1.2.6.1   Mail Survey

The questionnaire was mailed to the sample group of 1,015 representatives of the target groups identified in Section 1.1 on Thursday and Friday, December 5 and 6. On Tuesday, December 17, one and one half weeks after the initial

mailing, the first follow-up device was mailed and it was followed one week later on December 23 by the mailing of the second follow-up instrument. (Copies of these devices may be found in Section II, Appendix B.)

Although returns were still being received on a regular basis after the week of January 6, for the sake of analysis it was necessary to only include in the tabulation those returns which reached the Center by Friday, January 10. By this date, 205 returns had been received for tabulation, or a total response of 20%. As of Wednesday, January 22, a total of 225 returns had been received, or a total of almost 22%. It is safe to assume then, that if the time left in the contract period had permitted the delay of tabulation to include most of the late returns, the final percentage of response might have been considerably higher.*

1.2.6.2   Telephone Survey

At the request of the Clearance Officer of the Office of Management and Budget, a telephone survey was conducted as an additional follow-up measure to reveal similarities among non-respondents, as well as to be used as a means of comparing respondents and non-respondents. A random sample of 50 non-respondents was drawn and the same proportions were maintained

* An analysis of response rates by target group may be found in Section II of this report.

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for each target group as were maintained in the original
sample for the mail survey. Table 3 on the following page
provides a breakdown of the telephone follow-up survey sample
design by target group. A more complete analysis of this
survey, as well as an analysis of closed-end responses may be
found in Section II of this report and Appendix B of Section
II, which consists of the telephone survey and interviewer's
script.

1.3   SUBTASK 3

Subtask 3 -- Providing of information support to
Center programs and operations.

This subtask called for the further development of
existing NCHM information collection of housing management
and related materials, as well as the serving of specific
needs of Center program tasks, including Task 4. Although
its relationship to the development of the Technical Infor-
mation Center model is less direct than subtasks 1 and 2,
performance of this subtask involved the collection, analysis,
processing, storage and, for the most part, in-house dissem-
ination of information relating to specific Center program
activities being carried out during the contract period. As
such, Subtask 3 provided the opportunity to concentrate on
subject areas which are subsets of the total housing manage-
ment and related field literature which the model would
encompass and to seek out sources of this information on the
local, regional, state and national levels.

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1.3.1 Collection Development

The development of the Center information collection during the contract period will be covered in detail as part of the TIC Model presentation given later in this report, since it served as one of the bases for the Model. However, it may be said that this development took the form of expanding local, regional, state and national collection sources and the levels of information collection, as well as the subject areas that were found to relate to housing management. Both the reference and circulating collections were affected by this expansion and development. Some 780 new additions to these collections were cataloged during the course of the nine month contract period. In addition, as a result of this expansion, a number of special materials collections were further developed:

1. Serials -- These holdings were re-shaped so that a comprehensive collection of popular, scholarly, trade and professional journals and newsletters broadly related to housing management (including resident and consumer interests) was created. This special group of materials now provides a ready resource of information about the latest developments and thought in these fields, as well as including selected serials related to train-

ing, community development, law and principles of management.

2. Legislative Collection -- Further development here resulted in a pool of state and Federal housing laws and legislative histories. In addition, a complete file of all bills and reports produced since 1972 by the U.S. Congress relating to housing and other pertinent subjects has been created.

3. ERIC and NTIS Collections -- Microfiche copies of selected near-print and published documents produced to date from the Educational Resources Information Center clearinghouse system as well as government-sponsored research products distributed by the National Technical Information Service were acquired. These documents represent some of the most current material in the field of housing and related areas.

4. Urban Research Centers Materials Collection -- A great many of these research institutes, usually university-based, have produced highly relevant housing studies of regional, state and national scope. Since these materials, for the most part, are high in information

content but see very little exposure, the
expansion of the NCHM holdings in this
special collection area was critical.

Further development of the NCHM information collec-
tion also resulted in the creation of the seeds of additional
special collections important to housing management --
among them:

1. Descriptive materials on the activities
    of state housing development and finance
    agencies, including but not restricted to
    annual reports.

2. Materials pertaining to the operation of
    larger local housing authorities, including
    but not restricted to annual reports.

    The results of the Survey of Individuals,
    Agencies and Organizations Involved in
    Management Aspects of Multifamily Housing,
    which was designed and implemented as a
    part of Task 4, should also provide leads
    to additional information to add to most
    if not all of the existing and potential
    special collections.

1.3.2   Information Support for Center Program Activities

In performing research related to their respective projects, Center staff members required current as well as retrospective materials in the form of:

- HUD program data and other statistical information

- technical report literature produced as a result of government contracts and/or at the request and sponsorship of private industry

- housing-related and other legislation on the state and federal levels

- published materials whose subject content had bearing on their investigations

- research products of university-based research centers whose areas of activity included housing or related subjects

The Center research activities provided with such information support included the following HUD Contract H-2161R Tasks:

1. TASK 1 -- DEVELOPMENT OF A MODEL CURRICULUM TO BE OFFERED BY COLLEGES, COMMUNITY COLLEGES AND JUNIOR COLLEGES FOR THE TRAINING OF MULTIFAMILY HOUSING MANAGEMENT PERSONNEL.

2. TASK 2 -- DEVELOPMENT OF MODEL LEGISLATION FOR LICENSURE BY STATE GOVERNMENT OF MANAGEMENT INDIVIDUALS AND FIRMS SEEKING TO ENGAGE IN THE OCCUPATION OF MANAGING MULTI-FAMILY HOUSING.

3. TASK 3 -- DEVELOPMENT OF MODEL PERFORMANCE STANDARDS FOR THE CERTIFICATION OF INDIVIDUALS AND ACCREDITATION OF MANAGEMENT FIRMS ENGAGED IN OR DESIROUS OF BEING ENGAGED IN THE OCCUPATION OF MANAGING MULTIFAMILY HOUSING.

4. TASK 4 -- DEVELOPMENT, WITHIN ITS INITIAL STAGES, A HOUSING MANAGEMENT INFORMATION CENTER TO COLLECT, EVALUATE, PROCESS, STORE AND DISSEMINATE INFORMATION IN A FORMAT APPRO-PRIATE TO REACH BROAD AND SELECTED SEGMENTS OF INTEREST IN THE HOUSING MANAGEMENT FIELD.

1.3.3   Other Forms of Information Support

Information and reference assistance was also pro-
vided for program activities which fell outside the realm of
Contract H-2161R and, as such were not specifically called
for in stipulations of this contract. This support may be
divided into two categories --

- services performed for NCHM staff;

- those services performed upon request for
  outside users who represented a wide range
  of housing interests.

Information support which was based on materials
included in the collection as updated by subtask 3 and
reference assistance to other in-house program activities
included those which could fall under the general heading of
revenue development. Such assistance was provided in the
development and preparation of a proposal in response to HUD
RFP H-58-74, which called for design of a program related to
licensing mechanisms and examination practices, and interstate
real estate corporations in Equal Opportunity objectives.*
Still another example of specialized reference assistance and
information support based on collection holdings was that
provided for the development and production of two key hous-
ing management publications designed specifically for the
practicing resident manager. These publications are:

_____

*The Center was later awarded this contract.

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>   _Administrative and Accounting Guide for Federally_
>   _Insured Multifamily Housing Developments_
>
>   _The On-Site Housing Manager's Resource Book:_
>   _Housing for the Elderly_

Production of these publications, made possible through a grant from the Ford Foundation, contribute to the professionalization process for housing managers and the standardization of their performance on the job, an end that the products of this contract hopefully will also serve.

Another form of activity in which the Center provided information and referral services was in its response to requests for housing management information from the field. These requests came from individual managers, government agencies such as local housing authorities and state housing development and finance agencies, representatives of organizations such as management companies, representatives of colleges and universities engaged in housing management training, as well as other interested individuals and groups. Wherever possible, on the basis of the scope of the request and the available staff time required to fill it, the Center made every effort to provide what was needed or to refer the requestor to a source where the information could be obtained.

1.3.4   Special Project

The Information Center staff also assisted in the performance of Task 1 of this contract by directing the preparation of _An Annotated Bibliography for Instructors_

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and Students, which was Part 3 of the College Curriculum in Housing Management. This bibliography was designed to provide a listing of resources relating to housing management curricula.

TABLE 3

TELEPHONE FOLLOW-UP SURVEY

Sample Design

LIST I.D.#	ORIGINAL	SAMPLE SIZE	PHONE SAMPLE
1. I-A	71	7.1852	3.59 (4)
2. II-A	11	1.1132	.56 (1)
3. II-B	251	25.4012	12.70 (13)
4. II-C	12	1.2144	.61 (1)
5. II-D	47	4.7564	2.38 (2)
6. II-E	6	.6072	.30 (−)
7. II-F	23	2.3276	1.16 (1)
8. III-A	148	14.9776	7.49 (7)
9. IV-A	44	4.4528	2.23 (2)
10. IV-B	5	.5060	.25 (−)
11. IV-C	9	.9108	.46 (−)
12. IV-D*	19	*1.9228	*.96 *(1)
13. IV-E	155	15.6860	7.84 (8)
14. IV-F	2	.2024	.10 (−)
15. IV-G	12	1.2144	.61 (1)
16. V-A	100	10.1200	5.10 (5)
17. VI-A	100	10.1200	5.10 (5)
	TOTAL 1015		TOTAL 50

*Not to be counted in total.

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1.4   SUBTASK 4

            Subtask 4 - Perfect the design of the full-scale
                        housing management technical informa-
                        tion center.

        The Center indicated that as the basis for development

of the Housing Management Technical Information Center Model,

the following sources would be tapped;

            a. Knowledge, information and experience gained
                in the course of operating the NCHM staff
                Information Center;

            b. Data on existing information centers and in-
                formation analysis centers that operate
                successfully in other fields and subject areas;

            c. The analyzed results of the Survey of Indivi-
                duals, Agencies and Organizations Involved in
                Management Aspects of Multifamily Housing,
                which was also conducted as part of Task 4.

1.4.1   NCHM Staff Information Center and Model Development

        What has been learned from the two years of operation

of a staff information facility that also responded, when possi-

ble, to requests from the field for information, has been an

invaluable source of information in the design of the Model.

Among other things, the functioning of this unit and the in-

sight into field operations and personnel that resulted from

its operation, made possible the identification of character-

istics peculiar to this industry, as well as providing an

experience-base for dealing with these characteristics.

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1. Prime collection sources were identified
    for acquisition of information in the form
    of publications, technical reports and
    other such near-print literature, as well
    as program data and other statistical in-
    formation. Among the key information
    sources contacted for material and infor-
    mation in the course of the contract
    period were the Department of Agriculture,
    various state housing development and
    finance agencies, state departments of
    community development and administrations
    on aging, as well as any other state
    agencies found to be engaged in housing-
    related activities, housing trade associa-
    tions, larger local housing authorities,
    urban and gerontological research centers,
    the publishing industry, management companies,
    individual housing specialists, and last but
    not least, individual managers.

2. A knowledge of and feeling for some of the
    kinds, forms and amounts of non-proprietary
    information available within the industry
    that have not been identified and/or col-
    lected to date was acquired. This provided
    insight into the level of effort and work
    load that the Model would have to be designed
    to accommodate on an initial basis.

3. Identification and characterization was made
    of some of the key potential target groups
    within the housing management industry, for
    whom special information services eminating
    from an Information Center might be designed.
    Since product and service design are not only
    crucial to relevant, effective operation, but
    also pave the way to whatever degree of self-
    sufficiency might be attained by such an
    information processing center, any knowledge,
    however rudimentary, of the variety of groups
    to be served by such a unit is a valuable
    resource in the design stages of a Model.

4. A number of requests for information from
    industry representatives to which the staff
    Information Center provided the basis for
    the development of a profile of potential
    kinds of requests that might need to be han-
    dled by the full-scale Information Center,
    as represented by the Model. Some of these

requests involved a need for a specific
kind of information relating to a parti-
cular topic (e.g., actual operation/expense
analyses per unit). Others were requests
for general information on materials and
publications available within a given sub-
ject area. Typical responses to such
requests were subject bibliographies of
relevant source materials or, when copy-
right was not involved, copies of the
materials themselves. Still other reques-
tors asked for information that was not
part of the scope of the collection at that
time. Response in this case took the form
of providing the requestor with the names
of key staff persons in other organizations
and agencies who could provide the informa-
tion. An even smaller, more selective group
of requestors required only the most relevant
information on a particular topic or area of
interest. Here, as time and resources per-
mitted, in-depth reference assistance began
with the identification of all available
source materials, proceeded with the critical
analysis of these sources on the basis of
the scope and nature of the research being
conducted and ended with the identification
of those documents and materials critical to
the study. All this experience acted as the
practicum for the development of the refer-
ence services to be offered as a component
of this Model.

1.4.2   Existing Information Centers and Model Development

Analysis of the design of existing information centers

operating in other subject areas that are identified with and

influence the development of the professions and/or disciplines

to which they are related served as another source of informa-

tion on Model development. Of particular importance was data

collected as to their characteristic components. (For instance,

in most information centers, standardized acquisitions procedures

are established and implemented [one component], but a more selective group of these clearinghouses actually produce their own special reports, newsletters, etc. [another component]) Another key area of concern on which the analysis of such existing centers sheds some light is in the area of service charges for Center products and services.* Since most information center operations are now expected to be at least partially self-supporting and have marketable products in order to be recipients of Federal funding, data gathered as to operational costs involved in specific user services contributed greatly to the degree of relevance and feasibility of the suggested user services which are outlined as a part of the Housing Management Information Center Model. Comparative figures gathered on the number of staff persons per number of users, as well as any available information as to floor plans of existing centers were utilized in the course of Model design. Finally, available data on the bases for the design of selected information centers -- user specifications, existing models, or a combination of these -- was also pertinent material for examination prior to creation of the Model.

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* For a detailed discussion on making Information Analysis Centers more cost-effective through the institution of service charges and other measures, see The Marketing of Informational Analysis Center Products and Services, by Walter H. Veazie, Jr., which was jointly published in 1971 by the ERIC Clearinghouse on Library and Information Sciences and the American Society for Information Science Information Group on Information Analysis Centers.

1.4.3   TIC Survey and the Information Center Model

Perhaps the most important source of input for the design of the Information Center Model was the analysis of results of the Survey of Individuals, Agencies and Organizations Involved in Management Aspects of Multifamily Housing, for by means of this instrument some of the potential users of an operational Housing Management Information Center were asked about their individual information needs. Since no other study of this kind has ever been conducted in the housing management field, answers emerged to a number of key questions about the nature of the industry for which the Model was to be designed:

1.   What variety of users within the housing management field (as represented by the target group samples addressed in the survey) might the Model be expected to accommodate?

2.   What can the respondents tell us about the size of the industry in terms of:

   a.   the number of units they own and/or manage;

   b.   the socio-economic nature of these units;

   c.   the type of financing under which these units were developed (e.g., conventional, assisted, government insured, etc.)?

3.   What sources of information do these potential users now look to, if any, for information needed in performing job-related functions?

4.   What information not readily available do they have a need for?

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5. What information do they produce that, if pooled and made accessible, might prove useful to others operating in the industry?

6. How many of the respondents now have access to collections of information relating to housing management and how are these materials organized (on shelves, in file cabinets, on computer tape, etc.)?

7. What gaps in the field literature exist that might be filled by an Information Center that served as coordinator of research efforts on a field-wide basis and provided materials and information needed for research?

A detailed analysis of survey questionnaire returns, as well as a description of the total survey plan, is provided in Section II of this report.

Section II
SURVEY DESIGN
AND ANALYSIS

TABLE OF CONTENTS

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Appendix

FINAL REPORT

SURVEY OF INDIVIDUALS, AGENCIES, AND ORGANIZATIONS
INVOLVED IN MANAGEMENT ASPECTS OF MULTIFAMILY HOUSING

1.   THE PURPOSE OF THE STUDY

The purpose of this study was to survey the information

needs of housing management field personnel. The survey was found

to be necessary because so little is known about the kinds, forms

and amounts of information that are utilized and/or needed by

individuals in the multifamily housing management field in the

course of carrying out job-related functions. This is true in the

case of all field personnel -- whether they are individual resident

managers, government agency representatives, housing trade associ-

ation members, owner/managers, management company officials, or

other participant groups involved in some way in the management

process.

No prior investigations into the existing information

needs within this field have been made, except those which may

have been carried out informally on very small scales within

individual housing trade associations, among selected portions

of their respective memberships. Therefore it may be said that

at the time of this study, there was no significant research whose

purpose was to determine the answers to the following questions:

> 1. What kinds of information (statistics, technical
>   reports, journal articles, commercially published
>   books) do housing management field personnel cur-
>   rently use in carrying out job-related functions?

2. What additional kinds of information could these field participants use, if they were made available to them?

3. What kinds of information do these individuals/ organizations/government agencies produce in the course of their work or in connection with their work?

2.   METHODOLOGY

2.1   Samples

2.1.1 Mailing Sample

The sampling plan involved the administration of a questionnaire to a group of housing management field personnel who belong to one of the following key field groups:

a. State housing development and finance agency officials

b. Resident managers, supervisors of resident managers, or property managers of:

1. Private, government subsidized multifamily housing

2. Publicly owned multifamily housing

3. Privately owned, government insured multi- family housing

4. Privately owned, government financed multi- family housing; (e.g., Section 221-d-3)

5. Privately owned, conventionally financed multifamily housing

c. Officials of housing trade associations

d. Officials of management companies or owners/managers involved in the operation of multifamily housing

e. Officials of the 200 largest local housing authorities

f. Officials in HUD field offices whose work relates to the management process in some way

Mailing lists from various organizations and government agencies were acquired (see list of sources in table 1). The total universe which these combined lists represent is 12,457. Sample size was determined within each group and the lists encompassed by each group, rather than being determined by the total universe of all target groups combined. A random sample was taken from within the lists included in each group. Table 2 represents the universe, random start, interval, sample size, number of organizations who responded, and response rate for each target group. When the target group was sufficiently small, the entire universe was utilized in the mailing.

2.1.2   Telephone Sample

Because we received a 20 percent response rate on the questionnaire mailing, a decision was made to compare non-respondents to respondents. A random sample of non-respondents was drawn maintaining the same proportions for each target group as in the original sample. The sample design for obtaining this list is found in table 3.

Table 1. Sources for Lists Utilized

The following is a breakdown of the lists included in the sample, by source:

Source	Lists Utilized
I. Center-produced Lists	a. State Housing Development and Finance Agency Officials b. NCHM Training Program Graduates c. Housing Trade Association Officials d. Largest Local Housing Authorities e. Selected HUD Field Office Personnel f. HUD Subsidized Multifamily Housing Developments
II. Lists Obtained from HUD	a. 202/236 Housing for the Elderly Developments b. Approved 202 Senior Citizen Projects
III. Lists Obtained from National Association of Homebuilders	a. Apartment House Council b. Registered Apartment Managers c. Subscriber List to Compendium of Multifamily Housing d. Membership of Assisted Housing Committee e. Membership of Mortgage Finance Committee
IV. National Corporation for Housing Partnerships	a. Management Entities
V. Apartment Owners and Managers Association	a. Builder/Managers
VI. Real Estate Management Brokers Institute	a. Certified Real Estate Managers
VII. National Society of Professional Resident Managers	a. Membership
VIII. National Apartment Association	a. Affiliated Associations Presidents or Directors
IX. Institute of Real Estate Management Directory (1974 Directory of Professional Real Estate Management)	a. Certified Property Managers b. Accredited Management Organizations

Table 2. The Universe, Random Start, Interval, Number of Respondents, and Response Rate for Each Target Group

Target Group	Universe	Random Start	Interval	Sample Size	# Respondents	Response Rate
I. State Housing Dev. & Finance Agency Officials	71	NA	NA	NA	12	17%
II. Resident Managers Supervisors of Resident Managers and Property Managers	3518	6	10.05	350	31	9%
III. Housing Trade Association Officials	148	NA	NA	NA	10	7%
IV. Management Company Officials and Owner/ Managers	8220	27.980	33.827	246	22	9%
V. Largest Local Housing Authorities	200	2	2	100	42	42%
VI. Selected HUD Field Office Personnel	300	1.39	2	100	21	21%

TOTAL SAMPLE   1,015

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Table 3.   Telephone Follow-Up Survey
Sample Design

List I.D.#*	Original	Phone Sample
1. I-A	71	3.59 (4)
2. II-A	11	.56 (1)
3. II-B	251	12.70 (13)
4. II-C	12	.61 (1)
5. II-D	47	2.38 (2)
6. II-E	6	.30 (-)
7. II-F	23	1.16 (1)
8. III-A	148	7.49 (7)
9. IV-A	44	2.23 (2)
10. IV-B	5	.25 (-)
11. IV-C	9	.46 (-)
12. IV-D**	19	**.96 (1)
13. IV-E	155	7.84 (8)
14. IV-F	2	.10 (-)
15. IV-G	12	.61 (1)
16. V-A	100	5.10 (5)
17. VI-A	100	5.10 (5)
TOTAL	1015	TOTAL 50

* Each Roman numeral represents a target group, the name of which is the same as those found in Table 2. The letters following the Roman numerals indicate the source list within that target group.

** Not to be counted in total.

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2.2   Instrumentation

2.2.1   Mailed Instrument

An informal pre-test of the questionnaire was conducted on several members of the Center Staff with management backgrounds similar to those of the target groups. On that basis, it was estimated that the questionnaire would require at most ten to fifteen minutes of the respondents' time. The instrument is divided into sections of clustered questions for particular target groups. No one group within the sample is expected to answer more than 15 explicit questions. Therefore, while the instrument appears at first glance to be lengthy, it requires a minimum amount of response time. Government agency officials included in the sample will be requested to provide more information than individuals or private organizations.

There were no questions in the instrument which elicit responses in regard to sexual or religious beliefs or practices, age, income, or racial or ethnic identification. The only statistical information requested was the number of multifamily units developed and/or managed, according to resident income level and type of financing (conventional or subsidized).

Although there are no plans for formal publication of the survey results, one of the key objectives in conducting the survey was to foster information exchange among these key housing management field groups. Therefore, no promises of confidentiality

were made to potential respondents. In addition, the nature of the questions being asked were such that protection by means of confidentiality was not necessary.

The relevance of question content of the survey instrument was discussed with officials of several housing trade associations and management groups with headquarters in the Washington, D.C. metropolitan area. Among the organizations engaging in this process were the National Association of Homebuilders and the National Society of Professional Resident Managers. The valuable input of these discussions was considered and where appropriate, incorporated into the final questionnaire design.

A copy of this questionnaire may be found in Appendix A.

2.2.2   Telephone Questionnaire

This questionnaire was designed to be administered to a random sample of 50 non-respondents to the mailed questionnaire. Therefore, it is a shortened version of that questionnaire. The criteria for question selection was as follows:

- Identify target group(s) to which non-respondents belong
- Identify agency or organization affiliation
- Identify need for information or lack of need
- Identify current housing journal subscribers
- Identify information producer
- Identify category of multifamily housing

Unfortunately, the questions actually used in the telephone questionnaire have differences which have made comparison between the samples difficult.

A copy of this questionnaire may be found in Appendix B.

2.3   Procedures for Administering the Questionnaires

2.3.1   Mailed Questionnaire

The respondents were asked to participate in the sample by means of a written letter which accompanied the questionnaire. This letter explained the need for the collection of the information the Center was requesting and the value of this effort to the field as a whole.

Two instruments were designed to encourage response to this questionnaire. The first was a letter, which was mailed approximately one and a half weeks after the initial questionnaire mailing. The second was a postcard, which was mailed one week after the letter. It was hoped that these efforts would produce a 60% response rate or higher.

2.3.2   Telephone Questionnaire

The telephone questionnaire was administered to a random sample of 50 non-respondents. Interviewers were instructed to make two attempts to locate the individual who was named as respondent for the organization. If that person could not be contacted in two attempts, it was listed as a "no" response.

Interviewers read the introduction on the front page to explain the purpose of their call. When reading questions #1 and #6, interviewers were instructed to read them slowly, code the first "yes" response and not to read the categories which follow the coded response. When reading question #3, interviewers were instructed to read the entire question before accepting an answer. (See Appendix B, Questionnaire for Telephone Follow-up.)

2.4   Method of Analysis

The results of the survey were tabulated by machine according to frequency of response and, in many cases, percentage of response. No cross-tabulations were done.

3.   FINDINGS

3.1   Highlights of Results from Mailed Questionnaire

3.1.1   Respondent Profile

3.1.1.1   Types of Organizations

Respondents were asked to classify themselves in one of ten categories (according to type of ownership, funding and type of organization). Unfortunately, the categories offered were not mutually exclusive; as a result 28.3% checked multiple categories. Of the remaining, the most frequent were:

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Local Housing Authority	20.5%
Management Company	10.7%
HUD Field Office	10.2%
Privately Owned, Conventionally Financed Multifamily	6.3%

These four categories together with the "combinations" mentioned above account for three quarters (actually 76%) of all respondents.

3.1.1.2   Public Agencies and Nonprofits

Of those responding to the question, "Is your organization a publicly created agency?", a little more than half (58%) answered "yes". Among 101 non-publicly created organizations, 29% were nonprofits and 71% were for profit organizations.

3.1.2   Information Areas Where Respondents Indicated Interest

3.1.2.1   Organizations that Sponsor, Co-Sponsor or Develop Multifamily Housing

We found that 71.2% of the respondents have sponsored, co-sponsored, or developed multifamily housing. Evaluating these 146 organizations for type of units developed or sponsored cannot be precise because the categories offered were not mutually exclusive. However, if we accept the premise that organizations would be most interested in receiving information in areas in which they are currently working, this list would indicate some of the most popular subject areas.

- The sponsoring or development of subsidized low income multifamily housing units

- The sponsoring or development of subsidized elderly multifamily housing units

- The sponsoring or development of conventional (non-subsidized) moderate/middle and upper income multifamily housing units

Only one-third of those responding to this question said they would not be interested in information relating to these areas.

3.1.2.2   Organizations Involved in the Management of Multifamily Housing

Approximately 83% of the respondents indicated that their organizations or agencies were involved in the management of multifamily housing. Again if we accept the premise that organizations are interested in receiving information concerned with areas in which they are working, this list would indicate some of the most popular areas:

- The management of low income subsidized multifamily housing units

- The management of subsidized multifamily housing units for the elderly

- The management of middle and upper income conventional (non-subsidized) multifamily housing units

- The management of both subsidized and non-subsidized moderate income multifamily housing units

Almost 70% of the respondents said they would be interested in receiving information related to these areas.

3.1.2.3   Need for Housing Management Training Programs

Respondents were asked to indicate whether or not they would like to receive a variety of specified training programs. A list of thirty training subject areas was presented. All thirty training subjects were desired by at least some respondents. The most popular training subjects, Maintenance and Tenant/Management Relations, were each desired by 35% of those asked. The ten most popular subjects were:

Subject	% Desiring Training Program*
Maintenance	35%
Tenant/Management Relations	35%
Budgeting	31%
Security and Safety	30%
Role of the Manager	30%
Turnover, etc.	29%
Occupancy Procedure	29%
New Housing Programs	28%
Social Programs	28%
Management of Elderly Housing	27%

Even the least popular subject, Urban Renewal, got 29 requests (14% of those asked).

3.1.2.4   Need for Housing Management Training Materials

The demand for training materials was even higher. Training materials were desired over twice as often as training programs. The most popular subject matter for training materials desired was also Maintenance (57%). The ten most popular subjects were:

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* This includes those specifying a training program with or without training material and whether or not they had previous programs.

Subject	% Desiring Training Materials*
Maintenance	57%
Tenant/Management Relations	56%
Role of the Manager	54%
Budgeting	53%
Security and Safety	52%
Turnover, etc.	50%
Occupancy Procedure	48%
Financial Management and Analysis	46%
New Housing Programs	46%
Social Programs	45%

Even the least popular subject, again Urban Renewal, was desired by 22% of those asked. As you can see, most of the same subjects appear in both lists.

3.1.2.5   Subject Areas in Which Training Programs Have Been Conducted

Many of the same subjects also appear in the top ten list of those who have conducted programs.

Subject	% Conducted**
Tenant/Management Relations	42%
Role of the Manager	42%
Maintenance	37%
Occupancy Procedure	37%
Budgeting	31%
Turnover, etc.	30%
Employee Development	27%
Bookkeeping and Accounting	27%
Social Programs	26%
Security and Safety	26%

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* This includes those specifying training materials with or without a training program and whether or not they had previous programs.

** This list includes those indicating that they have conducted training programs in these areas regardless of whether they also desire training materials or programs.

These figures indicate that, in general, the subject matter areas in which these organizations were interested enough to conduct a training program, or programs, are the same areas in which they are still interested in obtaining information.

3.1.3 Organization Information Centers

Respondents to the question, "Does your agency or organization have a library or information center?" indicated that slightly over half (51.2%) do have one. Of those who indicated they had a library or an information center, slightly over half (52.1%) responded that their information was stored on shelves, while slightly over one-third (36.5%) indicated they stored information in filing cabinets. Only 17 respondents (8.9%) indicated that they used computer storage. Only 31 out of the 205 organizations indicated that they had a full- or part-time librarian. These findings would indicate that materials which can be easily stored on shelves or in filing cabinets by non-librarians would be of most use. These results also point to the need for remote library and information services.

3.1.4 Journals and Professional/Technical Publications

The respondents showed little enthusiasm for the questions concerning journals and professional/technical publications as indicated by their low rate of reply. The low response rate hampers analysis of these questions but there are a few statements which can be made.

- Respondents indicated that they made the most regular use of newsletters and technical journals (as opposed to technical books, technial reports, abstracting services, reporting services, and statistics).

- Respondents indicated they made the least regular use of abstracting services (as opposed to technical books, technical journals, newsletters, technical reports, reporting services, and statistics).

- Respondents seemed to indicate that statistical publications would be most useful to them.

- Only about one-fourth of the respondents indicated they subscribed or purchased any journals and professional/technial publications.

3.1.5   Studies and Reports Originating from These Organizations

Sixty percent of the respondents indicated their organization conducted studies or surveys relating to housing. However, only about forty percent indicated that reports or papers were written about these studies or surveys. Approximately 30% indicated they would be willing to distribute these reports or papers to other agencies. Eighty-five percent of those willing to distribute indicated they would distribute free of charge or for the cost of reproduction.

When questioned about whether their agency produced annual reports, respondents indicated that approximately 46% did produce these reports. Approximately 7% of the organizations indicated they produced other kinds of information not included in the above categories.

3.1.6   Funds for and Interest in Publications

In response to the question, "Does your agency or organization have a publications/educational materials budget?", 42% indicated that they did. Almost 70% of the organizations indicated they had funds that could be used for the purchase of publications. Two-thirds answered that their organizations were interested in purchasing publications of some kind.

In the next question we found indications of the type of publication these organizations valued the most. If first and second place preferences are combined, we find that periodic newsletters are of most value to their organizations. Periodic bibliographies and digests are felt to be of least value.

However, when it comes to organizations spending money for these publications, it was found that demand is very elastic and falls off sharply as price of publication increases. Approximately twice as many organizations were willing to spend between $10.00 and $25.00 as were willing to spend over $26.00 for all types of publications.

Interestingly enough, when non-respondents were asked whether they would purchase with their own money a publication dealing in-depth with housing management and related subjects, approximately 50% said "yes". The individual ratings for the type of publication valued the most indicated the same value scale as the organization ratings for the type of publication valued the

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most. And finally, individuals are even less willing to purchase documents as the price increases. Almost four times as many res- pondents indicated they would be willing to spend between $10.00 and $25.00 as would be willing to spend over $26.00.

When asked about either "organization purchase" or "individual purchase", approximately 60% of the respondents gave no reply. Since no purchase category of "zero or under $10.00" had been provided in the questionnaire, it might at first seem that roughly 60% were not willing to pay over $10.00.* However, a closer examination shows that about 15% of all respondents also gave no response to the simple yes/no lead in questions in Ques- tion 37a. Therefore, it is more likely that roughly 45% (i.e. 60%-15%) of those who considered how much they would be willing to pay, concluded that they would pay nothing or less than $10.00.

3.2   Highlights of Results from the Telephone Questionnaire

The telephone survey was carried out with a sample of fifty non-respondents to the mailed questionnaire. This section high- lights some of the findings from the telephone questionnaire. In the next section, comparisons will be drawn between the data from these two questionnaires.

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* A category for "zero or under $10.00 was not included because of the inappropriate nature of this price range, in terms of current publication costs, for the choice of publications offered for rank- ing in these questions.

3.2.1 Respondent Profile

From the sample of 50 drawn from all non-respondents, we were able to obtain telephone interviews from 24 of them (48% response rate).

These respondents were asked to classify themselves into one of seven categories including "other". Unfortunately, 20.7% classified themselves as "other". Of the remaining, the most frequent were:

Resident Manager, Supervisor, or Property Manager	16.7%
Official of a Management Co., etc.	16.7%
HUD Official	16.7%

These three categories, together with those who classified themselves as "other", account for 70% of all respondents.

Respondents were also asked to place into a category most of the multifamily housing they manage or are associated with. Three categories accounted for almost 85% of the respondents. These are as follows:

Privately owned, conventionally financed	37.5%
Combination of subsidized and non-subsidized	29.2%
Privately owned, government subsidized	16.7%

Thus, over 50% of these respondents were associated with privately owned multifamily housing.

When respondents were asked whether they were affiliated with a public agency, a nonprofit organization or a for profit organization, the majority indicated that they were affiliated with for profit organizations (about 60%). One-fourth responded that they were with public agencies and 13% were with nonprofit organizations.

3.2.2   Importance of Access to Information

Almost 85% of those responding indicated that having access to information relating to housing management or property management was important to the work of their organizations. Over half (55%) felt that it was important or very important to their work.

3.2.3   Currently Subscribing to Periodicals

In answer to the question, "Do you currently subscribe to any housing trade periodicals, such as the Journal of Property Management or the Journal of Housing?", 75% answered "yes".

3.2.4   Reports and Publications Originating from These
           Organizations

Almost thirty percent responded that their organization produced reports or publications relating to the operation of multifamily housing over the past two years.

3.3   Comparison of Response and Non-Response Samples

Although there were, of necessity, differences in the depth of the two questionnaires respondents were requested to answer, some comparisons can be made between response groups for the two instruments.

3.3.1   Respondent Profile

The primary differences between the respondents to the mailed questionnaire and the non-respondents contacted in the telephone survey was that non-respondents to the telephone questionnaire were mostly from public agencies whereas respondents were mostly from for profit organizations. The response rates are shown below:

	Mailed Questionnaire	Telephone Questionnaire
Public Agency	58%	26%
For Profit Organ.	29.5%	60%
Nonprofit Organ.	12.5%	13%

As you can see, the percentages of public agencies responding and for profit organizations responding have essentially reversed. However, the percentage of nonprofit organizations responding remained the same.

3.3.2   Currently Subscribing to Periodicals

About 30% of the respondents to the mailed questionnaire indicated they subscribed to journals, while 75% of the respondents

to the telephone questionnaire indicated that they subscribed to periodicals. This dramatic increase could be due to either the change in type of respondent or the difference between a telephone and mailed questionnaire. Because no cross-tabulations were done, the reasons for the differences cannot be evaluated.

3.3.3   Publications Originating from These Organizations

A comparison of these questions is made difficult by the differences between the two questionnaires. However, there seems to be a basic similarity between the two samples of the number of organizations that publish some type of paper.

3.4   Tables

These tables use abbreviated descriptions of categories.
Therefore, it is recommended that they be evaluated while referring
to the actual texts of the mail and telephone questionnaires res-
pectively.

3.4.1   Tables Derived from Responses to Mailed Questionnaires

Table 1. Type of Respondent (Q.4)

Category	Number	Percent
State Housing Development or Finance	12	5.9
Government Subsidized Multifamily Housing	11	5.4
Public Housing	2	1.0
Privately Owned, Govt. Insured	2	1.0
Privately Owned, Govt. Financed	3	1.5
Privately Owned, Conventionally Financed	13	6.3
Housing Trade Association	10	4.9
Management Company	22	10.7
Local Housing Authority	42	20.5
HUD	21	10.2
Combination	58	28.3
No reply	9	4.4
TOTAL	205	100.0

Table 2. Publicly Created Agency (Q.6)

Category	Number	Percent
Yes	81	39.5
No	111	54.1
No reply	13	6.3
TOTAL	205	100.0

Table 3. Profit or Non-Profit Corporation (Q.7)

Category	Number	Percent
Non-profit	29	14.1
Profit	72	35.1
No reply	104	50.7
TOTAL	205	100.0

Table 4. Sponsored or Developed Multifamily Housing (Q.8)

Category	Number	Percent
Sponsored	43	18.5
Co-sponsored	21	9.0
Developed	100	42.9
None of above	69	29.6
TOTAL	233*	100.0

*Some organizations were involved in more than one activity. For this reason the total does not equal 205.

Table 5. Multifamily Units Sponsored or Developed (Q.9)

Category	No. of Conventional Units	No. of Subsidized Units
Low income	7,038	78,393
Moderate	37,497	8,115
Upper	22,339	----
Elderly	4,229	53,176
TOTAL	71,103	139,684

*No. of sponsors and developers equals 146.

Table 6. Would Like Information (Q.10)

Category	Number	Percent
Yes	125	61.0
No	67	32.7
No reply	13	6.3
TOTAL	205	100.0

Table 7. Manage Multifamily Housing (Q.11)

Category	Number	Percent
Yes	159	77.6
No	36	17.6
No reply	10	4.9
TOTAL	205	100.0

Table 8. Number of Units Managed (Q.12)

Category	No. of Conventional Units	No. of Subsidized Units
Low income	10,518	111,346
Moderate income	17,887	27,899
Middle income	57,095	2,420
Upper income	23,532	-----
Elderly housing	4,640	59,449
TOTAL	113,492	201,114

Number of management firms equals 171.

Table 9. Would like Information on Multifamily Housing (Q.13)

Category	Number	Percent
Yes	141	68.8
No	58	28.3
No reply	6	2.9
Total	205	100.0

Table 10. Training Subjects (Q.14)

Category	Conducted Programs	Would like Programs	Would like Materials	Have Conducted and would like Program	Have Conducted and would like Materials	Would like program and Materials	Would like all three	No Reply
Role of manager	44	10	42	1	18	27	23	40
Budgeting	35	13	46	1	12	34	16	48
Maintenance	38	11	44	3	15	39	19	36
Tenant Relations	43	14	42	2	16	30	26	32
Employee Devpt.	32	8	32	1	7	30	16	79
Social Programs	28	7	37	2	8	33	15	75
News Programs	22	11	42	0	5	32	15	78
Grantsmanship	5	7	29	0	2	28	5	129
Urban Renewal	9	4	20	0	1	20	5	146
Economics	8	9	26	0	2	21	7	132
Mortgages	9	10	32	0	3	19	10	122
Planning and Devpt.	15	10	35	0	4	30	9	102
Security and Safety	26	9	47	2	8	34	17	62
Occupancy Procedure	43	6	38	2	9	30	21	56
Turnover	34	8	47	1	5	30	21	59
Purchasing	27	7	39	2	3	22	13	92
Insurance	23	10	37	1	3	29	8	94
Forms	20	7	30	0	4	35	6	103
Service Contracts	21	8	40	0	3	21	11	101
Supervision	25	7	34	3	5	28	15	88
Manpower	15	9	26	0	2	29	8	116
Grievance	20	4	36	5	6	29	12	93
Communications	22	8	32	2	6	20	13	102
Careers	9	7	38	1	2	33	7	108
Elderly	23	5	37	2	0	32	11	95
Mgt. Elderly Housing	25	9	38	2	0	33	12	86
Social Services, Elderly	18	7	32	1	2	31	10	104
Bookkeeping	30	9	32	3	6	25	17	83
Financial Management	23	8	44	1	5	30	16	78
Energy Conservation	15	6	43	2	2	31	8	98
Other	1	1	1	0	1	4	2	195
TOTAL	708	249	1,098	40	165	869	394	2,832

Note: above indicates number of responses, not number of respondents. The total is, therefore, greater than 205.

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Table 11. Has Library or Information Center (Q.15)

Category	Number	Percent
Yes	105	51.2
No	97	47.3
No reply	3	1.5
TOTAL	205	100.0

Table 12. How information Is Stored (Q.16)

Category	Number	Percent
Shelves	100	52.1
Filing cabinets	70	36.5
Computer Storage	17	8.9
Other	5	2.6
TOTAL	192	100.0

Table 13. Have Librarian (Q.17)

	Category	Number	Percent
	Yes	31	15.1
	No	163	79.5
	No reply	11	5.4
Total		205	100.0

Table 14. Use of Publications (Q.18.a.)

Category	Use Regularly	Not Available	No Reply
Technical books	67	23	115
Journals	101	33	71
Newsletters	122	26	57
Reports	66	53	86
Abstracting service	31	66	108
Reporting service	66	54	85
Statistics	63	59	83
Total	516	314	605

The above table is based on the number of mentions, not the number of respondents.

Table 15. Usefulness of Publications (Q.18.a.)

Category	Very Useful	Useful	Somewhat Useful	Not Useful	No Reply
Technical books	14	22	19	9	141
Journals	38	23	25	12	107
Newsletters	32	32	22	5	114
Reports	34	33	36	16	86
Abstracting service	31	32	42	25	75
Reporting service	38	28	36	18	85
Statistics	58	42	19	13	73
Total	245	212	199	98	681

Table 16. Subscribe or Purchase (Q.18.b.)

Category	Yes	No	No Reply
Technical books	41	47	117
Journals	38	79	88
Newsletters	32	89	84
Reports	50	42	113
Abstracting service	60	15	130
Reporting service	49	40	116
Statistics	56	39	110
Total	326	351	758

Table 17. Conducted Studies or Surveys (Q.19)

Category	Number	Percent
Yes	123	60.0
No	65	31.7
No Reply	17	8.3
TOTAL	205	100.0

Table 18. Produced Reports (Q.20)

Category	Number	Percent
Yes	84	41.0
No	43	21.0
No Reply	78	38.1
TOTAL	205	100.0

Table 19. Willing to Distribute Reports (Q.22)

Category	Number	Percent
Free of charge	18	8.8
Cost of Reproduction	33	16.1
For Publication charge	9	4.4
Does not apply	68	33.2
No Reply	77	37.6
Combination of above	—	—
TOTAL	205	100.0

31

Table 20.   Separate Agency Distributes Reports (Q.23)

Category	Number	Percent
Yes	15	7.3
No	133	64.9
No reply	57	27.8
TOTAL	205	100.0

Table 21.   Produce Annual Reports (Q.25)

Category	Number	Percent
Yes	94	45.9
No	82	40.0
No reply	29	14.1
TOTAL	205	100.0

Table 22. Other Information Produced (Q.27)

Category	Number	Percent
Yes	15	7.3
No	142	69.3
No reply	48	23.4
TOTAL	205	100.0

Table 23.   Would like to Receive Information (Q.29)

Category	Number	Percent
Yes	58	28.3
No	72	35.1
No reply	75	36.6
TOTAL	205	100.0

Table 24. Organizations Respondent Gets in Touch With (Q.30)

Category	Number
Government	137
Non-profit	34
Community	35
Trade or professional	108
University or research center	43
Other	18
Total	375

Table 25. Trade Association Members Interested (Q.31)

Category	Number	Percent
Less than 10%	3	1.5
10 - 25%	3	1.5
25 - 50%	5	2.4
Over 50%	9	4.4
Does not apply	41	20.0
No reply	144	70.2
Total	205	100.0

Table 26. Revenue Sharing Will Be Used For What Programs (Q.32)

Category	Number
Management	9
New construction or renovation	21
Subsidy funds	9
Maintenance	15
Training	9
Other	16
Total	79

Table 27. Government Funds Available to Agency* (Q.35)

Category	Number	Percent
Yes	47	22.9
No	115	56.1
No reply	43	21.0
Total	205	100.0

*For Housing Programs

Table 28. Agency of Government Which Made Funds Available for Housing (Q.36)

Category	Number
Planning Commission	14
Commission on aging	22
Department of community affairs	15
Other	12
Total	63

Table 29. Funding for and Interest in Publications (Q.37.a.)

Category	Yes	No	No Reply
Budget available	87	90	28
Funds can be utilized	141	32	32
Have interest in purchase	135	35	35
Total	363	157	95

34

Table 30. Rating of Publications in Priority Order (Q.37.b.)

Category	1	2	3	4	No Reply
Newsletter	74	18	11	9	93
Bibliography	9	13	19	25	139
Digest	11	15	24	25	130
Looseleaf reporting	17	47	23	14	104
Technical reports	22	22	20	19	122

Table 31. Agency Purchase Price Limit (Q.37.b.)

Category	$ 10-25	26-40	41-60	60+	No Reply
Newsletter	65	13	3	16	108
Bibliography	50	9	1	6	139
Digest	50	10	2	6	137
Looseleaf reports	45	18	6	15	121
Technical reports	44	17	3	10	131

Table 32. Would Purchase Publications With Own Funds (Q.37.c.)

Category	Number	Percent
Yes	104	50.7
No	61	29.8
No reply	40	19.5
Total	205	100.0

Table 33. Order of Priority for Publications Purchased With Own Funds (Q.37.c.)

Category	1	2	3	4	5	No Reply
Newsletter	41	21	10	8	6	119
Bibliography	8	13	11	12	25	136
Digest	14	6	22	21	9	133
Looseleaf reports	16	27	14	11	7	130
Technical reports	19	16	14	12	15	129

Table 34. Price Limit for Publications Purchased with Own Funds (Q.37.c.

Category	$ 10-25	26-40	41-60	60+	No Reply
Newsletter	61	7	2	4	131
Bibliography	40	5	2	1	157
Digest	48	4	3	1	149
Looseleaf reports	48	7	3	6	141
Technical reports	42	11	2	4	146

3.4.2 Tables Derived from Telephone Survey of Sample Non-Respondents

Table 1. Number of Responses and Non-Responses

Category	Number
No response*- public agencies	6
No response*- private organizations	7
No listing available	9
Questionnaire in mail	3
Located in Hawaii	1
Responded	24
Total	50

*A no response is a failure to obtain an interview after 2 calls.

Table 2. Position Held (Q.1)

Category	Number	Percent
State Dept. or Finance authority	2	8.3
Manager	4	16.7
Trade association	2	8.3
Management company	4	16.7
Local public agency	1	4.2
HUD	4	16.7
Combination	1	4.2
Other	5	20.7
No reply	1	4.2
Total	24	100.0

38

Table 3. Type of Organization Affiliated With (Q.2)

Category	Number	Percent
Public agency	6	25.0
Non-profit organization	3	12.5
Profit organization	14	58.3
No reply	1	4.2
Total	24	100.0

Table 4. Importance of Management Information (Q.3)

Category	Number	Percent
Very important	7	29.2
Important	6	25.0
Somewhat important	7	29.2
Not important	3	12.4
No reply	1	4.2
Total	24	100.0

Table 5. Currently Subscribe to Housing Periodicals (Q.4)

Category	Number	Percent
Yes	18	75.0
No	5	20.8
No reply	1	4.2
Total	24	100.0

Table 6. Have Produced Multifamily Housing Reports (Q.5)

Category	Number	Percent
Yes	7	29.2
No	13	54.1
No reply	3	12.5
Don't know	1	4.2
Total	24	100.0

Table 7. Type of Multifamily Housing Involved With (Q.6)

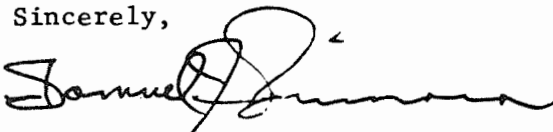| Category	Number	Percent
Privately owned, govt. subsidized	4	16.7
Publicly owned	0	--
Privately owned, govt. insured	0	--
Privately owned, govt. financed	0	--
Privately owned, conventionally financed	9	37.5
Other	0	--
Combination subsidized and unsubsidized	7	29.2
Not applicable	2	8.3
No reply	2	8.3
Total	24	100.0

Since its creation by Presidential Executive Order in April, 1972, the National Center for Housing Management has been actively engaged in filling the role for which it was created -- as the national resource center for continual development of the housing management profession. The professionalization of housing managers is recognized as one of the key elements in the preservation of the Nation's multifamily housing.

In order to better serve you; the housing managers, and those individuals, organizations and governmental agencies who are otherwise involved in the management process, the Center needs to know:

1. what kinds of information you currently use in your work;

2. what additional kinds of information you could use, if they were made available to you;

3. what kinds of information you produce.

The answers that <u>you</u> provide will be used in the design of a national Housing Management Technical Information Center, one that will respond rapidly to all requests for information from <u>you</u> and <u>other</u> <u>interested</u> <u>users</u>. In light of this, as well as the knowledge that you can bring to this effort, we ask that you take ten minutes in the next few days to fill out the attached questionnaire. A return envelope is enclosed for your convenience.

It is our hope that your willingness to share your experiences with others will contribute toward better housing management in the future.

Sincerely,

Samuel J. Simmons
President

Enclosures.

APPENDIX A

NATIONAL CENTER FOR HOUSING MANAGEMENT
1133 - FIFTEENTH STREET, N. W.
SUITE 611
WASHINGTON, D. C. 20005

SURVEY OF INDIVIDUALS, AGENCIES
AND ORGANIZATIONS INVOLVED IN
MANAGEMENT ASPECTS OF MULTIFAMILY HOUSING

So that the National Center for Housing Management can be more helpful in providing useful information in the field of housing management, we ask that you take a few minutes to consider each of the questions in this brief questionnaire. Please notice that in addition to asking about the work you have done in housing management, we are also asking what information might be helpful to you.

1. Respondent's Name_____

         Title _____

2. Agency Name and Address_____

         _____

         _____

3. Telephone Number_____

4. TYPE OF RESPONDENT:
    (Please check one)

    a. State housing development and finance agency official   ⬜

    b. Resident manager, supervisor of resident managers or

        property manager of:

        1. Private, government subsidized multifamily housing

            (e.g., section 236)   ⬜

        2. Publicly owned multifamily housing   ⬜

        3. Privately owned, government insured multifamily

            housing (e.g., FHA or VA)   ⬜

        4. Privately owned, government financed multifamily

            housing (e.g., section 221-d-3 or housing financed by a

            state housing development and finance agency)   ⬜

        5. Privately owned, conventionally financed multifamily

            housing   ⬜

c. Official of a housing trade association   ⬜

d. Official of a management company or an owner/manager
    involved in the operation of multifamily housing   ⬜

e. Official of a local housing authority   ⬜

f. A housing management official in a HUD field office   ⬜

5. Who is the principal housing management person to contact in
    your organization or agency?

    a. Name and Title_____

    b. Address (no. and street)_____
              (city & zip code)_____

    c. Phone (area code and no.)_____

6. Is your organization a publicly created agency? (check one)

    a. yes ⬜   b. no ⬜
        (skip to Q. 8)

7. If you are not a publicly created organization, are you: (check one)

    a. A nonprofit corporation?   ⬜

    b. A for profit corporation?   ⬜

8. Have you: (check all which apply)

    a. Sponsored multifamily housing   ☐

    b. Co-sponsored multifamily housing   ☐

    c. Developed multifamily housing   ☐

    d. None of the above (skip to Q. 10)   ☐

9. Irrespective of the corporate names used, if you have checked
    a-c in Q. 8, what is the total number of multifamily units you
    have developed or have been given the authority to develop?
    (Please fill in following chart)

Type of Units	Conventional (Non-subsidized)	Subsidized
a. low income (Note: other than elderly)	_____	_____
b. moderate/middle income	_____	_____
c. upper income	_____	(not applicable)
d. elderly housing	_____	_____

10. Would you like information relating to sponsoring, co-sponsoring or
    developing of multifamily housing? (check one)

    a. yes ☐   b. no ☐

11. Is your agency or organization involved in the management of

multifamily housing?   (check one)

a. yes   ⃞   b. no   ⃞
                       (skip to Q. 13)

12. If yes to Q. 11, would you please fill in the chart below:

Type of Units	Number of Units	
	Conventional (Non-subsidized)	Subsidized
a. low income	_____	_____
b. moderate income	_____	_____
c. middle income	_____	_____
d. upper income	_____	(not applicable)
e. elderly housing	_____	_____

13. Would you like information about types and numbers of multifamily

housing units managed from other agencies or organizations?   (check one)

a. yes   ⃞   b. no   ⃞

L

14. One of the needs frequently mentioned by housing managers is for training in specific areas of management. For each subject area in the table below, please check in the spaces provided whether you have conducted training programs, would like to have training programs or would like training materials.

Training Subject	Have Conducted Training Programs	Would like Training Programs	Would like Training Materials
1. Role of the Housing Manager			
2. Budgeting			
3. Maintenance			
4. Tenant/management Relations			
5. Employee Development			
6. Social Programs in Housing			
7. New Programs in Housing			
8. Grantsmanship			
9. Urban Renewal			
10. Real Estate Transfer and Economics			
11. Mortgages			
12. Planning and Developing New Housing			
13. Security and Safety			
14. Occupancy Procedure			
15. Turnover, Repossession, Eviction			

(question 14 continued)

Training Subject	Have Conducted Training Programs	Would like Training Programs	Would like Training Materials
16. Purchasing			
17. Insurance			
18. Development of Forms			
19. Service Contracts			
20. Supervisory Skills			
21. Manpower Analysis			
22. Grievance Management			
23. Communications			
24. Careers in Housing Management			
25. Housing for the Elderly			
26. Management of Elderly Housing			
27. Social Services for the Elderly			
28. Bookkeeping and Accounting			
29. Financial Management and Analysis			
30. Energy Conservation			
31. Other (Please Specify)			
32. Other (Please Specify)			

15. Does your agency or organization have a library or information center?

    (check one)

    a. yes ⬚   b. no ⬚
                        (skip to Q. 17)

16. If yes to Q. 15, how is the information stored? (check all appropriate boxes)

    a. Shelves   ⬚

    b. Filing cabinets   ⬚

    c. Computer storage   ⬚

    d. Other (please specify) ⬚ _____

                                   _____

                                   _____

17. Does your agency or organization have a full or part time librarian?

    (check one)

    a. yes ⬚   b. no ⬚

18. a. Listed below are descriptions of journals and professional/technical publications in the field of housing management. Documents of these types might be made available to managers if needed. Please indicate whether you regularly make use of these types of publications; whether you do not use them because they are not available; and whether you think they would be very useful, useful, somewhat useful or not at all useful.

Type of Publication	use regu-larly	not cur-rently avail-able to you	would be very useful	would be useful	would be some-what useful	not at all use-ful
Technical Books						
Technical Journals (collections of news from field participants, new and ongoing research, federal and state legis-lation, and abstracts of new publications).						
Newsletters (brief collections of field news items, usually published by trade associations).						
Technical Reports (reports on research done by government agencies, by those under contract to government agencies, or by private organizations).						
Abstracting Services (publications which provide lists of field books, reports and journal articles, and provide summaries of content for each).						
Reporting Services (as represented by sets of loose-leaf binders containing field news, legislation, and other items of interest, to which there are frequent updates).						
Statistics (e.g., family pro-files, welfare status, opera-ting costs, rental rates, census data).						

18. b. Beside the descriptions of journals and professional/technical

publications in the field of housing management that are provided

below, list the titles of any publications you use in your work.

Type of Publication	Title	Do you Subscribe or Purchase?
Technical Books		☐ no ☐ yes
Technical Journals (collections of news from field participants, new and ongoing research, federal and state legis- lation, and abstracts of new publications).		☐ no ☐ yes
Newsletters (brief collections of field news items, usually published by trade associations).		☐ no ☐ yes
Technical Reports (reports on research done by government agencies, by those under contract to government agencies, or by private organizations).		☐ no ☐ yes
Abstracting Services (publications which provide lists of field books, reports and journal articles, and provide summaries of content for each).		☐ no ☐ yes
Reporting Services (as represented by sets of loose-leaf binders containing field news, legislation, and other items of interest to which there are frequent updates).		☐ no ☐ yes
Statistics (e.g., family pro- files, welfare status, opera- ting costs, rental rates, census data).		☐ no ☐ yes

19. Has your agency or organization conducted studies or surveys relating
    to housing? (check appropriate boxes)
    a. yes /___/   b. no /___/   c. would like information from
                                                      others on studies done /___/

20. If yes to Q. 19, were there reports or papers written? (check one)
    a. yes /___/   b. no /___/

21. If yes to Q. 20, what reports or papers were produced? (Please indicate
    in the table below. If you need more space, use the back cover of this
    booklet.)

Report Title	Author	In House	Contract

22. Would you be willing to distribute such reports or papers to other agencies:
    a. free of charge /___/   b. for cost of reproduction /___/
    c. for a specific publication charge /___/

23. Is there a separate agency or organization which distributes your
    documents and reports?
    a. yes /___/   b. no /___/
                                    (skip to Q. 25)

24. If yes to Q. 23, what is the name and address of the distribution center?

    a. Name of center_____

    b. Street no. and name_____

    c. City, state and zip code_____

25. Has your agency produced annual reports dealing with the performance
of your agency? (check one)

    a. yes $\boxed{}$ b. no $\boxed{}$

26. Please describe housing management techniques which your agency has
used and which you feel are innovative. (Use back cover of booklet if needed.)

_____

_____

_____

_____

_____

27. Is there any information you produce that was not covered elsewhere in
this questionnaire?

    a. yes $\boxed{}$ b. no $\boxed{}$

28. If yes to Q. 26, would you please describe the information below. (Use
back cover of booklet if needed.)

_____

_____

_____

_____

29. Is there any specific information related to housing that you would like to receive?

a. yes /___/   b. no /___/
    (please describe)

_____

_____

_____

30. When you need housing related information, whom do you now get in touch with? (Please fill in all groups which apply.)

<u>Type of Group</u>   <u>Please specify name of agency</u>

Government agency   _____

                                        _____

Nonprofit organization   _____

                                        _____

Community organization   _____

                                        _____

Trade or professional association   _____

                                        _____

University or Urban Research Center   _____

                                        _____

Other   _____

                                        _____

(If you need more space, please use back cover of booklet.)

31. If you are a trade association (public or publicly created agencies skip to Q. 32), what percentage of your membership do you feel is greatly interested in housing management? (Check the appropriate box.)

    a. Fewer than 10 percent   ⬜

    b. Between 10-25 percent   ⬜

    c. Between 25-50 percent   ⬜

    d. Over 50 percent   ⬜

IF PUBLIC AGENCY OR PUBLICLY CREATED AGENCY

32. If your local governmental unit has used or plans to use Revenue Sharing funds for housing programs, what are the specific areas? (Check all which apply.)

    a. General management   ⬜

    b. New construction or renovation of public housing   ⬜

    c. Subsidy funds for housing sponsors   ⬜

    d. Maintenance of housing   ⬜

    e. Training   ⬜

    f. Other   ⬜ (please specify)

    _____

    _____

    _____

33. What community services such as recreation, library services, education, job training, health services and day care are regularly scheduled in the housing developments you are associated with? (Please indicate below.)

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

34. What community programs not now available do you feel are needed in the housing developments you are associated with? (Please indicate below.)

_____

_____

_____

_____

35. Are there any state or local governmental units which have made funds available to your agency for housing program activities of any kind?

    a. yes   ☐   b. no   ☐

36. If yes, please indicate below which type(s) of state or local governmental unit(s) has (have) made funds available.

State or local Planning Commission   ☐

State or local Commission on Aging   ☐

State or local Department of Community Affairs   ☐

Other   ☐ (please specify)

_____

_____

_____

FOR ALL RESPONDENTS

37. As a result of various inquiries from the field that the Center has received over a period of time, there is reason to believe that at least some housing management personnel need more comprehensive sources of information than those which are now available to them. The following questions are being asked in order to find ways of providing this information most economically to those who need it.

    a. Does your agency or organization have:

       1. A publications/educational materials budget;   ☐ yes   ☐ no

       2. Funds that could be utilized for the purchase of publications;   ☐ yes   ☐ no

       3. Any interest in the purchase of publications of any kind.   ☐ yes   ☐ no

b. Please rate, by number, in order of their value to your organization (with the most valuable as #1), the following types of publications, and then indicate the maximum subscription/purchase price your organization would be willing to pay for each type.

|		Subscription/Purchase Price Limit			
Rating in Priority Order	Type of Publication	10.00-25.00	26.00-40.00	41.00-60.00	60.00+
	Periodic Newsletter;				
	Periodic Bibliographies based on a profile of your individual/organizational needs;				
	Periodic Digest or Abstracting service which would provide access to new books, technical reports and journal articles;				
	Periodic Loose-leaf reporting service;				
	Technical report series.				

c. Would you, as an individual, purchase with your own money a publication dealing in-depth with housing management and related subjects?

☐ yes   ☐ no

If "yes," please go to chart below and rate, by number, in order of their value to you (with the most valuable as #1), the following types of publications, and then indicate the maximum subscription/purchase price you would be willing to pay for each type.

Rating in Priority Order	Type of Publication	Subscription/Purchase Price Limit			
		10.00 - 25.00	26.00- 40.00	41.00- 60.00	60.00+
	Periodic Newsletter;				
	Periodic Bibliographies based on a profile of your individual/organizational needs;				
	Periodic Digest or Abstracting service which would provide access to new books, technical reports and journal articles;				
	Periodic Loose-leaf reporting service;				
	Technical report series.				

YOU HAVE COMPLETED THIS
QUESTIONNAIRE

PLEASE MAIL IT IN AS SOON AS
POSSIBLE

THANK YOU

Appendix B

Telephone Follow-up Made to Non-Respondents
To Task 4 Survey

Interviewer's Script

"Hello, I am _____(name of interviewer)_____ and I'm calling

for the National Center for Housing Management in Washington, D. C.

A few weeks ago, you received a questionnaire on information needs in

the field of housing management. You were probably too busy to respond,

but your views are important to us. We have shortened the survey to a

few basic questions, which we would like to ask you while we have you

on the telephone. It should take only a few moments of your time.
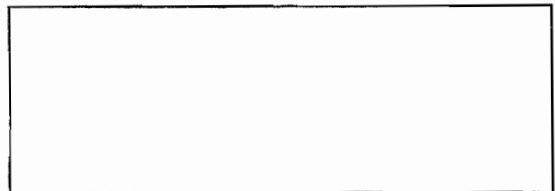
1. Which of these job titles best describes the position you hold:

   /__/   a. Are you a state housing development and finance
            agency official?

   /__/   b. Are you a resident manager, supervisor or property
            manager?

   /__/   c. Are you an official of a housing trade association?

   /__/   d. Are you an official of a management company or a
            multifamily owner/manager?

   /__/   e. Are you an official of a local housing authority?

   /__/   f. Are you a HUD regional, area or insuring office official?

   /__/   g. Other (Please ask the respondent to describe.)

            _____

            _____

            _____

2. Are you affiliated with: (choose one)

   /__/   a. a public agency?

   /__/   b. a nonprofit organization?

   /__/   c. a for profit organization?

3. How important to your work and/or to the work of your organization

   is having access to information relating to housing management or

   property management?

   /☐/   very important;

   /☐/   important;

   /☐/   somewhat important;

   /☐/   not at all important.

4. Do you currently subscribe to any housing trade periodicals,

   such as the Journal of Property Management or the Journal of

   Housing?

   /☐/   yes

   /☐/   no

5. Have you or has your organization produced any reports or publications

   relating to the operation of multifamily housing over the past

   two years?   (TO INTERVIEWER: Included here would be annual reports

   which contain information relating to multifamily housing.)

   /☐/   yes

   /☐/   no

6. In which category would you place most of the multifamily housing

   that you manage or with which you are associated?

   /___/   a. Is it privately owned, government subsidized,
               such as Section 236?

   /___/   b. Is it publicly owned?

   /___/   c. Is it privately owned, government insured, such as
               FHA or VA?

   /___/   d. Is it privately owned, government financed, such as
               section 221-d-3 or housing financed by a state housing
               development and finance agency?

   /___/   e. Is it privately owned, conventionally financed, with
               no government assistance of any kind?

   /___/   f. Is it some other category? (Please describe.)

            _____

            _____

            _____

   /___/   g. Not applicable.

After getting the information, close the conversation by saying:

"Thank you very much for your help. Your cooperation is appreciated."

NOTE: Do not push. If respondent is unwilling to cooperate, close

   the conversation by thanking him or her politely.

(2)TWO call-backs

NCHM

NATIONAL CENTER FOR HOUSING MANAGEMENT

Some time ago, a questionnaire was sent to you asking
your help in providing the Center with information useful
to professionals such as yourself in the field of housing
management.

Although nearly everyone to whom the questionnaire was sent
has responded enthusiastically, we have not yet heard from
you. Your views are important to us.

Please help by completing the questionnaire and sending it
in. If you do not have the copy that was sent to you
initially, please call us at (202) 872-1717 so that we can
put another in the mail right away.

Thank you,

Samuel J. Simmons
President

NATIONAL CENTER FOR HOUSING MANAGEMENT

1133 15th St., N.W.

Washington, D. C. 20005

Dear Mr. Simmons:

(Check One)

/_____/   I have completed the questionnaire for your survey
           and mailed it to you on (date) _____

/_____/   I have not yet completed the questionnaire, but plan
           to do so and will mail it to you on (date) _____

NATIONAL CENTER FOR HOUSING MANAGEMENT

This is just a reminder to you to complete the brief question-
naire we sent to you on information needs of housing managers, if
you have not already done so.

Please fill in the attached postcard indicating whether or
not you have completed the questionnaire and drop it in the mail.

The answers that you provide will be of great help to all of
us in the development of a national Housing Management Technical
Information Center.

Thank you,

Samuel J. Simmons
President

_____

_____

Ms. Beth A. Brown
National Center for Housing Management
Suite 611
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Appendix D

CLEARANCE DOCUMENTS

SURVEY OF INDIVIDUALS, AGENCIES AND

ORGANIZATIONS INVOLVED IN

MANAGEMENT ASPECTS OF MULTIFAMILY

HOUSING

National Center for Housing
        Management
1133 15th Street, N. W.
Washington, D. C.   20005
August 15, 1974

CLEARANCE DOCUMENTS

SURVEY OF INDIVIDUALS, AGENCIES AND ORGANIZATIONS
INVOLVED IN MANAGEMENT ASPECTS OF MULTIFAMILY HOUSING

1. JUSTIFICATION OF THE SURVEY

This survey of the information needs of housing management field
personnel is being conducted in connection with performance of Task 4 of
the Center's Contract #H-2161 R with the Department of Housing and Urban
Development, which calls for the development/design of a Housing Management
Technical Information Center Model capable of response to field information
requests on a national scale. The results of this survey will serve as one
of the inputs for model development, along with information gathered on
successful existing information center models, as well as information
gathered in the course of operation of the Center's existing staff
Information Unit.

This survey was found to be necessary because so little is known about
the kinds, forms and amounts of information that are utilized and/or needed
by individuals in the multifamily housing management field in the course of
carrying out job-related functions. This is true in the case of all field
personnel -- whether they be individual resident managers, government agency
representatives, housing trade association members, owner/managers,
management company officials, or other participant groups involved in some
way in the management process.

No prior investigations into the existing information needs within
this field have been made, except those which may have been carried out
informally on very small scales within individual housing trade associations,
among selected portions of their respective memberships. Therefore, it may
be said that, at the present time, there is no significant, measurable
amount of information that has been purposefully gathered in order to
determine the answers to the following questions:

1. What kinds of information (statistics, technical reports, journal
    articles, commercially published books) do housing management
    field personnel currently use in carrying out job-related functions?

2. What additional kinds of information could these field
    participants use, if they were made available to them?

3. What kinds of information do these individuals/organizations/
    government agencies produce in the course of their work or in
    connection with their work?

2.   DESCRIPTION OF THE SURVEY PLAN

2.1   Objectives

The survey plan involves the administration of a questionnaire to a
sample group of housing management field personnel who belong to one of
the following key field groups:

a.   State housing development and finance agency officials;

b.   Resident managers, supervisors of resident managers, or
     property managers of:

     1.   Private, government subsidized multifamily housing;
     2.   Publicly owned multifamily housing;
     3.   Privately owned, government insured multifamily housing;
     4.   Privately owned, government insured multifamily housing;
          (e.g., Section 221-d-3);
     5.   Privately owned, conventionally financed multifamily housing;

c.   Officials of housing trade associations;

d.   Officials of management companies or owners/managers involved
     in the operation of multifamily housing;

e.   Officials of the 200 largest local housing authorities;

f.   Officials in HUD field offices whose work relates to the
     management process in some way.

The questionnaire is designed to provide answers to the key questions
regarding information needs and information production, which are listed
in Section 1.

2.2   Respondent Universe and Sample Size

Mailing lists from various organizations and government agencies
have been acquired, to provide coverage in the random sample of all the
survey target groups listed in 2.1. The total universe which these
combined lists represent is 12,457. Sample size was determined within
each group and the lists encompassed by each group, rather than being
determined by the total universe of all target groups combined. The
following represents the universe, random start, interval, and sample
size for each target group included in the questionnaire. When the
target group is sufficiently small, the entire universe will be utilized
in the mailing.

2.3 Sources for Lists Utilized

The following is a breakdown of the lists to be included in the sample, by source:

SOURCE	LISTS UTILIZED
I. Center -produced Lists	a. State Housing Development and Finance Agency Officials b. NCHM Training Program Candidates c. Housing Trade Association Officials d. Largest Local Housing Authorities e. Selected HUD Field Office Personnel f. HUD Subsidized Multifamily Housing Developments
II. Lists Obtained from HUD	a. 202/236 Housing for the Elderly Developments b. Approved 202 Senior Centizen Projects
III. Lists Obtained from National Association of Homebuilders	a. Apartment House Council b. Registered Apartment Managers c. Subscriber List to Compendium of Multifamily Housing d. Membership of Assisted Housing Committee e. Membership of Mortgage Finance Committee
IV. National Corporation for Housing Partnerships	a. Management Entities
V. Apartment Owners and Managers Association	a. Builder/Managers
VI. Real Estate Management Brokers Institute	a. Certified Real Estate Managers
VII. National Society of Professional Resident Managers	a. Membership
VIII. National Apartment Association	a. Affiliated Associations Presidents or Directors
IX. Institute of Real Estate Management Directory (1974 Directory Professional Real Estate Management)	a. Certified Property Managers b. Accredited Management Organizations

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2.4   Pre-test

A pre-test of the questionnaire was conducted on several members of the Center Staff with management backgrounds similar to those of the target groups.

2.5   Follow-up Techniques

Two instruments have been designed to handle non-response. The first is a letter, which will be mailed approximately one and a half weeks after the initial questionnaire mailing. The second is a postcard, which will be mailed one week after the first follow-up instrument. It is hoped that these efforts will produce a 60% response rate or higher.

2.6   Technical Assistance in Sample and Questionnaire Design

Robert Learmonth and Harold Black, Ph. D. of Westat, Inc., a nationally recognized survey research organizations, provided assistance in the design of the questionnaire and on the random sample drawn from the universe of target groups.

3.   TABULATION AND PUBLICATION PLANS

The results of the survey will be tabulated by machine, where responses can be so quantified. The necessity of open-ended questions in the survey instrument, due to the initial quality of the inquiry, will require some manual tabulation. This phase will again be handled by Westat, Inc. Responses will be tallied and tables produced to show the frequency of responses. There are no plans for formal publication of the results, as the survey is being conducted only to provide fundamental information for the design of the Technical Information Center model described in Section 1.

4.   TIME SCHEDULE FOR SURVEY PROCESS

Task scheduling calls for the collection of data by means of the questionnaire by September 15, 1974. Analysis of the return, as well as tabulation of the results is scheduled for the period September 30 - October 15, 1974. A report which will include the results of this survey will be submitted to the HUD Contract Officer for approval on or before November 15, 1974. A period of no more than three months will have elapsed between the data collection and the presentation of the written report to HUD.

5.   CONSULTATIONS OUTSIDE THE AGENCY

The relevance of question content of the survey instrument was discussed with officials of several housing trade associations and management groups with headquarters in the Washington, D. C. metropolitan area. Among the organizations engaging in this process were the National Association of Homebuilders and the National Society of Professional Resident Managers. The valuable input of these discussions was considered

TARGET GROUP	UNIVERSE	RANDOM START	INTERVAL	SAMPLE SIZE
I. State Housing Development and Finance Agency Officials	71	NA	NA	NA
II. Resident Managers Supervisors of Resident Managers and Property Managers	3518	6	10.05	350
III. Housing Trade Association Officials	148	NA	NA	NA
IV. Management Company Officials and Owner/Managers	8220	27.980	33.827	243
V. Largest Local Housing Authority	200	2	2	100
VI. Selected HUD Field Office Personnel	300	1.39	2	100

TOTAL SAMPLE   1,012

and where appropriate, incorporated into the final questionnaire design.

6.   RESPONDENT REPORTING BURDEN

On the basis of the informal pre-test conducted on several staff members with backgrounds in management and government housing programs -- backgrounds similar to those of individuals included in target groups samples -- it has been estimated that the survey will require at most 10 to 15 minutes of the respondents' time, for the instrument is divided into sections according to target groups. No one group within the sample is expected to answere more than 15 explicit questions. Therefore, while the instrument appears at first glance to be lengthy, it requires a minimum amount of response time. Government agency officials included in the sample will be requested to provide more information than individuals or private organizations.

7.   APPROACH TO THE RESPONDENT

The respondents will be asked to participate in the sample by means of a written letter which will accompany the questionnaire. This letter will explain the need for the collection of such information and the value of this effort to the field as a whole.

8.   SENSITIVE QUESTIONS

There are no questions in the instrument which elicit responses in regard to sexual or religious beliefs or practices, age, income, or racial or ethnic identification. The only financial figures requested are those annual operating figures for the government agencies included in the sample group. This information, by law, is to be made available upon request to individuals, agencies, or organizations requiring it.

9.   CONFIDENTIALITY OF RESPONSE

Although there are no plans for formal publication of the survey results, one of the key objectives in conducting the survey is to foster information exchange among these key housing management field groups. Therefore, no promises of confidentiality will be made to potential respondents. In addition, the nature of the questions being asked are such that protection by means of confidentiality is not necessary.

10. ESTIMATE OF COST TO FEDERAL GOVERNMENT

1. Salaries

    a. Project Director   7632

    b. Secretary   3848

    c. Benefits   1492

             Total Salaries Expenditures   12,972

2. Consulting Services Required in the Design of Data Collection Instrument, Drawing of Sample, and Analysis and Tabulation of Return

                              2000

             Total Expenditure   2,000

3. Printing and Postage

    a. Printing of Questionnaire, Cover Letter, Follow-up Instruments and Return Address Envelopes   800

    b. Mailing Envelopes   100

    c. Postage   600

             Total Printing and Postage Expenditure   1,500

4. Administrative Costs (Rent, Telephone and Copying Services)

                              9920

             Total Expenditure   9,220

REVIEW OF BUDGET SECTIONS

1. Salaries and Benefits   12,972

2. Consulting Services Required in Design, Analysis and Tabulation   2,000

3. Printing and Postage   1,500

4. Administrative Costs   9,220

             Total of Survey Expenditures   25,692

Section III
HOUSING MANAGEMENT
TECHNICAL INFORMATION CENTER
MODEL
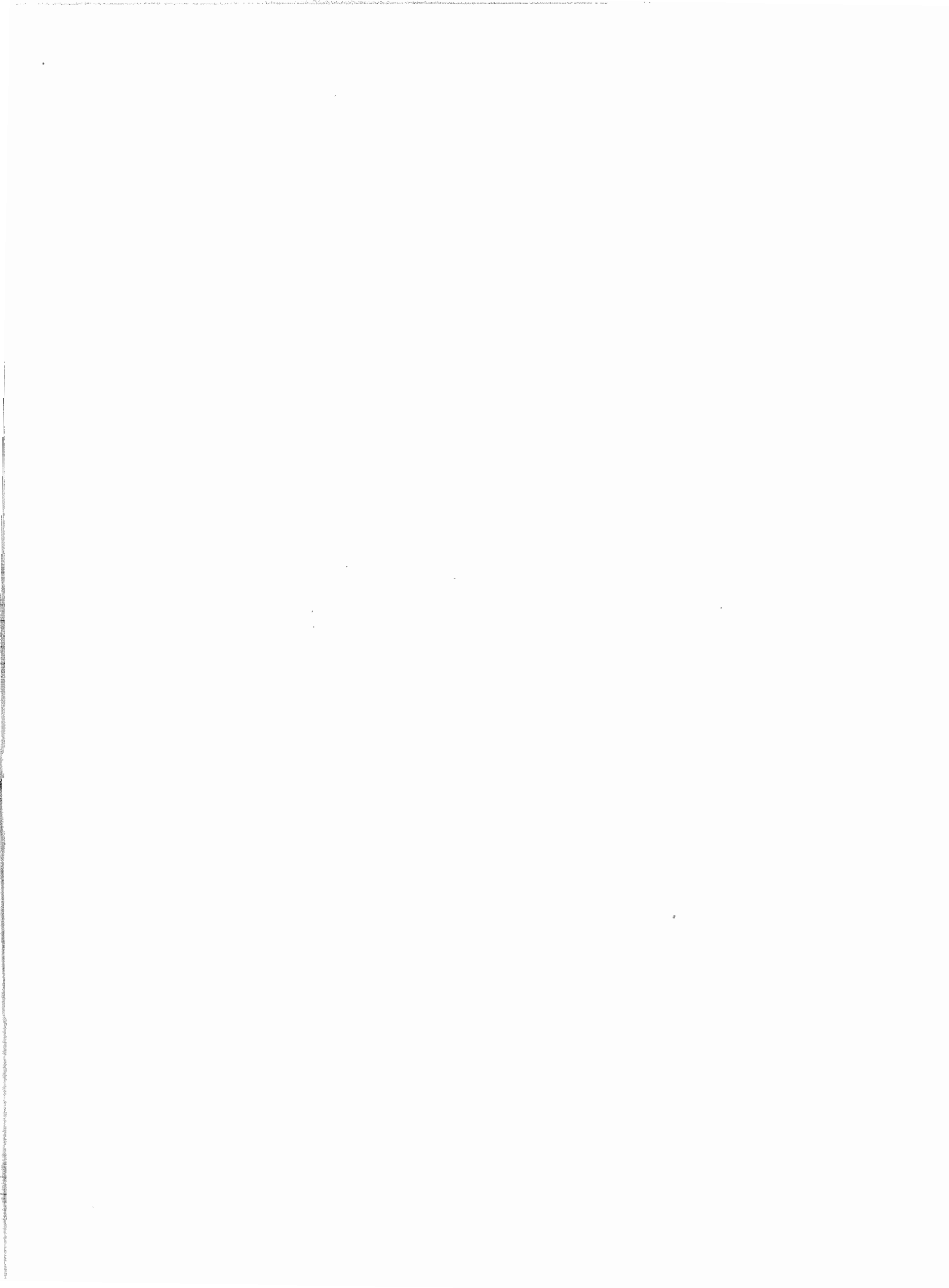
Information is an intangible commodity ...

it is not used up in the process of consumption ...

it can be passed from hand to hand
without necessarily diminishing in value .[*]

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*J.N. Wolfe, The Economics of Technical Information Systems (New York: Praeger, 1974), p. 7.

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1. BACKGROUND AND INTRODUCTION

The organization of knowledge and the subsequent
collection and classification by subject of written materials
are processes that have been a part of every era of history
since 2000 B.C., when the first libraries were established in
Egypt. The assembling of written resources, which were then
subjected to analysis by means of a preconceived framework of
all disciplines known to exist, was an activity that was
carried out easily for centuries until the 1500's when the
volume of literature dramatically increased as the development
of the printing press made the production of written documents
a more practical and less time consuming means of communication
with infinitely greater duplication and distribution possibili-
ties. However, systems for the control of information as we
know them today did not emerge on a wide scale in this country
until the 1960's, although an international scientific informa-
tion network was established in Europe and successfully operated
throughout the world as early as 1940. In the sixties, the
United States government was forced to face up to the need to
deal systematically with the vast amounts of information that
were being produced on an even greater scale than before as a
result of concentrated efforts to expand the frontiers of knowl-
edge in the hard sciences. One of the first confrontations with
fall-out from this "information explosion" led to the develop-
ment by Documentation, Inc., of the NASA Scientific and Technical

Information System.[1] Since the time of development of this system in 1962, numerous others, more or less sophisticated, have been developed and implemented with the financial support of the Federal government and/or private industry. For the most part, the evolution of information control in the social sciences has taken a back seat to what has been developed for the hard sciences. Perhaps the most impressive of existing social science information systems is the Office of Education's Educational Resources Information Center clearinghouse network, which began operation in 1967 and set as its goal the systematic, comprehensive collection and critical analysis of published and near-print information relating in any way to the field of education. These are just two of the many systems that are representative of the progress that has been made in information technology over the past two decades. But whatever the subject disciplines in which information systems operate, or the level of their sophistication, they all are designed to perform a vital control function in the development of their respective fields by initiating or coordinating efforts to collect, analyze (in some cases critically), process, store and retrieve/disseminate information identified as important to that field, whether it be statistical data, contract report literature, published material, or appears in some other form. Such systems make possible periodic readings of the state-of-the-art and the recognition of gaps in the literature which should be among the prime areas investigated by field researchers. They also provide

the individual field practitioner with a source of information
that may assist him in performing his job and in updating his
formal education and/or training.

Several attempts have been made in the area of housing and
community development to pool and exert control over information
produced by government and private industry field representa-
tives. One such attempt, which was funded by the Department in
the 1960's, involved the design of a plan for a regional office
information network for the collection, organization and compu-
ter storage of HUD program data ordinarily scattered on a region-
by-region basis among these offices.[2] Various other agencies
and institutions have also been active in developing plans for
housing information systems which would consolidate data and
materials resources on a state-wide level.[3] It is not known
at this time whether any of these systems has been implemented,
but it is obvious that a need for information that was readily
accessible to a designated user group prompted their design.
It is just such a need in the housing management industry for
a central resource of pertinent and timely information that the
National Center for Housing Management has addressed itself to
in the Housing Management Technical Information Center Model.
The Model was developed as a part of Task 4 of contract
#H-2161 R, which specifically called upon NCHM to:

> DEVELOP, WITHIN ITS INITIAL STAGES, A HOUSING MANAGE-
> MENT INFORMATION CENTER TO COLLECT, EVALUATE, PROCESS,
> STORE AND DISSEMINATE INFORMATION IN A FORMAT APPRO-
> PRIATE TO REACH BROAD AND SELECTED SEGMENTS OF INTEREST
> IN THE HOUSING MANAGEMENT FIELD.

The Model development was directly linked to and based upon three key areas of investigation:

1. The knowledge and experience that the Center has acquired in developing and operating for over two years a staff Housing Management Information Center which also responded, when time and staff permitted, to over 200 requests by industry representatives for field-related information.

2. The analysis and subsequent conclusions drawn from the results of the Survey of Individuals, Agencies and Organizations Involved in Management Aspects of Multifamily Housing, which was designed and administered to a sample of the 12,457 industry representatives who compose six of the key target groups within the field constituency. This Survey revealed for each target group key areas of information need by type of information and subject area (statistical, narrative). It provides specific information on the potential user community that the Model would have to accommodate and pinpoints the information they now use, have need of and produce themselves. (For a more thorough presentation of the Survey working plan and findings, see Section II of this report, Survey Design and Analysis. For a brief, but more complete synopsis of the survey efforts, you are referred to Section I - Summary of Project Activities.)

3. Data on and analysis of the systems design and operation of existing information centers and information retrieval systems currently functioning in other subject disciplines.

By combining what is known about the requirements for information that are unique to the housing management industry with the best of existing systems components, the Center has produced a Model that is not only completely practical in its design, but is also capable of adjusting to and integrating the changes and expansion in field interests that will almost certainly occur over time in a discipline that is still in its

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developmental stages and in the process of emerging as a subject area separate and distinct from real estate property management.

Presentation of the Model

The Model, which serves as the chief product of Task 4, will be presented on a component-by-component basis. These Components include:

a. System Design

b. Organization and Staffing

c. Acquisitions Strategy

d. Information Processing Procedures

e. Information Storage and Retrieval

f. Information Services and Products

g. Evaluation of Services and Products

h. Budget Considerations

Within the discussion of each component of the Model, the NCHM experience in system operation, the implications of the Survey findings, as well as information on components of what appear to be successfully operating systems will be incorporated in order that all possible approaches to design may be considered. This will be followed by a recommended design for each component.*

_____

* The reader is also referred to Section IV of this report, in which recommendations as to the implemenatation of the Model by the agency or organization chosed for this purpose are outlined.

2.   <u>SYSTEM DESIGN</u>

Investigations that analyzed existing information systems according to the overall functions that they performed for a user community or to the field as a whole have been carried out in the course of establishing other information centers. One such investigation which was conducted in connection with a Drug Abuse Information Study commissioned by the National Institutes of Health, identified four <u>types</u> of information systems: Controlled Processing; Uncontrolled Processing; Publication Extensions; and Management Control. The definitions of these four types which were provided in the survey cited above are as follows:

> "<u>Controlled Processing</u> -- Until recently, most information activities of an organization have been gathered under a single roof, or at least controlled from a central and administrative point. In other words, such organizations perform all processing activities themselves. The earliest information storage and retrieval systems, such as those at [E.I. DuPont de Nemours and Co.] and [those sponsored by the Battelle Memorial Institute], exercised close control over the activities of acquisitions, selection, bibliographic format, abstracting, indexing, retrieval, and so on. In addition, some were closely integrated with the specialists they served [e.g., DuPont] or in whose subject disciplines they were active [e.g., Battelle].
>
> <u>Uncontrolled Processing</u> -- Many of the centers in the field work either explicitly or by default did not exercise this kind of control, or the control was not integrated. For example, a center might ensure that abstracting and indexing are consistent and accurate, yet exercise no control over what is abstracted and indexed. Such organizations tended to have a 'black box' relationship to the user community.

Publications Extensions -- Several organiza-
tions format many magnetic tape data bases to
be used for selective dissemination according
to user profiles. Many such centers employ
file-management software that is both highly
sophisticated and generalized.

Management Control -- While some management
information centers in the field work were
no more than [computer] service bureaus, two
or three had developed integrated management
information software that not only tracked
programmatic information and data but also
provided access to technical information in
the manner of abstract retrieval systems.
These facilities were thus both a management
resource and a technial information resource."[4]

In order to make a choice as to which of these system
types should be adopted in a particular field, attention must
be focused on the nature, format and volume of the field litera-
ture produced to date that has either been collected or is
known to exist.

2.1   Existing Housing Management Field Literature

It has been the Center's experience in operating the
staff Information Center that the categories of materials to be
found in the housing management field are:

a. Statistical Data (both raw and analyzed)
    produced in the course of industry operation
    by government agencies, quasi-public agencies,
    private organizations, institutions and in-
    dividuals.

b. Published books, monographs and articles
    published in journals and other periodicals
    in the field of housing and community devel-
    ment.

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c.   Near-print technical reports which have
     been produced by government agencies and
     private organizations for internal or
     some other form of restricted use, or
     whose availability is not widely publi-
     cized.

d.   Annual reports produced by government
     agencies and organizations for the pur-
     poses of wide-spread distribution to the
     public.

e.   Training manuals produced in connection
     with or as by-products of housing manage-
     ment and related field training.

f.   Legislation and legislative reports pro-
     duced on the local, state and Federal
     levels.

2.1.1   Implications of User Survey

The Center's picture of what formats field informa-

tion was being produced in was borne out in the results of the

Survey. According to the analysis of tabulations, over 60% of

respondents indicated that their organizations produced reports

or publications relating to the operation of multifamily housing.

85% indicated that they would be willing to supply these

materials free of charge or for the cost of reproduction. Of

those responding, 45% indicated that their agencies or organi-

zations produce annual reports, with another 15% indicating

that their agencies or organizations produce other information.

The rate of response from multifamily housing sponsors and

developers (over 60%) and managers (both managers and management

companies) of multifamily developments (77.6%) were both sub-

stantially high, and since the activities of development and

management result in the production of statistical information
such as operating cost analyses, vacancy reports, and other
such tabulations, it can be safely said that there are vast
amounts of useful data that are being produced on a regular
basis. This is above and beyond the statistical storehouses
that develop as a result of the housing management-related
activities of the Department, as well as the Farmers Home
Administration and other Federal, state and local agencies
involved in the development/management cycle. Finally, up to
42% of the respondents indicated that they or their organiza-
tions or agencies have conducted training programs in housing
management-related subject areas, which seems to indicate that
there are considerable amounts of training materials that have
been produced throughout the field.

2.2   Types of Information Collected by Existing Models

As mentioned earlier in this report, the levels of
sophistication in existing information systems vary to a great
degree. In those information centers operating in scientific
disciplines, both primary literature in the form of journals,
technical reports and conference proceedings (original research)
and what is known as secondary literature, such as indexes,
abstracts, reviews, state-of-the-art reports, and monographs
make up the data base.[5] In the Wynne Associates study of in-
formation systems cited earlier, of the twenty-two centers that
were visited, nearly three quarters of them attempted to store

all of the literature that was produced in their respective fields. In order of priority, the following forms of information were collected on a regular basis by the systems examined:

1. Technical Journals
2. Technial Reports
3. Books
4. Research Reports
5. Abstracts
6. Pamphlets, brochures
7. Manuals, handbooks
8. Magnetic tape records
9. Question-and-answer booklets
10. Raw data
11. Internal Reports
12. Forms, administrative reports[6]

The ERIC Clearinghouse network is made up of a number of information centers, each of which is responsible for a particular area of education (e.g., the ERIC Clearinghouse for Higher Education). Each clearinghouse regularly searches for materials in the form of reports of innovative programs, conference proceedings, bibliographies, outstanding professional papers, curriculum-related materials and reports in educational research and development. Copyrighted materials within this group are also included, when release is granted by the author or sponsoring organization.[7]

2.3   Recommended System Design

On the basis of the potential housing management information center user community needs, as well as the volume of available information in the form of statistical data, technical reports, annual reports, training manuals and materials, as well as the many published journal articles, books and monographs produced that are pertinent to this industry, it is recommended that the information center be designed to accommodate all forms of field-related information, with the exception of raw data. This exception is made because of the high costs of processing and analyzing such data and putting it into any sort of useable form, as well as the limited use it would see in comparison to other forms of information. It is recommended, however, that definitive agreements be made between the Department and the organization or agency chosen to implement this Model to the effect that information on sources of field-related raw data will be freely exchanged so that its availability may be made known to those interested in utilizing it in research.

3.   ORGANIZATION AND STAFFING

The organization and staff size of an information center must allow for the efficient performance of the procedures which lead to the creation of the data base (collection, analysis and storage) and, of equal importance, those procedures which culminate in efficient response to user requests for information (retrieval and dissemination). Staff size is also closely tied to the size of the user audience, insofar as this may be identified when the system design is being developed. Still other considerations in staffing and organization are forecasting increases in the volume of information that will be produced in the discipline, as well as forecasting the volume of expected rate of increase in user requests over a designated period. This will permit the system to respond to such growth and the organizational pattern established will allow for expansion of services and the subsequent addition of staff.

3.1   Organization -- Alternatives and Recommendations

Information on the organization of existing information centers is difficult to obtain and actual organization charts are even less obtainable. However, the number of functions that need to be performed on a regular basis in order to create a meaningful information base for field use and provide specialized services to users based on that pool of materials

and data requires a high level of organization in an information system. Those associated with some existing models have indicated that the key is to organize around specific services to be offered and the user community itself.[8] Others take a more theoretical approach to organizational patterns. Since the Survey conducted as part of this task has given NCHM some feel for the information needs of the industry and the kinds of services that should be incorporated into the system to fill those needs, the Center recommends that organization of the Housing Management Information Center be approached in the light of this information.

3.2   Staffing

3.2.1   Staff Size and Levels in Existing Systems

The staff size of existing information systems can be as small as one professional and one non-professional or as large as 600 professionals and 400 non-professionals, depending upon the components of the systems, the subject scope of information involved and the size of the user audience.[9]

3.2.2   Other Criteria for Staffing

Staff size in an information center is also dependent upon whether all of the necessary information processing activities, such as indexing and abstracting, are performed internally or are accomplished by means of sub-contracting.

Another factor that affects staffing levels is whether or not

all center operations are housed under one roof. For instance,

each of the ERIC system clearinghouses which are scattered

throughout the U.S. seeks out and collects documents pertaining

to its specialized area of education and, after subjecting the

materials to criteria designed to exert quality control, pre-

pares abstracts of these documents and descriptors which

indicate subject content. These abstracts are then sent by

all the clearinghouses to the Central Processing and Reference

Facility, where the texts for the publication of the monthly

abstract journal, Research in Education, are prepared and the pre-

liminary work toward publication by Macmillan Information

Systems, Inc. of the monthly Current Index to Journals in

Education is performed.

3.2.3   Recommended Staffing Patterns

On the basis of the Center's experience with the

information needs of the potential housing management user

community, as well as the estimated size of the industry (see

Table 1), the initial staff of the housing management informa-

tion center should consist of:

Professional

a. A Director/Information-Specialist, who would
   oversee all operations performed, search for
   and select all materials for acquisition,
   edit abstracts, develop information exchange
   programs with key sources of field informa-
   tion, including the Department, the Farmers

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TABLE 1

Data on Size of Housing Management Industry

o Estimated and projected manpower needs (included clerical)
  for all rental housing: 1/

Rental Housing	1970	1980
Assisted	85,500	256,000
Non-assisted	1,368,000	1,710,000
Total	1,453,500	1,966,000

o Estimated and projected manpower needs (professional only)
  for multifamily rental housing: 2/

Multifamily Rental Housing	1972	1980
Assisted	8,700	21,200
Non-assisted	69,130	95,900
Total	77,830	117,100

o Projected (in 1968) full-time management and maintenance
  employees (excludes clerical) needed in publicly assisted
  housing for the elderly: 3/

1970	1980
17,788	74,684

o Number of public housing units as of December 1972: 4/

  1,055,000

TABLE 1 (continued)

o Selected assisted multifamily housing with federal mortgage
  insurance in force as of October 31, 1972: 5/

	developments	units
236	2,745	302,858
221(d)(3)BMIR	1,330	160,192

o Number of units (mostly multifamily, includes some single
  family) completed or under construction by State housing
  agencies as of February 1973: 6/

Total Units	Units with Federal Subsidy
172,007	71,929

1/ NCHP Task Force for Housing Management, Needed: A Strategy
    for Housing Management Training (Washington, D.C., 1971).

2/ Unpublished consultant report to the National Center for
    Housing Management (1973).

3/ NAHRO, Training Needs in Managing Housing for the Elderly
    (Washington, D.C., 1968).

4/ HUD

5/ HUD

6/ HUD

Home Administration, state housing development and finance agencies and local housing authorities, and perform all other administrative functions necessary to the smooth operation of the information center.

b. An Editor (part-time), who would do the research and other work necessary to produce a Housing Management Newsletter for the field on a monthly basis, as well as edit abstracts.

c. An Information Specialist, who would handle most of the reference service to field requestors and referrals to agencies and other organizations, as well as perform periodic "weeding" of the information base to remove documents that are no longer current and/or pertinent.

d. A Cataloger/Indexer/Abstractor (part-time), who would develop a thesaurus of field terms, based upon the literature, analyze all documents as to subject content, create abstracts and process all items for incorporation into the document collection.

Non-Professional

a. Secretary to the Director, with high level skills, who would assist the Director and the Editor in the performance of their duties.

b. Clerk/typist, who would assist with paperwork connected with information processing activities, and user services.

Table 2 is an organizational chart for this proposed staffing pattern.

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TABLE 2 - ORGANIZATION CHART

HOUSING MANAGEMENT INFORMATION CENTER

18
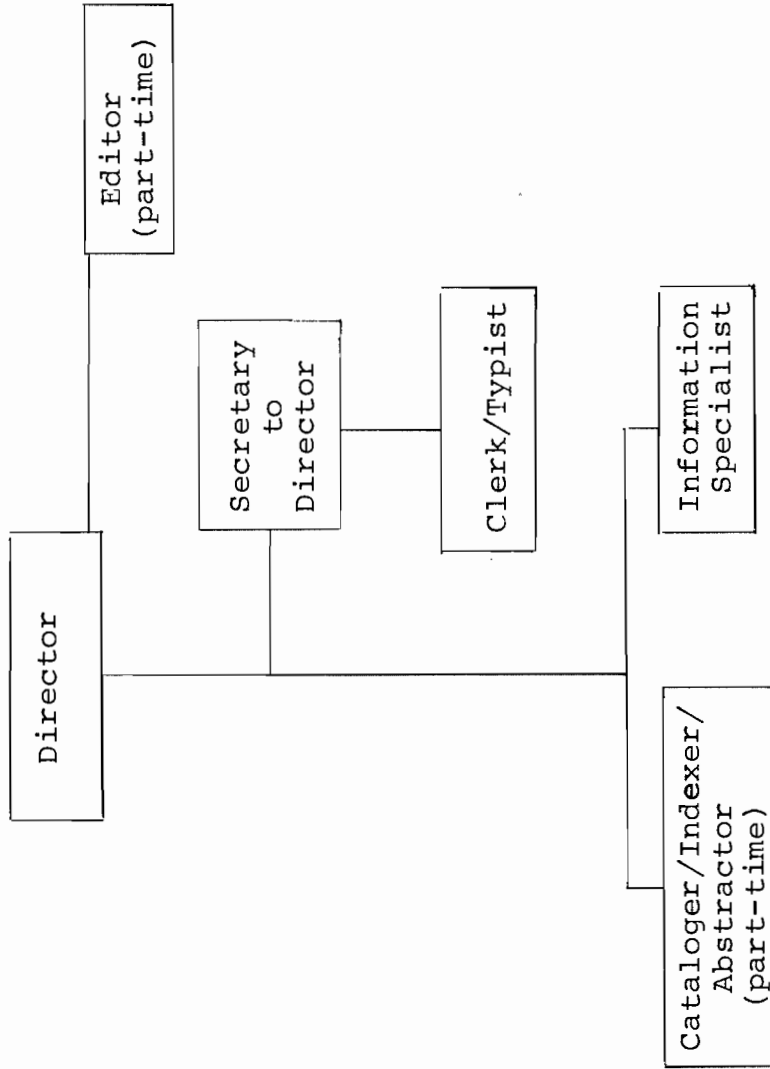
4.   ACQUISITIONS STRATEGY

As has been implied repeatedly in earlier portions
of this report, information relating to any one discipline is
usually scattered throughout the field. Various types and
amounts of information relating to one subject area are
produced and/or held by government agencies, research insti-
tutions, private industry, specialists and individual practi-
tioners, all of whose professional activities make them a part
of that particular field constituency. In order to centralize
these field materials, they must be continually and systematically
sought out and retrieved. This means that agreements must be
established with identifiable key sources of information in
order that any materials and/or data that are produced and
obtainable through these channels is automatically received.
In addition, for those sources less identifiable, current
journals and newsletters must be scanned on a continual basis
for references to pertinent literature or data collections.
Citations in current literature must also be scanned for
references germane to the established subject profile of
the data base. For this reason, a formal, precise acquisitions
strategy must be developed as a part of every information center
plan -- one that is the basis for all information collection
activities. As has been said about other aspects of model
development, the acquisitions strategy must be designed to
accommodate changes in and additions to areas of interest of
the user community.

4.1   Acquisitions Patterns in Existing Systems

Collection activities for the initial development and maintenance of information systems vary according to the scope of the systems (national, state, regional, etc.) and the subject matter with which the system is identified. For example, the Current Research Information System of the U.S. Department of Agriculture restricts its collection activities and, in turn, its system scope to descriptions of research being sponsored by six affiliated agencies of USDA (Agricultural Research Service, Forest Service, Farmer Cooperative Service, Statistical Reporting Service), a network of 53 state agricultural experiment stations and some 25 other state institutions.[10] In other information systems, acquisition of source materials is accomplished by means of staff knowledge, subscriptions, scanning of information-source directories (when these are available), information networks with other systems operating in the same or related disciplines, exchange programs and contacts with other organizations.[11]

4.2   Implications of Survey Findings Pertaining to
       Housing Management

A related issue to the development of an acquisitions scheme is where the user community currently obtains what information it knows to exist. Of those who responded to the Survey, 137 indicated that they sought needed information from a government agency; 108 respondents indicated that they contacted trade or professional associations. (See Section II of this report for additional information.) However, in this

same group, of those who responded to questions pertaining to their need for information on multifamily housing development and management, an average of 64% indicated that they did have a need. The implication here is that what information is available is not sufficient for their needs, or that the groups they contact either do not have the information they seek or do not provide it.

4.3   The NCHM Experience

One of the first activities which lead to the development of the NCHM staff Information Center was the design of a scheme for acquisitions. As this strategy was implemented over two years of operation, certain key collection sources for housing management and related information emerged. They include, but are not restricted to, the following individuals, agencies, organizations and institutions:

1. The Department, whose files contain operational statistics, as well as some experiential information obtained via required reporting by sponsors of assisted developments, or by means of narrative documents and back-up statistics that are the by-products of research contracts.

2. Farmers Home Administration, whose files on rural housing programs contain operational statistics in program report form as submitted by recipients of multifamily housing assistance.

3. Congress, for the latest legislative actions and committee reports relating to housing.

4. State Housing Development and Finance Agencies, who as semi-autonomous bodies collect operational data and other information relating to the multifamily developments that they sponsor or that otherwise fall under their jurisdictions, as well as produce pertinent reports internally or by sub-contract.

5. Housing Trade Associations, who not only
    collect non-proprietary statistical and
    other information from their respective
    members, but also produce germane publi-
    cations.

6. State Departments of Community Develop-
    ment, State Commissions on Aging, as well
    as any other agencies on the state level
    that sponsor multifamily housing construc-
    tion and/or are involved in management and
    in so doing collect/produce related statis-
    tical or narrative information.

7. Larger Local Housing Authorities, who not
    only receive statistical and other infor-
    mation from the public housing which they
    develop and operate, but who also produce
    management plans for those developments
    and perform related research.

8. Urban Research Centers, usually university-
    based, which produce original research in
    subject areas relating to housing manage-
    ment.

9. Gerontological Research Centers, again
    usually university-based, which produce
    housing-related research and/or develop
    training programs dealing with the housing
    of older adults.

10. Publishing Industry, where books, pamphlets
    and journal articles pertaining to housing
    management are produced.

11. Management Companies, who produce valuable
    non-proprietary internal reports dealing
    with information content that has proven
    valuable to others operating within the
    industry.

12. Individual Resident Managers, who produce
    case studies and other materials that are
    valuable sources of information on existing
    management practices.

Table 3 illustrates how these sources not only provide materials

to the Information Center, but frequently request information

from NCHM.

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TABLE 3

KEY COLLECTION SOURCES FOR HOUSING MANAGEMENT INFORMATION
NCHM INFORMATION CENTER

23
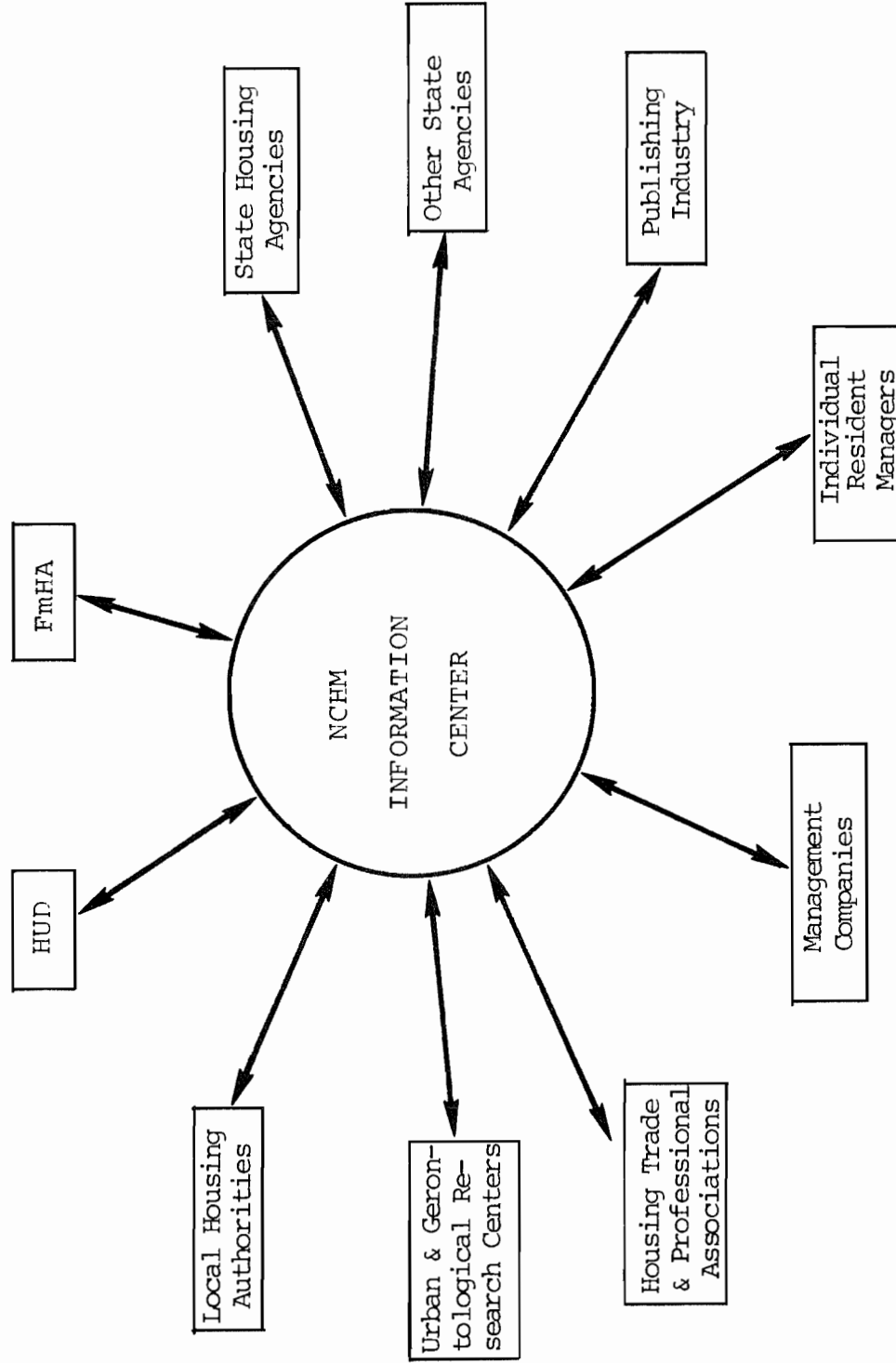
4.3.1   Subject Scope of Collection Efforts

Just as decisions must be made as to where or from whom pertinent materials will be collected, a subject profile of collection efforts must be shaped through keeping a constant watch on developments within the literature and being aware of new user interest areas. NCHM has developed such a profile of subject areas relating to housing management, all of which are currently represented in the Center's Information Collection.

-Accreditation (as related to housing management, as well as to various existing professions)

-Civil Rights

-Condominium and Cooperative Housing

-Education (including materials on training, curriculum design and development, adult education, vocational education, post-secondary education, tests and measurements, philosophy of education, etc.)

-Gerontology (including materials on the aging process, housing design features for older adults, and other special housing-related needs of the elderly)

-Housing -- General (as related to housing management, including materials on law, architecture and design, planning, finance, construction, maintenance, energy conservation, community development, rehabilitation, effects of density, equal opportunity, residents and resident organizations, government involvement, etc.)

-Housing Management (including materials on relevant training programs, past and present)

-Interpersonal Relations

-Licensing/Certification (as related to housing management, as well as to various existing professions)

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-Management -- Principles of

-Mobile Homes

-Property Management

-Psychology -- Principles of (including materials
on such current schools of thought as Reality
Therapy and Transactional Analysis)

-Real Estate (including materials on landlord-
tenant and real estate law, finance, operating
procedures, office management, etc.)

-Security Systems (as related to housing manage-
ment and design)

-Social Services (as related to multifamily
housing)

-Sociology -- Principles of

-Urban History/Sociology

4.4   Recommended Acquisitions Scheme

The NCHM experience in collection development serves
as an adequate model for an acquisitions scheme, since it was
developed and continually reviewed and expanded on the basis
of field needs and developments in the literature itself. It
is therefore recommended that the subject scope and key collec-
tion sources which were outlined on the previous pages be
utilized and serve as the basis for the acquisitions strategy
implemented by the agency or organization chosen for this
purpose.

5. <u>INFORMATION PROCESSING PROCEDURES</u>

> "An information system is an organization of
> people, materials and machines that serves to
> facilitate the transfer of information from
> one person to another. Its function is social:
> to aid communication."*

Publications, reports and other information in other forms rarely deal completely and totally with one subject. For example, in a book entitled <u>Multifamily Housing in America Today</u>, one would certainly find information pertaining to multifamily housing in the United States, as the title implies. But there is a good chance that significant amounts of information on other topics, such as the effects of density, energy consumption levels, operating costs, or resident organizations, might be found within the same document. In other words, information is <u>rarely</u>, if ever, <u>neatly</u> <u>packaged</u> by <u>subject</u> <u>area</u>. When there are very few materials to deal with, this presents no real problem. But when an entire field literature is involved, steps must be taken to provide what is known as <u>complete</u> <u>subject</u> <u>access</u> to all materials that contain information pertinent to that field. It is for this reason that the processes of indexing, abstracting and file organization have been developed -- to provide a means of rapidly identifying and providing information on documents pertinent to a particular subject request. These processes are essential parts of the information processing component of any model expected to

* Brian Cambell Vickery, <u>Information Systems</u> (Hamden, Connecticut: Shoe String Press, 1973), p.1.

deal with relatively large amounts of information and to provide user products and services in an efficient manner.

5.1   Indexing, Abstracting and File Organization

Indexing, abstracting and file organization are closely related activities in any information system operation, including those of libraries. Indexing is simply the process of extracting subject terms or descriptors from any given document which reflect its actual subject content. The best definition of an abstract to be found is, "... the terse presentation in (as far as possible) the author's own language, of all the points made, in the same order as in the original piece of primary documentary information..."[12] An abstract which conforms to this definition is really a source of information in itself and sometimes makes reference to the document it represents unnecessary.

5.1.1   Indexing and Abstracting

When a document is acquired for incorporation in the system, it is subjected to the indexing and abstracting processes. To use an earlier example, the book entitled Multi-family Housing in America Today would be analyzed and would be found to contain subject matter on multifamily housing, density -- effects of, energy consumption, resident organizations and possibly others. These would be the index terms or descriptors assigned to this publication. The book would then be scanned

and on the basis of its content and the manner of presentation, an abstract of 100 to 125 words or less would be written. As might be expected, descriptors recur in many documents that are indexed. For this reason and for the benefit of users who need to know the subject areas represented within the system, a thesaurus or listing of descriptors is developed by alphabetizing all descriptive terms that have been derived from documents indexed.* This thesaurus is updated each time a new descriptor is developed as a result of appearance of that subject in the literature or in connection with data.

5.1.2   File Organization

In order to retrieve document records (abstracts) in response to user requests for information, as well as to provide for on-site research, a file must be organized which permits access to document resumes, which are made up of abstracts and related information, as well as the original documents themselves. If a manual card file system is used, a card is made for each primary descriptor and identifier (bibliographic elements such as author, titled, publisher, etc.) However, more automated means of file organization are available. These will be treated as part of the discussion under 6, Information Storage and Retrieval, since organization, storage and retrieval are inseparable as handled by such services.

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* For a more complete treatment of the thesaurus-building process, see F.W. Lancaster's Vocabulary Control for Information Retrieval, which appears in the bibliography that accompanies this Model.

5.1.3   NCHM Experience

Currently, the Center's Information Collection is organized around an accessions file system. This is a manual system which is a modified version of the Library of Congress-type manual card file system, but not the L.C. Classification System. However, this file has been built to allow for easy conversion to an automated system. NCHM recognized this conversion as an eventual necessity, even for the purposes of efficient service to staff. Abstracts have been prepared for some 600 of the collection's 4,000 titles and numerous articles included in some 300 periodicals. A Thesaurus of Descriptors, based on the Department's Urban Vocabulary, has been developed and updated on a regular basis.

5.1.4   Other Existing Models

As mentioned earlier, file organization may be manual or automated. The National Oceanographic Data Center, which is operated under the auspices of the Department of Commerce's National Oceanographic and Atmospheric Administration, employs both approaches. Files of oceanographic station data and bathythermograph data are maintained by computer and stored on magnetic tape, while biological data is stored on cards.[13] In the ERIC System, each document that is chosen for inclusion in the information base is assigned an accession number, and is then analyzed on what is known as an ERIC Document Resume

Report, which requires that an abstract be created and that descriptors and identifiers be assigned to each document processed. The ERIC files are then maintained by computer.[14]

5.2   Implications of User Survey

Of those who responded to the Survey, 51.2% indicated that their agency or organization had a library or an information center. Of those who indicated that they had an information center, slightly over half (52.1%) indicated that their information was stored on shelves, while slightly over one-third (36.5%) indicated that they stored information in filing cabinets. Only 17 respondents indicated that they used computer storage. Only 31 of the respondents indicated that they had a full or part-time librarian. These findings indicated that industry representatives who use and need information require the kind of pre-analysis of materials that indexing and abstracting procedures provide. The results also point to the need for remote library and information services.

5.3   Recommendations

On the basis of NCHM experience with indexing, abstracting and file organization and its relationship to services to users (both staff and field), as well as the procedures employed by existing models, it is recommended that all of these information processing activities be included within the scope of the Housing Management Model. It is further recommended,

however, that in order to accommodate on-site reference service and use of the information base on-site for research, that file organization serve the dual purpose of providing access by means of an accession number to both a collection of hardcover copies of the documents and abstracts/report resumes of documents. The housing management industry needs a centralized hard-copy collection of field-related materials for purposes of on-site research, as well as the rapid service to the user community in the field that indexing and abstracting make possible.

Document resumes that are created for the file should be as complete as possible, while still allowing for the efficient processing of information so that it may be made rapidly available to users. It is suggested that up to ten descriptors be assigned to each document so that subject access is as complete as possible. Table 4 is a list of recommended categories for inclusion on the document resume form of the Housing Management Information Center.

TABLE 4

DOCUMENT RESUME FORM – RECOMMENDED CATEGORIES

Accession # _____

Author _____

Title _____

Place of Publication _____

Publisher _____

Date _____

Copyright? ____Yes ____No   Release? ____Yes ____No

Information Format _____

Government Report _____ Contract # _____

Descriptors (Index Terms)_____

_____

_____

Abstract

It is anticipated that 20,000 to 25,000 document records would form the initial file of the Housing Management Information Center. A good many of these are currently a part of the NCHM Information Collection, so they could be converted from the Center's current card file. Others are journal and other periodical articles produced since 1969 plus pertinent reports and other field literature produced since that date but not yet collected. It is also expected that the collection will grow rapidly during the first one to two years of full operation to meet the anticipated volume, complexity and expanded scope of information requests.

6.1   <u>Semi-automated and Automated Storage and Retrieval Systems</u>

In order that the suggested level of professional staff of the model can essentially be maintained while vastly increasing the type and volume of information collected and processed, as well as increasing services, some form of automation is definitely indicated. While there are a number of proprietary systems on the market, they all boil down essentially to two basic types: peek-a-boo systems and computerized systems.

6.1.1   <u>Peek-a-boo Systems</u>

These systems, such as Remac's Termatrex and McBee's Keysort, operate on the principle of alignment of holes or

notches drilled in pre-established positions on heavy card-
stock or plastic. The position locations are unique for each
allowable document descriptor. For example, assume that
"rental housing" is an authorized subject index category
arbitrarily assigned position 13. The document indexed to
rental housing would be drilled or notched in position 13.
Later when a search for information on rental housing is
called for, all cards are manipulated using system tools so
that only those notched or drilled in the "rental housing"
position fall out. The McBee system uses a long needle;
Termatrex is an optical device which utilizes light emitted
through the drilled holes.

6.1.2   Computerized Systems

As the name implies, these systems create a computer
file rather than library card files or a peek-a-boo card file.
The document records, including all subject index terms, are
entered on computer tapes or discs. When a specific informa-
tion request is received, a query statement is written and the
computer searches through all document records on file and
prints out those records that match the query statement.
The software for these text-processing systems was developed
during the 1960's and is now fully operational and available
for only monthly file maintenance and use charges, similar to
other computer service bureau programs. Examples are System
Development Corporation's ORBIT, Information RECON, and
Lockheed's DIALOG.

6.2   Historical Development

The classical method for classifying document collections is the library card file. Aside from floor-space considerations, the problem with a library card system is that a complete card must be filed and stored in each access file and location, i.e., a title card in a title file, an author card in an author file, and a card for each subject heading in the subject file. A document with five subject descriptors would therefore require five cards. Searching is manual, and document references that match the query must be copied manually from the cards.

In 1959 - 1960, Taube and Jonkers working together devised a matrix or "uniterm" classification scheme, whereby all documents that were indexed to a subject heading were entered by I.D. number on a single card with that heading. Using the same example, a single card with the heading "Rental Housing" would have dozens of different document numbers on it. As new documents were acquired, their I.D. numbers would be added to all the appropriate subject heading cards. Searching was still manual, but the variable information was presented numerically in matrix form.

This development coincided with the growing capabilities of computers which were ideal for handling numeric data in matrix form. Mortimer Taube pursued the computer applications of the matrix classification at Documentation, Inc.

Frederick Jonkers, on the other hand, felt that the complexity of alphabetic manipulations on the computers of that time coupled with the high cost of computer operation indicated a market for a semi-automatic device to handle the uniterm matrices. He formed Jonkers & Company and proceeded to invent the Termatrex device, which still basically operates the same way, although Remac has made some technical improvements.

Mortimer Taube stayed with Documentation, Inc., and in 1960 - 1961, with the backing of a large NASA contract, established the first automated information clearinghouse. At first, the NASA files were tape duplicates of the uniterm matrices: document I.D. numbers were added to subject heading records. The I.D. numbers were also the key to separately maintained author, title and corporate source files. In 1963, the deficiencies of this type of record that could be accessed by author, source, and subject heading were corrected. New accessions are merely assigned the next sequential number and added to the end of the file. This file format is used by all clearinghouse systems at the present time.

Concurrently with the Documentation, Inc., NASA developments which eventually led to RECON, IBM was developing its alphanumeric printer and text processing software. DOC PROC was its entry in the automated library programs field. It was used at Documentation, Inc. for early NASA experiments and also for the Psychopharmacology Abstracts service of NIMH,

the forerenner of the present National Clearinghouse for Mental Health Information. As DOC PROC developed, each significant word in the abstract became an index term , so subject indexing was not required but it was necessary to write a much more sophisticated query statement, including all possible word endings (singular/plural, present and past tenses, etc.) In an attempt to overcome this deficiency, IBM developed TEXT-PAC which essentially searches whole text looking for matches on word stems. The complexity of this system was its downfall. It never had many users and is no longer maintained by IBM. DOC-PROC, after its abandonment by IBM, was modified for third-generation computers by HEW programmers and is still used for all nine of the HEW Clearinghouses. However, the program patching and modifying that was done over the years was not documented. In the words of the director of computer services at the Parklawn building, "We know it works but we don't know how."

In contrast, the RECON system developed on NASA contract was well documented and is in the public domain. It has been in use for over ten years, and has been completely debugged, adapted for various computers, and tested in thousands of applications. Various proprietary modifications have been made by different systems companies, but they are all basically RECON, the dependable, tested workhorse program for information clearinghouses.

6.3 Advantages of Computerized Information Retrieval Systems

6.3.1 Peek-a-boo Disadvantages

Ten, or even five years ago, the costs of automation made peek-a-boo systems look attractive for small to medium sized document collections, and people were willing to put up with the drawbacks. These include:

- Maximum file size of 10,000 items. Larger collections are accommodated as a number of separate files, each of which must be searched separately.

- Single site accessibility. Users must physically be present at the file locations, and there is no possibility of multi-site use except by duplicating the entire card file!

- Need to purchase hardware and learn to use it. The slightest misalignment of the drill invalidates the reference. Card durability is also a problem with systems using paper cardstock.

- Manhours spent in creating peek-a-boo card file.

- Lack of a readable search record. For a clearinghouse operation, this is the greatest day-to-day drawback of all. Once a peek-a-boo search has been done and the relevant cards separated from the remainder, there is still the require-

ment to respond to the query with a readable
response. This involves copying and typing
the document records (exactly the same process
as with classical library card files) in order
to prepare a written response. Alternatively,
some peek-a-boo systems have abstract cards
that can be (manually, one-by-one) xeroxed to
create a response bibliography.

- Limited number of possible access points.
  Indexing is necessarily very broad in the peek-
  a-boo systems. Most have a maximum of 100
  subject headings, which does not permit much
  specificity of classification. For example,
  documents on fire hazards, home accidents, lead
  paint, rats, etc. would all have to be indexed
  to a borad category such as "Housing Health
  and Safety." The real drawback is in the
  search because the information specialist
  responding to a lead paint poisoning query has
  to read through and eliminate all the other
  "health and safety" references, a very time-
  consuming process.

- Costly convertability. Most peek-a-boo systems
  are marketed as "interim" systems. Obviously,
  they are intermediate between completely manual
  search and full automation. The problem is that

most collections that fill a real informa-

tion need tend to grow and to be used with

ever-increasing frequency. Since peek-a-

boo cards are not in a machine readable

format, the entire file must be key-boarded

for machine entry. The one exception is

Termatrex, which provides a 80-column

conversion and is comparable to the costs

of building a computer file in the first

place.

6.3.2   Computer Advantages

Computerized systems overcome each of the drawbacks

listed above, and offer several unique advantages.

- Unlimited file size. Since each new accession

  (document) is added at the end of the file,

  file-building can proceed at any time and

  rate. The eventual file size is essentially

  unlimited.

- Multiple-site accessibility. Terminals may

  be provided to any qualified users, all of

  whom could directly access the Information

  Center file!

- No purchase of hardware is necessary. A

  keyboard terminal and phone line are the only

  hardware required and both can be rented for

a nominal monthly fee.

- <u>Manhours to create file</u>. Essentially less time is required to keyboard document records on the terminal than to drill or notch peek-a-boo cards, and there is much less chance of significant error. Furthermore, the interactive terminal lists error transactions, so you <u>know</u> when a mistake has been made.

- <u>The response to a query statement is automatically typed</u> by the keyboard terminal. In the interactive mode, the response is almost immediate and in typed form that can be transmitted to a user.

- <u>Continuing or special interest bibliographies can be ordered as monthly (or other time time period) updates</u>. Certain topics have a wider user audience. Rather than run special queries for each of them, a computer printout can be obtained and used as camera-ready copy for reduction and offset printing. There is essentially no typing, editing, or proofing required to produce these bibliographies and they are valuable products for selective dissemination to the user community.

- Unlimited number of possible access points.

  As the state-of-the-art progresses, and
  technology changes, new interests (and often
  new terminologies) develop. In an automated
  system, new subject descriptors can be added
  at any time and the initial list of author-
  ized subject descriptors can be as detailed
  as desired.

- Matching user interest profiles with subject
  areas in order to automatically inform users
  of new accessions in their field. (SDI -
  selective dissemination of information) Most
  people who request information searches have
  an immediate need, or they would not go to
  the effort of requesting them. Yet, many
  others will use information if it comes
  across their desks, although they might never
  think to ask for it. A very useful informa-
  tion center service is SDI, which alerts
  users to new information sources in their
  field(s) of interest.

6.4   Cost Estimates

All of the following cost estimates assume that the Infor-
mation Center staff will create the file, i.e. keyboard the document
records (document No., author, title, corporate source, abstract (if

desired) and subject descriptors) or drill or notch the peek-a-boo cards.

6.4.1   Termatrex

The peek-a-boo system that is most highly developed is Termatrex, a product of Remac, Gaithersburg, Maryland.

Cost of manual input device

	(new)	$ 7,000
	(reconditioned)	6,000
Cost of automatic input device		13,000
Cost of cards (per 1,000)		500
Cost of file conversion to 80-column computer readable cards		4,000*

*Plus service charge based on detail of card format

6.4.2   Computerized Systems

The following estimates are all based on similar parameters: file size - 50,000 document records, annual increment 10,000 items Document record consists of accession no., author, title, source, abstract (not searchable but printable) and approximately 10 subject descriptors.

All are RECON-based programs with essentially the same

    capabilities.

A. Lockheed

    DIALOG (presently being used in D.C. by National Oceano-
              graphic and Atmospheric Administration)

    to create 50,000 item data base ----- $10,000 - $20,000*

    Annual operation

        file maintenance

        computer time

        batch update monthly

        query response $10,000 per year**

B. Systems Development Corporation

    ORBIT (presently being used in D.C. by National Library
           of Medicine)

    to create 50,000 item data base ----- $10,000 - $15,000*

    operation -- at any time after initial file creation

    connect charge ----- $10.00 per hour

    computer time -- call up file

            private file ----- $45-$50 per hour
            open use   ----- less per hour

---

    *Up to 50% reduction if file is marketable, i.e. if their
other customers are likely to want to access it. A completely
private file could be obtained or grant marketing rights to
Lockheed for a reduction in computer costs.

    **Again, if file is used by other customers, cost goes
down. Under this arrangement, it is possible to have no annual
cost.

Some sort of marketing arrangement possible with SDC -- if they are granted rights to the Information Center file for use by other customers, the price for service goes down.

C. Informatics uses COMNET computer network

Universalized RECON (presently used in D.C. by Environmental Protection Agency for environmental information network)

Direct labor (data base monitor, create STEMS table, etc.)	$12,700
Machine time to create file	13,800
Machine time for retrieval, etc.	hourly
Estimated first-year total cost	$35,000

Full service and file creation and maintenance is included.

6.5   Recommendations

Since the start-up (file creation) and first-year operational costs of computerized information services are comparable to Termatrex, and since the computerized systems offer so many immediate advantages and future options, it is recommended that implementation of the Housing Management Information Center Model should include a plan for an automated, service-bureau type system and budget accordingly. It is further recommended that as system specifications are further defined, that fixed-price bids be obtained from the three (or more) computer companies to provide these services. If companies other than the ones suggested here are asked to bid,

they should be requested to provide proof of operational pro-
gram status, and a list of clients for whom the information
center programs are satisfactory.

7. <u>INFORMATION PRODUCTS AND SERVICES</u>

The collection, analysis, processing and storage of
information in a centralized location are important field
functions that an information system performs for the industry
with which it is associated. But of all key functions, the
one that most directly affects the user community and to
which it relates and reacts negatively or positively is
retrieval/dissemination. For no matter how thorough the
collection activities or how meticulous the processing of
field information, if vehicles for the wide-spread and selec-
tive dissemination of information are not carefully designed
and based upon potential user needs, the information base
will see little use and will fail to foster further field
development through providing a base for research, a means
of updating training and educational experiences, as well as
serving other purposes.

7.1   <u>Products and Services Offered by Existing Models</u>

A variety of products and services are provided by
information systems who specialize in certain subject matter.
The ERIC System offers two key products: <u>Resources in Educa-</u>
<u>tion</u> (formerly <u>Research in Education</u>), a monthly cumulation of
announcements of research reports and fugitive materials and
<u>Current Index to Journals in Education</u>, a monthly publication
that provides access to more than 500 journals with education

and related subject matter content. In addition, a search

service of the ERIC data base is offered by selected network

clearinghouses, public agencies and private organizations. The

U.S. Department of Commerce's National Technical Information

Service, which specializes in the dissemination of Federal

Government publications and data files, offers NTIsearch,

which provides the requestor with up to 100 abstracts per

query, and supplies upon request documents within the system

in hardcopy and microfiche form. Publications of the system

include:

> Government Reports Announcements (a semi-
> monthly abstract journal of unclassified
> reports)
>
> Government Reports Index (provides access by
> subject, personal author, corporate author,
> contract number and accession/report number)
>
> Government Reports Topical Announcements
> (semi-monthly subject profiles of new mater-
> ials that are extracted from Government
> Reports Announcements)
>
> Fast Announcement Service (highlights new
> reports available)
>
> Selected Water Abstracts (semi-monthly
> announcement journal) 15

In the Wynne study analysis of selected clearinghouses

(referred to earlier in several instances), it was found that

the number of requests that centers responded to on a yearly

basis ranged from 387 to 10,000,000. This range is accounted

for by the fact that while some centers provide a wide range

of user services, and respond to voluminous requests, other
systems are specifically product-oriented and concentrate on
publications production. As a result, these Centers only fill
requests for their publications.[16] Table 5 is reproduced from
the Wynne study. It lists the services offered by various
centers and those systems in which use of each service is
classified as major or minor, or if it is among those planned
for the future.

7.2   Implications of the User Survey

Findings of the Survey shed some light on what types
of products housing management field personnel are most likely
to purchase. In response to the question, "Does your agency
or organization have a publications/educational materials
budget?", 42% indicated that they did. Almost 70% of respon-
dents indicated that their organizations had funds that could
be used for the purchase of publications. Two-thirds replied
that their organizations were interested in purchasing publi-
cations of some kind. Another question revealed the type of
publication these organizations valued the most. If the first
and second place preferences are combined, periodic newsletters
are of the most value to their organizations. Periodic biblio-
graphies and digests are felt to be of the least value. The
implications of these findings are difficult to interpret,
since the level of housing management coverage content in

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TABLE 5

Services	Number of Centers		
	Major	Minor	Future
Computer searching	11	4	
Current awareness	12	2	
Evaluating source materials	8	6	
Question-answering by experts ..	8	7	
Manual searching	9	4	
Conferences, workshops	9	3	1
Expert screening of literature search products	9	4	
Consulting, technical assistance	7	4	
Popularizing technical material.	6	3	2
Trend analysis	7	2	
Mailing standard packets in response to queries	6	5	
Selective dissemination	5	4	1
Education, training	6	2	1
Referral	4	5	
Forecasting	4	3	1
Management information for specific agencies	4	1	1
Lending	3	4	
R & D in field of study	3	1	1
R & D in information systems	2		
Announcement bulletins	1		

Product	Number of Centers		
	Major	Minor	Future
Serial publications	13	1	1
Indexes	11	2	
Brochures, pamphlets	9	2	
Directories	9	2	1
Annotated bibliographies	9	1	
Abstract bulletins	8	2	
Catalogs	8	2	
Newsletters	7	3	
Computer printouts	8	1	
Technical reports	7	2	
State-of-the-art reports	6	3	1
Data compilations	6	1	
Manuals, handbooks, texbooks .	5	1	
Microform	5	1	
Management reports	3	3	
Magnetic tapes	3	3	
Other	3	1	

currently available periodical publications is quite low.

Respondents may have been reacting to publications in other

fields which they found helpful, somewhat helpful or useless.

When organizations were queried as to their willingness to

buy publications falling into various price ranges, it was

found that demand is very elastic and falls off sharply as

the price of the publication increases. Approximately twice

as many organizations were willing to spend between $10.00

and $25.00 as were willing to spend $26.00 for all types of

suggested publications. Again, the implications of the res-

ponses are questionable, since it is human nature to go for

the lowest price category when a product sample is not pro-

vided for one to examine and evaluate in connection with a

suggested price range. (For additional Survey results that

pertain to this discussion, see Section II of this report.)

7.3   Recommendations

The Housing Management Information Center should

begin by providing a wide range of trial user products and

services and then settle upon those which seem to be most

relevant to the user community as a whole. Among these should

be:

    a. A monthly Housing Management Review (pub-
        lished newsletter);

    b. A monthly current information reports
        bulletin;

c. Selected dissemination of information upon request, based upon user profiles;

d. Information and Research Services, consisting of:

    1. Telephone information and referral service;

    2. Advisory research assistance for on-site collection use;

    3. In-depth reference assistance, including initial bibliographic research of available resources(e.g., critical analysis as to currency and relevance);

    4. Subject search service of the complete data file, upon request.

7.3.1 Housing Management Review

Since field representatives who responded to the Survey indicated a preference for a periodical newsletter, plans should be implemented immediately to provide this publication for circulation on a complimentary basis to an initial industry group of 5,000, composed of managers, management companies, nonprofit organizations and government agencies engaged in the development and management of subsidized multifamily housing. An editor who is a member of the Information Center staff should be in charge of its production and would rely heavily on the information base represented by the Information Center collection for newsletter content, in addition to contacts made with Federal, state and local governmental representatives. Regular feature sections for the Review should include, but not be limited to the following:

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HOUSING MANAGEMENT REVIEW

Regular Feature Sections

I.   Federal Policy and Programs
        (HUD, FmHA plus Issuance Coverage)

II.   Developments at State and Local Government Levels

        A. Codes

        B. Taxation

III.   Seminars, Workshops and Meetings

IV.   Focus: Publications and Reports
        (consisting of brief contents synopses and order-
        ing information)

V.   New Research
        (Brief sketches of government-sponsored, as well
        as private investigations)

VI.   Professional Development

        A. Training and Education

        B. Licensing

        C. Accreditation

VII.   Resident Manager Experience Exchange
        (A column which will encourage individual managers
        to exchange ideas on successful procedures or ask
        for peer input on specific problem areas)

VIII.   Management Practices

        A. Role of Manager

        B. Tenant-Management Relations

        C. Maintenance

        D. Financial Procedures (rent collection, etc.)

        E. Security

        F. Social Services

IX.   Experimental Programs
         (Housing Management Improvement Program, a
         management company's new method of rent
         collection, etc.)

X.   Regular, Short Technical Piece on Some Aspect
         Housing Management
         (Subject matter of feature sections I - IX
         would serve as topics for these pieces on a
         rotating basis.)

EXAMPLES

         A.   "Determining Management Fee"

         B.   "Housing Management Manpower Needs and
              Trends"

         C.   "Comparative Housing Management Techniques:
              U.S. and United Kingdom"

         D.   "Alternative Techniques for Tenant Partici-
              pation"

         E.   "The Delicate Balance: Management Rights
              vs. Tenant Rights"

The costs involved in producing twelve issues of such a publication are presented in Table 6. However, during the year of complimentary distribution, a plan for making the Review self-supporting by means of a subscription charge should be developed and implemented. Similar plans for partial or total self-sufficiency should be developed for all recommended user products and services.

7.3.2   Service Charge for Data Base Search and Other Services

The charges to be set for the services listed in 7.3 must be determined by the costs of those services, as well as the user's ability to pay. Table 7 is a list of current service charges now in effect in other existing information systems. It should prove helpful in the establishment of such charges for the Housing Management Information Center, when the Model is implemented.

TABLE 6

Production/Mailing Costs for Publication
of the Housing Management Review

I.   Printing Costs (Based on circulation of 5,000)

    A. Finalize design for masthead; create color
        separated art $ 250.00

    B. Pre-printing of masthead (per 1,000 sheets,
        per color)   10.00

    C. Composition/layout - per 4 page issue

        1. Simple (1 column unjustified)   95.00

        2. Medium (variable columns, unjustified) 175.00

        3. Complex (variable column, justified)   225.00

    D. Printing 5,000 copies - per 4 page issue,
        including folding (using 60lb. white offset
        and including up to 3 photographs)   700.00

    E. Special Stocks (additional cost) per 1,000
        sheets

        1. Simple (60 lb. pastel color)   20.00

        2. Medium (70 lb. antique)   25.00

        3. Complex (70 lb. linen or 80 lb.)   35.00

Based on Figures listed above, the printing for 6

issues (4 pages, 5,000 copies) would break down as follows:

    A. Design   250.00
    B. 2-color pre-print   600.00
    C. Composition/layout (with Medium specifications) 1,050.00
    D. Printing   2,100.00
    E. Special Stock (medium weight)   750.00

                               TOTAL $4,750.00

II.   Postage/Mailing (Based on circulation of 5,000
      12 times per year)

    A. Postage   6,000

    B. Mailing House charges

1. Keypunching and verification
   (up to five lines - 5,000 addressed)   460.00
   $92.00 per 1,000

2. Cheshire Lables ($8.00 per 1,000) for
   12 issues, each with 5,000 circulation   480.00

3. Mailing service charge - 1st class
   @ $12.85 per 1,000   771.00

                                   TOTAL $7,711.00

TABLE 7

COSTS TO USERS OF INFORMATION CENTERS

Note: The majority of the following data base search-costs
       were extracted from:

          Survey of Computer Readable Bibliographic
          Data Bases. Ed. Schneider, J.H. et al,
          American Society for Information Science, 1973.

Datrix II

Mail-order search of Doctoral Dissertations from data base of
99% of Ph.D. dissertations accepted in U.S. since 1861.
Searched by particular topic and keyword in titles. Takes
about a week. $15 minimum fee will produce a bibliography of
up to 150 citations, with additional citations at $0.10 each
(minimum charge is $5.00)

National Technical Information Service

On-line searching of 360,000+ abstracts. $50.00 for up to
100 abstracts.

Information for Business

Non-computer. Basic fee is $50.00 per research hour.

Cedol Reference File

Retrospective searches. $25.00 base fee plus $0.25 each for
first 100 references; $0.10 each for references in excess of 100.

METADEX

25,000 items per year added to data base. Retrospective searches.
$250.00 for full file search.

Nuclear Science Abstracts

(1967-current) 65,000 items per year added to file. Retrospec-
tive searches for general customers $68.00; government agencies
and AEC contractors: $26.00. Prints out list of accession
numbers only. User must then refer to Nuclear Science Abstracts
journal for full citation and abstract.

Crystallographic Data Center

Bibliographic file 1935-current. 2,000 new items a year. Retrospective search minimum charge $25.00.

Comprehensive Data Base of Patents

1950-1971. 25,000 new items per year. $175.00 per search.

S.A.B.I.R.

1967-present. 20,000 new items per year. $30.00 to $80.00 per search.

TITUS

1969-present. 30,000 new items per year. (French) $15.00 per search.

Food Science and Technology Abstracts

1969-present. 16,000 new items per year. Retrospective search four years $100.00 per topic.

CPI Magnetic Tape File

1968-present. 50,000 new items per year. Retrospective search $50.00 per year of data searched.

TOXICON

1930's to date. 40,000 to 60,000 new items per year. Variable cost per search, ranges from $10.00 to $90.00.

Rock Mechanics Information Service

One year on file, 2,000 new items per year. Searches cost $3.00.

Sociological Abstracts

1965-present. 16,000 new items per year. Search $40.00.

Petroleum Abstracts

1965-present. 16,000 new items per year. Retrospective search: $100.00 for 7-year data base plus $0.50 per item. 25% surcharge for non-members.

Water Resources Scientific Information Center

1967-present. $25.00 per search.

Chemical Abstracts Condensates

1970-present. Printout by citation and keyword. Abstract to be checked in Chemical Abstracts journal. $25.00 per search.

Engineering Index

1970-present. Approximately 200,000 records. $25.00 per search.

Education Resources Information Center

Approximately 130,000 abstracts. $10.00 per search.

8.   EVALUATION OF SERVICES AND PRODUCTS

Measuring the degree of effectiveness of any
operation is important. However, in information systems this
is especially true, since evaluation provides the needed feed-
back for system modification. It is most critical in the area
of user products and services.*

8.1   Existing Models

Evaluation programs that measure validity, reliabi-
lity, utility and feasibility were found to be few and far
between in currently operational centers that were the object
of site visits in the Wynne study. The goals of some centers
were found to be so vague as to be useless for evaluative pur-
poses. Few centers examined even made a practice of compiling
formal statistics about their operations.[17] Most Federally-
based centers send out to users letters requesting their
appraisals of services and solicit comments on the information
provided, but few go beyond that point.[18]

8.2   Recommendations

A key component of the Housing Management Information
Center should be an on-going evaluation program, which would be
instituted on three bases of performance:

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* For in-depth coverage of evaluation procedures, see The
Evaluation of User Services, by Donald W. King and Edward C.
Bryant, which is listed in the bibliography for this section.

1. Quality of Service. Using several techniques, the Center should take the pulse of user satisfaction. All information packages prepared in response to user requests should include a check-off form on which the recipient can evaluate Center performance and indicate both satisfaction and complaints. The Center should also make efforts to keep informed of user comments reported elsewhere, such as to government agencies or others interested in housing management. In addition, if such feedback is inadequate, the Center should periodically survey selected users to learn of their assessment of performance.

2. Quantity of Service. The Information Center staff should keep careful statistical data as part of their regular duties. To be totalled and analyzed periodically, these should include such data as the number of requests, requests per user group, requests per major subject area, response time to various types of requests, and the nature of the responses made (e.g., by telephone, mail or in person; information provided or referral made; content of response).

3. Cost Effectiveness. Based on analyses of all data and feedback collected with respect to both the quality and quantity of services, together with relevant cost data (e.g., cost of staff time, materials, postage, reproduction and other overhead expenses), the cost effectiveness of various activities and services should be assessed.

Whenever evaluation indicates that change is needed, the Center should respond accordingly. Just as the content of the collection should change in response to changing user needs, so should the Information Center's operations be modified and improved as needed so that its functions are performed as efficiently and responsively as possible.

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As the costs of publications, supplies and
special equipment escalate, a knowledge of the most
essential items needed in the establishment of an infor-
mation system such as the one described in this Model
is helpful in keeping start-up costs to a minimun.

9.1   Representative Budget Levels of Existing
           Information Systems

Rapidly changing costs experienced in the last
few years make the presentation of representative initial
budgets of existing systems a futile exercise. However,
some fairly recent figures (compiled in 1973) on the
annual budgets of thirteen representative information
center/clearinghouse operations are provided in Table 8.
These were drawn from the Wynne study of component
clearinghouse functions, which has been referred to
throughout this report. Accompanying staff level figures
are also presented, since staff salaries usually represent
                                                19
a major proportion of budget expenditures.

9.2   · Recommended Framework For Initial Operating
            Budget

On the following page, a recommended model
framework for the initial operating budget of the proposed
Information Center is presented. The final format of
such a budget would hinge on the type of information storage
and retrieval system chosen and the price tags on other

TABLE 8

STAFF AND BUDGET CHARACTERISTICS OF SELECTED CLEARINGHOUSES

ORGANIZATION	STAFF TYPE				BUDGET ($000)
	PROFESSIONAL		NONPROFESSIONAL		
	FULL	PART	FULL	PART	
1	14	2	9	5	400
2	10	10	5	10	500
3	100	–	10	–	1640
4	10	5	3	4	410
5	40	3	22	–	993
6	43	5	29	3	1700
7	21	15	14	10	550
8	40	3	34	30	2025
9	7	–	–	5	155
10	2	–	16	–	500
11	2	4	2	4	70
12	600	600	400	1800	27000
13	9	–	17	–	400

FRAMEWORK FOR INITIAL
OPERATING BUDGET FOR FIRST YEAR

I.   Staff

      A.   Professional

            1.   Director/Information Specialist

            2.   Editor (Part-time)

            3.   Information Specialist

            4.   Cataloger/Indexer/Abstractor (Part-time)

      B.   Non-Professional

            1.   Secretary to the Director

            2.   Clerk-typist

II.   Publications Acquisitions

      A.   Books, Technical Reports, Periodicals and
          Index Services

      B.   Audio-Visual Materials (Films, cassettes
          and microforms)

III.   General and Special Supplies

      A.   General Supplies, Postage and Photoduplica-
          tion (for regular purposes and for use in
          providing user services)

      B.   Publications Processing Supplies

IV.   Special Equipment

      A.   Shelving (wall and free-standing)

      B.   Index Table

      C.   Reading Tables or Carrels for On-site Users

      D.   Circulation Desk

      E.   Chairs for all furniture requiring them

F. Catalog Card File

G. File Cabinets (legal size, 4 drawer)

H. Microfilm Reader/Printer

I. Microfiche Reader/Printer

J. Table for Reader/Printers

K. Book-trucks for Materials Processing and
    Materials Shelving

V.   Information Storage and Retrieval System Costs
        (See 6, INFORMATION STORAGE AND RETRIEVAL, for
        estimated costs and recommendations)

VI.   Production Costs for Twelve Monthly Issues of
        the Housing Management Review (See 7, INFORMATION
        PRODUCTS AND SERVICES.)

VII.   Other Costs

        A. Telephone (for regular calls and for imple-
            mentation of telephone information and
            referral services)

        B. Rent

items at the time of model implementation. (See other
sections of the Model presentation, in which comparative
prices of components are presented.)

FOOTNOTES

SECTION III

1

Saul Herner and Matthew J. Velluci, eds., <u>Selected</u>
<u>Federal Computer-based Information Systems</u> (Washington, D. C.:
Information Resources Press, 1972), pp. 191 - 193.

2

See McKinsey and Company, Inc., <u>Implementing a</u>
<u>System for Regional Management</u> (Washington, D. C.:
Prepared for the Department of Housing and Urban Development,
June 1969).

3

Karen M. Seidel, <u>Development of a Housing Information</u>
<u>Base</u> (Eugene: University of Oregon, Bureau of Governmental
Research and Service, 1971), entire report.

4

Wynne Associates, "Component Functions of Selected
Clearinghouses" (Washington, D. C.: Produced for the Drug
Abuse Information Dissemination Study of the National
Institute of Mental Health, August 8, 1973), p. 1.

5

Sidney Passman, <u>Scientific and Technological</u>
<u>Communication</u> (New York: Pergamon Press, 1969), Chapters
3, 6-7.

6

Wynne Associates, <u>op. cit.</u>, pp. 4-5.

7

National Center for Housing Management, <u>Organizational</u>
<u>Analysis of the ERIC Clearinghouse on Library and Information</u>
<u>Sciences</u> (Washington, D. C.: NCHM, March 1973), pp. 1, 4.

8

Wynne Associates, <u>op. cit.</u>, p. 8.

9

See Herner and Velluci, <u>op. cit.</u>, entire volume
and Wynne Associates, "Identification, Analysis and
Classification of Information Clearinghouses" (Washington,
D. C.: Prepared for the Drug Abuse Information Dissemina-
tion Study, National Institute of Mental Health, July 11, 1973),
entire volume.

10
Herner and Velluci, op. cit., p. 5.

11
Wynne Associates, "Component Functions of Selected Clearinghouses," p. 5.

12
Robert Collison, Abstracts and Abstracting Services (Santa Barbara: American Bibliographical Center -- Clio Press, 1971), p. 3.

13
Herner and Velluci, op. cit., p. 45.

14
Lorraine M. Mathies and Peter G. Watson, Computer-based Reference Service (Chicago: American Library Association, 1973), pp. 27-29.

15
Herner and Velluci, op. cit., pp. 49-50.

16
Wynne Associates, "Component Functions of Selected Clearinghouses," pp. 5-7.

17
Ibid., p. 12

18
Herner and Velluci, op. cit.

19
Wynne Associates, "Component Functions of Selected Clearinghouses," pp. 8-9.

BIBLIOGRAPHY

SECTION III

Collison, Robert. Abstracts and Abstracting Services. Santa
    Barbara: American Bibliographical Center -- Clio Press,
    1971.

Herner, Saul and Matthew J. Velluci, eds. Selected Federal
    Computer-based Information Systems. Washington, D.C.:
    Information Resources Press, 1972.

King, Donald W., and Edward C. Bryant. The Evaluation of Infor-
    mation Services and Products. Washington, D.C.: Informa-
    tion Resources Press, 1971.

Lancaster, F.W. Vocabulary Control for Information Retrieval.
    Washington, D.C.: Information Resources Press, 1972.

Lutz, Raymond P. "Costing Information Services." Bulletin of
    Medical Libraries Association 59:2 (April, 1971),
    pp. 254-261.

Mathies, M. Lorraine, and Peter G. Watson. Computer-based
    Reference Service. Chicago: American Library Associa-
    tion, 1973.

National Center for Housing Management. Organizational Analysis
    of the ERIC Clearinghouse on Library and Information
    Sciences. NCHM. Washington, D.C.: NCHM, March, 1973.

Passman, Sidney. Scientific and Technological Communication.
    New York: Pergamon Press, 1969.

Seidel, Karen M. Development of a Housing Information Base.
    Eugene: University of Oregon, Bureau of Governmental
    Research and Service, 1971.

Slater, Frank, ed. Cost Reduction for Special Libraries and
    Information Centers. Washington, D.C.: Special Libraries
    Association, June, 1973.

Veazie, Walter H., and Thomas F. Connolly. The Marketing of
    Information Analysis Center Products and Services.
    Washington, D.C.: ERIC Clearinghouse on Library and
    Information Sciences and the American Society for Informa-
    tion Science, June, 1971.

Vickery, Brian Campbell. Information Systems. Hamden, Connecticut: Shoe String Press, 1973.

Wolfe, J. N. The Economics of Technical Information Systems. New York: Praeger, 1974.

Wynn Associates. "Component Functions of Selected Clearinghouses." Washington, D.C.: Produced for the Drug Abuse Information Study of the National Institute of Mental Health, August 8, 1973.

Wynn Associates. "Identification, Analysis and Classification of Information Clearinghouses." Washington, D. C.: Prepared for the Drug Abuse Information Dissemination Study, National Institute of Mental Health, July 11, 1973.

Section IV

RECOMMENDATIONS

1   <u>RECOMMENDATIONS</u>

On the basis of the work performed as a part of Task 4 of contract #H-2161R with the Department, which is outlined in detail in this report, as well as observations made in the course of complying with contract stipulations, the National Center for Housing Management wishes to make certain recommendations regarding the current state of information services in the housing management industry.

1.1   <u>Establishment of a Housing Management Information Center</u>

There is an acute need for the establishment of of Housing Management Information Center to systematically provide for the information needs of the following key field groups:

- managers, management agents and owners involved in the management of FHA subsidized multifamily housing

- commissioners and staff of local housing authorities engaged in the development and management of public housing

- HUD regional, area and insuring office personnel whose activities involve them in some way in the management process.

Some individuals belonging to these target groups are sorely in need of information that will assist them on the job by improving their performance and updating their educational and training experience. Others will find in the Information Center centralized resources of

field materials with which to perform research.

Still another level of potential users might
be composed of:

- Community Colleges, Colleges and Universities
  currently engaged in developing housing
  management training programs and educational
  curricula, and others interested in doing so.

- Housing trade and professional associations
  who would find such an information base
  useful for research purposes, as well as in
  the development of housing management and
  related training programs.

- State Housing Development and Finance Agencies
  currently engaged in housing management
  activities and those who plan to in the future.

- University-based urban and gerontological
  research centers whose staff members are
  engaged in housing-related research.

- Other individuals, government agencies and
  private organizations who have a need for
  housing management, and related information,
  such as architects, planning agencies, and
  construction/development firms.

1.2   NCHM as the Site for Establishment of the
        Information Center

As the old saying implies, "experience is the best
teacher." This certainly holds true in the operation of
information systems. The more foreknowledge possessed by
those designing and then operating a system, the better
the system design and operational process. In the housing
management industry, no agency or organization is more
qualified in experience than the National Center for
Housing Management to implement the Model presented as
part of this report. Not only has NCHM designed the Model

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itself, but it has conducted, with the assistance of Westat, Inc., a comprehensive user study entitled Survey of Individuals, Agencies and Organizations Involved in Management Aspects of Multifamily Housing. The findings of this study, as well as the experience and insight acquired in the operation for over two years of the NCHM Housing Management Information Center and data collected on the nature and operation of existing information systems, were incorporated in the Model design. Thus, NCHM possesses valuable experience in the following areas:

A. USER SURVEY EXPERIENCE - Designing and conducting an in-depth survey of some of the potential users of a Housing Management Information Center;

B. INFORMATION AND REFERRAL SERVICE EXPERIENCE - Providing a variety of reference services to Center staff and over 200 industry representatives who requested them;

C. INFORMATION PRODUCTS EXPERIENCE - Producing periodic reports of new information resources acquired, which was entitled NCHM Information;

D. DATA BASE SEARCH EXPERIENCE - Searching upon request the Information Collection for materials with specific subject content and developing selective, annotated bibliographies, such as College Curriculum for Housing Management, Part 3: Annotated Bibliography for Instructors and Students (produced as a part of Task 1 of contract #H-2161R with the Department);

E. FIELD ACQUISITIONS EXPERIENCE - Formulating an acquisitions scheme for housing management and related subjects, as well as developing the field source contacts with which to implement it;

F. MODEL DESIGN EXPERIENCE - Designing a model Housing Management Information Center to serve industry needs on a national level, which would provide a full range of products and services to the user community;

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G. COLLECTION BUILDING/FILE DEVELOPMENT
    EXPERIENCE - Assembling a collection of
    4,000 books, monographs, technical reports
    and other material, plus holdings of 300
    periodical and index titles.

H. THESAURUS DESIGN EXPERIENCE - Developing a
    Thesaurus of Descriptors Relating to Housing
    Management.

All of this experience is transferable to implementation

of this Model, or some other Model devised by the Department.

1.3   Additional Recommendations

    Prior to the implementation of the Housing

Management Information Center Model, the following steps

should be taken in regard to the Survey of Individuals,

Agencies and Organizations Involved in Management Aspects

of Multifamily Housing, which was designed and conducted

by NCHM as a part of this Task:

A. Funds should be provided to the Center for
    the further analysis of the survey returns,
    especially the open-ended responses. This
    analysis was not provided for under the
    performance stipulations of this Task,
    which called for and allowed sufficient time
    only for "preliminary analysis." Tabulated
    and analyzed results would not only prove
    valuable in Model implementation by pro-
    viding even more information on potential
    user groups, but could also be useful to
    the Department in identifying more clearly
    current industry training needs.

B. Funds should be provided to conduct
    follow-up field interviews in designated
    regions of the country, based on the contents
    of the Survey. This procedure would further
    define the need for information within
    specific target groups and provide oppor-
    tunities to locate and identify difficult-
    to-obtain field literature.

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It has been said that information is the basis for all action. NCHM has demonstrated in this report that from our vantage point of experience with field personnel, as well as the implications of the Survey results, the most crippling disadvantage that those in the housing management industry currently suffer from is the lack of information with which to act--to act as a preserving and protective force for the Nation's multifamily housing resources. If the Department is sincere in its wishes to preserve the taxpayer's multi-billion dollar investment in multifamily housing, it must take immediate and appropriate steps to meet the most pressing need of the group they have recognized as the only hope in the housing conservation effort -- managers. The professionalization of this group and the general upgrading of their skills is possible only through providing them with the sources of information they need to improve job performance and upgrade their training and educational experiences. Just as the Federal government reacted to the need for the collection, organization and dissemination of scientific and technological information in the 1960's through a long-term financial commitment to the NASA Scientific and Technical Information System and other such centers, the Department of Housing and Urban Development must recognize the need for information that exists within the housing management industry and respond to that need through a long-term financial commitment to the development of a field information center. NCHM realizes that this need

is present in a time of financial austerity, but even if development is approached on an incremental basis, the need is clear, the expertise for implementation is available and the time to respond is now.