Housing Management

Department of Housing and Urban Development

Public Housing Management Improvement Series

PB-253 815

HOUSING MANAGEMENT   MANAGEMENT INFORMATION
SYSTEM VOL. V. SECURITY MONITORING SYSTEM

Wilmington Housing Authority
Wilmington, Delaware

March 1976

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PB 253 815

BIBLIOGRAPHIC DATA SHEET	1. Report No. HUD/TMS/HM-76/15	2.	3. Recipient's Accession No.
4. Title and Subtitle Housing Management: Management Information System Vol. V. Security Monitoring System			5. Report Date MAR. 76
			6.
7. Author(s)			8. Performing Organization Rept. No.
9. Performing Organization Name and Address Wilmington Housing Authority 300 Delaware Avenue, P. O. Box 1105 Wilmington, Delaware 19899			10. Project/Task/Work Unit No.
			11. Contract/Grant No. H-1808
12. Sponsoring Organization Name and Address Assistant Secretary for Housing Management Department Of Housing & Urban Development 451 7th Street, S.W. Washington, D. C. 20410			13. Type of Report & Period Covered FINAL
			14.

15. Supplementary Notes

16. Abstracts

This publication is one of a series of documents resulting from the three-year Public Housing Management Improvement Program (PHMIP) which began in 1972. The PHMIP was aimed at developing, testing and evaluating housing management systems and approaches to improve the quality of life in public housing and to increase the efficiency and effectiveness with which public housing projects are managed.

This system was used to reduce crime within public housing projects by providing data needed to ensure maximum saturation of high crime areas by combinations of local police and housing authority security patrols.

17. Key Words and Document Analysis. 17a. Descriptors

Housing Management; Security; Crime Reduction; Crime Data

17b. Identifiers/Open-Ended Terms

Housing Management
Public Housing Management Improvement Program

17c. COSATI Field/Group

18. Availability Statement Release Unlimited Available From NTIS, Springfield, Va. 22161	19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 16
	20. Security Class (This Page) UNCLASSIFIED	22. Price $3.50/2.25

FORM NTIS-35 (REV. 10-73)   ENDORSED BY ANSI AND UNESCO.   THIS FORM MAY BE REPRODUCED   USCOMM-DC 8265-P74

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1. SUMMARY

The Security Monitoring System is a tool used to reduce crime within public housing projects by providing data needed to ensure maximum saturation of high crime areas by combinations of local police and housing authority security patrols. The system gathers statistics on reported burglaries, robberies, drug abuse and other crimes. In Wilmington, these data are collected through a cooperative agreement with the city police department. Reports generated by the system include detailed crime listings, frequency of crime by month within each project, crime listing by week within each project and the victim's age and sex.

A table update program is required in the system to create an accessible random file containing uniform crime code definitions. These definitions are in the process of being made a standard title and code for the same crime nationwide. The Security Monitoring System uses these codes as part of its reporting. A transaction file at the Authority contains changes, additions and deletions to the UCC-Crime table. The transactions are implemented by the Authority Security Department on transaction forms and given to

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Note: A summary of the overall Management Information System and a brief insight into how the Security Monitoring System interfaces with the other MIS subsystems are given in the document, "Management Information System. I. Executive Summary and Product Specifications." (See inside front cover page for information on how to order this document.)

data processing for the key-to-tape operation. The transactions

are combined with the input transactions from the Crime Complaint

Update phase. The file is then passed and matched against a

master file containing all of the UCC codes. All errors in editing

and updating appear on the Reject Report. All changes, additions

or deletions appear on the Crime Report, and the entire updated

UCC Crime Code file is printed on the Listing Report. Along with

these reports, an updated UCC-Crime Code File is produced on mag-

netic tape and on disk.

The reports tell what type of crime was committed; where, in

relation to the heavy crime areas; when; and against whom. The reports

are structured so that the privacy of the individual is protected

and so that no detailed information about the individual is produced.

The reports do not reflect individual names or addresses; they only

reflect demographic information on sex, age and general location

within the housing area.

II. HISTORICAL DEVELOPMENT

Wilmington, Delaware, is considered a high-crime area by its local police department -- on a par with its neighboring cities on the eastern seaboard. Two of the highest crime areas in the city incorporate the Wilmington Housing Authority projects of Southbridge, Southbridge Extension, Eastlake, Eastlake Extension and Riverside. However, these projects are no more susceptible to crime than are the neighboring non-Authority areas of the city.

One of the biggest problems for city police is solving burglary cases. Complaints from public housing residents historically have named burglary as the largest problem. In 1973, WHA established a Security Department to work on reducing the amount of crime in public housing areas, particularly burglary. However, there were few statistics to provide data on crime patterns. City police statistics were not broken down into public housing and non-public housing criminal activity.

A. Need

The Authority was experiencing a high occurrence of crime without detailed knowledge of how, where or the time of the incidence of the crime. It was, therefore, difficult to dis-perse patrolmen. And, without specific statistics to give to the city, increased police protection was nearly impossible

to obtain. The need arose for the development of a system whereby information could be gathered on crime patterns such as the time of day of the crime, how entry might have been made to a dwelling, how the crimes were being committed, who the victims were, the day of week most crimes occurred, the areas of possible weak security, and the probable origin of the criminals. This type of information was considered basic to establishing an effective security department.

B. Options

In order to gather the statistics required by WHA to set up a successful security program, a manual system was considered. WHA looked at the Wilmington Police Department files to determine how they could be used. The police reporting areas were not specifically geared to public housing property; areas encompassing public housing properties also took in other neighboring streets. Any manual system for extracting data from police files would have been laborious and costly in manhours.

Another option was to develop an independent monitoring system. This would be computerized and would edit all input and reject incomplete crime complaints. The system would automatically add the Uniform Crime Code description and pre- pare reports sorted in various sequences to meet the needs of the Authority.

C. Alternative Selected

In view of the spiralling cost of labor and the emphasis

by WHA in late 1973 on meeting current funded budgets within the Authority, a computerized Security Monitoring System turned out to be the most cost-effective alternative. The computerized system also guaranteed more complete data on each crime and promised to result in a more complete picture of crimes being committed within the public housing jurisdiction.

D. Experimental Design

WHA management hired a consultant to work with its staff to develop a successful Security Monitoring System. The first task was to establish the objectives for the Crime Incident Tracking System. The relationship of the system's objectives to the overall Authority goals was determined, and a justification for the Security Monitoring System was presented to the Authority senior staff for approval.

The next step was a preliminary feasibility study. The consultant interviewed the security section manager and the deputy director of public housing to develop preliminary system requirements. The real problems were determined, recognizing the exception cases and separating requirements from solutions. At all stages of the preliminary study, the consultant obtained the concurrence of the potential system users.

The next step was to start the detailed systems analysis and design study. Using the data gathered during the preliminary research, further interviews were conducted by the consultant with the security section manager, the deputy director

of public housing, project managers, officers within the Wilmington

Police Department and the WHA Data Processing Department. Observa-

tions were made of the current method of reporting crime statistics

occurring within the Authority along with how the police department

was reporting statistics.

A final computerized information flow was designed. Files

and tables were defined, record content, structure, size and formats

were established along with the design of required input forms and

output reports. During this design phase, there was constant contact

between the security section of WHA, the Wilmington Police Department,

the WHA Data Processing Department and the consultant. The final

systems designs were presented in the form of a Systems Specification

document to the Authority senior staff for comment prior to approval.

All comments were resolved with the appropriate staff member and

incorporated in the document. The document was then sent to the

Authority for final approval.

When the document was approved, the computer programming phase

was started. As each program was completed, test data were established

and used to test the system. When all testing was completed, users

and systems specifications and operations manuals were written and de-

livered by the consultant to the Authority.

The preliminary phase took about two weeks, the detail system

analysis about five weeks, programming about eight weeks and the

manual writing about four weeks.

The use of the Uniform Crime Reporting Coding Offense System enables the system to help the public housing security force in the following way: In the instance of burglary, the system can provide information on whether or not forced entry was used to enter the dwelling in which the crime was committed: the system can provide information on the type of burglary where there was no force used to gain entrance (consequently, the system can give management an idea as to whether or not a person is using a key or whether the person did break to enter); the system can also provide information on whether or not a vehicle was used in perpetration of the crime (this might indicate that a person lives in the area in which the crime was committed or drove to the scene in a vehicle).

Management of a security force can cross-index a week's work, and by using a grid system the information can be pinpointed to specific areas. A problem with vandalism can be narrowed down to specific projects, to areas within the project, to certain blocks, to actual streets and addresses. A security force then can intelligently be dispatched at the times and places the system's data dictate for action.

Specifically, the reporting system was set up using 20 fields, leaving room for additional inputs as required. The first input is the code number for the incident; next is the police reporting number; then the reporting person (housing manager, the victim, police officer, etc.); area of the city which would also be identified on a grid of public housing properties; location; type of crime, day of week; date; time; whether victim is male or female; victim's age;

whether a vehicle was used; area of building in which the crime took place (north side, east side, etc.); how access was gained (window, door, etc.).

The design stage of the system involved two people: the computer consultant and a knowledgeable WHA employee thoroughly familiar with police reporting methods and with technical knowl- edge of police activities.

III. MAJOR PROBLEM AREAS ENCOUNTERED

A. Problem Statement

A method was needed to capture meaningful statistics after obtaining information on all crimes taking place within the public housing properties.

1. Solution Options.

An agreement was made between WHA and the Wilmington Police Department whereby the police supplied the Authority with all crime complaints within WHA boundaries. A procedure was developed to have Maintenance Department employees report any crimes they observed that were not reported to the police. Also, the WHA security patrol entered unreported crime incidents into the system.

2. Problem Avoidance.

The only rational method for avoiding such a problem is for the public housing authority to develop meaningful relationships with its local police department. Normally, police departments employ their own type of reporting system, but the problem to be resolved between the authority and the police officials is how to evaluate what crime is going on versus what crime is not being reported. Police reports will detail only those crimes which are reported and on which police action was taken. As for misdemeanors, a police report will exist only if there is personal injury or property loss.

The majority of police work -- in the area of service activities -- generally will not be reported. Also, the problem for the public housing authority is how to deal with unreported crimes. It is estimated that in most urban areas there are three felonies for every one reported. The ideal way for a Security Monitoring System to work, therefore, is for the public housing authority to get all information with respect to police activities in certain areas in which the authority is monitoring.

B. Problem Statement

Problems arose with employees working in data processing disciplines who had no previous experience with EDP processing.

1. Solution Options.

Options to solving this problem involved either hiring experienced, high-paid EDP personnel or issuing easy-to-understand users manuals and conducting training classes. The latter move was taken, manuals were distributed and training classes held. The problem was eliminated.

2. Problem Avoidance.

The problem can be avoided by hiring experienced personnel in the first place. However, if present, non-trained personnel are to be kept on the job, then re-training will be necessary. Doing the training early in the installation of a new system will avoid many problems after the system is operational.

C. <u>Problem Statement</u>

Requirements of standardized and accurate input for the EDP system were encountered when processing the data through the edit programs.

    1. Solution Options.

See solution options under problem statement B, above.

    2. Problem Avoidance.

See problem avoidance under problem statement B, above.

IV. BENEFITS

A. Cost Reductions

Since the implementation of the Security Monitoring System, Wilmington Housing Authority has experienced a decline in the amount of property damage due to vandalism. Vacant unit vandalism reportedly has been reduced mostly as a result of the computerized system and ability to mobilize Authority security patrols based on the information generated by the system.

B. Other Benefits

Perhaps the biggest benefit of the Security Monitoring System to a public housing authority is the identification of crime trends, for instance, time, day of week, areas and methods of operation, structural weaknesses of dwellings, building design weaknesses permitting easy access or places to hide for perpetration of crimes, etc. All of this information permits planning, monitoring and evaluation of security patrols so that crime can be reduced and vandalism and destruction of property cut down. This adds to the tenants' feeling of security and well-being.

Another benefit of the system is a smoother operating authority. Referrals are made to departments within the authority and to service agencies outside the authority based on observations made by security patrols and through information from crime statistics which become apparent through the study of reports generated by the computerized system.

V. OPERATIONAL PROCEDURES TO IMPLEMENT

A. Ingredients Required

The most important ingredient required to implement the
Security Monitoring System is the establishment of a working
relationship between the public housing authority and the local
police department. A means needs to be developed whereby access
is made to police incidence reports for crimes reported within
the public housing boundaries. Without the ability to obtain these
types of basic data, the system will not have the sufficient input
upon which intelligent reports can be issued and upon which
management can plan, monitor and evaluate action taken by the
security department.
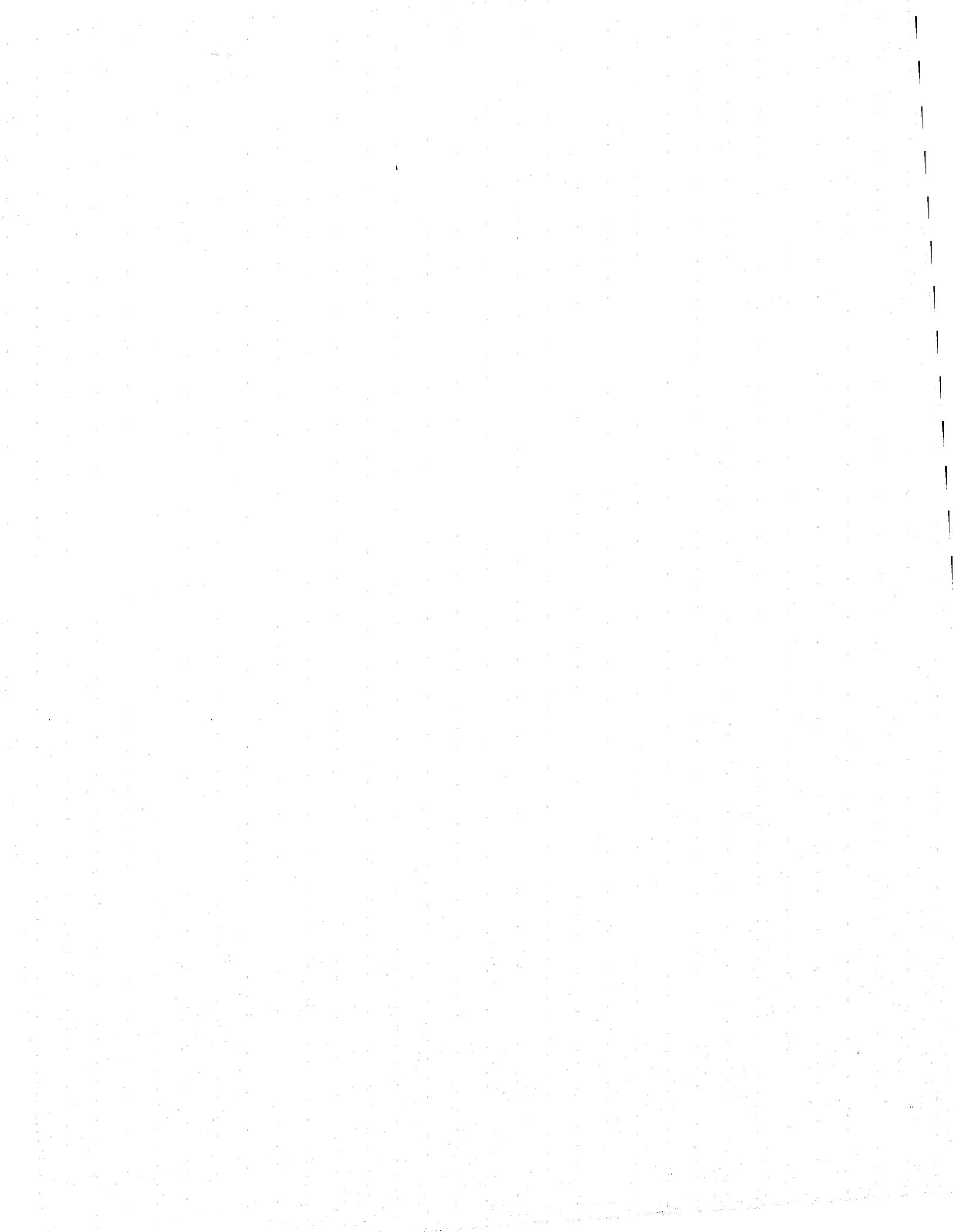
B. Installation Procedure

A clerk needs to be trained on how to capture the necessary
information from a police incident report. An implementation
start date needs to be set. The clerk must then start to input
data on crimes as of that date. Key personnel within the authority
should be identified who will be receiving copies of the crime
statistics and seminars should be scheduled by the security depart-
ment to explain how to interpret the reports.

C. Operational Requirements

An employee will need to be identified as the securities input
clerk. The amount of time required for this function will depend

on the size of the city, the city's crime rate and the physical
size of the public housing authority. A general rule for time
required is about three to five minutes an incident. It is
recommended that the system run a monthly schedule for housing
authorities in cities experiencing an average crime rate. Normal
operating time is .5 fillable units a month.

Data processing requirements for the system: The system was
designed and programmed to run on an IBM 360 or 370 OS operating
system. Input data must be in machine readable form (cards,
magnetic tape, paper-punched tape or magnetic disk).

END