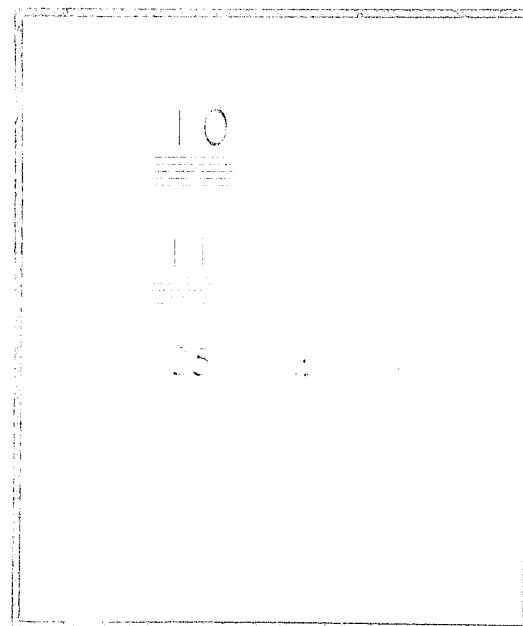


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Part I

Project for the Security Design
of
Urban Residential Areas
FINAL REPORT

prepared for the
National Institute of Law Enforcement and Criminal Justice
of the
U.S. Department of Justice

by the
Institute of Planning and Housing
New York University

32858

FINAL REPORT

PROJECT FOR SECURITY DESIGN IN URBAN RESIDENTIAL AREAS

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for the

NATIONAL INSTITUTE OF LAW ENFORCEMENT AND CRIMINAL JUSTICE
Grants 70-015 70-082 71-127-2

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TABLE OF CONTENTS

SUMMARY

I. CONCLUSION OF ANALYSES

- A. Large Scale Computer Analysis of New York City Housing Authority Data
- B. Comparative Analyses of Housing in other cities
- C. Before and After Studies in Conjunction with Physical Modifications
 - 1. Clason Point Gardens
 - 2. Intercoms
 - 3. Other Before and After Studies

II. PUBLICATIONS

- A. Defensible Space, Crime Prevention through Urban Design
- B. Architectural Design for Crime Prevention
- C. Immediate Measures for Improving Security in Existing Residential Areas
- D. Design Directive for Achieving Defensible Space in New Developments
- E. Other Publications

III. IMPLEMENTATION OF FINDINGS

- A. General Influence
- B. Specific Implementation

ADDENDUM

- A Results of Recent Regression Analyses
- B Intercom Effectiveness Study
- C1 Clason Point Crime Data
- C2 Clason Point Tenant Data
- * D1 Defensible Space Book
- D2 Defensible Space Reactions
- * E HUD Immediate Measures Book
- * F Design Directives Book
- G1 Officials and Organizations Receiving Information
- G2 Projects Modified in Accordance with Defensible Space Principles

* Separate Cover

FINAL REPORT OF

The Project for Security Design of Urban Residential Areas

SUMMARY: *The project determined that the form of the physical design of residential areas is a strong factor affecting the rate of victimization of inhabitants; the extent of vandalism; and general feelings of impotence in crime control as felt by both residents and police. The project isolated the governing physical ingredients and showed, through the example of successful environments, and through the preparation of three manuals how new and existing residential areas could be made more secure.*

This final report covers all activities of the Project for Security Design, at both Columbia and New York Universities, between 2/1/70 to 1/31/73. Those activities which have previously been described in earlier progress reports are referred to only briefly. Recent developments are reported in detail. (A comprehensive overview of the project is provided in a recent publication, enclosed, Defensible Space, Crime Prevention through Urban Design . This book was prepared as a popular version of the longer and more technical report to be published by the Government Printing Office, entitled Architectural Design for Crime Prevention. Preparation of the Macmillan version was paid for by the Macmillan Company and does not constitute a direct product of this grant.)

The project set out to determine the extent to which the physical design of urban residential areas is a factor in the criminal vulnerability and victimization of inhabitants. As an auxiliary pursuit it was also deemed desirable to measure the attitudes of the residents with different physical environments toward the maintenance and upkeep of their facilities and the extent to which they themselves participated in restricting criminal activity and vandalism.

Three means were used to make these determinations.

1. A detailed statistical analyses of 155,000 units of public housing in New York City
2. A comparative analyses of housing developments in major cities throughout the country.
3. Before-and-after studies of tenant attitudes, and crime and vandalism rates in housing developments which were modified in accordance with the project's hypotheses.

All three means were adopted as necessary to establishing the universalities of our thesis.

After almost three years of work the project has been able to verify most of its hypotheses. We have been able to identify, and concretely demonstrate, the elements of physical design that have a major impact upon crime patterns. The results, published in various books and journals, and presented at professional conferences throughout the country, have been well received. The typical response from housing management and housing police being: that the phenomena described as similar to those being experienced in their cities and projects, and that the hypotheses and statistics explain the nature and cause of the problem and the various suggested remedies will go a long way toward alleviating the problem.

Aside from its research undertaking, the project was charged with the production of two monographs: one which described the hypotheses, methodology, findings and state of the art of Defensible Space (the group of physical design mechanisms developed to improve security are referred to as creating a Defensible Space); and one which would outline for architects and planners and housing developers a comprehensive set of directives for constructing new housing which would embody these design features. Both these monographs were completed. The first, as mentioned above, is being published by the Government Printing Office; the second entitled "Design Directives for

Achieving Defensible Space" is enclosed with this report.

Two other manuscripts resulted as spin-offs from this project: The Macmillan publication mentioned previously and a Department of Housing and Urban Development publication entitled "Immediate Measures for Improving the Security of Existing Residential Areas". Preparation of both these manuscripts (enclosed) were paid for by the publishers as listed above, however as the National Institute of Law Enforcement and Criminal Justice was instrumental in providing the research base for accumulating the findings discussed in these manuscripts, it is fully credited for its support.

I SUCCESSFUL CONCLUSION OF ANALYSES

A. Detailed Computerized Analyses of New York City Housing Authority Data

Utilizing data provided by the New York City Housing Authority and its police, statistical analysis was conducted of crime patterns in relation to physical design features and social characteristics of tenants. Major physical features, primarily the number of units in a project, and the height of the buildings were shown to have a significant impact upon crime. Specific design features, such as lobby configuration and the relationship of buildings to surrounding streets were shown to have an effect upon the occurrence of crime in specific locations.

A variety of techniques were utilized, including analysis of variance, trend analysis, and step wise multiple regression analyses (see the Methodology Section of "Defensible Space" book).

Recently completed step-wise multiple regression analyses were particularly interesting in that it not only solidified the argument that physical features effect crime, but also began to illustrate the complex interplay between physical design features and social factors in the creation of criminal opportunity (see Addendum A1 of this report for a detailed description on these latest analyses)

B. A Comparative Analyses of Housing in Other Cities

In order to assess the universal significance of our statistical results in New York we have also conducted small-scale, empirical statistical surveys in other cities. These include case studies done in Boston, Philadelphia, St. Louis and San Francisco.

We have also looked at individual projects in the following cities: Cleveland, Newark, Chicago, Los Angeles, and Washington D.C. Although statistical records, in terms both of the occurrence of crime and of vandalism, are not as carefully kept in these cities as they are in New York, discussion with police and housing management in these cities reveal the same trends as those in New York. Different from New York where housing is in very short supply and there is a tradition for high-rise living, the best indicator of the extent of crime and the failure of projects in other cities is their high vacancy rates. The following projects in the cities listed are experiencing crime problems of crisis proportions. All those projects were designed containing the negative attributes defined in our studies:

Boston	Bromley-Heath; Columbia Point
Chicago	Cabrini Green; Robert Taylor Homes
Cleveland	Outhwaite
Jersey City	A. Harry Moore; Currie Woods
Kansas City	Wayne Miner
Newark	Stella Wright; Columbus Homes
Philadelphia	Raymond Rosen; Schuylkill Falls
St. Louis	Pruitt-Igoe
San Francisco	Yurba Buena, The Plaza
Washington	Green-Leaf Apartments

A detailed discussion of the problems being experienced by many of the above projects as a result of their design appears both in the GPO publication, "Architectural Design for Crime Prevention" and in the Macmillan publication, "Defensible Space".

C. Before and After Studies in conjunction with Physical Modifications

The New York city Housing Authority, and the U.S. Department of Housing and Urban Development, have co-operated in allowing us to modify existing housing projects in accordance with our hypotheses, and to perform pre-modification, and post-modification interviews and data collection to measure their impact. Attempting to co-ordinate the various government agencies involved in these efforts was complex and time consuming beyond any anticipation, but we believe the results have been well worthwhile.

1. Clason Point Gardens

Clason Point Gardens, is a two-story, 400 unit housing project in the Bronx, New York, which is typical of much low and moderate income housing throughout the nation. This project served as a major demonstration model of the concepts of Defensible Space.

The Project for Security Design prepared both the preliminary and detailed working drawings for the physical modification of this project. Tenants were interviewed, crime data tabulated, and other information collected, to insure proper measurement of the results. Major construction was complete by January, 1972, though finishing touches were not finalized until June, 1972. In the year since major construction was complete there has been a sharp drop in crime, in fact virtually no crime (see Addendum C1). Our interviews, photographs and tours of the project, indicate a marked improvement in tenant attitude in terms of responsibility for their homes (see Addendum C2).

2. Intercoms

In accordance with our designs the New York City Housing Authority has been installing buzzer-reply intercom systems in existing projects. These

are paid for by tenants monthly and are amortized over a ten year period. The Project for Security Design has been monitoring this program and consulting with the Housing Authority on all further installations.

A complete analysis of the failures and successes of this program has been prepared (see Addendum B of this report), and indicate an average reduction in crime of 8.7% over 2 years in comparison with all other New York City Housing Authority projects which suffered a 25% average increase. However if one removes from this list those projects which we anticipated would not fare well due to tenants characteristics, then the reduction in crime is 24%.

This effort was particularly useful as buzzer-reply intercom systems are a low-cost means of limiting crime in multi-family dwellings. However, intercoms are able to combat this difficult crime problem only if installed correctly, in terms of location, material, and tenant characteristics. By detailing the exact nature of successful intercom installations we are now able to give specific instructions in utilizing this low-cost crime prevention technique.

3. Other Before and After Studies

The Project for Security Design has developed specific plans for the modification of three other New York City Housing Authority projects. One of these, Bronxdale Houses, construction is well underway: Physical modifications to grounds provided with HUD monies and electronic equipment installations provided by the New York City Criminal Justice Co-ordinating Council with LEAA block grant to states funds, are being made. It is unfortunate that this effort, which involved two federal departments, one state office, and at least half a dozen local agencies, took so long to co-ordinate.

By New York City construction schedule standards our movement was rapid. However no monitoring of this project will be possible after installations are complete under NILE&CJ funding*. This is particularly unfortunate as Bronxdale is a unique effort, combining physical and electronic security devices within a low-income development.

Two other projects are well underway. Working drawings for the modification of Markham Houses in Staten Island have recently gone out to bid, and construction should start shortly. Detailed designs for Edenwald houses are just being completed.

Preliminary designs were also prepared for a number of other projects, including Highbridge and St. Nicholas. These however, were held back by HUD for lack of funds. Extensive interviewing, in preparation for the modifications, were done only at Bronxdale.

It should be remembered that the Project for Security Design in Urban Residential Areas was originally conceived as a three year research effort. Actual funding for the Project did not begin until a pilot four month grant was initiated in February, 1970. In June, 1970, and again in June, 1971, the project, now at New York University, was refunded on an annual basis. Although it was intended for the project to run a third year in order to complete the testing. The last grant was extended, without additional monies, to permit six more months of work, primarily the monitoring of recently completed experiments. Thus the Project did not continue as originally proposed, either in actual time elapsed or in terms of the funding provided. The project has initiated proposals for the receipt of grants from other funding agencies so as to be able to complete its research program.

* An Additional grant for \$20,000.00 extension from the New York City Criminal Justice Coordinating Council will provide for some limited monitoring at Bronxdale.

II. PUBLICATIONS AND PUBLIC RELATIONS

At the initiating conference on Defensible Space at Columbia University in November, 1969, it was strongly recommended by the participants that research of this nature would only prove useful if the results were widely disseminated. We have therefore constantly striven to keep our work relevant to practitioners in housing and to insure that the results of our research were made known.

A. "Defensible Space; Crime Prevention through Urban Design"

In March, 1971, Mr. John Conrad, then our grant monitor with the National Institute of Law Enforcement and Criminal Justice, suggested that private publication of our submitted monograph would result in greater dissemination and arrangements were made with the Macmillan Company to publish a somewhat popularized version of the results of our work, with full credit given to the role of NILE&CJ (See Addendum D1, copy of book).

Through the offices of this publishing firm, the book "Defensible Space" received widespread distribution and attention. Throughout its history the PSD had received relatively extensive and favorable coverage (see Progress Reports 6/24/71 - 4/30/71; 9/30/71 - 11/31/71). But the release of "Defensible Space" brought forth new attention; including not only praise from professional journals (Progressive Architecture, Architectural Forum), but also generated extensive national interest in weekly magazines (Time, Fortune, Newsweek); major newspapers (New York Times, Washington Post, Los Angeles Times, San Francisco Chronicle, Newsday); and electronic media involving many radio and television programs. Overall the response to our findings by both public and profession has been most enthusiastic. (Addendum D2).

B. Architectural Design for Crime Prevention

On July 21, 1971, the original draft of the above titled work was sent to the National Institute of Law Enforcement and Criminal Justice for publication as a monograph by the Government Printing Office. This text was revised, and graphic material provided in September, 1971. An updated statistics chapter was added in December 1971. The technical staff of the National Institute requested some final corrections and clarifications which were completed in June, 1972.

The last communication we received concerning this work was a letter on July 17, 1972 from Ms. Mary M. Davies, of the Research Administration Division of the Law Enforcement Assistance Agency, informing us that Mr. Ken Masterson, a technical specialist with LEAA, was working on the manuscript and that publication would soon be forthcoming.

C. Immediate Measures for Improving the Security of Existing Residential Areas

The Staff of the Project for Security Design, working within the newly created non-profit Center for Residential Security Design has prepared a publication with the above title under contract with the Department of Housing and Urban Development. Proper credit is given to the NILE&CJ for sponsoring the original research which allowed for the preparation of this manual. (See copy Addendum E). The HUD grant of \$25,000 paid only for the preparation of the manual.

This publication, to be released through the Government Printing Office demonstrates further the extent to which our concepts are being accepted by housing, planning, and architectural organizations; most particularly the government agencies supervising and administering housing activities. The above manual will encourage large scale implementation of physical measures

to improve security, and is a major implementation program that demonstrates the successful co-operation of two federal departments.

D. Design Directives for Achieving Defensible Space in New Developments

On June 21, 1972 a draft copy of the work entitled Design Directives for Defensible Space was delivered to the National Institute of Law Enforcement and Criminal Justice. Shortly thereafter we received a generally favorable reaction with a suggestion for consolidating two chapters.

Addendum F consists of a revised version of the 'Design Directives' text, (complete with graphic materials.) It is hoped that this manual will see publication shortly.

E. Other Publications

In addition to full scale books and monographs the staff of the Project for Security Design has prepared numerous shorter papers and talks. These include presentations before professional groups such as symposia of the National Association of Housing and Redevelopment Officials, and the Annual Conference of the American Institute of Planners. In addition, papers were presented at the Fourth National Symposium on Law Enforcement Science and Technology, and other papers will soon be published in the New York Times Magazine section and the Journal of the American Institute of Planners. A statement was also made before the U.S. Senate Special Committee on Aging, Subcommittee on Housing. (See Progress Report 6/24/71 - 9/30/71 for detailed accounts of earlier presentations and papers.) In total, thousands of architects, planners, and housing officials have been personally introduced to our findings and have had a chance to discuss their implications.

III..IMPLEMENTATION OF FINDINGS

In the end the true measure of the success of the Project for Security Design is the degree to which public agencies and practicing professionals have decided to adopt Defensible Space findings and methods. This acceptance is made evident by two types of responses; the first being the requests for specific information and advice and the second being the incorporation of Defensible Space ideas into new construction or the modification of existing housing.

A. General Influence

The government officials who have recently responded favorably to the work of the Project for Security Design begin with several members of Congress (Senators Williams, Javits, Percy and Brooke; Congress persons Koch and Abzug) and include many other elected officials including a number of Mayors. Numerous HUD officials, from the Assistant Secretary level on down have taken a strong positive interest in our work. Members of other federal agencies, including the Bureau of the Budget, also responded enthusiastically. Many local housing, planning and urban renewal officials have voiced agreement with Defensible Space. (See Addendum G1 for complete list.)

The response from the architectural, planning, housing, and law enforcement professionals has also been extremely positive. Among the many prestigious persons who voiced favorable reactions are: Dean William Porter of MIT School of Architecture; Herbert Sturz, President of the Vera Institute of Justice; Ada Louise Huxtable, architectural critic for The New York Times; the editors of both Progressive Architecture and Architectural Forum. (Again, Addendum G1 includes a more complete list.)

B. Specific Implementation

Over the past three years the Project for Security Design has been asked to provide specific design recommendations for a wide variety of government aided and private housing developments, both existing and proposed. Our mandate from the NILE&CJ allowed us to provide such services only when directly related to our research, or when there was a special need or provision for such services.

Despite these limitations over 10,000 units of housing have been built or modified in accordance with specific design recommendations prepared by the Project for Security Design. Design recommendations have also been prepared for an additional 14,000 units which are still awaiting actual construction. This is, of course, in addition to the many groups who have received generalized introductions to the concepts of "Defensible Space" and have gone on to incorporate these principals in their planning. (See Addendum G2)

We are also discussing the preparation of a model security code for residential buildings and areas with a number of potential funding sources.

ADDENDUM A

RECENT REGRESSION RESULTS

REGRESSION RESULTS

In an era of skyrocketing crime and paranoia just about everyone, including planners and architects, is searching for means of reducing crime. Social scientists have long been skeptical of the influence of design upon human behavior.¹ But physical designers are now joining with more socially oriented planners, criminologists, law enforcement officials and politicians to ask if there is any demonstrable means by which the man-made environment can be designed to limit crime. Behind the question is the fear that crime and vandalism will ruin the quality of life in new developments, as urban life styles have been so drastically curtailed in some central cities.

Oscar Newman, in his book Defensible Space: Crime Prevention Through Urban Design (Macmillan, 1972) presented and supported the hypotheses of specific design characteristics influencing crime patterns. The recently completed series of step-wise multiple-regression analyses discussed in this report are a further effort to identify those variables whose modification could serve to reduce crime. The study utilized one year of crime data from the New York City Housing Authority coupled with concurrent data concerning tenants and the physical nature of their projects.

The tenant and physical information were utilized as independent variables in a predictive equation. The dependent variable being predicted was crime. If it is possible to identify

statistically those qualities which predict the occurrence of crime, it can then be asked if these same qualities can be realistically controlled to reduce crime in residential developments.

We have developed a first approximation equation. From this equation the most basic of our findings is additional support for Newman's hypotheses that physical design features are strongly correlated with crime rates and locational patterns. Two physical variables, the number of units in a project and building height, were shown in the regressions to have a strong influence (other more specialized physical features, such as lobby visibility or stairwell design, had a correlation only with particular types of crimes and locations).

The study had originally begun with a list of over 40 physical characteristics, including standard architectural and planning measures, as well as indices specially prepared to measure projects in terms of particular hypotheses. This number was reduced by a range of techniques: direct observation, analysis of coupled projects, analyses of variance, simple regressions between physical features and crime and, finally, multiple regressions with both physical and social variables correlated with crime. Some factors that were anticipated to have a strong role were eliminated. For example, density did have a positive correlation with some types of crime; but density was nearly identical to building height in this sample (correlation .88), and height had a higher and more consistent correlation with crime.²

Number of units had the kind of generalized correlations anticipated (correctly) for social variables. Crimes of all types and in all locations correlated positively (correlations of .11 to .30) with number of units, with the broadest and most critical crime categories having the higher correlations (total felonies .216).

Building height had an overall weaker (see Table I) but more specialized effect than the number of units. Height alone accounted for an R^2 value of .206 in terms of elevator robberies (Table V). This was typical as the effect of height was greatest upon indoor crimes and crimes of personal confrontation -- precisely the most fear-provoking incidents, and those for which the criminal is least likely to be immediately apprehended (Table VI).³ An additional factor is what was called Index 2, project height in comparison to the surrounding buildings; being the only tall buildings in a neighborhood accentuated the problems of higher buildings (Table V).

The other physical variables tended to be even more selective in effect. Lobby visibility, for example, had a reasonably strong positive effect (simple correlation .30) only with lobby crime (and a negative correlation with outdoor crime). Stairwell configuration had only minimal correlations, even with stairwell crime, and was dropped from the final regressions. Percentage of windows facing street, which was intended to measure surveillance opportunity, had only a mild effect on grounds crime.

This limited effect indicates that architectural scale design features and hardware act as a form of mechanical prevention.⁴ These features can dislocate crime from one area to another. But dislocation is never 100% and a project without serious security design flaws and with adequate security hardware and personnel will present no opportunities. While this will not deter the hard-core criminal or drug addict, the youthful potential criminal, denied an easy opportunity, may commit no crime at all.

The social variables, as expected, operated across the board; roughly the same correlations with crimes of all types and locations. There is a definite problem of multi-collinearity with the socio-economic measures available. Which is another way of saying that the same families are receiving welfare, have only a single head of household, have low gross incomes and low disposable incomes and are predominantly Black or Puerto Rican and that no one factor can readily be selected as key. The percent of families in a project receiving all income from welfare (predominantly ADC as almost all the elderly receive social security) was, for the most part, the single social factor most highly correlated with crime. We do not believe that this suggests necessarily that members of welfare families commit crimes (though it may indicate that they are often victimized). The percent of families on welfare was simply the best indicator of socio-economic status and family stability (as related to crime in that housing project). In some categories, notably

indoor robberies, per capita disposable income (cash available after necessities) replaced percent on welfare as the socio-economic indicators most highly correlated to crime.

Another factor that should be mentioned as playing a role is the felony rate of FBI Index Crimes (which for our purposes is almost identical to felonies), in the surrounding precinct. While project felony rates are clearly correlated with that of the surrounding area (.40) the precinct rate (which includes crimes to commercial enterprises which do not exist in projects) is higher than the project rate. The precinct felony rate is most highly correlated with the rate of outdoor felonies on projects.

The approximate predictive equations we have developed by no means completes the useful information available, though it does have some clear implications for realistic decisions. Of the questions remaining, the most obvious is that our regressions have not accounted for the entire variation in crime rate (total R^2 generally went up to .60). Management, and quality of police protection, immediately come to mind as features we had no reasonable means of measuring. Also suggesting that there are factors we have inaccurately measured or missed entirely are a few individual projects which have many or all the qualities described as predicting crime but which do not experience particularly high crime rates. We do not intend to study these in detail.

Another question we have been considering is the effect of combinations of variables. While it may be possible statistically to isolate variables, they do, in fact, operate in combination. For example, a 5,000 unit project of 16 story buildings with a relatively high proportion of unstable, large and poor families located in a high crime area might have an even higher crime

rate than the total of the values indicated for each variable. Using the same example, a very similar but small project (say, one 150-unit high rise) might have a crime rate lower than the reduction accountable to the one variable of project size alone.

Another example is that high rise housing for families tends to have more crime than the low rise. But high-rise towers exclusively for the elderly have virtually no crime. Again, The combined effect of the variables does not necessarily equal the sum of values attributed to each factor individually.

The implications of this combination effect may be extremely important. This nation has a commitment to provide housing, including housing for poor, unstable, large, minority group families. Much of the opposition to such housing, even in Black communities, has been due to fear of crime. If it can be demonstrated that housing for such families will have relatively low crime rates if: the project is less than a certain size, or low rise, or has only a given proportion of families with certain characteristics, then the housing programs can proceed to provide more livable housing without stirring some of the hysteria accompanying many new low income developments. But to begin to plan for such housing, we have to understand the complex meshing of factors that result in Pruitt-Igoes.

There are factors that are not to be controlled, such as our concept of justice not allowing discrimination on the basis of number of adults in a family, or receipt of public assistance, as well as race. Similarly, economics may dictate higher buildings

in some circumstances (in which case they might possibly be reserved for the elderly). But some qualities can always be reasonably altered. For example, smaller housing developments are somewhat more difficult administratively and much less ego satisfying. But if little plans have no fire to stir mens' souls, they may solve real problems. Low-rise, high density (townhouses, garden apartments) may be more practical than high-rise. At this point we really cannot conclusively state the combinations of physical and social features that can be reasonably adjusted to insure lower crime rates, but we have indicated some of the possibilities.

A related issue is that the independent variables, both social and physical, do not have straight line relationships with the dependent variable of crime. We know from detailed analysis of buildings of different height that crime increases as height increases, most sharply when going from 5 stories to 15 stories. All walkups operate apparently pretty much the same, and once above 15 stories there is no appreciable crime increase with building height.

In a sense, what we are talking about is cut-off points. How high can a building be without inviting crime, or what proportion of difficult problem families can be assimilated into a project with the more stable families exercising a form of social control that prevents much crime and vandalism. Again, there are no definitive answers, but the question is of great interest.

HOUSING COMBINED REGRESSIONS (RATES/1000 POP)

(CREATION DATE = 07/26/72) CRIMES AS EXPLAINED BY SOCIAL & PHYSICAL VARIABLES.

***** MULTIPLE REGRESSION *****

DEPENDENT VARIABLE: TOTAL FELONIES

TABLE I

VARIABLE	MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
Percent of Population Receiving Welfare	0.53535	0.28660	0.28660	0.53535	0.15606	0.15105
Rate of F.B.I. Index Crimes in Precinct	0.58991	0.34799	0.06139	0.40893	0.09825	0.24092
Number of Units in Project	0.62780	0.39413	0.04614	0.21656	0.00344	0.23543
Per Capita Disposable Income	0.65263	0.42593	0.03179	-0.48491	-0.00443	-0.58925
Visibility of Elevators and Waiting Areas	0.66750	0.44556	0.01963	-0.11066	-1.69218	-0.25583
Building Height	0.67830	0.46009	0.01454	0.22049	0.45792	0.31100
Index 2: Project Height compared to Height of Surrounding Area	0.68908	0.47483	0.01473	0.01502	-1.29108	-0.15262
Index 3: Number of Publicly Assisted Projects in Area	0.69575	0.48406	0.00923	-0.20151	-1.01868	-0.08626
Percentage of Windows Facing Street	0.70065	0.49091	0.00685	0.10614	-0.05035	-0.19605
Percentage of Persons over 60 Years of Age	0.70975	0.50374	0.01283	0.02877	-0.34138	-0.48125
Visibility of Lobby	0.71720	0.51437	0.01063	0.10385	1.34568	0.16321
Family Size	0.72438	0.52473	0.01035	0.04076	-5.30166	-0.33301
Percentage of Families with Female Head of Household	0.72551	0.53637	0.00164	0.47896	-0.12612	-0.14706
(Constant)					58.17605	

HOUSING COMBINED REGRESSIONS (RATES/1000 POP)

(CREATION DATE = 07/26/72) CRIMES EXPLAINED BY SOCIAL & PHYSICAL VARIABLES.

***** MULTIPLE REGRESSION*****

DEPENDENT FARIABLE: FELONIES INDOOR

TABLE II

VARIABLE	MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
Percent of Population Receiving Welfare	0.50538	0.25541	0.25541	0.50538	0.00872	0.01617
Building Height	0.59414	0.35300	0.09759	0.35543	0.37093	0.48266
Number of Units in Project	0.63993	0.40951	0.05651	0.26571	0.00173	0.22744
Percentage of Families with Female Head of Household	0.67242	0.45215	0.04264	0.43501	0.16594	0.37070
Percentage of Persons over 60 Years of Age	0.70096	0.49135	0.03920	-0.07769	-0.18970	-0.51238
Index 3: Number of Publicly Assisted Projects in Area	0.71765	0.51502	0.02367	-0.24851	-0.86076	-0.13965
Family Size	0.72273	0.52233	0.00731	0.11131	-2.06581	-0.24860
Index 2: Project Height compared to Height of Surrounding Areas	0.72545	0.52627	0.00394	0.13383	-0.46388	-0.10506
Per Capita Disposable Income	0.72702	0.52855	0.00228	-0.41354	-0.00097	-0.24649
Percentage of Windows Facing Street	0.72929	0.53186	0.00331	0.19273	-0.01217	-0.09078
Visibility of Elevators and Waiting Areas	0.73044	0.53354	0.00168	0.02065	-0.28172	-0.08160
Visibility of Lobby	0.73189	0.53566	0.00212	0.09733	0.24701	0.05740
Rate of F.B.I. Index Crimes in Precinct	0.73248	0.53653	0.00087	0.34029	0.00876	0.04114
(Constant)					12.86247	

HOUSING COMBINED REGRESSIONS (RATES/1000 POP)

(CREATION DATE = 07/26/72) CRIMES AS EXPLAINED BY SOICAL & PHYSICAL VARIABLES.

***** MULTIPLE REGRESSION *****

DEPENDENT VARIABLE: ROBBERY

TABLE III

VARIABLE	MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
Percent of Population Receiving Welfare	0.47426	0.22493	0.22493	0.47426	0.00615	0.00849
Building Height	0.57097	0.32600	0.10108	0.35821	0.48592	0.47075
Number of Units in Project	0.61413	0.37715	0.05115	0.25108	0.00262	0.25551
Index 3: Number of Publicly Assisted Projects in Area	0.63639	0.40499	0.02784	-0.33147	-1.93140	-0.23330
Percentage of Families with Female Head of Household	0.66160	0.43772	0.03273	0.35782	0.11554	0.19217
Visibility of Lobby	0.67195	0.45151	0.01380	0.03423	-0.42713	-0.07390
Index 2: Project Height compared to Height of Surrounding Area	0.67994	0.46231	0.01080	0.15121	-0.86886	-0.14651
Percentage of Persons over 60 Years of Age	0.68214	0.46532	0.00300	-0.05182	-0.12719	-0.25577
Per Capita Disposable Income	0.68498	0.46920	0.00388	-0.38745	-0.00160	-0.30276
Percentage of Windows Facing Street	0.68722	0.47228	0.00307	0.15989	-0.01633	-0.09068
Rate of F.B.I. Index Crimes in Precinct	0.68933	0.47518	0.00290	0.32325	0.01656	0.05793
Visibility of Elevators and Waiting Areas	0.69043	0.47669	0.00151	0.03727	-0.26925	-0.05806
Family Size	0.69120	0.47775	0.00107	0.12696	-1.15052	-0.10308
(Constant)					19.04091	

HOUSING COMBINED REGRESSIONS (RATES/1000 POP)

(CREATION DATE = 07/26/72) CRIMES AS EXPLAINED BY SOCIAL & PHYSICAL VARIABLES.

***** MULTIPLE REGRESSION *****

DEPENDENT VARIABLE: ROBBERIES INDOOR

TABLE IV

VARIABLE	MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
Percent of Population Receiving Welfare	0.46045	0.21202	0.21202	0.46045	0.00428	0.00827
Building Height	0.55828	0.31167	0.09966	0.35477	0.37649	0.51079
Number of Units in Project	0.60606	0.36730	0.05563	0.25958	0.00167	0.22843
Percentage of Families with Female Head of Household	0.64581	0.41707	0.04976	0.41307	0.16378	0.38149
Percentage of Persons over 60 Years of Age	0.67105	0.45031	0.03325	-0.05270	-0.16704	-0.47040
Index 3: Number of Publicly Assisted Projects in Area	0.69332	0.48069	0.03037	-0.25720	-0.98747	-0.16704
Family Size	0.69941	0.48917	0.00848	0.07234	-2.14467	-0.26910
Index 2: Project Height compared to Height of Surrounding Area	0.70251	0.49352	0.00434	0.13507	-0.46024	-0.10860
Visibility of Elevators and Waiting Areas	0.70514	0.49723	0.00371	0.01179	-0.30849	-0.09317
Per Capita Disposable Income	0.70674	0.49948	0.00225	-0.39153	-0.00076	-0.20279
Percentage of Windows Facing Street	0.70851	0.50198	0.00250	0.19502	-0.00936	-0.07276
Visibility of Lobby	0.70890	0.50254	0.00055	0.08684	0.13884	0.03364
(Constant)					12.26192	

HOUSING COMBINED REGRESSIONS (RATES/1000 POP)

(CREATION DATE = 07/26/72) CRIMES AS EXPLAINED BY SOCIAL & PHYSICAL VARIABLES

***** MULTIPLE REGRESSION *****

DEPENDENT VARIABLE: RATE OF ELEVATOR ROBBERY

TABLE V

VARIABLE	MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
Building Height	0.45012	0.20261	0.20261	0.45012	0.24902	0.66551
Percent of Population Receiving Welfare	0.56443	0.31858	0.11597	0.37864	-0.01027	-0.03911
Index 2: Project Height compared to Height of Surrounding Area	0.58487	0.34207	0.02349	0.16146	-0.50355	-0.23423
Number of Units in Project	0.60738	0.36891	0.02684	0.13463	0.00040	0.10857
Visibility of Lobby	0.61831	0.38231	0.01340	0.04029	-0.24577	-0.11729
Percentage of Families with Female Head of Household	0.62701	0.39314	0.01083	0.25879	0.08821	0.40471
Percentage of Persons over 60 Years of Age	0.65324	0.42672	0.03357	-0.15054	-0.07269	-0.40325
Index 3: Number of Publicly Assisted Projects in Area	0.66159	0.43770	0.01099	-0.24419	-0.31594	-0.10528
Visibility of Elevators and Waiting Areas	0.66325	0.43990	0.00220	0.11571	0.10619	0.06317
Family Size	0.66446	0.44150	0.00160	0.17565	-0.56568	-0.13981
Percentage of Windows Facing Street	0.66490	0.44209	0.00058	0.24120	-0.00276	-0.04231
Per Capita Disposable Income	0.66543	0.44280	0.00071	-0.26260	-0.00016	-0.08489
(Constant)					2.68753	

HOUSING COMBINED REGRESSIONS (RATES/1000 POP)

(CREATION DATE = 07/26/72) CRIMES AS EXPLAINED BY SOCIAL & PHYSICAL VARIABLES

***** MULTIPLE REGRESSION *****

DEPENDENT FARIABLE: PERCENT OF ROBBERIES INDOOR

TABLE VI						
VARIABLE	MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
Per Capita Disposable Income	0.38122	0.14533	0.14533	-0.38122	-0.00170	-0.27474
Building Height	0.51267	0.26283	0.11750	0.36156	0.36681	0.30281
Number of Units in Project	0.56974	0.32460	0.06078	0.19730	0.00199	0.16568
Index 3: Number of Publicly Assisted Projects in Area	0.60353	0.36425	0.03964	-0.31500	-2.11220	-0.21741
Percentage of Families with Female Head of Household	0.63371	0.40159	0.03735	0.36775	0.02395	0.03394
Visibility of Lobby	0.64319	0.41369	0.01210	0.27367	2.16662	0.31941
Visibility of Elevators and Waiting Areas	0.66756	0.44563	0.03194	0.03828	-1.51444	-0.27830
Index 2: Project Height compared to Height of Surrounding Area	0.67069	0.44983	0.00420	0.22535	0.98123	0.14099
Percentage of Persons over 60 Years of Age	0.67336	0.45342	0.00359	0.09950	-0.27796	-0.47629
Family Size	0.68865	0.47423	0.02081	-0.07384	-6.45547	-0.49286
Percent of Population Receiving Welfare	0.69226	0.47923	0.00499	0.36221	0.18830	0.22.64
Percentage of Windows Facing Street	0.69376	0.48130	0.00207	0.21747	-0.01177	-0.05570
Rate of F.B.I. Index Crimes in Precinct	0.69420	0.48192	0.00062	0.33577	-0.01165	-0.03472
(Constant)					36.78792	

ADDENDUM B

INTERCOM EFFECTIVENESS STUDY

For the past three years the New York City Housing Authority has been installing buzzer-reply intercom systems in certain of its projects, with the expectation that they would improve security. There are presently twelve operational systems, nine of which have been in operation long enough to make a determination of their effectiveness.

Crime data (total felonies, misdemeanors, and offenses) was compiled for each project, for a three month interval around the installation date. The nine projects experienced a composite decrease in crime rate of 14.1%, with six projects experiencing a decline in crime rate and three an increase.

Specifically:

<u>Number of Units</u>	<u>Project Name</u>	<u>Increase in Crime 3 Mos. After Installation</u>
386	Baisley Park	-40.2%
425	Chelsea	- 7.4%
749	Clinton	- 4.5%
944	Fulton	-29.4%
882	Lafayette	+15.3%
1510	Monroe	+ 6.1%
1007	St. Mary's	+21.8%
536	Seth Low	-50.0%
398	Wilson	-38.7%
		Average -14.1%

The performance of the intercom systems over time was examined using a similar compilation of crime rate data for six, nine and 12 month intervals around the installation date. Utilizing the 12 month data as the long term standard of effectiveness, the nine projects exhibited a composite decrease in crime rate of 8.7%, with six projects showing an average decrease of 24.4% and three an average increase of 22.6%. In contrast the crime statistics for the entire New York City Housing Authority (Jan 1970-Dec. 1971: corresponding to the period when most of the installations were made) showed an increase in crime rate of 25.7%.

The 12 month crime data was juxtaposed against the three month data to determine whether the pattern of effectiveness changed. Significantly, five of the projects, Baisley Park, Chealsea, Clinton, Fulton and Seth Low, had similar percent decreases for both the three and 12 month intervals. Two projects, Lafayette and Monroe, showed crime increases at three months and at 12 months, with the situation deteriorating over time.

Two other projects, St. Mary's and Wilson, exhibited reversal of the crime rate--St. Mary's, which had a crime increase of 21.8% at three months, showed a 3.5% crime decrease at 12 months and Wilson, which showed a crime decrease of 38.7% at three months had a startling crime increase of 40.7% at 12 months.

A compilation of exterior crime for each project was also made to determine whether or not the intercoms would displace crime to the project grounds. Examination of the crime charts revealed that this did not occur.

The projects were divided into two groups by successful crime reduction (12 month interval) and an effort was made to determine if there were any significant tenant, project physical design, or intercom design characteristics which could account for the success dichotomy. (See Charts for data compilation) Examination of the Quality of Design and Physical Characteristics charts revealed little differentiation between successful and unsuccessful crime reduction projects. Only position of the main entrance appears significant. Monroe, Wilson and most of the buildings at Lafayette (all showing crime increases) have lobbies which are difficult to view from the street.

Examination of the Tenant Characteristics chart revealed:

- (1) Percent welfare appears to be uniformly higher in unsuccessful projects. (Small number of samples, however, detracts from the significance of this fact.)
- (2) Percent welfare families is lower in successful projects. However, the high σ value implies that this may not be proven.
- (3) There appears to be no significant relationship between the percent of broken families and successful crime reduction.
- (4) Successful projects exhibit a higher percentage of elderly. However, the difference between successful projects and unsuccessful projects is small and may only be significant as a reflection on the apartment

size spectrum in the projects. (As apt. size relates to # of children.)

- (5) Successful projects have significantly less teenagers than unsuccessful projects.

As a final effort, an examination of the condition of the intercom system at each project was accomplished to see if there was a correlation between condition and successful crime reduction. The data is presented in the accompanying chart along with data on the existence of tenant patrols at the projects. Generally, the correlation between condition of system and effectiveness is not strong. However, an interesting situation exists at Fulton, a successful project, where the condition of the seven story buildings differs markedly from that of the 25 story buildings. Lastly, little correlation exists between the existence of a tenant patrol and success of the system. This finding however should not be given too much credence as only two of the projects have tenant patrols.

Two interesting phenomena were observed while undertaking this study: one involved the complete reversal over time of the effectiveness of the Wilson system, and the other involved the difference in condition between the seven and the 25 story buildings at Fulton. It was hypothesized that both of these peculiarities could be attributed to the number of children, especially teenagers, in the effected buildings. Subsequent examination of these projects bore this out.

Wilson is a three building, state project with a relatively high average tenant income (\$7,758). All buildings contain large apartments. Buildings #1 and #3 have all 5 room apartments, while building #2 has 38, 6 1/2 - room apartments, 18, 7 1/2 - room apartments and the rest 4 room apartments. There are few elderly in the project and large numbers of children in all buildings, with building #2 having the most. A management interview revealed that building #2 is the most vandalized building, and loiterers are seen there frequently. This possibly accounts for our finding the intercom system in building #2 to be in much worse condition than the systems in the other buildings.

Fulton is an 11 building, federal project with a median tenant income of approximately \$5,900. There are eight 7-story buildings and three 25-story high-rises. The socio-physical data presented below again bears out the negative influence of large numbers of children.

FULTON

Welfare- 137 families
90% or more are elderly

Teenagers- 500
1,500 children in project

Female Head of Household- scattered, widows in high rise,
large families in low rise

High rise- 2 bedroom apartments- 96 per building
1 bedroom - 96
efficiency units - 24
ground floor- 3 7-room apartments
All elderly are in high rise

Low rise- all the large families are here
children hang out here, (including children from
high rise)
breeze ways under low rise conducive to loitering

Buildings 1 and 11- at extreme ends of the project
popular hang outs for teenagers
police do not get there as often as
other buildings
most vandalism occurs here

PHYSICAL CHARACTERISTICS TO CONSIDER WITH INTERCOMS:

- (1) Security door should open out
- (2) Escutcheon plate should be hardened metal
@ least 1/4" thick and should be fastened
in such a manner that bolt heads cannot be
vandalized
- (3) Door should have heavy duty door closer
- (4) Security door should be placed in a lobby.
Main entrance door should not be used as a
security door.
- (5) Intercom should be located in a glazed lobby,
not on exterior facade of building.
- (6) Intercom is less vulnerable to vandalism if
microphone and speaker are built into wall and
not located in a telephone receiver. (Telephone
touch tone system of buttons is good for dialing-
allows some anonymity of residents.)
- (7) Residents should be able to turn Intercom off in
their apartments.

TENANT CHARACTERISTICS TO CONSIDER:

- (1) Smaller numbers of teenage children will increase
chances of success of system.
- (2) Tenant patrol will supplement system and will
reduce system's vandalism.

CRIME DATA - AVERAGE # F.M.O./du

PROJECT	INTERCOM INSTALLED	STATISTICAL INTERVAL				AVG. INCREASE CRIME RATE (12 MO. INT.)
		3 MONTH	6 MONTH	9 MONTH	12 MONTH	
BAISLEY PARK	BEFORE	.0433	.0422	.0404	.0386	-39.9%*
	AFTER	.0259	.0189	.0243		
CHELSEA	BEFORE	.0094	.0136	.0134	.0111	-9.0%
	AFTER	.0087	.0105	.0098	.0101	
CLINTON	BEFORE	.0200	.0210	.0197	.0191	-13.1%
	AFTER	.0191	.0173	.0162	.0166	
FULTON	BEFORE	.0109	.0070	.0074	.0093	-34.4%
	AFTER	.0077	.0056	.0064	.0061	
LAFAYETTE	BEFORE	.0170	.0189	.0182	.0190	+10.5%
	AFTER	.0196	.0209	.0226	.0210	
MONROE	BEFORE	.0181	.0199	.0206	.0193	+16.6%
	AFTER	.0196	.0234	.0225	.0225	
ST. MARY'S	BEFORE	.0165	.0158	.0131	.0142	-3.5%
	AFTER	.0201	.0165	.0149	.0137	
SETH LOW	BEFORE	.0186	.0192	.0207	.0201	-46.3%
	AFTER	.0093	.0093	.0110	.0108	
WILSON	BEFORE	.0150	.0143	.0123	.0123	+40.7%
	AFTER	.0092	.0108	.0130	.0173	

* BASED ON 9 MO.
INTERVAL

PHYSICAL CHARACTERISTICS (DEFENSIBLE SPACE)

PROJECT [SUCCESSFUL CRIME REDUCTION]	MAIN ENTRANCE	SECONDARY EXIT		INTERCOM POSITION		#du ENTRANCE	BUILDING HEIGHT (STORYS)
	W/IN 50 FT. OF & FACING STREET	OPPOSITE SIDE OF BLDG. FROM MAIN ENTRANCE	OVER 50 FT. FROM INTERCOM	PUBLIC VIEW	HIDDEN		
BAISLEY PARK BLDG. 1-5	1	2		2		77	8
CHELSEA BLDG. 1,2	*			2		BLDG 1 - 202 BLDG 2 - 223	21
CLINTON BLDG. 1-5		1		2		140	18
BLDG. 6		2		1		52	9
FULTON BLDG. 1,3,4,5,7,8,10,11		**		2		18	7
BLDG. 2,6,9					1	218	25
ST. MARY'S BLDG. 1-6	***			2		168	21
SETH LOW BLDG 1,3	1			1		BLDG 1 - 131 BLDG 3 - 142	BLDG 1 - 17 BLDG. 3 - 18
BLDG. 2	1			2		132	17
BLDG. 4		2				131	17

* TWO ENTRANCES PER BLDG.
ONE FACES STREET, OTHER
FACES COMMON COURT.
SECONDARY EXIT ADJACENT MAIN

** TWO ENTRANCES PER BLDG.
NO SECONDARY EXITS

*** MOST ENTRANCES GREATER
THAN 50 FT. FROM STREET
SECONDARY EXITS ADJACENT
TO MAIN.

1 MAIN ENTRANCES FACE
PROJECT GROUNDS

PHYSICAL CHARACTERISTICS, CONTD.

PROTECT [UNSUCCESSFUL CRIME REDUCTION]	MAIN ENTRANCE	SECONDARY EXIT		INTERCOM POSITION		# du ENTRANCE	BUILDING HEIGHT (STORYS)
	W/IN 50ft. OF & FACING STREET	OPPOSITE SIDE OF BLDG. FROM MAIN ENTRANCE	OVER 50ft. FROM INTERCOM	PUBLIC VIEW	HIDDEN		
LAFAYETTE BLDG. 1				○		107	15
BLDG. 2,4				○		154	20
BLDG. 3,5-7				○		BLDG. 3 - 107 BLDG. 5,6 - 102 BLDG. 7 - 154	BLDG 3 - 15 BLDG 5,6 - 13 BLDG 7 - 20
MONROE BLDG 1-6						BLDG. 1 - 112 BLDG. 2-6 - 109	14
BLDG 7-12						37	8
WILSON BLDG 1,3		*			○	152	20
BLDG. 2						94	20

* SECONDARY STAIRS EXIT
INTO LOBBY.

TENANT CHARACTERISTICS*

PROTECTS W/ SUCCESSFUL CRIME REDUCTION	% WELFARE FAMS.		% BROKEN FAMS.		% ELDERLY		% TEENAGERS	# du/ENT.
BAISLEY PARK (QUEENS)		24.9		25.9		8.2	MEDIUM	77
CHELSEA (W. MAN.)		11.8		17.0		13.0	HIGH	105
CLINTON (E. MAN.)		32.8		23.0		8.2	Low	140
FULTON (W. MAN.)		12.5		15.2		14.4	MEDIUM	**
ST. MARY'S (BRONX)		2.9		19.3		6.6	MED.-Low	**
SETH LOW (BROOKLYN)		38.4		20.7		6.2	Low	132
MEAN		20.6		20.2		9.4		
σ		13.7		3.9		3.4		

* EACH BLOCK REPRESENTS
50% OF THE TOTAL
RELEVANT POPULATION

** SEVERAL BUILDING TYPES.
DETAILED BREAKDOWN
BY BUILDING IN DEFENSIBLE
SPACE CHART.

TENANT CHARACTERISTICS, CONT'D.

PROTECTS w/ UNSUCCESSFUL CRIME REDUCTION	% WELFARE FAMS.		% BROKEN FAMS.		% ELDERLY	% TEENAGERS	# du/ENT.
LAFAYETTE (BROOKLYN)		25.4		21.8	5.4	Low	**
MONROE (BRONX)		17.4		20.5	9.8	High	**
WILSON (E. MAN.)		31.3		25.8	1.6	High	**
MEAN		24.7		22.7	5.6		
σ		4.4		1.8	2.6		

PROJECT	CONDITION OF INTERCOM SYSTEM*	CRIME** REDUCTION	EFFECTIVE TENANT PATROL***
BAISLEY PARK	G	⊕	N
CHELSEA	G	⊕	N
CLINTON	G	⊕	N
FULTON	7-STORY - B 25 STORY - G	⊕	N
LAFAYETTE	G	⊖	N
MONROE	B	⊖	N
ST. MARY'S	G	⊕	Y
SETH LOW	G	⊕	Y
WILSON	G	⊖	N

* GOOD OR BAD JUDGEMENT
FROM DATA SHEETS

** ⊕ - CRIME REDUCTION
⊖ - CRIME INCREASE

*** Y - YES, TENANT PATROL
IN MAJORITY OF
BUILDINGS

N - NO TENANT PATROL
OR SMALL TENANT
PATROL

QUALITY OF INSTALLATION DESIGN

PROJECT	DOOR		ESCAP. RATE		INTERC. POSIT.		WORKMANSHIP	
	OPEN IN	OPEN OUT	YES	NO	PUBLIC VIEW	HIDDEN	GOOD	POOR
BAISLEY PARK	*	
CHELSEA		
CLINTON		
FULTON		
LEHMAN		
MONROE	
MOORE		
MORRISANIA		
WILSON		
ST. MARY'S PARK	
LAFAYETTE		

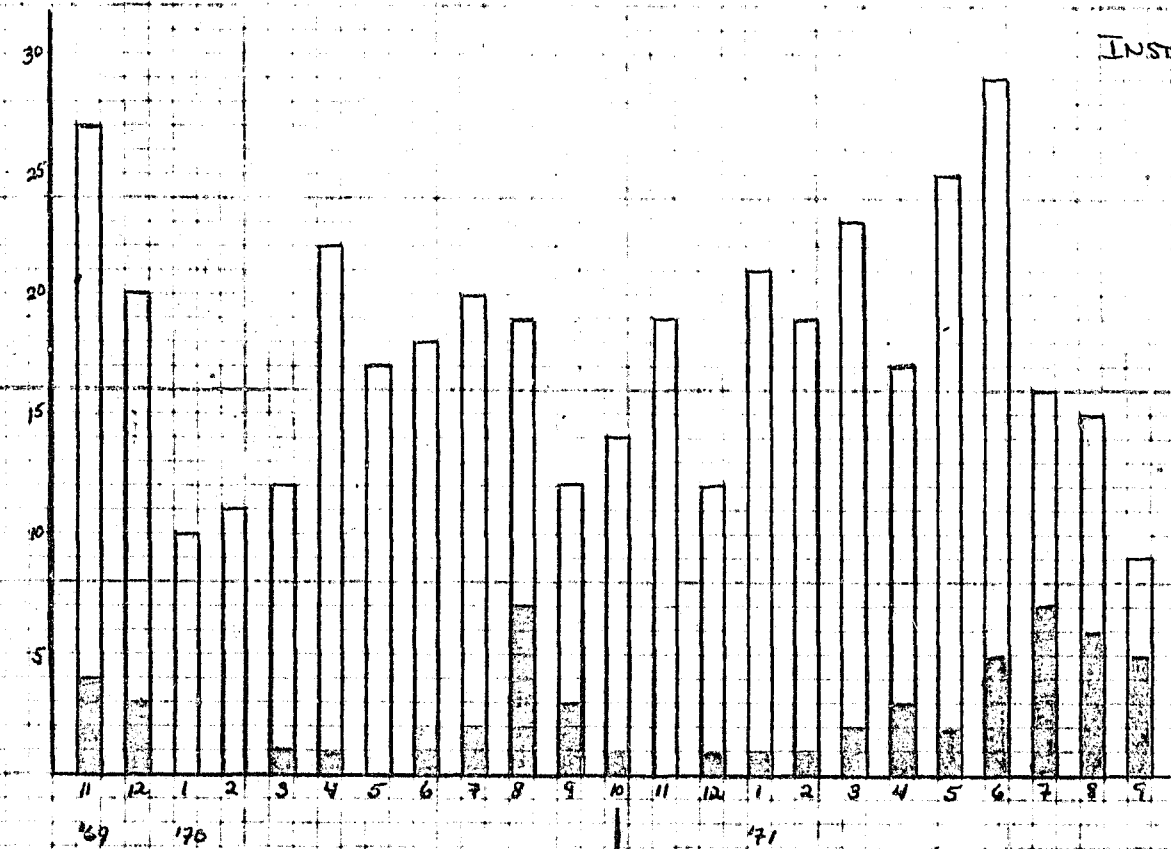
* TWO SECURITY DOORS
PER LOBBY - ONE OPENS
IN, OTHER OPENS OUT.

TOTAL FELONIES, MISDEMEANORS, OFFENSES

Lafayette

INSTALLATION DATE:

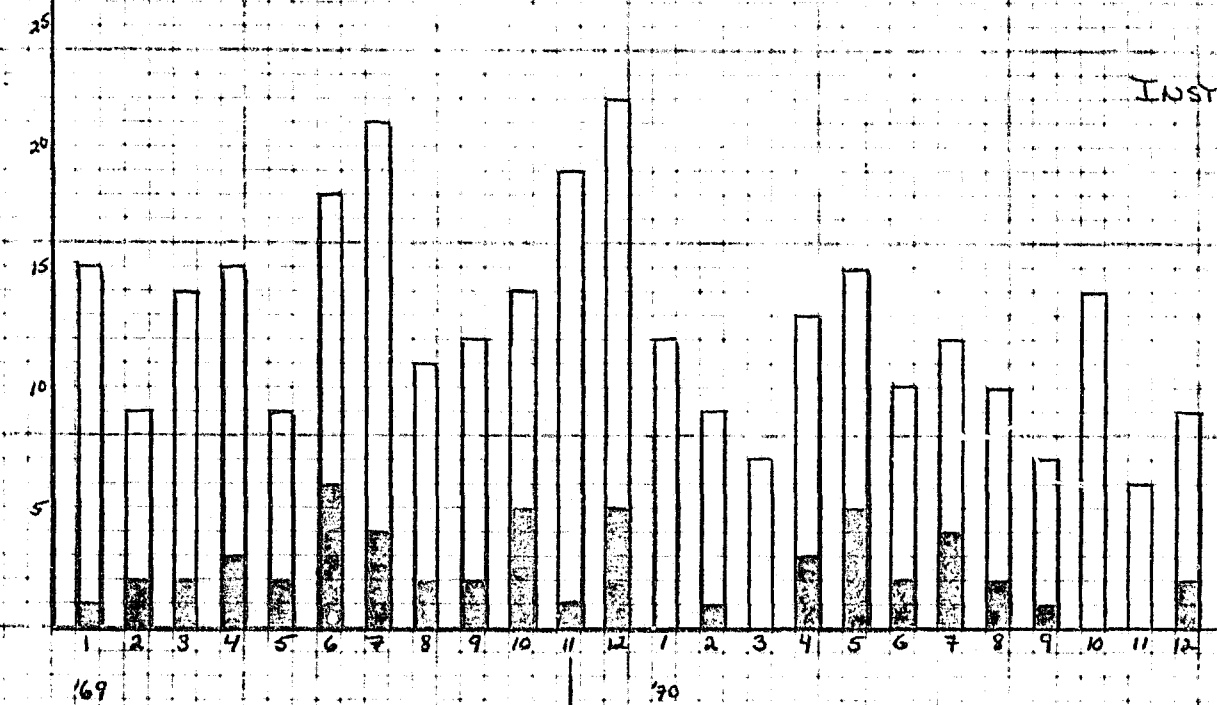
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Clinton

INSTALLATION DATE:

11-70



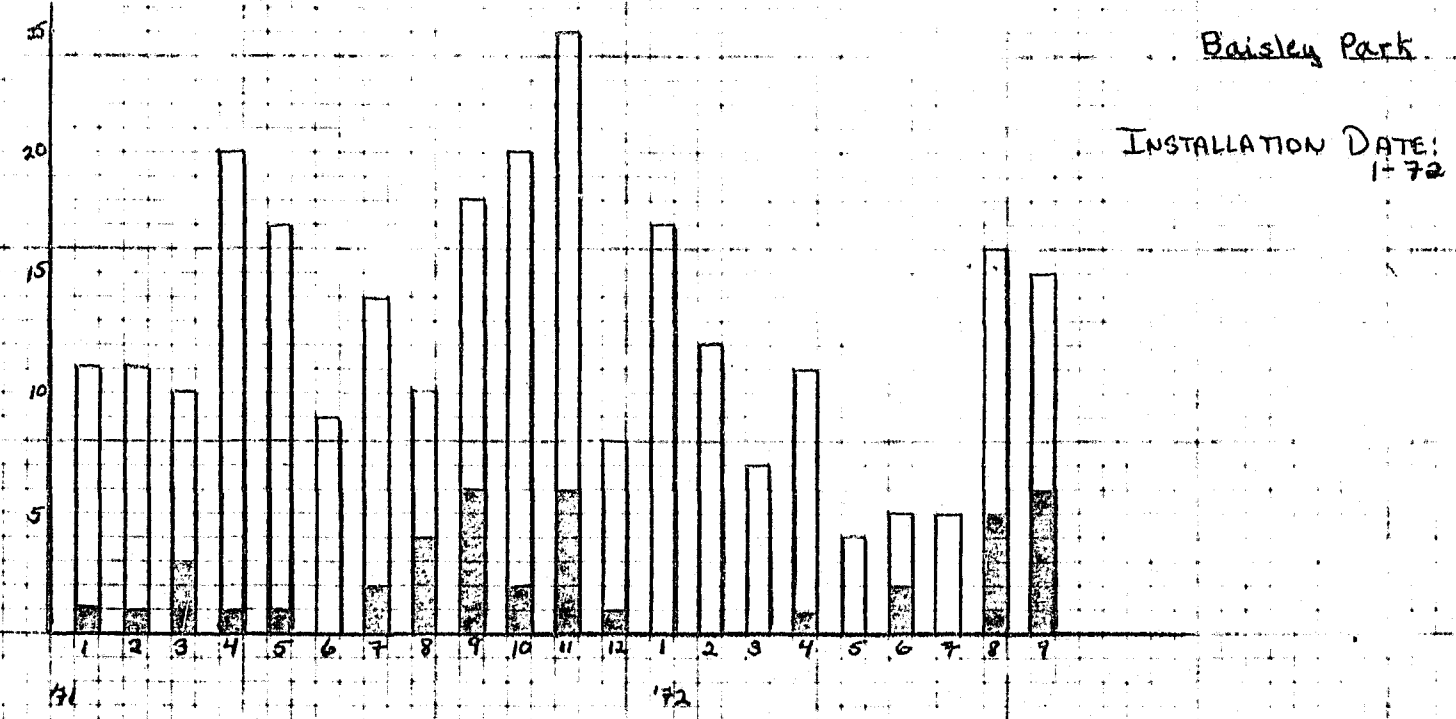
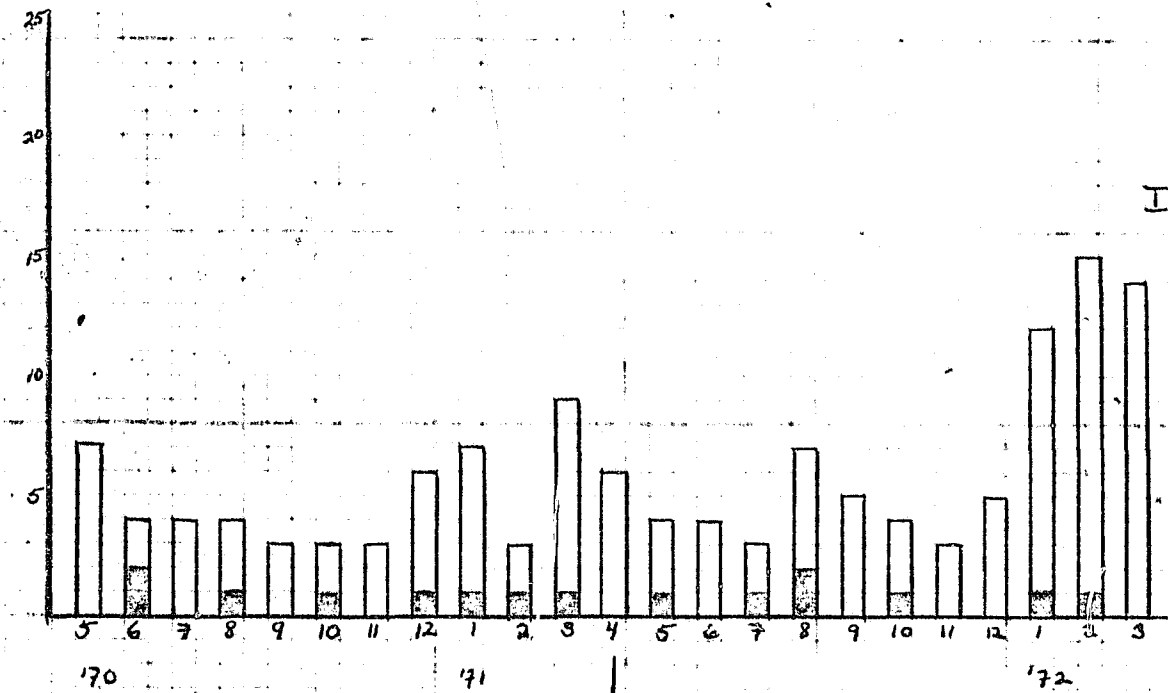
TOTAL F.M.O.

EXTERIOR E.M.O.

TOTAL FELONIES, MISDEMEANORS, OFFENSES

Wilson

INSTALLATION DATE:
4-71



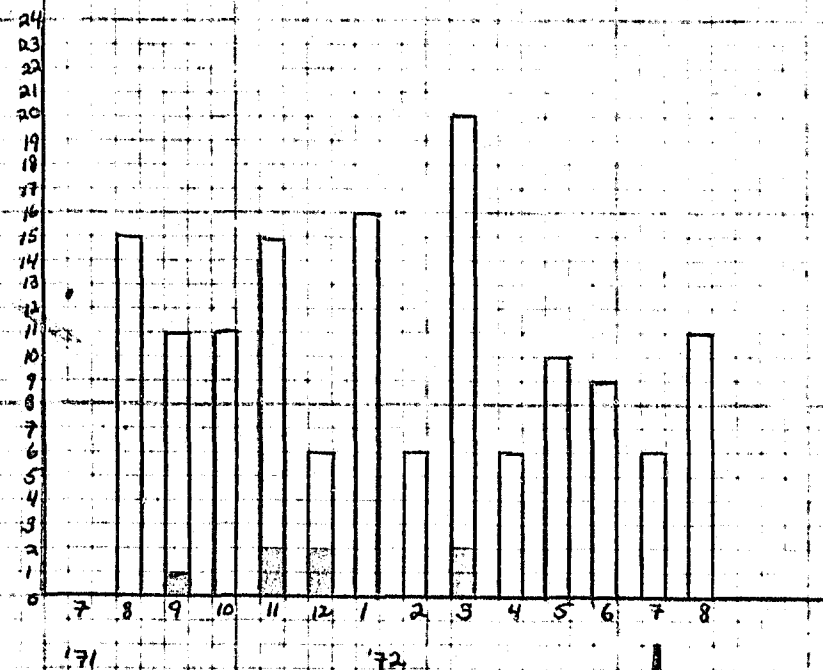
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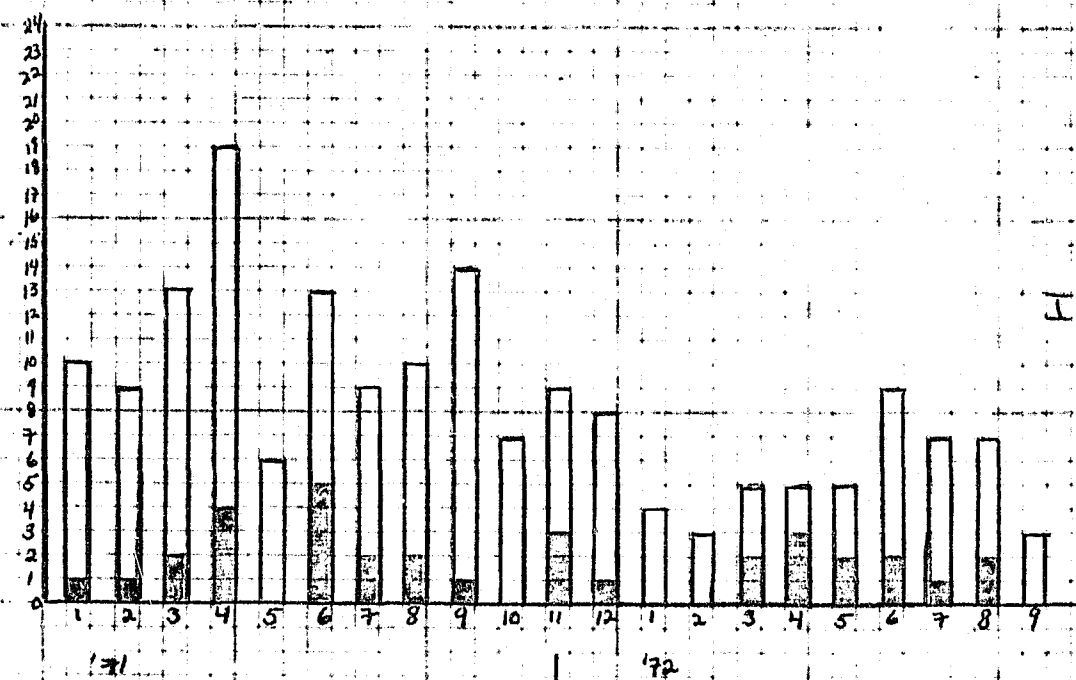
TOTAL F.M.O.
EXTERIOR F.M.O.

TOTAL FELONIES, MISDEMEANORS, OFFENSES

Lehman Village



INSTALLATION DATE:
7-72



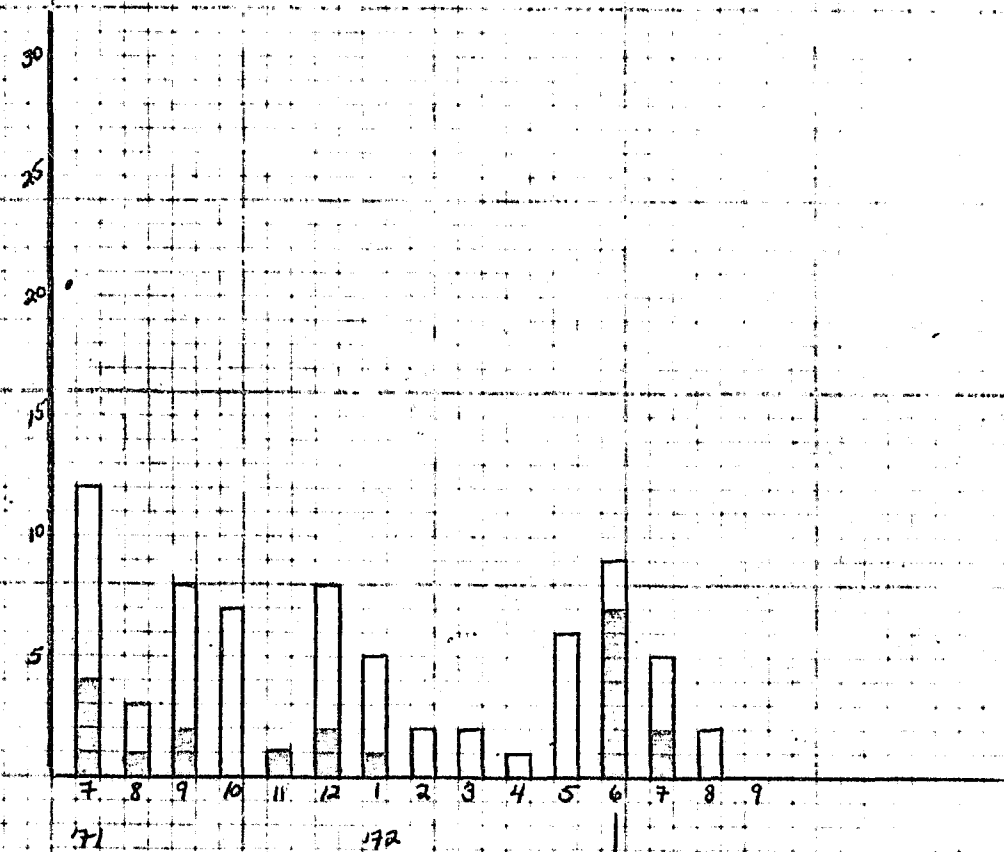
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11-71

TOTAL F.M.O.

EXTERIOR F.M.O.

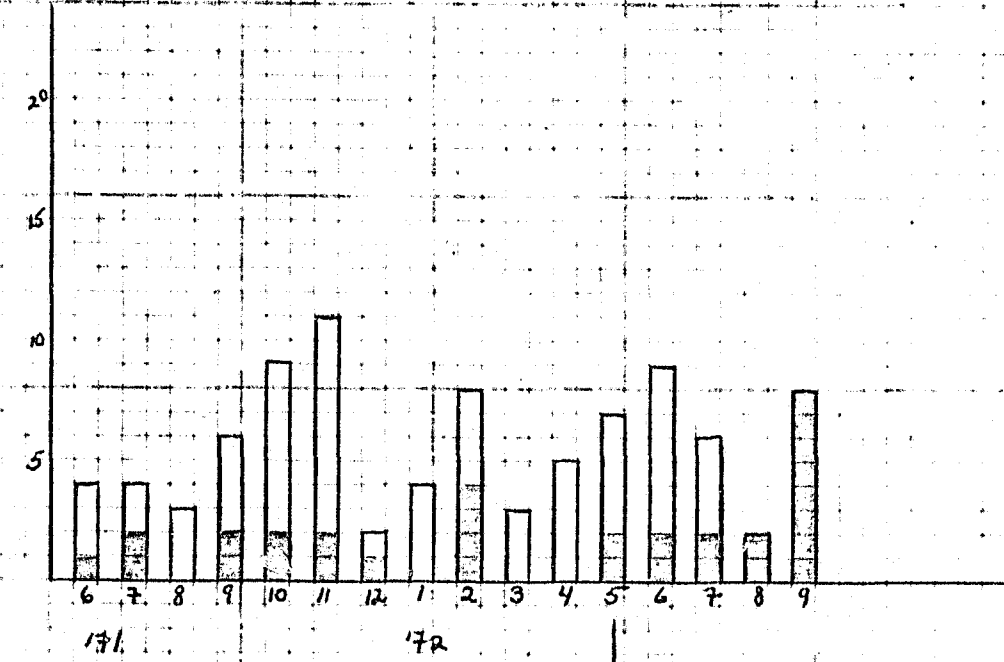
TOTAL FELONIES, MISDEMEANORS, OFFENSES

Moore



INSTALLATION DATE:
6-72

Morrisania



INSTALLATION DATE:
5-72

TOTAL F.M.O.

EXTERIOR F.M.O.

CONTINUED

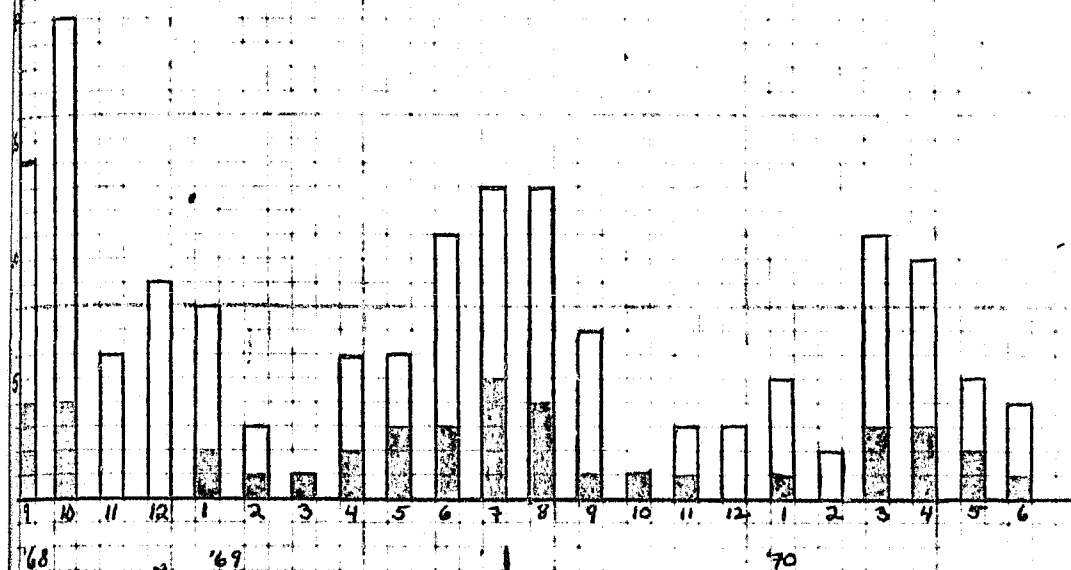
1 OF 2

TOTAL FELONIES, MISDEMEANORS, OFFENSES

Fulton

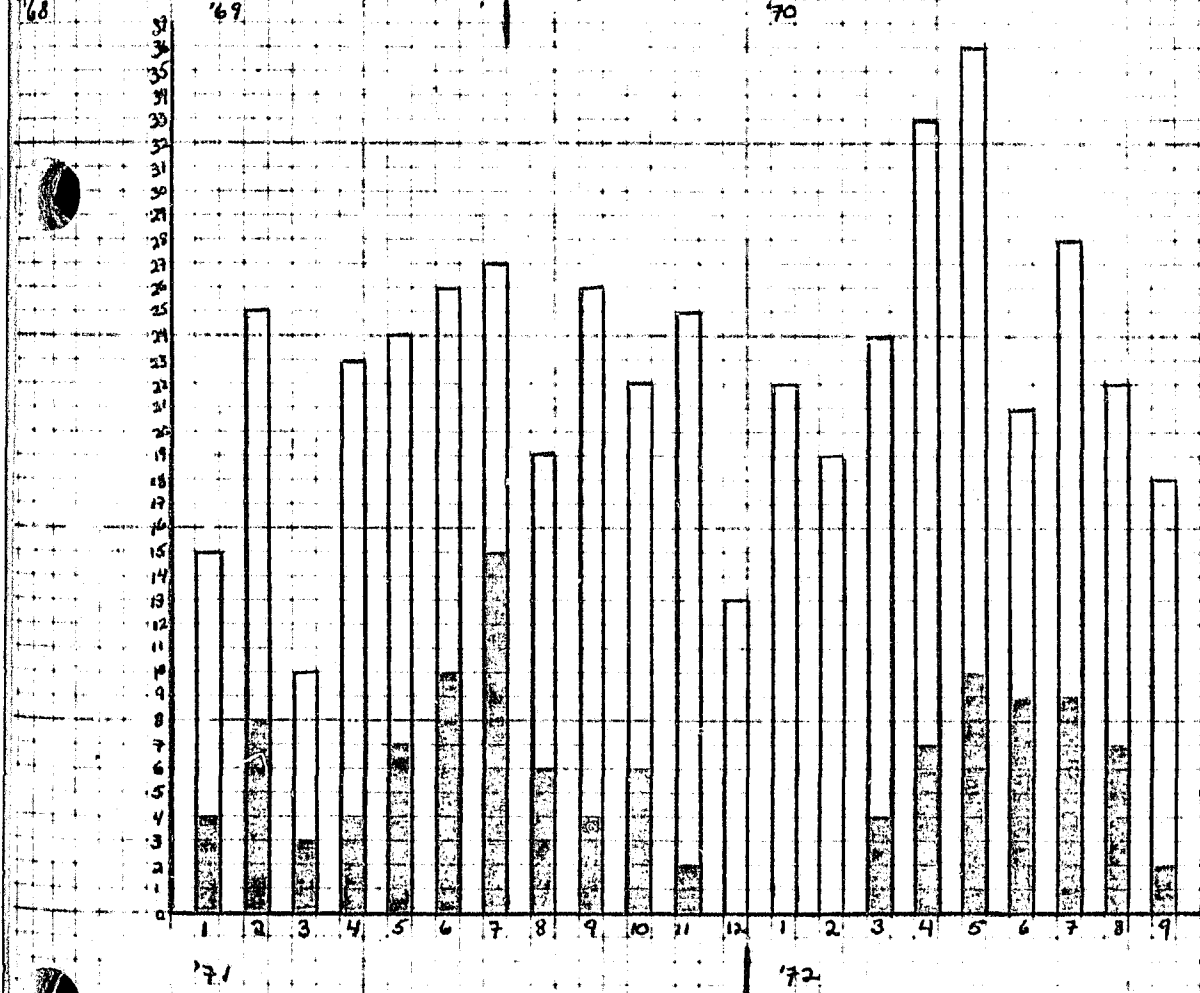
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7-69



Monroe

INSTALLATION DATE:
12-71



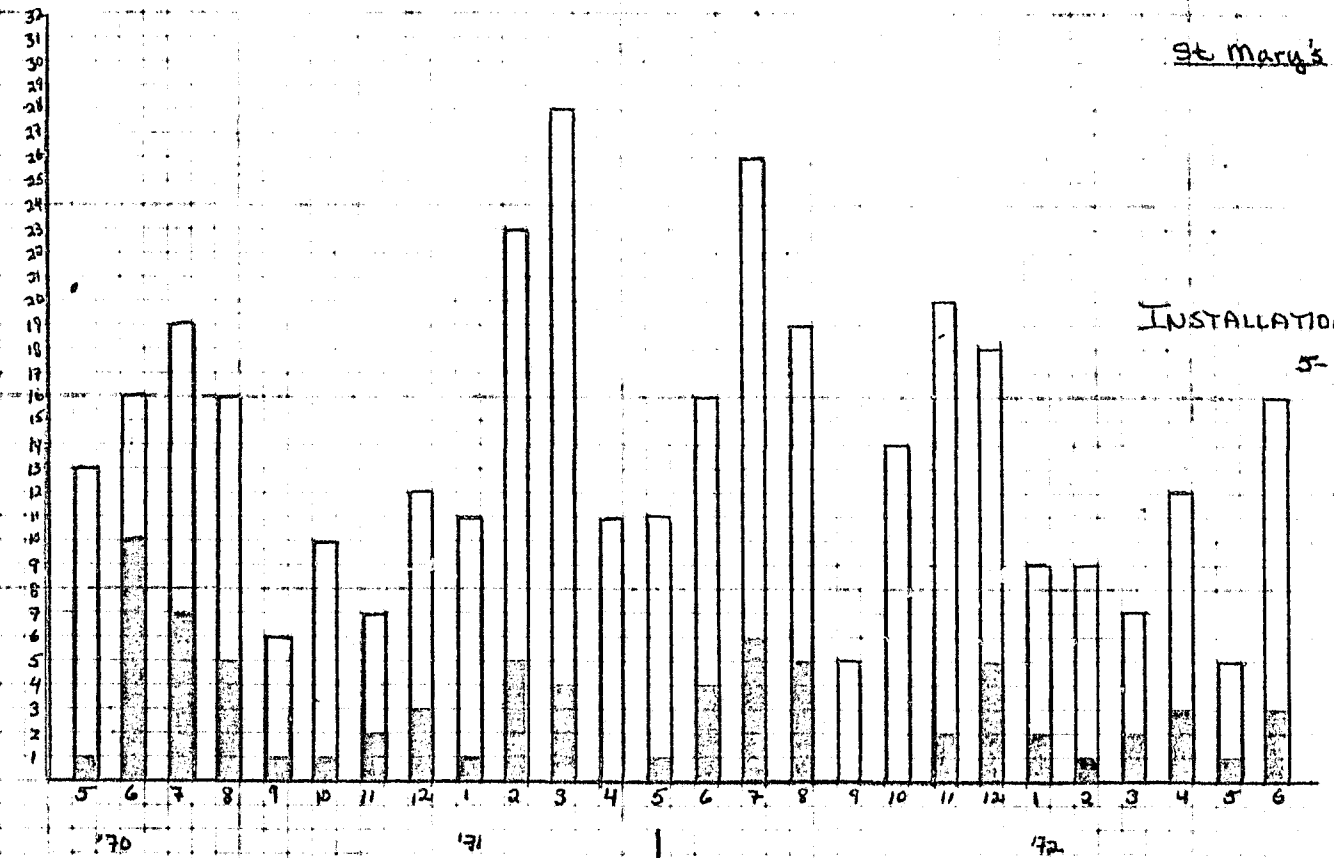
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EXTERIOR F.M.O.

TOTAL FELONIES, MISDEMEANORS, OFFENSES

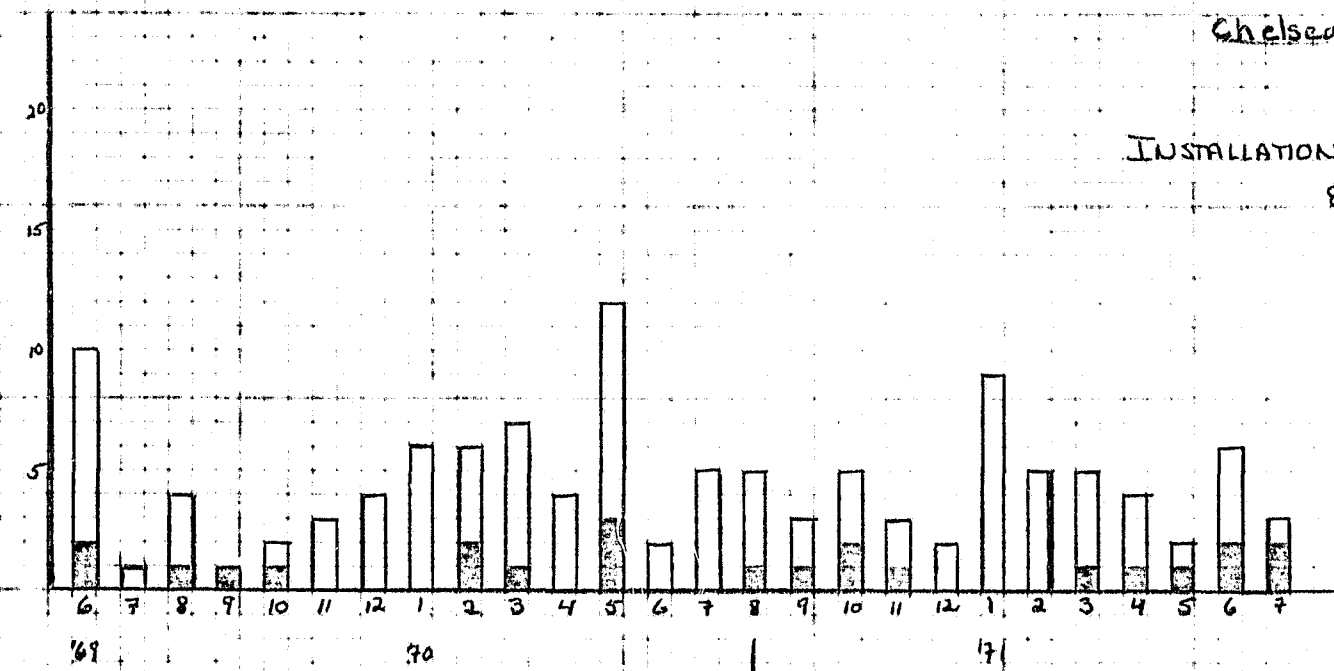
St Mary's

INSTALLATION DATE
5-71



Chelsea

INSTALLATION DATE:
8-70



TOTAL F.M.O.
EXTERIOR F.M.O.

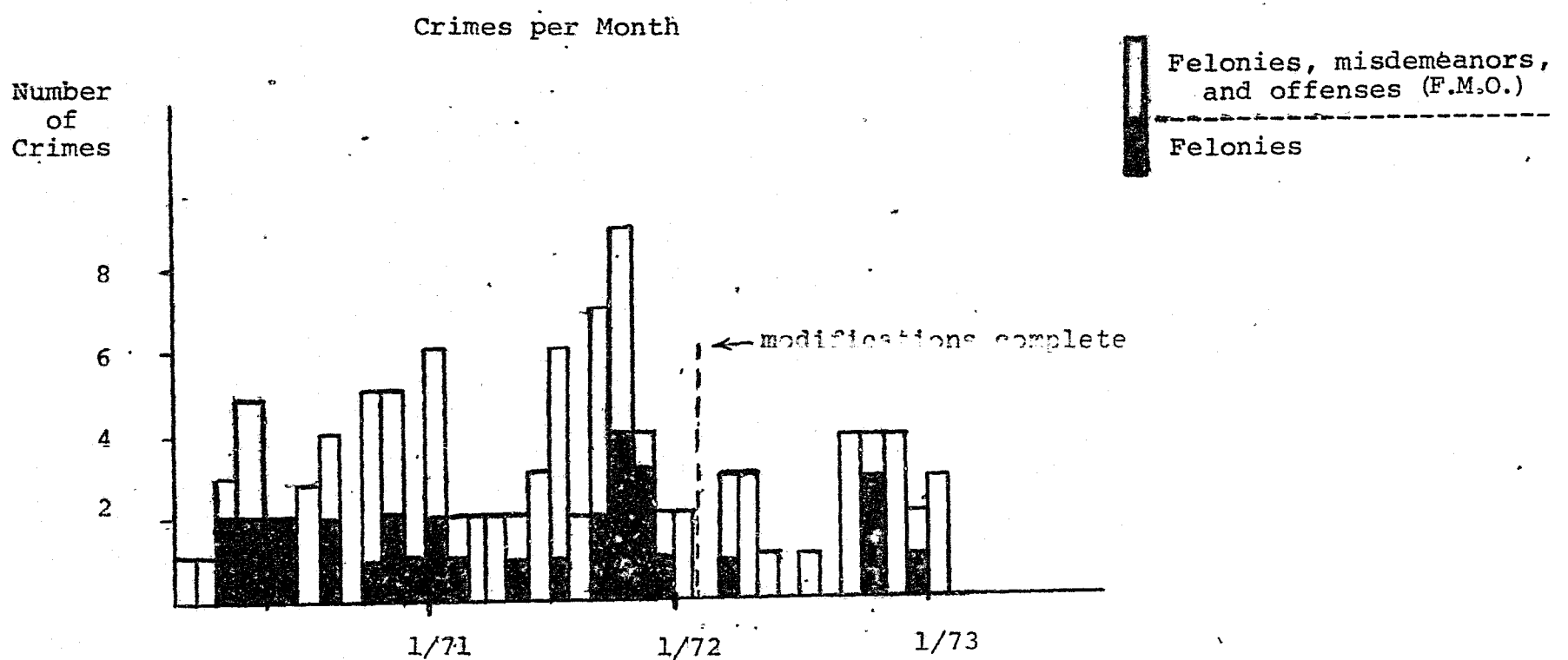
ADDENDUM C1

CLASON POINT CRIME DATA

Clason Point Crime

We have been recording all crime at Clason Point since 18 months prior to the modifications. The results, while too short term to be statistically significant, did register an apparent decrease in crime at the project. We intend to continue monitoring crime and to conduct whatever analyses possible in terms of location and type of crime.

CLASON POINT GARDENS - CRIME BEFORE AND AFTER MODIFICATIONS



Source: New York City Housing Authority Police

	1 yr. before mods.	1 yr. after mods.
F.M.O.	3.58	2.08
Felonies	1.08	0.41

ADDENDUM C2

CLASON POINT TENANT INTERVIEW RESULTS

ADDENDUM C2

1. Clason Point Interview Results

More than 170 interviews were conducted with the tenants of Clason Point Gardens. The tenants to be interviewed were selected on a random basis, with checks made to insure reasonable representation in terms of race, age and length of residency. Interviews were conducted both before and after modifications to the project (for detailed report on methodology see Progress Reports of June 24 - Sept. 30, 1971, Oct. 1, 1970 - Jan. 31, 1971).

40 questions were asked in each interview. Groups of four to six questions, each different measures of essentially the same phenomena, were together considered as indices. There are four indices considered particularly important in recording changes in tenant attitude due to physical modifications.

CLASON POINT INTERVIEW RESULTS

INDICES	RANGE high to low	PRE-MODERNIZATION			POST-MODERNIZATION			SIGNIFICANCE
		N	MEAN	S.D.	N	MEAN	S.D.	
EVALUATION	5-25	84	15.09	4.51	100	11.96	4.28	.01 level
NEIGHBORING	5-10	84	6.43	1.24	99	6.44	1.47	No
FEAR AT NIGHT	25-5	84	16.37	4.75	92	14.91	5.05	.05 level
SURVEILLANCE	3-6	84	4.12	.77	102	3.93	.87	.05 level

ADDENDUM D1

DEFENSIBLE SPACE, CRIME PREVENTION
THROUGH URBAN DESIGN

Under Separate Cover

ADDENDUM D2

REACTIONS TO "DEFENSIBLE SPACE"

FORUM

One of T. S. Eliot's favorite songs was "All Aboard St. Louis." That is only natural, considering he was born there. Trouble is, Eliot (like so many since) actually got aboard, and was content to enjoy the song (and the city) from afar.

In recent years, St. Louis has been suffering an increasing self-exile rate. But the temperament of this trek has little to do with poetry. It has to do with safety and stability, with protection and potatoes, and with the feeling that downtown just isn't the place to find them.

The opposite may turn out to be true. And there are rumblings of redemption to prove it.

The most resounding rumble came last spring when St. Louis blew the whistle on its public housing and blew up three of the 33 apartment blocks at Pruitt-Igoe, that two-generations-old detention facility in the north section of town.

Another rumble came last summer when HUD refused to fund further demolition, holding up redevelopment plans for the project, until the city approves a new convention center in the area. There are still about 600 families incarcerated in ten of the buildings, and there are heated questions about why HUD decided on this last-ditch effort to do nothing for them. Right now, the convention center seems assured. The 600 families languish.

The public debate about housing, now raging in St. Louis, has reached national proportions. The reason is *Defensible Space* by Oscar Newman, Director of New York University's Institute of Planning and Housing. Based on a three-year study which was commissioned by the National Institute of Law Enforcement and Criminal Justice, *Defensible Space* is not just the most important housing book in recent years. It is the most important human book as well. Sadly, on both counts, it is 20 years late.

Mr. Newman's study is a statistic-studded indictment of highrise public housing. The kind which lords over tenants in terms of physical scale, isolates them in terms of social scale, and consigns them to subsistence in terms of basic services. It reports that the highrise crime rate is seven times that in lowrise housing. And it documents the less blatant behavioral distortions brought on by the expedient, stock solutions of our housing agencies. Perhaps the most important aspect of *Defensible Space* is not the research it contains, but the research it calls for. While the so-called "soft" sciences have been given some very hard support here, the study clearly points to the need for sustained inquiry about how the design of our physical surroundings enrich or rob our citizens. That is an inquiry which architects, like Oscar Newman, must push for and participate in if architecture is to be, more than symbols of distinction, a source of sustenance for the daily lives of our people.

Pruitt-Igoe was, in many ways, the kind of "Wasteland" we needed. It has all of the pathologies, and none of the poetry, which T. S. Eliot imagined. There is no more room for deception. Now, almost 20 years after the start of Pruitt-Igoe, St. Louis has an opportunity to set a salutary standard in housing, just as it is setting a standard in preservation with the rescue of the Old Post Office for hotel and commercial purposes. Redeeming Pruitt-Igoe is no longer just a matter of conscience; it is a matter of conscience supported with statistics. 20th century life is a compromise between both, except that this time, human values, not dollar values, have taken priority. That, ultimately, is both the biggest savings—and the biggest dividend.—WILLIAM MARLIN

Editorial

Highrises and High Rising Crime

"Van Dyke" and "Brownsville" are the names of two New York City public housing developments across the street from one another in Brooklyn. They are almost identical in size, each houses approximately 6,000 people. They are designed to the same density: 288 persons per acre. Their tenants share the same social characteristics. Like most public housing, these projects are housing of last resort for families that are black, poor, often broken, mostly on welfare and endowed with a large number of children.

In appearance, however, these two projects are entirely different. Van Dyke is a cluster of 14-story high-rise slabs, with a few three-story buildings, housing only 13 per cent of the tenants, mixed in. In the manner of the "Radiant City" proposal of 1935, which the Swiss-born, French architect Le Corbusier made fashionable all over the world, the high-rise slabs are widely separated by open space, used for parking cars, some greenery and an expansive, mangy and rather useless lawn. The Brownsville project achieves the same population density by housing its residents in more closely spaced three- to six-story apartment houses of some diversity.

The highrising Van Dyke project was found to have 66 per cent more crime than the low-rise Brownsville houses. Over two and one-half times more robberies and 60 per cent more felonies, misdemeanors and other offenses occur in the taller buildings. What is more, Van Dyke, though more recently built, requires a total of 72 per cent more maintenance work than its older neighbor. Brownsville tenants take a greater interest in keeping the place clean and in good repair.

This dramatic difference in the incidence of crime and tenant attitudes is not accidental. Architect Oscar Newman, the director of the Institute of Planning and Housing at New York University, who includes this tale of two projects in his just published study on design and crime prevention ("Defensible Space," Macmillan, \$8.95), has also meticulously studied many other housing developments over a number of years. The crime rate, he has found, increases almost proportionally with building height. The total number of crimes of all kinds, according to police statistics and other data, is three times higher in towering elevator apartment buildings, particularly in large projects, than in neighborhoods of detached homes, townhouses and walk-up apartment houses.

The reason is that the high-rise projects are as anonymous as they look. Their residents cannot tell neighbors from strangers. They often do not even know the people with whom they have shared the same corridor for years. The lobby, stairs, elevators and hallways, says Newman, "are no-man's land, open and accessible to everyone. But unlike the

well-peopled and continually surveyed public streets, these interior areas are sparsely used and impossible to survey; they become a nether world of fear and crime." A criminal will rarely enter an area where he is easily recognized. In a high-rise housing project, however, he can trap his victim in the elevator and hide and escape in the profusion of unwatched and unwatchable fire stairs and secondary exits required by fire codes.

In Washington, luckily, we still have a height limitation and no towering public housing projects such as New York, Chicago, St. Louis and other big cities. Police say the crime problem is greater in Washington's new nine-story office buildings than in our apartment houses, most likely because our luxury apartments are relatively well-protected. The problem, at any rate, is not so much local, as one of national urban policy.

More guards and security devices of the kind that are turning middle-income high-rise apartments into fortresses, are expensive—too expensive for our over-extended housing authorities. In New York, what with fringe benefits and time off, one additional security guard, Newman discovered, costs as much as the services of 10 policemen. Nor do guards, human or electronic, offer much of a solution. "When people begin to protect themselves as individuals and not as a community," writes Newman, "the battle against crime is effectively lost . . . Means must be found for bringing neighbors together, if only for the limited purpose of ensuring survival of their collective milieu."

Architecture and urban design, by assuring the proper balance between privacy and community, are important factors in bringing neighbors together. Design can create what Newman calls "defensible space"—space, as he defines it, that is "a living residential environment which can be employed by inhabitants to enhance their lives while providing security for their families, neighbors and friends." Newman is not the first to have recognized this. Old neighborhoods with their "eyes on the street," as Jane Jacobs has pointed out in her "Death and Life of Great American Cities," are "defensible spaces." Under the 1968 Federal Housing Act, the government has directed that in subsidized housing, families with children should no longer be located in high-rise buildings, unless no other alternatives are available.

Because of land cost, driven up by speculation, zoning to increase desperately needed housing on limited inner city land and other pressures, the housers and planners are reluctant, however, to find other options. The myth still abounds that high-rises are the most economical solution. If you enter the high cost of crime and alienation into the calculation, however, high-rises are expensive indeed. Fearfully expensive.

How Building Design Can Help Combat Crime *by Anthony Downs*

The insecurity generated by rampant inner-city crime is felt throughout nearly every metropolitan area in the U.S. Fear is probably the single biggest cause of middle-class flight from central cities, the hostility of white parents toward busing for school integration, the desertion of downtown business districts after dark, and the unwillingness of middle-class people to accept those with low or moderate incomes as neighbors. Clearly, counteracting these impacts of high inner-city crime rates should be one of society's highest domestic priorities.

Yet there is very little prospect that either of the two approaches most often talked about will be effectively pursued in the near future—if ever. One approach, of course, is to reduce criminality by greatly reducing poverty and urban decay. But that would require truly major institutional changes in society, including passage of costly income-maintenance and job-creation programs that Congress has repeatedly rejected. And no one is sure how much reduction of crime would reduce crime anyway.

The other approach is to improve the effectiveness of the police and the criminal-justice system in deterring crime, and in dealing with those who commit crimes. But here, too, large-scale success would require major institutional changes that would be expensive and must be considered very unlikely.

Bypassing root causes

It is refreshing, therefore, to come upon the limited but promising approach suggested by Oscar Newman in his *Defensible Space* (Macmillan). Professor Newman, director of the Institute of Planning and Housing at New York University, proposes specific changes in the physical design of public housing and the adjacent spaces. The purpose of the proposed changes is to enable and encourage the residents to perform effective surveillance of their own territory.

Newman's approach has the advantage of being simultaneously superficial and profound. It is superficial because it

makes no attempt to get at the "root causes" of crime. Instead, it seeks to reduce opportunities for criminals to commit crimes. Since this wholly symptomatic approach requires no major institutional changes, it has a reasonable chance of being widely adopted.

Yet it is also profound, because it relies upon low-income residents themselves to upgrade their own living conditions. In my opinion, most major improvements in the quality of life of inner-city areas in the near future will have to come primarily from the self-help efforts of people already living there. The rest of our society appears unwilling to spend more money on these areas, or to scatter their residents into other, higher-quality environments.

Virtues in boundaries

Newman's proposals are also profound because they recognize that a great many households, perhaps most of them, would like to follow essentially middle-class behavior patterns. Most residents of public housing, I am convinced, would like to show the same proprietary concern over their dwellings and the spaces around them as middle-class suburban homeowners. Furthermore, such "natural" proprietary concern would greatly enhance the safety of their environments. Yet in most public housing, design impedes such proprietary behavior.

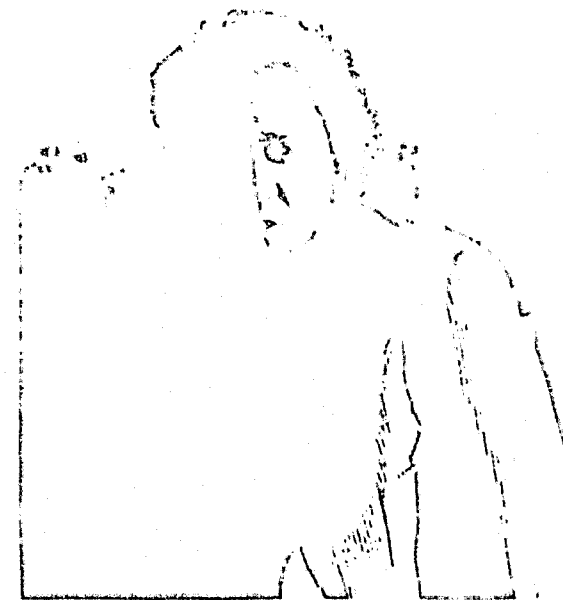
The principles set forth in *Defensible Space* were developed from extensive empirical studies of relationships between crime and the design characteristics of existing public-housing projects. These principles, Newman says, "have a common goal—an environment in which latent territoriality and sense of community in the inhabitants can be translated into responsibility for ensuring a safe, productive, and well-maintained living space. The potential criminal perceives such a space as controlled by its residents, leaving him an intruder easily recognized and dealt with."

Good design, Newman concluded from his studies, can foster territoriality, sense of community, and surveillance of intruders. To begin with, residents can more readily identify themselves with

the area around their own dwellings if design clearly demarcates specific areas as their own territory, distinct from public spaces. Visible boundary lines—both real and symbolic—should be used to demarcate a hierarchy of increasingly private spaces, from purely public areas (such as streets and public paths) through semiprivate spaces (such as raised steps right in front of an entranceway, or a front yard surrounded by a low wall or fence) to fully private areas (apartment interiors).

In keeping with the same principle, sites of public-housing projects should be laid out in such a way that certain exterior spaces clearly relate to specific buildings or groups of buildings. Also, different sections of large projects should be individualized through use of varying colors, textures, and building decors to create more identification of each group of households with a specific part of the project.

Insofar as possible, an entranceway should serve a relatively small group of households. Each entranceway should be linked to a separate vertical passageway (stairs or elevators), with short hallways on each floor. The access spaces clearly serving a particular cluster of apartments then become the territory of those tenants.



Oscar Newman

Anthony Downs is senior vice president of Real Estate Research Corp.

Planning Cities for Less Crime

By TOM GOLDSTEIN

Inner city slums have long been breeders of crime. Not all crime, but a substantial portion. In the past two decades, crime has continued to increase with alarming regularity in these neighborhoods despite the replacement of many of these crowded tenements with modern high-rise apartment complexes.

In "Defensible Space," Oscar Newman, an architect and urban planner, claims that the vertical stacking of people in low- and middle-income high-rises "is possibly the most cogently the criminal has in his victimization of society." After three years of observing and collecting data, Mr. Newman reports that

The Bookshelf "Defensible Space"

By Oscar Newman. Macmillan. 261 pages. \$8.95

crime rates increase almost proportionately with the height of such buildings. He forcefully argues that crime, born of a poverty of means, opportunity, education and representation, can be prevented architecturally.

Nearly four million low- and middle-income Americans now live in these familiar high-rise projects, many of which are unsafe at any rent. Newman argues that the high-rise prototype, with a resident janitorial and security staff, worked well for upper-middle income families with few children, but cannot be simplistically transplanted, minus the accompanying staff and accoutrements, for the use of large, low-income families.

In developing his theory of defensible space, Mr. Newman punctures such widely accepted shibboleths of designers as that pedestrian and vehicular traffic must be separated, age and income groups should be mixed, and large amounts of free ground area should be available. Bending the ideas of some older city planners, including Jane Jacobs, with a large dose of old-fashioned common sense, Mr. Newman points to four elements of physical design that can contribute to the creation of a secure environment:

—Territoriality. "At various scales of subdivision—from number of apartments per hallway, apartment units per building, and number of buildings per project—there ap-

pears to be a rule which says that the lower the number, the better." Reducing the number of people sharing a given access space not only increases pride of collective maintenance while reducing overt vandalism but also makes it easier to distinguish an intruder.

—Surveillance. Windows and doors should be positioned in such a way as to allow residents to naturally survey the interior and exterior public areas.

—Image. Building forms should be adopted which avoid the stigma attached to public housing. "By gentlemen's agreement, public housing must never approach the luxurious in appearance, even though it may cost more per square foot. It must retain an institutional image. Parallel to this, and much more devastating, is the effect of the institutional image as perceived by the project residents themselves."

—Location. Residential developments should be carefully juxtaposed with other urban facilities. For instance, a large public park is not necessarily the best neighbor for a housing project.

Under Mr. Newman's plan, fortress-apartments and uncopied streets would yield to aesthetic, functional buildings surrounded by a vibrant street life. Yet the dangers of carrying this thesis too far are apparent. He concedes that in order to prevent crime it may be necessary to segregate society "into physically separate, subclusters which are inviolable and uniform, both socially and economically."

Obviously, its effect on crime cannot be the sole concern in designing a building. What Mr. Newman suggests, without ever articulating, is that along with attention to the economics of land and interest rates and the necessary observance of fire regulations and building codes, a crime impact statement be made part of each new housing project's design.

Nor should it be thought that design alone can prevent crime. However, if the opportunity is removed, such crimes of opportunity (rather than premeditation) as muggings, burglaries, robberies and rapes might be dramatically reduced.

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Housing Without Fear

It is an astonishing book. It explodes just about every long-accepted rule on the way we build housing projects. It shows a direct relationship between the design of a building and the amount of crime committed inside (TIME, Nov. 6). It also suggests a solution in its title: **Defensible Space** (Macmillan; \$8.95). The author: Oscar Newman, 37, a tall, bushy-bearded architect, director of New York University's Institute of Planning and Housing. His guidelines are being adopted by HUD, the New York State Urban Development Corp., and city housing authorities in Chicago, Philadelphia and Minneapolis. In an interview with TIME, Newman explained his theories:

The idea of defensible space first emerged back in 1964, when I was part of a team of architects and sociologists who were studying why the notorious Pruitt-Igoe public housing project in St. Louis was being torn apart by the people who lived in it. Every public area—the lobbies, the laundries and mail rooms—was a mess, literally. There was human excrement in the halls. Except in one small area on each floor of each building. You had to go through a fire door and then you were in a little hallway separating two apartments. This little hall was spotless—you could eat off the floor. When we called out to each other in the other hallways, we could hear people bolting and chaining their doors, but in this area we heard peepholes click open. Sometimes people even opened their doors. The reason was that they felt this little hallway was an extension of their own apartments. We knew we were on to something.

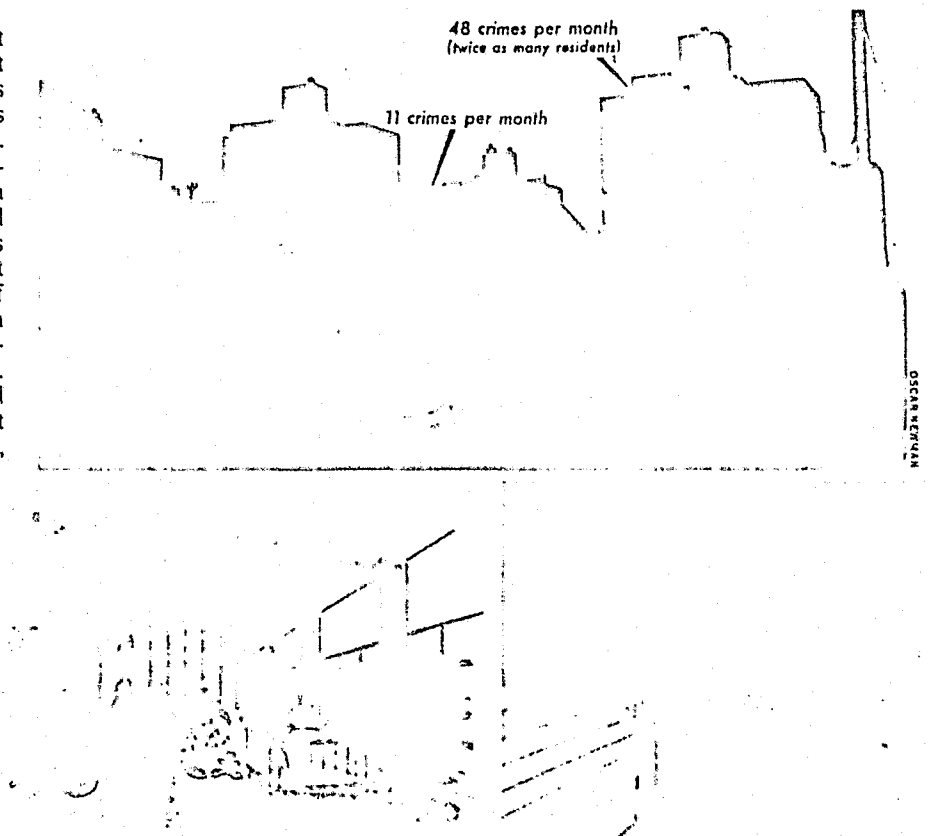
In 1969 the U.S. Justice Department commissioned the N.Y.U. Institute to study crime in public housing. We had thousands of interviews with residents, managers and policemen, and we got the statistical data amassed by the New York City housing authority. Certain patterns became clear. Obviously, high crime rates were linked to social variables such as the percentage of families on welfare and the number of families without a father, but we were surprised to find that overall density of population in a project is not a critical factor. On the other hand, the design—where you put people—is crucial. Height itself is one major element. We discovered that high-rise projects, like the Rosen houses in Philadelphia and Van Dyke in New York, suffered much worse crime

rates than those in some adjacent projects, which had similar densities and social types but were built low and broken up into smaller units. The reason is that as buildings get bigger and higher, they become more and more anonymous—no defensible space. They are also full of angled corridors and blind public areas. These hidden places are where 55% of all crimes in high-rise housing projects are committed. The empty staircases required by fire regulations also provide criminals with alternative routes for flight.

Actually, the problems with huge high-rise projects start with their location in slum-clearance areas that are already centers of crime. Then architects

All the major physical flaws in the design of public housing can be fixed. Projects must be open to view from the outside. Cars should be allowed through them. Jane Jacobs was right when she wrote in *The Death and Life of Great American Cities* that the presence of casual onlookers provides safety, but she did not go far enough. Along with increased surveillance, there must come a feeling of territoriality—a sense of pride and responsibility for specific areas of the project. When that happens, people start looking after each other's safety and their project as well. Proof? We have found that when you get more than six families on a corridor in a building, they don't feel ownership, and the crime rate is likely to double on that corridor. If you change the layout of the same building so that only six families share the hall—you might have to move

CONTRASTING RATES OF VIOLENCE IN PHILADELPHIA'S ROSEN PROJECT



ARCHITECT'S VISION OF PRUITT-IGOE GALLERY...

...ACTUALLY BECAME A VANDALIZED SLUM

make things worse. When they plan a new project, they usually design tall buildings with front doors that open onto interior recreation grounds. Often, they lay out whole superblocks with no streets through the middle of the project. It's stylish, elegant, and just what Le Corbusier taught. But it doesn't work. People on the neighboring streets neither see into the project nor travel through it. Criminals can prow around without anyone paying any attention. Nobody asks "What are you doing here?" In richer areas, middle-income families can afford to pay for doormen and superintendents to guard their high-rise buildings, but the poor cannot.

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Even less drastic changes can help. We've been granted \$2,000,000 by the U.S. Housing and Urban Development Department to modify four existing public housing projects in New York City. By adding simple amenities—fences, play equipment, benches, better lighting facilities—we can definitely make people feel the project is theirs. After we did this in the Clason Point project in The Bronx, the crime rate dropped to one third of what it was before we went to work.

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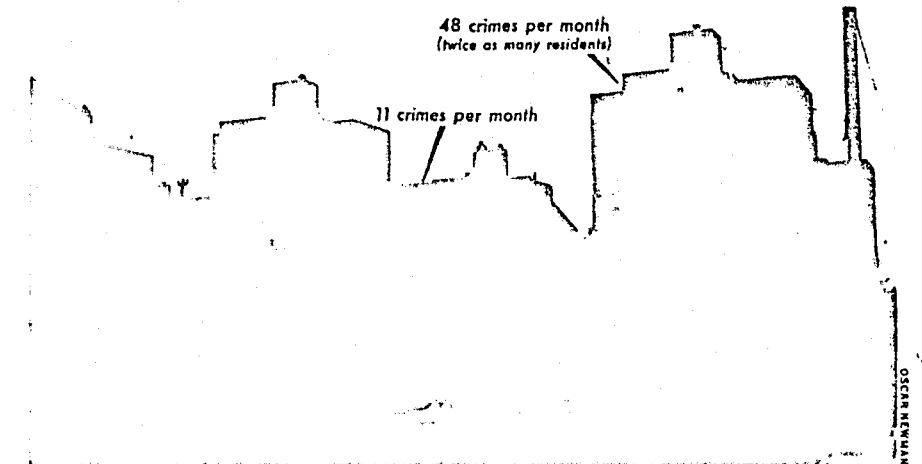
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Housing Study: High Rise-High Crime

By JACK ROSENTHAL
Special to The New York Times

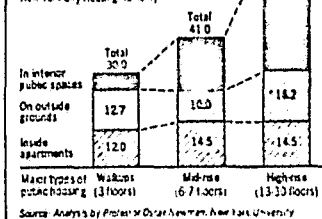
WASHINGTON, Oct. 25—A three-year study by a New York University research team has produced dramatic evidence of a major cause of the terror that afflicts public housing residents in many major cities. The higher the building, the higher the crime rate.

The most dangerous type of public housing of all, the study found, is the high-rise elevator building with floor upon floor of "double-loaded corridors" serving so many apartments, ranging along both sides of the hall, that residents can't tell neighbors from strangers.

The crime rate in such buildings is more than twice that in walk-up public housing. Nevertheless, the researchers conclude that even in such high-rise buildings crime—and the almost equally paralyzing fear of crime—can be curtailed.

PUBLIC HOUSING CRIME IN
RELATION TO BUILDING HEIGHT

Felonies per thousand families
Based on the number of crimes registered in 1969 by the New York City Housing Authority



Their primary solution lies in design, organizing a setting to maximize what Oscar Newman, an architect and the project director, calls "defensible space."

That is the title of a just-published book reporting the work of the \$200,000 study. It was conducted by N.Y.U.'s Institute of Planning and Housing and financed by research grants from Federal and city agencies.

A major aspect of the research was analysis of 1969 crime statistics that the New York City Housing Authority police compiled for 100 public housing projects.

In three-floor walk-up buildings, the study found, there were 30 serious crimes for every thousand families. In buildings of six or seven floors, there were 41 serious crimes. In high-rise buildings of 12 to 13 floors there were 143.

The rates differed little among the three types of housing with respect to crimes committed inside apartments or on outside grounds. But there was a very different result concerning crimes committed in interior public spaces—elevators, lobbies, corridors, stairs and roofs.

While the total serious

crime rate was twice as high in tall buildings as in walk-ups, the rate of crime in public spaces in the high-rises was seven times higher.

Why? The study offers the following answer:

"In a high-rise, double-loaded corridor apartment tower, the only defensible space is the interior of the apartment itself. Everything else is a 'no man's land,' neither public nor private."

"Unlike the well-served and continually surveyed public streets, these interior areas are sparsely used and impossible to survey, they become a 'no man's land' of fear and crime."

By contrast, Mr. Newman said in an interview today, "in the walk-up buildings, where few families share an entry, the interior public space becomes an extension of the home. And so does the street."

"Kids can play outside and still be within calling distance of the window. And as parents supervise their children at play, they also monitor street life. Defensible space is extended. You begin to get safe streets as well as safe buildings."

The contrast is evident from the sides of St. Louis Avenue in Brooklyn, as it intersects two parts of public housing—the towers of Van Dyke Houses on one side, the low and mid-rise buildings of Brownsville Houses on the other.

The two projects are almost identical in density, population, income, race and other characteristics except crime. In 1969, the study found, there were 43 reported criminal offenses in the tall Van Dyke project. There were 264 in the lower Brownsville project.

Attitude Toward Invasion
Brownsville residents and the police alike, Mr. Newman wrote in his book, regard the Brownsville project as smaller and more stable than Van Dyke.

"All intruders, including the police and interviewers, feel more cautious about invading the privacy of residents at Brownsville," he said. "By contrast, the fear attitude toward the invasion of the interior corridors at Van Dyke is casual and indifferent."

Such differences between high and low-rise public housing are evident regardless of neighborhood or city, Mr. Newman said today. The more dangerous public housing becomes by comparison with low-rise, and this is even more true in Newark, St. Louis and other cities than in New York, the study found.

The project called essentially for two solutions. One is to stop assigning families with children to high-rise buildings in large public housing projects.

Locating them in walk-up buildings would mean lower density—about 50 units an acre. But that, Mr. Newman contends in his book, would not be a problem anywhere but in New York.

He cites the enormous Pruitt-Igoe development of high-rise public housing in St. Louis, some of which has now been dynamited and most of which has been abandoned. There, density was only 48 units an acre.

Plan for the Elderly
And even in New York, he says, one solution would lie in concentrating elderly residents in high-rise buildings, familiar in walk-ups.

The second proposed solution calls for the design of defensible space. The resident of a public housing tower, situated on a park-like superblock with the entry facing inward, would be "much safer" than the one who had been able to go directly from street to front door, Mr. Newman writes.

Design improvements can even curtail crime in existing low-rise projects, Mr. Newman believes. He cites as evidence the modifications he has made, working with the Housing Authority of Clason Point Gardens in the Bronx.

The project houses 400 families in two-story buildings. The modifications focused on giving them a stronger proprietary sense over the grounds and walkways. It was finished eight months ago.

"Eight months is not long enough to tell anything for sure," Mr. Newman said today, "but as far as I am aware, with the same eight months last year, the total number of offenses is nearly six times lower."

News Analysis
Paul Sarason assesses how the study will affect public housing.

Representative William R. Anderson of Tennessee was

Oscar Newman, author of the crime study, looking at Brownsville Houses, foreground, and Van Dyke Houses in Brooklyn. One finding: higher building, more crime.

Towmen, in Rate Protest, Tie Up Roads for 3 Hours

By LAWRENCE VAN GELDER

A morning nightmare of clogged roads, stalled cars, and tempering frustration awaited the 20,000 motorists who left their homes yesterday when towmen, protesting their pay, staged a strike.

Nowhere else, a spokesman for the Traffic Department said, did the strike hit so hard. At 7 A.M. and beyond, on major roads until about 10 A.M., towmen had tied up traffic as they refused to work under rates set by the City Council.

At the same time, the towmen's refusal to work was a major cause of the traffic jams. The towmen, who are paid by the hour, refused to work under rates set by the City Council.

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News Summary and Index

THURSDAY, OCTOBER 26, 1972

The Major Events of the Day

International

A high-ranking French source disclosed that Henry A. Kissinger had reached a wide measure of understanding on a cease-fire with the North Vietnamese negotiator Le Duc Tho. The French officials who consider themselves Kissinger's closest advisers said they understood that the United States has undertaken to see that Saigon accept the agreement. But there is some difference among top French officials about how to phrase the United States will be in gaining the quick approval of President Thieu (Page 1, Column 8).

Continuation Predicted

Four bills to increase the rates are now before the Council, said David B. Friedman, a Manhattan Democrat and chairman of the Consumer Affairs Committee, which has jurisdiction over the rates.

Councilman Friedman said

that the rates proposed in the bill are from \$10 to \$20 for the first mile and from \$150 to \$2 for each additional mile. But he added that there had been no action on the bills because members of his committee wanted companion legislation to regulate the towing industry.

I agree that there should

be an increase in the Councilman said "I regret the fact that they saw fit to create this demonstration. There was no need for it."

Mr. Friedman said that the

regulation would be considered within the next 10 days or two weeks.

Mr. Kiss said the rates

here "the lowest in the U.S. bar none."

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The Other News

International
Israel intercept letter-bomb sent to Nixon Page 2
Renewed protests clog San Diego streets Page 3
Israel hurt by wave of wildcat strikes Page 3
Two Serbian party leaders resign posts Page 3
Soviet men abroad get guidance on job-hunting Page 4
Moscow free medical aid system overhauled Page 5
Peru said to plan return for combat Page 6
Laird, in London, sees "significant stage" Page 15

General
Soviet commentator robbed in Central Park Page 7
Tax status of Jewish appeals challenged in suit Page 13
S. 1 jury to study police corruption Page 27
C.A.B. is investigating on "air travel club" Page 28
Lawyer's group changes stand on "family" Page 31
Table design began with a cable reel Page 45

Family/Style
Making another sauce like restaurants do Page 44
At Central Park Zoo, all was not real Page 44
Table design began with a cable reel Page 45

Editorial
Beverly Smith, newspaper and magazine writer Page 46

Financial and Business
Stocks drift slightly in a rangeless session Page 50
Personal finance: large duties relatively low Page 50
Social earnings advance 11 percent in quarter Page 53
Net climb 10 per cent at Praxair & Lumber Page 59
Bethlehem Steel tipped quarterly profits Page 59
Treasury sets a \$3.8 billion borrowing Page 58

Industry and Labor
The 1972 Campaign
Caldwell describes his subliminal efforts Page 1
Mrs. Shriver visits brother's memorial Page 31
Large new McGovern job revealed Page 32
Agnew returns to the South to campaign Page 32
Senator McGovern can, again, be a surprise Page 33
Mrs. Shriver's three rivals Page 33
Senator McGovern's contest in Connecticut's fifth Page 33

Obituaries
Beverly Smith, newspaper and magazine writer Page 46

Financial and Business
Stocks drift slightly in a rangeless session Page 50
Personal finance: large duties relatively low Page 50
Social earnings advance 11 percent in quarter Page 53
Net climb 10 per cent at Praxair & Lumber Page 59
Bethlehem Steel tipped quarterly profits Page 59
Treasury sets a \$3.8 billion borrowing Page 58

Industry and Labor
The 1972 Campaign
Caldwell describes his subliminal efforts Page 1
Mrs. Shriver visits brother's memorial Page 31
Large new McGovern job revealed Page 32
Agnew returns to the South to campaign Page 32
Senator McGovern can, again, be a surprise Page 33
Mrs. Shriver's three rivals Page 33
Senator McGovern's contest in Connecticut's fifth Page 33

Obituaries
Beverly Smith, newspaper and magazine writer Page 46

Financial and Business
Stocks drift slightly in a rangeless session Page 50
Personal finance: large duties relatively low Page 50
Social earnings advance 11 percent in quarter Page 53
Net climb 10 per cent at Praxair & Lumber Page 59
Bethlehem Steel tipped quarterly profits Page 59
Treasury sets a \$3.8 billion borrowing Page 58

Industry and Labor
The 1972 Campaign
Caldwell describes his subliminal efforts Page 1
Mrs. Shriver visits brother's memorial Page 31
Large new McGovern job revealed Page 32
Agnew returns to the South to campaign Page 32
Senator McGovern can, again, be a surprise Page 33
Mrs. Shriver's three rivals Page 33
Senator McGovern's contest in Connecticut's fifth Page 33

Obituaries
Beverly Smith, newspaper and magazine writer Page 46

Financial and Business
Stocks drift slightly in a rangeless session Page 50
Personal finance: large duties relatively low Page 50
Social earnings advance 11 percent in quarter Page 53
Net climb 10 per cent at Praxair & Lumber Page 59
Bethlehem Steel tipped quarterly profits Page 59
Treasury sets a \$3.8 billion borrowing Page 58

Industry and Labor
The 1972 Campaign
Caldwell describes his subliminal efforts Page 1
Mrs. Shriver visits brother's memorial Page 31
Large new McGovern job revealed Page 32
Agnew returns to the South to campaign Page 32
Senator McGovern can, again, be a surprise Page 33
Mrs. Shriver's three rivals Page 33
Senator McGovern's contest in Connecticut's fifth Page 33

Obituaries
Beverly Smith, newspaper and magazine writer Page 46

Financial and Business
Stocks drift slightly in a rangeless session Page 50
Personal finance: large duties relatively low Page 50
Social earnings advance 11 percent in quarter Page 53
Net climb 10 per cent at Praxair & Lumber Page 59
Bethlehem Steel tipped quarterly profits Page 59
Treasury sets a \$3.8 billion borrowing Page 58

Industry and Labor
The 1972 Campaign
Caldwell describes his subliminal efforts Page 1
Mrs. Shriver visits brother's memorial Page 31
Large new McGovern job revealed Page 32
Agnew returns to the South to campaign Page 32
Senator McGovern can, again, be a surprise Page 33
Mrs. Shriver's three rivals Page 33
Senator McGovern's contest in Connecticut's fifth Page 33

Obituaries
Beverly Smith, newspaper and magazine writer Page 46

Financial and Business
Stocks drift slightly in a rangeless session Page 50
Personal finance: large duties relatively low Page 50
Social earnings advance 11 percent in quarter Page 53
Net climb 10 per cent at Praxair & Lumber Page 59
Bethlehem Steel tipped quarterly profits Page 59
Treasury sets a \$3.8 billion borrowing Page 58

Industry and Labor
The 1972 Campaign
Caldwell describes his subliminal efforts Page 1
Mrs. Shriver visits brother's memorial Page 31
Large new McGovern job revealed Page 32
Agnew returns to the South to campaign Page 32
Senator McGovern can, again, be a surprise Page 33
Mrs. Shriver's three rivals Page 33
Senator McGovern's contest in Connecticut's fifth Page 33

Obituaries
Beverly Smith, newspaper and magazine writer Page 46

Financial and Business
Stocks drift slightly in a rangeless session Page 50
Personal finance: large duties relatively low Page 50
Social earnings advance 11 percent in quarter Page 53
Net climb 10 per cent at Praxair & Lumber Page 59
Bethlehem Steel tipped quarterly profits Page 59
Treasury sets a \$3.8 billion borrowing Page 58

Industry and Labor
The 1972 Campaign
Caldwell describes his subliminal efforts Page 1
Mrs. Shriver visits brother's memorial Page 31
Large new McGovern job revealed Page 32
Agnew returns to the South to campaign Page 32
Senator McGovern can, again, be a surprise Page 33
Mrs. Shriver's three rivals Page 33
Senator McGovern's contest in Connecticut's fifth Page 33

Obituaries
Beverly Smith, newspaper and magazine writer Page 46

Financial and Business
Stocks drift slightly in a rangeless session Page 50
Personal finance: large duties relatively low Page 50
Social earnings advance 11 percent in quarter Page 53
Net climb 10 per cent at Praxair & Lumber Page 59
Bethlehem Steel tipped quarterly profits Page 59
Treasury sets a \$3.8 billion borrowing Page 58

Industry and Labor
The 1972 Campaign
Caldwell describes his subliminal efforts Page 1
Mrs. Shriver visits brother's memorial Page 31
Large new McGovern job revealed Page 32
Agnew returns to the South to campaign Page 32
Senator McGovern can, again, be a surprise Page 33
Mrs. Shriver's three rivals Page 33
Senator McGovern's contest in Connecticut's fifth Page 33

Obituaries
Beverly Smith, newspaper and magazine writer Page 46

Financial and Business
Stocks drift slightly in a rangeless session Page 50
Personal finance: large duties relatively low Page 50
Social earnings advance 11 percent in quarter Page 53
Net climb 10 per cent at Praxair & Lumber Page 59
Bethlehem Steel tipped quarterly profits Page 59
Treasury sets a \$3.8 billion borrowing Page 58

Industry and Labor
The 1972 Campaign
Caldwell describes his subliminal efforts Page 1
Mrs. Shriver visits brother's memorial Page 31
Large new McGovern job revealed Page 32
Agnew returns to the South to campaign Page 32
Senator McGovern can, again, be a surprise Page 33
Mrs. Shriver's three rivals Page 33
Senator McGovern's contest in Connecticut's fifth Page 33

Obituaries
Beverly Smith, newspaper and magazine writer Page 46

Financial and Business
Stocks drift slightly in a rangeless session Page 50
Personal finance: large duties relatively low Page 50
Social earnings advance 11 percent in quarter Page 53
Net climb 10 per cent at Praxair & Lumber Page 59
Bethlehem Steel tipped quarterly profits Page 59
Treasury sets a \$3.8 billion borrowing Page 58

Industry and Labor
The 1972 Campaign
Caldwell describes his subliminal efforts Page 1
Mrs. Shriver visits brother's memorial Page 31
Large new McGovern job revealed Page 32
Agnew returns to the South to campaign Page 32
Senator McGovern can, again, be a surprise Page 33
Mrs. Shriver's three rivals Page 33
Senator McGovern's contest in Connecticut's fifth Page 33

Obituaries
Beverly Smith, newspaper and magazine writer Page 46

Financial and Business
Stocks drift slightly in a rangeless session Page 50
Personal finance: large duties relatively low Page 50
Social earnings advance 11 percent in quarter Page 53
Net climb 10 per cent at Praxair & Lumber Page 59
Bethlehem Steel tipped quarterly profits Page 59
Treasury sets a \$3.8 billion borrowing Page 58

Industry and Labor
The 1972 Campaign
Caldwell describes his subliminal efforts Page 1
Mrs. Shriver visits brother's memorial Page 31
Large new McGovern job revealed Page 32
Agnew returns to the South to campaign Page 32
Senator McGovern can, again, be a surprise Page 33
Mrs. Shriver's three rivals Page 33
Senator McGovern's contest in Connecticut's fifth Page 33

Quotation of the Day

"We don't want integration with these people, we want quality education."—Thomas Duckett, a black parent among protesters at Junior High School 211 in Canarsie [B6 B]

Amusements and the Arts

Clement's "The Deadly Trap" Page 35
Maury Wills, 43, is placed on waivers by Dodgers Page 31
Third period proves hurdle for Islanders Page 31
Pairings for Holiday Festival are announced Page 52
Wood, field and stream hunt for woodcock Page 53
Old Glory sales set record of \$3.3-million Page 54
Giants' Tucker victimized by receiver balance Page 54
An engineer calculates how to raise winner Page 54

Notes on People

Ken in the News Page 31
Kenneth Arrow and John Hicks Page 71

Editorial and Comment

Editorial Page 42
Letters to the Editor Page 42
Tom Wicker on press backing anti-semitic Executive Page 43
Russell Baker views two aspects of Americans Page 43
Philip Clarke sees signs of Saigon's vigor Page 43
George Kahin outlines Hanoi's position Page 43

News Analysis

Paul Sarason assesses how the study will affect public housing Page 71

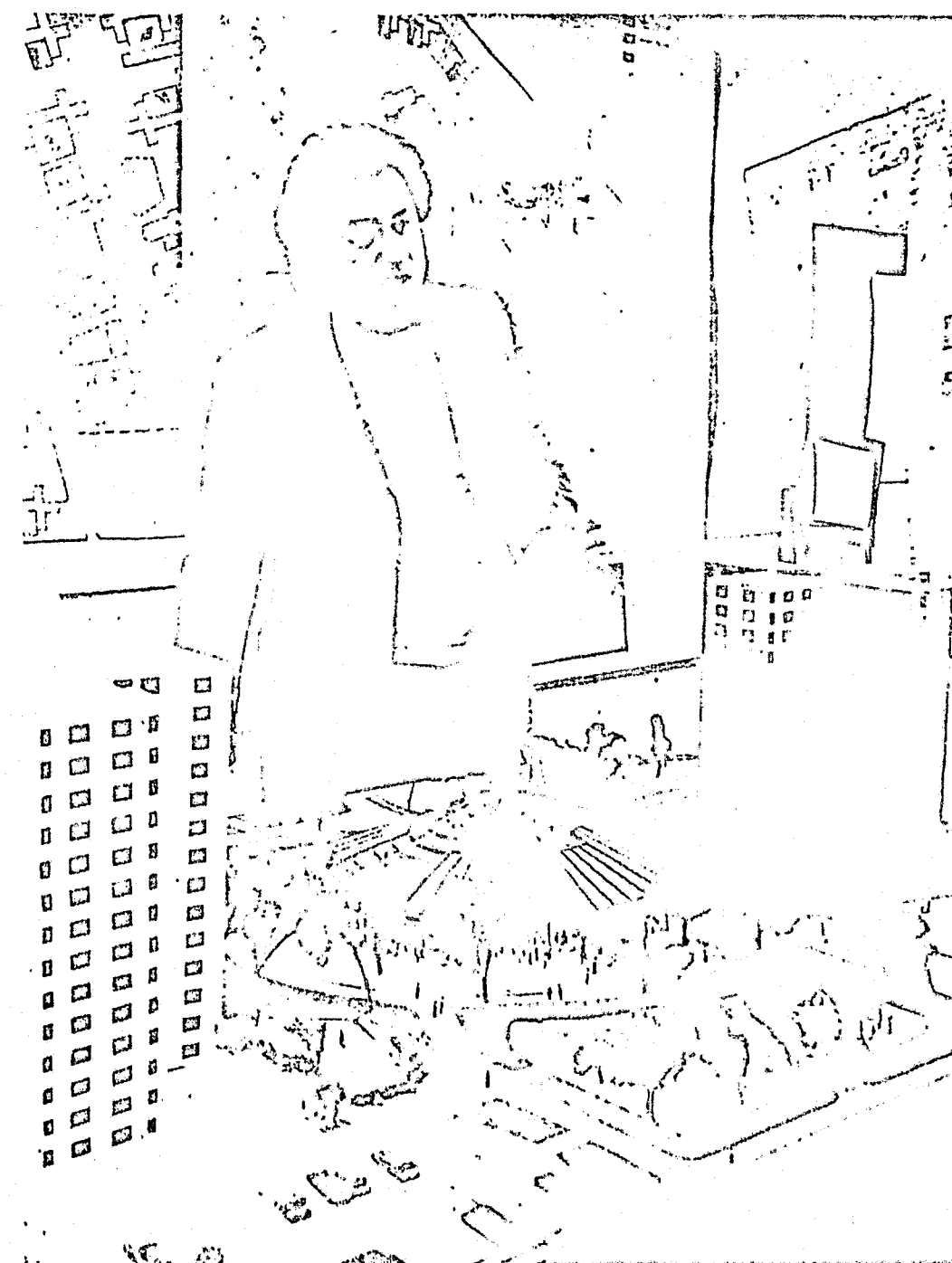
CORRECTIONS

Representative William R. Anderson of Tennessee was

Man Ends Up Spending \$68 to Win \$3.10Vager

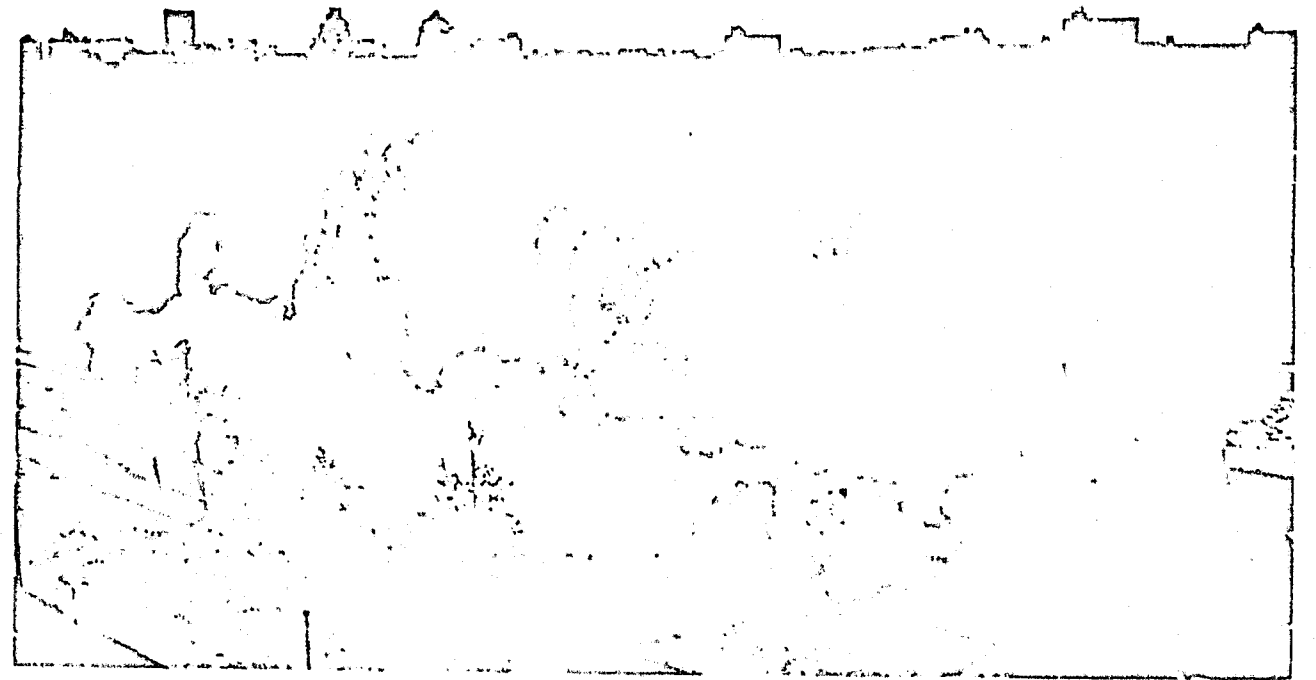
part II

Newsday's daily report on life and leisure for Long Islanders



An architect's cure for high-rise crime—lower the tenant. Page 4A.

Public Housing Is Not A Public Nuisance



The Pruitt-Igoe project in St. Louis, Mo., is plagued by crime and vandalism. The problems were so severe that officials demolished a section in April.

UPI Photo

—It's Just Built Wrong

That's the opinion of an architect-author who contends that properly designed public housing can be livable and not crime-prone.

By Fred Bruning

The primary function of the urban dweller in the 1970s may be simply to survive—survive the choking pollution, the frenzied traffic, the schizoid character of municipal services; to survive strikes, potholes, price-gougers, chumlord, subway fares, discount furniture stores, snowstorms, cab drivers, city hall and crime. Mostly, the crime.

Whether, looking back, historians and social observers will agree that the cities were as beleaguered by criminals in this time as they seem to be remains to be seen.

But, for now, the crisis seems to be clear and omnipresent.

So, probably, it should not be surprising that a book by an architect-planner on the principles of security in design—not exactly the subject matter usually brought to the screen as an X-rated movie—is gaining a good deal of attention in and out of professional circles.

The book is appropriately titled: "Defensible Space." The author: Oscar Newman, a tall, Canadian-born architect, with a self-proclaimed liberal background (his father was a union organizer in Montreal), and a long-standing interest in making life in the cities more livable. After spending the last eight years looking at existing concepts of public housing, Newman has arrived at this unsettling conclusion: A good deal of what was built shouldn't have been.

Particularly singled out for attack by Newman

is that mainstay of public housing around the country: the high-rise, high-density, elevator-dependent, low-income public-housing project.

"Criminals are attracted to these buildings like magnets," Newman said in a recent interview at the offices of the New York University Institute of Planning and Housing, which he directs. "And, once the criminals are inside, they operate very freely."

Newman, 37, who also is an associate professor of city planning at NYU, contends that the anonymity of many high-rise buildings, the no-man's-land nature of surrounding grounds, the discrimination of tenants to be protective of public space, the existence of places (such as elevators) that are ideal for the commission of crime—that all these factors make low-income towers incredibly vulnerable to illegal activity and, therefore, offer a most unfortunate solution to housing needs. High-rise, low-income housing should be avoided except in special circumstances, Newman says.

To be sure, he says, crime exists in high-rise buildings regardless of the residents' income, but it increases as the income level goes down and is particularly in evidence when residents are low-income families with teenage children. For it is the young-uns, Newman says, who often cause the trouble.

"We're saying, don't put families with kids in a [low-income] high-rise. They should be in three- to four-story walk-ups with a density of 50 dwelling units per acre. If high-rise is necessary at all,

put the people with families on the first three floors and the elderly on upper floors. Don't let the kids near the elevators. Keep them away from interior space."

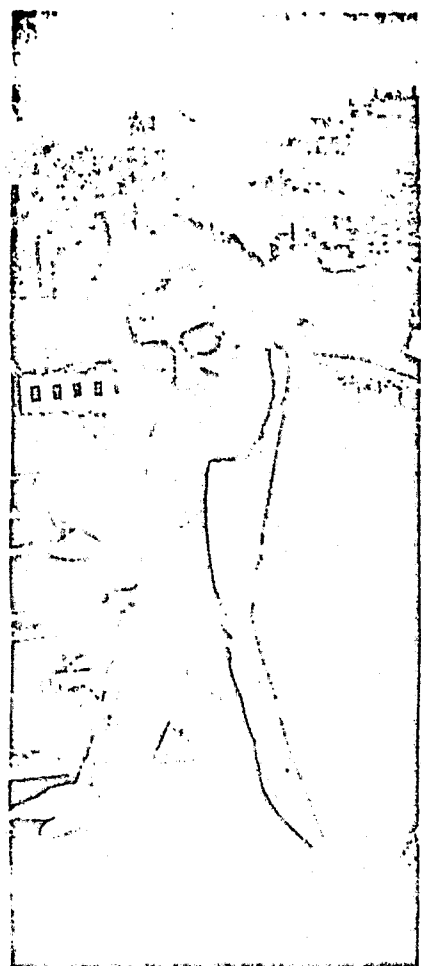
Newman's book amounts to a synopsis of the reports he and his associates submitted to the Justice Department, which, in large part, financed Newman's three-year investigation into the relationship between design and crime in public housing.

"Defensible Space" is a complex volume and Newman's thesis is not easily reduced to bite-size portions. He is quite willing to admit, nonetheless, that his findings are neither new nor likely to be a panacea for the low-income urban-dweller.

But, Newman feels, the book does bring together for the first time ideas that have been expounded in the past by various people—ideas, he says, that could be at least part of the cure modern cities are seeking.

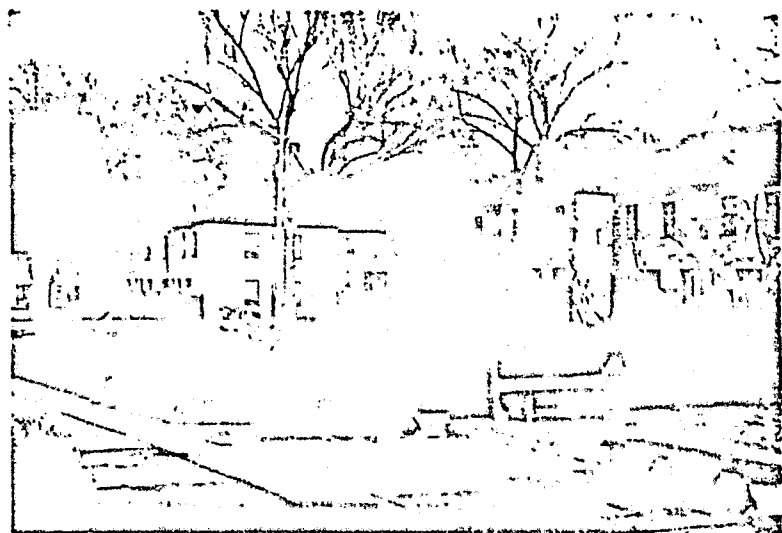
"Defensible space," Newman writes in his book, "is a surrogate term for the range of mechanisms—real and symbolic barriers, strongly defined areas of influence, and improved opportunities for surveillance—that combine to bring an environment under the control of its resident...."

Building height is not the only element that should be considered when developing low-income housing, Newman says. "It is simplistic to say that high-rise equals high crime. It's the [total] building design. What makes a building anonymous is that 150 to 500 families share a single entry and

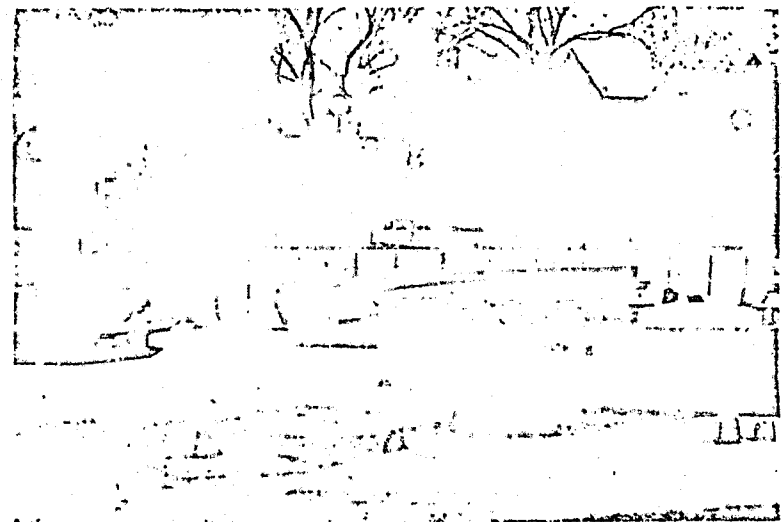


Oscar Newman, author of 'Defensible Space.'

'A good deal of what was built shouldn't have been....'



Clason Point complex in the Bronx was renovated...



...and residents gained a sense of 'territoriality.'

Interior circulation space that is hidden from public view. Access is open to everyone. You can't tell who belongs. Once you're in, no one is able to determine if you belong there."

So, Newman reasons, "territoriality" is a vital ingredient in any recipe for large-scale housing developments—the feeling on the part of residents that they have an interest in public areas and therefore an obligation to protect and preserve such places as well as their apartments.

"We're getting back to having the citizen take the primary role in crime prevention," Newman says.

Among the most spectacular contemporary failures in massive, high-rise, low-income housing, is the Pruitt-Igoe project in St. Louis, Mo. The development has been plagued by crime and vandalism to the point that many low-income families have stopped moving in.

Newman, once a teacher of architecture at Washington University in St. Louis, has seen the dilemma of Pruitt-Igoe first hand. The crisis became so severe this spring that St. Louis officials took drastic and desperate action: They blew an unoccupied section of Pruitt-Igoe into oblivion.

By contrast, one might look to the Clason Point project in the Bronx. Clason Point is a complex of two-story walk-ups that lacked a sense of territoriality and was easily accessible from surrounding streets until it was rehabilitated according to Newman's plans.

The architect fenced off 70 per cent of the development, refaced the buildings, built curbs around front yards and installed a series of small playgrounds and public seating.

Since the renovation, which was financed by funds from the Department of Housing and Urban Development, Newman reports that residents are showing an interest in the grounds by planting grass and shrubbery, and are using previously unused public areas. And, says Newman, overall crime is a third of what it was before the changes.

Other by-products from Newman's theories have not been so pleasing to him.

One bit of fallout he did not anticipate is the emergence of his book as a rallying point for those resisting the arrival of low-income housing in middle-income neighborhoods.

Jerry Birbach, leader of the opposition to the controversial Forest Hills housing development, asked Newman, the architect says, to speak out against the project.

Newman says he refused, explaining to Birbach that while he opposes the design of the Forest Hills complex he suspected the motives of Birbach's group—namely, that the residents simply did not want low-income public housing of any kind in the neighborhood.

Being sought out as a witness in opposition of low-income housing is an unusual position for Newman and not lacking in irony, according to his own self-definition.

The whole thrust of his work, says Newman, is toward a better life for low-income people and he has no desire to limit their housing options even further. His purpose is to design a safe environment for them. And he thinks he knows what low-income Americans want in their housing because he has spent a good deal of time talking to them about the subject and, at one time, lived in Harlem for three years in an attempt to better understand the problems of that community.

Newman's alternatives to high-rise housing are not likely to please those who oppose public developments.

He is an advocate of scatter-site housing and rent supplements that would make it possible for low-income families to live in middle-class apartments.

Integration, he feels is imperative. On the subject of ghettos, Newman is blunt and outspoken. "... what people are really saying," he commented, "is that the black and poor should be kept in ghettos that are fenced off."

"They are refusing to let minorities into unions, refusing to develop self-help programs. What we're saying is, 'Let them die away.' We're doing what they did in Nazi Germany: First create ghettos. Then force them off. The next step is genocide. That's what we're saying. We're taking the first step."

Despite his denunciation of the status quo,

—Continued on Page 19A

Progressive Architecture

October 1972

Fear of crime has become a major influence in our lives. More and more Americans must consider the safety of their persons and property in planning daily activities, moving households, locating businesses and accepting jobs. Physical evidence of this fear can now be seen in abandoned neighborhoods, boarded-up shops, untenanted urban renewal space and—in extreme situations—vacant public housing.

Back in 1965, Pruitt-Igoe in St. Louis made headlines as a project that could not attract tenants even at public housing rentals. Since then several projects in other cities have been judged unsafe at any rent. This year Pruitt-Igoe hit the press again when demolition began on some of its high rise slabs. The project was finally being altered physically.

When the tragedy of Pruitt-Igoe was first exposed, Oscar Newman was in St. Louis, teaching at Washington University. He was not the only one to realize that correlations could be found between physical design and criminal behavior, but he was one of the few to launch a systematic study of the subject. The results are summarized on page 92, "Alternatives to Fear," and presented fully in Newman's book, *Defensible Space*, published this month by Macmillan.

Newman's study represents the kind of commonsense analysis we must have if we are to piece together the relationship of architecture to behavior. And unless architects and planners at least begin to understand that relationship, they cannot pretend to be socially useful.

It is noteworthy that Newman's work was financed through an arm of the U.S. Justice Department, in the name of law enforcement, not through any housing agency charged with the well-being of its tenants. It is also noteworthy that much of the essential data for the study had been collected over a period of time by housing officials, as if they realized that the data could be useful, but saw no way to interpret it in policy-making. Instead, they continued assembling an ever more intricate web of regulations—covering ventilation of bedrooms, location of medicine cabinets, durability of window frames—everything but the physical and psychological security.

How could such a situation develop? How could housing

officials have adopted schemes with hazards that now seem so obvious? The process, as Newman reconstructs it, was one of successive deviations from an unwritten tradition. Public housing evolved from older tenement layouts; the classic X-shaped tower (page 103) was in effect a series of tenements stacked up around an elevator core. Those who set standards for housing were concerned with qualities that tenements lacked: sound construction, sanitary surfaces, sunlight, views and privacy. Later, economics suggested larger numbers of units per floor, then fire officials insisted on isolated emergency stairs, and well-meaning planners faced entrances away from the unsavory street—toward green space obtained by building higher. All of these steps undermined the tenants' security, yet none of them was against regulations, since the crime-inhibiting mechanisms of older housing had not even been recognized.

In the case of Pruitt-Igoe, a skip-stop elevator system linked to other apparently positive innovations—broad galleries instead of corridors, through ventilation for all units—produced an extraordinarily dangerous environment. Even with the example of Pruitt-Igoe before them, respected architects and sponsors are still adopting innovations designed as if to *promote* crime.

What Newman's study provides is a set of understandable criteria against which proposed housing can be compared. In New York, in fact, all housing constructed under the city's Public Housing Authority and its Housing and Development Administration is already being reviewed in the light of these criteria. We expect them to have much wider influence now that the study is public.

Let us hope that Newman's findings are not turned into yet another set of prohibitions. (Applied with bureaucratic logic, they could lead to a ban on *trees*.) Instead, his study should be correlated with others, covering every housing question: Who needs subsidized housing and why? Where should they live? What shared amenities should they have? What do they really need in a dwelling unit? in a kitchen? in a light fixture? Why do we keep repeating the same housing mistakes?

John Morris Diefen

ADDENDUM E

IMMEDIATE MEASURES TO IMPROVE SECURITY

IN RESIDENTIAL AREAS

Prepared for Department of Housing
and Urban Development

Under Separate Cover

ADDENDUM F

DESIGN DIRECTIVES FOR ACHIEVING
"DEFENSIBLE SPACE"

Under Separate Cover

ADDENDUM G1

OFFICIALS AND ORGANIZATIONS

RECEIVING INFORMATION

ADDENDUM G1

As government plays a key role in urban housing, particularly in high crime areas, much of our requests for services have been from government groups. At the Federal legislative level we have provided information to both the House of Representatives Committee on Banking and Currency (through Congressman Koch) and the Senate Committee on Banking, Currency and Urban Affairs (through Senator Brooke). In both cases the information describing our study and conclusions was forwarded to these committees, who are responsible for all Federal housing laws. A member of our staff testified before the Special Senate Committee on Aging, Subcommittee on Housing, chaired by Senator Williams, on the special problems of providing security for elderly residents. Senator Williams was also given a tour of projects modified following our design directives.

Also on the Federal level, the project for Security Design has established relations with a number of offices within the Department of Housing and Urban Development (HUD). The HUD Office of Research and Technology (Mr. Erkkila) has contracted with us to prepare a manual entitled, "Immediate Measures for Improving Security in Residential Environments" to be distributed to all Federally sponsored developments. We have also provided information to the Program Planning and Evaluation Division, (Mr. Caden), The Technical and Credit Standard Division (Mr. Artamonoff), and the Office of Community Development of HUD (Mr. Schulder). We have commented on proposed plans for large scale new towns within the HUD New Communities Office (Mr. Grouby). We have also dealt with various HUD regional offices, including New York and Boston.

As the Project for Security Design is funded by the National Institute of Law Enforcement, LEAA, Justice Department, we have, of course, provided a variety of services to Just Department branches. These have included assistance in the preparation of criteria for federally supported insurance programs, and presentations for the Private Security Seminar, held in LEAA offices on Friday, December 17, 1971.

Mr. Anthony Staderker, Management Analyst, Executive Office of the President, U.S. Bureau of the Budget, spent a day with us in the field examining our work. He is reviewing LEAA expenditures nationally.

Another approach on a national scale has been to deal with the practicing professionals concerned with housing development and management, whomever their employer. A major effort in this area was a series of lectures given by the Project Director at seminars across the country sponsored by the National Association of Housing and Redevelopment Officials. These lectures were intended to familiarize housing officials and builders with the nature

and results of our work. (See attached lists of participants.)

Similar presentations have been given to other groups such as the American Institute of Architects, the American Institute of Planners, the Citizens Housing and Planning Council, the National Association of Home Builders and the Urban Design Council. A questionnaire sent out in the earliest stages of the Project, requesting information from more than 1,000 architects, planners, organizations, created an interest that has not only been maintained but amplified.

In addition to dealing with many local officials and professionals through their national organizations we have also dealt specifically with local agencies. The New York City Housing Authority has been utilized as a model during the entire study. In addition to matters related to the actual modifications we are designing, the Project for Security Design is serving as part of a design review team, concerned with security for all new New York City Housing Authority projects. We have also been called in to assist in security matters involving elevators, and the installation of buzzer-reply systems.

Other New York agencies have also called upon the Project for Security Design for information or assistance. They have included the City Housing and Development Administration, the City Planning Commission, and the State Urban Development Corporation, each of whom was concerned with a specific problem. The New York City Police Department has consulted with us on matters concerning security hardware, electronic equipment and vertical patrolling.

A variety of local agencies across the country have asked us to provide information, in the form of either written material or presentations.

The Jersey City Housing Authority has asked for a redesign proposal for each of its nine projects. Others include: Newark (New Jersey) Housing Authority, New Jersey Housing Finance Agency; Baltimore (Maryland) Housing Authority, Housing and Development Corporation, and Planning Department; Orlando (Florida) Housing Authority; Philadelphia (Pennsylvania) Housing Authority and City Planning Commission; Chicago (Illinois) Department of Development, Illinois Housing and Development Administration; Cleveland (Ohio) Housing Authority; Boston (Massachusetts) Housing Authority, Police Department, and Redevelopment Agency and the Lower Roxbury Community Corporation; District of Columbia, National Capitol Planning Commission, Housing Authority, and Redevelopment Land Agencies; the Oakland (California) and Ventura (California) Housing Authorities. We have been assisting the St. Louis (Missouri) Housing Authority, HUD and the firm of Skidmore, Owings and Merrill considering alternative plans for the Pruitt-Igoe complex.

One new local level approach to implementation is the possible creation of security codes" within the building laws. At this point 18 jurisdictions have considered or adopted such measures. Several of these including New York, Boston, and Oakland (which was used in the creation of a California state code) have asked for and received specific information from the Project for Security Design. We are currently pursuing the possibility of such a security code becoming part of the National Building Code.

A number of private organizations, both profit and non-profit, have solicited information concerning residential security from the project. These have included developers such as Cedar-Riverside, Boise-Cascade, Phipps Houses, and Robert E. Simon Associates, as well as planning and architectural firms, such as Marcou-O'Leary (representing Westinghouse and Building Systems Incorporated); Moshe Safdie Associates; Katz, Weisman, Weber, and

Strauss; Shadrach Woods; and Davis and Brody. The non-profit groups involved include foundations, Ford Foundation, Russell Sage Foundation, the Fund for City of New York; Community Service Society; the United Housing Foundation ; as well as numerous local community groups.

As members of the academic community we have maintained communication with other researchers and educators in planning, architecture, public administration, and environmental studies at universities across the nation. These have included: Brandeis; Boston University, Harvard (Joint Center for Urban Studies); University of North Carolina; Ohio State University; Washington University; Florida State University; University of California at Los Angeles and Berkeley; Columbia University; Carnegie Mellon Institute; University of Wisconsin; Chicago University; University of Pennsylvania, Princeton University City University of New York, among others.

The project for Security Design has utilized various media as means for distributing information, though it is clear that media coverage will not result in the implementation of our proposals. Nevertheless, a variety of television, radio, newspapers, magazines and professional journals have covered the Project for Security Design.

WABC-TV, WEVS Radio, WTVR Radio, WNYC Radio, the New York Times, the New York Daily News, Christian Science Monitor, United Press International, The Overseas Press Club, are mass media that have carried write-ups on the Project for Security Design. Professional Publications such as Design and Environment, Progressive Architecture, Architectural Forum, HUD Challenge, Housing Affairs Newsletter, have also published material concerning the Project for Security Design. All of these efforts will be supplemented by the release of the Defensible Space Monograph.

PARTICIPANTS

NAHRO Conference

Washington, D.C.

1. National Capitol
2. Washington Housing Authority
3. HUD Regional Offices
4. HUD National Offices
5. Baltimore Housing Authority, Md.
6. Evansville Housing Authority, Indiana
7. Louisville Housing Authority, Kentucky
8. Indiannapolis Housing Authority, Indiana
9. Wallingford Housing Authority, Conn.
10. Orange Housing Authority, New Jersey
11. Planning, Baltimore
12. Newport Housing Authority, Rhode Island
13. Saginaw Housing Commission, Mich.
14. Hagerstown Housing Authority, Md.
15. Atlantic City Housing Authority, New Jersey
16. Norfolk Housing Authority, Virginia
17. Harrisburg Housing Authority, Pa.
18. St. Louis Housing Authority, Mo.
19. Hartford Housing Authority, Conn.
20. Detroit Housing Authority, Conn.
21. Bay City Housing Authority, Mich.
22. Cincinnati Housing Authority, Ohio
23. Lebanon Housing Authority, Pa.

24. Toledo Housing Authority, Ohio
25. York Housing Authority, Pa.
26. San Francisco Housing Authority, Calif.
27. Richmond Housing Authority, Va.
28. Gary Housing Authority, Indiana
29. Charlestown Housing Authority, Va.
30. Joliet Housing Authority, Illinois
31. Salem Housing Authority, Oregon
32. Greenwich Housing Authority, Conn.

PARTICIPANTS

NAHRO Conference

New Orleans, La.

1. Galveston Housing Authority, Texas
2. No. Little Rock Housing Authority, Arkansas
3. New Orleans Housing Authority, La.
4. Cleveland Housing Authority, Ohio
5. Atlanta Housing Authority, Georgia
6. Nashville Housing Authority, Tennessee
7. Kansas City Housing Authority, Mo.
8. Waco Housing Authority, Texas
9. Columbus Housing Authority, Ga.
10. Oklahoma City Housing Authority, Oklahoma
11. St. Paul Housing Authority, Minn.
12. Orlando Housing Authority, Florida
13. Corpus Christi Housing Authority, Texas
14. El Paso Housing Authority, Texas
15. Athens Housing Authority, Ga.
16. Houston Housing Authority, Texas
17. St. Petersburg Housing Authority, Florida
18. Tulsa Housing Authority, Oklahoma
19. Raleigh Housing Authority, N. Carolina
20. Dallas Housing Authority, Texas
21. Winston Salem Housing Authority, N. Carolina
22. Miami Housing Authority, Florida
23. Newark Housing Authority, New Jersey
24. Mobil Housing Authority, N. Carolina

PARTICIPANTS

NAHRO Conferences

Glen Cove, New York, N.Y.

1. New York City Housing Authority
2. HUD Regional Office
3. Hanover Tenant Association, Rochester, New York
4. Fall River Housing Authority, Mass.
5. Buffalo City Council, New York
6. Buffalo Housing Authority, New York
7. New Haven Housing Authority, Connecticut
8. Rochester Housing Authority, New York
9. Dwelling Manager's, Inc., New York, NY
10. Quincy Housing Authority, Mass.
11. Greensboro Housing Authority, N. Carolina
12. HUD, Washington, D.C.
13. Lower Roxbury Community Corporation, Mass.
14. Urban Institute, Washington, D.C.
15. Ontario Housing Corporation, Canada
16. Jersey City Redevelopment Agency, New Jersey
17. Settlement Housing Fund, Inc., New York, NY
18. Office of Economic Opportunity, Washington, D.C.
19. Detroit Housing Authority, Michigan
20. Weiser Company, South Gate, California
21. Los Angeles Housing Authority, California
22. Mayor's Safe Streets Advisory Committee, Boston, Mass.
23. Freeport Housing Authority, New York

24. Welfare Island Development Corporation, New York, NY
25. Syracuse Housing Authority, New York
26. Waltham Housing Authority, Mass.
27. Lexington Housing Authority, N. Carolina
28. United Security Limited, Toronto, Canada
29. Boston Housing Authority, Mass.
30. Phipps Houses, New York, NY
31. International Association of Chiefs of Police, Gaithersburg, Md.
32. Wilmington Housing Authority, Delaware
33. Philadelphia Housing Authority, Pa.
34. Lowell Housing Authority, Mass.
35. Cambridge, Mass.
36. Community Guardian Co, Ltd., Toronto, Canada
37. Stanford Housing Authority, Connecticut

ADDENDUM G2

IMPLEMENTATION: PROJECTS MODIFIED
IN ACCORDANCE WITH DEFENSIBLE SPACE
PRINCIPLES

Implementation

The Project for Security Design has implemented the concept of defensible space within different housing developments; the approaches vary with housing type and setting:

a. Large scale physical modifications of housing developments involves pre-testing, surveying, preliminary design, working drawings, and finally, construction and post-testing. The Project for Security Design has completed all design work for three projects, Clason Point Gardens, Bronxdale Houses, Markham Houses, housing among them a total of more than 7,000 persons. Clason Point construction and post-testing is complete, Bronxdale is under construction, and Markham modifications are ready to begin. Preliminary designs have also been prepared for several other projects including Highbridge, Wagner, Gravesend, Throgg's Neck, Breukelen and Edenwald. All of the above are New York City Housing Authority projects and modifications are being done with HUD modernization funds. While the results of these efforts are readily observable, it is still too soon to measure changes in the crime pattern.

b. The most intensive efforts in the area of electronic security systems have been made at Bronxdale. This is being done in co-ordination with ground modifications. A buzzer-reply system is being installed, and electronic surveillance systems will be tested under a grant from the Criminal Justice Co-ordinating Council.

c. The Project for Security Design has been consulted by several builders concerning the design of new projects. The New York City Housing Authority has adopted many of our Design Directives as standard for all new projects, and has asked our staff to review plans. One example is the Manhattan Valley project in Harlem, where we have worked with the architectural

firm involved and they have willingly modified their original design to comply with our design directives. Similar efforts have been made with other development groups such as the Cedar Riverside corporation in Minneapolis, and the Lower Roxbury Community Corporation in Boston.

d. In addition to influencing design guidelines of government programs and the attitudes of building professionals, as well as preparing designs for individual projects, a new approach has been the creation of security codes. Generally, these are items added to municipalities' county building code laws. At this time eighteen jurisdictions have adopted or are considering such codes; several have asked for our assistance. (See Addendum 4.)

In response to this opportunity, all currently existing or proposed codes have been collected. These have been used to establish the legal and practical restraints of these codes. A possible ultimate goal is the preparation of a model security code, based upon the work conducted by the Project for Security Design, to be incorporated in the National Building Code.

LISTING OF IMPLEMENTATION PROGRAMS

- I. Housing developments actually designed or modified
in accordance with specific proposals from Project
for Security Design
-

NEW YORK CITY HOUSING AUTHORITY

<u>Designs for New Projects</u>	<u>No. units</u>
1. Twin Parks East	800
2. Morrisannia	208
3. S. Bronx Model Cities	309
4. Bronxchester	400
5. Taylor St.	250
6. Ft. Independence	342
7. Manhattan Valley	180
<u>Modifications to Existing Projects</u>	<u>No. units</u>
Major: Clason Point Gardens	450
Bronxdale Houses	1,500
Minor: (Intercom)	
Fulton	
Baysley Park	
Wilson	
Lafayette	
Chelsea	
Clinton	
St. Mary's	
Monroe	
Seth Low	
TOTAL	2,400

BOSTON HOUSING AUTHORITY

Massachusetts Housing and Finance Agencies

Madison Park Houses 312

PRIVATE

New York

Phipps Plaza West	885
East Midtown	700
Columbia University	
560 Riverside Dr.	220
West Gate	200

Minneapolis

Cedar Riverside
(to eventually have)
(New Towns in Town)

1,299
12,500

II. Housing developments for which Project for Security
Design has prepared specific proposals

NEW YORK CITY HOUSING AUTHORITY

(Being prepared)	<u>No. units</u>
Edenwald	2,040
Highbridge	1,000
Markham	300

PHILADELPHIA HOUSING AUTHORITY

Martin Luther King Plaza	576
Raymong Rosen Apartments	1,122
Schuylkill Falls	714
Queen Lane Apartments	120

CLEVELAND HOUSING AUTHORITY

Outhwaite	1,028
Valleyview	400

NEWARK HOUSING AUTHORITY

Columbus Houses	1,200
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BOSTON HOUSING AUTHORITY

Charlaine I	100
Charlaine II	120
Washington Park	150
Castle Square	600
Washington Place	150

PRIVATE

Sarah Lawrence College

JERSEY CITY HOUSING AUTHORITY

Moore	664
Woods	712
Marion	461
Hudson	222
Holland	191
Lafayette	490
Washington	314
Montgomery	<u>451</u>
	3,505

END

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