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PROJECT ADMINISTRATION DATA SHEET

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Project Director: Dr. A. J. Catanese School/~~Lab~~ Architecture

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Atlanta, Georgia 30349

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ADMINISTRATIVE DATA OCA Contact Ralph Grede x-4820

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RESTRICTIONS

See Attached NIH Supplemental Information Sheet for Additional Requirements.

Travel: Foreign travel must have prior approval — Contact OCA in each case. Domestic travel requires sponsor approval where total will exceed greater of $500 or 125% of approved proposal budget category.

Equipment: Title vests with Sponsor; however, no equipment is proposed

COMMENTS:

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SPONSORED PROJECT TERMINATION/CLOSEOUT SHEET

Date 9/18/86

Project No. D-48-693

School/~~Lab~~ Arch.

Includes Subproject No.(s) N/A

Project Director(s) A. J. Cattanese GTRC / ~~XXX~~

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Title The Minimum Floor Area Problem in Local Zoning in Georgia

Effective Completion Date: 3/20/86 (Performance) (Reports)

Grant/Contract Closeout Actions Remaining:

- [ ] None
- [XX] Final Invoice or Final Fiscal Report
- [ ] Closing Documents
- [ ] Final Report of Inventions
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- [ ] Classified Material Certificate
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FORM OCA 69.285

Planning Barriers to Affordable Housing: The Minimum Floor Area Problem

by

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Summary of Major Findings

The minimum floor area requirements in zoning ordinances are used primarily to exclude people deemed undesirable. They do not reflect changing demographics, housing markets, or the quality of life, and there is no relationship to public health, safety, and morals. The authors suggest that now is the time to deregulate minimum floor areas in zoning ordinances and suggest alternative approaches. The case is made that many planners are reluctant to engage in this debate and defer to local politics. As a result, the courts are becoming the last resort -- a trend the authors find disturbing on professional and ethical grounds. They urge planners to assert their professional leadership responsibilities.

A well-established principle of planning is that decent, affordable housing should be provided to meet the needs of the community (Catanese and Snyder, pp. 280-283). It goes without saying that this principle applies to all social, economic, and racial groups -- indeed, it has been argued that this is the planners' ethical responsibility (Davidoff, 1970). It seems curious then that a common planning practice creates barriers that make affordable housing impossible. This practice is called the minimum floor area requirement and is common in many local zoning ordinances. It has the effect of establishing a wide range of minimum standards for the size of houses and apartments that often makes them too expensive for many low and moderate income people and small households. Despite much proof of this charge, planners seem unwilling to correct the problem, and planning and zoning commissions cling tenaciously to the practice. This seemingly innocuous technical matter creates an overwhelming barrier to affordable housing and makes planners and commissioners willing participants in exclusionary zoning.

Inherent Conflicts

A recent county plan in the Atlanta area stated that affordable housing for a variety of families was a goal for planning. The zoning ordinance that accompanied the plan, however, imposed minimum floor area requirements for single-family and multi-family homes where none existed previously.

When the professional in charge of the plan and ordinance drafting was questioned about this, he stated that he was responding to express demands of the planning commissioners who wanted some mechanism to prevent the "dumping of small homes" in their suburban county.[1] He said that one planning commissioner said that people who live in small homes "drank beer and rode motorcycles." It was clear that strongly held if inaccurate perceptions were too much for the professional to debate. He gave in.

In the City of Atlanta, just the opposite trend occurred. Atlanta imposed minimum floor area requirements in 1952 through its zoning ordinance. Like most cities, it already had a building code that had minimum floor area requirements for housing, but these were considered too small by the planners then. After 30 years' experience with minimum floor area requirements, planners in Atlanta came to believe that the practice was exclusionary and prevented affordable housing from being built. The 1982 zoning ordinance eliminated minimum floor area requirements.[2] Thus, the suburban commissioners' fear of dumping was completely unfounded, as well as exclusionary.

This is the inherent conflict in planning. Planners want affordable housing in their communities, yet they appear reluctant to eliminate minimum floor area requirements that drive up the cost of housing (Landis, 1986). There is a direct relationship between the size of a housing unit and its costs -- in fact, all real estate investment analysis is measured in cost per sq. ft. The problem is that some developers who may be willing to build smaller units and meet low and moderate income and small households market demands often are prevented from doing so by public policy. It is a strange situation where the private sector appears interested in providing smaller housing units to meet demands, but the public sector, through zoning, is creating obstacles that make affordable housing impossible.

The Pseudo-Scientific Evolution

Where did these standards come from? For example, it is common to find 1000 to 1600 sq.ft. minimum floor area requirements for single family homes and a range (450 sq.ft. for efficiency, 600 sq.ft. for one bedroom, and 750 sq. ft. for two bedrooms) for apartments in zoning ordinances. The origin of these standards came from the Reform Movement and the public health field, but the scientific validity is dubious.

The earliest efforts to affect the size of floor areas were the so-called Tenement Acts in New York City in the 1850's. Curiously, before the New Act Tenements, an average two-bedroom apartment was about 562.5 sq. ft., while after the Act, the two bedroom area went to 437.5 sq.ft., although it was better lighted, more airy, and accessible (Koppelman and de Chiara, 1969, p. 197). These reformist movements were based upon concerns for public health problems that were thought to be related to overcrowding and, by inference, small housing units.

Much of the early work sought to establish relationships between sickness, crime, and social problems with housing size.

Early studies tried unsuccessfully to establish that such problems as crime and health were related to small housing units (Ford, 1936; Festinger, et.al., 1950; Marquette, 1948). The fallacy with these attempts to find relationships was recognized much later in social science research. There may or may not be a relationship based upon correlations, and these associational findings should not be misconstrued as cause and effect relationships. In these particular studies, since most of the data were collected in slum areas where public health and social problems were rampant, it was fallacious to argue that the small housing units caused these problems, but many did anyway.

An early field of inquiry that was related to minimum floor area requirements were the "family living" studies of 1940's. Much of this work was funded by the John B. Pierce Foundation and sought to establish family living patterns as the basis for the design and planning of residences (Callendar, 1943). This work was influenced by earlier work by Svend Reimer in Sweden who believed that architects could influence family behavior and habits by the way that they designed housing, and he attempted to use these ideas in Swedish cooperative apartments (Callendar, 1943, p. 8). One study tested U.S. family behavior, attitudes, and possessions in order to improve them by having larger residences (Blum and Condee, 1944). Another study in the series introduced the idea of measuring space in homes as an implied causal factor of improved family living (Callaghan and Palmer, 1944). These studies evolved into a later field dealing with social disorganization as being related to small residential living areas. A leading exponent of this field, W. C. Loring, tried to distinguish the difference between floor areas, as measured in persons and physical areas, and what he called "social density," which had to be an articulation in socio-cultural terms (Loring, 1956, p. 166). Despite his efforts, a misconception was generated that held social disorganization to be caused by living in too small of a space.

In the early 1960's, there were some studies that attempted to relate living areas and densities to social behavior. While they were primarily efforts dealing with density, many conclusions were drawn for living spaces (Christian, 1961). What is so problematic about these studies and their impact upon housing policies is that they were really studies of pathological behavior of laboratory animals subjected to extraordinary crowding in closed environments -- hardly a basis for causal relationships in the urban environment (Calhoun, 1962).

The most well-known study that led to minimum floor area standards was a report of the Committee on Hygiene and Housing of the American Public Health Association (APHA, 1950). This committee report, and later expositions by its crusading chairman, the late Professor C. E. A. Winslow of Yale University, are often cited as the "scientific" basis for minimum floor area requirements in zoning. Winslow was also the director of the Pierce Laboratory of Hygiene at Yale and received funding from the Pierce Foundation. What were the scientific methods used to develop these surprisingly large standards? Were there sophisticated epidemiological data? Were there cause and effect data? Were there carefully controlled experiments? On the contrary, these scientific data sources were judgements made by committee members and staff, largely architectural by nature, of what should be the appropriate furnishings and space requirements for various sized families.

The Committee used many of the family living studies in order to determine the furniture, accessories, and other possessions of a typical family as well as family behavior patterns. A family was assumed to be a husband, wife, and three children. Surveys were undertaken with several interesting constraints imposed for statistical homogeneity, including: 1) all people in a dwelling unit must be related; 2) the wife could not be employed; 3) only white, non-ethnic families were considered; 4) no one in the family was handicapped; and 5) help was not employed since it would disrupt the normal housewife's patterns (Blum and Condee, 1974). The Committee then used these findings to develop architectural layouts for living spaces for these families, albeit with obvious socio-cultural biases. Consider, for example, how Winslow's committee defined the minimum floor space required for the ten basic family living activities:

Table 1
MINIMUM FLOOR SPACE REQUIRED FOR TEN BASIC HOUSEHOLD ACTIVITIES (In Square Feet)

Activities	Number of Persons					
	1	2	3	4	5	6
Sleeping and dressing	74	148	222	296	370	444
Personal cleanliness and sanitation	35	35	35	35	70	70
Food preparation and preservation	8	76	97	97	118	118
Food service and dining	53	70	91	105	119	146
Recreation and self-improvement	125	164	221	286	367	383
Extra-familial association	17	17	34	34	51	51
Housekeeping	48	91	110	127	146	149
Care of the infant or the ill	-	124	124	124	124	124
Circulation between areas	20	20	35	35	45	45
Operation of utilities	-	20	20	20	20	20

Using this and several other typical room arrangements, and basing this work loosely on family living studies and early animal overcrowding experiments, the Committee established minimum floor area requirements for residences for "healthful living." These minimum floor area requirements were as follows, based upon the number of persons living in the dwelling:

one person	400 sq. ft.
two persons	750 sq. ft.
three persons	1,000 sq. ft.
four persons	1,150 sq. ft.
five persons	1,400 sq. ft.
six persons	1,550 sq. ft.

No empirical proof was offered to support these standards, yet they were widely used in a legal context, as shall be examined below.

Evolution of Regulatory Measures

The objective of the American Public Health Association was to establish minimum floor area requirements in housing, occupancy, and building codes at the state and local level. Some efforts were made to establish national standards for minimum floor areas, but these have been gradually abandoned in favor of regional, state, and local regulations. It was not the intention of groups working on family living space standards to use zoning codes.

Winslow had these minimum floor area requirements included in the Proposed Housing Ordinance of the APHA in 1952. These requirements were two to three times higher than those of standard building codes (discussed below) and were so controversial that they were debated widely. The APHA revised the recommended ordinance in 1969, 1971, and 1975. Today, this set of requirements defers to national building code standards of 150 sq. ft. for the first person and 100 sq. ft. for each additional person. These latter standards reflect the requirements for ventilation, air, and assessibility that have been used for many years by fire underwriters. Winslow's requirements, however, were on the books, but rarely enforced, for 18 years. They are still used as scientific evidence to support minimum floor area requirements in lawsuits.[3]

Building Codes. -- The impetus for building codes came from concerns over the laws of life and property and subsequent costs incurred by insurance companies. The first model code was created by the National Board of Fire Underwriters in 1885. Building codes are an exercise of the police power in order to establish standards and regulations on the design, materials, construction, and occupancy of structures. The purpose is to protect occupants and surrounding structures from hazards due to fire, sanitary conditions, and structural integrity. These codes incorporate related codes concerning electric, gas, plumbing, and mechanical regulations.

The original building code of the National Board of Fire Underwriters was drafted as the National Board's Model Building Law in 1905. A later version came to be known as the Basic Building Code when it was published by the Building Officials and Code Administrators International (BOCA). The Basic Building Code has been adopted by states in the Northeast and Midwest. Two other versions of model building codes were developed in the 1940's. The Southern Building Code Congress International (SBCCI) adopted its Standard Building Code which has been in force in the Southern states. Most of the western states have adopted the Uniform Building Code of the International Conference of Building Officials (ICBO). While these three model codes will differ in several ways to meet regional needs, they all contain minimum floor area standards which are a virtual consensus (see Table 2). Since these codes relate to occupancy, they are expressed in terms of the number of people per dwelling unit. Hence, a three person dwelling unit in California would be required to have at least 320 sq. ft. while the same unit in

Florida would be required to have 350 sq. ft.

Table 2

Minimum Floor Area Requirements of Building Codes

Model Code	Floor Area Required (sq.ft.)	
	First Person	Each Additional Person
Basic (BOCA)	150	100
Standard (SBCCI)	150	100
Uniform (ICBO)	120	100

Housing Codes. -- Roughly paralleling the advent of building codes is the housing code. All three of the model building codes have a related housing code which is supposed to address three needs: 1) facilities of residences; 2) maintenance; and 3) residential habitability. These codes arose from reformist efforts to rectify conditions found in New York City tenements in the late 19th Century. The first model housing code was published by the Russell Sage Foundation in 1914 (Veiller, 1914). The contemporary versions of housing codes were created in the 1940's, but the impetus came in 1954 when the National Housing Act required a workable program that included such codes.

These housing codes also establish minimum floor area requirements. Since they are interrelated to the model building codes, it is not surprising to find that they have the same standards set forth by the respective codes shown in Table 2.

Housing Occupancy Codes. -- The 1949 Housing Act established a mandate to develop a means to insure quality in housing as part of its goal to effect "decent housing for all Americans." To assist in this effort, the American Public Health Association prepared its aforementioned Proposed Housing Ordinance in 1952. This is currently known as the American Public Health Association and U.S. Public Health Service Recommended Housing Maintenance and Occupancy Ordinance (APHA/PHS, 1975). It is intended to support building and housing codes by establishing standards that "(1) promote the physical and mental health and well being of the people ... (2) insure that the quality of housing is adequate ... and (3) provide adequate use, location, and amount of space for human occupancy."[4]

Again, housing occupancy codes establish similar floor area requirements for human habitats. The basic APHA/PHS requirement is 150 sq. ft. for the first person and 100 sq. ft. per each additional person. This is convergent with model building and housing codes.

After this cursory review of minimum floor area requirements in building, housing, and housing acceptancy codes, one would wonder why there is a problem. These standards are uniform and well-established. The problem is that despite this abundance of minimum floor area requirements, new and varied requirements began to appear in zoning ordinances in the early 1950's.

It is curious that minimum floor area requirements ever came into zoning ordinances, especially given the plethora of other regulatory controls. Zoning ordinances deal with the height, bulk, location, and use of buildings and land development. Except for minimum floor area requirements, nothing in zoning ordinances deals with the interior of buildings (see Table 3). The Standard Zoning Enabling Act, for example, never mentioned interior spaces in buildings (Department of Commerce, 1926). The most recent attempt to create a unified development ordinance does not deal with interior space but defers to building, housing, and housing occupany codes (Brough, 1985).

We believe that minimum floor area requirements found their way into zoning ordinances primarily for exclusionary reasons. That is, it was possible to exclude people for economic, social, and racial reasons by placing minimum floor area requirements in zoning ordinances that were far in excess of building, housing, and housing occupancy codes. Zoning ordinances became the preferred means for exclusion because there are no national or international congresses that validate the technical standards -- it is literally possible to make-up numbers in every community. There has been no attempt made to justify these minimum floor area standards in scientific or technical terms by any recognized technical, scientific or professional group.

An Atlanta Case Study

In order to test these hypotheses, we examined county and municipal zoning ordinances in the Atlanta metropolitan statistical area. We analyzed 62 county and municipal planning and zoning commissions in order to determine the status of minimum floor area requirements. We also reviewed prior zoning ordinances and commission minutes in an effort to determine trends in that subject area.

TABLE 3

COMPARISON OF FLOOR AREA REGULATIONS

Regulation	Codes			
	Building	Housing	Housing Occupancy	Zoning
Specify Interior Space Requirements[1]	Yes	Yes	Yes	No
Consistent Definition of Floor Area/Space[2]	Yes	Yes	Yes	No
Uniform Application of Definition[3]	Yes	Yes	Yes	No
Relating Space to Room Function[4]	Yes	Yes	Yes	No
Relating to the Number of Occupants[5]	Yes	Yes	Yes	No
Consistency with Other Codes[6]	Yes	Yes	Yes	No

[1]Does the respective code specify its purpose to regulate interior space dimensions.

[2]Does the respective code define that space.

[3]Is the application of the interior space requirement accomplished in a uniform manner for all residential structures regardless of dwelling type, number of stories, occupant tenure or number of bedrooms, gross vs. net.

[4]Does the regulation relate the space requirements with room function.

[5]Does the regulation relate the space requirements with the number of occupants.

[6]Is the regulation in its application consistent with the other related codes.

Affect on Quality of Space[7]	Yes	Yes	Yes	No
Demonstrable Relationship[8]	Yes	Yes	Yes	No
Date of Most Recent Edition	BOCA 1984 SBCCI 1984 ICBO 1985	1984 1982 1985	APHA 1975	Varies by Locale

[7]Within the scope of the particular code, does the implementation and enforcement of the regulation affect quality of space.

[8]Does the regulation through its application provide an objective "demonstrable relationship" within the legal parameters of police power.

The findings presented here focus upon multi-family housing. That was done because it promotes the best approximation of people to floor area as indicated by number of bedrooms. In other words, while single family minimum floor areas range from 1000 to 1800 sq. ft., it is not possible to relate these standards to bedrooms, but it is possible with multi-family housing.

Table 4 shows the minimum floor area requirements in the Atlanta area. Since Georgia adheres to the Standard Building Code, the minimum floor area requirements for buildings are 150 sq. ft. for the first person plus 100 sq. ft. for each additional person. For argument sake, let us assume that one person households live in efficiencies; two persons in one bedrooms; three persons in two bedrooms; and four persons in three bedrooms. We would expect consistency in regulations to approximate these standards of 150 sq. ft.; 250 sq. ft.; 350 sq. ft.; and 450 sq. ft. We found nothing of the kind.

Requirements for minimum floor areas fall into four broad types: 1) no specification; 2) absolute specification; 3) specification range; and 4) averaging procedures. The first type includes 14 out of 62 areas, or 23%, which did not have a specified requirement. Many of these areas are primarily rural and have not had to address multi-family development to any significant extent.

TABLE 4

ZONING REQUIREMENTS FOR MULTI-FAMILY HOUSING IN THE ATLANTA SMSA

	MINIMUM FLOOR AREA IN SQ FT			
COUNTY/CITY	EFF	1BDRM	2BDRM	3BDRM
Butts County	950 1st Family, 400 each additional			
Carroll County	None	None	None	None
Cherokee County	None	None	None	None
Clayton County	600	650	850	1050
Forest Park	500	500	500	500
Jonesboro	700	700	700	700
Lake City	550	750	950	950
Morrow	750	750	950	1050
Cobb County	450	600	750	900
Acworth	None	None	None	None
Austell	600	600	600	600
Kennesaw	600	800	1000	1200
Marietta	450	600	750	900
Powder Springs	830	830	830	830
Smyrna	500	600	750	900
Coweta County	None	None	None	None
Newnan	None	None	None	None
DeKalb County	650	650	800	1000
Avondale Est.	700	700	950	1200
Chamblee	600	600	750	1050
Clarkston	1000	1000	1000	1000
Decatur	350	600	800	800
Doraville	600	750	1000	1200
Lithonia	500	650	850	1000
Stone Mtn.	None	None	None	None
Douglas County	450	600	750	900
Douglasville	575	575	755	875
Villa Rica	None	None	None	None
Fayette County	None	None	None	None
Fayetteville	600	600	600	600
Peachtree City	500	500	500	500
Forsyth County	None	None	None	None

575

Fulton County	450	600	800	800
Alpharetta	None	None	None	None
Atlanta	None	None	None	None
East Point	500	500	500	500
Fairburn	800	800	1000	1200
Hapeville	500	500	1000	1200
Mountain Park	None	None	None	None
Palmetto	600	600	800	800
Roswell	1000	1000	1000	1000
Union City	275	550	800	800
Gwinnett County	450	600	800	1000
Buford	1100	1100	1100	1100
Dacula	1000	1000	1000	1000
Duluth	None	None	None	None
Grayson	950	1150	1350	1350
Lawrenceville	1000	1000	1000	1000
Lilburn	800	800	800	800
Loganville	1000	1000	1000	1000
Norcross	1000	1000	1000	1000
Snellville	800	800	800	800
Sugarhill	800	800	800	800
Suwanee	800	800	800	800
Henry County	800	800	1000	1000
McDonough	960	960	1000	1100
Newton County	Total Units Average of 650			
Paulding County	None	None	None	None
Rockdale County	650	850	950	1050
Conyers	600	700	800	1000
Walton County	650	650	750	1000

The second type includes counties and municipalities which have ordinances that maintain a constant minimum floor area for all apartment units. For example, the ordinance for Buford in Gwinnett County requires a minimum of 1100 square feet for efficiencies, one, two, and three bedroom units. Thirty-two percent of the areas or 20 municipalities and counties maintain this type of ordinance.

The third type of ordinance covering minimum floor area requirements contains an increasing requirement relative to the type of unit. Twenty-six or 42% have this type of ordinance. The most common ordinance in this category requires 450 sq. ft. for an efficiency with a 150 sq. ft. increment per additional unit.

The fourth type includes an averaging process of 650 sq. ft. found in Newton County as well as floor area ratios found in Atlanta and Palmetto. These are the most sophisticated in a technical sense.

Analyzing the ordinances spatially, several trends became clear. First, counties and municipalities without a specified requirement are located on the periphery of the Atlanta area where multi-family housing is not widespread. These include, Carroll, Cherokee, Coweta, Fayette, Forsyth, and Paulding Counties. Municipalities without requirements include Alpharetta, Mountain Park, Duluth, and Acworth.

In examining the ordinances, one finds a great deal of variance in requirements as they range from efficiencies to three bedroom units and between localities. Unit sizes may range from 275 sq. ft. in Union City for an efficiency to 1350 sq. ft. for a three bedroom unit in Grayson in Gwinnett County. The wide variance and lack of consistency would seem to indicate that there is little rational basis for these requirements. This is especially evident when one considers that building code requirements are basically uniform throughout the Atlanta area.

We examined trends in the Atlanta area and found that three counties and six municipalities have increased the minimum floor area requirements within the last year. The most common reasons cited was to protect the housing values of the community or to create suburban-style living as opposed to urban-style living. All of the ordinances that were found to increase the minimum floor area requirements were prepared by professional planners. As mentioned earlier, only the City of Atlanta has eliminated minimum floor area requirements in its zoning ordinance.

There are numerous examples in Atlanta and the rest of the country in which innovation and creativity in housing are impeded by the use of zoning to force large dwelling unit sizes. It should be made clear, however, that the purpose of these restrictions are not matters of public health and safety, since such factors are covered by state and local building codes and national congresses for standards. The most significant barrier to innovation and creativity in housing is local prejudice and stereotypes which are vented through minimum floor area requirements in zoning ordinances.

Legal Trends

While the minimum floor area problem appears to be worsening for planning practice, there have been some gains made through litigation. Formerly, the landmark case was Lionshead Lake v. Wayne Township (10 N.J. 89 A.2d 693, 1952). The New Jersey Supreme Court held that a minimum of 768 sq. ft. per dwelling unit was a reasonable use of the police power to maintain the aesthetics and property values of the community. The ubiquitous C.E.A. Winslow of family living fame was used as an expert witness to rationalize Wayne Township's standard, even though he thought it was too small for families in this community. In his dissent, and perhaps prophetically, Judge John Oliphant argued that the requirements excluded certain classes of people from living in Wayne Township and was unconstitutional. This case also led Charles Haar to write a tough rejoinder in which he argued that the zoning ordinance was being used to require minimum space requirements per dwelling unit and not per occupant and thus did not relate to public health, safety, and morals (Haar, 1953). Haar believed that Wayne Township's real purpose was to prevent smaller houses which it believed were detrimental to maintaining existing property values -- hence, he believed the economic exclusion was the only rationale. That set off a flurry of debate in legal and planning journals (Haar, 1977).

The litigation was quite mixed for several years after that. In 1954, the Supreme Court of Pennsylvania declared unconstitutional minimum floor area requirements (Medinger, 104 A.2d 118), yet in 1974 it upheld a 1500 sq. ft. requirement for single family homes (Harborgette, 368 A.2d 770). Several cases in Michigan added to the confusion as well. By the late 1970's, however, some consistency appeared.

In Homebuilders League v. Township of Berlin, N.J. (81 NJ 405 A.2d 381, 1979), the New Jersey Supreme Court declared the 1100 sq. ft. per dwelling unit requirements invalid and, in essence, overturned the Lionshead Lake Case. The court concluded that these minimum floor area requirements had not been proven to be needed to protect the public health or neighborhood character. The Court found that there was no rational evidence to link these requirements to the public interest and said that they were antithetical since they excluded classes of people for economic reasons -- that is, they could not afford 1100 ft. houses. This line of argument was instrumental in the Mt. Laurel Case as well (Southern Burlington County NAACP v. Township of Mt. Laurel, 119 NJ, 290 A.2d 465, 1974) when the court ruled minimum floor areas, large lot sizes, and other requirements as being exclusionary. The New Jersey Supreme Court reaffirmed its position in 1983 in Builders League v. Westhampton Township (457 A.2d 125) when a summary judgement was awarded the plaintiff thus upholding the Berlin Case.

It would appear that more litigation is likely given the inability of planners to resolve the issue and the continuing behavior of planning and zoning commissions to use this exclusionary practice. A Florida case now pending (Oakland Hills Apartments Ltd. v. City of Margate, 17th Judicial Circuit, 1984) challenges the very use of the zoning ordinance to set standards for interior spaces. This and related cases may lead to legal relief in the absence of planning remedies.

Planning Remedies

It appears to us that planners should be able to provide remedies for overcoming barriers to affordable housing that are set by minimum floor area requirements. Indeed, we find it disturbing that this technical matter must be referred to lawyers and the legal system for remedy. We believe that there are several approaches that planners can use instead of minimum floor area requirements.

Deregulation

The most obvious and direct approach is to deregulate floor areas in residences -- restrictions should be removed from zoning ordinances. This is hardly a new suggestion. In 1968, President Lyndon B. Johnson's National Commission on Urban Problems (Douglas Commission) reached the following conclusion:

> ... The most blatant ... exclusionary practice takes the form of excluding housing which fails to contain a minimum floor area as set out in the zoning ordinance. (National Commission, 1968, p. 215).

Fourteen years later, President Ronald Reagan's Commission on Housing made the same recommendation using prevailing political terms:

> ... Consumer demand rather than government regulation should determine the size of dwelling units. To do otherwise is to infringe upon individual life-style preferences and ignore financial constraints on more and more households. (Commission on Housing, 1982, p. 204).

In 1984, the Federal Housing Commissioner deleted any minimum floor area requirements found in the Federal Minimum Property Standards.[5] We agree with this. The floor area of residences is a matter of the market -- if floor areas are too small, the market will not absorb the space. That poses no threat to public health, safety, and welfare, as long as the requirements of the building code are met. We do not suggest deregulating the existing minimum floor area requirements of building, housing and housing occupancy codes, however, because we believe that these uniformly establish the baseline measurement for human habitation.

The size of a dwelling does not determine one's quality of life. Rather quality, as related to space, is determined by the use of that space and the comforts provided within that space. Quality then becomes a function of life safety, adequate light, ventilation, temperature and humidity control, sanitation, noise control and security. These are the concerns of building, housing and health codes.

There is much evidence to support the increasing demands for smaller housing units. It has been well-noted that housing demand is not so much a function of total population size, but rather of the total number of households. (Sternlieb, et.al., 1982). The growth in the number of households from 1960 to the present represents the greatest increase the U.S. has experienced in recent history. Over seventeen million households were formed during the period between 1970 and 1980, while the overall population increased by twenty-three million. This sets a remarkable precedent; three new households were formed for every increase of four persons. While this reflects changing life styles, it also reflects an increasingly older population (AARP, 1985).

This fact illustrates two rather simple but significant household trends: the decline of large size households and the increase of small (one and two person) households. During the ten year period 1970-1980, larger households containing five or more persons declined by 2.9 million. Most significantly, however, was the fact that 71 per cent of the net increase in households of less than five persons was concentrated among those consisting of just one or two persons. The decline in household size between 1980-1984 has continued, much of which has been due to the continuous dramatic increase in the number of one and two person households (Bureau of the Census, 1984). "The facts compel but one conclusion," stated Dwight Merriman, "that there is a great demand for smaller dwelling units, particularly for one and two-person households." (Merriam, 1984). If housing is to be affordable, then housing size must be reduced dramatically. It must be clear, however, that the quantity of housing space is not proportionally linked to its quality. (Marshall, 1983).

Downsizing dwellings to meet this rapidly growing housing need does not sacrifice the quality of life. In fact, we stand to gain much. Reduced energy consumption, reduced building area which increases opportunities to preserve open space and groundwater recharge, greater emphasis on functional design quality, more compact communities, opportunities for revitalizing neighborhoods, and infill development, to name a few, are advantages from smaller housing units.

The housing industry is probably one of the most responsive industries to consumer demand. For that industry to respond to these conditions and build the kinds of housing that people need, want, and can afford, however, public regulation of development must also be responsive. Otherwise, conventional housing developers will take the path of least resistance and build larger, more expensive housing units. (Landis, 1986) Innovative developers, on the other hand, will be frustrated, and too often, prevented from meeting housing demands. The households of the 1980's are very different from those of past decades when so many of today's zoning and land use regulations were developed. This has created a mismatch in some places between what regulations require in housing size and what many households would choose. As Richard Babcock has remarked, "It would seem reasonable, if there is a new market, that we alter our zoning ordinances so they no longer reflect the dominant preferences of the 1920's and the

1950's." (Babcock, 1983).

Performance Zoning

The concept of performance zoning can be traced to Dennis O'Harrow's 1951 Planning Advisory Service Information Report on Performance Standards in Industrial Zoning. While O'Harrow was concerned with industrial problems of noise, smoke, and dust, Lane Kendig has more recently used performance standards to provide flexibility and control not easily created through more conventional zoning mechanisms. (Kendig, 1980). Performance zoning focuses upon innovative approaches to defining land use and density. Since performance zoning concepts generally reflect the desire for maximum flexibility, consistent with the legitimate functions of zoning under the police power, the issue of dwelling unit size is not addressed. Rather, dwelling unit size is an issue to be resolved in the marketplace subject to justifiable restrictions found in building, housing, and health codes. Performance zoning instead deals with overall measures of density of housing development which are proper concerns.

Effective Density

The effective density concept represents an attempt to measure the intensity relative to land of each type of development. Unlike more traditional approaches to regulate the intensity of development, the effective density concept reflects the principles of performance zoning to both protect the public interest and promote flexibility in the development process. The effective density concept has great potential value for promoting the development of housing that is responsive to the broad range of housing needs of communities while also promoting efficient and superior forms of development. By using effective density controls, planners would be able to avoid the controversial issues associated with minimum floor area requirements while continuing to exercise control over zoning's more traditional concern with the relationships of density, bulk, and land coverage and use.

Several of the more notable uses of effective density controls are found within the Baltimore area. In Baltimore County, a definition of a density unit was adopted as early as 1970 as an expression of extent or density of dwellings as related to number of rooms in, or type of, units. The approach is such that:

- An efficiency apartment is equivalent to 0.50 density units;
- A dwelling unit with 1 bedroom is equivalent to 0.75 density units;
- A dwelling unit with 2 bedrooms is equivalent to 1.00 density units;
- A dwelling unit with 3 or more bedrooms is equivalent to 1.50 density units.

The effective density unit (EDU) is, to a large extent, a calibration device that expressed the relative pressure that each type of unit places upon land, infrastructure, and services. A 2 bedroom unit, equivalent to 1 EDU, is used as the standard in Baltimore County. The concept makes no distinction between multifamily units and single family units, but instead expressed them all in terms of the EDU. The ordinance is then able to control development density in terms of the number of density units allowed in each residential zone.

Let us apply this concept to Gwinnett County, the suburban area of Atlanta that is the fastest growing county in the U.S. In Gwinnett County the recently proposed revisions to the existing zoning ordinance would restrict development to 11 units/acre within zones permitting multifamily units. Presumably, this permitted density is based upon some appropriate and serviceable level of development. Several scenarios might be helpful in considering the possible impact of this regulation when expressed in terms of effective density.

Consider the alternative ways that a project could be developed at 11 dwelling units/acre, net of all streets, easements, and other such nondevelopable space. A parcel with 5 acres of land could be legally developed with any of the projects shown in Table 5. Using the density unit standards included in the Baltimore County ordinance, the effective density of these projects varies from 27.5 to 82.5 EDUs. Since the EDUs correspond roughly to total population density, traffic, and demand for schools and other public facilities, it is evident that controlling the intensity of use by simply limiting the number of dwelling units allowed per acre is insufficient to promote high development standards.

TABLE 5: EFFECTIVE DENSITIES OF REPRESENTATIVE PROJECTS

Project Description	EDUs
A. 55 3 BR Units	82.50
B. 55 2 BR Units	55.00
C. 55 1 BR Units	41.25
D. 55 Efficiencies	27.50
E. 30 1 BR Units + 25 2 BR Units	47.50
F. 33 1 BR Units + 17 2 BR Units + 5 3 BR Units	49.25
G. 5 Efficiencies + 45 1 BR Units + 5 1 BR Units	46.25

By further specifying a limit on the relative intensity of development through use of effective density units, however, planners may gain increased control over the impact of development. Assuming that the number of units was still restricted to 11 units/acre, Table 6 shows the number of units that would be permitted in areas allowing 5, 10, and 15 EDUs per acre, on a site with five developable acres, net any land required for streets, easements, and other public purposes.

TABLE 6:

UNITS PERMITTED ON A 5 ACRE SITE

WITH A MAXIMUM DENSITY OF 11 UNITS PER ACRE

	Permitted Units at 15 EDUs/Ac	Permitted Units at 10 EDUs/Ac	Permitted Units at 5 EDUs/Ac
All 3 BR Units	50	33	16
All 2 BR Units	55	50	25
All 1 BR Units	55	55	33
All Efficiencies	55	55	50

Projects consisting of mixes of unit types are actually encouraged by combining the effective density concept with more traditional restrictions on units per acre. All project alternatives in Table 5, except for Projects A and B, would be acceptable at 11 units/acre and 10 Density Units/acre. At 9 EDUs/acre, only alternatives C and D would be acceptable. However, other projects could qualify by selectively eliminating several units. Project G would be acceptable by eliminating two 1 BR units;

Project E could eliminate two 1 BR units and one 2 BR unit, etc. By combining these two conditions with additional restrictions -- such as, proportion of units allowed for each housing type, lot coverage standards, floor area ratios, landscaping, and height restrictions -- effective control over project quality is possible with little concern about detrimental impacts upon accepted norms for health, safety, and welfare.

Average Unit Size

Average minimum floor area requirements comprise a less desirable but alternative approach available to planners seeking to control the size of residential development without unduly constraining creative solutions to affordable housing. Developers can be afforded flexibility in zoning codes to provide a variety of unit sizes consistent with building codes. The overall floor area of each project is guided by regulations specifying the minimum average size of all units developed during each development phase of the project.

A number of communities, most notably within Florida, have adopted average minimum unit size clauses within their zoning ordinances. Several variations of the basic approach exist, but most of them simply specify the average unit size within any project, and in any of its phases. A typical average size is 500 square feet. Additional restrictions might address the percentage of units in any size category to encourage housing diversity within each project, lot coverage, parking, and other elements of more conventional zoning ordinances. Building and housing codes would assure conformance to basic conditions of health and safety.

Consider how this might work in a typical ordinance. A minimum average unit size of 500 square feet has been implemented in a number of ordinances already. To provide for housing diversity, this condition might be combined with a requirement that, for example, no more than a specified per cent of a project be dedicated to efficiency units with at least one unit with one or more bedrooms included in the project for every efficiency unit. A developer wishing to build a multi-family unit project then could build a certain number of efficiency units, but only if there were also at least a minimum number of units with one or more bedrooms. Such guidelines would guarantee housing diversity as well as provide for a reasonable degree of control over the project's character.

Thoughtful development of average minimum floor area criteria, while not as flexible as more performance oriented criteria, provides for substantial latitude in developing housing suitable for a cross-section of housing preferences. It also conforms rather closely to the desire of communities to have something negative to say about smaller housing units, however.

Conclusions

As Norman Williams once wrote, the purpose of minimum floor area requirements in zoning ordinances "may be stated quite simply: to force up the cost of housing." (Williams, 1975, p. 624). The preponderance of findings from our research reaffirms that minimum floor area requirements in zoning ordinances are used primarily to exclude people for any of a number of social, racial, and economic reasons. These regulations, outside of reasonable standards in building, housing, and housing occupancy codes, are intended to prevent housing that local politics and prejudices deem undesirable. It usually exacerbates housing affordability and creates enormous problems for small households. Such regulations are contrary to the housing market demands. It is an instance in which a planning tool is being used to discriminate, masking behind wrong and archaic standards that are irrelevant.

Quite disturbing is the lack of assertive leadership by planners to remedy this inequity. Planners appear to be reluctant to enter into the fray and instead defer to planning commissions and local council politics, with the exception of some dynamic areas like Minneapolis/St. Paul. (Metropolitan Council, 1977, 1978). Yet, they allow the zoning ordinance to be abused for exclusionary practices, and, in several cases, participate in framing the exclusionary clauses. This gives exclusionary zoning a false respectability and allows discriminatory actions to be condoned in the name of "good planning." The only signs of relief are seen in some recent lawsuits. We find this disturbing because this is a technical standard that is possible to change through ethical practice by planners. A good planner should make it clear to commissioners and council members that minimum floor area standards in zoning ordinances are exclusionary and inherently unconstitutional. If they refuse to consider the planner's advise, it should be noted as such. This would remove the myth of a sound technical basis. It would make it clear that planners are prepared to use zoning to achieve commonly-held goals to provide decent, affordable housing. Perhaps it will require more lawsuits to eliminate this form of discrimination from American planning and zoning. What we find so distressing is that planners are usually the defendants.

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Footnotes

1.Confidential communication, Atlanta, Georgia, November, 1985.

2.Atlanta's 1982 zoning ordinance does have floor area ratios (FAR) for large, multi-family buildings, but these do not effect the internal space of floor area per unit -- it simply deals with the bulk of the building and density of development. While floor area standards still remain in the building code, they are not restrictive.

3.See Homebuilders League v. Township of Berlin, N.J. 81 N.J. 405 A.2d 381, 1979).

4.APHA/PHS, Proposed Housing Ordinance, Sect. 1.02.

5.Federal Register, Vol. 48, Feb. 24, 1983; became effective 11 June 1984 for multi-family and Aug. 6, 1982 for one and two family.