

The Subdivision of the Single-Family House in the United States

by Anne Vernez Moudon

Moudon has been studying single family housing districts in America for many years as a researcher and teacher at the Massachusetts Institute of Technology and at the University of Washington. Her main interest has been the changes in housing caused by changes in the needs and lifestyles of the inhabitants. She has also analyzed how different typologies can adapt to changes and how zoning and building regulations may affect the possibilities and the process of housing conversions.

Moudon has been working with Marina Botta at the BOOM group at the Royal Institute of Technology in Stockholm. In 1989 she was guest researcher at the BOOM group and participated in Botta's research on renewal of older single family home suburbs in Sweden (now published in the report "Äldre Villaområden Varsam Förnyelse" by the Swedish Council for Building Research, T7:1994.).

In both the United States and Sweden there are suburban districts with older single family houses of great cultural, historical and environmental value which no longer reflect the needs and financial possibilities of modern households. The risk is that these houses may run down or undergo destructive renovation, victims of uncaredness and speculative interests. Moudon and Botta want to use their studies and examples to make home owners, architects and planners aware of the values, the problems and the capacity of this particular house type. Their aim is to give ideas and inspiration for the careful renewal of these older residential areas through subtle change able to respect existing values and qualities and to fulfill new needs demanded by modern lifestyles.

Even if there are great differences between the American and the Swedish contexts, Anne Vernez Moudon's description of the American situation is very interesting and can give new perspectives on the evolution of this common housing form.



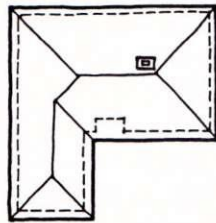
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THE MAJORITY OF PEOPLE in the U.S. live in single-family houses. Two-thirds of the housing stock in the U.S. consists of single-family houses, 90 percent of which is in the form of detached houses surrounded by a yard. Thus out of a total of 80 million households in the U.S., more than 53 million live in detached houses, an astonishing figure from a European perspective. Further, more than 50 percent of these houses have at least three bedrooms, one-and-a-half bathroom, a garage or a carport, and they are connected to public water and sewer systems.

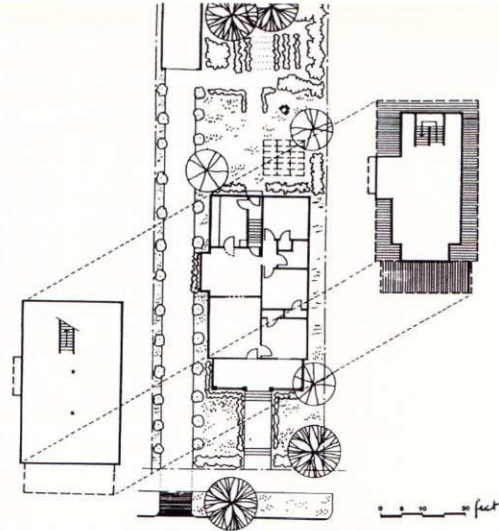
The large number of single houses underlies the trend toward suburbanization which began to be detectable at the end of the nineteenth century and now dominates the parts of U.S. cities built during this century. Already in the nineteenth century, private development companies subsidized the construction and management of street car routes to facilitate access to land for housing at the

Small "Bungalow" from the 1920's.



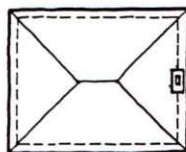


"Ranch house" typical since the 1930's.



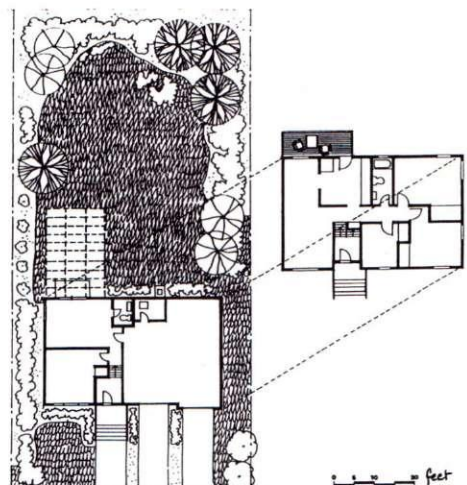
Plan of narrow-and-deep house, typical until the 1920's

outskirts of existing cities. However, most single-family houses in the U.S. have been built since 1945, when major governmental subsidies initiated during the Great Depression of 1930's finally took effect. The policies governing these subsidies singled out the detached house as the most desirable form of housing. The Federal Housing Administration (FHA) was established in 1934 to provide mortgage insurance for homeowners, encouraging banks to loan up to 90 percent of the cost of a property to prospective owners. Further subsidies from the Veterans Administration after the Second World War were made available to reduce interest rates on home mortgages for those returning from the front. In parallel, the Federal Highway Act of 1956 approved funding for 41,000 miles of "Interstate and Defense Highways," thus providing most of the road construction needed to access cheap land at the outlying areas



"Split-level house" typical since the 1930's.

Detailed plan of split-level house.



of existing cities – access which was necessary to accommodate the sizeable post-war demand for single-family housing.

What kind of housing do these single-family houses provide? What do they look like? Some 50 percent of the single-family stock was built after 1960, 30 percent dates from the 1930's to the 1950's, and 20 percent is from before the 1930's. The age distribution of the single-family stock varies greatly depending on the location in the country. In the Northeast (the Boston - New York areas), 43 percent of the single-family stock is more than 60 years old, but on the West Coast, this figure is less than 10 percent. The age of the stock affects primarily the size and form of both the lot and the house itself. The level of services within the house is less of an issue as bathrooms and kitchens are usually upgraded over time.

Country wide, houses and their related lots vary considerably in size and style. However, those intended for middle-class housing can be reduced to two basic types (within which many subtypes can be found, see Moudon 1992). One type which prevailed until the 1920's is the narrow and deep house on a lot ranging between 40 and 50 feet in width, and 100 to 120 feet in length. Bungalow houses are representative of this type. A second type which emerged in the 1930's and predominated in the 1950's is the wide and shallow house on a lot ranging from 50 to 80 feet in width and 100 to 150 feet in depth. The one-story wide and shallow houses are called Ranch houses; a two-story version of this house type is the split level house which has the entry half-way up from the ground level. This type continues to be used today but only for upper-middle class households. Within these types, there are many variations in shape and size.

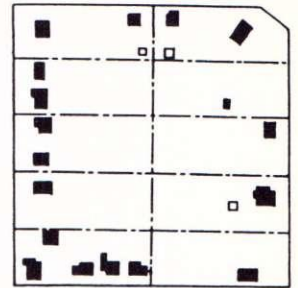
Photo of 1980's split-level house.



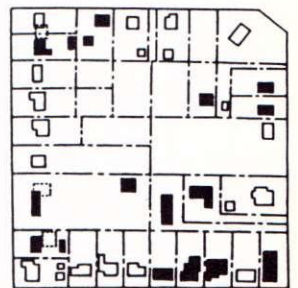
Subdividing the Single-Family Stock

Most single houses have been mass-produced *in situ* in a cookie-cutter type of approach – using repetitive floor plans and architectural features. Over time, however, many have been transformed to accommodate more than one household. The subdivision process has been caused by several different forces. One is the general maturation of the original suburban locations into urban ones: as cities have grown at a tremendous rate during this century, areas built before the 1940's which were originally far from the center cities quickly found themselves at the core of the urbanizing area. In the 1950's, most areas in this situation experienced an economic downturn: the new middle classes were moving away from the city, leaving behind an aging population which was slowly being replaced by lower-income owners and even tenants. Houses were subdivided into two or more apartments which could be afforded by the lower economic brackets of the population. Since the 70's, however, many of these same areas have been reclaimed by the middle and upper-middle classes and, as a result, have become economically strong again. In these so-called gentrified areas, subdivided houses have remained so because they respond to a need for smaller units by smaller households and because they further strengthen the economic base of the housing stock – thus, for instance, single people are able to afford such houses because they can rent parts of them out.

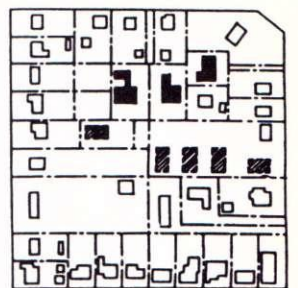
Thus past subdivision of the detached house stock occurred in both cases of economic upturn or downturn of neighborhoods. On the other hand, many recently built suburban communities also have second units which have been inserted *post facto*. These units respond to the second set of forces at work, namely increasing housing costs, which have risen beyond the means of the middle class. Thus economic hardship, combined with decreased household sizes (2.8 persons per household is the national average) has made renting parts of the property a necessary companion to home ownership for many.



1950

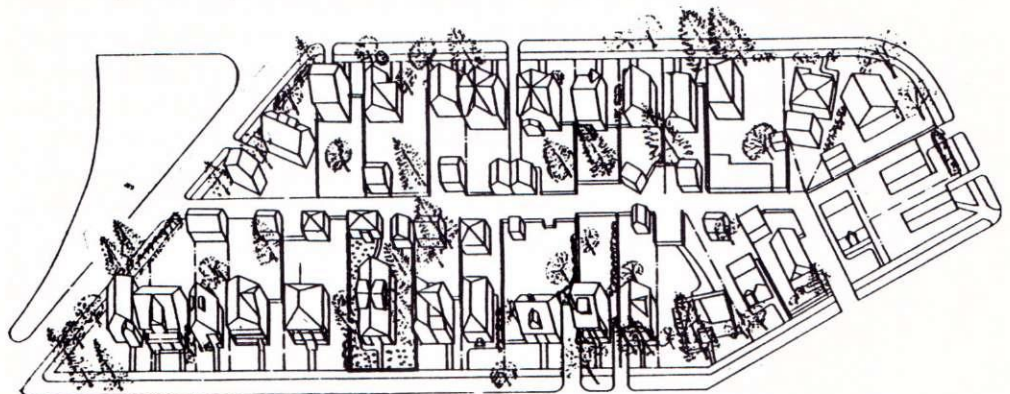


1964



1983

Evolution of a large block.



Insertion of second units in block with alley access.

Strong Laws Limiting the Subdivision of Single-Family Houses

Land-use regulations have been increasingly tight in American cities since the turn of the century. So-called “zoning laws” regulate strictly the use of the land and, in residential zones, the number of autonomous dwellings allowed for a lot of a given size. The famous 1926 court case of the Village of Euclid set an important precedent and established what is now known as Euclidian zoning. This court case allowed the state to define what constitutes a “family” and to restrict the number of people in one household in any given structure. Today, zoning laws restrict each family to the use of one fully equipped kitchen and further limit the number of unrelated persons who can constitute a family (6 to 9 persons generally). Hence in a single-family zone, only one family can occupy the property and only one kitchen can be found on the property. Secondary apartments (also called accessory apartments, mother-in-law units, bachelor units, granny flats, suites, etc.) are strictly prohibited in single-family zones.

Such zoning laws come to a surprise to Europeans who think of the new world as one of unlimited individual freedom. However, they are deeply ingrained in the American mind: the family is foremost in the establishment of a stable society, and the mixing of individual families seen as inviting immoral behavior which will cause the breakdown of the family. Thus the single-family property is set at the apex of zoning, with two- or three-family houses following. The apartment building is lowest on the list, still conceived of, to date, as a temporary form of housing, except in the largest older cities such as New York. Much of the distrust of non-single-family housing grew out of the post-depression years when many cash-poor owners of semi-detached properties (duplexes) defaulted on their mortgage payments because their tenants stopped paying rent. Also, as was mentioned earlier, the post-war middle-class flight away from the city centers caused the downturn of old single-family areas where houses were subdivided into apartments, and today many Americans still associate the subdivision of single-family properties with economic trouble. This sentiment is particularly interesting and also difficult to understand because since the 1970's, many such areas have been gentrified with the concomitant impressive increases in property values.

Popular opposition to allowing second units in single-family zones is widespread, coming primarily from homeowners who are comfortably established in good housing. On the other hand, those who would benefit from the second units are less visible, politically less organized, and typically not involved in the local political process. Many established homeowners see second units as a threat to the quality and value of their neighborhoods. Specifically, they fear that

such subdivision will cause a less socially cohesive neighborhood, parking and traffic congestion, and loss of green open space that will promptly cause decreases in property values. They also worry about speculators taking over their neighborhood and renting units to "transient" tenants, about overstressing the infrastructure with renters (particularly the utilities and the school system – public schools are typically financed by levies on property taxes).

However, studies have indicated that second units in single-family zones do not lower property values. If anything, they increase them (Gellen 1985, Vischer 1982), but not enough to entice developers to buy such houses as income properties. These studies show clearly that second units make economic sense for the homeowner who can then alleviate his or her housing expenses with a rental income. But they are not economical for investors having to carry the costs of two units and their land through the rental process (Mattheis 1989).

On this basis, housing experts have refuted homeowners' concerns about undue increases in densities of people as the result of allowing second units in single-family zones. They have argued that "empty nesters" (adults whose children have left the family home), the elderly, and small families with one adult are obvious candidates for owning homes with second units. These types of households have fewer members than the traditional couple with three children often intended for the property, which can therefore easily accommodate the additional small household likely to live in the second unit. Further, experts have argued that the growing demand for small units is better done with second units than with apartment blocks if the goal is to preserve the character of the single-family zones. In other words, second units are more in keeping with the spirit of the single-family zone than apartment buildings. This issue is also true in terms of the infrastructure, as the introduction of second units in several areas studied has not prompted increased demand for services such as police, fire, sewer, or garbage. Renters of second units do not have sizeable numbers of children to burden school districts (Hare 1986).

Legal and Illegal Subdivisions

The existence of laws prohibiting the subdivision of the single-family stock has not prevented people from inserting secondary units in their homes. The process of transformation which is evident in all cities at all ages continues in spite of legal constraints. This subdivision process has been particularly important in the creation of affordable housing units since the federal government has essentially relinquished its responsibility in subsidizing new housing. Subsidies are now in the hands of state and local governments which have not had the necessary resources to keep up with

housing demand, especially, of course, in the case of housing for the middle and lower classes. However, the illegal status of many of these units makes it difficult to establish their actual number. The estimates of illegally subdivided single-family stock vary from 3 to 20 percent. The most reliable figures come from individual cities which have conducted random surveys of their stock. For instance, Seattle estimates that 3 to 5 percent of its stock is subdivided illegally. The town of Babylon, N.Y. counted 10 percent of its single-family properties as being subdivided. These surveys are based on visual evidence of multiple units in detached properties: counting mail boxes, electric or gas meters, door bells, and signs of living in garages, entry doors visible from the street, etc.

In 1982, the U.S. Department of Housing and Urban Development studied the significant increase in the number of units created by transforming the existing building stock – commercial or institutional as well as the housing stock itself (HUD 1982). It showed that in the 1950's and 60's so-called conversions supplied some 10 percent of the new housing in the country. But since the mid-1970's, some 28 percent of new housing came from such conversions. While the proportion of these new units coming from subdivided single houses is not known, it is clear that subdivision is taking place at an increasingly rapid rate and is an important phenomenon.

Allowing Secondary Units in Single-Family Zones

Evidence of existing subdivision of detached houses has prompted many cities to legalize them, grandfathering the existing units into the zoning law and allowing new subdivisions to take place within the given zone. The legalization of secondary units may come from different needs in the community. The most frequent reason is the need for affordable housing both on the part of the homeowner and of the renter. The need for smaller units for the small contemporary families is also apparent. Interestingly, many houses with second units are owned by women who are single heads of household. Accommodating older people and allowing them to stay in their homes with a renter to help them financially, to contribute to the various chores, or to provide safety and company are other widespread reasons for legalizing second units. Finally, the desire to preserve large old houses which are historically significant but which are too expensive for single families to own and manage has encouraged cities to legalization as well.

Legalization of secondary units involves both the “grandfathering-in” of existing units and the development of legal ordinances regulating the creation of new secondary units within existing homes. Grandfathering-in means that the existing secondary units become legal “as they are”, though some jurisdictions demand that

the units be brought to code standard or require inspection of the units for health and safety standards. Grandfathering-in of the existing units may also be done without allowing further subdivision of the housing stock. In this case, the subdivided houses are legal entities, but so-called non-conforming uses in otherwise single-family zones. This means that not only no other house can be subdivided in the given zone, but the subdivided houses are subjected to stringent restrictions in terms of further transformations – prohibiting for instance any increase in the volume of the house even if larger houses are permitted in the particular zone.

Four basic methods have been identified to regulate second units: a *zoning ordinance* which allows second units by right; a *special-use permit* which allows second units only on a case-by-case basis; a *variance* which may let the property owner be relieved from certain code requirements, usually because of economic hardship; and *licensing* which give residents the right to a second unit for a limited and perhaps renewable amount of time.

Ordinances and conditions for obtaining licenses, permits, or variances allowing the subdivision of the single-family stock vary greatly from jurisdiction to jurisdiction. Most jurisdictions have a clause allowing subdivision for accommodating a blood-related family member to live in the house and to have a separate kitchen – hence the common name of secondary units as “mother-in-law” apartments. However, such clauses do not grant the owners the automatic right to subdivide their house: they must petition for a zoning variance which is often not granted on the grounds that once the second unit is in place, it can be rented to anyone, because the enforcement of the requirement for a blood-related family member is almost impossible, and certainly impractical.

Where there are specific ordinances allowing the subdivision of single houses, components of the different legislations remain similar. Ordinances can be *restricted to certain zones* within the town or city, where only some single-family areas can be transformed. But there may also be blanket ordinances which cover the entire jurisdiction. The *number of houses to be subdivided* within a given zone may be limited to a certain percentage of the properties – on a per block basis, for instance. Most ordinances require that one or more *off-street parking space* be provided for the additional unit. They may require that the *entry door* to the second unit not be visible from the street to retain the single-family character of the zone. The *size of secondary units* may be restricted: in some cases the second unit must be smaller than the principal unit, in other cases secondary units may not be larger than a given size or may have a restricted number of bedrooms. Also, some ordinances prohibit the subdivision of *houses that are smaller* than a given square footage – 2,000 square feet being often used as a minimum size for sub-

division. Uniform *façade color and material* are sometimes required in the case of additions to the existing house or new structure built on the lot in order to maintain some continuity in the visual appearance of the property. Some ordinances require that the *homeowner occupy* the principal unit of the house, or that the secondary unit be used by a blood relative. Yearly *inspections* are often required to insure that these rules are enforced. In other cases, *neighbors' approval* is required for subdivision to take place. And finally, *utility connection fees* are often demanded to acknowledge the additional infrastructure costs implied by the secondary units. These fees can be high as U.S. \$500.00 per unit. Similarly building permit fees for subdivision may be higher than those for single-family houses, at as much as U.S. \$3,000.00.

Generally, jurisdictions which have developed programs and laws to allow and also to control second units in single-family zones report relatively few such transformations to have actually taken place. This is true in California where the State passed a bill in 1982 forcing all jurisdictions to have their own second unit regulations or to accept the state's own ordinance. But even in the state with the largest housing needs and the highest housing prices, the effect of these ordinances has been disappointing. Lack of information on second units, lack of resources, and inordinate bureaucratic difficulties and costs especially in the zoning and building regulatory system, are believed to be behind these poor results.

Types of Physical Transformations Related to House Subdivision

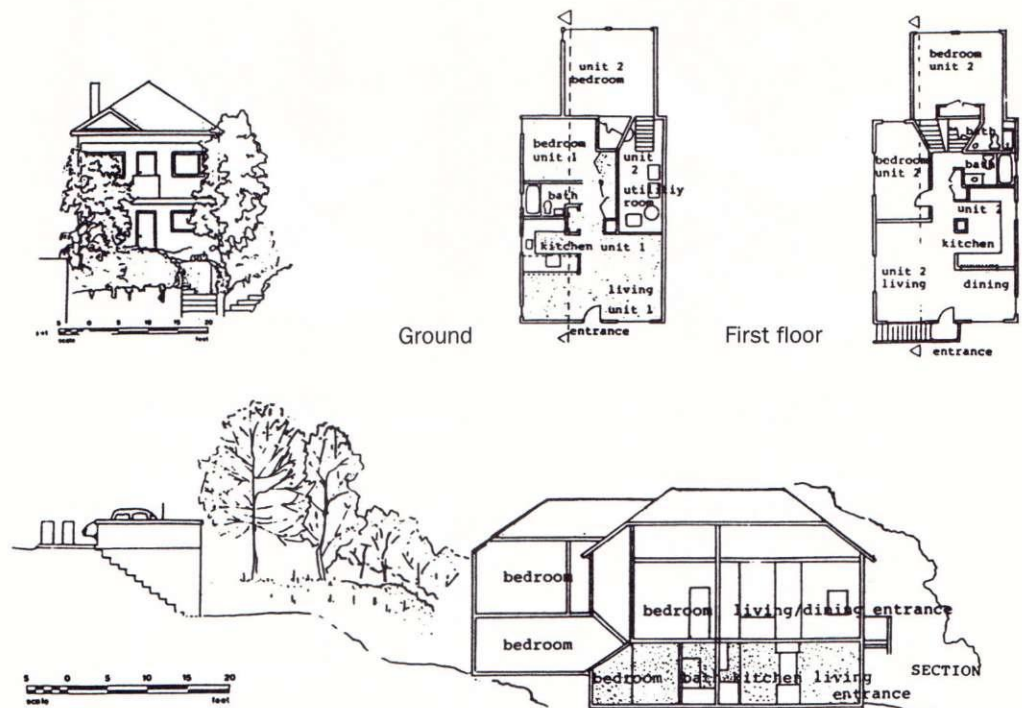
Four basic types of transformations to existing single-family properties can take place (Moudon et al. 1984). In the first two types, transformations occur within the existing land subdivision pattern, and in the second two cases, they involve further subdivision of the land into smaller lots. In these latter cases, the second units in effect become *bona fide* separate properties, or single-family houses which could themselves be further subdivided with second units thus quadrupling the number of households able to live on the particular piece of land.

1. Transformation Within the House

A second unit may be inserted anywhere within the house, but most likely in the basement, in the attic, or in the garage. Such transformations usually involve the addition of a kitchen and a door to the outside. Outside stairs may be added as well, usually in an inconspicuous way, in the back of the building, or at the side. Access to the second unit is not difficult to provide since the house is surrounded by a yard.



Photo of a narrow-and-deep bungalow with second unit inserted in the basement (see new door added).



Detailed plans of narrow-and-deep house transformed to have a second unit on the upper floor.



Photo of bungalow with second unit inserted in attic. New stairs have been added in the back of the house. They are not visible from the street.

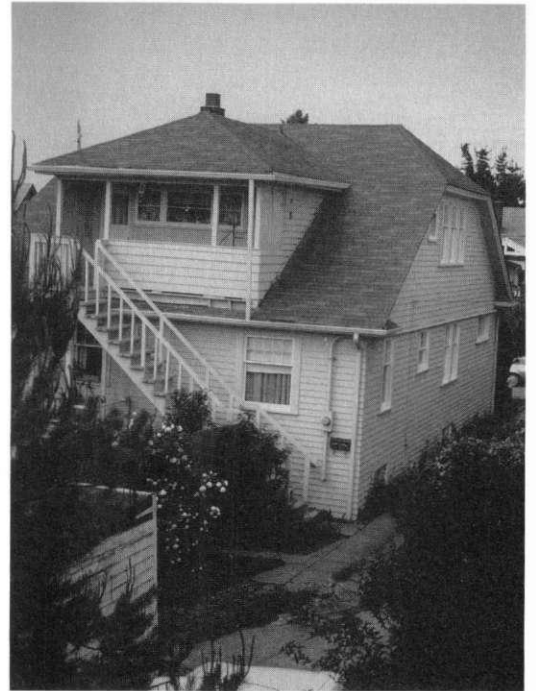
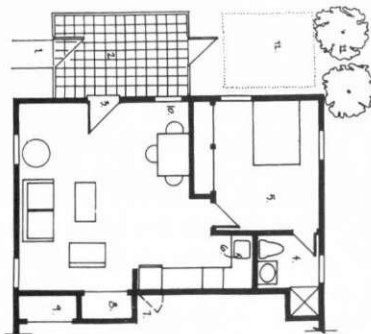
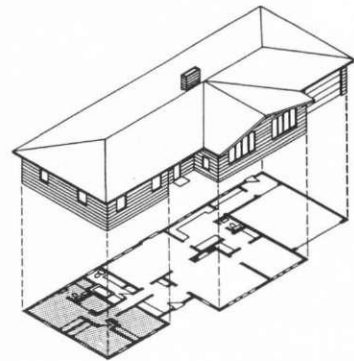
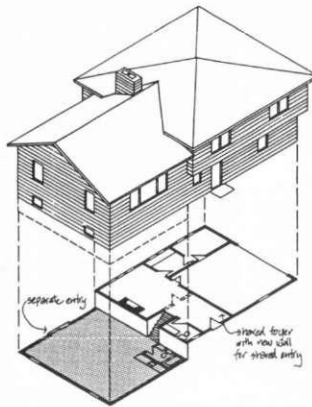
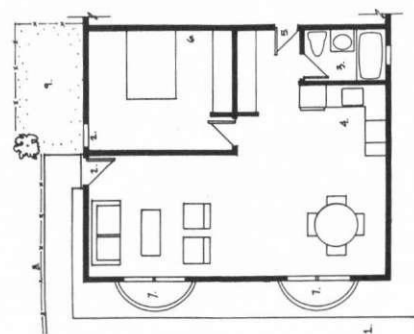


Photo of "box" house originally designed as a duplex, with third unit inserted into the basement (see new door added).



Inserting a second unit in the ranch house.



Inserting a second unit in the split-level house.

2. Transformation Through Addition

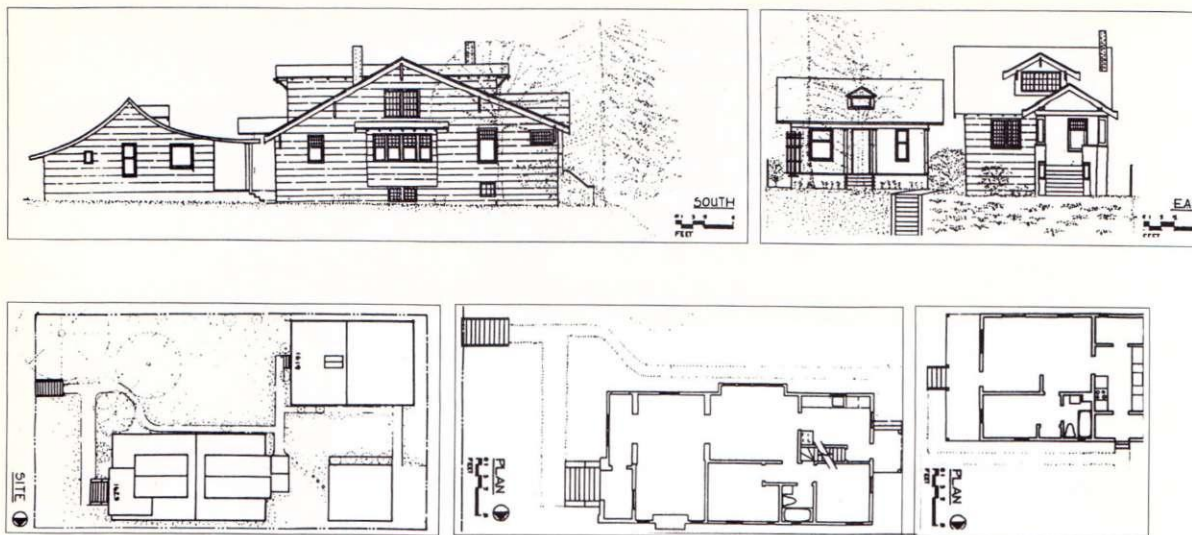
Second units are also accommodated through the building of additions to existing houses – special wings being constructed to increase the size of the house and to provide space for the second unit. Alternatively, the second unit is located in a separate structure, usually in the back of the lot. The structure may be built as new or remodelled from an old garage, carriage house, or garden tool shed or cottage.



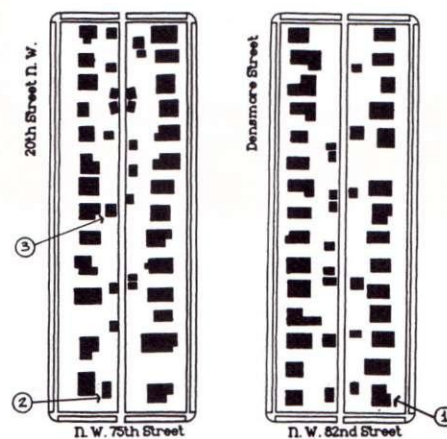
Photo of a second unit in a small separate structure in the back of the lot, and accessed through an alley.



A garage apartment after conversion.



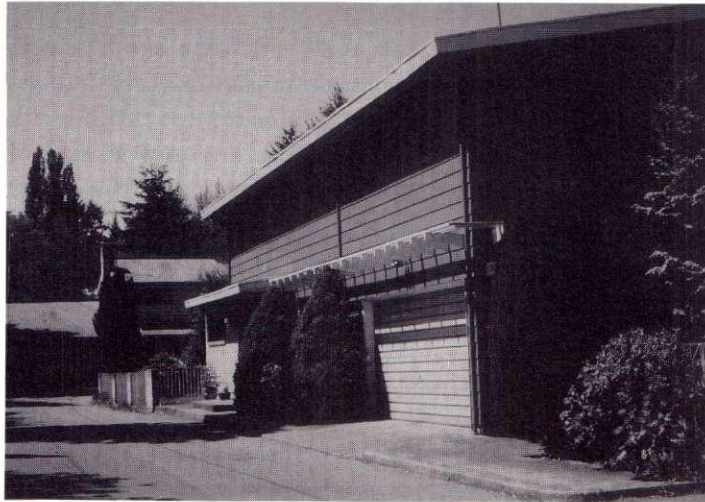
Detailed plans of second unit accommodated in a house in the back of the lot (in this case, the back house was the original construction).



Block where several second units accommodated in or on top of garages in the back of the lot. Access is provided through the alley.

3. Transformation Through Lot Subdivision

When the lot is large enough, it can be subdivided to provide for the building of a legally separate property. Wide lots may be subdivided into two narrow ones. But lots which are too narrow for subdivision but deep enough can be subdivided into so-called flag lots shaped as panhandles. Flag lots are common in small towns or erstwhile agricultural areas at the outskirts of towns where land was originally subdivided into large parcels because land was cheap. A set of as many as five flag lots can be found, with four separate driveways leading to the back lots. In some cases, back lots share a common access to save land.



Plan of double flag lots sharing a driveway.

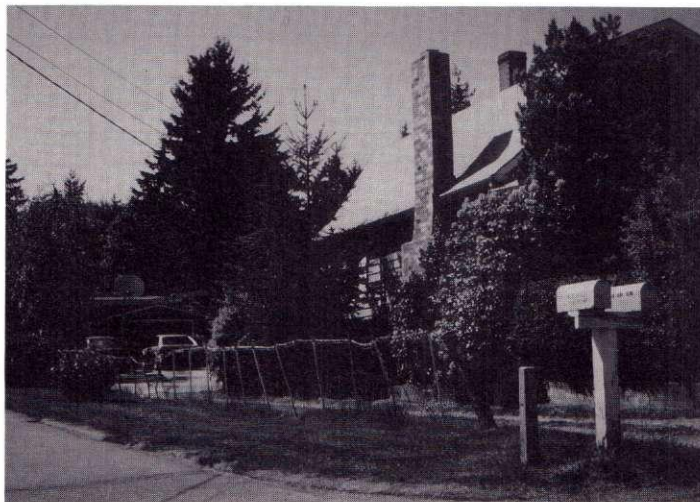
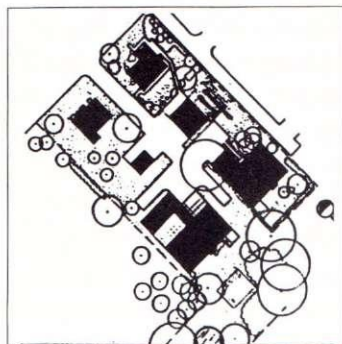
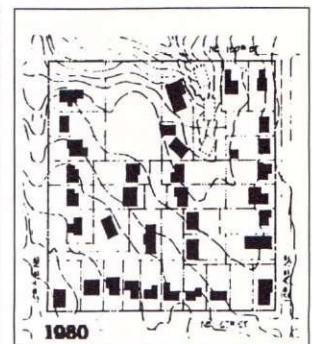
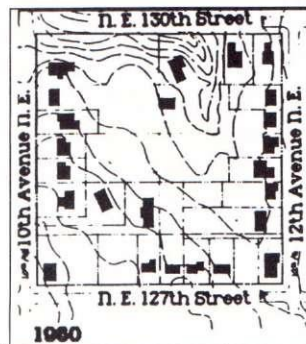


Photo of driveway passing by house on the street and leading to house in the flag lot.



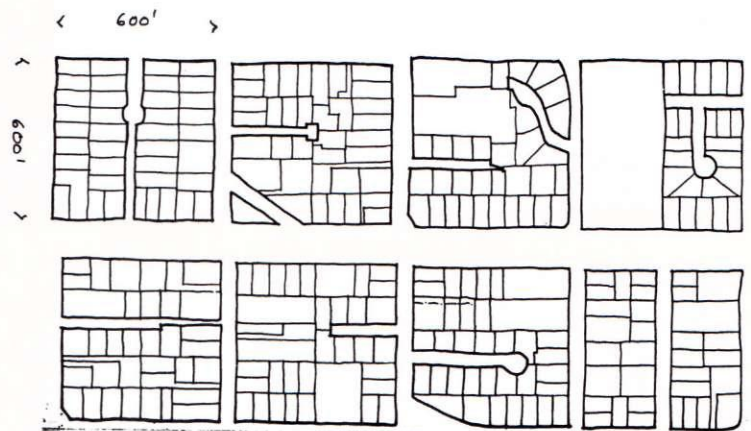
Alley inserted between two deep lots which are subdivided into lots.



Plans of simple flag lots inserted in the originally deep lots.

4. Transformation of Block Subdivision

In cases where the block is configured with large lots for single houses, it is possible to introduce a street or alley in the back of the lots which in turn allows each lot to be subdivided into two lots with independent access. In cases where properties line only two sides of the block, corner lots can be subdivided to add properties on the two other sides of the block.



New alleys and culs-de-sac provide access to newly subdivided lots in the interior of large, 600-foot (200-meter) square blocks.

Incentives for Creation of Second Units

Advocates have listed the following advantages to housing policies encouraging second units. First, they are a *source of affordable housing*. All areas surveyed which had a sizeable number of secondary units showed that rents for the units were lower than in comparable new apartment buildings, and that the quality of the units was also superior. This is explained by the fact that the owners who usually live in these houses often favor compatibility with tenants and as a result do not maximize their rental income potential. Also, the cost of inserting the second units in the single-family fabric is about one-third of a comparable new apartment, the major saving lying in the absence of added land and infrastructure costs. Second, the units permit *a better use of existing housing and land* because many single-family houses are simply too large for the needs and the means of today's families. Thus they tap underutilized existing housing resources. Also, they *encourage the maintenance of the existing housing stock* as homeowners can increase their revenues. Fourth, they provide *housing diversity with minimal disruption* compared to new housing which involves demolition and replacement, as well as the introduction of new building types and aesthetics.

Fifth, they offer *neighborhood stability* by allowing people to stay in their homes in spite of their changing needs and means. They also offer opportunities for intergenerational living. And sixth, second units *improve the tax base* of an area.

Public officials, housing experts, and prospective residents agree that second units should be encouraged in many single-family areas. The following incentives and removals of restrictions have been suggested to promote this strategy for new affordable housing:

- low interest loans for conversion for low- and middle-income homeowners financed through tax-exempt bonds;
- levy fees and property tax assessments based on the scale and impact of the additional unit but not on the unit as a new single-family house;
- one-step process for abiding to land use and building codes permits;
- no use permit or public hearing requirements
- low fees for permits;
- no occupancy restrictions;
- no unit size restrictions;
- all types of second units allowed;
- no more than one additional off-street parking space required; tandem parking allowed; parking in the set backs required by zoning allowed;
- special assistance extended to homeowners;
- homeowners allowed to act as their own general contractor.

Conclusions

There is clearly much activity in the area of subdividing single-family properties in the U.S. – on the part of homeowners working both within and without the legal boundaries of local ordinances, as well as on the part of the public sector attempting to devise regulations. The real estate industry also favors the process, especially as it facilitates sales of existing properties. Yet generally, the political climate in most communities is not conducive to subdivision, and bureaucratic red tape is endemic to the process of legalizing the units. This conservative attitude is particularly surprising in the light of escalating high maintenance and energy costs – a two-family house costs half as much to heat or cool as a one-family house. Resistance to subdivision can be explained by several factors which go beyond the bureaucratic impediments noted earlier and which relate to the financial dimension of housing in the U.S. *First* is the prevailing belief that the single-family house is “as American as apple pie”, meaning that self-respecting people by definition live in one. *Second* is the federal tax structure which allows homeowners to deduct house mortgage interests directly from their income

but which requires all rental monies to be included as income. *Third*, housing has traditionally served as an important source of retirement funds for middle- and upper-class Americans: as the value of property has risen regularly and sometimes incredibly, families who originally bought a modest home find that they can sell it in their late middle-years at what for many, amounts to a small fortune. Such fortunate people do sell their houses, buy smaller and cheaper units (an apartment or condominium of some sort) and invest whatever money is left. There again, the tax structure encourages selling rather than remodelling, as the homeowner 55 years of age or older can forgo capital gains tax on the sale – a one-time benefit aimed at augmenting the savings of retirees. Had the same homeowner not had the benefit of cashing in the added value to the house, would he or she have remodelled the house for subdivision? The answer is a partial yes: some would do so. *Fourth*, banks have offered what are termed reverse mortgages, whereby the bank will pay a monthly allowance to the homeowner based on the increased value of the house. In these cases, however, the bank becomes in effect a legal co-owner of the house. Such arrangements have not been entirely successful because they require a fairly sophisticated understanding of accounting, something that many homeowners do not have or have access to. In many cases also, the bank makes undue demands on the homeowner who may quickly feel trapped in bureaucratic procedures. Nonetheless, this option does not encourage the homeowner to subdivide the house for additional income. *Fifth*, the emphasis on the production of new housing away from existing urbanized areas has encouraged people to move on to new quarters as they reach a different stage in their life and need different (usually smaller) housing. Had these same people stayed in their original house, they would have been more inclined to subdivide it. However, it should be noted too that a sizeable proportion of new housing even in exurban areas is now in the form of attached single-family housing (row or terrace houses), duplexes (semi-detached houses or two apartments stacked in one house), triplexes, and fourplexes – thus housing of higher density than the single-family property.

Further, the housing situation has grown much more diffuse in the U.S. than in Sweden, especially in the last ten years of federal politics. Statistics on housing needs and demand are extremely poor, primarily based on marketing surveys which are intended to sell products rather than find out what people really need. These surveys also bypass those trapped in rental apartments who are unlikely to be able to afford ownership at all. Similarly, inventories of housing stock are coarse, based on the number of housing units, their basic characteristics, and approximate age. In such a climate, it is difficult to develop the fine-grained, personal, project by

project approach which is so often used in Swedish cases of renovation or remodelling of the housing stock. In short, while housing subdivision is everywhere in American cities, both political and regulatory contexts make it difficult to call it a *bone fide* strategy for providing needed affordable housing.

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