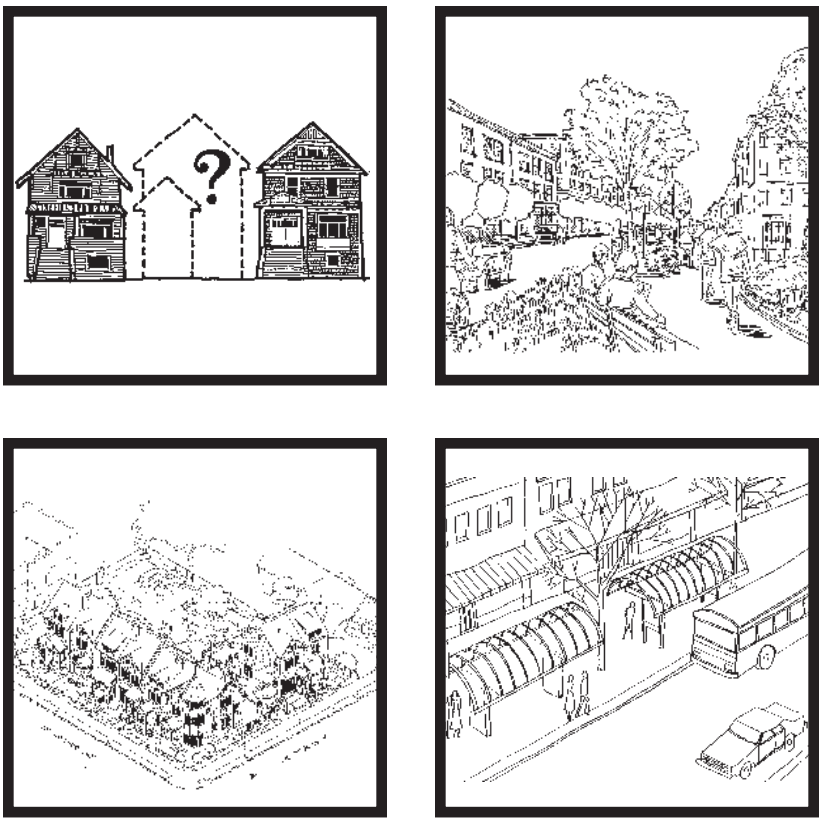

INFILL DEVELOPMENT

Strategies for Shaping Livable Neighborhoods

MUNICIPAL RESEARCH & SERVICES CENTER OF WASHINGTON

June 1997 ● Report No. 38

INFILL DEVELOPMENT

Strategies for Shaping Livable Neighborhoods

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Preface

Recent efforts by many communities to curb sprawling development, as well as changing housing needs, have rekindled interest in infill development—the development of vacant lands within urban areas. In Washington State, and other places, many fresh ideas have emerged from the process of reexamining the codes and policies that shape how communities will grow. This handbook describes promising strategies and provides examples of programs local jurisdictions can use to encourage infill development. The publication includes strategies to make it more feasible for developers to do infill development. It also provides strategies to make infill development more appealing to existing and potential residents. This handbook emphasizes the importance of thoroughly considering overall neighborhood needs and context to ensure successful infill development.

Special acknowledgment is given to Susan C. Enger, MRSC Planning Consultant, who researched and wrote this handbook. From our staff, Carol Tobin, Public Policy Consultant and Research Librarian, John Carpita, Public Works Consultant, and Judith Cox, Finance Consultant, reviewed the draft and provided helpful advice. Appreciation for fine work is also given to Holly Martin, for designing the format and preparing the document for publication, to Terri Sanders for computerizing scanned graphics, and to Nicole Stiver for preparing a number of illustrations for the publication.

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Introduction

Communities across the country are increasingly recognizing that the spread out patterns of growth, which have shaped American communities for the past several decades, cannot be sustained. Problems of increased traffic congestion, overburdened public facilities, increased housing and infrastructure costs, loss of open space and loss of other valued community resources are typically associated with such patterns. Instead, an increased emphasis on developing passed-over parcels within developed areas, and on maximizing use of existing public facilities is needed. Many communities are implementing programs designed to reverse inefficient patterns of sprawling, low-density growth. To contain sprawl development, most Washington communities are adopting urban growth boundaries which will restrict the amount of land that is available, outside of urban centers, for development. The resulting reduced land supply will focus new interest on infill development opportunities in central and suburban cities alike. A renewed emphasis on infill development can reverse the growing problems fueled by sprawl development.

Infill development is the process of developing vacant or under-used parcels within existing urban areas that are already largely developed. Most communities have significant vacant land within city limits, which, for various reasons, has been passed over in the normal course of urbanization. The program of infill development promoted in this handbook is more than the piecemeal development of individual lots. Instead, a successful infill development program focuses on the completion of the existing community fabric. It should focus on filling gaps in the neighborhood. Infill development, as discussed in this publication contributes to a healthy mix of uses that provides added vitality and convenience for residents. In addition, it is characterized by overall residential densities high enough to support transit, and a wider variety of services and amenities. It is designed to support improved transportation choices, including convenient vehicular and pedestrian circulation, and regular transit service. Attention to the character of development also is a key component for ensuing that the new development fits the existing context, and gains neighborhood acceptance.

The more comprehensive program of infill development discussed in this handbook will require a cooperative partnership between government, the development community, financial institutions, non-profit organizations, neighborhood organizations and other resources to achieve infill success.

Why is Infill Development Needed?

- **Infill development contributes to a more compact form of development which is less consumptive of land and resources.** Many developers are bypassing vacant urban area land for less expensive land beyond our cities edges. Our current patterns of sprawling, low-density development at the urban fringe are consuming land (including farmlands, wetlands, and other resource lands) at a much faster rate than population growth. In the Puget Sound region between 1970 and 1990, for instance, population has increased by 36 percent. During the same period, the amount of developed land has increased by 87 percent (Pivo and Lidman, 1990). Similar trends have been documented in Maryland, New Jersey, and other regions. According to the Governor's Council

on New Jersey's Outdoors, "threats to the environment cannot be explained by the state's population growth. Rather, it is explained by the fact that one-story buildings, expansive parking areas, and urban sprawl have been favored over more compact development" (Governor's Council on New Jersey's Outdoors in Mendelssohn, 1991).

- **Infill development offers increased mobility for those who can't drive or prefer not to drive. It is also an important part of the formula for minimizing traffic congestion.** In-city living offers other transportation choices in addition to the automobile. Filling in the gaps creates higher average densities, which in turn support more frequent transit service. Residents who live near where they work, shop, or pursue other activities often can choose to walk, and carpools may be easier to arrange. Such choice is particularly important for those who can't drive including elderly, youth, or low income residents who lack a car. Communities are learning that they cannot build their way out of traffic congestion. New highways or lane additions typically fill up as fast as they are built as a result of the extended commutes and more frequent vehicle trips required by spread-out development. For instance, in King County, Washington, total vehicle miles traveled (VMT) has increased 64 percent in ten years, while population has increased only 18 percent (1996 King County Annual Growth Report). To the extent that more people live closer to jobs, shopping and other activities, the number and length of vehicle trips can be reduced. Individuals benefit from reduced transportation costs as well as increased time to pursue various interests.

- **Fully utilizing existing facilities and services before considering costly service extensions to outlying areas offers savings for local government budgets.** Building expensive new facilities while existing facilities have existing capacity is wasteful duplication in an era of belt tightening. Many local jurisdictions traditionally have averaged the costs of services across all users rather than charging the full cost of serving more distant development. This has made outlying development relatively less expensive for the developer, while straining local government budgets. In addition, we are racing to construct expensive, new schools in outlying areas at the same time that we agonize over closing and finding new uses for inner city schools. Growth at the cities' edges has come at the expense of central cities. Older buildings in core areas have been abandoned, existing utilities are underutilized and, in general, new investment has been redirected to the outlying areas. Infill development also bolsters local government budgets by putting underutilized vacant land back on the tax roles. Spreading facility operation and maintenance costs among more residents and businesses ultimately will reduce costs for individual city taxpayers.

- **Infill development offers opportunities to increase the supply of housing types which meet the needs and purchasing power of today's households.** The average household size (number of people per household) in the United States today is 2.6 compared to 3.54 in 1950 (Bogdan,1995). The percentage of "traditional" households with two parents, children (and most likely a dog or cat) has steadily declined in recent years. Smaller families, elderly or empty-nester households, single parent households and single individuals make up an increasing share of our households. However, most of our current housing stock was built was built with this larger traditional family in mind. An increased supply of smaller-sized housing units can offer more affordable and lower maintenance housing choices for smaller households. This is especially important in an era where

fewer and fewer households can afford the average-priced home. Convenient in-city housing also offers time and transportation cost savings for today's households.

- **Renewed infill and investment in our central cities is crucial to the overall economic health of the surrounding regions.** Infill development brings increased numbers of residents to support in-city commercial centers. A more efficient business climate can result from employment centers located in close proximity rather than in scattered sites. As Charles Thurow notes (1994) the health of central city downtowns is intertwined with that of the region as a whole. For a region to be well-positioned to compete in a global economy, it must have at its vortex a thriving central city which can provide the vitality and draw to fuel the region's economy.

- **Infill development can bring new opportunity and improved quality of life for in-city residents.** The migration of higher-income residents, together with the best jobs, educational opportunities and services from many central cities, has left low-income residents isolated. It can be very difficult for them to learn about and travel to distant jobs, especially if dependent on transit that requires multiple bus transfers, or carpooling to scattered job sites. Reduced population and average income in cities also produces fewer tax dollars to support public services, and local businesses. Fewer opportunities and positive role models, can contribute to loss of hope, increased anti-social behavior, crime and even riots, as in Los Angeles. These trends further fuel middle-class migration from cities. In contrast, in-city neighborhoods offer living opportunities in neighborhoods with distinctive character and more opportunity for social interaction than sprawl development typically provides. Infill development can return jobs, purchasing power and new amenities to an urban neighborhood.

- **In-city neighborhoods, which provide central gathering places within ready walking distance, can facilitate interaction between neighbors.** Many existing in-city neighborhoods are laid out with parks, elementary schools, and convenience shopping within walking distance. These neighborhood focal points provide opportunity for regular contact with neighbors. Furthermore, they already exist and need only be preserved. In addition, if people do not have to spend all of their time traveling in different directions to work, shop, go to school, and recreate, they will have more time for family or community affairs and activities.

- **Energy and Environment savings are an important by-product of infill development.** New cars have improved fuel efficiency from the 1973 rate of 13 mpg to 29 mpg in 1989. Yet we continue to lose ground in our efforts to reduce fuel consumption. Sprawl-induced increases in automobile travel outweigh the improved fuel efficiency. Similarly, despite tightened tailpipe emissions, pollutants are projected to be worst in 2010, because of increased travel (Calthorpe, 1993). Compact development also takes development pressure off of sensitive lands, which have important functions such as wetlands and wildlife habitat.

Purpose of this Publication

Several excellent earlier publications present studies and thorough discussion about infill vacant land supply, development feasibility, market potential, characteristics and strategies to make it happen (see *Infill Development Strategies,* 1982, and *Making Infill Projects Work, 1985,* available from the Urban Land Institute). This guidebook does not attempt to duplicate or replace the useful background information of the earlier publications. The reader is encouraged to refer to these materials, as well. Instead, the focuses of this publication are to:

1. Provide an update on strategies which hold particular promise for making infill development happen—strategies to make infill development attractive to developers to do as well as appealing to potential and existing residents.

2. Highlight infill development's role as a critical element in accomplishing the community's goals for growth and development such as reducing transportation congestion, containing sprawl, revitalizing downtowns, encouraging affordable housing, and others.

3. Focus attention on emerging opportunities for infill development as economic and demographic conditions change.

4. Stress the importance of implementing measures to reverse negative perceptions and/or experiences about urban life, including concerns about security, quality of education, availability of services, amenities and other concerns.

5. Encourage a holistic approach to rebuilding and filling the gaps in neighborhoods. Facilitating the provision of public and private services, including frequent transit, parks, well-stocked grocery stores, and safe routes to school can do much to support successful infill development.

Figure 1 Infill development should complement existing neighborhood character.
(Source: City of Vancouver, B.C. Planning Department)

Organization

The chapter "Remedying Barriers/Recognizing Opportunities," will briefly summarize some of the barriers that have discouraged infill development and the emerging opportunities for such development. The second chapter, "Formula for Successful Infill Development," provides a checklist

for successful infill development. Strategies to make infill development more feasible for developers to do are presented in the third chapter "Strategies to Make Attractive for Developers." The final chapters "Strategies to Make Attractive to Potential Residents" and "Strategies to Make Acceptable to Existing Residents," present strategies to make infill development attractive to existing and potential residents. Appendix H contains a list of resources/contacts who can provide further information about examples used in this publication.

Remedying Barriers/Recognizing Opportunities

Parcels that have remained undeveloped over time, even when surrounding land has developed, are usually vacant for good reason. Although some have been held out of development because of the whims of a property owner or the speculator's hope for future profit, many others are vacant because some obstacle to their development exists. Infill parcels are a special type of development situation that involves greater risk and challenge to a developer and is of greater sensitivity to surrounding neighbors and city officials. However, the time seems particularly ripe for a greater focus on infill development. Recent legislation, changing demographics and economic conditions present new opportunities for infill. In this section, I will briefly note some obstacles to infill that must be overcome. I will then highlight several trends that provide new support for infill development. Finally, I will note some specific types of infill development situations which offer great promise.

Obstacles

Many vacant parcels in built-up areas suffer from site constraints that have inhibited their development. A variety of environmental constraints, such as steep slopes, streams or wetlands may restrict development of a parcel. The size, width or shape of a parcel may make it difficult to develop in a manner that meets current land use regulations or current market tastes. The site may be in an area that lacks basic infrastructure such as storm sewer or sidewalks. Sewer and water lines or other facilities may be undersized or deteriorated, requiring expensive improvements. As local budgets tighten, many communities have deferred maintenance on these and other important facilities. At times, parcels have been "landlocked" (left without street access by the development of surrounding lots).

New, stricter regulations may cause difficulties when applied to pre-existing lots. For instance, new parking, landscaping or drainage requirements may require more land area than could be provided and still accommodate reasonable development. New requirements or exactions for infrastructure improvements may make development prohibitive on land that is already expensive. As the area develops, increasing land values can make property expensive to purchase and develop at existing permitted densities.

In addition, neighborhood opposition can develop, particularly if the new development is very different in appearance or scale. New infill may also be seen as contributing to traffic problems, to crowded facilities or just to the loss of the vacant "mini-park" next door. The opposition can result in a lengthy permit process (and time is money in the development world), expensive conditions on project approval or even the death of the project.

The ready availability of cheaper land on the urban fringe has provided stiff competition to urban vacant lands. This was particularly true when federal funding heavily subsidized new highway and infrastructure construction. Most communities subsidize infrastructure for development at the fringe

by averaging infrastructure costs throughout the service area. Also, most central city vacant parcels sites are small relative to their urban fringe counterparts. Even with higher density allowances, the smaller sites accommodate fewer total units, reducing the potential for economies of scale than are possible with large track subdivisions. One study in the Albuquerque area investigated comparative costs between infill versus fringe single-family, multifamily and commercial projects. The study concluded that total costs for an infill detached single family project would exceed a comparable project in a fringe area by $10,300. A multifamily project in an infill area would command similar market rents but would cost seven percent more to develop than the comparable fringe project. A retail project would cost 32 percent more to develop in the infill area than the fringe area (Colombo & Taylor, 1988).

Partly in response to cheaper land, about 70 percent of new jobs are being created outside cities. Many of the new jobs require technical training which is also not readily accessible to inner-city residents (Kelley, 1996). Transportation to scattered job sites outside of cities can be difficult for those dependent on transit because it can require multiple transfers or inconvenient carpool arrangements.

The perception of greater crime, inferior schools and deteriorating facilities in central areas has motivated many middle-and upper-income buyers to escape to ex-urban enclaves. Although many northwestern cities retain some strong middle-class neighborhoods, the allure of "country living" remains powerful, especially for middle-class families with children. These perceptions also reduce the marketability of urban sites to new buyers. In a vicious cycle, the market for some urban sites has continued to weaken and financing has become more difficult as banks tend to "redline" or avoid risky investment areas.

Finally, previously developed and abandoned industrial sites in urban areas may remain vacant where the clean-up costs of industrial pollution are prohibitive. Clean-up costs of these "brownfield" (industrially-polluted) sites can at times exceed property values, again making virgin "greenfield" sites (which have never been developed) at the urban fringe comparably more attractive.

Figure 2 Cheap "greenfield" land provides stiff competition.
(Source: Nicole Stiver, Municipal Research & Services Center, 1997)

Emerging Opportunities

■ Recent Legislation

Several recent events have begun to brighten the prospects for infill development. The Washington Growth Management Act of 1990 (GMA) requires that most Washington counties, in cooperation with cities, designate urban growth areas (UGAs). UGAs are to include cities, lands already characterized by urban growth, and, if necessary, additional lands adjacent to such lands. Urban growth is not permitted outside of UGAs (RCW 36.70A.110). Annexations beyond the UGA are also prohibited. By reducing the supply of land that can be developed in urban uses, the GMA reduces the competition from outlying areas and enhances infill prospects. GMA goals for reducing sprawl, encouraging affordable housing and a variety of residential densities, assuring adequate facilities and other goals also strengthen infill prospects. The GMA planning processes is also intended develop consensus and provide clear guidelines about what development is appropriate in a community long before individual applications are considered. The process, which promotes citizen involvement and development of a shared vision, can reduce neighborhood opposition when projects are consistent with community goals. A variety of creative and more flexible approaches for implementing growth management objectives are being developed by numerous Washington cities, in response to GMA. Many of these new approaches are well-suited for infill development.

Following on the heels of GMA, ESHB 1724 required most Washington cities and counties to limit project permit application review time, to limit the number of hearings and appeals, to generally streamline project review procedures, and to better coordinate/integrate environmental and applications for project permits. These changes should reduce the risk of lengthy project review that can occur, when neighborhood opposition to next door development arises. Also in the spirit of regulatory reform, many communities are revising land use controls to provide increased flexibility for development where conditions are difficult. Again, this should facilitate the development of passed-over infill sites.

In addition, the Intermodal Surface Transportation Act of 1991 (ISTEA) and Washington's Commute Trip Reduction Act favor infill development. ISTEA represents a shift in emphasis to improved mobility rather than narrowly focusing on highway construction that subsidizes development in outlying areas. It has provided increased flexibility and funding for pedestrian and bicycle facilities, transit capital projects and other alternative transportation modes which can support infill development. Washington's Commute Trip Reduction law has provided the impetus for many local programs, which among other objectives, seek to reduce the number of trips made by vehicles that are transporting a single person to work. Some local programs, such as those reducing the ready availability of free, convenient parking at non-urban work sites, help put urban employment centers on a more equal footing with outlying employment centers.

Other new programs and policies, such as EPA's increased flexibility in regulating urban brownfield site clean-up, also favor increased interest in infill development.

■ Changing Demographics and Economic Conditions

As the recent Portland, Oregon study "Infill Development: Market Trends and Prototypes," comments, most Americans still would prefer a detached single family home on a lot with a private lawn. However, "economics and changing households are in the process of changing the American dream" (Tashman, Associates & Leland Consulting Group, 1993). This new reality opens up the opportunity for a range of new infill development types.

Much of our existing housing stock was built at a time when the "traditional" household consisted of two parents with children. That picture has dramatically changed. The average household size in the U.S. has dropped from 3.54 in 1950 to 2.6 today (Boagdan, 1995). The average household size in Washington is slightly smaller at 2.53 (Bureau of Census, 1990). Today, 50 percent of all Washington households are childless (1990 Census of Population and Housing). The percentage of childless households for the U.S. as a whole is even higher. (Leland-Tashman, 1993). Single parents with children now constitute about 10 percent of U.S. households (Leland-Tashman, 1993).

The percentage of Washington's population which is over 65 in Washington has increased to 11.4 percent. The percentage of elderly will increase even more rapidly after the turn of the century when the leading edge of the baby boom generation begins turning 65.

Housing costs have risen faster than average incomes in recent years, placing home ownership of traditional housing types out of reach for many households. For instance, King County, Washington found that despite rock bottom interest rates, in 1994, a $19,000 "affordability gap" existed between the median household income and the income that would be required to purchase the average-priced single family home in the county. Similarly, the affordability gap for apartment rental was $316 in 1995 in King County. (King County, 1996.)

In general, these smaller households require less space than the typical family of the past. Households whose occupants are aging or maintaining hectic schedules often will seek smaller, lower maintenance housing types than those now readily available. Childless households will be less concerned with locating in well-regarded school districts and may place higher value on convenient access to work. Convenient access to frequent transit service, medical centers, and other services may help elderly households to function independently for longer. Single parent families typically have below average incomes, requiring affordable housing and transportation costs. The also may seek to be near special services such as child care. Even families or individuals at median income are in need of more affordable housing than today's average-priced single family house. Infill housing types which are geared to meet these emerging needs have an excellent prognosis for success.

Recognizing Opportunities for Locating Infill Development

The individual vacant lot next door represents one obvious type of opportunity for small-scale incremental infill development. A Real Estate Research Corporation (RERC, 1982) study found that over half of the vacant parcels in three cities studied were under one-quarter acre in size. Less obvious are the opportunities represented by underutilized lots. For instance, a single house may be

built on a double lot to provide extra yard area. If the house is sited entirely on one of the lots, it may be possible to an additional unit without need of further subdivision. Or, an existing lot may be large enough and developed in a manner that allows additional smaller dwelling(s) (such as an accessory dwelling unit) to be added. A change in ownership or financial circumstances may make these infill sites available without further encouragement by local government. Where constraints have inhibited development, or low holding costs favor retaining land in a vacant state, government actions or improved construction techniques can encourage their development. The primary challenge of developing of such small infill sites is to assure new development fits the established neighborhood context.

Most communities also have a number of larger vacant sites. The RERC study cited above found that less than half of the vacant parcels exceeded one-quarter acre and few parcels exceeded five acres in size. However, over half of the sampled infill parcels bordered other vacant parcels, providing some opportunity for assembling larger parcels. Furthermore, in tight economic times, vacant land can become available through tax foreclosures or when surplus institutional or privately-held land is divested. Where parcels of several acres (approximately half of a typical city block) or more exist, greater opportunity exists for planning infill development as a package. Infill development on larger parcels offers an opportunity for increased densities, which enhance project feasibility, if it is well-designed to control its impacts on the surrounding neighborhood.

Several types of locations offer particular promise for larger infill development projects. Because infill development can be used to increase average densities and add to the variety of uses, it can help implement objectives for (1) transit corridors/station areas, (2) urban activity centers, and (3) mixed-use districts. Larger infill development projects may gain more ready acceptance in such areas than in homogeneous neighborhoods.

■ Transit Corridors and Station Areas

The Puget Sound area of Washington (which includes five out of six of Washington's largest cities) recently approved bond financing for a light rail system, and other transit system improvements. Infill development and redevelopment that increases densities along transit corridors and around stations can increase ridership potential and the use of transit. In return, residents that can locate along express bus routes and rail rapid transit corridors will greatly benefit from convenient access to jobs and other destinations. Transportation expenses can be reduced for infill residents when a family needs fewer vehicles, or when fuel and maintenance costs for a vehicle are reduced. Because a rail line is fixed in location, infill development investors have greater assurance that rapid transit will continue as an amenity to their project into the foreseeable future. Transit-oriented development is characterized by higher densities, a balanced mix of uses and good pedestrian linkage between uses and transit stops. A mix of uses within a transit corridor can promote more directionally-balanced transit service if riders have reasons to travel in both directions.

■ "Urban Villages"/Activity Centers

Cities such as Seattle are addressing growth management objectives, in part, by concentrating and intensifying development in and around existing or planned centers within a city. Consisting of a more intense level of residential, commercial and, in many cases, employment uses, these centers serve as hubs for less intensely developed neighborhoods and wider communities. Seattle's urban villages "are conceived as well identified and largely self-contained residential and commercial neighborhoods. Residential densities in urban villages would be high enough to encourage walking, support efficient transit service and provide adequate markets for neighborhood stores (Seattle Planning Department, 1993)." Infill development located within and around such activity centers may encounter less resistance than new development in the middle of a well-established residential area. Again, infill development can be employed to add density and a balanced mix of uses to these such centers. It can contribute to a wide variety of commercial services, employment opportunities, governmental services, restaurants and entertainment and cultural/recreational opportunities. The variety and 24-hour activity will make these centers attractive to some segments of the housing market.

■ Mixed-Use Districts

Many communities are considering designation of areas for a more balanced mix of uses to increase convenience and provide greater transportation choices. When a wide variety of uses are located in close proximity to each other, walking and bicycling become practical alternatives to automobile travel. Such infill clearly supports legislative objectives for improved mobility and reduced congestion. In return, infill development success can be enhanced by planning a mutually-supportive mix of uses. A mixing of uses can add variety and vitality to an area, making it a more attractive, interesting place to live. In addition, convenient commercial and personal services, readily accessible to work sites and residential areas, and convenient cultural or recreational amenities can enhance the attractiveness of infill development. Infill development can fill gaps to benefit the entire neighborhood including existing residents, for instance by including a grocery store or park where none exists. Commercial centers, surplus industrial or institutional lands, transit corridors and neighborhoods that already have some mixing of uses may offer the best opportunities for mixed use developments. Performance standards and careful design will be needed to ensure that dissimilar uses can be made compatible neighbors. For examples of policies and regulations promoting mixed-use development, see "Creating Transit-Supportive Regulations," PAS Report No. 468, APA, January 1996.

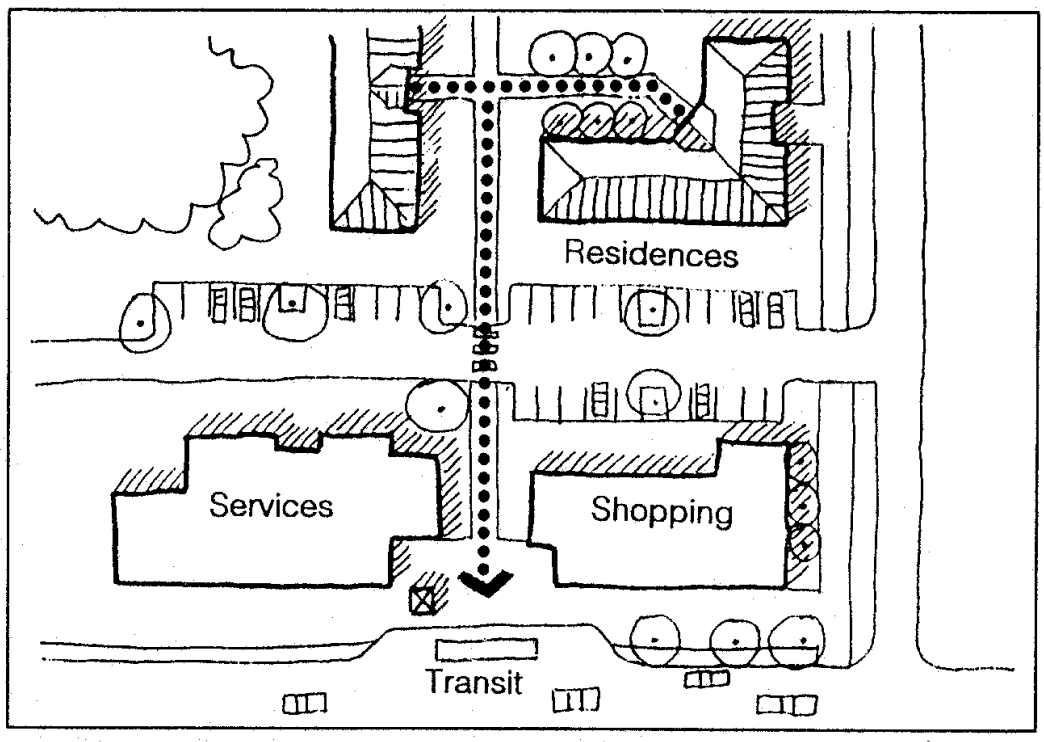


Figure 3 A mix of uses adds to the vitality and convenience of urban living.
(Source: Snohomish County Transportation Authority, 1993)

Formula for Successful Infill Development

Many communities have begun to realize that success in developing infill parcels requires more than a philosophy of "if you zone it, they will come." To ensure successful programs that stimulate infill development consistent with a community's vision, communities should:

1. Provide support which makes it attractive (profitable) for private sector developers to produce infill development. At the same time, encourage infill development which is attractive to potential residents and beneficial/acceptable to existing residents.

2. Promote cooperation to make it happen. Public officials, (sometimes from multiple jurisdictions), representatives from neighborhood organizations, non-profits, private developers and financial institutions will need to join forces for extensive, community revitalizing infill development to occur. Work for a shared vision for in-city neighborhoods.

3. Recognize where the best opportunities exist for infill development that reinforces community objectives for future growth. Some locations, such as transit corridors, or locations near employment, convenient shopping, and recreational or cultural amenities will greatly enhance infill success. Infill development success is also enhanced when it is done in a manner which reinforces the land use patterns and policy directions promoted by the recent state legislation described earlier. In particular, growth management and transportation legislation promote (1) compact development in urban centers rather than spread out development, (2) a balanced mix of mutually-supportive land uses to facilitate walking and transit, and (3) increased densities in transit corridors to better support frequent transit service.

4. Understand the larger context of how the neighborhood looks and functions as a whole. Appeal to new residents and acceptance by existing residents will be enhanced if the new development fits in with the existing context. It should also contribute in some way to the functioning and the desirability of the neighborhood. To attract residents who will live in infill housing, infill design must address their needs—for affordable housing, security, convenient access, services and other qualities. Infill development should fill the existing gaps in the neighborhood.

5. Identify priority areas where infill development can be successful and should be encouraged. Focus limited community resources to make targeted neighborhoods fully ready for infill development. Strive for a critical mass of public investment to engender private investor confidence.

6. Work with the development community to target the housing needs of smaller "non-traditional" family households (such as empty-nesters, single parent households, or childless couples) that are more likely to be attracted to close-in housing.

7. Address the barriers (real and perceived) which have prevented past development of vacant parcels. Local jurisdictions may be able to remedy inadequate infrastructure, difficult parcel assembly, lengthy permit processes, security concerns or other barriers which have discouraged past development. Successful infill will often require dealing with fears that many people have about central city.

8. In general, re-examine pass ways of doing business and consider whether new approaches may work better for current conditions.

Strategies to Make Attractive for Developers

As noted in the last section, developers may hesitate to undertake infill development projects because of real or perceived obstacles and risks inherent in such development. Developers must expect a reasonable return on their investment if they are to pursue infill development. They must feel confident that sufficient market demand exists for their intended product. Because time is money, developers also must believe that they can complete a project on a reasonable schedule. A number of studies indicate that many infill sites can be developed without public assistance, especially with the opportunities presented by emerging trends. Even so, the smaller-scale projects, lower profit margins and greater uncertainty typical of infill situations may tend to be more attractive to smaller developers than larger well-established developers. Also, infill development in some locations and some types of infill housing will likely require government action or incentives. Although local governments can not, on their own, accomplish wide-spread infill development, they can often set the stage to enable infill development by the private sector. This section will suggest a number of strategies that can make it more attractive for developers to take advantage of infill development opportunities.

Adopt Infrastructure Strategies Which Support Development in Infill Areas

One of the attractions of infill sites is the general availability of existing infrastructure. However, as noted earlier, the site may lack some elements of basic infrastructure including direct road access to the site. In other cases, infrastructure may be undersized by current standards or densities, or may be deteriorated, requiring replacement, particularly for a larger infill project. Under such circumstances, infill development becomes increasingly troublesome and expensive relative to "greenfield" development. Developers, concerned about their bottom line, are likely to go elsewhere. Local governments can employ a number of strategies related to infrastructure to increase the attractiveness of infill areas relative to outlying areas. Local governments, in turn, will generally benefit from the long term reduced costs of extending and maintaining infrastructure to close-in neighborhoods, rather than more distant sites. For instance, a Rutgers University study of the New Jersey State Plan, approved in 1992, estimated it would save the state $1.3 billion in capital needs over 20 years and $400 million a year in operating costs of municipalities and school districts, as compared to accommodating the same population and facilities in a spread-city pattern" (Rutgers University Center for Public Policy Research, 1992).

■ Establish Focused Public Investment Areas

Local jurisdictions can set the stage for infill development by using a focused public investment strategy to direct growth to target infill areas within urban areas. Several Oregon cities have implemented focused public investment programs to promote infill development. Generally, these are areas where there is substantial existing development and the major public facilities are largely in place. Within these focused public investment areas (FPIAs), local government will take a more proactive role in providing infrastructure and shaping growth. Such focused public investment can fill the gaps where basic infrastructure is missing or needs upgrading. In addition, directing desirable amenities such as parks or libraries to these areas can bolster investor confidence in the market potential and stimulate surrounding private investment. Focusing public investment to assure fully-served neighborhoods is more effective than a dispersed (something-for-everyone) investment approach. With the dispersed approach, no area ends up with adequate facilities and services. The liveability of all areas falls short of the level which will attract prospective buyers and renters.

Local capital improvements plans can coordinate the sequential addition of land, eligible for public improvements, to the FPIAs, as improvements are completed in the initially designated FPIAs (Kelly, 1993). Development can still take place outside the FPIAs. However, the private sector bears full responsibility for providing public facilities and services, if they wish to proceed in advance of the city's FPIA designation and capital improvement plan schedule. Salem, Oregon's Transportation and Development Services Director notes that in Salem, if a developer builds outside the FPIA in "leapfrog land," he or she must (1) annex to the city, and (2) extend master plan facilities outward to the development, linking them to Salem's facilities (Siegel, 1993). Salem's program includes provision for a developer to be reimbursed for his fair share of the costs by future developers who will also use the facilities. Although the developer may be reimbursed later, the up-front costs and

financing needs are greatly increased. Because of the expense of major public facilities, the FPIA program provides a compelling incentive for developing first in infill areas in designated FPIAs. The development of infill areas becomes increasingly attractive and profitable relative to sites outside of FPIAs.

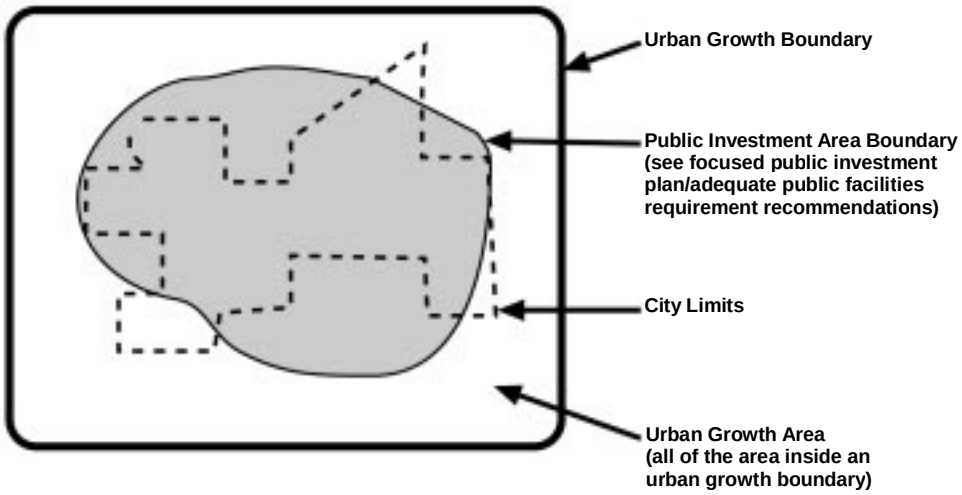


Figure 4 Focused public investment can stimulate infill development.
(Source: Oregon Department of Land Conservation and Development, 1992, redrawn by Nicole Stiver, Municipal Research & Services Center, 1997))

Successful Applications

Oregon's Department of Land Conservation and Development (DLCD) developed recommendations and guidelines for focused public investment programs for Oregon cities. Salem, Oregon, provided the initial model for the DLCD's proposed FPIA program.

The FPIAs proposed by DLCD call for five-year capital improvement plans to meet projected needs within the FPIAs. Local government is responsible for providing off-site improvements within the FPIA boundaries. The capital improvement plans should provide for the maintenance, replacement and upgrading of existing facilities. In addition, primary master plans must be developed for the entire urban growth area to identify major needed facilities. The FPIAs must provide at least a five year supply of fully-served, buildable land. The FPIAs can't include more area than a jurisdiction can demonstrate fiscal ability to serve. The local jurisdiction can, in some instances, invest outside the FPIA. For instance, it may do so if the investment would yield long-term capital cost savings or if it would complete a system which serves the entire urban growth area, such as a greenway trail (Oregon Department of Land Conservation and Development, 1992).

Policy Issues

- The FPIA programs require a commitment on the part of local jurisdictions to fund improvements within the FPIAs, where facilities are lacking or require upgrading. Assessments and fees must be in place to cover ongoing operation and maintenance costs and forecasted annual capital costs.

- Such a program will require coordination between cities and counties and between adjacent jurisdictions. If development can still take place in a scattered manner within adjacent jurisdictions, sprawling development could still ring a city and frustrate future logical expansion.

- Designating target areas for investment can be a politically difficult process.

■ Tie Infrastructure Policy to Service Area Tiers

A "tiering" of urban services can be used to accomplish similar objectives to those addressed by the focused public investment approach. The primary purpose of the technique is to assure a logical sequence of growth outward from developed areas. It can help direct growth to target areas where a full range of public services can be more readily provided. Several Washington communities have designated tiers, similar to programs pioneered by the Twin Cities area in Minnesota and Summit County, Utah. The tiers are basically a further refinement of the urban growth area designation process. They allow a community to further fine tune specific public service and growth management policies to these particular geographical subareas (tiers). Generally, the designated tiers are in the form of concentric circles around existing urban centers. The rings closest to the center(s) of existing development are the highest priority areas for growth and services. Local jurisdictions assume a greater share of the public improvements costs in the inner rings as an incentive to develop these areas first. Conversely, developers assume most or all of the costs of bringing services to outer rings. A capital facilities program linked to the mapped tier areas can provide a clear plan for when and where major improvements will be made. Designating tiers which stage growth over time also allows service providers to better anticipate, plan and provide for growth. As the first tiers are fully developed, the next tiers in line become target areas for development.

Promising Applications

Port Townsend, Washington has designated service tiers to help target growth and services within an overly generous urban growth boundary. Past platting and annexation practices resulted in land within city limits that far exceed 20-year growth projections. To ensure a more logical extension of growth and services within the boundary, the city has established three tiers. Approximately one half of the city falls within the first tier. The city has a stated policy of focusing a larger share of its programmed capital improvements into the first tier. The city is making a concerted effort to ensure that the first tier is fully served. If a developer seeks to develop on a block that lacks paved streets or other important infrastructure, the developer must put in the missing infrastructure. The developer pays only for the portion necessary to serve the new development. The city will pay the share related to properties that are already developed, and has set money aside in its capital improvements program

to cover these costs. The city will enter into a latecomers agreement with the developer to provide for payback to the developer for any properties not already developed. In certain areas, where improvements costs are prohibitive, and would discourage infill development, the city will allow development subject to an agreement that the developer or subsequent property owner will participate in a future LID. Over time, the city's policies should ensure that services within the first tier are brought up to standards. Within the second tier, the city will seek to put in some major infrastructure improvements, such as key arterial extensions, to the extent possible after first tier priorities for the year have been addressed. Within the third tier, the city requires full improvements but will not participate at all in the improvements. The developer must cover all costs of bringing required improvements to the property. The developer may get future payback through latecomer agreements, when and if other developments take place. The Western Washington Growth Management Hearings Board has upheld Port Townsend's plan and tier approach. (Bruce Freeland, 1997.)

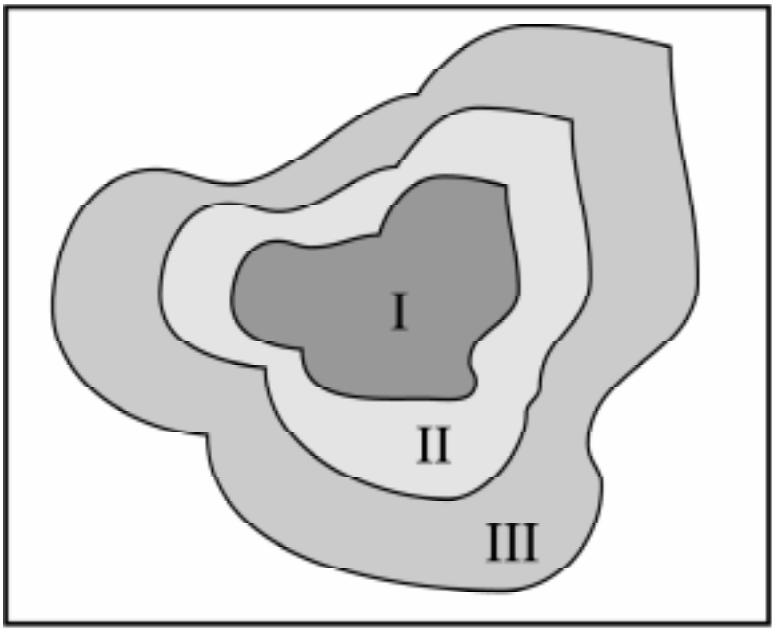


Figure 5 Tier programs give first priority to servicing more central, developed areas
(Source: Nicole Stiver, Municipal Research & Services Center, 1997)

Policy Issues

- Tiers may not be the best approach in a community where there is little basis for distinguishing tiers. For instance, if all parts of a jurisdiction are equally serviceable, or at a similar stage of development, tiers will be more difficult to justify.

- The tier approach will limit the immediate development options for property owners within the later tier phases. Some measures may be needed to assure some reasonable use of land in the interim period before full urban development is permitted. As an example, Summit County, Utah has provisions which allow a percentage of the future potential development to proceed before the area is reclassified as tier 2.

- The tier approach is likely to require considerable interjurisdictional cooperation. For instance, Summit County, Utah engages in joint planning within its cities' high priority annexation areas ("Land Use Element: Snyderville Basin General Plan," December 1992).

- Developing good criteria and adequate facility standards to define when a tier is ready for urban development is difficult. Pierce County has been struggling with standards which can be used to gauge when a tier is ready for urban development.

■ Reduce Service Standards and Impact Fees in Target Growth Areas

Local governments can also enhance the relative attractiveness of infill area development by adopting more appropriate level-of-service standards and/or lower impact fees within designated infill areas. If lower fees and standards are required in target infill areas than in more remote areas, these policies will provide incentives to develop in the target areas first.

Level-of-service standards establish the minimum amount and quality of public facilities and services that must be provided to satisfy community needs. The GMA directs that adequate public facilities and services be available at the time new development is available for use. Local jurisdictions may define what level-of-service is adequate to meet the particular needs of their residents.

Impact fees are fees a local jurisdiction charges new development to at least partially fund off-site public facilities and services made necessary by the new development. The GMA authorizes local jurisdictions to establish fees to finance certain types of improvements. Again, there is flexibility to tailor the fees, within limits, to meet local needs. The fees are generally levied based on the level-of-service standards established by a jurisdiction.

Service standards and impact fees are meant to assure that there are adequate facilities and services to support new development. However, many communities are finding that the traditional, uniformly applied transportation level-of-service standards may tend to defeat GMA objectives for directing growth to existing developed areas. Traditional transportation level-of-service standards measuring capacity have focused on the speed of automobile movement. As a rule, traffic will be more congested and slower within higher density urban areas than in rural areas, making automobile-oriented uniform standards more difficult to meet in infill areas.

Transit, pedestrian and other non-motorized modes of transportation also contribute capacity to the transportation system. Although roads may be more congested in urban areas, overall mobility may still be adequate where transit, bicycle and pedestrian facilities meet some of the circulation needs. In addition, a greater level of roadway congestion and delay may be acceptable in close-in urban areas, where residents may face shorter overall work or shopping trips. As a result, a lower street level-of-service standard may be justifiable in urban areas that have compensating transit or other circulation options, than could be justified in rural areas.

For additional information on transportation level-of-service standards, see the Municipal Research and Services Center (MRSC) publication: *Level of Service Standards: Measures for Maintaining*

the Quality of Community Life. The MRSC publication discusses emerging approaches to transportation level-of-service standards.

Communities often establish uniform impact fees that are based on the average cost of providing service to new development located within the jurisdiction. Such a fee system does not recognize that it typically costs more to serve more distant locations. For instance, longer sewer lines and street extensions may be required. The Sacramento planning staff found that if pricing reflected actual costs of extending services, fees charged to residential infill projects would be about $3,000 per unit compared to $10,000 to $15,000 for residential projects beyond their urban service boundary (Johnston, Seymour, Schwartz and Tracy, 1984). Communities may wish to consider impact fees that reflect the actual cost of extending a service to a given location (the marginal cost) rather than on a less equitable average cost. Lower fees could be charged in close-in target infill areas which are less expensive to serve.

In some cases, expensive replacement or retrofitting of infrastructure may be required in infill areas. The costs of *installing* facilities in such areas may then actually exceed costs in outlying areas. However, the public benefit of lower long-term operation and maintenance costs may justify lower fees charged to new development in close-in areas. Maintenance costs can be minimized within a less extensive service area. Infill development results in higher average densities so that ongoing costs can be spread over a greater population base as existing facilities are more fully utilized. This, in turn, translates into lower user fees. In addition, other public benefits, such as conservation of resource lands and open space, may justify a greater public share for infrastructure costs within target infill areas.

Successful Applications

King County, Washington has established different road level-of-service standards for different transportation service areas. A very low level-of-service for roads (level F) is acceptable in certain developed urban areas that have adequate HOV and transit service capacity to compensate for congested roads. Increasingly higher levels of service are required before development can go forward in other services moving outward from the more developed urban areas. The highest standard (B) is applied in some rural areas. The relatively lower standard in infill type areas provides an incentive to develop these areas first. King County's mitigation payment system (impact fees) also factors in distance from developed areas in establishing fees charged in different transportation zones (King County Code, Ch. 14.70 and 14.75).

Lancaster, California also recognized that it was more costly to provide services to projects 10 miles from the urban core than those close to the core. Before the city adjusted fees for distance, developers were locating projects away from the core where land costs were cheaper and fees were the same as for central locations. The city has revised its fee program to assess new development the full cost related to the new development, rather than shifting some of the costs to existing development. Lancaster divides the costs into capital improvements costs (one time lump sum expenditure to construct) and annual operation/maintenance costs. The city developed a computerized model which calculates combined impact fees for new development based on each

development's size, location and type of land uses. Developers are not charged for costs related to existing deficiencies. The program also provides a process for developers to provide an independent fee study for complex projects which may not neatly fit the model assumptions (Agajanian & Associates, 1992; Ledbetter, 1994).

Policy Issues

- Property owners with development plans outside of high priority growth areas may strenuously resist standards and fee structures which favor infill development. Such measures will be easier to enact if based on the community's vision and clear goals to focus growth near existing development.

- The rationale for differential standards and impact fees must be thoroughly documented to avoid constitutional challenge.

- Aggressive public investment in transit, non-motorized transportation facilities and active transportation demand management programs will be needed to avoid lost mobility within urban areas. Additional funding sources, such as transportation benefit districts or local improvement districts, may need to be established to fund needs not charged to new development.

Implement a Parcel Assembly Program and Strategic Land Banking

Assembling small, individual parcels into larger blocks under common ownership can greatly enhance their development potential. Local jurisdictions can acquire land for an immediate need or "bank" it until a future day when facilities are available or the timing is otherwise right. Most large developers are used to working with parcels of 20 acres or more, making the development of relatively small infill parcels less attractive for such developers. While small special niche developers may find it worthwhile to develop such small parcels individually, many established developers seek the economies of scale and greater profits possible with a larger site. Purchasing land under fragmented ownership can be time-consuming and very expensive for a developer. Not all desired parcels will be actively for sale, and the developer may need to pay a premium to induce a sale. Land prices may inflate once the developer's intentions are out. Some parcels may have title encumbrances which need to be cleared. In addition, some intervening sites may be occupied by buildings which would need to be removed or extensively remodeled to fit in the development.

The Real Estate Research study cited earlier found that half or more of the sampled vacant infill parcels in three study areas (Dade County, Florida; King County, Washington and Monroe County, New York) were under one-quarter acre in size. Although over half of the vacant infill parcels adjoined other vacant parcels, only a third of the adjoining parcels were in the same ownership. Central city infill sites are particularly handicapped relative to suburban infill sites. The average infill site in a King County central city location was 8,500 square feet while the average suburban infill site was over three acres. An even greater difference between central city and suburban sites existed in Dade and Monroe Counties (Real Estate Research Corporation, 1982). Small wonder that developers may be intimidated at the prospect of urban land assembly.

Far-sighted cities can aid this process by assembling and improving land, (and even removing encumbrances), in an organized manner which supports long-range plans, before specific demand arises. Kim Herman, Director of the Washington State Housing Commission, argues that it may be the most effective way that local jurisdictions can support the production of affordable housing. Once a local jurisdiction has control of useable blocks of land, the jurisdiction can use a variety of approaches to stimulate housing construction, such as collaboration with a non-profit or private developer. At the same time, the jurisdiction can better control development and assure that the development is consistent with community goals (Herman, 1997).

Kurt Creager, Executive Director of the Vancouver Housing Authority, agrees that land banking is essential to an affordable housing program. His advice to local jurisdictions is to identify key infill sites at least three to five years in advance to avoid paying inflated prices when speculative investment begins. This may be particularly important for guiding development in the vicinity of a light rail station or other magnet for growth. For example, Mr. Creager notes that although the average construction price for multifamily new construction is $86 per square foot in the four-county Seattle Metro area, the cost per square foot around the Portland rail stations has inflated to 140+ percent of that level. Purchasing land now, before the speculative cycle begins, can make affordable housing feasible when the time is ripe (Creager, 1997).

City governments can use their power of eminent domain, to purchase blighted property or to accomplish other legitimate public purposes. Cities also will benefit from working with counties to acquire land in target areas through tax defaults, donations or trades with other agencies. Washington's constitution generally restricts cities from giving property to private individuals or from offering it for less than fair market value. However, a city can loan or grant monies to benefit low income households. A city also can sell the more attractive package of assembled lots to private developers for fair market value. If the land will not be used in the near-term, the city may want to transfer land to a development corporation. Transferring the property may help the city avoid the appearance of being seen by the development community as a competing land speculator. The private sector may be more supportive of public land banking if developers have a crack at obtaining property for development at prices and arrangements that minimize their risks.

Successful Applications

Cleveland, Ohio has established a highly successful assembly effort in cooperation with the county treasurer's office, foreclosure office and prosecuting attorney's office. The city and county cooperate on an expedited foreclosure process to return the properties to productive use. The city now receives most of these delinquent properties. The amount of land is significant with about 900 lots obtained per year. Foreclosure properties that are not sold at county auctions go to the city's land bank. The city pays foreclosure costs out of the city's share of real estate excise tax fees. The property taxes are also forgiven. The city sells unbuildable property to adjacent owners and holds other land to sell for development. Most often, the buildable land goes to non-profits who use housing trust fund money to develop the property. One area of about 137 acres of land, located between the downtown area and Case Western University, has been transformed. The city has seen other development take off following the development of key projects on the foreclosed properties.

Yakima, Washington has consistently pursued a program to acquire individual lots, within a designated target area, which have abandoned buildings or which are vacant and poorly maintained. The city's code enforcement department has an aggressive program to identify and inspect properties that are not being maintained to city standards. In many cases, the city conducts research to determine ownership and contacts the owner of record with an offer to purchase the property at appraised value. The city uses a portion of its Block Grant funds to purchase these properties. The city does not use condemnation to take over ownership. The city then generally offers the property to non-profits or its housing authority to construct new housing or rehabilitate existing substandard housing. The city may move housing to a different site or trade properties to assemble land for key housing projects. The city 's program demonstrates how seemingly small individual acquisitions, when part of a larger program pursued consistently over time, can add up to significant housing production. Approximately 50 to 60 lots of single family housing have been developed or rehabilitated through the program.

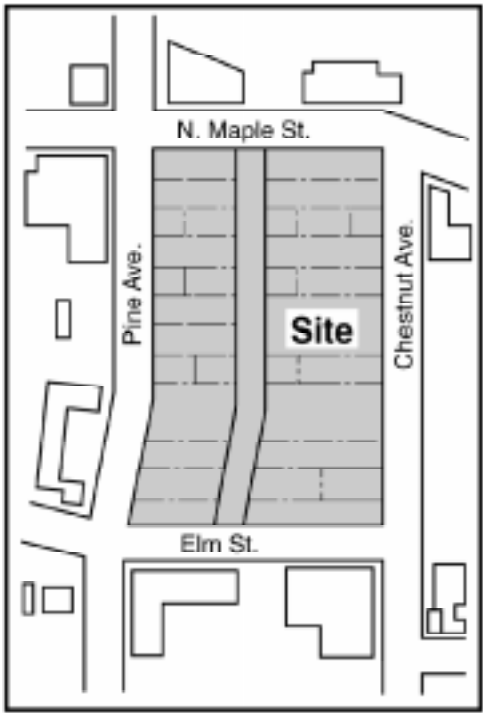


Figure 6 Assembling useable blocks of land can effectively facilitate infill development.
(Source: Nicole Stiver, Municipal Research & Services Center, 1997)

Policy Issues

- Land assembly can be very expensive, particularly if unanticipated expenses arise associated with environmental clean up, title encumbrances, and similar expenses.

- Land banking can require considerable start up money in the early stages of the program, before property is resold. If state or federal seed money or loan money is not available, it may require strong citizen support for a bond approval or a unique situation (such as Cleveland's tax delinquency holdings).

- While the land is under local government ownership, it is removed from the tax roles. (It may not be producing tax revenue anyway if the property is in default.) Property maintenance will also be needed until the property is resold. A community may be able to generate revenue to offset these costs by leasing the property for some interim use.

- Land banking may not be popular with the real estate industry, particularly those who may profit from land speculation.

- It may be difficult to carry out land assembly and banking on a significant scale without some use of eminent domain powers. Particularly if eminent domain is used, (but also at other times) it will be important to demonstrate a valid public purpose and to proceed with acquisitions based on an adopted plan.

Limit the Supply of Land Available for Development in Non-Target Areas

Most Washington communities have already taken one major step toward promoting development of infill sites. Many Washington communities are designating urban growth areas (UGAs) which set limits on where urban development can occur. As required by GMA, these UGAs must include an adequate supply of land to accommodate projected growth for the next 20 years. Urban growth is prohibited outside of the UGAs. The reduced supply of land outside of UGAs enhances the prospect for available infill sites. Even so, in the first years after the UGA is set, there will be an abundant supply of vacant land (enough for 20 years of growth). In many cases, local jurisdictions also have provided an additional safety factor of land supply above the 20 year requirement. Growth may occur at a different rate than projected. Development may still tend to go first to larger sites in undeveloped portions of the UGA before filling in existing built-up areas. When the land supply is abundant and large lot development is affordable, land may often develop at lower than permitted densities. If the Urban Growth Boundary is expanded before the high density centers and corridors have intensified, it may be difficult to reach the target densities and inefficient to provide transit service.

A flexible way to manage land supply over the short term is designate target growth areas with incentives as illustrated by the Oregon focused public investment area described in a preceding section. Another approach might be to designate urban holding zones within UGAs as Vancouver, Washington has done. The holding zones can be adjusted more flexibly than the UGA to increase the supply as it is needed. A variety of other phasing techniques can limit the short term supply to promote higher densities to develop before opening new areas to development. The MRSC working paper: "Keeping Pace with Growth: A Guide to Growth Phasing," provides a more comprehensive discussion of growth phasing techniques.

Successful Applications

Vancouver, Washington uses a holding zone which permits only very low densities until facilities are available to support urban levels of development. These density limits tend to discourage development until the facilities are available which allow higher densities. If development does occur, it must be laid out in a way which would permit further future development of the property at higher densities. Vancouver's holding zone provisions can be found in Appendix A.

Policy Issues

- Local jurisdictions that employ holding zones should carefully monitor land supply and the housing market to ensure that these temporary constraints do not help push land prices to unacceptable levels.
- Holding zones should be viewed as an interim state until full services can be reasonably provided to support urban development. Local jurisdictions should diligently pursue programs that prepare these areas for future development.

Provide Community Information and Sponsor Infill Demonstration Projects

"Greenfield" sites, never-developed sites located in largely undeveloped areas, can look more appealing to developers because such a site will have fewer established neighbors who might rally against a project. Objections raised by community residents at community meetings can result delays or even a decision to deny a project. Because time is money, developers have one more reason to shy away from the potential hassles of infill sites. Neighborhood residents may be predisposed to resist new development because of past experiences with infill development that was a poor fit with the existing neighborhood. In addition, developers are reluctant to try, and banks are reluctant to finance, new types of housing for which the market is untested. As one successful developer noted, "Developers don't want to be pioneers; developers want to be successful. Pioneers are the ones with arrows in their back... (and yet) if something is shown to be successful, Parkerlane Homes will go out and copy it" (Stewart, 1997).

Local jurisdictions can pave the way for responsible infill developers by providing information which can reduce neighborhood resistance to well-designed, new infill development. A number of jurisdictions have begun working with their residents to develop neighborhood-specific guidelines which produce more acceptable development. To convince neighborhood residents, illustrations and demonstration projects may be most effective. Demonstration projects also are an effective way to convince developers and banks that a thriving market exists for new and affordable housing types.

Successful Applications

Victoria, B.C. in Canada won several national awards last year for its infill housing project. The purpose of the project was to demonstrate that under appropriate design guidelines, small lot residential projects can blend well with existing neighborhoods. Financing for the project was provided under a program sponsored by four national (Canadian) housing organizations.

The city first developed a set of guidelines which emphasized fitting both the immediate and neighborhood context and preserving privacy between close-spaced residences. The guidelines address placement of balconies, decks and windows to respect neighbor's privacy, stepping back buildings to avoid overshadowing neighbors, building height, setbacks and mass which blends with neighboring property and similar provisions. The guidelines were tested by applying them to small lot housing which pre-dated current city by-laws. The homes were finished with attractive features including arbors, wrap-around verandas, patios with sunny exposures, elegant maple floors, french doors, gas fireplaces and high performance windows. The guidelines were designed for use in small infill projects—building spacing and other aspects of the guidelines would not necessarily work on a larger scale project. Excerpts from Victoria's guidelines appears in Appendix B.

The city then selected a developer to build a prototype project to demonstrate that the guidelines worked. Three detached houses were built on a 7,200 square feet lot divided into three 2,400 square feet lots. The houses sold quickly, in part because the developer was able to price the small lot homes

well below the average home cost. The city of Victoria invited neighboring residents and the general public to an open house at the prototype project. According to city staff, up to 300 people attended on the first day and 800 total attended during the open house week. The city surveyed surrounding property owners and open house visitors about their reactions to the project. Despite the higher density, 85 percent of the respondents were 100 percent satisfied with the project. The other 15 percent didn't like one or two aspects about the project. The city convincingly demonstrated that small lot development could be a positive addition to the neighborhood (Lam, 1997).

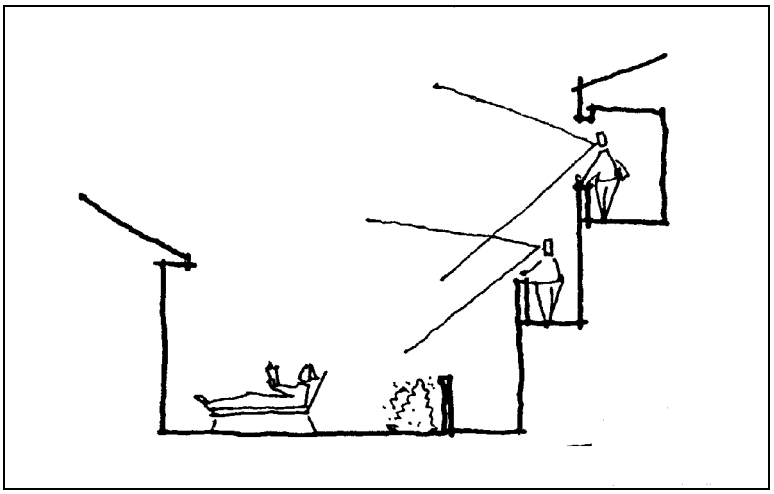


Figure 7 Design approaches help address privacy issues in small lot development
(Source: City of Seattle, Department of Construction & Land Use, 1993)

Snohomish County, Washington has a unique provision for a "temporary housing demonstration program." The county may select up to six projects per year which will be permitted to deviate from the county's normal development standards provided that they meet a general set of program criteria. The purpose of the program is generally to encourage, demonstrate, and win acceptance for innovative housing which addresses county goals for low/moderate income housing, housing diversity, mixed-use and mixed-income housing, and innovative neighborhood design. The county will track and evaluate these projects to document successes and identify desirable land use code revisions (Snohomish County Code, Sec. 18.51.120).

Vancouver, Washington's experience demonstrates how working with community residents on project design can win acceptance for denser single family development. The Rosemere neighborhood of Vancouver successfully blocked a 20 unit suburban-style single family development of mostly 5,000 square feet lots with small houses. Even though the gross density of the project at four units/acre was typical of single family projects proposed in the city, neighborhood residents did not see it as an asset. The same neighborhood later supported an even higher density project on the same site. A new developer brought in a design consultant team which organized focus groups of neighbors and prospective buyers and used slides to evaluate design preferences. The residents favored housing types similar to those in their neighborhood and reacted favorably to neotraditional concepts such as front porches, narrow streets and community greens. Other focus groups of prospective buyers were used to test preferences for housing features. These design preferences were incorporated into a new plan and developer design standards for the project. Despite the higher density (37 single family units

instead of 20 units on the same five acres) there was no opposition to the project—a number of neighbors even voiced support for the project which was approved unanimously at planning commission and city council meetings (Phillips, 1994).

Policy Issues

- Demonstration projects generally require adequate investment of public funds to design and construct a quality project that can effectively convince others of a projects viability and acceptability. If the project can motivate private and nonprofit developers to undertake similar projects, it will be a worthwhile investment.

Consider (or Support Legislation for) Tax Incentives to Promote Infill Housing

The following section describes several tax incentive approaches which can potentially stimulate infill housing. There is specific statutory authority for the ten-year property tax exemption approach for certain Washington cities. Two of approaches would require a constitutional amendment, and/or legislative action, to be used in the state of Washington. They are described here because the experience in other places indicates that they can be powerful tools for stimulating infill development. In some instances, however, tax incentives have been abused. In some areas, they have been applied to development that would have occurred without the incentive. In other instances, they have been awarded to projects offering minimal public benefit. Local jurisdictions should structure and use such tax incentives judiciously to promote development in target areas, where clear public benefit can be demonstrated. They may be worthy candidates for further study and legislative action.

■ Adopt Ten-Year Property Tax Exemption for Multifamily Housing

RCW 84.14 currently authorizes cities with a population of at least 150,000 which are planning under the Growth Management Act (GMA) to offer a ten-year property tax exemption as an incentive for constructing or rehabilitating multifamily housing in vacant structures. To qualify, a minimum of four multifamily units must constructed, converted, or rehabilitated within city-designated target areas, within urban centers. The tax exemption does not include the value of the land or non-housing-related improvements. The program can be used as an incentive for market rate housing as well as affordable housing. Applications may be accepted once a year. Currently, only Seattle, Spokane and Tacoma are eligible. A bill was approved by the legislature in 1997 to extend the tax abatement program to all cities and towns with a population of at least 100,000 or to the largest city in a county. That bill adds language to encourage local jurisdictions to include requirements for low-income or moderate-income occupancy in their guidelines.

Successful Applications

Portland, Oregon offers a property tax abatement for new infill housing priced under $105,000 in designated "distressed areas." In some cases, the city offers an abatement for rehabilitated housing. The benefiting property owner pays no tax on the value of improvements for 10 years. At $15 per $1,000 assessed valuation, the abatement would permit an approximately $125 reduction in monthly mortgage. This makes housing more affordable and expands the market for infill housing, making it more attractive to developers (Michael Harrison, 1994).

Tacoma, Washington has established a successful tax exemption program to stimulate multifamily housing within its 14 mixed use centers. Of the 11 applications submitted, six have now been approved for exemption by the city council and one pending project appears likely to receive exemption approval. Several of the other project applications either were ineligible, failed to secure financing, are pursuing historic tax exemptions or canceled for other reasons. In its first year, a total

of about 300 units were approved for exemption. Of the approved units, 199 are for low income housing units. Several of the projects are parts of mixed-use developments. Tacoma has received new applications for 280 units this year. Tacoma is very optimistic about the incentive program (Teasley and Wilkerson, 1997).

Policy Issues

- Until new legislation extends authority to other cities, Seattle, Spokane and Tacoma are the only cities in Washington that can employ the ten-year tax exemption.

- The incentive assists with tail-ending financing rather than up-front financing. Because the exemptions apply to building improvements and not land, the tax exemptions begin when the units are complete. The exemption does reduce holding costs and ongoing operational costs, but it is not a financing tool for project construction costs.

- If used on a large scale, some other revenue source may be needed to make up for lost tax revenue.

■ Adopt Tax Policies Which Discourage Holding Unimproved Property

Taxing land at a significantly higher rate than property improvements can accelerate development of vacant parcels. Conventional property taxation involves the taxation of both land and the improvements to the land such as buildings. In Washington, although county assessors separately assess the market value of a property's land and its improvements, both components are added together to determine property value and are taxed together at the one rate. Under this conventional property taxation system, improving property with buildings or other improvements such as infrastructure, increases property value. It also has the negative consequence of triggering higher taxes. This situation operates as a disincentive for improving land. A property owner must be certain that the property improvements will produce adequate return and investment to realize desired profits despite increased taxes. As long as tax rates on land are low, a property owner can afford to hold land, in an unimproved state, for speculative purposes. Speculation, in general, drives up land prices which in turn drives up housing costs. In fact, the King County Housing Partnership identified rising land values as the main "cost driver of the 1980's" (King County Housing Partnership, 1991).

Some communities have dramatically restructured their property tax system to tax land at a much higher rate than the tax rate on property improvements. Raising the tax on land while lowering the tax on buildings means that it will become more expensive to hold land in a vacant state. At the same time, this action would reduce the "penalty" on improvements, thus encouraging more intensive use. A study using King County data found evidence that land-extensive uses (such as single-story strip commercial shopping establishments with abundant surface parking, or large lot subdivisions) would experience a greater tax burden than land-intensive uses (such as multifamily complexes). Such a tax structure also would tend to precipitate upgrade of older, obsolete buildings or their conversion to more intensive uses. The overall burden on single family residences would remain much the same,

except for large lot residences which would experience increased taxes (Gihring, 1993). In general, this restructured tax system promises to promote changes which are consistent with many communities' growth management goals.

Successful Applications

Pittsburgh, Pennsylvania restructured its property tax system in 1979 to 1980 to one in which land is taxed at more than five times the tax rate applied to structures on the land. Following this change, Pittsburgh was the only city among 15 studied to experience "a large and significant increase in levels of building activity during the 1980's (a 70 percent increase on an annual basis over the 20 year period preceding the reform)." Only one other of the studied cities experienced any increase in building activity during this period, while the rest of the cities typically experienced a substantial decline in the annual real level of building activity. Pittsburgh's suburbs did not experience a similar increase. (Note that county and school district property taxes were not restructured so that overall, land within the city was taxed at twice the rate that was applied to improvements.) At the same time, Pittsburgh instituted a generous three year tax abatement on the additional value from new construction. The study's authors concluded that the tax abatement on improvements was the more powerful incentive. However, the huge increased rate on land provides the additional revenue source which allows the reduction in the rate on improvements (Oates and Schwab, 1992).

Policy Issues

- The major obstacle to implementing the dual tax rate is that Article VII, Section 1 of Washington's Constitution prevents county assessors in Washington from applying different rates to the two components of real property. A constitutional amendment would be necessary.

- The revised tax structure could result in some low-income housing being demolished and replaced by higher value uses, since the tax "penalty" on improvements would be reduced. However, the revised structure may also help to bring land costs down, contributing to affordable housing. Pittsburgh has used some exemptions and other measures to help minimize this effect.

- Washington's Growth Management Act requires counties to establish urban growth areas with adequate land supply to accommodate growth for the next 20 years. Not all if this land is needed at once. There will not be market demand for all of the vacant land immediately, and some property owners may be unfairly penalized when they have little choice but to hold land. This may be less of A problem if the restructuring involves only city taxes, as in Pittsburgh and the land supply within city limits (as opposed to the larger urban growth boundary) is relatively balanced with demand.

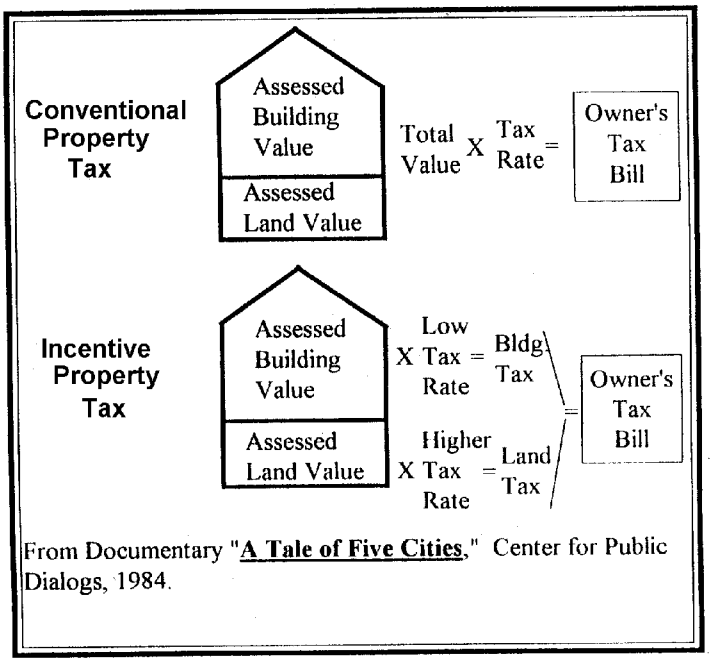


Figure 8 Taxing land at a higher rate than buildings should encourage development.
(Source: Center for Public Dialog. "Look to the Land," Common Ground USA)

■ Adopt a Tax Increment Financing Program

In many parts of the country, tax increment financing (TIF) is becoming an increasingly popular way to finance public investment and to stimulate private investment in infill or redevelopment areas. However, the Washington Supreme Court has found that Washington's Community Redevelopment Financing Act (which was intended to authorize TIF in Washington) to be in conflict with the state constitution. A constitutional amendment or legislation that avoids constitutional problems is required before TIF can be used in Washington, as further explained in the following policy issues section. However, TIF is discussed here because it is a tool that may be employed in most other states. The successful experiences with TIF in many other places suggests that it may be a tool worth pursuing further in Washington state. Juli Wilkerson, Manager of Planning and Development Services for the city of Tacoma, Washington considers the lack of a tax increment financing tool to be "the biggest barrier to redevelopment." She laments that the situation handicaps Washington cities from competing with other cities around the country in the effort to attract redevelopment interest and resources (1997). Cities, such as Tacoma, are continuing to work for new legislation that can pass constitutional muster.

The typical (TIF) method works by temporarily freezing the tax base at the pre-development level within a defined district. Property owners continue to pay taxes while the TIF district is in effect. A city or county will then make public improvements to the area, with the expectation that they will

attract additional private investment. If the private development occurs, tax revenues will increase above the base level. Existing properties increase in assessed valuation and new developments generate new tax revenues producing the tax increment. The tax increment is earmarked to finance selected improvements within the TIF district, rather than going to a community's general fund or to other taxing entities. Typically, a community will sell tax increment bonds at the initiation of the district so that funds are available to finance initial expenses such as infrastructure or land assembly. The annual increment revenues are then used to retire the bonds. Alternately, improvements can be financed on a pay-as-you-go basis from annual tax increment revenues.

In theory, development would not occur in these areas without the stimulating expenditure of public funds. Based on this theory, the community and other taxing entities do not actually lose revenue because taxes would not have increased without the district. Instead, they will benefit from increased taxes when planned improvements are completed and the TIF district expires. TIF, then, is a way of generating and leveraging funds for redevelopment without dipping into traditional revenue sources. Such programs can attract private investment in previously neglected areas, targeted for infill development and redevelopment, which may otherwise go to more outlying areas. As a result, it can reinforce efforts to develop target areas first (Planning and Zoning Center, 1991).

Successful Applications

In testimony to the potential utility of tax increment financing, only a handful of states lack specific authority for TIF. Minnesota and California cities were early pioneers and remain prolific users of the TIF tool. Results in some states have been mixed. However, there is sufficient evidence that a well-crafted and focused TIF program can play a pivotal role in financing and accomplishing community development programs.

The **Portland, Oregon** Development Commission and other Oregon communities have accomplished a range of projects with this tool. Phil Kushlan, a former Bellevue, Washington city manager, credits the Commission with transforming Portland's urban setting, in larger part through the use of TIF (Kushlan, 1993). The Portland Development Commission has used TIF to fund improvements such as parks in a residential neighborhood it was redeveloping near the downtown. TIF was also instrumental in funding a marina and waterfront esplanade in a mixed-use residential development on a key development tract in the downtown area. Smaller cities such as Cottage Grove, near Eugene, have also successfully used TIF to finance the sewer, water, sidewalk and other improvements needed to attract development to a formerly underserved area (Minter, 1991; Kushlan, 1993).

Policy Issues

- Washington State had enacted legislation intended to authorize use of TIF programs (The Community Redevelopment Financing Act, RCW 39.88.) However, the Washington Supreme Court found the legislation to be in conflict with constitutional provisions concerning property taxes collected for public schools (*Leonard v. Spokane*, 127 Wn.2d 194, 1995). A constitutional amendment is required to enable tax increment financing in Washington in its typical form.

Several attempts to amend the constitution to resolve the conflicts have been defeated at the polls. Legislation introduced during the 1997 legislative session sought to get around the potential constitutional problems with a somewhat different approach. The proposed Urban Stabilization Act bill would have earmarked increases in sales and excise taxes, rather than property taxes to finance improvements in targeted districts. Although the bill died late in the session, proponents in Tacoma and other cities feel that they made inroads and will push hard for its passage in the next legislative session. There is less experience around the country that demonstrates how well sales and excise tax will work as a substitute for property tax in raising funds for infrastructure improvements.

- A prospective TIF program would require careful analysis, accurate projections and a clear understanding of the financial consequences of the tax. Any TIF programs involving property taxes (which would require a constitutional amendment) would need to be examined to anticipate their effects on the county, school districts, fire districts and others that apply taxes within the district. Although these districts would continue to receive the revenues they received in the past, the revenues may not cover inflation increases and new costs associated with growth. This is especially important since these other taxing districts could appeal certain district issues to the state board of tax appeals. A community may need to give up a portion of the earmarked increment to avoid an appeal which undermines the district.

- If tax allocation bonds backed by property taxes were issued to pay for improvements, they may fail to attract investors. (Sandy Cohen, Assistant City Attorney at the City of Seattle believes tax allocation bonds will be considered similar to revenue bonds.) Particularly when located in infill areas, they may appear to be a risky investment. The local jurisdiction may have to pay an interest rate that is too high to make the project financially feasible. MRSC staff believes that bonds backed by sales or excise tax revenue may appear even riskier. In fact, there might not be a market for these bonds. If tax allocation revenues don't generate enough money to cover a community's debt service, the community may need to tap into its general fund to cover payments. Under either the property tax or sales and excise tax approach, local jurisdictions could choose to issue councilmanic general obligation bonds to finance improvements. They could then use these revenues to pay back the bonds, but would be required to use the general fund to cover any shortfall of revenues.

- TIF alone can not be counted on to shape the desired land use patterns. Penalties or incentives generally will not be enough to alter basic market conditions. They will need to be combined with a complementary package of growth management measures and incentives.

- The programs should be evaluated to avoid counterproductive results. For instance, in some other states, TIF has been abused to subsidize private development without commensurate public benefit. Shopping malls, sports stadiums and luxury office towers may not be what the community needs. Washington law does not allow communities to subsidize private development or otherwise make a gift of public funds. TIF expenditure should be based on a comprehensive plan which identifies priority community needs, addresses displacement of affordable housing and small businesses, and other community needs.

Revise Codes to Eliminate Excessive Standards

In some cases, adopting more flexible or less restrictive standards can allow infill development to go forward, where existing regulations discourage such development. Many infill parcels were created under regulations which have been replaced by newer, stricter standards. The size or configuration of these older parcels may make it difficult or impossible to develop them while meeting current standards. For instance, new requirements for on-site parking or large setbacks may not leave adequate area to reasonably develop the pre-existing lot. In many cities, older but desirable neighborhoods could not be built under current standards, which favor more suburban, auto-oriented type development. Where larger parcels exist, it may be physically possible to carve out new lots under current standards. However, rising land values and improvements requirements may make it unprofitable to develop under current density allowances. Code changes are generally possible while still maintaining desired neighborhood qualities, if a city is clear about what it is really trying to achieve.

A case study from King County illustrates the significant impact that development standards can have on land development costs. The case study follows the experience of a non-profit housing development corporation while developing the 43-unit Benson Glen subdivision/affordable housing project in the Renton area of King County. The study report compared typical 1980 and 1990 development costs with the 1995 development costs. The comparison indicated that most of the increased cost of development was related to increased land development costs, and to a lesser extent, increased land acquisition costs. The marketing and closing costs and constructions costs had stayed generally constant. In the case of Benson Glen, marketing and closing costs, and site acquisition costs were actually less than those of typical 1980 and 1990 projects. Land development costs had increased substantially, however. Even though the project received priority treatment from the County, the land development costs to prepare the site and comply with county standards amounted almost $33,000 per home. One of the larger pieces of the land development cost was the $5,000 per home that was required to install drainage improvements in compliance with the County's Storm Water Manual. Although storm water management is important to King County residents, the report noted that increased flexibility in applying the code could have addressed the storm water management concerns, while significantly reducing costs. The parking standards in effect at the time required more parking spaces than the total number of bedrooms in the project, according to the report. Particularly since the housing was intended for primarily low-income residents, the parking requirements may have been excessive.

The permit process required 23 months for final project approval, even though it had been expedited from what staff estimated would normally require 32 months. The non-profit developer was paying about $48,000 per year in holding costs such as interest payments and property taxes, so that an additional year in permit processing would have been costly. The report concluded that a major source of delay in the process was the uncoordinated, fragmentation of project review responsibility by a variety of departments. In addition, standards applied to the project were developed by separate functional departments with no one department responsible for considering how the regulations work together. The Benson Glen case study has triggered an effort to re-examine standards and permit procedures, and a pilot project to test more flexible, cooperative approaches to achieving quality community development (Lewis, 1993).

Several useful approaches can help identify land use code standards which may be impeding affordable infill housing and should be candidates for revision. Regulations which generate frequent variance requests may signal code provisions which are unnecessary or unreasonable, as Montreal, Canada found (Kinnis, 1995). Other communities, such as Camden, Maine, are re-examining and drawing on the standards that shaped attractive, surrounding neighborhoods, to provide more appropriate dimensional and design standards for new infill development (Richert, 1996). Existing neighborhoods can be used to illustrate the patterns and qualities that abstract standards will produce. A number of communities have found that reduced residential lot sizes (often combined with design standards), reduced or averaged setbacks, and reduced street and parking standards can stimulate development while producing attractive, livable neighborhoods. The following examples illustrate standard reduction programs.

■ Ease Standards for Pre-Existing (Nonconforming) Lots

If a pre-existing lot does not meet current minimum lot size standards, it can not be developed without special approvals. Variances or permits for nonconforming development may be necessary for infill parcel development, if more restrictive standards have replaced standards in effect when infill parcels were created. Variances generally require public hearings, which causes some amount of delay, and present an opportunity for neighbors to oppose or even block a project. Nonconforming status may restrict future additions or property improvements.

Successful Applications

Some communities, such as **Redmond, Washington**, specifically state that existing lots of record, although they don't meet current minimum area or dimensional requirements, shall be considered to be conforming lots. Tacoma allows certain additions to nonconforming structures to extend into required front or rear yards when the existing structure already extends beyond that setback line. Stanwood and Sultan, Washington both state that infill residential units shall conform to the dimensional standards in force at the time the surrounding area was developed. If documentation of those earlier standards is not available, minimum standards are derived from averaging the standards set by abutting properties. Portland, Oregon zoning provides that if a multifamily structure that exceeds current density standards is destroyed (by natural causes) it may be rebuilt with the old number of units (if rebuilt within five years).

■ Provide for Small Single-Family Lots

Successful Applications

Victoria, B.C.'s demonstration project mentioned earlier demonstrated neighborhood acceptance for lots as small as 2,400 square feet when development complied with infill design guidelines.

Many Washington cities are now designating zones with a minimum lot size requirement of 4,000 to 5,000 square feet rather than the 6,000 or 7,200 minimum lot sizes that have become common in recent years. A 5,000 square feet minimum lot size permits net densities in the seven to eight unit acre range, which can begin to support regular transit service in infill areas. Even smaller parcels can accommodate quality detached single family housing with private yard. Particularly in the Northwest, landscaping can do much to retain the privacy of smaller yards.

Seattle, Washington has designated a "residential small lot zone" with a minimum lot area of 2,500 square feet for a detached single family dwelling. Only one parking space is required which may not be located in the front or street side yard. A greater height is allowed for pitched roofs (up to 30 feet) than the 25 feet base height. Front or rear yard setbacks can be as little as 10 feet provided that the front plus rear yard must be a minimum of 30 feet. Side yard setbacks are five feet, but may be averaged so that one side yard may be a minimum of three feet (Seattle Municipal Code, Ch. 23.43).

Tacoma, Washington has also adopted special infill development standards which provide for front yard setbacks equal to the average front yard setbacks of adjacent developed property or the minimum setback for the zoning district, which ever is less. Side yard setbacks may also be averaged although never less than five feet. The setback will be assumed to be set at 10 to 15 feet, for particularly large side yards, for purposes of averaging. Similar averaging is allowed for determining height standards for infill development. A minimum 4/12 pitched roof is required, and height may not be restricted to less than 25 feet (Tacoma Municipal Code, Sec. 13.06.202).

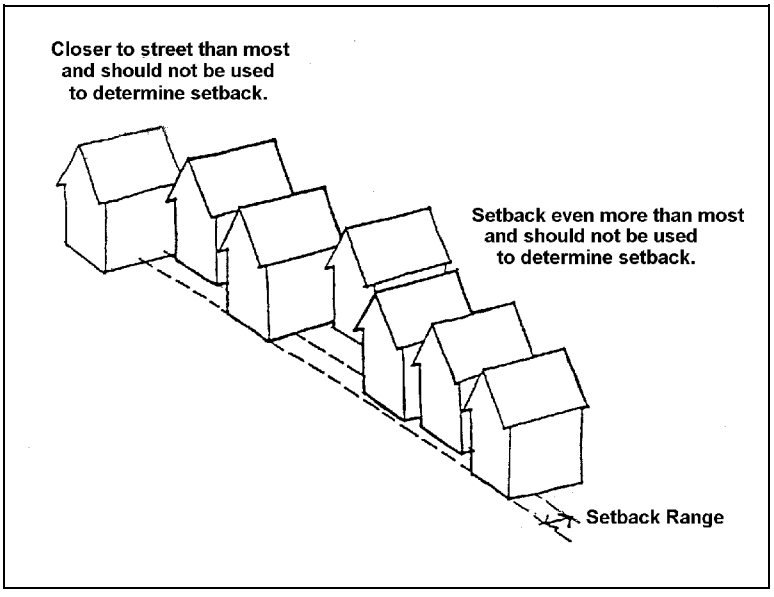


Figure 9 Setback averaging can increase flexibility while improving compatibility.
(Source: Department of Metropolitan Development Planning Division, 1993)

■ Reducing Street and Parking Standards

It is not uncommon for 25 percent or more a proposed project's land area to be set aside for required rights-of-way. On-site parking requirements can also consume considerable land area, depending on the type of use and local standards. Even in suburban locations, a number of recent studies have found that typical parking requirements by local communities greatly exceed peak parking demand on a typical day. For instance, although the average parking requirement for office uses may be 3.5 to five spaces per 1,000 gross square feet of building floor area, several studies have observed average peak parking use of between two to three spaces per 1,000 gross square feet (Willson, 1995; Shoup, 1995). Excessive parking standards are even less appropriate in infill areas where transit service and other alternatives can substitute for automobile travel. Similarly, as the automobile became the predominant mode of travel, street widths and rights-of-way expanded. Wider street widths and turning radii served to speed the automobile along, even on residential streets. A new school of thought argues that narrower streets reduces through traffic and accident potential on residential streets as cars are forced to slow down. Narrower streets also have a more intimate feel, also contributing to neighborhood liveability. Because streets and parking can tie up such a large percentage of a site's total land area, reducing excessive requirements can greatly reduce development costs and allow the site to be more intensely developed. Also, reducing the amount of abundant, free parking available in fringe areas makes in-city locations (which typically lack such abundant parking) relatively more attractive.

Successful Applications

Olympia, Washington represents one community which has conducted field studies (although cursory) of actual parking use. That city has begun to adjust its parking requirements downward to reflect real demand rather than to require excess parking which rarely, if ever, is fully utilized. For example, based on its studies, the city requires between 2.5 to 4 spaces/1,000 square feet for office uses (smaller offices require a higher ratio of parking). It requires as few as one space per residential unit for accessory or studio units and for any residential unit in its downtown business or high density multifamily zones.

Portland, Oregon with its efficient light rail transit has succeeded in reducing required parking even further. For instance, Portland requires only one parking space per residential unit in most zones, two spaces per 1,000 square feet floor area for most retail uses and 2.5 parking spaces/1,000 square feet floor area for office uses. Portland also adopted a "skinny street" ordinance in 1991 which applies to residential blocks in zones with minimum lot sizes of at least 5,000 square feet. The ordinance allows narrower streets with only a single travel lane, and parking on one or both sides. These residential streets serve primarily to provide local access to residences rather than provide for extended through travel. Therefore, the streets can reasonably accommodate two-way traffic although vehicles may have to pull over occasionally into a curbside parking lane to allow other vehicles to pass. To work well, there must be adequate breaks in the curbside parking, to permit yielding vehicles to pull over. For this reason, it may not work well in denser residential zones where on-street parking will be fully utilized. Portland reduced required street width for streets with two parking lanes from 32 to 26 feet, and reduced required streets widths for streets with a single parking

lane from 28 to 20 feet Portland's Fire Bureau supported the reduction for through streets which can be accessed from two directions, but pushed for two travel lanes on cul-de-sac streets longer than 300 feet (Bray and Rabiner, 1994). (Boulder, Colorado standards provide for fire set-up pads to address emergency vehicle access on its skinny streets.) Such street width reductions can result in a significant savings for infill projects which can translate into a more affordable, marketable project.

Too wide a street encourages dangerous high speeds.

A more appropriately sized residential street.

Figure 10 Narrow residential streets reduce development costs and disruptive traffic.
(Source: MAKERS Architectural and Urban Design, 1992)

Policy Issues

- Careful study and testing of proposals intended to eliminate excessive standards is advised to ensure that they are workable and do not sacrifice important safeguards and community quality of life.

Revise Codes to Provide Flexibility for Special Infill Situations

■ Provide for Planning Variances or Waivers

A few communities have provisions for planning variances or waivers. The more familiar hardship variance is designed to enable a departure from provisions of a zoning ordinance such as setbacks, or lot size. In general, they are granted to remedy some hardship or difficulty in using a site because of the physical characteristics of the property. In contrast, a planning variance is granted to allow departures from similar type zoning ordinance standards if it would result in improved zoning and planning and would benefit the community (Moskowitz and Lindbloom, 1993). Such a planning variance or waiver must be specifically provided for in ordinances to avoid abuse. It will be a much more successful tool if guidelines/criteria for determining benefit are also spelled out.

Successful Applications

The **Ogden, Utah** planning commission has the flexibility to reduce minimum lot area, lot width and yard setbacks for single-family or two-family infill development if the subdivision plan is of "exceptional quality and design" considering certain criteria. Similarly, Redmond, Washington may approve alternative street designs to encourage innovative designs or reduce disturbance to the natural setting if the alternative meets the intent of Redmond's street access provisions. The Snohomish County housing demonstration program described earlier allows deviations for selected projects subject to the following criteria:

Snohomish County Housing Demonstration Program Criteria for Permitting Deviations from Code Standards

1. The change contributes to the successful completion of the demonstration project as defined by the project selection committee;
2. The change is consistent with the purpose of the housing demonstration program as defined in subsection 3;
3. The change does not result in adverse impacts on the environment which are significantly different from the application of the zoning code;
4. The change does not threaten public health and safety;
5. The change is consistent with generally accepted engineering and design criteria , except as provided for in subsection 8;
6. The change promotes innovative neighborhood design and/or housing products.

■ Provide Flexibility for Site Development Through Planned Developments

Many communities provide the flexibility to deviate from zoning requirements, particularly dimensional standards, in exchange for well-integrated planned developments which meet (or exceed) the intent of the community's codes. Communities may use planned development provisions to serve a variety of purposes which may vary from community to community. Planned unit development provisions in unincorporated counties may emphasize clustering development to preserve large tracts of open space, compatible with surrounding rural development. Urban planned development provisions typically require that park and recreation needs be met. However, very large blocks of open space in urban developments may run counter to goals of efficient public service provision, if average densities are reduced or utility networks are disrupted. Any open spaces in planned developments should be carefully located and integrated with the community's overall open space system. Urban (infill) area planned development provisions may emphasize other purposes such as a unified approach to neighborhood development, more flexible development standards, a greater mixing of housing types and land uses including more affordable types of housing and convenience services, a more efficient arrangement of structures, streets, utility networks or other public improvements and in general, a more creative and aesthetic approach to land development. Urban planned developments may continue grid street patterns, as in neotraditional developments, or it may be appropriate to cluster development. In clustered developments, development can be clustered on unconstrained portions of a site. As a result, average densities can be maintained while avoiding disruption of many types of environmentally sensitive areas or lost of other special features.

Clustering development can also facilitate the buffering of development such as attached housing or convenience commercial from surrounding neighborhoods. In some cases, communities provide density bonuses in exchange for a planned development which provides superior design, public improvements and/or amenities. Many existing planned unit development ordinances (PUD) establish a high minimum acreage before a project can be developed under planned development provisions. A recent study from the Salem-Keizer, Oregon area concludes that PUD provisions should allow for planned developments on smaller infill sites and even allow for a limited density increase over the base- zone density (Tashman, 1993).

Successful Applications

Olympia, Washington's planned residential development provisions are intended to permit greater flexibility and, as a result, more creative and imaginative design than possible under conventional zoning. They are specifically intended to promote urban infilling, more efficient land use, and a variety of housing types while maintaining compatibility with surrounding neighborhoods. They also facilitate protection of sensitive areas and unique features, and encourage the provision of a higher level of urban amenities, among other purposes. Olympia generally applies base zone standards across the entire project rather than on a lot-by-lot basis. For instance, the density requirements, lot size and lot coverage requirements of the underlying district may be increased or reduced for individual lots as long as the average for the entire site is consistent. The base zone front yard setbacks are applied at the project perimeter rather than between every lot. Nonresidential uses for the convenience and service of development residents may be included subject to certain conditions related to design, screening and permit timing (Olympia Unified Development Code, Ch. 18.56).

Sumner, Washington has similar provisions and also may permit up a 20 percent density bonus for planned residential projects if certain design features and amenities are provided:

1. A variety of housing types are offered.

2. Advantage is taken of unusual or significant site features such as views, waterways, or other natural characteristics.

3. Separation of automobile and pedestrian movement (is accomplished).

4. Development aspects of the PRD implement the land use policies of the comprehensive plan.

5. Some extraordinary public benefit is derived in exchange for the increased density in the planned residential development.

Sumner may grant up to a 50 percent density bonus within planned mixed-use development projects (Sumner Municipal Code, Ch. 18.24 and 18.26).

■ Use Flexible Performance Standards Which Emphasize Outcomes

Local zoning ordinances traditionally establish many separate districts specifying a compatible set of permitted land uses in each district. Specific setbacks, height limitations and similar standards are also spelled out for each use to help limit impacts on adjacent properties. In general, these set standards do not take into account conditions which vary from site to site. They may be particularly difficult to apply in infill situations. In contrast, performance zoning/standards focus on directly controlling the impacts of a development. If adverse impacts on adjacent development are adequately addressed, the development is permitted. Most Washington communities still use districts and prescriptive standards to separate land uses, which typically have different types of impacts, to ensure compatibility. However, many are beginning to allow a greater mixing of uses to accomplish other goals such as more convenient access between work and home. Many communities are now incorporating some performance standards into their traditional zoning to allow greater mixing while improving compatibility. These performance standards spell out the desired end result (for instance, "on-site parking should not be visible from the public street") but allow flexibility in the particular means or approach for achieving that objective (underground parking, landscaping, berming, or change in topography could be used to accomplish this objective).

Successful Applications

There are several communities in other states which emphasize project performance rather than land use as a basis for project approval. The Hardin County development guidance system is award-winning example of a flexible land use regulation approach for a rural community. The Breckenridge permit system and Largo, Florida performance standard approaches have also gotten a lot of attention as flexible regulatory approaches. The following example from the performance-

oriented "Victorian (Australia) Code for Residential Development" provides flexible options for development.

Lot Layout Alternatives for Dwellings Fronting Major Streets

Dwellings fronting major streets such as trunk (arterial) collectors or traffic routes require layouts to ensure vehicles do not need to reverse out (back) into heavy traffic. Lots should also suit the siting and design of dwellings which can incorporate noise protection measures.

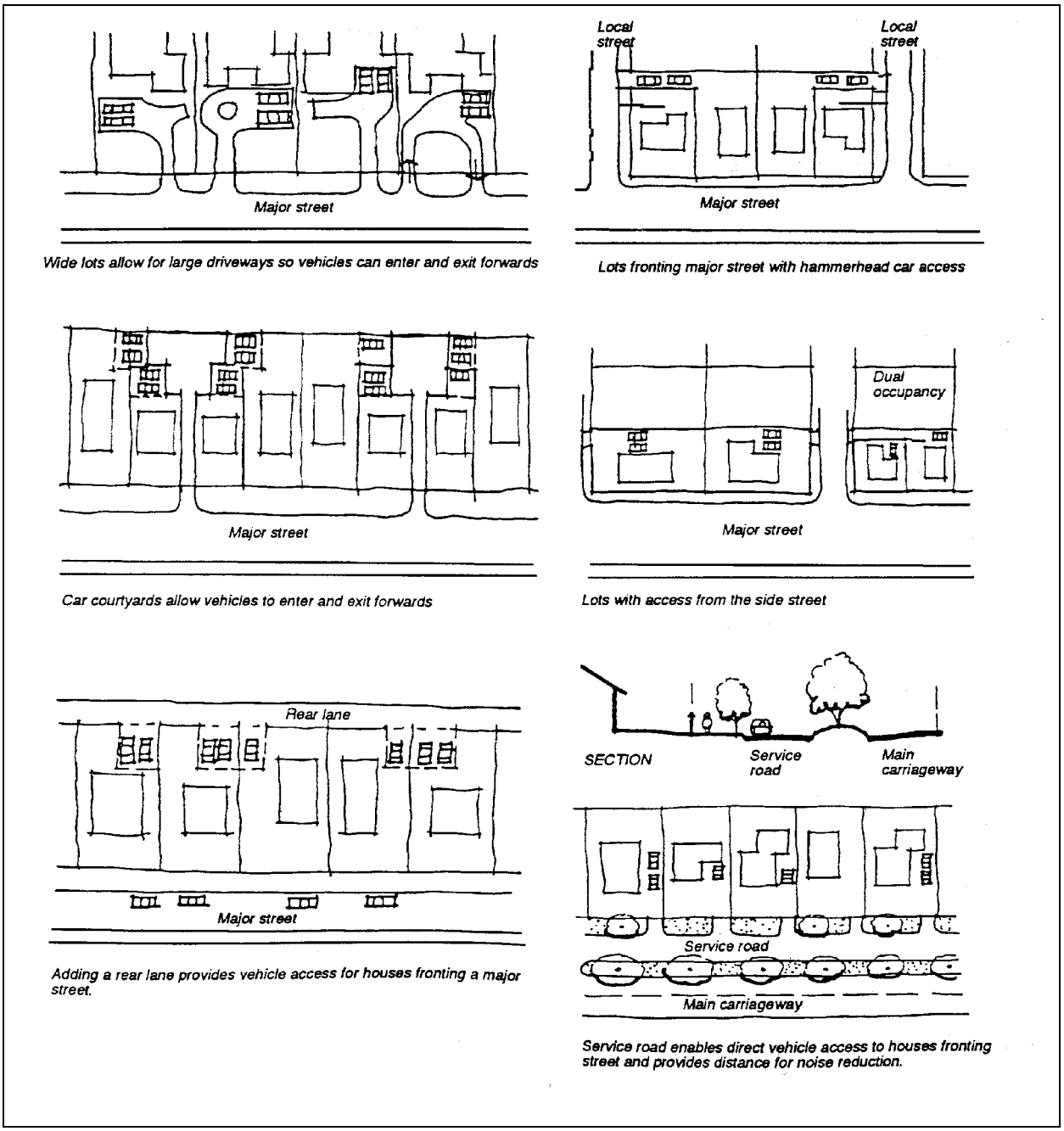


Figure 11 Performance standards offer flexible choices for meeting regulations.
(Source: Department of Planning and Housing, State Government of Victoria, Australia, 1992)

■ Streamline Development Review Process to Avoid Unnecessary Delay

Developers often have significant money tied up in their projects. Total project costs increase the longer the developer must hold the property before they the project can be marketed. A project will be more profitable (or more feasible) to the extent that the developer can proceed quickly through the permit approval, project design and construction stages. Developers particularly fear the kinds of unpredictable project delays resulting from neighborhood opposition at public hearings, which they view as more likely in infill development situations. Even before the ESHB 1724 legislation, many local Washington jurisdictions were reworking regulations to make the development review process faster and more predictable.

ESHB 1724 requires that local regulations limit the amount of time taken to process project permit applications. Together with SHB 2386, it requires a number of measures intended to provide a clearer understanding of local permit processes and local expectations, which, in turn, can reduce misunderstanding and delay. In response to ESHB 1724, all Washington jurisdictions are revising regulations to integrate environmental and project review and permitting processes. Local jurisdictions must limit the number of hearings and appeals on a development proposal (to one open record hearing and one closed record appeal). Local governments planning under the GMA also must provide an early notice to applicants regarding the adequacy of their application (within 28 days). A final decision on project approval must be reached within 120 days. GMA jurisdictions must also offer a consolidated permit process to allow concurrent processing and review of related development permits. SHB 2386 requires all local jurisdictions to make available permit assistance handouts which describe local government regulations and permit procedures.

In addition, a number of jurisdictions such as Clark County and Shoreline, have incorporated other measures to streamline procedures. Procedures with particular promise include:

- pre-application conferences between applicants and staff to clarify expectations and requirements;
- "one-stop shopping,"(where most development-related permits are handled through one department);
- administrative review and action on permits involving minor impacts (handled by staff or hearing examiner rather than scheduling hearings before a commission);
- assigning a single staff contact to help an applicant throughout a project;
- using technical review committees to coordinate multiple department review;
- encouraging early meetings with neighbors;
- permitting more uses "by-right" (ensuring that a permit is issued, provided that specific, well-crafted standards are met, rather than rely on discretionary review by commissions);

- and using computers to track permit status, to schedule permit actions, and to facilitate simultaneous review of applications.

Measures to streamline permit procedures facilitate all development, but may particularly facilitate infill development, which is vulnerable to delays in the permit review process. In addition, some communities have developed fast-track permit procedures applied within target infill development areas to increase the relative attractiveness of infill sites.

Successful Applications

Clark County, Washington's regulatory reform program illustrates many of the types of measures that can reduce unnecessary delay and costs associated with the permit review process. Clark County has implemented permit review and public hearing procedures to meet the letter and spirit of the ESHB 1724 legislation described above. In addition, Clark County has incorporated a number of measures that should reduce the frustrations of review processes without sacrificing appropriate control over the quality of development. The county requires a pre-application conference, prior to receiving an official application. The preapplication conference serves to clarify requirements and discuss issues at an early stage, before it becomes expensive to make major changes to a proposal. County staff use a checklist to provide quick feedback about obvious application deficiencies at the permit counter, typically on the same day. If the application is clearly incomplete, it will not be accepted and the applicant will be given information in writing about what is necessary to make the application "counter complete." Once the application has been received at the counter, it will be checked more completely for completeness. The applicant will than receive notice about whether the application is technically complete within a shorter time then the 28 days required by state statute, and within as few as five working days if the application was subject to a pre-application conference. A single planner is assigned as a contact and to coordinate all department comments on the project. A review team with representation from different departments will be convened to identify issues, immediately after submission and again within several weeks.

The county has taken steps to integrate land use and environmental review, including the use of combined checklists and forms. County staff have developed an exemplary set of permit assistance handouts and materials to help explain various permit processes. The handouts cover purpose, procedural steps and time limits, and submittal requirements. Standardized forms, clear English, and graphic illustrations help clarify permit procedures. Staff at the permit counter are available to answer questions, and a comfortable waiting area, complete with helpful signage and coffee, is provided. Computer programs are used to track permits. Several computer terminals are available in the lobby for those who wish to quickly check permit status (Clark County Code, Ch. 18.600 and Higbie, 1995).

The "two track" design procedure, now offered in the Albina neighborhood of Portland, provides applicants with a choice of review processes to meet differing needs. The developer has the option of adhering to very specific standards to receive an expedited, staff-administered project review, with great certainty for approval. If the applicant wishes greater flexibility or to vary from the standards, he or she can choose to go through a design review process with hearings scheduled before a

commission. The design commission review process can provide the flexibility needed to develop difficult sites while assuring neighborhood compatibility. A limited administrative review process for minor projects is also used in the Albina Community (Portland Bureau of Planning, 1993).

Vancouver, Washington has established an expedited development review process within designated transit overlay districts (where infill development and redevelopment to higher densities are encouraged). The expedited development review permit process entitles an applicant to be placed on a priority list, effectively jumping ahead of other applications awaiting review and decision (Vancouver Zoning Code, Sec. 20.95.060E).

Policy Issues

- Careful study and testing of proposal to streamline permit processes should be conducted to ensure that sufficient public and staff review is still permitted to safeguard important community values.

Conduct More Detailed Environmental Analysis at the Planning Stage

Successful Applications

Everett, Washington is conducting a more detailed environmental analysis of a plan subarea—a 4,000 acre industrially-zoned area (which is home to Boeing and other industries) with approximately 1,000 acres of undeveloped land. The environmental analysis and subarea plan will examine the cumulative impacts of proposed projects within the subarea. The area-wide environmental analysis will contain enough detail to greatly speed up permit review for projects within the area that are consistent with the subarea plan. Projects that are found to be consistent during a pre-application review will not be subject to further SEPA review. For projects that are generally consistent, but have some unaddressed new aspects, environmental analysis will be limited in scope to those aspects not covered under the original plan and EIS. Everett's approach will save time and money for project proponents relative to the traditional EIS requirements. A project proponent will be better able to anticipate what mitigation will be required, even before the permit application is submitted. The greater certainty about requirements and associated costs should facilitate obtaining favorable project financing. Such a "programmatic EIS" would be particularly appropriate for infill areas which a jurisdiction has targeted for development. The more limited environmental analysis required could be a major incentive for attracting infill development (Koenig, 1997).

Olympia, Washington has prepared a similar EIS focused on its North Downtown Planning Area. The purpose of the EIS is to encourage the type and mix of development envisioned in Olympia's comprehensive plan for the downtown. The study consolidates and discloses known information about the study area. As a result, it reduces the time and expense of finding information and provides greater certainty for developer about what will be involved in developing property. The Subarea EIS may be used by project proponents to support a development proposal within the study area. Although additional information may be needed for an individual project, an addendum to the subarea EIS may suffice. In analyzing four scenarios for downtown development, the EIS examines market feasibility and identifies mitigation measures that will be needed under the different scenarios. It also identifies key actions the city may want to take to further ready the area for desired development and redevelopment.

Policy Issues

- The high cost of the more detailed environmental review will make it difficult for most local jurisdictions to conduct such analysis over an extensive geographic area. However, conducting such analysis over a smaller target area may be manageable and can remove questions about unknown environmental conditions that may otherwise inhibit development. It may be possible to partner and pool resources with developers who are interested in an area to conduct a wider, more cost-effective environmental analysis.

Permit Adequate Densities to Ensure that Infill Development is Feasible

As noted earlier, infill sites in established neighborhoods are generally more expensive to acquire and develop than raw land in the suburbs. In addition to facing higher land costs, the infill developer typically works with smaller sites which accommodate fewer units, providing less opportunity for economies-of-scale and higher profits. Increased density allowances can help off-set higher land costs and construction difficulties, making more attractive profits possible, in addition to a contractor fee. In some cases, higher densities can make an infeasible project feasible. In addition, higher densities in infill neighborhoods can support more frequent transit service, lower public service operating costs, and support a higher level of both publicly and privately-provided services and amenities. For instance, higher densities can support a greater variety of convenience commercial establishments, services such as child care, and cultural and entertainment events. Higher densities also allow more compact, walkable neighborhoods when such amenities can be located in close proximity. Higher density housing types also respond to changing household needs and the need for more affordable housing. As a result, higher densities can contribute to increased quality of life in an infill neighborhood.

However, higher densities often trigger resistance on the part of neighboring residents. In part because of past experiences with poorly designed high density housing, existing residential neighborhoods often fiercely resist traditional forms of multifamily development. Existing residents may fear that new, higher density development will be out of character with the neighborhood because of size, inconsistent character, or other design aspects. They may be concerned about lower maintenance, particularly if rental units are involved. Spillover parking is a particularly major concern. Particularly if it is essentially a homogeneous neighborhood, they may fear it will be different from existing development and that it will be inhabited by people who are different. All of these potential differences can raise fears of lower property values and/or neighborhood quality.

The challenge for Washington communities will be to find approaches to increasing average densities that respect the existing fabric of established residential neighborhoods and address neighborhood concerns. Design features that blend with existing neighborhood features can facilitate acceptance. According to Vancouver, B.C. studies of neighborhood acceptance, other factors may be even more important. Housing which is clearly family housing will be better accepted, as will housing that is accompanied by community amenities, such as a park. Owner-occupied units are also more readily accepted. To large extent, careful location may be the key. New infill higher density housing will be better accepted if it is an improvement over previous uses, especially poorly maintained or nonconforming uses. It will also be accepted more readily if it is located in already heterogeneous areas near transportation, shopping and other services (City of Vancouver, B.C., 1986).

■ Provide for Subtle Density Increases Where Sensitive Compatibility Issues Exist

In many cases, infill development can be developed at slightly higher densities than existing surrounding development while maintaining the substantial character of surrounding development.

The additional density may make a marginal project feasible or provide greater incentive for a developer to undertake infill development. If the density increase is a subtle one, and the development is designed to resemble existing development, it is less likely to encounter resistance from surrounding neighbors. For instance, carefully designed and located duplexes and accessory units can provide increased density without altering the basic single family character of a neighborhood. As noted in the section on design guidelines, sensitive design is often even more important than density in gaining neighborhood acceptance.

Successful Applications

Battleground, Washington has established an "infill development opportunities" overlay district. Property within the district, zoned for residential use and minimum lots sizes of 6,000 or 7,500 square feet are eligible for subdivision at a lot size of approximately 80 percent of the required minimum lot size. Duplexes in the R-6 zone may be constructed at 120 percent of the normal maximum density (Battleground Municipal Code, Ch. 17.137).

Portland, Oregon has successfully used a number of approaches for subtle increases in density. For instance, Portland permits duplexes on corner lots with unit entrances facing different streets resulting in a single family appearance. The following presents code language permitting the corner lot duplexes:

Portland, Oregon Corner Lot Duplexes

Duplexes and attached houses on corners. This provision allows the construction of new duplexes and attached houses in locations where their appearance and impact will be compatible with the surrounding houses. Duplexes and attached houses on corner lots can be designed so each unit is oriented towards a different street. This gives the structure the overall appearance of a house when viewed from either street (Portland Planning and Zoning Code, Ch. 33.110).

1. Qualifying situations. This provision applies to corner lots in the R20 through R2.5 zones. This provision applies only to new development. Conversion of existing housing is prohibited under the regulations of this subsection.

2. Density and lot size. One extra dwelling unit is allowed. For duplexes, the lot must comply with the minimum lot size standard for new lots in the base zone. For attached houses, the original lot before the division for the attached house project, must comply with the minimum lot size standard for new lots in the base zone.

3. Additional site development standards. Each unit of the duplex of attached house must have its address, front door, driveway, and parking area or garage oriented to a separate street frontage.

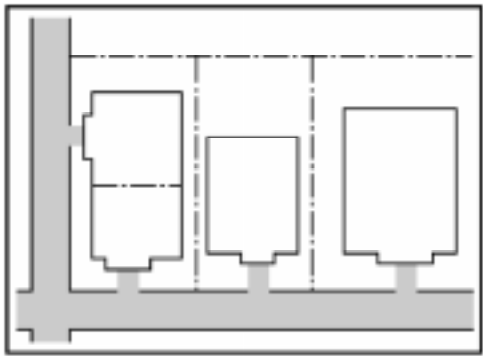


Figure 12 Duplexes on corner lots provide opportunities for subtle density increases. *(Source: Nicole Stiver, Municipal Research & Services Center, 1997)*

Portland also allows increased densities in transitional areas between residential and non-residential zones serving to buffer residential uses. Portland's provision is different from transition provisions in some zoning ordinances because it relies on increasing densities on the residential side of the line rather than requiring reduced intensity on the nonresidential side. The following contains language implementing this provision:

Portland's Transitional Sites

The transitional site standards allow for a transition of development intensities between nonresidential and single-family zones. A stepped increase in density is allowed on single-family zoned lots that are adjacent to most commercial, employment or industrial zones. The transition site provisions promote additional housing opportunities in a way that has minimal impacts on built-up single dwelling neighborhoods (Portland Planning and Zoning Code, Ch. 33.110).

1. Qualifying situations. The transitional site regulations apply only to lots in the R20 Through R2.5 zones which have a side lot line that abuts a lot in the C, E, or I zones, except for the CN and CO zones. The side lot line of the residential lot must abut the lot in a nonresidential zone for more than 50 percent of the residential length. If the lot is part of an attached housing project, the extra unit allowed by this subsection applies to the attached housing project, rather than just to the lot adjacent to the nonresidential zone.

2. Density. The lot or attached housing project may have one dwelling unit more than is allowed by the base zone.

3. Lot size. Lots must comply with the lot size standard for new lots in the base zone except for lots in attached housing projects which may be reduced to accommodate the extra dwelling unit.

4. Housing types allowed. The lot may contain a duplex or be divided for attached houses. If the development is in the form of an attached house, the site development regulations for attached houses apply.

5. Lot coverage. For attached housing projects, the general lot coverage standard of the base zone applies to the entire project, rather than to each individual lot.

Tacoma, Washington will consider special development permits for two or three-family units where special circumstances make development or continuation of single family development difficult. Tacoma's code specifies some criteria to ensure compatibility with surrounding development. Tacoma's hearing examiner uses the following criteria to consider whether additional units are appropriate:

Tacoma Special Development Permit Criteria for Permitting Higher Density

1. Location on an arterial street;
2. Location in close proximity to A more intensive zoning district;
3. Unusually large lot size for a one-family dwelling;
4. The presence of unusual natural site characteristics, such as steep topography or unstable soil conditions;
5. The existence on the site of a one-family dwelling with an above grade floor area of more than 2,400 square feet, exclusive of garage area, in the case of an application for conversion to a two-family dwelling, or 3,200 square feet in the case of a conversion to a three-family dwelling.

■ Maintain Average Densities by Allowing Density Transfer from Protected Areas

A number of communities have found that they are consistently getting less density than the level which is permitted by zoning. One of the reasons communities fall short of density goals can be that other regulations, which overlay those of the zoning district, tend to erode permitted densities. In particular, when environmentally-constrained lands are subtracted from the total land area which may be used for calculating allowed density, overall density will be reduced. Some communities have adopted provisions which allow a developer to transfer density to an unconstrained portion of the site in an attempt to maintain average densities while continuing to protect environmentally sensitive areas. However, the remaining portion of the site may not be able to accommodate all of the density which would normally be spread over a larger area. To address this concern, some communities have developed a sliding scale approach which allows a decreasing portion of the density to be transferred as the percentage of constrained area increases.

Promising Applications

The following contains an example of code language from Des Moines to allow a partial transfer of density from constrained areas (Des Moines Ordinance No. 853):

Des Moines Sensitive Area Density Transfer

b. Formula. The maximum number of dwelling units (DU) for a site which contains undevelopable environmentally sensitive areas is equal to:

[(Developable Area) / (Minimum Lot Area/DU)] + [Undevelopable Area) / (Minimum Lot Area/DU) (Development Factor)] = Maximum Number of Dwelling Units.

The maximum amount of commercial floor area for a site which contains undevelopable environmentally sensitive areas is equal to:

[(Maximum Permitted Floor Area/Lot Area) (Developable Area)] + [(Maximum Permitted Floor Area/Lot Area) (Undevelopable Area) (Development Factor)] = Maximum Amount of Floor Area.

Developable environmentally sensitive areas shall receive full credit towards calculating the number of dwelling units of floor area.

c. Development Factor. The development factor is a number to be used in calculating the number of dwelling units or the maximum allowable floor area for a site which contains undevelopable environmentally sensitive areas. The development factor is derived from the following table:

Undevelopable Sensitive Area As Percentage of Site	Development Factor
1 to 10	.30
11 to 20	.27
21 to 30	.24
31 to 40	.21
41 to 50	.18
51 to 60	.15
61 to 70	.12
71 to 80	.09
81 to 90	.06
91 to 99	.03

Woodinville, Washington and several other Washington communities are establishing transfer of development rights (TDR) programs to reduce density in some areas, while increasing density in target urban growth areas. The program thus helps Woodinville to accomplish both its goals for preserving certain resources while increasing densities in urban areas. A transfer of development rights program designates some lands as preservation (sending) areas where development is limited. Although property owners in these areas can not develop their land, they are assigned development rights which can be sold to landowners in designated growth (receiving) areas. Receiving area landowners can then develop at greater densities than would otherwise be permitted. The net result is higher densities permitted in receiving areas than would otherwise be permitted, while other areas are protected from development. Woodinville has designated most of its urban residential zones and its business centers as receiving areas. The city designated open spaces, wildlife habitat, woodlands,

shoreline access, community separators (greenbelts), regional trail/natural linkage(s), historic landmarks, and agricultural lands (not already protected) as sending areas. Such a program can even out the "windfall/wipeout" effect of traditional zoning where one property owner is restricted while another has many optional property uses. Bainbridge Island has a similar program allowing a density transfer from agricultural lands and critical areas to its Mixed Use Town Center and its Neighborhood Service Centers.

■ Use Density Bonuses to Stimulate Infill Development in Target Areas

Density bonuses can also be used as incentives to encourage infill development in target growth areas or to encourage types of development which will contribute to neighborhood needs. Ideally, density bonuses can be set at level which gives infill areas a competitive edge over non-targeted areas (or at least places them on an equal footing). At the same time, density bonuses should not result in projects out of scale and character with the neighborhood. Density bonuses are often given in exchange for certain benefits or amenities to ensure that new development makes a net positive contribution to the neighborhood.

Successful Applications

Clark County, Washington provides for special infill incentive densities in urban single family zones to maximize utilization of public facilities and services. Within each of the zones a 20 to 25 percent minimum lot size reduction is offered if certain criteria are met. For instance, a 4,500 square foot lot is allowed where the base density is normally 6,000 square feet. Infill parcels must be less than two and a half acres, all public services must be available, the housing type must be the same as on adjacent lots, urban development must exist on at least two sides and the plat must be designed to protect privacy and character of adjacent property (Clark County Code, Ch. 18.406.020).

Woodinville, Washington (and King County) offers a residential density incentive (RDI) for residential development in its urban residential zones and in several of its commercial zones. A maximum density of up to 150 percent of the base zone density is possible in exchange for providing benefits related to community goals. (Up to 200 percent density bonus is possible if 100 percent of the units are affordable.) For instance a 10 percent increase above the base is offered for development located within one-quarter mile of routes with at least a half-hourly transit service during peak and non-peak daytime hours. The city also allows 1.5 bonus units for every unit of permanent low-income (nonelderly) rental housing (up to a maximum of 30 for each five acres) and offers bonus units for a number of other specified amenities (Woodinville Municipal Code, Ch. 21.34).

■ Allow Well-Designed, Well-Located Multifamily Housing By Right

Multi-family development offers the opportunity for higher densities and potentially greater profits for infill developers. At the lower end of the multifamily range, townhouse and duplex densities are typically in the range of eight to 12 units per acre and may achieve up to 16 or somewhat more units

per acre. Multifamily densities can reach 60 to 300 units per acre in dense urban areas in the form of high rise developments (higher than suitable for most infill locations). These densities can support regular transit service. In addition, some multifamily housing is desirable to meet the needs of those who prefer the affordability or the more maintenance-free living and/or convenient locations, which multi-family living offers.

Developers may shy away from multifamily development if a rezone or conditional use approval is required, or if a discretionary review process without specific standards is required. Such processes can leave project proponents vulnerable to neighborhood opposition, delays and denials. A better way to address concerns over multifamily development is to solicit active neighborhood involvement when developing standards and to employ good design and siting criteria to minimize impacts. A number of lower density types of multi-family, such as townhouses, can blend successfully in predominantly single-family areas. Intermediate density types of multi-family also can achieve community acceptance when well designed and well located. As densities move above the townhouse level, they may be more readily accepted when located around neighborhood or community commercial centers, recycled industrial sites, or other transition areas. Most communities in Washington, including small towns, have some provisions for more traditional forms of multifamily apartment buildings. However, many communities may need to make code revisions to assure that these uses are more successfully integrated into the community. See the section "Ensure that Housing Types are Compatible with Existing Housing Types," for examples of strategies to promote improved design and acceptance of multifamily housing. See also Appendices D and E for multifamily design guidelines/standards that promote compatibility.

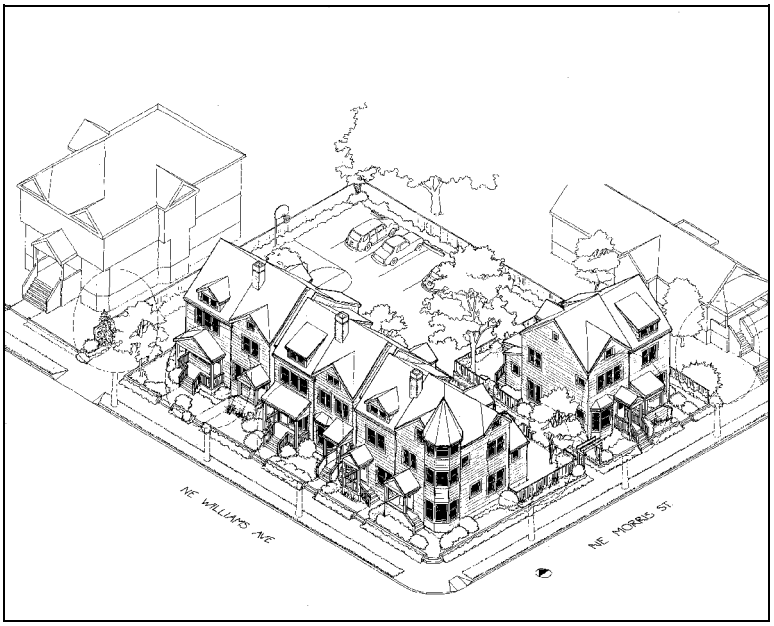


Figure 13 Well-designed, well-located multifamily can gain acceptance.
(Source: Sketch from "New Home Designs for North/Northeast Portland - Entries in the Essential Housing Competition," American Institute of Architects, Portland Chapter, 1991)

Address Barriers to Investment in Brownfield Sites

Concerns about costly clean up of environmental contamination and associated liabilities have become a major factor prompting businesses to seek new, environmentally clean (greenfield) sites, rather than expand, redevelop, or locate at sites in urban centers. The U.S. Environmental Protection Agency's change of policy direction and its "Brownfields Economic Redevelopment Initiative" open up new opportunities for the redevelopment of contaminated commercial and industrial properties. The Growth Management Act, focuses further attention on infill sites and provides additional impetus for rehabilitating these often centrally-located sites.

As defined by EPA, brownfields are "abandoned, idled, or under-used industrial and commercial facilities or sites where expansion or redevelopment is complicated by real or perceived environmental contamination." According to the General Accounting Office, the problem is extensive—the GAO estimates that there are 150,000 to 450,000 dormant brownfield sites across the country with clean-up costs estimated at $650 billion (Sachen, 1996). During the last two decades, federal and companion state environmental laws have placed liability for clean-up costs on present owners, business operators, and lenders, whether or not responsible for site contamination, in addition to past owners and business operators. As a result, businesses, developers and lenders have been understandably reluctant to invest in these properties. The stigma and reduced valuation of the brownfield site can readily spread to surrounding properties. This is particularly true if the brownfield property is abandoned, boarded up and otherwise no longer maintained.

New federal initiatives and reforms to the federal superfund laws and guidelines provide new authority for states local governments and others to cooperate in brownfield clean up efforts. They also expand the circumstances under which EPA will consider prospective purchaser agreements which limit liability for new owners. EPA's Brownfield Economic Redevelopment Initiative has funded demonstration pilot programs in a number of communities to build support and encourage clean-up of contaminated sites (Sachen, 1996). These changes and the hope for further easing of federal and state laws related to liability have encouraged many states and local communities to more actively pursue brownfield clean-up.

Brownfield clean-up efforts will be more effective if made a part of larger land assembly efforts rather than focusing on only individual projects. Targeting cleanup funding and measures to areas that have adequate infrastructure and are otherwise well-situated to attract investment will also be more productive. Major investments in site clean-up will be largely wasted if lot patterns or problems of crime, poor access, high cost-of-business and blight depress market potential. Public investment and incentives for clean-up will also be also be more productive if they are directed to support the type of industry that will be engines for local economic growth (Iannone, 1996).

More information about federal brownfields programs can be found on the Internet at the U.S. EPA web site at http://www.epa.gov/swerosps/bf.

Successful Applications

Tacoma, Washington is one beneficiary of the EPA's Brownfield Initiative. Tacoma received a $200,000 grant from EPA for a demonstration pilot program in the Thea Foss Waterway area. Thea Foss Waterway is a downtown Tacoma district with extensive contamination from former industrial uses. Much of the area is designated as a federal Superfund site. The city of Tacoma determined that an aggressive clean-up effort was needed to make anything happen, economically, in the downtown area. The city wanted redevelopment of this key downtown area to occur more quickly than would be permitted by the federal remediation schedule and negotiated a set of unique agreements with EPA and the Washington State Department of Ecology. EPA help resulting from these earlier negotiations enabled the city to do extensive testing to determine the extent of contamination. The current grant is being used to conduct an economic feasibility study to identify what kinds of uses would be best suited (and have the greatest market potential) in the area and to determine the best strategy to promote investment in the area. Through the grant funding, Tacoma has set up a public development authority to help market the area for infill development. Tacoma's plan for the area would promote a mix of residential and commercial development.

In addition, the city, for a number of years, has passed a series of general obligation bonds for cleaning up contaminated sites and for public improvements along the waterway, including new sewer lines, view corridors and a public esplanade. The city and development authority have also purchased much of the property on the western side of the waterway in order to initiate cleanup and redevelopment activities. Another $12 million bond is expected to be approved soon (Alford, 1997).

Policy Issues

- The primary policy issue is the high potential cost of cleaning contaminated sites, which would greatly strain most local government budgets. As a result, cooperative efforts and partnerships will be needed to make a dent in the problem. In addition, flexibility to adjust the level of clean up depending on the ultimate use can stretch local dollars. For instance, in some areas more lenient standards have been allowed for paved-over factory or commercial sites, while stricter standards remain for parks and residential uses (Peirce, 1996). New technologies such as bioremediation of groundwater also have the potential to greatly reduce clean up costs (Rebenstorf & Tripp, 1995).

- Because of the high costs, local officials may face considerable political heat for taking on a expensive reclamation efforts. Tacoma officials recognized the overriding importance and potential of their contaminated waterfront lands. The political heat turned to civic pride as the esplanade and other improvements replaced former eyesores and attracted new private investment.

- Although there has been some easing of liability requirements, uncertainty about liability continues to inhibit reuse of brownfields. Washington's voluntary clean up program does not provide liability release. Most programs and agreements with EPA do not provide complete release from liability. Even if EPA or the state may covenant not to sue related to clean-up of known past

contamination, a landowner may not be protected from lawsuits by third parties. The discovery of previously unknown contamination may also trigger new exposure. State laws and understandings with EPA will need to evolve to deal creatively with liability issues.

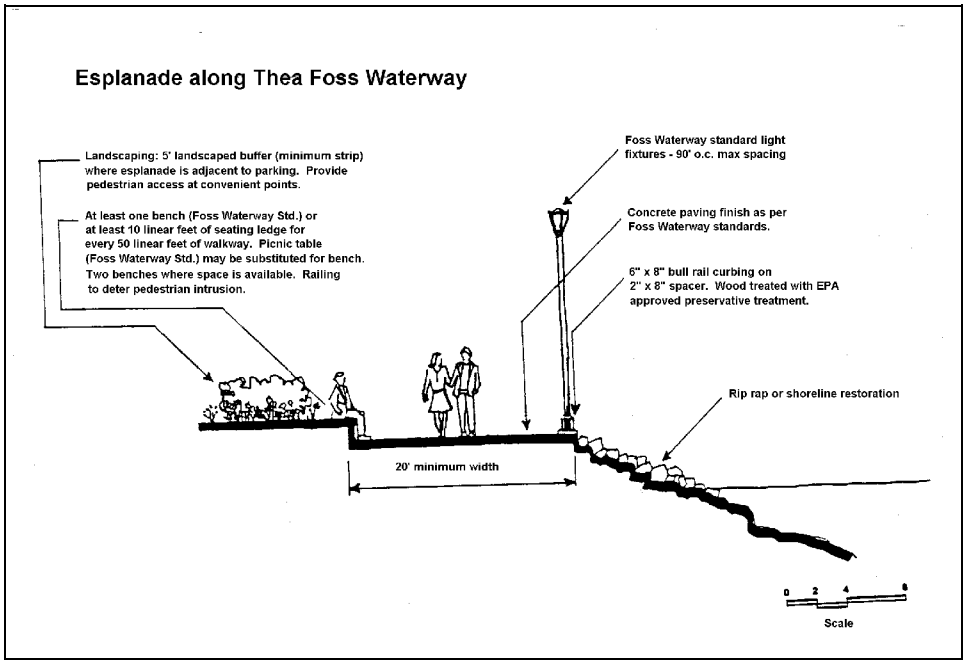


Figure 14 Tacoma recognized the value of reclaiming waterfront brownfield sites.
(Source: Tacoma Planning and Development Services Department, 1995)

Assist Infill Developer with Obtaining Favorable Financing Terms/Reducing Risk

Private developers are more likely to take on infill development if they are able to reduce risks or costs to an acceptable level. As a result, local jurisdictions may be able to encourage a higher level of infill housing if they can help developers to address these basic needs. Some of the approaches mentioned in earlier sections do function to reduce costs or risk for the developer. For instance, the previous section describes an economic feasibility study that the city of Tacoma conducted to determine what uses may be feasible on its brownfield sites. Such information can give developers confidence that the risks are within acceptable levels. Also, the land banking section described programs from cities such as Cleveland and Yakima that greatly reduce land acquisition costs for developers. The section on housing for today's needs describes how housing authorities, established by local jurisdictions, can partner with private or non-profit developers in creative ways to reduce costs.

Local jurisdictions may directly provide loans or grants to assist in the development of publicly or privately-owned housing, provided it is for low-income persons (RCW 35.21.685). Some cities, such as Seattle, have been successful in passing bonds to provide funds for affordable housing. However, most jurisdictions will have limited funds to use in this manner. Some cities have considered establishing revolving loan funds or providing loan guarantees to reduce costs or risks. The city of Bellevue is providing a guarantee to back Series B Bonds to be issued by the housing authority.

In addition, local jurisdictions have access to some federal funds or some other types of funds that are not directly available to private developers. Cities may be able to channel these funds to developers or partner with developers to accomplish infill projects. In other cases, local jurisdictions can help make private developers aware of funding sources for housing. See Appendix F for Selected funding sources useful for infill development.

Strategies to Make Attractive to Potential Residents

If infill development is to take place at a significant scale, it must be attractive to sufficient numbers of potential residents and businesses. Developers will not undertake infill development if there is not a sufficient demand for in-city living. Since World War I, and accelerating after World War II and the new mobility provided by the automobile, the pull of suburban and exurban locations has been irresistible. Middle class families have left in-city locations seeking to rise above urban, working class conditions, and to fulfill their dreams of owning detached single family homes on spacious lots in safe, clean neighborhoods.

Cities seeking investment in older urban neighborhoods must deal with real or perceived conditions that push potential residents away from in-city neighborhoods such as crime, jobs lost to outlying areas, and declining quality of schools. A three-year ULI advisory services study of six low-income inner-city neighborhoods revealed that "it is not the inadequate garages and backyards or the lack of cul-de-sacs that contribute most strongly to suburban flight. It is crime and the decline of public schools; it is the poor quality of infill development, the lack of code enforcement, and the blight that erode neighborhood vitality." (Cole, Bragado Corbett, and Sprowls, 1996.)

In-city neighborhoods also must offer qualities and amenities not available in outlying areas to successfully compete with exurban locations. As Peter Calthorpe notes, the inner city can never compete with suburbs as convenient places for automobiles (Calthorpe, 1996). In-city neighborhoods must build on their strengths. They can offer distinctive character, and mature landscaping typically lacking in new neighborhoods, built over a short time. Their central locations can offer quick access to work, shopping, community services and recreational opportunities. Residents in close-in neighborhoods can choose to walk or ride transit as an alternative to driving. Higher densities permit affordable housing, and support a variety of public and commercial services, as well as nearby cultural, social, recreation, and entertainment opportunities. These types of qualities are not guaranteed with lot-by-lot infill development, however. As one infill developer notes, "We are not just building buildings—we are building a neighborhood," (Charles Shaw in Dan McLeister, 1996). Cities and developers will need to team together to plan, develop and fill the gaps to achieve complete neighborhoods, with full services and attractive amenities. They will need to be attentive to emerging trends and needs. In addition, in declining neighborhoods, revitalization efforts must occur on sufficient scale to produce visible improvements, if they are to engender confidence and attract private sector investment.

In-city living will not appeal to everyone. A Seattle study indicates that households with children strongly prefer detached single family homes in the suburbs. However, studies such as Seattle's "Housing Preference Study" indicate that there is a sufficient market for in-city living, particularly if certain qualities are present. The Seattle study explores housing preferences and the trade-offs people will make if they cannot have all the things they want in a house and a neighborhood. Seattle was particularly interested in identifying potential candidates for urban village living (residential and

commercial neighborhoods within a central city). The Seattle study revealed housing type to be the most important dimension in housing choice for over one-third of the respondents (most preferring single family), while home ownership was most important to slightly less than one-third of the respondents. For the remaining respondents, other features such as affordability, commute time, school quality or crime were more important than housing type. The study found that the presence of neighborhood parks, greenery, good transit, convenient neighborhood businesses and quality urban design doubled the number of metropolitan area residents who would choose to live in Seattle multifamily homes (to about 17 percent of the population). Townhomes, which permit home ownership and offer some of the advantages of single family homes, can sway additional potential residents who put a premium on home ownership. When the above amenities and townhome purchase opportunities were present, the number who would choose urban village central city living rose to 22 percent. If, in addition, city schools and crime were perceived to be no worse than suburban schools and crime, the study indicated that 35 percent of the metropolitan population would prefer Seattle urban village housing to living in multifamily outside the city or to single family homes anywhere (Seattle Planning Department, 1993).

Encourage Convenient Commercial Services to Support Neighborhood Needs

As noted earlier, the last several decades have seen a significant migration of middle class residents and purchasing power from the city. Average household size has declined to 2.6 persons per household. As a result, fewer people live in central cities who can support in-city businesses and services. At the same time, the automobile, refrigeration and spacious suburban sites with abundant parking have contributed to trends toward larger stores serving a larger service area. For instance, the average A&P grocery store has grown from 6,000 square feet to 54,000 square feet and offers a larger selection of goods. Smaller in-city retail stores, with a reduced customer base and lack of parking, may have difficulty surviving. In addition, problems with crime have driven businesses out of some urban neighborhoods. Those that have survived, do not enjoy the efficiencies of the larger stores and generally have a higher cost structure and narrower selection of goods. As a result, some existing in-city neighborhoods lack adequate convenience businesses or are served by more expensive stores (Bogdan, 1995). As shopping opportunities and associated jobs disappear from the neighborhood, the quality of life in central neighborhoods declines. Where neighborhood commercial centers are poorly maintained, they can have a blighting effect on surrounding residential areas.

Some cities have succeeded in attracting critical businesses and services (even large discounter retail) back to inner city neighborhoods. The addition of higher density housing types, matched to emerging housing needs, can compensate for customer base lose related to smaller household size. Improved pedestrian and transit facilities can facilitate access to such businesses. Market studies may have tended to underestimate income (including unreported income) in central neighborhoods. Changing demographics, particularly an increasing percentage of minority groups such as Latinos, create some special niche opportunities such as catering to ethnic food demand. Some retail developers, using design and security features, have developed shopping centers in urban locations with fewer thefts/robberies/burglaries and higher annual sales per leasable floor area than comparable suburban centers.

Successful Applications

Public, private and nonprofit efforts combined to bring a successful shopping center to the Watts area of Los Angeles. The shopping center consists of well-known discount, food and drug store chains, a variety of smaller shops, and personal and financial services. The shopping center's annual sales of over $350 per leasable square foot tops the $200 per leasable square foot figure for a comparable suburban shopping center. It enjoys a remarkably low crime rate, experiencing one burglary, three thefts of or from cars and one attempted robbery during one year. By comparison, a similar-sized suburban shopping center would experience eight burglaries, 70 thefts of or from cars, and four robberies, during a 12 month period.

Heightened security measures combined with attractive landscaping and design were key to the success of this project. The center employs its own security force, uses more intense than normal lighting levels, has limited entrances monitored by motion detectors and close circuit TV cameras,

and has six to eight foot high cast iron fences surrounding the center. Despite the intensive security measures, the center appears welcoming. Generous amounts of landscaping, ornamental columns on the fences and other design features disguise and soften the effects of the security measures (Titus, 1990; and Berens, 1996).

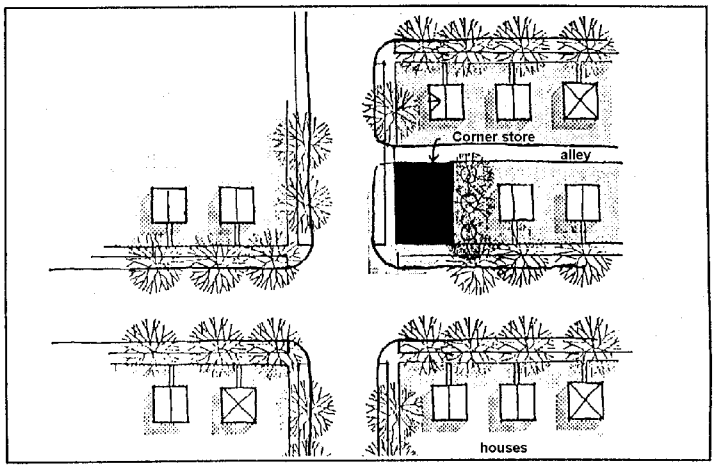


Figure 15 Convenient commercial services make urban living more attractive.
(Source: Saint Paul, MN Department of Planning & Economic Development, 1993)

The American Planning Association recently honored Earvin "Magic" Johnson with the Association's Presidential Award. The former basketball star developed a 12-theater cinema complex in the inner city, South Central neighborhood of Los Angeles. The cinema complex has become one of the most profitable complexes in the country and has helped turn around the neighborhood (*Planning*, 1997).

Policy Issues

- Putting together a large inner-city commercial development can require considerable patience and years of negotiation with a variety of agencies, on the part of the developer. A developer is unlikely to take such a project on without sensing unified support and the promise of tangible help from local jurisdictions and development agencies. Seattle designated a staff contact to help expedite the approvals from multiple departments and agencies for the Promenade 23 shopping center in a central neighborhood.

  In target areas where local jurisdictions wish to encourage such developments, local jurisdictions should consider investing in upgraded public improvements to attract and support such development. Additional public support may be necessary to encourage projects in marginal areas. Although now profitable, the Vermont-Slauson shopping center in Watts required public support to get it off the ground. Sixty percent of the project's total cost came from public sources including urban development action grants, U.S. Economic Development Administration grants, community development block grants, tax exempt industrial development bonds, enterprise zone

tax write-offs, city infrastructure grants, and tax-increment financing. As federal programs dry up, new state and local government programs and private sector funding will become increasingly important.

Private sources may become more available with the proven success of developments such as Vermont-Slauson. Also, developers should be encouraged to meet with citizen's groups rather than allowing them to be "blind-sided" by a large development. The Alexander Haagen Development Company, which developed the Watts shopping center, have met regularly with citizen groups to win their support and benefit from valuable feedback (Titus, 1990).

- Inner-city commercial developers can anticipate high costs for security, in some inner-city locations. Heightened security will be important if tenants are to minimize crime-related loses and if customers are to feel comfortable. For the inner-city centers developed by the Haagen Company, security costs represent 60 to 70 percent of the common area charges compared to an industry-wide average of about 15 percent. The initial public contributions toward acquisition, construction and financing and the ongoing profitability of the centers make the security costs affordable (Titus, 1990).

- Quality design and generous landscaping were key components in making these centers feel welcoming despite heightened security measures. Other planning and crime design features reinforce security measures such as a 48 inch high wall to minimize storefront window breakage. Locating tenants with similar operating hours together to ensure a concentration of activity, and siting buildings so that storefronts face each other helps provide casual surveillance for added safety (Berens, 1996).

Increase Access to Job Opportunities and Programs for Infill Residents

While jobs were once concentrated in central cities, most new jobs are now created in newer suburbs or outside of cities. The mobility provided by the automobile, the opportunity for home ownership offered by veteran housing programs and federal mortgage guarantees, and concerns about crime, the quality of public schools and similar issues helped fuel a migration of families out of central city neighborhoods. Businesses soon followed their customers and labor pool outward. In addition, lower land costs were attractive to industries which benefited from spread-out single-story development and inexpensive parking. The remaining inner-city residents, often with limited transportation options, are geographically isolated from new employment centers. At the same time, the disappearance of manufacturing jobs that employed low-skilled labor, the downsizing and obsolescence of many older buildings, and the higher technical training required by many new jobs have particularly impacted low-income, inner-city residents.

The shopping center discussed above is one example of projects which can bring new jobs to inner-city areas. Mixed use developments offer additional opportunities for jobs in close proximity to housing for residents of varying income levels. Recognizing the mismatch between the job skills of many inner-city residents and the majority of newly created jobs, some communities have incorporated job training and placement programs into new infill developments.

Successful Applications

Marin County, California. The non-profit Marin City Community Development Corporation (CDC) was the prime mover behind a project which sought to (1) generate jobs, (2) provide affordable housing (a minimum of 40 percent of the total), and (3) strengthen community identity in unincorporated Marin City, California. The CDC met with community residents to better understand the needs of the community as a whole. The CDC established a partnership with another nonprofit, the Bridge Housing Corporation, and a private for- profit commercial developer to develop a mix of community retail, office, housing, and community uses and infrastructure including child care and open space improvements. Marin County backed the effort by obtaining some financing and bonding and by facilitating permit approvals required from a variety of governmental agencies. The project was expected to generate about 375 construction jobs and 600 permanent jobs. To direct these jobs to community residents, CDC established training and entrepreneurship training programs, as well as job counseling and placement. The lease agreement with the commercial developer guarantees that all jobs and business opportunities will be offered first to qualified Marin City residents. CDC also opened the Enterprise Center, an incubator for small businesses. Small businesses can lease space and take advantage of the Center's pooled resources and training workshops (Shreeve, 1993).

Sumner, Washington highlights the concept of a combined owner-occupied business/residence in its mixed use zone design guidelines. A live-work arrangement provides additional opportunities for employment that do not require a lengthy commute. Combining income-generating space with residential space can lower the costs of setting up and operating a small business. Such an

arrangement can provide needed flexibility for single working mothers and others for whom commuting presents problems. The following presents language from Sumner's Urban Design Concept Plan and Design and Development Guidelines (1995) which describe the unique live-work arrangement.

Sumner, Washington Live-Work Arrangement

> Live-Work Arrangements for owner-occupied business/residences are depicted in the attached examples with shared driveways and garage entries for work vehicles for at least every two buildings; (and with) a 20 percent residential floor area open space requirement on the upper level. An additional option locates the work vehicle parking and storage areas in the center of the block, accessible by alley, with the residential units above businesses oriented to the primary street.

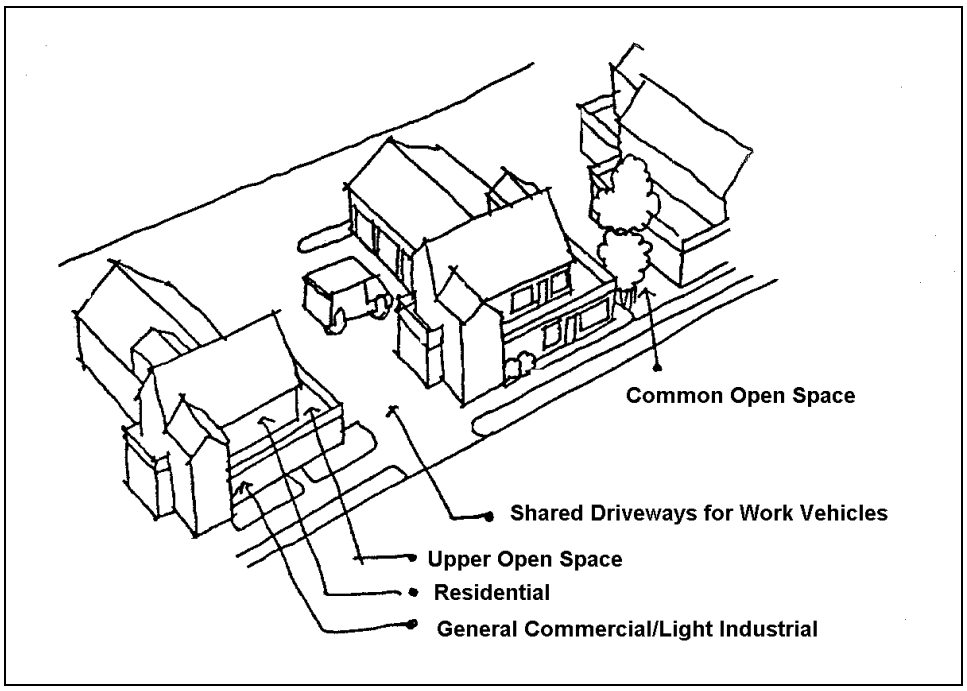


Figure 16 Live-work arrangements offer flexible job opportunities without commutes.
(Source: Sumner Community Development Department, 1995)

See also the section on providing convenient, frequent transit service for an example of transit access to jobs.

Policy Issues

- A project which addresses the community as a whole rather than focusing narrowly on just one component, such as housing, requires cooperation and financial participation by a number of agencies and groups. The process can be time consuming and involves greater risk (and rewards)

than a more straight forward project. As a result, compromises may be necessary and it may not be possible to fully meet the goals of all the participants.

- As in the Marin City project, some provisions may be needed to assure that existing residents have training and access to newly created jobs. New jobs will likely attract potential employees from outside of the area. This may be desirable, particularly if new families are attracted to live in the area. However, it can contribute to gentrification and displacement of existing residents, if they are not able to qualify for jobs or if new demand raises rents in the area beyond what existing residents can afford.

Employ Crime Prevention Design to Promote Security/Retain Families

In addition to the "pull" of suburban jobs, conditions such as high crime and poor quality of education can help "push" families into leaving inner-city neighborhoods. For instance, a study found that the four top reasons for selling a home were: housing values, schools, crime and taxes (Percy and Hawkins, 1992 in Varady & Raffel, 1995). An Urban Land Institute study of six low-income neighborhoods, among other studies, revealed that low quality of education and crime most strongly contribute to neighborhood decline (Bragado, Corbett and Sprowls, 1995). Similarly, a Phoenix, Arizona study found crime and the perception of crime to be the number one barrier to infill development followed closely by the perception that schools are inadequate or unsafe (Phoenix Planning Department, 1995). A city of Seattle residential preference indicated that if city schools and crime were perceived to be no worse than suburban schools and crime, the number of metropolitan area residents who would choose a central city living situation would increase significantly. The number who would choose multifamily living when amenities such as good transit service, convenience stores/services and open spaces, in addition to ownership opportunities was 22 percent. The number preferring such a living situation increased to 35 percent if they perceived that crime and school quality was no worst than suburban schools and crime. Suburbs are no longer immune from fear of crime. A 1991 survey by the National Research Council found that more than 42 percent of residents in suburbs of major cities were afraid to walk in their neighborhoods at night (Alan Farnham, 1992).

Some middle class families have responded to rising crime by choosing to live in gated communities (developments having gates or access restricted to authorized individuals only) in suburbs or outside of cities. Fences, locks, alarm systems and guarded entrances around homes and communities are typical responses to increasing crime fears. Residents of low-income communities which can not afford such expensive fortifications are left vulnerable. Although families may feel safe inside their "secure enclaves," they also give up public places and other areas outside of these developments to feel secure. Fear of crime may cause people to avoid taking a night course, go jogging alone or allow children to play outside. Overall security and quality of life of city residents is not addressed by this approach as Americans "shuttle from safe haven to safe haven through mean streets" (Vonier, 1997).

Instead, some communities have achieved impressive results through neighborhood and architectural design techniques which reduce the opportunity for crime rather than rely on expensive mechanical (e.g., locks and alarms) or personnel-intensive (guards) approaches. Very useful design guidelines for safety have been developed for use in Canadian cities such as Toronto (City of Toronto Planning Department, 1992) and through the Crime Prevention Through Environmental Design approach developed by Timothy D. Crowe, 1991. These guidelines have a common emphasis on increasing an individual's clear vision of surrounding areas and the visibility of activity areas from surrounding residences and uses. For instance, increased pedestrian-level lighting, path designs which avoid blind corners and provide escape route choices, use of only low fences or see-through landscaping, and building entrances, which are visible from public streets or places, will reduce potential hiding places for a criminal. Similarly, use of lighting and first or second story windows (not entirely covered by signs), front porches overlooking paths, parking areas, and public areas, and a variety of land uses

with 24-hour activity, can provide informal surveillance which tends to discourage crime perpetrators.

Each of these approaches advocate design which signals that neighborhood residents and businesses are watching and are taking care of their neighborhood. For instance, prompt repairs, litter pick up and graffiti removal are signs of a involved community. In fact, in the city of Phoenix survey mentioned above, graffiti was ranked as the number one factor in creating the perception that an area had a crime problem. Design techniques also can be used to clearly delineate the transition between public and private areas, making it more readily apparent when some one enters an area where they do not belong. For instance, gates, low walls, or a change in pavement can be used to signal the transition without an unpleasant, fortified appearance. In some public housing projects, grounds have been assigned to individual units rather than leaving them in ambiguous common area, to stimulate a sense of ownership. In turn, this has resulted in better maintenance and monitoring of those areas (Newman, 1995).

Oscar Newman was an early advocate of design approaches to reduce crime opportunity. His studies of several housing projects (Newman, 1995) suggest that ease of access to outsiders is among the strongest predictors of burglaries. Measures that restrict the ease of physical access into buildings or the neighborhood and/or make it more uncomfortable and difficult to enter unobserved, have been successful in reducing crime. In particular, designs which eliminate or slow vehicular through traffic in neighborhoods can reduce escape routes or make unfamiliar cars more noticeable. Use of cul-de-sacs has been associated significant lower crime (Newman, 1995). Use of traffic calming devices which greatly slow traffic on local streets may have similar effects while still allowing convenient vehicular and pedestrian circulation.

In addition, community policing programs which emphasize working with community residents for crime prevention rather than only responding to crime, seem to be putting a dent crime rates in cities like Seattle. A return to foot patrols in many communities provides more face-to-face contact and opportunity to build trust among community residents while increasing visibility of the police presence in the neighborhoods.

Successful Applications

Sarasota, Florida incorporated crime prevention through environmental design (CPTED) principles into their zoning and development review process. A pilot CPTED program apparently turned around a neighborhood in which 68 percent of the businesses had been victims of crime, according to a business crime survey. The neighborhood also was plagued with prostitution and drug activity. Sarasota's program combined high visibility police patrols and undercover enforcement actions with changes to land use codes and development review. A CPTED review, conducted by a law enforcement officer and a trained planner or building inspector, is required for development plans, conditional rezoning and special exceptions. The ordinance requires that the petitioner respond to concerns raised by the reviewers. The applicant may propose alternative solutions to address the raised concerns. The city commissioners then decide whether the applicant's responses are adequate.

The zoning ordinance contains mandatory requirements covering lighting, landscaping, maintenance and other standards. For example, parking lot landscaping must be of low height (a maximum of 2.5 feet) or tree canopies with a minimum clearance of five feet, to eliminate hiding places. Solid barriers may be used for buffering with a maximum height of 2.5 feet. All other separation treatments cannot exceed 60 percent opacity unless buffering residential property. All exterior lighting must be maintained in an operative state. Parking, service and pedestrian areas must be well-lighted. The ordinance includes incentives for balconies and front yard use to increase the "watchful eyes" effect. Unenclosed balconies can extend into a setback area and are not counted toward total floor area allowances. Greater heights are allowed for theaters and third floor residential and hotel/motel uses which increase the around-the-clock activity, discouraging after hours crimes. Nonconforming use provisions were revised to eliminate requirements which discourage improvements exceeding ten percent of the assessed valuation. All Sarasota public projects are designed incorporating CPTED principles and businesses receiving city redevelopment funds are subject to CPTED review. (Plaster and Carter, 1993; Post, 1996). Crime dropped 40 percent between 1996 and 1990 when the program was initiated. City-wide crimes rates dropped only nine percent during the same period (Carter, 1997). Building permits, rental rates and property values also jumped during that time.

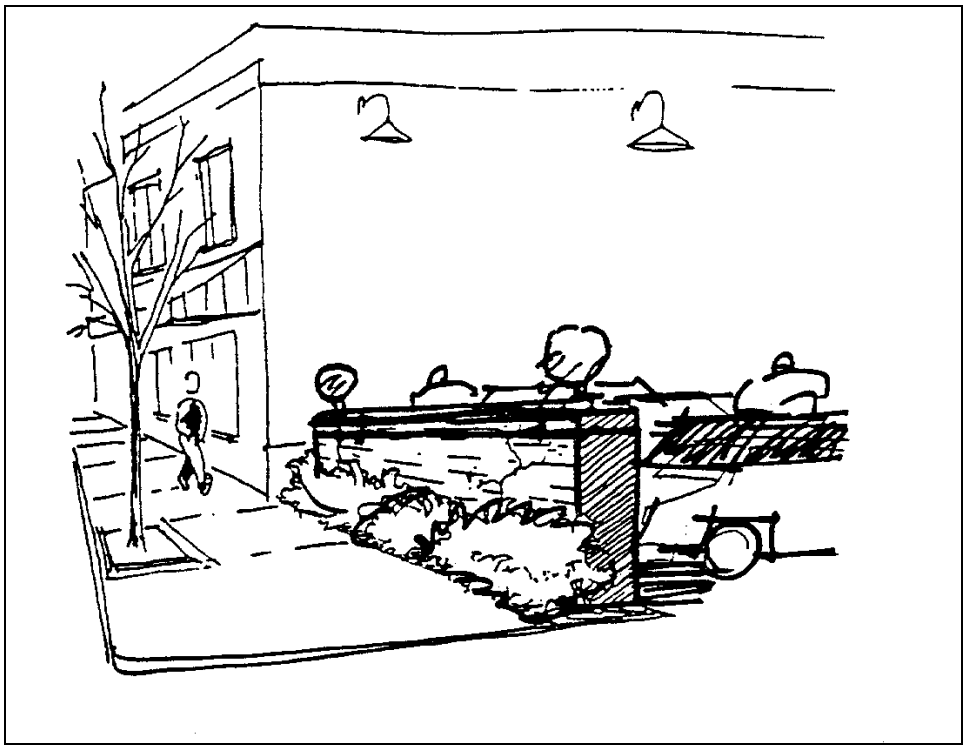
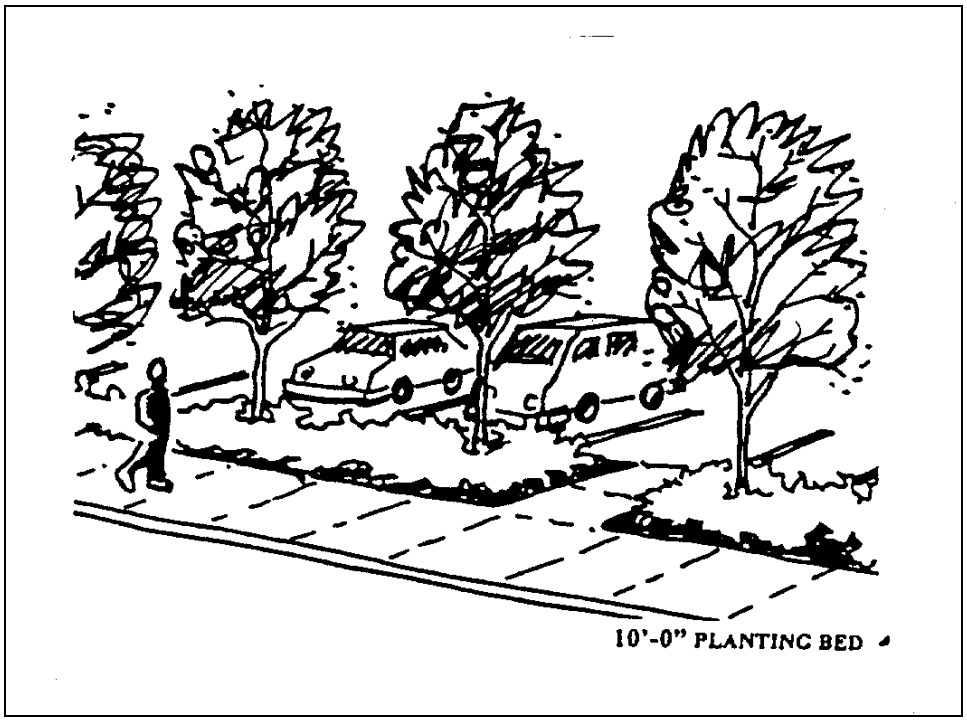


Figure 17 Use of low walls and vegetation allows clear vision for improved safety.
(Source: Sumner Community Development Department, 1995)



San Bernardino, California observed elevated crime rates in areas with high percentages of rental property (including many single-family rentals), particularly when poorly managed and located in blighted neighborhoods. In response, the city combined an extensive inspection program with a thorough landlord training program. The city began inspecting rental units, sending notices of violations. A high percentage (60 percent) of owners corrected violations without further action by the city. The city also established a landlord training and certification program. The city's eight hour training session and manual covers topics such as (1) applicant screening and rental agreements to reduce crime, (2) dealing with suspected illegal activity, and (3) making the property attractive to honest, responsible tenants. The program also includes a physical audit of the property, recommendations for crime prevention and owner hosting of an apartment watch meeting. Property owners completing the course may post a "crime-free" logo on the property, which has proven to be an effective marketing tool (Mulvihill, 1996).

Policy Issues

- Although cul-de-sacs and street closures have been linked to significant crime reductions, they may run counter to goals for facilitating direct, convenient pedestrian and transit access within the neighborhood. If these approaches are used, collectors at frequent intervals, pedestrian connections between cul-de-sacs, and similar measures will be needed to maintain convenient pedestrian circulation. To better maintain the convenience of alternate routes and pedestrian circulation, "traffic calming" techniques such as narrow streets, narrowing streets at pedestrian crossings, or traffic circles are recommended. These techniques slow traffic, inhibit quick get-

aways and discourage through traffic by outsiders, while better accomplishing convenient circulation. Traffic calming approaches are described in greater detail in the next section.

- Mixed use and higher densities do provide a higher level of activity around the clock which, in turn, provides more "eyes" to keep watch and to discourage potential crimes. However, some studies indicate that mixed use and higher densities alone may not assure lower crime. In fact, homogeneous residential neighborhoods with narrow streets and few major thoroughfares tend to be the lowest crime neighborhoods in these studies. A mixture of uses, which was typified by free-standing commercial, set back from the street with parking lots in front were associated with higher crime. Such commercial in residential areas may serve to bring more offenders and victims together and increase the opportunity for crime, when not designed to facilitate informal surveillance. Also, both very low and very high densities may create opportunities for crimes to occur unobserved.

  Mixed use can be designed to minimize opportunities for unobserved crime. In addition, when commercial establishments primarily serve local residents, the number of nonresidents entering the neighborhood is reduced. Residents will then be better able to monitor unusual behavior. Regulation of on-street parking and supervision or off-street parking areas can influence crime rates. Community watch programs and increased police patrols may be needed, in addition to design approaches. In-between densities may best provide increased activity and eyes without the crowding that makes surveillance difficult. An analysis of the types of crime, location of incidents, residential location of offenders and victims and similar information can help predict the combination of design and measures which will best accomplish a reduction of crime rates (Greenberg and Rohe, 1984).

Attract Infill With Cultural Facilities and Public Realm Improvements

Some people will choose to live in inner city neighborhoods because they require the convenient services, transportation options and the affordable housing that such areas typically offer. To attract potential residents who have a wider range of choices of where they live, and to provide a high quality of life for all residents, infill areas must offer qualities which spread-out development cannot offer. To choose a denser infill living situation, these potential residents must perceive attractive compensating qualities. For example, distinctive neighborhood character, attractive streetscapes, inviting gathering places, and proximity to a variety of public services and cultural social, recreational and entertainment opportunities can enhance the quality of urban living.

Studies from Seattle, Portland and other communities profile the type of potential residents most likely to choose urban living. As noted earlier, these include many non-traditional families such as empty-nesters, single moms, elderly, childless couples, students and other households composed of unmarried individuals. Successful infill development will focus on providing housing, services, facilities and amenities which meet the needs of such households.

According to one observer, "The livability of the neighborhood, after its reconstruction, can be measured by the way it promotes social interaction, gives people a sense of community and security, and enables them to control their physical, economic and social environment," (Hermanuz, 1988). The gathering place function of public places (including private cafes, espresso outlets, corner stores, taverns or establishments which encourage social interactions) may be particularly important in an age when participation in civic, religious and fraternal organizations has declined.

Successful Applications

Kirkland, Washington may be a particularly convincing case study for demonstrating the power of public investment in the public realm. Kirkland has consistently recognized the importance of investment in public improvements to improve the quality of community life and to attract private investment within the central area. For the past quarter-century, Kirkland has capitalized on its lakeside location by making strategic capital investments. At the same time, the city has encouraged higher densities and a mix of housing, employment, and recreational activities within its compact downtown area (less than one-half square mile). The result of Kirkland's combined policies is a very walkable, and alive downtown which has attracted significant nearby infill and redevelopment activity. Despite rapid growth, Kirkland retains a certain coherent, small town appeal, absent in many communities which have experienced rapid growth and change.

Early investments in its Marina Park were followed by other shoreline acquisitions to create more than two miles of shoreline parks. A multi-use central park with ballfields and regular events also attracts people to the central area. A performing arts center may be added to the park shortly. A senior center and public swimming pool attract additional people downtown. The library has remained downtown, and a new city hall was built bordering the downtown district. Kirkland has

used LID funds, community development block grant funds, projects by other agencies and private investment to extend a network of sidewalks throughout the area. Benches, pedestrian lighting, min-plazas, landscaping, and public art encourage people to linger and interact with others. The city's earlier efforts may have been a factor in attracting public art donations to such an extent that the city is beginning to run out of locations for the art. A number of private art galleries have also been drawn to Kirkland. As Eric Shields, the city's planner director observed, "if you do other things right, these sorts of things fall into place." The city worked with the highway department for improvements which better fit city plans, and with Metro (a regional agency) for a downtown transit center. Kirkland has attracted considerable residential investment including 12 condominium projects representing an investment of about $156 million, now in the pipeline (John Hahn, 1997; Eric Shields, 1997).

Figure 18 Investment in public improvements enhances quality of community life.
(Source: MAKERS Architecture and Urban Design, 1992)

Tacoma, Washington has joined forces with business and art community groups to develop a downtown revitalization plan which uses investment in cultural resources as a key strategy to stimulate economic development. An earlier grassroots effort raised $6.3 million to restore the historic Pantages Theater, now listed on the National Register of Historic Places. The city then established a task force to help accomplish the creation of a theater district, anchored by the historic theater in the downtown vicinity. The theater district now includes five newly constructed projects and three restorations of vintage buildings, including several theaters and supporting facilities, a multi-purpose rehearsal hall, an art gallery and a theater square which functions as a park and outdoor performance space. In addition, public art works, expressing Tacoma's varied cultural mix, have been installed. Large, colorful banners suspended from light standards further reinforce the cultural district image. In the 1994-95 season, performances and events drew an estimated 250,000 attendees, topping the previous year's draw by 20,000. An additional increase of 40,000 attendance is projected for the following

year. The cultural facilities investments have stimulated surrounding development including a variety of restaurants, night spots, art galleries and retail outlets.

Tacoma has adopted a cultural plan and has initiated a number of other project and programs that demonstrate Tacoma's commitment to developing its cultural resources. A $57 million rehabilitation of Tacoma's rail station and a pedestrian bridge between the rail station and an adjacent museum will incorporate some $6 million worth of glass art donated by the well-known glass artist, Dale Chihuly. Chihuly is working with the city on plans for a glass art museum. Tacoma also has a competitive process for allocating one-quarter million dollars of seed money for art-related programs in the theater district area. Tacoma also has an interesting ordinance provision that limits movie screen complexes with more than six screens to the downtown area. The city is currently recruiting an 18 screen complex to be located near the downtown area The theater district and investment in cultural resources have made Tacoma a more attractive and exciting place to live and work (Corpuz, 1996; Wilkerson, 1997).

Policy Issues

- It can be politically difficult for communities to spend money on cultural facilities and streetscape improvements, which some will argue are "luxuries." This is particularly true when cities face pressing problems such as public safety concerns, inadequate or unaffordable housing, health and welfare concerns and so forth. However, others will argue that social gathering places, open spaces and the arts are food for the soul, and are essential for social well-being and psychological health.

- Amenities such as those described for Kirkland, may help attract an upscale crowd of residents. Housing and living costs can rise if new, more affluent residents move in. Some existing residents may feel squeezed by higher costs and may resent other changes as well, if the area begins to seem "gentrified." In fact, Kirkland recently imposed a moratorium on buildings over 35 feet in height within the central business district to provide time to review policies and guidelines regulating larger buildings. These revisions may affect downtown residential development. A comprehensive program, which include affordable housing strategies, design guidelines, and other measures may be important to assure that the changes that take place benefit the whole community.

Provide Convenient Transit Service and Continuous Pedestrian Network

By definition, the central locations of infill housing offer relatively convenient access to downtown employment centers, shopping, business and personal services, community services, and entertainment/cultural opportunities and events. Transit and pedestrian or bicycle networks, provided in infill areas, can offer viable alternatives to automobile travel. The Portland and Salem infill development studies cited earlier indicate that in-close living may hold particular appeal for "non-traditional" households, including elderly, singles and single parents, and childless couples. Portland, Oregon for instance, does exhibit a higher percentage of singles, single-parent families and elderly than the percentage for the region as a whole (Tashman-Leland, 1993). Low income residents may be bound to central neighborhoods, in part, because of the typically greater availability of more affordable types of housing such as rental units and older housing. As a whole, these groups may have a particular need for transportation options other than the automobile. Elderly residents, who are unable to drive, can maintain their independence longer if they can get to medical services, shopping and other places without driving. Single-parent households and other typically low income households, who can not afford a car, again will be attracted to infill areas that offer travel options. The Seattle housing preference study cited earlier indicates that an even wider variety of household types may be attracted to the convenient, urban living situations, if attractive amenities, including good transit service, are available (Seattle Planning Department, 1993). Having additional transportation options is becoming more attractive to middle income families as increased car prices make it difficult to afford a second car (Monroe, 1997). The following are examples of local jurisdictions which offer transportation alternatives which add to the attractiveness of infill living situations.

Successful Applications

Pierce County, Washington. Transit is adding new bus routes, changing schedules, and organizing van pools to facilitate access to jobs for residents of a Tacoma empowerment zone. Intel Corporation has agreed to hire at least 70 residents of the empowerment zone to work in its new plant in the nearby city of DuPont. The Intel site manager has publicly stated that the availability of high-quality transportation was one of the major reasons Intel chose to locate its plant in Pierce County. Free bus passes provided through a state JOBS "welfare-to-work" program are also helping Pierce County welfare recipients access and hold jobs. The program is jointly administered by the Employment Security Department and the Department of Social and Health Services (Monroe, 1997).

Also see the Kirkland, Washington example, in the last section, illustrating the benefits of creating an attractive pedestrian environment.

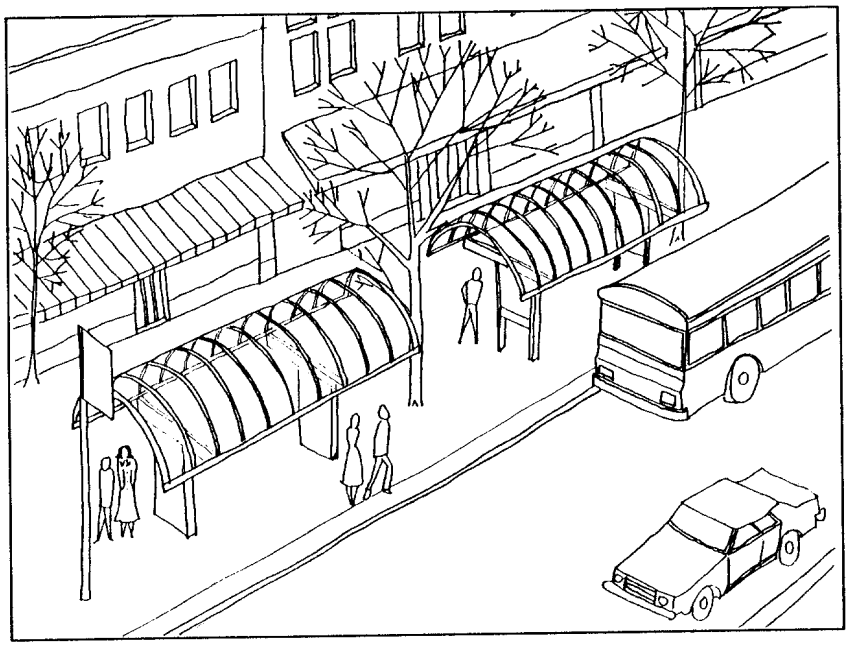


Figure 19 Convenient transit service and continuous sidewalks enhances urban living.
(Source: Snohomish County Transportation Authority, 1993)

Promote Affordable and Low Maintenance Housing Choices to Match Today's Needs

As noted in the introduction and other earlier sections, much of our current housing stock was built with the "traditional household" in mind. However, smaller families, in general, including elderly or empty-nester households, singles, and single parent households are making up an increasing share of today's households. Smaller housing units may better meet the needs of these households, and will be less costly. Rapid increases in home prices and rents through the 1980s have meant an increasing need for more affordable housing. Infill development can offer the opportunity to fill gaps in our existing housing stock, if it is targeted to the needs created by these changing demographics and economic conditions. To the extent that it meets these unmet needs, infill development success is enhanced.

Each of these groups has unique needs, but they share many needs in common which may not be reflected in much of our newly produced housing. For instance, single-parents, especially single-mothers, often have incomes substantially below the median income. They require affordable housing. Often unable to afford a car, housing, which is located near day care, stores, jobs, and other services and near family or others who provide a support system, is also essential. A safe neighborhood is particularly important for a mother who is raising children alone. Raising a child alone also means that time is at a premium. Living situations with minimal maintenance requirements, can help ease the time crunch. (Ahrentzen, 1991.) Elderly and active, young singles, who are just getting started, also are likely to be attracted to smaller, low-maintenance housing types in locations where walking or regular transit service offer an alternative to driving.

As noted, affordable housing opportunities are particularly needed in close-in neighborhoods. Affordable housing is generally defined as housing that costs no more than 30 percent of a household's gross monthly income for rent/mortgage and utility payments (excluding telephone). Decent, affordable housing is a need of all income groups—whether they enjoy high, middle, or low incomes. Although those with high incomes have abundant choices, it is increasingly difficult for moderate-income households (with incomes at 80 to 115 percent of the median household income) to find affordable housing. Low-income (between 50 to 80 percent of the median household income) and very-low-income households (at or below 50 percent of the median household income) have even fewer chances to find decent, affordable housing (income ranges as defined in RCW 43.63A.510(3)). Contrary to popular belief, the majority of low-households are working households. Firefighters, policemen, office personnel, many teachers, retail clerks, and other service workers, who make a substantial contribution to the community, often have incomes in the low- and median-income range.

Because infill projects by nature are often small-scale, such development is often overlooked as a potential source of affordable housing. However, as places such as Yakima, Washington, demonstrate, over a period of years, an ongoing infill housing program can add significant affordable housing to the existing housing stock. Furthermore, the housing will likely be located near jobs and services which low income residents need to access.

Washington cities do not have the authority to own and operate housing (except in the context of

urban renewal or historic preservation). However, they can play a leadership role in stimulating the development of low- and moderate-income housing. Local jurisdictions can use the following approaches to stimulate affordable housing: (1) set zoning and building permit requirements that support affordable infill housing, (2) funnel community development block grant funds and other federal or state money to housing, (3) establish housing authorities and assist housing authorities and non-profit organizations by making grants and loans, (4) assemble and bank land for housing purposes, and (5) in general, serving as a catalyst, coordinator and bully-pulpit for the affordable housing cause (Spitzer, 1992). (Note that Washington cities or towns may provide loans or grants to assist in the development or preservation of publicly or privately-owned housing for low-income persons (RCW 35.21.685). There are constitutional obstacles to providing loans or grants to the private sector for economic development or many other purposes.)

Kim Herman, Executive Director of the Washington State Housing Finance Commission, advises that one of the most effective ways that local jurisdictions can promote affordable infill housing is to assemble and bank land, similar to the Yakima program, described earlier.

Many local jurisdictions have found that establishing a housing authority, or supporting the efforts of housing-oriented non-profit community development corporations can be a particularly effective way to increase affordable housing production. Such organizations focus on housing production as their core business, in a way that multi-purpose general government can not. Both types of entities can produce housing without the added cost of maximizing profits. One of the major advantages of working with a housing authority to do the job, is that local jurisdictions need not assume the significant risks associated with housing production. As a municipal corporations, housing authorities can raise money by issuing tax-exempt revenue bonds, backed by the revenue from a particular property. These bonds do not affect a local jurisdiction's bond limits. Non-profits can be particularly skilled and patient at putting together a financing package that must necessarily leverage funds from a variety of sources. Non-profit corporations have access to foundation support to provide additional resources for housing. These same foundations are often reluctant to support government-sponsored projects—they do not want to commit scarce foundation funds to projects they believe should be supported by tax dollars.

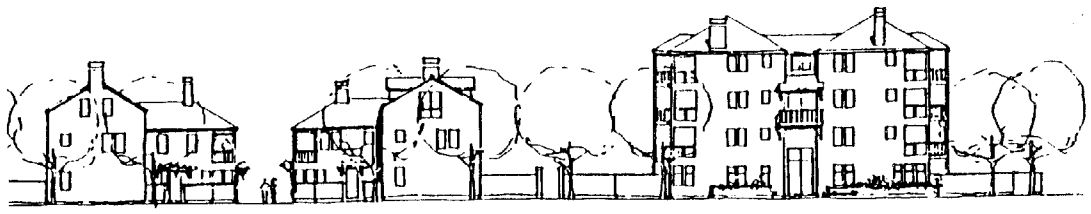


Figure 20 San Jose, CA prototypes for suburban affordable housing.
(Source: Bay Area Economics, 1991)

The following describes the common types of development corporations:

Types of Development Corporations

Entrepreneurial Nonprofit Developers. These non-profits typically develop, own or manage properties in a number of cities. Their primary skills are the same as those of private developers: assembling land, obtaining entitlement, putting together viable project financing, and managing the asset. Like their private sector counterparts, entrepreneurial non-profit housing developers typically operate "lean and mean."

Community-Based Nonprofit Developers. These organizations—like their entrepreneurial counterparts—are principally developers and managers or affordable housing projects. However, they usually limit their operations to one or two cities or neighborhoods, through boards of directors that typically are composed of local officials and residents, they have developed ongoing relationships with local government officials. They tend to be smaller in size than entrepreneurial non-profits and to make greater use of outside financial consultants.

Community Development Corporations. These organizations typically undertake a wide array of activities in addition to housing development, including the provision of social and health services, tenant advocacy and organizing, and local economic development (Morris, Landis and Smith-Heimer, 1996).

A following section on compatible housing types, and Appendices C and D describe housing types that promise to better meet these emerging needs, because they are centrally located, smaller, more maintainable and/or more affordable. Sumner's provision for owner-occupied live-work arrangements described in the section on providing jobs in infill areas, represents another living situation that responds to the needs of those who can not or do not wish to commute. The section on streamlining permit processes discusses changes to permit review procedures that can shorten the permit process and help minimize up-front costs of housing development. In addition, several examples of strategies for making housing affordable to potential residents are offered:

Successful Applications

Seattle, Washington has established its "Hometown Home Loan Program" to provide an incentive to employees to purchase homes within the city limits. Through the program, loan origination and other closing costs are reduced for employees, often by 50 percent off typical closing costs. The program also offers employees free home buying seminars. Continental Bank, which administers the program, applies more flexible guidelines for determining limits on the ratio of the employee-borrower's income to monthly house payments and other financial obligations. The more flexible guidelines may make it possible for an otherwise borderline applicant to qualify for a loan. Seattle also uses the program as an incentive to purchase targeted vacant or abandoned properties, and is encouraging other employers to offer the program.

Vancouver, Washington has established and works cooperatively with a highly effective housing authority. The Vancouver Housing Authority now has $70 million worth of projects in the pipeline and put 200 new units into service during the last year. The housing authority issues revenue bonds to generate funds for land acquisition and construction, as do most housing authorities. In a creative twist, uses its tax exempt line of credit to borrow money secured by other assets of the authority rather secured by the specific property. The housing authority can than use these funds to fund construction at an interest rate typically three points lower than the typical short-term construction loan rate. Vancouver uses an RFP and a competitive selection process with selection criteria based on public policy goals. The competitive process allows them to keep costs down while selecting a private (or nonprofit) developer who can do the job in an innovative but efficient manner. The housing authority will typically negotiate a deal in which land purchased by the authority is sold to the developer and an agreement negotiated to buy the developed property back (or to sell it to a non-profit) in a bulk sale . When the property is developed in private ownership, rather than by the housing authority (a municipal corporation), it is not subject to state prevailing wage and public bidding laws which draw out the process and tend to increase costs. The developer's risk is greatly reduced after negotiating a fixed price and a certain payment date.

The housing authority used a similar process for a 28-unit condominium project with all units affordable to households with incomes below 80 percent of median income. In this project, the authority continued to hold the land (at virtually no cost, since no property taxes must be paid by the tax-exempt authority). The developer deferred payment on the land until the time that the units were sold.

The authority also uses turn key construction to produce affordable infill housing. For example, a classic infill property, in private hands with existing permit approvals, was sold to another developer to build for the housing authority. In this arrangement, the authority negotiated with a developer about what would be built (a well-designed, well-located, 150-unit condominium project with 51 percent of the units affordable to median-income level families). Surrounding neighbors apparently were more accepting of the mixed-income development, than an entirely low-income project. In return the authority negotiated a contract to buy the finished product at fixed price. The developer assumed all responsibility for building the project. The authority paid the developers in three phases tied percent of occupancy.

As these examples illustrate, creative housing authorities such as Vancouver's have the flexibility and tools that can greatly facilitate infill housing. Cooperative partnerships between local government, housing authorities, non-profits and private developers can build on the powers, assets, and advantages of each type of entity to further stretch limited resources (Creager, 1997).

Strategies to Make Acceptable to Existing Residents

Existing residents have frequently succeeded in blocking or delaying new development on vacant sites in their midst. Such neighborhood resistance, and the potential for costly delays, makes many developers reluctant to pursue infill development opportunities. Neighborhood residents may be concerned about new development and increased density for a variety of reasons. Concerns about overloaded/overcrowded public facilities such as schools and parks, and increased traffic on residential streets are often raised at public hearings. Many residents are motivated by past bad experiences with new development, which failed to fit existing neighborhood patterns and character. New buildings which are out of scale with existing single family structures can cause particular alarm. Most of the strategies described in the last section which aim to make infill locations more attractive to potential residents, will also serve to make new infill development more acceptable to existing residents. In addition, the following strategies address concerns that existing residents frequently express, when faced with new development in their neighborhoods.

Adopt Design Standards/Guidelines for Improved Compatibility

■ Purpose and Use

A number of communities are developing and using design guidelines (1) to clarify what aspects of the community's existing character are valued by the community and what are the community's expectations for new development, (2) to ensure that new development complements rather than disrupts existing neighborhood character, (3) to ensure that new development is well connected to the larger neighborhood through continuous streets and sidewalk patterns and other visual and functional linkages, and (4) to raise the general quality of development. As noted above, residents may fear change and new development in their neighborhoods, based in part, on past experiences with poorly designed and poorly functioning development. Proposed new development, which seems out of context with the existing neighborhood, will likely provoke lengthy debate and sometimes outright opposition by neighbors. If the debate can be focused on design, rather than the red flag issue of density, chances of neighborhood acceptance will be greater. Experience with visual (design) preference surveys suggests indicates that residents often show preference for well-designed higher density housing examples over lower density examples of standard design. Design guidelines can allow flexible choices for preserving those qualities that are vitally important to community residents, but which are difficult to quantify in prescriptive zoning standards. Design guidelines can be tailored to unique situations and to address the relationship between properties. Therefore, they can achieve results that can not be accomplished by conventional zoning regulations that are applied across the board. Design guidelines offer an effective way of illustrating and communicating desired qualitative relationships between uses.

A comprehensive set of design guidelines will seek to relate new development to the surrounding context at several levels. Guidelines for infill areas are typically concerned with the relationship between the new development and its immediate neighbors. For instance, guidelines may encourage/require similar scale and height as that of neighboring uses, or window placement which respects the neighbor's privacy. In addition, to be effective, design guidelines should be concerned with how new building(s) fit with patterns established along the block (such as typical setbacks or streetscape). They should also be concerned with the broader context of neighborhood character, especially if within a historic district, waterfront district or district with some special function. Surveys of existing structures, block patterns and district character are recommended to document the existing context. The guidelines will be better supported by community residents to the extent that community residents are involved in developing guidelines, and the guidelines express what qualities are most valued by the community.

Design guidelines typically address aspects of site design which can improve compatibility such as landscaping, buffering, parking and garage placement, relation of buildings to the street, sidewalk circulation, or fencing. In addition, they typically address compatibility of building design, which may include similar scale, proportions and mass, window patterns and shape, roof shape, building materials or facade features, such as porches. In general, guidelines for infill within stable neighborhoods should encourage buildings that echo (rather than exactly reproduce) the character of surrounding

buildings. Through use of design guidelines, some communities have successfully provided for higher densities and affordable housing types while maintaining compatible building scale and appearance. Design guidelines also typically address connections between old and new development such as street and sidewalk patterns well-linked into the larger neighborhood. Design guidelines may also encourage common areas, gathering places or other features that facilitate community interaction.

■ Review Process

Communities have chosen different routes for applying design guidelines. Some communities have voluntary guidelines. By alerting developers about what type of development the community desires, the guidelines may influence developers to incorporate desired features. To the extent that developers believe their proposed development will sail more smoothly through the process, they may be motivated to observe the guidelines. Some communities, such as Indianapolis/Marion County, go a step further by offering incentives (such as residential tax abatements or grant eligibility) to developers who conform to design guidelines in target areas (Department of Metropolitan Development, 1993). Some communities require that proposed development conform to specific, non-discretionary design standards, often administered by staff. Although staff review can generally be completed more quickly, administrative staff can not exercise broad discretion. Many other communities require that some types of development go through a design review process, where a design commission exercises some judgment in deciding whether the proposal meets the intent of the guidelines. The latter design review process provides less certainty of approval, but may allow greater flexibility in how the guidelines are met. As noted, below, decisions made by a design review commission can not be arbitrary—they must still be based on clear criteria.

■ Legal Considerations

A recent decision from the Washington State Court of Appeals affirmed that, at least for Washington jurisdictions, "aesthetic standards are an appropriate component of land use governance." *Anderson v. Issaquah*, 70 Wn. App. 64, 82 (1993). However, the Court did not provide local jurisdictions with a blank check in applying design guidelines. The Court voided Issaquah's design guidelines because they were too vague to provide meaningful guidance to decision-makers or applicants. The decision in this case indicates that guidelines should be written (and preferably illustrated), formally adopted, published and readily available to the public. Terms which do not have generally settled meanings (or which are not widely-accepted technical terms) such as "harmonious" should be avoided or defined to provide specific guidance. In general, guidelines should be clear, and specific enough to provide clear direction. To be on the safe side, guidelines and standards should be tied to other legitimate public purposes, for instance, the maintenance of property and other economic values or historic preservation. Although a Washington case, the decision may provide useful guidance for communities in other states, as well.

Promising Applications

Several Washington communities have developed design guidelines since the *Anderson v. Issaquah*. Although new, they offer promising design approaches for addressing compatibility issues for new development in the midst of existing development.

Gig Harbor, Washington. "The City of Gig Harbor Design Manual (1996)" contains a comprehensive set of specific, well-illustrated design guidelines addressing general, commercial, multifamily, single family and historic district situations. The essence of each guideline is stated and additional language further clarifies what can be done to conform to the standard. The manual also provides specific definitions for terms such as "stately" appearance, or "significant vegetation" to a degree that provides clear guidance about what is desired. The guidelines address site design and architectural compatibility. In addition, the guidelines move beyond the individual parcel and include interesting connection standards, focusing on (a) and (b) visual and functional links between districts and parcels, (c) transitions between dissimilar uses, and (d) right-of-way, common area improvements that will create a cohesive community image. The guidelines also cover design treatment where different zone designations meet.

Gig Harbor provides for a choice of review processes similar to the flexibility offered by Portland, Oregon, described earlier. The application may be approved by the planning staff if it conforms to the specific standards in the design manual. Alternatively, the applicant can choose to go before the design review board which can waive specific requirements if it finds that an alternate design provides an equivalent or superior solution and if it meets the intent of the requirement.

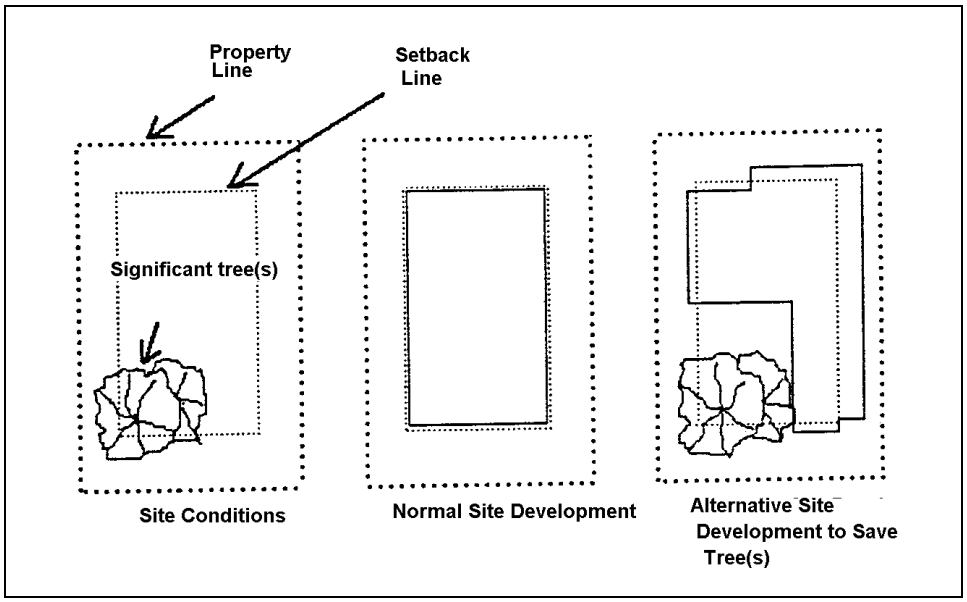


Figure 21 Gig Harbor's guidelines provide setback flexibility to save significant trees.
(Source: City of Gig Harbor, 1996)

The following example illustrates Gig Harbor's approach:

Excerpts from Gig Harbor's Design Manual

- **Encroachment into setbacks.** Structures and parking areas may encroach into required setbacks if it can be shown that such encroachment allows significant trees or tree clusters to be retained. Encroachment shall be the minimum necessary to protect specified trees. In no case shall the yard be reduced to less than five feet.

- **De-emphasize garage.** Where it is not possible to locate garages behind the house, it is possible to de-emphasize the garage by giving visual emphasis to design elements which reflect human activity and enclosure. Choose one of the following options:

  a. *Recess garage entrances.* Recess garage entrances at least six feet back of the front facade or the house, or
  b. *Emphasize windows and porches.* Provide windows in gables or dormers above the garage doors along with front porches which emphasize the front entries.
  c. *Provide rear alley access to garages*. For determining setbacks, the lot line abutting the alley shall be considered the rear lot line.

  (Note: this guideline applied in single family zones, similar guidelines were developed for the multi-family zone.)

- **Choose side yard setbacks which best preserve views from adjacent parcels.** In determining side yard setbacks, consideration should be given to how the location of the structure will affect views from adjacent parcels and how vehicular access to rear garages can best be achieved, total combined side yard setbacks may be allotted as desired except that a minimum of five feet on any one side is required.

Sumner, Washington. The "City of Sumner Urban Design Concept Plan and Design and Development Guidelines (1995)" includes the design plan which serves as a framework for public investment and the guidelines which ensure that the goals expressed in the plan are carried out in private development projects. By developing and packaging the design plan and guidelines together, Sumner has succeeded in clearly highlighting its design vision and valued elements in the city's existing urban design, which should be maintained and augmented. Main elements of the plan cover gateways (providing the first impression of the city), pedestrian linkages, (for a walkable environment), building scale and character, signage (eye-catching, by nature), and streetscape (to promote unified treatment of elements in the public right-of-way). The plan and guidelines together provide a clear picture of what the city wants to be when it "grows up." Some of the guidelines are mandatory (using words like shall), while others are advisory. A statement about the purpose or rationale is included in each guideline. The standards are tailored to different types of districts.

Sumner employs different design review processes which vary with the level of impact associated with different uses. A designated staff person decides a number of types of applications (signs, accessory units, accessory structures, exterior renovations). The applicant may request review by a design

commission advisory to the designated official. The official also decides several more complex types of design applications with advisory but mandatory design commission review (multifamily, new commercial additions, any structure in a neighborhood commercial zone and industrial park concepts). Mandatory design commission review with decision by city council is required for planned residential developments (with some exceptions) and planned mixed-use developments.

The following contains several examples of design guidelines which illustrate Sumner's approach:

Excerpts from Sumner's Design Guidelines

- *Height, Bulk, Scale*: Neighborhood commercial structures are intended to maintain the residential nature of the surrounding fabric. Modulating the building mass, the addition of dormer windows, covered entrance ways or porches will enhance the sense of human scale.

  In keeping with the residential character, pitched roofs are preferred with a slope of a minimum of 5/12.

- *Repetition with Variety*: Groups of detached houses shall add variety to repeated basic building designs through front facade treatments, building attachments such as porches and decks, bay windows, and trim details. This variety of architectural elements can add market appeal through variety of design to a cost effective repetition of basic building designs.

- *Pedestrian Circulation*: To enhance the experience for pedestrians moving between businesses and between automobiles or transit and businesses, it is vital to provide a comprehensive pedestrian network that reduces conflicts among pedestrians and automobiles. In new developments, as well as existing businesses, a well-marked continuous and protected path network must connect:

  - the principal entrances of adjacent buildings located on the same site,
  - building entrances and the extent of on-site parking areas,
  - the principal building entrance to the sidewalks,
  - the principal building entrance to those of buildings on adjacent commercial and residential sites where possible.

See appendices D and E for additional examples of design guidelines from Olympia and Sumner, Washington.

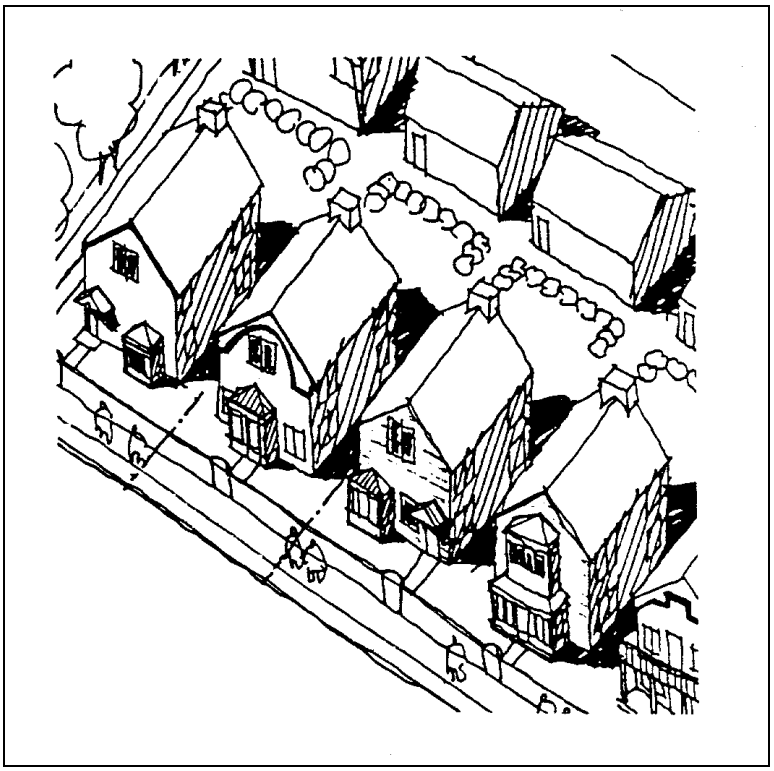


Figure 22 Sumner's guidelines promote variety while continuing basic patterns.
(Source: Sumner Community Development Department, 1995)

Policy Issues

- Although design guidelines should be based on existing context, they should not rigidly attempt to recreate the past. The objective should be compatibility rather than a carbon copy of adjacent development. Repetition of patterns should be tempered with allowance for variation and creativity of some design elements—or they will produce boring results. In addition, design guidelines should be adjusted to accommodate new trends and needs. As noted earlier, changing lifestyles, demographics and issues of affordability will require some flexibility to address. Finally, simply being older does not assure that something is better. Community residents will need to determine what aspects of their past they value, and wish to continue as a template for the future.

- Some will argue that aesthetics and design are frivolous concerns—economic, affordability and other issues should take precedence. Local jurisdictions will certainly need to balance whatever burden design guidelines place on property owners with the benefits gained by the community. Quality design can also have economic benefits by improving market value and raising property values in the surrounding area. In addition, design guidelines often address the very qualities of greatest concern to neighbors, and still opposition to allow a project to go forward.

Ensure Housing Types Which Are Compatible with Existing Types

The previous section discussed how careful design can contribute to a good fit with the neighborhood context. In addition, the *type* of housing can ease acceptance when fitting into an established neighborhood. A number of intermediate-density housing types have the potential for fitting more smoothly into established neighborhoods. Yet most American cities, compared to their European counterparts, have a conspicuous lack of housing in the eight to 22 unit per acre range. As noted earlier, many Americans still cherish the idea of a single family house on an individual lot in a single family neighborhood. "The key then becomes how does the development industry incorporate as many characteristics of a single family home into these medium and higher density products." (Tashman Associates & Leland Consulting Group, 1993.) In single family zones, it is particularly important that new housing assumes much of the appearance, scale and features of local single family housing types to gain acceptance.

Most communities in Washington, including small towns, also have some provisions for more traditional forms of multifamily apartment buildings. However, many communities may need to make code revisions to assure that these uses are more successfully integrated into the community. Appropriate locations and crafting better site and building design requirements are key to ensuring that multifamily buildings blend with their surroundings. Multifamily types that exhibit human scale, features which minimum building bulk, and features which contribute to the livability of the neighborhood, will be more warmly embraced. As noted in the previous section, landscaping, open space, and recreation areas; pitched roofs, measures which protect privacy, porches, and other single-family-like features; measures which encourage variety and interesting features; parking area screening; gradual transitions in scale or intensity; and connected roads and pathways can serve to improve the fit between multifamily and adjacent lower intensity development. Appendix C provides a brief description of a number of housing types that hold particular promise for blending into existing neighborhoods, while meeting present day housing needs. The descriptions in the Appendix C are excerpted from a Portland study with additional comments added about situations for which these types are particularly well suited. This section highlights several promising housing types now permitted in several innovative Washington communities.

Promising Applications

Sumner, Washington provides for a number of multifamily residential types that can accommodate multifamily densities (10 to 25 units per acre) while maintaining much of the appearance of conventional single family development. Sumner allows these uses in zones designated for multifamily or mixed use development. However, several of these types could be adapted for use in single family zones. Several options for detached single family on small lots (ranging from 2,500 to 4,000 square feet). are available in Sumner. The first option is for detached houses on individual lots in a small lot pattern with alley access for parking. The second detached housing option allows bungalow scale houses clustered around a common open space and or private spaces aggregated together in a commons arrangement. The open space created by the clustered arrangement allows

the location of small detached houses in a small area without seeming crowded. Several other communities in Washington, such as Olympia and Seattle, provide for such housing using the term "cottage housing." Sumner also allows multiplex (multifamily) dwelling units with requirements for patterns and features which add variety and interest. One particularly interesting type of permitted multifamily dwelling is the "multiplex home." The multiplex home is a single house-type structure limited to a single front facade and shared entry (with the possibility of additional side or rear entries) to imitate the appearance of a large single family home. The multiplex home may contain two to eight separate units. The Sumner guidelines illustrate their use in corner lot or interior lot locations. Design standards are provided for each housing type to help ensure that the housing fits into the neighborhood fabric without assuming a "cookie cutter" uniformity. Excerpts from Sumner's guidelines for these unique housing types can be found in Appendix D.

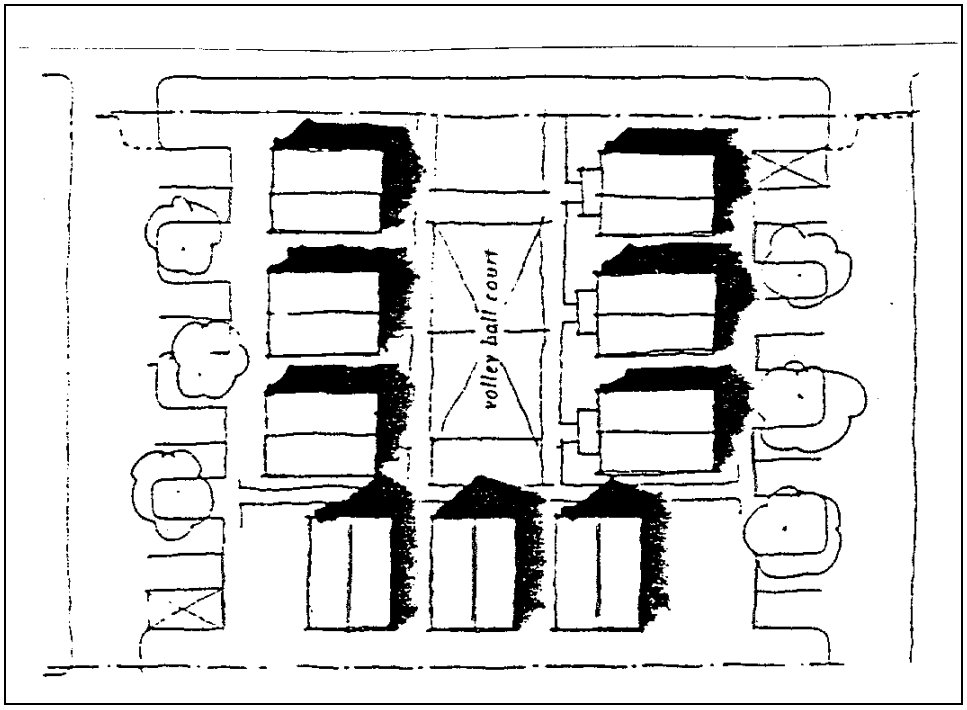


Figure 23 Clustering small houses around common space reduces the sense of crowding.
(Source: Sumner Community Development Department, 1995)

Olympia, Washington (as well as many other Washington communities) permits multifamily development in certain zones provided that specified standards are met. In addition to more traditional type standards, Olympia has adopted special standards and guidelines to guide development of multifamily housing ranging from townhouses to higher density multifamily complexes.

Olympia allows townhouse in many of its residential zones, including some single family zones. However, in its R4, R4-8, or R6-12 Districts (numbers are approximately the number of allowed units per acre) townhome structures may contain no more than four individual units and shall have no more than one builder (Olympia Unified Development Code, Ch. 18.64). Olympia's standards are intended to promote townhomes that are affordable, but also offer many of the amenities of single family

development and which can be individually conveyed. Townhouses are attached dwelling units which occupy space from the ground to the roof, with no units above or below. They typically have separate, individual entrances and private, ground level yards directly accessible from the unit. Because of the common wall construction, they are generally more energy and cost efficient. They allow more compact development than is possible with detached units, separated by yards. Features such as individual yard area and top to bottom ownership provide similarities to single family living. The units can be individually conveyed through a subdivision or short plat process. Townhouses can assume the traditional linear, row house pattern common on the East Coast or in San Francisco, or can assume a more varied configuration and design as illustrated below.

For a number of reasons, townhomes may be a particularly attractive option for increasing density in a community. As noted earlier the average household size has steadily declined during the last several decades. In fact, in the city of Seattle, two-thirds of the single family homes are occupied by only one or two residents. As noted earlier, a recent Seattle housing preference survey indicates that about 15 percent of the survey respondents preferred townhouses to either single family houses or units in large buildings. In addition, the survey identified other groups who may be attracted to townhouse living when forced to make trade-offs based on affordability, travel time to work and other criteria. Also, 28 percent of the respondents valued opportunity for home ownership above housing type or any other criteria for choosing housing. As single family detached homes become less affordable, townhomes can offer an attractive alternative for home ownership for this segment of the population. Because townhouses are less prevalent and less widely-known in the western states (a type of townhomes know as rowhouses are common in East coast cities), they may have even greater potential as familiarity with their advantages increases.

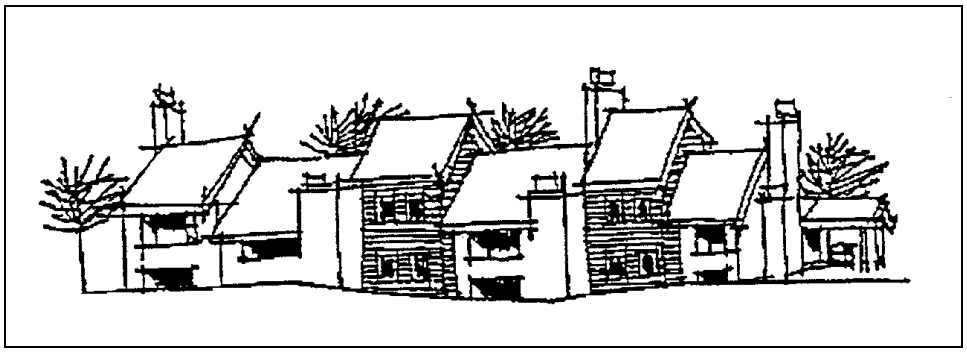


Figure 24 Townhomes offer potential low-maintenance, affordability and ownership.
(Source: City of Gig Harbor, 1996)

Olympia's multifamily guidelines place particular emphasis on locating parking in areas where they will not dominate the site, on building scale which matches its surroundings, on providing pedestrian facilities and circulation, on landscaping, and on building articulation and detail which achieve variety and a human scale. An excerpt from Olympia's guidelines related to building articulation are included in Appendix E.

The intermediate housing types described in Appendix C, including stacked townhouses and the low rise garden apartments, are other housing types with a chance of greater acceptance. They are

particularly fitting when located around neighborhood or community commercial centers or other transitional areas.

Snoqualmie, Washington has adopted clear criteria for permitting the addition of an "accessory unit" to an lot developed in single family use. An accessory unit, often know as a "granny flat" or "mother-in-law apartment," is a separate, self-contained dwelling unit, allowed in association with a single family residence. Some cities require that the accessory unit be attached to that residence, while others allow a detached accessory unit to be located on the same lot as the single family residence. It is generally subordinate in size, location and appearance to the single family residence. An accessory unit generally has its own outside entrance and always has a separate kitchen and bathroom.

Accessory apartments may be a particularly appropriate way to provide for increased density in single family areas. They allow underutilized space in existing residences to be used more fully, which fits well with the trend to smaller household size. In some communities, this is particularly significant—in the city of Seattle two-thirds of the single family housing stock is occupied by only one or two people, for instance. Accessory units increase the supply of affordable housing at minimal cost to the public or private sector. They also can provide additional income and security to the homeowner, among other benefits. Of particular relevance to this chapter, accessory units are well-suited to the task of adding density to an area with little or no outward appearance of additional density. They often involve mainly interior remodeling or minor exterior additions or alterations.

The Washington 1993 Housing Policy Act requires counties and cities of over 20,000 population to provide for accessory units, and many other communities are preparing ordinances in response to Growth Management Act direction. As a result, there are many newly drafted or adopted examples of such provisions available. These ordinances contain a variety of provisions many of which are designed to limit the impacts of the additional units on surrounding residential areas. While it is important to assure that accessory units blend into the neighborhood, ordinance restrictions should not be so restrictive that they discourage this type of housing. For more information, *Accessory Dwelling Units: Issues & Options*, available from MRSC, is an excellent reference The format of that publication is useful for either preparing or fine tuning sections of an accessory housing ordinance. Language from Snoqualmie's ordinance is contained in the following:

Snoqualmie's Accessory Housing Provisions

Accessory dwelling units, when permitted as an allowable use, shall be subject to the following standards and criteria:

a. Only one accessory dwelling shall be created per lot in single-family zones;

b. An accessory dwelling unit may be constructed in either an existing or new single family residence (principal unit);

c. The accessory dwelling unit may be attached to, or detached from the principal unit;

d. Any additions to the principal unit, or a new detached accessory unit, shall not exceed the allowable lot coverage or encroach in existing setbacks;

e. Either the primary residence or the accessory dwelling unit shall be owner occupied; An application for certificate of zoning compliance for an accessory unit shall include a letter from the owner(s) stating that the owner(s) shall occupy one of the dwelling units on the premises, except for bona fide temporary absences for up to four months out of each year (*some communities require signed affidavits or a recorded deed restriction*);

f. The accessory dwelling unit shall not be larger than ten percent of the lot area or 600 square feet, whichever is smaller, and shall have no more than one bedroom (*some communities provide for a range of sizes e.g., 300 to 800 feet*);

g. One off-street parking space, in addition to that which is required for the underlying zone, shall be provided. Parking spaces include garages, carports, driveways or other off-street areas reserved for vehicles;

h. The accessory dwelling unit shall be designed so that, to the degree reasonably feasible, the appearance of the principal unit and lot remain that of a single-family residence;

j. The design and size of the accessory dwelling unit shall conform to the building, plumbing, electrical, mechanical, fire, health, and any other applicable codes. When there are practical difficulties involving carrying out the provisions of this section, the building official may grant modifications for individual cases;

k. The living space of all accessory dwelling units established in the floodplain shall be elevated to one foot above the 100 year flood elevation (Snoqualmie Municipal Code, Ch. 17.55).

Tacoma, Washington similarly has adopted an ordinance allowing accessory units. Tacoma's ordinance contains the following language concerning design compatibility for accessory units:

Tacoma Accessory Dwelling Units

"An ADU shall be designed to maintain the architectural design, style, appearance and character of the main building as a single-family residence. If an ADU extends beyond the current footprint or existing height of the main building, such an addition must be consistent with the existing facade, roof pitch, siding and windows. Only one entrance for the main building is permitted to be located in the front facade of the dwelling. If a separate outside entrance is necessary for an ADU, it must be located either off the rear or side of the main building. Such an entrance must not be visible from the same view of the building which encompasses the main entrance to the building and must provide a measure of visual privacy (Tacoma Municipal Code, Sec. 13.06.196C."

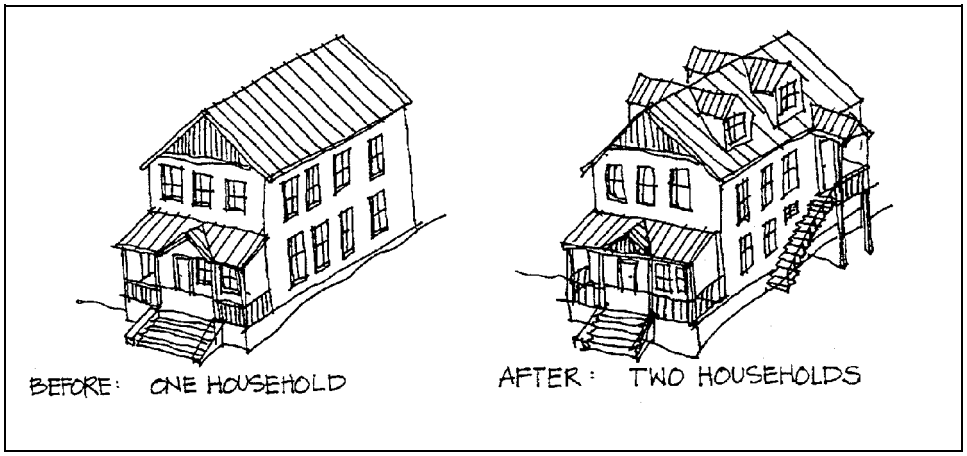


Figure 25 Accessory units can be almost invisible additions to single family neighborhoods.
(Source: Municipal Research & Services Center, 1995)

Employ Traffic Calming

The earlier section on crime reduction notes that restricting the ease of access and through traffic on residential streets may reduce crime potential. In addition, "traffic calming," devices are being successfully used as approaches to slow or divert traffic away from residential streets for increased traffic safety and improved neighborhood quality. Traffic calming usually involves physical changes to local access streets to reduce vehicle speeds and volumes and other disruptive effects of automobile traffic on neighborhoods. To be successful, traffic calming should be applied in an integrated manner across a larger area rather then only at an isolated site.

Many residential streets built in the last several decades were designed to standards which emphasize straight street alignments and generous street widths. Although official speed limits and stop signs may attempt to hold down speeds on local access streets, many motorists feel comfortable exceeding limits and traveling considerably faster on straight and wide streets with light traffic. The higher speeds contribute to higher accident rates, often involving children. Studies show that most fatal accidents involving children occurred on residential streets (Wallwork, 1993 in Hoyle, 1995). Studies indicate that traffic calming approaches, which force motorist to slow down and pay attention, can significantly reduce traffic accident rates and can reduce the severity of accidents that do occur.

Traffic calming should also redirect traffic to more efficient thoroughfares, which can increase the overall street system capacity. In addition, the reduced traffic and vehicle speeds resulting from traffic calming helps minimize traffic noise and pollution in neighborhoods. Reduced dominance by automobiles enables people to more comfortably use their streets for other purposes, whether walking, bicycling, socializing or washing a car. Traffic calming devices such as traffic islands can also provide an opportunity for attractive landscaping at neighborhood entry points. Where new residential streets are contemplated, narrower street widths and parking lanes on the street make it less comfortable to travel fast. Existing streets can also be retrofitted with a number of traffic calming devices. Common traffic calming approaches include:

1. Speed Hump—Hump that rises above the paved surface to cause a bumpy ride for speeders. They are a more elongated version (generally about 12 feet long) of the speed bumps common earlier. They are tapered more gradually to a height of four to six inches to cause discomfort to those traveling more than 15 to 25 miles per hour, and lessen problems that shorter speed bumps caused for school buses and fire trucks. Raised crosswalks, generally with a change of pavement texture, perform in a similar manner (Lemov, 1996).

2. Diagonal Diverter—A barrier placed diagonally across an intersection that forces vehicles to turn, rather than continuing down the street. Its primary purpose is to discourage through travel on residential streets by making it more circuitous than travel on collector or arterial streets (Holye, 1995).

3. Chokers, Neck Downs, Chicanes and Slow Points—These are all devices which physically narrow the street. They serve to slow traffic at periodic narrow points along the street. They may be installed as a curb/sidewalk protrusion into intersections or at mid-block crosswalks to narrow

the distance that pedestrians must travel to cross a street. Chicanes are a form of curb extension which alternate from one side of the street to the other to reduce vehicle speeds.

4. Traffic Circles or Round-abouts—See description below.

Successful Applications

Seattle, Washington pioneered U.S. use of small traffic circles in existing intersections to slow traffic in residential neighborhoods. Traffic circles are raised islands, located within the intersection of two streets. Their placement in the center of the intersection requires vehicles to slow down and maneuver around the traffic circle. The city has found them to be very effective in slowing traffic and reducing accidents. As a result, Seattle has now installed more than 800 traffic circles on residential streets (Walter, 1995). To more effectively maintain reduced speed, they should be installed about 600 to 800 feet apart, along the street. A study of Seattle's traffic circles found that they reduces crashes at intersections by up to 90 percent and reduced mid-block collisions by at least 39 percent. (von Borstel in Hoyle, 1995.) Many neighborhoods have "adopted" nearby traffic circles and maintain attractive landscaping on them. The city has backed away from some other types of traffic calming such as traffic diverters, which have triggered more opposition, because of greater inconvenience for neighborhood residents.

For more information, contact Ellie Rangel at 206/684-0813 or Jim Mundell at 206/684-0814.

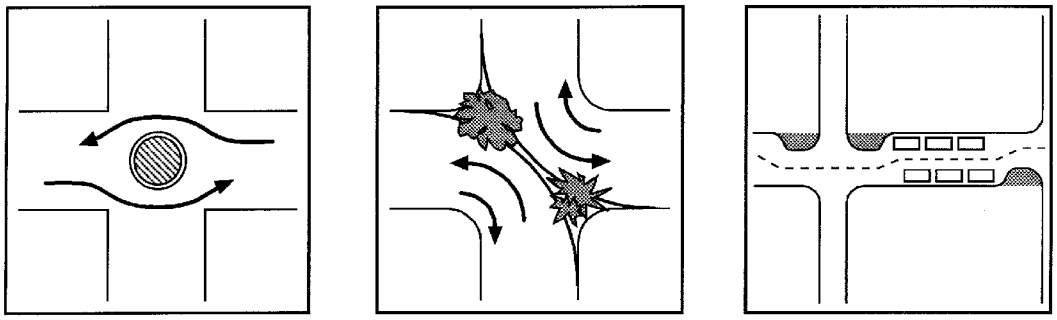


Figure 26 Traffic calming devices can reduce vehicle speed, accidents and crime access.
(Source: Nicole Stiver, Municipal Research & Services Center, 1997)

Policy Issues

- Although slowing traffic on residential streets may improve safety and neighborhood peace, traffic calming will be opposed be some who object to the inconvenience of slower travel. Some motorists will find that they have lost their favorite short-cuts. Communities in Maryland, such as Howard County, have found that residential acceptance is paramount. As a result, Howard County requires that two-thirds of the neighborhood residents approve the project before construction. Phoenix, Arizona also polls entire neighborhoods and sometimes finds that

opposition is limited to a few vocal residents. However, at other times, the polls have indicated major opposition, leading the city to explore other alternatives (Lemov, 1996).

- Making residential streets slower through traffic calming, should be coupled with efforts to make collectors and arterials faster to maintain overall acceptable service levels. Effective improvements to collectors and arterials can be expensive, of course.

- Traffic circles in particular, can confuse motorists who, without further instruction, may turn in front of a circle, rather than passing it before turning left. Even so, because of slower speeds, studies indicate the traffic circles are reducing the accident rate. Signage and other efforts to educate the driving public can help to reduce confusion.

Conclusion

Despite significant barriers to infill development, new opportunities are emerging. The changing nature of today's households provides an expanded market for infill development. In addition, recent legislation provides new support for infill development—including legislation that supports compact development, alternative transportation modes, and more flexible land use regulation.

Infill development promises to contribute to the solution of the myriad problems associated with sprawling land use patterns. It can support increased transportation choices, a more efficient use of land and infrastructure, more varied and affordable housing types, savings for local government budgets, reduced pollution, improved economic health and improved quality of community life.

A successful infill development program will require more than a narrow focus on producing houses to fill individual lots. Instead, a cooperative partnership with the broader focus of completing the existing community fabric is required. A variety of strategies have been successfully employed by local communities to make infill development happen. In Washington, and other places, many fresh ideas have emerged from the process of re-examining existing codes and searching for more flexible ways to shape development. A creative combination of strategies will best accomplish significant infill development. The package of strategies should both encourage developers and raise the desirability of infill development in the eyes of existing and potential residents. In many cases, these strategies will need to address the negative perceptions that many residents have about urban living. Concerns about safety, quality of education and quality of public and commercial services may need to be addressed, in addition to concerns about design, finance and infrastructure upgrade. Certainly the resources to promote infill development are limited, and the obstacles are sometimes daunting. In the long view, however, the costs of continuing to favor sprawl development patterns (to the public and private sector alike), will far exceed the resources needed now to facilitate infill development.