

The Barriers to Using Urban Infill Development to Achieve Smart Growth

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Abstract

The smart growth movement of the 1990s has seen many development and planning associations, state and local governments, and the Clinton administration encourage significant infill development to control sprawl and promote revitalization. Will the 123 million projected increase in population in the next 50 years be attracted to infill development or to outlying growth areas?

A review of 22 major central cities shows that they captured only 5.2 percent of total new metropolitan housing permits over the decade: 2.2 percent of single-family permits and 14.9 percent of multifamily permits. This analysis identifies the practical barriers to urban infill development, including land assembly and infrastructure costs, unwillingness to condemn, municipal social goal and regulatory policies, difficulty of finding developers, complexities of public-private partnerships, excessive risks, resistance from local residents, and stakeholder conflicts and political constraints. While supporting infill, smart growth advocates should focus primarily on encouraging higher-density, quality suburban and outlying growth.

Keywords: Development/revitalization; Growth management; Housing

Introduction

“The great suburban build-out is over” (Kunstler 1993, 245).

The recent smart growth movement of the 1990s has many associations (American Planning Association, American Institute of Architects, Urban Land Institute [ULI], and the National Association of Home Builders [NAHB], among others), state and local governments, and the Clinton administration advocating some degree of central-city reinvestment and infill development as a significant part of an urban strategy to slow down sprawl. The Census Bureau predicts that the United States will grow from 280 million in 2000 to 403 million by 2050, necessitating somewhere on the order of 60 million new housing units (including replacement demand) over the existing 115 million housing units.

Barriers to infill development suggest that very little of this forecasted new development will occur in presently built-up areas. While some pockets of older areas and passed-over sites can and should be developed, functional and economic obsolescence will continue to plague many older urban neighborhoods, and outlying development will con-

tinue. The primary goal of smart growth advocates should be to encourage higher-density, quality development at the metropolitan edge and exurbia while selectively choosing those relatively limited infill opportunities, which vary by market. According to the Real Estate Research Corporation,¹ an optimal infill site is located in a receptive neighborhood with well-maintained properties, good land price, adequate utilities, no major land problems, appropriate zoning, and potential development profitability compared with alternative sites: This combination is not easily found.

Recent central-city housing trends and infill market potential

A review of new housing construction permits issued since 1989 in 22 older cities shows that the percentage of new units being built in central cities is limited, compared with their respective metropolitan areas (see table 1). These central cities included 29.1 percent of the total metropolitan housing stock in 1990, with only 16.4 percent of the metropolitan single-family units but 42.3 percent of multifamily units. Yet these cities attracted only 5.2 percent, or 131,419, of the 2,520,754 total new unit permits in these metropolitan areas during the decade. They ranged from a low of 0.6 percent in St. Paul (MN) to 39.2 percent in San Francisco (skewed by limiting the analysis to the primary metropolitan statistical area [PMSA]), with a median of only 4.4 percent. Obviously, these patterns have existed for decades in many of these cities since significant population decline has occurred.² Even a city like Portland (OR), deemed the prototypical city for infill development as part of an urban growth boundary (UGB) regime, captured only 12.0 percent of total metropolitan housing starts over the period. The city had set a goal of 20 percent in 1991 (Hunsberger 1998b).³ Only 2.2 percent of the single-family permits and 14.9 percent of multifamily units permitted in these 22 metropolitan areas were located in the central cities.

¹ Real Estate Research Corporation. 1982. *Infill Development Strategies*. Washington DC: ULI and American Planning Association. (This book was cited in Suchman and Sowell 1997 and is out of print).

² Some of the cities performing better are also partly skewed by relating their capture only to the PMSA instead of the consolidated metropolitan statistical area.

³ In Portland, the suburbs grew by 1,195,000 from 1950 to 1995, while the city increased only 124,000 and declined from 53 percent of the metropolitan area total, to 25 percent. The UGB era began in 1979, and from 1980 to 1995 the suburbs grew by 779,000, compared with 133,000 in the city, which declined from 29 percent of the metropolitan area total. Thus, over the 45-year period, the city captured only 10 percent of the growth, increasing to 17 percent since the UGB was established in 1979 (Abbott 1997).

Table 1. Selected Metropolitan Areas and Central Cities, 1990 Housing Units and 1989 to 1998 New Housing Permits

Locales*	1990 Housing Units					1989–98 New Housing Permits				
	Total	Single Family	% Single	Multi-family	% Multi	Total	Single Family	% Single	Multi-family	% Multi
Atlanta MSA	1,174,007	702,412	59.8	471,595	40.2	392,426	312,899	79.7	79,527	20.3
City	182,754	76,836	42.0	105,918	58.0	16,711	3,757	22.5	12,954	77.5
% City	15.6	10.9		22.5		4.3	1.2		16.3	
Baltimore MSA	938,979	318,958	34.0	620,021	66.0	126,994	103,403	81.4	23,591	18.6
City	303,706	34,452	11.3	269,254	88.7	2,470	1,534	62.1	936	37.9
% City	32.3	10.8		43.4		1.9	1.5		4.0	
Boston PMSA	1,149,998	375,639	32.7	774,359	67.3	66,682	53,913	80.9	12,769	19.1
City	250,863	27,633	11.0	223,230	89.0	2,986	614	20.6	2,372	79.4
% City	21.8	7.4		28.8		4.5	1.1		18.6	
Buffalo, NY, MSA	402,131	214,265	53.3	187,866	46.7	27,571	20,455	74.2	7,116	25.8
City	151,971	41,330	27.2	110,641	72.8	2,234	803	35.9	1,431	64.1
% City	37.8	19.3		58.9		8.1	3.9		20.1	
Chicago PMSA	2,380,355	1,185,388	49.8	1,194,967	50.2	260,313	195,462	75.1	64,851	24.9
City	1,133,039	264,216	23.3	868,823	76.7	27,449	7,696	28.0	19,753	72.0
% City	47.6	22.3		72.7		10.5	3.9		30.5	
Cincinnati PMSA	582,376	169,100	29.0	413,276	71.0	89,092	64,682	72.6	24,410	27.4
City	169,088	56,403	33.4	112,685	66.6	3,783	1,860	49.2	1,923	50.8
% City	29.0	33.4		27.3		4.2	2.9		7.9	
Cleveland PMSA	758,984	456,725	60.2	302,259	39.8	65,609	51,364	78.3	14,245	21.7
City	224,311	93,082	41.5	131,229	58.5	3,199	1,695	53.0	1,504	47.0
% City	29.6	20.4		43.4		4.9	3.3		10.6	
Detroit PMSA	1,714,351	1,164,264	67.9	550,087	32.1	175,173	136,212	77.8	38,961	22.2
City	410,027	243,165	59.3	166,862	40.7	3,406	547	16.1	2,859	83.9
% City	23.9	20.9		30.3		1.9	0.4		7.3	
Miami PMSA	771,288	311,519	40.4	459,769	59.6	107,645	56,963	52.9	50,682	47.1
City	144,550	43,119	29.8	101,431	70.2	8,109	650	8.0	7,459	92.0
% City	18.7	13.8		22.1		7.5	1.1		14.7	
Milwaukee PMSA	562,031	297,799	53.0	264,232	47.0	70,294	38,342	54.5	31,952	45.5
City	254,204	93,973	37.0	160,231	63.0	4,798	939	19.6	3,859	80.4
% City	45.2	31.6		60.6		6.8	2.4		12.1	

Table 1. Selected Metropolitan Areas and Central Cities, 1990 Housing Units and 1989 to 1998 New Housing Permits (continued)

Locales*	1990 Housing Units					1989–98 New Housing Permits				
	Total	Single Family	% Single	Multi-family	% Multi	Total	Single Family	% Single	Multi-family	% Multi
Minneapolis MSA	988,735	591,153	59.8	397,582	40.2	174,285	142,859	82.0	31,426	18.0
City	172,666	75,196	43.5	97,470	56.5	2,887	990	34.3	1,897	65.7
% City	17.5	12.7		24.5		1.7	0.7		6.0	
Newark, NJ, PMSA	693,062	353,356	51.0	339,706	49.0	36,352	28,069	77.2	8,283	22.8
City	102,473	9,432	9.2	93,041	90.8	3,570	999	28.0	2,571	72.0
% City	14.8	2.7		27.4		9.8	3.6		31.0	
New Orleans MSA	524,056	277,720	53.0	246,336	47.0	35,306	30,304	85.8	5,002	14.2
City	225,573	82,274	36.5	143,299	63.5	3,321	2,459	74.0	862	26.0
% City	43.0	29.6		58.2		9.4	8.1		17.2	
Oakland, CA, PMSA	820,279	469,391	57.2	350,888	42.8	80,203	65,797	82.0	14,406	18.0
City	154,737	68,702	44.4	86,035	55.6	4,134	1,839	44.5	2,295	55.5
% City	18.9	14.6		24.5		5.2	2.8		15.9	
Philadelphia PMSA	1,907,150	739,094	38.8	1,168,056	61.2	144,288	125,879	87.2	18,409	12.8
City	674,899	36,366	5.4	638,533	94.6	5,305	1,902	35.9	3,403	64.1
% City	35.4	4.9		54.7		3.7	1.5		18.5	
Pittsburgh PMSA	879,811	564,959	64.2	314,852	35.8	54,512	45,496	83.5	9,016	16.5
City	170,159	70,048	41.2	100,111	58.8	1,746	994	56.9	752	43.1
% City	19.3	12.4		31.8		3.2	2.2		8.3	
Portland, OR, PMSA	512,664	327,464	63.9	185,200	36.1	146,862	89,718	61.1	57,144	38.9
City	198,319	123,825	62.4	74,494	37.6	17,595	9,106	51.8	8,489	48.2
% City	38.7	37.8		40.2		12.0	10.1		14.9	
Rochester, NY, MSA	399,088	251,339	63.0	147,749	37.0	33,283	27,507	82.6	5,776	17.4
City	101,154	41,580	41.1	59,574	58.9	773	578	74.8	195	25.2
% City	25.3	16.5		40.3		2.3	2.1		3.4	
San Francisco PMSA	680,010	259,898	38.2	420,112	61.8	30,878	12,353	40.0	18,525	60.0
City	328,471	54,839	16.7	273,632	83.3	12,094	1,418	11.7	10,676	88.3
% City	48.3	21.1		65.1		39.2	11.5		57.6	
St. Louis MSA	1,006,011	647,924	64.4	358,087	35.6	109,905	95,439	86.8	14,466	13.2
City	194,919	70,320	36.1	124,599	63.9	1,532	677	44.2	855	55.8
% City	19.4	10.9		34.8		1.4	0.7		5.9	

Table 1. Selected Metropolitan Areas and Central Cities, 1990 Housing Units and 1989 to 1998 New Housing Permits (continued)

Locales*	1990 Housing Units					1989–98 New Housing Permits				
	Total	Single Family	% Single	Multi-family	% Multi	Total	Single Family	% Single	Multi-family	% Multi
St. Paul, MN, MSA	988,735	591,153	59.8	397,582	40.2	174,285	142,859	82.0	31,426	18.0
City	117,583	57,165	48.6	60,418	51.4	1,080	557	51.6	523	48.4
% City	11.9	9.7		15.2		0.6	0.4		1.7	
Washington, DC, MSA	1,556,749	685,110	44.0	871,639	56.0	293,081	226,373	77.2	66,708	22.8
City	278,489	34,428	12.4	244,061	87.6	2,237	942	42.1	1,295	57.9
% City	17.9	5.0		28.0		0.8	0.4		1.9	
Total	20,402,115	10,363,477	50.8	10,038,638	49.2	2,520,754	1,923,489	76.3	597,265	23.7
City	5,943,955	1,698,384	28.6	4,245,571	71.4	131,419	42,556	32.4	88,863	67.6
% City	29.1	16.4		42.3		5.2	2.2		14.9	
Noncity	14,458,160	8,665,093	59.9	5,793,067	40.1	2,389,335	1,880,933	78.7	508,402	21.3
% Noncity	70.9	83.6		57.7		94.8	97.8		85.1	

Source: U.S. Bureau of the Census 1989–98.

Note: Twenty of the top 50 metropolitan areas' central cities are inelastic; New York City is excluded as an outlier; new units only, excluding rehab, are considered. MSA data for Minneapolis and St. Paul are not double-counted. Atlanta is low elasticity and Portland is medium elasticity; they are included for comparison purposes.

* MSA = metropolitan statistical area; PMSA = primary MSA.

These trends are primarily for so-called inelastic cities, which have had limited growth in their corporate boundaries by annexation through the years (Rusk 1993). Even more elastic communities—mainly new-growth cities in the South and West—may have growth in their corporate boundaries, but many older areas of these cities lack reinvestment and replicate the decline of older, Rustbelt communities.

Former U.S. Department of Housing and Urban Development (HUD) Secretary Andrew Cuomo frequently discusses the fact that the city homeownership rate is 50 percent, compared with 73 percent in the suburbs. This discrepancy is due primarily to the significant multifamily housing stock in cities. Much of the single-family housing stock in the central cities is renter occupied, providing substantial housing opportunities for lower-income households. In 1990, for these 22 selected areas, 59.9 percent of the non-central-city housing was single-family, compared with 28.6 percent of the central-city housing. During the 1990s, 78.7 percent of the new housing permits in the non-central-city portion of these areas were for single-family units, compared with only 32.4 percent in the central city. Homeownership will be limited in central cities because of the extensive amount of multifamily housing. These trends have major implications for infill housing markets, since a 1993 Fannie Mae poll showed that 86 percent of American households believed that owning a home was better than renting, 83 percent believed that owning was a good investment, and 73 percent preferred a single-family detached home with a yard (Downs 1994).

Positive infill market factors

The rationale for infill development market potential is partly based on demographics (Fannie Mae Foundation 1999). Smaller families, empty nesters, childless married couples, and singles are growing demographic groups seeking housing that reflects their lifestyle and life cycle (ULI 1999). Just one-quarter of households are families with children, and families make up only 70 percent of all households, compared with 81 percent in 1970 and 90 percent in 1940. Of the remaining 30 percent, 60 percent live alone (Herron 1998). The large proportion of single or childless households, the pool of existing or former city residents, government employees required to live in the city where they work, and people who are interested in access to urban amenities are also good markets to penetrate (Suchman and Sowell 1997).

Often, the market for infill housing is generated by growth in centrally located office employment. Accessibility to transit and proximity to employment centers, particularly anchor institutions like hospitals or universities, have historically been good locations to capture an infill market (Suchman and Sowell 1997). Developers are selling a lifestyle, not just proximity to jobs. They are selling location, proximity to culture,

walking neighborhoods, and nightlife: Infill housing is building on existing assets of that immediate neighborhood and community (Danielsen, Lang, and Fulton 1999; Herron 1998; Lang, Hughes, and Danielsen 1997; O'Malley 1998). Anthony Downs (1997a) notes that some of the back-to-the-city movement is related to the city's getting a piece of metropolitan growth because of the good economy in selected hot submarkets. However, he also indicates that vacant land in cities with weak downtowns will not attract strong infill development patterns.

Negative infill market factors

Many inner-city neighborhoods are challenging development environments because of deteriorated infrastructure, patterns of disinvestment and abandonment, and a lack of supporting facilities and services like grocery stores and convenience retail outlets. Issues such as economic conditions, household income, community participation, environmental conditions, and state and local housing requirements deter many developers more accustomed to suburban greenfield sites (Suchman and Sowell 1997). Another issue is the complexity of doing market studies in untested markets, finding legitimate comparables for appraisers, and obtaining competitive financing in a risky or untested environment (Danielsen, Lang, and Fulton 1999; Farris 1996; Kump 2000; Suchman and Sowell 1997).

Factors commonly employed to explain central-city abandonment and the gradual shift to outlying suburbs include both push and pull factors such as family life cycle characteristics, mortgage interest and property tax deductions, interstate highway and Federal Housing Administration/Department of Veterans Affairs policies, racial prejudice, and urban hardship issues of central-city living (Aryeetey-Attoh et al. 1998; Bier and Howe 1998; Howe et al. 1998; Kasarda et al. 1997; Morrow-Jones 1998; Varady 1990; Varady and Raffel 1995). A 1991 Toledo (OH) survey of 408 home sellers found that the top five reasons for moving were to (1) seek a larger house, (2) seek a better school, (3) change jobs, (4) seek a better-styled home, and (5) seek a safer neighborhood. The desire for larger and better-styled homes is typically difficult for central-city and older built-up areas to satisfy, given the problems associated with land assembly, property acquisition and disposition, and developer preferences (Aryeetey-Attoh et al. 1998; Suchman 1996).

While urban and inner-suburban development is emerging as a desirable market for growing demographic groups, an even larger portion of the population still chooses to live in the suburbs or on the suburban fringe. According to a 1997 Fannie Mae survey, 70 percent of Americans prefer to live in suburbs, small towns far from cities, or rural areas.

The idea that smart growth is anti-suburb is based primarily on the perception that smart growth is seeking to change the current locations of development. When the market and consumer preferences of homebuyers and commercial and retail interests are analyzed, it is clear that most people still want to live and work in the suburbs or on the suburban fringe. (ULI 1999, 6)

Most people want a single-family home with lot, the American Dream, and are able to get it at a reasonable cost in the suburbs (Danielsen, Lang, and Fulton 1999; Downs 1994; NAHB 1999; ULI 1999).

Barriers to infill development

Before entering academia in 1991, I had a 17-year career as a consultant, infill home builder, nonprofit housing president, and director of development for the St. Louis Community Development Agency and Economic Development Corporation (which included packaging \$1.5 billion in public-private partnerships in 40 communities and over 1,000 housing units). I have direct experience in attempting to overcome these barriers to infill development, which have been generally acknowledged since the turn of the last century. Even Ebenezer Howard's Garden City was an 1898 proposal to build new towns to serve as a relocation resource and empty out the slums of London and then assemble the land more easily for redevelopment (Howard 1965).

Although Michael Porter (1995) has suggested that the inner city has a competitive advantage today, he also identifies many of its real disadvantages as found by Mabel Walker (1938), Miles Colean (1953), and others who established the foundation for the urban renewal program in 1949. Many of these problems have been acknowledged for decades, yet the nation has only occasionally been successful in attracting development in built-up environs. Porter (1995) suggests that these barriers, including land assembly difficulties, building costs, other regulatory costs, security, and infrastructure, must be addressed directly or the inner city will continue to erode. The barriers to infill development cited in the next section are not new,⁴ but they may be new to another generation of planners and developers who should learn from many decades of experience.

Standard suburban developers have to deal with one or perhaps a couple of farmers/land speculators, maybe a planning commission and council for a rezoning, perhaps a neighborhood group concerned about traffic or the adjacent impacts of the proposed project, possibly an environmentalist concerned about sprawl and losing some farmland or trees, an institutionalized and relatively simple financing process, and finding

⁴ For historical background, see Congressional Research Service 1973.

buyers or tenants in a growing area where the new life cycle of other nearby investments tends to create positive externalities for substantial returns on investment. Development in built-up areas is not so easy. In addition to the standard litany of central-city and inner-suburban issues of crime, poor schools, racial tensions, high tax rates, and cheaper outlying-suburban alternatives, other barriers to infill development, as described in the next section, exist (Calthorpe 1993; Downs 1997b; Hudson 1998; Loessberg 1995; Suchman 1997).

Land assembly cost barriers

Necessity for land writedown. Land assembly at a reasonable cost in a good market location is frequently a major deterrent in a central-city or built-up environment. Suchman and Sowell (1997) suggest that “one of the advantages of developing housing in central cities is the availability of parcels of vacant and underused land and buildings at the center of a metropolitan region” (39). Markets vary by community and sub-areas.⁵ What might the cost of assembly in a major, moderately priced, older city (not a San Francisco or New York, but rather a Detroit, St. Louis, Cincinnati, or Buffalo, NY) be? Developers would typically pay from \$0.25 to \$4.00 per square foot for open land in standard suburban residential sites. Site assembly (acquisition, relocation, demolition, clearance/environmental, site preparation) in a built-up urban environment for marginal or blighted areas might cost around \$15 per square foot.

Such assembly might also necessitate some residential and commercial relocation. Assuming that \$2 is the reuse fair market value (a realistic value for middle-income garden apartments at 15 units/acre), then the \$15 assembly cost suggests the need for a land writedown (grant) of \$13 per square foot. Under this scenario, a 10-acre infill site for 150 garden apartments would necessitate a \$5.7 million land writedown for a \$9 million project. A \$5.7 million land writedown would represent a significant commitment of local resources; for example, St. Louis receives only \$27 million in Community Development Block Grant (CDBG) funds; Newark (NJ), \$12 million; and Peoria (IL), \$2 million. Other sources such as tax increment financing might exist, but the CDBG dollars available for just one infill project on marginally developed land impart a sense of scale to the limits of financing. A \$5.7 million land writedown to attract a private development costing roughly \$9 million is not abnormal and represents the nation’s urban renewal experience.

⁵ Municipal tax-delinquent land banks may appear to be opportunities, but the parcels typically have no market feasibility, which is the reason for the tax delinquency in the first place. St. Louis has 17,000 parcels representing about 500 acres in a relatively concentrated area, yet half of this area is still under private ownership and needs assembly, and many of these parcels are brownfield industrial areas that the city avoids foreclosing on. My division was responsible for them.

The brownfield option. To avoid major assembly problems, many city officials and developers look for large-scale, underdeveloped sites under one or several owners, and they are hard to find. Greenberg and Popper (1994) describe potential development opportunities in TOADs, that is, temporarily obsolete abandoned derelict sites, also known as brownfields. Sites may be abandoned housing developments, factories, warehouses, schools, dump sites, railroad lines, canals, parking lots, military bases/defense plants, or waterfronts in either private or public ownership through the tax foreclosure process. Although Greenberg and Popper (1994) and Suchman and Sowell (1997) suggest that many of these sites are potentially valuable inner-city land, they are frequently surrounded by blight or have environmental cleanup, rehabilitation, or clearance/redevelopment costs that are not feasible without major land writedown and public assistance.

Compared with vacant suburban land and farms at the edge of a city, built-up environs tend to have more extensive costs even for determining whether contamination exists through various audits and tests for asbestos, polychlorinated biphenyls, underground tanks, lead paint, and toxic/hazardous waste. Furthermore, hazards are sometimes not found until demolition and site clearance are under way, thereby deterring investment and making projects less feasible and riskier. Also, the whole brownfield litany of present and future liability issues, financing constraints, and so on add to the problems of revamping older areas (Simons 1998; Simons and Sharkey 1997). These are major deterrents, especially when developers need to control a large enough area to eliminate negative externalities. I have been involved in site demolitions where we found unknown cemeteries, Indian burial grounds, and even trunkline sewers and other utilities.

Over 600,000 brownfields exist nationally. Gilliland (2000) completed a performance evaluation of 107 sites, including a variety of residential project areas needing more stringent cleanup, and found that 30 percent of the total development cost was publicly funded. Median project size was 4 acres, with an average of 13.7 acres. Cleanup represented 8 percent of the total cost, with the median remediation cost at \$56,945 per acre and \$4.46 per square foot of building—a substantially higher cost for cleanup than the land might be worth for residential development.⁶ Total site preparation costs including remediation were \$98,000 per acre or \$6.55 per square foot. Median leverage was only \$2.48 of private expenditure per dollar of public funding, a definite deterrent to reuse.

⁶ Hudnut (1998) cites a U.S. Conference of Mayors survey of 122 cities, where there are 47,000 acres of brownfields in 16,500 mostly urban sites. These are considered opportunities, but how are they to be assembled and at what cost? Frequently, these sites are in deteriorated areas with limited market potential for reuse. In 1996, Mayor Daley of Chicago announced a \$50 million cleanup of 200 acres (\$5.73 per square foot). Suburban land for commercial reuse sells for that price or less, and at much less for housing.

The costs of blighted land assembly are frequently higher than the value of the site for the reuse intended. This reinforces what was learned from developing the urban renewal program—that is, land writedown (or gap financing) is frequently a necessity, whether for infill development or rehabilitation. Depending on density and value, residential land for average communities could range from less than \$1 to \$10 per square foot, frequently much less than land assembly costs in built-up environs. Table 2 shows various land cost scenarios for land assembly and site preparation, as well as disposition (sales) prices of the land for infill development. The public purpose of eliminating blight and encouraging infill development has been supported since the Supreme Court's *Berman v. Parker* decision in 1954. Although these examples are given in a new development context, the same concept of gap financing and writedown is needed to assemble deteriorated and abandoned buildings for complementary rehabilitation or historic preservation where the market frequently will not cover total costs.

Land assembly and site preparation barriers

Need to eliminate negative externalities. Assembling an area large enough to encourage investment and eliminate negative neighborhood spillover effects is a major barrier. Development is inhibited by negative externalities from remaining residents and structures in surrounding neighborhoods (Downs 1997a). “An infill project in a run-down area should be large enough to create its own environment” (Suchman and Sowell 1997, 13). McCormack Baron & Associates of St. Louis believes a critical mass starts at 200 units (Suchman and Sowell 1997). My experience suggests that the area could be as small as several parcels or literally hundreds of acres, depending on the negative externalities. While some neighborhood activists believe that assembly can be done piecemeal by parcel or by block, many economists and planners believe that large amounts of acreage must be assembled or controlled to create complete revitalization and re-creation of a neighborhood growth cycle (Stegman 1979). Control means the ability to eliminate spot blight and encourage property maintenance and investment, including code enforcement, rehabilitation, preservation, or infill development to eliminate the “prisoner’s dilemma” problems.

The prisoner’s dilemma theory indicates that two adjacent property owners are each limited in their investment decision making by what the other will do—a real concern for infill developers (Hartshorn 1992). If one owner rehabilitates or develops infill and the other does not, the rehabilitated/infill property will be negatively affected by the adjacent deteriorated property, and the owner will not receive as good a return on investment as the one who did nothing. Thus, both property owners are in a dilemma: If both improve their property, they will both theoretically receive good returns, benefiting from each other’s investment. This ex-

Table 2. Land Writedown Scenarios per Acre and per Square Mile

Land Assembly and Site Preparation Costs		Sales Price Alternatives/Sq. Ft.				
		\$1.00	\$2.00	\$4.00	\$6.00	\$8.00
Per Sq. Ft.	Per Acre	Total Land Writedown (Subsidy) per Acre for Alternative Sales Prices/Sq. Ft.				
\$15	\$653,400	(\$609,840)	(\$566,280)	(\$479,160)	(\$392,040)	(\$304,920)
\$10	\$435,600	(\$392,040)	(\$348,480)	(\$261,360)	(\$174,240)	(\$87,120)
\$5	\$217,800	(\$174,240)	(\$130,680)	(\$43,560)	\$43,560	\$130,680
Per Sq. Ft.	Per Sq. Mile	Total Land Writedown (Subsidy) per Sq. Mile for Alternative Sales Prices/Sq. Ft.				
\$15	\$418,176,000	(\$390,297,600)	(\$362,419,200)	(\$306,662,400)	(\$250,905,600)	(\$195,148,800)
\$10	\$278,784,000	(\$250,905,600)	(\$223,027,200)	(\$167,270,400)	(\$111,513,600)	(\$55,756,800)
\$5	\$139,392,000	(\$111,513,600)	(\$83,635,200)	(\$27,878,400)	\$27,878,400	\$83,635,200

ample is for just two properties; the dilemma is more complex for all the property owners on a block or for a whole neighborhood. Mutual decision making—perhaps induced by the local government—is required to improve a neighborhood’s values and long-term future. Through urban renewal, code enforcement, and community development programs, communities have attempted to eliminate these negative externalities affecting value.

Need to use eminent domain. Holdouts who will not sell or who ask truly exorbitant prices deter infill development. If a public purpose (typically blight elimination) exists, this problem is usually dealt with through eminent domain. Approval of city plans, blight designation, and condemnation processes take time and money. While many central-city and inner-ring suburban communities have institutionalized these processes, they still entail a major transaction cost that many developers either do not know about or are unwilling to pursue.

When one considers the risk of failure to assemble property compared with the opportunity costs for time and effort expended, the sheer volume of acquisition transactions is a deterrent to infill development. Private land assembly can be painstaking. Developers obviously do not want neighboring property owners to know about the assembly so that holdouts can be avoided as much as possible. Sometimes, a developer will send out real estate agents to option property and get it under control over a very short time period. But this is not easily done, even if the market will bear attractive financial offers for property. Some owners do not want to sell at all, they may be speculating, they may be unreachable or have clouded title, or they may hold out. Assembly of outlying, vacant, suburban land is easier, with fewer transaction costs and less risk of failure.

My experience indicates that individual city council members frequently have sole approval power over projects in their district area and may not be willing to help with eminent domain. Or they may be willing to help with commercial but not residential condemnation. Council members can be wary of condemnation because of the public furor that it may generate, perhaps by even a few disgruntled activists wanting to be disruptive and garner media attention. Many neighborhood residents are unaware of the concept of condemnation, and fear may be generated that “your home is next” and that owners will not be paid just compensation. Private-rights activists might question the constitutionality of “forcing people out of their homes and businesses” to serve other private interests. If relocation of occupied property occurs, similar fears about fairness of compensation and “kicking people out into the streets” are expressed throughout the neighborhood. All this disruption can have positive or negative political consequences for the council member and other elected officials. The status quo is sometimes easier politically.

Although many question how fair just compensation is, the holdout is frequently rewarded by getting a higher price for lengthening the negotiation process and even getting condemned during a court proceeding (Liebmann 2000). Some holdouts legitimately do not want to sell, but many use the process to leverage a higher price. The people who initially negotiated positively with the city or developer at fair market value do not receive as much as the condemnee. If a city is unwilling to use condemnation, the holdout can also extract a higher payment than the market price from the developer (assuming that the project can carry the cost or the city is willing to raise gap financing). Eventually, these issues become public and disgruntlement can cause more political volatility. While holdouts can be found in suburban situations, the relatively inexhaustible land supply at the periphery allows land assembly and development to occur more easily (Nelson 2000).

Need to get clear title. Private land assembly is frequently constrained by the inability to get clear title on property because of the age of records and the difficulty in finding and negotiating with all owners of record. The taxpayer of record may not be the property owner, but rather a representative, with the owners dispersed. Many heirs may be on a title, and they may be difficult to find or unwilling to sell their part of the estate. Tax and other liens may cloud the title. Another problem can be obsolete plats of subdivisions that need to be assembled. Condemnation is frequently the only way to achieve clear title. This constitutes another transaction cost barrier, although it is an effective way to get clear title (Downs 1997a; NAHB 1999; Simons and Sharkey 1997; Suchman and Sowell 1997).

Need to upgrade infrastructure. Today, many suggest that existing infrastructure is underused and constitutes an asset for infill development. Even at the beginning of the urban renewal program, Colean (1953) suggested that reusing infrastructure was something of a myth because redevelopment frequently necessitated upgraded facilities and that infrastructure systems become obsolete. Many infill advocates also cite the ability to use existing infrastructure, but many practitioners understand that infrastructure can be obsolete. High-density infill housing on existing lots may require additional infrastructure investment (e.g., alley upgrades, underground cable, or drainage) to comply with market demand for off-street parking and garbage removal (Simons and Sharkey 1997).

Residents of Southwest Portland claimed that planners had failed to determine whether roads, environmental controls, and sewers were adequate to support rezoning requests for substantially higher residential and commercial density. The Planning Commission agreed and suspended the entire plan, and then asked city commissioners for \$220,000 to update the city's 9-year-old Public Facilities Plan, saying that the city's long-range plans for water, sewer, park, and road investments lacked consistency ("Multnomah" 1998).

Developers of Chicago's Garibaldi Square, a 6.5-acre infill development of 128 units, found that

projects that involve the reuse of urban sites can present special problems with regard to demolition, debris removal, and the installation of sewer and water services. Builders should plan to remove no more than is absolutely necessary, even to the point of creating grade rather than removing old foundations or other obstacles. (Suchman and Sowell 1997, 35)

Madison Place town homes, a 125-unit community on a six-acre blighted site in a built-up suburb of Washington, DC, required a new four-lane road, a new traffic signal, and improved stormwater management, thereby showing that existing systems are often inadequate (NAHB 1999).

Unwillingness to use eminent domain, a necessity for significant infill development

I sent a 27-question mail survey to the community development and planning officials in 57 central cities of the 50 largest metropolitan areas asking about their attitude toward retailing and land assembly issues (Farris 1997). Of the 57 surveys, 36 were returned, a 63 percent response.

Table 3 identifies the 36 respondents, including their geographic location and David Rusk's relative elasticity categories representing the combined effect of a city's density in 1950 and the degree of city limit expansion between 1950 and 1990 (Rusk 1993).

Each city's initial density and degree of boundary expansion (by percentage) are ranked against those of all other cities in its group. A city's relative rankings (organized by decile) for the two key characteristics (initial density and boundary expansion) are multiplied together to produce a composite elasticity score. (Rusk 1993, 53)

Cities with the greatest elasticity had vacant peripheral city land to develop and the political and legal tools to annex new land. Inelastic cities are typically older cities already built out at higher-than-average densities in the industrial age and either unable or unwilling to expand their city limits. Elastic cities tend to be much younger in their development cycle (Rusk 1993). The nation's zero-elasticity and low-elasticity cities expanded their city area by only 6 percent and 44 percent, respectively, between 1950 and 1990, whereas medium- to hyper-elastic cities expanded their area by 306 percent and 625 percent, respectively (Rusk 1993). Most inelastic areas are in the Northeast and Midwest, and most elastic areas are in the South and West.

Table 3. Survey Respondents

City	Elasticity	Location
Anaheim, CA	Medium	West
Baltimore	Zero	Rustbelt
Boston	Zero	Rustbelt
Buffalo, NY	Zero	Rustbelt
Charlotte, NC	Medium	Sunbelt
Chicago	Zero	Rustbelt
Clearwater, FL	High	Sunbelt
Columbus, OH	Low	Rustbelt
Dallas	High	Sunbelt
Dayton, OH	Low	Rustbelt
Denver	Medium	West
Fort Worth, TX	Hyper	Sunbelt
Greensboro, NC	Hyper	Sunbelt
Houston	Hyper	Sunbelt
Indianapolis	Medium	Rustbelt
Los Angeles	Low	West
Milwaukee	Zero	Rustbelt
Minneapolis	Zero	Rustbelt
Nashville, TN	Medium	Sunbelt
Oakland, CA	Zero	West
Oklahoma City	Hyper	Sunbelt
Orlando, FL	Hyper	Sunbelt
Philadelphia	Zero	Rustbelt
Phoenix	High	West
Pittsburgh	Zero	Rustbelt
Portland, OR	Medium	West
Riverside, CA	High	West
Salt Lake City	High	West
San Antonio	High	Sunbelt
San Diego	Hyper	West
San Francisco	Zero	West
San Jose, CA	High	West
St. Louis	Zero	Rustbelt
St. Petersburg, FL	Medium	Sunbelt
Tampa, FL	Medium	Sunbelt
Winston-Salem, NC	High	Sunbelt

Source: Farris 1997.

Although the survey was retail oriented, the attitudes about land assembly pertain directly to infill housing as well as to neighborhood revitalization and provision of the quality retail necessary to encourage infill development. A paradox appeared in the results: Respondents strongly supported the need for additional retailing, including discount stores, yet many were unwilling to help assemble land, especially using eminent domain.

According to table 4, only four cities would definitely be willing and four would probably be willing to relocate at least 50 households and 30 marginal businesses in a blighted area to encourage a quality large-scale retail development. In other words, 28 of the 36 cities would not be willing

Table 4. Would Your City Be Willing to Relocate at Least 50 Households and 30 Marginal Businesses in a Blighted Area through the Use of Eminent Domain to Encourage a Major Shopping Center Development?

	N	Definitely Not	Probably Not	Probably Yes	Definitely Yes
Total	36	10	18	4	4
Elasticity					
Zero	11	4	2	2	3
Low	3	0	3	0	0
Medium	8	2	4	1	1
High	8	3	4	1	0
Hyper	6	1	5	0	0
Region					
Rustbelt	12	3	5	2	2
Sunbelt	13	3	8	2	0
West	11	4	5	0	2

Source: Farris 1997.

to do this type of land assembly to encourage retail development. The Rustbelt cities are slightly more apt to consider this type of project, although about half of even those cities would be opposed.

Even if 80 percent of an area was privately assembled with only 20 percent remaining as holdouts, only four cities would definitely assist by using eminent domain for land assembly and roughly half would probably assist, as shown in table 5. Slightly more than a third would not help for even the remaining 20 percent. Less elastic cities are somewhat more willing to help, and certainly a Rustbelt location tends to indicate more support. Rustbelt cities have more land assembly issues to contend with and are historically more involved in public land assembly of blighted and underused properties. But even 3 of 11 zero-elastic cities would probably not assist. Furthermore, higher-elastic cities still have vibrant economies and tax base creation in standard suburban-style development, so they have less fiscal rationale to encourage infill. But even the more elastic, non-Rustbelt cities have older neighborhoods that may need such assistance to attract convenient facilities or quality infill housing.

In the same vein, a more general question (not shown) regarding the attitude of city councils toward the use of eminent domain for blight elimination shows that 3 cities are very much opposed (2 of the 6 hyper-elastic cities), only 15 are generally willing to use it, and 18 use it on rare occasions with developers in hand. Lower-elasticity cities are more willing to condemn, with the Sunbelt most opposed to using eminent domain. All Rustbelt cities are willing to use it. Obviously, the power of eminent domain needs legislative support. And these findings are only for central cities, which are more apt to use these tools. Few suburban areas are comfortable with eminent domain.

Table 5. Would Your City Be Willing to Use Eminent Domain for Several Holdouts if a Developer Privately Assembled Greater Than 80 percent of the Parcels in a Marginal Area for Redevelopment?

	N	Definitely Not	Probably Not	Probably Yes	Definitely Yes
Total	36	3	10	19	4
Elasticity					
Zero	11	0	3	6	2
Low	3	0	0	2	1
Medium	8	1	2	4	1
High	8	2	1	5	0
Hyper	6	0	4	2	0
Region					
Rustbelt	12	0	2	8	2
Sunbelt	13	1	6	6	0
West	11	2	2	5	2

Source: Farris 1997.

Table 6 indicates that 15 cities never assemble large-scale sites for development similar to the old urban renewal program without a developer, but 17 have pursued this approach in a few circumstances. Rustbelt and low-elastic cities are more apt to have assembled property for speculative development.

Table 6. Does the City Ever Assemble a Large Site(s) Where the City Believes Market Potential Exists without Having a Developer Commitment, Somewhat like the Old Urban Renewal Program?

	N	Never	Only in a Few Targeted Areas	Other
Total	36	15	17	4
Elasticity				
Zero	11	3	7	1
Low	3	1	1	1
Medium	8	2	5	1
High	8	5	2	1
Hyper	6	4	2	0
Region				
Rustbelt	12	2	8	2
Sunbelt	13	5	7	1
West	11	8	2	1

Source: Farris 1997.

While many have been critical of the urban renewal program, it is interesting to note how many successful infill projects in revitalizing cities in the past two decades have been on “failed” urban renewal land that was made available for development. It is very difficult to take residential developers or anchor tenants to a blighted area still needing land

assembly and try to market the land. Even tax-delinquent/land banked areas have many scattered-site pockets of abandoned and occupied buildings needing to be acquired before development can occur (Suchman and Sowell 1997). Developers/anchors want immediately available (or at least short-term) sites to plan for their development portfolio. Counting on the city to assemble a property (given the barriers to infill development) is difficult for a developer unless the city has an excellent reputation for land packaging. The 1949–1974 urban renewal program attempted to counter this negative externality, with both successes and failures. But communities are not willing to spend the funds on speculative land assembly, either because of the excessive upfront cost or the unwillingness to risk land not being developed expeditiously—in addition to the political risk.

Development barriers

Surmounting regulatory and social goal barriers

Central cities tend to have more red tape and include many socially worthwhile programs, but at a potential disadvantage for the city developer compared with outlying suburban locations. Such programs include linkage fees, affirmative action and provision of minority/female/city resident construction and permanent employment opportunities, permanent job referral coordination for a commercial/industrial project's duration, extended retention of units for low- and moderate-income households beyond provided subsidies, Davis-Bacon construction cost standards if using federal funds, and others (Nyden and Wiewel 1991; Porter 1995).

Furthermore, zoning and subdivision regulations are not conducive to encouraging infill development, thus necessitating rezoning, ordinance revision, or pursuit of numerous variances. Permitting processes need to be streamlined to support development (Cole et al. 1996; Suchman 1996). Many ordinances are not geared to accommodate the concepts of neotraditional infill development (Fader 2000; "Five Projects" 2000). Sometimes, design standards for urban projects are extensive compared with the typical suburban development in terms of enhanced facades, landscaping, lighting, parking, and construction and code requirements—beyond what the market can bear. Bidding processes and public works coordination may be more difficult in urban environs. Even noise and dust mitigation during construction in a built-up environment may be more costly than at an outlying suburban site. Sources of funding and public-private partnership contractual provisions may have monitoring and reporting requirements beyond the norm for the project's life. Again, these are higher transaction costs for operations and for institutionalizing as a development process.

Even if infill commercial developers support these social goals and programs, they may have problems negotiating tenant leases, especially for national tenants that have standard specifications and operating procedures. These community social requirements may be a leasing deterrent or at least another hurdle to overcome, which may even be used as leverage by the national tenant for more favorable leasing terms—perhaps providing the rationale for more gap financing (Porter 1995).

Infill developers are frequently involved in local and federal historic districts. Although such districts can be an asset, developers need to appreciate the complexities of review and approval processes in historic districts. Obtaining approval for necessary spot clearance can be a hurdle in historic areas. Preservation can be an asset to revitalization and attraction of infill development, but historic buildings may be a deterrent if a substantial number of buildings or much square footage is vacant and abandoned. Markets vary, and sometimes preservation should be a priority. Also, infill developers sometimes do historic preservation as part of the development. While architectural standards for exterior and interior preservation or rehabilitation can be positive fiscally, they are still a hurdle to attracting infill developers willing to learn the nuances of preservation (a transaction cost). Regardless of whether a developer is doing preservation or complementary new development, dealing with the state historic preservation officer, or possibly the Advisory Council on Historic Preservation for memoranda of agreement, and negotiating with the local historic community and board of architectural review can be a daunting exercise for a specialist, let alone a novice.

Finding infill developers and builders

My experience suggests that urban infill projects attract a variety of developers, many of whom are not typical. While the largest cities have attracted some national developers such as Post Properties or Trammel Crow, who specialize in the niche market of infill development, many midsize communities and large cities with weak markets have not attracted such developers. Or they may get them for one or a few key large-scale target projects. For example, McCormack Baron & Associates of St. Louis has specialized nationally in large-scale, mixed-income public-private partnerships with substantial gap financing and public incentives to make developments feasible (Suchman and Sowell 1997).

But infill necessitates a local home building industry to specialize in such projects, especially for sporadic and scattered-site small-scale land assemblies. Many of the smaller local niche developers are undercapitalized and enter development from the perspective of wanting to do something for their hometown; many are design-oriented individuals frustrated with what they perceive as a lack of quality development; many are very interested in historic preservation and downtown as the

center of the community; many are intrigued by evolving New Urbanist principles of infill; and many live or work in up-and-coming neighborhoods. In addition to profit, psychic rewards attract them. Because of this interest, many are willing to take the time to learn the complexities of public-private partnerships and enjoy the challenges of financing and political relations.

Urban deals usually have substantial limelight and glamour, including much positive publicity. The avant-garde and elites of the community admire and are involved with such developments. In many metropolitan areas, few developers are active in infill and central-city development, and those who are have the opportunity to be closely allied with the power brokers of the community, including city mayors, politicians, administrative officials, the financial and corporate community, the media, and so on. Many media personnel live in chic urban neighborhoods and focus their stories on city development issues.

Sometimes, nonprofit housing corporations perform the development or packaging function either as partners with builders or as developers/builders themselves. These are frequently oriented to the affordable housing market, but many such groups are undercapitalized and have limited capacity to perform the total development function (Miles, Berens, and Weiss 2000; Rohe et al. 1998).

Many developers and home builders active nationally and in suburban areas are not that interested in getting intimately involved in the local community, with much high-profile visibility or the necessity to do public-private partnerships. The problem is finding and nurturing infill developers/builders capable of generating economies of scale for feasible operations. They need to have access to capital on terms competitive with those of suburbia, lots available on an expeditious and continual basis, the willingness to deal with the barriers, and a large enough capacity to have an efficient home building operation, compared with the standard suburban, large-scale, institutionalized developer (Danielson, Lang, and Fulton 1999).

Political barriers

Coordination risks and complexities of public-private partnerships

At the edge of town, new development is regulated primarily through zoning and subdivision regulations. All developments built during the same period are part of a new life cycle for the area, with positive externalities tending to benefit everyone's investment. However, infill development is sometimes done in conjunction with other developers and property owners according to a city plan. The complexity of achieving

simultaneous investment by numerous public and private decision makers in an area large enough to create positive externalities can be a deterrent in the built environment, especially in marginal areas. Compared with the outlying suburb, the sheer volume of property owners making decisions and commitments presents a higher risk in an area needing revitalization. Furthermore, arranging necessary public incentives for gap financing or tax abatement expeditiously and concurrently with many property owners and developments is difficult.

The time to put together public financing incentives requires quality staff who understand development economics and a legislative body and city administration that support plans. Public-private partnerships and infill target area planning usually need long-term institutional memory and support with consistent staff and legislative commitments. This is hard to achieve over the 5- to 15-year process required for many areas and developments. Consistent local policies at the agency and city council level are vital. Furthermore, gap financing and other incentives require detailed negotiations and extensive public hearings and review processes for each project. Some developments require multiple layers of financing from different public and private sources, with different goals and schedules for each. It may take years to successfully package the appropriate financing for a project.

The required approval processes for local government tools alone are complex, even without the additional burden of securing private financing of equity and debt. Even if a city is well organized, the maze of approvals and the risks of failure are daunting. Jumping over the hurdles of tax increment or abatement financing, approval of CDBG or HOME funds, revenue bond issues, state bond financing or approval of low-income housing tax credits or other fund sources, and foundation approvals is certainly abnormal for most developers. More consulting fees are typically required for packaging deals, including legal and public-private partnership specialists. The amount of money required up front for due diligence is usually higher, with a greater risk of failure than is the case with standard suburban deals. Unfortunately, for many communities, development returns to cover that risk are sometimes not commensurate; hence, additional support is required for gap financing, even possibly through guarantees of return on investment (Miles, Berens, and Weiss 2000).

The local power brokers

Many cities have activist council members who are elected by district and have complete power of approval over developments in their district, regardless of the citywide implications. This power has the potential for abuse. Given how often a public-private partnership is needed, the project area's council member and those members of the city council

on various legislative subcommittees responsible for approval can have a major influence on a developer's requests. My experience and anecdotal evidence (including documented fraud) suggest that this power leverage has the potential to be abused by public officials skirting extortion. Sometimes, unscrupulous city leaders have suggested such considerations as who should be partners with the developer, what contractors or consultants should be used, which employees should be hired, what political donations would be appreciated, and other questionably legal "suggestions."

Sometimes, a nonprofit neighborhood organization is made a partner as a conduit for funding the organization. Some organizations are certainly invaluable partners that provide a legitimate service deserving of financial reward, but some provide minimal services and merely serve as sources of employment for friends and relatives and as political patronage for local officials. Occasionally, even the source of funding (e.g., HUD, foundations, state housing finance agencies) encourages relationships with nonprofit organizations, which can be abused by politicians. These are abnormal issues for standard developers, who do not understand how to deal with activist and sometimes fraudulent local community and political systems. While standard developers may have seen some questionable practices in rezoning and suburban development approvals, they are rarely as complex as city development negotiations.

NIMBY (not in my backyard)

Frequently, infill developers need land rezoned to more intensive uses to help carry the land cost; rezoning often creates a local neighborhood fight and NIMBYism. Many residents are opposed to having higher-density housing located near them, even if it is more highly valued. And they are generally opposed to introducing mixed uses or allowing commercial/industrial uses nearby (Danielsen, Lang, and Fulton 1999).

In July 1998, the Portland Planning Commission suspended plans to add 7,500 apartments, row houses, and homes in Southwest Portland after residents protested and requested less aggressive housing densities (Franzen and Hunsberger 1998). Voters in suburban Portland attempted to close their doors to compact housing and even recalled a mayor and two council members over dense development and a neighborhood light-rail alignment. According to Langdon (1998), "higher densities called within the boundary are becoming more difficult to achieve as established residents fight new infill development that is at densities higher than in their own neighborhoods" (87). The recent annual conference of the Congress for New Urbanism, entitled CNU 2000: The Politics of Place, focused on forces supporting sprawl and especially on NIMBYs and no-growth advocates opposing New Urbanist developments at infill locations. The conference brochure suggested that "NIMBYism

is rising as the Urban Growth Boundary fills in and higher densities become necessary. As development pressures mount, citizens begin to fear changes in their neighborhoods.”

A classic case of NIMBYism is the development of I’On, a 243-acre, 762-unit traditional neighborhood development in Mount Pleasant, SC. The site is just across the bridge from Charleston (SC) in a fast-growing upper-middle-class suburb, which has a premiere Old Town historic area that is a model for New Urbanism. The passed-over site was used for years by a road-building business to mine soil. The town’s 1992 master plan called for a traditional neighborhood development at the site, and in 1995, Vince Graham and his father, developers of successful New Urbanist communities, proposed 1,240 units, including 439 upper-middle-class apartments and limited commercial uses. The apartments were designed to look like historic Charleston sideyard homes. The developer requested rezoning as a planned development in conformance with the council-approved comprehensive plan, but nearby lesser-valued subdivisions opposed the rezoning, which was turned down by the town council in 1996.

Another attempt to get council approval for 850 units with only 120 luxury apartments also failed by a 5-4 vote. The developer finally obtained approval in 1997, but only after all multifamily units and housing over retail shops were eliminated and only limited commercial space was allowed. These changes reduced the density from 5.1 to 3.1 units per acre. Homes in this 762 single-family luxury development range from \$250,000 to over \$1 million, considerably above values in the adjacent subdivisions. The problem was the “excessive” density and clustering of units on grid streets. A citizens’ campaign to overturn the rezoning tested a little-used 1975 state statute that allows referenda to overturn decisions by elected officials. A high school English teacher who lived in the adjacent subdivision and was a leader of the opposition said, “They don’t have to make some kind of Williamsburg, white-picket-fence, yuppie-land out of it” (Ball 1997). The state supreme court eventually dismissed the referendum case initiated after development was under way. If this kind of development in a relatively sophisticated community cannot be easily approved, infill development approval will be difficult in many places (“Five Projects” 2000; Snowden 1998).

Displacement and gentrification issues

The political and philosophical complexities of relocation also make land assembly very difficult. Many politicians are afraid of dealing with relocation, especially of elderly homeowners who are more apt to vote. Even if relocation were financially and physically (new environment) beneficial, social disruption is a real concern from an equity perspective, as well as politically (Rohe and Mouw 1991). Furthermore, the age-old

question of where to relocate and whether the area should be redeveloped for existing residents may be a deterrent. Unfortunately, racial tensions and politics sometimes ignite. Frequently, the developer is then portrayed in the media as “forcing people out of their homes or businesses” and accused of being “greedy” and “caring only about profits.” Infill development is difficult to pursue without some use of relocation and eminent domain. Gentrification’s effects on longtime residents create a quandary for landlords, policy makers, and neighborhood leaders. Although rising rents may hurt existing tenants, remaining property owners see improvements and rising values as a sign of long-term success, reversing urban decay (Gunnells 2000; Hunsberger 1998a; Varady and Raffel 1995; Wyly and Hammel 1999).

Gentrification has reemerged since the mid-1970s as a significant issue in some submarkets of older areas. While the risk of displacement is real, Lang, Hughes, and Danielsen (2000) believe the risk of attracting the middle class to the city through infill development is outweighed by the even greater risk of losing a chance to secure a larger tax base.

Pressure groups for development before its time

My experience suggests that another major problem for cities assembling land either through acquisition or land foreclosure of tax-delinquent parcels is the push by the political community to get development done, perhaps prematurely. A Catch-22 situation exists for infill development in an area that should have long-term redevelopment commitments, partly because of the constraints of the electoral process for mayors and council members—typically four-year cycles. Using a redevelopment example in an abandoning area, neighborhood and political pressures may push to get something (anything) done in the area, perhaps some rehabilitation grants and support for new infill low-income housing. Projects are funded, the neighborhood sees “progress,” pictures are taken with the politicians and existing neighborhood leaders and supporting lenders, and everyone claims revitalization is on its way (Stone 1989). Yet the neighborhood surrounding the project may continue to decline, and any realistic estimate of the cost to turn the area around is prohibitive in the short term.

Five years later as the neighborhood continues to decline despite a scattered-site marginal project here and there, the timing and market feasibility of development might get closer to being realistic. Yet now the scattered infill developments completed earlier become financial and political deterrents to doing what is necessary to revamp the area. So it remains in limbo or is haphazardly invested in—possibly wasting resources that could have been used more efficiently elsewhere. The difficulty for the politician is how to tell neighborhood residents that the area has to continue to decline and that investment there would be

wasted. No politician can say that, so a picture with a project or two can be beneficial. Some areas may literally need to be avoided for 25 years or more to allow complete abandonment and eventual redevelopment. This opens the debate over the concept of triage that Downs (1994, 1997a) has written extensively about. Colean (1953) envisioned this problem and encouraged cities to accept slum and blight elimination as a public good in and of itself, with land banking as a legitimate long-term strategy.

Conclusions

While these barriers are extensive, local governments that use public-private partnership tools and substantially reduce the transaction cost burden to the developer can make a real difference in encouraging infill development. Some markets are so strong that standard development review processes are all that is necessary to approve private infill development. But smart growth advocates should be realistic about the amount of development that will occur in built-up areas versus outlying open land as various stakeholders consider future policies. The U.S. population is expected to double in this century. It is hard to imagine that a large percentage of that growth will occur in existing built-up areas.

Smart growth advocates should focus especially on encouraging higher-density quality development on open peripheral land. The discussion in this article suggests that this is where most development will occur. Perhaps up to 20 percent can be infill in cities and the older suburbs (this would be a big increase from present patterns). The density of most cities is 5 to 10 times that of their suburbs (Downs 1994). Over time, perhaps the lower density of suburbs and some of the larger land assemblies under one or a few owners for shopping centers, office centers, and major apartment developments will provide opportunities for easier redevelopment and intensive reuse.

Perhaps Downs (1994) best describes the scale of infill development necessary to accommodate growth when he shows that

to raise overall density from 3,500 to 7,500 persons a square mile,⁷ 47.1 percent of all housing land would have to be redeveloped with new housing at fifteen units per acre, 24.2 percent at twenty-five units an acre, or 14.0 percent at forty units an acre. Clearly, any substantial increase in the residential density of built-up areas that is to be achieved through redevelopment would require major clearance and rebuilding. This would be a major disruption to existing neighborhoods. Such extensive redevelopment would be necessary

⁷ For a sense of scale, in 1990, the city of Atlanta was 2,989; Portland 3,504; Los Angeles 7,426; Washington, DC, 9,884; Boston 11,860; and San Francisco 15,503 (Downs 1994; Farris 1996).

in fast-growing metropolitan areas if rigid growth boundaries were drawn tightly around present settlements and all growth was confined within these boundaries. This policy is what the Sierra Club has recommended for southern California. It is hard to believe that residents where such upzoning is planned would permit it, considering the pressures they have exerted in the past to down-zone residential land there. (148)

Many suburbs today are built to accommodate between 1,000 and 3,000 people per square mile, typically based on markets and land cost (Downs 1994). While infill will continue in selected submarkets, smart growth advocates should aggressively pursue higher-density, quality development at the periphery rather than the typical low-density suburban sprawl of the past 50 years (Danielsen, Lang, and Fulton 1999).

Is the great suburban build-out over, as Kunstler (1993) predicts? Far from it. But let us hope that continued outlying growth is done more efficiently in the future.

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