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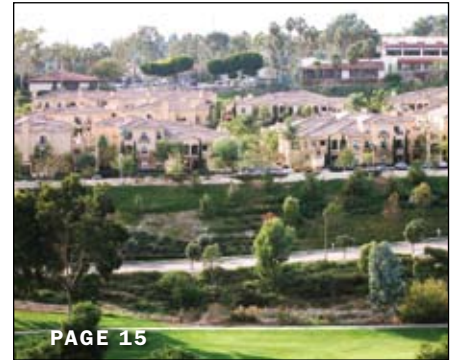
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CONTENTS



FEATURES

- 2 An Infrastructure and Economic Recovery Plan for the United States
PETRA TODOROVICH

Despite the challenges of overhauling existing policies and implementing a bold agenda for infrastructure investment, the decisive election of a new President on a platform of change presents a real opportunity and sense of momentum for action in Washington.

- 8 What Policy Makers Should Know About Property Taxes
RONALD C. FISHER

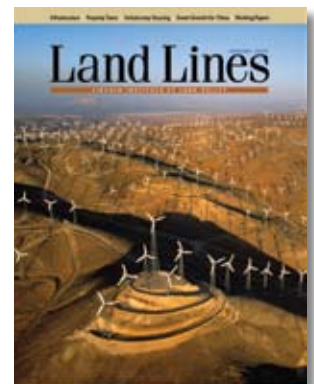
Although property taxes continue to be a fundamental and important revenue source for local government, they also remain exceptionally controversial. Still, the topic of property taxation seems to be one for which improved education and understanding is especially necessary.

- 15 Inclusionary Housing, Incentives, and Land Value Recapture
NICO CALAVITA AND ALAN MALLACH

We suggest that a better approach is to link IH to the ongoing process of rezoning—either by the developer or by local government initiative—thus treating it explicitly as a vehicle for recapturing for public benefit some part of the gain in land value resulting from public action.

DEPARTMENTS

- 1 Report from the President
22 Faculty Profile: Ming Zhang
24 New Lincoln Institute Book:
Smart Urban Growth for China
25 Other Educational Products:
Community Partnering for Environmental Results
Twentieth-Century New England Land Conservation
26 Program Calendar
28 Fellowships: Laurie Wayburn
29 Recent Lincoln Institute Working Papers



5,000 wind turbines in Tehachapi, California
© Alex S. MacLean/Landslides

Infrastructure: Spending More and Spending Well

Infrastructure spending is high on the current U.S. policy agenda for a number of reasons. First, recent dramatic failures have highlighted the harmful effects of poor maintenance and age-related deterioration on infrastructure facilities. Second, infrastructure investment is a candidate to stimulate the economy in the current recession. Third, enhancing infrastructure is crucial to long-term economic competitiveness and environmental sustainability.

Finally, infrastructure investments are an important determinant of urban form, spatial development, and land prices.

But what is infrastructure? One common definition includes all transport systems (road, transit, rail, air, water); all networked utilities (power, pipelines, water supply, sanitation, telecommunications); irrigation and flood control; and pollution control and waste disposal. It excludes schools, hospitals, and other public facilities.

International comparisons using this definition show that countries spend an average of 4 percent of GDP on infrastructure, and that this share increases in step with economic growth when annual growth rises above average rates of 2 to 3 percent. Accordingly, for China to sustain its growth rate of 10 percent requires an annual infrastructure investment share of similar magnitude. Based on data compiled by the Congressional Budget Office, in 2004 the United States public and private investment in infrastructure (as defined here) was \$302.5 billion, or only 2.6 percent of GDP, a share that seems to have varied little since the early 1980s.

While U.S. spending on infrastructure has been low compared to other countries, new investment cannot just be turned up, like water from a faucet. Efficient spending must be directed to specific projects that benefit the economy over the long term and produce valued services that reduce the costs of production, goods movement, congestion, ill health, urban development, and economic growth.

The Congressional Budget Office reports that estimates from other agencies indicate an additional \$103.5 billion of annual infrastructure spending (in 2004 dollars) can be justified in economic terms. These amounts include funds for maintenance (following a “fix-it-first” policy), funds to expand transport systems, and funds to achieve existing environmental standards (particularly for rivers and waterways).



Gregory K. Ingram

This spending would raise the GDP share for infrastructure to about 3.5 percent.

Existing estimates of the economic impacts of infrastructure investment—on the order of 30,000 to 40,000 jobs per \$1 billion of infrastructure investment and long-term growth in GDP—are based on the premise that infrastructure investment will be efficient and productive. If it is not, the multiplier effects can be smaller and the investment can have

longer-term negative effects.

For example, to combat its deep recession in the 1990s, Japan embarked on a large infrastructure investment program that raised the public sector's share of total investment from 21 to 29 percent. This investment did little to stimulate growth, however, and the resulting increase in national debt raised debt-servicing costs greatly. Because increased infrastructure investment in the United States also will be debt-financed, it is very important in terms of future U.S. growth for new funds to be spent productively.

One of the major challenges facing increased infrastructure investment in the United States is that projects planned in the past and ready for immediate implementation may now be out of date. The U.S. economy faces significant new challenges, including adapting to higher energy costs, reducing carbon emissions, increasing alternative energy capacity, and mitigating the effects of global climate change affecting coastal areas and water availability.

These changes mean that business as usual is no longer sufficient. Infrastructure investments must take account of the need to increase urban densities, improve transit access, coordinate transport and environmental investments across metropolitan areas within emerging megaregions, and foster green technologies in infrastructure itself. Better management of existing infrastructure may be an alternative to some new investments. For example, the Federal Highway Administration estimates that broader use of congestion tolls could reduce highway investments by up to \$20 billion per year.

Spending on infrastructure clearly can be increased, but these resources must be allocated to carefully selected projects that produce long-term benefits in the rapidly changing economic and environmental circumstances of the twenty-first century.

AN Infrastructure and Economic



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Two solar-electricity generating systems in Daggett, California, along with seven other similar facilities in the Mojave Desert, produce enough electricity for 500,000 people.

Petra Todorovich

Infrastructure is something that often goes unnoticed. Unless it breaks or the delivery system fails, the bridge that spans the river, the drinking water that comes out of the tap, and the light that switches on attract little attention. However, in recent years high-profile disasters—the levee failures in New Orleans, the bridge collapse in Minneapolis, and the steam pipe explosion in New York City—have demonstrated the increasing age and disrepair of the infrastructure that was built by earlier generations and that Americans have increasingly come to take for granted.

There is growing recognition that even the highways, bridges, transit systems, electrical grids, water pipes, and sewers that are not failing in spectacular ways are nonetheless increasingly overbur-

dened, outdated, or obsolete. While other nations, including Germany, France, Spain, the United Kingdom, and China, are making bold investments in high-speed rail, public transit, and renewable energy, the United States is struggling to maintain its existing infrastructure in a state of good repair. Earlier this year, the Congress acted to fill an \$8 billion funding shortfall in the Highway Trust Fund, much of which goes to maintain roads and bridges. Mass transit agencies, also underfunded and struggling to keep up with rising ridership levels, are now facing the lose-lose proposition of having to raise fares while also cutting service.

And in recent months, a new, harsh reality has emerged, overtaking infrastructure in the national debate: the tightening of global credit markets and the slowing of the national economy. A global financial crisis, precipitated by the collapse of America's subprime mortgage market and seizing

Recovery Plan FOR THE UNITED STATES

up of credit, has played out in the closure of storied investment banks, wild gyrations in the stock markets, rounds of layoffs, and pleas from America's banking and automobile industries for assistance from the federal government.

Impetus for Bold Action

The convergence of these infrastructure and economic crises provides an impetus for bold action. America 2050, a joint venture of the Lincoln Institute of Land Policy and Regional Plan Association, is working with a national committee of civic, business, and government leaders to develop a Strategic Investment Framework for roads, bridges, transit systems, the energy grid, water infrastructure, and telecommunications. Since its launch in 2005, America 2050 has been gaining traction among policy makers and professionals in the planning and development fields in its call for a national strategy to accommodate America's projected population growth and the emergence of megaregions in the twenty-first century. The onset of a deepening recession changes the context of this discussion and adds urgency to the need to create jobs and invest wisely in the nation's future.

President-elect Barack Obama and the U.S. Congress are considering bold actions to create jobs and restore economic prosperity early in the new administration. There is talk of a major economic recovery bill when Obama takes office, and both he and the Democratic leadership in Congress have proposed focusing on infrastructure spending as a way to stimulate the economy. Such an approach could be targeted to address the dismal condition of America's existing infrastructure and to develop the capacity that is needed to accommodate the next generation of population and economic growth.

In anticipation of this unusual opportunity, America 2050 is developing a comprehensive approach to infrastructure investment that could help the nation meet its core challenges: rebuilding the economy, achieving energy independence, and mitigating climate change, while positioning the nation for long-term economic prosperity and competitiveness in the global economy.

This spring, America 2050 launched a "Rebuilding and Renewing America" campaign to draw national attention to the need for an infrastructure investment plan. Even before the full extent of the economic crisis had been revealed, strong interest was evident in the caliber of participants at a kick-off forum held at the Woodrow Wilson Center in Washington, DC, on May 9, 2008. With the support of the Lincoln Institute, the forum convened business and labor leaders, philanthropists, and elected officials, including the Governor of Pennsylvania and Democratic and Republican members of Congress, demonstrating broad, bipartisan interest in the need to address America's infrastructure needs.

Moving forward, America 2050 is holding a series of forums in the nation's megaregions to engage experts in different regions on policy approaches to transportation, energy, and water infrastructure, and to draw attention to this opportunity to create jobs and stimulate the economy.

The notion of a national infrastructure plan for the United States may seem like, in the words of historian Robert Fishman (2007), "an exercise in bureaucratic hubris," but in fact, it is one of the oldest traditions of our country. In 1808, under President Thomas Jefferson, Treasury Secretary Albert Gallatin proposed a series of roads and canals in corridors that were later used to build the nation's rail network, and to develop and unify the Northwest and Louisiana territories. In 1908, President Theodore Roosevelt completed a second national plan designed to promote development in underperforming regions of the South and West, such as Southern California, Atlanta, Seattle, and Phoenix, through conservation and development of natural resources. In the 1930s, President Franklin D. Roosevelt's National Resources Planning Board proposed public works investments, including what later became the interstate highway system.

At the bicentennial of the Gallatin Plan and the centennial of the TDR's Conference of Governors, and as our nation faces the worst economic crisis since the New Deal, perhaps the notion of a new national plan to provide a roadmap for infrastructure investments and economic recovery is not so

outlandish. Like these precedents, a new national infrastructure plan could give shape and purpose to transportation, energy, and water legislation for decades to come. And like the jobs created during FDR's New Deal, an economic recovery plan shaped by infrastructure investment could leave a lasting legacy for America's future generations.

In this crisis we may have a once-in-a-lifetime opportunity to finance an ambitious program of infrastructure spending while improving the effectiveness and strategic focus of our infrastructure investments. To achieve this goal we need to be successful in articulating the importance of infrastructure investments, both as counter-cyclical projects that can put people to work during the crisis, and as the foundation for a stronger, more resilient economy in the future. Without these investments in creating capacity for future growth, it can be argued that America's economic prospects and future competitiveness could be diminished.

America 2050's Strategic Investment Framework will include a physical plan for national networks of goods and passenger movement (including freight rail, intercity passenger rail, major seaports and airports, and improvements to the interstate system), as well as key investments in energy transmission, water infrastructure, and communications. Inspired by the role that bold visions have played in the past, the framework will include a coordinated set of policies and goals for reforming federal infrastructure legislation. In return for giving states and local governments greater flexibility in how they achieve desired federal outcomes, programs would demand greater accountability to performance standards. America 2050 has adopted a "triple bottom line" approach to evaluating infrastructure investments against the three goals of economic return, environmental sustainability and social equity.

One of the key challenges will be to reform existing policies that work at cross purposes. For example, transportation funding that favors road building over public transit investment makes it more difficult to achieve energy independence; and farm subsidies for commercial agriculture encourage the use of pesticides and fertilizers that pollute watersheds, raising the cost of protecting and providing clean drinking water.

Despite the challenges of overhauling existing policies and implementing a bold agenda for investment, the decisive election of a new President

on a platform of change presents a real opportunity and sense of momentum for action in Washington. As Obama's new chief of staff, Rahm Emmanuel was quoted as saying in mid-November, "Rule one: never let a crisis go to waste. There are opportunities to do big things."

Key National and Global Trends

America 2050 was formed in response to a set of long-term national and global challenges that will shape America's growth and development in the next century.

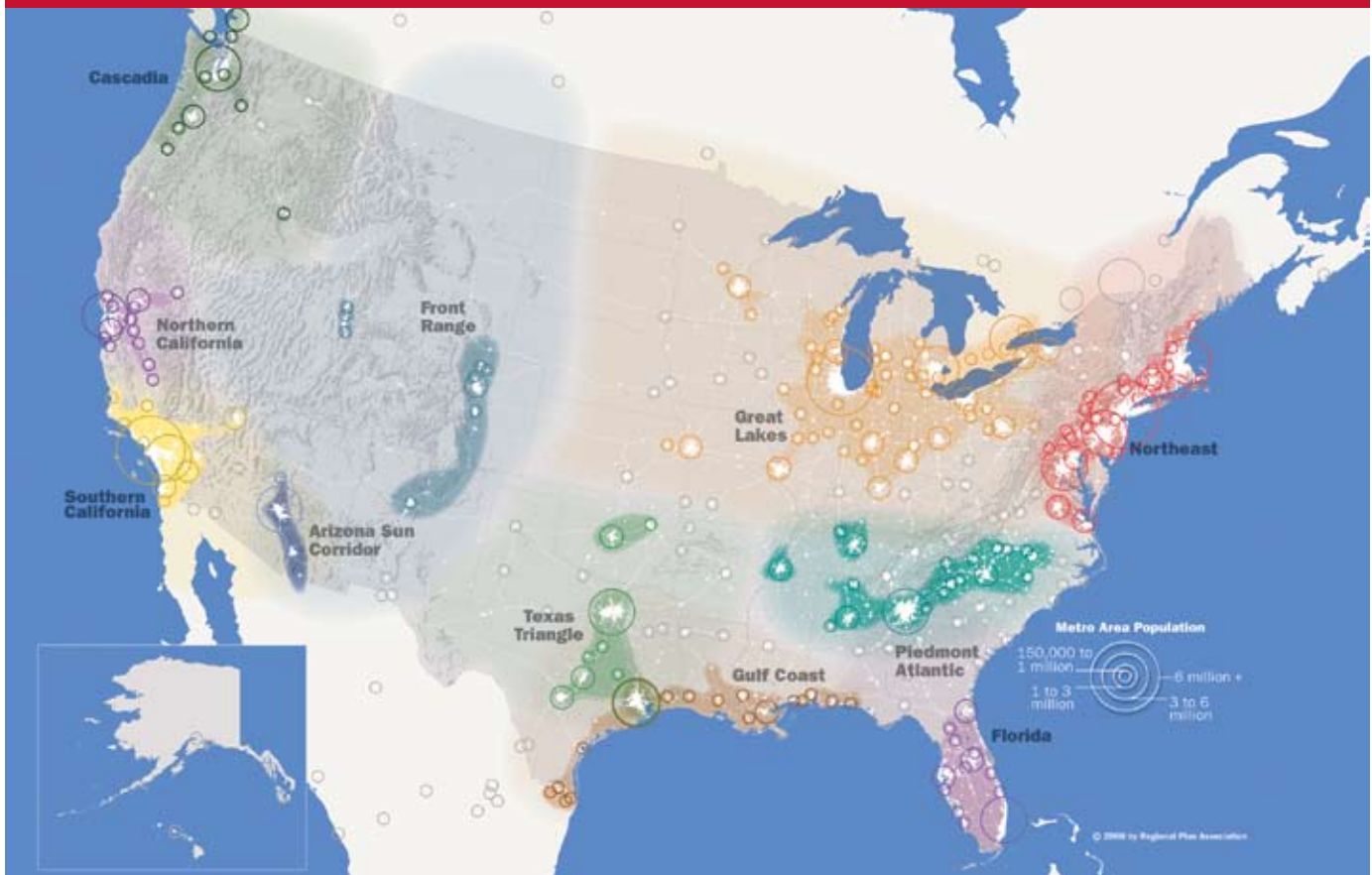
Population growth and demographic change. Despite the current economic crisis, America is growing. The U.S. Census estimates the population will reach 439 million people by 2050, and will be older and more racially diverse than it is today. That number represents a 50 percent increase in population over the year 2000, compared to an increase of only about 130 million people from 1950 to 2000.

Energy independence and climate change. Perhaps the greatest challenge we face as a nation is the need to shift from our dependence on foreign oil to a new energy economy that does its part to reduce greenhouse gases. Such a transition can create millions of "green collar" jobs, by manufacturing solar panels and wind turbines, creating fuel-efficient cars, retrofitting buildings to become more energy efficient, and developing technology for carbon capture and storage.

Movement of goods. We live in a global economy, and one-third of our GDP is based on foreign trade. As never before, the United States is reliant on truck-based freight, which is expected to double by 2035 (AASHTO 2007). As a result, congestion on our highways will have a disproportionate impact on businesses. Even if the trade volumes were to level off, America's existing ports, intermodal connections, and freight networks are ill equipped to handle the volumes of freight they move today with efficiency or reliability.

Rising household costs and regional inequity. The global economy has created winners and losers, and many cities and regions hit by the loss of manufacturing jobs have yet to recover. Household budgets are increasingly pinched by transportation and energy costs. At a regional level, access to jobs is often segmented by geography, with the location of jobs and affordable homes moving in opposite directions.

FIGURE 1
Megaregions Are Expanding Across the United States



Source: America 2050, Regional Plan Association.

Changing spatial patterns. We are seeing changing spatial development patterns and lengthening commutes. The fastest growing areas of the nation are those at the outer fringe of metropolitan regions, as people “drive to qualify” for a nice house with a yard, good schools, and other perceived amenities. In exchange, they spend more time in traffic and more of their household budgets on transportation.

Emerging megaregions. We are also witnessing the emergence of a new urban form—the megaregion—that consists of networks of metropolitan areas connected by overlapping commuting patterns, business travel, industrial value chains, transportation infrastructure, natural systems, and shared historical and cultural characteristics. America 2050 has identified 11 emerging megaregions where over three-quarters of the population and economic growth will be focused by 2050 (figure 1). These megaregions are becoming the new productive engines in national and global economies, but only if we make the right investments to make them efficient, productive, sustainable places.

New Approaches to Transportation, Energy, and Water Infrastructure

Driving the need for a Strategic Investment Framework is the recognition that our current approaches to planning, financing, building, and maintaining infrastructure in this country are insufficient, misguided, or outdated. America’s transportation infrastructure, with its direct impacts on the nation’s economic competitiveness and environmental sustainability, is widely maligned for its effect of perpetuating America’s dangerous dependence on foreign oil and automobile-based land development. The national interest in reforming transportation policy is clear: the transportation sector consumes roughly two-thirds of America’s total oil consumption, with impacts on our balance of payments and foreign policy.

In its “Transportation for Tomorrow” report, the National Surface Transportation Policy and Revenue Study Commission (2007) condemned the nation’s transportation program for “pursuing no discernable national interest” other than the rights of “donor States” and congressional earmarks.



© Ming Zhang

Houston has introduced a light-rail transit system into its downtown areas.

And yet, while the program has no defined national purpose, it has inherent biases that are driving us down the wrong path toward increased fossil fuel consumption and foreign oil dependence.

We must change the vast imbalance between federal investment in highways and in public transit—a cumulative ratio of 9 to 1 highway to transit investment since 1956 (U.S. PIRG Education Fund 2008). While it was most pronounced during the construction of the interstate system, the funding imbalance persists today in decisions about new capacity. Federal funding for new transit projects is provided through a highly competitive grant program, New Starts, with limited funds and many applicants. This level of scrutiny does not exist for comparable new road projects.

Energy infrastructure in America is similarly ill equipped to meet the energy supply and climate change challenges facing the nation today. The nation's electrical grid is badly outdated, comprising a patchwork of private owners, and still vulnerable to the type of widespread blackout that crippled the Upper Midwest and Northeastern Seaboard in August 2003. Despite the recent spurt of production in new wind and solar technologies, the grid lacks the capacity to transport electricity over long distances from the wind farms of upstate New York or the solar farms of Arizona to the population centers where the energy is needed (Wald 2008).

The federal government has invested minimally in developing the Smart Grid, a technology that combines broadband technology with the grid, allowing for real-time monitoring, peak hour pricing,

greater redundancy, and two-way flows of energy. The Smart Grid will allow distributed generation, so consumers with solar panels on their roofs or electric cars with leftover energy at the end of the day can power their own homes and even sell electricity back to the utility company. Also needed are investments in superconductor technology to transport electricity over longer distances to make better use of renewable energy generated in remote places.

In addition to these investments in the energy infrastructure of the future, a strong commitment to efficiency is the most cost-effective strategy for all levels of government and the private sector. Cities like Boston, Chicago, Seattle, and New York are leading the way by changing vehicle fleets, retrofitting old buildings to become more energy efficient, and promoting greater use of public transit. A stronger commitment to energy efficiency by the federal government could include an ambitious program to retrofit all federal buildings, and a policy for locating federal buildings in areas accessible to public transit, walking, and biking.

Water infrastructure is a third area where national policies must be updated to meet the needs of the new century. During the 1970s, the federal government financed significant investments in programs such as the Clean Water Act, which achieved great gains in controlling pollution from point sources, such as sewage plants and factories. The growing challenge today is to control non-point source pollution that flows in runoff from urban stormwater systems and agricultural facilities, while also ensuring an adequate, safe supply of clean drinking water.

Today more than 72,000 miles of municipal water and sewer pipes in this country are more than 80 years old, and the investments made in the 1970s are now reaching the end of their useful lives. The Environmental Protection Agency has identified a gap of about \$534 billion in unmet capital, operating, and maintenance needs to renovate or replace clean water and drinking water systems over the next 20 years. (U.S. Environmental Protection Agency 2002).

Population growth and migration in fast-growing megaregions such as southern California, the Southeast, Arizona, and Las Vegas are also taxing drinking water supplies and demanding coordinated, watershed-wide approaches. Even in water-rich regions like the Northeast and the Great Lakes,

suburban sprawl is requiring new infrastructure investments and degrading drinking water quality for downstream communities.

All the challenges we face today in providing clean drinking water, maintaining our water infrastructure, and controlling flooding will only be magnified by the effects of climate change. Meeting the challenges will require engaging in complex, multi-stakeholder strategies such as the recently signed Great Lakes Compact, which created an eight-state commission to protect water quality, along with investments in land management, infrastructure repair, and public education.

The Role of Megaregions in a National Plan

Megaregions are composed of multiple states, regions, or local jurisdictions that will absorb the majority of the population and economic growth in the twenty-first century. The complexity of working across jurisdictional boundaries often complicates infrastructure planning, whether for transportation corridors, electric transmission lines, or watershed protection. However, these megaregions can provide one-stop shopping for surmounting the trickiest hurdles to large-scale infrastructure planning, and they are logical partners with the federal government in developing and implementing a national infrastructure plan.


America 2050 is hosting forums in each megaregion to identify the strategic infrastructure priorities and common policy approaches that could facilitate the creation of a federal infrastructure and economic recovery plan. In late 2008, forums in Chicago (for the Great Lakes megaregion) and Sacramento (for the Northern California megaregion) convened stakeholders to begin this discussion. The forums are already providing insights about strategies that can help the megaregions meet their own challenges.

In the Great Lakes megaregion, the long-term decline of manufacturing has been compounded by the crisis in the auto industry, skepticism over the effectiveness of ethanol as an alternative fuel, and concerns about carbon emissions from coal-powered plants. Smartly addressing three carbon-related “Cs”—cars, coal, and corn—could point the way to a new energy economy for the Midwest.

In Northern California, the high cost and limited supply of housing in the Bay Area has pushed sprawl inland to the Central Valley, giving rise to longer commutes for workers in San Francisco,

Oakland, and the Silicon Valley. Rampant development in the Central Valley also threatens its prime agricultural land—the Valley’s economic base and a major source of food for the nation. These concerns call for a megaregion-scale planning approach to coordinate transportation, housing, and economic development.

Conclusion

The crisis in our financial markets and the deepening national recession suggest difficult times for the United States. But, sometimes a crisis is necessary to rally sufficient leadership and popular support for radical changes to address entrenched policies, practices, and inertia. With regard to infrastructure and economic recovery, we have two key challenges to meet. First, we must rally support for making sufficiently bold investments to put people to work and make transformative investments in infrastructure. Second, we must ensure that the choices we make about infrastructure provide new models of decision making and accountability to obtain investments that will transition the nation to be a low-carbon economy with energy independence, and a sustainable, equitable future. 

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What Policy Makers Should Know About Property Taxes



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Ronald C. Fisher

Although property taxes continue to be a fundamental and important revenue source for local government, they also remain exceptionally controversial. The common, overarching objection to property taxes is that they are “unfair”—unfair in their distribution across income classes; unfair to particular groups of taxpayers (e.g., homeowners, senior citizens, farmers); unfair because increases in property value are taxed without a cash gain to offset the higher tax; unfair because of inept or corrupt administration; unfair for funding education because of wide disparities in property values; and so on (Youngman 2002).

Economists and other tax analysts express different concerns about the consequences of property taxes, including their effects on efficient housing consumption, on the location decisions of both households and businesses, on the supply of capi-

tal and use of capital in production, and on local government decisions about the efficient quantity of public services (Zodrow 2008).

As a consequence of these varied concerns, the property tax seems to be continually under assault—the target for reform, reduction, or even elimination. The adoption of Proposition 13 by California voters in 1978 was a key event in the widely termed “property tax revolt.” Voters in other states subsequently adopted limitations similar to California’s or enacted exemptions, abatements, credits, or special features to reduce or constrain property taxes for various groups. In the 1980s and 1990s, state legislatures reformed the financing of education, sometimes as required or encouraged by litigation, which decreased or changed the structure of property taxes and often substituted revenues from other sources.

In recent years the property tax revolt has been resurgent as a number of states have considered proposals to reduce or even eliminate the property tax by expanding alternative revenues. Because many of these proposals substitute increased state taxes and new intergovernmental grants for local property tax revenues, they may reduce the fiscal autonomy of local governments while also decreasing reliance on property taxes.

Reflecting President Kennedy’s (1962) warning that “too often we hold fast to the clichés of our forebears,” many popular comments and criticisms of property taxes either reflect outdated views on the state of tax administration or ignore recent research that provides a new and substantially different perspective. This is, of course, as much the fault of tax analysts as it is political officials. Still, the topic of property taxation seems to be one for which improved education and understanding is especially necessary. The following considerations may help clarify some important aspects about using property taxes as a source of local government revenues and a mechanism for financing local services.

Property Taxes and Local Governments

Property taxes are the financial foundation for local governments.

The \$346.3 billion of property taxes collected in fiscal year 2005 accounted for about 28 percent of all local government general revenue, but it constituted nearly 75 percent of local government taxes. As the primary revenue source directly controlled by local governments, the property tax has been central to local fiscal autonomy.

Property taxes provide about a third of general revenue for public schools nationally, about a quarter of revenue for county governments, and about 20 percent of revenue for cities (figure 1). Townships, many of which provide public services in more rural areas, depend on property taxes for more than half of their revenue. Overall, the share of local revenue from property taxes decreased in the 1960s and 1970s, but has remained fairly constant in recent decades.

Replacing all property taxes would require more than doubling state sales taxes.

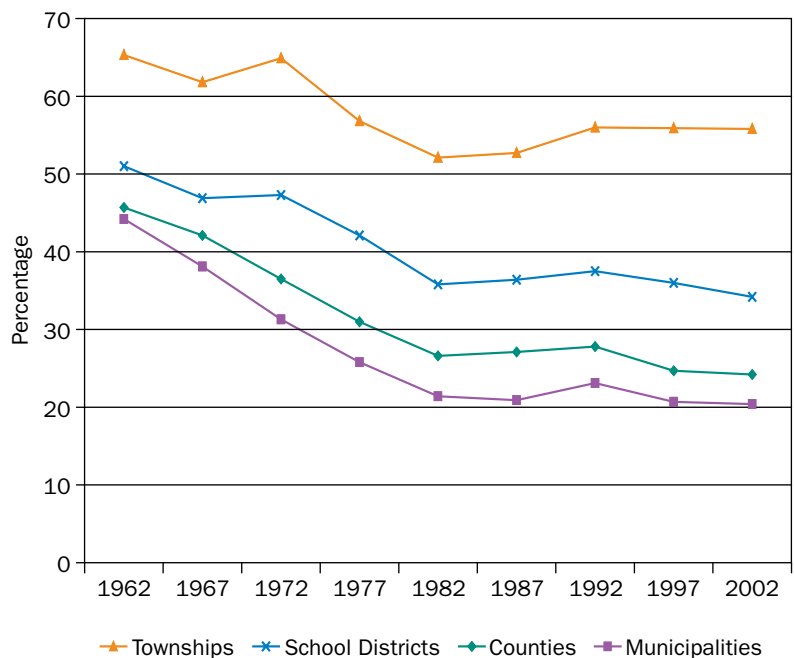
Total property taxes, sales taxes, and corporate income taxes collected by all U.S. governments are roughly of the same magnitude—in the \$350 to \$450 billion range (figure 2). In 2005, property taxes (\$346.3 billion) were essentially equal to federal and state corporate income taxes (\$355 billion), but greater than both general sales taxes (\$271.2 billion) and selective excise taxes (such as gasoline and cigarette taxes, \$197.8 billion).

Accordingly, if all property tax revenue were to be replaced by higher general sales tax revenue without any change in the sales tax bases, state sales tax rates would have to increase by 125 percent. Assuming the average state and local general sales tax rate is about 7 percent, rates of 15 or 16 percent would be needed to replace all property taxes with no change in sales tax bases. Similarly, property tax revenue could be replaced by doubling all state and federal business income taxes, although the trend in recent years has been to reduce business taxes.

Property taxes have been responsive to economic growth and relatively stable over time.

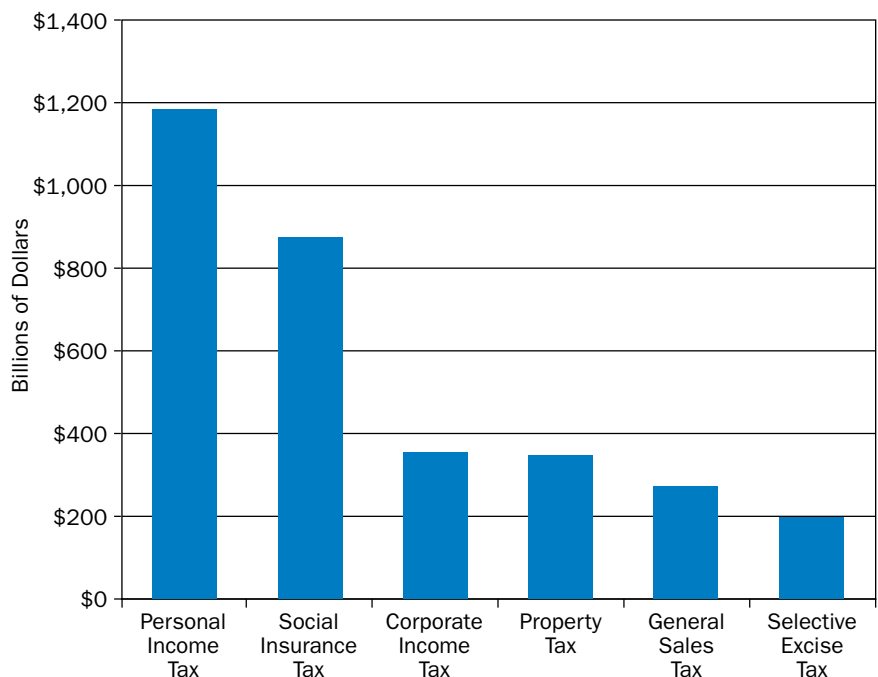
Two key questions for all taxes concern their long-run budget implications. Does the tax base grow

FIGURE 1
Property Taxes as a Percentage of General Revenue, by Type of Government, 1962–2002



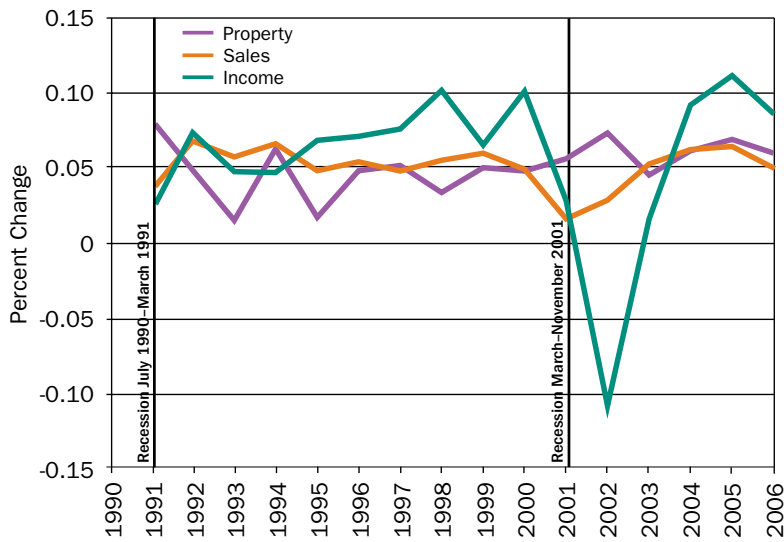
Source: Fisher (2007).

FIGURE 2
Total Taxes Collected by Type Across All U.S. Government Levels, 2005



Source: Fisher (2008).

FIGURE 3
Volatility of State and Local Tax Revenue, 1990–2006



Source: Kenyon (2007, 41)

automatically in response to economic growth? And to what degree does the tax base vary from year to year as the economy fluctuates? The first question is important because demand for public services normally increases with economic (income) growth, requiring additional revenue to provide additional services. Second, if a tax base varies substantially as national economic conditions vary, then budget planning becomes more difficult.

Property taxes have been a stable revenue source (especially compared to sales and income taxes), varying the least across years among all the major state taxes (figure 3). The short-run stability of the property tax base reflects the economic fact that capital investment (both residential and business) is by nature a long-run decision influenced more by long-run expectations than short-run economic circumstances.

Accordingly, property values traditionally have not declined substantially with each recession, and when they have declined, the typical lag in assessments has maintained taxable property values at least through the first part of the economic downturn. Indeed, in some cases, property tax bases were countercyclical, growing at the times when sales and income tax bases were declining.

Property values in the United States have reflected long-run economic growth, so that (until recently) property tax revenues also increased in response to growth (second only to personal

income taxes). Property values, especially residential values, also have increased in response to new family formation, suburbanization, improvements in transportation, and new business investment. At the same time, improvements in assessment practices have permitted property assessments for tax purposes to reflect these increasing market values.

Property Taxes and Homeowners

Typical homeowner property tax payments are between \$125 and \$150 per month.

Total property taxes on all types of property in the United States have remained at about 3 percent of total personal income since 1982 (increasing modestly from about 2.85 percent in 1982 to 3.15 percent in 2005). Recent research shows that the median effective property tax rate on all real property (residential and nonresidential land and buildings) is about 1.7 percent of total property value (Gravelle 2007).

What is the “typical” property tax liability for a homeowner? The 75 million year-round, owner-occupied housing units existing in 2005 had a median market value of \$165,344 and median monthly real estate tax of \$127 (U.S. Census Bureau 2005). The median owner-occupied home value had risen to about \$191,000 by 2007, with a median monthly property tax of \$144 (U.S. Census Bureau 2008).

With the recent housing market crisis, prices have declined from the peak 2007 levels (so that the 2005 data may be more accurate now). Therefore, half of U.S. homeowners pay less than \$125 to \$150 per month in property taxes. The median homeowner had annual property taxes of \$1,524 in 2005 and \$1,728 in 2007, and an effective property tax rate of less than one percent (.9 percent) of property value in both years.

Of course, property tax amounts vary among homeowners because tax rates differ among communities, and homeowners have properties of different values. A homeowner with a median-value home can expect annual property taxes of \$1,500 to \$3,300, or roughly \$125 to \$275 per month if tax rates are higher than average (see table 1). A homeowner with a \$300,000 home (about at the 75th percentile of owner-occupied houses in 2005) could expect annual property taxes of \$2,700 to \$6,000 (\$225 to \$500 monthly), again depending on tax rates.

Concerns about homeowner property tax burdens can be mitigated with targeted tax adjustments.

Nearly every state has programs to reduce or limit property tax burdens for selected homeowners, so that net tax amounts are often lower than indicated by the American Housing Survey. For instance, 40 states provide homestead exemptions or credits; 34 states and the District of Columbia provide property tax rebates or credits (often called circuit breakers) that apply if property taxes exceed some specified percentage of income; and at least 25 states and the District of Columbia provide property tax deferral options to prevent owners from having to sell a house to pay taxes (Baer 2005). Eligibility for many of these programs is determined by income or wealth, or is targeted to specific taxpayers, especially senior citizens.

Another consideration is that property taxes may be “reduced” through federal income tax deductions taken by taxpayers who itemize their deductions. Federal deductibility can be a major advantage of local property taxes compared to local sales taxes, because under current federal tax law taxpayers who itemize deductions may deduct state and local property taxes and *either* income taxes or sales taxes. For states that have both income and sales taxes, it is almost always better for taxpayers to deduct the income rather than the sales tax.

Increases in property tax payments due to increases in property values may create a liquidity problem for households, especially when property values increase faster than incomes.

Property taxes are levied on the value of capital (primarily land, structures, and equipment) used in

producing goods and housing services. In a well-functioning property tax system, the tax should be related to the market value of the property. If the market and taxable values of properties in a jurisdiction rise and the tax rate is kept constant (or if the tax rate is reduced, but less than proportionally to the increase in values), then property tax amounts for those properties that are increasing in value will also increase. Because the increased value of an owner-occupied dwelling is not normally realized until the house is sold, taxpayers may face higher property taxes without additional income (cash) to pay the higher tax amount.

This issue may be especially problematic for individuals who purchase homes based on the maximum monthly payment that the household could afford. It also may be one of the two primary contributors behind calls for major property tax reduction or even elimination over the last decade, a period when housing prices increased substantially. The other factor is the relationship between property taxation and school funding equity (see Kenyon 2007).

The example of a household with a \$100,000 income and a home with an initial value of \$300,000 may be instructive (table 2). Initially, the household has a monthly mortgage payment of \$1,600 and a monthly property tax payment of \$250, so that housing expense is 22 percent of income. If over five years housing values grow 9 percent annually and incomes 3 percent, the value of the house will be about \$460,000 and the household’s income about \$115,900. With a constant tax rate, annual property tax liability will rise from \$3,000 to \$4,600 and monthly property tax payments from \$250 to \$383—an overall housing payment increase of \$133 per month. Although

TABLE 1
Illustrative Annual and Monthly Property Tax Amounts

Value Percentile	Market Value	Effective Tax Rates (annual/monthly)				
		0.90%	1.00%	1.40%	1.70%	2.00%
20th	\$78,000	\$702/\$58.50	\$780/\$65.00	\$1,092/\$91.00	\$1,326/\$110.50	\$1,560/\$130.00
40th	\$130,000	\$1,170/\$97.50	\$1,300/\$108.33	\$1,820/\$151.67	\$2,210/\$184.17	\$2,600/\$216.67
median	\$165,000	\$1,485/\$123.75	\$1,650/\$137.50	\$2,310/\$192.50	\$2,805/\$233.75	\$3,300/\$275.00
60th	\$200,000	\$1,800/\$150.00	\$2,000/\$166.67	\$2,800/\$233.33	\$3,400/\$283.33	\$4,000/\$333.33
75th	\$300,000	\$2,700/\$225.00	\$3,000/\$250.00	\$4,200/\$350.00	\$5,100/\$425.00	\$6,000/\$500.00

Source: Author calculations based on the 2005 American Housing Survey.

TABLE 2
Illustration of Growth in Property Value and Property Tax Over Five Years

Market Value	\$300,000
Household Income	\$100,000
Value to Income Ratio	3.0
Mortgage Amount	\$270,000
Monthly Mortgage Payment (principal + interest)	\$1,600
Effective Property Tax Rate	1%
Annual Property Tax	\$3,000
Monthly Property Tax	\$250
Total Monthly Expense (principal + interest + tax)	\$1,850
Monthly Housing Expense/Income	22%
Change After Five Years	
New Market Value (9% annual growth)	\$460,000
Household Income (3% annual growth)	\$115,900
Value to Income Ratio	4.0
Effective Property Tax Rate	1%
New Annual Property Tax	\$4,600
New Monthly Property Tax	\$383
New Total Monthly Expense (principal + interest + tax)	\$1,983
Change in Annual Property Tax	\$1,600
Change in Monthly Property Tax	\$133
Change in Market Value	\$160,000
Monthly Housing Expense/Income	21%

Source: Author calculations.

taxes have risen faster than income, the ratio of housing expense to income has fallen (from 22 to 21 percent), and the household's home equity has increased from \$30,000 (the initial down payment) to roughly \$190,000, a \$160,000 capital gain.

What are possible or appropriate responses to this situation? Of course, no policy response may be necessary, because homeowners in this situation are wealthier, at least on paper. Indeed, one could

argue that many individuals purchased homes with the expectation and desire that the value would increase. Recall that a home value of \$300,000 was in the top quartile of all year-round owner-occupied homes in 2005.

Two programs have been used by states and localities to deal with this concern. The first, circuit breakers, provides tax credits or rebates when property tax amounts exceed some threshold of income. If property taxes rise faster than income, then a circuit breaker credit or rebate may effectively reduce the amount of the tax increase. A second possible solution is to permit households to defer property tax payments (or at least the increase in payments) until the house is sold. For the \$300,000 house example, if the owner sold the house after five years and had deferred only the *increase* in property tax amounts compared to when the house was purchased, the owner would owe about \$4,560 in back taxes (plus interest), but would have a \$160,000 capital gain from which to pay the deferred tax.

Distribution of Property Tax Burdens

The overall distribution of property tax burden seems to be roughly proportional to income for the bulk of middle-income taxpayers.

Research shows that for a national uniform property tax on all property, a graph of effective tax rates (i.e., tax as a percentage of income) would be U-shaped with respect to current annual income—regressive (falling) for the bottom 30 to 40 percent of households, proportional for the majority, and progressive (rising) for the top 5 to 10 percent of households. The rising tax burden for the top 10 percent of taxpayers occurs because the national property tax would reduce the rate of return to all forms of capital ownership, thus imposing a relative burden on capital owners, who are concentrated at the top of the income distribution. If the same tax is compared to a measure of permanent or lifetime income, the overall tax burden is essentially proportional to permanent income.

The result is only slightly different if one accounts for variations in tax rates between communities or between types of property. Assuming that the differentially higher property tax burdens fall on homeowners and renters in higher-tax communities and consumers of goods produced with taxed property, tax burdens are regressive for the bottom

20 to 40 percent of taxpayers and proportional for the remainder (comparing to annual income). The overall result is slightly less progressive because of relatively lower estimated burdens for the highest income individuals. In comparison to permanent or lifetime income, the overall distribution of property tax burden becomes a bit more progressive.

Certainly, research does not support the popular view that sales taxes are relatively better for lower-income taxpayers. The distribution of property taxes and sales taxes are quite similar. Sales taxes tend to be mildly regressive compared to current annual income and roughly proportional with respect to permanent or lifetime income. However, there are at least two reasons to think that these estimates of overall property tax incidence may not be relevant for specific policy decisions considered by individual states or local governments, as noted next.

The expected economic effects of a specific property tax change depend on which governments change the tax, and how.

Because the distribution of burden depends on the nature of the tax (uniform or differential) and on the geographic extent of any property tax change, analyzing the overall incidence of a property tax must be done with care. First, a nationwide reduction in property taxes would benefit all owners of capital, proportional to the amount of capital owned. Such a change clearly would favor the rich, who own relatively more capital.

Second, if only one state eliminated the property tax, the benefit would go to landowners, housing consumers, and workers in that state. Whether such a change is pro-rich or pro-poor depends on the income level of workers and home-owners in that state and would differ greatly between states such as Connecticut and Mississippi. Third, if only one local government eliminated the property tax (by switching to a local income or sales tax, for example), the benefit of the property tax reduction would go almost exclusively to landowners in that locality. The distributional effect depends on the economic characteristic of those landowners, some of whom may not even be residents of the locality.

One needs to be careful of the “catch 22” inherent in this kind of analysis. It might seem that property tax reduction in all lower-income states would be a pro-poor policy for the nation. However,



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if one low-income state reduces property tax the effects would be progressive or pro-poor, but if all lower-income states were to reduce property taxes simultaneously, the effect would be similar to a national reduction in property tax. That is, the effect would be regressive or pro-rich because the benefits would accrue primarily to the owners of capital.

To predict the income distributional consequences of changes in property taxes at the state and local level, it is important to know whether jurisdictions with relatively high property tax rates tend to be high- or low-income communities. The evidence on this point varies geographically, especially for local governments. Among states, however, the number of low-income states hurt by high tax rates is essentially offset by low-income states that benefit from low tax rates.

Under certain conditions, the property tax serves as the “price” for living in a given community and consuming the local government services.

Property taxes may become locational prices or fees if: 1) consumers choose residential locations based on the property tax and service package offered by the local government; 2) there are different communities from which to choose; and 3) there is some mechanism (such as zoning) to maintain the equilibrium (Fischel 2001). In such a situation, individuals who desire the same fiscal package are grouped together. If one community has high property taxes because residents demand a relatively large quantity of public services, its residents are simply paying for the services they use.

If property taxes serve as benefit taxes or fees in this manner, then the tax does not change rates of return to capital or create incentives for reallocation of capital between jurisdictions or uses. In this case, it does not make sense to consider the incidence of the tax separate from the provision of public services, because the tax simply reflects the demand for the services, with each taxpayer paying the cost of the desired consumption of local public services.

Whether to think of property taxes as taxes on mobile capital, or as fees for residing in a particular jurisdiction and benefiting from the services provided there, remains a controversial issue among some public finance analysts. Supporters of the benefit tax view cite studies showing that many metropolitan areas have numerous localities offer-

ing different services, each remaining relatively homogeneous, and that the popularity of complicated zoning rules may serve to maintain community homogeneity. Indeed, this perspective seems to apply quite well in suburban areas of relatively large metropolitan regions (see Inman 1994).

There is less agreement on whether this perspective applies to rural areas and large central cities. In rural areas, individuals may have few residential choices because of the geographic size of communities, or may find it infeasible to separate their work and residential location choices. This perspective also may not apply in large cities, which are inherently quite heterogeneous. Property taxes on homeowners in large cities, therefore, may not necessarily correspond to the benefits from public services, so the distributional effect of the tax may be important.

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What This All Means

What might be said, then, in defense of property taxes relative to the main alternatives of income or sales taxes? Relatively modest property taxes for the representative homeowner (less than one percent of property value or \$150 monthly) support a myriad of important local government services and have permitted local governments to function independently of higher-level governments. Property taxes are relatively visible and thus contribute to government accountability. Property tax revenues have been responsive to economic growth and perhaps the most stable of all tax bases. Property taxes often are economically efficient compared to alternatives, especially if they serve as local benefit charges. Finally, property taxes may add to overall tax progressivity compared to the alternatives; importantly, property taxes are in most instances more progressive than sales taxes.

Although some of the political policy concerns about property taxes thus seem to be inaccurate or exaggerated, it also seems clear that many of these concerns continue to influence policy decisions. If taxpayers or public officials object to property taxes on distributional, efficiency, or administrative grounds, the relevant questions to explore further are: how do property taxes compare to the alternatives; how can targeted adjustments be used to alter property taxes for selected taxpayers; and how important is it for local governments to maintain fiscal independence. **■**



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Inclusionary Housing, Incentives, and Land Value Recapture

Nico Calavita and Alan Mallach

Inclusionary Housing (IH) programs are land use regulations that require developers of market-rate residential development to set aside a small portion of their units, usually between 10 and 20 percent, for households unable to afford housing in the open market. Alternatively they can choose to pay a fee or donate land in lieu of providing units. Originating in the early 1970s, inclusionary housing has grown to be a major vehicle by which affordable housing units are provided in large parts of the United States, as well as an important strategy for affordable housing in many other countries.

From the first days of IH, there has been widespread debate over what is sometimes called the “incidence” controversy—that is, how the costs of providing affordable, and by definition below-

market, housing are addressed, and which of the parties in a real estate transaction actually bears those costs. As a result of widespread concern that costs are being borne by developers and/or market-rate homebuyers, and reflecting legal concerns associated with the takings issue, many municipalities enacting inclusionary ordinances have combined them with incentives or cost offsets designed to make the imposition of an affordable housing obligation cost-neutral. Many of these incentives, however, displace costs onto the public, either directly or indirectly.

We suggest that a better approach is to link inclusionary housing to the ongoing process of rezoning—either by the developer or by local government initiative—thus treating it explicitly as a vehicle for recapturing for public benefit some part of the gain in land value resulting from public action.

The La Costa Paloma Apartments in Carlsbad, California, have 180 apartment units affordable to households earning at or below 50 and 60 percent of the area median income.

The Evolution of Inclusionary Housing

Several factors contributed to the development of inclusionary housing in the early 1970s: efforts to foster racially and socioeconomically integrated communities and combat exclusionary practices; the rise of the environmental movement that spurred growth management programs; the use of exactions to make development pay for the costs of growth; and sharp housing cost increases, particularly in key areas such as California and Washington, DC. During the 1980s, IH became an important tool to offset the Reagan administration’s savage cuts in federal funding for affordable housing by pushing states and localities to take a more pro-active role in the affordable housing arena.

California, New Jersey, and Massachusetts led the nation in IH, driven by state laws enacted during this period that required local governments to produce, or remove obstacles blocking others from producing, their “fair share” of affordable housing. Outside of those states, the greater Washington, DC, region produced many of the first significant IH programs, notably in Montgomery and Prince George’s counties in Maryland, and Fairfax and Loudoun counties in Virginia.

IH was originally a tool to provide affordable housing and create mixed-income communities in

suburban areas, but today it is also being adopted in urban centers such as Denver, Baltimore, Chicago, and New York where redevelopment, infill, and densification—and often gentrification—are taking place. Some cities are also requiring developers who convert rental housing into condominiums to make a portion of the former rental units affordable to moderate- or low-income homebuyers, extending the reach of IH to existing buildings as well. Implementing IH programs becomes more problematic, however, when applied to urban infill sites and redevelopment areas, where development is often more expensive and difficult than in the suburbs, demanding particular flexibility in designing and administering IH ordinances.

No national survey has ever been conducted of IH programs. Estimates range from 300 to 500 programs in existence and 80,000 to 120,000 units produced (Porter 2004; Brunick 2007; Mallach 2009). IH may not be a panacea for the nation’s housing affordability problems, but it can be a significant, locally based component of an overarching strategy in which the federal and state governments must also play significant roles.

IH, moreover, is no longer an exclusive American practice. In recent years it has spread not only to Canada and many European countries, includ-

Part of an inclusionary development in affluent suburban Cranbury, New Jersey, this four-unit structure is designed to look like an expensive single-family house.



© Alan Mallach



The single-family developer of the La Costa Paloma Apartments in Carlsbad, California, was allowed to cluster the IH units and build them in collaboration with a nonprofit developer.

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ing England, Ireland, France, Italy, and Spain, but also to such far-flung places as India, South Africa, New Zealand, and Australia. The global spread of IH reflects a larger policy shift under which governments increasingly look to developers to shoulder part of the wider societal costs of development. But who actually pays for those costs?

The Incidence Controversy

Since it can be assumed that affordable housing units will sell or rent for below-market prices, there is little doubt that there are costs associated with complying with a municipality's inclusionary requirement. While developers often maintain that renters or buyers of market-rate units bear the cost of IH, economists point out that the developer and/or the seller of raw land to the developer should, under most circumstances, absorb part or all of these costs. There seems to be agreement in the literature that "in the long run . . . most of the costs will be passed backward to the owners of land" (Mallach 1984, 88).

A strong argument in support of this position is that a rational developer will already charge the maximum housing sale price that the market can bear, and thus will be unable to pass along additional costs through higher prices. Under those

circumstances, if newly imposed exactions increase the cost of development, either the price of the land or the developers' profits will have to come down. While developers may reduce their profit margins, it is likely that wherever possible they will seek a reduction in land costs. Critics of IH maintain that these represent unreasonable and unfair outcomes, while proponents argue that it is neither unfair nor unreasonable for the landowner to bear much of the cost of inclusionary programs.

Is the reduction of land costs a desirable outcome of IH? Put differently, does the imposition of IH actually reduce land value from some level intrinsic to the land, or does it represent the recapture of an increment in land value associated with governmental action?

It is widely argued that increases in land values do not generally result from the owner's unaided efforts, but rather from public investments and government decisions, and are therefore in whole or part "unearned." This argument is accepted in many European countries, leading to the adoption of regulations that attempt to recapture or eliminate what are considered to be windfall profits associated with land development. Our research, supported by the Lincoln Institute, has found that in many countries IH is viewed explicitly as a

mechanism to recapture unearned increments in land value.

In the United States, where the “right to develop” is far more central to the concept of property rights than is the case in most European countries, land value recapture is not widely recognized as a part of planning practice and land development. Thus, the imposition of affordable housing obligations is often legitimized by providing compensation in the form of incentives or cost offsets to developers for the additional costs of providing IH.

As Hagman (1982) has argued, incentives such as density bonuses and other cost offsets have no effect on the price paid by the buyers of market units, but ensure instead that the unearned increments in land value will keep flowing to landowners. Even housing advocates will argue for cost offsets, if only as a way of gaining support and blunting developers’ opposition to the enactment of inclusionary ordinances. Incentives and cost offsets provided to developers are not free, however, but may carry potentially high public costs.

Incentives and Cost Offsets

It has been argued in the United States that without incentives and cost offsets, “inclusionary housing becomes a constraint or an exaction on new

development” (Coyle 1991, 27–28). For example, the California Department of Housing and Community Development (HCD) has advised for years against “the adoption by local governments of inclusionary housing ordinances or policies which shift the burden of subsidizing low-income affordability from government to private builders” (Coyle 1994, 2). The current HCD position is that IH creates a potential obstacle to private residential development and therefore localities must demonstrate that IH adoption or implementation has a neutral or even positive impact on development. Similarly, a 2007 New Jersey court decision found that municipalities seeking to enact inclusionary ordinances must provide the developers with “compensating benefits” to mitigate the cost of the affordable housing obligation (*In the Matter of the Adoption of N.J.A.C. 5:94 and 5:95*, 390 N.J. Super. 1 (App. Div, 2007), certif. denied 192 N.J. 72 (2007).

In this climate, it is understandable that local governments incorporate cost offsets or incentives in their inclusionary programs, even in the absence of a clear legal doctrine requiring offsetting benefits. These programs may include density increases or “bonuses,” waivers or deferral of impact fees, fast-track permitting, lower parking requirements,

Mill River House is a 92-unit mid-rise in a downtown redevelopment area of Stamford, Connecticut, with a 12 percent low/moderate income set aside.



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relaxation of design standards such as street widths and setbacks, or other regulatory concessions that subsequently reduce developers' costs. In addition, financial incentives may be provided through federal Community Development Block Grants and Home funds or state and local subsidies, including below-market-rate construction loans, tax-exempt bond mortgage financing, and land write-downs.

A survey of IH in California found that local financial subsidies are common among the most productive jurisdictions (NPH/CCRH 2007). The most frequently used subsidy is tax increment financing (TIF), which is all but synonymous with redevelopment in California. Under state law, 20 percent of all TIF revenues must be dedicated to the provision of affordable housing. After TIF funds the most widely used incentives are density bonuses and permit-related concessions, such as deferral, reduction, or waiver of applicable permit and impact fees. Some jurisdictions also offer fast-track processing and flexibility of design standards, including height and bulk requirements, as well as parking and open space requirements. In his national study of IH programs, Porter (2004, 9) found a similar pattern with "the most common compensatory offering being density bonuses . . . although their specific value in any given location is difficult to calculate."

Studies have shown that it is often possible to fill the affordability gap—the difference between what it costs to provide housing and what lower-income households can afford—through local government measures that reduce production costs. However, developers often argue that cost offsets alone do not compensate them adequately for inclusionary requirements. Even additional financial assistance does not guarantee acceptance of IH by the development industry. In large jurisdictions in fast-growing areas with powerful development interests, even cost offset approaches can be thwarted, particularly during recessionary periods, as they were most egregiously in the City of San Diego in the early 1990s (Calavita and Grimes 1994).

These incentives often come at a public cost. Financial incentives are paid directly by taxpayers, either through appropriations at the federal, state, or local level, or by redirecting revenues that would otherwise go into the city's general fund. The effect of fee waivers, reductions, or deferrals is nearly as direct. Development creates demands for public facilities, services, and infrastructure, the costs of



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which are typically mitigated by fees whose nature and amount is directly related and roughly proportional to the development's impact.

When a project does not pay its full cost, the city must make up the lost revenue or allow infrastructure or service levels to decline. In either case, the public bears a cost. Fast-track permit approval will require more personnel to process the plan at public cost, or lengthen delays for projects that do not benefit from the fast track. Lower parking requirements might be justified by the assumption that lower-priced units require less parking, an assumption that may not be supportable in all cases, and thus a legitimate cause of concern for neighborhood groups.

Density bonuses, which are used widely to incentivize urban design amenities as well as affordable housing, can be both the most attractive to the developers and the most problematic to the public at large. When superimposed on an existing planning framework, density bonuses raise three major areas of concern.

1. They undermine existing regulations, effectively undoing land use planning and zoning regulations without the associated processes that usually accompany zoning changes. A Los Angeles

Torrey Highlands, a 76-unit IH project serving families earning up to 60 percent of area median income, is in the City of San Diego's northern fringe area.

SOMA Grand is a 246-unit condominium project with 29 IH units in the South of Market (SOMA) neighborhood of San Francisco. The IH units are affordable to families making 100 percent of area median income, while the market-rate units sell for between \$500,000 and \$1.9 million.

- City Council member opposed to IH stated: “This proposal automatically increases a density in a community by 15 percent, which in effect trashes a community’s efforts to master plan their community” (Smith 2004, 2).
2. They may lower the level of service of public facilities and infrastructure in the area. Analysis of the adequacy of public facilities, identification of needed improvements, and scheduling of the investments—either on the part of the developer or the locality—is needed to ensure that levels of service will not deteriorate as a result of the additional density associated with land use or zoning changes. Without it the quality of life and public services in neighborhoods affected by significant use of density bonuses may deteriorate. These impacts are rarely taken into consideration.
 3. They frustrate citizen participation in the planning process by being enacted outside of that process. Once approved, their implementation is piecemeal, and their impacts only gradually felt.

A critical distinction must be made, therefore, between density increases resulting from an up-zoning based on a planning process that has presumably taken into account the issues arising from an increase in land use intensity, and density bonuses superimposed on existing zoning with the potential to have a significant but unanticipated impact on neighborhoods. The costs imposed by density bonuses, as with other incentives, are often forgotten by those who propose using cost offsets and incentives to support IH.

Land Value Recapture Through Rezoning

Reliance on cost offsets and incentives implicitly assumes a static view of urban planning—that IH requirements will be applied within the existing planning and zoning framework as part of the subdivision or site plan approval process. Within this framework, while rational developers will try to buy the land at prices that reflect those requirements, the availability of cost offsets will reduce the developer’s motivation to bargain with the landowner who, in any case, will not be motivated to sell her land at any less than the price she could get in the absence of IH requirements. In the end, the landowner is likely to get her price and the developer his profits, while the city and the neighborhoods absorb the costs. All of this reflects the re-



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luctance of the public sector in the United States to confront the effects of any action on land values. There is a better way.

Planning is a dynamic process. Plans and ordinances are changed constantly to reflect both changes in external conditions and the potential profit to be made from upzoning properties to higher density or more profitable uses. Constant zoning changes are a reality of the planning process in any area with strong development demand. When land use intensities change and land values increase as the result of public action, IH can become an integral part of the local land use planning and development process, rather than being superimposed on a pre-existing framework. Thus, IH can become an instrument to recapture the land value increment associated with the government action of rezoning or land use changes.

The state of Washington took a step in this direction in 2006 in enacting HB 2984, which specifically authorizes IH where it is linked to upzonings. As described in one commentary, “If a city decides to upzone a neighborhood, it can require that anyone building in that area include a certain number of affordable units. . . . The justification of this requirement is that the property owner has

been given increased land value by virtue of the upzone, and that increased value is the equivalent of an incentive under a voluntary program” (The Housing Partnership 2007, 5).

Rules proposed by the New Jersey Council on Affordable Housing, which sets standards for IH in the framework of the state’s statutory fair-share scheme, have moved in a similar direction. The rules establish “minimum presumptive densities” and “presumptive maximum” IH set-asides, ranging from 22 units to the acre with a 20 percent set-aside in urban centers to 4 units to the acre with a 25 percent set-aside in areas indicated for lower density under the State Development and Redevelopment Plan (New Jersey Council on Affordable Housing 2008, 47–48). Although not explicitly linking the inclusionary requirement to a rezoning per se, rezoning will be needed in many, if not most, cases to achieve the presumptive densities required by the proposed rules.

Recent New Jersey legislation has gone a step further, mandating that every residential development “resulting from a zoning change made to a previously nonresidentially zoned property, where the change in zoning precedes the application . . . by no more than 24 months,” contain a set-aside of housing affordable to low- and moderate-income households (Public Law 46 of 2008, amending N.J. Statutes Ann. 52:27D–307). The Council is empowered to set the appropriate set-aside percentage in such cases based on “economic feasibility with consideration for the proposed density of development.” Although the concept is arguably implicit in the Washington statute, the New Jersey legislation appears to be the first time that the principle of “planning gain,” as it is termed in the United Kingdom, or the recapture of the land value increment resulting from rezoning for the benefit of affordable housing, has been enshrined in American land planning law.

We are not proposing that communities do away with existing IH systems, but rather that there be a two-tiered approach. The first would impose modest inclusionary requirements within an existing zoning framework, incorporating those incentives that can be offered without undue cost to the public. The second would be associated with significant upzonings of either specific parcels or larger areas grounded in the principle of land value recapture, imposing inclusionary requirements that in many cases could be substantially higher than the 10 to

20 percent range that is now customary. A period of transition might be appropriate to allow land markets to adjust to the new regulatory framework.

In conclusion, the time has come to reconsider the underlying premises of IH in the United States. By grounding IH in the practice of rezoning, we believe it is possible to better integrate inclusionary housing into good planning practices and begin to recapture for the public good some part of the unearned increment in land values resulting from the exercise of public land use regulatory powers. **L**

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Dr. Ming Zhang is a visiting research fellow at the Peking University–Lincoln Institute Center for Urban Development and Land Policy in 2008–2009. He has been a faculty member since 2004 in Community and Regional Planning at the University of Texas at Austin. Prior to joining UT Austin, Zhang worked at Texas A&M University, the Rockefeller Institute of Government (Albany, NY), and the Huazhong (Central China) University of Science and Technology. He received a Dissertation Fellowship from the Lincoln Institute in 2000–2001, and earned his Ph.D. in Urban and Regional Planning from the Massachusetts Institute of Technology.

Having a combined educational background in architecture, planning, and transportation, Zhang has developed a keen research interest in land use–transportation integration. He has researched the impact of rapid mass transit on land use, and the influence of urban form on travel behavior. He has studied many cities, including Boston, Houston, Austin, Dallas/Fort Worth, Hong Kong, Beijing, Shanghai, Guangzhou, Taipei, Bangkok, Curitiba, São Paulo, Brasília, San Juan (PR), and Santo Domingo.

His most recent articles appeared in such journals as Urban Studies, Transportation Research Record, Journal of Planning Education and Research, Journal of the American Planning Association, and City Planning Forum (in Chinese). He also contributed a chapter on value capture in land use–transit development to the 2007 Lincoln Institute book, Urbanization in China: Critical Issues in an Era of Rapid Growth. Contact: zhangm@mail.utexas.edu.

Ming Zhang

LAND LINES: *In which research and educational programs have you worked with the Lincoln Institute?*

MING ZHANG: My work with the Lincoln Institute is mainly in two research areas: planning for megaregions and transit-oriented development (TOD), in both the United States and Chinese contexts. Teaming up with my colleagues Fritz Steiner and Kent Butler at UT Austin, I have studied the Texas Triangle megaregion. I am also collaborating with Professors Liangyong Wu and Weijia Wu of Tsinghua University for research on megaregions and spatial planning in China with a focus on the Beijing-Tianjin-Hebei (BTH) megaregion.

With support from the Lincoln Institute’s China program, I studied development around rail transit stations in mainland China, Hong Kong, and Taipei, and in Latin American cities. In the U.S. context, I am conducting a case study of Austin, Texas, examining the potential of TOD to reduce the rate of external driving trips.

I am also involved in several teaching programs sponsored by the Lincoln Institute. Since 2005 I have lectured every spring on Infrastructure Development and Planning at the International Center for Land Policy Studies and Training, Taiwan. Participants of the program come mostly from Latin America, Southeast Asia, and Eastern Europe. In addition, I have lectured for various workshops and research fellowship courses organized by the Institute’s China Program in Beijing.

LAND LINES: *You mentioned the Texas Triangle as a megaregion. Is the Triangle really a megaregion or just a geometrically shaped coincidence?*

MING ZHANG: How a megaregion is defined concerns basic conceptual and methodological issues in current megaregion research. We explored these issues through a case study of the Texas Triangle, which encompasses the metro areas of Dallas/Fort Worth, San Antonio/Austin, and Houston. A planning studio taught by Armando Carbonell of the Lincoln Institute, Robert Yaro of the Regional Plan Association, and Jonathan Barnett of the University of Pennsylvania in 2004 initially identified the Texas Triangle as one of the about ten emerging megaregions in the United States.

Since then various ways of defining megaregions in or around the Triangle have been proposed, with the number ranging from none to three. Our study looked into the growth histories and economic bases of the Triangle metros as “space of places,” and analyzed goods and information movements among the metros as “space of flows.” We also examined the ecological and environmental interdependency of these metros. Our empirical results suggest that they are becoming more integrated, while the mobility and environmental challenges facing one metro are also being felt by others. These challenges will likely increase as the Triangle’s population is expected to grow by an additional 10 million by 2050.

LAND LINES: *Can you share some observations on China’s plan-making in general and spatial planning for megaregions in particular?*

MING ZHANG: China has a planned economy initially adopted from the former Soviet Union. Plan-making is the responsibility of governments at the central and the local level. The National Development and Reform Commission (NDRC, formerly the State Planning Committee) under the State Council makes national economic development plans, known as Five-Year Plans. Specific functional units of the government develop implementation programs that are largely spatially oriented as they aim to specify the location and allocation of planned developments.

The practice of spatial planning has been influenced by the national urbanization policy in China, where urbanization is seen as both the outcome and the source of development. Spatial planning serves as a means to achieve policy goals. Over time, the national policies have been shifting their foci as the country undergoes dramatic political, economic, and social transformation, and since 2000 this policy has focused less on small-to-medium-sized cities and more on regions of large urban agglomeration.

The 10th Five-Year Economic Development Plan (2001–2005) stressed the need to intensify the “growth engine” role of the country’s three top megaregions: the Yangtze River Delta (YRD), the Pearl River Delta (PRD), and the Beijing-Tianjin-Hebei (BTH) region. The 11th Five-Year Plan (2006–2010) continued this regional growth approach and was instrumental in facilitating the development of 10 to 15 large megaregions. At the megaregion seminar held in October 2008 at the PKU–Lincoln Institute Center we saw that Chinese planners have made many plans around the megaregion level. Most Chinese megaregion plans have reached a broad audience through published books, online postings, and panel discussions on TV forums; they have raised public awareness of challenging issues facing their cities and regions, and encouraged participation of various interest groups in shaping their common future.

LAND LINES: *What have you learned from China’s megaregion development strategy that might inform U.S. initiatives like America 2050 and megaregions like the Texas Triangle?*

MING ZHANG: The megaregion effort in the United States has taken a bottom-up approach, in contrast to the top-down approach in China. One lesson from observing Chinese megaregion plans is the need to make large-scale plans as part of the campaign for national spatial development strategies, and America 2050 may help to facilitate such a process.

Another lesson is that the federal and state governments can and should play an active role in strategic planning and investments in transportation infrastructure. A high-speed rail (HSR) line started operating in July 2008 between Beijing and Tianjin in the BTH megaregion, cutting travel time from two hours by car to 30 minutes by rail. Quality of life has improved as citizens in both cities now can commute easily to jobs, housing, and services in both places.

U.S. cities and regions still rely on the infrastructure dating from the late nineteenth and twentieth centuries. In the Texas Triangle and many other megaregions, major airports and highways are reaching their capacities. How should the Texas Triangle

prepare for an additional 10 million people while maintaining quality of life and economic competitiveness? HSR should be considered, but a bottom-up approach toward development of regional/national infrastructure may not work effectively. In the early 1990s, for example, a proposal for HSR in Texas by a local franchise failed largely due to strong opposition from Southwest Airlines.

LAND LINES: *Conversely, are there lessons for China?*

MING ZHANG: China can learn from the United States to address regional governance issues through coalition building and participatory planning. Currently there are five levels of governments in the political geography of China: central, province, prefecture, county, and township. Another layer at the megaregion level will not be helpful. The U.S. political geography at the local level is also fragmented, but experience has found innovative ways to facilitate coordination and conflict resolution among different interest groups and local communities.

Another lesson is to incorporate market forces for megaregion development. As the market continues to grow in China’s economy, the U.S. experience and techniques for partnering with the private sector are valuable references. Examples include value capture for infrastructure financing, public-private partnerships for public works, and environmental credit trading.

LAND LINES: *Now please tell us more about your work with the Lincoln Institute on TOD*

MING ZHANG: In 2005–2006, the Institute’s China Program supported my study of TOD experiences in three mainland cities (Beijing, Shanghai, and Guangzhou) as well as in Hong Kong and Taipei. In the following year, the project extended in two directions: additional case studies of Curitiba and São Paulo, Brazil; and a comparison of bus-based rapid transit and rail, with respect to their capital and operating costs, service capacity, and land use impacts. I presented the TOD study to the Institute-sponsored TOD workshop led by Professor Robert Cervero in Shanghai in 2006. In collaboration with scholars from the case study cities, the research has generated six

publications (one of which is in Chinese), with others under review. This TOD research continues at the PKU–Lincoln Institute Center in collaboration with the China Academy of Transportation Science in Beijing. My focus is on the application of value capture techniques for TOD.

LAND LINES: *Do Chinese cities need TOD, given that density is already high, mixed land use is a common practice, and the share of transit use is much higher than in the United States?*

MING ZHANG: Yes. Two observations from our initial study suggest that TOD ought to be promoted in Chinese cities. First, urban expansion since 1978 has become increasingly auto-oriented, and the new built environment typically features super-blocks, multiple-lane roadways, and street design that is hostile to pedestrians and cyclists. A Chinese version of sprawl is emerging as scholars have warned. Second, Chinese cities have been investing in rapid transit to accommodate the rising mobility demand, but there has been little time for detailed consideration of integrating transit with surrounding functions. Many stations and their nearby land uses are simply adjacent, leaving much of the area dysfunctional for TOD.

While the U.S. principles of TOD are valid in China, the performance standards generally are not applicable. My research in Hong Kong, Taipei, and the Mainland Chinese cities led to an operational TOD model characterized as Five-Ds Squared or 5D²: Differentiated Density, Dock-like District, Delicate Design, Diverse Destination, and Distributed Dividends. It emphasizes that TOD should be applied as a composite policy combining land use, transportation, and transit finance (see Zhang 2007). **L**

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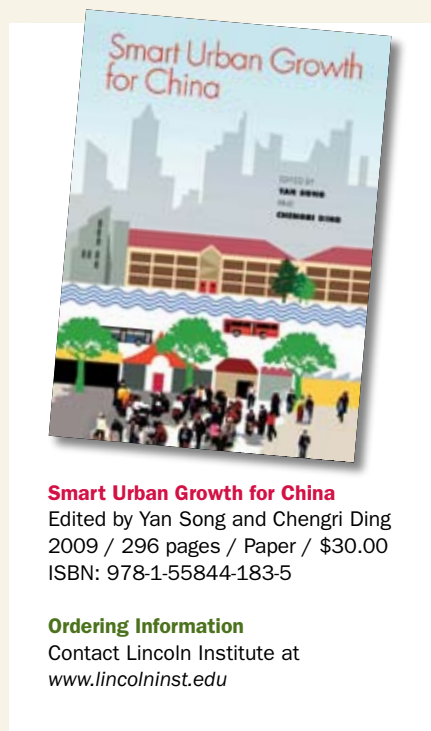
Smart Urban Growth for China

Increasing concerns about global warming, soaring gas prices, and environmental degradation are triggering interest in sustainable development, and China is no exception. Through more than two decades of rapid economic growth, China's level of urbanization increased from 18 percent to 41 percent between 1978 and 2003, and it is expected to reach 65 percent by 2050. This growth threatens to produce shortages of land resources, damage to the environment, and social inequity, all of which pose difficult challenges for China's sustainable future.

Acknowledging these problems, the Chinese government initiated a movement called "scientific outlook on development," which stresses the development of a harmonic society, with sustainable and balanced development as its basic requirement, and coordinated and comprehensive growth as its fundamental approach. Chinese scholars, policy makers, and planners are asking questions such as: Are smart growth doctrines developed elsewhere applicable in China? Are public policies effective in managing the problems associated with urban growth? Are the plans efficient as instruments in guiding toward more scientific growth?

To help address these issues, the Lincoln Institute of Land Policy organized a conference on "Smart Urban Growth for China" in May 2007. It was the second in a series to understand the evolution of changes taking place in China. Thirteen papers from the first conference were collected in the book *Urbanization in China: Critical Issues in an Era of Rapid Growth*, published by the Lincoln Institute in 2007.

This book presents various perspectives on shaping a sustainable urban future for China based on conference discussions of the following questions: What lessons can China learn from other countries through their experiences in combating urban sprawl? What are the "dumb" growth patterns that are economically inefficient, environmentally unfriendly, or socially undesirable in Chinese cities? Finally, to what extent is China's fragmented planning sys-



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tem responsible for uncoordinated urban growth, and how might it be improved?

Contents

Foreword, *Gregory K. Ingram*
 Introduction, *Yan Song and Chengri Ding*

Part I: Defining Smart Growth for China

1. Smart Growth and Urbanization in China: Can an American Tonic Treat the Growing Pains of Asia?, *Gerrit Knaap and Xingshuo Zhao*
2. Smart Urban Design Strategies for Sustainable Development and Growth in China, *Dennis Frenchman*
3. Greenbelts in Korea: Implications for Smart Land Use Regulations in China, *Chang-Hee Christine Bae*
4. Property Tax for Sustainable Urban Development, *Chengri Ding and Yan Song*

Part II: Identifying Urbanization Distortions in China

5. Managing Urban Development in Chinese Cities, *Alain Bertaud, Jan K. Brueckner, and Yuming Fu*

6. Consequences of Land Policy in China: Deciphering Several Emerging Urban Forms, *Chengri Ding*
7. Are Farmland Preservation Policies Intelligent Enough to Protect Arable Land in China?, *Roger C. K. Chan*
8. Economic Growth, Industrialization, and Population Expansion: Growth, Population, Industrialization, and Urban Land Expansion of China, *Xiangzheng Deng, Jikun Huang, Scott Rozelle, and Emi Uchida*

Part III: Making Smarter Plans

9. Plan Integration for Coordinated Urban Growth in China, *Yang Zhang, Yan Song, and Chengri Ding*
10. Toward Better Plans to Guide Smart Development in Chinese Cities, *Yan Song and Xiaohong Pan*
11. The Physical and Social Dimensions of the Job-Housing Balance in Urban China, *Jiawen Yang, Jian Feng, and Ralph Gakenheimer*
12. Integrated Land Development—Transportation Models for Chinese Cities: Where's the Future?, *Daniel A. Rodriguez*
13. Choosing Areas for Spatial Policy Interventions: Principles to Guide Integrated Spatial Plans, *Paul Cheshire*

Conclusion, *Yan Song and Chengri Ding*

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Community Partnering for Environmental Results

This Community Partnering learn-by-doing DVD packet presents a three-part simulation-based program designed to place the individual learner in a broad range of experiences. The simulations are based on real cases that were developed with the help of public sector employees who found themselves in each scenario charged with accomplishing environmental results by working effectively with the community groups who were stakeholders in each situation.



Developed through an initial partnership between the U.S. Environmental Protection Agency and the Institute for the Learning Sciences at Northwestern University, the program is now offered to a broader group of learners with support from the Department of Economic and Community Development at the Lincoln Institute of Land Policy.

Designed for self-directed individual use, these DVDs can also be used for team learning and dialog. The learner is placed in a specific role (community-based coordinator) and learns by doing. As challenges that mirror real life arise, the learner must take action to address them. The program contains video clips from local and national environmental organizations, community groups, and the EPA. The stories are indexed and cross-referenced to provide a robust “flight simulator” learning environment. When the learner requests help or makes mistakes, this vast database of expertise is available.

The program presents three scenarios representing a range of settings, stakeholders, environmental problems, and geographic regions, and each is built around a framework for developing community partnering skills.

- Evans Bay involves a hazardous waste site clean-up in an urban community;
- Crystal Creek presents a western watershed where the learner plays the role of a facilitator brought in to help a community protect a natural resource; and
- Burnside explores rising asthma rates in a big-city neighborhood that have triggered a larger debate around zoning, land use, and public health.

To learn more about how the program was designed and how it can be used effectively as a learning tool, contact The Public Sector Consortium at info@public-sector.org.

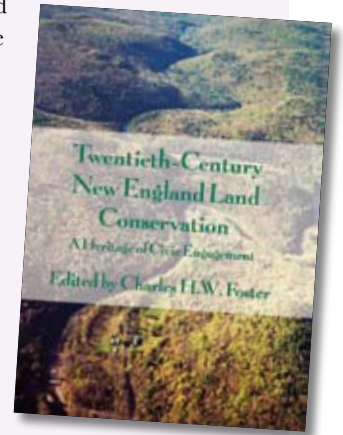
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To view excerpts and order the DVD, go to www.lincolninstitute.edu

Twentieth-Century New England Land Conservation: A Heritage of Civic Engagement

Edited by Charles H.W. Foster

Many partners have been involved over the last decade in developing an archive of materials documenting the evolution of land conservation in the six New England states. Coordinated by Charles H.W. Foster, this book is the culmination of efforts by volunteer citizens and officials in state, federal, and nonprofit agencies who were dedicated to telling the story of how they and their predecessors worked to protect the New England landscape through a century of civic participation.

Written by and about New Englanders, this book is relevant to others attempting to address conservation problems on a regional basis. These are the stories of people acting the New England way—recognizing a need, taking on a responsibility without being asked, and applying the Yankee attitude in order to bring about tangible conservation gains. But above all, the account is one of hope for the future because, as the authors document, conditions at the turn of the twentieth century were of a nature we would not tolerate today: cut and burned-over forests, eroded topsoil, depleted farmlands, streams choked with refuse and pollution, and species at the brink of extinction. At a time of growing concern for the environment both locally and globally, this book is certain to inform and inspire the next generation of conservation leaders.



The Lincoln Institute began its involvement with land conservation issues in New England in the early 1980s by sponsoring seminars and later a series of meetings of the Land Conservation in New England Study Group. The Institute has continued to offer educational and research programs on land use planning for conservation, conservation finance, conservation easements, and land policy implications for climate change. The Institute is one of several supporters of this volume, which will be available in February.

Charles H. W. Foster is adjunct research associate and lecturer at Harvard University Kennedy School of Government and a faculty associate at the Lincoln Institute of Land Policy. He formerly served as commissioner of natural resources and secretary of environmental affairs in Massachusetts, and dean of the Yale University School of Forestry and Environmental Studies. Contact: fwhe@aol.com

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Courses and Conferences

The education programs listed here are offered as open enrollment courses for diverse audiences of elected and appointed officials, policy advisers and analysts, taxation and assessing officers, planning and development practitioners, business and community leaders, scholars and advanced students, and concerned citizens.

For more information about the agenda, faculty, accommodations, tuition, fees, and registration procedures, visit the Lincoln Institute Web site at www.lincolninst.edu/education/courses.asp.

Programs in the United States

WEDNESDAY–THURSDAY, FEBRUARY 4–5

Portland, Oregon

Resolving Land Use Disputes

Patrick Field and Ona Ferguson, Consensus Building Institute, Cambridge, Massachusetts

This introductory course presents practical experience and insights into negotiating and mediating solutions to conflicts over land use and community development. Through lectures, interactive exercises, and simulations, participants discuss and work with cases involving land development and community growth, designing and adopting land use plans, and evaluating development proposals. Questions of when and how to apply mediation to resolve land use disputes are also explored.

MONDAY–FRIDAY, MAY 4–8

Phoenix, Arizona

The City–CLT Partnership: Municipal Support for Community Land Trusts

John Davis and Rick Jacobus, Visiting Fellows, Lincoln Institute of Land Policy, and Burlington Associates in Community Development

Participants learn about the key elements of the city–CLT relationship identifying some of the common pitfalls and best practices from throughout the country. Participants study the range of challenges that arise when local governments choose to support community land trusts and the best practices of local governments to help CLTs grow and develop. This course uses the Lincoln Institute policy focus report on *The City–CLT Partnership* published in spring 2008. These sessions are offered jointly with the NeighborWorks Training Institute.

National Community Land Trust Academy

MONDAY–FRIDAY, FEBRUARY 16–20

Atlanta, Georgia

Introduction to Community Land Trusts

Michael Brown, Burlington Associates in Community Development, Burlington, Vermont

This course includes comprehensive sessions on the nuts and bolts of the community land trust model: How are CLTs structured and governed? How do they operate? And why are so many communities turning to CLTs as their preferred community development and affordable housing strategies? Participants learn how local CLTs seek to balance the seemingly competing goals of providing limited income homeowners with a fair return on their housing investment while seeking to assure that housing is kept affordable for future occupants of limited means. This session is offered jointly with the NeighborWorks Training Institute.

Financing Permanently Resale-Restricted Homes

Julie Brunner, OPAL Community Land Trust, Eastsound, Washington

Participants explore various ways of structuring public subsidies that do not interfere with the private financing of CLT homes or undermine the CLT's stewardship of land and preservation of affordability. Participants then examine mortgage financing options for CLT homebuyers and learn how to negotiate with banks to secure terms that protect both the borrower and the CLT. Prerequisites for the course include a familiarity with sections of the CLT Legal Manual and the model CLT ground lease that pertain to the financing of resale-restricted, owner-occupied housing on leased land.

Designing Resale Formulas and Managing Resales

Julie Brunner, OPAL Community Land Trust, Eastsound, Washington

Participants learn how to evaluate the pros and cons of various resale formulas for the purpose of either designing a new formula or amending an existing formula to better meet a community's needs and priorities. Participants also examine options, policies, and procedures for managing the resale of CLT homes over the long haul. Participants in this course must be familiar with the model CLT ground lease and must have a working knowledge of resale formulas and resale procedures that are commonly employed by CLTs.

Programs in Latin America and Europe

MONDAY–FRIDAY, FEBRUARY 9–13

Rotterdam, The Netherlands

Land Policy and the Functioning of Land Markets

Saskia Ruijsink, Institute for Housing and Urban Development Studies (IHS), Rotterdam, The Netherlands

This one-week module, offered as part of the IHS Master Course in Urban Management and Development, analyzes land markets in different contexts. Examples from North American and Western European countries are compared to developing and transition countries in Central and Eastern Europe. Land markets, property

rights, land use planning, smart growth policies and urban density, and informality in land development are addressed through case studies, comparative research, and role playing. This module is open to some researchers and professionals who are not enrolled in the master course.

MONDAY–FRIDAY, MARCH 9–MAY 22

Rotterdam, The Netherlands

Land Development Strategies and the Future of Cities

Martim Smolka, Lincoln Institute of Land Policy; and Saskia Ruijsink, Institute for Housing and Urban Development Studies (IHS), Rotterdam, The Netherlands

This three-month course is open to participants attending the Master Course in

Urban Management and Development offered by IHS in cooperation with Erasmus University, Lund University of Sweden, Rotterdam Development Corporation, and the Lincoln Institute of Land Policy. This program is designed for international practitioners, urban and housing researchers, policy makers, and senior government staff who want in-depth knowledge of land policies in developing and transitional economies. Participants develop papers on their own countries, focusing on regularization programs and informal land markets, property taxation, value capture, and large-scale urban projects.

TUESDAY-WEDNESDAY, MARCH 10-11

Bogotá, Colombia

Contribution of Property Valuation and Improvements

Oscar Armando Borrero Ochoa, Universidad Nacional de Colombia, Bogotá; Soraya Ximena Álvarez Bermúdez, Lonja de Propiedad Raíz de Bogotá

This symposium for real estate developers, private sector interests, and the general public presents both national and international knowledge and experiences in real estate appraisal. Four cases of Colombian cities (Bogotá, Medellín, Manizales and Barranquilla) will illustrate three themed roundtables on juridical, technical, and urban issues simultaneously. Other international cases will be shared to expand the discussion of key aspects that each city adopts for the collection of property taxes.

DATES TO BE ANNOUNCED

La Plata, Argentina

Urban Land Law

Martim Smolka, Lincoln Institute of Land Policy; and María Mercedes Maldonado, National University of Colombia

This course examines the connections between legal systems and urban development in general, and the legal dimensions of urban land policy and management in particular. It provides a critical review of the traditional categories of civil law and public law, and discusses the context and specifics of new legal frameworks such as Colombia's Law 388 and the City Statute in Brazil to address major land policy challenges.

DATES TO BE ANNOUNCED

Panama City, Panama

Challenges to Cadastre Management and Real Estate Development in Central America

Martim Smolka and Diego Erba, Lincoln Institute of Land Policy; Jean-Roch Lebeau, Association for Land and Territorial Management (AGISTER), Guatemala; Rolando Armuelles, National Land Program (PRONAT), Panamá; Álvaro Uribe, University of Panamá

This seminar reviews the Central American experiences with cadastre management, including its relation to new instruments of property valuation and analysis of the functioning of urban land markets. The seminar is geared to local and national public officials, academicians, and real estate professionals of the private sector and other agents with an interest in property assessment issues to improve the design of housing finance, urban infrastructure, and services provision systems.

Lincoln Lecture Series

This annual lecture series highlights the work of scholars and practitioners who are involved in research and education programs sponsored by the Lincoln Institute. The lectures are presented at Lincoln House, 113 Brattle Street, Cambridge, Massachusetts, beginning at 12 p.m. (lunch is provided). Consult the Lincoln Institute Web site (www.lincolnst.edu) for information about other dates, speakers, and lecture topics. The programs are free, but pre-registration is required. Contact rsugihara@lincolnst.edu to register.

FRIDAY, FEBRUARY 20

Property Rights, Titling, and Regulation: An International Perspective

Benito Arruñada, Department of Economics and Business, Pompeu Fabra University, Barcelona

WEDNESDAY, APRIL 22

Place-Based versus People-Based Community Economic Development

Randall Crane, Department of Urban Planning, University of California, Los Angeles



Satellite image (IKONOS) showing an irregular settlement of Rosario, Argentina (highlighted in light blue). Prepared by Diego Erba for use in courses on cadastre management.

Graduate Student Fellowship Application Deadlines

Dissertation Fellowships

The Lincoln Institute's Dissertation Fellowship Program supports doctoral students whose work focuses on land use planning, land markets, and land-related taxation policies in the United States and selected other parts of the world. The program provides an important link between the Institute's educational mission and its research objectives by supporting scholars early in their careers.

The Institute will award a limited number of fellowships of \$10,000 each for the 2010 fiscal year, starting July 1, 2009. To download a copy of the application guidelines and forms, and to learn about the work of current fellows, visit the Institute's Web site at <http://www.lincolnst.edu/education/fellowships.asp>. An electronic version of the complete application must be received at the Lincoln Institute by the March 2, 2009 deadline.

International Student Fellowships

The Institute's Program on Latin America and the Caribbean (LAC) will offer a new online thesis forum to support selected master's and dissertation candidates during the 2009–2010 academic year, instead of its traditional fellowship program. Applications for this forum will be accepted during the summer of 2009, and selections will be announced in the fall. For more information, contact lac@lincolnst.edu.

Through the Peking University–Lincoln Institute Center for Urban Development and Land Policy, the China Program awards fellowships to master's and doctoral students residing in and studying land and tax policy in the People's Republic of China. Awards are given in Renminbi (RMB), and range between Y20,000 and Y40,000. The application deadline is April 15, 2009. For more information, see the Peking University–Lincoln Institute Center Web site: <http://plc.pku.edu.cn>.

Laurie Wayburn Named 2009 Kingsbury Browne Fellow

Laurie A. Wayburn, cofounder and president of the Pacific Forest Trust, has been named the third Kingsbury Browne Fellow at the Lincoln Institute of Land Policy.

"I'm deeply honored that the work of the Pacific Forest Trust has been recognized with this honor named for Kingsbury Browne. He shared our pioneering vision for sustainable forest and land use policy, and our concerns about conservation and climate change. He also recognized the important role forests must play as part of a global warming solution," Wayburn says. "I am proud to be part of a network of land conservation leaders who are carrying on his legacy."

Wayburn has led state, regional, and national efforts to enact climate change policies that unite conservation and management with market-based incentives to reduce carbon dioxide emissions. She is the co-author of *America's Private Forests: Status and Stewardship* (Island Press 2001), and has received both the James Irvine Foundation Leadership Award and the Forest Leadership Award.

The Pacific Forest Trust, which Wayburn cofounded and leads with PFT Managing Director Connie Best, is the only U.S. nonprofit dedicated exclusively to promoting the conservation and stewardship of America's private forestlands, with a key focus on climate stabilization. They have been leaders in the creation of market incentives for landowners to protect and enhance their forests' ability to remove greenhouse gases from the atmosphere. Through financing innovations and pioneering the use of working forest conservation easements, the organization has been instrumental in the protection of millions of acres of forestland.

Kingsbury Browne is credited as one of the founders of America's modern land trust movement. In 1980, as a fellow at the Lincoln Institute himself, Browne first envisioned a national network of land trusts and other conservation organizations. He convened conservation leaders at a meeting in Cambridge that led to the formation of the Land Trust Alliance in 1982. The Kingsbury Browne Fellowship is awarded annually in conjunction with the Kingsbury Browne Conservation Leadership Award, which was announced by the Alliance as part of its National Land Conservation Conference in Pittsburgh on September 19, 2008.

During her fellowship year Wayburn will develop a working paper describing why and how forests and their management should be central to any emerging policies and plans to address climate change. This work is intended to help policy makers understand the various roles forests can play in affecting carbon dynamics, including the sequestration of carbon in forests as they grow and emissions created when forests are cut down or cleared for development. The paper will describe the linkage of the forest sector with other carbon emissions sectors—like energy, land use, landfills and construction—and the resultant policy and accounting implications.



What's New on the Web

WORKING *papers*

The Lincoln Institute contracts with scholars around the world to undertake research that helps to advance our interests in land and tax policy. The following working papers based on recent research projects have been posted for free downloading on the Lincoln Institute Web site since July 1, 2008. Visit www.lincolninst.edu/pubs to view these and more than 550 other papers.

Anderson, Nathan B., and
Therese J. McGuire
**Property Taxation in Illinois:
A Framework for Reform**

Bell, Michael E., and Charlotte Kirschner
**A Reconnaissance of Currently
Available Measures of Effective
Property Tax Rates**

Biderman, Ciro
**Informality in Brazil: Does Urban
Land Use and Building Regulation
Matter?**

Carrión, Andrea
**Management of Suburban
Growth: Changes in Land Use
and the Real Estate Market in
the Area of Influence of the New
International Airport of Quito,
Ecuador**

Carter, Rebecca
**Land Use Planning and the
Changing Climate of the West**

Coulson, N. Edward, and Herman Li
The Land Tax Is Pretty Neutral

Dantas, Rubens Alves, André Matos
Magalhães, José Raimundo de Oliveira
Vergolino, and José Luiz Portugal
**A Spatial Analysis of the Impact
on Land Prices of Urban Zoning
Regulations in the City of Recife
from 2000 to 2006**

Dubin, Robin
Foreclosures in Cleveland

England, Richard W. and Ju-Chin Huang
**Property Taxation and Residential
Density: Theory and Empirics**

Espino, N. Ariel
**Development of Affordable
Housing in the Historic Center of
Panama City: Searching for New
Models of Economic Development
and Social Integration**

Haddad, Emilio
**New Judicial Procedures for
Eminent Domain Cases in São
Paulo, Brazil**

Ingram, Gregory K.
**Note on Measuring Changes in
Capital/Land Ratios Related to
Tax Changes**

Kaklauskas, Arturas, Arvydas
Bagdonavicius and Albina Aleksiene
**Further Development and Practical
Application of Market-Based Land
Mass Appraisal On-Line System
for Land Taxation**

Meffert, Douglas J.
**The Resilience of New Orleans:
Urban and Coastal Adaptation to
Disasters and Climate Change**

Perdomo-Calvo, Jorge, C.A. Mendoza-
Álvarez, Juan Carlos Mendieta-López,
and Andrés Francisco Baquero-Ruiz
**Study of the Effect of the Trans-
Milenio Mass Transit Project on
the Value of Properties in Bogotá,
Colombia**

Perry, David, Scott Levitan, Andre
Bertrand, Carl Patton, Dwan Packnett,
and Lawrence Kelley
**360 Degrees of Development:
Universities as Real Estate
Developers in Atlanta**

Portugal, José Luiz, Rubens Alves Dantas,
and João Freire Prado
**A Spatial Analysis of the Impact
of the Orla Project on Land Prices
in Praia de Atalaia, Aracaju,
Sergipe, Brazil**

Song, Yan, and Yves Zenou
**How Differences in Property Taxes
within Cities Affect Urban Sprawl**

Uribe, Maria Camila
**Property Tax in Colombian
Municipalities: Tax Base and
Institutional Issues**

Vandegrift, Donald, and Michael Lahr
**Open Space, House Prices, and
the Tax Base**

The following papers are recent English translations of research previously completed and posted in Spanish or Portuguese; the original date is indicated in parentheses.

Clichevsky, Nora (2001)
**State of the Art on Vacant Land
in Latin America**

Furtado, Fernanda (1997)
**Instruments for the Recovery
of Value Increments in Latin
America: Weak Implementation,
Ambiguous Interpretation**

Gamarra Huayapa, Margarita (2001)
**Experience with the Betterment
Levy in Peru**

Garza Puentes, Nestor Fernando,
with John Jairo Montaña Rivera, and
Gustavo Junca Rodriguez (2000)
**Urban Growth of Bogotá in
a Speculative Context**

Núñez Fernández, Ricardo (2000)
**Urban Land as a Factor in
Economic and Social Inclusion:
The Experience of Havana**

Poduje Capdeville, Iván (2000)
**Low-Income Housing in Chile:
Serial Production with Nowhere
to Go**

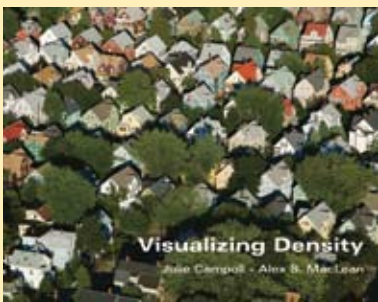
Quadri de la Torre, Gabriel (1999)
**Mexico City: Urban Revitalization
and Recycling For Sustainable
Development**

Rolnik, Raquel (1999)
**Territorial Exclusion and Violence:
The Case of São Paulo, Brazil**

Land Lines

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Recent Lincoln Books on Planning and Urban Form available at www.lincolninst.edu



Visualizing Density

*Julie Campoli
and Alex S. MacLean*

Landscape architect and land planner Julie Campoli and aerial photographer Alex S. MacLean have created a richly illustrated book to help planners,

designers, public officials, and citizens better understand the concept of density as it applies to the residential environment. Also included is a CD-ROM of the Density Catalog section, including more than 1000 aerial photographs of 250 locations.

2007/160 pages/Paper/\$39.95/ISBN: 978-1-55844-171-2



Visioning and Visualization: People, Pixels, and Plans

*Michael Kwartler
and Gianni Longo*

This book will assist urban professionals, public sector leaders, and the public to navigate two complex and evolving fields: public involvement and digital visualization as applied to planning.

Based on the authors' experiences in developing sophisticated public involvement processes and applying 3D GIS-based simulation and visualization tools to planning and design, the book features more than 100 color illustrations and case studies of four communities: Santa Fe, Houston, Kona (Hawaii), and Baltimore.

2008/104 pages/Paper/\$35.00/ISBN: 978-1-55844-180-4



Engaging the Future: Forecasts, Scenarios, Plans, and Projects

*Edited by Lewis D. Hopkins
and Marisa Zapata*

Forecasts, scenarios, plans, and projects are four ways of representing, manipulating, and assessing ideas about the future. The chapters in this richly illustrated volume offer a

variety of tools and examples for planners in situations where they are positioned to advocate for a new kind of planning—one that allows communities to face uncertain and malleable futures with continuous and deliberative planning activities.

2007/392 pages/Paper/\$35.00/ISBN: 978-1-55844-170-5



Planning Support Systems for Cities and Regions

Edited by Richard K. Brail

This book invites the reader to join in a virtual dialogue with its authors—educators, theorists, model builders, and planners—about technology and the social context in which technology is employed. This dialogue, or perhaps dialectic, revolves around

the almost unlimited potential of computer-based tools to enhance the effectiveness of planning and the serious challenges in applying these tools within real-world planning environments.

2008/312 pages/Paper/\$35.00/ISBN: 978-1-55844-182-8