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"Efficiency - Equity - Clarity"

Smart Growth Reforms ***Changing Planning, Regulatory and Fiscal Practices to Support More Efficient Land Use***

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Abstract

This paper identifies specific policy and planning reforms that support smart growth. It describes fifteen categories of reforms and dozens of specific implementation strategies. It discusses their benefits and costs, examples, best practices and information sources. These reforms can help correct existing policies and planning practices that encourage sprawl and automobile dependency. They tend to reduce per capita land consumption, improve land use accessibility, increase transportation options and help achieve various planning objectives.

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Introduction

Land use development is a complex process affected by countless decisions made by governments, businesses and individual consumers related to factors such as *location* (where a particular land use will be located), *density* (number of people or jobs in an area), and *accessibility* (the distribution of activities and the travel options available in an area). These decisions often involve tradeoffs, such as between density and accessibility, and between different types of transportation infrastructure. In many cases a particular decision favors a particular type of development pattern and precludes another.

Sprawl refers to relatively dispersed, homogeneous and automobile-dependent land use development (Table 1). Many current policies and planning practices unintentionally encourage sprawl. For example, zoning codes that require generous parking supply, limit densities, and prohibit multi-family housing and mixed-use buildings are probably not intended to stimulate sprawl, but they do. Transport planning practices that favor automobile over walking and transit improvements, and therefore favor suburban residents over urban residents, were probably not intended to reduce travel options, but they do. And mortgage lending practices which ignore the higher transportation costs associated with urban fringe locations are not intended to encourage households to choose automobile-dependent home locations, but they do. These policies and planning practices reduce consumers' housing, community and travel options, resulting in more sprawl and automobile dependency than is socially optimal (Levine, 2006).

Table 1 Comparing Smart Growth and Sprawl ("Smart Growth," VTPI, 2005)

	Sprawl	Smart Growth
Density	Lower-density, dispersed activities.	Higher-density, clustered activities.
Growth pattern	Urban periphery (greenfield) development.	Infill (brownfield) development.
Land use mix	Homogeneous (single-use, segregated).	Mixed land uses.
Scale	Large scale. Larger buildings, blocks, wide roads. Less detail, since people experience the landscape at a distance, as motorists.	Human scale. Smaller buildings, blocks and roads. Careful detail, since people experience the landscape up close, as pedestrians.
Public services (schools, parks, etc.)	Regional, consolidated, larger. Requires automobile access.	Local, distributed, smaller. Accommodates walking access.
Transport	Automobile-oriented. Poorly suited for walking, cycling and transit.	Multi-modal. Supports walking, cycling and public transit.
Connectivity	Hierarchical road network with numerous loops and deadend streets, and limited, unconnected walking and cycling facilities.	Highly connected streets (a grid or modified grid) and nonmotorized facility network (sidewalks, paths, crosswalks and shortcuts)
Street design	Streets designed to maximize motor vehicle traffic volume and speed.	Streets designed to accommodate a variety of activities. Traffic calming.
Planning process	Unplanned, with little coordination between jurisdictions and stakeholders.	Planned and coordinated between jurisdictions and stakeholders.
Public space	Emphasizes the private realm (shopping malls, yards, gated communities, private clubs).	Emphasizes the public realm (streets, walking environments, public parks, public facilities).

This table compares Smart Growth and sprawl land use patterns.

Justifications For Reforms

Many of the policies and practices that encourage sprawl can be considered *market distortions* because they violate efficient market principles, including consumer choice, cost-based pricing and neutral public policies, as summarized in Table 2.

Table 2 Market Distortions That Favor Sprawl (“Market Principles,” VTPI, 2005)

Type of Distortion	Description	Smart Growth Reforms
Underpricing Location-Related Costs	Although public service costs tend to be higher for sprawl development, development charges, utility fees and local taxes do not generally reflect these location-related costs.	Implement utility pricing, public service fees and taxes which reflect differences in the costs of supplying public services due to differences in location accessibility.
Excessive Parking and Roadway Requirements	Most zoning codes and development standards require generous road and parking capacity. This encourages lower-density, urban fringe development where land is cheaper, and underprices vehicle travel.	Reform zoning codes, particularly parking requirements and roadway design standards.
Roadway Right-of-Way	By convention, land use for public roads and parking facilities is exempt from rent and taxes. Economic neutrality implies that land used for roads should be priced and taxed at the same rate for competing uses.	Collect additional roadway user fees and parking charges to represent rent and property taxes on roadway rights-of-way.
Brownfield Development Barriers	Many potential infill sites are considered “brownfields,” and face barriers to private development far greater than the true risk of harm, inhibiting infill development.	Encourage urban redevelopment and brownfield rehabilitation. Encourage development that reflects Smart Growth principles.
Undervaluing Nonmotorized Modes and Transit	Transportation planning practices tend to undervalue nonmotorized transport modes and transit services, and so underinvest in them.	Improve the evaluation of alternative modes to better recognize their full value to society.
Residential Lending Practices	Mortgage lenders usually treat automobile ownership as a financial asset rather than a liability. As a result, lower-income households are encouraged to purchase homes in automobile-dependent suburban areas rather than in multi-modal urban locations.	Reform residential lending practices to reflect the additional transportation costs of sprawled housing locations, and implement location-efficient development and mortgages.
Underpricing Automobile Travel	Automobile travel is underpriced through underpricing of road use, free parking, fixed insurance and registration fees, and various external costs.	Correct transportation market distortions that underprice automobile travel, including more direct charges for the use of roads and parking facilities, distance-based insurance and registration fees, and special charges for external costs imposed by automobile use.

This table describes some market distortions that encourage sprawl and automobile dependency, and reforms that can help correct these distortions.

Although individually these market distortions may appear modest and justified from a narrow perspective, their impacts are cumulative, exacerbating many problems including traffic congestion, accidents, infrastructure costs, consumer costs and pollution emissions. Critics sometimes suggest that an equal set of distortions favor compact development and multi-modalism, but the only examples they generally present are urban growth boundaries, which are only applied in a few areas with limited effectiveness, and dedicated funding for public transit services, which are a relatively small portion of total transport funding, and are justified for a variety of reasons (Litman, 2005a).

Smart Growth policies tend to correct these distortions, and can help achieve various planning objectives including reduced external costs (such as automobile traffic congestion, accident risk and pollution emissions), benefits to disadvantaged people (for example, by improving accessibility for non-drivers), public service cost saving (for example, reducing unit costs for providing emergency services, mail delivery and schools), consumer cost savings, openspace preservation, and the creation of more livable communities (Litman, 2004). Many Smart Growth reforms reflect consumer and preferences; market research indicates that many consumers prefer more compact, mixed, multi-modal neighborhoods, provided they have other desirable features such as personal security, quality public services, stable property values and prestige.

Figure 1 Smart Growth Versus Sprawl



Smart Growth creates multi-modal urban villages where walking, cycling, driving and public transit are all feasible.



Sprawl creates automobile-dependent landscapes where automobile travel is the only feasible form of access.

Land use development is a slow process, so the effects and benefits of Smart Growth reforms may take many years or decades to be fully realized, but their total benefits tend to be large and durable, and so are worthwhile. This indicates that, at a minimum, Smart Growth reforms are justified to the degree that they correct and offset current sprawl-encouraging market distortions or achieve other planning objectives. Because existing distortions are well established, with decades of cumulative effects, it may be inadequate to simply eliminate them and let the market work toward efficiency at its own pace. More aggressive policies that favor higher-density, infill development and alternative modes

may be justified to more quickly achieve planning objectives. Because these reforms provide multiple benefits, they tend to be undervalued by conventional planning, which tend to consider just a few impacts and objectives at a time.

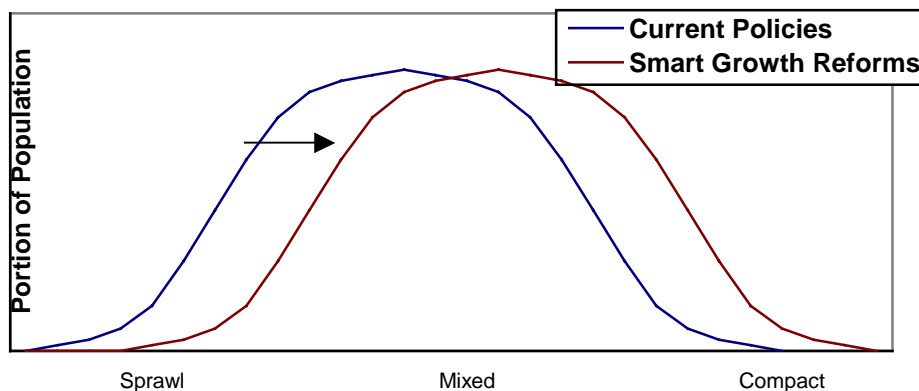
There is growing support for Smart Growth among various professions and interest groups, including planners (APA, 2002a), transportation engineers (ITE, 2002), Governors (NGA, 2001), builders (NAHB, 2004), environmental professionals (EPA, 2001) and public health officials (CDC, 2004), to name just a few.

Effects of Reforms

Although individually most Smart Growth reforms have modest impacts on land use and transportation patterns, their impacts are cumulative and synergistic (total impacts are greater than the sum of individual impacts). An integrated set of Smart Growth reforms can have significant total impacts, reducing per capita land consumption and per capita vehicle travel by 20-40%, or even more (Litman, 2005c).

For example, with current practices which encourage sprawl and automobile dependency, the average household might choose a medium-size, urban fringe lot, with little demand for small-lot and multi-family housing. With Smart Growth policies that improve the quality of urban neighborhoods and reward residents who choose more compact housing, average lot size decline and more households consider multi-family housing. Most changes are incremental, for example from a large- to a medium-size lot, or from a duplex to a townhouse, but their cumulative effects can be large.

Figure 2 Smart Growth Reforms Shift Demand



Smart growth reforms can shift consumer decisions toward more compact neighborhoods.

Smart Growth Reforms

Various categories and specific types of Smart Growth reforms are described below.

Comprehensive Planning

A basic principle of good planning is that individual, local, short-term, local decisions are coordinated in order to support strategic, long-term, regional objectives. Comprehensive planning provides this coordination.

Comprehensive Planning means that a community has a community planning process which identifies strategic goals, objectives, targets and evaluation practices, covering land use, transportation, economic development and social programs, and identifies policies, planning practices and programs to help achieve these goals and objectives (“Planning and Implementation,” VTPI, 2005). Such a plan can determine the type of land use development that should occur in each area, and how it integrates with transportation and other public services. For example, a comprehensive plan should identify where denser development should be encouraged, where openspace should be preserved, and coordinate public policies and infrastructure investments to support that development pattern.

Implementation

Below are specific strategies for implementing Comprehensive Community Planning:

- *Comprehensive Plan Requirements.* Higher levels of government can require regional and local governments to produce a comprehensive plan in order to qualify for infrastructure grants and other funds, in order to insure that such investments are well planned.
- *Planning Funds.* Higher levels of government can provide funding to help regional and local governments implement comprehensive plans.
- *Capital Improvement Programs.* Capital improvement programs (CIPs) establish a schedule and funding basis for extending and improving public infrastructure and services (e.g., streets, water and sewer lines, schools, libraries, parks, and other government services) based on comprehensive development plans. This tends to reduce public costs (particularly extra costs resulting from dispersed development), minimize unreasonable expectations by urban fringe residents, and encourage more efficient development.
- *Planning Policy Assessment.* A planning policy assessment is a detailed analysis of agency policies, rules, and regulations to determine whether they are in conflict with strategic plans. The location of public investments, tax incentives, land development regulations, and the criteria for receiving governments grants all contribute to shaping development patterns. A planning policy assessment can help identify and correct policies that are inconsistent with overall development goals.
- *Adequate Public Facility (APF) Standards.* Adequate Public Facility (APF) standards limit development to areas adequately accommodated by critical public facilities and services, such as water, sewer, drainage, and traffic capacity, or require developers to pay the costs of upgrading facilities that have inadequate capacity. APF standards ensure that urban growth is cost effective and does not overburden municipal facilities and reduce current service. APF ordinances encourage more cost effective development, and direct development toward facility-rich areas, which often consists of urban infill (JCSC, 2001).

- *Specific-Area Development Plans.* It is useful to develop plans for urban neighborhoods, downtowns, and other business centers, historic areas, and areas of environmental significance that are consistent with strategic plans.
- *Establish Performance Indicators.* Establish specific targets and indicators for evaluating progress toward those targets. For example, a comprehensive plan might include targets for the portion of jobs that will be accessible by transit and for openspace preservation.

How Much Regulation?

There are legitimate reasons to avoid excessive regulation. Too much regulation limits consumer choice, competition and innovation. For example, generous minimum parking requirements and setbacks in zoning codes can make it difficult to develop affordable housing or implement new designs. On the other hand, regulations and positive incentives can help protect valuable cultural and environmental resources, insure pedestrian accessibility, and maintain desirable aesthetic standards.

Private, masterplan development often has extremely strict design standards. Many specify the types of buildings that can be constructed, the materials that can be used, the amount and type of signs that can be displayed, exterior building colors, and even whether clotheslines are allowed in residential yards. These regulations are implemented because they provide value. The absence of such regulations in older neighborhoods can place them at a disadvantage when compared with newer, masterplanned communities.

As much as possible, regulations should be performance-based and flexible, focusing on solving specific problems and allowing a wide range of solutions. For example, rather than requiring certain minimum parking supply, municipal codes can specify that development not increase parking problems on adjacent streets, allowing developers to use a combination of parking supply and demand management strategies to meet that objective.

Benefits, Costs and Consumer Impacts

Comprehensive planning can provide many benefits. The planning process provides a variety of useful information, encourages civic engagement, and is an opportunity to identify and address many problems. The resulting plan can provide predictability, consistency and integration, which leads to more cost effective decisions by individuals, businesses and public organizations. It provides cost savings to governments, developers and citizens, and improves service quality. Coordinating land use and transportation improves accessibility, for example, increasing the number of destinations accessible by walking, cycling and public transit within a community, which provides savings to businesses and residents, and is particularly important for physically, economically and socially disadvantaged people.

A comprehensive planning process may require additional public staff time and special resources for information collection, public outreach and other activities. Citizens tend to benefit through opportunities for civic engagement, more predictable development, more cost effective public services and an opportunity to address specific community problems, although some people may be unhappy with some aspects of the plan, or consider the project too expensive.

Examples and Case Studies

Maryland Strategic Planning

The Maryland Department of Transportation (MDOT) adopted performance measures to help evaluate the agency's success in meeting the goals laid out in the Maryland Transportation Plan (MTP), the overarching policy document that guides MDOT's activities. The legislature established a task force to advise the agency on suitable performance measures to adopt. Because the MTP includes land use and smart growth goals, the recommended package includes measures that relate to Smart Growth and transportation-land use linkages.

Greater Vancouver Regional Strategic Plan (www.gvrd.bc.ca/growth/lrsp.htm)

The *Livable Region Strategic Plan* (LRSP) produced by the Greater Vancouver Regional District (GVRD) provides a regional growth strategy. It was adopted by the GVRD Board with formal support of all municipalities and recognized by the B.C. provincial government in 1996. The primary goal of the plan is to help maintain regional livability and protect the environment in the face of anticipated growth. It is used by all levels of government to guide and coordinate land use and transportation decisions. The LRSP is linked to local community plans through a Regional Context Statement. Other agencies, the private sector and residents also use the plan to understand and contribute to Greater Vancouver's vision for its future development.

Florida Strategic Intermodal System Plan (www.dot.state.fl.us/planning/sis/phase2/default.htm)

The Florida State mandated the development of a Strategic Intermodal System (SIS) transportation plan that lays the foundation for the future growth and development of the statewide network of transportation hubs, corridors and connectors. An initial Draft SIS Strategic Plan was developed and distributed to the public for comment in a series of workshops held in 2004. The final plan was adopted in January 2005.

Information Resources

American Planning Association (www.planning.org) has extensive resources for community and transport planning.

Keith Bartholomew, *Integrating Land Use Issues into Transportation Planning: Scenario Planning*, University of Utah; funded by the Federal Highway Administration, U.S. Department of Transportation under Cooperative Agreement No. DTFH61-03-H-00134 (www.arch.utah.edu/bartholomew/SP_SummaryRpt_Web.pdf), 2005.

Citizen Planner Institute (www.citizenplanner.com) trains average citizens, public officials, business people, and kids in the basics of neighborhood and town design.

CTI Centre for the Built Environment (<http://ctiweb.cf.ac.uk/cticbe/planning/planning.html>) provides planning resources.

SGN, *Getting To Smart Growth: 100 Policies for Implementation*, and *Getting to Smart Growth II: 100 More Policies for Implementation*, Smart Growth Network (www.smartgrowth.org) and International City/County Management Association (www.icma.org), 2002 and 2004.

Sustainable Communities Network (www.sustainable.org) provides tools to help citizens work together to define a community's course and make it more sustainable.

Toolbox for Regional Policy Analysis Website (www.fhwa.dot.gov/planning/toolbox/index.htm) by the US Federal Highway Administration, describes analytical methods for evaluating regional economic, social and environmental impacts of various transportation and land use policies.

Urban Land Institute (www.uli.org) is a professional organization for developers, which provides practical information on innovative development practices, including infill and sustainable community planning.

VTPI, "TDM Planning and Implementation," *Online TDM Encyclopedia*, Victoria Transport Policy Institute (www.vtpi.org/tdm/tdm50.htm), 2003.

Intergovernmental Coordination

Smart Growth requires effective coordination among various levels of government, including *vertical coordination* (between different levels of government), and *horizontal coordination* (between neighboring and overlapping jurisdictions). This coordination may involve various institutions, agreements and planning frameworks, which can be voluntary, encouraged or mandated.

Implementation

Various strategies and tools for intergovernmental coordination are described below.

- *Regional Planning Councils* (also called *Metropolitan Planning Councils* or *MPOs*) are regional agencies that coordinate planning activities and provide related services (such as data collection and transportation modeling). Municipal governments may be required to adopt local plans that are consistent with the regional plan. Regional councils may use various mechanisms to resolve disputes between jurisdictions.
- *Comprehensive Plan Consistency Requirements* ensure that local zoning and land use decisions are consistent with higher-level comprehensive plans.
- *Vertical Consistency Requirements* ensure coordination between local, regional and state/provincial development plans. States or provinces generally act as coordinator and mediator of sub-state conflicts, although local governments are generally given considerable leeway to adopt their own development goals.
- *Horizontal Consistency Requirements* ensure coordination between the plans of adjacent local jurisdictions. It is normally achieved either by giving a state or regional organization the authority to require local governments to amend their plans to achieve consistency or by providing a process whereby local jurisdictions consult each other about land use issues.
- *Interjurisdictional Agreements* coordinate planning between jurisdictions on development, standards, and infrastructure extensions, and other activities. Such agreements may be informal, contractual or mandated by higher levels of government.
- *Regional Service Agreements* give a single regional agency responsibility for major public services (e.g., water supply, sewage treatment, roads and public transit) which tends to reduce costs, improve interjurisdictional coordination and support Smart Growth.

Smart Growth Policy Reforms

- *Expert Panels* involve knowledgeable professionals from various disciplines (real estate experts, developers, environmentalists, bankers, and planners) who evaluate the land use impacts of specific planning decisions, such as new roads or zoning requirements
- *Cross-Acceptance Processes* develops compatibility between local and state plans. The process results in a written statement that specifies how plans will be coordinated.
- *Developments of Regional Impact (DRI)* policy enables regional review of larger development projects that have impacts beyond their local jurisdiction. Review is designed to improve communication among governments on large-scale developments and to provide a means of identifying and assessing potential development impacts before conflicts arise.
- *Regional Revenue Sharing* means that local governments share the tax revenue from major new development, in order to reduce interjurisdictional competition for development which may contradict strategic land use plans.

Benefits, Costs and Consumer Impacts

Coordinating planning decisions among jurisdictions and government agencies can provide many benefits, including more efficient use of resources, increased consistency and predictability, and improved service delivery. Increased coordination may require more planning resources, may limit local control over some decisions and so may lead to conflicts, for example, between local and regional governments. Citizens tend to benefit from cost savings and increased predictability, although some may be unhappy about development restrictions by higher levels of government.

Examples and Case Studies

Maryland Priority Funding Areas (www.op.state.md.us/smartgrowth)

In 1997 the State of Maryland passed “Priority Funding Areas” legislation that limits most State infrastructure funding and economic development, housing and other program monies to Smart Growth Areas which local governments designate for growth. This package facilitates the reuse of brownfields and provides tax credits to businesses creating jobs in a Priority Funding Area. The Maryland Department of Transportation reviews and comments on all draft land use plan updates that are submitted by local governments to the state’s Department of Planning (Maryland Department of Planning). These comments are shared with local governments prior to plan finalization.

Oregon Transportation Growth Management (www.lcd.state.or.us/tgm)

The Oregon *Transportation and Growth Management (TGM)* program is a consortium between the Oregon Department of Transportation and the Department of Land Conservation and Development to support improved local planning. The TGM program provides non-regulatory technical assistance and grants funding to local communities. Total funding for the joint TGM program during the 1999-2001 biennium is \$11.2 million. Of that, about \$9.9 million came from federal transportation funds and the remaining \$1.3 million is from state general funds. The TGM program offers four main services to Oregon communities:

Smart Growth Policy Reforms

- *TGM Code Assistance.* The Oregon TGM code program helps communities modify their development ordinances, comprehensive plans, and development review procedures to allow and encourage smart development patterns.
- *TGM Consultants.* The Quick Response Program provides planning and design services to help developers and communities create compact, pedestrian-friendly, and livable neighborhoods and activity centers. In response to local requests, property owners, local and state officials, and affected stakeholders come together to review development proposals, develop innovative design solutions, and overcome regulatory obstacles to land use, transportation, and design issues.
- *TGM Grants.* Since 1993, the Oregon TGM program has distributed \$21.6 million in planning grants to local governments to accomplish transportation-efficient planning. In the 2001-2003 biennium, grants of approximately \$4.9 million have been awarded to local jurisdictions for *Transportation System Planning* and *Integrated Land Use and Transportation Planning*. This funding helps local governments develop integrated land use and transportation system plans that promote compact, mixed-use, pedestrian-friendly development and reduce reliance on the automobile.
- *TGM Outreach Program.* The Oregon TGM Outreach program is aimed at increasing the understanding and acceptance of smart development principles through things like workshops, a partnership program and technical assistance for practitioners. Maine DOT is also looking at creating tools and outreach programs that would link transportation and land use for local decision makers.

Information Resources

NRTEE, *Environmental Quality in Canadian Cities: The Federal Role*, National Round Table on the Environment and Economy (www.nrtee-trnee.ca), 2003.

Toolbox for Regional Policy Analysis Website (www.fhwa.dot.gov/planning/toolbox/index.htm) by the US Federal Highway Administration, describes analytical methods for evaluating regional economic, social and environmental impacts of various transportation and land use policies.

Urban Land Institute (www.uli.org) is a professional organization for developers, which provides practical information on innovative development practices, including infill and sustainable community planning.

USEPA, *Smart Growth Policy Database*, US Environmental Protection Agency (<http://cfpub.epa.gov/sgpdb/browse.cfm>).

WCEL, *Smart Bylaws Guide*, West Coast Environmental Law Foundation (www.wcel.org/issues/urban/sbg), 2004.

Location Efficient Development

Location Efficient Development means that development is located and designed to maximize accessibility (“Location Efficient Development,” VTPI, 2005). Planning practices can encourage location-efficient development by designating areas for development where public infrastructure will be provided, and limiting development outside these areas or requiring developers to pay the incremental costs for infrastructure in non-designated areas. Various incentives can encourage local governments, developers, businesses and consumers to choose more efficient locations for facilities and activities.

Current zoning codes often prohibit or discourage location-efficient development (particularly more compact, mixed-use development), and current residential lending practices fail to recognize the transportation cost savings to households that choose more accessible locations.

Current infrastructure investment practices often favor suburban expansion over infill development. For example, Schneider and McClelland (2005) found that between 1998 and 2001, per capita state infrastructure expenditures in Wisconsin averaged \$1,250 in suburban Oakland County, \$303 in Pontiac, and only \$25 in Detroit. This results because infrastructure funding is allocated based on “needs,” which fails to reward residents for choosing locations that avoid infrastructure expansion.

Concurrency requirements imposed in some jurisdictions limit development based on the projected capacity of available infrastructure, including roadway capacity. For example, developers might be required to pay for roadway expansion if a project is projected to increase traffic so that local road Level-of-Service degrades from C to D. This tends to discourage infill development and encourage dispersed, automobile-dependent sprawl. Revised concurrency requirements take into account the reduced per capita traffic generation, shorter trips and improved travel options in urban areas, and so allow more infill development (Wallace, 2005).

Jobs-housing balance refers to the ratio of jobs to residents in a community, particularly housing that is affordable to the people who work in the community. Increasing jobs-housing balance tends to reduce commuting distances, and by increasing local services used by residents (shops, restaurants, schools, etc.) it can reduce travel for other activities. Residents of areas with jobs-housing balance have lower average commute mileage than residents of single-use communities. Suitable planning strategies include more mixed-use commercial development incentives (so more jobs are located close to residential areas) and more affordable housing (so more workers can locate near their employment centers).

Implementation Strategies

- Designate where public services will be provided based on Smart Growth principles. For example, indicate where utility lines, paved roads, professional fire services, and schools will be provided during the next twenty years. Require developers to pay for any additional infrastructure outside these designated areas.
- Remove unjustified regulations that limit density and mixing. Offer incentives such as higher densities, additional building heights and other bonuses for location efficient development.
- Encourage development of affordable housing near commercial areas.
- Use public-private partnerships to create location-efficient development.
- Reward neighborhoods that accept infill with amenities such as street and sidewalk improvements, traffic calming, parks, lower tax rates, and school improvements.
- Expedite permit approvals for developments that support smart growth objectives. This can take the form of fewer regulatory and review requirements and faster scheduling for projects that meet certain criteria.
- Reform development financing practices to allow innovations such as mixed-use and higher density buildings with reduced parking supply.
- Encourage lenders to apply *location-efficient mortgage* principles, so transportation cost savings are recognized when calculating a household's borrowing ability.
- Reduce parking requirements and implement parking management strategies to encourage location efficient development.
- Establish flexible, multi-modal *concurrency* requirements to encourage infill development and discourage sprawl. Reduce restrictions on increased traffic generation in more compact, mixed-use, multi-modal areas where there are good alternatives to automobile travel.
- Encourage development of district heating and cooling plants, which provide space heating and cooling to numerous facilities in an area (www.districtenergy.org).
- Limit the size of retail businesses so they are more broadly distributed throughout the community and sized to fit into residential neighborhoods. This reduces travel distances and improves walking and cycling access for common errands.
- Regulate impacts (noise, pollution, parking demand) rather than land use types (commercial or industrial buildings), which gives businesses greater flexibility and an incentive to reduce negative impacts at their source.

The following criteria can be used to evaluate whether a particular project reflects Location Efficient Development principles:

- Is it located in an urban area within a half-mile of quality public transit?
- Is it located near commonly-used services such as grocery stores, video stores and schools?
- Is the design pedestrian-friendly and of an appropriate scale?
- Is parking efficiently managed?
- Does it have a minimum density of 15 housing units per acre?
- Is it being developed with substantial community input?
- Does it include a significant portion of affordable housing units?

Benefits, Costs and Consumer Impacts

Location-Efficient Development encourages more accessible development patterns and provides economic benefits to individual households. It reduces development and utility costs, provides transportation cost savings, improves accessibility for non-drivers, and can increase overall housing affordability.

Best Practices

Brophy and Vey (2002) identify the following ten steps that local and state/provincial governments can take to promote redevelopment of vacant and abandoned properties and improve the quality of urban neighborhoods:

1. *Know Your Territory.* Develop an inventory of vacant land and buildings, available to potential developers, that identifies their condition, who owns them, their assessed value, etc.
2. *Develop A Citywide Approach To Redevelopment.* Establish a redevelopment plan that includes coordinated government policies and actions by government agencies.
3. *Implement Neighborhood Plans In Partnership With Community Stakeholders.* Build a strong relationship with neighborhood leaders, business owners, community development organizations, and other stakeholders to build support for redevelopment programs.
4. *Make Government Effective.* Create an effective and efficient process for land development. Government agencies must have clear budgets and powers, employ well-trained staff, and use effective procedures for the acquisition, disposition, management and redevelopment of lands and buildings.
5. *Create A Legal Framework For Sound Redevelopment.* Several reforms may be needed to facilitate the redevelopment process, including changes to property tax foreclosure laws, local government eminent domain powers, and rules that allow local government land banking.
6. *Create Marketable Opportunities.* Establish a process involving real estate professionals and community stakeholders that identifies what to do with vacant properties, including a transparent process for determining which developers are allowed to purchase land and partner with governments on specific projects.
7. *Finance Redevelopment.* Establish policies and programs to help finance redevelopment, which may include funding to cover special redevelopment costs (such as environmental cleanup), bond financing, tax deferrals or exemptions, and support for non-profit organizations that redevelop land.
8. *Build On Natural And Historic Assets.* Preserve and highlight special natural assets (parks, waterfronts, trails) and historic or cultural features (historic buildings, unique cultural neighborhoods, etc.).
9. *Be Sensitive To Gentrification And Relocation Issues.* Work with neighborhood and nonprofit groups, local businesses, developers and policy makers to identify people and businesses that may be displaced or harmed by urban redevelopment and develop plans and programs to protect them, such as affordable housing and relocation funding.
10. *Organize For Success.* Successful urban redevelopment requires that public officials provide leadership and vision, and work to overcome obstacles.

Examples and Case Studies

Austin Smart Growth Matrix

The city of Austin, Texas uses a Smart Growth Matrix to analyze development proposals (www.ci.austin.tx.us/smartgrowth). It is designed to measure how well a project supports Smart Growth objectives taking into account its location, its proximity to transit, urban design characteristics, compliance with neighborhood plans, projected tax revenue, and other policy priorities. Financial incentives may be available to developments with high scores, such as waiver of development fees and public investment in new or improved infrastructure such as water and sewer lines, streets or streetscape improvements, or similar facilities.

Federal Support for Location Efficient Mortgages (www.fanniemae.com)

Fannie Mae, the largest source of home loan funds in the USA, is supporting the development of Location Efficient Mortgages (LEMs). Seattle and the Bay Area of California were the first areas of the country targeted for participation. “We’re in the American Dream business,” said Heyward Watson, director of Fannie Mae’s Puget Sound office. It’s a well-known fact, however, that attaining that dream in Seattle and King County has become increasingly more difficult.

Cochrane Affordable Development (www.abag.ca.gov/services/finance/fan/cochrane.htm)

Cochrane Village is an affordable housing development located in Morgan Hill Ranch Business Park. In the late 1980s the business park struggled to find business occupants, in part because of the high cost of housing for employees. As a result, businesses, local government and a non-profit developer worked together to build 96 apartments and town houses, a playground and daycare facility within the office park, located with convenient access to retail shops.

New Jersey Smart Growth Checklist (NJF, 2003)

New Jersey organizations developed a *Smart Growth Development Checklist* which rates proposed development based on the following factors:

- LEED certification.
- Openspace preservation and maintenance.
- Onsite stormwater management.
- Energy conservation and use of alternative energy sources.
- Walking and cycling support features.
- Proximity to transit services.
- Support for alternative transportation (reduced parking supply, bicycle storage, TDM programs, etc.)
- Housing affordability.
- Heritage preservation and design features.
- Public amenities.

Quality Growth Communities

In 2004 the state of Utah began to certify towns and districts that agree to engage in long-term planning as “Quality Growth Communities.” In return they receive preferred loan terms and priority access to state funding and technical expertise. “What we try to do is to

get the cities and counties to take the first step, to do the planning, to think about their own future,” says John Bennett, project director for Utah's Quality Growth Commission. “And what we say to them is, we’re not going to spend our money for water or sewer or transportation or even housing unless you've done some planning as local governments about these issues.”

Smart Growth Incentives (SGN, 2002 and 2004)

The publication, *Getting To Smart Growth: 100 Policies for Implementation*, describes numerous incentives to encourage more efficient development. Below are examples:

- The state of California offers “Jobs-Housing Balance Grants” to employment center communities that increase the number of housing units.
- Many communities offer “density bonuses” to developers who meet certain design objectives.
- The city of Milwaukee revised its building codes to allow a greater range of building types.
- The Moderately Priced Dwelling Unit (MPDU) program in Montgomery County, Maryland gives developers density bonuses if they make 12.5-15% of their units affordable, for sale or rented to lower-income households.
- Some cities are revising zoning laws to allow *secondary suites* (also called *accessory units*).
- The Washington State Department of Transportation has flexible design standards that allow state highway funds to be used to create wider sidewalks, curb extensions, bus stops and crosswalk improvements on urban arterials.
- The state of Maryland devotes increased financial support to existing schools, so schools in older neighborhoods now receive 80% of school capital funding (up from 38% in the past).
- The San Francisco Bay Area Metropolitan Transportation Commission provides special funding for transit-oriented development improvements such as pedestrian and cycling facilities, streetscape improvements and transit village development for areas within one-third mile walk of a transit station. Funding increased with development densities: \$1,000 per bedroom in projects containing 25 units per acre, and up to \$2,000 per bedroom for developments with 60+ units per acre.
- The city of Fort Collins, Colorado, uses a Land Development Guidance System (LDGS) which gives developers density bonuses for projects that have desirable, Smart Growth design features.

Industrial Land Planning (www.movingtheeconomy.ca)

The City of Vancouver performed a comprehensive review of the role and function of its industrial land stock. The study resulted in a policy of industrial land retention and management. Both the City of Vancouver and the Greater Vancouver Regional District have a policy of “planning by proximity”, to minimize transport and utility costs. More centralized industrial location can help increase urban employment and economic development, reduce vehicle commuting, reduce public service costs, and increase tax revenues.

Live Near Your Work Incentives

The state of Maryland's *Live Near Your Work* (LNYW) program provides a minimum of \$3,000 in direct cash assistance to home buyers moving to designated neighborhoods surrounding major employers (www.dhcd.state.md.us/lnyw/index.cfm). Local governments designate the LNYW areas and administer the program within their jurisdictions. Participating employers - businesses, non-profits, colleges or universities, or government agencies - must set eligibility requirements, promote the program to their employees and provide matching resources.

Information Resources

Affordable Housing Design Advisor Website (www.designadvisor.org), sponsored by the U.S. Department of Housing and Urban Development, provides information on developing more affordable housing, redeveloping urban communities and implementing [Smart Growth](#).

Edward Carman, Berry Bluestone and Eleanor White, *Building on our Heritage: A Housing Strategy for Smart Growth and Economic Development*, Center for Urban and Regional Policy, Northwestern University (www.curp.neu.edu) for the Commonwealth Housing Task Force, 2003.

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Institute for Location Efficiency (www.locationefficiency.com) is an organization that works to encourage implementation of Location Efficient Development.

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Smart Growth Policy Reforms

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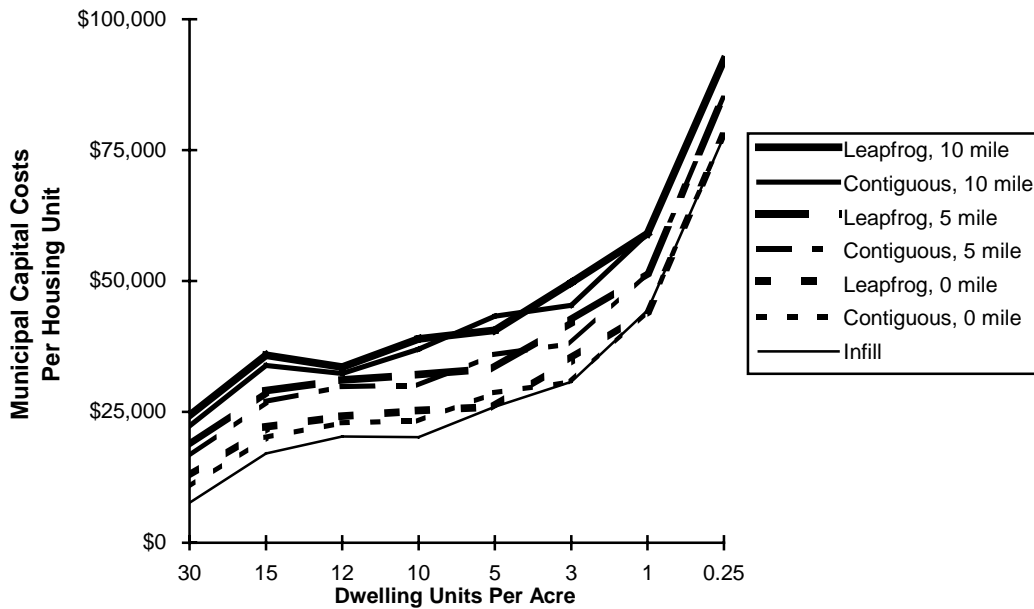
USEPA, *Smart Growth Policy Database*, US Environmental Protection Agency (<http://cfpub.epa.gov/sgpdb/browse.cfm>).

Robert P. Wallace, “Urban Area Revitalization: Transportation Concurrency Exception Areas - Concept and Application,” *ITE Journal*, Vol. 75, No. 1 (www.ite.org), January 2005, pp. 44-47.

Location-Based Fees

The cost of providing public services such as roads, utilities, schools, emergency services tends to be lower in compact, accessible locations than for more dispersed, sprawl locations (Litman, 2004). Figure 3, and Table 3 illustrate how land use density and location affects the costs of providing some public services. Most property taxes and fees do not reflect these location-related cost differentials, and so overcharge compact development and undercharge dispersed, sprawl development. Location-based taxes and fees tend to be more equitable (it reflects the “user pays” principle) and give consumers an incentive to choose more cost effective locations.

Figure 3 Residential Service Costs (Frank, 1989)



This illustrates increased capital costs for lower density, non-contiguous development.

Table 3 Per Household Annual Municipal Costs (Smythe, 1986)

Costs	Rural Sprawl	Rural Cluster	Medium Density	High Density
Units/Acre	1:5	1:1	2.67:1	4.5:1
Schools	\$4,526	\$4,478	\$3,252	\$3,204
Roads	\$154	\$77	\$53	\$36
Utilities	\$992	\$497	\$364	\$336
Totals	\$5,672	\$5,052	\$3,669	\$3,576

Per household public service costs increase due to sprawl.

Implementation Strategies

- Structure development impact fees and utility connection charges to reflect actual costs (Blewett and Nelson, 1988; Slack 2002; Coriolis Consulting, 2003). This means that development fees reflect the higher costs of providing services to more dispersed locations. For example, development fees might be \$10,000 per unit for infill residential development where there is infrastructure capacity, \$20,000 per unit in lower density suburbs, and \$40,000 per unit for dispersed locations that require infrastructure expansion.
- Provide development fee discounts or exemptions for urban infill development, high performance buildings (buildings that have water-efficient plumbing, on-site stormwater management, energy efficient features, etc.).
- Charge rates for utilities such as water, sewage and power that reflect the higher costs of serving more dispersed locations (Slack, 2002).
- Structure property tax rates to reflect the higher unit costs of providing public services such as roads and traffic services, emergency response, and street lighting to dispersed locations.
- Apply stormwater management fees or taxes based on a facility's impervious surface area, to reflect stormwater management costs, heat island effects and other impacts of pavement.
- Fund local roadway costs through use-based fees, or offer property tax discounts to households that do not own an automobile, reflecting the lower local roadway costs they impose. Similarly, unbundle parking, so building occupants only pay for the amount of parking they actually need.

Examples and Case Studies

Lancaster Development Fees (www.newrules.org/environment/lancaster.html)

The city of Lancaster, California charges development impact fees that reflect the infrastructure costs of a particular location, calculated by a civil engineering firm. A typical new house located near the city is charged \$5,500, while the same house located a mile from town would be charged \$10,800, reflecting the additional costs of providing infrastructure there. This discourages sprawl. Since this fee structure was implemented in 1993 all new development has occurred near the central core. These fees only represent a portion of the total public costs that increase with dispersed development (school busing and infrastructure maintenance costs are not included), so even greater land use changes would probably occur if other public service costs were efficiently priced.

Austin Transportation User Fees

Austin, Texas (www.ci.austin.tx.us) utility bills include a *Transportation User Fee* (TUF) based on the average number of motor vehicle trips generated per property, reflecting its size and use (City of Austin Code 14-10). For example, single-family development is estimated to generate 40 motor vehicle trips per acre per day, condominium residential use and townhouse residential use generate approximately 60 motor vehicle trips per acre per day, and offices generate approximately 180 motor vehicle trips per acre per day. The charge averages \$30 to \$40 annually for a typical household. The city provides exemptions to residential properties with occupants that do not own or regularly use a private motor vehicle for transportation, or if the user is 65 years of age or older.

Stormwater Management Fees (NEMO)

Some jurisdictions impose stormwater management fees based on the amount of impervious surface on a site. This rewards developers and occupants who use more compact development and provide more openspace.

Albuquerque Development Fees

The city of Albuquerque, New Mexico has established development fees designed to reflect the cost to provide public infrastructure in different locations. An impact fee is a one-time charge imposed on new development to help fund the costs of capital improvements that are necessitated by and attributable to the new development. The fee structure reflects the lower cost of serving development in areas where major infrastructure already exists, and the higher costs of serving new areas. Fees for a new 2,000 square foot house range from \$1,300 in the older parts of the city up to more than \$100,000 in more dispersed and affluent locations. The fees are reduced for projects that support strategic economic development and affordable housing objectives.

Information Resources

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Smart Tax Policies

Some current tax policies favor suburban development over Smart Growth, by favoring lower-density development, single-family over multi-family, new construction over redevelopment of existing buildings, and development outside of urbanized areas over construction within existing urban areas (England, 2003; Slack, 2002)

State and local governments sometimes make poor land use decisions due to interjurisdictional competition for tax revenues. This encourages governments to attract development even when it contradicts other economic development and land use objectives, such as dispersed, automobile-oriented commercial development which contradicts efforts to create more compact, multi-modal communities (Wassmer, 2001).

Voith (1999) finds that existing housing tax policies tend to encourage new suburban development over redevelopment of existing urbanized areas. Equalizing tax treatment of new and renovated housing could encourage better use of urban land and diverting pressure from greenfields. Gladwell (2004) describes how accelerated capital depreciation rates implemented in 1954 to encourage industrial investment unintentionally stimulated suburban mall development and associated suburban sprawl.

Smart Growth tax reforms are designed to correct current tax policies that encourage sprawl, and reward more accessible, compact development, particularly to the degree that Smart Growth reduces public service costs, reduces external costs, benefits disadvantaged people, or supports other strategic planning objectives.

Property taxes can be structured to favor more compact, infill development over sprawl in order to reflect the lower cost of providing public services within existing urban areas, the reduced per capita transport externalities generated in areas with reduced per capita vehicle travel, and strategic planning objectives such as greenspace preservation.

Split-Rate Property Taxes (also called *Land Value Capture*) means that different property tax rates are applied to the assessed values of buildings and land, with a lower rate applied to buildings (O'Mearasheehan, 2001; Rybeck, 2004). Many economists believe that reducing taxes on building and increasing taxes on land would encourage more clustered, infill development adjacent to existing infrastructure, reducing development pressure on outlying areas and discouraging urban sprawl, although applied to rural lands it can increase development of farms and other openspace.

Split-Rate Tax Promotes Smart Growth

by Stewart Schwartz, *Getting Smart Newsletter*, Vol. 2, No. 4, Smart Growth Network (www.smartgrowth.org) September 1999.

Landowners can profit from owning land in two primary ways: they can develop property and increase its value directly, or they can wait for population growth, general wage increases, or public infrastructure improvements to increase their land values without any investment. This second method, known as *land value appreciation*, encourages owners to hold land out of use in anticipation of future value increases, leading to land speculation.

A technique called the *split-rate property tax*, however, minimizes speculation and instead encourages productive economic use of the land. The split-rate approach promotes development near existing urban infrastructure while reducing development pressure at remote sites that are more appropriate for agricultural, conservation, or recreational uses. Unlike traditional property taxes, the split-rate tax recognizes the dual and opposing nature of the taxes on land and building values. Buildings become valuable as a result of their owners' work in constructing and maintaining them. On the other hand, land derives its value from the desirability of its location, which is frequently a function of proximity to public infrastructure.

A split-rate tax reduces tax rates on building values and increases tax rates on land values. This makes facility improvements and maintenance less costly, and gives landowners more motivation to maximize income from land, particularly in urban areas where land values are highest, adjacent to existing infrastructure and amenities. It therefore discourages speculation and urban expansion while returning to the public treasury those economic benefits from public infrastructure improvements.

Meanwhile, away from infrastructure, where land values are lower, taxes will also be lower and there will be less economic motivation for development. Because the demand for developed space is limited at any given time, greater use of urban land can help reduce premature development of outlying areas. As a result, the split-rate tax counteracts sprawl and promotes affordable residential and commercial rents.

Both theory and experience indicate that split-rate taxes can encourage more compact development and urban redevelopment. Additionally, split-rate taxes reduce financial burdens on most residences and neighborhood businesses while raising the burdens on vacant lots and surface parking lots. Pittsburgh is the largest city in the United States with a split-rate tax. Until the late 1970s, the city had taxed buildings at one-half the rate on land values. Today, Pittsburgh taxes buildings at one-sixth the rate on land. In spite of the severe depression in local industries, residential and office development within Pittsburgh has grown substantially. Contrary to national trends, the pace of development within the city limits has exceeded that of its suburbs.

Implementation Strategies

- Offer lower tax rates for development that reflects Smart Growth principles. For example, reduce sales and property taxes on redevelopment projects in blighted urban areas, and for mixed-use development.
- Structure property taxes to favor more compact, infill development. For example, impose lower tax rates on properties within an urban growth boundary than outside of the boundary.
- Apply special taxes on vacant land and parking facilities in appropriate urban areas to encourage infill development and reduce the amount of land devoted to parking facilities.
- Correct any tax policies that favor new construction over redevelopment of older buildings.
- Establish “anti-piracy” rules that discourage a jurisdiction from using subsidies to lure businesses from neighboring jurisdictions. Use regional tax-base sharing strategies to avoid conflicts among neighbouring municipalities that contradict strategic land use objectives.
- Impose special taxes on blighted and abandoned properties.
- Offer special tax incentives for brownfield redevelopment.
- Introduce a special tax on greenfield development or when farmland is converted to non-agriculture uses.
- Reduce capital gains taxes on gifts and sales below market value of ecologically sensitive openspace to conservation trusts.
- Apply special taxes on parking facilities or on impervious surface.
- Make capital investments in community energy systems (including investments in generation equipment, underground pipes and thermal host systems) eligible for the accelerated capital cost allowance.
- Fund roads and parking facilities through user fees rather than property taxes.
- Reform tax laws to provide equal or lower tax rates (relative to assessed value) on higher-density and commercial housing.
- Ensure that housing funding and tax policies make older buildings as attractive as new construction. For example, make used homes and residential renovations equally eligible for grants, tax discounts and first-time-buyer programs as new homes.
- Allow exemptions or deferrals in the taxation of capital gains from the sale of urban land to encourage urban redevelopment.
- Allow developers to defer tax payments on rental construction until units are occupied, rather than as a lump-sum payment.
- Allow the deferral of tax on depreciation and capital gains upon the sale of a rental property if another rental property is purchased.
- Allow the rollover of profits for investment in additional rental housing.

Benefits, Costs and Consumer Impacts

Smart Growth tax policies can support more efficient and equitable development patterns. Costs may include transition costs (as taxes change) and any additional transaction costs (if tax collection becomes more complex). Although they increase some taxes (those in sprawl locations) they reduce others (those in Smart Growth locations).

Examples and Case Studies

Smart Growth Tax Abatement

Some jurisdictions offer targeted property tax abatement for affordable housing, infill development, rehabilitation of older buildings (including heritage buildings), hurricane and seismic upgrading (making older building hurricane and earthquake resistant), and job-creating commercial development in economically depressed areas.

Smart Growth Tax Abatement

The City of Orlando, Florida uses a mileage-based formula (based on trip generation times average trip distance factors that reflect location) to charge developers for their traffic impacts, with discounts for Smart Growth locations and designs, which recognizes their travel reduction benefits.

Special Vacant Property Tax Rates

The state of Kentucky allows cities to apply a higher tax rate to owners of blighted and abandoned properties to encourage redevelopment. The Vacant Properties Commission sends letters to owners of run-down properties giving them 90 days to fix the problems. If the owner fails to act, the properties are sent to the city commission for certification and added to a vacant properties list. At that point, a run-down property can be taxed at a higher rate.

Tax Exemptions For Environmental Protection

Donations of land to land trusts are exempt from U.S. federal capital gains taxes. This encourages taxpayers to donate environmentally sensitive land for preservation.

Regional Revenue Sharing

A proposed California state law would pool additional tax revenue generated from new development and redistributing it as follows: a third would go to cities based on population, a third would stay where the development is located, and a third would go to the host city provided it met certain “smart growth” goals, including affordable housing creation, open space preservation, and infill development (ILSR 2004b).

Information Resources

Paul C. Brophy and Jennifer S. Vey, *Seizing City Assets: Ten Steps to Urban Land Reform*, Brookings Institute (www.brookings.edu), October 2002.

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Locate and Design Public Facilities For Smart Growth

Governments are large employers and service providers, and can directly support Smart Growth by favoring more accessible locations, designs and management practices for publicly funded facilities such as offices, schools, and affordable housing projects. As much as possible, government agency offices, schools, post offices and other public institutions can be accessible by multiple modes (walking, cycling and public transit) rather than just driving. Building location and design can have a major impact on vehicle trips. One study found that the portion of students walking to school is far higher in older (pre-1970) schools than in news schools because the latter tend to be located at the urban fringe and are less accessible by nonmotorized modes (SCCCL, 1999).

This could motivate municipal governments and developers to try more efficient development practices, offset some of the higher upfront costs associated with such practices, and change overall market practices by introducing new planning and construction techniques.

Implementation Strategies

- Choose accessible, multi-modal locations when constructing or leasing buildings for public agencies.
- Apply Smart Growth design principles to public facilities, particularly those that generate large numbers of trips or attract clients who often have limited ability to drive, such as schools, medical centers and social service agency offices.
- Take into account consumer transportation costs when evaluating location options. For example, government agencies should be willing to pay higher rents for more accessible locations if the extra cost is offset by transportation cost savings to clients.
- Insure that public facilities are accessible by people with disabilities and other special needs.
- Make public facilities and government agencies examples of Smart Growth and sustainable building design.

Benefits, Costs and Consumer Impacts

Smart Growth public facilities help support transportation and land use objectives, including increased accessibility and modal choice (since more public facilities are accessible by walking, cycling and public transit) and reduce many costs associated with increased vehicle traffic and dispersed development. It may increase some development costs, including per acre land costs (offset by reduced land requirements), and costs associated with improved facility design. Many consumers benefit from improved accessibility and travel choice, but some may consider themselves worse off if Smart Growth facilities are less accessible by automobile.

Best Practices

- Demonstrate that current infrastructure is efficiently used before new infrastructure is funded.
- Give preference to existing infrastructure renewal over expansion into new areas.
- Require a transportation demand management plan as a precondition for funding of transportation infrastructure.
- Require water metering as a precondition for funding of water and sewer systems.
- Consider alternate approaches, such as targeted investment in housing or information technology, to reduce the need for new transportation systems.
- Implement a sustainable community investment plan, including measures to increase co-operation and coordination among neighbouring municipalities, to provide a broader context for infrastructure investment spending.

Examples and Case Studies

Smart School Planning

The Council of Educational Facility Planners International produced the guide, *Schools for Successful Communities: An Element of Smart Growth*, which provides specific information on how to plan, locate and design public schools so they are effectively integrated into the communities they serve, and allow more students to walk and bicycle to school. It describes numerous case studies and model state and local policies for smart growth schools. Beaumont and Pianca (2000) describe examples of public policies to favor more accessible schools, and case studies of communities that have preserved older, more accessible schools rather than building new schools at the urban fringe:

- In Durham, N.C., when state standards threatened a historic elementary school, neighborhood residents mounted a campaign that resulted in the school being saved and renovated. The campaign produced a study to refute claims that renovating the school would be infeasible.
- In Rice Lake, WI, a “Save Our Schools” committee preserved three historic elementary schools. They point out that if the schools are closed, children who currently walk to school would need to be bused.
- In Sharlevoix, MI, residents sued the school district over plans to build a new high school on 74 acres of prime farmland three miles out of town. They are encouraging the district to renovate an in-town school instead.
- The state of Maryland has eliminated minimum acreage requirements for new schools, leaving site decisions to local communities. The state now gives preference to reinvestment in existing schools over new school construction that may stimulate sprawl.
- In the state of Maine, the state planning office and the board of education have published a joint brochure urging school districts to avoid sprawl, renovate existing, more accessible schools, and promote walking to school.
- The state of New Jersey has adopted a special Rehabilitation Code that makes it easier and less expensive to rehabilitate historic buildings, such as neighborhood schools.

Maryland Neighborhood Revitalization Areas

The Maryland DOT's neighborhood conservation program provides funding for transportation improvements on roadways and other transportation facilities located in state designated neighborhoods (often referred to as neighborhood revitalization areas), where the improvements will provide economic revitalization and improved livability to older, run-down neighborhoods. Eligible projects include roadway repaving or reconstruction, roadway signing, lighting and traffic controls, walking improvements, bus shelters and transit station access improvements, streetscaping, etc.

Rhode Island Transportation Planning

Rhode Island's Transportation Improvement Plan (TIP) development process has a funding allocation system that prioritizes projects that encourage compact development and penalizes those that encourage sprawl (Governor's Growth Planning Council, 2001). As a result, the majority of available funds are spent on system management and preservation projects, and less to capacity expansion projects, particularly in areas with unplanned, dispersed development.

Federal Urban Redevelopment Funding

The Federal Transportation Equity Act for the 21st Century (TEA-21) provides funds for transportation-related enhancements, many of which are selected to support urban redevelopment and other land use objectives. Projects may include bicycle and pedestrian facilities, safety and educational activities for pedestrians and cyclists, acquisition of scenic easements and historic sites, scenic or historic highway programs, preservation of abandoned railway corridors, etc.

Information Resources

Constance Beaumont and Elizabeth Pianca, *Historic Neighborhood Schools in the Age of Sprawl-Why Johnny Can't Walk to School*, National Trust for Historic Preservation (www.nationaltrust.org), 2000.

CEFPI, *Schools for Successful Communities: An Element of Smart Growth*, Council of Educational Facility Planners International (CEFPI) and the US Environmental Protection Agency (www.epa.gov/smartgrowth/schools.htm), 2005.

National Trust for Historic Preservation (www.nationaltrust.org) focuses on preserving downtown areas and historic buildings.

Project for Public Spaces (www.pps.org) works to create and sustain public places that build communities. It provides a variety of resources for developing more livable communities.

Tim Trohimovich, *Pricing Growth & Financing Smart Growth*, 1000 Friends of Washington (www.1000friends.org), Oct. 2001.

USEPA, *Smart Growth Policy Database*, US Environmental Protection Agency (<http://cfpub.epa.gov/sgpdb/browse.cfm>).

Reform Zoning Codes

Most communities use zoning to control local land use, including the location, type, density, size, lot coverage and design of development, and requirements. Conventional codes tend to encourage lower-density, single-use, automobile-dependent land use by mandating generous parking supply, limiting density, and in many ways prohibiting innovative urban development (Levine, 2006; Lewyn, 2005). Many communities are now changing their zoning codes to reflect [Smart Growth](#) objectives.

Alternative Development Standards (ADS) encourage [Accessible](#), [Clustered](#), mixed land use patterns, with public services (stores, schools, parks, etc.) located within neighborhoods; diverse housing types (single-family, multi-family, apartments above retail stores, secondary suites, etc.); a walkable scale (i.e. many destinations are within convenient walking distance of each other); a grid-pattern for streets with a high degree of connectivity (i.e., streets connected at a fine scale, as opposed to large blocks with many dead-ends), narrower road widths, smaller lots, and alley car access ([New Urbanism](#)). Square footage of buildings, and residential and commercial capacity can remain the same, but compact design and clustering reduces building footprints and individual lots and road dimensions.

Table 4 Conventional and Alternative Development Standards

Conventional	Alternative	Benefits of ADS
Large-lot development	Compact development, narrower lots.	More efficient infrastructure More affordable housing
Wide roads Few sidewalks Cul-de-sacs Front driveways	Narrower roads Sidewalks Roads in a grid pattern Rear lanes/on-street parking	Less dependence on cars Traffic ‘calming’ Pedestrian-friendly Improved streetscape Increased safety Openspace preservation
Single use No Neighbourhood shopping or employment opportunities	Mixed-use “main street”	Increased community cohesion. More accessible shopping and jobs.
Lower road grades (road cuts through land)	Higher road grades (roads follow natural topography)	Less disturbance to natural land forms. Reduced grading costs

This table compares conventional and alternative development standards, and describes ADS benefits.

ADS can be incorporated into:

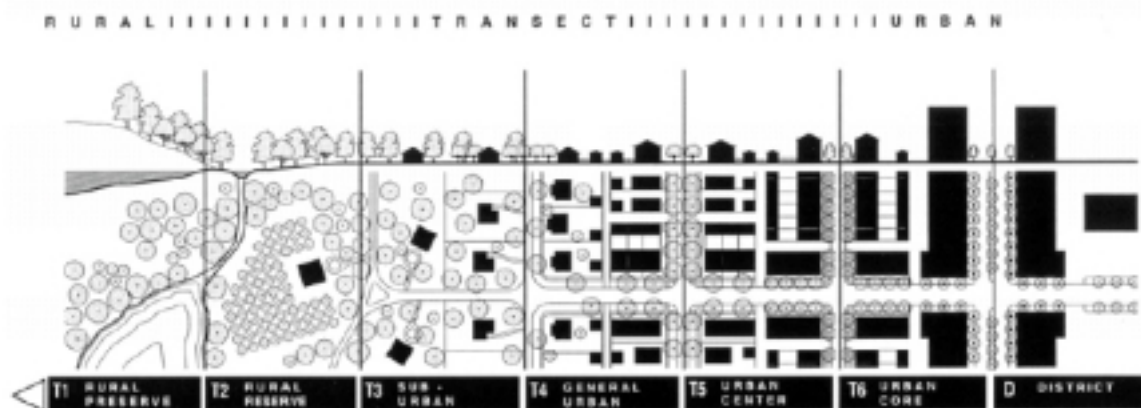
- Comprehensive and community plans.
- Zoning codes, bylaws and guidelines (tree protection, heritage conservation, etc.).
- Covenants and development agreements.
- Approval process (speedier approvals for Smart Growth development).
- Financial and other incentives (e.g., taxes, development fees, utility rates).
- Roadway and path standards (narrower roads, sidewalks, traffic calming).
- Parking standards and facilities.
- Stormwater standards (reduced road and parking requirements, on-site stormwater handling, permeable surfaces, etc.).
- Public facility location and design.

Form-based codes (also called *performance zoning* and *district-based zoning*) are zoning codes that indicate the type of development desired in a particular area, allowing more flexibility and encouraging more unique and context-sensitive designs. Form-based codes focus on streetscapes and the public realm. They tend to be highly illustrated and involve a significant level of public participation. Current zoning codes tend to be designed for the convenience of regulators. They divide land uses into specific categories, such as commercial, residential, industrial, etc., with rigid rules applied to each. This tends to discourage or even prohibit mixed-use development, such as housing over retail, and other design innovations.

Some communities establish area-specific zoning codes and development policies. For example, some communities have *Pedestrian Overlay Districts* or *Transit Overlay Districts* where development standards encourage higher densities and mixed development, pedestrian-friendly streets, and reduced parking requirements. To support more efficient development and increase housing affordability, one study recommends that states provide financial and other incentives to local communities that pass *Smart Growth Overlay Zoning Districts*, which allow development of single-family homes on smaller lots and the construction of apartments for families at all income levels (Carman, Bluestone and White, 2003).

Transect refers to a comprehensive, ecologically-based land use planning framework that organizes the continuum of human environments, from remote wilderness to farmlands, villages, town, cities and dense downtowns. It is a geographical cross section through a sequence of contiguous environments – for example, from wetland to upland, or tundra to foothill. This approach can be applied to the build environment by introducing settlements of gradually increasing density.

Figure 4 Transect Land Use Planning (Alminana, et al., 2003)



Transect analysis provides a framework for planning many different types of land use conditions.

Implementation Strategies

- Revise existing zoning codes to reflect Alternative Development Standards.
- Educate planners and developers concerning ADS.
- Adopt special flexible performance-oriented zoning that accommodates urban infill, redevelopment and reconstruction of older buildings while still safeguarding the public health, safety and welfare.
- Create smart growth and transit-oriented development land-use guidelines and design manuals which include recommended codes, standards and design practices that support smart growth.
- Encourage flexibility through innovative planning strategies such as *Planned Unit Developments* (PUDs), which offer flexible options to developers for determining uses, densities, building placement, and other factors, based on overall parameters for development, such as average densities and open space requirements, but does not specify how these must be achieved within the site. This allows much greater design flexibility than ordinary zoning. PUDs usually require special design reviews processes.
- Enact minimum density zoning in certain areas, such as units per acre or maximum lot sizes, as opposed to only regulating maximum densities. Minimum density zoning can promote compact urban development in targeted areas. Such a target can be implemented by regulation or informally in the development review processes.
- Employ inclusionary zoning practices to encourage development of low-income housing in all neighborhoods (Fox and Rose, 2003). These strategies include removal of barriers that limit affordable housing, and incentives or requirements to include affordable units in new developments.

Benefits, Costs and Consumer Impacts

ADS can:

- Create more livable and cohesive communities,
- Improve transportation options.
- Reduce development and public service costs.
- Reduce the amount of land devoted to roads and parking.
- Maintain habitat and preserve openspace.
- Improve storm water management.
- Reduce per capita energy consumption and pollution emissions.
- Increase housing affordability and choice.
- Support local economic development.

Developing and implementing ADS can involve special costs to revise codes, educate planners and developers as to how to apply the code, and deal with problems that may develop as the new code is applied. Citizens tend to benefit overall from revised codes, since they increase flexibility, but some may be unhappy with certain aspects, such as increased density within existing neighborhoods.

Innovative Zoning Can Help Revitalize Municipalities

By Thomas Hylton, *The Morning Call*, (www.McCall.com) November 18, 2004

Zoning laws are designed to empower municipalities to control their own destiny. Each city and township is supposed to develop a comprehensive plan to show how it wants to grow, and then adopt zoning to carry out its plan. In reality, zoning ordinances rarely produce great places to live and work.

Most create isolated zones that separate housing, offices, and stores. That means people must drive for all their activities. New buildings are typically strung along highways for easy access by car, and bordered by large parking lots. Landscapes quickly become traffic-congested junkscapes.

Zoning laws also tend to focus on the development of open land. Yet, many communities are already developed. Future prosperity depends largely on the re-use of existing buildings and the compatibility of new development with the old, but conventional zoning doesn't address that need. In 2003 Pottstown, Pennsylvania established an innovative land-use ordinance which reinforces the older community's historic development pattern and small-town charm. Since it was adopted several new homes have been built on small lots that were vacant for decades, with higher quality proposals than had been submitted in the past.

Experience shows that municipalities do better through voluntary negotiations than heavy-handed regulations. To make it easier for property owners, Pottstown contracted with a design professional to provide free advice for applicants. It hired landscape architects and town planners on an ad hoc basis to suggest improvements to plans. Most developers have been happy to cooperate.

Pottstown's land use law is unusual in several ways:

- It is easy to read. The ordinance uses plain language, charts and photographs to explain how the city wants to grow.
- It controls building appearance. Zoning laws typically control building size and location, but not what they look like. However, state law allows municipalities to protect their historic resources so Pottstown created a conservation district that requires new construction to be compatible with existing architecture.
- The ordinance relaxes parking requirements to make it easier to use the vacant upper stories of downtown buildings. Parking spaces can be shared by commercial users during the day and residential users at night. New parking lots must be placed to the side and rear of buildings so they are less obtrusive.
- Ample shade trees are required along streets and in parking lots. One tree must be planted for every two parking spaces to create a shade tree canopy.
- Instead of using arbitrary measurements for side yards, setbacks, and building size, the ordinance calls for new buildings to be about the same size and have the same setbacks as existing buildings on the block.
- The ordinance establishes design guidelines for new buildings in Pottstown's strip commercial development areas. Major chain stores and fast-food franchises are increasingly willing to design buildings compatible with traditional architecture if the municipality asks.

Examples and Case Studies

Smart Code (www.municode.com)

The *SmartCode* is a comprehensive set of zoning regulations which reflect New Urbanist principles. It provides design criteria for streets, blocks, open spaces and buildings which fit into a tier system of land development based on hamlets, villages, and town centers, called *transect zones*. It can replace conventional zoning ordinances which tend to limit urban design innovation and encourage sprawl.

Palo Alto Form-Based Code (www.city.palo-alto.ca.us/zoning)

The city of Palo Alto, California is updating its development requirements using *Context Base Design Form Code*. This is a zoning code which creates a desired urban forms based on design features such as the context of buildings to each other and open spaces, street design, and building design. The development of this code involved extensive research, publication of issue papers, and public consultation to create codes that reflect the city's strategic planning objectives.

Alternative Development Standards (www.marh.gov.bc.ca/GROWTH/NOV1996/alt.html)

Several British Columbia communities are implementing Alternative Development Standards:

- Kelowna's Kettle Valley is the first of three new neighborhoods to be developed in a community village concept. In the first Neighbourhood, 1,028 residential units will be focused around a 50,000 square-foot Neighbourhood commercial centre. The project developer and designer, in working with the city, have created a 'neotraditional' Neighbourhood which encourages pedestrian traffic over cars and focuses activity in a centralized commercial area. "There are a lot of 'firsts' for Kelowna with this project," said Hazel Christy, Kelowna's Manager of Special Projects. "We have created a new, comprehensive development zone based on the Neighbourhood village concept." Other features include a seniors' residential and care centre, residential units above the mixed-use commercial area, reduced building setbacks and hillside development.
- The Regional District of Nanaimo (RDN) proposes to use ADS to achieve densified village cores in Lantzville and Cedar Village and to create village centres in the Shaw Hill - Deep Bay area. The goal is to create urban enclaves within rural areas while limiting urban sprawl. "Our basic philosophy is to accommodate growth in denser communities and not waste the land we have," said Electoral Area Director Bob Jepson. The Lantzville community plan uses what Jepson calls "modern tools" for planning: density bonusing, promoting residential uses above commercial development and discouraging large-lot subdivisions in favour of smaller lots. In addition, to meet the need for seniors' housing, the area is proposed to accommodate townhomes and a care facility. Jepson believes public education and involvement are vital to elicit community support and the RDN has held round-table discussions with groups in the area. "We try to educate rather than legislate," he said.
- Salmon Arm, with a population of 16,000, is a growing community that has incorporated many ADS into its goal of achieving compact communities. "Our community had been allowed to develop through the creation of subdivisions literally miles from each other," said Salmon Arm Mayor Ian Wickett. "It was really a necessity to implement a different planning approach that was more cost-effective." Council divided Salmon Arm into four development

areas and started by densifying the downtown area to maintain “a living core to the community.” “We still have a downtown that people shop in,” said Mayor Wickett. He added that the development of mixed-use housing in the past few years, including rental housing, has proved to be very popular.

- Surrey’s Clover Valley Station - a partnership development - is a compact-lot neighbourhood of 215 affordable detached homes. The subdivision is pedestrian-friendly with homes situated on lots with narrow frontages and minimal side yards. Car access is from rear lanes. The homes provide an affordable and popular choice for homebuyers who prefer fee simple ownership to strata title. Council has approved in principle an additional 335 compact lots at Clover Valley Station. The first phase of Panorama Village, another compact community with average lot sizes of 2,400 square feet, is also underway in Surrey. “In both projects, application of neo-traditional design creates a sense of spaciousness between the small lots, and the clustering of houses has created significant open spaces, preserving valuable views,” said Surrey Mayor Bob Bose.

The Oregon Land Conservation and Development Commission (LCDC)’s Metropolitan Housing Rule requires local governments in the Portland region with projected populations of less than 8,000 to achieve an overall housing density of at least six units per net developed acre by the year 2000.

Maryland’s *2000 Infill Guidelines* (www.mdp.state.md.us/planning/m&gs/01-22.htm) are more flexible zoning codes that support urban infill and community redevelopment.

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Smart Growth Network (www.smartgrowth.org) includes planners, govt. officials, lenders, community developers, architects, environmentalists and activists.

Urban Development Institute (www.udi.bc.ca).

Urban Land Institute (www.uli.org) is a professional organization for developers that provides practical information on innovative development practices, including infill and sustainable community planning.

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Encourage Urban Redevelopment

Urban redevelopment faces a variety of obstacles, including extra construction costs and uncertainty, particularly if an area may contain contaminated industrial lands (called *brownfields*). These obstacles encourage private developers to choose suburban, greenfield development over urban redevelopment, although cleanup and redevelopment of existing urbanized areas is generally more desirable from society's perspective. Redirecting development into existing urban areas helps create more accessible, multi-modal communities and preserve open space.

Implementation Strategies

A variety of policies and planning strategies can be used to encourage urban redevelopment and brownfield rehabilitation (NGA, 2000; Eichenfield and Associates, 2002; NRTEE, 2003; WCEL, 2004).

- *Renovation Tax Incentives.* These are special tax discounts, credits and deferrals for the renovation of vacant or underused urban buildings. This can be particularly appropriate for investments required to make properties meet current safety standards, such as seismic upgrading (earthquake reinforcement) and improved accessibility for people with disabilities (such as elevator installation).
- *Rental Property Taxes.* Special tax policies can encourage the provision of more affordable, rental housing. Depreciation and capital gains taxes on rental properties can be structured to favor more affordable housing, taxes can be deferred on the sale of rental property if another rental property is purchased, and pooling of such deferrals can be allowed across properties, so a developer can expand from multiple smaller properties to larger property.
- *Vacant Building Tax.* Special taxes can be applied on vacant land and abandoned buildings within urban areas.
- *Specific-Area Development Plans.* Special development plans can be created for older urban neighborhoods, downtowns, historic areas, tourist centers, and areas of environmental significance.
- *Brownfield Redevelopment.* Develop special programs to cleanup and redevelop urban brownfield sites.
- *Downtown Revitalization (also called Main Street Programs).* Implement policies and programs to redevelop and revitalize downtowns and create more mixed-use, urban infill commercial centers reflecting New Urbanist principles.

Downtown Revitalization (also called *Main Street Programs*) is intended to make downtowns and neighborhood [Commercial Centers](#) more successful and attractive, helping to create more mixed-use, infill development reflecting [New Urbanist](#) principles. Such efforts involve downtown economic development programs, increased downtown housing, promoting community activities (such as recreational, cultural and civic events that attract regional residents to the downtown), [Parking Management](#), [Traffic Calming](#) and building rehabilitation (www.mainst.org).

Various funding sources can be used to support urban redevelopment projects:

- *Local Improvement Districts (LIDs)* (also called *Special Assessment Districts* or *Benefit Assessment Districts*) apply a special tax to property in a given area to fund improvements, new infrastructure, and special services.
- *Community Revitalization Grants* are public funds that target development in particular areas, such as older, run-down urban districts. These funds can create infrastructure and amenities that encourage infill development and leverage additional investment.
- *Tax Increment Financing (TIF)* is a way to finance public infrastructure investments such as transit, road and utility service. Governments earmark a portion of the increase in property or sales tax revenues that result from these improvements to repay their costs. For example, say the annual property tax on a vacant lot is \$1,000 and it brings in no sales tax revenue. A new transit service or streetscape improvements is made that results in development of the site that increases annual property taxes to \$7,000, and provides \$3,000 in sales taxes. Of the \$10,000 in taxes collected from this site, \$1,000 goes to the general fund (as it did before) and the remaining \$9,000 pays off the bonds that financed those infrastructure improvements.
- *Parking Meter Revenues and Special Parking Taxes* are often used to fund redevelopment. This is sometimes formalized, so that a portion of revenues is dedicated to special accounts and programs, such as streetscape improvements and downtown security.

Urban redevelopment is sometimes constrained by the special problems associated with brownfields (www.epa.gov/brownfields). Special efforts may be needed to fund their cleanup address liability concerns, and allow buildings to be reused (NGA, 2000; Hara Associates, 2003). Specific ways to encourage brownfield redevelopment are summarized in the table below.

Table 5 Brownfield Redevelopment Policies (Hara Associates, 2003)

Tax Reforms/Incentives
<i>Deductible Remediation Expenses.</i> Allows redevelopers to deduct remediation costs as a current expense, rather than capitalizing as part of redevelopment costs. The tax benefit is in the year the expense is made, rather than spread over future years.
<i>Tax Credits.</i> Providing \$ through tax reductions matching expenditures on remediation of brownfields.
<i>Abatements.</i> Includes abatements of property taxes, development charges, planning fees, etc.
<i>Tax Forgiveness.</i> Historical taxes owing on lands, such as federal liens, may be forgiven.
Direct Financial Assistance
<i>Grants – Assessment/Cleanup.</i> Money given to support site assessment and remediation.
<i>Grants – Project Support.</i> Money given directly to support a project either through grants, free services, etc.
Capital Market Interventions
<i>Assumption of Liability.</i> Through individual project agreements, Governments can assume the liability for future civil and regulatory risk once given remediation requirements are met.
<i>Remediation Loans.</i> Loans may be given for assessment and remediation.
<i>Project Loans.</i> Through devices such as revolving funds, low interest loans may be provided. Funds “revolve,” by using loan repayments (principal and interest) to provide new loans.
<i>Loan Guarantees.</i> As an alternative to direct lending – a portion or all of loans to projects may be guaranteed.
<i>Mortgage Insurance.</i> A form of loan guarantee in which the loan is secured by the land being redeveloped.
<i>Lender liability limits.</i> Lenders, especially those who assume control of land after mortgage defaults, are protected from regulatory and/or civil liability for pollution and clean-up.
Civil Law Reform
<i>Time limits.</i> A time limit may be placed on how long someone may be held liable after publicly approved remediation has taken place. This allows closure of risk at least in terms of time.
<i>Proportionate Liability.</i> Liability can be limited to a party’s role with respect to the source of pollution. In the current regime a minor player may bear the whole cost of a claim.
<i>Transferability.</i> Parties may pay others to take on the full liability for future claims. For example, a landowner may pay a redeveloper or a specialist firm in land remediation to assume full risk.
Regulation
<i>Force Majeure.</i> Aggressive public pursuit of site assessments and subsequent clean-ups as required by the regulatory framework.
<i>Certificates of Compliance.</i> Government approval of remediation efforts, usually accompanied with a commitment not to take further regulatory or administrative action except under specific circumstances.
<i>Flexible Standards (Site-Specific Assessment).</i> In exchange for restrictions on future land use, allows sites to meet remediation standards appropriate to the land use. May include on-site stabilization of contaminants and ongoing control measures that must be monitored.
<i>Public Insurance Funds.</i> A complement to measures limiting regulatory risk. A compulsory fund to pay for clean-ups required after owners/redevelopers released from responsibility. Financed from premiums from same.
Information
<i>Public information.</i> Information on social value and safety of brownfield redevelopment delivered to public.
<i>Technology Dissemination.</i> Information on most cost-effective practices shared among key actors and/or demonstrated in pilot projects
<i>Training/Capacity Building.</i> Ensuring public and private sector actors share full and common understanding of the policy instruments and methods available for brownfield redevelopment.
Institutional Development
<i>Standards of Practice.</i> Development of standards of practice for site assessment and remediation, ideally integrated with regulatory processes and requirements.
<i>Deed registration.</i> A system of registering environmental remediation history and related land-use restrictions.
<i>Land pre-qualification.</i> Programs to pre-qualify land as eligible for other brownfield redevelopment initiatives.
Direct Redevelopment
<i>Land reclamation banks.</i> Agencies may be created either publicly or privately to hold brownfields, remediate them, and return them to market.

Examples and Case Studies

Brownfields Redevelopment Tools

The USEPA *Brownfields Cleanup and Redevelopment* website (www.epa.gov/brownfields) lists numerous successful brownfield projects, including projects in Baltimore, Chicago, Dallas, Palo Alto, Los Angeles, Portland, Salt Lake City, Seattle, Stamford and Trenton.

Ontario's Brownfields Statute Law Amendment Act, 2001 received Royal Assent in November 2001. The first of two phases of regulations were passed in October 2002 and proclaimed to be in force as of December 1, 2002. The remaining regulations were expected to be in effect in early 2003. The act seeks to encourage brownfield redevelopment by clarifying environmental regulatory liability and providing municipalities with more flexibility in planning and financing.

Quebec's new legislation to amend the Environmental Quality Act and other legislative provisions with regard to land protection and rehabilitation was passed in June 2002. Expected to come into force in March 2003, it amends the rules applying to contaminated soil management and establishes a regulatory system to clarify the roles and responsibilities of the different participants in brownfield redevelopment.

City Uses Legal Tools To Encourage Redevelopment (www.detroitrenaissance.com)

A special 30-person unit in the City of Detroit Prosecutor's office has identified 12,000 abandoned homes across the city and used laws and property records to bring owners to court. These abandoned housing, and the crime they attract, impedes revitalization and business investment. As a result, many of these properties have been redeveloped or renovated. This program holds landlords accountable for their property, which improves neighborhoods, and pays for itself through increased fines and tax revenues, and reduced policing costs.

In Detroit's 11th police precinct, the first district targeted, crime dropped 30 percent. In a city starving for revenue, the program collects back taxes from either the owners hauled into court or the new owners who buy the properties at auctions detailed on the county's Web site. Currently, there are 1,300 registered bidders. (Also see Keating and Sjoquist, 2003.)

Parking Revenues Finance Downtown Redevelopment (Kolozsvari and Shoup, 2003)

During the 1950-70s Old Pasadena's downtown had become run down, with many derelict and abandoned buildings and few customers, in part due to the limited amount of parking available to customers. Although curb parking had two-hour limits, this was poorly enforced. Many employees simply parked in the most convenient curb spaces and moved their vehicles a few times each day. The city proposed pricing on-street parking as a way to improve parking for customers. Many local merchants originally opposed the idea. As a compromise, city officials agreed to dedicate all revenues to public improvements that make the downtown more attractive. A Parking Meter Zone (PMZ) was established within which parking was priced and revenues were invested.

With this proviso, the merchants supported the proposal. They began to see parking meters as a way to fund the projects and services that directly benefit their customers and businesses. Because downtown parking had previously been unpriced, the city didn't lose any funding by dedicating the revenue to improvements in that area. In fact, the city gained revenue from overtime fines.

The city formed a PMZ advisory board consisting of business and property owners to recommend parking policies and revenue distribution. The resulting investments included new street furniture and landscaping, more police patrols, street lighting, more street and sidewalk cleaning, pedestrian facility improvements and marketing, such as area maps showing local attractions and parking options. To highlight these benefits to motorists, each parking meter has a small sticker which reads, “Your Meter Money Will Make A Difference: Signage, Lighting, Benches, Paving”

This created a “virtuous cycle” in which parking revenue funded community improvements that attracted more visitors, which increased parking revenue, allowing further improvements. This resulted in extensive redevelopment of buildings, new businesses and residential development. Parking is no longer a problem for customers, who can almost always find a convenient space. Local business activity and sales tax revenues have increased far faster than in other shopping districts with lower parking rates, and nearby malls that offer free customer parking. This indicates that charging market rates for parking with revenues dedicated to local improvements can be an effective way to support urban redevelopment.

San Francisco Commercial Parking Tax (www.ci.sf.ca.us/tax/parking.htm)

The city of San Francisco imposes a 25% tax on all commercial parking transaction (“any rent or charge required to be paid by the user or occupant of a parking space.”) The city collects nearly \$50 million annually from this tax, and expects this revenue to increase if parking operators implement better revenue control systems (PT, 2001). Revenues are divided between the city’s general revenue, public transportation and senior citizen funds.

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Growth Controls and Openspace Preservation

Growth controls limit the amount of development that may occur in an area. *Openspace* (also called *Greenspace*) refers to agricultural and undeveloped lands, including farms, forests, parks and gardens. Smart Growth often involves policies and programs to preserve openspace. These policies are important to offset development pressures on urban fringe lands, which may otherwise increase property taxes on openspace lands, forcing land owners to develop or sell to developers.

Implementation Strategies

Specific strategies for preserving openspace are described below (Nelson and Duncan, 1995; DCA, 1998).

- *Urban Growth Boundaries.* Establish a boundary within which development is encouraged and outside of which development is restricted. This might include a limit on the maximum number of additional units or floor area that can be built outside of existing urbanized areas.
- *Growth rate caps.* These limit the number of new residential units or commercial space that may be constructed each year. Such caps have generally been enacted by urban fringe communities experiencing rapid population growth and significant development pressures.
- *Openspace and Agricultural Zoning.* This type of zoning favors land uses such as parks, farming, livestock, forestry and sometimes golf courses, and restricts other types of development. It is applied in areas where growth is undesirable.
- *Conservation Easements.* Conservation easements involve the transfer of development rights from a property owner to a third party, such as a foundation or government agency. This preserves resource lands as open space, and often enables landowners to continue using their land in traditional ways without facing higher property taxes.
- *Greenfield Development Taxes.* Apply special taxes on greenfield development (conversion of farms and forests to residential and commercial uses), to discourage urban expansion and recover the costs of providing public services to dispersed, urban fringe development.
- *Tax Breaks for Openspace Preservation.* Tax breaks can be provided to owners who donate openspace lands or their development rights for conservation and preservation. Property sales taxes can be based on actual sale prices rather than assessed value when openspace property is sold to conservation organizations.
- *Differential Assessment Programs.* Farmland and other openspace can be assessed at its agricultural or conservation use value rather “fair market value” based on potential development. Owners can be required to repay foregone taxes if the land is developed.
- *Openspace Conversion Tax.* Special taxes can be applied to land when it is developed from openspace (farms, woodlands and other wildlife habitat). The tax revenues can be used to purchase conservation easements and development rights, and so insures the preservation of additional openspace and compensation to land owners who do not develop.
- *Land Acquisition and Banking.* Openspace acquisition can consist of the purchase or donation of land, conservation easements and development rights, for governments or nonprofit groups that hold it in trust for conservation purposes. Such land can be left undeveloped, or used in ways that preserve their environmental attributes, such as parks, watersheds, farming and natural harvesting. Land banking refers to holding land for future uses, such as providing government services (e.g., utility rights-of-way), redevelopment or future schools. Governments can dedicate funds for conservation lands acquisition.

Smart Growth Policy Reforms

- *Transfer Development Rights (TDR)*. TDR separates the value of potential development of land from the value of the current use of that parcel and transfers that development value to another site. A TDR program permits owners of land in development-restricted areas, called *sending districts*, to sever the development rights from their property and sell those rights to property owners in specified receiving districts. Landowners who purchase development rights are then able to increase the amount of development that can be built on the receiver site. TDRs can be used to save historic structures from demolition, prevent urbanization of farmland, and preserve unique environmental areas and scenic vistas.
- *Right-to-Farm-Policies*. These policies insure that laws limiting noise and smells are not applied to normal farming activities on existing farmlands due to increased urban fringe residential and commercial development.
- *Farmland Preservation Credits*. Farmers can be offered income tax credits to offset their local property tax bills. The credits encourage farmers to continue farming rather than sell their land for development.
- *Downzoning/Upzoning*. Downsizing urban fringe lands to exclusive farm and forest uses with large lot zoning (often more than 10 acres per housing unit) reduces property tax burdens and development pressure. This can be offset by upzoning (increasing maximum development densities) within urban areas.
- *Sensitive Area Zoning*. Special zoning can be applied to areas with special environmental or social attributes, such as unique ecosystems or historic sites.
- *Urban Growth Boundaries*. Urban Growth Boundaries (UGBs) define where urban development is allowed, and urban services will be provided. UGBs are generally designated to accommodate growth for a significant period of time - typically 20 years or more and they are updated periodically.
- *Urban Service Areas*. Urban Service Areas (USAs) define where urban services (public water, sewage, paved roads, schools, libraries, parks, professional fire fighters, etc.) will be provided, in order to reduce public service costs, make public services more rational and equitable, and encourage more efficient development patterns. This is often implemented in conjunction with Comprehensive Plans and Urban Growth Boundaries.
- *Water Protection Programs*. These programs are designed to protect water supplies, water quality and aquatic life in creeks, lakes, and aquifers. This often includes restriction on development along shorelines and other vulnerable areas. This may restrict urban fringe development to what can be accommodated by available water supplies (particularly in desert areas), or restrict potentially harmful activities within watersheds.
- *Flood and Fire Protection Policies*. Governments can restrict development on floodplains, along rivers and in other areas vulnerable to flooding, either directly, through zoning regulations, or by restricting publicly-subsidized flood insurance compensation in vulnerable areas. Similar policies can apply to areas threatened by wildfires.
- *Development Exactions*. Development exactions require developers to contribute resources for public facilities, which often include land for parks and other forms of openspace.

Examples and Case Studies

Growth Controls (Porter, 1996)

Many communities (particularly in California and Colorado) have adopted growth limits/controls. For example, Petaluma, California limits the total number of new residential units to a 500 annual average not to exceed 1,500 over a three-year period.

Portland Urban Growth Boundary (NEW, 2004)

Analysis of growth patterns in 15 U.S. cities shows that the city of Portland's urban growth boundary has protected rural lands from development. From 1990-2000, new development used half as much land per capita as the average city in the study. The same population growth with low-density development would have more than doubled Portland's area.

Agricultural Land Reserves

British Columbia established Agricultural Land Reserves (ALRs), where agriculture is recognized as the priority use. Within ALRs, farming is encouraged and non-agricultural uses are controlled. It includes private and public lands that may be farmed, forested or vacant land. Some ALR blocks cover thousands of hectares while others are small pockets of only a few hectares. The *Agricultural Land Commission Act* (www.legis.gov.bc.ca/37th3rd/3rd_read/gov21-3.htm) provides the legislative framework for the establishment and administration of the agricultural land preservation program. ALR regulations take precedence over, but do not replace other legislation and bylaws that may apply to the land. Local and regional governments, as well as other provincial agencies, are expected to plan in accordance with the provincial policy of preserving agricultural land. One important effect of the ALR policy is to preserve farmland and limit urban sprawl around growing urban areas such as Vancouver and Victoria.

Information Resources

APA, *Smart Growth Legislative Guidebook and User Manual: Model Statutes for Planning and the Management of Change*, American Planning Association (www.planning.org), 2002.

F. Kaid Benfield, Matthew D. Raimi, & Donald Chen, *Once There Were Greenfields: How Urban Sprawl is Undermining America's Environment, Economy and Social Fabric*, Natural Resources Defense Council & Surface Transportation Policy Project (www.transact.org), 1999.

F. Kaid Benfield, Jutka Terris and Nancy Vorsanger, *Solving Sprawl: Models of Smart Growth in Communities Across America*, Natural Resources Defense Council (www.nrdc.org), 2001.

Center for Watershed Protection (www.cwp.org) provides analysis and resources for minimizing hydrologic impacts and pollution.

William Fulton, Jan Mazurek, Rick Pruetz and Chris Williamson, *TDRs and Other Market-Based Land Mechanisms: How They Work and Their Role in Shaping Metropolitan Growth*, Brookings Institution Center on Urban and Metropolitan Policy (www.brookings.edu), 2004.

Land Trust Alliance (www.lta.org) provides resources for establishing and supporting land trusts.

Smart Growth Policy Reforms

Matthew McKinney, "Linking Growth and Land Use to Water Supply," *Land Lines*, Lincoln Institute for Land Policy, (www.lincolninst.edu), April 2003, pp. 4-6.

NEW, *The Portland Exception: Comparison of Sprawl, Smart Growth, and Rural Land Loss in 15 US Cities*, Northwest Environment Watch (www.northwestwatch.org), 2004.

NRTEE, *Securing Canada's Natural Capital: A Vision for Nature Conservation in the 21st Century*, National Round Table on the Environment and Economy (www.nrtee-trnee.ca), 2003.

D.R. Porter, *Profiles in Growth Management: An Assessment of Current Programs and Guidelines for Effective Management* Urban Land Institute (www.uli.org), 1996.

USEPA, *Smart Growth Policy Database*, US Environmental Protection Agency (<http://cfpub.epa.gov/sgpdb/browse.cfm>).

Transport Planning Reforms

Smart Growth involves changing land use patterns, which tends to be a slow process. In most communities only 1-4% of land is developed or redeveloped each year. Smart Growth benefits are therefore generally slow to be achieved. However, these benefits tend to be very diverse and durable. They provide a legacy that can improve lives for years, decades and generations in the future.

Current transport planning tends to focus on a limited set of planning objectives and transportation improvement strategies, which tends to favor sprawl and automobile-dependency. More comprehensive, flexible, long-term planning tends to support Smart Growth and transportation diversity.

Planning decisions often involve trade-offs between *accessibility* (people's ability to reach goods, services and activities) and *mobility* (physical travel). Conventional planning practices emphasize the benefits of improving vehicle mobility by increasing road and parking capacity, while Smart Growth emphasizes the benefits of improving accessibility by locating activities closer together and providing multiple travel options. For example, locating a along a major highway, with abundant parking supply increases mobility but reduces accessibility. Locating a school in the center of a neighborhood within walking and cycling distance of most homes maximizes accessibility but may seem inconvenient to motorists.

Many current planning practices tend to favor mobility over accessibility. For example, transportation system quality is often evaluated primarily in terms of roadway Level-of-Service (LOS), a grading system from A to F, indicating the ease of travel by motor vehicle. Roadway LOS is often used to prioritize transport improvements and constrain infill development. For example, many communities have *concurrency* requirements that limit the amount of development allowed in a particular location based on its predicted generation of vehicle trips and whether that will reduce the LOS on nearby roads. Similarly, generous minimum parking requirements encourage automobile travel and the dispersion of destinations, and discourage compact and infill development.

Current planning practices also tend to undercount and undervalue alternative modes such as walking, cycling, public transit and telework. This occurs because conventional travel surveys tend to overlook short trips, non-commute travel, travel by children, and nonmotorized links of trips that involve motorized travel (for example, a bike-transit-walk is often categorized simply as a transit trip, and a walk-drive-walk trip is simply categorized as an automobile trip; the cycling and walking links do not count), and because conventional economic analysis tends to focus on a limited number of planning objectives, and so overlooks many benefits of reduced vehicle traffic and increased use of alternative modes (for example, the parking cost savings and reduced accident risk that results when travelers shift to transit, and the health benefits of increased walking and cycling are generally ignored in transport planning).

Described differently, conventional planning evaluates transportation system performance based mainly on vehicle traffic *speeds* but ignores travel *distances* (the

distribution of destinations and therefore average travel distance between them), travel *options* (such as whether travelers can choose walking, cycling or transit rather than driving), and *qualitative factors* such as the ease of obtaining transit information, the comfort and cleanliness of transit vehicles, and whether streetscapes are pleasant for walking. As a result conventional planning favors transportation polices and investments that disperse destinations and lead to automobile-dependency, and undervalues Smart Growth policies and investments that increase land use accessibility, travel options, and qualitative improvements to the transportation system.

Current transportation economic analysis practices tend to take a relatively short-term perspective, valuing improvement within three to five years far more than benefits ten or twenty years in the future. As a result, it can justify transportation improvements that provide short-term benefits but increase long-term costs, such as highway capacity expansion which may reduce traffic congestion for a few years, but over the long term worsens regional traffic congestion, accident risk and pollution emissions by stimulating sprawl and therefore increasing total per capita vehicle mileage and automobile dependency.

Current planning gives equal weight to virtually any type of mobility increase. Some economists argue that increased mobility by people who are mobility constrained (they currently have limited mobility, for example, because they cannot drive) should be given greater weight than increased mobility by people who are already highly mobile, reflecting the principle of *diminishing marginal benefits* (Martens, 2005). For example, a transit improvement that helps non-drivers who currently travel only 5,000 annual miles increase their mobility to 7,000 annual miles probably provides more benefits than a highway improvement which allows long-distance commuters who currently drive 30,000 annual miles to drive 32,000 annual miles.

Accessibility-oriented transportation planning involves changing planning practices to better evaluate accessibility, and the full, long-term impacts of a transportation planning decision (“Comprehensive Transport Planning,” VTPI, 2005).

Benefits, Costs and Consumer Impacts

Accessibility-based planning can provides significant cost savings and benefits to individuals and society. For example, to the degree that accessibility-oriented planning reduces travel distances and improves travel options, reduces vehicle ownership and operating costs, reduces traffic and parking congestion, reduces accident risks and pollution emissions, and improves accessibility and mobility options for non-drivers.

Implementation Strategies

More comprehensive and flexible transport planning can involve a variety of specific strategies (VTPI, 2005):

- Use a comprehensive evaluation framework that considers all significant impacts to consumers, businesses and communities, including those that are indirect and long-term.
- Use performance indicators that reflect *accessibility* rather than just *mobility*. Develop methods to quantify accessibility, taking into account people's abilities (whether they are able to walk and drive), time and monetary budgets. For example, determine the number of jobs and services within a 30-minute commute time for area residents, taking into account the travel options available to those who cannot use an automobile.
- Consider impacts on nonmotorized travel, including reduced pedestrian access from inadequate walking facilities, wider streets, increased vehicle traffic speeds and volumes, and more dispersed destinations.
- Apply longer-term analysis for durable impacts, and apply lower discount rates when evaluating decisions that leave desirable legacies to future generations.
- Establish multi-modal performance indicators, including level-of-service ratings for walking, cycling, driving, public transit and telecommunications.
- Use more comprehensive travel surveys and data analysis, particularly regarding measurement of nonmotorized travel and basic mobility for disadvantaged people.
- Identify the reduction in estimated vehicle trip and parking generation rates for various factors such as proximity to transit, land use mix, parking pricing and commute trip reduction programs. Use this to reduce parking and roadway capacity expansion requirements in Smart Growth areas.
- When implementing concurrency requirements and developer fees, apply variable congestion thresholds in more accessible and multi-modal areas, recognizing that people who live and work in such areas tend to generate fewer vehicle trips.
- Use an up-to-date travel model that can forecast the traffic generated by increased roadway capacity and the effects this will have on downstream congestion and roadway costs, parking costs, and pollution and sprawl.
- Consider long-term impacts transport planning decisions have on land-use, including the dispersion of destinations and loss of greenspace from decisions that increase sprawl.
- Apply the principle of diminishing marginal benefits when evaluating transportation, so increased mobility by transportation disadvantaged people is given more weight than the same increase in mobility by people who currently travel high annual mileage.
- Apply *Context Sensitive Design* (CSD), which means that design standards can be adjusted to reflect community values and accommodate multiple objectives.
- Apply *Contingency-Based Planning*, which identifies solutions that will be deployed if needed to address future problems.
- Apply *Access Management*, which refers to more integrated transportation and land use planning to improve accessibility and transportation system efficiency.
- Improve *public participation* in transport planning means that citizens and stakeholders are more involved in transportation planning and funding allocation decisions.

Examples and Case Studies

The following case studies are from Peaks and Hayes (1999).

- In New York, the West Side Highway is being rebuilt — not as the super-highway Westway that was once proposed but as a six-lane urban boulevard with tree-lined buffers and medians, replicas of early 20th-century street lights, walkways, and bikeways.
- In Torrance, Calif., congestion was relieved on Carson Street, and safety was increased through the addition of a two-way left-turn lane; improved pavement; and new curbs, gutters, and sidewalks. Landscaping improvements in the median and along the sidewalks improved the aesthetics.
- In Oregon, the historic Columbia River Highway is being restored with stone and timber guardrails and concrete caps, concrete arches on viaducts, and an interpretive center. Oregon Department of Transportation plans to restore as much as possible of the entire 120-kilometer roadway as either a scenic highway or as a hiking and biking trail.
- In Lake Tahoe, Calif., a narrow two-lane section of Route 89 covering about a kilometer was upgraded to stabilize the slope and control erosion to prevent rock slides. At the insistence of local officials, special two-beam guardrails were installed that provided a more scenic view but are invisible from the lake. Trees and shrubs were planted to help the project blend into the surrounding environment.
- In Westminster, Md., numerous public meetings resulted in a revised plan for upgrading the main street. The final plan included a reduced roadway width, protecting 34 of 42 mature trees with space for 104 new trees, new and widened sidewalks, and 11 pedestrian-friendly areas with landscaping and other aesthetic improvements. Westminster's heritage was also promoted by constructing sidewalks and crosswalks with concrete made to look like the bricks used in nearby historical buildings.
- In Lincoln County, Ore., the Lincoln Beach Parkway was reconstructed with a raised landscaped median separating two lanes of traffic on each side. Bicycle lanes were built along the shoulders. Median breaks were tailored to allow for easy movement by oversized recreational vehicles and tour buses.

FDOT Multi-Modal Level-of-Service Evaluation
(www.dot.state.fl.us/planning/systems/sm/los/default.htm)

The Florida Department of Transportation has developed several planning tools for evaluating access and multi-modal level-of-service. The state's "Transportation Concurrency Management Area" defines geographically compact areas where traffic congestion thresholds are reduced due to a high level of accessibility and quality travel options. FDOT pays particular attention to walking and cycling.

Fort Collins, Colorado

A special *Multimodal Transportation Level of Service Manual* is used in Fort Collins and nearby urban areas to evaluate accessibility, connectivity and continuity of various modes. The city established varying minimal acceptable levels of service (LOS) depending on street classification and land use. These standards range from LOS B on connectors in low-density, mixed residential areas, to LOS E on arterials in commercial corridors and mixed-use districts. Pedestrian and bicycling LOS standards take into

account directness, continuity, street crossings, visual interest, amenities and security of pedestrian and cycling facilities. Specific pedestrian LOS standards are established for transit corridors and around schools.

Redmond, Washington

Redmond’s transportation master plan is based on Washington State growth management requirements. The plan includes integrated transportation and land use planning objectives, concurrency management and performance monitoring. The plan states, “level of service standards should reflect access, mobility, mode split, or capacity goals for the transportation facility depending on the surrounding development density and community goals, and should be developed in consultation with transit agencies serving the planning area.” Local transportation planning decisions are integrated with regional multi-modal planning goals. The country’s multi-modal LOS standards include traffic volume and roadway capacity, regional transit service quality, local transit accessibility, bicycle system implementation, and pedestrian environmental adequacy.

Montgomery County and City of Rockville, Maryland

These jurisdictions have different roadway LOS standards depending on whether or not an area is transit-oriented, as summarized in the table below. Transit-oriented areas are allowed to have higher levels of local congestion, since development is more concentrated, there are more travel options, and a smaller portion of trips are made by automobile. These jurisdictions also have Transportation Demand Management programs that encourage use of alternative modes in transit-oriented areas. Developers are provided credits based on the quantity and quality of TDM strategies and programs they implement. This supports increased land use accessibility.

Table 6 Comparison of Allowable Congestion Levels

Road Classification	Transit-Oriented Area		Non-Transit-Oriented Area	
	V/C Ratio	LOS	V/C Ratio	LOS
Primary residential (Class II)	Less than 0.9	D	Less than 0.8	C
Major arterial, minor arterial, major collector (Class I)	Less than 1.0	E	Less than 0.9	D
Business district roads, freeway ramps and intersections of two major arterials	Less than 1.0	E	Less than 1.0	E

Transit-oriented areas are allowed to have higher levels of local congestion, since development is more concentrated and there are more travel options.

Information Resources

FDOT, *Quality/Level of Service Handbook*, Florida Department of Transportation (www.dot.state.fl.us/planning/systems/sm/los/los_sw2.htm#handbook), 2003.

FHWA, *Context Sensitive Design/Thinking Beyond the Pavement*, Federal Highway Administration (www.fhwa.dot.gov/csd), 2002.

Ft. Collins, *Multimodal Transportation Level of Service Manual*, City of Fort Collins, Larimer County and City of Loveland (www.co.larimer.co.us/engineering/GMARdStds/ApdxH%2010-01-02.pdf), 2002.

Susan Handy, Robert G. Paterson and Kent Butler, *Planning for Street Connectivity: Getting From Here to There*, Planning Advisory Service Report 515, American Planning Association (www.planning.org), 2004.

Larry Marcus, "Smart Growth and Congestion: What Is The Right Balance?" ITE Transportation Planning Council Newsletter, Institute of Transportation Engineers (www.ite.org), Fall 2005, pp. 2-4.

Karel Martens, "Grounding Transport Planning On Principles Of Social Justice," Submitted to Berkeley Planning Journal, (www-dcrp.ced.berkeley.edu/bpj), July 2005.

National Transportation Enhancements Clearinghouse (NTEC) (www.enhancements.org) provides information to incorporate various types of community improvements in transportation projects, including trails and pedestrian facilities, scenic and landscape improvements, preservation of historic and cultural facilities, and environmental protection.

Harold E. Peaks and Sandra Hayes, "Building Roads in Sync With Community Values," *Public Roads*, (www.tfhr.gov/pubrds/marapr99/flexdsgn.htm), 1999.

PPS, *Context Sensitive Solutions*, Project for Public Spaces (www.pps.org/CSS/cssonline.htm), is a comprehensive website devoted to CSD.

Scenic America, *Getting It Right In the Right of Way: Citizen Participation in Context-Sensitive Highway Design*, Scenic America (www.scenic.org), 2000.

TRB, *Best Practices For Achieving Context-Sensitive Solutions*, Transportation Research Board, NCHRP Report 480 (www.trb.org), 2002.

WSDOT, *Building Projects that Build Communities: Recommended Best Practices*, Community Partnership Forum, Washington State Department of Transportation (www.wsdot.wa.gov/ta/paandi/paihp.html), 2003.

More Neutral Transport Funding

Current transportation funding practices tend to be biased in various ways that favor motor vehicle travel and encourage sprawl. Many jurisdictions have laws that limit vehicle registration and fuel tax revenues to highway expenditures, even if other types of transportation improvements are more urgent and cost effective. Highway budgets often have more total funding, and highway projects often have lower funding match requirements than other modes (Puentes and Prince, 2003). Many jurisdictions devote significant funds to parking facility subsidies.

Transport funding practices also tend to favor capital expenditures over operations and maintenance. Many federal and state funds may only be used for new highway construction, and cannot be transferred to maintenance or demand management programs. This encourages jurisdictions to expand infrastructure beyond what is optimal, even when they lack adequate resources to operate and maintain existing facilities.

This encourages public officials to favor highway solutions to transportation problems, encourages urban expansion over redevelopment of existing urban communities, encourages automobile-oriented land use development, encourages development of new facilities over incremental improvements to existing facilities or demand management strategies even when they are more cost effective, and results in higher per-capita transportation funding in suburban areas than in more urbanized areas. More neutral and efficient funding practices tend to support Smart Growth and more balanced transportation investments.

Implementation Strategies

For information on these strategies see VTPI, 2005.

- *Comprehensive Transportation Planning* takes into account a wider range of impacts (benefits and costs) and solutions than typically considered in transportation planning. For example, it takes into account indirect and downstream impacts that result from roadway capacity expansion and other policies that increase vehicle traffic, and additional benefits that result from improved travel options and reduced automobile traffic.
- *Least-Cost Planning* (also called *Integrated Planning*) is an approach to resource planning that considers demand management solutions equally with strategies to increase capacity, and considers all significant impacts (costs and benefits), including non-market impacts. When applied to transportation planning it tends to shift more planning and investment resources to alternative modes and mobility management programs.
- *Transportation Operations* refers to transportation programs that improve management of existing transportation infrastructure (particularly roadways), often as an alternative to capacity expansion.
- *Fix-It-First Policies* mean that priority is given to maintenance, operations and incremental improvements of existing facilities, and major capital projects are only implemented if there is adequate additional funds (SELC and ELI, 1999; NGA, 2004; Lyles, 2005).
- *Contingency-Based Planning*, identifies solutions that can be deployed if needed to address future problems rather than implementing capacity expansion in anticipation of future needs.

- *Flexible Funding* means that transportation funds can be used for whatever type of program is most cost effective and beneficial overall.
- *Alternative Transportation Program Funding* means that significant funds are dedicated to alternative modes and transportation management programs.
- *Transportation Growth Management* includes special programs designed to improve coordination between transportation and land use planning. This may include funding for land use planning, and requirements that transportation investments support strategic land use planning objectives.
- *Urban Transportation Funding* allocates tax funds towards existing urban areas, to insure that urban residents receive a fair share of transportation resources, and to support smart growth development patterns.

Examples and Case Studies

Operations

The U.S. Federal Highway Administration, in cooperation with various other transportation professional organizations, has developed an Office of Operations (www.ops.fhwa.dot.gov) which provides institutional support and information for various operations, maintenance and management strategies that result in more efficient use of existing roadway capacity.

Preventive Maintenance (FCM, 2002)

A primer on preventive infrastructure maintenance provides guidelines for applying least-cost planning to roads. It explains, “Preventive maintenance is intended to treat small problems before they require more expensive repairs. By slowing the rate of deterioration, treatment can effectively increase the useful life of pavement. However, the practice of systematically identifying payments that would benefit most from preventive maintenance, and of implementing treatments in a timely manner, is often neglected.”

Washington State Growth Management

The Washington State Growth Management Act requires each Regional Transportation Planning Organization (RTPO) to develop a regional transportation plan based on a least cost planning methodology that identifies the most cost-effective transportation facilities, services and programs for their region. Regional Transportation Plans adopted after July 1, 1995 should incrementally incorporate least-cost planning methodologies as they are updated. All RTPs developed or updated and adopted after July 1, 2000 must be based upon a least-cost planning methodology.

Information Resources

Patrick DeCorla-Souza, Brian Gardner, Jerry Everett & Michael Culp, *A Least Total Cost Approach to Compare Infrastructure Alternatives*, Transportation Modeling Improvement Program, FHWA (<http://tmip.fhwa.dot.gov>), 1999.

Office of Operations Website (www.ops.fhwa.dot.gov), by the Federal Highway Administration, provides information and resources for strategies and programs that result in more efficient use of existing highway infrastructure.

ITE, *Smart Growth Transportation Guidelines*, Smart Growth Task Force, Institute of Transportation Engineers (www.ite.org), 2003.

Smart Growth Policy Reforms

Ward Lyles, *Where Do We Go From Here? Wisconsin Transportation at the Crossroads*, 1000 Friends of Wisconsin & The Land Use Institute (www.1kfriends.org/documents/1KFriendslegislat_001.pdf), 2005.

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SELC and ELI, *Smart Growth in the Southeast: New Approaches to Guiding Development*, Southern Environmental Law Center (SELC) and Environmental Law Institute (ELI) (www.eli.org/pdf/rrsoutheast99.pdf), 1999.

STPP, *The \$300 Billion Question: Are We Buying a Better Transportation System?*, Surface Transportation Policy Project (www.transact.org/library/Recommendations.asp), 2003.

Brian Taylor, "When Financing Leads Planning: Urban Planning, Highway Planning, and Metropolitan Freeways in California," *Journal of Planning Education and Research*, Vol. 20, No. 2, 2000, pp. 196-214.

USEPA, *Characteristics and Performance of Regional Transportation Systems*, Smart Growth Program, US Environmental Protection Agency (www.epa.gov/smartgrowth/performance2004final.pdf), Feb. 2004.

VTPI, *Online TDM Encyclopedia*, Victoria Transport Policy Institute (www.vtpi.org), 2005.

Mobility Management Programs

Mobility Management (also called *Transportation Demand Management* or *Trip Reduction*) includes a variety of strategies and programs that encourage more efficient use of transportation resources by changing travel behavior (VTPI, 2005). Mobility Management is often implemented as an alternative to road and parking facility capacity expansion. Mobility Management both supports and is supported by Smart Growth.

Implementation Strategies

- *Transportation Management Association* can provide mobility management services for several employees in an area, such as a downtown, neighborhood commercial center or mall.
- *Commuter Trip Reduction (CTR)* programs and ordinances encourage and require developers, employers, or building managers to provide incentives for occupants or employees to use alternative modes.
- *Pedestrian Improvements* include sidewalk, pathway, crosswalk and streetscape improvements.
- *Transit and Ridesharing Improvements* include a wide variety of strategies and programs that improve public transit, carpool and vanpool speed, convenience, comfort, affordability and security.
- *Bicycle Improvements* include paths, lanes, storage and changing facilities.
- *Bike/Transit Integration* means that bicycle can access and be carried on public transit vehicles.
- *Flextime*, gives commuters more flexibility in when they must arrive at work.
- *Telework* consists of electronic communication that substitutes for physical travel.
- *Carsharing* consists of vehicle rental services designed to substitute for private vehicle ownership.
- *Distance-Based Pricing* consists of various pricing reforms to charge motorists more directly for their use of roadways and for vehicle insurance.
- *Commuter Financial Incentives* consist of various incentives for commuters to use alternative travel modes, such as the ability to *cash out* free parking (receive the cash equivalent of parking subsidies).
- *Campus Transport Management* includes various programs to encourage efficient commuting on school, college and industrial campuses.

Examples and Case Studies

Oregon's ECO Program (www.deq.state.or.us/nwr/ECO/ECO_Rules.pdf)

The state of Oregon has a Employee Commute Options (ECO) program requires employers with more than 50 employees in the Portland area to make a good faith effort to encourage employees to reduce automobile commute trips, with a target of a 10% reduction over three years. Employers to fail to make such an effort may be fined.

Oregon Business Energy Tax Credit Program (www.energy.state.or.us/bus/tax/taxcdt.htm)

The Oregon Office of Energy offers the Business Energy Tax Credit to those who invest in energy conservation, recycling, renewable energy resources and less-polluting transportation fuels. Projects that reduce employee commuting or work-related travel and investments in cleaner-burning transportation fuels may qualify for a tax credit. Projects must reduce work-related travel by 25% to be eligible. To date, more than 5,500 Oregon energy tax credits have been awarded (see website for a list of case studies). Altogether, those investments save or generate energy worth about \$100 million a year. The tax credit is 35% of the eligible project costs - the incremental cost of the system or equipment that's beyond standard practice. You take the credit over five years: 10% in the first and second years and 5% each year thereafter. If you can't take the full tax credit each year, you can carry the unused credit forward up to eight years. Those with eligible project costs of \$20,000 or less may take the tax credit in one year.

Space Coast Commuter Assistance (www.ridescat.com/commuterassistance/index.html)

The Space Coast Area Transit agency in Southern Florida supports the Space Coast Commuter Assistance (SCCA) program to help commuters use alternative modes. The program supports car/vanpool matching, fixed route bus service, employer parking incentive programs, developing Park-n-Ride locations, telecommuting options, the vanpool program, alternative work scheduling, bicycle commuting, pedestrian commuting, or combination of the above elements. The agency helps develop individualized commute trips reduction programs for each business. There is no charge for SCCA's services.

Commuter Connections (www.commuterconnections.org)

Commuter Connections is a network of Washington DC metropolitan commuter transportation organizations coordinated by the Metropolitan Washington Council of Governments (COG). It is the main commuter information resource for Maryland, Virginia, and the District of Columbia. It helps businesses identify opportunities for voluntarily complying with the Clean Air Act guidelines to reduce vehicle emissions, and provides the following services:

- Promoting telework programs and other pollution reduction activities.
- Using Geographic Information System software to match commuters for ridesharing.
- Offers a regional Guaranteed Ride Home program.
- Operates a regional system of Traveler Information kiosks, InfoExpress.

Trip Reduction Ordinances (www.nctr.usf.edu/clearinghouse/tro)

Some jurisdictions have ordinances that require or encourage commute trip reduction programs. Below are some examples.

- *Washington State's Commute Trip Reduction Law* (CTR) is designed to reduce traffic congestion, pollution and fuel consumption (www.wsdot.wa.gov/pubtran/ctr). Employers in major urban areas with more than 100 employees at a worksite are required to develop CTR programs that encourage employees who drive alone to work to consider using an alternative commute mode such as buses, vanpools, carpools, biking, walking, teleworking and flexible work schedules.

Smart Growth Policy Reforms

- *Maricopa County* (www.valleymetro.org/Rideshare/EmployerServices/ordinance.htm) requires major worksites with 50 or more employees to implement trip reduction programs.
- *Cambridge* (www.ci.cambridge.ma.us/~CDD/envirotrans/ptdm/index.html) has an ordinance requiring businesses to implement TDM at new developments.
- *South Natomas* (www.SouthNatomasTMA.org) allows developers to use TDM programs, such as participation in a TMA, to help gain municipal acceptance of new developments.
- *Bay Area* (www.arb.ca.gov/DRDB/BA/CURHTML/R13-1.HTM) requires all public and private employers with 100 or more workers at site to establish commute trip reduction targets and identify various strategies to help achieve these targets.

Information Resources

Association for Commuter Transportation (www.actweb.org) is a non-profit organization supporting TDM programs.

Center for Urban Transportation Research, University of South Florida (www.cutr.eng.usf.edu) provides resources and training for CTR program development.

Commuter Choice (www.commuterchoice.com) provides information on Commute Trip Reduction programs and benefits. The *Commuter Choice Business Calculator* (www.commuterchoice.com/employers/businesscalculator.htm) indicates how much business can save by implementing Commuter Choice programs.

FDOT, *Commute Alternatives Systems Handbook*, Florida Department of Transportation (http://plan2op.fhwa.dot.gov/pdfs/Pdf1/Comm_alt.pdf), manual on encouraging alternative modes for commuting trips.

ICF Consulting, *Strategies for Increasing the Effectiveness of Commuter Benefits Programs*, Transit Cooperative Research Program (TCRP) Report 87 (http://gulliver.trb.org/publications/tcrp/tcrp_rpt_87.pdf), Transportation Research Board (www.trb.org), 2003.

The *International Council for Local Environmental Initiatives* (www.iclei.org) provides a variety of transportation management resources suitable for implementation at the local level.

SAVE, *Toolbox for Mobility Management in Companies*, European Commission (www.mobilitymanagement.be), 2001. This website provides information to help companies develop mobility plans.

Travel Plans Website (www.local-transport.dft.gov.uk/travelplans/index.htm) provides guidance for developing employer and community transportation management programs.

USEPA, *Commute Alternative Incentives*, Transportation and Air Quality TCM Technical Overviews, US Environmental Protection Agency (www.epa.gov/oms/transp/publicat/pub_tech.htm), 1998.

VTPI, *Online TDM Encyclopedia*, Victoria Transport Policy Institute (www.vtppi.org), 2005.

Parking Management

Parking Management includes a variety of strategies that encourage more efficient use of existing parking facilities, improve the quality of service provided to parking facility users, and address specific problems associated with current parking facility design. Parking management supports Smart Growth by allowing greater flexibility in parking facility location and design, reducing the total amount of land needed for parking, reducing the costs of infill and compact development, by creating more walkable communities, and by encouraging the use of alternative travel modes.

Implementation Strategies (“Parking Management,” VTPI, 2005)

- *Shared Parking.* Share parking facilities among a group of users, rather than assigning each motorist an individual space.
- *More accurate requirements.* Reduce minimum parking requirements at sites with lower parking demand.
- *Allow Trade-offs.* Reduce parking requirements at facilities with mobility management programs.
- *Parking Pricing.* Charge motorists for using parking facilities.
- *Cashing Out.* Provide the cash equivalent of free parking to commuters who use alternative modes.
- *Unbundle parking.* Rent and sell parking facilities separately, rather than automatically included with housing and commercial leases and purchases.
- *Location Efficient Development and Mortgages.* Design and manage development at more accessible locations to encourage use of alternative modes.
- *Improve User Information.* Provide convenient information on parking availability and price.
- *Address spillover problems.* Use management, pricing and enforcement strategies to address spillover problems.
- *Develop overflow parking plans.* Use overflow parking plans, rather than excessive supply, to address occasional events.
- *Parking caps.* Limit maximum parking supply in an area.
- *Improve walkability.* Improve pedestrian conditions to allow motorists more convenient access to a larger number of parking spaces.
- *Tax parking.* Impose taxes on parking facilities and their use. Apply workplace parking levies on unpriced parking provided by employers to employees.
- *Bicycle parking.* Provide bicycle parking as a substitute to automobile parking facilities.
- *Parking revenue.* Use parking meter revenue to fund local-area transportation demand management programs.

Examples and Case Studies

Vancouver Parking Management

The City of Vancouver is developing a more flexible approach to parking requirements for multi-family dwellings to support efficient transportation, smart growth and affordable housing planning objectives. City staff have proposed a Sustainable Transportation Credit Program that allows developers more flexibility based on their specific location and circumstances. The program is loosely based on the LEED™ Green building rating system. Developers receive credits for reducing the number of parking stalls, providing parking spaces for carshare vehicles, and providing annual transit passes to building occupants.

Portland Parking Management

The Tri-County Metropolitan Transportation District, which manages transportation in the Portland, Oregon area, has implemented various parking management strategies around transit stations to minimize costs and support [Transit Oriented Development](#). These include:

- Arranging [Shared Parking](#) with Park & Ride and other types of land uses, including apartments, churches, movie theaters and government buildings near transit stations.
- Using lower minimum parking requirements around transit stations.
- Allowing Park & Ride capacity near transit stations to be reduced if the land is used for Transit Oriented Development, thus allowing car trips to access transit to be replaced by walk/bike trips.

Monrovia Parking Management

The city of Monrovia allowed development of a 12-screen, 2,400-seat movie theater in the middle of its downtown without providing the usual adjacent parking structure. Monrovia's Old Town business district is compact (six blocks long and two wide) and abutted by residential neighborhoods on three sides. Medium and high-density housing (mainly senior citizen) had been developed immediately adjacent to the commercial properties. Transit buses provide service to the edges of Old Town and Monrovia has an active dial-a-ride service providing door-to-door public transportation. Old Town was redeveloped in the 1970s as a pedestrian-friendly "main street" shopping and service district. Free public parking lots and street parking combined to provide more than 1,200 spaces scattered throughout the district that were never more than 80% filled. A theater was to be built on one of the public parking lots, so those spaces had to be replaced, and were by the expansion of another City-owned lot and the re-configuration of a sidestreet adjacent to both that lot and the theater site. When the theater opened, there were more spaces than before the project began. In its first six months of operation, the theater has attracted good crowds and the parking has yet to be a problem. Lot and street parking is sufficient to handle the demand and convenient enough so movie-goers will happily walk two-to-three blocks between their cars and the theater to stroll past shops and restaurants.

Information Resources

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Educate Development Professionals

Designers, developers, builders and financing institutions are often unfamiliar with Smart Growth and new urbanist practices and the benefits they can provide. Communities can help educate people involved in land use development decisions through presentations, workshops, publications and design contests, often in partnership with professional organizations, such as those for planners, developers, designers and building trades. Special efforts may be directed at changing development financing practices to allow more mixed-use, infill development (Leinberger, 2001), and to modify zoning codes (Otak, Inc., 1999).

Implementation Strategies

- Develop Smart Growth and transit-oriented development land-use guidelines and design manuals.
- Sponsor workshops, conferences and courses for public officials and professionals.
- Encourage colleges and universities to offer courses and workshops on land use issues.
- Establish professional development programs and information clearinghouses to support progressive development.
- Provide contests and awards for Smart Growth programs.

Examples and Case Studies

Growing Smart Handbook (www.planning.org/growingsmart/index.htm).

The American Planning Association (APA) produced a “Growing Smart” legislative handbook and user manual. It is based on examples from statute books across the nation, of virtually all the major types of laws that states have enacted to guide development, and to allow and support better land use policies at the regional and local level. Model laws are provided to help states and communities redraft their own policies. “States can’t do smart growth until they have modernized planning laws” so they’re applicable to 21st century conditions, says APA Executive Director W. Paul Farmer.

Portland Region (www.trans.ci.portland.or.us)

The city of Portland, Oregon has numerous programs to educate and encourage developers and designers to apply Smart Growth principles.

Seattle Street Improvement Programs (Seattle, 1996)

The city of Seattle has developed a guidebook called *Making Streets that Work* which provides information for residents concerning how to request various types of street improvements, including traffic calming, street furniture, and temporary road closures for special events.

Smart Growth Network (www.smartgrowth.org/casestudies/casestudy_index.html)

The Smart Growth Network has information on more than a dozen Smart Growth development projects.

Portland Guide for Public Street Improvements
(www.portlandonline.com/auditor/index.cfm?c=27478).

The city of Portland, Oregon developed several information resources to help improve street design quality:

- *Design Guide for Public Street Improvements*, helps consulting engineers prepare construction drawings for public street improvements.
- *Design Standards for Public Streets*, describes national and local engineering standards for street elements and right-of-way widths, including the city of Portland's *Skinny Street Standards* (adopted 1991), *Pedestrian Design Guidelines of the Pedestrian Master Plan* (adopted 1998), and *Bicycle Master Plan* (adopted 1996).
- *Creating Public Streets and Pedestrian Connections through the Land Use and Building Permit Process*, which incorporates existing street design standards and identifies other relevant design manuals. Where possible, information has been simplified for easier understanding, and it is presented based on zoning designations.

Information Resources

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Smart Growth America (www.smartgrowthamerica.org) is a nationwide coalition promoting new development patterns that protect farmland and open space, revitalize neighborhoods, keeps housing affordable, and provides more transportation choices.

Smart Growth Network, *Getting To Smart Growth: 100 Policies for Implementation*, Smart Growth Network (www.smartgrowth.org) and International City/County Management Association (www.icma.org), 2002.

Urban Land Institute (www.uli.org) is a professional organization for developers that provides practical information on innovative development practices, including infill and sustainable community planning.

Land Use Impact Evaluation Tools

Public officials often make decisions using transportation and land use models that do not accurately predict long-term impacts. For example, the most commonly used transportation models do not consider land use impacts of infrastructure investments, and so underestimate the negative impacts that result from road and parking policies that stimulate sprawl, or the benefits that result from transit investments and smart growth policies that stimulate compact, multi-modal urban development.

Implementation Strategies

- Improve travel surveys and other data collection practices to provide more detailed information on travel demand, particularly nonmotorized travel and basic mobility for disadvantaged people.
- Develop and apply planning models which measure land use accessibility rather than just vehicle mobility.
- Improve and apply transportation and land use planning models to better evaluate the effects of planning decisions.

Examples and Case Studies

Integrated Models

Integrated land use and transportation models attempt to respond to the shortcomings of traditional transportation models. These typically involve interconnected sets of submodels, each representing a different aspect of the urban system. The gravity-based Integrated Transportation Land Use Package (ITLUP) and economic equilibrium CATLUS are two such models. Integrated models are not transferable across geographic areas due to their sensitivity to small changes in model parameters and assumptions; they must be calibrated to unique local data. This makes them expensive and difficult to compute.

Improving Four-Step Models

Conventional, four-step traffic models, such as the Urban Transportation Modeling System (UTMS), can be improved incrementally by integrating more land use factors, such as mix, connectivity, and design, and by incorporating feedback loops between steps to recognize reciprocal impacts. The Land Use Transportation Air Quality Connection (LUTRAQ) is one study that attempted this, performed in Portland, Oregon (1000 Friends of Oregon, 1997). It built on the four steps used in conventional traffic models, but adjusted household auto ownership in response to land use factors such as transit accessibility, and allowed for feedback loops between steps to allow for shifts in mode and destination choice in response to travel conditions.

Activity-Based Models

Another new approach, called *activity-based modeling*, predicts travel based on information about people's demand to participate in activities such as work, education, shopping, and recreation, and the spatial and temporal distribution of those activities.

Information Resources

1000 Friends of Oregon, *Making the Connections: A Summary of the LUTRAQ Project*, 1000 Friends of Oregon (www.friends.org), 1997.

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Summary

Table 7 lists the Smart Growth reform strategies described in this report, and indicates the level of government at which they are typically applied. In many cases, higher levels of government (federal, state or provincial) can provide funding or incentives for strategies that are actually implemented by regional or local governments.

Table 7 Summary of Smart Growth Policy Reforms

Strategy	Federal	State/Prov.	Reg./Local
Comprehensive Community Planning		X	X
Intergovernmental Coordination	X	X	X
Location Efficient Development		X	X
Location-Based Fees		X	X
Smart Tax Policies	X	X	X
Locate and Design Public Facilities For Smart Growth	X	X	X
Reform Zoning Codes		X	X
Encourage Urban Redevelopment	X	X	X
Growth Controls and Openspace Preservation		X	X
Transport Planning Reforms	X	X	X
More Neutral Transport Funding	X	X	X
Mobility Management Programs		X	X
Parking Management			X
Educate Development Professionals	X	X	X
Land Use Impact Evaluation Tools	X	X	X

State/Pro. = State or Provincial Governments Reg./Local = Local or Regional Governments

There are a number of justifications for implementing these reforms. Many correct existing market distortions which result in economically excessive sprawl and automobile dependency, or are justified on second-best grounds to offset existing distortions which favor sprawl. Many of these reforms support planning objectives such as reduced congestion costs, accident risk and pollution emissions, openspace preservation, and improved mobility for non-drivers. Although individual impacts tend to be modest and slow to be achieved, they provide significant, multiple, durable benefits.

Talking Points On Compact Development (NHBA, 2005; www.nahb.org)

Below are suggestions by the National Home Builders Association for promoting more compact, mixed, smart growth development.

An important part of Smart Growth is using land more efficiently and preserving those lands that are most environmentally sensitive. By building in a more compact way, these goals can be achieved. Compact development also reduces development costs through more efficient use of infrastructure, which in turn makes housing more affordable. Compact development can encompass the following:

Cluster development produces very attractive and marketable communities and makes it easier for developers to preserve environmentally sensitive lands such as wetlands and forests by allowing lots to be grouped on certain portions of a site, rather than spread uniformly across a site, so that other areas of the site may remain undisturbed as open space. Yet many localities make it difficult or impossible to develop in this manner.

Higher density development uses land more wisely by building more homes on the land. Higher density housing could include single-family homes on smaller lots, or it could include attached homes or apartment buildings. Many people enjoy the affordability and ease of maintenance of higher density housing. Higher densities also create cost-savings through greater efficiencies in infrastructure. Zoning codes that prohibit this type of development should be changed.

Mixed-use development can produce diverse and convenient communities that can have the added benefit of reducing traffic. By integrating different uses such as residences, offices, and shopping, many daily vehicle trips can be eliminated or reduced in length. Zoning was established to separate different uses that created nuisances, such as separating factories from residences. But today most workplaces are clean and quiet and can be built closer to homes without adverse effects. Many employers also find that locating workplaces near shops, banks, dry cleaners, and restaurants can save their employees time. Zoning needs to address our modern condition and make these kind of developments possible.

Traditional Neighborhood Developments are a type of community that mixes uses and housing types to create a form more like the towns of the past than the automobile dominated suburbs we have come to know. These new communities are built for walking, and ideally allow residents to walk to shops, schools, places of worship, parks, and eventually transit stops. There are now over 200 traditional neighborhood projects under way or in the planning stages. Examples include Celebration, near Orlando, Florida; Harbor Town in Memphis; and Kentlands, in Gaithersburg, Maryland. Again, zoning often prohibits this type of development, but some communities are adopting new zoning codes to permit it.

What Needs To Be Done

Change your development ordinances.

If these types of development are to be built, your community's laws must permit them to occur. It may be necessary to adopt new ordinance language that permits and encourages cluster development, higher densities, and mixed uses. Narrower street widths, varied yard setbacks, alternative stormwater and wastewater systems, and altered approaches to utility installation may all need to be considered to make compact development possible and successful. If each developer must go through a complex and costly process of obtaining special waivers and approvals, special use permits, or planned unit development approval to achieve compact

development, the developer will probably find it makes more business sense to keep building conventional large-lot subdivisions.

Provide more certainty in the approval process.

The second thing that must be done is to assure the developer of more certainty in the development approval process. Too often, even when a community's comprehensive plan or zoning ordinance calls for compact development, a developer is thwarted by opposing citizens or an uncooperative government. If your community decides through its democratic process to support compact development—whatever they have agreed this term means in terms of lot sizes and allowable densities—measures should be taken to ensure that these plans are carried out. Community discussions about the appropriateness of cluster development, higher densities, or mixed uses should take place during the comprehensive planning process, not on a project-by-project basis.

To streamline the development approval process and give developers more certainty in building compact development, the following suggestions are made:

- *Presumption of approval.* If zoning and development standards are met, there should be a presumption of approval. Applicants should not be forced routinely into case-by-case reviews such as the special exception, conditional use, or planned unit development process.
- *One stop permitting and cross-training of staff.* All requirements and permits for land developments should be initiated from a single central location. Cross-training of staff reduces specialization and enhances staff understanding of how different development standards and requirements relate to each other; this improves coordination and helps expedite the approval process.
- *Specify time limits for reviews and approvals.* Ordinances should specify when decisions will be made, such as within 30 or 45 days of the acceptance of the application or the holding of the public hearing.
- *Eliminate multiple public meetings and hearings.* If several commissions or boards want to review the development proposal, a single hearing can be jointly held.
- *Simplify and reduce the number of zoning districts.* In many jurisdictions, zoning districts are so narrowly defined that any change in a developer's plans requires a rezoning. Over-specificity of zoning districts also makes mixed uses almost impossible. Reducing the number of zoning districts can allow a greater range of uses and densities in each zone and reduce the need for rezonings.

Plan for compact development.

To permit and promote compact communities, citizens, planners, and public officials must be willing to challenge the conventional wisdom of the past and accept that new goals may require new tools. But allowing compact development and helping it get approved are not enough. Communities need to help pave the way by planning for and helping provide the necessary infrastructure to support compact development — be that streets and highways, or water and wastewater systems. Developers and communities need to work in partnership to make compact communities a reality and achieve Smart Growth.

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