

MODERNIZING URBAN & SUBURBAN CODES:

INITIAL ESSENTIAL FIXES FOR HIGHEST PRIORITY CHALLENGES

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MODERNIZING URBAN AND SUBURBAN CODES: INITIAL ESSENTIAL FIXES FOR HIGHEST PRIORITY CHALLENGES

1. Allow or require mixed use zones	1
2. Recalibrate dimensional standards.....	3
3. Rein in and reform the use of planned unit developments (PUDs).....	5
4. Fix parking requirements	8
5. Increase density and intensity (in centers)	13
6. Modernize street standards	17
7. Enact standards to foster walkable places.....	22
8. Designate and support preferred growth areas and development sites.....	25
9. Encourage green infrastructure stormwater management	28
10 Adopt smart annexation policies.....	30
11. Avoid the Devil’s density	34

MODERNIZING URBAN AND SUBURBAN CODES:

INTRODUCTION

Across the country, state and local governments are facing budget shortfalls while seeking to create jobs, foster economic development, maintain infrastructure, and reduce greenhouse gas emissions. This atmosphere combined with demographic trends and market shifts presents a real opportunity for creating environmentally sustainable communities. However many local governments find their existing land development codes and ordinances prohibit or create barriers for development that can help communities invest in existing infrastructure, meet local and state climate change goals, protect the environment, and improve public health.

To address this issue, local governments are looking for to modify or replace their codes and ordinances so that future development and redevelopment will focus on creating complete neighborhoods – places where residents can walk to jobs and services, where choices exist for housing and transportation, where and open space is preserved, and where climate change goals are realized. However, many local governments lack the resources or expertise to create community-specific changes to existing regulations. Furthermore, model codes or ordinances can be too general and are often designed for a community to adopt it wholesale.

The Development, Community, and Environment Division (DCED) in US Environmental Protection Agency wanted to explore if tools to modify codes were available and if not, discuss what tools could be developed. To kick start the conversation, DCED convened a national panel of smart growth codes experts to discuss different ways to addressing code and ordinance barriers in communities. This document is the initial result of that panel. It is still draft and is intended as a starting point for a larger conversation about the tools and information local government need to revise their land development regulations.

The purpose of this document is to identify the most common code and ordinance barriers communities face, and then to provide information and code provisions for these barriers that communities could incorporate into their land development regulations. In addition, given the effort and political will necessary to make any changes to local regulations, the suggested code provisions are separated into three categories:

INITIAL ESSENTIAL FIXES FOR HIGHEST PRIORITY CHALLENGES

- **Adjustments:** Code suggestions in this category assume the local government will keep the existing regulation and are looking for revisions that will help local governments remove barriers to building smart growth developments or to create a regulatory framework where all development types have equal footing. Examples here include changing code language from minimum setback measures or minimum parking requirements to maximums.
- **Major modifications:** Code suggestions in this category assume the local government is looking to change the structure of the existing code. Suggestions may include creating incentives for smart growth development or creating overlay zones and mixed use districts.
- **Wholesale Changes/Replacement:** Code suggestions in this category assume the local government is looking to create a new regulatory framework, such as creating a form based code or requiring sidewalks and alleys.

Some communities have found that an incremental approach to code changes works best while others have found success in wholesale change. This structure strives to provide a starting point for all communities by recognizing their wide variability.

The document includes eleven subject areas that represent the most common barriers local governments face when they want to implement smart growth approaches. Topics covered include mixing land uses, parking requirements, dimensional standards, density, and annexation among others. Each area, or “essential fix,” describes the problem and how best to respond to the problem, expected benefits, and implementation steps. Other resources include practice pointers and examples.

This tool does not include model language nor is it intended to be a model code or ordinance. However, the information provided here can assist communities in evaluating their existing codes and ordinances and apply the information to achieve smart growth objectives. In addition, this document focuses on barriers in suburban and urban communities. Rural development is addressed in a separate document and is still under development.

While, this draft can be used by the public, it is still being reviewed and revised. However, the intent is to continually revise, update, and expand the information provided here. Please send comments, feedback, or suggestions to the US EPA project manager, Kevin Nelson, AICP, at nelson.kevin@epa.gov or 202-566-2835.

1

ALLOW OR REQUIRE MIXED USE ZONES

Introduction

A common problem with traditional “Euclidean” zoning used by many communities is its primary focus on separating potentially incompatible land uses. This has led to enormous inefficiency in our urban development patterns—particularly for mobility—and has resulted in increased auto use and greenhouse gas emissions. The underlying problems that zoning was originally designed to address – separating residential land uses from factories, stock yards, rowdy commercial areas, and other “noxious” uses are still important (although less important than 80 years ago). However, circumstances have changed, and the goal of separating such uses must now be placed in context with a host of other problems that are created by not allowing the location of uses where they will be most efficient, as well as with promoting alternative modes of transportation and helping create lively urban places.

Responding to the Question

Mixed use zones will look different in various contexts, from downtowns to TODs to commercial corridors to the neighborhood corner store. In particular, communities should be mindful of these variations so that there is not a “one size fits all” solution for how land uses can be mixed to accommodate market conditions and design expectations. Requiring vertically mixed use buildings, such as ground floor retail with offices or residences in the upper floors, along older pedestrian oriented corridors can activate a sleepy street at all hours. Alternatively, simply permitting a variety of uses within one zoning district allows a horizontal mix of uses for areas that are in flux or too much commercially zoned land.

Expected Benefits

- Reduction in auto use and vehicle miles traveled resulting in lower greenhouse gas emissions, lower commuting costs for citizens, and decreased road congestion.

- Transportation choices--more balanced transportation systems that support alternative modes such as walking, bicycling, and mass transit.
- Livelier urban spaces that result from creating gathering places for pedestrians with access to a wide variety of retail shops, restaurants, and entertainment.
- Complete neighborhoods with opportunities to live, work, and play within a short distance.
- Diversity of housing types and opportunities for supplying a lifecycle of housing.
- Healthier commercial areas, focusing retail in appropriate locations and supplying customers in the immediate vicinity of the retail and services.
- More compact urban development that helps preserve open space in outlying areas by reducing the need and demand for low-density, sprawling development.
- Efficient use of urban services and public cost savings.

Steps to Implementation

1. Adjustments

- Define mixed use areas/activity centers in land use plans (on a neighborhood, community, regional scale) and designate preferred locations for each.
- Permit residential in the upper floors of appropriate existing commercial zoning districts.

2. Major Modifications

- Remove obstacles to mixed use development by creating mixed use zoning districts that allow mixed use development by-right (e.g., without the need for a rezoning or special discretionary approval processes).
- Develop an appropriate variety of mixed use districts including vertically mixed uses and horizontally mixed uses as needed. Different districts may permit or require a specific mix of uses.

1. Allow or Require Mixed Use Zones

- Designate mixed use districts on official zoning map.

3. Wholesale Changes/Replacement

- Sync zoning codes and area plans to coordinate the location and development of mixed uses.

Practice Pointers

- Adopt compatibility standards to ensure adequate transitions to adjacent, lower-density/intensity uses. Consider architectural/design, open space, operational, and other categories of transitional standards.
- Tailor development standards (such as parking, open space, and landscaping regulations) for mixed use developments so as not to create unintended hurdles for this preferred development form (e.g., typical suburban parking requirements do not reflect the reduced need for parking typical of most mixed use developments. The additional land that such excessive standards require for parking can undermine the feasibility of denser mixed use developments and spread out growth so that lively, compact developments are hard to achieve.
- Utilize market studies to ensure an appropriate amount of commercially and residentially zoned land. Avoid mapping too much land with a required vertical mix of uses that the market cannot support. Horizontal mixed use districts can allow the market to determine the appropriate mix of uses in the area. Establish standards for the development of each use within the area to ensure contiguous retail areas. In these locations, establish triggers for renewed planning efforts as the area begins to change.
- Level the playing field for mixed use developments—for example, by making sure that single-use commercial strip developments are not held to lower design and other standards than a mixed use development.

- Consider mandatory mixed use development in preferred locations (e.g., near transit stops) to ensure that such locations are not preempted by low-density single-use development.
- Create incentives for mixed use development in the form of a wider array of permitted uses in mixed use zone districts (vs. single-use districts), increased densities, and accelerated application processing.

Examples and References

- Getting To Smart Growth: 100 Policies For Implementation (2002)
- Urban Land Institute, Growing Cooler: The Evidence on Urban Development and Climate Change (2008)
- HDR, “Celebration Traffic Study Reaffirms Benefits of Mixed Use Development,” (2008)
- Andy Coupland, Reclaiming the City: Mixed Use Development (1997)
- Florida Department of Transportation, Model Regulations and Plan Amendments For Multimodal Transportation Districts (2004) and Multimodal Transportation Districts and Areawide Quality of Service Handbook (2003)
- Oregon Commercial and Mixed Use Code Handbook, <http://egov.oregon.gov/LCD/docs/publications/commmixedusecode.pdf>
- American Planning Association, Model Smart Land Development Regulations Interim PAS Report, Sec. 4.1 Model Mixed-Use Zoning District Ordinance (March 2006) <http://www.planning.org/research/smartgrowth/pdf/section41.pdf>
- Smart Code Mixed-Use Transect Zones, www.smartcodecentral.com
- Colorado Springs, Colorado, Mixed Use Development Manual (including transitional compatibility standards)

2 RECALIBRATE DIMENSIONAL STANDARDS

Introduction

Dimensional standards in many zoning codes (those standards that govern minimum such as lot area and width, floor area ratios, setbacks, heights) are geared to produce a suburban vision of low intensity, low-rise residential and commercial development. Even codes applicable to mature urban areas often reflect this suburban orientation. While such a pattern of development may be appropriate in some areas and under some circumstances (e.g., around environmentally sensitive areas), these suburban-oriented standards have stifled more compact urban development in many cities and towns and prevented the development of attractive, lively, and cost-efficient urban places. Recalibrating such standards will result in a reduction of lot sizes, coinciding in a change in design and dimensions of lots. This can help accommodate and promote a more urban, compact development pattern and create attractive urban environments. Changes in dimensional standards will also enable improved connectivity through more compact form. (Note that other aspects of dimensional standards related to streets and parking are addressed in Issues Nos. 4 and 6.)

Responding to the Question

Cities across the country have been built based on the availability of land and proximity to jobs and amenities. Dimensional standards were established to accommodate these conditions. As communities and prosperity yielded larger lots and more spread-out development, we now find a need to reassess the overall function of a community. A smart growth neighborhood evokes a compact, walkable form through its design and direction from codes and ordinances. Achieving this type of place is best done through modifying the regulating criteria – that is – the size of lots, setback, heights and the like.

Expected Benefits

- Higher density development that supports transit and mixed-use activity centers.
- A more attractive public realm that is designed to balance pedestrians and bicyclists with the auto.
- Cost-efficient provision of infrastructure and services.

Steps to Implementation

1. Adjustments

- Tailor dimensional standards in development code to promote more urban, compact development. Consider changing minimum standards to maximums.
- For residential development, the focus will be on lot width and area, reduced yards, increased lot or building coverage for smaller lots, increased height and increased density.
- For commercial or mixed use development, the focus will be on increased height, reduced yards and open space, increased lot or building coverage, and increased floor area ratios (FAR).
- Adopt provisions to allow residential clustering on smaller lots by right.
- Replace commercial setbacks with build-to lines, bringing buildings up to the street and placing parking to the side or rear.
- Replace floor area ratio (FAR) with form standards such as height and maximum setbacks. Consider limiting building footprints in neighborhood commercial areas.
- Modify commercial districts to allow residential development, especially in upper stories.
- Eliminate buffers within the commercial area – do not buffer like uses from each other.

2. Major Modifications

- Incentivize the provision of multiple housing types in existing districts through favorable dimensional standards.

2. Recalibrate Dimensional Standards

- Establish or reduce block lengths or block perimeters to produce better connections and walkability.
- Adopt context-based or neighborhood-based dimensional standards that reflect existing quality compact neighborhood patterns (streets, walkability, etc.)
- Revise current districts to redevelop existing neighborhoods by applying new dimensional standards.
- Create districts for new compact building and development types not already within your community, neighborhood scale standards. (see discussion of mixed use in Issue No. 1)
- Include other agencies such as public works, fire departments early on in discussions regarding revising dimensional standards.
- Analyze potential storm water management requirements of denser developments and consider use of green infrastructure approaches (See Issue No. 9).

3. Wholesale Changes/Replacement

- Coordinate new form-based dimensional standards with zoning map changes.
- Plan a subarea of the community, then develop or calibrate and adopt a form-based code.

Practice Pointers

- Where significant change in dimensional standards is proposed, model the existing standards in comparison to the proposed standards – preferably in 3-D.
- Consider design and operational compatibility standards to ensure that new compact urban development is compatible with existing surrounding lower-density residential neighborhoods.
- Revise subdivision specifications and standards to encourage denser, more compact developments (e.g., narrower streets, reduced minimum driveway width).
- Relate dimensional standards to the transportation system (for example, modify setbacks based on right-of-way widths).
- Replace standards that allow a variety of forms (such as floor area ratios) with predictable dimensional requirements.

Examples and References

- Oregon Commercial and Mixed-Use Code Handbook, <http://egov.oregon.gov/LCD/docs/publications/commixedusecode.pdf>
- Emina Sendich, Planning and Urban Design Standards, American Planning Assn. (2006).
- Franklin, TN, dual development and dimensional standards (for traditional and suburban areas of the community)
- Durham, NC, Unified Development Ordinance, development standards by context.
- Colorado Springs, Colorado, Mixed Use Development Design Manual (See transitional compatibility standards).
- LEED-ND

3 REIN IN AND REFORM THE USE OF PLANNED UNIT DEVELOPMENTS (PUDs)

Introduction

The inflexibility of Euclidean single-use zone districts, inappropriate development and dimensional standards, and Byzantine approval processes have given rise to the widespread use of negotiated developments in many communities. These negotiated developments usually take the form of planned unit developments (PUDs) or master planned communities (MPCs). The use of PUDs has enabled communities to overcome some of the strictures of Euclidean zoning and to provide a vehicle for local government officials to negotiate community benefits such as additional open space, recreational facilities, better design, and contributions to infrastructure. The use of PUDs, which spread rapidly after the concept was introduced in the 1960s, is attractive because it is often simpler and quicker than seeking multiple amendments and variances to an outdated existing zoning code to correct what no longer works to produce developments a community desires.

Originally PUDs were conceived of and used to promote design flexibility to achieve special qualities or to allow flexibility in design standards to address or take advantage of special site characteristics, or community goals. (e.g. Clustered developments to provide open space or protect sensitive natural areas.) The use of PDs or PUDs was to achieve higher quality developments and meet community goals better than the standard subdivision and zoning regulations could achieve. Communities, such as Sea Ranch in Northern California, was a model of Planned Developments, taking advantage of quality design to achieve a better integration with the natural environment. Many of the initial TND developments were approved through a PD or PUD process.

However, today, relatively standard subdivisions are being approved using PDs as an alternative to re-writing zoning and subdivision regulations. The ability to add conditions onto the approved developments is also a key feature, which Cities require to insure they receive the appropriate infrastructure, off site improvements and fees to offset development impacts. The initial objective of unique or quality design has been lost as part of the PD process.

The PUD approach has now proliferated to the point that most projects of any size or significance are approved that way--some observers estimate that upwards of 40% of all residential units in the United States each year are approved through a PUD process, not traditional zoning. The result is that many growing cities are not the products of their land use plans and zoning codes, but rather are the result of individually-negotiated agreements. Indeed, in growing number of communities all major developments are being reviewed through the PUD process.

Increasingly, however, communities are recognizing the downside of relying heavily on PUDs/negotiated developments:

- Significant uncertainty for developers and neighbors of proposed PUDs. There is uncertainty for developers because there are no standards to guide the development approval process and for neighbors who find they cannot rely on existing zoning or land use plans, and that the development team controls much of the planning process.
- longer and less efficient project reviews—that can often drag out for years as they become politically charged. Communities often have not set goals for an area.
- Major City Planning decisions are being made with less community input into defining the community objectives for the area prior to a development proposal.
- Environmental and design standards are often minimized in the process.
- The creation of an administrative nightmare for staff who over time have to deal with multiple mini-zoning codes created for each PUD—that invariably differ from other PUDs in terms of development standards and other requirements.
- The Planning process becomes a “project by project” process rather than a comprehensive development review process and becomes much more of a political process than an evaluation of planning regulations and community goals.

3. Rein in and Reform Planned Unit Developments (PUDs)

Reaction to the Problem

These problems have resulted in a growing number of communities acting to reduce the use of PUDs by updating their zoning districts and standards to accommodate preferred development patterns and types or limiting the use of PUDs to larger projects that offer the ability to provide compensating community benefits without waiving key design and environmental standards.

Communities are attempting to “get out in front of” PUD proposals by creating a series of PUD zoning regulations or design guidelines which are developed vis-à-vis a community design process to provide the City the opportunity to define their important goals for a site or area prior to specific development proposals. Principle, regulations and design guidelines are then used in conjunction with Planned Development Zoning to provide clearer direction while also allowing the desired design flexibility.

Expected Benefits

- Increased certainty and predictability of the community design outcome in the development review process, while allowing appropriate design flexibility.
- By setting the basic goals and fundamental standards for an area’s development prior to a specific development proposal creates an efficient design and review process and less staff time to administer the development over time.
- Adherence to community growth visions and goals as established in comprehensive plans. By setting the basic goals and fundamental standards for an area’s development prior to a specific development proposal the City provides the development community clear direction as to quality and character and fundamental elements they wish to see as part of any proposal.
- By setting the major goals and regulations prior to development proposals, important design and environmental standards that need not be waived or weakened in the PD process.

Steps to Implementation

1. Adjustments

- Reform PUD process to include a dimension of Community Design within the various PD Designated Areas and reduce the use of PDs on small sites (under 2 acres).
- Substantially reduce or remove the use of PDs by fixing dimensional standards, particularly on small parcels.
- Create standards for PUD (example; apply Traditional Neighborhood Design (TND) Policies, Standards and Design Guidelines, etc. as base PUD regulations prior to development proposals).
- If PUDs are allowed, rein them in by establishing minimum size for the PUD, identifying specific allowable locations, and prohibiting waiver or weakening of important environmental and design standards.

2. Major Modifications

- Delete PUDs as an alternative to following comprehensive plans and zoning code provisions. This may require Cities to undertake many more public planning efforts to provide the detailed goals, objectives and detailed design elements for larger sites; as well as undertake re-writing the city’s zoning regulations.

3. Wholesale Changes/Replacement

- Create area plans, mapped, and zoned: be proactive in planning and zoning.
- Prior to accepting a development proposal for an area the city shall undergo a public master planning process to set goals and objectives, map land use and zoning and set standards, regulations and development quality through guidelines for the entire planning area. (Example: gatekeeper and Precise Plan processes by City of Mountain View California).
- Implement an overlay district, which allows for development of a site or area if specific standards are adopted. An example of this could be an overlay of

3. Rein in and Reform Planned Unit Developments (PUDs)

the SMART Code or other set of development regulations onto an area designate in the Comprehensive plan for future development.

Practice Pointers

- Consider establishing a list of compensating community benefits that the community expects in return for flexibility in terms of uses, density, etc. Provides reassurance to community and some certainty for developers regarding negotiated benefits.

Examples and References

- Center for Land Use Education, “Planned Unit Development” (2005) <ftp://ftp.wi.gov/DOA/public/comprehensiveplans/ImplementationToolkit/Documents/PUD.pdf>
- State of New York, “A Guide to Planned Unit Developments” (2005)
- Corvallis, OR, “Planned Unit Development in Corvallis’ Urban Fringe.
- Traditional Mixed Use Neighborhood Development Guidelines (2006) and Implementation Process; Westminster, CO. <http://www.ci.westminster.co.us/files/tmund.pdf>
- Teton County, ID; Martin County, FL; McHenry County, IL (minimum PUD size) put up web links
- Precise Plans and City Gatekeeper Process; City of Mountain View, CA. http://www.ci.mtnview.ca.us/city_hall/community_development/planning/plans_regulations_and_guidelines/precise_plans.asp
- St. Lucie County, FL; Routt County, CO (mandatory open space set aside)
- North Las Vegas PUD community benefit matrix and planned infill district (proposed)
- Blaine County (Sun Valley, ID); Larimer County, CO (PUDs allowed only in specified locations/districts)
- The SMART Code; <http://www.smartcodecentral.com/about2.html>

4 FIX PARKING REQUIREMENTS

Introduction

The parking standards found in many traditional zoning codes represent a significant barrier to lively mixed-use developments and activity centers, especially in existing downtowns. Parking standards commonly in use in the U.S. call for too much off-street parking and require all of it (or too much of it) to be provided on the development site. Also, many zoning codes do not allow consideration of alternative parking arrangements such as shared parking or credit for on-street parking that can reduce the need for on-site spaces and also help create a more attractive streetfront environment. Such regulations fail to recognize the difference between parking demand in urban and suburban environments.

In many communities the effect of traditional parking requirements is to make redevelopment of smaller parcels in older, mature areas of cities infeasible and to make dense, compact, mixed-use development nearly impossible because of the code requirement for large expanses of surface parking or expensive structured parking. Large areas of surface parking in commercial areas discourage walking and pedestrian activity and aggravate parking demand issues by forcing people to drive between destinations. Frequently, zoning codes or development regulations allow (or even require) surface parking to be placed between buildings and the street, and they often allow parking structures to be built as stand-alone uses – both of which are deadly to the vitality of urban places.

Response to the Problem

Municipal governments across the country have been working to create more effective parking management systems for at least a couple of decades. They have been assisted in this effort by research analysis published by the Urban Land Institute, American Planning Association and other professional organizations. The best newer parking management systems have these characteristics in common:

- Good parking management systems recognize that too much parking supply can be a serious issue,

but so can not enough parking supply. The practice of regulating parking supply became common in the first place because of the issues caused when developers provided inadequate parking and parking spilled over into nearby neighborhoods. What is generally needed is “the right amount” of parking, and that can vary widely by place and by point in time. Good parking systems are carefully balanced to be specific to their settings and are adaptable to changes in the situation over time.

- Good parking management systems recognize that parking policy must be well integrated with overall multimodal transportation policy and with land use policy. Transit services, good bicycle facilities and a great walking environment can reduce parking demand significantly. Mixed use development patterns, coupled with good walking environments can reduce parking demand even further. However, these must be precedent to reducing parking requirements. For example, it makes little sense to reduce parking supply so that people “will ride the bus” if transit service levels are too low to attract ridership.
- Good parking management systems take into account the fact that parking is inherently expensive. Surface parking consumes valuable land, subtracting it from productive use. Structured parking incurs capital costs that generally exceed \$20,000 per space, thereby subtracting capital funds from productive use.
- Successful local parking management systems carefully reconcile the cost of providing parking supply with local taxation and fees, with the fine schedule for parking violations, and with the amounts that are being charged for use of parking.

Successful municipal parking management systems generally incorporate some combination of the following strategies and measures:

- Lower Parking Supply Minimums – The minimum parking requirements contained in many local codes are based on demand studies conducted in subur-

4. Fix Parking Requirements

- ban places. These studies reflect parking demand in settings where shoppers and workers do not walk or use transit. In mixed use settings with good walk environments such regulations over-estimate parking demand and have a self-fulfilling effect by making mixed use development and redevelopment physically impossible.
- Off-Site Parking – In mixed use urban environments, parking should be treated as a utility, not an on-site private activity. Requiring each land owner in a downtown to provide private parking on their parcel is akin to requiring each land owner to drill their own water well. Modern parking ordinances allow parking minimums to be met off-site, although they may require that the parking location be within a maximum distance from the development (600' in some downtowns; 1,000' in others). These could be private “joint parking” facilities or public facilities owned by a parking district. The developer is still responsible for the cost of parking, either directly through capital fees or indirectly through property taxes. In some settings it is feasible to “unbundle” parking from residential projects, allowing parking to be provided on the open market.
 - Fee-In-Lieu System – In places where the city is providing public parking facilities or where a parking district has been created, provisions can be written that allow a developer to pay a set fee in lieu (FIL) of providing parking supply directly. The money from FIL payments is then used to expand public parking supply. It is important that any FIL fee schedule be realistic with respect to actual costs of parking. Some cities have had trouble with FIL systems where the fees were set below the actual cost of construction and the city was unable to build the parking.
 - Shared Parking Credits – Suburban parking requirements assume each business has its own separate parking supply and that this must be large enough to accommodate the peak hour of the peak day of the year. In mixed use settings, that assumption results in excessive parking. Different parking uses peak at different times of day – office parking in the middle of the daytime, retail in late afternoon and on weekends, restaurants in the evening, etc. Shared parking provisions allow developers to reduce parking supply requirements to reflect opportunities for different uses to use the same parking spaces.
 - Parking Enforcement – A universal cause of perceived parking shortages is the misuse of premium parking by employees. The closest, most convenient parking spaces – storefront, on-street parking in particular – should be protected for use by customers and clients. Yet in many places these spaces are occupied by the cars of employees. Even where time restrictions have been established to counter this, they are often poorly enforced or the fines are too low to deter routine abuse. This situation can be corrected by ensuring there is adequate employee parking somewhere, by using computerized ticketing systems (as opposed to chalking tires, which is easily defeated), and by adequately staffing the enforcement effort.
 - Public Transit – Many cities have successfully reduced parking demand in mixed use areas by improving transit service, especially for commuters. This is an especially attractive approach because it reduces parking demand while at the same time improving mobility and access.
 - On-Street Parking – The most valuable parking in most commercial and mixed use places is storefront parking on the street in front of businesses. Yet many cities are careless about losing on-street parking or do not do enough to ensure maximum number of spaces per block. Shifting from parallel to diagonal parking can increase parking supply by up to 30% per block face.

4. Fix Parking Requirements

Expected Benefits

- Lower cost of redevelopment and infill projects, helping them compete with sprawl projects.
- Improved economic viability and vitality of cities in general and mixed use districts in particular.
- Increased tax base and tax revenues.
- Lively, active mixed use districts that serve as regional destinations.
- Increased transit patronage that in supports increased levels of transit service.
- More walkable, pedestrian-friendly environments.

Steps to Implementation

1. Adjustments

Note: some measures below are in support of code changes, but are not in themselves addressed through the zoning or land development code.

- Create a parking overlay district within the parking code for a downtown or other mixed use activity center. Reduce minimum off-street parking supply requirements within the overlay district based on recalculated demand resulting from non-auto mode share, mix of land uses and a “park once” strategy that encourages walking to multiple destinations from one parked car. Calculate a shared parking allowance based on the specific land uses in the overlay district.
- Improve enforcement of parking time limits in a downtown or other mixed use activity center by providing in the code for use of hand-held computers for issuing tickets (replacing the chalking of tires). Revise the parking overtime ordinance to provide escalating fines for scofflaws (repeat offenders) and set fines at levels that deter abuse. Increase enforcement levels so that probability of being ticketed for overtime parking approaches certainty. (Ensure that adequate parking for employees is in fact available in non-premium locations before implementing this measure.)

- Develop Residential Parking Permit (RPP) provisions to help protect neighborhoods impacted by overflow parking resulting from increased parking enforcement. Design the system to be applied on a neighborhood basis (not automatically city-wide) based on criteria or warrants – actual amount of on-street parking demand, etc. Carefully manage and enforce the RPP system to avoid abuse, such as sale of permits, etc. Consider returning a portion of receipts from RPP fees to the neighborhood in the form of street repairs and improvements. Consider selling “commuter permits” for residential streets in RPP districts near mixed use centers, with all or some of the revenue returned to the neighborhood in the form of capital repairs and improvements.
- Work with the public works department to increase the amount of on-street parking in a downtown or other mixed use activity center. Evaluate the length of “red zones” at intersections and shorten them where feasible. Convert parallel to diagonal parking where feasible. Evaluate parking stall specifications (length and width) and reduce them to generate increased supply.
- Establish (in the code) authorization for parking advisory committees for specific areas where parking issues are controversial. Provide for the appointment of a cross section of stakeholders to committees including businesses and residents. Charter the committee to serve in an advisory capacity on parking studies and on potential changes to parking ordinances.

2. Major Modifications

Note: some measures below are in support of code changes, but are not in themselves addressed through the zoning or land development code.

- Undertake a comprehensive revision of the parking ordinance. Revise the tables of parking supply minimums, reducing them wherever possible to reflect urban context, non-auto mode shares and actual land use mix. Develop a system of shared

parking credits either as a set percentage in connection with form based codes or based on land use mix in connection with a zoning system. Create parking overlay districts for existing downtowns and mixed use activity centers and write provisions for future additional overlay districts. Unbundle parking from residential development in districts with higher densities and high level of land use mix. Allow off-site parking under specific conditions and set limits for its distance from development sites. Develop provisions to govern joint parking (parking met through contracts or leases with other businesses or land owners) to ensure that parking supply commitments made in connection with development approval are honored and maintained over time. Allow some credit for on-street parking supply in storefront retail districts. Allow for substitution of a form based code in certain zone districts to simplify and eliminate the need for more detailed parking regulations.

- Overhaul the parking enforcement system citywide. Improve enforcement of parking time limits by acquiring hand-held computers for issuing tickets (replacing a system of chalking tires). Revise the parking overtime ordinance to provide escalating fines for scofflaws (repeat offenders) and set fines at levels that deter abuse. Increase enforcement levels so that probability of being ticketed for overtime parking approaches certainty. Evaluate parking supply in and around parking overlay districts and identify parking supply to be available for commuter parking use. Develop a Residential Parking Permit (RPP) system to help protect neighborhoods impacted by overflow parking resulting from increased parking enforcement (see above for details).

3. Wholesale Changes/Replacement

Note: some measures below are in support of code changes, but are not in themselves addressed through the zoning or land development code.

- Provide for the establishment of parking districts. (These are distinct from the parking overlay districts described above although their boundaries can be coterminous.) Establish a district management and governance structure, including an appointed board with a charter of authority (however requiring appropriation of the district budget by City Council). Give districts authority to collect and spend revenues from parking fines, fees and paid parking and allow them to set staffing levels through their budgeting process like a city department. Devolve enforcement to districts, removing parking enforcement from the police department and making it a civilian function. Develop provisions for issuance of debt financing (with City Council approval). Create criteria for selection of sites for parking facilities to be owned and/or built the district. Where applicable use the City's taxing authority to create permanent funding in support of the functions of the districts. Require districts to conduct "parking space equivalency studies" to take into account actual parking demand reflecting non-auto mode shares, land use mix and other factors.
- Work with the local or regional transit agency to develop a commuter transit pass that is bundled with a parking permit within parking districts and paid for with proceeds from the revenues of the district, including tax revenues. Use this "universal pass" to increase transit patronage while still allowing for managed levels of commuter parking demand.
- Institute paid parking for public parking supply in parking districts. Start with off-street publicly owned parking. Use pay kiosks for on-street parking to reduce streetscape impacts, improve efficiency and improve customer convenience.

4. Fix Parking Requirements

Practice Pointers

- Consider how financial institutions impact parking requirements.
- As part of regulating parking, you should have paid parking, then think about how these will be implemented; anticipate paid parking.
- Design standards for parking structures.
- Tailor parking standards for infill areas vs. greenfield sites (fewer, smaller spaces).
- Provide priority parking for hybrid/alternative fuel vehicles.
- Consider requiring a portion of parking lot be constructed of pervious materials.

Examples and References

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- Christopher V. Forinash, et al., "Smart Growth Alternatives to Minimum Parking Requirements", Proceedings from the 2nd Urban Street Symposium, July 28-30, 2003. <http://www.urbanstreet.info/>
- LEED-ND Neighborhood Pattern and Design—parking areas limited to 20% of overall site area with no surface lot larger than 2 acres.
- Parking maximums: Victoria Transport Policy Institute, "Parking Maximums", Online TDM Encyclopedia: http://www.vtppi.org/tdm/tdm28.htm#_Toc128220478; Seattle, WA, and Franklin, TN.
- Orange County, FL—incentives for parking structures (do not count against allowable FAR).

5

INCREASE DENSITY AND INTENSITY (IN CENTERS)

Introduction

Density is probably the most controversial and least understood concept in urban planning. Citizens and elected officials routinely see the amount of development allowed on a site (measured in number of dwelling units, square footage of commercial space, etc.) as the most important consideration in local planning. “Too much” density is seen as the cause of traffic congestion, ugly buildings, loss of green space, crime, and many other ills. However, increasing the average density of urban infill and redevelopment projects – and of greenfield projects – is crucial to improving the livability and the quality of the urban environment as well as protecting open space, supporting transit, and reducing vehicle miles traveled. Furthermore, with increased densities, EPA research shows that higher densities may better protect water quality – especially at the lot and watershed levels.

Much of what people respond to negatively regarding density is the result of larger development patterns which help to create congestion on arterials, single use areas which emphasize driving to get to destinations and dense developments which are looked upon unfavorably as a result of poor quality site layout and building design. And, unfortunately many people associate density with poorly managed rental or affordable housing developments. Property values is often an underlying concern of residents when discussing higher density developments.

Density itself does not dictate quality development or residents’ income levels. Many areas, which are of higher density, are the highest quality areas within a community. When quality features such as streetscapes, mixture of uses, site planning and building design are implemented, higher density neighborhoods are often the most desirable areas in any community. However density is still the most difficult and inflammatory of all planning goals and principles.

Privacy, parking and compatibility with the character of the community are often the issues most directly cited as concerns with more dense developments. Identifying

techniques and requirements to guide development to ensure that higher density projects are compatible is an almost universal need in U.S. cities.

Responding to the Problem

The concept of density is one that requires ample discussion and education to allay misconceptions and misunderstandings regarding its purpose and benefit. To that extent encouraging density should be regarded as a positive as opposed to a negative. Increased density and intensity enables the provision of transit, retail and institutional amenities often desired by residents. Many lower density communities often ask “why can’t we have those things that that community has.?” Density is part of that equation. The benefits and resources outlined below provide the foundation for a complete smart growth community, one that can only thrive from increased density.

Communities need to confront the density issue in a comprehensive manner rather than a project by project basis. There are a number of strategies and tools which communities may use to focus their more dense community. Through the Comprehensive or General Plan process the community should target areas, which can support higher density development with minimal concern and impact on existing neighborhoods. Cities should also focus higher density developments in mixed-use areas which will allow walking to shops and services as an alternative to driving, lessening vehicle trips and minimizing parking requirements. Lastly communities should focus much of their higher density areas where they can be served conveniently by transit, either bus, rail or other opportunities. This will lessen vehicle trips and parking requirements.

These policies can be implemented through new mixed use or TOD districts, changes in zoning designations or creation of new high density, mixed use or TOD zoning districts, modifying existing zoning to allow greater densities within existing districts as well as creating new compatibility standards and design guidelines so to assist with transitions to existing neighborhoods.

5. Increase Density and Intensity (In Centers)

Expected Benefits

- If communities can develop density within our existing centers then there will be less pressure to expand our existing towns, saving agricultural lands, natural open space or sensitive habitats.
- Higher density buildings and developments use less energy as well as use less land and typically less materials and lower greenhouse gas emissions per resident or capital, lessening the community's carbon footprint.
- Higher density housing types adds to a community's diversity as well as providing opportunities for provisions of affordable housing, particularly in those areas which have high land values and development sites are scarce.
- Adequate density to support transit:: Higher density districts, nodes and corridors can be served by transit more effectively. In lower density neighborhoods, seven to eight (7-8) du./ac. is often cited as the minimal density, which can be somewhat served by transit. The nodes and corridors help to make servicing these lower density areas more efficient.
- High density areas help to support local shops and services, relying more on pedestrian access from residents and surrounding neighborhoods than vehicle trips. The high density housing gives greater support, providing some opportunity for lower density neighborhoods to have more local shops and services.

Steps to Implementation

1. Adjustments

- Set minimum densities within General or Comprehensive Plans and Zoning Districts: Many Cities have found that setting a policy of reaching a minimum of midpoint to 80% of Comprehensive plan allowable density for all developments helps to achieve the build-out figures for City wide housing policies and goals..

- Locate/designate higher density development centers in comprehensive plans.
- Increase maximum densities in designated activity center zone districts. This can be
- Create activity center zone districts with higher densities, increased height/FAR, and reduced parking requirements. This can be done by creating specific zones, modifying existing zones or creating a new overlay district which allows for selective modification of existing zoning regulations within an already zoned area, without changing all of the zoning of a parcel.

2. Major Modifications

- Tailor development standards to accommodate denser developments (e.g., increased height limits and FAR, parking, and flexible open space/landscaping regulations) (e.g. Urban style projects should not be evaluated based on suburban development standards.) This is common practice, however studies of various typical sites with other standards such as parking, open space and height, as well as performing economic feasibility evaluations for these development prototypes..
- Rezone areas designated as activity centers by government initiative based on comprehensive plan vs. case-by-case rezonings. These would typically be new zoning districts special for these areas.

3. Wholesale Changes/Replacement

- Use a redevelopment agency to purchase difficult or critical parcels. This is particularly effective with areas such as corridors which often have smaller parcels which require aggregation to allow developments at a higher density.
- Establish minimum densities/intensities, or midpoint density goals, in community/regional mixed-use activity centers and transit-oriented developments.
- Do not count structured parking towards FAR if FAR is used in regulations. (e.g. parking podi-

5. Increase Density and Intensity (In Centers)

ums which do not extend above 4-5' above grade should not be counted towards FAR.; Do not count above grade parking structures as FAR if they are “wrapped” as in a residential wap development.

- Parking often is the most difficult regulation to modify as well as being a costly development component. Parking may be reduced as part of a TOD or mixed use/high density districts. Parking may also be “unbundled” from the residential units. Allowing residents to choose to not purchase parking if it is not needed or desired.
- Set parking maximums rather than minimums to discourage over-parking a development. This will allow for higher density developments as parking often limits a projects overall density.

Practice Pointers

- Density is context sensitive, minimum density of x and range to y.
- Adopt site and building design standards for higher density commercial and residential projects ensure high-quality, attractive development.
- Density bonuses with flexible zoning standards: For some special projects such as special needs and/or affordable housing. Many jurisdictions have developed special density bonuses as well as allowable concessions or variances for specific regulations as a trade-off for affordability, senior or disabled housing. See California State Law SB1818)
- Designating buildable envelope or form, rather than density allows flexibility in the number of units allowed, accomplish goals of greater density while controlling height, setbacks etc.).
- Adopt transition/compatibility standards to ensure higher density/intensity projects in activity centers are compatible with surrounding neighborhoods (e.g., building stepbacks, open space, landscaping, etc.) (See Palo Alto TOD Compatibility Guidelines)

Examples and References

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5. Increase Density and Intensity (In Centers)

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- Donald Shoup, The High Cost of Free Parking (2005), Planners Press, American Planning Association; Chapter 20. Available for purchase from <http://www.planning.org/APAStore/Search/Default.aspx?p=1814>
- Parking Maximums and Unbundled Parking Regulations in Market – Octavia Plan, San Francisco, CA.: http://www.sfgov.org/site/planning_index.asp?id=25188

6

MODERNIZE STREET STANDARDS

Introduction

For several decades, municipal decisions about the size and design of streets have been based primarily on traffic capacity considerations. This narrow focus overlooks the fundamental role that streets play in shaping neighborhoods and communities. Streets represent a profoundly important use of land. The design of streets directly influences the character, value and use of abutting properties as well as the health and vitality of surrounding neighborhoods. The design of streets determines whether the areas served will be walkable, whether certain types of retail will be viable, and whether the urban landscape will be attractive and comfortable – or stark and utilitarian. These impacts, in turn, affect land values (and associated tax receipts) and overall economic strength and resiliency. The character of streets can discourage or encourage redevelopment, hasten or reverse urban flight, and add or subtract value from abutting property. These are obviously important policy considerations for any municipality.

Design of streets also affects a range of key environmental factors in urban settings, including the volume of storm-water runoff, the water quality of that runoff, and the magnitude of the urban heat island effect. The importance of street trees in particular is hard to overstate: they remove carbon dioxide and certain pollutants from the air; they intercept and absorb rainfall before it reaches the street; they shade the landscape, reducing ambient air temperatures in warm months; they add value to neighborhoods; and they slow traffic, improving public safety.

Cities and towns have also tended to make planning and design decisions about streets one project at a time, making choices from the limited perspective of specific sections of specific street corridors. This limited perspective ignores the fact that transportation systems are comprised of networks of facilities. From a public policy perspective, the macro-scale characteristics of networks are more important than the micro-scale design of specific sections of streets in determining how well a local transportation system functions (including how much capacity the system has).

This traditional project-by-project perspective has resulted in poorly-connected networks of oversized streets, rather than well-connected networks of smaller streets. The resulting connectivity problems have been exacerbated by the national trend, beginning in the 1920s, to let developers make network layout and connectivity decisions for streets built as part of their subdivisions and commercial sites. The inevitable outcome of this has been poor connectivity, inconvenient circulation, and over-crowded arterials. These outcomes, in turn, have been detrimental to emergency service response, local access to existing businesses, and neighborhood walkability.

These issues – street design and network connectivity – have been further compounded by oversimplified and unsupported theories about traffic safety. Contrary to available evidence wider, faster streets have been promoted as safer than narrower, slower streets. Congestion has been identified as a safety problem that can be solved by intersection widening, even though actual accident data indicates that cause-effect relationships are more complicated than that. In recent years, modern transportation engineering analysis has begun to reveal that the width of streets, the size, proximity and orientation of buildings and street trees, the configuration of intersections, and the presence of on-street parking all have significant effects on the speed of travel and the attentiveness of drivers, with positive benefits for both accident frequency and accident severity.

Clearly, there is a need for cities and towns to update their approach to planning, designing and building streets and street networks. This is one of the most important opportunities available to urban America.

Response to the Problem

Both street design and network connectivity can be improved through smart growth codes. Generally, cities have been addressing street design issues through subdivision regulations rather than zoning ordinances, although that can vary with the existing local regulatory structure. Form based codes can provide a foundation for street design, and to a lesser extent for connectivity, but additional

6. Modernize Street Standards

design details and procedural requirements also will be needed. The primary policies that cities and towns are implementing to improve street design include:

- Complete Streets – the principle that streets should be designed to serve all modes of travel equally well (pedestrian, bicycle, personal vehicles and transit);
- Narrow Local Streets – the principle that local streets (streets that primarily provide access to abutting properties as opposed to streets that primarily serve pass-through traffic) should be no wider than absolutely necessary;
- Context-Sensitive Thoroughfares – the concept that arterial and collector thoroughfares should be designed in character with abutting lands and surrounding neighborhoods and should not be overly wide or designed to encourage inappropriate vehicular speeds;
- Pedestrian-Oriented Environments – a range of planning and design principles that make places “walkable” – safe, attractive and convenient for a wide variety of pedestrians, including people walking for utilitarian purposes as well as people strolling and exercising;
- Universal Design – the principle, based in the Americans with Disabilities Act, that pedestrian facilities should be designed for convenient and safe use by a wide variety of people, including persons with disabilities, elderly and children, people pushing strollers and towing roller-bag suitcases, as well as strong, fit pedestrians walking quickly;
- Green Streets – a set of policies that address watershed protection through systems of stormwater management reducing the volume of water piped directly to streams and rivers, that make use of a street tree canopy for stormwater interception, temperature mitigation and air quality improvement, and that serve as a visible element of a system of “green infrastructure” that is incorporated into the aesthetics of the community; and,
- On-Street Parking – the concept of using on-street

parking, not only as a convenient way to add value and economic viability to property in mixed use districts, but also as a design strategy to make streets safer and more appealing for pedestrians.

Cities and towns (as well as state DOTs and counties) are addressing network connectivity issues by enacting changes to their land development codes and subdivision regulations to require minimum connectivity in new development and in redevelopment. To be effective, these standards must address both external connectivity – how well connected with the larger street network a development is, and internal connectivity – how well connected the land uses within the development are with each other. The most commonly-used connectivity regulations establish standards for:

- Maximum block length and block circumference or block area;
- Minimum intersections per linear mile of roadway, or per square mile of area; and,
- Connectivity Index – number of street links divided by number of intersections.

Expected benefits

- Improved safety for motor vehicles, pedestrians and bicyclists.
- Reduced environmental footprint – storm water runoff, heat island effect, and land consumed.
- Increased levels of pedestrian presence, walking, and active living with attendant health benefits.
- Value added to abutting properties and surrounding neighborhoods.
- Increased tax base and tax revenues.
- A more attractive city or town with improved economic vitality and economic resiliency.
- A more flexible, adaptive network for avoiding congestion.
- Improved emergency response and emergency evacuation capability.

- Reduced street maintenance costs.
- Reduced per capita and per household vehicle miles of travel with no reduction in mobility.

Steps to Implementation

1. Adjustments

- Revise the local street design standards to add a “road diet” cross section for streets that currently have four general purpose lanes with no on-street parking, no bike lanes or inadequate pedestrian space – or any combination of these deficiencies. Set criteria for conversion to three lanes (two general purpose lanes and a two-way left turn lane) with either bike lanes or on-street parking, and improved pedestrian accommodation.
- Update the local street design standards to reflect modern “universal design” criteria for pedestrian curb ramps, crosswalks, and curb extensions. Create overlay design criteria for “safe routes to school,” transit corridors, downtowns and other priority pedestrian areas.
- Update design standards governing provision of street trees to increase the city’s street canopy as new streets are built and as existing streets undergo major renovation. Clearly and permanently resolve issues of cost responsibility for maintenance of street trees. Ensure that standards are realistic for local climatic conditions, specifying appropriate tree species and appropriate designs to accommodate and contain tree root structures.
- Adopt a policy governing provision of bike lanes on arterials and collectors as streets are built and as existing streets undergo major renovation. Set standards for deciding which streets will have on-street lanes, taking into account spacing of facilities, speed of traffic, availability of right of way, and other practical matters. (This policy will be most effective if based on a local bicycle system plan setting system objectives, defining facility types and setting connectivity standards.)

2. Major Modifications

- Begin developing and testing local stormwater designs such as rain gardens, bio-swales and other techniques in preparation for development of local green streets standards and policies.
- While these “essential fixes” are intended to guide changes to zoning and other land development codes rather than planning processes, little or no progress will be made on these issues in the absence of a solid planning foundation. Because streets are integral to community form and character, the best way to set the stage for improvements in street design and street network connectivity is to embed these principles in the local comprehensive plan or community master plan. In states and regions with growth management or environmental requirements governing preparation of local plans, this will be a necessary step prior to the measures described below. In most places the planning foundation should take the form of a multimodal transportation master plan or a multimodal transportation element in the local comprehensive plan.
- Revise the local street classification system to create a Multimodal Corridor designation. This can be handled as an overlay requirement without changing underlying functional classification system if that is easier. Use Multimodal Corridor designation as the means of applying “complete streets” principles (design for all modes) in specific corridors. A network of Multimodal Corridors based on local transit routes and on a bicycle system plan can guide both development review and prioritization of projects in a capital improvements program. This should be intended as an interim step toward implementation of “complete streets” requirements citywide.
- Revise local street design standards to add “narrow local streets” categories. Create design templates for residential and commercial streets that are narrower than currently allowed.

6. Modernize Street Standards

- Set minimum internal connectivity standards for new subdivisions based either on maximum block length, block size, intersections per square mile or a Connectivity Index.
- Create a street vacations policy (or update existing requirements). Prevent any street vacation that would reduce the connectivity of the street network. Allow vacations where the loss of the link is mitigated by establishment of a new link parallel in function to the existing link.

3. Wholesale Changes/Replacement

- The need for a planning foundation (see first point in section above) applies to measures in this section as well. All of the measures described below should be based on an adopted multimodal transportation master plan or multimodal transportation element in the local comprehensive plan.
- Undertake a complete overhaul of the local street design standards with the objective of reducing the future environmental footprint of streets. Incorporate complete streets provisions and green streets principles. Adopt narrower lanes, narrower rights of way, and reduced-lane cross sections. Include non-traditional cross sections such as multiway boulevards where applicable.
- Reintroduce public alleys into the local transportation system. Create standards allowing and guiding provision of alleys in subdivisions and requiring them in large commercial projects. Add alley templates to the local street design standards.
- Set minimum internal and external connectivity standards to be applied to all new subdivisions and large commercial projects and also to guide local public works decision making relative to the capital improvements program.
- Update the code to significantly increase the amount of on-street parking in commercial and mixed use districts and on residential streets.

Practice Pointers

- Involve emergency service providers, public works, and other departments early in comprehensive planning and before code revisions are drafted. Narrower lanes and reduced-lane cross sections can be controversial and city councils may be unwilling to override a fire chief's concerns about these issues. In many cases, coordination and cooperation between local departments have overcome such obstacles.
- In many states there is at least some degree of state guidance that applies to local street design standards. And in virtually any municipality, some important streets will be under state jurisdiction (state routes). For these reasons, early and continuing coordination with the state department of transportation is critical to the success of most of the measures outlined above.
- Look for opportunities for cost savings and other benefits associated with narrower street standards, including reduced stormwater volume, reduced snow removal and other maintenance costs, and other savings.

Examples and References

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6. Modernize Street Standards

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 - International Bicycle Fund, Planning: Bicycle and Pedestrian Friendly Land Use Codes (<http://www.ibike.org/engineering/landuse.htm>)
 - Metro (urban Portland region) Green Streets Handbook – design principles and guidelines <http://www.oregonmetro.gov/index.cfm/go/by.web/id=26335>
 - City of Boulder, Colorado web site describing the City’s multimodal corridors program http://www.bouldercolorado.gov/index.php?option=com_content&task=view&id=355&Itemid=1624

7

ENACT STANDARDS TO FOSTER WALKABLE PLACES

Introduction

In successful, livable cities, people are able to walk comfortably and safely. However, many current codes result in places that prevent or discourage walking by imposing suburban urban design (Issue #2) including overly wide streets and motor vehicle dominated landscapes (Issue #6). In such places the “pedestrian realm” is treated as an afterthought – the space left over between the edge of the street and the buildings and parking lots. One significant challenge to developing a walkable city is the lack of design standards or performance measures for “walkability,” like those that guide other kinds of transportation planning and design. Thus many cities are not in a position to guide private development and public works investments so that good pedestrian accommodation is built into development and redevelopment, and they do not have programs or provisions in place to repair older pedestrian-hostile areas. The magnitude of this need has been highlighted in recent years both by the number of pedestrian injuries and fatalities and by the effects that reduced physical activity (a direct result of urban design) have had on the personal health of the U.S. population.

Response to the Problem

The two primary elements to be addressed through codes are design standards for facilities, including public works facilities built by and for the city (e.g. streets and sidewalks), and requirements for private development and redevelopment projects. Cities usually regulate facility design through design standards adopted as ordinances or as administrative rules. In addition to guiding the planning and design decisions of the city itself, these design requirements may be applied to private projects in part through the zoning approval process and in part through regulations in the subdivision process. In some cities, form-based codes are used to guide not only the design of streets and sidewalks, but also the urban design relationships between all elements of the built environment. Cities may also use level of service standards to ensure that development and redevelopment projects meet minimum criteria for “walkability.” Finally, cities may adopt “Safe

Routes to School” planning and design criteria, and may designate pedestrian districts or zones in special areas (downtowns, around schools, near colleges and universities, etc.).

Expected Benefits

- Safer cities – fewer vehicle/pedestrian accidents resulting in fewer injuries and deaths.
- A healthier public resulting from increased levels of active living.
- Improved economic viability, stabilized property values and reduced retail leakage.
- Increased transit patronage associated with better pedestrian access to transit.
- Reduced parking demand in commercial areas due to “park once” phenomenon.
- Reduced vehicle miles of travel (VMT) per capita and per household as short trips are made by walking rather than driving.
- Reduced per capita emissions of criteria air pollutants and greenhouse gases resulting from reduced per capita VMT.

Steps to Implementation

1. Adjustments

- Develop or revise local street and street crossing design standards to improve pedestrian safety, convenience and comfort both as a part of routine public works projects and as a part of ongoing development and redevelopment in the city.
- Adopt standards to incorporate trees and other shade structures into the pedestrian realm, especially within mixed use districts, addressing maintenance and irrigation as well as landowner responsibilities.
- Prepare and implement a “safe routes to school” program, taking advantage of federal funding and a well-evolved national database of successful ex-

amples.

2. Major Modifications

- Designate one or more pedestrian districts (keep the initial number small) where the City will focus its efforts to improve walkability. Develop a zoning overlay district for use in making targeted changes to the underlying zoning categories to reallocate street cross sections, regulate building setbacks and so forth. Prioritize capital improvement funding to pedestrian facility needs within the district(s). Build upon success by designating additional pedestrian districts once the program has solid achievements to show in the initial districts.
- Establish pedestrian level of service/connectivity requirements for all development and redevelopment projects more than two acres in size. Include minimum pedestrian connectivity within developments and with adjacent developments, limit cul-de-sacs, limit block lengths, safe school routes, etc.)
- Adopt special pedestrian environment standards for mixed use districts to improve pedestrian safety, comfort and convenience including requirements for on-street parking, build-to lines, minimum façade transparency, building entrance spacing, canopies and similar pedestrian-friendly elements.

3. Wholesale Changes/Replacement

- Prepare and adopt a pedestrian circulation element in the local comprehensive plan or in a separate transportation master plan. Establish pedestrian policies to guide the development of design standards, as well as development review guidelines and requirements. Develop a prioritized multi-year pedestrian capital improvements plan to implement the circulation element.
- Require major developments to include pedestrian circulation plans as part of application/site plan submittals. Set and apply minimum connectivity standards and level of service criteria.
- Revise subdivision and zoning development stan-

7. Enact Standards to Foster Walkable Places

dards to require sidewalks on both sides of streets in all developments.

- Require pedestrian walkways in parking lots of over 1 acre in extent or 200 feet in width linking perimeter sidewalks to primary building entrances.

Practice Pointers

- Cities often adopt plans calling for the entire city to be “pedestrian friendly.” This normally turns out to be more a slogan than a policy. Virtually any city in the U.S. today has vast areas of urban landscape with poor pedestrian accommodation and resolving all of that will take many years of investment and careful regulation. It is important to immediately implement regulations that prevent new development of areas with inadequate pedestrian accommodation and to adopt standards that prevent construction of any new streets with inadequate provisions for pedestrian accommodation. But public investment to retrofit and improve sidewalks, crosswalks, grade separations and other facilities should be prioritized initially to school zones and routes, downtowns and other important mixed use districts, transit corridors, and other areas where a significant pedestrian presence is expected or desired.
- Involve a wide range of stakeholders and city departments (fire, police, public works) throughout any pedestrian circulation planning process. Many pedestrian plans, policies and programs are enacted each year that are not fully implemented because of low levels of support within the City government itself.
- One of the most important characteristics of public streets affecting pedestrian environments is the speed of vehicular traffic. Speeds above 30 mph make sidewalks less pleasant and street crossings more dangerous and difficult.
- The most critical link in any pedestrian network is the availability of safe, appropriately-spaced street crossings, especially crossings of arterial streets. Cities need good local policies for location, fre-

7. Enact Standards to Foster Walkable Places

quency and design of street crossings and they must invest in safe, well-designed crossings if they want to develop functional, active pedestrian districts.

- On-street parking is an important pedestrian feature that separates sidewalks from moving traffic and also serves as a primary source of pedestrians.
- Cities must stay current with “universal design” requirements that ensure sidewalks, trails, crosswalks, parking lots, building entrances and other features of the built environment are fully accessible to people with physical disabilities and others dealing with physical challenges. There are specific regulatory requirements resulting from the national Americans with Disabilities Act (ADA) and these are being expanded and updated frequently.

Examples and References

- Florida Department of Transportation, Model Regulations and Plan Amendments For Multimodal Transportation Districts (2004) and Multimodal Transportation Districts and Areawide Quality of Service Handbook at p. 26 for polygon approach (2003)
- Complete street standards (www.completestreets.org)
- Linda Dixon, “Bicycle and Pedestrian Level of Service Performance Measures and Standards,” *Transportation Research Record* 1538, <http://www.enhancements.org/download/trb/1538-001.PDF>
- Bruce Lands et al., *Modeling the Roadside Walking Environment, A Pedestrian Level of Service*, <http://www.enhancements.org/download/trb/1538-001.PDF>
- LEED-ND Neighborhood Pattern and Design Criteria Nos. 7 (standards to promote walkable streets) and 8 (measure for minimum internal connectivity based on street miles/square mile).
- SmartCode Version 9. Tables 1 through 14 for physical space allocation and design based on “urban transect” or context zones. http://www.smartcode-central.com/smartfilesvg_2.html
- Reid Ewing, *Pedestrian and Transit-Friendly Design: A Primer for Smart Growth* (www.epa.gov/dced/pdf/ptfd_primer.pdf)
- “Designing Sidewalks and Trails for Access,” FHWA. “Part I of II: Review of Existing Guidelines and Practices” <http://www.fhwa.dot.gov/environment/sidewalks/index.htm> and “Part II: Best Practices Design Guide” <http://www.fhwa.dot.gov/environment/sidewalk2/index.htm>
- City of Redmond, Washington Transportation Master Plan, pedestrian level of service, pedestrian components <http://www.redmond.gov/connectingredmond/policiesplans/tmpprojectdocs.asp>
- National Center for Safe Routes to School <http://www.saferoutesinfo.org/>
- Pedestrian overlay districts: City of Charlotte North Carolina Zoning Code 10 – 77 Part 8. <http://www.municode.com/resources/gateway.asp?pid=19970&sid=33>; City of Seatac Washington <http://www.ci.seatac.wa.us/mcode/smc152803000.htm>; City of Cleveland Ohio http://www.cndc2.org/pedestrian_retail_overlay_ordina.htm. See also City of Coral Gables Florida zoning code Article 4, Division 2. Overlay and Special Purpose Districts, Section 4-201. Mixed Use District (MXD) http://www.citybeautiful.net/CGWeb/dep_plan_ZCRW.htm
- Leaf, W.A. and D.F. Preusser. “Literature Review on Vehicle Travel Speeds and Pedestrian Injuries.” (1999) Washington, DC: US Department of Transportation. (Publication no. DOT HS 809 021).

8

DESIGNATE AND SUPPORT PREFERRED GROWTH AREAS AND DEVELOPMENT SITES

Introduction

For many decades, most municipalities have handled land development and growth reactively. Zoning changes have been initiated primarily by land owners and developers. Developers have often selected development locations that did not follow city comprehensive plans. Subdivision and property assembly have been undertaken by land owners and developers with specific development projects in mind. There is often a financial incentive for developers to develop peripheral sites rather than redeveloping infill sites. This can be balanced by communities focusing their resources in specific areas to act as catalyst for redevelopment in a specific area the City desires.

For many reasons- there is a need to plan land uses and development intensities in preferred growth areas and development sites to encourage and facilitate redevelopment, support infill in urban areas, transit supportive areas and to guide greenfield development to appropriate areas with ready access to existing infrastructure. or planned extensions. Local governments need to play a more active role in selecting areas where new growth makes the most sense. They need to revise their development codes and capital improvement plans to reinforce those choices by making these areas more attractive to the development community than other areas were the City has less desire to see development activity. This more focused role can be controversial, but can be done in a manner that benefits both the land owner and the community at large.

Response to the Problem

Municipalities need to be proactive about determining where and to what extent they will grow. This is critical as most places do not have the political will to say no to specific development proposals. While infrastructure deficits exist, many local governments see more benefit in attempting to take on more development. Instead to be effective in providing for current residents and being thoughtful for future residents, cities need to designate where growth will occur, then rezone and change codes, while altering utility/infrastructure provisions accommodate it.

To best focus development where desired a detailed Plan, whether called a Concept Plan, Specific Plan, Design for Development Plan or Urban Design Plan with comprehensive Subdivision Regulations and Street Mapping, Zoning and design guidelines as well as infrastructure plan and financing or implementation plan. A successful process will include a comprehensive stakeholder and citizen engagement process and be supported by studies and data supporting the designation of growth areas (such as fiscal impact analysis, cost of infrastructure studies, etc.).

Expected Benefits

- Achieve the City's goals for focused and coordinated infill development.
- Greater predictability for support of infill proposals which meet the new development standards and certainty of location and development potential for landowners, developers, and citizens.
- More efficient development review processes. With complete policies, land use and development regulations, the review process should be stream-lined as well as more strongly supported by the Planning Commission and/or City Council.
- Cost-effective infrastructure provision. Focusing and prioritizing infill development sites will provide efficient use of existing infrastructure capacity.
- Preservation of open space and natural resources when infill/redevelopment is supported. Focusing on infill development minimizes a community's pressure to expand its periphery, or develop in areas with more sensitive habitat or open space resources.

Steps to Implementation

Note: There are differences between in-town and greenfield locations, so steps might be applied differently in separate locations.

1. Adjustments

- Identify and map preferred growth areas in comprehensive plans. These should include policies and

8. Designate Preferred Growth Areas and Sites

goals & objectives for the various areas in terms of

- Establish utility/transportation capacity plans.
- Change the minimum lot size, requiring smaller parcels to be aggregated or developed in conjunction with larger parcels in a coordinated manner.
- Designate agriculture interim/holding zones in lieu of low density zoning in areas which the City would rather not see imminent development (define large minimum lot size)
- Create District or Area Plans to guide development.
- Location specific impact fees vary the fees for development based on location as infill sites traditionally have less infrastructure costs than peripheral or greenfield development.

2. Major Modifications

- Adequate public facility ordinance: sets criteria for utility expansion and service of outlying developments, effectively limiting the Cities requirements to provide utilities to outlying areas.
- Establish an annexation policy which sets criteria for annexation including utility and infrastructure provision and financing as well as setting minimum development thresholds and development of a plan for the coordinated development of the area, prior to annexation. (see #10 Annexation).
- A community may purchase key sites, which it feels are critical.
- Urban service areas and urban services boundaries which as part of the overall master facilities plan can be used to phase development with the timing of infrastructure.
- Designate growth areas, ensuring that there is the proper mix of urban functions. These areas should be defined in greater detail defining a capacity range of all general land uses (Retail, commercial, institutional, residential and open space as well as other uses) and a set of principles and key features (connections, open space features, etc.) that each area will be required to address.

3. Wholesale Changes/Replacement

- Establish urban service areas/urban growth boundaries and support by zoning areas outside boundaries for agriculture and other very low-density uses.
- As part of detail Area Plans, and rezone designated growth areas to allow denser development (e.g., around transit stops, regional activity centers,).

Practice Pointers

- Coordinate local government capital investment plans to support development in designated growth areas and discourage in other areas.
- Adopt comprehensive plan land use map that depicts preferred development areas and describe clearly the range of mix of uses desired as well as the community design principles as well as the key features desired for each area.
- Coordinate regionally with other local governments to adopt supportive plans and designated growth areas. It is as critical to coordinate the areas between cities, which will not receive urban development so that these community separators can be maintained over time.
- Strategic managed phasing of growth areas is critical. Each town or City needs to find the appropriate strategy for holding growth areas in check until they are prepared for the types of development that the community envisions for that area.
- City needs to find ways to prioritize development so that key projects are implemented as catalysts possibly earlier than other developments might be realized. I.e. Lower intensity or less complex developments will often be attempted first, while they may rob critical or desired projects of their market opportunity, pushing them off for many years. This is particularly true of retail, which requires residential support and typically will be drawn to auto-oriented sites prior to infill sites the City or community may desire

Examples and References

- Doug Porter, Managing Growth In America's Communities, ULI (1997) p. 53+ "Where To Grow."
- John Nolan, Well-Grounded: Using Local Government Authority To Achieve Smart Growth, Environmental Law Institute (2001) at p. 25+.
- Denver Council of Regional Governments Regional Growth Allocation System
- Lancaster County, PA, comprehensive plan designed growth areas: http://www.co.lancaster.pa.us/planning/lib/planning/long_range/growth_management/rural_area_concept_summary.pdf
- Austin, TX, Smart Growth Zones http://www.epa.gov/dced/scorecards/austin_matrix.pdf; <http://www.ci.austin.tx.us/smartgrowth/>
- State of Maryland Smart Growth Priority Funding Areas Act, <http://www.mdp.state.md.us/fundingact.htm>
- City of Petaluma, California Urban Growth Boundaries; <http://west.stanford.edu/cgi-bin/pager.php?id=105>
- Oregon Urban Growth Boundaries; <http://www.metro-region.org/index.cfm/go/by.web/id/277>
- City of Boulder Co. Land Purchase for Open Space History; http://www.bouldercolorado.gov/index.php?option=com_content&task=view&id=1167&Itemid=71

9

ENCOURAGE GREEN INFRASTRUCTURE STORMWATER MANAGEMENT

Introduction

Storm water management has been handled in local zoning and storm water management ordinances through strategies that are increasingly questionable from an environmental and cost perspective. Many communities are beginning to recognize that conventional approaches to storm water management rely on detention only and fail to address other important water quality needs:

- Reduction of surface pollutants being flushed into watercourses,
- Reduction of impervious area to minimize runoff and allow infiltration and reduced storm water volumes,
- Increasing groundwater recharge, and
- Flexibility in handling storm water on constrained infill development sites

Most local zoning and subdivision codes as well as storm water management ordinances are at odds with modern needs and designs and can stifle infill and redevelopment. For example, many do not allow green infrastructure approaches for managing storm water (green roofs, bioswales along roads, rain gardens) that cost-effectively reduce storm water flows, pollutant loads and sedimentation. Local regulations do not often provide options for off-site and regional storm water management that can provide effective alternatives for infill and redevelopment.

Response to the Problem

Communities are increasingly concerned about the best ways to manage stormwater effectively in light of the water quality impacts of increased impervious surfaces associated with the built environment as well as the rise of intensive storm events. Strategies to address stormwater no longer focus on conveyance and flood management alone, but have become more diverse and include strategies that take advantage of natural environmental systems that can reduce volume and flow and provide greater treatment. The benefits outlined herein showcase the ways

stormwater can be managed to effectively accommodate new growth with preserving existing investments.

Expected Benefits

- Reduced storm water volumes and velocity.
- Improved storm water runoff quality.
- Lower cost for storm water management facilities.
- Potential recreational and community amenities if well-designed.
- Traffic calming, more distinctive communities, etc.
- Urban heat island mitigation and reduced energy demands

Steps to Implementation

1. Adjustments

- Adopt storm water management plans and water quality elements of comprehensive plans to recognize and allow green infrastructure practices for meeting other land use goals.
- Zoning and subdivision regulations should be amended to specifically allow or require green infrastructure facilities such as green roofs, infiltration techniques (rain gardens, permeable pavement), and water harvesting devices (rain barrels and cisterns).
- Local land use plans and regulations recognize that higher density development has better environmental performance.
- Complete EPA Municipal Green Infrastructure Policy Audit.

2. Major Modifications

- Require that storm water regulations be met using practices that infiltrate, reuse and/or evapotranspire, avoid single use facilities.
- Update Stormwater Design Manual to include list of green infrastructure practices based on local priorities (e.g., water quality, visible green amenities, heat island reduction, etc)

9. Encourage Green Infrastructure Stormwater Management

3. Wholesale Changes/Replacement

- Give credit towards storm water management requirements for preservation of trees (reduction of storm water runoff volumes) and open space (infiltration) and other existing pervious surfaces.

Practice Pointers

- Engage in regional stormwater management strategies that identify and protect existing water networks, priority areas for flood protection and other watershed-scale green infrastructure.
- Consider amending building codes to promote and allow green infrastructure practices, such as cisterns and storm water reuse.
- Enact riparian buffer regulations.
- Consider separate storm water management requirements for densely developed activity centers and infill sites vs. greenfield development. Recognize that impervious cover limits, open space requirements, and on-site detention requirements may be appropriate for greenfield developments with large acreages but not more urban sites. Provide flexibility to allow off-site and regional storm water management facilities on prioritized sites within the watershed and give credit for alternative approaches like pervious pavement and green roofs.
- Extensive consultation likely to be required with storm water management agencies that are usually committed to “hard” infrastructure facilities (e.g., curb and gutter, lined drainage ditches to concentrate and convey storm water flows).

Examples and References

- U.S. EPA Storm Water Management Audit Tool (forthcoming).
- U.S. EPA Green Infrastructure website: <http://www.epa.gov/greeninfrastructure>
- Center for Watershed Protection guidance on aquatic buffers: http://www.cwp.org/aquatic_buffers.htm
- U.S. EPA Sourcewater Protection: <http://www.epa.gov/nps/ordinance/sourcewater.htm>
- City Trees: Sustainability Guidelines and Best Practices, <http://www.treetrust.org/pdfs/citytrees-bonestroopilot.pdf>
- Duerksen and Richman, Tree Conservation Ordinances, American Planning Assn. PAS Report No. 446 (1993) and Zoning Practice: Tree Preservation (American Planning Assn. July 2006)
- EPA SWPPP Guide: <http://cfpub.epa.gov/npdes/stormwater/swppp.cfm>
- Plants for Stormwater Design Volume II, http://www.greatrivergreening.org/_downloads/PSD%20II%20Sample.PDF
- EPA Smart Growth Office, “Protecting Water Resources with Higher-Density Development”: http://www.epa.gov/dced/water_density.htm
- Green Values Storm Water Toolbox, <http://greenvalues.cnt.org/>

Introduction

Communities often have the most influence over development on their edges at the time when land is annexed into a municipality. It is then that the greatest opportunity exists from a legal and policy perspective to 1) determine how those lands will help the community advance its overall planning goals, and 2) ensure that the public costs associated with development of the annexed area (the costs of infrastructure and services) are balanced with potential future tax and other revenues from the annexed lands (including any exactions or other requirements).

Many small communities and rural counties have no systems, standards, or techniques in place for evaluating proposed annexations and have not adopted annexation policies that are coordinated with their comprehensive plans and growth strategies.

In most states, municipalities face enormous pressure to annex lands. One of the most important forces driving annexation is the desire of cities and towns to increase their tax base, thereby increasing revenues into municipal coffers. Further, in most growth areas, municipalities must deal with the potential that if they don't annex aggressively, their neighbors may, leaving them "hemmed in" by the annexations of others and limited in their ability to grow horizontally. Finally, in many growth areas, municipalities may believe the only way to ensure that growth in the surrounding region occurs responsibly and according to a plan is to proactively annex areas to gain control over planning, development and design decision-making before development occurs.

Ad hoc annexation is a major cause and enabler of premature exurban development and sprawl. Ironically, in many cases the actual tax burden associated with annexed areas may exceed increased tax revenues – especially over the long term.

Response to the Problem

The principal policy directions taken by smart growth communities related to annexations include:

- Revising local codes to require that annexations be anticipated in the comprehensive planning process and that annexations be consistent with adopted comprehensive plans;
- Developing intergovernmental processes and agreements – between counties and municipalities, and between neighboring municipalities – to guide and govern planning for physical expansion and annexation; and,
- Establishing criteria for the review process leading up to potential annexations, including criteria for fiscal impact analyses.

Because many of the forces driving ad hoc annexation are based in local competition for tax base, smart growth communities and regions may also need to work together to rationalize their local taxation systems, including consideration of revenue sharing among jurisdictions.

Expected Benefits

- Provide for well-planned, contiguous municipal expansion that benefits the community and supports community character and quality of life and promote compact, community centered urban development.
- Avoid budget balancing issues associated with annexed areas that become "tax negative" as infrastructure and service needs outstrip tax revenues from low-density, low-value development with high per-unit infrastructure and service costs.
- Avoid intergovernmental competition for territorial expansion leading to over-extension of municipal boundaries and the resulting scattered, leap-frog development.

10. Adopt Smart Annexation Policies

- Preserve rural areas with their resources – agriculture, open space, stormwater infiltration, etc. – and maintain a distinction between “town” and “country.”
- Avoid ad hoc formation of small incorporated municipalities intended primarily to prevent tax increases associated with annexation.
- Provide for orderly, planned community expansion to accommodate population growth and provide tax base required to meet the community’s adopted objectives.

Steps to Implementation

1. Adjustments

Note: these four measures are designed to be mutually supportive but are presented separately because one or more of them may already be present in a local code.

- Establish a code requirement that future annexations be consistent with the community comprehensive plan (or local equivalent) along with a requirement that the comprehensive plan specifically map and describe future potential areas of annexation. These could be developed using a sphere of influence/urban transition area approach like that used in California’s LAFCO system, or a set of tiered planning areas like that used by Boulder and Boulder County, Colorado.
- Require that future potential annexation areas mapped in the comprehensive plan include a preliminary identification of anticipated zoning as well as a preliminary description of how municipal services and infrastructure (water, sanitary sewer, stormwater, transportation, police and fire, etc.) would be funded in annexed areas. This should be based on community service standards and an assessment of existing conditions and capacities in the mapped areas.
- Require that the mapping of potential future annexation areas in the comprehensive plan specifically

identify and evaluate any prime agricultural lands, important wildlife habitat areas, areas of special ecological value or concern, and any lands contaminated by past industrial or agricultural activities or hazardous materials spills.

- Establish a code requirement that the transportation element of the community comprehensive plan (or local equivalent) prescriptively identify a future collector and arterial street network (or local equivalent) for any potential future annexation areas mapped in the plan. Require that extensions of the existing municipal street network be mapped to meet minimum internal connectivity within any annexed areas as well as minimum external connectivity with existing and future neighborhoods and developed areas.

2. Major Modifications

- Adopt fiscal impact analysis requirements for proposed annexations including criteria for the forecast ratio of revenues to costs. Include provisions for additional fees to rectify imbalances. Include carefully-worded provisions for special cases where annexation of lands can be justified based on other community objectives (e.g. open space, recreational lands, water supply, etc.).
- Establish a minimum contiguity requirement for any proposed annexation area. (Example: at least 25% of the circumference of any proposed annexation must be coterminous with the existing incorporated area, subject to exceptions for bodies of water, etc.) An adjunct provision, or variation of this, would be to specifically prohibit “flagpole” annexations.
- Develop and adopt joint infrastructure standards for use by a municipality and a county, or by multiple municipalities and/or counties (for water, sanitary sewer, stormwater, streets, etc.) to be applied to proposed development within areas that the parties have agreed may eventually be annexed into a municipality. This ensures that any development within future annexation areas that occurs prior to

10. Adopt Smart Annexation Policies

annexation is not rural in character and also ensures that facilities are designed consistent with standards of the municipalities. This discourages “shopping” of one government against another to obtain the “best deal” for a land owner or developer.

3. Wholesale Changes/Replacement

Note: some measures below are in support of code changes, but are not in themselves addressed through the zoning or land development code.

- Develop an intergovernmental agreement between one or more municipalities and one or more counties providing for development and adoption of a multi-jurisdiction comprehensive plan. Include provisions for identifying areas of potential future annexation, and provisions for zoning, infrastructure, lands of special concern and street extensions similar to the four measures described above under Adjustments.
- Develop an intergovernmental agreement between one or more municipalities and one or more counties to guide the annexation process within specific areas mapped in the agreement. Include provisions addressing infrastructure standards and funding of extension of infrastructure and services, and provisions governing the approval processes of the affected jurisdictions.
- Develop a regional compact or intergovernmental agreement for revenue sharing to reduce or eliminate the pressures to annex land for municipal budget growth purposes.

Practice Pointers

- Annexation law and policy are among the most controversial aspects of growth management. Many states are currently actively legislating on the subject of annexation, changing the laws governing authority of municipalities to annex land, establishing or revising criteria for annexations, requiring additional review and approval by adjacent counties and municipalities, and providing for oversight by third parties or agencies. The first step for any municipality is to make sure that local ordinances are updated to be consistent with state law.
- Issues related to estimating costs of extending infrastructure and municipal services into potential annexation areas are difficult to resolve if there are no agreed-upon standards for the timing, placement and design of urban facilities and services. An important step in addressing annexation policy issues is to work – hopefully in cooperation with other area governments – on design and service standards that will be used to estimate the cost of provision of facilities and services.
- One of the potential beneficial outcomes of good annexation policy, especially with multiple jurisdictions involved, is the ability to avoid leapfrogging of suburban subdivisions and commercial projects outside the municipal areas. However, this potential will not be realized if the county continues to permit development that is suburban in character but with rural standards for subdivision and infrastructure design. Changes to county zoning and land development codes are an essential component in overall rational annexation process.

Examples and References

- See local area formation committee (LAFCO) system used in California <http://www.calafco.org/>
- Also see specifically Monterey County, California LAFCO “Sphere of Influence Policies and Criteria” - <http://oosweb.co.monterey.ca.us/lafco/policy.htm>
- Denver Regional Council of Governments Growth Allocation Policy – “Mile High Compact” - <http://www.drcog.org/index.cfm?page=MileHighCompact>
- City of Knoxville, TN, annexation policy <http://www.cityofknoxville.org/policy/annexation.asp>
- Austin, TX, Smart Growth Initiative <http://www.ci.austin.tx.us/smartgrowth/> and Smart Growth Criteria Matrix http://www.epa.gov/dced/scorecards/austin_matrix.pdf
- Boulder Valley Comprehensive Plan (Boulder County, Colorado) “Super IGA” and other agreements, plans and provisions <http://www.bouldercounty.org/lu/igas/index.htm>
- Larimer County, Colorado “Rural Land Use Center” <http://www.co.larimer.co.us/rluc/>
- Larimer County, Colorado “Larimer County Urban Area Street Standards” <http://www.co.larimer.co.us/engineering/GMARdStds/GMARdStds.htm>
- Twin Cities Revenue Sharing (“Fiscal Disparities) Program as described in a report for the Minnesota legislature <http://www.house.leg.state.mn.us/hrd/pubs/fiscaldis.pdf>

Introduction

This term describes development on the periphery of urban areas, suburbs, and small towns that is not dense enough to support mixed land uses or transit or create other efficiencies associated with urban development patterns like cost-efficient infrastructure—but at the same time is too dense for rural areas to maintain truly rural development patterns. Rural development patterns are typically:

- supported by limited infrastructure (e.g., gravel roads, septic systems, etc.),
- produce cost savings associated with reduced government services, and
- preserve large tracts of open space and agricultural lands

The concept has most relevance in the context of exurban development – areas outside of existing cities and towns. In terms of housing, the “Devil’s Density” is approximately 2-4 units per acre at the more suburban end of the spectrum and one unit per 20-40 acres at the rural end. Many suburban, small town, and county zoning codes and subdivision ordinances only allow densities that fall within the “devil’s density.”

This low density suburban/rural development pattern has been one of the fastest growing sectors of the housing market, fueled by a variety of factors, mainly: a move to rural communities for quality of life, an expanding second home market for lower cost vacation homes in small town areas, and a desire by rural communities to grow and the development community being able to quickly received entitlements through a less complicated County or rural town’s entitlement procedure (i.e. “the path of least resistance”).

Land use laws, particularly in the western States, give extensive rights to the large scale land owners, ranchers and farmers to develop their properties in the future. Thus, the low density residential zoning is the “de facto” zoning which has been over-laid onto many large scale tracts of

land. This means that many areas which are perceived of as “rural” are in fact zoned for this “devil’s density” of residential development.

The desire of these communities to remain “rural” or “maintain their small town character” is a common theme in these communities. Lower densities are often encouraged as they believe that this translates to a rural character. However these densities most frequently translate into low density standard subdivisions with inappropriate street designs using standard suburban subdivision regulations, with homes which are more typical of suburban rather than rural communities. The most difficult densities are those in the 1/2 acre to 5 lots. The difficulties with these densities include:

- expensive infrastructure to both provide and maintain for minimal number of units;
- inability to service on septic systems for extensive time durations;
- it is nearly impossible to intensify this pattern later as they are typically individual property owners;
- there is little possibility to carry on true agriculture or maintain farm animals in these areas;

The “Devil” in these densities is that they are neither rural nor town-like in their character. They fail to achieve either goal of the communities and yet once developed they are reluctant to change and they become more difficult to maintain over time. This will be a growing issue in the future for most communities at the urban fringe.

This is also a jurisdictional, City – County issue. Much of this development pattern is occurring with County jurisdiction at or near City limits. This is due to large agricultural properties being within County jurisdictions and being developed many times within County development procedures. The Counties often have minimal regulations and limited resources to plan for, review or process these types of development applications. This has made the implementation of policies and restrictions as well as standards for these development very difficult to control.

The development community is often way out in front of County Planning and Engineering as far as ability to deal with the various complex issues that arise from these developments.

Response to the Problem

The problem of the “Devil’s Density” is that it creates a development pattern that is not sustainable on any level – fiscally, environmentally, socially and from a health perspective. Overall, the density described here is symbolized in the 2-acre lot, with a modest amount of estate lots and other uses part of the community. When zoning at these densities, cities are focused more on the perceived market demand versus what it will take in infrastructure and resources to support such a pattern. When communities look at the potential impacts and decipher where they can make improvements through increased densities as well as a host of zoning changes, a sound smart growth community can form.

Communities need their Comprehensive Plans to very specifically locate and limit this housing pattern to areas which form a natural edge to the community, that will not be expanded beyond or “leap-frogged” in the future. An example may be an areas bordering creek ways or other natural open space corridors, which are natural barriers to expansion and clearly define an edge to the community. Another strategy is to expand the towns street pattern (often a loose grid) in a manner to allow some expansion that utilizes the remaining infrastructure capacity and then ends on the agricultural zone at the communities edge. This will provide a more integrated large lot pattern which transitions to the towns agricultural uses at its periphery.

These remedies only address the properties at a community’s urban edge. The most problematic developments are outside these areas as the ranches, orchards and farms are closed and looked to as development opportunities. These are most typically in Counties, thus Counties and Cities need to coordinate their planning efforts to minimize the ad hoc, development of rural areas and integrate their comprehensive plans to include urban expansion areas as well as areas which will be maintained in agricul-

tural or other open space designations for the foreseeable future. Cities and Counties will need to tackle this issue together in a comprehensive manner to provide a strategy which addresses planning, engineering and property ownership and development issues.

Expected Benefits

- Lower infrastructure costs for local governments and service providers.
- Preservation of large contiguous blocks of open space and agricultural lands. This is most critical when discussing habitat corridors and maintaining viable agricultural activity/businesses.
- Increased support of activity centers and traditional neighborhood developments, with greater connectivity with the immediate town or city.
- Avoids leapfrog growth; by eliminating areas within a communities urbanized boundaries, the community does not have to “leapfrog” beyond the low density areas to expand their boundaries.
- Minimizes the areas which are hamstrung by limited re-development potential due to ownership patterns.

Steps to Implementation

NOTE: A number of implementation steps from essential fix #8 support preferred growth areas also apply to this implementation fix including: agricultural interim holding zones, area specific impact fees, adequate public facilities ordinance, annexation policies, urban services areas and boundaries etc. Also see No.8: “Designate and Support Preferred Growth Areas and Development Sites”

1. Adjustments

- Adopt comprehensive plans that recommend against “Devil’s Density” in peripheral and exurban areas.
- Amend zoning ordinances to repeal zone districts that allow “Devil’s Density” at urban edge.

11. Avoid the Devil's Density

- If these zones are going to occur, then develop design regulations, which call for connectivity as well as integration with the adjacent neighborhoods and create specific transitions to adjacent agricultural or undeveloped areas.

2. Major Modifications

- Establish urban service areas/urban growth boundaries in comprehensive plans that prescribe true rural densities (e.g., 1 unit/80+ acres) in rural areas.
- Adopt true agricultural zone districts (1 unit/80+ acres) it is generally considered that to provide for true agricultural use the minimum lot size for viable agriculture is 80 acres. This may vary somewhat depending on sites, soils and the type of agricultural business within an area.
- Require minimum densities in areas targeted for growth in a community.
- Require cluster/conservation subdivisions at the urban/town edge to provide rational transition to rural areas. These are for edge conditions only and not for areas not directly adjacent to the existing urban edge. Or those that will not abut natural edges such as creeks etc.
- Require "Devil's Density" be located only at urban edge, with appropriate caveats regarding urban/suburban interface.
- Require fiscal impact analysis/mitigation-e.g. require comprehensive fiscal impact analysis for proposed rural developments and mitigation measures so that rural developments pay their own way, or is not approved.
- The SMART Code is one tool to categorize and implement the zoning regulations by classifying and appropriate transect for these urban rural interface areas and then calibrating the regulations for the specific community.

3. Wholesale Changes/Replacement

- Zone for agriculture-only districts to cover large areas which preserve agricultural viability.

- Annexation policy – e.g. require mandatory annexation as a condition of development approvals in town impact areas (consider a "no objection" clause when annexation is feasible and desired by the town.
- Joint Town/City and County planning to develop policies, which set criteria (location/size controls) to limit the ability for PUDs to prevent the creation of rural new towns.

Practice Pointers

- Depending on the state, land patterns and types of agriculture, the appropriate acreage for agriculturally zoned parcels will vary.
- Consider how rules related to lot splits/family subdivision chart the course for inappropriate densities. Family subdivisions are often used to get around minimum lot size regulations.
- In the past communities have used Devil's Density for economic development and property ownership interests; relying on unsustainable development patterns. Often smaller towns see low-density development fees and raised property values along with construction jobs and retail sales as economic development. Unfortunately, the cost of maintaining the public infrastructure, most frequently exceeds the value brought with the short term economic development.
- Do not allow cluster/conservation subdivisions in areas where true rural development patterns are preferred (These subdivisions patterns have been shown to disrupt agricultural operations over time.) Although the design of these cluster developments often have quality appearance and conceptually appears to be a positive strategy,
- In special circumstances Land Trusts have been able to purchase conservation easements from farmers and ranchers to prohibit urban development while allowing them to receive a portion of the benefit of development, allowing them to maintain the agricultural business on the land for the future.

- TDR, Transfer of Development Rights Program, should be considered, however these are complex and will be feasible in only a limited situations.

Examples and References

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- Paul Tischler, Analyzing the Fiscal Impacts of Development, Management Information Service Report No. 20 (1988).
- General agricultural zoning references: <http://www.mrsc.org/subjects/planning/farmland.aspx#agricultural>
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