



9 Regulatory Frameworks for Walkable Communities

The walkable community concept plans proposed in section 2 share the elements of compact form, a mix of residential and commercial uses, public gathering and recreational spaces, a well-defined edge, and a pedestrian orientation. But without regulations to plan and guide growth to have these characteristics, Orange County's rural lands will continue fragment and our quality of life degrade due to the current pattern of dispersed automobile-dependent development. In this section we discuss and recommend regulations and policies for walkable communities. These include:

- local small-area planning processes to engage people in developing community visions with goals and objectives that are evaluated over time;
- Orange County's current Zoning Ordinance and Flexible Development Standards, the land-use element of the Orange County Comprehensive Plan, and other local land-use practices;
- nonregulatory techniques, such as conservation easements and landowner compacts, and regulatory frameworks for growth management;
- feasibility studies of various growth management practices and combinations of tools for implementation;
- potential negative consequences of improperly managed growth, such as declining property values and insufficient availability of affordable housing; and
- potential for Orange County to cooperate in regional planning initiatives and explore new ideas. We can take a broad perspective and a synergistic approach as we manage the growth our communities are faced with.

9.1 Citizen-driven small area planning

Orange County currently has little authority to prescribe exactly how and where development takes place. This is understandable in the context of fragmented land ownership. In order to improve capacity for oversight, the SOCF report presents the idea of a Growth Management Board (Section IV.1, Goal 1, Recommendation 1, Action Strategy A). While such a board could temporarily bridge the authority gap, we should consider whether a handful of "representatives from all designated 'future' growth areas in the County" can determine "fair formulas for accommodating future growth" without broader public participation. We strongly endorse citizen-driven small area planning processes (described in Section IV.1, Goal 1, Recommendation 3, Action Strategy B of the SOCF

report) to help determine where growth should occur and to help guide how growth takes shape. Citizens are local experts who can provide valuable input concerning future growth. Their participation is critical to a collaborative and successful process.

Hundreds of rural communities across the U.S. have engaged in goal-setting processes and have reached consensus on preserving farmland, forests, scenic views, sensitive lands, water and air quality, and other issues (Crisler, 1997). Orange County's SOCF project is an excellent example of participatory visioning; we encourage more such citizen-driven efforts, especially on smaller scales. Citizens in every community should have a forum to state preferences for the kind of development they want, to assess the effects of growth on their area, and to set forth measurable conservation goals.

We hope that local people, who have direct experiences with their communities, will work with government planners to discover alternatives to piecemeal planning practices. These alternatives may include infill development and redevelopment in urban communities, clustered development in transition areas, and village-type development in rural areas.

Recommendation: *Promote community-based small-area planning processes that produce goals and objectives measurable over time. Whenever possible, amend planning policies and regulations that obstruct community goals. Accompany small-area plans with consensus-based design guidelines that support walkable communities brought about through infill, redevelopment, and new clustered development.*

9.2 Developing walkable communities under existing zoning ordinances

Walkable communities can be developed in Orange County under an existing provision of the zoning ordinance. Planned development (PD) districts were created for the County's transition areas as part of the Joint Planning Agreement among Orange County, Carrboro, Chapel Hill, and OWASA. The PD district may also be applied in rural areas "where the size or complexity, or both, of the proposed development warrant its use" (Orange County, 1981). Like PD districts, the conceptual proposals we presented in section 2 address fundamental problems in the current zoning structure and seek similar benefits to the community. The County ordinance describes the goals as:

- economical and efficient land use;
- more efficient energy use;
- lower maintenance costs;
- higher average amenity levels in all types of development;
- comfort and convenience of residents;
- protection of the characters of surrounding neighborhoods;
- less automobile traffic congestion;
- no unscheduled development on individual lots;
- appropriate and harmonious variety; and
- creative design and a better environment.

In addition to these goals, our concept plans aim to conserve open space, improve air quality, and strengthen senses of place and community.

Our current zoning structure discourages walkable development in a number of ways. In some places, PD regulations may be too restrictive. For example, infill or redevelopment proposals in Hillsborough and Efland may not be “under unified control, to be planned and developed as a whole.” It is not clear if or how PDs can be applied, except on greenfields (open spaces with few or no existing structures), which are the very areas that should remain undisturbed. Development of greenfields promotes neither economical and efficient land use nor a better environment through creative design.

Our current zoning structure tends to separate land-use types in developed and partially developed areas of Orange County. Dispersion of residential, commercial, industrial, institutional, and office zones is a recipe for automobile-oriented development. Traffic congestion, air pollution, fragmentation of open space, and a lack of a sense of community prevail because residents cannot work, shop, and play near their homes. The current zoning structure encourages people to use their automobiles instead of taking the bus, walking, or biking. Development ordinances also contribute to automobile dependence. For example, new developments usually must provide ample free parking, which worsens traffic congestion and adds to the total area of impervious surface. Orange County and its municipalities could learn from cities like Long Beach, California, and Bellevue, Washington that have successful parking reduction programs (Bragado et al., 1995).

Our framework of planning regulations can be changed for the better. The SOCF report (under Section IV.1, Goal 1, Recommendation 1, Action Strategy B) suggests some topics for the Growth Management Board to explore. We talk about some of these and other promising growth management strategies below. No single strategy is the complete solution to managing growth. The potential benefits and costs of each approach should be studied. Then, an intelligent and effective combination of strategies can be implemented.

Recommendation: *Conduct feasibility studies and cost/benefit analyses of proposed growth management practices in Orange County. Implement a combination of tools.*

9.3 Growth Optimum Overlay Design (GOOD)

When Craig Benedict took his position as planning director of Orange County in 1999, he recognized the need for a more comprehensive approach to land use planning. The planning staff created a geographic information system (GIS) program, called “Growth Optimum Overlay Design” (GOOD), to help visualize a growth model for the County. The program evaluates an area’s suitability for future development according to weighted attributes such as watersheds, slopes, forested areas, and proximity to services and transportation corridors, with the highest value assigned to proximity of services. When the location and intensity of present land uses are factored in with environmental constraints, the model suggests that we would be far better served by more concentrated land use than by the current pattern of dispersed growth. This comprehensive approach to planning for growth underscores the inadequacy of our current blanket zoning practices that separate land uses and produce disjointed communities.

Recommendation: *Apply the Growth Optimum Overlay Design GIS program to countywide comprehensive planning and community-based small-area goal setting and planning.*

9.4 Performance zoning

Even with their many flaws, some of our zoning regulations can still preserve natural and agricultural lands in the face of future development. Our zoning codes typically apply general blanket requirements to individual land use types such as residential or commercial. Performance zoning requires a development project to meet standards according to its context and situation, such as brownfield (urban infill or redevelopment) or greenfield (undeveloped transition or rural area). Performance standards can limit the intensity of development in protected areas, control the impact of development on nearby lands such as critical water supply areas, limit the impacts of development on public services such as schools, and protect the natural environment (for example, by promoting pedestrian-friendly communities to reduce air pollution from cars). Performance zoning promotes mixed-use development by allowing for a greater mix of possible uses.

The handful of performance standards currently in the Orange County Zoning Ordinance pertain to electrical disturbance or interference, noise levels, vibrations, air pollution, and disposal of liquid wastes. Performance standards pertaining to other environmental concerns could be added. For example, a checklist of questions or a point system could spell out to developers what levels of environmental impact the project area and adjacent land uses the County would allow. A developer could the design



A mixed-use neighborhood in Washington, D.C.

a project more creatively, less restricted by blanket requirements that may be irrelevant or inappropriate to many parcels in a given zone.

Recommendation: *Amend planning regulations to include performance zoning based on standards that specify both desired and undesired effects.*

9.5 Conservation and cluster zoning

Conservation zoning would restrict building in areas subject to flooding, on steep slopes (usually defined as having gradients greater than 15%), along stream banks, on wetlands, and in other sensitive areas. The GOOD program can identify such land areas; the “Rating Orange County by its Wildlife Value” report (Triangle Land Conservancy, 1999) is an excellent supplemental resource. Such conservation areas normally permit only agricultural and recreational uses; even these may be limited according to the sensitivity of the land (Sargent et al., 1991). In light of the severe weather phenomena North Carolina experiences, conservation zoning for flood hazard areas should also become an important consideration for protecting public health.

Conservation zoning has been enacted to some degree as an “Interim Development Standard” in the Zoning Ordinance in Article 6, Section 15.2. The entire University Lake Watershed is placed off limits to all public water and sewer service and alternative treatment and disposal systems. While this standard does not restrict all development, as a conservation zone would, it does limit

the type and intensity of growth that could take place in a well-defined conservation area.

Cluster zoning treats a parcel of developable land in its entirety. Development does not take place on a lot-by-lot basis. A specific fraction of the land is set aside for conservation; building is concentrated on the remainder. Physical attributes, existing structures, and common community goals determine where and how development takes shape. Cluster zoning encourages the preservation of contiguous open space, especially adjacent to established regional conservation zones. The reduced need for new infrastructure lowers municipal and housing costs. More low- to moderate-income housing is possible. Planning tools that may be used to encourage cluster zoning include special-use permits, floating zones, and subdivision review, like the process described in the existing Flexible Development Ordinance of Orange County.

Recommendation: *Amend planning policy to include conservation and cluster zoning options, based on the Growth Optimum Overlay Design GIS program and community goals.*

9.6 Flexible development standards

Orange County created the Flexible Development Ordinance (FDO) to address limitations in our current zoning structure (Orange County Planning Department, 1996). The ordinance seeks “to preserve agricultural and

forestry lands, natural and cultural features, and rural community character that might be lost through conventional development approaches.” We applaud this effort, but simply to “allow and encourage” greater design flexibility and creativity will not effectively shape future land use in the County. The three alternative development options described in the FDO (estate, conservation cluster, and village) require 33% of the lot to be set aside as open space. These options are generally superior to designs for conventional development, however they are strictly voluntary, with few incentives for developers.

Because a “yield plan” or conventional layout must also be submitted along with each FDO concept plan to illustrate the density allowed under current regulations, a project conforming to flexible development standards entails extra work. Unless incentives are provided, a typical developer would likely submit only the conventional development plan. Incentives to promote innovative development may include density bonuses, tax breaks, or a facilitated approval process. Another way is to simply require that a developer implement the development options described in the FDO (Orange County Planning Department, 1996).

At least 10,000 new units are projected to be built in the rural areas of the County by 2030. The people of Orange County want to protect open space and farmland from development, as the work of SOCF has shown. Orange County needs unambiguous policies to promote clustered, compact development, with clear distinctions between villages and protected lands beyond the village edge. Recently, the County has increased the amount of land required per dwelling unit, a process called “downzoning,” to protect open space. However, downzoning has limited effectiveness with respect to open space protection.

Downzoning the Rural Buffer from 1 to 2 acres per unit encourages dispersed suburban development in the County. Because of its proximity to Chapel Hill and Carrboro, the Rural Buffer will continue to experience powerful development pressures. The FDO does not currently apply to the Rural Buffer. 4,000 new conventional-style houses in this “protected” area would consume 8,000 acres, fragmenting forests, subdividing farms, increasing vehicle miles traveled, and so forth. Police, EMS, fire, school busing, and other services would have to be extended at great cost.

Instead, we should cluster those 4,000 new units at crossroads with ready access to services, thereby preserving the majority of the Rural Buffer. The FDO should be mandatory for any development, particularly in the Rural Buffer, where the overall number of dwelling units allowed should not be increased. Downzoning for farmland or watershed protection could succeed only at 10 (or even 25 or 50) acres per unit in the Rural Buffer and other areas that have been identified as appropriate for conservation

zoning. Development in conservation areas is never advisable, but, if allowed, it should be clustered and compact and leave large areas totally undisturbed.

Recommendation: *Require flexible development standards in the Rural Buffer and elsewhere.*

9.7 Density transfer programs

Density transfer allows development in designated areas while conserving open space and farmland elsewhere. A density transfer program manages development rights by trading them from protected areas, or “sending sites,” to areas where land can be developed, or “receiving sites.” The density transfer is based on appropriate equity compensation for land in the sending site and the allowable (transferred) density in the receiving site. Thus, the program must include a formula for calculating the number of dwelling units disallowed in the conservation area and appropriate residential density levels in the designated development area. Randall Arendt (1999) suggests that the formula include “density factors,” such as environmental constraints (e.g., soil depth, slope, and wetness), streets, stormwater management areas, and rights-of-way. These factors can be weighted according to their degree of severity or proximity within a given building lot.

No regulatory mechanisms for transferring density exist in Orange County or the Triangle region. Transfer of development rights (TDRs) and purchase of development rights (PDRs) are two planning programs that have been tested in many parts of the country. Few TDR programs have succeeded, due to regional market forces that were poorly accounted for. Successful implementation would require a regional structure to monitor and manage the program. PDRs have been more successful. These programs raise purchasing funds, “hold” development rights that have been purchased, and monitor the transfer of those rights.

Recommendation: *Conduct careful analysis, enact state-level enabling legislation, and create a comprehensive program that incorporates a combination of density transfer mechanisms.*

9.8 Overlay districts

An overlay district (OD) may be identified in the County’s comprehensive plan as, in effect, a small-area plan in which the intensity of development is based on the characteristics of the area being developed. The OD discards blanket zoning regulations and applies mandatory flexible development standards and performance, conservation, and cluster zoning as appropriate to mixed-use communities. Thus, in some areas the County could rapidly “clean the zoning slate” and more efficiently reach the goals of the SOCF task force and future small-area plans set by each community. Arendt (1999) describes the Village Design Overlay District as a special zoning district

where there is a broad consensus that higher density and mixed-use development is appropriate and desirable.

Recommendation: *Include overlay districts in planning policy to carry out small area plans.*

9.9 Conservation easements

The conservation easement is perhaps the simplest and most flexible tool for preserving land of natural and cultural significance, because it does not involve regulatory intervention and land remains in private hands. The easement is a legal document that guides future use of a property, regardless of ownership. Certain rights accompany land ownership, such as timber harvesting and development of structures. An easement on land surrenders

A landowner compact allows for conservation planning without special government regulations or involvement.

some or all of these rights. Benefits of the easement include permanent protection of the land while maintaining ownership; reduction of estate, income, and property taxes; and prevention of disagreements over future use of the land (Natural Lands Trust, 1997).

The Triangle Land Conservancy (TLC), a nonprofit regional land trust serving the greater Triangle region, uses conservation easements, among other tools, to protect natural and cultural resources for future generations. According to their website,

A conservation easement is a legal agreement between a landowner and TLC in which: (1) the landowner promises to keep the land in its natural conditions, and (2) TLC is granted the right to monitor the property and enforce the terms of the easement if need be. The easement is attached to the deed for the property and stays with the deed even when the land is sold or transferred. TLC tailors each easement to a landowner's needs, allowing the landowner to continue farming or timbering (using best management practices) (<http://www.tlc-nc.org/TLC/index.html>).

At the time of this report's publication, TLC had protected 3,081 acres of the most sensitive lands in the Triangle. The Conservancy owned 18 properties through title acquisition (by purchase or donation), held conservation easements on 16 more properties, had transferred 3 tracts to County or state governments for inclusion in parks or greenways, and had assisted in the creation of a regional park. Orange County should continue to work with TLC to protect sensitive lands. We should educate our citizens about conservation easements, tax savings, and how to set up a legal agreement with TLC.

Recommendation: *Work with the Triangle Land Conservancy in protecting sensitive lands with conservation easements and educate citizens about this planning tool.*

9.10 Landowner compacts

The landowner compact is a nonregulatory conservation technique for density transfer. Whereas an individual or a family can set up a conservation easement, an entire neighborhood may enter into a landowner compact. Owners of contiguous property can treat the combination of their land as one entity (Arendt, 1994). They can take a broader, more comprehensive, and more logical approach to planning, conservation, and development than individuals could take on a parcel-by-parcel basis.

One or more parcels might be ideal for open space conservation, while others might be more suitable for development. The landowners could enter into a joint agreement to develop each parcel appropriately. First, the

percentage of each parcel's potential development would be determined. Net proceeds after development would then be divided proportionately among landowners. Boundary lines are ignored within the landowner compact, yet each party maintains individual property development rights and benefits even if no development takes place on his or her particular parcel. A landowner compact allows for conservation planning without the special government regulations or involvement needed for PDR or TDR programs.

Recommendation: *Educate property owners in Orange County about landowner compacts and provide incentives to use them.*

9.11 Urban growth boundaries

An urban growth boundary (UGB), like a growth phasing program, predetermines where growth can and cannot occur. While less flexible in locating future growth, a UGB tends to establish a clearer "urban edge" than other forms of growth management regulation. Although they may limit the availability of affordable housing, UGBs have served conservation purposes well. For instance, public officials in Boulder, Colorado established a "blue line" beyond which water service would not be supplied (Kelly, 1993). Growth was limited on the mountain slopes that are the city's scenic backdrop. Often, UGBs are defined by "green belts" like the Rural Buffer around Chapel Hill and Carrboro. To prevent widespread low-density growth, a green belt should be maintained as a conservation district where very little development is allowed.

UGB programs must have the institutional framework of a regional planning authority. They seem to work best where there is state-mandated planning, as in Hawaii and Oregon. In any case, it is difficult for communities to

project the land area needed for growth over a period of ten, twenty, or more years. Land prices tend to drop in the conservation areas and increase in growth areas. Using 1980 data, Knaap found that land values were approximately 50% lower outside the urban growth boundary in Washington County, Oregon (Kelly, 1993). In some places, UGB regulation has led to discontinuous or “leapfrog” development, hardly the desired effect.

UGBs do not deal directly with issues such as congested roads, overloaded public services, overcrowded schools, and affordable housing. Like all growth management tools, they are not the sole solution to managing growth. The goal of growth management is to determine the amount and location of development, not its form. Unless we establish a framework for the development of walkable communities with quality transit services, automobile-dependent development will continue to dominate with or without urban growth boundaries.

Recommendation: *Carefully study problems other communities have had with Urban Growth Boundaries and potential solutions to those problems. Implement UGBs carefully with a combination of other tools.*

9.12 Compensable regulations

Regulatory planning structures like those described above must address the issue of compensation for landowners. Compensable regulation is a technique that “lies between

conservation zoning, which may be too confiscatory, and public acquisition, which may be too costly” (Sargent et al., 1991). Landowners whose property value drops because of regulation are compensated financially if they wish to sell their land. They receive an amount at least equal to the value of the land before the imposition of regulations, or equal to the new market price of similar unrestricted land. With careful study, some portion of projected savings from growth management could be set aside for appropriate compensation to those who give up or lose some development rights.

Recommendation: *Create and implement compensable regulations, with a dedicated local funding source, to account for and reimburse financial losses resulting from new development regulations.*

9.13 Regionalism

Sustainability, defined in the SOCF report as the responsible use of resources for their ongoing availability to future generations, cannot be achieved within local political boundaries. Orange County, its municipalities, and neighboring counties should coordinate their efforts in a regional approach to many environmental issues. The County should join existing efforts and explore new ways to guide our region’s inevitable future growth. Our County and region must join forces to create a bigger vision and stronger plans for the future of our land.



Manarola, Italy



Orange County, North Carolina

Recommendation: *Cooperate in existing regional planning initiatives, such as the TJCOG Regional Principles Project, the TJCOG and Triangle Land Conservancy's "Regional Greenprint" initiative, and the Triangle Smart Growth Coalition's Smart Growth Certification Program. Explore new ways to work together for a better future.*

9.14 References

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