CONSERVATION DEVELOPMENT AND SMART GROWTH:

A DEVELOPMENT TECHNIQUE FOR OPEN SPACE PROTECTION

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INTRODUCTION

In communities across the United States the pressures of population and economic growth, and the market interactions between the two, are spurring unprecedented residential, industrial and commercial development. Such development is rapidly accelerating around urban centers as declining transportation costs, increasing residential and commercial demands, and both direct and indirect governmental incentives make relatively inexpensive agricultural land surrounding such centers attractive for private development. This development has led to the transformation of small town America and its accompanying countryside into a sprawling concrete land of highways, residential subdivisions, strip malls and suburban industrial parks. Farmland surrounding urban centers has been paved over and planted with homes and malls while the historic main streets, neighborhoods, and larger central business districts of America's major cities have seen a decline in population and overall economic health.

Moreover, the older infrastructure of America's central cities and mature suburbs is being abandoned for the appeal of a "clean start" at the metropolitan edges. Once rural municipalities must now support the dramatic increase in the demand for public services and public infrastructure needed to support more intensive use of rural land. The building of the first seven generations of Americans has been surpassed, and in many cases erased, by the sheer volume of building of the last two – and such development has occurred not in the central cities, but upon the formerly agricultural land that surrounds them. In addition, such development has not followed the same density patterns of previous development – the modern era of development is one of low density and large lots. This surge of low-density building has stripped from many communities those very qualities of small town rural living that brought development and residents there in the first place – causing the inevitable population movement further into the hinterland as families search for the sense of place that propelled them to the suburbs originally. It is an unhealthy cycle, and one that is irreversibly changing the face, and the life, of the nation's communities. As Philip Langdon, a respected suburban critic wrote in his seminal work, *A Better Place to Live*: "Each year development pushes out across more than a million acres, yet the expansion of highways, housing tracts, and other suburban construction rouses fewer cheers than at any time in the past. The problem is not simply that a sensible person can no longer believe in the rightness of turning huge expanses of farmland, forest, desert and other rural landscapes into additional suburbs. The problem is that the suburbs we build are fostering an unhealthy way of life."[1]

In such an era of rapid growth the need for a comprehensive and well-planned approach to development is critical to the health of America's communities. The sense of place and community that Americans demand can only be created, or maintained, through a firm sense of where each community has been, where it is, and where it wants to go in terms of its built and natural environment. Once development occurs, for the most part, it stays.

Hence, planning for development is crucial to the long-term health of a community, and its residents.

Moreover, such planning is crucial to the preservation of the ecosystems and environmental conditions that support each community. As more farmland is developed and more land is made impermeable by pavement traffic increases and sources of non-point pollution proliferate threatening the ecosystems upon which our health depends. Sense of place and environmental integrity are closely intertwined, and such factors are central to the planning and design of modern communities and to the preservation of existing ones.

As the century draws to a close, new planning concepts and tools have emerged as planners, developers, government officials and others on the front line of community development have sought innovative ways to design and develop communities which appeal to a sense of place and quality of life while protecting the environmental integrity of the region. Such planners, architects, developers, landscape architects and environmental engineers have emerged under the banner of "Smart Growth" as a movement that strives to avoid the mistakes of post-war suburban construction and design and to create a twenty-first century way of living that is sustainable in the long term – both in terms of a healthy society, and a healthy environment.

Peter Calthorpe, one such architect on the cutting edge of planning for livable communities and the author of *The Next American Metropolis*, summarized the current state of planning when he wrote: "The current round of suburban growth is generating a crisis of many dimensions: mounting traffic congestion, increasingly unaffordable housing, receding open space, and stressful social patterns. The truth is, we are using planning strategies that are 40 years old and no longer relevant to today's culture. Our household make-up has changed dramatically, the work place and work force have been transformed, real wealth has shrunk, and serious environmental concerns have surfaced. But we are still building World War II suburbs as if families were large and had only one breadwinner, as if jobs were all downtown, as if land and energy were endless, and as if another lane on the freeway would end congestion."[2] Designers such as Calthorpe are attempting to alter these planning and design strategies, forging new and reviving older, traditional ways of town planning and development which foster healthy and cohesive communities while simultaneously reducing the environmental cost of development.

The purpose of this analysis is to first briefly outline the principles of "Smart Growth" and second to discuss the way one of the principles – Open Space Preservation – has been incorporated into land use planning and real estate development through the use of conservation (or "open space') design in subdivisions. The concept of Conservation Development (CD) and the process through which a CD is developed is detailed, and several case studies are outlined to give examples of the real world application of the theory. Finally, the conservation development method is critiqued with an emphasis on its application in land use planning, and its potential to meet smart growth objectives.

THE SMART GROWTH PRINCIPLES

"Smart Growth is development that serves the economy, community and the environment. "[3] While this phrase may seem a simple rendering of the fundamental principles of smart growth, within each word – development, economy, community and environment – lies a varied and

expansive set of regulatory, programmatic and design based tools which developers, local public, officials, and planners can utilize to create sustainable and livable communities.

Much has been written regarding "sustainable development" in recent years and Smart Growth, as a movement, follows in the footsteps of policymakers and activists from recent decades. The term "sustainable development" was popularized by the World Commission on Environment and Development in their 1984 report: *Our Common Future*[4] and has been used since to characterize the movement to find a more livable pattern of development. In Our Common Future, the commission characterized "sustainable" as "development that allows people to meet the needs of the present without compromising the ability of future generations to meet their own needs."[5]

Smart Growth follows directly in the tradition of "sustainable development" and in recent years the term has grown increasingly popular among public officials and development industry leaders. "Smart Growth" as a term now encompasses as broad series of public programs and policies, as well as development techniques intended to promote growth in a "sustainable" way, not deny it. Maryland Governor Parris Glendening speaks to this subtle difference between the mission of smart growth, versus past movements to prohibit growth: "The goal of smart growth is not no growth or even slow growth. Rather, the goal is sensible growth that balances our need for jobs and economic development with our desire to save our natural environment."[6]

Smart Growth, while a broad label for many policies, is characterized by a number of widely recognized principles. The Smart Growth Network, a network of over thirty private sector, public sector and non-governmental partner organizations, promotes ten principles as defining smart growth oriented policies[7]:

1) Mix land uses
2) Take advantage of compact building design
3) Create a range of housing opportunities and choices
4) Create walkable neighborhoods
5) Foster distinctive, attractive communities with a strong sense of place
6) Preserve open space, farmland, natural beauty and critical environmental areas
7) Strengthen and direct development towards existing communities
8) Provide a variety of transportation sources
9) Make development decisions predictable, fair and cost- effective
10) Encourage community and stakeholder collaboration in development decisions

Additionally groups like ICMA promote the encouragement of local and regional policies that promote balanced growth decisions, and federal and state laws that are respectful of local initiatives – a strong statement regarding the need for progressive fiscal and land use policies at the local level to implement smart growth principles.[8]

The development community has embraced many of the principles of Smart Growth, both through its professional organizations and though developments on the ground. The

Urban Land Institute is a partner of the Smart Growth Network and has hosted the annual Smart Growth Conference for the past several years. In addition, ULI has created a Smart Growth Advisory Group and taken a lead on promoting developments centered on smart growth principles through a wide variety of conferences and publications.Other organizations and trade publications such as Professional Builder also recognize the appeal of smart growth principals in new developments and as a way to smooth the path to project approval. A recent article in *Professional Builder* entitled "Project approval: 10 Surefire ways to succeed"[9] lists "accept smart growth principles" and "build open space into your plans" – a key smart growth principal – as two of its keys to ensuring timely project approval.

Open space protection is indeed one of the chief smart growth principles, and one that has received increasing recognition within the development community. As a recent National Association of Home Builders report states: "An important part of Smart Growth is using land more efficiently and preserving environmentally sensitive land."[10]
ICMA and the Smart Growth Network list a number of ways which environmentally sensitive land can be saved, as well as utilized in developments that protect the resources while still developing at a profit. "Design and implement zoning tools that preserve open space" is one of the ICMA principles, and one of the chief zoning tools they suggest using is cluster development zoning[11] – also known as zoning for conservation development or open space development. Conservation development is one tool that balances the protection of sensitive lands and open space, and the encouragement of development to accommodate new growth. The remainder of this paper analyzes the theory, process and application of conservation development as a tool within the smart growth toolbox.

CONSERVATION DEVELOPMENT: CONCEPTUAL FOUNDATIONS

The roots of conservation development as a planning method lie within the disciplines of urban and regional planning and environmental design. As a method, it owes its genesis to a unique blend of public, private, academic and non-profit interests and personnel focused on finding a better way to develop and design communities than the cookie-cutter subdivisions and commercial developments that have characterized the post-war era. Such environmental designers as Ian Mcharg, Philip Lewis, Fredrick Steiner and Michael Hough have worked to link the concepts of ecological protection and preservation to those of design and development. Their efforts have laid the groundwork for planning methods such as conservation development by focusing attention on the need to understand a community's environment, the impacts of development upon that environment, and the innovations in design that will allow built environments to develop in an ecologically friendly manner.
Conservation development can be viewed as a rather rocky marriage between the historically adversarial forces advocating natural resource protection and preservation, and those promoting private development. As with any marriage or partnership, there are disagreements between parties and different means through which each party attempts to achieve its goals; however, the goal is often the same – in the case of conservation development it is a sustainable, healthy community with a high standard of living. The marriage occurs in terms of the sensitivity of both environmental planners and private developers to each other's priorities. Conservation development requires such sensitivity in the structure of the method, and its use is based on a broader community vision and desire to preserve valuable open space while not seriously deterring development.

Underlying the theory of conservation development is a series of assumptions about the value of land, and the development of communities. These assumptions are central to an understanding of the method as a planning tool because they shape the way that the community would use this method to guide development. The basic assumptions include the following:

1) Development will occur, and it will occur primarily on former agricultural land or other land that has minimal existing development because it appears less expensive to develop.
2) Such land is important in terms of how it contributes to the health of the ecological systems of the region.
3) Rural lands have other attributes that are valuable to a community – including agricultural uses, historical resources and scenic views.
4) Planning can effectively minimize development's negative impact on ecosystem health while also maximizing economic benefits of land to developer.

In total, these assumptions lay the groundwork for a set of principles that guide the method's application and the planner's approach to the site, and the community.

The central guiding principles of conservation development are simple, straightforward, and inherently practical. Because the method assumes that development will occur, the focus turns to the preservation of specific aspects of the land on the site that are particularly important to the community and to the ecosystems upon which the community depends. The primary guiding principle is one of open space protection and the protection of environmentally sensitive lands. This goal is realized by requiring that a significant amount of the total acreage of the development be set aside and dedicated as open space that be used for resource protection (in terms of ecological, historical, scenic and agricultural resources). Typically "significant" is at least forty percent, but more often over fifty percent of the total acreage.[12] The dedicated open space is intended for a purpose – the protection of valuable community assets – and for those reasons in order for a conservation development to be considered different from a traditional development with a greater-than-normal quantity of landscaping, a large amount of acreage must be dedicated. The design intention is for the open space to both serve a preservation purpose, and be the focal point of the development. This requires a significant setaside of land in order to fulfill both purposes.

Secondly, this open space should be of high quality and should be in large, contiguous zones that are accessible to users. Thirdly, the development of the land should not be limited in a way that will detract from a developer's profit. The design is *density neutral* – which means that any development which occurs on the site will follow the designated density in the zoning regulation and will not detract from the number of residential or commercial units that the developer can build on the site. Setting aside such a large amount of land has a significant land value impact, and it will require a different set of housing choices and price points, therefore this model is not for use in all situations. However, conservation design is intended as an option to be used in areas where such housing choices will be supported within the market, and where additional density and the premium enjoyed due to integrated open space will help to offset the land costs.

Finally, conservation development is not a radical design concept, it is one that appreciates the history of the community, and attempts to accentuate the best of the community.

Conservation development should "fit" a community and the design steps are created with that always always in mind. With these assumptions and principles in mind, the specific steps of the method are easy to adapt to and provide a simple, straightforward and practical way to conserve precious resources while simultaneously allowing for appropriate growth and development that will be a long-term asset for a community.

CONSERVATION DEVELOPMENT AS A PLANNING TOOL

Randall Arendt, a leading authority on conservation development design, divides the application of this method into two broad stages – the first, Arendt terms the background stage, and the second, the design stage. The opening background stage is an information gathering and selection phase; the second is a more subjective phase dealing with the actual design of the development. The second relies on the information provided in the first, and is particularly dependent on the maps that are produced from the background process.[13]

The *background stage* focuses on four pieces of information determined in separate steps: 1) an understanding of the locational context of the development, 2) the mapping of natural, cultural, and historic features, 3) the integration of the information layers – specifically the overlay of the maps from step #2, and 4) the prioritizing of objectives for resource use and protection. The last two steps are intertwined and are not necessarily conducted in sequence; however, they are separate in the information they provide the planner in the design stage of the development plan.

In the first step, the developer gains an insight into the location of the site in terms of the surrounding community. Is the site adjoining a traditionally planned small town, with a main street layout and higher density? Or it is in a very rural setting with few man-made structures around it? Or, on the other hand, is the site amidst conventionally suburban subdivisions, or adjoining a series of commercial strip-malls? Such information will determine the appropriateness of design for the community. If near a traditionally designed town, the development can accentuate and continue that style of planning. If amidst a residential subdivision, considerations of aesthetics and creating some type of flow to the development are important. The locational context is important so as not to plan a development that is radically different from the community – one of the chief principles of the method. It is also at this point that a community's comprehensive plan should be evaluated in terms of the "fit" of this development. Having a comprehensive plan, and especially one that addresses open-space is important for linking a conservation development to nearby developments to create green-space corridors. This is a stage with a great deal of community outreach and research – it is important in terms of the long range health of the community to respect the compatibility of the development and this information provides the basis for that effort.

The second step in the background stage is perhaps the most important of the four. The mapping of the resources on the site is crucial information for the developer – without it a conservation design would be worthless. The developer, or consultant hired to provide planning assistance, creates maps to show the location and extent of the environmentally important resources – primarily soils, floodplains, slopes, significant wildlife habitats, woodlands and farmland – as well as historical, archeological and cultural features, and scenic views both in and out of the site. Other factors to consider are drainage, groundwater, riparian buffers, and limitations on septic system installations. Once these maps are created, they are consolidated and overlaid. This process of overlaying each map is the third step of the background stage. Once each map has been overlaid, the areas not affected on the site maps are those that would impact the site's resources the

least. Unfortunately, since a basic principle of this method is to allow for the development of the property at the maximum level allowed by its zoning regulations, often times more land must be developed than that which doesn't include resources. (If not done prior to this point, it is here that a planner should determine the maximum number of units which can be built on the site by first excluding acreage that is legally unbuildable due to wetlands or steep slopes, then multiplying the buildable acreage by the density allowed by the community's zoning regulations. This is the maximum number of units that can be developed on this site, and, according to this method, should be developed to maximize developer's profit.) Once the maximum number of lots is known, and it is known whether land with resources on it must be developed, the planner conducts the fourth stage – the development of priorities for the resources. This is an incredibly subjective process, and one that provides both opportunities for community input, and the possibility for tension within the community about the priorities. Once again, a comprehensive plan can help to focus the priorities of the development, but it is here where a great deal of community involvement can be crucial to the design and eventual success of the development.

After completing the background, the developer moves to the four-step design process. Using the information provided in the background stage, the design stage is also straightforward and relatively simple to conduct. The steps of the *design stage* include: 1) identifying conservation areas using the information gained through the previous survey phase, 2) locating house sites on the possible developable area, 3) designing street alignments and trails and 4) drawing the lot lines for the final development. Upon the completion of these steps, a working planning document can be presented which is environmentally sensitive, economically viable to the developer and includes community input and a sense of community suitability.

The first step in the design stage involves looking at the resource maps and determining both primary and secondary conservation lands on the site. The primary conservation lands are lands that are legally protected from building. After that land is designated, secondary conservation lands can be designated. This is land that has important resources upon it, but may not be legally protected from development. The resource maps provide the information for such decisions – often they include hydric soils, land with specific habitats such as wildflower meadows, historical sites like older farmhouses in their traditional rural setting, and scenic views which have been hallmarks of the collective community memory and provide beauty to a community.

After this stage is completed, the developer determines the possible housing sites. He or she would already have determined the number of possible lots; the goal in this step is to determine how to site houses in a more compact way that allows for the requisite amount of land to be conserved. This means building on smaller lots, and designing homes in more innovative designs. Such planning can also take the form of more traditional methods with a focus on public open space ("village greens or commons") and closer setbacks from streets so as to create the "front porch" environment of earlier American communities. This step then flows into the third – the determination of road and trail location. This method is one that focuses on streets ending in ways that accentuate the open space of the development (known as terminal vistas), and winding through a development in a way that also allows for a greater sense of openness than a straight grid pattern. In addition, an extensive trail system is a plus – it is a way to create private recreational space in a community that can become central to the enjoyment of the very land being conserved.

The final stage of development is the actual drawing of the lot lines. It is the easiest stage and accompanies the innovated design of the houses and development itself. In total, the four steps provide an innovative and potentially satisfying development that has long-term potential as a successful residential community. The potential for innovation in development design, and innovation in environmental conservation is enormous if the community is welcoming to such a development and if zoning regulations allow for such a plan. It is these factors that can provide the greatest difficulty in creating such a development, and are potential weaknesses of the method.

CONSERVATION DEVELOPMENT: CASE STUDIES

Conservation development as a concept has gained popularity in recent years, and there are now several prominent examples of the use of conservation development design. Two such examples – Prairie Crossing in Grayslake, Illinois, and Pinehills in Plymouth, Massachusetts are briefly profiled here. These case studies are intended to show the types of innovative projects that can be developed with a high proportion of the land in dedicated open space.

Prairie Crossing, Illinois

Prairie Crossing is located in Lake County - a rapidly developing suburban county forty miles north of Chicago. The location is convenient to O'Hare International Airport, I-94 which links Chicago and Milwaukee, and is served by the Wisconsin Central commuter line providing train access to downtown Chicago.

Totaling 667 acres, when completed the development will include 317 single-family homes on lots ranging from 6,000 to 20,000 square feet. The project preserves more than 450 acres and sets aside over seventy percent of the total acreage as high quality open space.[14] The guiding principles of the development are simple, and show an interest in building a community along with the development. Prairie Crossing's guiding principles include:

1) Environmental protection and enhancement
2) A healthy lifestyle
3) A sense of place
4) A sense of community
5) Economic and racial diversity
6) Convenient and efficient transportation
7) Energy conservation
8) Lifelong learning and education
9) Aesthetic design and high quality construction
10) Economic viability

Many of these principles are implemented through the use of the conservation development design to protect open space, and create a sense of place that is characterized by the unique qualities of the location. The open space is used for habitat protection, not simply as a visual amenity, a healthy lifestyle is encouraged through trail access and a pedestrian orientation to entire development and both the sense of place and community are based primarily on the open space and environmental theme. Prairie Crossing is located at the western end of the Liberty Prairie Reserve, a 2,500 acre nature preserve intended for habitat protection in rapidly suburbanizing Lake County. The preserve is named after a remnant of a wet mesic prairie, once a common ecosystem to the

region, and isbounded on the east by the Des Plaines River. Most of the 450 acres of Prairie Crossing's dedicated open space is located as a component of the reserve. The reserve was created out of a partnership between Prairie Holdings Corporation (which is developing the community), Lake County and in 1996 the Liberty Prairie Conservancy was created to manage the reserve.

The development is characterized not only by its large portion of dedicated open space, but also by the 10 miles of trail networks that run through the project. This trail network not only allows for community access to the reserve, it also connects to the train station and encourages a "bike to ride" lifestyle.

Prairie Crossing is also a partner in the US Department of Energy's Building America Initiative that seeks to develop energy efficient technologies in partnership with the residential homebuilding industry. Prairie Crossing is the first community-scale demonstration project for the program. Through the program, homebuilders in Prairie Crossing use more energy efficient techniques in construction such as wider spacing of studs in the framing (2 inch by 6 inch studs spaced 24 inches on center instead of 2 by 4 inch spaced 16 inches on center), greater insulation to improve the ceilings to a R-43 rating and the walls to a R-26 rating, and energy efficient HVAC systems.[15]

According to the Urban Land Institute, the innovations in design and technologies used in the Prairie Crossing development are leading to success in the real estate market. Homes are selling for $139 a square foot, which is thirty-three percent higher than homes in the competitive market area (CMA). Moreover, homes are selling considerably faster then the comparable sales pace in the CMA at an average price of $335,000 – an estimated fourteen percent faster than local competition.[16]

Pinehills, Massachusetts

Pinehills, in Plymouth, Massachusetts is located seven miles from the Atlantic coast and forty-five miles south of Boston. This development is an innovative marriage of traditional southeastern Massachusetts's environmental features – the cranberry bogs, rye fields and kettles (small depressions carved out by the glaciers that are now home to many rare species of plant and aquatic life) – and traditional Massachusetts development: the cape cod housing style and traditional village green.

The Pinehills development is a master planned community located on one original 3,000 acre parcel. Originally farmland held by two families of over three hundred years, Digital Equipment Corporation purchased the property in the early 1980s as a location for a new corporate headquarters. Due to the recession in the early 1990s Digital never constructed the office campus, and instead sold the land in 1991 to a partnership that included New England Development, the largest private developer in New England, a local entrepreneur and a local builder – The Green Companies.[17]

In order to build the type of conservation development intended by the partnership, a zoning change was required. That change was from "Rural Residental" requiring two-acre lot minimums to an Open Space Mixed Use Development (OSMUD). This zoning change allowed for an open space development with a mix of land uses, and, overall, a small increase in the project's overall density. If the 3,000 acres had built out at 2-acre minimums, between 1300 and 1500 houses

would have been entitled.The current plan for Pinehills under the new OSMUD zoning allows for 2854 units on 875 acres and preserves 1425 acres as high quality open space and up to 700 acres for a Nicklaus Design golf course.

Pinehills not only sets aside over seventy percent of the available land for open space, the development includes a 350-acre nature preserve for rare habitat, an interwoven system of trails which allows easy access to the contiguous open space, and a system of preserved cranberry bogs which will continue to be harvested.

In addition to the open space aspects of the design, Pinehills incorporates a 178-acre, 1.3 million square-foot pedestrian oriented Village Green as a mixed use town center, as well as a 250 room Marriott conference center.

From a fiscal standpoint, Pinehills makes sense to Plymouth's local government, as well as to the development community. With the variety of housing types – from single-family detached to zero-lot line attached – and a variety of price points (high $300s to 1.5 million), Pinehills offers a high-end quality of life in a rapidly growing affluent community that is currently experiencing a housing shortage. Once built out, the development will contribute to a strong local tax base, while still maintaining the open space and natural resources of the community.

CONSERVATION DEVELOPMENT: A CRITIQUE

Conservation Development, as a particular method is not particularly old; however, the concepts of open-space, mixed-use communities that are pedestrian scale has been around for centuries. The modern addition of environmental consideration adds a new and powerfully motivating force to the concept. There are difficulties, however. Perhaps the chief obstacle is the change in zoning required to accommodate such development. Requiring zoning and regulations to protect green-space corridors, protect the land that has not been developed but is still privately owned through a housing association, and to allow for mixed-used development can be difficult and lead to very public battles that often create adversaries of the parties that first sought to develop with this model. Secondly, the method has the potential to provide a "back door" to more intensive development then originally planned if the regulations restricting development on the secondary conservation land are relaxed. Thirdly, the method could be viewed by some in the community as an acceptable development model for land that is particularly valuable as a completely undeveloped site and could also be a "back door" to development.

There are multitudes of environmentally conscious and sensitive ways to protect valuable environmental resources while focusing a community's development in sensible and sustainable ways. Conservation development is only one possibility, and it will not always fit every situation. In fact, many land use professionals and academics have argued that conservation development, or cluster development, can induce exactly the kind of fragmentation of agricultural lands and leapfrog development that it is supposedly trying to remedy. As Tom Daniels, a leading agricultural protection advocate, writes: "The ultimate result (of open space zoning) may be clusters of suburban communities with a modicum of open space between them, rather than a working rural landscape with active commercial farm operations."[18] In response to that argument, Randall Arendt defends open space development by arguing: "Just as agricultural zoning and related techniques are the most appropriate approaches to pursue in truly agricultural areas, I would posit that "open space zoning" and other forms of compact development are equally appropriate in

other jurisdictions where current zoning densities aredensities are in the rural-suburban range (higher than the minimum resource-based density of 20 acres per dwelling). In such were are essentially dealing with issues such as preserving 'rural character' and conserving open space for a broad spectrum of uses including small-scale agriculture, wildlife habitat, and passive recreation."[19] Simply put, conservation development in one tool of many, and the use of its design in development must be sensitive to the regional location as well as the amenities on-site.

From a market perspective, conservation development represents an opportunity for a developer to provide an innovative product in the market place; however, he or she must also be aware of regional market preferences and location. Conservation development often requires a variety of housing options, many of which are higher density than surrounding developments. The regional preference of buyers, and the time taken to educate the market about the amenities of such a development, are key factors in the fiscal success of the development. And, although there is not currently a definitive study of the premiums attached to units within a conservation development, past research and anecdotal evidence points to premiums as high as forty percent for designs with large quantities of open space within the development, and the provision of trails for access.[20]

In final analysis, Conservation Development is a method with great potential both from an environmental perspective and a private market perspective. As communities in rural and suburban America come face to face with the effects of growth and the decisions that accompany the issue, the more methods and land-use tools that each community has at its disposal the greater the possibility for sustainable and healthy development. Conservation Development is a smart development choice – for the environment, the community and the real estate market.

ENDNOTES

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[12] For the most comprehensive reading on this method see Randall Arendt's, *Conservation Design for Subdivisions: A Practical Guide to Creating Open Space Networks.* (Washington D.C.: Island Press. 1996.) and his more recent book on integrating conservation design into model codes: Growing Greener: Putting Conservation into Local Plans and Ordinaces. (Washington D.C.: Island Press. 1999.)
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