

Cluster/Conservation Development

Introduction

Over the past fifty years, residential development has spread across the Illinois landscape, quite rapidly in some areas. As urbanized areas have grown, people have migrated to what have become known as “subdivisions” located in more suburban or rural areas on the outskirts of towns and cities. Much of this type of development has followed a traditional design, which some have described as “checkerboard or cookie-cutter housing development.” The residential zoning ordinances in most communities have encouraged such traditional designs by requiring minimum lot sizes, uniform road frontage and lot setbacks, specific road standards, and other standard requirements. In general, the only open space within such developments has been the yards between adjoining privately owned housing lots. In many cases, little planning went into preserving or improving the quality of the open-space areas or protecting natural features on the developed parcel.

As concerns over issues such as “urban sprawl,” open-space preservation, environmental protection, and farmland loss have increased, some home buyers, developers, and community officials have started to question whether the traditional development pattern provides the quality of life that many homeowners now desire. To help address these issues, a rather new concept in development, cluster or conservation design, has become predominant in many communities. Although still somewhat new to many Midwestern areas, the cluster designs have been used for some time in parts of the eastern United States and are beginning to show up in Illinois.

What Is Cluster Development?

The most common name for this new development approach is cluster development, but conservation design and a number of regional terms are applied to the same concept. Regardless of its name, the main objective of cluster development is to allow residential, or even commercial, development while still protecting the area’s environmental features, allowing for more open space, and protecting farmland and the character of rural communities.

Cluster developments differ from traditional developments in several ways. Cluster developments usually site homes on smaller lots and there is less emphasis on minimum lot size. However, the total number of homes, or density, on a given acreage does not necessarily increase over that allowed in the traditional subdivision designs. The same number of homes is clustered on a smaller portion of the total available land. The remaining land, which would have been allocated to individual home sites, is now converted into protected open space and shared by the residents of the subdivision and possibly the entire community. (It is important to note that there is flexibility on the “homes per land area” issue: some incentive-based ordinances allow for development of more homes in exchange for providing other non-required features that are desirable to the community.)

In most cases, local ordinances and regulations must be updated to facilitate building conservation development subdivisions. Road frontages, lot size, setbacks, and other traditional regulations must be redefined to permit the preservation of environmentally sensitive areas, rural architecture, historical sites, and other unique characteristics of the parcel of land being

developed. Developers often cite local regulations as the primary reason more innovative designs are not used. More flexible regulations does not mean “anything goes,” however. Traditional codes must be replaced with new design standards that address the goals of conservation development, such as open space preservation, etc.

Open Space Preservation & Maintenance

The increased common open space in cluster developments may be used for a number of purposes. The specific purposes are defined during the development’s platting process. In many cases, the open space is designed to protect natural areas. One principle of conservation design is that environmentally sensitive areas must first be identified and designated as non-buildable. Then subsequent planning can ensure that home lots do not infringe on those sites and that those sites are not calculated into the total area permitted for lots. The open space can also be used for more active recreational facilities, native habitat for wildlife or plantings, agricultural production, or other allowable purposes. The landowner and community jointly determine how the open space will be used while the subdivision proposal is being approved.

In most of these developments, each homeowner has equal access to the open space areas. In some cases, the open space may be designed such that the whole community can share its use. Even if access is limited, the community often shares in the overall benefits of open-space preservation.

A homeowners’ association is usually responsible for protecting and maintaining the open space. When necessary, the community also may have the authority to enforce the open-space provisions approved in the plat agreement. For example, if necessary maintenance of open space is being neglected, the community can create a subordinate special taxing district that taxes homeowners in the subdivision in order to fund such maintenance.

The open space can also be protected permanently by a conservation easement, a legally binding agreement that can restrict any unwanted type of development into perpetuity. (Local U of I Extension offices have additional information regarding conservation easements.)

Advantages and Disadvantages

As previously suggested, many advantages of cluster development are related to specific uses of the open space and the “feeling” that this space generates for a community. Some of the chief advantages include:

- Open space can provide community members with larger recreation areas and create a sense of openness that many people desire.
- Open space can benefit the environment by providing habitat for wildlife, naturally filtering storm water, reducing storm water runoff from impervious surfaces, and protecting the natural features of a site.
- Linking the open space of several conservation design subdivisions can help develop larger and more effective “environmental corridors” within and between communities.
- Developers may benefit because these designs usually reduce the costs of site development and increase the market price of individual plots in comparison with traditional subdivisions.
- These designs can benefit rural areas by reinforcing the policy of maintaining the local rural character that is included in many comprehensive land use plans.

Disadvantages of cluster development may include:

- Perhaps most important, local officials, developers, and the community may be predisposed toward traditional development designs because they are familiar and well understood. An education effort may be necessary to help these groups understand the goals and advantages of cluster development.
- During the planning phases, lot and home layout may take extra work to ensure that while homes are located closer together, they still take advantage of the open-space goals of the design.
- Methods to protect and maintain the open space must be carefully developed, implemented, and monitored.
- Although not necessarily a restricting disadvantage, the management of waste water must be carefully designed for smaller lots.

While these disadvantages should be acknowledged and addressed, none should preclude the use of cluster development.

Waste Water Management

Storm water and septic management can take some additional planning in a cluster development.

Actually, well-designed cluster developments may benefit the whole community in terms of storm water management. These developments usually have less impervious surface cover and provide more open space for water infiltration. These two factors combined can help reduce the amount of storm water runoff leaving the property and thus decrease the chances that the new development will cause flooding problems. Although traditional subdivisions may be required to build storm water detention areas, these structures usually only reduce the flow rate of water, not the increased volume. Natural areas, such as wetlands or native plantings, that are a part of the cluster development's open space can help manage storm water by reducing the volume of runoff and cleaning the storm water during the infiltration process. In fact, many conservation designs include planting deep-rooted native plants in the open space to help improve soil structure and increase water infiltration.

Another advantage of cluster developments is that they generally use less mass grading of the parcel's soil surface. Such grading can compact the soil and increase runoff even on areas where there is no construction. Road ditches in cluster designs are often grass swales instead of curb and gutter. These grassy areas allow for more water infiltration and are often less costly for developers and require less maintenance from the homeowners' association or community.

Private septic systems in rural areas have always presented a challenge to communities. It is difficult to ensure proper water treatment with these systems. The traditional practice has been to place a septic drain field on an individual homeowner's 1+ acre lot, assuming the lot meets state and local health requirements. While this approach may still be possible in a cluster design, some type of alternative layout or system will probably be required. Placing easements on the common open space can allow for drain fields to be established in that area. As technologies improve, other alternatives, such as mechanical systems, constructed wetlands, land application, or small community systems, may be used. Local health departments and the Illinois EPA have additional information on septic siting and management.

The availability of community sewer systems may help avoid septic problems when developments are near municipalities.

Does Cluster Development Preserve Farmland?

Putting the same number of houses on less land area can preserve open space, especially for a subdivision and the adjacent community. Does it preserve land for agricultural purposes? That question is not as easy to answer.

Some cluster developments, especially large ones, can preserve open space for agriculture. The open area may be leased to farmers for typical Midwestern farming practices. Alternatively, the homeowners can plant community gardens or engage in small-scale agricultural production. In some cases, the open space could even house livestock, such as horses, owned by the homeowners or others.

However, unless the open space is a large acreage, it may be difficult for traditional farming to continue in the open-space areas. Traffic congestion, crop damage, farm noise, odors, etc., all discourage many farmers from farming such parcels of land around subdivisions, especially in rapidly developing areas. Even so, the open space in cluster developments can provide a good buffer between traditional farming operations and residential areas, thus alleviating some of the pressures of neighboring development and allowing farming to continue in nearby areas longer into the future.

Further Reading

Randall Arendt. 1999. *Conservation Design for Subdivisions: A Practical Guide to Creating Open Space Networks*. Washington, DC: Island Press.

Randall Arendt. 1999. *Growing Greener: Putting Conservation into Local Plans and Ordinances*. Washington, DC: Island Press.

Northeastern Illinois Planning Commission. 1997. *Source Book on Natural Landscaping for Public Officials*.

References

Blaine, Thomas, and Peggy Schear. 1998. Cluster Development Fact Sheet, Ohio State University Extension Land Use Fact Sheet Series.

Kendall County, Illinois Conservation Design Residential Ordinance, 2000

University of Minnesota Extension Residential Cluster Development Fact Sheet Series, 1998.

University of Wisconsin Extension Environmental Corridors Fact Sheet.

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