



Compact Development Study

A Report of the

Falmouth Comprehensive Plan Advisory Committee

Hugh Smith, Chairman
Vicki Swerdlow, Vice Chairman
Hugh Coxe, Planning Board
Mark Terison, School Board

Lissa Robinson
Joe Wroblewski
Gail Zarr

Prepared by George Thebarg AICP, Community Development Director
With assistance from Mark Eyerman of Planning Decisions Inc. and Ethan Croce,
Administrative Assistant

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Executive Summary

Project Purposes

In October of 2003, the Falmouth Town Council adopted a resolution directing the Comprehensive Plan Advisory Committee (CPAC) to undertake a town-wide study of compact development as a continuation of a larger residential master planning process set forth in Comprehensive Plan 2000. The Council further directed that the first step in the study should be a solicitation of citizen values on the issue. To that end, CPAC conducted a random telephone survey of Falmouth households that included questions on their views about compact development. CPAC also explored whether knowing the pros and cons of different types of development would affect respondents' views.

Citizen Views

CPAC found that Falmouth residents are evenly split on whether the town should pursue compact development as a means to manage growth or continue the large-lot policies that support low-density suburbanization. But CPAC also discovered that views change as people learn more about the complex issue. This report is primarily intended to advise the Town Council on possible policy direction to implement the town's Comprehensive Plan, but CPAC hopes that it will also help citizens explore the topic so that they can better evaluate their goals for the future of their town.

Compact Development Models

Compact development can take many different forms. It can be primarily residential or mixed with institutional uses (e.g., schools, churches, nursing homes) and/or commercial development. Compact neighborhoods are characterized by higher density, but the residential components can range from single family homes to high rise apartments and everything in between. CPAC considers the compact neighborhoods that already exist in Falmouth along the Foreside to provide the best models for evaluation and exploration of options for future compact growth in the community.

Addressing the Impacts of Compact Developments

Whatever form compact development takes in Falmouth, it will be highly scrutinized by citizens both in terms of the general impacts on the town and the specific impacts on existing neighborhoods. CPAC determined to address those concerns head on in the study, and this report is organized accordingly. After reviewing the views of citizens as expressed in various survey information, the second section deals with the town wide implications of compact development in light of the values and goals of citizens set forth in the Comprehensive Plan. The consultant and staff developed selection criteria based on both the feasibility *and* the appropriateness of compact development in light of citizen values and goals.

Criteria for Selecting Compact Development Locations

Feasibility for compact development is based on the availability of public sewer and public water and having adequate road network capacity to accommodate increases in traffic. *Appropriateness* for compact development is measured in the report according to the impacts on natural, scenic, and open space resources identified in the Open Space Plan, and per proximity to town activity centers identified in the Bicycle & Pedestrian Master Plan.

Recognizing that citizen values and goals expressed in the Comprehensive Plan and surveys are generalized and inadequate to forming specific public policy on growth management issues, this report presents a range of options for the Council to consider in terms of appropriate locations for

compact development. Depending on the Council's analysis, the town could either take a permissive or even promotional approach to compact development in the future, or it could determine that a conservative or even restrictive policy response is warranted.

Using the selection criteria for feasibility, CPAC has determined that numerous properties throughout the eastern half of the town could be considered for some form of compact development. Of the parcels that are *feasible*, the number that are *appropriate*, however, will depend heavily on the approach taken by the Council in setting a policy course. A permissive approach based on the values and goals of the Comprehensive Plan would indicate that most of the feasible properties (as many as 175) could be considered appropriate. The most restrictive approach to provisions for compact development would eliminate most of the feasible parcels (leaving as few as 50).

Caution on Interpreting the Results

As with the previously stated caveat on the weight that should be placed on input collected through citizen surveys, a similar and more emphatic caution is raised in interpreting the selection criteria results. The analysis used in this study is very generalized, and none of the properties identified on the maps have been investigated to determine if the town's generalized data is accurate. That generalized data is suited for studies that describe general conditions in various areas of town, but it is inadequate to determine actual conditions on the ground on any given property. The information is well suited toward evaluation and formulation of long-range policies, but it should not be used to determine whether specific properties would be developable or un-developable under those policies.

Critical Elements—Design and Traffic Impacts

Regardless of the scale and scope of compact development that is pursued as a growth management program, the localized impacts on neighborhoods and roads will need to be addressed in any policy changes. CPAC believes that the design of compact development projects can and must address localized impacts to protect existing neighborhoods and to provide a positive context for pursuing compact development. Another critical consideration is the localized effect of added traffic that will be generated by future development, whether it occurs as a result of conventional subdivisions or compact neighborhoods. Although traffic congestion will be a problem with any growth management program, attempts to concentrate development in limited areas will face greater challenges.

Maintaining Density Neutrality

Finally, CPAC continues to assert that any policy taken on compact development should maintain density neutrality to accomplish the Comprehensive Plan goals and to satisfy citizen expectations. Increasing development density in some areas of the community must be offset by reducing density in other locations. Changing the currently allowed densities in any location will be questioned and/or challenged by residents of the affected areas. This report seeks to help policy makers and concerned citizens evaluate the implications of compact development as a growth management option both for area residents and for the town as a whole.

Report Recommendations

Based on the research, CPAC recommends seven ideas as a basis for pursuing a compact development program for Falmouth:

1. Use the compact development screening criteria of this report to determine "consistency with the Comprehensive Plan" for the current compact development mechanisms of the Zoning Ordinance.

2. Consider additional forms of and locations for compact development zoning based on the screening criteria of recommendation #1.
3. Adopt a unified ordinance for compact development to deal comprehensively and specifically with the special requirements of this development form.
4. Develop and apply general and specific design guidelines for all compact developments.
5. Conduct a design workshop with stakeholders as the first step in the process of rezoning and/or approval for a compact development project.
6. Commission a study of the road network to determine carrying capacity and to identify specific limiting segments and intersections.
7. Attach a density transfer fee to all extra housing units allowed over the base zoning density to maintain overall density neutrality.

Project Purpose

In July of 2003, the Falmouth Comprehensive Plan Advisory Committee (CPAC) presented a draft Future Land Use Plan for central Falmouth to the Town Council for consideration. This draft plan was developed after an eighteen month residential master planning process, the first of several recommended in Comprehensive Plan 2000 (See Fig. 1). The Woodville and Falmouth Center areas were chosen for the first project because the availability of public water and sewer provided the most growth management options, and because those areas had experienced and were experiencing significant development pressure.

The Comprehensive Plan recognized that unless growth management policies changed, developers would continue to build out the town following the pattern of low-density, single family subdivisions called for by the town's earliest Comprehensive Plan and a zoning framework that was enacted in the early 1960s. The current plan directed CPAC to explore growth management alternatives and to conduct an extensive public participation process involving residents of the area that would be affected by possible policy changes.

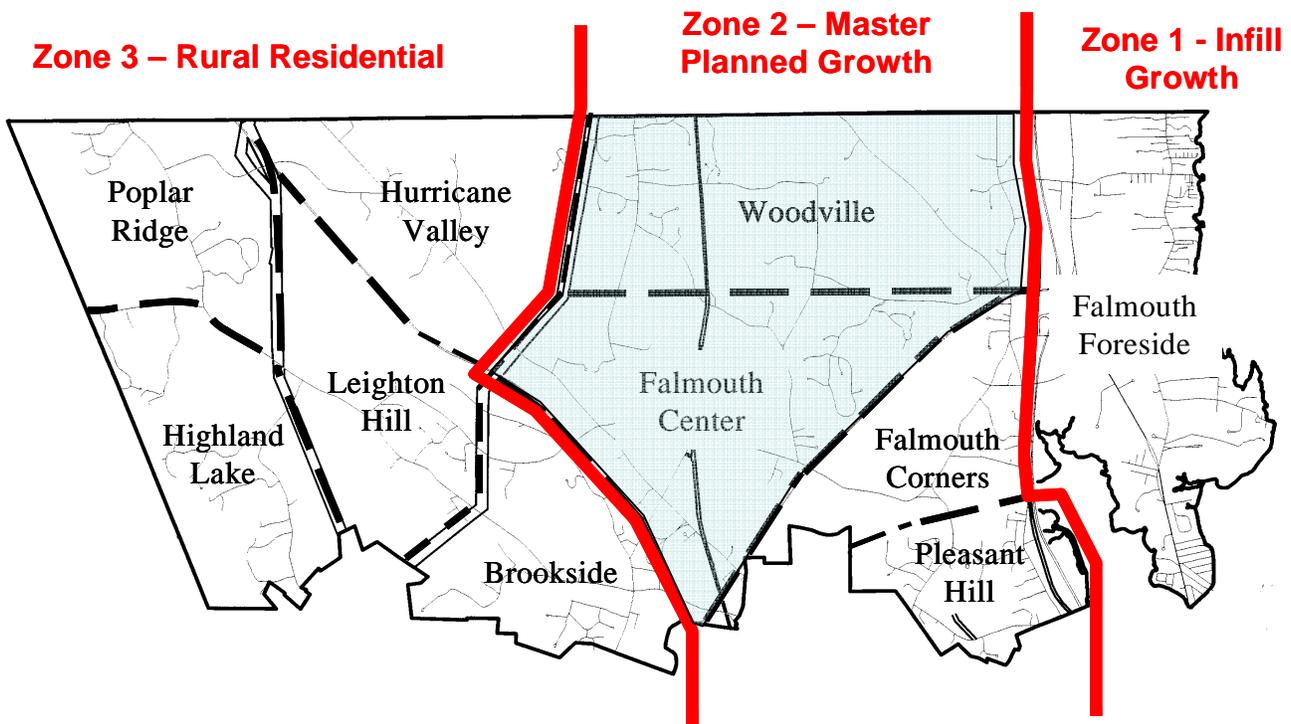


Figure 1— Residential master planning areas identified in Comprehensive Plan 2000

Based on the direction given by the Comprehensive Plan, CPAC worked with scores of residents from the study area and participants from other areas of town to develop a draft growth management plan. CPAC commissioned a build out analysis showing what the area would look like after the next 700 or more homes allowed by current zoning were added. Participants in the study then evaluated the pros and cons of conventional large lot zoning, conservation zoning, country estates, compact neighborhoods, and preservation. The input solicited through that planning process led CPAC to recommend that conservation zoning and country estates be applied as a

new zoning paradigm, and that selected locations in the study area be zoned for higher density, compact neighborhoods. CPAC also recommended that some type of development rights transfer system be considered that would preserve other properties within the study area as permanent open space, thereby maintaining an overall neutral density of development within the study area.

Both the proposal for higher density neighborhoods and the idea that certain parcels should be preserved from development were challenged during public hearings on the draft Future Land Use Plan. In response to public concerns, the Town Council adopted a resolution in October of 2003 directing CPAC to study the issues of developing compact neighborhoods and preserving open space on a town-wide basis, as opposed to looking at the study area in isolation. The Council also directed CPAC to “solicit citizen opinions” as the first step in the planning process for these projects. This report documents the outcomes of CPAC’s exploration of compact development on a town-wide basis.

Citizen Values in 2000

Citizen Attitudes Toward General Growth Issues

Comprehensive Plan 2000 included two town-wide citizen attitude surveys distributed by mail. The first contained questions about citizen values and concerns about growth in the community. The second survey presented different ideas for policies to address those values and concerns and asked for public reaction. In October and November of 1999, CPAC distributed a citizen survey to each household in town. Of the 3900 residences that received the survey, 1200 responded for a 31% response rate. Preserving open space and managing residential growth were top priorities for Falmouth residents. The highest level of consensus was expressed for setting housing densities based on environmental suitability of the land (85%). Eighty-four percent of respondents want the town to guide development away from areas of natural, scenic, or open space value.

More than three quarters (77%) listed open space and natural areas as important reasons for living in Falmouth. The next strongest level of support focused on cluster development, with two-thirds of survey respondents supporting clustering to keep portions of project sites as open space. That same level of support was expressed for preserving natural areas for passive recreational pursuits (66%) and for purchasing important open space areas (66%).

A significant segment of Falmouth’s population believed that the town should protect important areas even if it restricted landowner use (64%), and nearly half felt that the town should direct growth to appropriate locations.

Citizen Attitudes Toward Specific Growth Patterns (Fig. 2 & 3)

The surveys circulated in the last Comprehensive Plan update explored relatively specific ideas for the types of development preferred by individuals and by the town as a whole. CPAC asked citizens what types of neighborhoods they would like to live in and what types of neighborhoods they thought were best for the town. Interestingly, only 17 % of Falmouth residents *prefer* to live in dispersed subdivisions, which now constitute about 90 % of all housing being built in Falmouth (Figure 2).

The survey also asked citizens to identify housing types that are good for the town. Mixed housing densities and patterns were heavily favored (60%) along with compact growth next to areas served by public utilities (24%). Only 10% thought that the current pattern of housing in dispersed subdivisions on private wells and septic systems was good for the town (Figure 3).

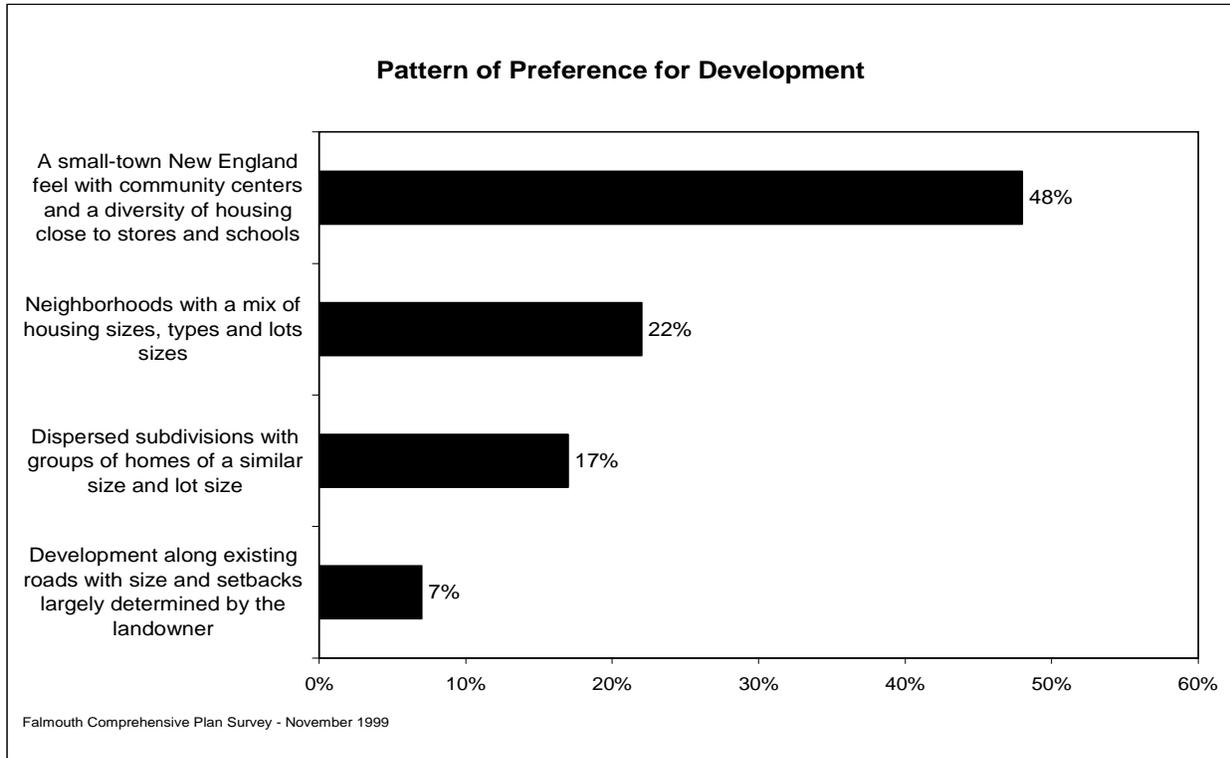


Figure 2—1999 Citizen views toward personal preference of growth patterns.

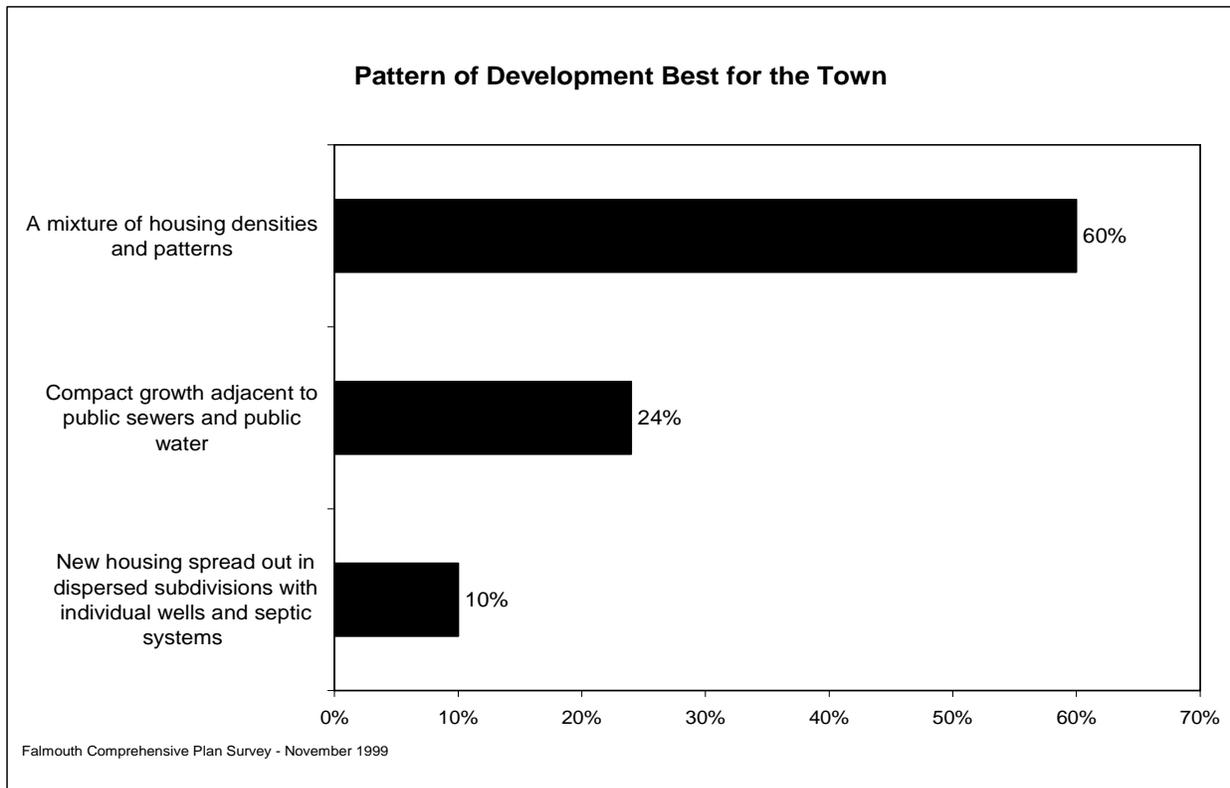


Figure 3—1999 Citizen views toward town interests in growth patterns.

Citizen Values in 2004

To expand upon the input on citizen values collected in the 2000 Comprehensive Plan update as requested by the Council, CPAC commissioned a random telephone survey with questions about compact growth and other topics related to the draft Future Land Use Plan recommendations. With respect to compact development, the survey presented questions designed to solicit responses to the following policy questions:

- **Is there a preference for compact neighborhoods or large-lot subdivisions?**
- **What are the factors that might affect views on these two development patterns?**
- **Who should decide what patterns get built by developers?**
- **Is there openness to rental housing and condominiums in town?**

The results of the 2004 phone survey indicated that there is strong support in the community for the following policies:

- Seven in ten residents (71%) support increasing the number of condominiums and townhouses in Falmouth, if they are included in compact neighborhoods.
- Two in three residents (68%) support increasing the number of rental units in Falmouth, if they are included in compact neighborhoods.
- A two-thirds majority (66%) of residents would oppose letting developers decide whether they would build large-lot developments or compact neighborhoods. 47% felt strongly that developers should not be making this decision.

The 2004 citizen survey also identified policies where people in the community are split in their opinions. Anticipating that there might be divergent views on whether Town policies should favor large lot zoning or compact neighborhoods, CPAC included questions that looked at the pros and cons of the two contrasting approaches to growth management:

- Based on their initial opinions, residents are nearly evenly split on whether they would support (48%) or oppose (47%) requiring housing to be grouped into compact neighborhoods so that land could be set aside as open space.
- Based on their initial opinions, residents are also evenly split on whether they would support (48%) or oppose (48%) requiring housing to be built on large lots of 2 acres or more.
- Among those that initially supported grouping housing together on smaller lots to preserve open space or requiring large lots of 2 acres or more, the opinion of most changed depending on possible advantages or drawbacks to such development.

- Residents are split on whether the town should allow extra housing in some areas of town and use fees generated by this mechanism to purchase development rights in other areas of Falmouth.

The input collected in these citizen surveys led CPAC to believe that while people in town are concerned about the impacts of growth that will occur under the town's current zoning framework, they are cautious about dramatically changing the framework of regulation. They are quite open to greater provisions for multi-family housing, and they desire more diverse housing options and maintaining a small town atmosphere. They also seem a little skeptical about "creative" mechanisms like transfers of development rights. Notwithstanding their caution and skepticism on some aspects of compact growth policies, Falmouth citizens seem strongly supportive of town efforts to take steps to plan for future growth and to direct it to areas that can most accommodate it with minimal impacts on the community. This citizen input led CPAC to take a rather cautious and conservative approach to exploring where compact development might be feasible and appropriate in Falmouth, and it strongly influenced the recommendations that are made in this report.

Goals for Compact Development

Compact, higher-density, mixed-use neighborhoods provide one option for managing the impacts of growth in Falmouth. Building new housing on smaller lots in areas served by public water and sewer results in a more efficient use of land and can provide more diverse housing opportunities than the traditional pattern of spreading homes across the landscape on large lots with private wells and septic systems. Directing future growth to compact development areas can also help preserve the rural character and open space of some parts of Falmouth. Finally, compact growth can enhance a sense of community by creating neighborhoods that are conducive to social interaction and providing opportunities to walk and bike to nearby amenities like schools, libraries, stores, and parks.

Compact development can take a number of different forms. It can be comprised solely of single family homes on small lots in traditional neighborhoods like those along lower Route 1 near Mackworth Island. Small stores like Town Landing Market and churches like those on Route 88 can provide a mix of non-residential uses in keeping with the character of those neighborhoods. Multi-family housing like the condominium projects on the Foreside can fit well in compact areas and provide the advantages of common facilities and joint maintenance of properties. Demographics indicate that Falmouth's population will continue to include a higher percentage of elderly residents, and the market demand for residential care facilities like Falmouth by the Sea and Oceanview could increase in the future. Compact neighborhoods with smaller homes and lots can also provide more affordable housing options for young families just starting out in the housing market.

Compact development can be proposed as larger projects that involve hundreds of housing units on large land tracts of undeveloped land. But it can also be composed of smaller in-fill projects on vacant lots within or near established neighborhoods. Whatever the scale or form of compact neighborhoods, there are significant impediments to their development in Falmouth. The limited availability and high cost of raw land makes it difficult to assemble parcels suitable

for higher density housing. The requirement of public water and sewer means that developers must capitalize the up-front costs of public utilities as opposed to letting lot owners install their own individual wells and septic systems. Compact neighborhoods usually require closed street drainage systems which also increase the costs of development above what can be accomplished in low-density subdivisions where open ditches and culverts are allowed. The cost efficiencies of doing compact development may require that the town allow higher density in areas considered for compact growth options. The higher density provided in compact neighborhoods could, however, be offset by purchasing or transferring the development rights in other sections of town or even in the immediate vicinity.

Higher development density in areas designated for compact growth faces the added impediment of neighborhood opposition from existing residents. In those areas, people may object to change in general and express particular concern for the real or perceived impacts of higher density developments. Those concerns will have to be met in the planning process, and CPAC believes they can be addressed through careful selection of locations for compact neighborhoods and through careful design of new development. The following section of this report looks at selection criteria. A later section deals with design aspects of compact development.

Selection Criteria for Compact Development

To explore ways to achieve the goals of compact development while recognizing the significant challenges, CPAC asked its consultant and town staff to develop objective screening criteria to identify locations where compact development would be feasible, appropriate, and acceptable. The following analysis attempts to address the first two evaluative aspects of feasibility and appropriateness. Based on the general guidance provided by the Comprehensive Plan and citizen input from surveys and public forums, the consultant proposed a set of “filters” through which compact development proposals should pass before they would be considered by the town. These screening criteria were designed to first identify the largest possible area of town that could be considered for compact growth and to then apply increasingly stringent criteria to focus down on the most suitable areas. The process is not intended to identify specific parcels of land, but it does explore the effects of the proposed screening process on existing properties that generally meet or fail to meet the criteria. This analysis was done using readily available data from the Planning Office and some common understanding of the conditions of roads and utilities throughout the town. Field specific conditions and data could alter the results in a more detailed study of a specific development proposal. The assumptions for this study will be stated along with the analysis.

The criteria used to identify areas for possible consideration as compact growth areas follow:

- 1. Availability of Public Sewer Service**
- 2. Availability of Public Water Service**
- 3. Access to Major Arterial or Collector Roads**
- 4. Impact on Significant Natural Resources**
- 5. Impact on Scenic & Open space Resources**
- 6. Proximity to Community Centers of Activity**

The first three selection criteria or filters deal with the issue of feasibility in terms of construction and traffic impacts. The latter three focus on appropriateness in terms of the impacts on community resources and accessibility to community centers. By applying these selection criteria, we can objectively evaluate where the town should consider compact development proposals that would be in keeping with the comprehensive planning criteria that have been adopted by the town.

The goal of this study is to develop screening criteria that can be used to objectively evaluate locations for future compact growth. Identifying specific land tracts or individual properties to designate for compact growth projects is not a goal. To explore the effects of the screening criteria, however, we have taken general data on Falmouth properties and applied the screening criteria to see the results on a town-wide basis. By showing the effects of the filtering on individual properties, we can better understand and evaluate the *screening criteria* to see if they are appropriate and workable. Hopefully, the criteria will benefit both the process of deciding whether to add more compact growth options to the ordinances and for reviewing development proposals brought forward under the existing Zoning Ordinance.

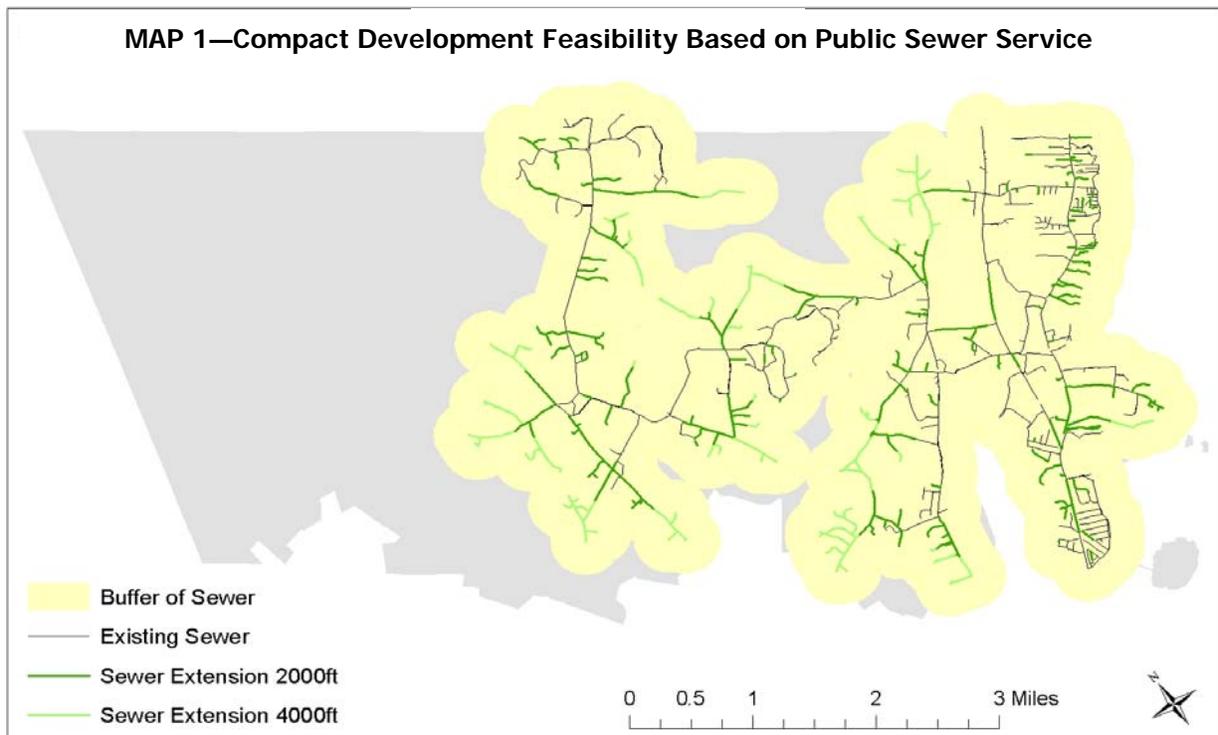
1. Availability of Public Sewer Service

In the early 1970s, the town received federal funding to construct a sewage treatment plant on Clearwater Drive off U.S. Route One. A series of sewer pumping stations and force mains were installed to carry wastewater from the densely developed areas of the Foreside and the commercial areas along Route One to the sewage treatment facility. In the mid to late 1970s, a series of condominium projects took advantage of the new infrastructure to create several high quality, high-density, housing projects that added greatly to the housing mix in Falmouth.

In the 1980s and 1990s, a series of expansions to the sewer system were made, primarily by private developers. As an extension of the original goal of cleaning up environmental hazards, the town extended sewers to the Pleasant Hill area. Subsequently, developers made further extensions to upper Route One, to the Woodlands Country Club, and over to former Exit 10 of the Maine Turnpike. More recently the town extended sewer service to West Falmouth Corner, and last year the Falmouth Country Club ran a line along Winn Road to replace their failing community septic system.

The experience of these expansions indicates that sewer lines can be extended over great distances to serve existing neighborhoods with septic problems or for new development. Experience also indicates, however, that long-distance extensions are extremely expensive and require higher development density, taxpayer subsidies, or both. From a feasibility standpoint, CPAC considered that future compact development on vacant land adjacent to the existing sewer system or within short striking distances would be a logical criterion for evaluating where compact growth projects could and should be located. For the purposes of this analysis, lands within 1500 feet of an existing sewer line (yellow) were considered most feasible. Sewers could also be readily extended along an existing road for short distances such as 2000 (dark green) or 4000 (light green) feet.

Using this single criterion, it appears that compact development would be feasible in at least half of the town.



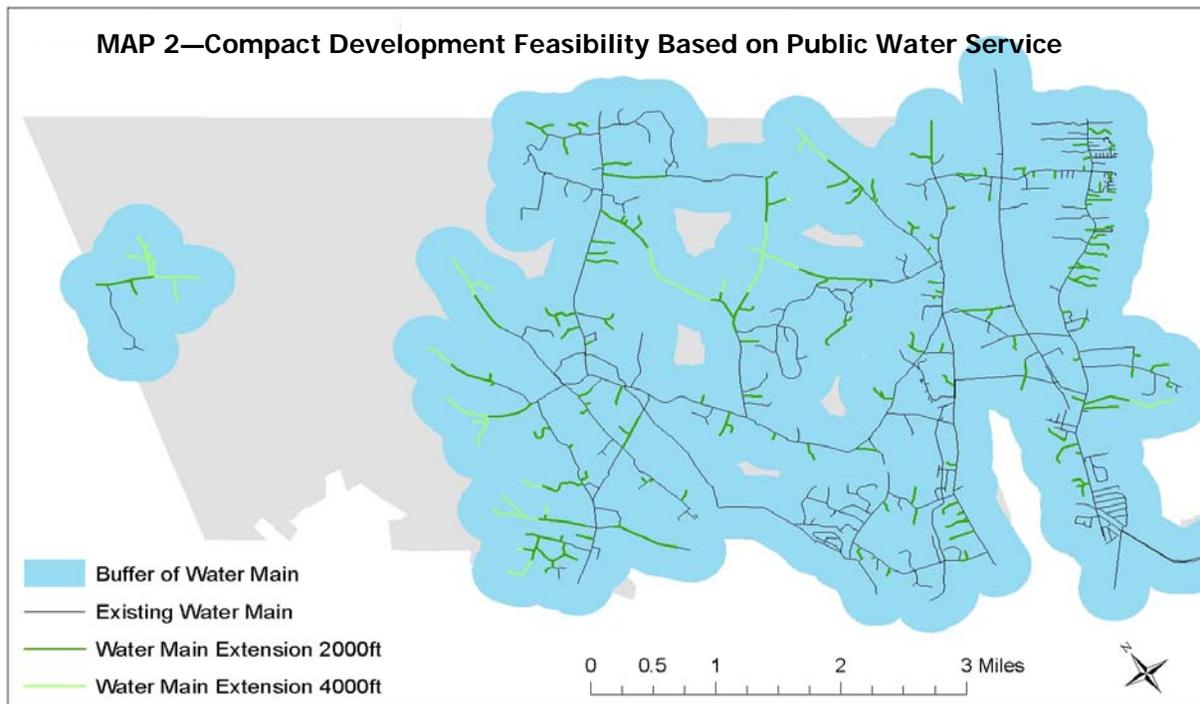
Map 1—The public sewer system currently serves about a third of the town’s land area. Minor extensions could expand coverage to about half of the town.

2. Availability of Public Water Service

Public water is another infrastructure requirement for compact development. Currently, the Portland Water District (PWD) services about one-half to two-thirds of all Falmouth households. The town’s Subdivision Ordinance requires all new single-family subdivisions to be serviced by public water if such service is “feasible.” One of the problems with the low-density development that has been occurring in Falmouth is that the cost feasibility of public water extensions is reduced when small single-family subdivisions are proposed within relatively short striking distances of public water lines. In a recent project on Longwoods Road, developers convinced the Planning Board that an extension of 700 feet along Longwoods Road to serve a 7-lot subdivision was not feasible.

Public water lines are generally more cost-effective than public sewers. Water lines can follow the topography at depths just below the frost line. Gravity sewer lines must go deeper due to the flushing process by which they operate. Falmouth’s rolling topography and single treatment plant typically require multiple pumping stations that increase line construction and effluent transport costs. Water lines, by contrast, are mostly affected by the presence or absence of ledge that must be blasted for water line trenches. Another limitation is the topographic elevation and the ability of the Portland Water District to maintain adequate water pressure within the system to serve higher elevation properties, high volume users, and fire fighting hydrant needs.

The PWD does not generally finance construction of public water lines to serve new development, therefore developers must bear the full costs of extensions. For the purpose of this analysis, CPAC chose to consider the same rule of thumb for public water service areas as for public sewers. Land within 1500 feet of an existing sewer line is most feasible for compact developments that need public water. Extensions along existing roads of 2000 or 4000 feet would likely be less feasible but doable if compact development densities were involved.



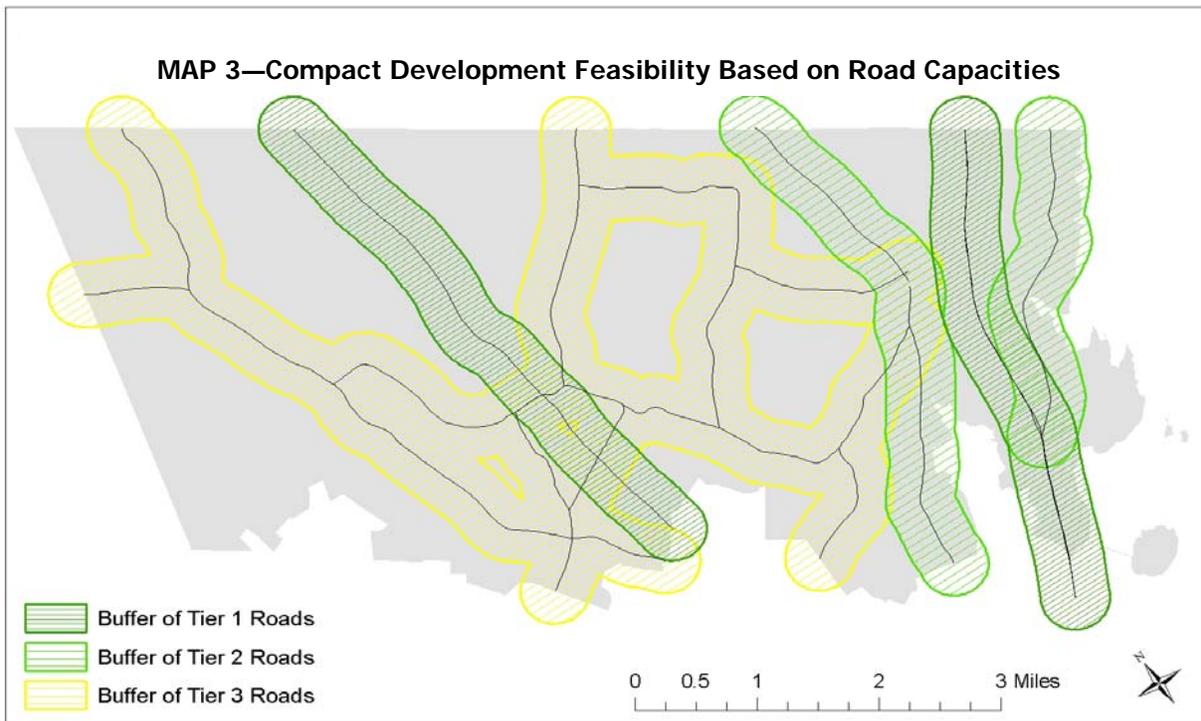
Map 2—The Portland Water District provides public water service to about half of the town. Minor extensions could expand coverage to about two-thirds of the community.

3. Access to Major Arterials or Collectors

A national survey conducted by the National Association of Realtors and the National Association of Homebuilders queried homeowners about things that were most important to them in selecting new housing. When asked the 16 most important aspects of a home and its location, the second most important quality was “less traffic in neighborhood” (60%). Locally, homeowner concern with traffic is the most frequent objection to development proposals in general, and it is particularly raised as an issue by opponents of multi-family housing or other types of higher-density development.

From a traffic engineering standpoint, most of the development that occurs in a small suburb like Falmouth does not even register on the evaluation scales used to determine traffic safety conditions. The biggest concerns are typically focused on the efficiency of existing intersections and the sight distances provided for road entrances to new development. Notwithstanding the quality of life concerns of residents, most roads in Falmouth are designed to safely carry far more traffic than they currently experience. This is particularly the case for major arterials and collectors in town.

CPAC believes that compact development could be best accommodated along the major road corridors based on a tier system of favorability. Locations with direct access to the major arterials of Route One and Route 100 would be the most suitable (dark green). The next most suitable locations would be along the numbered minor arterials/major collectors of Routes 9 and 88 (light green). The third tier (yellow) are the other major collectors of Allen Ave. Ext., Middle Road, Woods Road, Woodville Road, Winn Road, Leighton Road, Mountain Road, Brook Road, Blackstrap Road and Babbidge Road. These roadways are designed for higher traffic volumes and are the most suitable roadways to service compact development. There may be site-specific limitations at various intersections and segments, but as a general rule, they help define the largest area of the community that could be considered for compact development.



Map 3—Falmouth’s major roads help define the most suitable locations for compact growth. A tiered system could help determine the most suitable locations.

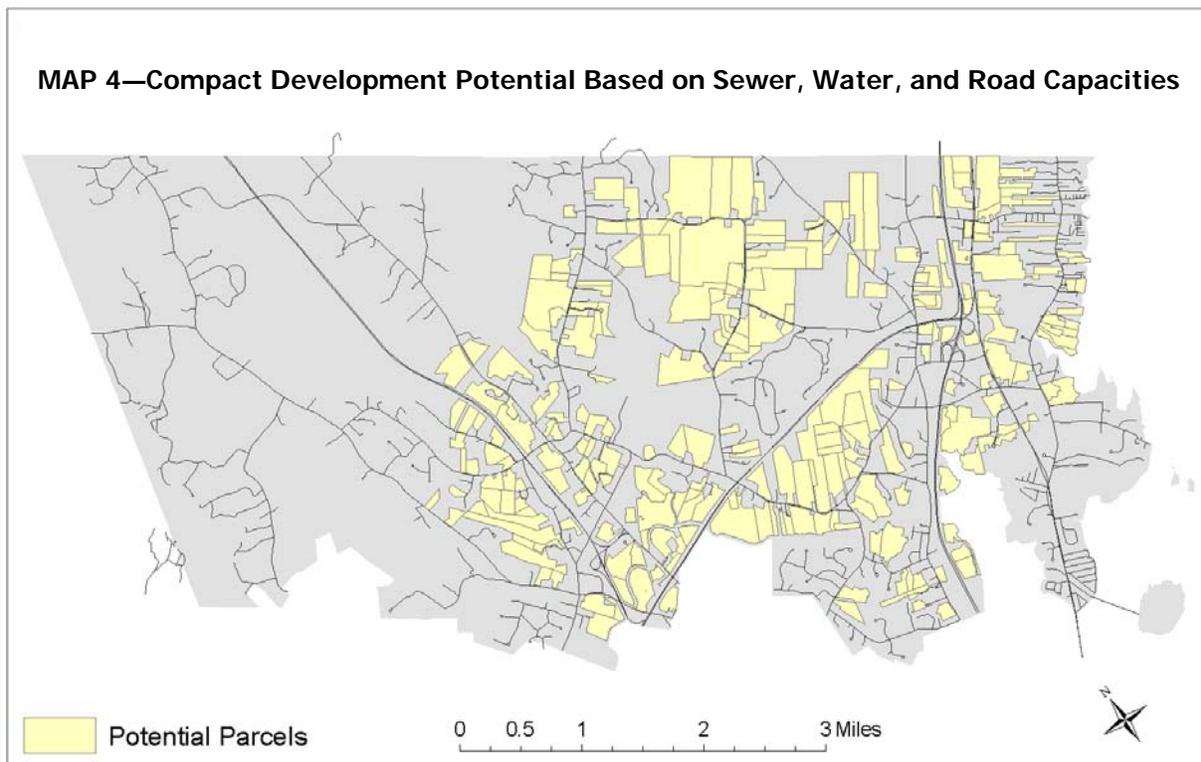
Effects of the First Three Screens

The availability and capacity of the town’s infrastructure—sewer lines, water lines, and major roads, define where in Falmouth compact development is most feasible. To help evaluate how much developable land is available in close proximity to these public improvements, staff used the town’s Geographic Information System (GIS) to evaluate specific parcels with at least five buildable acres of undeveloped land that could be considered for some form of compact neighborhood.

Using availability of public infrastructure alone as the screening criteria would generate the largest number of parcels for consideration as locations for compact development. Placing the GIS “buffers” around the sewer and water lines and the major roads identified 245 “feasible” parcels. It should be noted that parcels that were touched by the GIS buffers were included, so the analysis included some land that was beyond the 1500-foot distance parameter.

In looking at the results, it is apparent that there are numerous opportunities for Falmouth to consider compact development options. The vast majority of the 245 potential parcels are located west of I-295 and east of a set of ridges that define the westerly margin of the central river valleys of Falmouth, which contain large areas of undeveloped land. From a geographic standpoint, parcels within the existing service areas of public water and sewer are the most viable.

Although public sewer could be extended to areas along Mountain and Brook Roads, the topography and ledge in those areas would be far more difficult to overcome, and the sewer would need to cross bridges on the Maine Turnpike. Similar general constraints might affect any of the potential parcels, and site-specific constraints might be even more limiting. This analysis does, however, give a fair general sense of the areas where compact neighborhoods are feasible and the relative amount of land that is undeveloped in those areas.



Map 4—Evaluating feasible locations for compact growth based on public water and sewer and on road capacity yields just under 250 parcels that have at least five acres of buildable land.

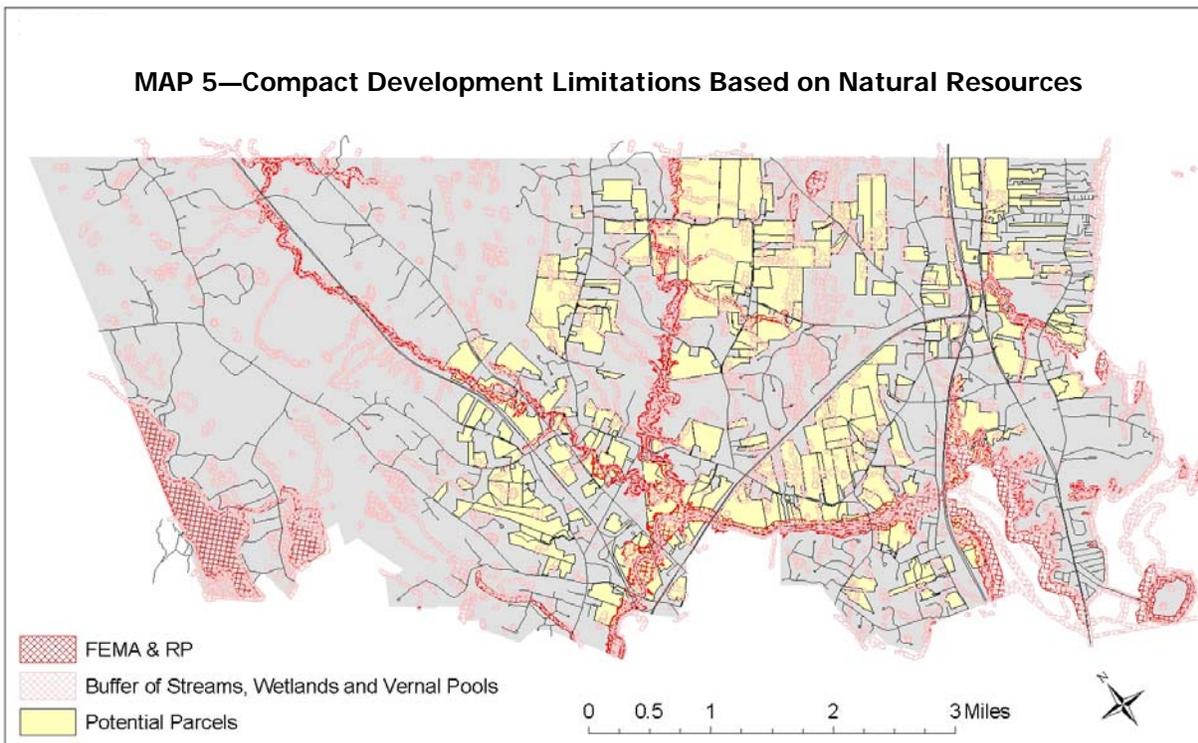
4. Impact on Natural Resources

Although various locations in Falmouth may be *feasible* for compact development, it does not mean that such areas are necessarily all *appropriate*. To help evaluate the appropriateness of potential locations and parcels, staff and consultants developed the next set of filtering criteria. The Comprehensive Plan’s recommendations have consistently reflected the citizens’ goal that future development be directed away from environmentally sensitive lands.

Federal, state, and local laws have been enacted that prohibit developers from construction that denigrates the quality of Falmouth’s water bodies and protect lands that immediately surround them (i.e., vegetative buffer strips). In recent years, Falmouth has expanded protections beyond the minimums required by federal and state laws. CPAC assumes that compact development would be precluded on parcels that are significantly within these restricted areas.

Outside agencies have long required protections for coastal waters and their margins, fresh water ponds like Highland Lake, and the rivers and major streams that flow through Falmouth. Falmouth’s comprehensive planning and conservation studies have also identified the smaller, tributary streams that feed those major water bodies as worthy of protection as well. Wetlands along those streams affect water quality, and other wetlands provide unique wildlife habitat and serve as storage and filtration areas for stormwater. Minor streams, wetlands, and vernal pools have recently been added as important resources that require setbacks and buffers along their borders.

This map overlays an environmental filter over potential parcels based on national and state regulatory programs (dark red) and regulations that have been enacted that are specific to Falmouth (light red).



Map 5—Environmental constraints that would affect the viability and suitability of parcels that might be considered for compact development sites.

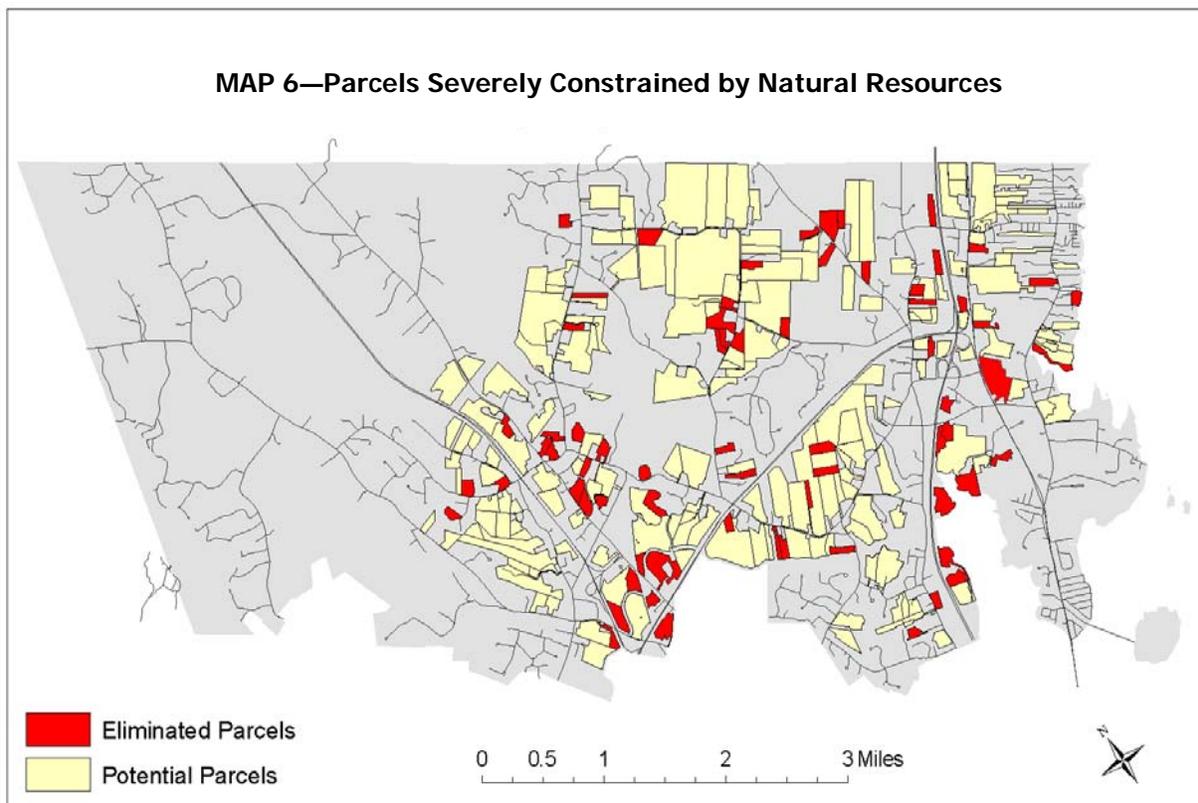
Effect of Natural Resources Screen

The presence of these environmental constraints can severely limit the development potential of land in general, and on smaller parcels, they can totally preclude higher density development that tends to result in greater physical changes to the land than traditional low-density subdivisions. At the same time, the presence of protected environmental features does not always preclude development. In fact, sometimes those very features can be used as recreational and visual focal points for compact neighborhoods.

Applying the natural resources selection criterion has the effect of knocking off 69 of the 245 potential parcels as being inappropriate for compact development, leaving 176 parcels that have potential as feasible and appropriate sites based on the three infrastructure filters and the one natural resources criterion. The eliminated parcels are mostly the smaller ones scattered throughout the potential compact development areas.

Once again, it is important to qualify this analysis by stating that these conclusions are based on very limited general information that may not accurately reflect individual site conditions on any of the 69 individual parcels screened out by the process. Based on this high level, low-detail information, it appears that there is less than five acres of good usable land on those smaller parcels that have significant natural resource constraints.

On-site inspections by qualified professionals might, however, indicate a different conclusion for any given parcel. The correct way to interpret the meaning of the data is to surmise the general effect of applying the filtering criteria if they were applied and the field conditions were consistent with town-wide data. This level of analysis is only helpful at the policy development stage as opposed to the permitting stage of specific applications.



Map 6—Parcels that are almost entirely affected by natural resource constraints (69 of 245).

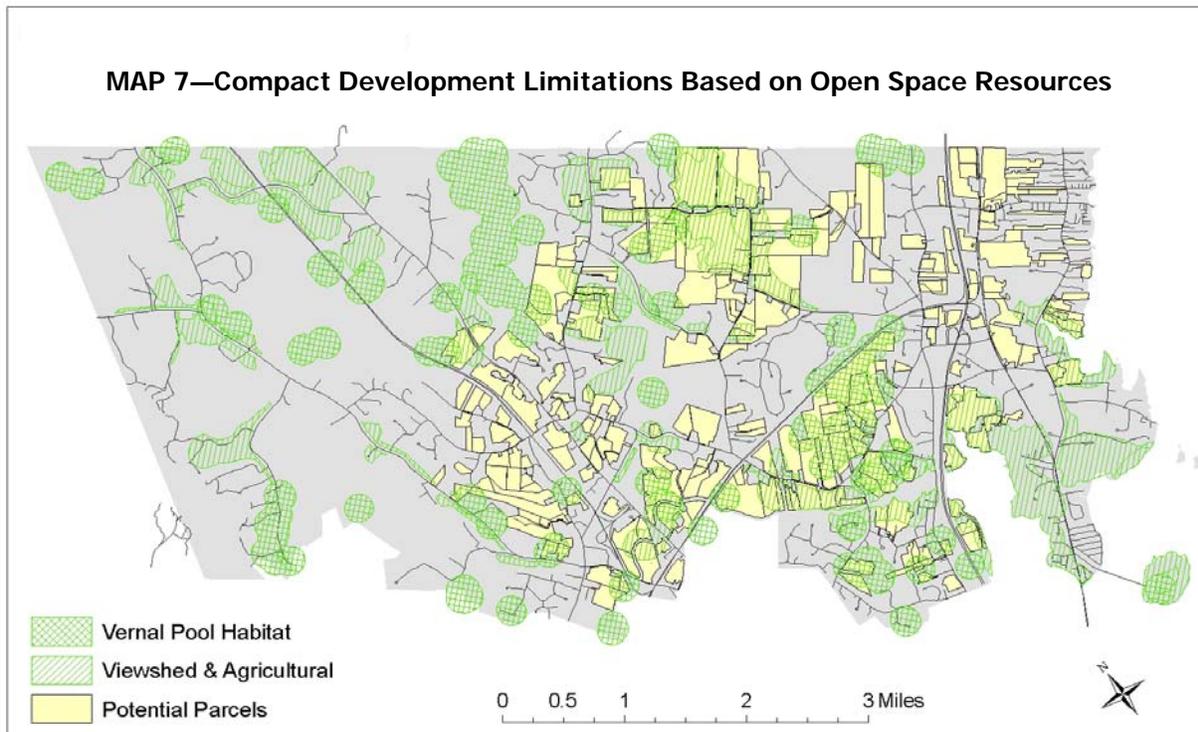
5. Impact on Scenic & Open Space Resources

In addition to the specific environmental concerns reflected in federal, state, and local regulations, the Comprehensive Plan has also established goals for preserving broader scenic and open space resources. The 1990 Open Space Plan identified several resources worthy of town preservation efforts. That plan identified agricultural lands and other open fields visible to public roads as special “viewsheds.” Certain roads in the community have a special rural character defined by limited housing construction in a view dominated by natural landscape features and rustic human additions like stone walls and rail fences and orchards.

Higher-density compact developments in such rural settings would dramatically alter that rural character. The impact of compact development on these open space resources could be construed as counter to the comprehensive plan goals to preserve them.

In recent years, the Conservation Commission has been exploring the existence and ecology of “vernal pools.” These relatively small pools exist for short periods during and after the spring melt before drying up in the summer. They provide critical breeding habitat for several amphibian species that provide a food source for numerous other species of animals and birds. The forested area surrounding these pools is also critical to the life cycles of these amphibians and typically extends through the 40 acres around each pool (green circles on map).

Although the town does not regulate vernal pool upland habitat, policies that encourage the development of such areas would likely be questioned by conservationists.



Map 7—Scenic and open space resources identified in the town’s Open Space Plan could be applied to help determine suitable locations for compact development.

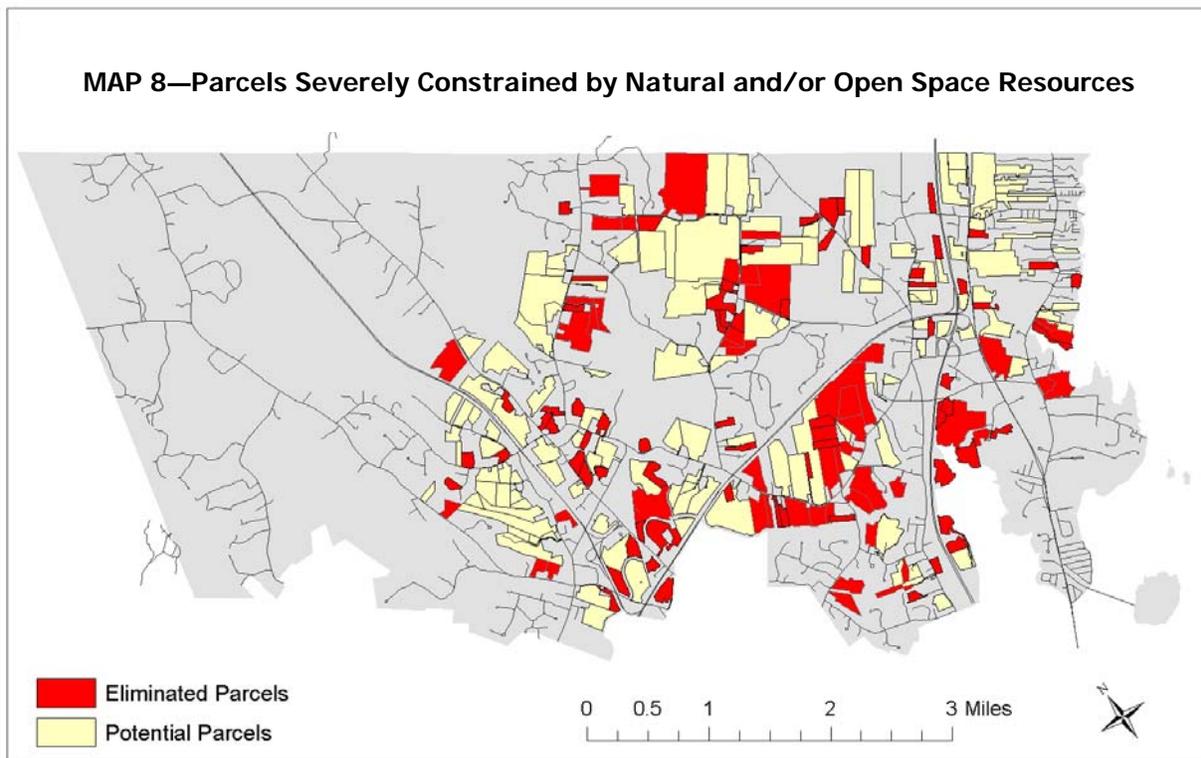
Effect of Scenic & Open Space Resources Screen

Agricultural lands, scenic views, and vernal pool habitats are not currently restricted from development, but their preservation is a priority for other conservation mechanisms like the town’s land acquisition program. One possible policy approach to determining appropriate locations for compact development would be to exclude parcels that are primarily comprised of lands in these scenic and open space classifications. Applying this screening criterion would result in the elimination of 49 additional parcels, and some of the largest potential parcels for compact development.

One of the goals of pursuing compact development is to direct growth that will occur in low-density subdivisions throughout the town to more concentrated locations, thereby preserving open space and rural character. Applying the screen of scenic and open space resources to preclude such concentration of development will have the effect of spreading that development in low-density subdivisions over larger geographic areas, which will also have detrimental effects on those scenic and open space values.

In theory, precluding any consideration of compact neighborhoods on the basis of scenic and open space resource impacts could actually have a *greater* impact overall on those resources by the spread of development throughout areas containing those resources. The impact of low-density subdivisions on those community resources is one of the major motivations for exploring the option of compact development as an alternative.

If the town is to pursue compact development in some locations, it may require tradeoffs between compromising scenic and open space resources in limited locations in order to achieve better results for the town overall.



Map 8—Parcels that would be heavily impacted by natural and open space resource limitations.

Natural resources—69 of 245 feasible parcels

Open space resource—49 of 245 feasible parcels

Total resources—118 of 245 feasible parcels

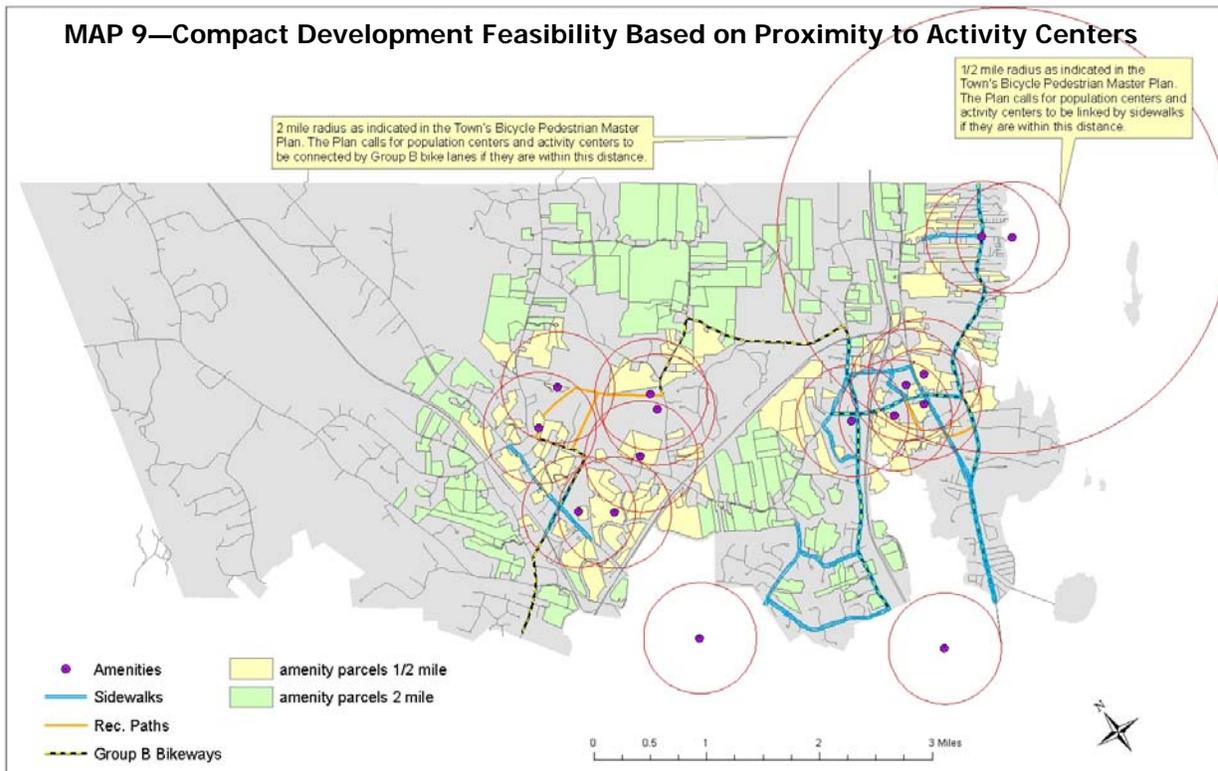
6. Proximity to Activity Centers

An important criterion for selecting possible locations for compact development is the opportunity for residents of neighborhoods to walk or bike to nearby public activity centers like schools, shopping, libraries, parks, and playgrounds. Having bicycle and pedestrian access to public facilities tends to increase their utilization and can improve safety. Thus there is a symbiotic relationship between compact neighborhoods and community facilities that can enhance the quality of both.

Defining proximity can be a challenge. A national study of park access that explored park use as a function of distance to residences indicated that proximity was more important than the actual amount of park land in a community. Falmouth’s comprehensive planning studies have produced a possible set of selection criteria for the larger question of proximity. The Bicycle and Pedestrian Master Plan evaluated the potential and priorities for installing sidewalks and bike lanes across town. In order to justify investments that would experience significant usage by citizens, that plan established criteria and locations based on distance from public activity centers to neighborhoods.

For pedestrian activity, the plan indicated that a half mile radius from the activity center was a suitable distance where sidewalks would likely see constant activity. For bicycles, a distance of two miles is the limit of what casual (Group B) cyclists will travel on a regular basis to access public facilities. Of course, distance is just one factor among many involved in bicycle and pedestrian facility planning (e.g., safety and maintenance of facilities), but it provides an objective basis for evaluating suitable locations for future compact neighborhoods.

Beyond distance, the town could also consider the presence of actual or proposed access routes that may make the location more positive or negative than distance as the crow flies. Finally, CPAC also questioned whether projects that were large enough to create their own activity centers should be considered.



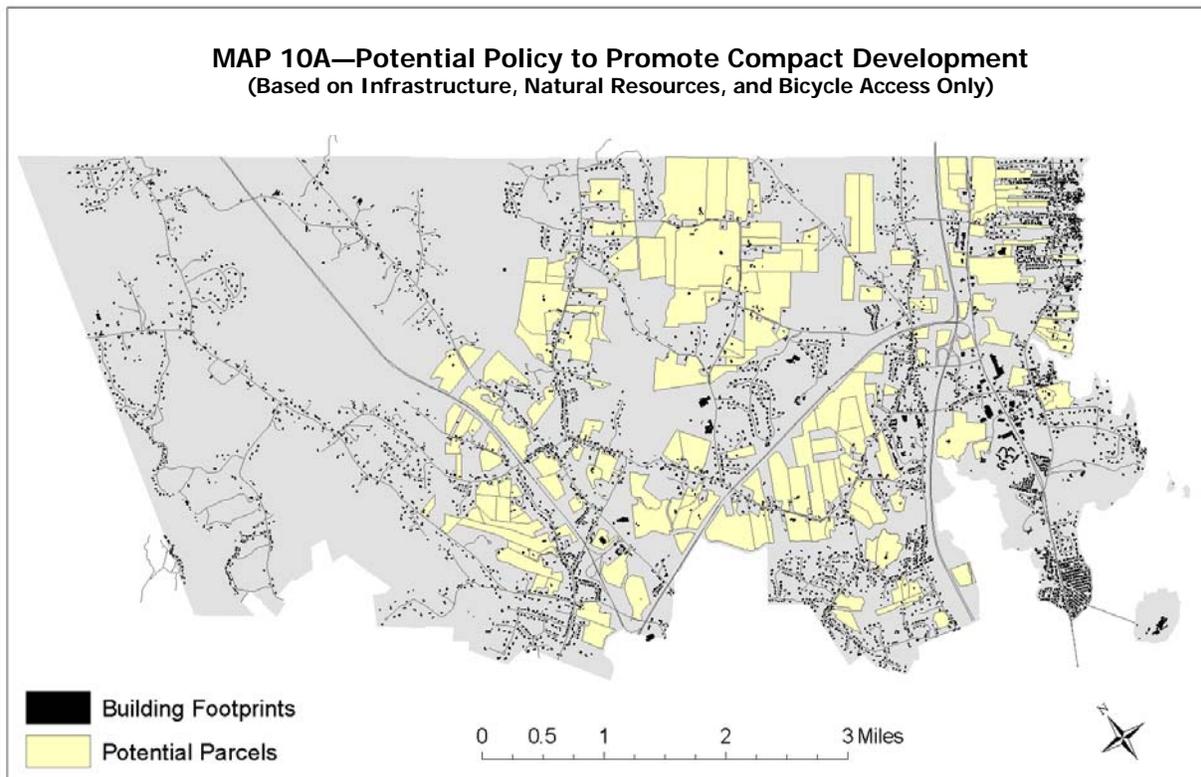
Map 9—Proximity to town activity centers could be a criterion for determining suitable locations for compact growth. The town’s Bicycle & Pedestrian Master Plan establishes criteria for determining appropriate distances for walking and biking purposes.

Applying the Selection Criteria

CPAC has been charged by the Town Council to do a town-wide study of compact development. CPAC initiated that process by reviewing public values and concerns as indicated during the drafting of Comprehensive Plan 2000 and as updated in a 2004 citizen survey. CPAC then developed selection criteria that reflected those citizen values and concerns. If the town is to pursue or make greater allowances for compact, higher-density development in some areas, hard choices will be needed on trade-offs between many of those expressed values. The purpose of this analysis is to present a tool that can be used to objectively evaluate conditions and options and to make those hard choices in keeping with the town’s long-range planning goals.

Because the project goal is to develop a useful planning tool for the political decision-making process, CPAC applied the selection criteria for compact growth as a spectrum of possible policy choices starting with the most liberal application of the screening criteria, which is represented in the map on this page. As stated previously, the town’s infrastructure (sewer, water, & roads) defines the areas where compact development is most feasible. If the town were to promote or even require compact development as a growth management option, applying a combination of the natural resources screen and 2-mile proximity measure based on bicycling connections would yield the largest number of parcels for consideration as potential sites.

As illustrated in Map 10A, This “loose” screen allows 176 of the 245 potential parcels to pass through, giving the most opportunities for development of new compact neighborhoods in Falmouth. CPAC wants to once again emphasize that this high level analysis does not mean that all of the 176 parcels would ultimately be suitable or acceptable for compact growth projects, but applying this screen would make them eligible for more detailed consideration.

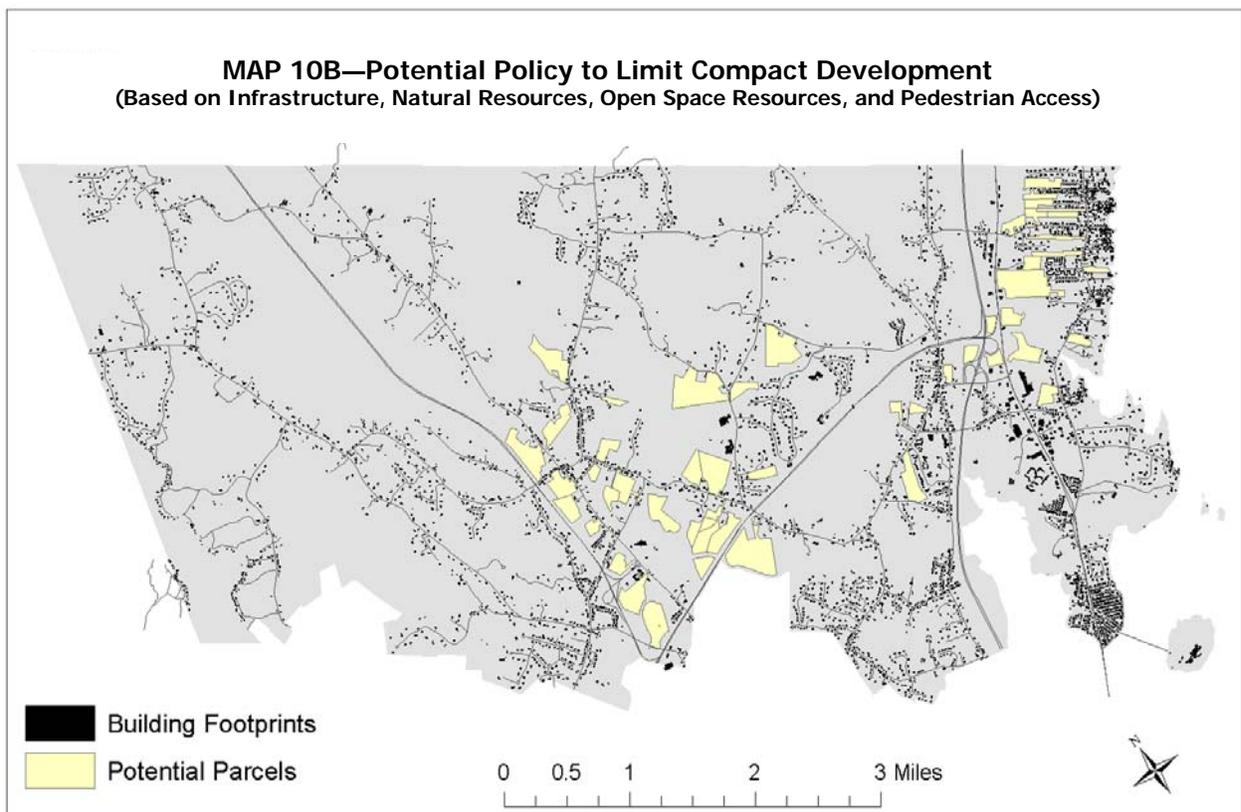


Map 10A—Results of applying a combination of the selection criteria in a loose screening that would most liberally allow consideration of locations for potential compact development projects.

Map 10B represents the opposite end of the potential compact development policy spectrum. If the Town Council considers that compact development is too complicated and risky and/or that citizen concerns over higher density development warrant a more conservative approach, a very “tight” screen using the selection criteria could be applied. In addition to precluding parcels that are restricted by natural resource constraints (areas where development is prohibited based on environmental regulations), this filter would apply the screening criteria for scenic and open space resources. Those criteria would exclude parcels with large areas of scenic or open space land and those that contain the upland habitat of vernal pools. Under this approach, consideration for locations of future compact neighborhoods would also be limited to those parcels within a half-mile walking distance of an existing community activity center.

Applying this most stringent set of screening criteria would only yield 51 of the 245 parcels for consideration as locations for compact neighborhoods. Although this result could be characterized as being overly restrictive, one could also argue that these are parcels that have the highest viability for success as compact neighborhood locations and ones that should be pursued or permitted in town policies. The caveat that has been repeatedly stated applies equally to this presentation piece. Many of the 51 parcels that passed this filter may not be suitable for consideration as compact development locations due to more detailed, site-specific information, and other parcels that were screened out may have been unfairly eliminated due to a lack of accurate information. The analysis does, however, give a sense of the potential of this tool to help formulate objective policies on compact growth to carry out implementation of the town’s Comprehensive Plan.

These last two maps also raise another criterion that CPAC explored in this study—impacts on existing neighborhoods. All of the existing buildings in town are shown, giving a general sense of the density of development surrounding the potential sites of compact neighborhoods. The impact of potential compact development on the quality of life of those existing neighborhoods must be addressed in the planning process, and CPAC believes that effective solutions can be achieved through the design process.



Map 10B—Results of applying a tighter screening combination of the selection criteria that would most conservatively allow limited consideration of locations for potential compact development projects.

Design of Projects

The Comprehensive Plan Advisory Committee has explored the *feasibility* of compact development in terms of infrastructure and its *appropriateness* in feasible locations based on goals of the town's long range planning documents. This report section deals with a third important policy element—whether higher density, more compact neighborhoods are *acceptable*. Initially, CPAC attempted to develop a seventh selection criterion based on the impact on neighborhoods. Exploring how to objectively assign that criterion produced no compelling basis for making a determination based on neighborhood impacts.

Part of the difficulty in dealing with this issue is that it is inherently subjective, depending on the preferences and sensitivities of those involved in the discussion. Many residents have moved to Falmouth from more metropolitan sections of the country, and the most densely developed sections of our town seem sparsely developed to them. Long-time residents by contrast, remember when the town was far more rural, and they often think that Falmouth is becoming overcrowded. Throughout the comprehensive planning process, *both* perspectives seemed to express concerns about the concept of promoting or allowing compact development as a growth management option for the community, and opposition to higher density development is prolific at public meetings on specific project proposals.

As CPAC explored this most challenging question of the compact development issue, members eventually came to the conclusion that higher density *per se* was not the defining factor in people's perceptions of compact development. They saw the real problem and solution in the design of projects. This conclusion was strongly influenced by a publication of the Lincoln Institute of Land Policy that attempted to help communities like Falmouth visualize what various housing and development densities look like from the air, which gives a far different and more comprehensive perspective than typical views from the ground plane. The observations of the report's authors were telling to CPAC members:

We set out to show what density looks like. What we found was that it doesn't reveal much about physical character. It plays a role, but what really defines and determines the character of a place is design. This is a crucial fact for communities that are planning for density. If they want their residents to buy into and buy high density housing, they must take steps to pursue good design.

CPAC members are not sure that policy makers want Falmouth residents to “buy into and buy high density housing,” but they strongly feel that compact development cannot be fairly evaluated as a growth management option without understanding the importance of this aspect of the issue. The Lincoln Institute publication was helpful in expanding CPAC's understanding of community concerns over compact development heard in community forums held as part of the residential master planning process:

As they plan for growth, communities must realize that design plays a profound role in the success of compact neighborhoods. Before they even discuss density, they should engage in an extensive public dialogue to define the character of desirable growth and determine which design approaches will contribute to that character. Any discussion of residential density levels should be guided by a clear vision of what the new or redeveloped neighborhoods will look like.

Developing a clear vision of what new neighborhoods in Falmouth will look like clearly must take into serious consideration the design of those neighborhoods, but there are other, more subtle concerns that are also at play in people's views toward compact development:

The public accepts infill development as an idea, but balks at the reality, perceiving proposed densities to be too high. The aversion to density runs even deeper in communities whose land use regulations mandate low densities...In many cases a broader fear of growth or change lies behind the complaint that a project is "too dense." General concerns about the impacts of an increased population often lead opponents to the conclusion that density equals overcrowding. This problem is exacerbated when people have no visual information to dispel negative mental images of dense development.

Traditional Falmouth Neighborhoods

Overcoming the negative mental images that many people have toward higher density development can be addressed by looking at successful models of compact development both locally and across the country. It is equally important to scrutinize aspects of such projects that may not be particularly suited to Falmouth's open space context. This will ensure a proper fit and projects that will enhance rather than detract from the town's special character. Thankfully, there are many examples of compact neighborhoods already in Falmouth that can be used to explore the positive and negative aspects of this development pattern. The oldest and most notable form of compact development in town exists on the Falmouth Foreside.

The photograph to the right (Fig. 4) shows a segment of Foreside Road containing mixed uses and mixed density. A commercial greenhouse and retail operation fits well in the neighborhood that consists of large waterfront estates, 1/4 acre-lots in a traditional grid, and a more contemporary cul-de-sac with larger lots. Such neighborhoods comprise some of the most desirable and valuable real estate in Falmouth.

Lower Route 1 (Fig. 5) contains some of the most compact and livable neighborhoods in Falmouth. Although the lots are substantially

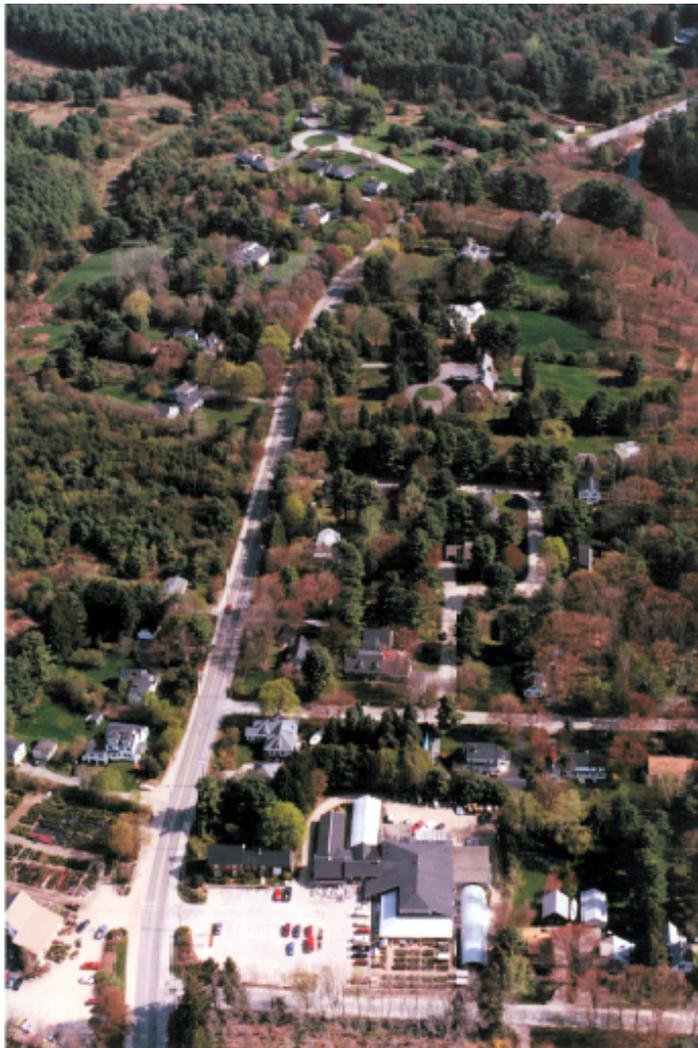


Figure 4—Existing neighborhoods on Falmouth Foreside exemplify compact development that fits the community's context and character.

smaller than the newer subdivisions built over the last few decades, the design and siting of homes on the lots has created a greater sense of neighborhood and provided adequate yard spaces for the individual lots (Fig. 6) . The smaller yards do not provide adequate area for some outdoor activities, and residents must conduct those activities at other locations like parks and schools. The close proximity of Casco Bay and access to nearby Mackworth Island and Maine Audubon’s Gilsland Farm provide a counterbalancing sense of open space not available to more sparsely developed neighborhoods in other parts of town.

Although the original developers took advantage of these unique features in the creation of the neighborhoods, most of the individual lots were developed by builders and home buyers who focused on the specific lots they were involved with. There was no overall coordination or control of the development, because the town lacked modern planning, zoning, and building codes that are currently applied to projects proposed for construction. Smaller homes were built on the lots because of economic limitations, and the landscaping, fencing, and other lot features that help define the quality of life for area residents were installed and/or grew over time (Fig. 7).

Would such high-density, high quality neighborhoods be accepted today in other parts of Falmouth? The answer would likely depend on the vision provided by developers, the perceptions of area residents, and the reactions of Falmouth’s policy makers. There are, in fact, ex-

amples of more contemporary forms of compact development that have been approved by the town, and there are mechanisms in the current ordinances that permit it to happen elsewhere. Looking at those successful examples can help us understand the ramifications and community expectations for compact development if that policy should be pursued as a means of growth management in the future. They can also provide insights on how such existing programs might be improved.

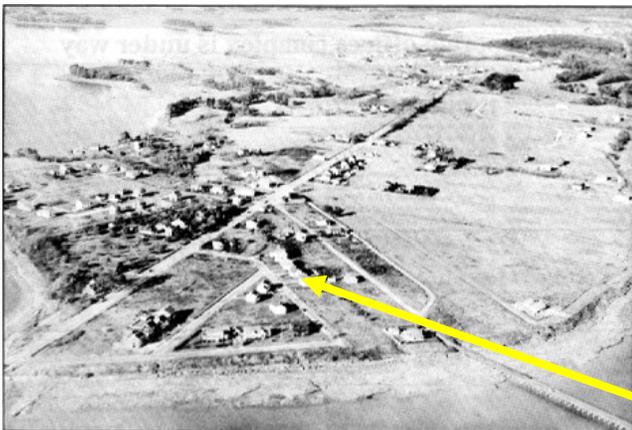


Figure 7—Lower Route 1 as it was being developed in the 1930s..



Figure 5—Lower Route 1 contains some of the most compact neighborhoods in Falmouth..



Figure 6—Homes in the neighborhood are scaled to fit the smaller lots, and the yard spaces are clearly defined by hedges and fences. Garages are behind homes or set back farther than the front plane of the houses so that they do not dominate the streetscape. Mature trees throughout the neighborhood also help define the neighborhood’s character. Narrow streets and on-street parking help maintain low traffic speeds, but on through streets, sidewalks would greatly enhance the sense of pedestrian safety and comfort.

Open Space Residential Districts (OSRDs)

In the late 1980s, the Town Council enacted an amendment to the Zoning Ordinance for “Open Space Residential Districts” (Section 3.11). This zoning mechanism was patterned after an ordinance used in Lincoln, Massachusetts as a means to give developers incentives to set aside open space. The ordinance provides density bonuses to developers who are willing to set aside 70 percent of a land tract as permanent open space. The density bonus is also tied to implementation of other Comprehensive Plan recommendations, but it allows developers to build housing in very tight clusters with lot sizes as small as 5000 square feet in order to maximize the amount of common open space.

The town has had one project approved as an OSRD, the Cornerstone Estates subdivision on Woods Road across from the Public Works garage. The project’s 26 homes are clustered on 10,000 square foot lots, where standard zoning required one and two-acre lots. In keeping with the ordinance provisions, the developer was awarded nine extra housing units because the open space was considered significant (it abutted town property), public access was provided, and a 100-foot buffer established along Woods Road. As a result of the rezoning granted by the Town Council, the developed portion of the site was limited to about 10 acres, while the preserved open space was more than 20 acres. The project also included a small neighborhood playground as a focal point and gathering space.



Figure 8—Plan of Cornerstone Estates subdivision on Woods Road

Although the open space goals of the town were met by the Cornerstone Estates project, complaints have ensued about the “crowding” of the large homes on the small lots (Fig. 10). The limited yard spaces have also generated violations of the terms of the dedicated open space as some individual lot owners have expanded their back yards onto the town-owned land. These problems could have been addressed through more careful attention to the design of the project. One possibility would be to limit the size of the homes on a graduated scale tied to the lot size. This approach is used for expansions of non-conforming homes in high-density neighborhoods on the Foreside.

Another option would be to require the developer to come up with a master plan for all of the housing that would ensure compatibility and coordination of individual house sites while providing adequate flexibility for design creativity and responsiveness to personal preferences.



Figure 9—Aerial perspective of Cornerstone Estates subdivision

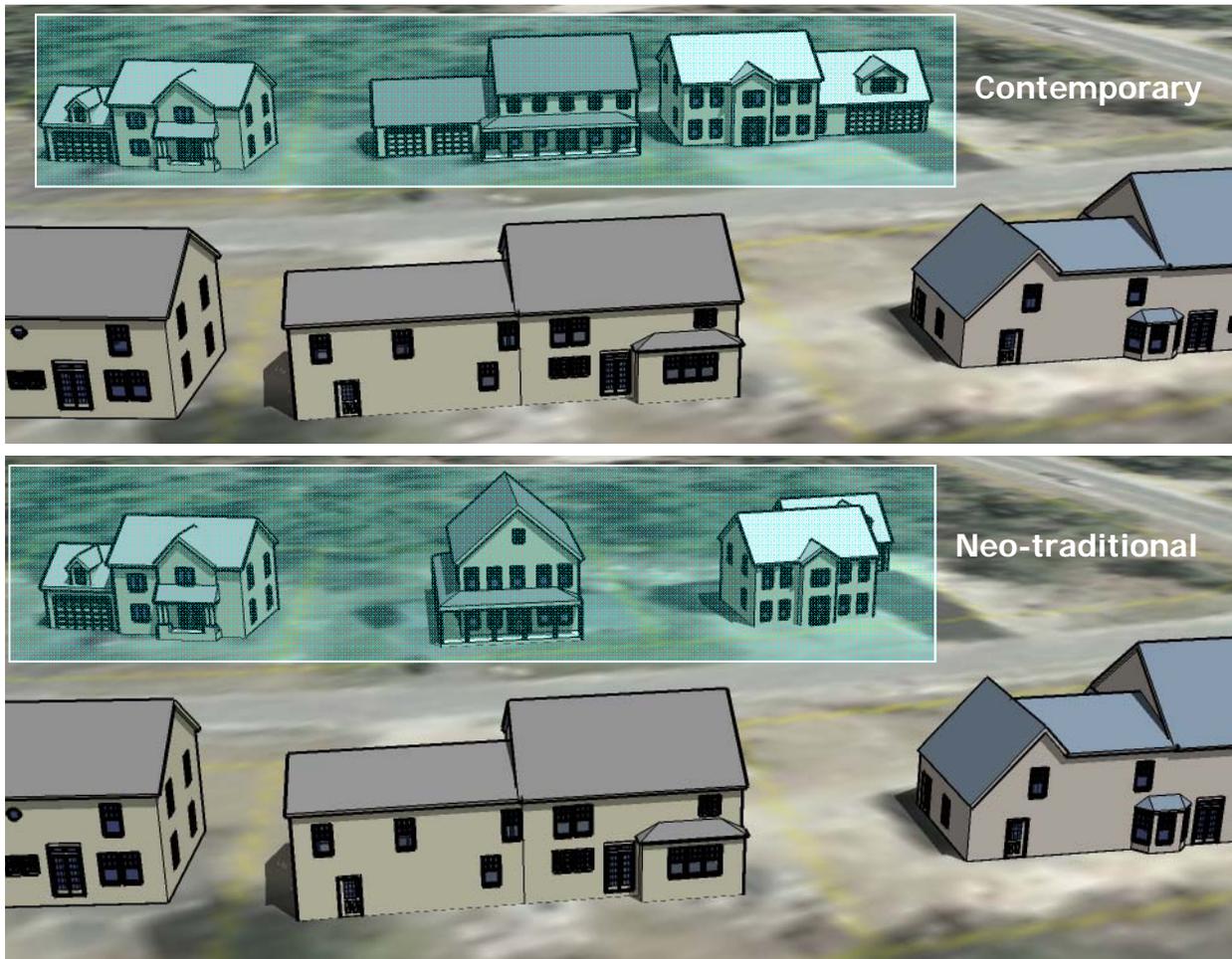


Figure 10—Notwithstanding the small lot sizes in Cornerstone Estates, standard sized homes were built with the orientation of the home’s long axis being built parallel to the front property line. The lack of design guidance produced crowding of the homes and ineffective yard spaces that led to encroachment on adjacent open space owned by the town.

Neo-traditional Neighborhood Design

Computer visualization is a helpful tool to explore design considerations and options for compact development in Falmouth. The drawings on this page were created using a computer program called “SketchUp” based on building plans of the actual homes in the Cornerstone Estates subdivision. The building models were constructed on an air photo base that shows the lot lines and building footprints, to ensure that the buildings are to proper scale for accurate depictions of the neighborhood. The drawings below show the homes as they were actually built. The large contemporary homes fill the lots due to the size and parallel orientation of the homes to the street. Although reducing building scales could create more intervening space between the homes, the computer models below illustrate that the same sized structures could be reoriented on the lots to create a more traditional neighborhood with a greater sense of space overall, and with more effective private yard spaces on each of the lots.

In addition to the design of individual homes and lots, traditional neighborhoods and their neo-traditional successors give equal attention to the design of the “streetscape” and the open spaces surrounding and within compact development projects. Street trees, esplanades, and sidewalks help define the public realm in traditional neighborhoods, and front yards with landscaping and low level walls and fencing create intervening semi-public spaces that transition to the more private yard spaces to the side and rear of the homes. The relationships between public and private spaces is very important to the design of compact neighborhoods.



The open space around Cornerstone Estates is wooded and unimproved, limiting opportunities for trails and other active or passive recreational activities. With a little more foresight by the developer and the town, this open space could have been improved for recreational use by the residents with limited impact on the open space qualities, and the homes could have been oriented more effectively to take full advantage of the open space system. This open space design approach is inherent in the conservation zoning program being considered by the town, and it also has application to compact development models with higher development densities. In fact the design of open spaces in compact developments may be *more* critical than in conservation zoning projects, as they will be more limited in scope and more housing will rely on the open space amenities.

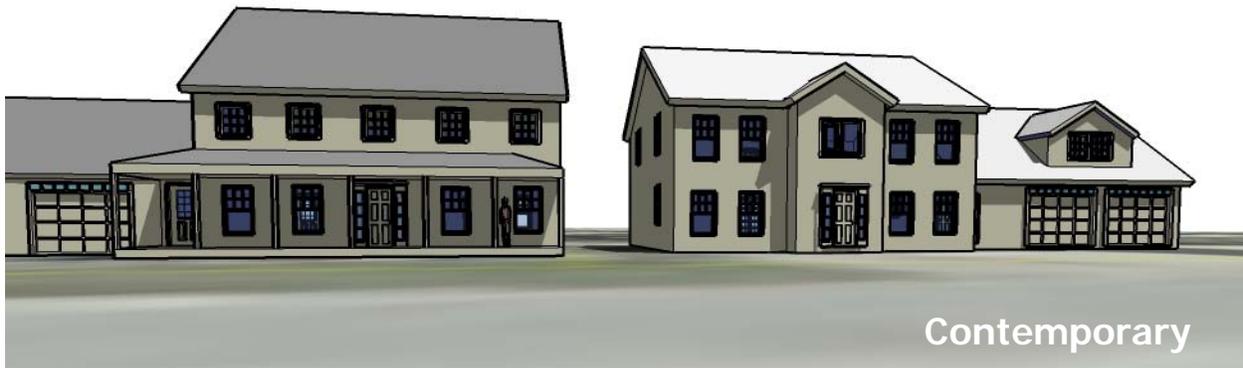


Figure 11—Computer generated models of actual homes built in Cornerstone illustrate the lack of yard space between buildings due to the size and orientation of the homes.

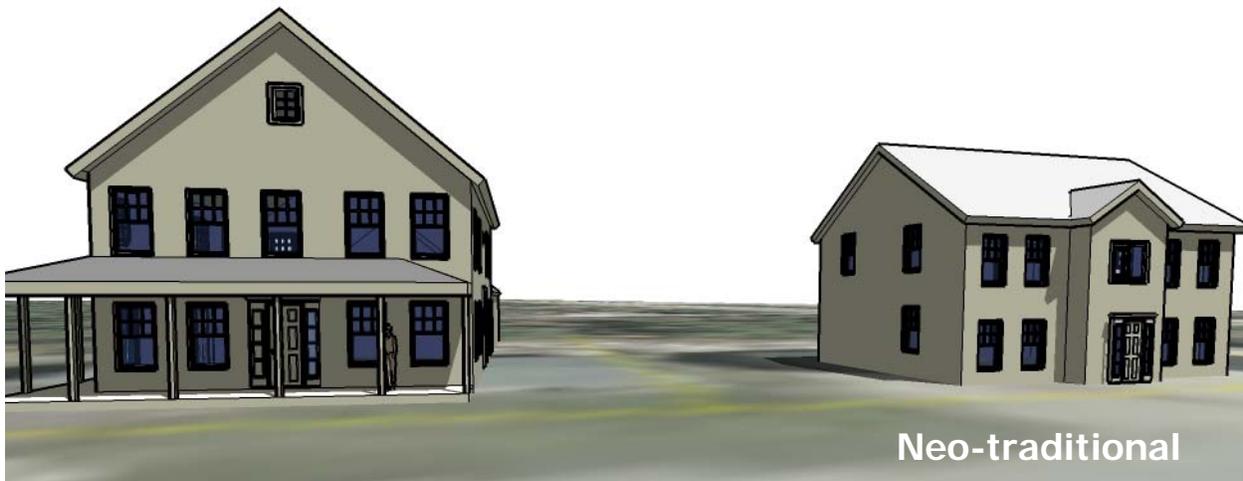


Figure 12—Computer models illustrate the same sized homes reoriented in keeping with traditional neighborhoods. Garages are placed behind the homes (attached or detached), and the main axis of some homes are placed perpendicular to the street, producing greater separations between homes and better opportunities for private yard spaces.

Neo-traditional Neighborhoods

Compact development has been successfully achieved in other parts of the country. One of the more notable neo-traditional projects is The Kentlands in Gaithersburg Maryland. The housing in this project has all of the conveniences and amenities of modern technology along with the character and charm of historic neighborhoods. The integration of open space within and around the project gives a sense of openness that belies the high density of housing that is present. Careful attention to design details and coordination of site and building construction gives a sense of visual and social cohesion and quality. The layout provides ample public and private spaces that are vital to the success of higher density development. The additional development makes it more cost-effective to provide such amenities.



Figure 13—Smaller areas of open space can create a park-like setting within the compact development project.



Figure 14—Larger areas of open space can create recreational opportunities for residents and nearby neighborhoods.



Figure 15—Front yards provide semi-public spaces and opportunities for social interaction.



Figure 16—Rear yards provide private spaces for family activities.

Retirement Community Overlay Districts

Another form of compact development already contained in the Falmouth Zoning Ordinance provides density incentives to provide retirement housing with a continuum of care levels starting with fully independent housing units and going to more dependent group facilities like assisted living. The Oceanview project off Falmouth Road was the town’s first retirement community and it helped define some of the density and design parameters of the ordinance (Fig. 17). The base Residential B zoning, which permits a density of 1 unit per acre was changed to allow 4 units per acre for single units and even higher density for more institutional-style buildings.

To ensure that Retirement Community facilities fit in with surrounding neighborhoods, the ordinance limits them to larger parcels of 30 acres or more. Such large tracts provide ample room to implement one of the main design principles of this zoning mechanism—providing a transition of scale and density from the project interior to the periphery. The graphics on this page show that larger, institutional buildings (Fig. 18) are required to be placed at the center of the project (orange shading), while smaller, lower buildings are required along the project boundary (yellow shading). This provides a use transition that makes them more compatible with surrounding single family neighborhoods.

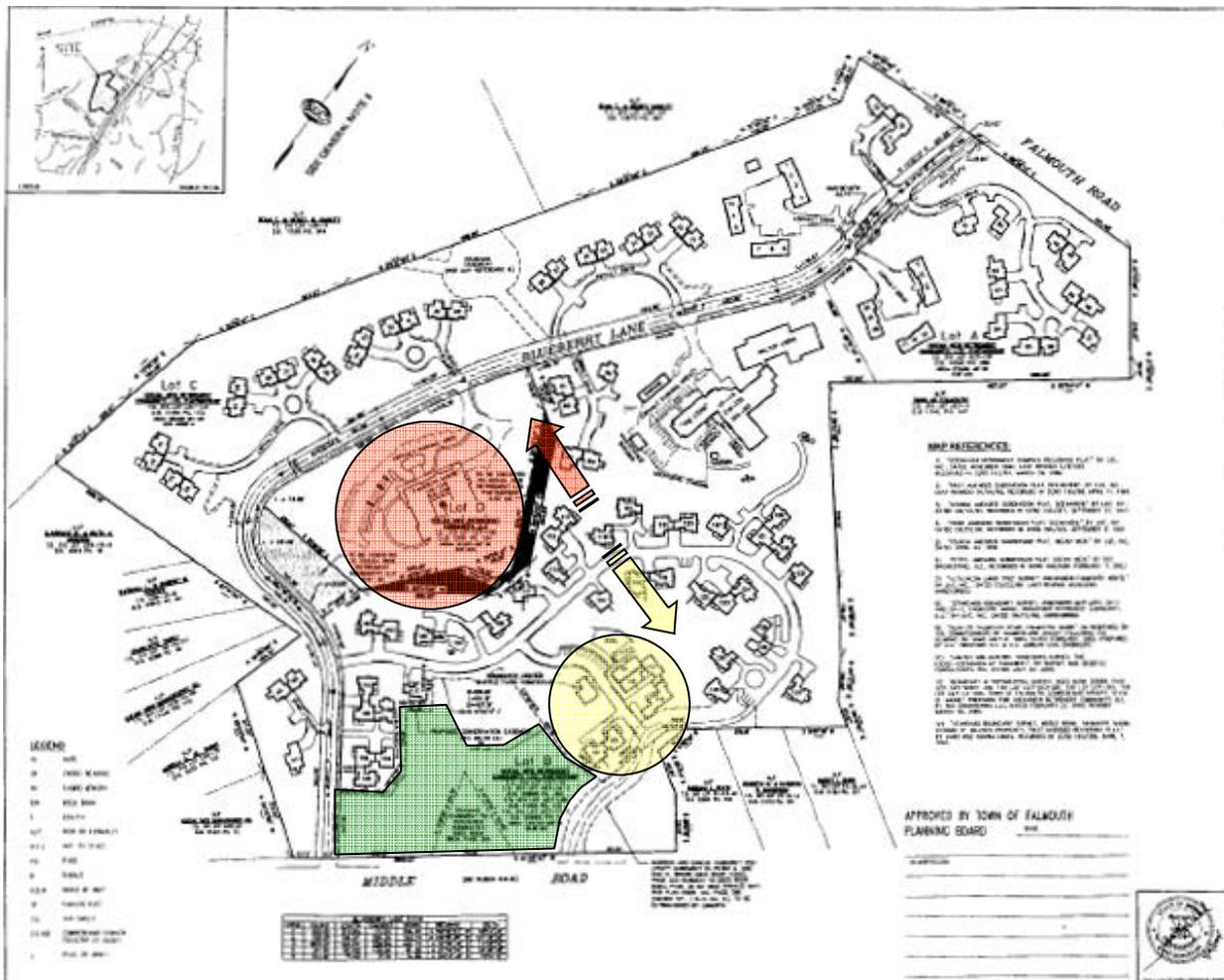


Figure 17—Subdivision plan for Oceanview showing transition of use and intensity from interior to periphery of project.

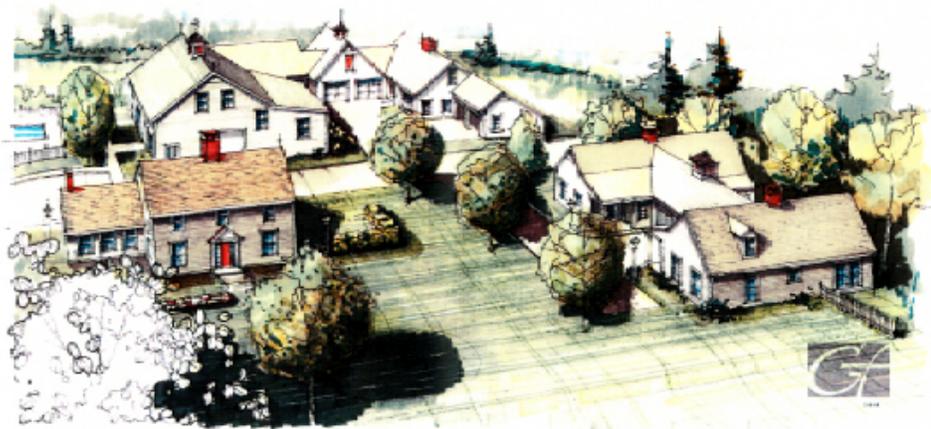
The recent expansion of Oceanview onto the adjacent Whipple Farm provided a test for the effectiveness of this higher density, compact development program. The property proposed for higher density housing was historic and highly visible to neighbors and public roadways. Through the rezoning negotiation process with the Town Council and the site plan review process with the Planning Board, the developer was required to maintain a central open space along Middle Road (green shading) and to orient the units around that open space. Many of the proposed single units were attached together to maximize the available open space, and the architecture of the new buildings will reflect the historic buildings of the site (Fig. 19).



Figure 18—Larger institutional buildings must be located at the project interior, smaller buildings must be located adjacent to abutting properties.

Oceanview provides another example of compact development already occurring in Falmouth under existing ordinances. Retirement Community facilities face higher policy scrutiny and design requirements per the Council’s rezoning review and the Planning Board’s site plan review. This dual review approach could be applied to other forms of compact development.

Figure 19—The architecture of new units will be designed to reflect the style and character of the historic farm buildings.



The Whipple Farm

Ocean View at Falmouth

Ocean View Retirement
Community Limited Partnership

Design Workshops

The Tidewater Farm Master Plan currently under consideration by the Town Council provides a fourth example of compact development in Falmouth. The process started with a design workshop hosted by CPAC and involving stakeholders of the Village Center area, including the landowners and the Lunt Road neighborhood. Discussion groups explored shared values and goals and generated conceptual ideas for future development. Engaging in discussions long before specific projects are proposed reduces process stress, which fosters more effective communication and cooperation of the parties. Establishing community goals in advance of development proposals increases probability of their realization, but it also gives developers greater assurance of productive investment and neighbors greater input into the outcomes.

Another important design principle came out of the Tidewater Farm project that should be considered for other types of compact development. Transitional open space between existing neighborhoods and proposed development can double the benefit of that open space and can provide existing residents with incentives to cooperate in the planning process. Upon project completion, it can also provide a meeting ground for existing residents and newcomers.

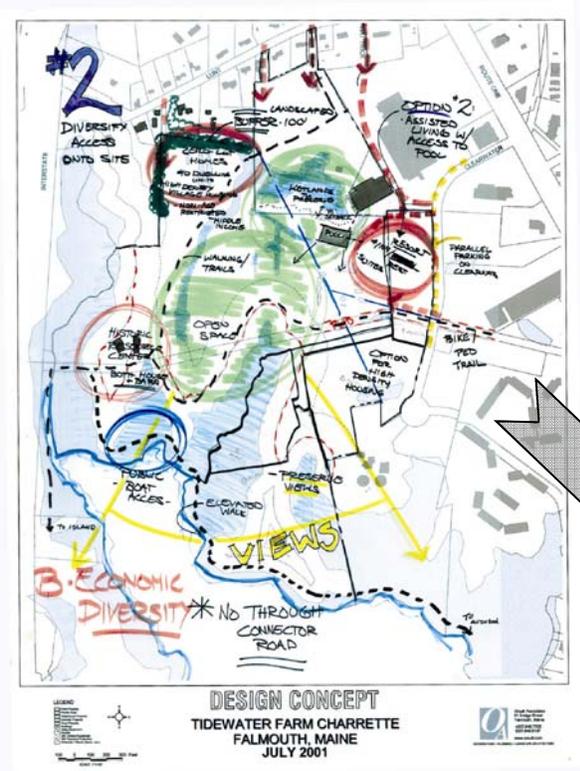


Figure 20—Bubble diagrams record input from discussion groups to help explore common values and set overall vision and direction.

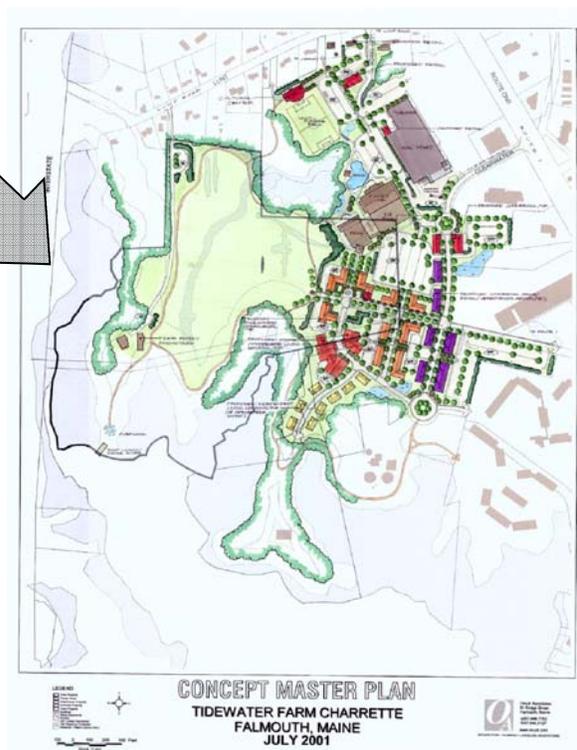


Figure 21—A conceptual master plan consolidates the participants’ views and creates a vision for future development.

Report Recommendations

Based on the input received in various citizen surveys conducted by the town and input CPAC collected during various public participation forums, along with the results of the compact development selection criteria analysis and design considerations, CPAC makes the following recommendations for consideration by the Town Council:

1. Use the compact development screening criteria of this report to determine “consistency with the Comprehensive Plan” for the current compact development mechanisms of the Zoning Ordinance.
2. Consider additional forms of and locations for compact development zoning based on the screening criteria of recommendation #1.
3. Adopt a unified ordinance for compact development to deal comprehensively and specifically with the special requirements of this development form.
4. Develop and apply general and specific design guidelines for all compact developments.
5. Conduct a design workshop with stakeholders as the first step in the process of rezoning and/or approval for a compact development project.
6. Commission a study of the road network to determine carrying capacity and to identify specific limiting segments and intersections.
7. Attach a density transfer fee to all extra housing units allowed over the base zoning density to maintain overall density neutrality.

Discussion

- 1. Use the compact development screening criteria of this report to determine “consistency with the Comprehensive Plan” for the current compact development mechanisms of the Zoning Ordinance.**

A. Open Space Residential Districts (OSRDs)

The Falmouth Zoning and Site Plan Review Ordinance currently contains provisions for selected types of compact development. Section 3.11 was enacted in 1989 to provide for Open Space Residential Districts (OSRDs) as a “floating zone.” Under the ordinance, the Town Council can approve a special zoning district subject to the requirements of Section 3.11 for high density, “super clustered” housing projects. The purposes of this zoning mechanism are very consistent with the general goals for compact development:

- a. preservation of environmentally sensitive areas;
- b. directing growth toward public utility service areas without detracting from the quality of

- life of present residents;
- c. providing a mixture of housing types that will be available to residents of diverse income levels; and
- d. minimizing demands on public infrastructure by concentrating roads and public utilities within smaller portions of large land tracts.

To accomplish these goals, the Town Council adopted a density bonus of up to 60 percent of the base zoning allowance, provided that four specific comprehensive planning goals are met by the project. To be granted an OSRD rezoning, a developer must set aside 70 percent of the land tract as permanent open space. To qualify for the full density bonus, the open space must be considered significant by the town, public access must be provided, a 100 foot-buffer must be maintained along the public road, and a portion of the project's housing must be affordable.

Subsection 3.11.7 of the ordinance contains additional criteria that are judged by the Town Council in the rezoning process:

- In determining whether to grant the request for rezoning, the Council will determine whether:
1. ***the development proposal is consistent with the Comprehensive Plan;***
 2. the public sewer should be extended to serve the project if it is not currently available;
 3. the developer should be awarded density bonuses based upon the applicable requirements of this subsection 3.11; and
 4. to apply appropriate conditions to the rezoning.

The first general criterion for evaluating whether to grant a request for OSRD rezoning asks the Town Council to determine "consistency with the Comprehensive Plan." The Comprehensive Plan contains numerous findings, goals, and recommended policies dealing with a variety of planning topics, such as natural resources, housing, infrastructure, economic development, utilities, and public facilities. Given that goals for preserving natural resources often conflict with goals for creating diverse housing and promoting economic opportunities for businesses, Councilors could come to very divergent positions on the question of general consistency with the Comprehensive Plan. Developers and residents of areas proposed for OSRDs will almost inevitably come to divergent positions on Comprehensive Plan consistency.

The objective framework for selecting compact development locations in this report (i.e., the screening criteria) could provide a means for consistently evaluating proposals for OSRDs. Rather than trying to exhaustively identify all possible recommendations of the Comprehensive Plan that could apply, the Council would focus on the specific criteria of infrastructure availability (sewer/water/roads), impact on natural resources and/or scenic and open space resources, and proximity to town activity centers.

As indicated in the second section of this report, the selection criteria can and should be tailored to provide either a loose screening (if the Council wants to be permissive) or a tight screening (if the Council wants to be restrictive) for where compact development projects will be considered. Having this objective methodology available would also help developers evaluate the desirability and viability of pursuing investment in compact development projects, and it would inject a level of predictability into the process.

CPAC recommends that the Council adopt this report as an amendment to the Comprehensive Plan and that the methodology for selecting appropriate locations for compact development be referenced in Section 3.11.7 of the Zoning and Site Plan Review Ordinance.

B. Retirement Community Overlay Districts (RCODs)

Adopting this report as an amendment to the Comprehensive Plan and referencing it could also help the Council with processing requests for rezoning under another ordinance section that permits another form of compact development. Section 3.16 of the ordinance was enacted by the Council in 1998 in order to provide greater flexibility for proposed expansions of the Oceanview Retirement Community project. Rather than granting the developers relief from specific ordinance requirements for a proposed expansion phase, the town took a comprehensive look at the use in general and adopted a special zoning district to be applied as an overlay zone on Oceanview and other similar projects.

As with the OSRDs, RCODs ask the Town Council to make a determination of consistency with the town's Comprehensive Plan, but the ordinance provides no guidance on relevant sections of the plan to review. These high density residential projects are currently permitted by Council discretion in about one third of the town. Providing an objective basis, such as the selection criteria of this report, for making the consistency determination would clarify and facilitate the review process for Retirement Community projects.

2. Consider additional forms of and locations for compact development zoning based on the screening criteria of recommendation #1.

CPAC supports the concept of compact development as a growth management option. The town has enacted several limited forms of compact development starting with the high density zoning on Route 100, which was based on the town's goal of the 1980s to extend public sewer to that development corridor. As a result, the Village Mixed Use District along the Gray Road allows a housing density of 4 units per acre in residential planned developments. Last year, the Council enacted amendments to the ordinance that allow even higher residential density in commercial sections of the Route One Corridor (Section 5.4 - Diverse Housing in Mixed Use Developments).

As mentioned in the prior recommendation, the town allows compact development through its Open Space Residential District and Retirement Community Overlay District mechanisms. In order to accomplish citizen goals established for the Tidewater Farm in a 2001 design workshop, the Town Council is currently negotiating a special zoning district that also accomplishes the goals of compact development.

Thus, various limited forms of compact development are allowed and/or are being considered on a case by case basis in unspecified locations. Based on the selection criteria and design guidance of this report, the Council may want to take a more comprehensive approach to compact development projects by expanding allowances and/or by designating specific areas for compact development projects. This would bring a greater predictability to the process and would give developers greater confidence to pursue these expensive and potentially controversial development proposals.

3. Adopt a unified ordinance for compact development to deal comprehensively and specifically with the special requirements of this development form.

Whether the town expands allowances for compact development or continues the current practice of looking at them on a case by case basis for special application projects (e.g., open space, Retirement Community, special zoning district), it would be helpful to have a uni-

fied set of regulations to assure that such projects are treated consistently, accomplish the goals of the Comprehensive Plan, and are sensitive to the neighborhood contexts where they will occur. Appendix 1 contains an example of a “Traditional Neighborhood Development” ordinance that contains provisions to deal holistically with compact development.

CPAC recommends that the current components and provisions for the Village Mixed Use District, the Open Space Residential District, Retirement Community Overlay District, Diverse Housing in Mixed Use Districts, and the draft Tidewater Master Planned Development District be reviewed and incorporated into a unified ordinance dealing consistently and comprehensively with all forms of compact development.

4. Develop and apply general and specific design guidelines for all compact developments.

CPAC considers the design of compact development to be as important as the selection criteria for determining where such projects would be feasible and appropriate. The design aspects of compact development will seriously affect: a) how such projects fit into neighborhoods, b) the quality of life of the new residents, and c) the prospects for political acceptance of future compact projects in the town.

Since the adoption of the 1994 Comprehensive Plan, the town has successfully developed and applied commercial design guidelines along the Route 1 and 100 business corridors. Those guidelines have provided developers with flexibility to meet market conditions while assuring the town that redevelopment and new development is high quality and enhances rather than detracts from the character of the community.

Comprehensive Plan 2000 recommended that similar design guidance be applied by the town to the residential development sector through the residential master planning process. During the public participation process, CPAC encountered public resistance to the concept of residential design guidelines as a general proposition. CPAC considered and dismissed the idea of including residential design guidelines in the proposed conservation zoning program currently before the Town Council, even though homes will likely be clustered on small lots in open fields where community character impacts could be significant.

CPAC takes a different view on the need for and appropriateness of design guidelines in compact development. Because compact development as it currently exists in Falmouth’s zoning program and as contemplated by this study will have higher density than conventional or conservation subdivisions, the need for design controls is higher. When homes are located on one and two-acre lots, the need for coordination of the development of individual sites and structures is limited. When homes are located on quarter acre lots (or smaller) in dense neighborhoods, the spillover effects of activities on individual lots affect the surrounding development to a much greater degree.

Since the town allows much higher density outright (e.g., Retirement Community projects) or awards density bonuses as part of the review process (e.g., open space residential districts), the town has a legitimate basis for requiring developers to follow stricter design standards. Some standards are already imbedded in the ordinance. Multifamily housing in open space residential districts must be located farther from the project boundary than single family homes to provide more buffering for adjacent residents. Retirement Community projects carry this layering principle even further, with controls for the scale as well as the setbacks of buildings. Both OSRDs and Retirement Community projects must go through Planning Board site

plan review where the Board considers landscaping and lighting design under specific (though outdated) standards and architecture through a general criterion:

Relation of Proposed Buildings to Environment: Proposed structures shall be related harmoniously to the terrain and to existing buildings in the vicinity that have a visual relationship to the proposed structures, so as to have a minimally adverse affect on the environmental and aesthetic qualities of the developed and neighboring areas.

Past Town Councils did not consider this general language on architecture adequate to achieve the town's comprehensive planning goals for commercial development, and CPAC does not think that it will address the needs of compact development either. CPAC recommends that the town adopt specific residential design guidelines for compact neighborhoods to be applied to existing forms and to ones that may be considered in the future. Those design guidelines should address the general layout of projects and the specific elements of both public (streets, parks, etc.) and private (lots, homes, etc.) components of new compact neighborhoods.

5. Conduct a design workshop as the first step in the process of rezoning and/or approval for a compact development project.

In recent years, increased emphasis has been placed on public involvement in the land use policy-making process. Comprehensive Plan 2000 set forth a residential master planning process that focused on distinct geographic areas within the town so that residents of neighborhoods within those areas could effectively participate in the planning process. In carrying out the first project to implement the master planning recommendation, CPAC conducted intensive planning workshops and multiple public forums involving scores of citizens to solicit values and ideas to help formulate draft policies based on that public input.

The goal of this process was to build a consensus of opinion on appropriate and desirable growth management programs to be applied to future development in the central Falmouth study area. CPAC hoped that the positive involvement of stakeholders (e.g., landowners, residents, conservationists, developers) in an iterative process exploring common values and concerns would lead to constructive compromises on policies reflecting both community concerns for the impacts of growth and the rights of land owners and developers to pursue lawful development of property.

Based on past experiences of Falmouth and other communities, the expectation was that such communications and compromises would be far more successful through a proactive planning process addressing *future* development than the historic public process where current residents react to specific project proposals of developers. Unfortunately, a highly controversial and publicized development proposal for a major land tract in the center of the study area was injected into the center of the master planning process, and the political volatility of that controversy derailed the process.

Notwithstanding the difficulties imposed by the political controversy, several important insights were gained that apply directly and indirectly to future efforts of the town related to compact development.

First, CPAC learned that there is widespread understanding and concern about the impacts of low-density, suburban development on the community at large and on specific neighborhood areas. There seemed to be consensus of those involved in the planning process that a continuation of buildout under the current zoning program would irreversibly erode the

town's natural resources and character. As a result, there was a high level of openness to consider alternative growth management options like conservation zoning, country estates, and compact development. Participants in the process were actually willing to consider increasing density in some parts of the study area in order to reduce development of other, more scenic or sensitive locations. They were also willing to put recommendations for areas to be preserved from major development and areas for compact growth consideration on maps for discussion purposes.

Not surprisingly, participants in the locations designated for land preservation expressed strong concern for the potential loss of development rights. Participants who lived in areas proposed for compact neighborhoods with higher density worried that the open space and traffic impacts of that higher density would be significant. Understandably, participants with both perspectives attended public meetings with the Town Council and criticized the draft Future Land Use Plan (FLUP) prepared by CPAC. That plan proposed that CPAC continue the planning process to the next phase of drafting possible ordinance amendments to implement the general planning goals of the Comprehensive Plan for residential master planning in keeping with input received during the specific neighborhood planning process leading up to the FLUP.

As a result of the public criticism, the Town Council withheld approval of the FLUP recommendations and directed CPAC to look at compact development on a town-wide basis rather than focusing exclusively on locations within the initial study area, which led to the preparation of this report.

The second important lesson learned from the first residential master planning effort was that for compact development to be considered as a viable growth management option in Falmouth, the specific and localized concerns of existing residents in areas deemed feasible and appropriate must be addressed in the planning process. Talking about and exploring the general pros and cons of compact development will not adequately alleviate the strong public concerns over the potential impacts of such development on their neighborhoods and homes.

CPAC believes that the town's experience with commercial master planning could provide a helpful and workable process for dealing with those localized concerns. Over the past decade or more, CPAC has successfully conducted design workshops for the former Kmart Shopping Center (now Wal*mart), the larger Route 1 business district (i.e., Village Center), and the area around Maine Turnpike Exit 53 (West Falmouth Crossing). Each of these design workshops involved stakeholders in the community and the local areas and produced master plans that were adopted by prior Town Councils, incorporated into the town's ordinances, and constructed by private developers following the visions developed in the workshop planning processes. A fourth design workshop process produced the master plan for the Tidewater Farm that led to current negotiations with a private developer to implement that vision through a specific development proposal.

The current forms of compact development provided for in the Zoning Ordinance (Village Mixed Use, Open Space Residential Districts, Retirement Community Overlay Districts, Diverse Housing in Mixed Use Districts) contain no requirement for an iterative neighborhood planning process to give area residents and citizens at large an opportunity for input into the design process. Having such a process in place might have alleviated some of the public controversy over the proposed Open Space Residential District project in the Falmouth Corners area that is now being addressed through the town's second master planning process. It could also have been applied to the most recent expansion of Oceanview, which required expansion of the Retirement Community Overlay District for that project.

CPAC recommends that the Town Council adopt ordinance amendments that will require a design workshop process (similar to those conducted for commercial areas) to be done as the first step in the rezoning process for all forms of compact development in the current ordinance and for any that may be considered in the future. The results of this process would not be binding on the Council or the Planning Board, but it would give opportunity for developers and neighbors to work together to come up with specific development proposals that meet the needs of all affected parties. The information generated by the process would also help inform and speed up the decision-making process at the Town Council and Planning Board stages of the review process.

6. Commission a study of the road network to determine carrying capacity and to identify specific limiting segments and intersections.

One of the compact development locational criteria of this report identifies major and secondary arterials and major collector roads as possible locations for compact development (see Page 15). The analysis for roads assumes that those major roadways are designed for and do carry large volumes of local and regional traffic and are the travel corridors most capable of accommodating additional traffic from compact development projects.

Notwithstanding the general accuracy of this assumption, there are perceived and actual limitations on those roadways that must be addressed as part of any consideration of a compact growth policy. In fact, adequately and accurately addressing the traffic impact issue may be one of the critical factors affecting public perceptions on the appropriateness of higher density, compact development as indicated in the Lincoln Institute report *Visualizing Density*:

Opposition to density, although often cloaked in concerns about scale or form, can be based on other factors that affect residential quality of life. Overcoming fear of density requires a multi-pronged approach that addresses the potential impacts of increased population such as noise, traffic, school crowding, etc.

During the residential master planning process for central Falmouth, project consultants compared the impacts of traffic generated by conventional subdivisions with that of traffic generated by compact development on the study area as a whole. The consultants assumed that there would be more housing units in a compact development project, but that the trip generation rates of individual units would be less than the traffic generated by standard single-family housing.

Applying these assumptions to a build-out analysis, they were able to draw general conclusions about the overall net effects on traffic volumes from the different types of development. They did not, however, analyze whether increases from either conventional or compact development could be safely accommodated by the road network, regardless of which one generated more net traffic. The scope of the study also did not permit any evaluations of road and traffic safety conditions in specific locations where compact development might be considered.

Although site-specific evaluation of traffic impacts can be effectively done only with detailed information of actual development proposals, the town could develop a base of information on road capacities and deficiencies to help formulate compact growth policies for the town and to evaluate projects that may come forward under those policies. Such a study would look at all road segments and intersections in areas that are deemed feasible and appropriate for compact development projects.

Traffic consultants would look at existing conditions to determine road and intersection capacities and to identify key limiting components of the system and/or safety problems that currently require improvements or will require them with increased traffic levels. They should factor in background traffic levels and increases occurring as a result of growth in neighboring towns. Near term or long range improvements planned by the town or Maine Department of Transportation would also affect the study results.

Once this baseline information were available, the town could better screen locations for compact growth projects and could better plan and manage the road network irrespective of the land use policy issues. Some communities across the country have used similar analyses to reset allowed zoning densities based on the road carrying capacity available or anticipated. (See Appendix 2).

Having good information on road conditions could also improve the town's position in negotiations with developers of conventional or compact development for off-site traffic improvements or financial contributions to needed improvements that will be done by the town or state as a result of traffic growth. It should be noted, however, that traffic impact fees should be considered on a regional basis, as the volume generated by individual Falmouth developments, even higher density compact ones, will likely be a small percentage of the total traffic using the roads.

The road network data would also help the town evaluate the need for interconnections between existing and proposed roads as part of a larger transportation policy. The town has been struggling with the issue of interconnectivity, and a more comprehensive understanding of the road network would demonstrate the need for and implications of making connections between roads and neighborhoods to facilitate overall traffic movements in town.

Finally, this information could be used by the Planning Board in evaluating the impacts and guiding the road designs of conventional and compact development projects.

7. Attach a density transfer fee to all housing units allowed over the base zoning density to maintain overall density neutrality.

The potential impacts of traffic from compact development and potential limitations of the roadway system may provide one legitimate reason to consider some type of transfer of development rights as an integral part of any compact development policies. Although respondents to the citizen surveys expressed split views on the appropriateness of pursuing a program of development rights transfers, CPAC considers this policy to be critical to the long-term acceptance of compact development as a component of Falmouth's growth management program.

Two strong public concerns for residential growth *per se* are the impacts of increased traffic and the potential for increased costs of education from new households. If the town allows higher density development in selected locations without an offsetting reduction in density in other areas, the likely net result will be an overall increase in total development, and the town's long-range planning goals for reducing the impact of development on town resources and character will not be achieved. Compact development can be an effective tool in directing growth to the most appropriate locations in the community, but it doesn't accomplish that goal if it just adds more density.

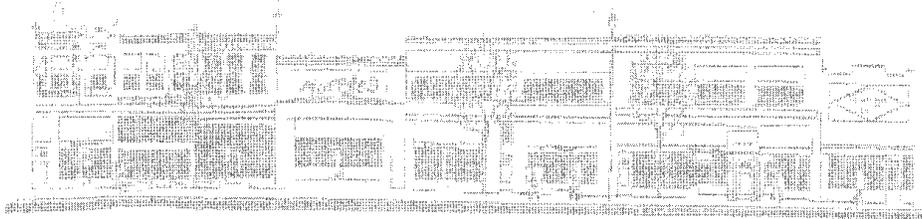
Transfer of development rights programs have been tested in some Maine communities for two decades, and they have not been effective. Traditional development transfer programs rely upon establishing specific "sending" and "receiving" areas, and the purchase of develop-

ment rights in the former to obtain extra construction permits for projects in the latter. Beyond the political controversies associated with the transfer area designations, the real estate market has significant difficulty in assigning values to such transactions, and their complexity hinders their success.

Appendix 3 contains a model for a simpler system of Density Transfer Fees that could be added to the town's land acquisition funding program to improve and expand the established practice of preserving open space and providing land for municipal parks and facilities. Limiting the application of such fees to housing units in excess of base zoning would address the fairness question that may be raised by developers.

Appendix 1

A Model Ordinance for a Traditional Neighborhood Development



Prepared by Brian W. Ohm, James A. LaGro, Jr., and Chuck Strawser
April 2001

Approved by the Wisconsin Legislature, July 28, 2001

UW
Extension

◀**A Model Ordinance for a Traditional Neighborhood Development**▶

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Introduction to the Model Ordinance

This publication includes the text of the model ordinance for a traditional neighborhood development required by Section 66.1027 of the Wisconsin Statutes, part of Wisconsin's recent *Smart Growth* law. The publication begins with a brief overview of the principles and objectives of traditional neighborhood development. These principles and objectives should be used to guide cities and villages in the development of local ordinances for traditional neighborhood development. The ordinance text begins on page 5. In addition to the ordinance text, the publication includes a commentary on the ordinance text. This is to make the document easier to understand and guide local officials and others interested in traditional neighborhood development.

The law requires that this ordinance be submitted to the Wisconsin Legislature by January 1, 2001, for approval. If approved, by January 1, 2002, every city and village with a population of at least 12,500 must enact an ordinance that is **similar** to this model traditional neighborhood development ordinance. The ordinance is meant as a guide and is **not** intended to be adopted *as is*. **Each community must adapt the language and concepts of the ordinance to fit the unique circumstances found in that community.** The critical goal for cities and villages is that they adopt ordinances that reflect the principles and objectives of traditional neighborhood development.

This model ordinance is written in a format similar to some planned development district or planned unit development ordinances. It is written in this format because of the provision in the law that *the ordinance is not required to be mapped.* Cities and villages may, at their option, develop the traditional neighborhood development ordinance following a different format. For example, a city or village may want to develop the ordinance as an overlay zoning ordinance or as a floating zoning district. Cities and villages should review their existing development review processes and adopt a streamlined review process that encourages the use of traditional neighborhood development principles and does not create a disincentive to the use of the traditional neighborhood development ordinance.

The traditional neighborhood development ordinance should provide an alternative to conventional ordinances and planned unit developments. Communities may also need to adapt other applicable ordinances, to ensure they are consistent with principles of traditional neighborhood development.

Principles and Objectives of Traditional Neighborhood Development

The *Smart Growth* law defines *traditional neighborhood development* to mean: *a compact, mixed use neighborhood where residential, commercial and civic buildings are within close proximity to each other.* It is a planning concept that is based on traditional small town and city neighborhood development principles. Traditional neighborhood development is, in part, a reaction to the often inefficient use of land and infrastructure and lack of a sense of community in many newer developments.

Traditional neighborhood development is found in the older parts of Wisconsin's cities and villages, parts that often developed prior to World War II. More recent examples are found in the older parts of Greendale, a *greenbelt* community built by the federal government near Milwaukee in the 1930s, and Middleton Hills, a new development begun in the 1990s in Middleton near Madison. Interest among consumers in traditional neighborhood development appears to be growing with other traditional neighborhood development projects in the planning stages (*Wisconsin State Journal*, 10/08/00.). Traditional neighborhood development is one of a variety of planning concepts that share

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similar themes. These models include neo-traditional development, new urbanism, urban villages, hamlets, compact communities, transit-oriented development, pedestrian pockets, and the revitalization of existing traditional towns. This model ordinance draws upon a number of these models as appropriate for Wisconsin cities and villages.

The concept of traditional neighborhood development is the subject of a growing body of literature. While there is no single model for a traditional neighborhood development, certain principles define this type of development. Understanding the principles and objectives of traditional neighborhood development is an important in the process of developing a traditional neighborhood development ordinance. Cities and villages need to prepare comprehensive plans that provide a context for traditional neighborhood developments. As part of this planning process, cities and villages should analyze the development patterns and designs of the past to provide a context for the specific standards contained in the ordinance. These principles are discussed below and were used to guide the development of this model ordinance. As cities and villages modify the model ordinance to meet the unique circumstances found within their communities, the ordinances developed should seek to achieve these principles:

□ Compact Development

Traditional neighborhood developments are compact. Compact development patterns (for both residential and commercial uses), can promote a more efficient use of land and lower the costs of providing public infrastructure and services.

Compact development also means the development is designed for the human scale. The human scale is defined as "the relationship between the dimensions of the human body and the proportion of the spaces which people use." (Nelessen, 135). This includes paying attention to walking distances, the height of buildings, the design of street lights and signs, sidewalks, and other features.

Compact development can also promote social interaction by including civic spaces such as parks and public buildings. It also means residential, commercial, and civic buildings are within close proximity of each other that can encourage people to walk between the various uses.

□ Mixed Uses

Traditional neighborhood developments are designed to include a mixture of uses. This means that nonresidential land uses, such as commercial, civic and open space, are mixed with residential land uses. Mixing land uses can broaden the tax base of a community. Mixing uses also helps promote walking between the various uses. Different modes of transportation are promoted in the community such as walking, bicycles, transit, and automobiles.

Mixed use also provides a community center or focus. For example, the community center may be a public facility such as a park, recreational facility, school, or library, or it may be a retail area. Mixed use also means promoting a mix of housing types and sizes to accommodate households of all ages, sizes, and incomes. This means varying lots sizes and densities, and allowing other types of housing such as attached single-family residences, townhomes, duplexes, fourplexes, and specialty housing for seniors. Mixed use may also mean that housing is provided in the same building above commercial uses such as shops or offices.

□ Multiple Modes of Transportation

Traditional neighborhood developments provide for access generally by way of an interconnected network of circulation systems that facilitate walking, bicycling, and driving. Streets are designed to promote the safe and efficient use of different transportation modes. The

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interconnected street pattern is meant to limit the use of isolated cul-de-sacs that force the major circulation pattern of a community onto a few major roads. Short blocks in traditional grids create multiple routes and more direct ones for pedestrians, bicyclists, and motorists. Independent networks of sidewalks and bikeways complement the street network.

Traditional neighborhoods are also meant to be “pedestrian friendly.” Given the compact design of the neighborhood, streets will be narrower than what is required in conventional subdivision ordinances. Narrow streets and other “traffic calming” techniques help slow traffic down to promote pedestrian safety. Front porches and other amenities like, street trees, can also encourage walking. The mixed uses of traditional neighborhood developments will also promote walking if shops, offices, and public services and facilities are within walking distance.

□ Responsive to Cultural and Environmental Context

Significant cultural and environmental features of a site (amenities as well as constraints such as steep slopes, wetlands, critical wildlife areas, and highly erodible soils) should influence the way the site is developed. Developments with a clear “sense of place” require careful design and siting of buildings, streets, and other infrastructure. This includes the provision of adequate open space, neighborhood parks and playgrounds. Environmentally responsive stormwater management systems, the use of indigenous vegetation, and the energy conservation measures in the design and orientation of structures also help create “sustainable developments.” The historic and architectural character of the community are other important design influences.

Preparation of this Ordinance and Additional Resources

In developing this ordinance, relevant ordinances, design manuals, and traditional neighborhood development plans from various parts of the United States and abroad were collected and compared. Similarities were noted and inconsistencies were analyzed. Many of the ideas and concepts from these ordinances were used in the preparation of this ordinance. Other literature relevant to traditional neighborhood development was also reviewed. The resources consulted in preparing this ordinance include:

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COMMENTARY: This ordinance will be part of a larger set of ordinances governing land use. Cities and villages required to adopt the ordinance must modify the ordinance to provide the best fit within the overall context of their existing land use ordinances.

All references in the ordinance appearing between brackets [] are to be filled in with the appropriate reference by the jurisdiction adopting the ordinance.

1. General Provisions

- 1.1 Statutory Authorization.** This ordinance is adopted pursuant to the authority contained in sections 62.23 and 66.1027 of the Wisconsin Statutes.
- 1.2 Purpose.** The purpose of this ordinance is to allow the optional development and redevelopment of land in [name of city/village] consistent with the design principles of traditional neighborhoods. A traditional neighborhood:
 - 1. Is compact;
 - 2. Is designed for the human scale;
 - 3. Provides a mix of uses, including residential, commercial, civic, and open space uses in close proximity to one another within the neighborhood;
 - 4. Provides a mix of housing styles, types, and sizes to accommodate households of all ages, sizes, and incomes;
 - 5. Incorporates a system of relatively narrow, interconnected streets with sidewalks, bikeways, and transit that offer multiple routes for motorists, pedestrians, and bicyclists and provides for the connections of those streets to existing and future developments;
 - 6. Retains existing buildings with historical features or architectural features that enhance the visual character of the community;
 - 7. Incorporates significant environmental features into the design;
 - 8. Is consistent with the [City/Village]'s comprehensive plan.

COMMENTARY: The purpose statement should reflect the principles and objectives of traditional neighborhood development.

- 1.3 Applicability.** The traditional neighborhood development ordinance is an alternative set of standards for development within the [City/Village] for new development of [15 acres or more] contiguous to existing development, redevelopment or infill development of [10 acres or more].

COMMENTARY: A city or village adopting an ordinance for a traditional neighborhood development may want to designate standards for the minimum size of traditional neighborhood developments and location.

- 1.4 Fees.** The [Common Council/Village Board] may, by resolution, establish fees for the administration of this ordinance.

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2. Definitions

COMMENTARY: Cities and villages should examine the definitions currently in their ordinances and how those definitions meet the goals and objectives of traditional neighborhood development.

The following definitions shall be observed and applied, except when the context clearly indicates otherwise. Words used in the present tense shall include the future tense. Words used in the singular form shall include the plural form. Words used in the plural form shall include the singular. The word "shall" is mandatory and the word "may" is permissive.

- 2.1 Accessory Building - a detached subordinate structure, the use of which is incidental to that of the principal structure and located on the same lot.
2.2 ADT - average daily traffic volumes of vehicles on a street.
2.3 Affordable housing - housing in which mortgage, amortization, taxes, insurance, and condominium and association fees, if any, constitute no more than [28] percent of gross household income for a household of the size which may occupy the unit.
2.4 Alley - a public or private way permanently reserved as a secondary means of access to abutting property.
2.5 Arterial - a major street for carrying a large volume of through traffic in the area, normally controlled by traffic signs and signals.
2.6 Block - a unit of land bounded by streets or by a combination of streets and public land, railroad rights-of-way, waterways, or any other barrier to the continuity of development.
2.7 Building Height - the limit to the vertical extent of a building.
2.8 Building Scale - the relationship between the mass of a building and its surroundings, including the width of street, open space, and mass of surrounding buildings.
2.9 Building Setback, Front - the distance from the street right-of-way line to the closest point of the foundation of a building or projection thereof.
2.10 Collector - a street designed to carry moderate volumes of traffic from local streets to arterial streets or from arterial to arterial.

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- 2.11 **Common Open Space** - squares, greens, neighborhood parks, [city/village] parks, and linear environmental corridors owned and maintained by the [city/village].
- 2.12 **Curb Radius** - the curved edge of streets at an intersection measured at the outer edge of the street curb or of the parking lane.
- 2.13 **Lot** - a parcel of land occupied or intended for occupancy by a use permitted in this ordinance, including one main building, together with any accessory buildings, open spaces, and parking spaces required by this ordinance and having its principal frontage upon a street or upon an officially approved place.
- 2.14 **Lot Line** - the property lines bounding the lot.
- 2.15 **Lot Width** - the horizontal distance between side lot lines measured at the front setback.
- 2.16 **Net acre** - an acre of land excluding street rights-of-way and other publicly-dedicated improvements such as parks, open space, and stormwater detention and retention facilities.
- 2.17 **Principal Building** - a building in which the primary use of the lot on which the building is located is conducted.
- 2.18 **Queuing** - the use of one travel lane on local streets with parking (usually an intermittent parking pattern) on both sides.
- 2.19 **Secondary Dwelling Unit** - An additional dwelling unit located within the principal dwelling on the lot, in a freestanding building or above a residential garage.
- 2.20 **Story** - a space in a building between the surface of any floor and the surface of the next floor above, or if there is no such floor above, then the space between such floor and the ceiling or roof above.
- 2.21 **Street** - a strip of land, including the entire right-of-way, publicly or privately owned, serving as a means of vehicular travel, and furnishing access to abutting properties, which may also be used to provide space for sewers, public utilities, shade trees, and sidewalks.
- 2.22 **Traditional Neighborhood** - a compact, mixed use neighborhood where residential, commercial and civic buildings are within close proximity to each other.

COMMENTARY: This definition is derived from Wisconsin's smart growth law, Wis. Stat. ' 66.1027(1)(a).

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3. Application Procedure and Approval Process

COMMENTARY: The development review process varies significantly in cities and villages across the state. The Application Procedure and Approval Process outlined here provides one approach. Cities and villages are not required to adopt this exact process. Rather, cities and villages need to examine their development review processes to find ways that the review process can be streamlined so developers are encouraged to use the traditional neighborhood development ordinance. Cities and villages should examine zoning procedures, special zoning districts and special procedures that may apply to those districts, planned unit development procedures, subdivision review procedures, and procedures before other bodies such as architectural or design review commissions. Depending on what the examination reveals, cities and villages need to develop an efficient and expedited review process for traditional neighborhood developments that encourages the implementation of this ordinance.

Prior to the issuance of any permits for development within a Traditional Neighborhood Development, the following steps shall be completed according to the procedures outlined in this section:

- 1. the applicant shall have had an initial conference;
2. a General Implementation Plan and a zoning map amendment to a Traditional Neighborhood Development District shall be approved by the [Common Council/Village Board];
3. a Specific Implementation Plan shall be approved by the [Common Council/Village Board].

COMMENTARY: Communities may want to require only one development plan for smaller projects and/or streamline the planning requirements in this model ordinance to require one development plan in addition to the plans and documentation required by their subdivision ordinance.

3.1 Initial conference. Before submitting an application for a Traditional Neighborhood Development project, the applicant shall schedule an appointment and meet with the [planner, municipal staff, Plan Commission] to discuss the procedure for approval of a Traditional Neighborhood Development project, including submittal requirements and design standards.

3.2 General Implementation Plan

- 1. General Implementation Plan Process. Following the initial conference, the applicant shall submit a general implementation plan to the [City/Village] planner or municipal staff together with an application for a zoning map amendment to a Traditional Neighborhood Development District.
a. Within [20] days, the Plan Commission shall conduct a public hearing to consider the zoning map amendment request and to consider a recommendation for approval or disapproval of a general implementation plan. At this public hearing, the Plan Commission shall receive a report from the [City/Village] planner or municipal staff recommending approval, disapproval or approval with specified modifications. Within [20] days, the Plan Commission shall recommend the [Common Council/Village Board] either:
i. approve the General Implementation Plan and zoning map amendment,
ii. approve the General Implementation Plan and zoning map amendment with modifications, or
iii. deny the General Implementation Plan and zoning map amendment.

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- b. The [Common Council/Village Board] shall receive the recommendation from the [Plan Commission] and a report from the Planner or municipal staff. Upon due consideration, the [Common Council/Village Board] shall either:
 - i. approve the General Implementation Plan and zoning map amendment,
 - ii. approve the General Implementation Plan and zoning map amendment with modifications, or
 - iii. deny the General Implementation Plan and zoning map amendment.
2. **General Implementation Plan Submittal Requirements.** The purpose of the general implementation plan is to establish the intent, density, and intensity for a proposed development. The General Implementation Plan shall include the following:
 - a. A general location map of suitable scale, but no less than one inch = [200] feet, which shows the location of the property within the community and adjacent parcels including locations of any public streets, railroads, major streams or rivers and other major features within [1000] feet of the site.
 - b. A site inventory and analysis to identify site assets or resources, and constraints, including but not limited to floodplains, wetlands and soils classified as “poorly drained” or “very poorly drained,” soils with bedrock at or within 42 inches of the surface, utility easements for high-tension electrical transmission lines (>69KV), steep slopes greater than [15%], and brownfields.
 - c. A conceptual site plan, at a scale of no less than one inch = [100] feet, which indicates topography in [two] foot contours for sites with 15 feet or more of local relief, or one foot contours for local sites with less than 15 feet of local relief, consisting of a map with proposed features and existing site features and uses that will remain. These features should include building outlines, location of streets, transit stops, drives and parking areas, pedestrian and bicycle paths, service access areas for receiving material and trash removal, and other impervious surfaces. The location of proposed and existing to remain trees and shrubs should also be included, along with any other significant features.
 - d. A conceptual storm water management plan identifying the proposed patterns of major stormwater runoff, locations of stormwater infiltration areas, and other significant stormwater best management practices.
 - e. Identification of the architectural style(s) of the Traditional Neighborhood Development and the accompanying site design style(s). The design style of the Traditional Neighborhood Development shall be conveyed with drawings or computer simulations of typical proposed building elevations (including dimensions of building height and width, and facade treatment).
 - f. A written report that provides general information about the covenants, conservation easements, or agreements which will influence the use and maintenance of the proposed development. The report shall also describe the site conditions and the development objectives.
 - g. Any other information deemed necessary by the [City/Village] in order to evaluate plans.
 - h. [Five] copies of the above information shall be submitted plus [one] reduced set no larger than 8-1/2 inches by 11 inches.

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- 3.3 Specific Implementation Plan.** The purpose of the Specific Implementation Plan is to establish a detailed development proposal. The Specific Implementation Plan can be proposed, reviewed, and acted upon as whole or in part or phases.
- 1. Specific Implementation Plan Process.** Following approval of the General Implementation Plan, the applicant shall submit a Specific Implementation Plan to the [planner, municipal staff, Plan Commission].
 - a. Within [30] days following receipt of the Specific Implementation Plan, the Plan Commission shall receive a report from the [planner, planning department, municipal staff] recommending approval, disapproval or approval with specified modifications. The Plan Commission shall determine that the proposed Specific Implementation Plan is in substantial conformance with the approved General Implementation Plan. Upon due consideration, the Plan Commission shall recommend that the [Common Council/Village Board] either:
 - i. approve the Specific Implementation Plan as being in substantial conformance with the General Implementation Plan;
 - ii. approve the Specific Implementation Plan as being in substantial conformance with the General Implementation Plan with specified modifications; or
 - iii. deny the Specific Implementation Plan.
 - b. Following Plan Commission recommendation, the [Common Council/Village Board] shall receive the recommendation from the Plan Commission and the report from the planner or municipal staff. Upon due consideration, the [Common Council/Village Board] shall either:
 - i. approve the Specific Implementation Plan as being in substantial conformance with the General Implementation Plan;
 - ii. approve the Specific Implementation Plan as being in substantial conformance with the General Implementation Plan with specified modifications; or
 - iii. deny the Specific Implementation Plan.
 - 2. Specific Implementation Plan Submittal Requirements.** The applicant shall submit a series of plans, maps, and written materials which include the following information:
 - a. A general location map of suitable scale which shows the boundaries and dimensions of the property within the context of the [city/village] and adjacent parcels, including locations of any public streets, railroads, major streams or rivers and other major features within 1000 feet of the site, along with a legal description of the property.
 - b. A site inventory and analysis to identify site assets or resources, and constraints, including but not limited to floodplains, wetlands and soils classified as “poorly drained” or “very poorly drained,” soils with bedrock at or within 42 inches of the surface, utility easements for high-tension electrical transmission lines (>69KV), slopes greater than [15%], and brownfields.
 - c. A site plan, including proposed topographic contours at one foot intervals, with the following information:
 - i. the location of proposed structures and existing structures that will remain, with height and gross floor area noted;

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- ii. the location of street and pedestrian lighting, including lamp intensity and height;
 - iii. the location of proposed open space;
 - iv. the circulation system indicating pedestrian, bicycle, and motor vehicle movement systems, including existing and proposed public streets or right-of-ways; transit stops; easements or other reservations of land on the site; the location and dimensions of existing and proposed curb cuts, off-street parking and loading spaces, include service access for receiving and trash removal; sidewalks and other walkways;
 - v. location of all trees, shrubs, and ground cover (proposed or existing) to remain on the site.
- d. A stormwater management plan for the site. The grading plan shall show existing and proposed ground elevations with contours (one-foot contour interval) and spot elevations at significant high points, low points, and transition points. The grading plan shall also note the finished ground floor elevations of all buildings. The plan shall also show the locations of all storm drainage sewers and structures, and infiltration or detention/retention structures; and all wetlands on the site, using the Federal Manual For Identifying and Delineating Jurisdictional Wetlands, and copies of documents completed in making the wetlands identification.
- e. Detailed elevations of all proposed commercial buildings and typical elevations of residential buildings. Scaled elevations should identify all signs, building materials and percentage of ground floor commercial facade in windows; the location, height and material for screening walls and fences, including outdoor trash storage areas, electrical, mechanical and gas metering equipment, storage areas for trash and recyclable materials, and rooftop equipment.
- f. A utilities plan showing underground and above ground lines and structures for sanitary sewers, electricity, gas, telecommunications, etc.
- g. A written report which completely describes the proposal and indicates covenants or agreements that will influence the use and maintenance of the proposed development. The report also shall describe the analysis of site conditions and the development objectives.
- h. Phasing plans, where applicable.
- i. Any other information deemed necessary by the [Common Council/Village Board] in order to evaluate plans.
- j. [Five] copies of the above information shall be submitted, plus [one] reduced set no larger than 8-1/2 inches by 11 inches.
- 3.4 Amendments to the Specific Implementation Plan.** Minor changes to the Specific Implementation Plan adopted by the [Common Council/Village Board] may be approved by the Planning Department, provided that the changes do not involve:
1. Increases or decreases of less than [10%] in floor area of structures or number of dwelling units.
 2. Change in exterior building material.
 3. Alteration of any conditions attached or modification to the Specific Implementation Plan made by the [Common Council/Village Board].

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A major change to a Specific Implementation Plan which is less restrictive than any conditions of approval for the initial Specific Implementation Plan, shall require approval by a majority vote of all members of the [Common Council/Village Board].

- 3.5 Subdivision of Land.** If the Traditional Neighborhood Development involves the subdivision of land as defined in the [City/Village]'s subdivision ordinance, the applicant shall submit all required land division documents in accordance with the requirements of the subdivision ordinance and Chapter 236 of the Wisconsin Statutes. If there is a conflict between the design standards of the subdivision ordinance and the design guidelines of this ordinance, the provisions of this ordinance shall apply.
- 3.6 Ownership and Maintenance of Public Space.** Provision shall be made for the ownership and maintenance of streets, squares, parks, open space, and other public spaces in a Traditional Neighborhood Development by dedication to the [City/Village].
- 3.7 Recording of Documents.** The following documents need to be filed by the applicant in the County Register of Deeds Office within [10 days] after approval of the document by the [Common Council/Village Board]: a certified copy of the zoning ordinance amendment designating a tract of land as a Traditional Neighborhood Development; the general implementation plan; and the specific implementation plan.

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4. Traditional Neighborhood Development Design Standards

4.1 Neighborhood Uses. In order to achieve the proximity necessary to make neighborhoods walkable, it is important to mix land uses. A traditional neighborhood development should consist of a mix of residential uses, a mixed use area, and open space as provided below:

COMMENTARY: A goal of traditional neighborhood developments is to include a mixture of uses such as residential, commercial, civic, and open space.

1. **A mix of residential uses** of the following types can occur anywhere in the traditional neighborhood development. For infill development, the mix of residential uses may be satisfied by existing residential uses adjacent to the Traditional Neighborhood Development.
 - a. Single-family detached dwellings, including manufactured homes;
 - b. Single-family attached dwellings, including duplexes, townhouses, row houses;
 - c. Multifamily dwellings, including senior housing;
 - d. Secondary dwelling units (granny flats);
 - e. Special needs housing, such as community living arrangements and assisted living facilities.

COMMENTARY: A goal of traditional neighborhood developments is to promote a mix of housing types (such as attached single-family residences, townhomes, duplexes, fourplexes, and specialty housing for seniors) to accommodate households of all ages, sizes, and incomes. Mixing housing types promotes affordability, meets the diverse needs of the housing consumer, and can make a community more walkable.

2. **Mixed use area**, of commercial, residential, civic or institutional, and open space uses as identified below. All residents should be within approximately 1/4 mile or a 5 minute walk from existing or proposed commercial, civic, and open space areas. Individual businesses should not exceed [6000] square feet in size.

COMMENTARY: A goal of traditional neighborhood developments is to provide a community center or focal point. In this ordinance, the term mixed use area is used to designate the community center. The mixing of uses in this area can reduce vehicle use and can broaden the tax base of the community. It can also help build community identity.

- a. Commercial uses.
 - i. Food services (neighborhood grocery stores; butcher shops; bakeries; restaurants, not including drive-throughs; cafes; coffee shops; neighborhood bars or pubs);
 - ii. Retail uses (florists or nurseries; hardware stores; stationery stores; book stores; studios and shops of artists and artisans);
 - iii. Services (day care centers; music, dance or exercise studios; offices, including professional and medical offices; barber; hair salon; dry cleaning);
 - iv. Accommodations (bed and breakfast establishments, small hotels or inns).

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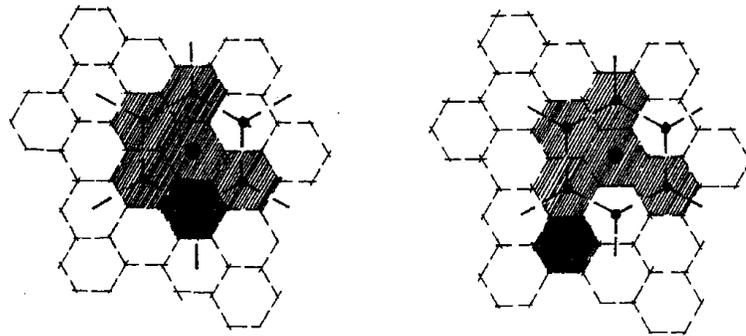


Figure 1. Plan-view conceptual diagrams of neighborhood commercial service areas (hexagons). Each hexagon represents a neighborhood with a mixed-use center (dot) that is within a five-minute walking distance of the neighborhood's edge. Clusters of neighborhoods (larger hexagon) can support more extensive commercial development than individual neighborhoods. The appropriate amount of commercial uses within a traditional neighborhood development depends on the location, or community context, of the new development (darker shaded hexagon).

- b. Residential uses.
 - i. Single-family attached dwellings, including duplexes, townhouses, row houses;
 - ii. Multifamily dwellings, including senior housing;
 - iii. Residential units located on upper floors above commercial uses or to the rear of storefronts;

COMMENTARY: Mixed use may also mean that housing is provided in the same building above commercial uses such as shops or offices.

- iv. "Live/work" units that combine a residence and the resident's workplace;
 - v. "Special needs" housing, such as community living arrangements and assisted living facilities.
- c. Civic or institutional uses.
 - i. Municipal offices, fire stations, libraries, museums, community meeting facilities, and post offices;
 - ii. Transit shelters;
 - iii. Places of worship;
 - iv. Educational facilities.
- d. Open space uses.
 - i. Central square;

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- ii. Neighborhood park;
- iii. Playground.

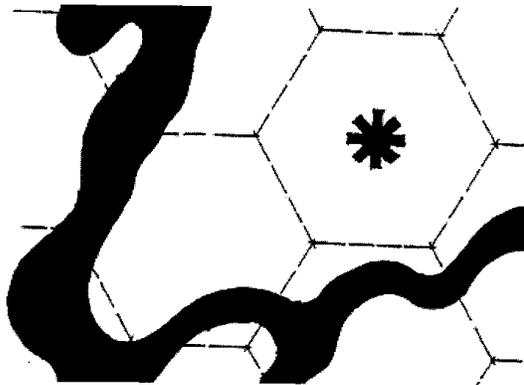


Figure 2. Elevation sketch of a typical streetscape within a mixed-use area. Architectural design, street furniture, and landscaping all contribute to an attractive, human-scaled environment with a distinct visual character.

- 3. **Open space** uses identified below should be incorporated in the traditional neighborhood development as appropriate. Large outdoor recreation areas should be located at the periphery of neighborhoods rather than central locations.

COMMENTARY: A goal of traditional neighborhood development is to incorporate the significant environmental features of a site into the design of the development. This includes the provision of adequate open space for both active and passive recreational uses, use of open space as a visual amenity, and use of open space for stormwater management.

- a. Environmental corridors;
- b. Protected natural areas;
- c. Community parks;
- d. Streams, ponds, and other water bodies;
- e. Stormwater detention/retention facilities.



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Figure 3. Plan-view diagram illustrating the importance of context in planning public open space. Large, contiguous open spaces are community-wide resources with environmental, aesthetic, recreational, and educational benefits. Smaller parks and open spaces (asterisk) should be located in neighborhoods (hexagons) that are not within easy walking distance of community parks and open space.

4.2 Development units. The number of residential dwelling units and the amount of nonresidential development (excluding open spaces) shall be determined as follows:

COMMENTARY: A goal of traditional neighborhood development is that development is more compact.

1. In areas devoted to mixed residential uses:
 - a. The number of single-family attached and detached units permitted shall be [5 – 8+] dwelling units per net acre;
 - b. The number of multi-family units shall be [15 - 40] dwelling units per net acre.
 - c. Secondary dwelling units shall be permissible in addition to the number of dwelling units authorized under this section. However, the total number of secondary dwelling units shall not be more than [10 percent] of the total number of single-family attached and detached units.
 - d. For each affordable housing unit provided under this section, one additional dwelling unit shall be permitted, up to a maximum [15] percent increase in dwelling units.
2. In mixed use areas:
 - a. The number of single-family and multi-family dwelling units permitted shall be calculated the same as above plus an additional number of units not to exceed [10 percent] of the amount permitted above.
 - b. All dwelling units constructed above commercial uses shall be permissible in addition to the number of dwelling units authorized under this section. However, the total number of dwelling units shall not be increased by more than [10 dwelling units or 10 percent], whichever is greater.
 - c. The total ground floor area of nonresidential development uses, including off-street parking areas, shall not exceed [25] per cent of the traditional neighborhood development.

4.3 Open Space. At least [10-20] percent of the gross acreage of the Traditional Neighborhood Development must be open space. Open space may include undevelopable areas such as steep slopes and wetlands, and stormwater detention and retention basins. At least [25] percent of the open space must be common open space dedicated to the public for parkland. [90] percent of the lots within the areas devoted to mixed residential uses shall be within a 1/4 mile or a 5 minute walk from common open space.

COMMENTARY: Open space is a significant part of a Traditional Neighborhood Development. The amount of open space dedicated to the public should reflect the needs generated by the intensity of the proposed Traditional Neighborhood Development. The open space should also be consistent with the city/villages plans for its park and open space system.

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4.4 Stormwater Management. The design and development of the traditional neighborhood development should minimize off-site stormwater runoff, promote on-site filtration, and minimize the discharge of pollutants to ground and surface water. Natural topography and existing land cover should be maintained/protected to the maximum extent practicable. New development and redevelopment shall meet the following requirements:

- 1. Untreated, direct stormwater discharges to wetlands or surface waters are not allowed.
2. Post development peak discharge rates should not exceed pre-development peak rates.
3. Erosion and sediment controls must be implemented to remove 80% of the average annual load of total suspended solids.
4. Areas for snow storage should be provided unless the applicant provides an acceptable snow removal plan.
5. Redevelopment stormwater management systems should improve existing conditions and meet standards to the extent practicable.
6. All treatment systems or BMPs must have operation and maintenance plans to ensure that systems function as designed.

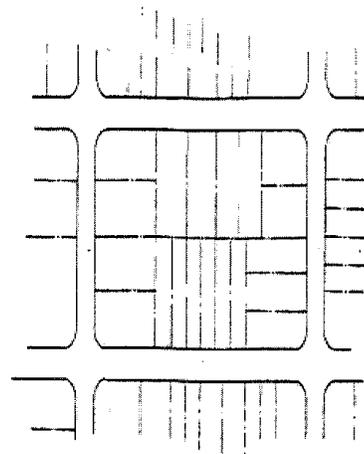
4.5 Lot and Block Standards.

COMMENTARY: Providing diversity in block and lot size can help to create an urban structure that is pedestrian friendly. Short blocks in traditional grids create multiple routes and more direct ones for pedestrians, bicyclists, and motorists.

Lot and block design should promote development that is compatible with natural features, minimizes pedestrian and vehicular conflict, promotes street life and activity, reinforces public spaces, promotes public safety, and visually enhances development.

Lot design should allow for passive solar designs.

- 1. Block and lot size diversity. Street layouts should provide for perimeter blocks that are generally in the range of 200-400 feet deep by 400-800 feet long. A variety of lot sizes should be provided to facilitate housing diversity and choice and meet the projected requirements of people with different housing needs.



and activity, reinforces safety, and visually enhances

Lot design should allow

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Figure 4. Plan-view diagram of a street grid showing a diversity of lot (parcel) sizes.

2. **Lot Widths.** Lot widths should create a relatively symmetrical street cross section that reinforces the public space of the street as a simple, unified public space.

COMMENTARY: Cities and villages should establish minimum and/or maximum lot sizes and setbacks that meet traditional neighborhood development design principles within the context of their community.

3. **Building Setback, Front - Mixed Use Area.** Structures in the mixed use area have no minimum setback. Commercial and civic or institutional buildings should abut the sidewalks in the mixed use area.

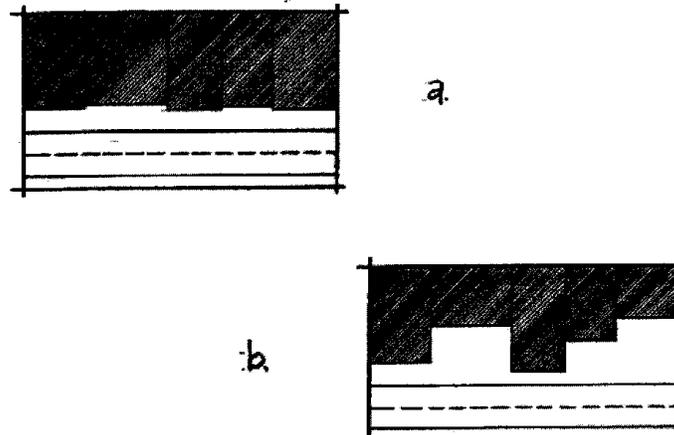


Figure 5. Plan-view diagrams showing two alternatives for building setbacks from the street right-of-way in mixed-use areas. Relatively uniform setbacks (a) are preferable to widely varying building setbacks (b).

4. **Building Setback, Front - Areas of Mixed Residential Uses.** Single-family detached residences shall have a building setback in the front between [0 and 25] feet. Single-family attached residences and multifamily residences shall have a building setback in the front between [0 and 15] feet.
5. **Building Setback, Rear - Areas of Mixed Residential Uses.** The principal building on lots devoted to single-family detached residences shall be setback no less than [30] feet from the rear lot line.

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- 6. **Side Setbacks.** Provision for zero lot-line single-family dwellings should be made, provided that a reciprocal access easement is recorded for both lots and townhouses or other attached dwellings, provided that all dwellings have pedestrian access to the rear yard through means other than the principal structure.

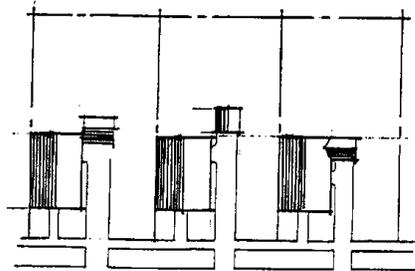


Figure 6. Plan-view diagram of the zero-lot line concept. A large side-yard on each parcel is created by uniformly eliminating one of the side-yard setbacks.

- 4.6 **Circulation Standards.** The circulation system shall allow for different modes of transportation. The circulation system shall provide functional and visual links within the residential areas, mixed use area, and open space of the traditional neighborhood development and shall be connected to existing and proposed external development. The circulation system shall provide adequate traffic capacity, provide connected pedestrian and bicycle routes (especially off street bicycle or multi-use paths or bicycle lanes on the streets), control through traffic, limit lot access to streets of lower traffic volumes, and promote safe and efficient mobility through the traditional neighborhood development.

COMMENTARY: A goal of a traditional neighborhood development is a vehicle circulation system that provides for access generally by way of an interconnected network of streets (such as a grid pattern). The interconnected street pattern is meant to limit the use of isolated cul-de-sacs which force the major circulation pattern of a community onto a few major roads.

- 1. **Pedestrian Circulation.** Convenient pedestrian circulation systems that minimize pedestrian-motor vehicle conflicts shall be provided continuously throughout the Traditional Neighborhood Development. Where feasible, any existing pedestrian routes through the site shall be preserved and enhanced. All streets, except for alleys, shall be bordered by sidewalks on both sides in accordance with the specifications listed in Table 1. The following provisions also apply:
 - a. **Sidewalks in residential areas.** Clear and well-lighted sidewalks, [3-5 feet] in width, depending on projected pedestrian traffic, shall connect all dwelling entrances to the adjacent public sidewalk.
 - b. **Sidewalks in mixed use areas.** Clear and well-lighted walkways shall connect building entrances to the adjacent public sidewalk and to associated parking areas. Such walkways shall be [a minimum of 5 feet] in width.

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- c. Disabled Accessibility. Sidewalks shall comply with the applicable requirements of the Americans with Disabilities Act.
- d. Crosswalks. Intersections of sidewalks with streets shall be designed with clearly defined edges. Crosswalks shall be well lit and clearly marked with contrasting paving materials at the edges or with striping.

COMMENTARY: Traditional neighborhoods should also be "pedestrian friendly," meaning they provide for pedestrian safety and convenience. An independent network of sidewalks and bikeways can also promote walking and reduce reliance on private vehicles.

- 2. **Bicycle Circulation.** Bicycle circulation shall be accommodated on streets and/or on dedicated bicycle paths. Where feasible, any existing bicycle routes through the site shall be preserved and enhanced. Facilities for bicycle travel may include off-street bicycle paths (generally shared with pedestrians and other non motorized users) and separate, striped, 4 foot bicycle lanes on streets. If a bicycle lane is combined with a lane for parking, the combined width should be 14 feet.
- 3. **Public Transit Access.** Where public transit service is available or planned, convenient access to transit stops shall be provided. Where transit shelters are provided, they shall be placed in highly visible locations that promote security through surveillance, and shall be well-lighted.
- 4. **Motor Vehicle Circulation.** Motor vehicle circulation shall be designed to minimize conflicts with pedestrians and bicycles. Traffic calming features such as "queuing streets," curb extensions, traffic circles, and medians may be used to encourage slow traffic speeds.
 - 1. Street Hierarchy. Each street within a traditional neighborhood development shall be classified according to the following (arterial streets should not bisect a traditional neighborhood development):
 - i. **Collector.** This street provides access to commercial or mixed -use buildings, but it is also part of the [city/village]'s major street network. On-street parking, whether diagonal or parallel, helps to slow traffic. Additional parking is provided in lots to the side or rear of buildings.
 - ii. **Subcollector.** This street provides primary access to individual residential properties and connects streets of lower and higher function. Design speed is 25 mph.
 - iii. **Local Street.** This street provides primary access to individual residential properties. Traffic volumes are relatively low, with a design speed of 20 mph.
 - iv. **Alley.** These streets provide secondary access to residential properties where street frontages are narrow, where the street is designed with a narrow width to provide limited on-street parking, or where alley access development is desired to increase residential densities. Alleys may also provide delivery access or alternate parking access to commercial properties.

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COMMENTARY: A goal of traditional neighborhood developments is narrower streets than what is required in conventional subdivision ordinances. Narrow streets and other traffic calming techniques help slow traffic down to promote pedestrian safety.

Local street widths utilize a concept called queuing the use of one travel lane on local streets with parking (usually an intermittent parking pattern) on both sides. At low traffic volumes, with intermittent parking, cars traveling in opposite directions must occasionally use the parking lane as a travel lane or wait for another car to pass. The debate over the potential benefits of narrower streets are discussed in the Institute of Transportation Engineers' 1997 publication, Traditional Neighborhood Street Design Guidelines.

Table 1: Attributes of Streets in a Traditional Neighborhood Development

	Collector	Subcollector	Local Street	Alley
Average Daily Trips	750 or more	750-1500	Less than 250	Not applicable
Right-of-Way	76-88 feet	48-72 feet	35-50 feet	12-16 feet
Auto travel lanes	Two or three 12 foot lanes	Two 10 foot lanes	Two 10 foot lanes, or one 14 foot (queuing) lane	Two 8 foot lanes for two-way traffic, or one 12 foot lane for one-way traffic
Bicycle lanes	Two 6 foot lanes combined with parking lanes	4 foot lanes with no parking, or 6 foot lanes combined with parking lanes	None	None
Parking	Both sides, 8 feet	None, one, or both sides, 8 feet	None or one side, 8 feet	None (access to individual drives & garages outside Right-of-way)
Curb and gutter	Required	Required	Not required	
Planting strips	Minimum 6 feet	Minimum 6 feet	Minimum 6 feet	None
Sidewalks	Both sides, 5 feet minimum	Both sides, 3-5 feet	Both sides, 3-5 feet	None

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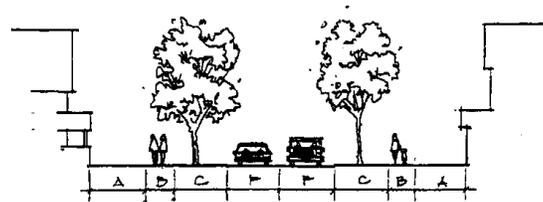


Figure 7a. Schematic sketch of a typical local street cross-section. Table 1 lists the recommended dimensions of each component: A) building setback from street right-of-way; B) walkway; C) planting area; F) travel lane.

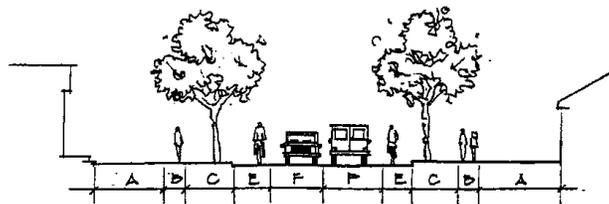
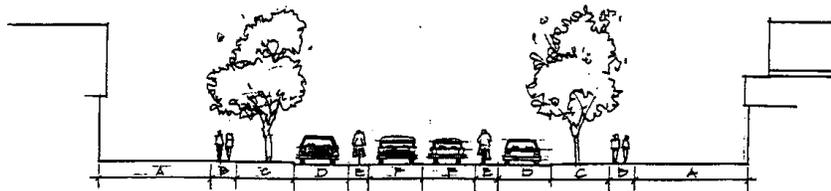


Figure 7b. Schematic sketch of a typical sub-collector street cross-section. Table 1 lists the recommended dimensions of each component: A) building setback from street right-of-way; B) walkway; C) planting area; E) bicycle lane; F) travel lane.



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Figure 7c. Schematic sketch of a typical collector street cross-section. Table 1 lists the recommended dimensions of each component: A) building setback from street right-of-way; B) walkway; C) planting area; D) parking lane; E) bicycle lane; F) travel lane.

- b. Street Layout. The traditional neighborhood development should maintain the existing street grid, where present, and restore any disrupted street grid where feasible. In addition:
 - i. Intersections shall be at right angles whenever possible, but in no case less than 75 degrees. Low volume streets may form three-way intersections creating an inherent right-of-way assignment (the through street receives precedence) which significantly reduces accidents without the use of traffic controls.
 - ii. Corner radii. The roadway edge at street intersections shall be rounded by a tangential arc with a maximum radius of [15 feet] for local streets and [20 feet] for intersections involving collector or arterial streets. The intersection of a local street and an access lane or alley shall be rounded by a tangential arc with a maximum radius of 10 feet.

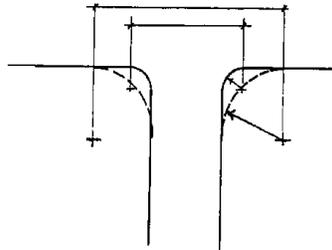


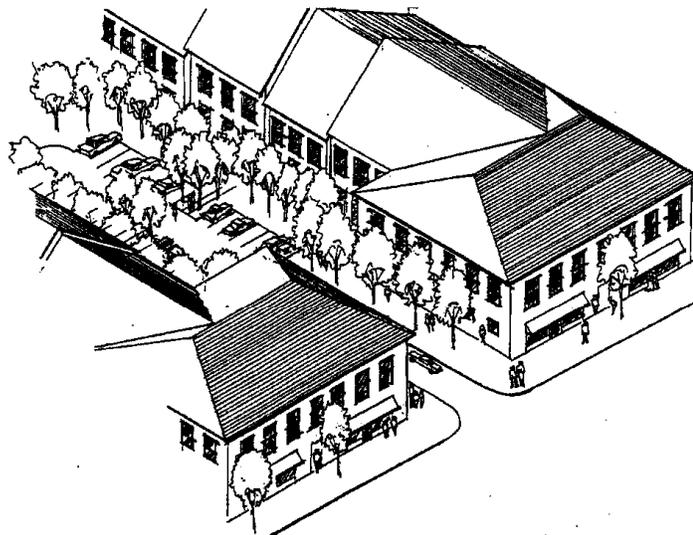
Figure 8. Plan-view diagram of a street intersection. Reducing the radius of street corners slows turning vehicle traffic and shortens pedestrian crosswalks.

- iii. Curb cuts for driveways to individual residential lots shall be prohibited along arterial streets. Curb cuts shall be limited to intersections with other streets or access drives to parking areas for commercial, civic or multifamily residential uses. Clear sight triangles shall be maintained at intersections, as specified below, unless controlled by traffic signal devices:

<u>intersection of:</u>	<u>minimum clear sight distance:</u>
local street and collector	[120 feet]
collector and collector	[130 feet]
collector and arterial	[50 feet]

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- iv. The orientation of streets should enhance the visual impact of common open spaces and prominent buildings, create lots that facilitate passive solar design, and minimize street gradients. All streets shall terminate at other streets or at public land, except local streets may terminate in stub streets when such streets act as connections to future phases of the development. Local streets may terminate other than at other streets or public land when there is a connection to the pedestrian and bicycle path network at the terminus.
- c. Parking requirements. Parking areas for shared or community use should be encouraged. In addition:
 - i. In the mixed use area, any parking lot shall be located at the rear or side of a building. If located at the side, screening shall be provided as specified in section 4.8.
 - ii. A parking lot or garage may not be adjacent to or opposite a street intersection.
 - iii. In the mixed use area, a commercial use must provide one parking space for every [500] square feet of gross building area.
 - iv. Parking lots or garages must provide not less than one bicycle parking space for every [10] motor vehicle parking spaces.
 - v. Adjacent on-street parking may apply toward the minimum parking requirements.
 - vi. In the mixed residential areas, parking may be provided on-site. [One] off-street parking space with unrestricted ingress and egress shall be provided for each secondary dwelling unit.
 - vii. Multi - family uses must provide one parking space for every dwelling unit and [0.5] parking space for each additional bedroom.



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Figure 9. Aerial perspective sketch of a mixed-use area integrating commercial (ground floor) and residential (second story) uses. A relatively narrow gap in the continuous street wall (created by the mixed-use buildings) provides access from the street to a landscaped, pedestrian-friendly parking lot.

- d. Service access. Access for service vehicles should provide a direct route to service and loading dock areas, while avoiding movement through parking areas.
- e. Paving. Reduction of impervious surfaces through the use of interlocking pavers is strongly encouraged for areas such as remote parking lots and parking areas for periodic uses.

4.7 Architectural Standards. A variety of architectural features and building materials is encouraged to give each building or group of buildings a distinct character.

COMMENTARY: A goal of traditional neighborhood development is that it is compact. Compact development in part means the development is designed for the human scale. This emphasis on design includes being sensitive to walking distances, the height of buildings, the design of street lights and signs, sidewalks, and other features.

1. Guidelines for Existing Structures

- a. Existing structures, if determined to be historic or architecturally significant, shall be protected from demolition or encroachment by incompatible structures or landscape development.
- b. The U.S. Secretary of the Interior's Standards for Rehabilitation of Historic Properties shall be used as the criteria for renovating historic or architecturally significant structures.

COMMENTARY: Guidelines for new structures within a Traditional Neighborhood Development must be responsive to the community context. It may be appropriate to conduct an architectural inventory of existing architectural styles in the community and determine which, if any, styles should be replicated.

2. Guidelines for New Structures

- a. Height. New structures within a Traditional Neighborhood Development shall be no more than [3 stories] for single-family residential, or [5 stories] for commercial, multi-family residential, or mixed use.

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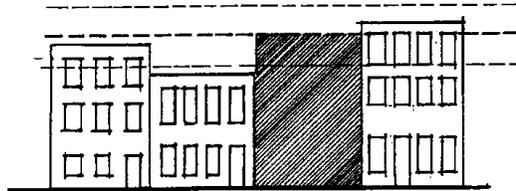


Figure 10. Schematic elevation sketch of a mixed-use streetscape. To create a visually unified streetwall, buildings should be no more than 30% taller or 30% shorter than the average building height on the block.

b. Entries and Facades

- i. The architectural features, materials, and the articulation of a facade of a building shall be continued on all sides visible from a public street.
- ii. The front facade of the principal building on any lot in a Traditional Neighborhood Development shall face onto a public street.
- iii. The front facade shall not be oriented to face directly toward a parking lot.
- iv. Porches, pent roofs, roof overhangs, hooded front doors or other similar architectural elements shall define the front entrance to all residences.
- v. For commercial buildings, a minimum of 50 percent of the front facade on the ground floor shall be transparent, consisting of window or door openings allowing views into and out of the interior.
- vi. New structures on opposite sides of the same street should follow similar design guidelines. This provision shall not apply to buildings bordering civic uses.



Figure 11. Schematic elevation sketches of two multi-storied buildings with equal heights and widths. Architectural details such as porches, windows, and roof dormers articulate a building's facade (right) which enhances visual quality and contributes to a human-scaled development.

- 3. **Guidelines for garages and secondary dwelling units.** Garages and secondary dwelling units may be placed on a single-family detached residential lot within the principal building or an accessory building provided that the secondary dwelling unit shall not exceed [800] square feet.

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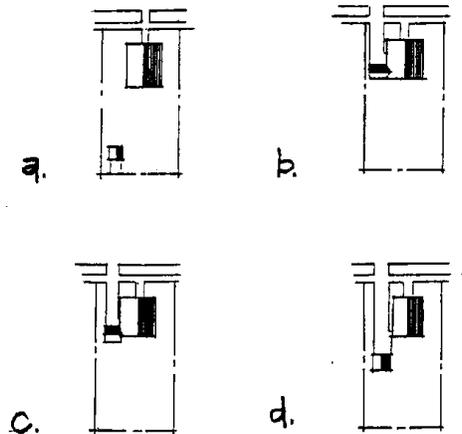


Figure 12. Plan-view diagrams of four alternative garage locations on a single-family housing lot: a) detached garage is accessed from an alley; b and c) attached garage is accessed from the local street, d) detached garage, behind the house, is accessed from the local street.

4. **Guidelines for exterior signage.** A comprehensive sign program is required for the entire Traditional Neighborhood Development which establishes a uniform sign theme. Signs shall share a common style (e.g., size, shape, material). In the mixed use area, all signs shall be wall signs or cantilever signs. Cantilever signs shall be mounted perpendicular to the building face and shall not exceed [8] square feet.

COMMENTARY: These regulations are not meant to supersede an existing ordinance for exterior signage. If such an ordinance already exists in a community, it should be used.

5. **Guidelines for lighting.**
 - a. Street lighting shall be provided along all streets. Generally more, smaller lights, as opposed to fewer, high-intensity lights, should be used. Street lights shall be installed on both sides of the street at intervals of no greater than [75] feet. Street lighting design shall meet the minimum standards developed by the Illumination Engineering Society.

♦A Model Ordinance for a Traditional Neighborhood Development♦

- b. Exterior lighting shall be directed downward in order to reduce glare onto adjacent properties.

4.8 Landscaping and Screening Standards. Overall composition and location of landscaping shall complement the scale of the development and its surroundings. In general, larger, well-placed contiguous planting areas shall be preferred to smaller, disconnected areas. Where screening is required by this ordinance, it shall be at least 3 feet in height, unless otherwise specified. Required screening shall be at least 50 percent opaque throughout the year. Required screening shall be satisfied by one or some combination of: a decorative fence not less than 50 percent opaque behind a continuous landscaped area, a masonry wall, or a hedge.

- 1. Street trees. A minimum of one deciduous canopy tree per [40] feet of street frontage, or fraction thereof, shall be required. Trees can be clustered and do not need to be evenly spaced. Trees should preferably be located between the sidewalk and the curb, within the landscaped area of a boulevard, or in tree wells installed in pavement or concrete. If placement of street trees within the right-of-way will interfere with utility lines, trees may be planted within the front yard setback adjacent to the sidewalk.
- 2. Parking area landscaping and screening.
 - a. All parking and loading areas fronting public streets or sidewalks, and all parking and loading areas abutting residential districts or uses, shall provide:
 - i. A landscaped area at least [5] feet wide along the public street or sidewalk.
 - ii. Screening at least [3] feet in height and not less than [50] percent opaque.
 - iii. One tree for each [25] linear feet of parking lot frontage.
 - b. Parking area interior landscaping. The corners of parking lots, "islands," and all other areas not used for parking or vehicular circulation shall be landscaped. Vegetation can include turf grass, native grasses or other perennial flowering plants, vines, shrubs or trees. Such spaces may include architectural features such as benches, kiosks or bicycle parking.

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- c. In large parking lots containing more than [200] spaces, an additional landscaped area of at least [300] square feet shall be provided for each [25] spaces or fraction thereof, containing one canopy tree. The remainder shall be covered with turf grass, native grasses or other perennial flowering plants, vines or shrubs.
- 3. Installation and Maintenance of Landscaping Materials.
 - a. All landscape materials shall be installed to current industry standards.
 - b. Maintenance and replacement of landscape materials shall be the responsibility of the property owner. Landscape maintenance should incorporate environmentally sound management practices, including the use of water- and energy-efficient irrigation systems such as drip irrigation, and pruning primarily for plant health and public safety, replacing dead materials annually.
- 4. Materials. All plant materials must meet the minimum standards set by the the American National Standards Institute in ANSI Z60.1 American Standard for Nursery Stock. Landscape species shall be indigenous or proven adaptable to the climate, but shall not be invasive species. Plant materials shall comply with the following standards:
 - a. Minimum plant size shall be as specified as follows (for the purpose of determining tree trunk size, the diameter shall be measured 6 inches above ground level):

Plant Type	Minimum Size
Evergreen tree	6 feet in height
Deciduous canopy tree	22 inches caliper at dbh*
Small deciduous tree	12 inches caliper at dbh*
Evergreen or deciduous shrubs	18 - 24 inches in height

*dbh = diameter at breast height
 - b. Landscape materials shall be tolerant of specific site conditions, including but not limited to heat, drought and salt.
 - c. Existing healthy plant material may be utilized to satisfy landscaping requirements, provided it meets the minimum plant size specified above.
 - d. Landscape materials that are used for screening shall be of a size that allows growth to the desired height and opacity within 2 years.

COMMENTARY: Cities and villages need to make this section consistent with and existing landscaping ordinances. Many ordinances include a list of recommended or required plant materials that have been determined to be suitable. Such a list would be specific to each community and its climate zone and site conditions.

Appendix 2

Road Capacity Analysis



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Traffic Sheds in Williamson County, Tennessee

Session: Transportation that Manages Rural and Exurban Growth

Stephen Tocknell, AICP
 Tocknell and Associates

ABSTRACT: *For the twelve years that traffic sheds have been a part of the Williamson County zoning ordinance, the county has experienced a very high rate of growth, while generally maintaining its rural character outside the fringes of its urban areas. Williamson County's traffic shed procedures have generally kept new development in balance with the capacities of its county roadways, which generally do not meet published design standards.*

With the enactment in 1998 of urban growth boundary legislation statewide in Tennessee, Williamson County's traffic shed procedures can be modified to be much more restrictive in areas outside urban growth boundaries and planned growth areas. Modified traffic shed procedures can be utilized to encourage the concentration of new growth within those areas where it can best be served.

WILLIAMSON COUNTY OVERVIEW

Williamson County is a high growth high income county located on the southern boundary of Nashville and Davidson County in Tennessee. The City of Brentwood is located in Williamson County just south of the Davidson County line, and the City of Franklin, the county seat, is nearly in the middle of Williamson County. The county population has more than doubled since 1980, from just over 58,000 to just over 126,000. Brentwood's population is 23,445 and the population of Franklin is 41,842.

Although the two communities are both growing rapidly, Brentwood is more of an edge city with several large office parks, whereas Franklin has a more historical looking Main Street and town square. Within the widely extended city limits of both cities, there are many low density upscale residential developments. Along both sides of the boundary between Brentwood and Franklin, there is a large concentration of retail, light industrial, and office development known as Cool Springs.

In spite of the general pattern of low density residential development around Franklin and Brentwood and all along the Davidson/Williamson County line, the county as a whole has managed to maintain a very attractive rural character. Its attractiveness is greatly due to its topography of low but steeply rolling hills, but credit should also go to the county's commitment to growth management planning.

ORIGIN OF TRAFFIC SHEDS IN WILLIAMSON COUNTY

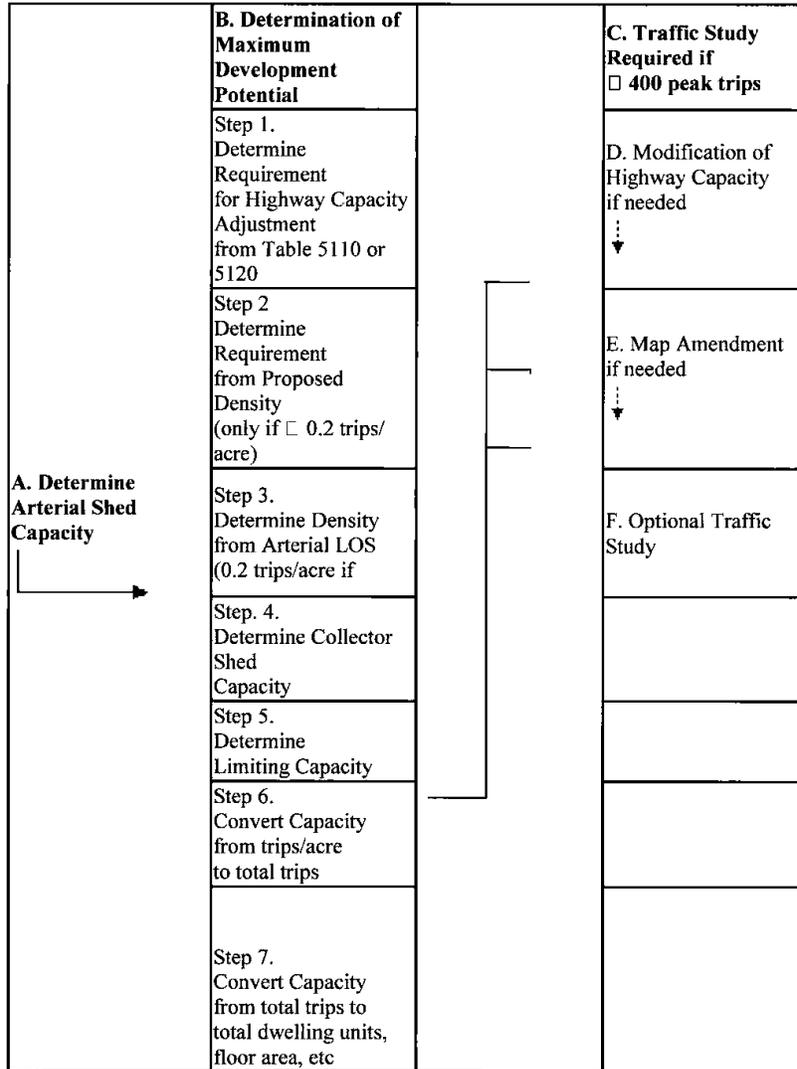
In the late Eighties, Williamson County's leaders were confronted with what at that time was known as "Saturn Fever," a wave of land speculation that was triggered by the announcement in 1985 that GM would locate a new auto assembly plant just south of Williamson County in Spring Hill TN. Up until then Spring Hill's main claim to fame was that Peter Jenkins had chosen to live there soon after the publication of his best selling book entitled "Walk Across America."

Once "Saturn Fever" took off, it developed a life of its own, leading to strong pressures both for and against new development. To deal with these issues, Williamson County retained a consulting team to prepare a growth management plan and a performance zoning ordinance. Williamson County's traffic shed procedures were developed as a part of that ordinance, which was initially adopted in 1988.

The consulting team was headed by Lane Kendig Inc., and also included Tocknell & Associates. Tocknell & Associates has administered Williamson County's traffic shed procedures on a continuing basis since late in 1989.

HOW TRAFFIC SHEDS WORK IN WILLIAMSON COUNTY

Figure 1 is a flow chart that depicts Williamson County's traffic shed procedures.

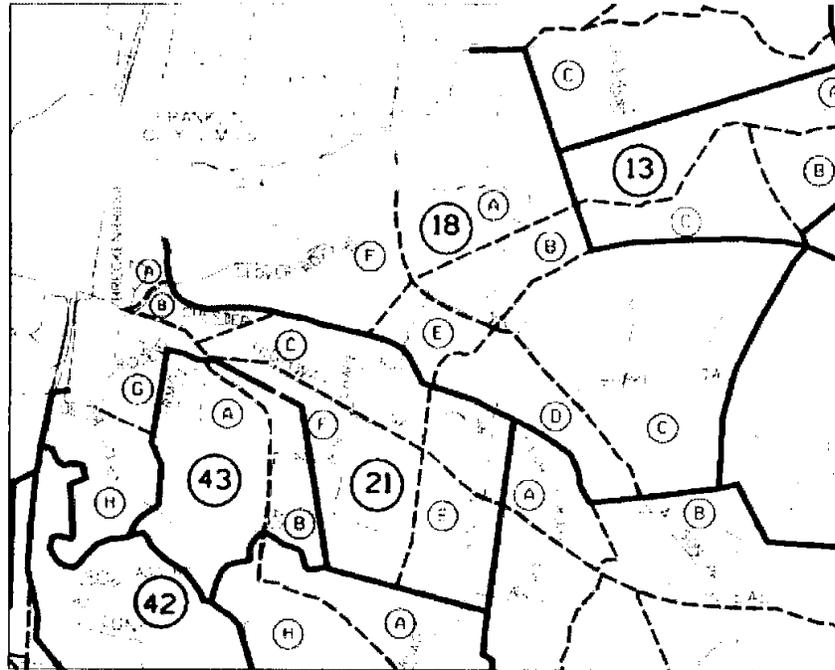


**Figure 1: Highway Capacity Adjustment Flowchart
Williamson County Zoning Ordinance
Section 5230**

In Williamson County the traffic sheds function as a comprehensive set of overlay zones, so that the maximum permitted density for proposed new developments is the either the base zoning density or the density as determined by the traffic shed procedures, whichever is more restrictive.

In turn there are actually two sets of traffic shed procedures in Williamson County: one for arterial sheds and one for collector sheds. Depending upon which is the more restrictive, the controlling traffic shed density is either the arterial shed density or the collector shed density. Arterial sheds are groupings of individual collector sheds.

Figure 2 shows a portion of Williamson County's traffic shed map, including both numbered arterial sheds with solid line boundaries, and letter-designated collector sheds with dashed line boundaries.



**Figure 2: Part of Traffic Shed Map
Williamson County TN**

The maximum permitted density for collector sheds is relatively straightforward - the area of the shed divided by the capacity of the principal collector roadway designated for that shed. For arterial sheds the maximum permitted density depends upon the existing level of service on the main arterial that traverses each arterial shed - the lower the level of service, the lower the permitted density.

For arterials and for designated collectors, the capacities were determined using the chapter on two lane highways from the 1985 Highway Capacity Manual. The same procedures for determining rural highway capacities were carried forward through to the 1997 Highway Capacity Manual.

TRAFFIC SHEDS AND TENNESSEE'S URBAN GROWTH BOUNDARY LEGISLATION

In Williamson County both the arterial and collector traffic shed capacities were factored up so that the base zoning district densities and traffic shed densities would each prevail in roughly the same number of instances. If this adjustment factor had not been applied, then the traffic shed densities would have been nearly always more restrictive than the base zoning district densities.

One of the reasons that Lane developed traffic sheds for Williamson County was to implement a system for growth management on a countywide basis. A system of growth boundaries was not considered to be politically feasible in the late Eighties, when the traffic shed system was developed for Williamson County.

But in 1998 urban growth boundary legislation was enacted on a statewide basis in Tennessee. Tennessee Public Chapter 1101 also allows the designation of "planned growth areas" in counties." Planned growth areas" are different from urban growth areas in that "planned growth areas" do not have to include municipalities.

With Public Chapter 1101 now in place across Tennessee, this may be the time for Williamson County to revisit its traffic shed procedures, in order to implement a more restrictive set of standards to control development outside urban growth boundaries and planned growth areas.

A CASE STUDY

I'd like to wrap up this presentation with a 1994 case study that illustrates a real world application of traffic shed procedures as a tool for controlling development triggered by a sewer line extension into Williamson County from the City of Franklin.

The landowner requested a change in the base zoning district to reflect the availability of sewerage services to his property. Williamson County responded by requiring a traffic shed analysis of the entire area that would potentially be served by the sewer line extension. Figure 3 shows the study area for this rezoning study: about 3,500 acres.

In this analysis, committed and proposed roadway improvements were added to the county roadway network, and traffic shed procedures were used to determine if the roadway improvements would add enough capacity to support the change in base zoning.

Figure 4 shows State Route 96, the arterial roadway that serves this area, Figure 5 shows a typical rural collector roadway, and Figure 6 shows a new street being built to serve a new residential development in this area.

Procedures were followed to determine how the proposed widening of the arterial roadway would have increased the traffic shed capacity of this area. But what I'm going to show today is how the proposed construction of new collector roadways would have increased the number of collector sheds, so that each collector would serve a smaller area, and the collector shed capacity, expressed in trips per acre, would be increased.

Figure 7 shows a revision to the collector shed map based on the construction of both a new collector and a new arterial roadway. The right side of the figure shows additional two new collector sheds that would be fed by a new arterial that has been proposed to be built within the City of Franklin. With this new arterial in place, traffic from Collector Sheds 50A and 50B would be expected to flow directly north and out of the county's planning jurisdiction.

Table 1 shows that without 50A and 50B, Traffic Shed 49D is 484 acres and has a capacity of 2.89 PM peak hour trips per acre. But when Traffic Shed 50A is created out of 49D, then the number of acres in 49D goes down from 484 acres to 261 acres, and its capacity in trips per acre goes from 2.89 PM peak hour trips per acre up to 5.36.

In this case the proposed improvements to the arterial roadway were not considered to be definite enough to warrant a change in the arterial shed capacity, so the requested rezoning was denied. But in another case, in 1999 in a different area of the county, traffic shed procedures were followed in order to determine the costs of collector roadway improvements needed to support higher density zoning. These costs were the basis for the enactment of a fee schedule that functions more or less the same as an impact fee for that particular area. Developers have supported the payment of this fee, in order to secure development approvals and also in order to fund improvements to what would otherwise have been a bunch of substandard rural roadways.

Figure 3
Study Area - Pratt
Rezoning Study
Williamson County TN

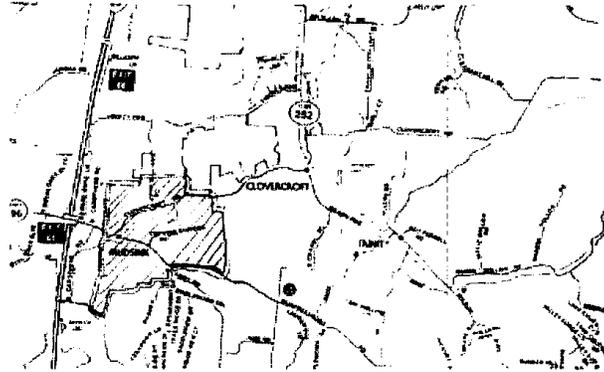


Figure 4
Typical Arterial
Williamson County TN



Figure 5
Typical Collector
Williamson County TN



Figure 6
Typical New Street
Williamson County TN



Figure 7
Effect of New Traffic Shed

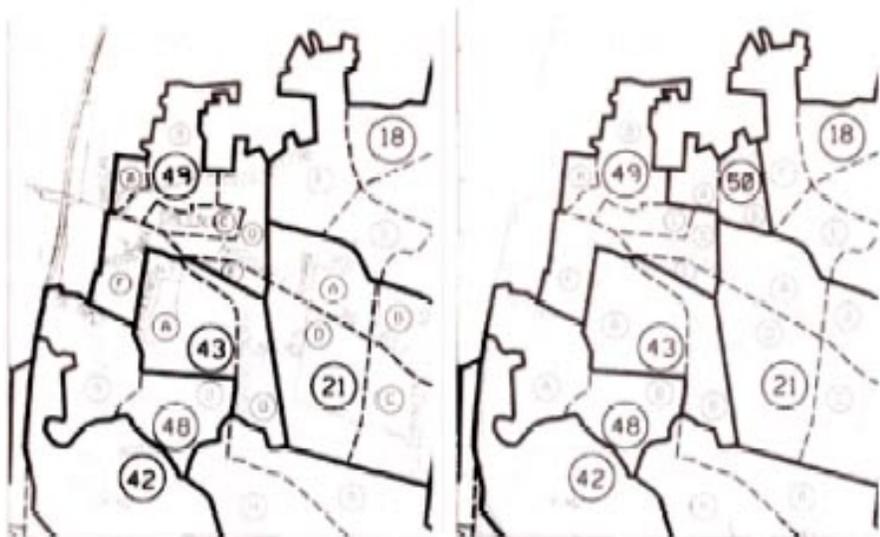


TABLE 5230B1 - FIRST REVISION						
Shed		Road Name	Zoning	Acres	Highway	Trips per
43-	A	Cedarmont	SE	814	1700	2.09
	B	Pate Rd	SE	522	1100	2.11
43-	TOTAL	Arno Rd		1,336		
49-	A	Breckenridg	SE	118	1700	14.40
	B	Clovercroft	SE	642	1400	2.18
	C	C Stevens	SE	209	1100	5.26
	D	Oxford Glen Dr	SE	484	1400	2.89
	E	(NO COLLECT OR)	SE	100	***	0.20
	F	Ridgeway	SE	418	1700	4.07
49-	TOTAL	96 East		1,687		
TABLE 5230B1 - SECOND REVISION						
Shed No.		Road Name	Zoning District	Acres	Highway Capacity	Trips per Acre
43-	A	Cedarmont Dr	SE	814	1700	2.09
	B	Pate Rd	SE	522	1100	2.11
49-	A	Breckenridge Rd	SE	118	1700	14.40
	B	Clovercroft Rd	SE	642	1400	2.18
	C	C Stevens Rd	SE	209	1100	5.26
	D	Oxford Glen Dr	SE	261	1400	5.36
	E	(NO COLLECT OR)	SE	100	***	0.20
	F	Ridgeway	SE	418	1700	4.07
49-	TOTAL	96 East		1,464		
50-	A	Clovercroft RD	SE	223	1400	6.28
	B	Clovercroft RD	SE	338	1400	4.14
50-	TOTAL	Liberty Pike		562		

Table 1
Effect of New Shed

CONCLUSION

For the twelve years that traffic sheds have been a part of the Williamson County zoning ordinance, the county has experienced a very high rate of growth, while generally maintaining its rural character outside the fringes of its urban areas. Williamson County's traffic shed procedures have generally kept new development in balance with the capacities of its county roadways, which generally do not meet published roadway design standards.

With the enactment in 1998 of urban growth boundary legislation statewide in Tennessee under Public Chapter 1101, Williamson County's traffic shed procedures can be modified to be much more restrictive in the areas outside urban growth boundaries and planned growth areas. Modified traffic shed procedures can be utilized to encourage the concentration of new growth within those areas where it can best be served.

Author and Copyright Information

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Stephen Tocknell, AICP, was educated at the University of Pennsylvania (BA, 1971) and at Northwestern University (MS in Transportation, 1974). He earned his AICP certificate in 1994, and is currently serving as president of the Tennessee Chapter of the American Planning Association. Since 1982 Mr. Tocknell has been the principal of Tocknell & Associates, which prepares transportation studies and provides transportation planning technical assistance for growing communities located mainly within Middle Tennessee.

Stephen Tocknell grew up on Long Island in Freeport NY. He is married to Margaret Dick, a native of Ireland who was once a planner for the State of Delaware. They have two daughters: Erin (23) and Cathleen (19).

CONTACT INFORMATION

Stephen Tocknell, AICP
Principal
Tocknell & Associates
1330 Otter Creek Road
Nashville TN 37215
stevetock@aol.com
615 269 5435 phone
615 269 0831 fax

Appendix 3

Density Transfer Fees

Density Transfer Fee: A Fee in Lieu of a Transfer of Development Rights (TDR) Program

Page 1 of 2



American Planning Association
2001 National Planning Conference

Density Transfer Fee: A Fee in Lieu of a Transfer of Development Rights (TDR) Program

Mike Pelletier



Session: Takings, Givings, and TDRs (March 14, 8:45 am)

The Town of Berthoud, Colorado has a population of almost 5,000 people. It is located between Denver and Fort Collins in an area that continually gets rated by major magazines as one of the top 100 best places to live in the United States. Although historically an agricultural town, it is under tremendous growth pressure. The Town is trying to preserve its small town charm and its agricultural heritage by maintaining surrounding productive farmland.

A conventional TDR program was considered to help pay for the needed preservation dollars. However, due to limited budget and staff, it was deemed too complicated to design and implement. The main concern was the effort required and feasibility of actually creating a robust market with competitive pricing for the TDRs. Charging a fee in lieu of a TDR program was determined to be far easier. The fee method also has the benefit of providing more control over exactly where preservation dollars are spent. This is especially important since certain farms are more important to preserve than others and not achieving preservation of the entire targeted area is a very real possibility.

The Town refers to the fee as a density transfer fee. It is collected upon issuance of a building permit for a new dwelling unit that was made possible by a Town upzone (a rezone that allows higher density). The fee is calculated in conjunction with subdivisions and credits are given for prior density allowed on the property and for every acre of qualifying open space provided. The proceeds are spent to purchase existing development rights from surrounding farm property in accordance with Town's land use plan. Thereby completing the transfer of units from farmland to Town. (Ordinance)

For example, the owner of a 100-acre property with county zoning density can build 20 homes. It is then annexed into town and given an upzone. The developer receives approval for a subdivision with 400 homes and 20 acres of qualifying open space. The fee would be then calculated as follows. The base fee in Berthoud is currently \$3,000 per house, in this case multiplied by 400 homes totals \$1,200,000. From this figure credits are subtracted: 20 for prior allowed density and 20 for qualifying open space. Each credit is equivalent to one home,

thus 40 credits times \$3,000 equals \$120,000. This credit is subtracted from \$1,200,000 creating a total of \$1,080,000 due from the subdivision. Dividing this total by 400 homes equates to \$2,700 due with each building permit. These dollars are then spent on purchasing development rights from surrounding farms. Grants and matching dollars are also sought in order to leverage Berthoud's agricultural preservation and open space fund. (Density Transfer Fee Calculation Guidelines)

While this fee is easier to design and implement than a TDR program, the difficulty comes in determining the appropriate and defensible fee for your area. Enclosed is a separate page showing how Berthoud approached this task. The assistance of a local land appraiser is probably a necessity. This process is similar to setting impact fees for schools, parks, etc.

The density transfer fee is different from an open space impact fee, since it applies only to property that receives an upzone from the Town. The difference in justification in turn leads to a difference in the justifiable amount of the fee. Since courts have upheld traditional TDR programs to date, the density transfer fee may provide an attractive alternative to an open space fee that uses the standard rational nexus approach. Berthoud's density transfer fee was started in March of 2000 and has not been challenged. For added security, the Town's standard annexation petition states that the petitioner agrees to pay the fee.

Since the fee is applied at the time of pulling a building permit, it will likely be paid by the homebuilder or homeowner rather than the developer. Depending on the market, the majority of the fee will be passed onto the homeowner rather than cutting into developer's profits. While the density transfer fee is justified by a additional residential density from the Town (i.e., upzone) it has the negative effect of raising home prices, as do other actions by the Town that improve quality of life.

The Town of Berthoud has decided that a development pattern of compact urban density surrounded by farmland outweighs the initial higher home prices caused by the fee. This development pattern will help maintain the small town charm and agricultural heritage, as well as lower infrastructure costs compared with sprawling large lot development. Monies will start to be collected from the fee in the spring of 2001 and several conservation easements are currently pending using money from other sources.

Author and Copyright Information

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Mike Pelletier, Director of Planning, Town of Berthoud
(970) 532-2643



American Planning Association
2001 National Planning Conference

Density Transfer Fee (Ordinance)

Mike Pelletier



Session: Takings, Givings, and TDRs (March 14, 8:45 am)

ORDINANCE NO. _____

AN ORDINANCE CREATING A FEE AND ESTABLISHING A FUND TO PROVIDE FOR THE TRANSFER OF DEVELOPMENT UNITS FROM AGRICULTURAL AREAS TO THE TOWN OF BERTHOUD, LARIMER AND WELD COUNTIES, COLORADO.

WHEREAS, pursuant to Section 31-23-301(3), C.R.S., which grants to the Town of Berthoud as a statutory municipality the power and authority to promote the health, safety and general welfare of the community by regulating, among other things, the percentage of a lot that may be occupied, the size of open spaces, the density of population, the location and use of buildings, structures and land for trade, industry, residential or other purposes; and,

WHEREAS, the upzoning of real property after it is annexed to the Town has an immediate and significant positive impact on the fair market value of the property;

WHEREAS, a program that transfers development units directly from sending areas to receiving areas via sales between private property owners requires significant administrative cost and effort for both the Town and developers;

WHEREAS, the purpose of the fee is to simplify the transfer of development units to the Town of Berthoud from agricultural lands in the surrounding the area;

WHEREAS, the fee in lieu of a private transfer of development units allows the Town of Berthoud to target where development units are purchased, thus controlling the quality not just the quantity of the transfers;

WHEREAS, the process of developing acreage into residential, commercial and industrial lots necessarily removes land from agricultural uses and open space; and,

WHEREAS, it is incumbent upon the Town to ensure the logical and economical growth of the various physical elements of the Town, in a manner which

promotes efficient use of the Town's infrastructure; and,

WHEREAS, the Town is charged with the responsibility of protecting the environmental assets of the Town while ensuring quality development that will preserve and enhance the quality of life for the residents of the Town; and,

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF TRUSTEES OF THE TOWN OF BERTHOUD, LARIMER AND WELD COUNTIES, COLORADO:

Section 1. Density Transfer Fee.

Section 30-10-110 is hereby added to the Town of Berthoud Development Code.

A. There is hereby implemented a fee to provide for the purchase of residential development units from agricultural areas, environmentally significant areas, and community separator areas to the Town of Berthoud. This may be accomplished by the purchase of the property in fee title or through restrictions on development or conservation easements or any combination of these or other rights, which would preserve or promote the open space aspects of the real property.

B. The preservation of open space and agricultural areas primarily benefits the residents of the community with minimal impact upon or benefit to commercial or industrial users and is therefore applicable only to residential developments.

C. A re-zoning of land from either a residential, agricultural, or transitional zoning district to a district that allows a higher residential density triggers payment of the fee. The total fee for a subdivision will be determined at the final development plan stage and then allocated to each unit for payment with the building permit. The total fee will be the sum of the total number of units in the final development plan, minus credits earned as listed below:

1. One single-family unit credit is given for each single-family unit allowed by right with the prior County zoning or Town zoning if applicable. Multi-family credit can be earned in a similar manner. When calculating allowable prior zoning density, gross acres will be used. This will be measured using the centerline of exterior roads and will include all areas except for water bodies, floodplains, and area for road right-of-ways.
2. For every acre of permanent open space provided in the subdivision, one single-family unit equivalent credit is given. Qualifying permanent open space includes deed-restricted land that is used for agricultural, environmental, or equivalent open space purposes. It does not include parkland required by the Town or buffer strips. Credit can also be earned for equivalent open space acquired off-site in areas approved by the Board of Trustees.
3. Additional factors that increase or decrease the amount of credit given will be

determined by the Planning Director, subject to the purposes and intent set forth in the preface to this ordinance. Appeals of his or her decision will be heard by the Town Board.

D. New parcels created from fee paid lots through subdivision of said lot will be subject to this fee.

E. If the Town increases the allowable density within a zoning district to the extent that a property could be subdivided for an additional unit, then the fee would apply and be assessed at such time as additional building permits for new residences are requested.

F. The fee for a single-family house is \$3,000 and \$1,500 per dwelling unit for multi-family structures. Calculation of the fee is provided in a document entitled "Density Transfer Fee Calculation Guidelines".

G. Six percent of the total Density Transfer fee collected will be used for administration of this process. The balance of these fees shall be exclusively used for the open space acquisition and preservation purposes as described in this Ordinance. These fees shall be separately accounted for within the Town's annual budget.

Section 2. Effective Date.

The Board of Trustees of the Town of Berthoud herewith finds, determines and designates that this Ordinance shall take effect and be in force thirty (30) days after publication.

At its meeting March 14, 2000, a public hearing was set by the Board of Trustees of the Town of Berthoud for its meeting held on the 28th day of March, 2000. After the public hearing, the Ordinance was read, passed and ordered published by the Board of Trustees at its meeting this 28th day of March, 2000.

TOWN OF BERTHOUD:

ATTEST: Richard Strachan - Mayor

Mary K. Cowdin - Town Clerk

Published: _____



American Planning Association
2004 National Planning Conference

Density Transfer Fee (Calculation Guidelines)

Mike Pelletier



Session: Takings, Givings, and TDRs (March 14, 8:45 am)

Staff recommends a fee of \$3000 per single-family dwelling unit. The fee for duplex and other multi-family structures should be about half that to reflect the lower land value per unit. These guidelines provide two methods for arriving at the fee. The fee is based on a policy of requiring new development to pay for transferring density from the surrounding area into Berthoud and on the value provided to private property when Berthoud upzones said property.

Value Generated by Residential Upzoning

Upzoning from FA1 (Larimer County) to R1 (Berthoud) roughly increases the value of land fourfold. For example, \$40,000 for 7,000 sq.ft. lots in Town (\$5.7 per sq.ft.) versus \$140,000 for 100,000 sq.ft. lots in County (\$1.4 per sq.ft.). Land prices in the area support this conclusion. For example, the Berthoud Commons property in Town appraised at \$22,000 per acre, while the Rasmussen property south of Lonetree Reservoir in the County sold for \$4,700 per acre. The fourfold value increase excludes the value created by subdivision approval since zoning supports the rights for subdivisions.

Comparison to Traditional TDU Program Method

Since the fee is meant to replace a traditional transfer of development units program, it is rational to base the fee on a low-end cost of a unit from the theoretical sending area. The low-end cost unit would be located where development is least profitable and is assumed to be \$3000 per acre. To convert this dollar value to a units, the smallest and thus cheapest lot size allowed by Larimer County FA-1 zoning is 2.29 acres is used. Since the last few development units on a property are the most expensive, a diminution value of 40% is used to reflect the cost of purchasing only a few of the development units on a property. A 6% administrative fee is added for the Town to process collection and distribution of the monies. This creates the formula below:

$$\text{\$3,000 per acre} \times \text{2.29 acres per unit} \times \text{40\% value removed by purchasing only a few of the development units} \times \text{6\% administrative fee} = \text{\$2,913}$$

The fourfold value increase associated with receiving Town zoning as calculated above offsets the cost to developers for transferring development units to the Town from more expensive lots in the County. This can be shown in the following formula, which uses the above estimated costs of a lot in Town versus in the County:

$$4 \times (\$40,000/\text{unit}^{\text{Town}})/(\$140,000/\text{unit}^{\text{County}}) = \text{approximately } 1$$

For the average multi-family structure, it is assumed that the land cost per unit would be about half that of a single-family. Plugging this land value into the formula, similarly cuts the fee in half.

The Goal Method

Another approach to calculating the fee is to set a goal for how much land should be preserved in the County for each unit created in Town. Since the Town is creating at least a fourfold property value increase, it is reasonable to set a goal for each dwelling unit created by an upzone in Berthoud to reimburse the Town for preservation of a fourfold equivalent area in the County. Assuming an average Town density of 4 units per acre, this equates to preserving an acre of land for each upzoning of an additional single-family dwelling unit.

In this formula, a range is provided for the cost of land. These prices reflect a more reasonable estimate than just the low-end cost. In fact, land prices in areas likely to be targeted for development unit purchases may be higher than the range provided. The higher land price areas were left out because the fee is meant to replace a traditional transfer of development units program, whereby a developer in a receiving area would seek out the lowest cost development units to purchase.

This formula is based on an $\text{area}^{\text{Town}}$ to $\text{area}^{\text{County}}$ transfer rather than the $\text{unit}^{\text{Town}}$ to $\text{unit}^{\text{County}}$ transfer basis in the previous method. To achieve this a 70% diminution in value for removal of all the development rights is used. The formula is as follows:

\$3,000 to \$5,000 per acre for land x 70% value removed by purchasing all the development units x 6% administrative fee

$$= \$2,226 \text{ to } \$3,710 \text{ per acre}$$

Conclusion

The values used in all the calculations are based on the best available sales data and assumptions regarding the price of purchasing development units off a property. Since definitive values on all properties where development may take place are impossible, it is reasonable to use \$3,000 for a single-family unit and

▼
Density Transfer Fee (Calculation Guidelines)

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\$1,500 for each multi-family unit.