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Land Use and Community Design

Introduction

Land use within a community is the pattern of residential, commercial, industrial and public development, interspersed with what is generally considered as open space, such as forests and natural features, undeveloped land, agriculture and parks and recreational areas. The evolution of land use within a community is the product of local economic conditions and community preferences; growth and development is based on such factors as access to jobs, employment, and the availability of affordable land for new housing or commercial development. Community preferences, expressed as land use plans and regulations, dictate the use, form, location, and sometimes the pace, of new development.

Land use forms the basis for master planning and determines, to a large extent, a Town's need to provide public facilities and infrastructure, transportation networks and services, and protection of environmental resources. As communities plan for their future, determining how and where growth and development should occur will provide the basis for planning where investments for municipal services will be needed, as well as determining what controls will be necessary to protect areas of the Town from unwanted development. Communities have the ability to control land use and development patterns through a variety of mechanisms, including zoning and subdivision regulations, provision of public utilities and infrastructure, and protection of open space lands through direct acquisition and the acquisition or acceptance of conservation restrictions/ easements.

The following sections provide an overview of the current land use patterns in Bedford. The discussion includes a breakdown of the percentages of land devoted to different types of development based upon GIS data, information generated by the build-out analyses conducted by the Southern New Hampshire Planning Commission, zoning patterns and initiatives in past years to manage growth and development, an overview of recent land use trends, and a listing of current land development activities that could impact development trends and land use activities in the future. Additionally, community character and design is discussed.

Land Use and Community Design Goals

- Encourage and maintain architectural quality in nonresidential development.
- Create compact development opportunities in areas appropriate for growth along Route 101 and near the proposed transit station.
- Promote growth that is environmentally sustainable and capable of withstanding economic downturns.
- Establish stewardship and preservation of the unique rural residential character of Bedford's neighborhoods and strengthen linkages between areas.

Bedford's Physical Form and Development Pattern

Bedford's physical form is shaped by two factors: the undulating topography formed by natural corridors of the north/ south pattern of its primary stream channels, which drain to the Merrimack River, and the ridges of higher land between them; and the low, flat landform of the Merrimack River flood plain. The town's rolling landform descends west to east from a high point of approximately 600' in the northwest corner to its lowest elevation of approximately 200' along the upper banks of the river. Generally there is a 200' difference in elevation from west (Joppa Hill Road) eastward to Route 3/ 293 and the Merrimack River. Distant views are common from the ridges, particularly east and west.

The natural stream corridors are still legible from town roads with upland and wetland vegetation that engages the roadways creating contrasting pockets of natural and man-made landscapes and a contrast of closed wooded pockets with open meadows. Along the east edge of town, River Road generally defines the western edge of the Merrimack River zone, with the topography falling gently away from the roadway down to the river.

Development has been shaped by these differences in land form. The combination of rolling topography and forested uplands with the distant east/ west views available from higher ridges has created highly desirable locations for residential homes. Road patterns have responded to this topography with a network of winding, two-lane country roads that wend their way between the main north/ south ridge roads…Joppa Hill Road on the west, Wallace Road in the center and the Everett Turnpike/ River Road corridor along the Town's eastern edge. Route 101 (Horace Greely Highway) runs diagonally from northeast to southwest rising approximately 200' from the intersection with Route 114 until it exits the town's border with Amherst. High points have also provided excellent locations public buildings which creates a town presence even from the lower elevations along Route 101.

The combination of narrow, winding country roads with the open/ closed patterns typical of a farmed landscape creates the predominant visual character of Bedford away from the Route 3 corridor. Low density patterns of residential development over the years have not overpowered this landscape and the rural character of the town has remained consistent.

Development patterns along the river take advantage of the flatter topography which has created opportunities for higher residential densities as well as for larger footprint retail, office and industrial buildings, business parks and retail centers in a more typical commercial corridor relationship.

The Route 101 corridor is where the two patterns- the rural residential and the more suburban commercial- begin to confront each other. Along the north side of the road the landforms rise and provide occasional views to single family residential and public buildings located at higher points of elevation. While there are some high points, the land to the south generally falls away from the road in a southeasterly direction. Pockets of commercial development are interspersed with natural pockets of woodlands and wetland vegetation creating a contrast between rural patterns and suburban patterns of development.

Development Character

Just as Bedford's physical form and character is a contrast of natural features- the river flood plain and corridor and the rolling topography of stream channels- so is the character of its' built environment. Single family residential development over the years has responded to the rural landscape, in many instances taking design cues from the farm buildings typical of the Town's history. While zoning has routinized building to road relationships, the larger lot requirements are in concert with the land forms and character of the landscape and the rural nature has been consistently maintained and reinforced with stone walls, natural fences and narrow, uncurbed, country roadways.

The Town has made an admirable effort to maintain this rural character even along commercial areas. The combination of sign control and land development regulations serves to reduce the potential negative visual impacts of the pockets of commercial development along Route 101. Varied roof lines, gables and dormers in combination with natural siding materials serve to extend the Town's character; however the relationship of buildings to the road exhibits a more typical suburban pattern (i.e. road, parking area and building) which is inconsistent with this rural character. The natural pockets that still engage the roadway are a mitigating factor in reducing the visual impact of the commercial development and provide a transition to the more rural residential areas.

The type of development along the more commercial corridor of River Road and the eastern edge of the town is consistent with a corridor of this nature and responds to the character of this landform. Again, town efforts to control signage and shape the design of development have had a positive effect on the overall character of this area. This, in combination with an interesting mix of old and new, of building typologies and of uses, has resulted in a corridor character that is atypical in many ways and it will be important to maintain these values as portions of the corridor redevelop in the future. Specifically, requiring varied rooflines rather than flat roofs, encouraging multi-story buildings with viable second floor uses, mixing uses horizontally and vertically, and well landscaped setbacks will help weave this corridor more positively into the overall design ethic of the community.

Trends

In developing a strategy to manage future growth it is important to understand emerging trends that may become relevant to future land use patterns. Changing demographics are expected to have an impact on development patterns and lifestyle choices. Among the trends that can be expected to shape future land use patterns are:

- The rise in number of households without children, now 30%;
- The preferences of "empty nesters" for walkable living in close proximity to shopping and transportation options;
- The preferences of younger generations for live/ work/ play proximity;
- The rising concerns regarding energy use, sustainability and general environmental awareness;
- Changes in transportation policy and funding that support new options like transit oriented development (TOD);
- Fluctuating gas prices and global warming concerns; and
- Technological changes that impact the home and the marketplace.

Evidence of these trends has begun to manifest itself in recent years in a variety of ways:

- The rise of Smart Growth and New Urbanism which have begun to reshape how we think about neighborhood structure and which is being applied in communities large and small to address infill development opportunities;
- Again, as infill opportunities arise, communities and developers are looking at compact development and mixed use particularly in response to a rising demand for live/ work/ play proximity but also as a means to balance demand with open space preservation; and
- TOD has gained momentum in response to demand for transportation options by young workers as well as retirees.

Changing retail habits have led to new retail models such as the Lifestyle Center which recalls "main street" and town center models that have introduced housing and public uses into retail configurations;
In more rural areas, towns have begun looking at techniques such as cluster development with smaller lot sizes as a means of preserving valued open space.

Additionally, as technology continues to expand at a rapid pace we are beginning to see impacts on typical development patterns. Currently more than 55 million people work some portion of the week at home and these numbers are expected to increase dramatically in the coming decade. As a result, an increase in applications for accessory buildings and expansion is more likely as well as a drop in demand for office space. More and more people use the internet to shop and this is particularly true with younger generations. The impacts on retail space are only beginning to be seen but the demand for retail space will be impacted.

Managing Land Use and Design

Guiding future development and managing the subsequent patterns of that development in Bedford should be led by clear goals particular to its three distinct zones: the river zone, the 101 corridor and the rural residential area. If Bedford is to be perceived as a community and not a bedroom suburb, it must continue to offer a variety of housing options and more importantly, provide those options in a way that is consistent with broader goals of sustainability, livability and sound energy use. It must also continue to guide the design quality of new development to insure consistency with the community's design aesthetic.

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The River Zone

This zone provides the community with a tremendous opportunity to respond to demographic changes and trends but also to balance growth demands with those of open space and conservation. The zone already has a variety of uses but the pattern is more typically suburban with uses segregated by zoning category. However, there are a number of positive examples to build upon:

- Sign control and land use regulations have combined to reduce visual noise and repetitious design;
- There are a minimum number of single story, flat roofed buildings;
- The predominance of buildings, old as well as new, with gables and steeper pitches conveys a sense of village to the corridor;
- Efforts to preserve trees and existing wooded areas have resulted in an overall character of "buildings in the woods" in many areas;

- Planted setbacks have softened edges and reduced the impact of parking areas; and
- Because many generations of buildings are present, there is an interesting variety to the architecture and scale of the buildings.

With increases in population and the demand for new housing, many feel the rural nature of the town is threatened. Higher density housing would address the need for variety and affordability while easing the threat of overbuilding in the more rural areas. While there is currently a good bit of housing in this corridor it is spread out horizontally rather than vertically thus requiring more land and pushing people outside a realistic walking distance to retail and services.

Clearly, steering new growth to the river corridor to preserve rural character is one strategy, but this must be accompanied with a set of design guidelines that identifies the architectural and urban design attributes that are important to the community. Guidelines can play an important role in assuring community members that higher densities can be achieved without sacrificing community aesthetic values.

Future growth should consider mixed use and compact development in this zone particularly where there are infill opportunities or redevelopment of existing sites. The corridor already contains a base of retail and service uses along with businesses. Adding vertical housing as a component of new buildings will place new residents within walkable distance of these uses, reduce vehicle trips, and provide an opportunity to create a sense of place that has vitality and interest.

Long term, the potential of a commuter stop in the southern portion of the zone would provide an excellent opportunity for transit oriented development. Again, higher density mixed use development should be encouraged in this area governed by design guidelines that spell out the desired character of the private development as well as the public realm.

Finally, the emerging development and infill of this zone should be better linked by a system of pedestrian ways. As infill occurs, new development should be connected to existing to support walking. Portions of the zone offer the potential for a riverwalk/ bikeway which could be a valued community asset. This zone has the potential for creating interesting and vibrant neighborhoods and, supported with a framework of walkways and trails, can address community goals for sustainability and energy conservation.

The Route 101 Corridor

This corridor provides a contrast: the rural patterns of the historic Bedford settlement and its churches, Town Hall and country architecture with the community's commercial needs and subsequent retail development. The corridor also carries significant amounts of traffic at peak hours and its role as an east-west link creates pressure for additional retail development that can take advantage of the exposure provided. But the corridor plays an important role in knitting together the past, present and future Bedford. Too much commercial development will undermine this role.

Balancing town needs for services and tax revenues with the value of its rural tradition creates a real challenge for this corridor. One strategy that would help achieve this balance would be to push future development into nodes at key intersections, preserving natural areas between these nodes using tools such as transfer of development rights (TDR). This would support preservation of natural stream corridors as green infrastructure and provide visual relief both on the corridor as well as from outside as it is viewed from surrounding areas at higher elevations. Such a strategy would also minimize curb cuts which would improve safety along the corridor.

Design guidelines should be established for these nodes to ensure a design vocabulary consistent with creating a scale and style that is "village" in its nature rather than that which is more typical of suburban highway commercial zones. There are some fine examples of this already in this zone such as the Walgreens and adjacent buildings. Future development in these nodes should push buildings closer to the road with parking to the sides or at the rear of the development rather than setting buildings behind parking fields.

The Rural Residential Zone

If any aspect of Bedford's rural character is threatened by growth surely it is this zone. While there is a need to provide opportunities for future families to enjoy this lifestyle, providing additional larger lot single family development uses more land and results in more vehicle trips on a rural road network. Development pressures in the future may also threaten valuable landscapes such as farmed areas, meadows and woodlands. The visual degradation is more heavily felt when open fields are filled with home sites.

Steering growth to the river corridor will help abate this potential scenario and provide balanced housing opportunities. However, utilizing techniques such as conservation subdivisions and clustered small lots in suitable areas should be considered in tandem with this strategy as a means of assuring the community that this rural aesthetic can be sustained.

Current Land Use

According to the build-out report prepared by the Southern New Hampshire Planning Commission (SNHPC), the following land use characteristics describe Bedford's land use development pattern in 2010. As shown in Table 2-1, more than half (54.3 percent) of the total land are in Bedford is classified as undeveloped. This includes open space, which as defined in the November 2009 Open Space Plan totals approximately 7,754 acres of land (36.7 percent) of the Town's land area. The predominant land use is residential, occupying over 8,000 acres of the developed portion of the Town. In fact, residential land uses represent 83 percent of all the developed land.

Table 2 –1 Bedford Land Use Characteristics 2010

Land Use	Acres	Percent
Undeveloped	11,538	54.3%
Residential	8,067	38%
Commercial	594	2.8%
Public	443	2.1%
Agriculture	433	2.0%
Industrial	122	0.6%
Manufacturing	56	0.3%

Source: Southern New Hampshire Planning Commission

See also Figure 2-1, which illustrates current land use in Bedford.

Build-out Analysis

SNHPC prepared a detailed build-out analysis for the Town of Bedford. This was done pursuant to the Community Technical Assistance Program (CTAP), which is a joint effort between the 26 communities along the Route 93 corridor, state agencies, regional planning commissions, and several nonprofit organizations. A build-out study was done for each of the 26 municipalities to help them reduce the impacts of increased development that may result from the widening of Route 93 in the region.[1]

The build-out study, as described by SNHPC, is a means by which planners can approximate the extent of future development. Different scenarios and assumptions are applied that yield data allowing one to compare the results and assess the effects of each scenario. SNHPC tested three scenarios for the Town of Bedford. They are as follows:

- The base build-out shows the maximum growth that is likely to occur pursuant to current zoning. This scenario estimates the total level of development (the number of residential dwelling units and the amount of nonresidential square footage) that will occur over time if the zoning remains the same over time. It is important to understand that this is not a prediction of what will happen, but what the **maximum** build-out potential could be in the future.
- The standard alternative build-out applies the Natural Services Network (NSN) data layer to the base build-out which adds an additional development constraint to the analysis. At the same time, the densities allowed by zoning in the base build-out are still applicable. Thus this alternative illustrates where land may be environmentally constrained and where it may be appropriate to concentrate development. However, note that it is still a prediction of **maximum** build-out potential under current zoning, with the additional environmental constraint factored into the calculation.
- The community scenario allows the Town to identify the build-out characteristics unique to Bedford that it would like tested. It allows the Town to test an alternative build-out scenario based upon local development issues or policies. Those factors will be described below.

In addition to information regarding future development, the build-out analyses also measure a series of indicators or impacts resulting from new growth. These factors include population, number of school-age children, available open space, density, demands for municipal services such as public safety, water and energy use, and transportation impacts including vehicles and trips per day.

As described in the SNHPC report, the community scenario tested for Bedford was based on the following assumptions:

[1] SNHPC, Town of Bedford CTAP Buildout Report, January 2010 Draft

- Redevelopment resulting in high density residential development (up to 32 units per acre) within a ½ mile buffer around the potential transit station where Macy's is currently located near the new airport access road currently under construction.
- Redevelopment in the area zoned General Residential near Donald St. with a density of up to 14 units per acre in a mixed-use setting.
- Redevelopment along commercially zoned areas of Route 101 that currently have water and sewer service.
- Mixed-use development with a density of up to 32 units per acre on the northern portion of the Route 3 Performance Zone between Upjohn Street and Park Drive.
  NOTE: the Town scenario numbers will be added after completion of the revisions to the build-out study.

In summary, the build-out showed the following results as shown in Table 2-2. This table does not include all the data prepared by SNHPC – please refer to (link to study on Planning Department website) for a full copy of the build-out study. It is important to understand that these numbers are for illustrative and comparison purposes only. There are a number of other factors to be taken into account when attempting to assess build-out, primarily that the extent of development is market driven and the timing and ultimate level of build-out cannot be predicted with certainty.

Table 2 –2 SNHPC Bedford Build-out Analysis

Category	Indicator	Units	Current	Base Build-out	% change	Standard Alternative	% change	Town Scenario	% change
	Developed residential	acres	5,831	15,050	158%	14,974	157%		
	Developed non-residential	acres	1,356	2,051	51%	1,992	47%		
	Dwelling units		7,547	12,692	68%	13,030	73%		
	Commercial floor area	sq. ft.	5,094,719	9,623,264	89%	9,741,890	91%		
Demographics	Population		19,395	32,492	68%	33,357	72%		
	School kids		3,666	6,141	68%	6,304	72%		
Open Space	Open space	acres	15,708	5,794	-63%	5,930	-62%		
Land Use Characteristics	Population density	persons/sq. mile	514	861	68%	884	72%		
	Housing density	dwelling units/acre	1.3	0.84	-35%	0.87	-33%		
Municipal Demand	Fire & ambulance	calls/year	1,552	2,559	67%	2,669	72%		
	Police	calls/year	24,631	41,264	68%	42,363	72%		
	Solid waste	tons/year	10,473	17,545	68%	18,013	72%		
Water and Energy	Residential energy use	mbtu/hh/yr	871,240	1,452,056	67%	1,423,894	63%		
	Commercial energy use	mbtu/hh/yr	508,453	960,402	89%	969,456	91%		
	Residential water use	mgals	892	726	-19%	733	-18%		
Transportation	Vehicles		13,940	23,353	68%	23,975	72%		
	Trips/day		67,587	116,302	72%	117,355	74%		

Source: Southern New Hampshire Planning Commission

Major Development Projects

There are several potentially significant development projects in various stages of the permitting process that should be noted.

❖ **Bedford Mall Redevelopment** – The existing Bedford Mall is located on the east side of Route 3, directly across from Kilton Road. Under the development program, the existing mall (which is currently 60% vacant) would be demolished. A new shopping center would be constructed on the site that would accommodate a 93,500 square foot Kohl's store, 80,000 square feet of additional retail space, and a 3,000 square foot restaurant.

- **Lexus Car Dealership** – A Lexus Car Dealership is proposed to be constructed on the existing CR Sparks Restaurant and Event Center site located on Kilton Road. The existing 200 seat restaurant and 400 seat event center would be removed from the site and potentially relocated nearby. A new building would be constructed on the 4.5-acre site to house to the dealership. The project was recently approved and will total 61,900 square feet.

- **Bedford Hills Mixed-Use Development** – A proposed mixed-use development has been approved in the vicinity of Route 101 and Route 114 and is anticipated to begin construction in September 2010. The proposed development, known as Bedford Hills is anticipated to include 160 units of active adult living (55+), 84 units of assisted living and 81,848 square feet of commercial space. The commercial space includes a 56,060 square foot medical office building, a pharmacy with drive-thru, a 250 seat restaurant, a bank with drive-thru and a coffee shop. This project was approved in 2009 and construction is anticipated to start in September 2010.

- **The Workout Club and Wellness Center** – A site plan containing a new health club with medical office facilities was approved by the Planning Board in January 2007, but has not yet been constructed. The site is located on Donald Street adjacent to the existing Slammers Billiards Lounge, which will share access and parking with the new development. The proposed 2-story building will be 90,800 square feet per floor; however, the second level will have only 56,000 square feet of actual floor space because the areas above the swimming pools and sports courts will be open. A partial basement, housing locker rooms, showers, a business office and mechanical rooms, will have 9,425 square feet. The proposed uses inside the building will include 20,000 sq. ft. of medical offices, a travel agency, a day care center (for gym patrons -- and only while using the facility), a juice bar and pro shop, a day spa, as well as a variety of sports and exercise facilities . Although the project has not yet been constructed, the proponent has maintained all approvals necessary to be move forward in the future.

- **Mini Cooper –** Concept plans for a proposed 15,245 square foot Mini Cooper automobile dealership and associated site improvements on

South River Road have been submitted. Construction is expected later in 2010.

- **Medical Office** – Concept plans for a proposed 3-story, 36,000 square foot medical office and urgent care facility with associated site improvements on Washington Place have been submitted with construction expected imminently.

Local Development Regulations

This section of the Master Plan considers the important role played by zoning in guiding future land use decisions. It analyzes the zoning ordinance from a variety of perspectives and includes recommendations for changes and amendments that revise the ordinance so that it achieves the Goals and Objectives of the Master Plan. Some of the recommendations are simply aimed at improving the manner in which the ordinance is presented so that it becomes more "user-friendly".

In addition, Bedford has Land Development Control Regulations, which essentially include impact fees, subdivision control regulations, and site plan regulations.

Overview of the Bedford's Zoning Districts

Bedford's zoning ordinance has designated ten different zoning districts (three residential, five commercial and office, one industrial, and one civic/ institutional) and three overlay districts. The following is a brief description of each district, but it should be noted that the ordinance does not include a purpose section that describes the various zoning designations.

- Residential and Agricultural (RA) – the RA zone is a 1½ acre minimum lot size district that allows single-family dwellings, including cluster residential developments, agricultural uses, and institutional uses. This is the predominant zoning district in Bedford, occupying over 83% of the Town's land area.
- General Residential (GR) – Minimum lot size ranges from ½ acre if served by water and sewer to 1½ acres where no service is available. This district also allows single-family housing and institutional uses. Most of the GR zoning is in the northeast corner of the Town.

What is zoning?

Modern zoning began in the early 1900's in response to the location of potentially incompatible and noxious land uses next to commercial and residential areas. The zoning ordinance has evolved over the years as a means to limit the types of land uses that could locate in a particular area of the municipality, resulting in a separation of uses. Ideally, the Master Plan is the blueprint for the Town and the zoning ordinance is the regulation that implements the plan. Typically, a zoning ordinance regulates land use by:

- Specifying and distinguishing different land use types;
- Creating development standards for the size and shape of lots and the buildings erected on those lots;
- Addressing lots, buildings and uses that pre-dated the adoption of the zoning ordinance (non-conformities);
- Establishing criteria for the evaluation of permit applications for new buildings;
- Establishing procedures for permitting uses not specifically allowed by right;
- Defining terms that have specific meanings under the ordinance; and,
- Creating a map that displays the geographic extent of each zoning district.

- Apartment Residential (AR) – The minimum lot size is generally 40,000 sq. ft., plus 4,000 sq. ft. for each dwelling unit, with up to 12 units per building. Duplexes and multi-family dwellings are allowed.
- Civic and Institutional (CI) – This district essentially allows uses such as churches, educational institutions, and public facilities.
- Commercial (CO) – This commercial district has a minimum lot size of 1½ acres and is located along several stretches of Route 101. A variety of retail, office, and related uses are allowed by right or special exception.
- Office (OF) – This district is located at the junction of Routes 114 and 101, occupying about 79 acres. The minimum lot size is one acre and only office related uses are allowed.
- Neighborhood Commercial (NC) – Only four acres are zoned NC, which has a one acre minimum lot size and allows small offices, retail, and personal service establishments. These are very small areas specifically designed to serve a small neighborhood.
- Highway Commercial (HC) – The HC zone occupies approximately five acres of land on Route 114 in the middle of an area zoned as Service Industrial. The minimum lot size is one acre and it allows retail related uses.
- Service Industrial (SI) – About 0.5 percent of the Town's land is zoned for industrial uses, much of which is located along Routes 101 and 114. This in one of two districts where industrial uses such as manufacturing warehousing, trucking, and research and development are allowed. Minimum lot size is three acres.
- Corridor Performance Zoning District (PZ) – This nonresidential multi-use district was established along the Route 3 corridor to provide for flexibility in attracting a diversity of uses that would meet specific development standards with respect to dimensions, landscaping, parking, signage, design, and environment. Over 1,500 acres of land fall in this zoning district, making it the area where the majority of nonresidential land uses are located in Bedford.

Table 2-3 below shows the amount of land zoned for each of the zoning districts described above. Figure 2-2 is a zoning map for the Town of Bedford.

Table 2 –3 Total Land in Each Zoning District

Zoning	Area (sf)	Acres	Percent
AR - Apartment Residential	4,406,750	101	0.48%
CI - Civic/Institutional	7,074,608	162	0.77%
CO - Commercial	14,839,464	341	1.62%
GR - General Residential	51,942,668	1,192	5.67%
HC - Highway Commercial	281,412	6	0.03%
NC - Neighborhood Commercial	189,966	4	0.02%
OF - Office	3,434,263	79	0.38%
PZ - Route 3 Performance	66,414,920	1,525	7.26%
RA - Residential Agricultural	761,805,875	17,489	83.22%
SI - Service Industrial	5,016,635	115	0.55%
Total	**915,406,561**	**21,015**	**100.00%**

Additionally, there are three overlay districts; Wetlands Conservation District, Floodplain Development District, and Historic District (discussed in Chapter ___, Historic and Cultural Resources). The Wetlands Conservation District limits permitted uses to green spaces, agriculture, forestry, and similar uses, depending upon soil type. The Floodplain Development District applies to land designated as special flood hazard areas pursuant to the Federal Emergency Management Agency (FEMA). Standards are established for the granting of building permits within FEMA designated flood hazard areas.

Land Development Control Regulations

The Land Development Control Regulations include design and construction standards that supplement the zoning ordinance. Included within these regulations are parking, landscape, and site design standards. These regulations include those for off-street parking that are typically found in the zoning ordinance, such as the minimum parking requirements for different land uses.

One issue that is routinely faced by cities and towns, particularly along a highway commercial corridor, is the construction of impervious parking lots that are designed for the few peak days during the holiday season. Most of the time, these lots have a great deal of excess capacity. To address that situation, a number of communities around the country have instituted maximum parking standards in addition the minimum standards. Thus, a range is created and by establishing such standards, it is possible to reduce the expanse of unused parking areas and can reduce the amount of impervious surfaces.

Additionally, shared parking arrangements are becoming more commonplace within the parking regulatory framework. There may be situations where two or more uses have different business and parking needs based upon their hours of operation. For instance, a restaurant that draws a predominantly dinner clientele can share parking with an adjacent dental office that expects patient visits from 9 a.m. to 5 p.m. Thus, shared parking should be accommodated with a demonstration that the hours, days, or peak parking demand for the uses are so different that a lower total number of spaces could be justified. This can be of benefit along any of the commercial corridors in Bedford, but may prove particularly useful along Route 101 where the potentially available land is more constrained, as discussed earlier.

The Land Development Control Regulations include general landscaping provisions. Additionally, the Route 3 Corridor Performance Zoning District establishes more detailed landscaping performance standards for specific areas on a developed parcel. These performance standards are likely to be responsible for the softened edges and the preserved trees along the Route 3 corridor, as noted above. As a result, many of these standards could also be applied to other areas of commercial development with similar effect. Consideration should be given to a broader application of similar performance standards.

The regulations also contain architectural preferences that are delineated in the site plan review application checklist. These architectural and design details govern building materials, roof lines, windows and doors, facades and pedestrian amenities. By codifying them in the zoning ordinance, the Town would provide itself with a valuable tool that can be used to maintain the character of its development that was highlighted earlier in this chapter. Taking it a step further, many municipalities have created design guideline manuals with detailed descriptions of architectural and design guidelines appropriate for development in village settings, highway corridors, and residential areas. Conceptual illustrations and photographs supplement the guidelines with visual examples of how the guidelines would be applied.

Finally, the regulations include the calculations and justification for the school and recreation impact fees assessed on new developments in Bedford. These were last reviewed and updated in 2006. The findings that supported the impact fee program in 2006 are consistent with the conclusions and recommendations of this Master Plan Update.

Land Use and Sustainability

The issue of sustainability has been a growing concern in land use planning in recent years. As municipalities experience increased growth, especially on more marginal land, there has been an increasing awareness of the long-term ramifications of our growth patterns on the environment. In other words, as stated in the American Planning Association (APA) Policy Guide on Planning for Sustainability, planners should worry about "whether the Earth's resources will be able to meet the demands of a growing human population that has rising aspirations for consumption and quality of life, while maintaining the rich diversity of the natural environment or biosphere." The patterns of human development, whether they are physical, social, and economic, affect sustainability at the local and the global level. The very nature of planning is "integrally related to defining how, where, and when human development occurs, which affects resource use." [2]

As illustrated by APA, planning for sustainability includes the following *processes*, *practices* and *outcomes*.

Planning processes include:

- Making planning decisions in a holistic and fully-informed manner that involves all segments of the community and the public and private sectors.
- Educating all age groups to raise public understanding of and regard for the future consequences of current planning decisions and ultimately change human behavior.

Planning practices include:

- Developing a future-oriented vision, which look beyond current needs and recognizes environmental limits to human development.
- Fostering projects/ activities that promote economic development by: efficiently and equitably distributing resources and goods; minimizing, reusing and recycling waste; and protecting natural ecosystems.
- Upholding a widely held ethic of stewardship that strongly encourages individuals and organizations to take full responsibility for the economic, environmental, and social consequences of their actions, balancing individual needs and wants with nature and the public good.
- Taking leadership in the drafting and implementation of local, regional and state policies that support sustainability.

[2] American Planning Association, Policy Guide on Planning for Sustainability, April 2000 (http://www.planning.org/policy/guides/adopted/sustainability.htm)

Planning outcomes include:

- Local and regional development patterns that expand choice and opportunity for all persons, recognizing a special responsibility to address the needs of those that are disadvantaged.
- Resilient, diverse, and self-sufficient local economies that meet the needs of residents and build on the unique characteristics of the community to the greatest extent possible.
- Communities with a healthy economy, environment and social climate that function in harmony with natural ecosystems and other species and allow people to lead healthy, productive and enjoyable lives.[3]

Using these principles as a guide, this Plan and other actions taken by the Town can help to move Bedford towards a policy of promoting sustainability. In the Municipal Services and Facilities chapter, there is a recommendation that the Town establish a Sustainability Task Force to address these issues and make further recommendations as to how the Town of Bedford can lead by example and encourage private developers to adhere to sustainability principles. Furthermore, the Town established the Energy Commission to look for ways to reduce energy consumption. At the same time, it is clear that there are a number of additional steps the Town should take to further achieve the goal of sustainability. The following are strategic policies (either elaborated on here or as recommended in other chapters of the Plan) that the Town should implement in order to advance sustainable practices. Many will serve multiple purposes.

- ➢ Encourage compact, transit-oriented development that minimizes dependence upon the automobile (see recommendations below)
- ➢ Encourage pedestrian-friendly, human-scaled, mixed-use developments where people can live, work, play and shop (see recommendations below)
- ➢ Minimize development patterns that extend into undeveloped areas by maintaining a protected edge around neighborhoods (preservation of rural residential character)
- ➢ Promote designs that conform to environmental constraints (see Cluster Residential Development)
- ➢ Provide incentives for redevelopment and remove disincentives (see Route 3 Corridor Performance Zoning District)
- ➢ Provide transportation alternatives (see recommendation to support for commuter rail in Transportation chapter)

[3] Ibid.

- Design local streets that enhance pedestrian and bicycle opportunities (see recommendation to develop a pedestrian and bicycle plan in the Transportation chapter)
- Design streets that are connected (see recommendations for street connectivity and access management in Transportation chapter)
- Provide housing that is affordable to all income and age groups (see Housing chapter recommendations)
- Reduce building and vehicle energy consumption (see Energy and Utilities chapter)
- Provide recreational facilities that can be easily accessed by walking or biking (see recreational facility recommendations in the Municipal Services and Facilities chapter)
- Reduce encroachment and impacts to natural resources by funding open space acquisitions and preserving sensitive habitat (see Open Space Plan)
- Encourage stormwater best management practices that reuse and restore runoff quality (see stormwater management discussion in the Municipal Services and Facilities chapter)
- Reduce or minimize impervious surfaces (see parking recommendation below)

Moving Ahead: Recommended Actions

A number of the recommendations below are made in order to maintain and enhance Bedford's community character, particularly in the rural residential portion of the Town. Additionally, some of the recommendations that follow are designed to encourage a more compact development pattern in areas where such development is most appropriate, such as around the proposed new commuter rail station and airport access road. Many of the recommended actions pertain to revising or updating the zoning ordinance. See also Figure 2-3, Future Land Use Map, which identifies where some the land use strategies discussed in this chapter would apply.

1. Consider encouraging future development along Route 101 into nodes at key intersections, preserving natural areas between these nodes using tools such as transfer of development rights (TDR). Essentially, TDR transfers the growth from areas where protection is desired (open spaces, environmental resources) to areas where development is appropriate because of proximity to infrastructure and services.

2. Review locations along Route 101 where zoning could be revised to allow for increased lot depth. This would provide space for additional development and required parking that could reduce curb cuts and create more of a campus style development.
3. Consider rezoning the areas around the proposed transit station and Manchester Airport Access Road for transit oriented development (TOD). This would encourage higher density, high-quality development within 10-minute walk of the station in a manner that focuses on pedestrian traffic. Development around the station would include a mixture of office, residential, retail, and civic uses.
4. Consider the addition of multi-family housing mixed in with the commercial uses in the northern end of the Performance Zone. Encourage mixed-use development with retail and services on the first floor and residential above.
5. Future growth should consider mixed use and compact development in this zone particularly where there are infill opportunities or redevelopment of existing sites. Adding vertical housing as a component of new buildings will place new residents within walkable distance of these uses, reduce vehicle trips, and provide an opportunity to create a sense of place that has vitality and interest.
6. Develop architectural/ design standards for the Performance Zone. This district currently includes standards for dimensions, landscaping, parking, screening, signage, lighting and environment. In order to enhance the character of the built environment along Route 3, some design guidelines should be established for future development.
7. Consider amending the Cluster Residential Development to reduce or eliminate the minimum size threshold (currently 15 acres). Consider requiring a conservation subdivision plan as an alternative to the standard subdivision where appropriate as a means to increase conserved, contiguous open spaces. Lot sizes would be reduced, but overall project density would remain the same.
8. Consider requiring a conservation subdivision plan as an alternative to the standard subdivision where appropriate as a means to increase conserved, contiguous open space. Lot size would be reduced but overall project density would remain the same.
9. Consider adding maximum parking standards to the Land Development Control Regulations in order to establish a mechanism for reducing impervious coverage for new development.
10. Consider providing for shared parking arrangements where appropriate by amending the Land Development Control

Regulations to allocating parking spaces on a prorated basis to be determined by the types of uses that share the parking area.

11. Recodify the ordinance in conjunction with other revisions mentioned above and in other plan elements to make the ordinance easier to use by developers and for Town administration. Among the items to consider are the following:
    - Consolidating the definitions from all sections into a single Article.
    - Add illustrations to the definitions.
    - Incorporate Table of Uses into Article 45-4, Use and Dimensional Regulations rather than as an appendix. §45-4-2 refers to the Table of Uses, and it would be easier to use the Table if it was located within the same Article.
    - Add a purpose section for each zoning district to explain how they differ from one another.
    - Incorporate the parking regulations into the zoning ordinance.