

# Appendix A<sup>1</sup>

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## A Zoning Diagnostic Evaluation for Harvard

*The Relationship between Land Use Regulations and the Accomplishment of Master Plan Goals and Objectives*

### Introduction

This report provides an assessment of how the land use rules of the Town of Harvard, principally its zoning regulations, currently meet the goals, policies, and objectives recently adopted as part of the Town's initial Master Plan phase. The report is also designed to provide the Town with an array of zoning options to further advance the objectives of the Master Plan in appropriately guiding and influencing the evolution of the Town's built and natural environment.

The first section of this report reviews and summarizes Harvard's basic Zoning Bylaw provisions related to zoning districts, use regulations, density and dimensional rules, and the review procedures that shape proposed development. A brief review of issues related to the Town's subdivision regulations, and an examination of the issues surrounding cluster housing development, are included.

In the second section of this report, key findings related to the first section are further explored and compared in relation to the recently adopted Master Plan goals and objectives. Thereafter, conceptual options for amending the Zoning Bylaw to advance these goals and objectives are suggested. This section of this report includes suggestions about prioritizing zoning actions, and administrative and other consequences that the Town needs to prepare itself for as it considers implementation strategies for readying zoning amendments for adoption.

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<sup>1</sup> Terry S. Szold, Community Planning Solutions, prepared for Community Opportunities Group, Inc. and the Town of Harvard, October 17, 2001.

## **Section I**

### **Current Zoning Rules**

There is ample evidence around us that zoning requirements strongly influence not only the form and pattern of development, but also the nature and distribution of trip generation and levels of service along roadways. Prior to any assessment and recommendation of alternative zoning strategies, it is important to review and analyze what the existing rules allow.

The core and essence of all zoning regulations are its districts, each district's use allowances, and the dimensional and density regulations that shape the built and natural environment. The pages that follow review Harvard's current zoning districts and use regulations. Thereafter, the dimensional, density, and development regulations that influence the built form of Harvard is reviewed and explored. Relevant findings are included.

#### **Zoning Districts and Use Regulations in Harvard**

- Agricultural-Residential (AR)
- Business (B)
- Commercial (C)
- Multiple Residence (MR)
- Watershed Protection and Floodplain (W)
- Watershed Protection and Flood Hazard (WFH)
- Watershed Greenspace Buffer District & Nashua River Watershed Greenspace Buffer District
- Wireless Communications Tower Overlay District (WCTOD)
- Interim Planning Overlay District (IPOD) (*No longer exists on Zoning Map and not covered here*)

#### **Use Regulations in the AR District**

This District is provided for compatible agriculture and single-family residence uses.

##### **Summary of Permitted Uses:**

Single Residence: Primary uses are detached one-family dwellings, and mobile homes serving as detached one-family dwellings (provided the mobile home has a permit from the Building Inspector). Home occupations, excluding retail or wholesale trade or on-premise showrooms, are allowed as a secondary use of the premises. Providing room and board to "non-transients by the resident family" is also allowed as a secondary use.

Agricultural: Agricultural uses permitted include ordinary farming, orchard keeping, animal husbandry, and other specialties. The commercial raising of swine or fur animals is not permitted. Parcels less than five acres are considered to be Home Farms. A Home Farm may include but is not limited to the following activities: rental of horse stalls, selling of its own produce to the public, and operation of a "you-pick" harvest. While normal farm operations are

not considered detrimental, agricultural uses are subjected to Section 5.1 of the Protective Bylaw—where no use is permitted which is injurious, offensive, or otherwise detrimental to the neighborhood, community, or the natural environment. For agriculture conducted on parcels of five or more acres, activities that constitute or are accessory to the principal agricultural use are *not* subjected to the provisions of Section 5.1. (Examples of such accessory uses are camps for seasonal farm labor and farm stands.)

Conversion for Multiple Residence: Conversions of existing single-residences and their accessory structures (primarily barns having a cubic volume of at least 15,000 feet) are allowed by special permit. Such conversions are permitted providing the following:

- the dwelling (and any accessory structures) will remain in “undivided ownership”;
- the dwelling (and any accessory structures) was in existence on 3/6/65 and has not been “significantly” enlarged since;
- the “external character” of the premises will continue to be that of a customary one-family residence;
- the lot has land area conforming to lot size standards with additional land area of at least .5 acres for each dwelling unit beyond the first;
- the lowest floor level of a dwelling is at least partly above grade;
- any parking area larger than that needed for a customary single family dwelling will be screened from view from neighboring properties;
- the septic system meets the regulations defined in the Bylaw for size and location; and
- approvals are given by the Board of Appeals and the Board of Health.

Conversion of Seasonal Residence: By special permit, conversion of a lawful existing seasonal residence—including summer homes and other part-time residences not previously reviewed and approved as year-round residences—is allowed. Such permits are authorized only when minimum standards of fitness for human habitation, minimum requirements for disposal of sanitary sewage, and any additional Board of Health requirements are met.

Institutional Uses: Parks, conservation areas, educational and religious uses are permitted.

By Special Permit:

*In-Law Apartment Use*

A group of rooms in a single-family residence may be used as a separate apartment with its own bedroom and kitchen facilities providing:

- the premises are being used by the owner as a principal residence (and have been used as such for a period of at least five years prior to the date of application for the special permit)
- the apartment has its own separate entrance from the outside
- an adequate supply of drinking water and provisions for sewage disposal is provided
- the number of residents in the separate apartment does not exceed three (3).

*Use authorized by special permit from the Planning Board*

- Golf courses
- As provided in the Mini-Subdivision section of the Bylaw
- As provided in the Cluster Development section of the Bylaw (see also additional sections of this report).

(Note: Findings and recommendations on Mini-Subdivisions and Cluster Development are found under the topic, “Development Review Procedures” in this Section of the report.)

***Findings: AR District***

The Town's land area is principally composed of the AR District, and it contributes to the Town's rural character. Consideration of additional flexibility in this district, such as removing some of the restrictions for conversion to multiple residence, and providing a more viable cluster option to generate greater housing diversity will be a key challenge for the new Master Plan.

**Use Regulations in the B District**

This District is a very small district (less than 5 acres) in the Town Center area, and provides for selected business uses.

**Summary of Permitted Uses:**

Uses that are permitted in the districts surrounding the B District are also permitted in this district. Additional uses that are permitted (subject to Site Standards in the Bylaw):

- retail businesses
- personal service establishments
- indoor eating establishments
- banks or similar financial institutions
- real estate offices
- other types of professional offices.

***Findings: B District***

The Town needs to consider a special district to be superimposed over, and to potentially be modestly expanded from what currently exists for the Town Center area. For example, the area of future uses in this new and expanded area needs to be expanded to ensure that artist space, galleries, and small-scale performance space will be permissible. (See the detailed discussion of a recommended Town Center and Village Overlay District in Section II of this report.)

**Use Regulations in the C District**

This District is intended to provide the community with "necessary and appropriate" commercial services. Limited manufacturing operations (no more than 12 persons involved on the premises) are allowed on the site of a permitted commercial activity, as applicable. This district is located along both sides of Ayer Road, north of Route 2.

**Summary of Permitted Uses:**

Commercial uses are categorized in the Bylaw as Small-Scale, Medium-Scale, and Large-Scale. Some Medium-Scale and *all* Large-Scale commercial uses are allowed by special permit only. Detail for each category is provided below.

**Small-Scale**

The following uses are permitted, subject to the Site Standards in the Bylaw:

- professional offices
- business agents
- travel agents
- secretarial services
- photocopying services
- artist/craftsman/photographer studios
- florist/gift/stationary/antiques shops
- tailor shops
- musical repair shops.

### Medium-Scale

The following uses are permitted, subject to the Site Standards in the Bylaw:

- medical/dental offices
- banks or similar financial institutions/ATMs
- barber/beauty shops
- appliance/upholstery repair
- bicycle repair/rental
- inns / bed and breakfasts (in a pre-existing building only)
- utility collection agencies
- laundry/dry cleaning (pick-up)
- preschool /day care
- small engine equipment sales and service
- retail businesses (not including auto sales)
- medical supplies/equipment sales and distribution (no storage of toxic/virulent substances allowed)
- catering/deli/food market or similar eating establishments
- eating establishments (not furnishing mechanical or live entertainment)
- farm stands
- media outlets (including broadcast stations, newspapers, publishing, printing)
- sports-related recreation/entertainment (daylight hours only; excluding golf driving ranges)
- construction/building supplies and sales (plumbing, electrical, carpentry, etc.)
- landscaping services
- nursing homes/long-term and convalescent health care facilities
- mobile storage/transfer and distribution of petroleum products (not to exceed 5,000 gallons)
- warehouse and storage (permitted in buildings existing prior to 10/16/98; with restrictions on motorized vehicle storage. Prohibited are toxic or virulent materials, hazardous or medical wastes, and self-storage facilities.).

The following types of Medium-Scale commercial uses are allowed by Special Permit only:

- engineering/research/experimental/testing laboratories
- kennel and/or veterinary services
- mortuaries.

### Large-Scale

The following are allowed by Special Permit *only* and subject to the Site Standards in the Bylaw:

- commercial greenhouses
- light manufacturing (no more than 12 persons involved in the actual manufacturing operations; all raw and finished materials stored inside structure)
- machine/welding shops
- commercial entertainment and recreation (indoor, such as bowling alleys, theaters, fitness centers, etc.)
- farm machinery sales and service
- auto repair garages/body shops/auto accessory sales and installation
- storage/parking/incidental maintenance of construction/excavation equipment (land area for this use not to exceed 50,000 square feet; special permit granted for this use only when granting authority finds that there will be no significant increase in traffic, and proper screening of the use from view of other properties and adjacent roads is in place)

- warehouse and storage (with restrictions on motorized vehicle storage. Prohibited are toxic or virulent materials, hazardous or medical wastes, and self-storage facilities.).

#### Other

Additional uses are allowed in the C District as provided in the Agricultural Uses, Conversion for Multiple Residence, Earth Moving, Institutional Use and Other Off-Site Signs subsections of the Bylaw. Also, Single Residence Use (on lots as they existed 2/1/72) allowed, as defined in the Bylaw.

#### ***Findings: C District***

The C District needs to be newly described and use and development regulations need to be tailored specifically to encourage uses consistent with the Town's village identity. Warehouse and storage as a principal use should be discouraged, as should petroleum product storage and transfer. (See Section II for more detail on potential new regulations for the C District.)

#### **Use Regulations in the MR District**

This District is intended for multiple-resident use, including subsidized residences. There is no evidence that any land is specifically zoned for MR District uses.

#### Summary of Permitted Uses:

Multiple residence use is subject to the Site Standards in the Bylaw. Further restrictions include the following:

- An individual lot for each multi-dwelling shall be in undivided ownership, conforming to Lot Size Standards and having additional land area of at least 1.5 acres for each dwelling unit beyond the first.
- Building length cannot exceed 150 feet; any garage must be only one story in height; lowest floor level must be at least partly above grade.
- A multiple residence cannot contain more than 8 dwelling units.
- Development must provide pedestrian ways for circulation and access to schools, parks, shopping and other facilities and community services/amenities.

Uses as provided in the Earth Moving and Institutional Uses sections of the Bylaw are also permitted.

#### ***Findings: MR District***

Identifying locations for multiple residence uses is a key challenge for the new Master Plan. Permitting multifamily uses and apartments in the newly described C District should be considered.

#### **Special Districts**

- **Watershed Protection and Floodplain (W)**
- **Watershed Protection and Flood Hazard (WFH)**
- **Watershed Greenspace Buffer District & Nashua River Watershed Greenspace Buffer District**
- **Wireless Communications Tower Overlay District (WCTOD)**

Uses permitted in the **W District** are the same as those permitted in the AR District, provided certain performance standards are met related to grading, excavation, and filling, so that no adverse impacts to ground water absorption, storage capacity, and drainage patterns are created. Special Permits from the Planning Board are required for most construction and grading beyond what are authorized for driveways and subdivision roads and other incidental uses.

Construction of dwellings or sewage disposal (ordinarily allowed in the AR District), or other potential sources of contamination is not permitted unless a Special Permit is authorized by the Planning Board, and it is proven by an applicant that such use is not unsuitable because of drainage conditions, and an applicant's land is not an inland wetland.

The **WFH District**, which is explicitly listed as an "overlay district," superimposes the development and construction limitations listed in the W District, except that driveway and roadway length exemptions are less restrictive.

***Findings: W and WFH Districts***

Given the importance of wetland and water resource preservation objectives to the Town, there is a need for an improved, clearly mapped representation of both the W and WFH Districts. Applicants will always need to supplement such mapped representation with detailed field investigations, but clearly delineated town maps that reflect wetland and floodplain resources will clearly strengthen the town's ability to monitor development and improve an applicant's understanding of the importance of these critical resources.

Section 8 of the Zoning Bylaw provides reference to a **Watershed Greenspace Buffer District and Nashua River Watershed Greenspace Buffer District**, which protect watercourses and the wetlands and floodplains within such watercourses from development. Uses are limited to greenspace. The Nashua River Watershed Greenspace Buffer District is defined further as extending 300 feet from the centerline along the river.

***Findings: Buffer Districts***

The Town needs greater detail in its Zoning Bylaw on its intentions for these buffer districts, and its compatibility with the Commonwealth's "Rivers bill" regulations.

**Wireless Communication Towers Overlay District (WCTOD)**

The Town's regulations for wireless communication towers provide ample opportunity for the location of such facilities. Section 5.8 of the Bylaw and recently adopted amendments ensure a detailed review and Special Permit process to ensure minimization of adverse visual impacts.

***Findings: WCTOD District***

The evolving nature of legal challenges and decisions related to the Federal Telecommunications Act (TCA) of 1996 may shift the scope and reach of municipal regulations to regulate such uses. Since the Town amended its regulations for wireless communication towers in March of 2000, it makes sense to give the amended regulations a chance to be effective, prior to undertaking the preparation of new or amended rules.

## Density, Dimensional, and Development Regulations

Listed below are the Town's dimensional and development regulations, grouped in two tables. The variable nature of how the regulations apply, particularly in relation to "lot types," makes determining development rules a complicated exercise for Town Boards and the applicants who must use the regulations.

**Table 1: Lot Area, Width, and Access Requirements**

	Basic Lots	Type 1 Lots	Type 2 Lots	Type 3 Lots	Type 4 Lot	Type 5 Lots
Land Area:	1.5 acres	1.5 ac.	4.5* ac.	1.5 ac.	4.5 ac.	3 acr.
Lot Width:	200' at 120'	200' at 120'	270'	200' at 160'	400'	320' at 180'
Or width from roadway centerline						
Access frontage:	180'	120'	50'	75'**	50'	180'
Access width:			35'		35'	
Access centerline:				600'		
Access centerline radius:			80'		80'	

\*may be reduced to 2.5 with distribution of excess to adjoining lots and Planning Board approval.

\*\*frontage must be in circumferential arch of permanent turnaround in approved subdivision.

**Table 2: Land Structure Relations**

Floor Area Ratio (FAR):	.10 or 8,000 Sq. Ft. (whichever is larger); Town uses in town-center .20
Maximum Bldg. Size*:	No greater than 220,000 cubic feet; Greater than 110,000 cubic feet by Special Permit only.
Maximum Height:	Less than 3 stories and 35 feet
Setbacks**:	Bldg. to be located in compact, contiguous area of buildable land
Centerline of Road Setback:	75-125 feet
Maximum Structures on a Lot:	(all structures must demonstrate potential to comply with lot area and other dimensions)
Visibility:	No impairment of visibility within 20 feet of street sideline, for fence, plantings, signs of 2.5-7 feet

\*Agricultural and institutional use by Town in town-center is exempt from this requirement.

\*\*and for Backland and Hammerhead lots, within a circle within the lot having a diameter of at least the lot width. Setbacks from lot boundaries for other than fences shall be at least the height of structure. Other variations for setbacks from lot boundaries apply for other than fences, signs, and poles (between 60-125 feet, and 20% of lot width. 60' and 125' setback does not apply to institutional use by Town).

### **Findings:**

The Town's dimensional and lot standards involve the application of an array of standards to variable lot circumstances. As previously noted, calculating development privileges is a complex exercise for applicants seeking approval and the reviewing board. The calculations are made



more complicated because illustrative drawings are not provided, and the requirements are not grouped into tabular form.

The consulting team believes that the original drafters of the dimensional provisions appear to have been nobly trying to address a variety of lot and potential lot circumstances—including hammerhead lots (lots with more narrow frontage and access, and greater area to the rear), and lots with substantial area or backland area, enabling development without excessive subdivision roadway infrastructure, but ample provision made for driveway and emergency vehicle access. But the consulting team believes it is an appropriate time to re-examine the dimensional standards to ensure the following:

- Clear understanding of the application of the standards;
- Reducing the potential for excess land clearing to accommodate arbitrary building setback and centerline setbacks from the road; and
- Fostering building siting on the least constrained, contiguous buildable area of the lot.

It is suggested that the Planning Board engage a planner, landscape architect, and civil engineer, to review the above referenced standards, to present alternatives that may help the Town better accomplish its land use, Master Plan, and growth management objectives.

#### **Other Development Standards:**

- **Driveways**
- **Shared Common Driveways**

There are a variety of requirements for driveways, based on length, lot width and frontage, type of lots served, and date of actual creation of the driveway itself. There are standards for shared driveways that provide access for more than one lot. The Planning Board must either conduct a Site Plan Approval or a Special Permit Review for the various driveway construction situations described in the Bylaw.

It will be important for the Town and Planning Board to consider whether some of the Town's required building setback requirements cause driveway length and construction to be longer and more substantial than necessary.

- **Common Open Space Requirements**

Provision for Common Open Space (COS) is detailed in the Zoning Bylaw and is referenced as applicable to FPS (Flexible Plan Subdivisions), which is no longer fully described or included in the Zoning Bylaw.

#### **Development Review Procedures**

What follows is a summary of current development review procedures in the Town, and associated findings.

#### **Site Plan Review Regulations**

Site Plan Review is required to activate or enlarge certain uses, and to ensure compliance with the Zoning Bylaw and its Site Standards. Site plans detail, among other things, lot boundaries, setbacks, buildings, driveways, parking areas, walkways, green areas, utility details, disposal of sewage, methods of drainage, etc.

Many communities apply Site Plan Review to a large array of non-residential uses, and to selected residential uses.

The current regulation would need to be substantially expanded or augmented by other “Design Review” regulations in order to achieve the Town’s Master Plan Goals and Objectives detailed for the village and commercial areas in the Town.

(Note: More detail on “Design Review” is at the end of this section of the report.)

Even if an expanded Site Plan Review is not adopted, the Planning Board should consider drafting minimum and maximum parking ratio requirements for commercial and other uses, to ensure that there is adequate parking area, but not excessive or surplus parking area on lots.

### **Subdivision Regulations**

Pursuant to MGL Chapter 41, the Planning Board administers regulations pertaining to the subdivision of land, as well the division of land for lots not required for approval as a subdivision (ANR lots). The Subdivision Regulations are principally focused on the form and content of plans, and the layout and design of streets, ways, drainage, and underground utilities that will serve the new lots being created.

Since the Planning Board has not significantly revised these regulations since 1986, it is particularly ripe for review by a civil engineer, landscape architect, and planner to determine whether amendments can be achieved to update the regulations to reflect new design and construction standards related to the availability of new materials, drainage methods, and right-of-way and pavement width standards.

The consulting team’s initial review revealed that the Board’s roadway width standards (see Table 5.4.0 of the regulations) and its cul-de-sac width requirements need to be reviewed, particularly to reduce impervious surfaces and slow traffic. Additionally, the Board’s criteria for granting waivers or variations in standards (see Section 1.5), should be expanded to include considerations relating to protection of water resources and sensitive environmental areas.

Finally, the Town should remember to revisit the “Type 5 Lot” standards in the Flexible Plan Subdivision Regulations, particularly if the “Lot Width Circle Diameter” and “Lot Width Circle Setback From Centerline” regulations, if its cluster provision is amended in the Zoning Bylaw.

### **Mini-Subdivisions**

The development category, “Mini-Subdivision” is detailed both within the Planning Board’s Subdivision Rules and Regulations and the Zoning Bylaw. It provides an alternative to conventional subdivisions, and less stringent roadway standards for certain backland tracks of land. It is subject to a Special Permit review and approval and Subdivision Review by the Planning Board. The ways in mini-subdivisions must be private, and there must be a homeowners’ association to provide maintenance of all roads. There seems to be little application of this provision in Harvard but the mini-subdivision alternative may be useful to keep, since town services may be less burdened than in a conventional subdivision situation in which the Town, over time, may accept the streets proposed in the subdivision as public ways.

Additionally, there are requirements applicable to the mini-subdivision, such as a 180 foot frontage requirement on an existing street for one additional driveway connection (as well as other requirements), which makes this development option less attractive to developers who are more experienced with a conventional subdivision filing.

### **Sewage Requirements**

Since there is no public sewer in Harvard, and there are severe soil limitations for waste water disposal, there is a need to appropriately reflect sewage disposal rules in town regulations, in order to protect public health and wetland areas from contamination. The Town should review

its sewage disposal references and regulations to determine which regulations are more appropriately included in Board of Health rather than Zoning regulations.

***Additional Findings: Need for Expanded Design and Development Review***

A major theme that emerged in the recently adopted Master Plan Goals and Objectives and in discussions with members of the Master Plan Committee involved in the development review process, is the importance of ensuring that Harvard's special natural and built form and heritage is preserved. In Massachusetts, historic preservation of buildings can be most effectively ensured by the adoption of a local historic district(s) – a non-zoning tool that is administered by a *Historic District Commission*, pursuant to MGL Chapter 40C. In a local historic district, a *historic district commission* (which has regulatory authority, unlike a *historical commission*) is empowered to review proposals to alter and adapt structures included within the district's boundaries.

Chapter 40C does have its limits in terms of preservation objectives, however, because of its emphasis on exterior architectural features (not use of land). Sometimes issues of building massing, scale, and siting can be more completely addressed when historic district commission review is supplemented by a design review process that is grounded in zoning, either as a stand alone process or integrated within site plan review.

Another development review technique that can be used and applied through zoning is "design review," often an administrative and advisory process that is different from traditional site plan review regulations. Site plan review is often focused on issues and considerations of access, parking, circulation, siting, landscaping, etc. Design review, in contrast, is principally focused on "form based" considerations and design and aesthetic issues. Site plan review, design review, and historic district commission review all have virtues and limitations, and are circumscribed by applicable state law. In some towns and cities in Massachusetts, such as Cambridge, Lexington, and Nantucket, design review and historic district commission review co-exist.

Expanding both the scope and level of development review in the Town has administrative and staff resource consequences that must be carefully considered. A wise course of action may be to formalize and add design review considerations and/or an advisory design review component to the existing Site Plan Review process, and to make it applicable, particularly in any future Village Overlay and Community Commercial District. (Note: See Section II for more detail on this topic.)

**Background—Cluster Development for Open Space Conservation (CDOS)**

Cluster residential zoning is a technique used to allow proposed residential units and accessory buildings to be "clustered" more closely together. The purpose is to create larger tracts and areas of surrounding open space, and to facilitate building siting which results in preservation of existing topographic and natural land features. Cluster housing can also promote a diversity of housing opportunities, thereby promoting greater housing affordability.

In a cluster housing development, a homeowners' or community association is often responsible for maintenance of roadways and utilities, snow plowing, and trash removal.

The gross density of development in a cluster configuration can often be the same density permitted under conventional single family zoning. For that reason, in some instances, cluster housing is virtually indistinguishable from existing single family house types. In other instances, however, cluster housing development involves unifying design or architectural motifs.

Another goal of cluster zoning is that on-site structures, utilities, and roadways are situated on the most suitable land on a parcel for building; this creates numerous opportunities to preserve

critical land and environmental features. Some communities in New England have elected to reference their cluster provisions as “Open Space Residential” zoning, reflecting the primary goal of this regulatory mechanism.

Cluster housing, similar to Planned Unit Developments (PUDs), can authorize a diversity of housing types (2 bedroom homes or townhouses are constructed, rather than the 3-4 bedroom homes associated with a conventional subdivision). The result is that the typical number of school age children associated with a cluster development, on a per unit basis, is frequently a smaller ratio or number than that associated with large single family homes within a subdivision.

Figure 1 provides a conceptual illustration of a conventional subdivision, typical of the type being developed throughout Massachusetts. In contrast, Figures 2 and 3 provide conceptual illustrations of residential development in cluster configurations, in both a detached and attached unit setting. As previously noted, the cluster approach should yield more open space, less pavement, and greater opportunity to preserve vistas and critical natural resources.

To summarize, the benefits of Cluster Housing are the following:

- *Housing* can be situated on the most suitable land area of the site, allowing more sensitive land to be protected as open space;
- *Open space* can be protected in perpetuity, allowing natural resource and aesthetic features to be preserved for future generations;
- *Substantial buffer areas* are provided, helping to assure privacy and the value of neighboring properties;

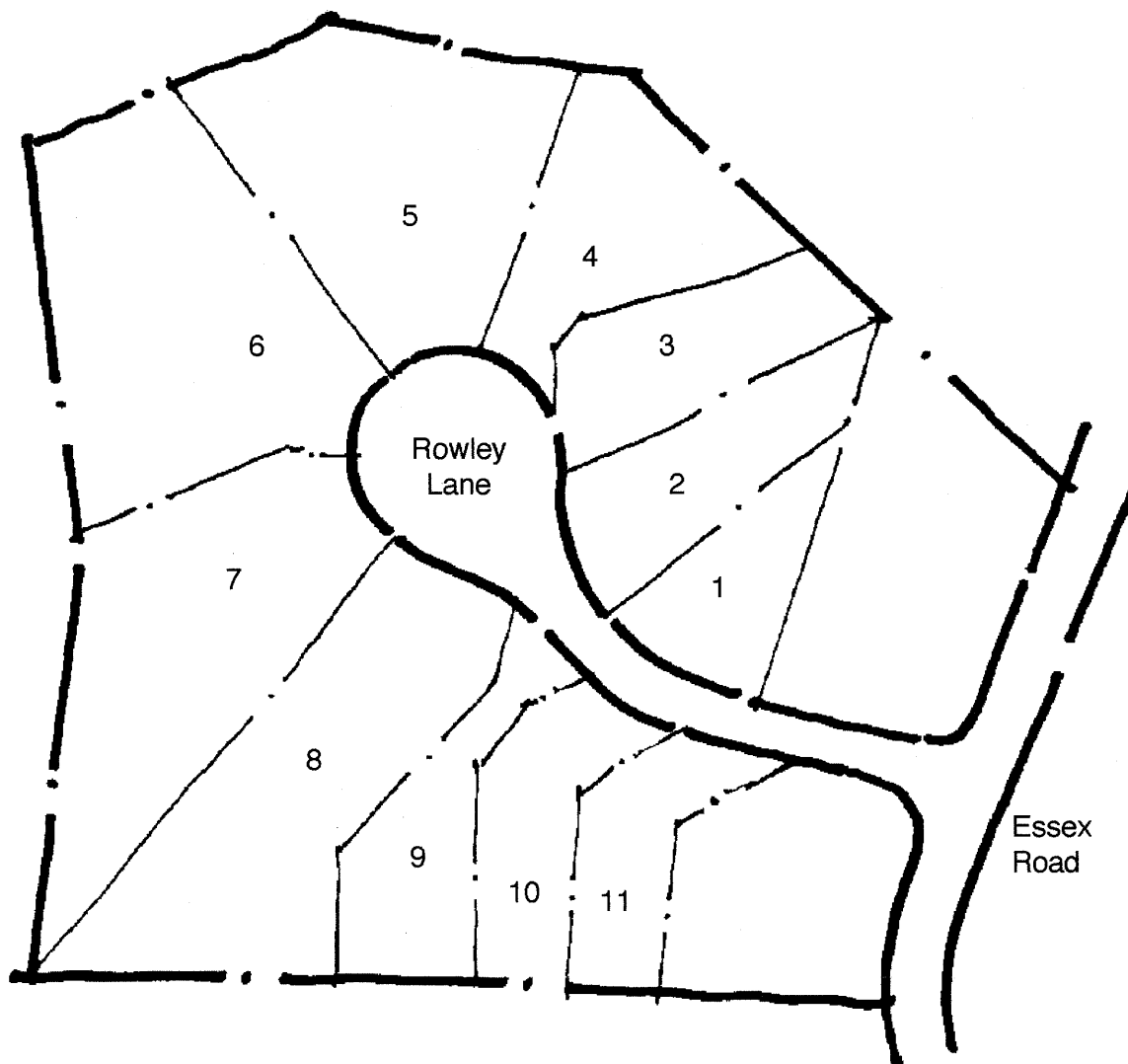


FIGURE 1: CONVENTIONAL SUBDIVISION CONFIGURATION

**FIGURE 2: DETACHED CLUSTER CONFIGURATION**

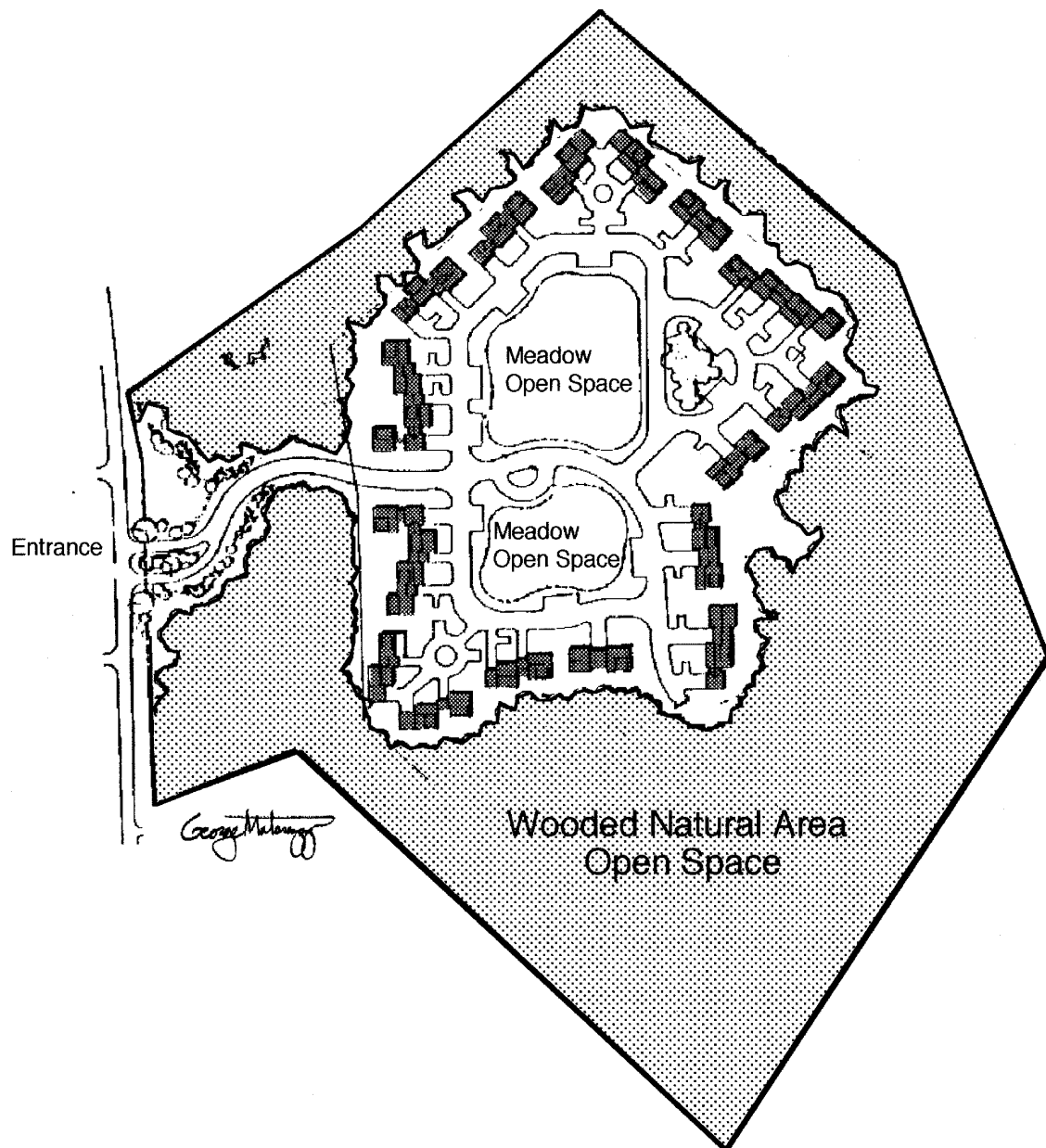


FIGURE 3: ATTACHED CLUSTER CONFIGURATION

- *Land Form* can be blended or harmonized with housing, minimizing removal of vegetation, and the needless alteration of existing topography by cut and fill operations;
- *Municipal service costs* are reduced because road maintenance and trash removal is the responsibility of a homeowners' association, rather than the responsibility of the Town; and
- *Fiscal impacts* such as school costs are reduced, since cluster housing units often have smaller numbers of bedrooms, generating less school age children per unit.

#### ***Findings: Harvard and CDOS***

In Section 6.9, of the Zoning Bylaw, the Town has a provision for Cluster Development for Open Space Conservation. Town officials involved in the planning process have stated to the consultant team that this provision has been rarely been used. It is subject to a Special Permit granted by the Planning Board and subdivision approval.

The purpose and intent of the cluster section is to provide an alternative to conventional lot by lot residential development and to preserve open space farmlands, natural resources and wetland areas and to preserve the rural and historic character of the Town. There is a large minimum lot size required for activating cluster development and wetland areas must be discounted from minimal parcel size which is 20 acres.

While the net density of a cluster development can be higher as it relates to the concentration of cluster lots, the overall number of lots resulting on the tract must be the same as conventional development. Cluster development allows more flexibility in relation to lot width and other dimensional requirements. There are a variety of requirements related to cluster development including sewage disposal and water supply and site development standards. Appropriate mechanisms for the assurance of open land protection must be approved by the Planning Board. There are additionally other design requirements and standards. Once again, lesser setbacks and building separation are possible, but the overall density of the development will always be the same as that permitted under a conventional subdivision.

The Town's recently adopted Master Plan goals in relation to open space preservation and affordable housing are unlikely to be achieved under the present cluster bylaw for the following reasons:

- There is no density bonus offered to developers for providing substantial open space protection areas;
- There is no density bonus or incentive provided for setting aside units for low and moderate income housing, or housing for the elderly or disabled;
- A conventional subdivision plan must be filed and approved, in addition to the filing of a special permit, making the regulatory procedure less expeditious and subject to more scrutiny than a conventional development.

Other opportunities exist to vastly improve the cluster provision, and to make it more consistent with Master Plan objectives. In particular, there are few internal design considerations that are applicable to the special permit review. It would be useful for the Town to consider adding design considerations relating to building form, scale, screening and other strategies to minimize bulk and encourage building articulation more consistent with the built form of Harvard. The Town would be able to achieve more visual amenities both internal to the development and



adjacent to the cluster site, particularly if genuine incentives are provided to cluster development applicants. Without more dimensional flexibility, and/or at least modest density increases, cluster housing provisions will only be minimally used.

#### ***Recommendations Related to Cluster Provision***

In order to genuinely accomplish goals for rural character and open space, the Town should consider embracing a new cluster provision that dispenses with adherence to internal lot lines and traditional yard and setback requirements, and substitutes requirements for *securing large tracts of existing, undisturbed open space*.

Further, in order to meet the Town's objectives, a new cluster provision will need to be created that balances real dimensional flexibility with detailed design standards, and include genuine rewards such as the following:

- ***A density bonus*** offered to developers for providing substantial open space and agricultural protection areas;
- ***A density bonus or dimensional incentive*** provided for setting aside units for low and moderate income housing, or housing for the elderly or disabled;
- ***An allowance*** that provides for diverse housing types (e.g., townhouse units).

***Design standards*** to ensure aesthetic and overall development quality should include the following requirements and specifications:

- **Building Placement** that avoids regular spacings and that will be viewed as continuous walls from important vantage points should be demonstrated, inclusive of providing for maximum buffering of buildings and structures to adjoining properties, and for the preservation of scenic views from major vantage points, especially from major roads;
- **Building Massing and Articulation** that avoids unbroken building facades longer than forty (40) to sixty (60) feet;
- **Building Materials and Building Treatments** that reduce the visibility of buildings from distant vantage points, that are compatible with backgrounds and surroundings, and encourage use of materials and colors compatible with other quality buildings of similar scale in the vicinity;
- **Roofline Articulation** that provides a variety of building heights and varied treatments that are consistent with New England Village style architectural motifs;
- **Landscaping and Landscape Treatments** for all open areas, exclusive of areas that will remain in an existing natural state. Such areas should be landscaped in an appropriate manner, utilizing both natural and man-made materials, including treatments for new and existing streets; and
- **Pedestrian Amenities** that emphasize pedestrian-oriented features such as covered walkways, outdoor sitting plazas, landscaped open space, drop-off areas, and recreational facilities. Tree-lined or otherwise appropriately landscaped pedestrian paths and walkways should be required to link together areas designated as open space within the site, and wherever possible, to other adjoining open space areas.

The above requirements are actually “design review” or enhanced site plan review standards. If these requirements and standards were coupled with the more functional engineering requirements (such as drainage and roadway adequacy, requirements, etc.), the Town would have a more complete cluster provision—and better development outcomes would be ensured.

## **Section II**

### **Connecting Zoning to Master Plan Goals and Objectives**

In this section, a selection of recently adopted Master Plan Goals and Objectives that are connected to land use and zoning are presented, and analyzed in relation to the zoning discussion and findings presented in the previous section. *The objective of this section is to tease out potential regulatory strategies that can be used to actually accomplish the Master Plan Goals and Objectives.*

To enable greater ease of review, the selected Goals and Objectives have been edited or consolidated to reduce redundancy and to better connect the zoning analysis previously conducted to the ultimate policy or goal envisioned.

#### **Accomplishing Housing Goals and Objectives**

Most municipal Master Plans contain broad goals and policies to promote housing diversity and affordability. However, many communities fail to achieve their housing diversity mission because zoning barriers exist and are allowed to continue in municipal bylaws and ordinances. To address this reality, Massachusetts has a “Comprehensive Permit” statute to allow a zoning override when cities and towns fail to meet their prescribed statutory minimum. This frequently controversial mechanism has been used throughout the state to generate hundreds of affordable units.

Harvard has recognized that it can use its own zoning authority to help foster affordable housing options. Listed below are the Housing Goals and Objectives along with the suggestion of zoning strategies and actions to help accomplish these important goals and objectives.

#### **Housing Goals and Objectives**

**Goals:** Encourage diversity in the local housing stock and diverse housing options that balance neighborhood “sense of place” and open space preservation. Consider ways to reduce housing costs.

##### *Specific Objectives:*

- Provide incentives through local regulation, funds or land.
- Allow housing in the commercial district.
- Regulate for smaller house sizes.
- Encourage mixed use development.
- Re-evaluate cluster zoning and approve cluster alternatives.
- Provide income- and age- diversity in housing options.
- Promote assisted living facilities.
- Encourage both ownership and rental units.
- Permit different types of units, such as condominium, townhouses, and two-family.
- Encourage wide variety of economic and social types of unity in different areas.

#### **Specific Zoning Strategies and Actions to Accomplish the Goals and Objectives**

- *Allow Conversion for Multiple Residence Uses*  
There have been few conversions of existing single family dwellings and accessory structures for multiple family dwellings. Such conversions are subject to a special permit from the

Board of Appeals and are subject to a variety of other requirements including a date of existence requirement. If the Town were to genuinely wish to promote accessory or other apartment uses in existing single family residences, it would need to consider permitting them by right and subject to a variety of standards.

- *Identify Areas to Allow Multiple Residence Uses, and Permit such uses in the Commercial C District*  
The Town has a provision in its zoning to enable multiple residence uses. However, this provision is isolated within the zoning by-law and the uses discussed are not carried forward as allowable uses in the AR Districts. It is also important to point out that even in the Business and Commercial districts multi-family residences are not permissible. Instead, the Town has a stand-alone MR District that allows for multiple residences and subsidized housing, but there is no land to be found anywhere on the Town's current zoning map to enable such development to occur. Identifying future areas for multi-family housing and multi-family zoning is a key challenge to be addressed as part of the Town's implementation of the Master Plan.

Introducing mixed-use and apartment allowances in the Commercial district will enable the Town to combat commercial sprawl and help it to leverage more affordable housing units (see further discussion about the Commercial District, below). Deciding on units per acre allowances for such use will be an additional challenge, and may be directly affected by community sewage disposal availability.

- *Revise Housing Cluster Regulation*  
(See detailed discussion and recommendations in previous section.)

### **Accomplishing Town Center and Village Development Goals in the Commercial and Village Areas**

In the 1988 Master Plan update for the Town there many goals articulated for enhancing the quality of the Town's commercial districts. A greater emphasis in the new Master Plan Goals and Objectives has been placed on preserving and encouraging a village atmosphere in the Town's Commercial District, and also on encouraging mixed use and more civic uses and services in the village centers.

Listed below is the selection of Goals and Objectives for these important districts and areas, along with the suggestion of zoning strategies to help bring these goals and objectives to fruition.

#### **Commercial District Goals and Objectives**

**Goals:** Encourage village atmosphere in the commercial districts, and explore innovative uses to improve this area.

##### *Specific Objectives:*

- Develop strong design guidelines for site development and buildings, including aesthetic standards in keeping with the town's character.
- Expand commercial site standards to support town character.
- Consider alternative uses for the present C district, including a restaurant as part of the mix of uses.
- Consider mixed-use development that conforms to a village type identity.
- Create zoning for both commercial and residential uses.

There seems to be a strong interest in encouraging a more attractive and interesting built and environment in the Commercial C District along Ayer Road. Public officials and others would like to see alternatives to the emerging “strip” pattern of commercial development along this corridor that is more consistent with the Town’s village identity.

#### ***Specific Zoning Strategies and Actions to Accomplish the Goals and Objectives***

There are a variety of regulatory strategies that can be used to accomplish the objectives reflected above, including:

- *Create a new “Harvard Community Commercial District” replacing the existing Commercial “C” District;*
- *Establish new design considerations, standards (including minimum and maximum parking ratios, maximum floor area per use unit), and incentives in the “C” District;*
- *Allow on-site mixed-use and stand-alone residential development to enable small-scale apartment development.*

By introducing a mixed-use atmosphere the commercial district will become more viable, more pedestrian friendly, and aesthetically more pleasing. Further, residents could satisfy more shopping needs locally. The Town could also leverage more affordable housing units if such development was linked to greater retail opportunities and new allowances for residential use.

#### **Village Center Goals and Objectives**

**Goal:** Encourage a sense of community in the two village centers.

- Create mixed-use village centers - provide services, amenities, and gathering places.
- Direct development towards a community village pattern.
- Develop a trail system connecting commercial areas as an alternative to cars.

**Goal:** Plan for and manage the Town Center as the center of community spirit and government.

#### ***Specific Objectives:***

- Transform the town center into a pedestrian-oriented center.
- Serve local needs for shopping and cultural activities.
- Develop a trail system connecting the town center as an alternative to cars.

Conversations with Municipal Officials involved in the land use and permitting process in the Town reveal a strong interest in promoting more commercial diversity in the Town Center and the Still River Village area to complement the civic and open space uses to be found in this area. The Master Plan goals also reinforce this interest. Uses such as coffee shops, galleries, space for artisans and crafts people, and places for performance space and cultural activities and boutiques are all considered desirable uses and activities, particularly in the Town Center.

#### ***Specific Zoning Strategies and Actions to Accomplish the Goals and Objectives***

The Town may wish to consider a **Town Center and Village Overlay District** to superimpose special standards and special incentives to achieve the amenities described above. Such an overlay district for the Town Center could specify the following:

- *Special design standards and considerations;*
- *Maximum development thresholds and maximum floor area per retail unit;*
- *Uses to be allowed by right, subject to design review;*
- *Uses to be permitted only by special permit, also subject to design review; and*
- *Special incentives and floor area bonuses to be awarded by special permit for exemplary development proposals (including set asides or dedications for trails and pedestrian linkages and connections).*

Availability of sewer and water connections in capacity will be a major factor in how the Town Center can evolve. Clearly, a specialized and focussed planning effort, and potentially, a specific area plan, may be desirable for this important area.

### **Accomplishing Natural Resource, Land Management & Open Space, and Agricultural Goals and Objectives**

Listed below is a selection of Master Plan Goals and Objectives related to natural resources, open space, and agriculture. Specific regulatory strategies are highlighted, where appropriate to each topic area.

#### ***Natural Resource Goals and Objectives***

**Goals:** Ensure a safe and adequate water supply; Preserve and protect water resources using the best management and land use standards; Preserve air quality and control noise pollution.

#### ***Specific Objectives:***

- Take a town-wide perspective that seeks to protect water quality and quantity regionally as well as locally.
- Closely analyze all wetland projects and increase the size of buffer zones to wetlands where necessary to protect against fragmentation, critical habitat loss, and water quality impacts.
- Prevent light and noise pollution.
- Monitor air and noise quality.

#### ***Specific Zoning Strategies and Actions to Accomplish the Goals and Objectives***

Further mapping of the Town's Wetlands and Floodplain and Flood Hazard Districts will help integrate natural resource considerations into most aspects of the development. Revising the Town's Cluster Housing Provisions (detailed analysis of this issue is provided in the first section of this report) will also reduce residential sprawl, and preserve habitat and wetland areas.

#### ***Land Management & Open Space Goals and Objectives***

A recurrent theme in town planning documents is the maintenance and preservation of the Town's rural atmosphere. Listed below is a selection of these goals and objectives, and regulatory suggestions to help foster their accomplishment.

**Goals:** Preserve the rural landscape aesthetic; Maintain the rural characteristics of town roads. Encourage land use and development that is appropriate to the context of different areas in the town; Preserve and protect land resources using the best management and land use standards.

*Specific Objectives:*

- Preserve vistas to west.
- Preserve country-like characteristics, including significant street trees.
- Control the number and type of driveway cuts onto public roads.
- Apply the same design and esthetic standards to new roads.
- Do not manage land use with state Title V regulations.

*Specific Zoning Strategies and Actions to Accomplish the Goals and Objectives:*

The previously discussed revision to the Cluster Bylaw can help accomplish a number of the bulleted objectives reflected above. If genuine density and development flexibility is added to the cluster provision, curb-cuts from conventional subdivision and ANR lots will be reduced, and preservation of stone walls and significant caliper trees will result, particularly because the net buildable areas can be more carefully determined. The Town will also have an enhanced tool, beyond Title V regulations, to better manage land use.

**Agricultural Goal and Objectives**

Listed below is the primary Master Plan Goal related to agriculture, and its related objectives.

**Goal:** Preserve and support agricultural resources not as a conservation program, but as a viable enterprise.

*Specific Objectives:*

- Provide flexibility in uses allowed by zoning to help with the viability of agricultural operations.
- Use Agricultural Preservation Restrictions for preserving farmland.
- Identify potential agriculture lands and try to preserve for future use.

*Specific Zoning Strategies and Actions to Accomplish the Goals and Objectives*

Cluster development can be an excellent tool for preserving farmland. Density bonuses can be given for preservation of prime farmland or orchards, and further deed restrictions and transfer of development rights can be ensured prior to Special Permit approval. Additionally, by dispensing with the rigid dimensional standards of lot and setback configuration, greater amounts of land can be preserved in its natural state.