

DENSITY through DESIGN

Research Reports



Volume II consist of four separate research reports on:

1. Factors Driving Community Opposition to Residential Density
2. Regulatory Barriers to Increase Residential Density
3. Precedents for Achieving Greater Residential Density
4. Innovative Design Techniques to Achieve Residential Density



This project was a collaboration between students of regional planning, landscape architecture and architecture at the University of Massachusetts Amherst. It was directed by Professors Elisabeth Hamin and Dean Cardasis who were assisted by Michael DiPasquale of the CPTC and Nedim Kemer.



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1. FACTORS DRIVING COMMUNITY OPPOSITION TO RESIDENTIAL DENSITY

Understanding the basis of community opposition to denser residential development is essential to the process of creating successful projects. Without this sensitivity, good projects may never be built.

Disagreements between citizens and officials often involve perceptions and values, rather than technical issues. The most frequently raised arguments against denser residential developments are those that involve traffic and congestion, reduced property values, adverse impacts on local aesthetics, and increased costs for community services. In Massachusetts, the potential of increased costs to local schools is one of the leading concerns of project opponents. Fortunately, in each of these areas of concern, there are pertinent responses and additional information that can help opponents overcome their concerns or fears about increased density.

In most communities, there is preference for maintaining existing visual aesthetics and policies regarding housing development. In the 495/MetroWest Corridor, denser residential developments have received a negative reputation because, in the view of municipal planning officials, they tend to be poorly conceived, designed and/or built. In Medway, planning officials suggest that denser residential development is likely to be opposed because of potential increased costs of community services, especially for schools and sewer infrastructure. In Sudbury, the leading concerns identified are the proximity of new development to abutters and residents, as well as the aesthetics of the development itself and its impacts on the existing town aesthetic; projects with a poor appearance tend to generate opposition.

Communities, and the design-phase studio teams, may be able to effectively address community opposition to denser residential development by crafting a site concept and implementation program that emphasizes:

- Excellent site design with classic architecture, low-impact landscaping and transportation alternatives to mitigate traffic impacts;
- Mixed use zoning to enhance tax revenues from the commercial sector;
- Maximizing Chapter 40R and 40S applicability;
- Early involvement of stakeholders with a special focus on the municipal boards and officials; and
- A review of municipal permitting processes to improve predictability.

2. REGULATORY BARRIERS TO INCREASE RESIDENTIAL DENSITY

Studies show that high housing costs in the metropolitan Boston area are due to the insufficient supply of housing. This scarcity of housing has caused housing prices to rise sharply so that homes are no longer affordable for residents attracted to the area for jobs and quality of life. The reasons for this shortfall in supply are complex, but clearly a primary factor in the lack of supply is restrictive municipal zoning and other land use regulations.

Research shows that in Massachusetts, there are two main categories of regulatory barriers to new development: extensive permitting process requirements for housing developers, and zoning regulations that limit the land that is available for higher density development. Both of these factors appear relevant in the MetroWest corridor, where large lot zoning and long permitting processes are quite typical. Specific barriers are as follows:

Impediments to the permitting process for housing developers

- Prolonged permitting process and complicated appeals discourage developers.
- Impact fees and permitting costs place additional cost on homebuyers and developers.
- Contradictory state regulations are enforced by different authorities. Often these governing bodies have little communication with each other.

Zoning regulations that limit the land that is available for higher density development

- Home rule gives municipalities in Massachusetts the power to adopt, amend, and repeal ordinances or bylaws. This allows municipalities to adopt even more stringent bylaws than what is dictated by state legislation.
- In response to local goals, many municipalities have adopted large lot zoning and few opportunities for multi-family developments, placing an absolute constraint on the number of homes which can be built and driving up home prices.
- Euclidean zoning often mandates single use development and makes traditional development patterns with high-density housing and nearby commercial areas almost impossible to create.
- Environmental protection laws, while important, limit the number of buildable lots in Massachusetts. Often, local municipalities will impose even more stringent bylaws.
- Building codes are often variably interpreted at the local level, creating confusion for developers.

Recommendations

Altering regulations based on the findings of this report could significantly improve the environment in which land and housing decisions are made. Additionally, further gradual policy changes striking a balance between incentives and mandates will be crucial to creating more affordable housing and compact development.

- Reducing the minimum lot size would allow for the development of more affordable housing.
- The implementation of form-based zoning codes is an innovative way to promote sustainable development that supports mixed-use neighborhoods with a range of housing types.
- Encouraging appropriate streamlining permitting techniques and other incentives help motivate developers to construct smaller, denser dwellings.

Changes in state legislation should be made in order for municipalities to grow in a more sustainable manner.

3. PRECEDENTS FOR ACHIEVING GREATER RESIDENTIAL DENSITY

This study analyzed nationwide exemplary cases to compile a list of “best practices” to aid the municipalities within the 495/ Metrowest region in addressing the shortage of workforce housing. This list shows that there are many tools municipalities can use to spur relatively dense, affordable housing development. These tools include incentives that make projects more attractive to developers, zoning revisions that foster sustainable, compact development and techniques that encourage community stakeholders to support these kinds of developments.

One of the most important initiatives a municipality can take is to create incentives for developers. By easing the process for developers, and in turn reducing development costs, a municipality can become more attractive for development. These incentives include:

- Density bonuses that provide developers a greater density or Floor Area Ratio (FAR) than traditionally allowed in exchange for affordable rents or sales prices on some of the units.
- A streamlined application process that will speed up the permit and application process for developers, potentially saving them weeks or months of waiting time.
- Transfer of development rights, a land use regulatory tool that provides landowners or developers who wish to build in a preferred-growth area the ability to transfer development rights from areas where growth is discouraged, thus gaining a higher density on their project.

Another avenue that municipalities should take is the creation of flexible zoning measures that provide for a greater range of land-development patterns than allowed under traditional zoning. These measures include:

- Inclusionary zoning that mandates that a set percentage of units in a new residential development, or one being converted to residential, be made affordable.
- Cluster zoning and cluster development that permits the building of residences on smaller lots, with the land saved from the reduction of the lot size creating protected open or recreational spaces.
- Planned unit developments that emphasize flexibility in design by allowing various land-uses to be placed side-by-side, decreased building setbacks and lot sizes, greater building heights, and more housing units.

Executive Summary

Zoning and design should directly address municipal goals for the particular neighborhood. Traditional neighborhood developments encourage smaller lots with reduced setbacks, narrow streets, wide sidewalks, and traditional style architecture. Transit-orientated developments concentrate residential development near centers of mass transit, thus emphasizing walkability. Mixed income housing interweaves housing units for varying income levels throughout a new development while maintaining an appearance consistent with market-rate housing. A variety of housing types allow multi-family housing, “in-law” apartments, duplexes, accessory apartments, and rehabilitated structures adapted for residential use by-right in zoning districts across a municipality.

To be successful, these measures designed to increase density and affordability in municipalities must gain the support of the community. Municipalities can take a range of steps to increase public approval for their proposed measures. Some of these are:

- Obtaining public input through workshops, meetings, and forums as a way to involve the public in the planning process;
- Conducting charrettes to develop ideas used for neighborhoods, streets, master planning or even residential density;
- Gaining the support of elected officials, as residents look to them for leadership;
- Building excitement and fostering effective communication through careful word choice;
- Utilizing the local media to disseminate information to residents and thus potentially diffuse unfounded fears from higher density proposals;
- Gaining the support of corporate leaders as they are stakeholders in the community;
- Employing visualization techniques that show proposed plans or development scenarios as a way to encourage public participation and discourage unfounded fears of density; and
- Utilizing the municipal website as useful medium for posting upcoming issues, meetings and agendas, as well as showing maps and other visual aids.

Examples from across the country show that the implementation of development incentives, progressive zoning laws, and a successful citizen participation process can help cities and towns implement relatively dense housing developments that are affordable and sustainable. It is the goal of the study that with the aid of these proposed “best practices,” communities of MetroWest will be able to create new methods for implementing workforce housing initiatives.

4. INNOVATIVE DESIGN TECHNIQUES TO ACHIEVE RESIDENTIAL DENSITY

This study examined design techniques to create beautiful, functional higher density housing that addresses many of the concerns and issues noted in the previous reports. We have chosen ten case studies that specifically address the issues of density and sustainability in housing. Through our research we have identified the following as key criteria that make higher density design successful:

- Organization of public and private space,
- Separation of pedestrian and vehicular traffic,
- Strategic techniques that magnify smaller spaces,
- Effective on-site storm water management,
- Use of alternative energy sources and green building materials,
- Techniques that ensure better affordability.

While each case study varies in location, intensity, and innovations, all provide key lessons that have inherent applicability to the MetroWest Corridor.

Case Studies

Radburn, New Jersey is an important historical example that sought to put the automobile in its place – away from potential pedestrian walkways and living spaces. In addition, Radburn revolutionized the way neighborhoods are spatially organized, by arranging the housing prior to drawing lot lines.

James Rose Center in Ridgewood, New Jersey shows how living spaces can be deconstructed and rearranged to balance public, private, and green spaces. In addition, the work of James Rose demonstrates multiple techniques that magnify small spaces to make them appear larger.

Village Homes in Davis, California offers many innovations in natural on-site storm water management, and preserves common open spaces that are connected through pedestrian pathways and are used for fruit bearing trees.

Wellington in Breckenridge, Colorado was created in response to a severe shortage of workforce housing. While maintaining stringent affordability standards, Wellington also has key sustainable features including a riparian corridor.

Greenwood Avenue Cottages in Shoreline, Washington is a compact infill development of eight small single family homes that demonstrate how very small homes can be both beautiful and successful in the marketplace.

Executive Summary

Kentlands in Gaithersburg, Maryland and Bamberton (proposed) are two New Urbanist developments by Duany and Plater-Zyberk that incorporate mixed use, diverse housing choices, and walkability in the creation of the planned communities.

Highlands Garden Village and Holiday Neighborhood in Colorado are two premiere developments that emphasize green building practices, mixed use development, and a diversity of housing choices.

Caldwell Farm in Newbury, Massachusetts serves as an award winning local example of a cluster development that preserved a large amount of open space.