

**New Hampshire Department of Transportation
Massachusetts Executive Office of Transportation**

I-93 Transit Investment Study:

**A National Review of
Transit-Supportive Land Use Practices
and an Analysis of
New Hampshire and Massachusetts
Land Use Regulations**

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Introduction

This technical memorandum summarizes our review and assessment of the zoning ordinances and, where applicable, comprehensive plans for New Hampshire and Massachusetts towns and cities in the I-93 Transit Investment Study Area. It does not address other ordinances. Its primary purpose is to assess whether the existing regulations and strategies promote or impede opportunities to support future transit systems through the implementation of various transit-related land use policies and strategies.

This memo is organized in two sections. The first is broken into nine subsections, each of which describes the role of a specific zoning and / or land use planning technique in implementing transit-supportive land use strategies. This includes a discussion of such approaches as station area zoning, density, mix of uses, and parking standards. Within each subsection is a summary of successful national models, based on our knowledge and research of transit-oriented development (TOD) zoning strategies and techniques, and general best practices. The second section assesses the degree to which each jurisdiction's zoning ordinances utilize these strategies and, as appropriate, identifies opportunities to facilitate transit-oriented development.

National Review of Land Use Planning Techniques and Strategies

1. Station Area Zoning

The first, fundamental step towards facilitating transit-supportive land use is to ensure that zoning ordinances allow the creation of zones with land uses and densities that make possible the implementation of TODs. Zoning codes can achieve this through a variety of methods that generally fall into three principal categories: Euclidean base zoning, an overlay zone, or a floating zone.

Euclidean, or traditional, zoning separates land uses and usually contains explicit regulations such as bulk and height controls. Development projects that meet all regulations may be developed as-of-right.

Overlay zones, by contrast, are created to control land use for a purpose that does not coincide with existing zoning; these could include protecting the environment or preserving historic sites. The overlay zone, as its name implies, is placed on the zoning map over a base Euclidean zone.

The overlay modifies, eliminates and / or adds regulations to the base zone. Land within the overlay is subject to the rules both of the overlay and the base zone. Overlays effectively provide land use control without increasing the complexity of existing regulations.

Floating zones contain criteria establishing the location of the zoning district, but the zone is not mapped until an application for development that fulfills all of the regulations is approved. This approach allows jurisdictions to avoid a mapping controversy until specific projects are submitted. This approach also provides time for the developer or TOD proponents to conduct community outreach and build support for the proposed project.

Some jurisdictions have found that generic overlays are too blunt a tool to facilitate the fine-grained TOD development they envisioned, and have replaced them with station-specific base zones. This approach has proven to be more effective, planners say, because it allows the jurisdiction to tailor the zoning to station areas and create market-responsive bonuses and performance standards. Finally, although an overlay district is a flexible tool, it should be mapped with some care. Noncontiguous land mapped within the same overlay district should share characteristics that qualify it for special treatment and distinguish it from other land.

Form-based zoning codes are a newly emerging technique for simplifying the development process and allowing the flexibility that helps to facilitate TODs. Form-based codes place emphasis on building form as opposed to land use, setting requirements for structure types and characteristics such as setback, building height and floor area ratio (FAR). A building is permitted anywhere within the zone regardless of use, as long as it conforms to these requirements. The intent of a form-based code is to encourage use diversity among visually compatible structures. Very few jurisdictions have chosen to use this zoning approach: California is the only state that has adopted enabling legislation.¹ Based on performance, it may become a useful tool in encouraging a diversity of uses and in alleviating developer concerns about delays in the permitting process.

National Models

Seattle, WA undertook a Station Area Planning program in 1998 to focus on future development around stations that were proposed in Sound Transit's 1999 adopted alignment. Station Area Overlay legislation was passed by the City Council in 2001. This created districts that prohibited auto-oriented uses (drive-in businesses and vehicle repair facilities) and revised parking

¹ Tomabari, Edward A. "Smart Growth, Smart Choices Series: Mixed-Use Development," (National Association of Home Builders, January 2005).

standards within a quarter-mile of proposed light rail stations to preserve future TOD opportunity areas. Overlay districts include the following characteristics:

- Residential uses at street-level are prohibited along principal pedestrian streets.
- Specific activities are excluded, including drive-in businesses and industrial uses.
- Flexible parking standards are encouraged, and design standards call for parking to be placed at the rear or side lot lines of a structure.
- Nonconforming uses cannot be expanded by more than 20 percent of the existing gross floor area of an existing use.

Portland, OR created interim development standards to prevent undesirable land uses from being developed before station area plans were enacted. In 2004, the City created Light Rail Transit Station overlay zones that contain very detailed requirements on site design and location of uses. The requirements were designed to encourage a mix of residential, commercial and employment uses within the zones.

Minneapolis, MN is currently amending its comprehensive plan to designate the areas around each of the six neighborhood stations on the Hiawatha Corridor light rail system as transit station areas. This process is occurring in two stages. The first stage establishes pedestrian overlay zones in the station areas and creates additional regulations and incentives for development in these areas. The second will result in recommendations for changes to the “primary” zoning districts.

Best Practices

- Overlay districts can be an effective interim measure to control undesired land uses and preserve TOD opportunity areas while station area plans are being completed. A base zone can replace the overlay when station area planning is completed.
- Overlay districts are effective when applying design standards or other general guidelines to areas throughout the jurisdiction, such as around station areas.
- Base zones are generally the most effective method for controlling land uses.
- A floating zone can be used to enact a TOD ordinance to avoid mapping controversies. It should contain very specific location criteria and provide the opportunity for public input during the planning process, not during rezoning or approval.

2. District Boundaries

The boundaries of TOD zones are generally defined by the distance a pedestrian is willing to walk in ten minutes. This distance is typically a quarter- to a half-mile around a transit station, although some jurisdictions have chosen TOD boundaries based on their community's unique geographic characteristics.

While many jurisdictions set boundaries on a straight-line radius from the transit station to the district edge, the distance along city streets more accurately measures "walkability" when adjoining streets are not connected, the topography is severe, or physical features intervene. In environments where bicycling is common and / or encouraged, a bicycle travelshed two miles from the transit station also would have implications for land use.

In order to achieve the greatest density of transit, employment, and retail uses, jurisdictions require the most intense development to locate adjacent to transit stations. Some jurisdictions further refine this approach by allowing medium intensity uses to locate between a quarter-mile and half-mile of the station. Such a gradation of intensity helps to mitigate the impact of the highest intensity uses on areas outside of the transit station zone and is similar to the village development pattern that is common in New Hampshire. In addition, some jurisdictions have enacted buffer zones or height planes, in which the maximum permitted building height decreases for parcels approaching the edge of the transit zone.

National Models

Lakewood, CO passed legislation in February 2007 creating Transit Mixed-Use (TMU) districts in the station areas surrounding four planned stations on the West Corridor of the new light rail line stretching from Golden, CO into downtown Denver. The TMUs are designed to encourage development that has a sufficient density of both residents and employees and appropriate mix of uses to support the light rail line. The Sheridan Boulevard Station will be approximately 90 acres, and will contain five sub-areas that allow a mixture of commercial and residential uses and an 800-space parking structure.

Best Practices

- Transit station zones are typically mapped within a quarter- to half-mile from stations.
- Some jurisdictions have created location criteria to help determine which adjacent properties could be included in the transit zone once it is mapped and rezoning requests

are filed. These criteria relate to land use characteristics and conditions that are transit-supportive.

3. Mix of Uses

The creation of a mixed-use commercial core that includes residential uses is the key land use planning action in creating a transit-supportive environment. While this concept is sometimes presented as “new” by planners, it is actually a return to the traditional development patterns of New England communities. This type of development should be built within the TOD boundary at a density that supports transit. The percentage of retail, office and residential uses generally varies based on station / neighborhood types and market demand. Convenient transit that is accessible to retail, housing and employment can reduce traffic congestion during peak hours by shifting local driving trips from arterials to walking trips within the TOD. Eventually, less road capacity will be needed if the mix of uses helps to diminish peak travel demand.

Mixed uses are integral to the creation of TODs from a transit ridership, traffic management, land use efficiency and neighborhood vitality perspective. Customers are more willing to commute by transit if convenience shops and other daily supportive services (drycleaners, day care, banks) are located near stations. TODs promote balanced, bi-directional traffic flows and allow for more efficient trip consolidation. If space is divided among office, commercial and residential uses, trips can be more balanced through the day and week. This mix of uses also creates opportunities for improved land use efficiency: nighttime theatergoers and daytime office workers, for example, can share parking in the same facility. These types of purpose and spatial efficiencies can help to reduce the scale of suburban activity centers. Finally, mixed uses increase neighborhood vitality and improve the opportunities for social interaction.

Determining the type of transit station can provide a context in which to identify appropriate land uses. Regional transit stations in mature areas (such as stations in downtowns and edge cities) will serve the most users and are most suitable for high intensity employment, residential and retail uses. Developing areas designated as regional growth centers, including the areas surrounding highway interchanges, also can be zoned for high intensity uses.

Neighborhood and community stations in either mature or developing areas can serve and support low intensity commercial uses and lower residential densities. Neighborhood TODs also provide an opportunity for affordable housing because land prices in these areas generally will be less costly than more intense station areas, enabling developers to build housing units at a lower cost while meeting state and local affordable housing goals.

Regional and district TODs generally will have larger core areas (i.e., the transit station and the immediate surroundings around which the district is developed) than community and neighborhood stations. Larger mixed-use cores often include supermarkets, professional offices, restaurants, service and entertainment uses, comparison retail and employment-intensive office and light industrial uses. The size and location of the core commercial area will reflect market demand as well as proximity to transit. In all areas, upper floor office and residential uses help to create a 24-hour environment and generate volumes of shoppers to support retail uses.

In mature areas, station area planning should identify existing uses that fit the concept of TOD, as well as transit-supportive uses that are missing from the land use pattern. Site improvements may be needed at some properties, which many jurisdictions address through design guidelines. In addition, infill sites should be identified so the density and intensity of the neighborhood can be increased, if necessary, to support development patterns that meet that mobility needs of the community.

Uses that rely on automobile and truck traffic are not appropriate in TOD areas, although some jurisdictions allow drive-throughs and other auto-dependent uses to remain in order to avoid the issue of nonconforming uses. This, however, is not a best practice. Such uses should be deemed legally nonconforming uses. Uses that are not appropriate for TODs and have been prohibited by jurisdictions include service stations, car washes, outdoor and mini storage facilities, motels, and car repair facilities.

Different uses are appropriate in different types of transit station areas. The appendix contains a table of recommended transit-supportive uses.

National Models

San Diego, CA's TOD Design Guidelines encourage the development of village greens and public plazas around transit stops and core commercial area to serve as public activity centers. The guidelines also encourage the City's Park and Recreation Department to allow TODs to meet the City's park standards through the use of small and frequent parks and plazas.

Gresham, OR created four zones for the area surrounding a light rail station. Each zone encourages a minimum amount of a certain type of development, but allows for a mix of other types of development, subject to development standards. This plan allows for a mix of uses within a broader development context.

Seattle, WA prohibits manufacturing uses in TODs because such uses generally have few employees per acre. However, **San Diego's** TOD Design Guidelines say that light industrial uses with low employment densities can be appropriate in some TODs, provided they are located outside of the mixed-use core and are compatible with other TOD uses.

Tacoma, WA utilizes “mixed-use districts” to encourage development tailored to each center’s residential, commercial, or industrial character. These districts replace the zoning code entirely and are combined with additional design and engineering guidelines.

Best Practices

- Regional transit stations in mature areas serve the most users and are most suitable for high intensity employment, residential and, retail uses. Developing areas, specifically the southern region of New Hampshire, can best guide the development which will accompany projected population growth rates through areas zoned for higher-intensity use.
- Regional and district station areas generally will have larger core areas than community and neighborhood station areas. Larger mixed-use cores often include supermarkets, professional offices, restaurants, service and entertainment uses, while neighborhood and community stations can serve and support low intensity commercial uses and lower residential densities.
- Different uses are appropriate in different types of transit station areas. In mature, regional station areas, entertainment centers, offices, and high-end retail are appropriate, while in developing neighborhood areas, mixed-use residential, and small convenience retail should be permitted.

4. Development Density and Intensity

The economic viability of transit systems is tied to their ability to attract riders. Numerous studies have identified a positive link between ridership and the density and intensity of development around transit stations. Reid Ewing’s 1997 survey of 11 TOD design guidelines across the United States concluded that a residential density threshold of 7 units per acre (basic bus service), 15 units per acre (premium bus service) and 20 to 30 units per acre (for rail services) were most common.² These numbers are not relevant to specific sites or corridors, but represent common density thresholds.

² Ewing, Reid. *Transportation and Land Use Innovations*. Chicago: Planners Press, 1997.

Because density is central to the application of TOD principles, jurisdictions should define density precisely and apply the definition within the zoning regulations. Residential density can be measured several ways: as *gross density*, which includes all uses, streets and open space and is usually measured in persons per square mile; *net density*, which includes residential and associated uses and open space and is expressed in dwelling units per acre; and *net-net density*, which includes only residential development on site and exclude streets, higher uses, public parks and undevelopable spaces, and is also measured in dwelling units per acre. The effects of using gross versus net-net density are dramatic, as the net-net densities can generate yields twice as high as the gross density measure.

Most areas are not built at this density or intensity. A single-use subdivision of single-family detached homes, for example, typically is built at a net density of one to eight units per acre, or three to eight units per acre if clustered. Houses built at zero lot lines can reach five to 10 units per net acre, while townhouses typically are eight to 16 units per net acre. By contrast, garden apartments typically include 16 to 40 units per net acre, while mid-rise and high-rise apartment buildings can range from 30 to as many as 300 units per net acre.

Employment density also has been shown to be more influential than residential density at generating transit ridership. Suggested densities for employment and commercial centers vary from .35 to 2.0 FAR, depending on the presence of residential uses and structured parking facilities. A national study of transit ridership patterns found that downtown densities of 100 workers per gross acre translates, on average, into 300 boardings per day for suburban light-rail stations that are surrounded by low-density (five persons per acre) residences 20 miles outside of a downtown.³

The level of transit service and the resulting level of pedestrian traffic will determine to a large degree the intensity of uses that can be supported in the station area. TODs with high levels of transit service are most appropriate for intense uses; TODs with less frequent service generally can support lower use intensities.⁴ Densities also may be determined by considering the costs of transit operations. Transit providers may work with jurisdictions to determine the density needed to support transit by calculating the number of trips per acre of developed land.⁵

³ Parsons Brinckerhoff Quade & Douglass, Inc., R. Cervero, Howard/Stein-Hudson Associates, and J. Zupan. "Regional Transit Corridors: The Land Use Connection," *TCRP Project H-1*. Washington, D.C.: Transportation Research Board, National Research Council, 1995.

⁴ Morris, Marya. "Creating Transit-Supportive Land-Use Regulations." Chicago, IL: American Planning Association, *Planning Advisory Service* (1996): 41.

⁵ White, S. Mark. "The Zoning and Real Estate Implications of Transit-Oriented Development," *TCRP J-5, Topic 3-03*, Washington, D.C.: Transportation Research Board, National Research Council, September 1997 draft: 2.

National Models

San Diego encourages developers to mix building types to create a transit-supportive housing density that is compatible with surrounding neighborhoods. San Diego’s TOD Design Guidelines recommend average minimum densities of 12 to 25 dwelling units per net acre in TOD areas. The City determined that single-family detached housing could be built at 12 to 17 units per acre on small lots, with ancillary units (or “granny flats”) on some lots.

San Diego has also established minimum and maximum intensities for office development, which vary depending on whether a site has structured parking (see Table 1 below). The City strongly urges office developers to build structured parking and allows maximum FAR for office uses to be increased if recommended in a transit station area or community plan. However, the maximum allowed without structured parking implies that parking requirements would be reduced or a portion would be provided offsite.

Table 1: City of San Diego’s Minimum and Maximum Floor Area Ratios for Office Uses in TOD Zones

Without structured parking		With structured parking	
Minimum	Maximum	Minimum	Maximum
0.35	0.6	0.5	Set by community plans
0.35	0.6	0.5	

Source: City of San Diego Transit Oriented Development Design Guidelines

A study in **Washington State** stated that employment uses require at least 50 employees per acre to support transit service. This is, however, an employment density more typical of suburban areas than of dense transit districts. Office uses typically provide 250 square feet of space per employee. A center employing 50 workers per acre, then, would encompass 10,000 square feet, or an FAR of 0.29 (see Table 2).⁶ Increasing the FAR to 0.35 and even to 0.50 would yield 61 and 87 employees per acre, respectively.

Table 2: The Relationship Between Employment Density and Floor Area Ratio

Employees per acre	Floor Area Ratio
50	0.29
61	0.35
87	0.50

Source: HNTB

⁶ Morris, p. 41.

Compare these figures to the densities required to support transit in Table 3 and it is clear that the employment density required of transit should be higher than typical suburban standards.

**Table 3: Residential and Employment Density
Required to Support Transit Service**

	Intermediate Service Local Bus	Frequent Local Bus	Light Rail	Rapid Transit
Dwelling Units per acre	7 ^a	15 ^b	9 ^c	12 ^d
Residents per acre	18	38	23	30
Employees per acre	20	75	125+	

^a Average: Varies as function of downtown size and distance to downtown.
^b Average density over a two square mile tributary area
^c Average density for a corridor of 25 to 100 square miles to downtowns of 20 to 30 million square feet of nonresidential floor space
^d Average density for a corridor of 100 to 150 square miles to downtowns larger than 50 million square feet of nonresidential floor space

Source: Residential Densities: Regional Plan Association, 1976; Colman, 1976;
 Employment Densities, Ewing, 1996; Frank and Pivo, 1994.
 Cited in the course manual of the National Transit Institute’s Training Course
 for Coordinating Transportation and Land Use, p. 2.37, 2001.

Huntersville, NC (located 12 miles north of Charlotte) has prepared a TOD plan and neo-traditional zoning code in response to explosive growth over the past 15 years. The TOD-R district promotes residential growth with compatible commercial uses within a half-mile of rapid transit stations; the TOD-E district allows high-density office employment with FARs between 0.5 and 1.5. Additionally, sites within a quarter-mile of a proposed transit stop are not restricted as to housing type. This decision is an attempt to avoid the political controversy that often accompanies attempts to allow multi-family rezoning.

Mountain View, CA replaced an older shopping center that was adjacent to a commuter rail station with 400 housing units by increasing the density and using transit-supportive design guidelines. Net residential density for single-family homes is 12 units per acre, townhouses and rowhouses are 30 units per acre, and apartments are 50 units per acre. Average density is 22 units per acre, and all units are within walking distance of the transit station.

Denver, CO’s transit-mixed use zoning district allows FARs of up to five to one and reduces parking requirements by 25 percent. In order to qualify for this zoning, sites must be at least 12 acres and within walking distance of a transit station.

Best Practices

- Density is more important than mix of uses in influencing transit ridership. Residential and employment areas adjacent to transit station areas should be planned and zoned accordingly.
- A mix of residential building types (small lot single-family detached and attached housing, garden apartments and multi-family developments) should be permitted in TOD zones to create density sufficient to support transit.
- The difference between gross and net densities should be defined in the zoning regulations, and the distinction should be used explicitly.
- Employment densities of between 75 and 125 (or more) workers per acre are needed to support rapid/mass transit along corridors.

5. Regulatory and Policy Incentives

Most jurisdictions have found that land use regulations and design standards are only partially successful in creating the type of mixed-use, pedestrian-friendly, transit-oriented district they have envisioned. Numerous studies have concluded that public-sector policies and incentives are essential in overcoming the institutional constraints that can prevent successful TODs. Where “sticks” have limited utility, “carrots” can help. Carrots are incentives in the form of density or other bonuses, reductions or waivers of fees, land cost write-downs, and fast track permitting to counterbalance any increased development burden as a result of TOD requirements. In addition to incentives, developers value regulatory clarity and stability. Clear TOD policy support and direction from the local government will encourage developers to move non-traditional projects forward. This support can come in the form of a consolidated permit review process for projects in the TOD district, a centralized and easily accessible development code database, or flexibility through the permit review process.

The most common incentives used in TOD are density bonuses and relaxed parking standards. Density bonuses allow developers to construct more units on a site than would be allowed under existing regulations in exchange for helping a jurisdiction achieve public policy goals. These goals should be reflected in the city or town’s comprehensive plan. The most common use of density bonuses is to create dwelling units in market-rate developments that are available to low- and moderate-income households at below-market price points. Except in areas with buoyant real-estate markets and perhaps limited land, developers may not be interested in density bonuses. Many suburban developers do not believe the market will support maximum densities allowed under standard base zoning, much less bonuses. There are exceptions where bonuses can be used to leverage TODs: usually very strong real estate markets with a huge demand to

build as much commercial space as possible. Relaxed parking standards are another common TOD development incentive. Parking requirements are often based on the assumption that developers are constructing in a typical suburban, car-oriented environment, and will provide surface or structured parking for their developments. Reduced parking standards recognize that densities are higher, alternative transit is readily available, and car use is discouraged in TODs. In addition to supporting a pedestrian-oriented environment, reduced parking requirements typically decrease construction budgets, thereby making new development more financially attractive. Parking reductions can still meet the need of customers traveling to and from their destinations by car, but does so in non-conventional ways, for example shared parking facilities and use of municipal lots.

Developers often cite land assembly and packaging as being the most effective development incentive because TOD sites are often infill development created from smaller, irregular parcels that are owned by multiple entities. Developers of greenfield sites would not have to contend with the burden of land assembly. By pre-assembling and packaging infill sites for development, a municipality is helping to neutralize one of the challenges associated with TOD development.

Creating zoning incentives essentially involves four steps: establishing the purpose(s) of the incentives, selecting the amenities, determining what bonuses will be granted, and administering the program.

Once a jurisdiction has developed the purposes of the incentive program, based on the goals of the comprehensive plan, the policies should be articulated in the statements of legislative intent, together with the other statements of purpose for the TOD zone. The next step is to select the amenities: these could include affordable housing, preservation of historic resources, or the retention of existing open space. Zoning incentives are legally justified on either the “traditional externalities analysis” of the local government’s police power or on the aspect of the police power that empowers local governments to protect the public welfare. Incentives for public plazas and arcades have been justified on the basis of the “traditional externalities analysis,” where a rational nexus between the incentive and the public benefit resulting from the granting of the incentive must be shown.

When administering bonus programs, local governments must decide whether to grant bonuses as-of-right or use a discretionary process. Most jurisdictions do both. Even in cities where bonuses are granted as-of-right, the site review process provides the local government with an opportunity to shape the details of amenities. Even well crafted incentives are difficult to implement. Ambiguities in design guidelines make it important that the administrative

procedure for granting incentives be as explicit as possible so the public receives the benefit proportionate to the bonuses provided.

National Models:

Somerville, MA leveraged the extension of the MBTA's Red Line through Davis Square to reinvigorate a commercial and residential area that has fallen into decline during the 1960s and '70s. Through planning and land assembly, the City integrated existing structures with the redevelopment of over 170,000 square feet of office and retail space and new multi-family housing. The City designated a redevelopment area within the square that allowed for property acquisition and clearance, infrastructure improvements, and some public control over private development within the area. The City also worked with state and federal agencies to package grants to finance civic improvements, including streetscapes, public art, and park renovations.

Density bonuses in **Montgomery County, MD** have been used near the Bethesda and Silver Spring stations to alleviate developers of the cost burden associated with the inclusionary housing ordinance that requires affordable housing unit set-asides. The inclusion of this housing in office developments has helped to create a 24-hour live / work district.

Atlanta's Lindbergh City Center occupies 51 acres surrounding MARTA's Lindbergh subway and bus station. The 4.8 million square feet of development is made up of 2.7 million square feet of office space, 330,000 square feet of retail space, over 500 apartments, more than 350 condos and a 190-room hotel. The master plan for the TOD envisions a development of medium- and high-rise structures with decked parking centered on the Lindbergh station.

San Jose, Orlando and Portland have enacted variable impact fees for mixed-use projects, using a sliding scale to reduce the fees required of developers to reflect the reduced number of trips generated by mixed-use projects. Without these reductions, impact fees would have rendered proposed TOD projects financially infeasible.

Best Practices

- Incentives must be relevant to the development context to be effective. Density bonuses will not be effective where density is not controlled. In these areas, expedited permit tracking or tax write-downs may be more appropriate.
- Jurisdictions must decide whether to grant incentives as-of-right or through a discretionary process. Most local governments do both. Even in places where an as-of-right system is used, local governments can exert some control over the amenity through the site review process.

- Density bonuses are most effective in areas with buoyant real-estate markets and limited land.
- Other incentives used to leverage TODs include land-cost write-downs in return for equity participation, local grants, and tax abatement.

6. Design Guidelines

Transit-supportive urban design guidelines are used to both encourage and facilitate transit usage. Guidelines address building design, pedestrian orientation, landscaping, site design, and development scale. They are usually implemented in conjunction with zoning requirements, and, unlike zoning codes, allow for flexibility in the project review process. Rather than prescribing the method to achieve a development goal, design guidelines state the goal and provide multiple methods for achieving it. Zoning codes allow for TOD land uses, but design guidelines shape the appearance and experience of the TOD's built environment.

Design rules usually are advisory guidelines, not standards. Mandating design elements and improvements adds to the cost of development projects and can make them less appealing to developers. Therefore, most jurisdictions use incentives instead of standards to entice developers to build amenities. The decision to make design guidelines mandatory rather than advisory often depends on the regulatory context. In highly regulated environments mandatory standards may be effective; where the environment is lax, strict guidelines will reduce the attractiveness of the TOD. Some jurisdictions also have required certain design elements that support bicycle, pedestrian and transit uses, but these requirements are few. Often, design is best treated as a negotiable item as part of the development process.

An important dimension of promoting design is creating the kinds of amenities that will make the densities necessary to support transit more acceptable to potential transit riders. Research shows that good quality design and site improvements can “soften” perceptions of density.

National Models

Many excellent TOD design guidelines, including the TTA guidebook for the **Raleigh-Durham area of North Carolina**, have been written and are worth considering. An overview on “Pedestrian and Transit-Friendly Design,” prepared for the Florida Department of Transportation by Reid Ewing, lists several “essential” design elements for TOD:

- Medium- to high-densities
- Mix of land uses

- Short- to medium-length blocks
- Transit routes every half-mile
- Two- or four-lane streets (with rare exceptions)
- Continuous sidewalks wide enough for couples
- Safe crossings
- Appropriate buffering from traffic
- Street-oriented buildings
- Comfortable and safe places to walk.⁷

San Diego's *Transit-Oriented Development Design Guidelines* is another good source. The design principles within it are to be applied in the zoning ordinance when station area plans are drafted. For example:

Buildings must be of a sufficient intensity and density to create safe and active streets enhanced by a sense of enclosure and visual interest, and to support transit. Orienting buildings to public streets will encourage walking by providing easy pedestrian connections, by bringing activities and visually interesting features closer to the street, and by providing safety through watchful eyes and activity day and night. Moderate to high intensities and densities also support frequent and convenient transit service; and retail centers can provide a greater variety of goods and services if more residents and employees are within close proximity. (*City of San Diego TOD Design Guidelines*)

Somerville, MA created a Design Review Overlay District in the Davis Square neighborhood to help ensure that redevelopment and new construction fits within the context of the existing environment and encourages pedestrian activity.

Implementing TOD design guidelines can generate institutional conflicts within local government. Many transit-supportive design manuals call for generous turning radii at street intersections to allow buses to negotiate turns. Such designs are generally at odds with the minimalist street designs advanced by neo-traditionalists and TOD advocates. Neo-traditionalists practice the New Urbanist style of planning, which advocates for denser, pedestrian-friendly, mixed-use communities that reduce reliance on automobile use. In the case of proposed TODs in **California, Oregon and Virginia**, developers have been caught in a crossfire between traffic engineers and fire marshals who complained that planned streets were too narrow (for safety and liability reasons) and neo-traditional planners who insisted they were

⁷ Ewing, Reid. *Pedestrian- and Transit-Friendly Design: A Primer for Smart Growth*. Washington, D.C.: Smart Growth Network, 1999.

too wide (and thus auto-centric). Insurance underwriters also have a potential voice in TOD outcomes. A proposal to increase density bonuses by 25 percent around several **Los Angeles** Metrorail stations would have increased the fire code rating, which forced the City to back away from a TOD proposal.

Best Practices

- Many jurisdictions enact design guidelines in TOD zones to encourage good design. These guidelines, which are usually advisory, are contained within the TOD zoning ordinance. Other jurisdictions apply general design guidelines (guidelines that also can be applied outside of TOD areas), often through an overlay district.
- Mandating design elements and improvements adds to the cost of development projects and makes them less appealing to developers. Therefore, most jurisdictions use incentives instead of standards to entice developers to build amenities. However, in heavily regulated environments, mandatory standards are feasible.
- Selecting relevant amenities is an important part of promoting good design. Good design and site improvements “soften” perceptions of density.

7. Provisions Friendly to Bicyclists and Pedestrians

The success of a TOD largely depends on getting people out of their cars and onto their feet or bicycles. One way to achieve this modal shift is to provide a vibrant, safe, and interesting environment through which to walk or bicycle. Though this created environment is often an outgrowth of the design process described above, it can be augmented to specifically enhance the pedestrian experience through landscaping, street furniture, and pedestrian-friendly street-level business activities. Bike racks, showers, and designated bike lanes are useful in encouraging bicycle ridership.

Street design should reflect the prioritization of pedestrians and bicyclists over single occupancy vehicles (SOVs). For urbanized areas, this can be achieved through grid patterns of street networks, block lengths no longer than 400 feet, well-defined and enforced pedestrian crossings, and traffic calming techniques.

National Models

Zoning provisions requiring showering facilities have been recommended in **Atlanta’s** Lindbergh Station District zone and similar guidelines have been enacted in **Mountain View, CA** to serve workers commuting to their jobs on bicycles.

Somerville, MA provides extensive bike storage facilities at the Davis Square stop on the Red Line, and has used traffic calming techniques, including pedestrian safety islands, brick crosswalks, and pedestrian signalization, to reduce the speed of traffic flow and increase pedestrian safety.

Atlanta's Lindbergh Transit Station zone also contains specific design standards for public sidewalks, requiring a minimum width of 15 feet and creating space for street furniture, trees, signage and other facilities without obstructing pedestrian access.

Columbus, OH's TOD overlay zone requires bicycle parking facilities be installed within 50 feet of building entrances of all new office and multi-family structures.

Best Practice

- Zoning provisions requiring showers, bicycle parking, minimum sidewalk widths, and other amenities for bicyclists, pedestrians and transit users should be enacted to create a more pleasant built environment.

8. Parking

Managing the supply of and demand for parking is one of the fundamental challenges of a successful TOD. Plentiful parking encourages the use of single occupancy vehicles (SOV) over mass transportation alternatives. Studies have found that office buildings with similar designs, tenants, and transit service generated less SOV trips when parking is restricted.⁸ TODs strive to balance the demands of motorists with the needs of pedestrians, bicyclists and transit users. Several zoning tools have been developed to manage parking within TODs, including parking minimums and maximums, shared parking, offsite parking allowances, and the use of on-street parking.

Parking lots and structures consume land that could be used more efficiently and productively.⁹ Many jurisdictions attempt to return parking lots to a higher use by reducing parking requirements. Even in places where parking standards are reduced, fluctuations in demand can leave many spaces empty. Shared or joint use parking is a zoning requirement that addresses this situation. Adjacent or nearby uses can share parking spaces, whether in a shared parking lot or a larger parking structure serving many uses. Shared parking is especially effective when the uses'

⁸ Alverson, K. "An Evaluation of the Effectiveness of Transportation Demand Management Programs in Downtown Bellevue." Master's degree thesis. University of Washington. 1991.

⁹ Morris, p. 15.

peak periods of parking demand are staggered. Transit stations and entertainment complexes create a natural shared-parking arrangement because their demands for parking complement each other over a 24-hour period.

Several jurisdictions allow uses within TODs to satisfy a portion of their parking requirements with on-street parking. Installing short-term parking meters with high rates for long-term parking is a common adjunct to this policy, so customer turnover and high yields from street parking are realized. Mandatory employee off-site parking for commercial uses is another strategy. Some jurisdictions also have created employee-cashout programs that encourage employees to use transit by adding to their wages the employer's equivalent cost of providing a parking space.

The amount of parking that will be required at each transit station typically is a function of its proximity to the Central Business District (CBD). Stations at the end of a transit line will serve the largest commutershed and require the most parking. Because demand at these stations is high, parking maximums should be greater than at station areas closer to the CBD, where transit users can choose among stations and where the potential time saved by taking transit instead of driving is less. Parking maximums can be reduced incrementally based on a station's proximity to the CBD.

National Models

Denver, CO does not impose parking requirements in the downtown commercial core, but has created requirements for residential mixed-use and TOD zones: 2 spaces per 1,000 square feet of office space, 3.3 spaces per 1,000 square feet of retail space, and 1 to 2 spaces per housing unit, depending on the number of bedrooms. Developers can apply for a 50 percent reduction in the requirement if the required parking is close to transit and is shared among uses.

Portland, OR has adopted parking maximums in several of its TOD zones, including the Cascade Station / Portland International Center Plan District, where maximums have been enacted for properties adjacent to a light rail line.

San Diego, CA recommends parking reductions of 2 – 15 percent for different types of land uses in the City's urban TODs. The Metropolitan Transit Development Board (MTDB) entered into a license agreement for parking with a theater owner to share the transit agency parking lot at Grossmont Station. To use the parking lot, the theater pays MTDB under terms of an annual lease. Theatergoers can use the parking lot at all hours, subject to the same limitations of trolley

patrons (for example, no parking over 24 hours). San Diego also allows retail, office and public uses to count on-street spaces adjacent to their properties as part of their required allotment.

Best Practices

- Many jurisdictions have reduced the parking required of land uses in TOD zones through parking maximums, shared parking, offsite parking, and on-street parking. These reductions usually are expressed in a percentage reduction from the standard required in the jurisdiction's parking regulations.
- Parking standards should be reviewed every few years to determine if they are effective.
- Shared or joint use parking can be used where fluctuations in parking demand leaves many spaces empty during parts of the day.
- Several jurisdictions allow uses within TODs to satisfy a portion of their parking requirements with on-street parking. Retail, office and public uses to count on-street spaces adjacent to their properties as part of a required allotment.
- Stations at the end of a transit line serve the largest commutershed and require the most parking. Because demand at these stations is high, parking maximums should be greater than at station areas closer to the CBD.
- Many municipalities have established parking authorities to fund and build public parking structures at TODs. This allows jurisdictions to manage the supply of parking where parking standards are reduced.

9. Housing affordability

TODs provide a unique opportunity for increased affordable housing opportunities in both existing and new housing stock. Housing that is located adjacent to mass transportation minimizes transportation costs in relation to total household budget. New higher-density construction in TODs provides an opportunity for municipalities to incentivize developers to include a percentage of affordable units. Mixed-income housing is desirable because it provides the range of housing types and price points that allow for the population mix necessary to sustain a diverse, vibrant community.

The zoning tools used to encourage the development of affordable housing include density bonuses, maximum set-aside provisions, and waiving or relaxing certain zoning regulations. These tools are used to implement “inclusionary zoning,” which either requires the inclusion of affordable housing in new construction, or creates special incentives to encourage it. It is important to note that New Hampshire state law does not allow for inclusionary zoning to be made mandatory; it must be a voluntary incentive. Mandatory inclusionary zoning is legal in

Massachusetts. A 1999 Massachusetts Housing Partnership Fund study found that more than 100 municipalities (out of 351) in Massachusetts have some form of inclusionary zoning.¹⁰ New Hampshire's only state statute regarding affordability requires that manufactured housing is provided for in local zoning codes.¹¹

Massachusetts' Chapter 40B of the General Laws allows non-profits or other eligible entities to seek local approval for affordable housing without regard to zoning or other locally-adopted land use controls if less than 10 percent of the municipality's housing stock is subsidized. The intent of the statute, which is essentially a statewide inclusionary zoning law, is to increase the supply and improve the distribution of low- and moderate-income housing through the state. While New Hampshire's state legislature does not allow for mandatory inclusionary zoning, the frequency of southern New Hampshire localities adopting voluntary affordability zoning codes is comparable to Massachusetts.¹²

Jurisdictions without explicit provisions for affordable housing in their TOD zones may address the issue through general housing policies and inclusionary zoning. California, Maryland, Connecticut, New Hampshire, New York and Virginia have enacted legislation to enable or require local governments to adopt inclusionary zoning provisions for affordable housing, and New Jersey, Oregon and Florida have statewide policies and / or programs.¹³

Some jurisdictions also have enacted variable impact fees for TOD projects, using a sliding scale to reduce the fees required of developers to reflect the reduced number of trips generated by mixed-use projects.

National Models

All units in **Renton, WA's** Overlake Station qualify as affordable housing. The joint development project of King County, the King County Housing Authority and a private developer utilizes tax-exempt financing and federal housing tax credits to provide units to households earning 60 percent of the county's median income (\$35,000 to \$40,000 per year).

¹⁰ Philip B. Herr and Associates. "Zoning for Housing Affordability." Boston, MA: Massachusetts Housing Partnership Fund, 2000.

¹¹ State of New Hampshire, Revised Statutes Annotated, Title LXIV, Chapter 674, Section 32.

¹² Herr, Philip B. "Zoning for Affordability in Massachusetts: An Overview." National Housing Conference Affordable Housing Policy Review: Inclusionary Zoning: Lessons Learned in Massachusetts, 2002. 2 (1): 4.

¹³ Morris, p. 29.

Each unit also will receive a bus pass as an incentive to use transit and reduce automobile congestion in the area.

Los Angeles County provides a density bonus, subject to the planning director's review, of up to 50 percent if at least 33 percent of the total dwelling units in a development are provided for lower-income households, or at least 50 percent of the units are provided for qualified senior citizens. To obtain the bonus, the developer must record covenants to ensure that lower-income households and / or senior citizens will occupy the bonus units for 30 years.

Atlanta, GA's Lindbergh Transit Station Area district includes an incentive for affordable housing. It allows developers to increase the floor area of residential uses to two times the gross lot area, from a base of 1.0 for nonresidential uses, 0.696 for residential uses, and 1.696 for mixed-use projects, if at least 20 percent of the units (for sale or rent) are affordable. The Atlanta City Council has defined the price of low-income units at 1.5 times the city's median family income and the rent of low-income units at 60 percent of fair market rent. Developers must agree to keep the units affordable for at least 20 years.

Montgomery County, MD's Moderately Priced Dwelling Unit Law has been effective at providing affordable housing for many years. It is a mandatory program requiring that 12.5 – 15 percent of all housing units in developments of 50 units or more be priced affordably. In exchange, the developer may build up to 22 percent more units than the zoning would otherwise permit. Moderate income households (earning 65 percent or less of the county median income) may purchase or rent housing at a below-market rate. Moreover, one-third of the rental units are set aside for low-income households, defined as households at or below 80 percent of the county's median income. Units must be integrated architecturally and spatially into the development.

Charlotte, NC's transit station area joint development policies, adopted in 2003, encourage banks to offer LEMs for home or condo buyers near transit stops.

Best Practices

- A few jurisdictions, such as Los Angeles County and the City of Atlanta, have included affordable housing density bonuses among their TOD zoning provisions. However, these jurisdictions are the exception, not the rule. Most local governments address affordable housing through general policies that apply in residential areas, including TODs.

- Jurisdictions without explicit provisions for affordable housing in their TOD zones may address the issue through general housing policies and inclusionary zoning requirements. The zoning tools used to require or encourage the development of affordable housing include density bonuses, maximum set-aside provisions, and waiving or relaxing certain zoning regulations.
- Mandatory set-asides require that residential projects of a certain size or larger include a percentage of units for low- and moderate-income households. Some density bonuses are combined with mandatory set-asides to offset the developer's costs of providing the lower income units.

Appendix

Evaluation of the Transit Supportiveness of Selected Land Uses			
	Group		
Use Classification	1 ¹⁴	2 ¹⁵	3 ¹⁶
Residential Uses			
Single-family residential ¹⁷			
Lots greater than 5,000 square feet	-	X	-
Lots 5,000 square feet or less	X	-	-
Multifamily residential	X	-	-
Elderly residential	X	-	-
Public and Semipublic Uses			
Cemeteries	-	-	X
Clubs and lodges	-	X	-
Convalescent facilities	-	-	X
Cultural institutions	X	-	-
Day care, general	X	-	-
Government offices	X	-	-
Hospitals medical offices	X	-	-
Park and recreation facilities ¹⁸	-	X	-
Public safety facilities	-	X	-
Residential care	-	X	-
Schools, colleges and adult education	X		-
Commercial uses			
Ambulance services	-	-	X
Animal sales and services	-	X	-

¹⁴ Group 1 = Transit Supportive

¹⁵ Group 2 = May be transit supportive with appropriate development standards

¹⁶ Group 3 = Not transit supportive

¹⁷ Small lots or attached single-family housing is transit supportive.

¹⁸ Small parks are transit supportive; large facilities such as golf courses and multiple playing fields are not.

Evaluation of the Transit Supportiveness of Selected Land Uses			
Animal boarding	-	-	X
Banks and savings and loans	X	-	-
with drive up service	X	-	-
Building materials and service	-	X	-
Commercial recreation and entertainment ¹⁹	-	X	-
Eating and drinking establishments	X	-	-
fast food or take out	-	X	-
with drive through service	-	X	-
Bar and tavern	X	-	-
Food and beverage sales	-	X	-
Funeral and investment services	-	-	X
Laboratories ²⁰	-	X	-
Maintenance and repair services ²¹	-	X	-
Nurseries, commercial	-	-	X
Offices, business and professional	X	-	-
Personal improvement services	-	X	-
Personal services	X	-	-
Research and development services	-	X	-
Retail services	X	-	-
Volume discount retail	-	X	-
Travel services	X	-	-
Vehicle equipment sales and service ²²	-	-	X
Automobile rentals	-	-	X
Automobile washing	-	-	X
Commercial parking garage ²³	-	-	X
Commercial surface parking	-	-	X
Service stations	-	X	-
with convenience retail	-	-	X

¹⁹ Indoor uses such as cinemas and theaters are transit supportive.

²⁰ Small-scale facilities such as medical labs are transit supportive.

²¹ Neighborhood-oriented businesses are transit supportive.

²² Vehicle sales and service can be transit supportive if on site storage of vehicles is limited.

²³ Garages can be transit supportive if active, nonparking uses are located at street level

Evaluation of the Transit Supportiveness of Selected Land Uses			
Vehicle equipment repair	-	-	X
Vehicle equipment sales/rental	-	-	X
Vehicle storage	-	-	X
Visitor accommodations	-	X	-
Hotels	X	-	-
Bed and breakfast inns	X	-	-
Motels	-	X	-
Industrial uses			
Includes truck stops, manufactured home sales, cold storage plants, junk yards and solid waste transfer stations	-	-	X
Light industrial/employment	-	X	-

Source: Adapted from Planning and Design for Transit, Tri-Met, March 1993
Cited in *Creating Transit-Supportive Land-Use Regulations*, Planning Advisory Service Report 468, 1996.

Analysis of Existing Zoning Ordinances and Recommendations

Bedford, NH

Bedford Zoning Policies

Station area zoning

Bedford's Zoning Ordinance maps the town into ten base districts, three overlay districts, and one performance zone. The F.E. Everett Turnpike (I-293) and Daniel Webster Highway (Route 3) run along the Town's eastern border with Manchester, and are intersected by Route 101, which is the main east-west arterial. Route 101 merges with and becomes part of I-293 at this juncture. The prospective rail transit line runs along the western border of Manchester, directly across the Merrimack River from the convergence of these major roads and highways. The performance district (PD) has been mapped to cover approximately 75 percent of the eastern border area of Bedford. The purpose of this district, and all districts that use performance standards, is to discourage the separation of land uses by utilizing a more flexible land use planning tool that measures the quantifiable impacts of each development. In order to develop in the Route 101 performance district, the developer must receive Planning Board approval by demonstrating that the proposed project meets all of the performance standards outlined in the Zoning Ordinance. These requirements include dimensional, parking, environmental, signage, lighting and landscaping standards. This type of land use planning tool allows for greater development flexibility while maintaining the Town's overall design and usage controls. The Zoning Ordinance indicates that in 1997 Bedford chose to delete multiple residential dwellings from the list of permitted uses in the Route 101 PD. While a number of other transit-supportive uses are allowed, such as personal service establishments, banks, day care facilities, restaurants, and professional offices, the absence of residential uses will prevent this district from achieving a fully transit-supportive level of development. Without residential uses, the district will not be able to sustain a vibrant, pedestrian-friendly, 24-hour neighborhood.

Areas zoned for Apartment Residential are located on the western edges of the Route 101 PD, but are too far from the potential rail transit corridor to be considered transit-supportive. Additionally, the height and density requirements on these multi-family dwelling units are too restrictive to permit the level of residential development required for a TOD. The Residential Agricultural, Civic Institutional, and General Residential districts that abut the Route 101 PD strictly separate residential from all other uses. In order to facilitate mixed-use, transit-oriented development, the Town may want to consider revising the Route 101 PD

to include multi-family residential at the transit-supportive levels of density outlined in the first half of this memo, or creating a TOD overlay district that allows dense, mixed-use development that is targeted to within a half-mile radius of a potential transit station.

District boundaries

The Zoning Ordinance does not identify specific TOD Zoning Districts; therefore, there are no defining parameters for district size or boundaries.

Mix of uses

Bedford's Zoning Ordinance strictly separates residential uses, with the exception of elderly housing, from all other uses in each of the base and overlay districts. The Route 101 PD, which most closely functions as a TOD district, offers the greatest variety of commercial, industrial, institutional, agricultural, and industrial uses, but does not permit any residential uses. In order to leverage the greatest economic development potential from a potential transit station, as well as capitalize on the opportunity to diversify Bedford's housing stock and provide greater access to affordable housing opportunities, the Town may want to consider permitting denser, multi-family housing either in the recommended TOD overlay zone or within the Route 101 PD.

Development density and intensity

The greatest density of development is permitted in the far eastern portion of Bedford and in selected areas along the Route 101 corridor. The balance of the Town is zoned Residential Agricultural, which restricts uses to single-family, cluster, and elderly housing units, some institutional uses, and agricultural uses. Lots in this district must be at least 1.5 acres, with sizable frontage and setback requirements. The most densely zoned residential district is the Residential Apartment zone, which permits minimum lot sizes of just under one acre and a maximum of 12 dwelling units per development, with a maximum of two bedrooms per unit, in a building no taller than 35 feet. This level of residential density is not supportive of a wide variety of household types, especially young families with children, nor is it supportive of a potential mass transit system. While permitted cluster developments allow for smaller dwelling units, they do not allow for a greater density of these units on a lot. The Town may consider allowing greater residential density within existing districts, particularly the Residential Apartment zone or within the recommended TOD overlay zone.

Allowed commercial and industrial densities, even in the Route 101 PD, are not great enough to adequately support a TOD. Restrictions on building heights, minimum lot sizes, and frontage requirements guide development in a pattern that is not pedestrian-friendly. The

Town may want to consider increasing density and reducing frontage and setback requirements both in existing districts as well as the recommended TOD overlay.

Regulatory and policy incentives

Bedford's existing regulatory and policy incentives are currently restricted to the Route 101 PD. Bonus dimensional standards have been developed in an effort to manage access to and from parcels located on the Route 101 corridor. In exchange for deeding land that is within 50 feet of the centerline of Route 101, deeding land for a shared access driveway, or deeding land for use as future service roads, a developer can increase the percentage of allowed impervious surface by a pre-determined formula. Reductions in setbacks and minimum lot areas are also available. While these incentives function to make commercial and industrial development denser within the PD, the Town may want to consider strengthening the incentives for dense, mixed-use development. Specifically, the Town may consider streamlining the permitting process, providing density bonuses, increasing the allowed minimum densities in residential zones, reducing parking requirements, or assisting developers with land assembly.

Design guidelines

The Historic District of Bedford has the Town's strictest design guidelines: they evaluate, among other things, a proposed project's compatibility, scale and size, project impact, stylistic features, and historical, architectural, or cultural value. While some other districts have general design guidelines, the Town may want to consider a similar design review process for the Route 101 PD or the recommended TOD overlay. Mandatory design guidelines may serve to stifle development, but the provision of design suggestions and assistance with project design review may help to guide future development in a way that is aesthetically pleasing and sensitive to context.

Provisions friendly to bicyclists and pedestrians

The Zoning Ordinance includes one provision that is designed to encourage bicyclists and pedestrians: the Route 101 PD performance standards "encourage a pedestrian-friendly environment through the inclusion of sidewalks, barrier-free street crossings, mass transit shelters, public benches, and bicycle racks." The Land Development Control Regulations specify that pedestrian access to all non-residential or multi-family structures must be provided via sidewalks that are consistent with ADA regulations. When non-residential or multi-family developments are sited on public streets with sidewalks, on-site walkways must be constructed in order to provide pedestrian access to the development.

In order to support transit-oriented development, as well as increase mobility options for seniors and young people, provide recreational opportunities, and reduce congestion, the Town may want to consider creating a network for pedestrian and bicycle paths. These paths could serve as connectors from the residential, western half of the Town to the denser, commercially-oriented eastern half.

Parking

Bedford's Zoning Ordinance requires two parking spaces per single- and two-family dwelling unit, two spaces (one of which must be covered) for multi-family dwellings, and one space per 250 square feet of gross floor area in professional office areas. The only parking-based incentive offered in the Zoning Ordinance is within the Route 101 PD: side and rear lot landscaping requirements are eliminated when a development utilizes shared access and interconnected parking. The City may want to consider reducing parking requirements, especially for multi-family dwelling units, in order to encourage developers to construct denser developments.

Housing affordability

With the exception of a 25 percent affordable unit requirement for elderly housing developments, the Town of Bedford does not provide any incentives for the creation of affordable housing units. The vast majority (83 percent) of Bedford's housing stock is single-family dwelling units; the remaining 17 percent is multi-family units. There are no manufactured housing units. The requirement that multi-family dwelling units cannot have more than two bedrooms effectively prevents families with more than one child from living in rental housing in Bedford. This extremely narrow choice of housing stock will limit the ability of young families, seniors, and low- to moderate-income households to either remain in or move into Bedford. As population rates continue to grow across New Hampshire, development pressure and Bedford's existing land use regulations will force the type of large lot, single-family home construction that encourages sprawl and traffic congestion. Bedford should consider allowing for higher density, multi-family residential developments in the Route 101 PD, and consider allowing additionally density bonuses for the provision of affordable units.

Derry, NH

Derry Zoning Policies

Station area zoning

Both I-93 and the prospective rail line pass through the southwestern quadrant of the Town, which is the site of the downtown area and the densest levels of development. The rail line is almost immediately bordered on the west by I-93 and on the east by Route 28, another major north-south arterial. Route 102, which serves as Derry's main street in the downtown, intersects with both Route 28 and the rail line, passing just north of I-93 before reaching Derry's western border with Londonderry. This quadrant also contains each of the Town's 21 zoning districts, one of which is an overlay (Traditional Business Overlay) and one of which is floating (Neighborhood Commercial District). The Central Business District (CBD) zone is essentially a mixed-use district designed to protect existing residential, historical, traditional commercial, and cultural uses. In addition to retail, commercial, and supportive services, this district allows single-family and multi-family (up to four dwelling units) residential uses. The Traditional Business overlay district (TBOD) is another mixed-use district, designed to allow uses that will complement existing historical, residential, commercial, and cultural uses. The district allows the development of multi-family residential in conjunction with non-residential uses, specifying that the residential units are not permitted on the ground floor.

While the Zoning Ordinance does not create a TOD district, the CBD and TBOD largely function as mixed-use, transit-supportive districts. The City may want to consider increasing allowed density to transit-supportive levels in these districts and creating a TOD overlay district to target mixed-use development with a half-mile radius of a potential transit station.

District boundaries

The Zoning Ordinance does not identify specific TOD Zoning Districts; therefore, there are no defining parameters for district size or boundaries.

Mix of uses

In the fall of 2000, new zoning regulations allowing mixed uses, a broader range of retail uses and dimensions that were patterned after traditional downtown development were adopted. The mix of uses allowed across a range of zoning districts, specifically the CBD and TBOD, can be characterized as transit-supportive. The City may consider allowing for limited commercial, retail, office, and supportive service uses in the Multifamily Residential district. As discussed in the first half of this memo, the City would more successfully

leverage economic development from a mass transit system if a mix of uses is allowed within a half-mile radius of a station. This change would be effective because of existing residential density and the fact that this district is already located within the main transportation corridor (between Route 28 and I-93).

The 2003 Master Plan recommends a revision of the Zoning Code to encourage housing for Derry's senior citizen population in or near the downtown. The Independent Adult Community overlay district allows senior citizen-designated housing developments in the Medium Density Residential, Low Medium Density Residential, Low Density Residential, and Office / Research and Development districts. In order to implement the recommendations of the Master Plan and allow for the broadest range of housing options near prospective transit station sites, the City may want to consider allowing senior housing in districts that currently allow for any residential use. This would increase the mobility options of the senior citizens, as they could live closer to the downtown core in denser housing developments.

Development density and intensity

The 2000 U.S. Census data shows that Derry had a population of 2,398 within a half-mile radius of the proposed station area. This translates into an average residential density of five persons per acre. Based on projections created by area metropolitan planning organizations, this population is expected to increase to 2,968 in 2030, which would increase density to six persons per acre. This is a 24 percent increase, without accounting for any additional growth due to the implementation of commuter rail or bus service. The numbers of households for this area is also projected to increase by 24 percent in this timeframe. The number of total employees within the half-mile radius is projected to grow by 41 percent, from 1,483 in 2000 to 2,091 in 2030. A new mass transit system, whether commuter rail or bus service, could be expected to increase these rates of growth, while providing a mechanism for managing increased traffic volume and providing new economic development and housing opportunities.

Derry's Zoning Ordinance uses minimum lot areas to define density rather than dwelling units per acre (residential) or FAR (non-residential). The CBD, which allows a maximum of 18 dwelling units per acre, is the exception. There are a range of residential zoning districts to create gradations in density and development intensity, from the Low Density district, which requires single-family homes on three acre lots, to the Multifamily Residential district which requires 3,630 square feet of lot area per dwelling unit. This highest level of allowed density approaches the amount necessary to support a mass transit system, but the Town may

want to consider further increasing it to fully transit-supportive levels. One way to achieve this is through increasing building height allowances: in the densest residential district, the MFR, buildings cannot exceed 60 feet. The Town may want to consider increasing this so that, while maintaining sensitivity to the context of surrounding buildings and existing neighborhood character, a greater density of multifamily units can be constructed.

Setbacks and frontage requirements are appropriate in all districts, and transit-supportive in the CBD and TBOD. The Town may want to consider reducing minimum lot sizes in the Office / Medical / Business and Commercial districts; smaller lots will create a more pedestrian-friendly, transit-supportive landscape.

Regulatory and policy incentives

The Ordinance does not currently allow for any regulatory or policy incentives. The Town may want to consider implementing incentives to encourage future development that is consistent with the recommendations of the Master Plan. For example, the Plan recommends the creation of more housing for seniors closer to the downtown. After making this allowable within the Zoning Ordinance, the Town may want to create a density bonus system or offer streamlined permitting and expedited review in order to encourage development. The Plan also recommends improving the landscaping of downtown businesses. In order to encourage this, the Town may offer parking requirement reductions in return for an increase in square footage of landscaped lot frontage. There are a number of incentives that Derry can explore using in order to achieve its land use planning goals.

Design guidelines

Because one of the goals of the CBD is to allow development that would not have a severe impact on existing historical, residential, traditional commercial, or cultural uses, the Planning Board has been authorized to adopt architectural design regulations for the district. The Office / Business district also outlines design guidelines that encourage new construction to blend in with the existing residential character of the district. While other districts require general site plan reviews, the Town may want to consider adopting a stricter design guideline and review process for all the districts in the downtown area. This will allow the Town to ensure that all future development is visually compatible and incorporates design elements that are transit-supportive.

Provisions friendly to bicyclists and pedestrians

The 2003 Derry Master Plan states the Derry residents can “now get downtown without having to use our cars, either biking through the interlacing Pathways trail system or by

taking the bus or jitney shuttle that circulates throughout the community. It's much easier to bike and walk among Downtown stores now that through traffic on Broadway [Route 102] has been reduced and diverted to other routes.”²⁴ The plan does, however, recommend increased public investment in streetscape improvements and the creation of incentives to encourage downtown businesses to improve landscaping. These two new initiatives would complement the work that has already been undertaken to improve the pedestrian experience. The Town may also want to consider whether the provision of street furniture and bike racks in the CBD and TBOD might further enhance the pedestrian and biking experience.

Parking

The 2003 Derry Master Plan recommends several innovative approaches to addressing inadequate parking, including revising site plan review requirements to encourage shared parking, Town acquisition of several parcels in the downtown in order to provide additional parking, and considering the possibility of an “access fee” in-lieu of on-site parking provisions. In addition to considering these recommendations, the Town may evaluate expanding the CBD district requirement specifying that parking should be located at the rear of the building to other downtown districts. This will create a more inviting environment for pedestrians by encouraging human-scale development that directly abuts walkways.

Housing affordability

Derry's housing stock is fairly evenly divided between single-family (51 percent) and multi-family (45 percent) dwelling units. The Master Plan states that there are ample opportunities for affordable homes, including senior-oriented housing complexes, in Derry. In 2000, 4.5 percent of the total housing stock (455 units) was assisted units of affordable housing. These units include both family and senior citizen households. Between 1970 and 1990, the Master Plan notes that Derry's senior citizen population grew by 75 percent. As the baby boomer generation ages, this percentage can be expected to quickly increase.

Derry does not currently offer incentives for the creation of affordable housing units. In order to accommodate projected growth rates and provide an even wider choice of housing stock, the Town may want to consider offering density bonuses or other regulatory incentives to encourage development in targeted areas. These incentives should be directed towards zones which allow for multi-family residential and are close to shopping, employment, recreation, and transportation opportunities.

²⁴ Town of Derry 2003 Master Plan, “The Town We Want: Vision of Future Derry.”

Hudson, NH

Hudson Zoning Policies

Station area zoning

Hudson's Zoning Code identifies seven districts: the majority of the Town is mapped as one of the two General districts. These General districts are designed to "allow natural constraints, such as infrastructure development and market forces, to determine the most appropriate use of land," so they permit almost all uses which are allowed in the other five districts. The code specifies that these two districts are intended to eventually become absorbed in either existing or newly created districts. The majority of Hudson's densest development occurs along its western border, immediately adjacent to the existing rail line. Each type of zoning district is present along this border.

The Town's Master Plan, a draft revision of which is currently available, recommends maintaining the existing balance of single-family, two-family, and multi-family housing units. It also encourages the development of alternative transportation systems. In order to achieve both of these planning goals, the Town should consider implementing a TOD overlay district to allow for higher residential densities and mixed uses within a half-mile radius of any proposed transit station. This would accommodate Hudson's population growth rates and facilitate economic development, while at the same time discouraging sprawl by patterning development in the traditional New England style.

District boundaries

The Zoning Code does not identify specific TOD Zoning Districts; therefore, there are no defining parameters for district size or boundaries.

Mix of uses

There is no defined mixed-use district, but, with the exception of the Industrial district, some form of residential use is permitted in all districts. Multi-family housing is only permitted in the Business district. However, commercial and retail uses are not permitted in the Residential R-1 and R-2 districts. The Town Residence district, which is intended to encourage denser residential developments, does not allow for a number of supportive commercial and retail uses. This separation of uses does not create an environment in which the type of mixed-use, dense development that supports transit ridership could be successfully created.

Hudson's mostly densely developed area, its downtown core, is immediately across the Merrimack River from Nashua's downtown. Other areas along the border do not have this land use coordination: Nashua's commercial and multi-family region along its southeastern border is directly across from a large recreational and single-family zone in Hudson. Directly north of these parcels, Hudson's industrially developed area abuts single-family homes in Nashua. In order to most effectively leverage development from any mass transit system, Nashua and Hudson should collaborate to synchronize future transit-supportive, mixed-use development.

Development density and intensity

Hudson's Zoning Code encourages the development of low-density, single- or two-family homes. Density requirements are expressed in minimum lot areas rather than dwelling units per acre (residential) or FAR (non-residential). These densities are decreased if town water and sewer service is not present. Large minimum lot areas, in combination with sizable frontage requirements, will function to encourage a pattern of sprawling residential development. This pattern of development is not transit-supportive, and is at odds with the recommendation of the Master Plan to "create strong, viable local neighborhoods with a range of facilities on hand so that people can drive shorter distances to where they want to go and make more trips by foot, bicycle, or public transportation."

A Growth Management plan, added to the zoning code in 2001, requires that a building certificate be obtained by a developer in advance of receiving a building permit. These certificates are required for new construction on lots of record established after November 3, 2000. Subdivisions approved by the Planning Board are guaranteed a minimum certificate allocation, the amount of which is outlined in the Zoning Code. The remaining annually-allocated certificates are then awarded to applicants on a first-come, first-serve basis.

The Town may want to consider allowing residential densities in the recommended TOD overlay district to approach the levels outlined in the first half of this memo. Similarly, the Town should consider allowing supportive as-of-right commercial and retail uses on the street-level of multi-family developments in this district. Reduced lot and frontage requirements would allow denser, more pedestrian-friendly development.

Regulatory policies and incentives

Hudson's Zoning Code allows for a reduction of the minimum frontage and lot size requirements for mixed-use or dual use on a lot. The requirements are calculated under

existing guidelines for the principle use with the most frontage, but each additional use is calculated at half of its typical value. These reductions are allowed based on special exception.

The Code does not provide incentives for increased density; it is not clear that, based on Hudson's market, this form of incentive would be the most effective in encouraging transit-supportive development. The Town may want to consider offering parking reductions or flexibility for multi-family developments or commercial and retail establishments in the recommended TOD overlay zone. Additionally, the Town may want to consider reducing or waiving impact fees for residential developments within the proposed TOD overlay district.

Design guidelines

Hudson requires that the Planning Board review and approve site plans for all developments that are new or a change of use, excepting one- and two-family residential construction. As part of this review process, the Town recommends that, where practical, non-residential developers should consult the design standards set forth in the August 2000 "Non-Residential Development: Community Character Guidelines," as prepared by the Nashua Regional Planning Commission. In addition to this recommendation, the Town may want to consider adopting a stricter design guideline and review process for all the districts in the downtown area and in the proposed TOD overlay district. This will allow the Town to ensure that all future development is visually compatible and incorporates design elements that are transit-supportive.

Provisions friendly to bicyclists and pedestrians

Hudson's Master Plan recommends a well-connected, interesting pedestrian network that includes access to schools, shopping, and recreation. With the assistance of the Nashua Regional Planning Commission, the Master Plan outlines a highly detailed potential bicycle and pedestrian network. The creation of this network would be an excellent step towards creating an alternative transportation system for the Town, and would function as a good partner with any future mass transit systems.

The zoning code requires that sidewalks, where necessary, be four feet wide. The Master Plan recommends that this be increased to five feet in order to comply with Americans' with Disabilities Act guidelines.

Parking

Hudson's Zoning Code requires that residential developments provide two parking spaces per unit, retail business and personal service establishments provide one space per 200 square feet of gross leasable area, and industrial areas provide one space per 600 square feet of gross floor space or 0.75 spaces per employee of the combined staff of the two largest shifts. All parking must be provided on the same lot as the use it is serving.

The large number of on-site spaces required could function to discourage denser development, and the abundance of free parking encourages people into single occupancy vehicles. Parking reductions for higher-density developments and allowances for shared parking could supply adequate parking facilities while reducing the impact of parking lots and structures on the built environment.

Housing affordability

Two-thirds of Hudson's existing housing stock is single-family. Demographics trends reveal decreasing household sizes, while, at the same time, increasing population rates for the entire southern New Hampshire region. The combination of these three factors will result in increasing housing costs per capita, which means that young families, lower-income households, and elderly residents will be priced out of the market. Communities that have homogenous housing stock or household types lack the social and economic diversity necessary to sustain themselves and grow efficiently.

Currently, Hudson does not offer any incentives for the creation of affordable housing. The Town does offer lot size and parking reductions for developments designated for senior citizens. The Master Plan recommends that affordable housing, especially for very low-income and elderly residents, should be located within walking distance of essential services, retail, and medical facilities. This recommendation could serve as the basis for the creation of an affordable housing density bonus within targeted zones throughout the Town.

Litchfield, NH

Litchfield Zoning Policies

Station area zoning

The Town of Litchfield is a predominantly rural and agricultural community, but it is surrounded by some of the most urban cities and towns in New Hampshire: Merrimack, Nashua, and Manchester. The prospective western alignment of the rail transit line runs just across the far side of its western border with Merrimack. Just inside the western border of

Litchfield, Route 3A mirrors the route of the rail line through Merrimack; Route 102 slices through the southeastern corner of Litchfield. The Town is mapped into four base zoning districts: Commercial, Commercial Industrial, Residential, and Transition. The Zoning Ordinance further breaks these districts down by geographical location: Highway Commercial, Southwestern Commercial, Northern Commercial, Southern Commercial / Industrial, and Northern Commercial / Industrial. There is no mixed-use district. The northern and southern portions of the Town have the greatest diversity of zoning districts and highest levels of development.

The 2002 Master Plan recommends the creation of a town center zoning district in order to allow increased density and a mix of permissible uses. Despite the fact that the rail line does not extend into Litchfield itself, the Town may want to consider establishing a mixed-use, TOD town center district to guide development in the area nearest any potential transit stations in Merrimack. This could be accomplished either through an overlay district or through the creation of a new base district.

District boundaries

The Zoning Ordinance does not identify specific TOD Zoning Districts; therefore, there are no defining parameters for district size or boundaries.

Mix of uses

The Southwestern Commercial district allows for the development of one residential unit in conjunction with a commercial use, provided that the minimum lot size is one acre. Transitional districts offer the same opportunity for commercial / residential development, as well as permitting single and duplex residences that have been occupied since March 14, 1989, and the combination of two or more principle uses on the same parcel without subdivision. Both the Northern and Southern Commercial / Industrial districts also allow for the use of two or more principles uses on the same lot. Currently, true mixed-use development that includes residential units is not allowed. The recommended TOD overlay district is the mechanism that would combine commercial, retail, and supportive services with residential uses in order to create vibrant, self-supporting 24-hour neighborhoods.

Development density and intensity

The 2002 Master Plan recognizes that in order to preserve Litchfield's rural and agricultural character, it must partner with municipalities across the region in planning for future land use. Locally, the Plan calls for the creation of a diversity of zoning districts to broaden the tax base, preserve rural and agricultural land, and discourage scattered development. The

density of development is going to be somewhat constrained by the absence of a public sewer system. The Town can leverage this constraint to achieve community land use and planning goals by making geographically targeted infrastructure investment decisions.

Local zoning does not currently permit the as-of-right creation of multi-family housing greater than two attached units. The density for existing multi-family residential developments is somewhat high, the highest being eight units per acre, considering that none are served by public sewer. The minimum residential density for single-family homes is one dwelling unit per acre and 1.5 acres for duplexes and two-family developments.

In an effort to maintain Litchfield's annual growth rate at regionally comparable levels, the Town approved a Residential Growth Management Ordinance in 2000. The Ordinance establishes a residential housing growth target based on the average annual percentage increase in building permits issued in the five adjacent municipalities over the past preceding six years. This ordinance is set to expire on May 1, 2008, unless renewed. The Town also adopted the Housing for Older Persons Ordinance in 2001, which allows for the development of duplexes that are restricted to residents aged 55 and over.

In the Commercial, Commercial / Industrial, and Transitional districts, the minimum lot size is one acre, although final lot sizes are at the discretion of the Planning Board, based on, among other things, sewage disposal requirements and soil types. Minimum frontages for these lots range from 150 feet up to 500 feet. These large frontage requirements create an extremely auto-dependent landscape that is unfriendly to pedestrians. Should the Town decide to create the recommended town center or TOD district, these frontages and lot size requirements, in addition to setbacks, should be greatly reduced. Walkable, vibrant, mixed-use districts require human-scale development.

Regulatory and policy incentives

The 2002 Master Plan encourages the creation of a Transfer of Development Rights program (TDR) as a mechanism to target growth to areas with supportive infrastructure while preserving existing open space. The Plan suggests that the density credits generated through this program be directed towards the creation of a village-scale, mixed-use development.

The Town currently offers up to a 25 percent density bonus in the Housing for Older Persons overlay district, which is awarded at the Planning Board's discretion. The Town may also want to consider creating a system of incentives to encourage targeted denser developments that are sensitive to the community's rural and agricultural aesthetic. These could include the

suggested TDR program, streamlined permitting, density bonuses, or impact fee reductions or waivers.

Design guidelines

The Zoning Ordinance provides only very general site plan review requirements. The 2002 Master Plan advocates discouraging strip-style development through design standards that support the desired types of commercial site development. Design guidelines in residential and mixed-use areas could be an important planning tool as future development pressures encourage sprawling, disjointed development. Design guidelines offer a mechanism to encourage developments that are complementary to the rural and agricultural aesthetic of the community.

Provisions friendly to bicyclists and pedestrians

The 2002 Master Plan includes the preservation of road capacity through coordinated land use and transportation as one of its transportation goals. The Town's recognition of the importance of land use decisions in transportation planning is further reflected in the stated goal of encouraging land use patterns that make transportation alternatives viable. Specifically, the Plan calls for the expansion of the bicycle and pedestrian trail on "both new and existing roadways and aggressively seek protection of historic transportation right-of-ways for future use when connections can be made."

The Zoning Ordinance does not currently offer any requirements that are sensitive to the needs of bicyclists or pedestrians. In order to support transit-oriented development, as well as increase mobility options for seniors and young people, provide recreational opportunities, and reduce congestion, the Town may want to consider enhancing the network for pedestrian and bicycle paths. These paths could serve as connectors from the residential portions of the town to the northern and southern commercial districts, as well as any potential transit station which may be developed in Merrimack.

Parking

There are no parking minimums or maximums outlined in Litchfield's Zoning Ordinance. The Town may want to consider establishing requirements in Commercial, Commercial Industrial, and Transition districts as a means of controlling traffic and encouraging alternate forms of transportation. As discussed in the first half of this memo, abundant parking encourages travel by single occupancy vehicle and often results in a sprawling, pedestrian-unfriendly environment. The Town may want to consider instituting parking requirements now in advance of future population growth and increased vehicular traffic.

Housing affordability

Litchfield's Zoning Ordinance does not currently permit the creation of as-of-right multi-family housing. In 2005, 81 percent of Litchfield's housing stock was single-family housing and 15 percent was multi-family. The Master Plan states that Litchfield has been turned into a bedroom community over the previous 40 years. The Plan claims that "the high cost of housing and limited housing opportunities may influence the high incidence of elderly residents moving out of the community later in life. Another change already underway is the larger numbers of children entering the school system each year."

The Town adopted a Housing for Older Persons ordinance in March 2001, which is designed to encourage development of housing alternatives with supportive facilities and services for senior citizens. While a density bonus is available in these developments, it is not in exchange for a percentage of affordable units. The Town may want to consider requiring the construction of affordable units in order to receive a density bonus.

Should the Town create a sewer system that allows higher density development, the Town may want to consider targeting development to growth corridors and offering density bonuses in exchange for the provision of affordable units for residents of all ages.

Londonderry, NH

Londonderry Zoning Policies

Station area zoning

Londonderry is mapped into nine base zoning districts (two residential, four commercial, two industrial, and one airport) and five overlay districts. There is no transit-oriented development overlay district. I-93 is the major north-south transportation corridor, and Routes 28 and 102 are the major east-west arterials running through Londonderry. Route 28 intersects I-93 at Exit 5, and Route 102 intersects at Exit 4; Route 28 runs nearly parallel to the prospective rail transit corridor. These points of intersection are all potential sites for a mass transit station.

The Exit 5 area is zoned to allow for a mix of uses that are supported by the Route 28 Performance Overlay District (POD). This POD, and a similar district mapped along Route 102, was created to utilize performance standards and incentives to facilitate land use patterns that are supportive of existing and future development along both routes. The western portion of Route 102 continues to be residential and low-density, while the portion approaching I-93 becomes higher-density commercial. The Route 102 POD is currently

mapped to transition between these two areas of different development patterns. While these two districts most closely approximate a transit-oriented development district, they do not allow the residential development that would facilitate a mixed-use community. The Town may want to consider implementing a TOD overlay district to allow for higher residential densities and mixed uses within a half-mile radius of any proposed transit station.

District boundaries

The Zoning Ordinance does not identify specific TOD Zoning Districts; therefore, there are no defining parameters for district size or boundaries.

Mix of uses

Until the 1960s, Londonderry was a largely agricultural community. While the Town is still noted for its orchards, a majority of the Town (approximately 58 percent) is zoned residential. In order to retain this agricultural and rural aesthetic, the Town should consider targeting growth to corridors where it already exists and the Town's existing infrastructure can support it. This would mean allowing for a mix of commercial, residential, retail, and office space along the rail corridor and at Exits 4 and 5 on I-93. While multi-family uses are permitted on parcels adjacent to these corridors, in order to leverage the economic development associated with mixed-use development, they need to be permitted on parcels directly abutting these corridors. Similarly, the Town may want to consider allowing some multi-family residential developments at targeted locations within existing commercial districts.

Development density and intensity

The 2000 U.S. Census data shows that Londonderry had a population of 234 within a half-mile radius of the proposed station area. This translates into an average residential density of 0.5 persons per acre. Based on projections created by area metropolitan planning organizations, this population is expected to increase to 328 in 2030, which would increase density to 0.7 persons per acre. This is a 40 percent increase, without accounting for any additional growth due to the implementation of commuter rail or bus service. The number of households for this area is projected to increase by 41 percent in this timeframe. The number of total employees within the half-mile radius is also projected to grow by 41 percent, from 327 in 2000 to 461 in 2030. A new mass transit system could be expected to support and possibly increase these growth rates.

Londonderry's 2004 Master Plan identifies a number of environmental constraints, including the Musquash conservation area, Scobie Pond, and Little Cohas Brook, which, when

combined with minimal infrastructure, limit the amount of development which can occur in parts of northern and western Londonderry. The Plan identifies I-93's exits 4 and 5 as concentrations of dense commercial and retail development.

While the Master Plan identifies the desire of residents to maintain lower-density housing stock that fits in the context of existing residential development, the expansion of I-93 and possibility of a mass transit system, coupled with high rates of population growth, means that targeted, higher-density housing developments should be considered. The Master Plan identifies that there is very little land remaining in the highest-density R-3 districts for additional development.²⁵ Denser developments along existing transportation corridors would provide additional housing opportunities for future growth without encouraging a pattern of sprawl development.

The Zoning Ordinance specifies that no more than 24 dwelling units may be constructed per lot. The Town's Residential Development Phasing policy applies to all developments of 15 dwelling units / lots or more; developments are restricted to the construction of between 15 and 48 units per year, based on the type and location of construction. The Growth Management section of the Zoning Ordinance provides that residential development shall not exceed a 2 percent increase in Londonderry's housing stock over the preceding calendar year. These types of land use tools are meant to control and guide growth, but may create a barrier to higher-density, transit-supportive developments in areas within a half-mile radius of a transit station.

Regulatory policies and incentives

The Route 102 POD allows dimensional incentive bonus standards, including reductions in minimum lot area and frontages, an impervious surface bonus (which allows for a greater percentage of the lot to be covered by an impervious surface), and a reduction in front setback requirements. These bonuses are awarded for projects that choose to voluntarily develop their properties in a way that is most compatible with the stated goals and objectives of the district and the Master Plan. Within this district an individual commercial building cannot have a building footprint larger than 12,500 square feet, but may be granted an incentive bonus to a building footprint not larger than 25,000 square feet if the proposed parking for the commercial use will be limited to the rear and side of the structure, the parking area for the building is interconnected with an adjoining lot, or provisions are made

²⁵ Town of Londonderry Master Plan, 2004, p. 3 – 8.

to allow for connection of parking lots in the future, and the access for the building is shared with one or more other lots.

The Route 28 POD offers only an impervious surface bonus.

Outside of these two zoning districts, the Zoning Ordinance does not specify any regulatory policies or incentives that would encourage transit-supportive development. The Town may want to consider offering parking reductions or flexibility for multi-family developments or commercial and retail establishments in the recommended TOD overlay zone. Increased as-of-right density and assistance with land assembly would further facilitate transit-supportive development in appropriate areas.

Design guidelines

Londonderry does not have strict requirements for design guidelines outlined in its Zoning Ordinance. Only one district's regulations makes mention of design guidelines: the Planning Board requires a rendering of proposed buildings within Commercial zones. The Town may want to consider implementing design guidelines in the PODs and multi-family residential areas in order to create visual continuity in new developments.

Provisions friendly to bicyclists and pedestrians

The 2004 Master Plan recommends the creation of a prioritized trail plan that would link trails and pathways throughout the commercial district, residential neighborhoods, and parks of Londonderry. The Plan specifically targets the town center area as being particularly unfriendly to pedestrians: "...the entire town center is extremely difficult to navigate by foot. There are almost no pedestrian amenities such as sidewalks, crosswalks, and signage and there is a perceived shortage of nearby parking."²⁶

The most densely developed commercial and retail areas, along Exits 4 and 5, are currently designed to be accessed by vehicles entering or exiting I-93. This type of auto-dependent design is not pedestrian-friendly and provides a barrier to transit-supportive land use. In order to address this and similar situations, the Town should consider creating a comprehensive bicycle and pedestrian network to facilitate the mobility of both the youth and senior citizen populations.

Parking

Londonderry's Zoning Ordinance requires that two parking spaces be provided for every single- and two-family unit, and that 2.5 spaces be provided for every multi-family dwelling unit. Professional and business offices must provide 4.5 parking spaces per 1,000 square feet of gross floor area. These are fairly high parking requirements, which may make it more difficult for developers to utilize parcels to their highest and best use. The Zoning Ordinance allows for coordinated or joint parking design in the Route 102 POD, but it does not specify that this would be a reduction in the parking requirement. The Town should consider allowing for reductions in the baseline parking requirements, as well as reductions based on shared parking facilities.

Housing affordability

The majority (70 percent) of the Town's housing stock is detached single-family homes, and the majority of all housing units (86 percent) have been built since 1970. The master planning process found that "many residents lamented the fact that their children, upon their return to Londonderry following college, could not find nearby affordable housing."²⁷

Londonderry's Zoning Ordinance does not currently allow any incentives for the construction of affordable housing units. The Town may consider providing incentives for the construction of housing that is affordable to low- to moderate-income households, particularly in multi-family housing developments. Specifically, this could be achieved through density bonuses in return for the provision of affordable units or a reduction or waiver of impact fees.

Manchester, NH

Manchester Zoning Policies

Station area zoning

Each of the three corridors being considered for a prospective transit line passes through Manchester. The City is mapped into 16 base zones (six residential, three business, two mixed-use, four industrial / institutional, and one conservation) and ten overlay districts. This variety of zones provides a good framework for implementing the dense, mixed-use development that is necessary to support a mass transit station.

Specifically, the Redevelopment district is designed to "provide a transitional mixed-use district that facilitates the redevelopment of areas lying between the Central Business District

²⁶ Town of Londonderry Master Plan, 2004, p. 4 – 5.

and the residential multifamily districts.” Drawn around both prospective rail corridors, this district provides flexible opportunities for a mixture of commercial, industrial, and residential uses. The Amoskeag Millyard Mixed-Use district is across the Merrimack River from the Central Business District and is designed to allow the adaptive re-use of former mill buildings and to allow for special planning and design issues associated with pedestrian linkages to the downtown. This district also contains two overlay districts: the Amoskeag Millyard Historic (AMH) district overlay and the Amoskeag Corporation Housing Historic (ACHH) district overlay. The ACHH is designed to protect and leverage the opportunities that this area presents, including the “retention of the architectural and historical values characteristic of this complex, and the presence of valuable resources for present and future housing and office needs.”

These districts, which are abutted by the dense Urban Multifamily district, indicate that the City is working to encourage dense, mixed-use development. While these base and overlay districts represent a sensitivity to existing buildings and physical infrastructure, the City may want to consider the creation of a true TOD overlay zone in anticipation of future mass transit station(s). This designation would enable the City to target even denser, multi-use developments to within a half-mile radius of a transit station, which could be designed to complement the existing network of base and overlay districts.

District boundaries

The Zoning Ordinance does not identify specific TOD Zoning Districts; therefore, there are no defining parameters for district size or boundaries.

Mix of uses

The Zoning Ordinance allows for a good mix of residential, commercial, retail, and support services within the Redevelopment and Amoskeag Millyard Mixed-Use districts. The City may want to consider allowing for a similar mix of retail and support service uses in the Urban Multifamily district, thereby allowing residents to fulfill errands for daily needs within their own neighborhoods. The recommended TOD district overlay would also provide the opportunity for a transit-supportive mixture of uses. Overall, the multitude of uses allowed within several zones provides a good opportunity for the targeted, mixed-use development that is necessary to implement transit-supportive land use policies and regulations.

²⁷ Town of Londonderry Master Plan, 2004, p. 4 – 45.

Development density and intensity

The 2000 U.S. Census data shows that Manchester had a population of 5,350 within a half-mile radius of the proposed station area. This translates into an average residential density of 11 persons per acre. Based on projections created by area metropolitan planning organizations, this population is expected to increase to 6,279 in 2030, which would increase density to 13 persons per acre. This is a 17 percent increase, without accounting for any additional growth due to the implementation of commuter rail or bus service. The number of households for this area is also projected to increase by 17 percent in this timeframe. The number of total employees within the half-mile radius is projected to grow by 41 percent, from 17,624 in 2000 to 24,789 in 2030. A new mass transit system, whether commuter rail or bus service, could be expected to increase these rates of growth, while providing a mechanism for managing increased traffic volume and providing new economic development and housing opportunities.

The 2006 Manchester Downtown Strategic Plan recommends the site at the intersection of Elm and Auburn Streets, which is currently an industrial building, for a multi-modal transit center. This could either be planned for mixed-use or as part of a larger-transit supportive mixed-use development that is designed to encourage pedestrian usage, trip consolidation, and a vibrant, 24-hour neighborhood.

Manchester allows for its tallest as-of-right development in the C-2 district (10 stories) and densest as-of-right development in the Amoskeag Millyard Mixed-Use district (FAR of 6.0). Generally, the minimum lot sizes and setback requirements for the R-2 and R-3 districts are supportive of denser, urban development. In order to facilitate even denser residential development, the City may want to consider allowing for density bonuses in return for the provision of affordable housing. The Strategic Plan also references a number of surface parking lots which negatively affect the pedestrian scale of the landscape and provide an opportunity for redevelopment. The City should consider reducing its downtown parking requirements (discussed below) and working to assemble and package these parcels for redevelopment.

Regulatory and policy incentives

The Zoning Code offers a density bonus for the provision of multifamily dwelling units for the elderly: increased building height to 100 feet, increased density to 80 dwelling units per acre, and a FAR of one in the R-3 district. The City may want to consider expanding density bonus provisions to include affordable housing. Considering that Manchester is already largely developed, the City may encourage infill development by assessing the inventory of

City-owned land and working with developers to assemble parcels of vacant and underutilized land for redevelopment.

Design guidelines

The only references to design guidelines in Manchester’s Zoning Ordinance occur in reference to the Arena overlay and Amoskeag Millyard Historic district. The City may want to consider expanding this design review process to cover all zoning districts that are mapped in the Central Business Area so that the City may guide visually cohesive, transit-supportive building and environment design.

Provisions friendly to bicyclists and pedestrians

According to the 2006 Manchester Downtown Strategic Plan, the City has an inconsistent pedestrian environment: “Some parts of the City have well-maintained sidewalks and curbs with decorative light fixtures and street trees while other parts have so many curb cuts that the sidewalks are non-existent.”²⁸ The Plan comments, though, that the expansion of I-293, which runs along the Merrimack River, provides an opportunity to plan for increased pedestrian access and amenities at key points along the river.

As discussed above, the Amoskeag Millyard Mixed-Use district is designed to allow the adaptive re-use of former mill buildings and to facilitate special planning and design issues associated with pedestrian linkages to the downtown. This effort could serve as a template for pedestrian planning activities outside of this district. As part of its ongoing effort to update the 1993 Master Plan, the City may consider undertaking a survey of existing sidewalks and bike trails to determine if existing networks could be upgraded or new linkages created.

Parking

Developments within the Amoskeag Millyard Mixed-Use (AMMU) and Arena overlay districts are not required to conform to the parking requirements outlined in the Zoning Ordinance. Developers must, however, submit a parking plan to the Planning Board for their approval. In the AMMU, parking requirements may be modified based on the unique characteristics of the individual structure or use and the characteristics of mixed uses which operate at different hours of the day. The parking plan should explain how the expected parking demand can be accommodated through on-site surface parking, public parking

²⁸ Manchester Downtown Strategic Plan, April 2006, p. 23.

available in on-street spaces, or in parking garages / lots. The Ordinance further allows proximity to mass transit to be considered when calculating parking requirements.

The Downtown Strategic Plan also indicates that surface parking dominates the environment in the Mill District, surrounding historic buildings and limiting pedestrian access to the waterfront.²⁹ Surface parking lots should be kept to a minimum and, when necessary, placed behind buildings or converted into aesthetically pleasing, structured parking facilities on smaller parcels.

In order to more fully create a transit-supportive, pedestrian-friendly environment, the City may consider implementing a parking plan process similar to the one currently used in the AMMU for zones throughout the Central Business District.

Housing affordability

Approximately 37 percent of Manchester's housing stock is single-family; 63 percent is multi-family. While residents have a number of housing stock types to choose from, Manchester, like the entire southern region of New Hampshire, must increase housing production to keep up with population growth and reduced household sizes. The 2006 Manchester Strategic Downtown Plan finds that housing density is lower and housing values are lower within a one-mile radius of downtown; both density and value increase outside of a three-mile radius.³⁰ This indicates that there is ample opportunity to construct downtown dwelling units at all price points, from affordable studio, one- and two-bedroom apartments, to luxury condos for empty-nesters. This mixture of housing stock would provide the diversity of household incomes and types that is necessary to create a mixed-use, transit-oriented development.

Manchester's Zoning Ordinance does not currently allow any incentives for the construction of affordable housing units. The City may consider incentivizing affordable housing production for low- to moderate-income households, particularly in multi-family housing developments. Specifically, this could be achieved through density bonuses in return for the provision of affordable units, or a streamlined permitting process for developments that include affordable housing.

²⁹ Manchester Downtown Strategic Plan, April 2006, p. 23.

Merrimack, NH

Merrimack Zoning Policies

Station area zoning

Merrimack utilizes Euclidian zoning with a designated Elderly Overlay District (EOD), multiple Planned Residential Districts (PRDs), and a Town Center District (TCD). The rail corridor is located almost exclusively within an R Residential District and I-1 Industrial Districts, and is immediately adjacent to both Limited and General Commercial Districts (C-1 and C-2). The rail line also passes through the EOD, two PRDs, and the TCD.

The residential density in the rail corridor, which is subject to the R-4 zoning classification, requires a minimum lot size of 40,000 square feet (.91 acres) for a single family home, 80,000 square feet for two-family residences (1.83 acres), and multi-family housing at a density of 12,500 square feet per unit. The EOD allows densities at more than twice this amount (up to 8 units per acre). The PRD District also permits higher densities (eight units per acre for elderly, six units per acre non-elderly) and requires a commercial component.

The southern portion of the rail corridor passes through an I-1 District, which is one of the largest contiguous industrially-zoned areas in the region. In addition to industrial uses, various support uses (restaurants and day care) and planned unit developments (higher density residential and compatible non-residential uses) are permitted in the district. In total, Merrimack can support an additional 4,600,000 square feet of commercial and industrial floor area.

Because of the large percentage of existing non-conforming uses in the Town Center, redevelopment would be encouraged by relaxing zoning restrictions for non-conforming buildings and sites. While the 2002 Master Plan Update indicates that no additional local growth control or regulation is necessary, a number of vacant parcels provide an opportunity to encourage denser, transit-supportive land uses. The Town may consider a TOD overlay district to allow for higher residential densities and mixed uses within a half-mile radius of any proposed transit station.

District boundaries

The Zoning Code does not identify specific TOD Zoning Districts; therefore, there are no defining parameters for district size or boundaries.

³⁰ Manchester Downtown Strategic Plan, April 2006, p. 10.

Mix of uses

Merrimack's Zoning Code does not identify a true mixed-use zone. I-1 and I-2 Districts, however, allow a number of transit-supportive uses by right (restaurants, banks, hotel) and allow the residential density of the EOD and planned unit developments through a Conditional Use Permit. Similarly, C-1 and C-2 districts allow residential uses (other than planned unit developments) when granted by the Zoning Board of Adjustment (ZBA). While this is de-facto mixed use, the additional burden of applying for an extra permit or applying to the ZBA may discourage mixed-use developments in these districts. The creation of an as-of-right mixed-use overlay district would streamline the development process and provide regulatory clarity. This would be especially useful along the southern portion of the rail line, where large tracts of land zoned I-1 are currently occupied by employers such as Fidelity Investments, and would provide an ideal opportunity to create a 24-hour, mixed-use TOD.

Development density and intensity

The Zoning Code expresses residential densities in lot size and dwelling unit per acre and commercial / industrial density in lot size alone. Planned unit developments (PUDs), the EOD, and the R-4 District offer the opportunity for the densest residential developments. Most of these districts are located in the far eastern portion of Merrimack, between the Everett Turnpike and the Merrimack River, immediately abutting the rail line. Cluster development is permitted in any residential districts other than R-1, which provides another opportunity for denser residential development. Side yard and frontage requirements constrain development density. Because industrial and commercial uses are governed by lot size rather than maximum gross floor area, density bonuses will be ineffectual as an incentive for denser development.

In order to successfully leverage full development potential from a transit station, residential densities within a half-mile of the station should be increased to the transit-supportive levels outlined in the first half of this memo. The maximum allowable as-of-right residential density of 8 units per acre is not sufficient for a TOD. Increased density could be accomplished through a TOD overlay zone.

Regulatory and policy incentives

The Zoning Code does not provide incentives for increased density. As discussed above, the creation of a TOD overlay zone would provide the opportunity to streamline the permitting process by removing the necessity for Conditional Use Permits and appearances before the

ZBA. A reduction in residential and commercial parking requirements in a TOD overlay zone would provide a further incentive for denser development.

Design guidelines

The 2002 Master Plan Update addressed aesthetic concerns in the TCD: “the extent of existing development, much of which is uncoordinated, unattractive and incompatible with the human scale, limits the ability of the Town to create a new more aesthetically pleasing environment.” The Town’s Subdivision Regulations (April 2007) include a building design section, which outlines design requirements for PRDs, C and I Districts for any buildings requiring site plan approval from the Planning Board. The Town may want to consider adopting a stricter design guideline and review process for all the districts in the downtown area. This will allow the Town to ensure that all future development is visually compatible and incorporates design elements that are transit-supportive.

Provisions friendly to bicyclists and pedestrians

The 2002 Master Plan Update recommends an expansion of the existing bicycle network and the implementation of traffic calming techniques to improve bicycle and pedestrian safety. Sidewalks, where required, must be five feet wide. There are no bicycle facility requirements. In order to support transit-oriented development, as well as increase mobility options for seniors and young people, provide recreational opportunities, and reduce congestion, the Town may want to consider creating a network for pedestrian and bicycle paths. Additionally, the Town may want to consider implementing the traffic calming techniques, particularly in the Commercial districts that are adjacent to the F.E. Everett Turnpike.

Parking

The only mention of parking in the Zoning Code directs that off-street parking shall be provided for all uses and developments proposed as required by the Planning Board in accordance with the State’s RSA 674:43. The subdivision regulations outline parking requirements by land usage: single-family homes must provide two spaces, two-family homes must provide four spaces, multi-family residential developments must provide one space per dwelling unit plus one space per bedroom, offices must provide one space per 200 square feet of gross floor area, and industrial establishments must provide two spaces per three employees. There are currently no provisions in the Zoning Code or Site Plan Review guidelines for parking reductions.

Housing affordability

The 2002 Master Plan Update found that “Merrimack’s overall pattern of residential development has provided for a wide range of housing alternatives to meet the needs of a diversity of families and individuals.” No affordable housing provisions are specified in the zoning code. While the Master Plan indicates that the Town does not currently need an increased supply of affordable housing, Merrimack may want to have provisions and incentives in place to manage the expected future population growth rates in a manner that encourages and supports a variety of household types and income levels.

Nashua, NH

Nashua Zoning Policies

Station area zoning

Nashua utilizes both Euclidian zoning and overlay districts to map the city into 15 base zones, six overlay districts, and three special districts. A special Transit-Oriented Development district is created in the Zoning Code, but does not currently appear on the zoning map. Through this mixture of zones, overlays, and special districts, the Code currently provides a number of tools for encouraging transit-supportive development. The rail corridor passes through General Industrial Districts (GI), Urban Residence Districts (RA, RB), Suburban Residence Districts (R9), and a General Business District (GB).

Specific transit-supportive zones and districts include the Mixed Use overlay district (MU), Flexible Use district (FU), and Transit-Oriented Development district (TOD). MU districts are “established from time to time” to “enable in-fill development to occur in a manner that will be compatible with the surrounding site environment and neighborhood” to ensure that “private development and rehabilitation will be compatible and coordinated with public improvement and investment.” FU districts permit multiple, coordinated uses in an integrated concept development plan while providing for open space, wetland protection, and recreation. The TOD district encourages a mixture of residential, commercial, and employment opportunities in a more intensely built-up environment that is pedestrian-oriented and transit-supportive.

District boundaries

The TOD District is not currently defined; the Board of Aldermen, upon recommendation by the Planning Board, will define the area where it finds that the land area will support transit usage because of, among other factors, an existing or proposed development. The area, once defined, would be restricted to a half-mile radius of the transit station.

Mix of uses

Nashua's Code includes one defined mixed-use district, and several that function as mixed-use districts. The Mixed Use overlay district (MU) allows, in addition to uses permitted by the underlying district, residential, community facility, agricultural, retail, service, commercial and accessory uses. The Flexible Use district (FU) allows for a range of uses, including single-family residential, mixed-use village area (which includes elderly housing, retail, personal service, and professional and business offices), accessory uses, and a few conditional uses. The Downtown districts (D-1 and D-3) also allow for a mix of uses, including accessory dwelling units, elderly housing, multi-family dwellings, commercial, recreation and entertainment. The TOD District allows uses defined in the R-C (Urban Residential) and D zoning districts.

The diversity of zoning, overlay, and special districts and the multitude of uses they allow provide a good opportunity for the fine-grained, mixed-use development that is necessary for the implementation of transit-supportive land use.

Development density and intensity

According to the Nashua 2000 Master Plan, the City is almost entirely built out. The Code clearly defines density levels for all zoning districts, and also defines the level of density that the City has found sufficient to support transit ridership: 16 – 40 dwellings units per acre and FARs ranging from 2.5 to 6.0. In general, permitted densities, setbacks, minimum lot areas, and required frontages are conducive to denser, urban development. The code specifically allows the Administrative Officer to reduce a district's setback requirement for the development of infill lots. Densities can be further increased through the series of density bonus incentives that the City offers, the details of which will be discussed in the following section.

Regulatory and policy incentives

The Code provides a number of incentives, including increased density, permit streamlining, parking reductions, and fee waivers. Planned Residential Developments (PRDs) offer a variety of incentives in exchange for a density bonus of .025 bonus units per acre on 10 – 25 acre tracts, to a maximum of .5 dwelling units per acre on tracts exceeding 25 acres. These incentives include the provision of plantings along existing natural landscape buffers, 250 square feet per unit of developed active recreation facilities, or a privately-operated day nursery or kindergarten for 12 or more children. Conservation Subdivisions offer bonuses of .10 to .25 dwelling units per acre for tracts smaller than ten acres for the same incentives

offered to PRDs. Density bonuses are also available to incentivize the creation of affordable housing units, the details of which are discussed in the “housing affordability” section below.

Permit streamlining is offered under the Code’s inclusionary zoning section: if a rezoning is required for a dwelling unit, the applicant can file a combined site planning and rezoning request.

The Code allows a reduction in parking requirements for mixed-use developments. The reduction is calculated through a formula that weights the types of uses and time of day.

Impact fees are waived for elderly and low- to moderate-income housing units.

Nashua currently offers an array of regulatory and policy incentives to encourage denser, more affordable development. Because the City has been largely built out, it may also want to consider assembling and packaging infill lots for developers in order to facilitate the redevelopment process. As discussed in the first half of this memo, developers have cited this regulatory incentive as adding value and making redevelopment possible on parcels where it might have been deemed too difficult otherwise.

Design guidelines

Nashua’s code requires site plan review for non-residential uses or multi-family dwellings of four or more units. Approval criteria includes the requirement that the proposed use should co-exist with surrounding uses and the development must maintain the unique aesthetic, architectural, and visual character of nearby buildings. Site and subdivision guidelines also have general guidelines regarding building appearance.

Within the FU district, the Code requires that all structures within the mixed-use village area reflect the guidelines outlined in “Hall’s Corner Architectural Design Review, Procedure and Guidelines.” In exchange for more flexible zoning, Planned Residential Developments establish higher standards of building design than in typical residential developments. The Downtown Districts are subject to design requirements that mandate traditional storefronts oriented towards Main Street.

Provisions friendly to bicyclists and pedestrians

Nashua’s 2000 Master Plan recognizes that existing development patterns are primarily geared towards auto dependency. The Zoning Code states that the street system should be designed to respect the function of streets as the “shared domain of drivers, pedestrians, and bicyclists.” Sidewalks, where required, must be at least five feet in width; if a bike lane in

included, the sidewalk must be at least ten feet wide. The Code recognizes the importance of sidewalks in increasing the mobility of seniors by stating that the use of walkways, trails and natural walking paths shall be an integral part of the design of any elderly housing development. Developers, when approved by the Planning Board, may choose to pay a fee in-lieu of constructing a required sidewalk. The revenue may be solely used for the construction of new sidewalks in the area of the City where the sidewalk would have been constructed.

Parking

The Code requires that off-street parking be provided for any new structure, enlargement, or new land use. The spaces must be provided on the same lot as the principle use, or the Planning Board may approve a parking lot no more than 300 feet from the lot line of the use the parking is serving. The Planning Board may also allow the substitution of municipal lot spaces for the off-street parking requirement, as long as they are located within 1,000 feet of the building. Two or more buildings may also provide required parking in a combined facility, at the discretion of the Administrative Officer.

The Code allows for parking reductions through a defined formula that weights uses and the time of day. This reduction is available for office / industrial, retail, hotel, restaurant and entertainment / commercial uses.

Housing affordability

While the majority of Nashua's housing stock is multi-family, most of the new construction since the 1980s has been single-family. The City understands that a diversity of housing stock types and price points are necessary to accommodate the demographic trends towards older and smaller households.

Voluntary inclusionary zoning is expressly allowed under New Hampshire state law. Nashua has identified a critical shortage in affordable housing and responded by providing incentives for the increased construction of affordable units through the provision of streamlined permitting and density bonuses. The zoning code defines low-income households as earning no more than 50 percent of the area median income (AMI); moderate-income households earn between 50 – 80 percent of the AMI. In order to be considered an affordable dwelling unit, these households may spend no more than 30 percent of household income on rental housing plus utilities, or 33 percent for owner-occupied housing.

The Code provides permit streamlining for developers of affordable housing by allowing the combination of the site plan and rezoning applications. Available density bonuses range from 15 – 30 percent, based on affordable set-asides of 2 – 20 percent. These units must remain affordable for 20 – 30 years, depending on the type of unit. The highest rates of bonus are available in the TOD district zoning classification. Alternately, the ordinance allows developers to pay a fee equal to the dwelling unit construction cost into a housing trust fund as means of compliance. These policy decisions indicate the City’s commitment to implementing planning principles that align with the techniques of transit-oriented development.

Salem, NH

Salem Zoning Policies

Station area zoning

Salem is divided into 12 zoning districts (three residential, one recreational, six commercial / industrial, one rural, and one Town Center) and one Seniors Housing overlay district. The I-93 corridor and Route 28 / rail corridor are parallel, at one point within a half-mile of each other. The ongoing expansion of I-93 will decrease this separation while increasing traffic capacity. Expanded capacity will provide opportunities for economic development and growth in this entire corridor. Planning land use to complement a future mass transit system will allow for economic expansion while at the same time diminishing the impact of vehicular traffic on main arterials.

The commercial and industrial zones are concentrated in the areas between these two corridors: the Mall at Rockingham Park is directly north of Rockingham Park Boulevard, which connects I-93 to Route 28. The I-93 and Route 28 corridors pass through the majority of zoning districts in Salem, none of which allow an opportunity for the dense, mixed-use developments that would be transit-supportive. Because of the close proximity of the two corridors, however, it may be possible to leverage the existing residential, commercial, and industrial development and associated traffic to support a mass transit system. Specifically, multi-unit developments should be permitted as-of-right in commercial districts, the Limited Community Shopping Village District, and the Town Center District. Rather than modifying existing base zones, Salem may want to consider creating a TOD overlay district that would encompass the half-mile radius of a proposed transit station.

District boundaries

The Zoning Ordinance does not identify specific TOD Zoning Districts; therefore, there are no defining parameters for district size or boundaries.

Mix of uses

Salem's Zoning Ordinance allows for mixed-use in a variety of its districts, including the Garden Apartment R-A district, Business Office (BO) districts, Commercial-Industrial (CI) districts, Limited Community Shopping Village (LCSV) district, and Town Center (TC) district. While the BO, LCSV, and TC districts allow for residential uses, they are restricted to one- and / or two-family dwellings, which do not allow for densities that would approach a transit-supportive level. CI districts allow for a variety of commercial and personal service uses, but no residential.

The corridor between I-93 and Route 28 is the most heavily developed and intensely zoned region in Salem. Greater spatial and usage efficiencies could be gained by combining abutting complementary uses: for instance, a multi-unit residential unit could be located on the upper floors of a bank and drycleaner, which is adjacent to a grocery store and an office building that has a café at street-level. Currently, this type of mixed-use, residential development is not possible. The recommended TOD overlay district is the mechanism that would combine commercial, retail, and supportive services with residential uses in order to create vibrant, self-supporting 24-hour neighborhoods.

Development density and intensity

The 2000 U.S. Census data shows that Salem had a population of 1,181 within a half-mile radius of the proposed station area. This translates into an average residential density of two persons per acre. Based on projections created by area metropolitan planning organizations, this population is expected to increase to 1,493 in 2030, which would increase density to three persons per acre. This is a 26 percent increase, without accounting for any additional growth due to the implementation of commuter rail or bus service. The number of households for this area is also projected to increase by 26 percent in this timeframe. The number of total employees within the half-mile radius is projected to grow by 47 percent, from 1,770 in 2000 to 2,596 in 2030. A new mass transit system, whether commuter rail or bus service, could be expected to increase these rates of growth, while providing a mechanism for managing increased traffic volume and providing new economic development and housing opportunities.

Salem's Zoning Ordinance does not currently allow high-density, mixed-use development. In the Residential district, single-family housing, which represents the majority of Salem's housing stock, must be on lots of at least 25,000 square feet; two-family developments must be on lots of at least 37,500 square feet. In the Rural district, the minimum lot size for a single-family home is 87,120 square feet, and 174,340 square feet for two-family dwellings. Large portions of the land on the western edge of the I-93 corridor are ideal for higher-density development, but are zoned Rural. The only district that allows above a two-family dwelling unit is the Seniors Housing overlay district, which permits densities of up to eight units per acre. These density levels begin to approach the residential densities needed to support a mass transit system, as outlined in the first half of this memo.

The majority of developments cannot be more than two and one-half stories tall and have maximum lot coverage ratios of 25 – 50 percent. This, in combination with generous setback requirements, results in smaller, less dense developments. In order to increase the density of developments to a transit-supportive level, Salem may want to consider increasing as-of-right density for new construction within a half-mile radius of proposed mass transit stations. This would include increasing allowable building height and reducing setback and frontage requirements.

Regulatory and policy incentives

Salem's Zoning Ordinance provides a density bonus in exchange for open space preservation. In Residential and Rural districts, this means that a development of at least 40 acres may be awarded a density bonus of up to 20 percent of the as-of-right density if at least 50 percent of the lot is reserved as open space.

The Seniors Housing Overlay district allows a density bonus of up to 10 percent for all projects over ten acres that restrict the age of all occupants to 62 and older. This additional density is a bonus on top of the increased density allowed because the housing development is designated for senior citizens age 55 and over.

With the exception of these two density bonuses, the Zoning Ordinance does not allow for any regulatory or policy incentives. Salem may want to consider whether density bonuses within the Town Center or Limited Commercial Shopping districts may be effective in steering denser development into areas that have the infrastructure to support it. Other incentives to consider implementing include streamlined permitting and reduced parking requirements.

Design guidelines

As outlined in the Site Plan Regulations, Salem’s design guidelines are fairly general; the most specific regulate the Town Center district. Within this district, the Zoning Ordinance outlines such design elements as massing and style, façade elements, door and window openings, and materials are specified. The Town may want to consider expanding these design requirements into the Limited Community Shopping Village and proposed TOD overlay districts in order to guide pedestrian-friendly, human-scaled development.

Provisions friendly to bicyclists and pedestrians

Salem’s Master Plan calls for a reduction in the need for roadway construction through the development of viable alternatives that reduce the dependence on the automobile as the only mode of travel. Salem’s Zoning Ordinance does not currently require nor offer any incentives for the development of a bicycle or pedestrian network. In order to reserve open space, reduce local traffic congestion, and improve air quality, the Town may want to consider designing a network that would allow people to bike or walk into the corridor between Route 28 and I-93. This network could also be used by commuters seeking an alternate method for accessing a mass transit station.

Parking

Off-street parking requirements are outlined in the Zoning ordinance: two spaces per dwelling unit in single-family dwellings and apartments, one space per unit in housing for the elderly, and one space per 300 square feet of gross floor area for office and business uses. These requirements are fairly high, and the Ordinance does not provide any options for reducing these requirements through shared parking or the use of municipal lots. It will be difficult for developers to achieve higher levels of density without a baseline reduction in the parking requirement or the opportunity for reductions.

Housing affordability

Salem’s Zoning Ordinance includes an article outlining the opportunity for density bonuses for the provision of affordable housing units. Units are to be affordable for households making 50 to 100 percent of the area median income. Neither the Zoning Ordinance nor the Site Plan Regulations outline the exact amount of the density bonus available, other than to state that such density will be awarded by the Planning Board, density shall not be more than 50 percent greater than allowed in underlying zone on the basis of four bedrooms per single family, and that not more than 40 affordable units will be allowed on a single tract. The

Master Plan states that, at the time of its writing, the affordable housing ordinance had been applied only twice since its adoption.

The Seniors Housing overlay district specifies that at least ten percent of the total dwelling units in all projects shall be dedicated as affordable to low- and moderate-income households (those making less than 80 percent of the area median income).

The need for affordable housing is going to continue to grow across the southern New Hampshire region. In order to proactively address the housing needs of its current and future residents, Salem may want to consider clarifying and streamlining the affordable housing ordinance in order to ease the development process. Also, the Town may want to revise the Zoning Ordinance to allow for more multi-family housing developments in selected areas in order to increase the variety of the housing stock and allow more affordable housing opportunities for young people, senior citizens, and lower-income residents.

Windham, NH

Windham Zoning Policies

Station area zoning

Windham's Zoning Ordinance maps the Town into 12 primary districts (three residential, seven business uses, one rural, and one historic) plus four overlay districts (aquifer protection, open space residential, elderly housing, and Route 28 access management). While no TOD district has been explicitly created, three districts (Neighborhood Business District (NB), Gateway Commercial (GC), and Village Center District (VC)) are supportive of denser, multi-use development. The existing rail corridor runs through a residential and a rural zone along the western border of the Town, while I-93 passes through the center of Town and immediately abuts almost every type of zoning district. While the land use surrounding the I-93 corridor is already the densest and most diverse in the Town, a TOD overlay district for future use along the rail corridor would provide the Town with an effective tool for proactively guiding future growth.

The NB district allows for businesses that provide goods and services for residents of the area. While residential uses are not allowed in the district itself, it does provide the types of services that would support denser, pedestrian-friendly residential developments. The VC district is located along Route 111, between I-93 and the rail line, and has the high-density, mixed-use characteristics of TOD, including parking requirement reductions, no setback requirements, and no minimum lot sizes. The GC district is designed to encourage high-quality commercial development along the I-93 corridor at Exit 3. While its density

requirements and performance standards are similar to a TOD, residential uses, which are the key to a true TOD, are not allowed under the current zoning ordinance.

District boundaries

The Zoning Ordinance does not identify specific TOD Zoning Districts; therefore, there are no defining parameters for district size or boundaries.

Mix of uses

Windham's 2005 Master Plan makes clear that the retention of the community's rural usages and aesthetic is a planning and land use goal of the Town. The Plan acknowledges that the construction of I-93 brought unexpected growth, which changed Windham's historically rural pattern of development. The expansion of I-93 that is currently underway and a potential mass transit system will provide opportunities for economic development and population growth, but requires proactive planning actions in order to direct development in a way that complements, rather than challenges, the community vision established in the Master Plan. One way to accomplish this is to create higher-density, mixed-use development in specific districts, so as to alleviate sprawl and congestion in the community as a whole.

Windham's Code currently allows for a mix of commercial and retail opportunities in the mixed-use districts above; the Code specifically encourages them in the GC district. In order to be fully transit-supportive, however, each of these districts should also allow for higher-density multi-family residential developments. The VC district currently allows for up to 20 percent residential development and most closely approximates a TOD. Even the districts that do not allow for any residential uses, such as the Professional, Business and Technology district, abut residential areas. If a comprehensive pedestrian and bicycle network was created to connect these zones, as described below, these forms of alternative transportation could reduce congestion on the I-93 and main arterial corridors. Additionally, economic development opportunities would be created for existing commercial and retail uses adjacent to this network.

Existing mixed-use districts have been located in the I-93 corridor to support the vehicular traffic associated with the highway. With slight modifications to permitted uses, including the inclusion of higher-density residential, this corridor would be supportive of a mass transit system in the I-93 right-of-way. This diversity and density of uses is not currently allowed along the existing rail corridor. In order to fully capitalize on a potential rail transit station, the Town should consider creating a TOD overlay zone that extends in a half-mile radius from the station and allows for mixed commercial, retail and residential uses. Because this

radius would pass through abutting municipalities, Windham should reach out to their neighbors and craft a micro-regional planning effort to ensure that neighboring development plans are coordinated and mutually supportive.

Development density and intensity

The 2000 U.S. Census data shows that Manchester had a population of 576 within a half-mile radius of the proposed station area. This translates into an average residential density of 1.1 persons per acre. Based on projections created by area metropolitan planning organizations, this population is expected to increase to 739 in 2030, which would increase density to 1.5 persons per acre. This is a 28 percent increase, without accounting for any additional growth due to the implementation of commuter rail or bus service. The number of households for this area is also projected to increase by 28 percent in this timeframe. The number of total employees within the half-mile radius is projected to grow by 41 percent, from 88 in 2000 to 124 in 2030. New commuter could be expected to support this growth, while providing opportunities for economic expansion and spatially-efficient housing opportunities.

Windham uses soil-based lot sizing to determine minimum lot areas for development. Minimum lot sizes are 50,000 square feet with 30,000 square feet of contiguous area, excepting the VC district and Open Space Residential zones. In both the GC district and VC district, there are no setback requirements, which is conducive to the denser, urban development that encourages pedestrian, street-level activity.

The Master Plan states that the average single-family lot size in 1998 was 1.1 acres: single-family homes are 92 percent of Windham's housing stock. This density of residential development encourages sprawl, increases reliance on single occupancy vehicles, and is not conducive to transit-supportive development. The Open Space residential district offers an opportunity to create denser residential development in an effort to conserve open space. The numbers of lots allowed are the same as under a traditional subdivision, but developers are given dimensional flexibility in exchange for setting aside 65 percent of the total area for open space. The Residence B district allows for the densest residential development, up to six units of per multi-family building, but is only mapped in three small areas throughout the town. As discussed above, denser, multi-family development should be permitted in the GC district, VC district, and NB district, and should be permitted in the recommended TOD overlay.

Regulatory and policy incentives

Windham currently offers four incentives to increase density in designated elderly housing developments. These incentives include up to a 20 percent density bonus in return for the provision of 25 percent of rental units for the elderly, up to a 50 percent density bonus for elderly units constructed in conjunction with a local, state or federal program designed to create affordable housing units for senior citizens, up to a 15 percent density bonus if at least 50 percent of the units are handicapped accessible, and up to a 15 percent density bonus for the provision of significant and substantial on-site recreational and / or common facilities.

The Village Center, Gateway Commercial, and Professional, Business and Technology districts offer options for shared or reduced parking requirements, based on demonstration to the Planning Board that shared parking will be maximized by complementary uses.

Because one of the stated land use goals of the town is to protect the rural landscape, the Town may want to consider implementing a transfer of development rights (TDR) system. TDRs allow areas that choose not to develop to the highest allowed density (rural areas) to “transfer” or sell their development capacity to areas (such as downtown) where such increased density is desirable. Typically, this mechanism is used to control the location of population growth, and allows rural landowners to capture the market value of their property without selling it, changing its use, and subdividing it. TDR programs have been used by multiple municipalities around the country, including Vermont, Pennsylvania, and New Jersey, for decades.

Design guidelines

Site plan review is required for any new use or change in use, excepting one- and two-family structures. The Site Plan Regulations provide guidelines for building design and appearance, with a separate section specifying additional requirements for the TC district.

Provisions friendly to bicyclists and pedestrians

The Code requires that the GC district provide pedestrian and bicycle access and circulation as an integral element of the design of any site. The Planning Board may require the extension of bicycle and pedestrian access to property lines, and the interconnection of access ways to adjacent parcels. This is a TOD-supportive requirement, but is limited to a relatively small area within Windham. The Town may want to consider extending this bicycle and pedestrian network so that residents have the opportunity to bike or walk along one continuous path from residential areas to business and commercial districts. This would

create recreational opportunities, reduce congestion, and provide increased mobility options to the elderly and non-vehicle owning populations.

Parking

Off-street parking requirements are specified in the Code: one space must be provided per dwelling unit, one space per 250 square feet of gross floor area for business, professional, and administrative offices, and one space per 200 square feet of gross floor area in retail and service establishments. As discussed above, the Village Center, Gateway Commercial, and Professional, Business and Technology districts offer options for shared or reduced parking requirements, based on demonstration to the Planning Board that shared parking will be maximized by complementary uses. The Town may also consider allowing adjacent municipal lot spaces to be counted towards off-street parking requirements.

Housing affordability

Windham's only affordable housing bonuses are those in the Elderly Housing Overlay District, which is discussed above. While these policies are important in creating affordable housing opportunities for senior citizens in Windham, the Town may consider incentivizing affordable housing production for low- to moderate-income households, particularly in multi-family housing developments. Specifically, this could be achieved through density bonuses in return for the provision of affordable units, or a streamlined permitting process for developments that include affordable housing.

Andover, MA

Andover Zoning Policies

Station area zoning

Andover is mapped into 11 base zoning districts (four residential, three business, one mixed-use, three industrial) and two overlay districts (flood hazard and watershed protection). A number of highways and large arterials crisscross the Town: I-93, Route 28, and the existing commuter rail line are the main north-south connectors, while I-495 runs east-west along the northern edge of Andover's border. Andover currently has two commuter rail stations: Andover station in the downtown core and the Ballardvale station along the Town's southern border. I-93 and the rail line converge just past the edge of Andover's southern border in an area known as the Lowell Junction.

Zoned for industrial uses, the Lowell Junction area is home to facilities owned by Gillette / Proctor & Gamble, Wyeth BioPharma, Charles River Labs, and AGFA Films, among other companies. Approximately 6,000 workers travel to work daily in the Lowell Junction area. Despite this high concentration of employment, the Town has been unsuccessful in their multi-decade effort to construct a new interchange from I-93 to provide better and more direct access to this area. Several existing businesses are unable to expand within the Lowell Junction because of poor highway access. An estimated 11,575 new jobs could be created if the existing vacant commercial and industrial land is fully developed.³¹ Following a joint effort by Andover, Tewksbury and Wilmington, the Merrimack Valley Planning Commission undertook an "Interstate 93 Corridor Study" during 2001 – 2003 to evaluate, among other things, the feasibility of widening I-93 and adding a new interchange at this location. After determining that construction was feasible, MassHighway and the Federal Highway Administration (FHWA) requested a stand-alone document outlining alternatives for a new interchange. This report, "The Route I-93 / Lowell Junction Interchange Justification Study" (IJR), has been submitted to Massachusetts' Executive Office of Transportation for ultimate submittal to the FHWA. This marks the first step towards receiving FHWA approval for the interchange. Should this project receive all approvals and proceed, it will present an overwhelming opportunity to fully tap the development potential of this area.

The Merrimack Valley Economic Development Council released a whitepaper supporting the construction of a new interchange at the Junction, developed together with a new multi-modal transportation center along the Haverhill commuter rail line. The Council argues that

a major multi-modal transit center located at the Junction would connect the development with residents of Lawrence, Haverhill and Bradford, where approximately 20,738 people live within a 10-minute walk to transit.³² Furthermore, according to the Council, there are over 1,000 units of housing currently being planned or under construction within walking distance to stations in Lawrence, Haverhill, Bradford, and Andover.³³ All of these units would be connected to the Junction via rail.

The Ballardvale commuter rail station is located in an area that is zoned General Business, Single Residence A, and Industrial G. A strip of parcels zoned Single Residence C buffers this area from the Industrial A designation of the Lowell Junction area. The downtown Andover station is located within the Mixed-Use district, and is immediately surrounded by General Business, Industrial G, and Single Residential A zones.

Both of these stations, particularly the downtown station, allow for a mix of uses in the area immediately surrounding the station. Neither of these stations, though, is located in or near zones that allow multi-family residential dwelling units. In order to capitalize on the Junction area's vast development opportunities, the Town should consider creating a TOD overlay district that allows a mix of multi-family dwelling units with commercial, retail, and supportive personal services within a half-mile radius of each station. This would increase transit ridership and provide the Town with additional economic development opportunities. The Tri-Town Planning Coalition, which represents officials from Andover, Tewksbury, and Wilmington, have released a vision for the area that does not include the creation of housing within the core of the new development. This decision will result in the creation of a new office and retail development, but may stunt the potential of this development to become a true mixed-use, 24-hour community. This vision will allow the Tri-Town Planning Coalition to achieve its stated goal of expanding the tax base for each community. The Coalition may consider expanding its vision to include a residential component in an effort to reach the housing goals of the three communities.

District boundaries

The Zoning Bylaws does not identify specific TOD Zoning Districts; therefore, there are no defining parameters for district size or boundaries.

³¹ Merrimack Valley Economic Development Council, "The Junction / Route 93 Development Area: Our Opportunity for Smart Growth and Regional Economic Development in the Merrimack Valley and Northeastern Massachusetts."

³² Ibid.

Mix of uses

The 1992 Andover Master Plan identifies a goal of creating more mixed-use development, particularly in areas that are transitioning from obsolete and inappropriate uses. The Plan recommends identifying incentives and guidelines that could be used to encourage developers to create mixed-use developments in older historical industrial districts. The Zoning Bylaws have created a development mechanism called Planned Development – Mixed Uses to allow for the redevelopment, conversion, or expansion of existing structures to include a mixture of multi-family dwelling units with business uses. A Mixed-Use district has been created in the downtown core to facilitate development that incorporates a mix of uses, but prohibits residential uses other than single-family detached dwellings. In order to create a residential population to support both the businesses in the Mixed-Use district and increase transit ridership numbers, the Town may want to consider revising the Code to allow multi-family residential within the Mixed-Use district, or create the recommended TOD overlay district. The Town may also want to consider evaluating whether any older, obsolete industrial structures located near the rail stations could be further incentivized to encourage redevelopment as a Mixed-Use Planned Development.

Development density and intensity

Andover's Zoning Bylaws express density in minimum lot areas, minimum yard depths, and maximum heights. The Single Residence C district requires a minimum lot size of approximately one acre, while the Apartment district must fulfill the requirements of the adjoining Single Residence district, although the development must provide at least 3,500 square feet per unit. No more than 12 dwelling units are allowed in any one building in the Apartment district, and buildings cannot be over three stories. This density could be increased to better facilitate TOD, increase activity in the station areas, and reduce the number of vehicles contributing to traffic congestion.

Regulatory and policy incentives

While the Zoning Ordinance contains mandatory affordable housing construction requirements (discussed below), the Town may consider providing density bonuses in exchange for the voluntary provision of affordable units. By providing this opportunity, the Town could target the incentives to areas near transit stations, thereby increasing density while generating ridership. The Town also provides a number of incentives for reduced

³³ Ibid.

parking requirements in the General Business district. The Town may want to consider expanding these incentives to other downtown districts, including the Mixed-Use district.

Design guidelines

The 1992 Master Plan recommended extending the mandatory Design Advisory Group project review to commercial and industrial projects outside of the General Business district. Specifically, the Town may consider creating a design guideline process for the Mixed-Use and recommended TOD overlay districts in order to encourage uniform, cohesive development that creates a pedestrian-friendly, human-scale environment.

Provisions friendly to bicyclists and pedestrians

The 1992 Master Plan recommended the creation of a bicycle-friendly transportation system that encourages frequent use by commuters, students, and residents. The Zoning Bylaws now include a section designed to ensure public safety by reducing the interaction of pedestrians, bicyclists, runners and recreational users with automotive traffic, reducing reliance on autos for local trips, reducing the impact of heavy traffic volumes on local roads, and encouraging linkages between neighborhoods. The Bylaws state that the goal of the Town is to “promote, whenever possible in the development process, provision for pedestrian and bicycle paths connecting residential housing, adjacent neighborhoods, school, recreational sites, open space, downtown services, places of work or any other connections which will provide safe, efficient, alternative ways of transportation and encourage a greater sense of community.” As the Lowell Junction interchange project moves forward, the Town should incorporate pedestrian and bicycle linkages throughout the area to increase mobility options.

Parking

The Zoning Bylaws offer parking requirement reductions for Industrial districts, based on evidence that special circumstances have reduced the need for parking. A number of reductions are also available in the General Business district: shared parking facilities may be used if up to 50 percent of the spaces serving a building may be used jointly for other uses not normally open or used during similar hours or remote parking is used by the employees and / or clientele of a commercial use. A 15 percent reduction is available if direct pedestrian access to abutting commercial areas is provided through improved pathways, stairway access, or other improvements.

Housing affordability

The 1992 Master Plan recommends promoting the development and maintenance of a variety of housing types available at all price points. The Plan specifically encourages the adaptive reuse of existing buildings, including former industrial sites, for residential use, the establishment of a Housing Trust Fund, zoning incentives to encourage the construction of affordable housing, and the development of lower density, scattered site affordable units.

The Zoning Bylaws now incorporate a number of both mandatory and voluntary opportunities to provide affordable housing units. In an effort to provide more affordable housing opportunities to seniors, 15 percent of the units developed in senior citizen assisted living facilities must be set aside as affordable for low-, moderate-, or upper-moderate-income seniors. The Bylaws also specify two types of Planned Developments that may be permitted: a Planned Development – Multifamily Dwelling (PD-MD) for the conversion of existing non-residential structures to multi-family dwelling units, or a Planned Development – Mixed Use (PD-MU) for the combination of multi-family dwelling units with business uses. In order to gain approval for proposed projects with more than three dwelling units, 15 percent of the residential units must be set aside for affordable units subsidized by either state or federal funds. Dimensional special permits for the construction of subsidized affordable housing are also available. These are designed to encourage the use of nonconforming lots for the construction of affordable housing.

Lawrence, MA

Lawrence Zoning Policies

Station area zoning

The City of Lawrence is mapped into thirteen zoning districts (three business, three industrial, three residential, and four highway / open space / water) and two overlay districts (Riviviendo Gateway and Planned Industrial). The City is divided into northern and southern halves by the Merrimack River. Route 28, known as Broadway, and Winthrop Avenue are the main north-south arterials; I-495 runs along the eastern border of the City and has two interchanges in Lawrence. The existing Lawrence MBTA commuter rail station is located on the Haverhill Line. This line runs north from Boston until it reaches the southern edge of the Merrimack River, at which point it curves east and crosses Lawrence's border with North Andover. Lawrence is the station where the proposed eastern alignment of the rail corridor would meet with the existing Haverhill MBTA line and continue on the existing route down to Boston's North Station.

The station is located in an area that is zoned General Industrial (I2). This district allows for office, restaurant, and retail uses that are considered transit-supportive, but it does not allow residential uses, with the exception of multi-family developments by a special permit. The area is immediately abutted by a Secondary Business district, which is similar in permitted uses to I2, and Residential (R3/R4) districts, which permit the densest residential development. While these surrounding districts are within a half-mile of the station, the City may still want to consider creating a TOD overlay zone to allow for a specific mixed-use, high-density residential and commercial zone in the area immediately surrounding the station. The creation of such a district would also allow the City to offer incentives for transit-supportive development and allow the creation of design guidelines.

District boundaries

The Zoning Ordinance does not identify specific TOD Zoning Districts; therefore, there are no defining parameters for district size or boundaries.

Mix of uses

Lawrence's Zoning Ordinance contains both Mixed Use and Planned Development designations. Planned Unit Developments are defined as mixed-use developments of two or more buildings or structures on a lot that is the lesser of a minimum of 60,000 square feet or five times the minimum lot size of the base zoning district. The development mixture is residential, open space, commercial, industrial, or other uses which, when combined with the variety of building types, is "sufficiently advantageous" to receive special permission for development. Mixed use developments are similarly defined, but apply to only a single building, as opposed to two or more.

As stated above, the existing station is located in an I2 Industrial zone, which allows for some mixed-uses, although multi-family residential is allowed only by special permit. Multi-family housing is not allowed as-of-right in any zoning district: it is only available through a special permit and site plan review process. The Zoning Ordinance specifies that mixed uses are allowed in the Business districts, but prohibited in all residential districts. This separation of uses is not particularly transit-supportive. In order to leverage the greatest economic development potential from a transit station, as well as capitalize on the opportunity to diversify Lawrence's housing stock and provide greater access to affordable housing opportunities, the City may want to consider permitting denser, multi-family housing as part of mixed-use development in the recommended TOD overlay zone.

Specifically, the 2000 U.S. Census reveals that while owner-occupied housing units account for only 32.2 percent of the total housing stock, the vacancy rate for these units was at only one percent. This extremely low vacancy rate indicates that there is demand for more homeownership opportunities than what is currently provided. The City may want to consider the possibility of incentivizing the creation of for-sale condominium units in the recommended TOD overlay zone. The Monarch on the Merrimack, slated to open in October 2007, is a residential reuse of the former Wood Worsted Mill. This new loft-style condominium development is located adjacent to the Lawrence commuter rail station, and exemplifies how adaptive reuse and infill development can be useful in creating transit-supportive development in older urban areas. This type of residential development is key to revitalizing an area, but it is one component of what must be a larger, comprehensive effort to create a mixed-use, high-density, pedestrian-friendly neighborhood. Retail, office, and supportive services should be allowed at street-level on the streets within a half-mile of the commuter station.

Development density and intensity

The residential zones in the area surrounding the station are R2/R2A and R3/R4: these are the densest residential districts. The R4 zone requires a 5,000 square foot lot area, 2,500 square feet of lot area per dwelling unit, minimum frontages of 50 feet, and a maximum height of six stories / 70 feet. The majority of the parcels in the adjacent residential zones are developed, which reduces the opportunity for new, higher-density construction. The I2 and B2 districts allow multi-family residential (by special permit), and the parcels in these districts provide the greatest opportunity for infill and redevelopment. Redevelopment and new construction may be further facilitated, however, if multi-family uses are allowed as-of-right within the recommended TOD zone, subject to TOD design guidelines.

Regulatory and policy incentives

Based on the success of the Monarch on the Merrimack and similar developments, private developers could become more interested in redeveloping adjacent underutilized mills and vacant lots. This market demand could provide the City with an opportunity to create a system of incentives for developers in exchange for the provision of amenities in the public way surrounding their developments. Currently, the City does not offer any development incentives in the Zoning Ordinance. The City's Department of Community Development offers assistance programs for businesses, including the Brownfields Cleanup Incentives program and the Gateway Project. This Project is located within Lawrence's U.S. Department of Housing and Urban Development-designated Renewal Community Area,

which offers businesses access to special tax incentives. This program utilizes private and public investments to revitalize the City's downtown residential, commercial and industrial centers.

In addition to these and other existing programs, the City may want to consider additional incentives. These could include land cost write-downs and fast track permitting. While the private market for new housing units may be on the upswing in Lawrence, as evidenced by the Monarch on the Merrimack, the City will be instrumental in creating an environment that facilitates and sustains new and infill development.

Design guidelines

The site plan review guidelines, as currently outlined in the Zoning Ordinance, do not address the aesthetic elements of construction, which is an essential part of creating a transit-supportive environment. The recommended TOD overlay district would provide an opportunity for the City to create a series of design guidelines to encourage new and infill redevelopment that is sensitive to context, human-scaled, and transit-supportive. Mandatory design guidelines may serve to stifle development, but the provision of design suggestions and assistance with project design review may help to guide future development in a way that is aesthetically pleasing.

Provisions friendly to bicyclists and pedestrians

Lawrence's zoning ordinance does not require any provisions for bicyclists or pedestrians, although the site plan review process requires that proposed sidewalks and other amenities will provide maximum pedestrian and bicyclist safety and access. The station area is separated from surrounding residential and business areas by the track itself. This creates an unfriendly environment for pedestrians, and does not encourage passengers to arrive at the station on foot or by bike. The City could incentivize developers in the recommended TOD overlay to improve pedestrian linkages around the station area. This would be especially helpful in the area around the Parker Street underpass between Market and Merrimack Streets. A large percentage of the frontages on Parker and Market Streets are surface parking lots, which are not conducive to creating a pedestrian-friendly environment. Increased landscaping, the provision of street furniture and bike racks, and the creation of bike lanes would create an environment that would encourage pedestrian and bike use.

Parking

Lawrence's Zoning Ordinance requires that general office uses provide three parking spaces per 1,000 square feet of gross floor area and residential uses provide one parking space per

one bedroom apartment and two spaces for all other types of dwelling units. These are comparatively high parking requirements, but the Ordinance does provide the opportunity to qualify for parking reductions. Planned Unit Developments and Mixed Use developments may be allowed to utilize shared parking by special permit if the developer can demonstrate that the mix of uses has different peak hours or days of demand.

The Ordinance also outlines two parking management plans that could qualify developers for a parking reduction: Parking Management Program “A” and Parking Management Program “B.” Under “A”, reserved parking for carpools is provided, a ride-share match-up bulletin board that also shows public transit schedules is provided on-site, an annual promotion is undertaken with the State ride-sharing program, a transportation coordinator is appointed, and an annual activity report is provided. Plan “B” includes all of the activities of “A”, plus subsidizes either monthly parking charges at public transit facilities, provides vanpool passes to employees for \$15 per month, or provides employee shuttle bus service. While there are some exceptions to these plans, they are a good step towards creating flexible parking requirements. As the City looks to encourage infill development, it may want to consider requirements that on-site parking be placed at the rear of the building, so as to encourage minimal lot setbacks and a pedestrian-friendly environment.

Housing affordability

As discussed above, 2000 U.S. Census data indicates that the demand for owner-occupied units is greater than the supply. Lawrence’s demographic characteristics illustrate the need for a greater supply of affordable housing: households are larger than the state average (2.9 versus 2.51), median household income in 1999 was only 45 percent of the statewide median (\$27,983 versus \$50,502), and the percentage of persons living below poverty in 1999 was over two and one-half times greater than the statewide figure (24.3 percent versus 9.3 percent). Also, the percentage of foreign-born persons living in Lawrence in 2000 was approximately two and one-half times the statewide figure (30.6 percent versus 12.2 percent). This demographic profile demonstrates a pressing need for affordable housing. While the Lawrence Housing Authority and the City’s Department of Community Development are working towards the creation of affordable housing opportunities, the City may also want to investigate increasing unit production by leveraging the emerging trend of loft redevelopment of mill facilities. The City could require developers to provide either a percentage of their units as affordable to low- and moderate-income households or pay a payment into an affordable housing trust fund for the creation of affordable units throughout the City.

Methuen, MA

Methuen Zoning Policies

Station area zoning

Two of the prospective mass transit corridors pass through the City of Methuen: I-93 runs through the western half of the town and the potential eastern alignment rail corridor runs just east of I-93, paralleling Route 28. I-495 passes through the eastern half of the City, connected to I-93 by the east-west Route 213. There are not currently any MBTA commuter rail stations in Methuen. The rail line passes through the existing downtown, which is defined in the draft Master Plan as the Gaunt Square area, bounded by Broadway, Hampshire, and Osgood Streets. The City is mapped into 15 base districts (two conservation, seven residential, four business, one industrial, one hospital) and two overlay districts (major industrial and Ashford School Re-Use). There is no mixed-use district, but the Central Business District (CBD), which the rail line runs adjacent to, is intended to be “a place of diversity and a mixture of uses.” Despite this intent, the Zoning Ordinance allows multi-family residential uses only through a special permit in the CBD, thereby greatly reducing the district’s functionality as a true mixed-use zone.

The City of Methuen updated the 1986 Master Plan in 2007, an action that was undertaken because of residents’ concerns regarding the pattern of development that is occurring in their community. Specifically, “traffic congestion is increasing; environmentally sensitive lands and rural areas are being proposed for residential developments; housing growth without balanced economic development is shifting property tax burdens on residents; housing is becoming less affordable; and the maintenance and upgrading of public facilities is increasingly difficult to finance...” These are all concerns that can at least be partially addressed through the decision to implement higher density, transit-supportive land use policies. Indeed, the Master Plan references the desire of Methuen’s residents to have “smaller-scale, more unique stores and restaurants” than the existing downtown provides.

According to the Master Plan, the City owns 424 vacant parcels of land. While a number of these are either abutting existing municipal buildings or undeveloped due to environmental constraints or conservation, the balance represent a valuable opportunity to provide development assistance (through packaging and assembly) and development control (through deed restrictions). Additionally, the City may want to consider creating a TOD overlay zone near the prospective rail station in order to allow as-of-right mixed-use, higher-density development. Based on the recommendations of the Master Plan, the City may also want to

consider implementing similar mixed-use development along major vehicle corridors, such as Routes 213 and 113.

District boundaries

The Zoning Ordinance does not identify specific TOD Zoning Districts; therefore, there are no defining parameters for district size or boundaries.

Mix of uses

One land use goal outlined in the Master Plan is to “support a mix of land uses to provide more options for residents to work and live in.” Mixed-use developments are not currently allowed in any district, including the CBD, as-of-right; in the Limited Business (BL) and CBD districts, mixed-uses are allowed with a special permit. The Master Plan recommends allowing residential densities of up to 12 units per acre in the CBD. Currently, when permitted, these developments must follow the density requirements of the underlying zone.

The Code does not allow any retail, service or office uses in any of the residential districts. Only Planned Unit Developments are allowed to include up to three convenience commercial establishments per 100 dwelling units. This separation of uses is not conducive to the mixture of residential, commercial, office, and supportive services that are necessary to sustain a 24-hour, transit-oriented development. The City may want to consider implementing the recommendations of the Master Plan by allowing for residential densities of up to 12 dwelling units per acre in the CBD and in the recommended TOD overlay district.

Development density and intensity

The 2000 U.S. Census data shows that Methuen had a population of 3,294 within a half-mile radius of the proposed station area. This translates into an average residential density of seven persons per acre. Based on projections created by area metropolitan planning organizations, this population is expected to increase to 3,689 in 2030, which would maintain density rates at seven persons per acre, but represents a 12 percent population growth. The number of households for this area, however, is projected to increase by 19 percent in this timeframe. The number of total employees within the half-mile radius is projected to grow by 10 percent, from 1,535 in 2000 to 1,694 in 2030. A new mass transit system, whether commuter rail or bus service, could provide opportunities for more compact housing stock. This could be critical because the number of households within this half-mile radius is projected to increase at a faster rate than the population, which indicates that household size will be shrinking.

Dimensional requirements outlined in the Zoning Ordinance define minimum lot sizes ranging from 8,000 square feet (Residential, RG and MA) up to lots over 130,000 square feet (Limited Business, certain developments in the multi-family districts). The maximum as-of-right density for any residential development is six units per acre, and the maximum height limit for any building is four stories; this does not approach the transit-supportive levels of density outlined in the first half of this memo. Minimum frontages and front- and side-yard setbacks encourage auto-dependency and strip-style development.

The Master Plan identifies new subdivisions and Chapter 40B developments (subsidized low- and moderate-income housing) on the City's east and wide sides as contributing to traffic congestion on collector streets. According to the Master Plan, 71 percent of all residential acreage is single-family, and 73.4 percent of residential development is on lots of a half-acre or less. There are two multi-family zoning districts in Methuen: MA and MB. Both allow multi-family developments by special permit only. MA requires three acre lots with a permitted density up to two dwelling units per acre. The MB district requires a one acre minimum lot and a maximum density of four dwelling units per acre. The Master Plan also comments that recent construction of senior citizen-restricted housing and 40B developments have been "cause for concern among residents," and raised questions about appropriate residential densities and usages.

Planned Unit Developments (PUDs) are allowed by the City as a means for promoting the efficient use of land. Although increased density is not permitted, with the exception of the affordable housing density bonus (described below), a 30 percent open space requirement ensures that the development will make more efficient use of the minimum 10 acre lot requirement. Mixed-use developments in the CBD and BL districts have no required minimum setbacks, but frontages that range from 80 to 100 feet are too large to encourage fine-grained, pedestrian-oriented development.

In order to allow for residential growth while addressing the concerns of residents discussed above, the City may want to consider targeting increased residential development, including affordable units, to the CBD and the recommended TOD overlay district. The City may also want to consider making multi-family developments as-of-right in the multi-family and CBD districts. The extra regulatory burden of applying for a special permit may be functioning to discourage developers from applying. The Master Plan also discusses the possibility of implementing a Transfer of Development Rights (TDR) program in order encourage the preservation of existing farm and open space. The development rights generated could be directed to areas where the City would like to generate density.

Regulatory and policy incentives

The City does not offer any regulatory or policy incentives other than an affordable housing density bonus and parking reductions (described below). The City may want to consider offering streamlined permitting for mixed-use developments or residential developments that include an affordable housing component.

Design guidelines

The City has general site plan review guidelines, but does not have design guidelines to encourage uniform, cohesive development that creates a pedestrian-friendly, human-scale environment. The City may want to consider creating voluntary design guidelines for the CBD and the recommended TOD overlay district in order to encourage uniform, cohesive development that creates a pedestrian-friendly, human-scale environment.

Provisions friendly to bicyclists and pedestrians

The Master Plan references the City's "limited and unpredictable placement of sidewalks." The Plan comments that sidewalks are in some of the older neighborhoods of Methuen, but are missing from connector corridors. The City has no existing citywide trail network, there are infrequent bicycle racks, no designated bike lanes, and children are not allowed to ride bicycles to school. The Plan recommends the creation of a city-wide bike and pedestrian plan to "create a system of off-road paths, lanes, and trails that connect destinations and provide desirable recreation opportunities." In order to support transit-oriented development, as well as increase mobility options for seniors and young people, provide recreational opportunities, and reduce congestion, the City way want to consider implementing the recommendations of the Master Plan.

Parking

Currently, the City requires two parking spaces for one- and two-family homes, two spaces for multi-family units, one space per 300 square feet for office, and one space per 250 square feet plus one space per two employees on maximum shift for retail uses. The City offers several options for reducing the parking requirement. The Special Permit Granting Authority may allow off-site parking on another lot if the use the parking is serving is not more than 200 feet from the lot. In the CBD, off-site parking is allowed within 500 feet of the principle business, and the Community Development Board may reduce the parking requirement by up to 50 percent if it is demonstrated that it is infeasible to create the required amount. Joint parking lots are available when it can be demonstrated that the combined parking needs of all uses sharing the lot will be sufficiently staggered through the day and night to meet the

normal requirement for each use. In addition to this diverse array of parking reduction opportunities, but the City may want to also consider allowing parking reductions for housing developments that contain affordable units.

Housing affordability

According to the Master Plan, only 9.2 percent of the City's housing stock is subsidized with State or Federal funds, which means that developers can use Chapter 40B to bypass local zoning laws to create affordable housing units. In order to address this affordable dwelling unit shortage, the Plan goes on to recommend that the City institute a mandatory inclusionary zoning ordinance on all new residential subdivisions, especially in rural areas. The requirement would be on a sliding scale dependent on development size; the minimum affordable unit contribution would be one unit, the maximum would be six units.

The City already offers an affordable housing density bonus in multi-family developments. Four of the multi-family development types (multi-family, attached dwelling, planned unit development, and mixed-use development) allow up to 100 percent density bonuses for affordable housing; this is awarded at the discretion of the special permit granting authority. Developers must provide at least 10 percent of the units as affordable to households up to 80 percent of the area median income. The units are deed restricted in order to retain affordability through ownership changes. The Community Development Board may allow developers to pay a fee-in-lieu of constructing affordable units within developments: the amount of this fee is determined by the Board, and paid into a City-administered Affordable Housing Fund. The combination of proposed mandatory affordable requirements and voluntary incentive bonuses should be effective in helping Methuen to designate 10 percent of its housing stock as subsidized affordable. The City may also want to consider requiring affordable housing units be constructed in the recommended TOD overlay zone.

Tewksbury, MA

Tewksbury Zoning Policies

Station area zoning

Tewksbury is mapped into 12 base districts and six overlay districts. The existing Lowell line of the MBTA commuter rail slices through the western edge of the City in an area that is zoned Heavy Industrial. I-495 passes through the northwestern edge of Tewksbury, intersecting with Route 28. Route 28, also known as Main Street, is almost entirely bordered by the City's only commercially-zoned parcels. I-93 runs through the easternmost points of Tewksbury, in the area that is known as Lowell Junction. This area, as discussed in both the

Andover and Wilmington sections, represents a huge industrial and commercial development opportunity.

The Merrimack Valley Economic Development Council released a whitepaper supporting the construction of a new I-93 interchange at the Junction, developed together with a new multi-modal transportation center along the Haverhill commuter rail line. In this paper, the Council states that the Town of Tewksbury rezoned land west of I-93 to allow Mills Corporation to construct a new regional, retail shopping center on the west side of I-93 when the proposed Lowell Junction interchange is constructed.³⁴ This area is now covered by the Highway Corridor Overlay District (HCOD) which is designed to, among other things, facilitate integrated physical design and to encourage interaction among activities located within the overlay district. This overlay specifies performance standards, which were created to establish a mechanism to both facilitate and control development.

The Council recommends a major multi-modal transit center located at the Junction, and argues that it would connect the development with residents of Lawrence, Haverhill and Bradford, where approximately 20,738 people live within a 10-minute walk to transit.³⁵ Furthermore, according to the Council, there are over 1,000 units of housing currently being planned or under construction within walking distance to stations in Lawrence, Haverhill, Bradford, and Andover.³⁶ These would all be directly linked to the Junction via train.

55 percent of Tewksbury's employment consists of retail and service jobs, and 18 percent manufacturing. Since 1995, Tewksbury has absorbed higher rates of employment and business growth than either Andover or Wilmington.³⁷ It is especially important, then, for Tewksbury to have an appropriate transit-supportive station area zoning plan in place to leverage the greatest possible amount of development from the new Lowell Junction interchange. The City may consider creating a TOD overlay zone, in addition to the HCOD, in order to permit higher-density residential in a targeted area around the proposed interchange. While the area is surrounded by the Residential zone, the permitted density in this zone is not high enough to take full advantage of the development potential presented by the Junction interchange. The Tri-Town Planning Coalition, which represents officials from Andover, Tewksbury, and Wilmington, have released a vision for the area that does not include the creation of housing within the core of the new development. This decision will

³⁴ Merrimack Valley Economic Development Council, "The Junction / Route 93 Development Area: Our Opportunity for Smart Growth and Regional Economic Development in the Merrimack Valley and Northeastern Massachusetts."

³⁵ Ibid.

³⁶ Ibid.

³⁷ Ibid.

result in the creation of a new office and retail development, but may stunt the potential of this development to become a true mixed-use, 24-hour community. The existing vision will allow the Tri-Town Planning Coalition to achieve its stated goal of expanding the tax base for each community. The Coalition may consider expanding its vision to include a residential component in an effort to reach the housing goals of the three communities.

District Boundaries

The Zoning Bylaws does not identify specific TOD Zoning Districts; therefore, there are no defining parameters for district size or boundaries.

Mix of uses

Tewksbury's Zoning Bylaws do not contain a specific mixed-use district. The existing districts tend to be fairly strict in usage separation: Commercial districts only allow single-family or elderly housing by special permit, and the Residential districts do not allow for any commercial or retail uses. The major transportation intersections, including the I-495 and Route 38 interchange, are located in areas that permit only limited amounts of residential development. As discussed above, the HCOD overlay, which is located in the Junction area, does not allow for any residential uses. The Town should proactively plan for TOD-style land use in the Junction area. This could be accomplished by implementing a TOD overlay district to allow for higher residential densities and mixed uses within a half-mile radius of any proposed transit station or new interchange.

Development density and intensity

According to the Merrimack Valley Economic Development Council, after accounting for natural constraints, land along the west side of I-93 in all three communities could support about 1.85 million square feet of office, retail and industrial space and several hundred units of housing.³⁸ Tewksbury should conduct an evaluation of its existing Zoning Bylaws to see if existing zones are mapped in order to best facilitate and encourage this development.

The Zoning Bylaws provide a number of different high-density residential development options. Multi-family dwellings are only allowed in the Multiple Family district by special permit from the Planning Board. No more than 100 units are allowed, and commercial and industrial uses are prohibited. The maximum height of the building is 35 feet, and there cannot be more than seven units per acre, or three bedrooms per unit, or 14 bedrooms per acre. Multi-family dwelling units for people over age 55 are authorized by special permit in

³⁸ Ibid.

both the Multiple Family Residential district and the Commercial district. No more than 150 units are allowed, and no more than seven units or 14 bedrooms per acre are permitted.

The Multiple Family Dwellings in the Senior Village District / 55 (SVD/55) is an overlay district designed to allow senior citizen-designated housing in multi-family buildings zoned at higher densities than permitted in the base district. It is located at the junction of Andover and North Streets in an area whose base zone is Residential. A Senior Village Development is allowed by special permit, must be at least five contiguous acres, not taller than 2.5 stories, and no more than seven units per acre.

The Community Development District (CDD) is designed to provide an alternative to residential, institutional and public elderly housing in Tewksbury. A Community Development Project (CDP) is allowed by in the CDD subject to site plan review by the Planning Board. Each CDP must be sited on at least 12 acres, have no more than six dwelling units per acre, nor more than 2 bedrooms per unit to a maximum of 12 bedrooms per acre. 65 percent of the units per dwelling acre must be devoted to Independent Living Facility, and 35 percent must be used for Assisted Living / Long Term Care Facility.

While these districts provide a variety of options for constructing residential development, the densities that they generate are not sufficient to support a mass transit system. The Town may want to consider allowing increased residential densities in targeted areas around the Town: in existing Multi-Family districts along the Route 38 corridor or in the recommended TOD overlay in the Junction area. Currently, all multi-family residential development requires a special permit. In order to encourage development, the Town may consider streamlining the permitting process by allowing these developments as-of-right in targeted areas.

Regulatory and policy incentives

Tewksbury currently offer two density bonus incentives. One that is offered, the Historic Preservation Incentive, is designed to provide incentives and permit flexibility in the preservation of historic buildings. This incentive allows developers to receive a “one for one” density bonus for dwelling units constructed in an SVD / 55 development: for every one historic housing unit, the developer receives one bonus SVD / 55 dwelling unit. These units are not subject to the affordable housing requirements described below.

The Open Space Residential Design Special Permit (OSRD) is designed to encourage the preservation of open space by allowing greater design flexibility in residential developments.

OSRDs are permitted in R40, R80 and Farming districts, and offer one additional market-rate dwelling unit in exchange for an affordable housing unit, up to a maximum 15 percent increase in allowed density. For each additional 10 percent of the site set aside as open space, a density bonus of five percent is awarded. This bonus cannot exceed 25 percent of the allowed density.

Because so much of the residential development in Tewksbury requires a Special Permit, the Town may want to consider converting a number of uses to as-of-right and control development through stricter design guidelines or performance standards. Additionally, the Town may want to consider reducing the parking requirements in targeted areas in order to encourage denser development and transit ridership.

Design guidelines

The OSRD district has the strictest design review process; the remaining districts are subject to relatively general design requirements. The Town may want to consider implementing stricter architectural design guidelines in the HCOD and multi-family residential areas in order to create visual continuity in new developments.

Provisions friendly to bicyclists and pedestrians

The Zoning Bylaws require sidewalks where necessary for safe pedestrian access and circulation, but do not outline any requirements for bicycle path provisions. In order to support transit-oriented development, as well as increase mobility options for seniors and young people, provide recreational opportunities, and reduce congestion, the Town may want to consider creating a network for pedestrian and bicycle paths. These paths could serve as connectors from the residential areas of Town to the Lowell Junction development area and increase opportunities for the use of alternative forms of transportation.

Parking

Tewksbury's Zoning Bylaws require three spaces per single-family dwelling unit, two spaces per multi-family dwelling units, one per 200 square feet of a personal service establishment, and one per 300 square feet of gross floor area for business and office uses. The Zoning Bylaws allow the Planning Board to reduce the number of parking spaces required by no more than 30 percent through the issuance of a special permit. This reduction is awarded based on documentation verifying the "special nature or use of a building." Because Tewksbury's parking requirements are comparatively high, the Town may want to consider shared parking or reduced parking requirements, particularly in the HCOD and the recommended TOD overlay district.

Housing affordability

Tewksbury requires the inclusion of affordable units in a number of different zoning districts. The Town requires that a Multiple Unit Development which receives a special permit must provide at least 15 percent of the units to households earning 80 percent of the area median income. An application for an Open Space Residential Design Special Permit will require that at least ten percent of the total units be put aside for households earning up to 80 percent of the area median income. Construction of affordable units may be waived if the developer makes an equivalent fee-in-lieu-of-units payment to the Town of Tewksbury for disbursement to the Affordable Housing Trust Fund. This Fund is available for use by the Local Housing Partnership to create affordable housing either through the purchase of land or units, or the development of new or rehabbed dwelling units.

The Bylaws also require that the ratio of three-bedroom market-rate units to three-bedroom affordable units must be one to one in both Multiple Family and Multiple Dwelling for Persons Over 55 districts. This is important, as low-income households with children often have difficulty in finding a dwelling unit which is large enough to accommodate a family with multiple children. An application for an SVD / 55 development must include an affordable component which is determined by a sliding scale based on density.

In addition to developer-subsidized units, the Bylaws allow for the construction of cluster developments. These developments do not increase allowed density, but provide a diversity of dwelling unit sizes and price points. This diversity is important in providing housing opportunities that are affordable to all of Tewksbury's current and future residents.

Wilmington, MA

Wilmington Zoning Policies

Station area zoning

The Town of Wilmington is mapped into 12 zoning districts (five residential, three business, two industrial, and two conservation). Each of the three prospective mass transit corridors passes through Wilmington. Two MBTA commuter rail lines (Haverhill and Lowell) run on parallel north-south tracks through the Town; there are two existing commuter rail stations (North Wilmington and Wilmington), and the Anderson Regional Transportation Center is just across Wilmington's southern border. The only two areas zoned for the Central Business District (CBD) are immediately adjacent to the two commuter rail stations, and the General Business (GB) districts are located around the stations and along the main arterials leading to

the stations. I-93 passes through the northeastern portion of the Town and is bordered by General Industrial (GI) and Residential (R) districts.

The CBD, GB, GI, and R districts each have strictly defined separations of usage: no residential uses are allowed in the GI district, and only certain types of residential are allowed by special permit in the CBD and GB districts. No business uses are allowed in any of the residential districts. In order to discourage the type of auto-centric sprawl development that the residents expressed disapproval of during the Master Planning process, the Town may want to consider creating a TOD overlay district that allows for a mix of residential, retail, and business uses within in a half-mile radius of both the existing commuter rail stations and the area known as the Lowell Junction Development Area.

Wilmington, like Andover and Tewksbury, is also directly affected by the proposed construction of a new I-93 interchange at the Lowell Junction Development Area. The Merrimack Valley Economic Development Council released a whitepaper supporting the construction of a new interchange at the Junction, developed together with a new multi-modal transportation center along the Haverhill commuter rail line. A major multi-modal transit center located at the Junction would connect the development with residents of Lawrence, Haverhill and Bradford, where approximately 20,738 people live within a 10-minute walk to transit.³⁹ Furthermore, according to the Council, there are over 1,000 units of housing currently being planned or under construction within walking distance to stations in Lawrence, Haverhill, Bradford, and Andover.⁴⁰ All of these units would be connected to the Junction via rail.

Currently, the northern tip of Wilmington, which is the area adjacent to the Lowell Junction area, is zoned GI and R. The Town may wish to continue coordinated planning efforts with Andover and Tewksbury to ensure that regional planning strategies are in place in order to best facilitate spatially-efficient, transit-supportive development in the Junction area. The Tri-Town Planning Coalition, which represents officials from Andover, Tewksbury, and Wilmington, have released a vision for the area that does not include the creation of housing within the core of the new development. This decision will result in the creation of a new office and retail development, but may stunt the potential of this development to become a true mixed-use, 24-hour community. This vision will allow the Tri-Town Planning Coalition to achieve its stated goal of expanding the tax base for each community. The

³⁹ Ibid.

⁴⁰ Ibid.

Coalition may consider expanding its vision to include a residential component in an effort to achieve the housing goals of the three communities.

District Boundaries

The Zoning Bylaws does not identify specific TOD Zoning Districts; therefore, there are no defining parameters for district size or boundaries.

Mix of uses

The Town of Wilmington Master Plan 2001 states that while four industrial centers (Southeastern Wilmington, East Wilmington, Northeastern Wilmington, and the center of town) have emerged in Wilmington, a strong town center never emerged. The Plan attributes this failure to a lack of planning policies that promoted the development of attractive mixed-use districts: specifically, a zoning bylaw requiring 125 foot lot frontages in commercial districts encouraged auto-oriented strip developments along state highways.

The Neighborhood Business district (NB) allows for less intense uses than in the General Business district, and permits single-family dwelling units and accessory apartments. Smaller required frontages and lot sizes contribute to a denser, more residential character.

The Master Plan explains the importance of mixed-use centers in increasing economic activity, reducing automobile dependency, and fostering social interaction, and recommends that the Town consider reducing the General Business districts in order to focus activity in designated activity centers. These recommended activity centers would follow TOD planning principles of mixed-use, pedestrian-oriented development, and are specifically recommended in the Town Center.

Multi-family residential uses are permitted in the Central Business District by special permit from the Planning Board, but must be located above the ground floor in existing structures. For new, entirely residential multi-family construction in the CBD, the building must be on a lot of at least 25,000 square feet, be no more than 40 feet tall, and a density of one unit per 4,000 square feet of lot with no more than 12 units per structure.

Conservation Subdivisions, when 50 units or larger, may apply to the Planning Board to include no more than 1,000 square feet of convenience retail primarily targeted to the residents of the surrounding neighborhood. The area around the North Wilmington MBTA station also includes some mixed commercial development. Because the Town lacks a true mixed-use district, the Town may want to consider mapping the recommended TOD overlay district around existing commuter rail stations and the proposed Junction interchange.

Development density and intensity

The 2001 Master Plan states that recent residential development is the result of the subdivision of farms and forests, which has “changed the character of the formerly open spaces and unpopulated roadways.”

Planned Residential Developments (PRDs) are designed to protect opening space by promoting dense development on compact sites. The minimum lot size is eight acres, and the maximum density is three units per acre. As of the 2001 writing of the Master Plan, there were no existing PRDs. This may be because they can only be created in response to a specific proposal from a developer and are classified as a rezoning, which requires a two-thirds majority of the votes in a Town Meeting for approval. The requirements of this process function as a strong disincentive to developers, thereby encouraging a pattern of sprawling, subdivision development. Conservation subdivisions are allowed in an effort to provide a development design that facilitates the preservation of open space by encouraging a more compact form of residential development.

The General Business district (GB) is the Town’s main commercial district designation. The Master Plan characterizes these districts as accommodating the type of strip-mall development disliked by the residents of Wilmington. Buildings are set back from the street, only cover a small percentage of the lot, and are usually surrounded by parking. Because of this auto-centric design, buildings are not pedestrian-friendly and encourage traffic congestion. The Town may wish to encourage more pedestrian-friendly, transit-supportive development through the recommended TOD overlay district, or by increasing both the density and variety of allowed uses in the GB and GI districts.

Regulatory and policy incentives

The 2001 Master Plan comments that in the absence of higher-density zoning or incentives to develop at natural activity centers, like the CBD or Perry’s Corner, developers choose to develop along roadways with fewer spatial constraints. The lack of development incentives offered by the Town, then, is directly encouraging the type of strip-mall development and sprawl that the Town is trying to avoid.

In order to protect the existing open space in Wilmington and encourage a denser pattern of commercial development, the Town may want to consider assembling and packaging smaller, infill parcels of vacant or under-utilized land for developers.

Design guidelines

The Zoning Bylaws offer only general regulations for site design standards and site plan review, which prohibits the Town from guiding new development in a manner than it is both aesthetically pleasing and pedestrian-oriented. The Town may want to consider TOD design guidelines like those used in San Diego (discussed in the first half of this memo) in order to guide transit-supportive development in the recommended TOD overlay zone.

Provisions friendly to bicyclists and pedestrians

The 2001 Master Plan claims that existing pedestrian and bicycle facilities are inadequate, and recommends that the Town “invest in sidewalks, pathways, and other pedestrian connections that will link residential neighborhoods to school, activity centers, and employment areas.”

The Zoning Bylaws state that Conservation Subdivisions shall provide walkways and bicycle paths to link residences with parking areas, open spaces, and recreation facilities, including links to off-site land uses (schools, recreation facilities, neighborhood activity centers) and existing or proposed bicycle trail networks.

Parking

The Zoning Bylaws require two parking spaces per dwelling unit, one space per 250 square feet of gross floor area in retail and service businesses, and one space per 300 square feet of gross floor area for business and professional uses. The Bylaws allow for shared parking facilities: when any land or building is used by two or more distinguishable purposes, the parking requirement is determined based on a calculation that factors in type of land usage and the time of day.

The Bylaws also offer reduced parking requirements for the CBD: retail and service businesses are required to provide one space per 400 square feet of gross floor area, and offices must provide one space per 500 square feet of gross floor area. These standards are further relaxed to 600 and 750 square feet (respectively) if the use is within 600 feet of a public parking lot of at least 60 spaces, of which at least two-thirds is two-hour parking.

Conservation Subdivisions also have reduced parking requirements if located within a half-mile of an MBTA commuter rail stations: instead of two spaces per dwelling unit, the developer must provide 1.5 off-street spaces.

The Board of Appeals may issue a special permit to allow reductions in parking requirements based on a demonstration that a proposed change in use of a building or new construction, which normally would result in a higher parking requirement, would not adversely affect the neighborhood if kept at the current levels.

While the Town currently offers a variety of parking incentives, it may want to consider proactively planning a strategy to avoid parking congestion that could occur due to increased vehicular traffic resulting from the proposed interchange in the Lowell Junction area. These strategies could be a combination of shared parking, parking requirement reductions, and parking maximums.

Housing affordability

The Over 55 Housing district contains a density bonus for the inclusion of affordable units: the total number of allowable units may be increased by 25 percent if at least 25 percent of the total number of units will be set aside as affordable. The for-sale units will be subject to contractual agreements that restrict occupancy and resale prices, thereby ensuring their long-term affordability. Additionally, the Town must be granted the right of first refusal for all affordable units that are being sold, and at least 70% of the affordable units must be initially offered to Wilmington residents.

Woburn, MA

Woburn Zoning Policies

Station area zoning

The City of Woburn is mapped into 15 base districts (four residential, four business, three industrial, two mixed-use, one office, and one open space) and two overlay districts (office park and Woburn Loop Bikeway / Greenway Overlay District). The existing commuter rail line has two stations in Woburn: Anderson Regional Transportation Center and Mishawum. The Anderson station was opened in 2001 as a multi-modal connection center servicing the Amtrak Downeaster service to Portland, Maine, the MBTA commuter rail service from Lowell into North Station, the Logan Express bus shuttle to Logan Airport in Boston, the Manchester Shuttle bus to New Hampshire's Manchester airport, the MetroNorth Shuttle which provides bus service to locations in Woburn, Burlington, and the Lahey Clinic, bicycle parking, and a 2,000 space parking lot. The Mishawum commuter rail station is located adjacent to I-95 / Route 128. I-93 briefly passes through the southeastern border of the City. The traditional downtown is located close to the geographical center of Woburn, which is not near any of these major transportation corridors. The rail line passes through mainly

industrial districts and borders on some of the lowest density residential districts. While both of these stations are well-established and well-used by commuters, the City may want to investigate the possibility of creating a TOD that allows higher-density, multi-family residential and other mixed-uses within a half-mile radius of both stations. Currently, the mixed-use districts are located in the downtown core.

District boundaries

The Zoning Ordinance does not identify specific TOD Zoning Districts; therefore, there are no defining parameters for district size or boundaries.

Mix of uses

As discussed above, the Industrial and Office Space districts through which the rail line passes do not allow the mix of residential, commercial, retail, office and supportive services that are essential to creating a TOD. The existing Mixed-Use districts currently allow for the highest density apartment developments, but should broaden the variety of commercial, retail, office, and supportive services that are allowed to operate. These districts are located in the downtown area, which, as discussed above, is removed from both of the commuter rail stations. The Industrial and Office Park districts that currently surround the stations do not allow for any residential uses and have a limited number of commercial and retail services. In order to diversify the mix of uses within a half-mile radius of the stations, the City should consider implementing the recommended TOD overlay zone.

Development density and intensity

Woburn's least dense residential zoning districts require at least a 12,000 square foot lot for detached single-family construction. This small lot size, in combination with comparatively small frontage and setback requirements, encourages a moderately dense development pattern. The first unit of an apartment development requires a 12,000 square foot lot, with 4,000 square feet for each additional unit. Apartment buildings can reach a maximum height of seven stories. This type of multi-family residential is restricted to the R-4 and Mixed-Use districts, neither of which is mapped near the commuter rail stations. This type and density of use should be permitted in the recommended TOD overlay zone to increase ridership and provide a wider variety of housing opportunities for Woburn's residents.

Regulatory and policy incentives

The Zoning Ordinance currently allows for a density bonus in cluster developments: while the general requirements state that allowed density should reflect the normal zoning requirements of the underlying district, the developer can apply for up to a 15 percent density

bonus for the provision of community amenities. These include providing public access to open space for recreation, deeding land to the City for conservation, a matching of extra market-rate units with an equal number of units to be available at construction cost to the City of Woburn Housing Authority, creating a variety of price points and differently sized units to permit purchase by a broader market, or planning to include units especially suited to seniors.

This incentive, along with available parking reductions described below, are the only two regulatory or policy incentives provided for in Woburn's Code. The City may want to consider offering streamlined permitting or flexibility for multi-family developments or commercial and retail establishments in the recommended TOD overlay zone. Increased as-of-right density and assistance with land assembly would further facilitate transit-supportive development in appropriate areas.

Design guidelines

Woburn's Zoning Ordinance does not currently outline any requirements for a design review process. In order to create a more transit-supportive, pedestrian-friendly environment, the City may want to consider providing developers with voluntary designs in the Downtown Business, Neighborhood Business, and Mixed-Use districts. Also, design guidelines should be included in the creation of the recommended TOD overlay district.

Provisions friendly to bicyclists and pedestrians

The Woburn Loop Bikeway / Greenway Overlay District was created as a mechanism to encourage the redevelopment of abandoned or underutilized commercial and industrial sites. The overlay, which is drawn over the General Industrial district, permits a variety of residential uses and incorporates the Woburn Loop Bikeway / Greenway Project (WLBGP). The WLBGP is the alternative transportation corridor construction project that is proposed for the former railroad right-of-way known as the Woburn Loop. The Woburn Redevelopment Authority identifies the right-of-way as running approximately .8 miles through the center of Woburn's South End, which is the area of the City with the greatest percentage of low- and moderate-income households. The WLBGP will serve as an innovative tool to facilitate new housing and economic development opportunities in this under-utilized and blighted corridor. As the planning process for this project moves forward, the City may want to consider evaluating potential bicycle and pedestrian paths extending from the WLBGP area into surrounding neighborhoods, including the Anderson Regional Transportation Center.

Parking

Woburn requires two parking spaces per dwelling unit in all residential districts, one per 200 square feet of ground floor retail or service establishment, one per 350 square feet for the same uses above or below the ground floor, and one 350 square feet of floor area in office or professional buildings. A reduction in the number of off-street parking spaces required in the Mixed-Use districts are available through a special permit, given that the hours of parking needs for individual uses are sufficiently staggered throughout a 24-hour period.

Additionally, a special permit may issued to allow off-site parking that is within 500 feet of the use it is servicing. The City may want to consider reducing residential parking requirements in the existing residential districts, as well as the recommended TOD district.

Housing affordability

Woburn's only incentive for the production of affordable housing is available in cluster developments, as described above. In order to accommodate projected growth rates and provide an even wider choice of housing stock, the Town may want to consider offering density bonuses or other regulatory incentives to encourage development in targeted areas.

These incentives should be directed towards zones which allow for multi-family residential and are close to shopping, employment, recreation, and transportation opportunities.

Specifically, the City may want to consider targeting affordable housing development to the area surrounding the Anderson station: easy access to multiple modes of public transit would increase a household's budget for housing and food by eliminating the financial burden of owning a car.

The Woburn Redevelopment Authority has converted vacant and underutilized space to residential use in three Woburn Square buildings. This is being funded in part through grants from the Housing Development Support Program (HDSP), administered by the Massachusetts Department of Housing and Community Development. The Pilgrim Square project restored the first floor of an abandoned building in Woburn Square for retail uses, while the upper two floors each contain two one-bedroom residential units. All four of the units will be rented to low- to moderate-income households. The 414 Main Street Redevelopment Project retained ground floor retail space and created three one-bedroom residential units on the second floor of the building. The Moore & Parker Redevelopment Project is currently in the design phase. It is slated to include ground floor retail and five one-bedroom units to be constructed on the upper two floors. The rent established for all units will be affordable to households at 65 percent of the area median income. These efforts

represent an innovative and effective way to rehab vacant buildings while encouraging retail and affordable rental housing opportunities.