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# SWAP Parking Bylaw Project

Funding provided by the  
District Local Technical Assistance  
program

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Prepared for the

Towns of Bellingham, Hopkinton,  
Medway, Sherborn and Wrentham  
All member communities of the  
SouthWest Advisory Planning  
Committee (SWAP)

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## **Acknowledgements**

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The SWAP Parking Bylaw project was requested by representatives of the Towns of Bellingham, Hopkinton, Medway, Sherborn and Wrentham on behalf of the ten communities comprising the SouthWest Advisory Planning Committee (SWAP), a subregion of the Metropolitan Area Planning Council (MAPC).

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This report was produced by the Metropolitan Area Planning Council. Professional technical assistance was provided by Cynthia Wall, Project Manager and Senior Regional Planner, and Alison Felix AICP, Transportation Planner.

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## **TABLE OF CONTENTS**

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### **Acknowledgements**

<b>Contents</b>	<b>Page</b>
I. Executive Summary	4
II. Task One: Review of Existing Regulations	5
See also Appendix I	
III. Task Two: Review of Current Best Practices	6
See also Appendix II	
IV. Task Three: Model Parking Bylaws	7-32
Appendix I	31-39
Appendix II	40-51

## Executive Summary

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The SWAP Parking Bylaw Project develops a series of recommended regulations that can be adapted by individual communities to update existing parking requirements. The draft language can be modified by the Town Planner and Planning Board to suit a specific community, and presented to Town Meeting for incorporation into town zoning bylaws. The goal is to provide communities with information and tools to make informed decisions about parking so that the demand and supply are balanced and appropriate.

The draft regulations are organized into three topic areas, and include 12 parking strategies selected by Town Planners and others working with MAPC. These are:

Topic: Parking for Alternative Vehicles

Strategy # 1	Small Car Parking	Page 11
Strategy # 2	Motorcycles	Page 12
Strategy # 3	Bicycles	Page 13
Strategy # 4	Electric Vehicles	Page 14

Topic: Managing the Parking Demand

Strategy # 5	Reducing Required Parking	Page 16
Strategy # 6	Parking Maximums	Page 17
Strategy # 7	Fees-in-Lieu of Parking Spaces	Page 19
Strategy # 8	Shared Parking	Page 20

Topic: Managing the Environmental Impacts of Parking

Strategy # 9	Pervious Paving Materials	Page 23
Strategy # 10	Parking Reserves	Page 25
Strategy # 11	Landscaping for Shade and Air Quality	Page 25
Strategy # 12	Location of Parking	Page 26

Additional information is available from MAPC's Parking Toolkit

<http://mapc.org/resources/parking-toolkit>

and the State's Smart Growth/Smart Energy Bylaw-Smart Parking Model Bylaw

[http://www.mass.gov/envir/smart\\_growth\\_toolkit/bylaws/SP-Bylaw.pdf](http://www.mass.gov/envir/smart_growth_toolkit/bylaws/SP-Bylaw.pdf)

## **TASK ONE:**

### **Review of Existing Zoning Regulations**

The first task of the project was to review the existing parking requirements in the zoning bylaws of the Towns of Bellingham, Hopkinton, Medway, Sherborn and Wrentham. Town Planners were asked to identify issues to be addressed in the study. In addition to the zoning bylaws, relevant town plans were also reviewed.

Appendix I summarizes this information and provides a baseline of information about the existing parking regulations in the five participating SWAP communities.

## **TASK TWO:**

### **Review of Best Practices**

For the second task, MAPC developed a matrix of Best Parking practices. The process began by reviewing the existing MAPC Parking Toolkit to identify communities that have adopted regulations pertinent to the parking topics identified in the Scope of Work. The draft matrix was reviewed and discussed at SWAP meetings on July 27, 2011 in Sherborn, MA and on August 24, 2011 in Wrentham, MA. Comments from the meeting attendees were noted and their input used to select the 12 parking strategies for the draft bylaws. Please see Appendix II for this Matrix, including comments from the meeting attendees.

## **TASK THREE:**

### **Model Parking Bylaws**

For the final task, MAPC developed draft bylaws for 12 parking strategies organized into three general topic areas. These are:

Topic: Parking for Alternative Vehicles

Strategy # 1 Small Car Parking

Strategy # 2 Motorcycles

Strategy # 3 Bicycles

Strategy # 4 Electric Vehicles

Topic: Managing the Parking Demand

Strategy # 5 Reducing Required Parking

Strategy # 6 Parking Maximums

Strategy # 7 Fees-in-Lieu of Parking Spaces

Strategy # 8 Shared Parking

Topic: Managing the Environmental Impacts of Parking

Strategy # 9 Pervious Paving Materials

Strategy # 10 Parking Reserves

Strategy # 11 Landscaping for Shade and Air Quality

Strategy # 12 Location of Parking

The following Parking Bylaw Report includes a parking overview section and provides an explanation of how to use the Report. Each topic area is introduced by a context section that presents a brief background on the related parking strategies. There is a menu of suggested bylaw language that recognizes:

- The suburban nature of the SWAP subregion, with very limited public transportation
- Village centers with on-street or municipal parking areas
- Shopping mall, strip development, or village center without parking areas
- Employee vs. customer parking (long term vs. short term parking)

The project anticipates that communities will review the topics they are interested in and adapt the suggested bylaw language to suit their requirements. Shaded areas in the text indicate that a decision needs to be reached concerning a range of numbers or a percent, or signals an issue that may require a discussion of planning policy.

MAPC looks forward to working with SWAP communities to incorporate these parking strategies in town zoning bylaws.

**SouthWest Advisory Planning Committee Parking Bylaw Project Report**

**INTRODUCTION**

Representatives from the Towns of Bellingham, Hopkinton, Medway, Sherborn and Wrentham wished to update elements of their respective parking bylaws. They also identified a need and an opportunity to promote better land use and economic development practices.

**Purpose of the Study**

To develop a series of regulations that could be adapted by individual communities to better manage parking. The language can be modified by the Planning Board to suit a specific community and presented to Town Meeting for incorporation into town zoning bylaws. The goal is to provide communities with information and tools to make informed decisions about parking so that the demand and supply are balanced and appropriate.

The menu of draft regulations is organized into three Topic Areas, and includes 12 parking strategies selected by town planners and others working with MAPC.

**MANAGING THE PARKING SUPPLY**

**How do we get the most from the spaces we need and/or have?**

**Parking for Alternative Vehicles**

Strategy # 1	Small Car Parking	Page 11
Strategy # 2	Motorcycles	Page 12
Strategy # 3	Bicycles	Page 13
Strategy # 4	Electric Vehicles	Page 14

**II. MANAGING THE PARKING DEMAND**

**How do we build flexibility into the requirements?**

Strategy # 5	Reducing Required Parking	Page 16
Strategy # 6	Parking Maximums	Page 17
Strategy # 7	Fees-in-Lieu of Parking Spaces	Page 19
Strategy # 8	Shared Parking	Page 20

**III. MANAGING THE ENVIRONMENTAL IMPACTS OF PARKING**

**Reduce the Impervious Surface**

Strategy # 9	Pervious Paving Materials	Page 23
Strategy # 10	Parking Reserves	Page 25
Strategy # 11	Landscaping for Shade and Air Quality	Page 25
Strategy # 12	Location of Parking	Page 26

Project funding was provided by the District Local Technical Assistance (DLTA) program administered by the Massachusetts Executive Office of Housing and Economic Development and the Unified Planning Work Program administered by the Boston Region Metropolitan Planning Organization (MPO).



**Scope of Work: Metropolitan Area Planning Council (MAPC) and SouthWest Advisory Planning Committee (SWAP) Communities relative to Parking Bylaw Revisions using District Local Technical Assistance (DLTA) Funds**

Bellingham, Hopkinton, Medway, Sherborn and Wrentham have requested assistance from MAPC to revise existing parking regulations in their town zoning bylaws utilizing state funds from the District Local Technical Assistance (DLTA) program. These five communities are part of the SouthWest Advisory Planning Committee (SWAP) subregion of MAPC.

**Goals of the Study**

- To develop dimensional parking requirements for alternative types of vehicles such as motorcycles, bicycles, and compact cars. Include incentives for promoting new technologies such as hybrid/electric cars.
- To develop flexible parking requirements for businesses that are pedestrian accessible and/or promote walking within the community. Determine if a reduction in number of required spaces is feasible and/or desirable for pedestrian-accessible locations.
- To examine the potential for incentives for business owners to modify existing parking areas to conform to new parking requirements.
- To reduce the amount of impervious surface required for parking facilities and allow for shared parking alternatives.

**MAPC proposes the following Scope of Work:**

1. MAPC will review existing zoning regulations in each participating town and solicit issues of concern from the Town Planners and Planning Boards. The participating towns are: Bellingham, Hopkinton, Medway, Sherborn and Wrentham.
2. MAPC will review current Best Practices to address the goals identified above. MAPC will research zoning bylaws that successfully incorporate the Best Practices.
3. MAPC will draft a model parking bylaw that incorporates sections to:
  - a. Promote shared parking
  - b. Reduce impervious surfaces
  - c. Allow for reduced dimensional standards for alternative vehicles such as motorcycles and bicycles and hybrid vehicles
  - d. Reduce parking requirements for businesses that promote access by other modes (transit, bicycle and pedestrian)
  - e. Promote sidewalk construction and connectivity

June 22, 2011

## PARKING OVERVIEW

- **Required parking is not based on a plan**

Included in the zoning bylaw, SWAP communities have standards for the minimum amount of parking required for different land uses. These minimums are generally based on the Institute of Transportation Engineers (ITE) Parking Generation Report and/or other communities' parking requirements. Rarely are the parking requirements based upon a parking plan for the community, generally focusing on the village center or downtown. Lacking a plan, there is no overall understanding of the existing parking supply that can be correlated to demand generated by new construction, changes in use, or redevelopment.

- **Parking regulations are a balancing act**

Perhaps more than any other land use regulation, parking requirements are a type of balancing act. The parking regulations need to balance the needs of an auto-oriented society and the potentially detrimental effects to the community. The key is to provide sufficient parking to meet the needs of businesses and to maximize economic development, while respecting environmental issues and community character.

- **Flexible parking takes many forms**

Acknowledging that some of the existing regulations may not promote economic development or retain village character, SWAP communities wanted increased flexibility in determining the appropriate number of parking spaces to require under different scenarios, including village centers and strip mall development/redevelopment. There are many techniques to achieve flexibility and they may be generally categorized as reducing the demand for parking and efficiently managing the supply.

- **Environmental impacts of parking should be managed**

Parking can be designed and managed to mitigate environmental impacts, particularly stormwater run-off. SWAP communities wanted information on how to do this effectively, primarily by decreasing the amount of impervious surface.

## HOW TO USE THIS REPORT

Each of the three Topic Areas is introduced by a Context section that provides a brief background on the related parking strategies and concludes with Key Considerations. The 12 individual parking strategies include a brief description of the strategy and Suggested Bylaw Language. The Report concludes with a section on Incentives to promote these strategies.

- Menu of Suggested Bylaw Language that recognizes:
  - The suburban nature of the SWAP subregion, with very limited public transportation
  - Village centers with on-street or municipal parking areas
  - Shopping mall, strip development, or village center without parking areas
  - Employee vs. customer parking (long term vs. short term parking)

Whether and how the various parking topics are implemented by a given community will depend on the type of commercial development being reviewed i.e. whether this is a larger mall with a single owner, or a small establishment in a village or within a small strip development. For several topics, alternate language will be provided, depending upon whether the proposed regulations would be appropriate for a village center with on-street

parking or a municipal lot, or for a strip development or area that would need to provide all required parking.

- **Suggested bylaw language** *Will be shown in italics*
- Indicates a **decision** needs to be reached on the exact **number or percent**. This may include discussing the community’s policies relating to land use and/or parking. Where a range or number or percent is given, the figure represents a current best practice and is from an existing parking regulation. **Planners/Planning Board members need to discuss and determine the appropriate number/percentage/policy for their community.**

**I. TOPIC: MANAGING THE PARKING SUPPLY**  
**How do we get the most from the spaces we need and/or have?**

**Context: Providing Parking for Alternative Vehicles**

Managing the supply of parking includes making the most efficient use of land devoted to parking, as well as providing for alternate means of travel. SWAP planners requested information on varying the required dimensions of the spaces in order to accommodate different sizes and types of vehicles. The purpose of the suggested bylaws below is to provide flexible parking space requirements in order to accommodate other types/styles of vehicles, such as compact (small) cars, motorcycles, electric vehicles and bicycles.

Not everyone drives a Sport Utility Vehicle. Communities wish to acknowledge that there are a variety of vehicles that require varying amounts of parking. It is anticipated that by allowing developers, property owners, etc., some discretion in number, size and type of parking spaces that must be provided, less land overall will be devoted to parking, permitting additional development and encouraging more sustainable site design.

There are four parking strategies and model bylaws under this Topic:

- Strategy # 1 Small Car Parking
- Strategy # 2 Motorcycles
- Strategy # 3 Bicycles
- Strategy # 4 Electric Vehicles

**STRATEGY # 1 PARKING FOR SMALL (COMPACT) CARS**

It may be preferable to use the term “small car” rather than “compact” because of variations in definitions, for example a “compact SUV” is still not a small car. The purpose of this bylaw is to encourage or require some small car spaces with reduced dimensions. The percentage of spaces that may be reserved for small cars can vary from 10% to 50% of total required spaces. Some communities wish to know how many small cars are registered in town, to gauge demand. Excise tax information available from the Assessor is one way to determine this information.

The benefit of this Strategy is that while the number of required spaces will likely remain the same, there will be a decrease in paved area on the site.

**Suggested bylaw language: FOR Village Center AND Mall/Strip Development**

*Parking Space Dimensions: Off-street parking shall comply with the following dimensions, exclusive of maneuvering and driving lanes.*

Standard Parking Space/Stall	9 feet wide	18 feet long	162 sq ft
Small Car Parking Space/Stall	8 feet wide	16 feet long	128 sq ft

*In off-street parking facilities [with more than 40\* parking spaces], a maximum of 30%\* of the spaces may be for small car use. Small car parking spaces shall be grouped in one or more contiguous areas and with appropriate signage.*

*[\* number of spaces TBD [some communities may not want to specify applicability and will want this applied to all parking lots]. Maximum allowed/required can vary from 10% to 50% or as determined appropriate for the community/particular development]*

**STRATEGY # 2 MOTORCYCLE PARKING**

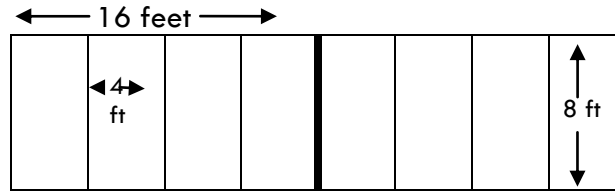
Some parking garages in Boston and Cambridge provide spaces designated for motorcycles, and MAPC found one business in Waltham that also provides separate parking accommodations. The challenge is similar to that of providing bicycle parking: space is reserved for vehicles that may not be utilized several months of the year, given the New England climate.

Motorcycle/motor scooter parking should be designed so that the vehicles are protected from cars, and not merely “grouped” into a standard parking space. This picture below is an example of dedicated motorcycle parking spaces.



Recommended Motorcycle Parking Space Dimensions	4 feet wide x 8 feet long.
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Where parking meters are utilized, and there are separate designated motorcycle spaces, the charge for these spaces should be one-fourth to one fifth (1/4 to 1/5) the rate for an automobile. This is because approximately four to five motorcycles can be parked in the space of one automobile. Seasonally, each group of 4 motorcycle spaces could become one small car space, with the cars parked in parallel. Adjustable signage could be modified, depending on the season, to accommodate either motorcycles or small cars.



Each motorcycle space is 4 ft. wide by 8 ft. long  
 A small car space is 8 ft. wide by 16 ft. long

**Suggested bylaw language: To be adapted for Village Center and/or Strip Development**

Motorcycle parking may substitute for up to 5 spaces or 5 percent of required automobile parking, whichever is greater

For every 4 motorcycle parking spaces provided, the automobile parking requirement is reduced by 2 spaces. Each motorcycle space must be at least 4 feet wide and 8 feet long. Existing parking may be converted to take advantage of this provision.

**OR**

For parking lots containing more than 50 spaces, 10% of the required spaces may be designed for small car and/or motorcycle use. Small car parking spaces shall be not less than 8 ft. wide by 16 ft. long. Motorcycle spaces shall be not less than 4 ft. wide by 8 ft. long. Spaces designed for small cars and/or motorcycles shall be grouped in one or more contiguous areas and identified by appropriate signage.

**STRATEGY # 3 BICYCLE PARKING**

There is growing interest in the MAPC region in bicycles as a mode of travel. The success of Boston’s Bikeshare is one example; a growing network of dedicated bicycle lanes as a component of complete streets design is another. It makes sense to include secure bicycle parking in the array of alternate parking provisions. Some jurisdictions differentiate between employee and customer bicycle parking, requiring different accommodations for each. For example, employee (typically long term) would be covered, and could be within a building. Customer bicycle parking would be located near the main entrance door.

**Suggested bylaw language: To be adapted for Village Center and/or Strip Development: Specific provisions to be determined by each community. This is a menu of Best Practices.**

One bicycle parking space will be provided for each ten (10) (20 is also used) off street automobile spaces required. Each space will be a minimum of 2 feet wide by 6 feet long. Rack(s) will be provided that allow for the bicycle frame and one wheel (some specify two wheels) to be locked to the rack and that support the bicycle in a stable position without damage to wheels, frame or components. All bicycle racks and lockers shall be securely anchored to the ground or building structure.

*Bicycle parking:*

- May include lockers or other secure storage facilities*
- Shall provide adequate spacing for access to the bicycle and locking device when the spaces are occupied*
- Where possible, shall be located within view of building entrances or view of windows, and/or security personnel stations*
- Where possible, shall be sheltered from the weather (particularly for longer-term employee parking)*
- Shall be provided in a structure when **all** (or some %) automobile parking spaces are provided within a structure, or shall be protected from the weather*
- Shall be designed and installed to minimize potential conflict points between pedestrians and motor vehicles and the spaces shall not interfere with pedestrian circulation*
- Shall be clearly marked and lighted*
- Shall be separated by a physical barrier or sufficient distance to protect bicycles from damage from automobiles*
- Does need not be paved, but shall be finished to avoid mud and dust*

For employee bicycle parking: offices/larger retail operations should consider installing employee showers/changing rooms for those who commute by bicycle. This amenity is a strong incentive to commute regularly to work. (See Incentives Section)

**STRATEGY # 4 ELECTRIC VEHICLE CHARGING STATIONS**

The purpose of this model bylaw is to encourage battery charging stations. The stations are key infrastructure elements that support this emerging vehicle type. Electric vehicles (EV) can help reduce environmental impacts compared to gasoline-powered vehicles, and reduce fuel costs. There are two types of electric vehicles: battery electric are all-electric vehicles and plug-in hybrids are vehicles that combine electric motors with internal combustion engines (ICE). Unless batteries can be conveniently recharged, consumers will be reluctant to embrace this technology.



(Photo credit: Boston Herald Nov. 13, 2011)  
This electric vehicle charging station is located at the Charles Hotel, Cambridge, MA



Another style of electric charging station

**Suggested bylaw language (Applies town-wide)**

Add to **“Definitions”** section of the zoning bylaw, or incorporate the following definitions in a separate section of the bylaw:

**Battery Charging Station:** An electrical component assembly or cluster of component assemblies designed specifically to charge batteries within electric vehicles at **Charging Level 1, 2 or 3.**

**Charging Level:** The standardized indicator of electrical force, or voltage, at which an electric vehicle’s battery is recharged. Level 1 is considered slow charging; Level 2 is considered medium charging; Level 3 is considered fast or rapid charging.

**Electric Vehicle:** Any vehicle that operates, either partially or exclusively, on electrical energy from the grid, or an off-board source, that is stored on-board for motive purpose, such as a battery electric vehicle or a plug-in hybrid electric vehicle.

**Inserted under “Accessory Use” section**

Battery Charging Station equipped with Level 1 or Level 2 charging equipment designed for electric vehicles is Allowed as an Accessory Use to any principal use. If only one station is provided, it shall be universally accessible (i.e. provide “Handicap Access”).

**As a “Principal Use”**

Battery Charging Station is Permitted in Industrial zones, and by Special Permit in Commercial zones. (This Principal Use would be similar to a gas station.)

**Key Considerations for Alternative Vehicles**

**Implementation**

The spaces for small cars, motorcycles and bicycles should be clustered and clearly marked. (Small cars with small cars, etc.). It may be desirable to provide a locational advantage by having these spaces near the building’s main entrance. Signage for motorcycles and bicycles could be movable so that good weather demand is met, and perhaps some of the space utilized for small cars in the winter. This could provide an incentive to include these types of spaces.

**Challenges**

Enforcement is always going to be an issue; we have all seen large pick-up trucks and SUVs parked in spaces designated “compact”. Is there a way to put small car dimensions on the sign? Some lots have spaces painted “compact car” to indicate they are reserved for this vehicle type.

<b>Dimensional Table for Alternative Vehicles</b>			
Standard Parking Space/Stall	9 feet wide	18 feet long	162 sq ft
Small Car Parking Space/Stall	8 feet wide	16 feet long	128 sq ft
Motorcycle Parking Space	4 feet wide	8 feet long	32 sq ft
Bicycle Parking Space	2 feet wide	6 feet long	12 sq ft
Universal Access Space (Handicapped)	12 feet wide	18 feet long	216 sq ft

Note that the parking lot aisles between entire rows of small cars can also be narrower.

**II. TOPIC: MANAGING THE PARKING DEMAND**  
**How do we build flexibility into the requirements?**

**Context**

Flexible parking requirements allow for the required amount of parking to be adjusted depending on certain factors (a site's walkability, or if transit is available, for example) and/or various parking strategies (shared parking or parking maximums). SWAP communities wanted tools so that they might modify parking for a use/development project depending on the specifics of the site. There was agreement that currently in many instances excess parking is required, resulting in a decrease in the amount of potential development and tax revenue. Also see the "Incentives" Section at the end of the Report for additional information about promoting flexibility.

There are four parking strategies and model bylaws under this Topic:

- Strategy # 5 Reducing Required Parking
- Strategy # 6 Parking Maximums
- Strategy # 7 Fees-in-Lieu of Parking Spaces
- Strategy # 8 Shared Parking

**STRATEGY # 5 REDUCING REQUIRED PARKING**

Parking requirements can be reduced, either in the zoning bylaw or by a regulatory board, based on discrete factors. These factors may be locational: Is the site in a village center, or is public transportation available? (For SWAP communities this is generally a bus route). The factors could also include some of strategies to manage supply, such as the provision of bike parking and facilities for employees, or ride-matching services that help people identify potential carpool or vanpool partners.

***Suggested Bylaw Language for Village Centers and Strip Development***

This is appropriate in both a Village Center and a Strip Development because it requires the developer to provide **a parking study** so that actual demand for new parking can be quantified.

*A decrease in the number of off-street parking spaces required by this bylaw (section/chapter) may be granted as part of a **Special Permit application or a Site Plan Review** provided that the following criteria have been met:*

- 1. The purpose and intent of the bylaw is met.*
- 2. The amount of off-street parking to be provided will be sufficient to serve the use(s) for which it is intended.*
- 3. The decrease in required off-street parking is based on a parking study prepared by a registered professional engineer. The parking study will include, at a minimum, the following:*
  - a. Size and type of existing uses or activities on site*



- b. Size and type of proposed uses or activities on site
- c. Rate of parking turnover
- d. Peak traffic and parking loads to be encountered
- e. Availability of on-street parking or municipal parking facility (Village Center) or existing lot (strip mall, shopping mall)
- f. Availability of public transportation, bicycle and/or pedestrian facilities such as sidewalks
- g. Other factors identified by the **Planning Board, Zoning Board of Appeal (SPGA/Site Plan Review entity)**

4. The SPGA/Site Plan Review entity **may or shall** consult with the Town building inspector, engineer and/or planner prior to granting any decrease in parking.

5. If the Special Permit Granting Authority (SPGA)/Site Plan Review entity allows a decrease in the amount of required off-street parking, the SPGA may require that a portion of the site be reserved to meet the off-street parking spaces required by this bylaw. This reserved area shall not be developed and shall be either landscaped or maintained in a natural state. The reserved area shall not count towards the open space requirements.

**Suggested Additional Bylaw Language for a Village Center**

In the **Village Business Zone (specify which commercial/business zone applies)**, legal on-street parking may be credited toward the parking requirements if the spaces are located between the premises side lot lines on the same side of the street.

**OR**

In the Village Business Zone, the required number of spaces for nonresidential uses shall be **50%** of the amount listed in Table or Section \_\_\_\_

Off-street parking may be reduced if there is a municipal parking lot within **2 blocks/400 feet** of the use.

Off-street parking may be reduced if employees are provided with, and required to use, remote parking.

The following language is for communities with varying intensities of business zoning districts, including a central business district. It allows for a decrease based on the intensity of use:

Off-street parking for non-residential uses must be provided only if the number of required spaces exceeds **20** in the **central business district** or **5** in the **limited business district**.

**STRATEGY # 6 PARKING MAXIMUMS**

The amount of parking mandated by zoning represents the minimum amount required for particular uses. Another approach to manage parking is to establish an upper limit or a cap “a maximum” on the amount of parking that may be built. Establishing parking maximums can prevent developers from building excessively large lots. Providing for parking maximums in a zoning bylaw can assist with the redevelopment of parking lots and/or strip malls and shopping areas where an excess amount of parking has been created. Along with additional development

capacity, reconfiguring an existing large parking lot is also an opportunity to reduce stormwater runoff.

**Suggested Bylaw Language For both Village Center and Mall/Strip Development**

No more than **150%** of the required parking shall be constructed.

**Alternatively**

A chart could be utilized. Both minimum and maximum parking would be included. Each community would substitute their own minimum/maximum parking requirements. The Minimums noted here are also good general guides for Village Centers. The Maximums better reflect Mall/Strip Development scenarios.

*Off-street parking shall be provided in accordance with the following minimum and maximum requirements.*

<b>Use</b>	<b>Minimum Parking Spaces:</b>	<b>Maximum Parking Spaces</b>	<b>Comments</b>
Dwelling units Studio/1 Bedroom	1.5 per unit 1 per unit	2 per unit 1 per unit	Reduction for smaller units
Eating and drinking establishments	1 space for each 4 seats or 2 spaces for each 150 s.f. of gross floor area, excluding basement storage area	One space for each 2 seats or one space for each 50 square feet of gross floor area, excluding basement storage area	Use seats for primarily sit down facilities, floor area for primarily take out facilities.
Motels, hotels and lodging houses	0.75 space for each guest room or dwelling unit, plus 1 space for each 500 s.f. of meeting, banquet or restaurant area	1 space for each guest room or dwelling unit, plus 1 space for each 400 s.f. of meeting, banquet or restaurant area	
Medical, dental or professional building	1.3 spaces for each 200 s.f. of gross floor area, excluding basement storage area	1.5 spaces for each 200 s.f. of gross floor area, excluding basement storage area	
Offices	1 space for each 300 s.f. of gross floor area, excluding basement storage area	1 space for each 200 s.f. of gross floor area, excluding basement storage area	
Retail business and service establishments	1 space for each 250 s.f. of gross floor area on the first floor of a building, and one space for each 500 square feet of gross floor area thereafter for all floors use businesses, excluding basement storage area	1 space for each 200 s.f. of gross floor area on the first floor of a building, and one space for each 400 square feet of gross floor area thereafter for all floors used for office, retail or service businesses, excluding basement storage area	
Theaters, auditoriums, assembly halls	1 space for each five seats or for each 100 s.f. of auditorium area, if there are not fixed seats	1 space for each four seats or for each 50 s.f. of auditorium area, if there are not fixed seats	
Mixed uses in a single building or a development		Spaces required will be the sum of the requirements of the various individual uses	If deeded condo parking, may not apply.

**STRATEGY # 7 FEES-IN-LIEU OF PARKING SPACES**

Several of the strategies to manage parking reference municipal parking lots. One of the challenges in many communities is to establish a municipal lot. Obviously, removing existing structures in a downtown or village center is not a preferred method of obtaining municipal parking. There could be vacant lots, however, or opportunities to purchase vacant properties. Fees in Lieu of Parking Spaces can help the community pay for parking. In Lieu Fees can be established as a flat rate per parking space not provided, or per square foot of floor area, or through a case-by-case determination of the development as a whole. Fees may be collected as a property tax surcharge, at the time a development is permitted, or annually.

**Suggested Bylaw Language for Village Centers**

*The purpose of this bylaw is to support commercial development in the Village Center by establishing a mechanism to provide public off-street parking facilities in lieu of private off street parking.*

*All or a portion of the required off street parking may be waived by the SPGA by special permit when the property is located within the Village Center District, provided that:*

- 1. The Board finds that there are sufficient publicly-owned parking spaces in the vicinity of the property to justify the waiver without detriment to the public health, welfare and safety; and*
- 2. The Town is paid a fee equal to the fair market value of the waived parking spaces (the area of which shall be determined by the number of waived spaces times 200 square feet) plus the cost of converting such spaces into a parking lot, as estimated by the Planning Board with the advice of the Town Engineer/Highway Superintendent. The owner (or occupant) of the property subject to the waiver is responsible for the payment.*
- 3. If the property owner donates to the Town a public right-of-way providing an important pedestrian or vehicular linkage in accordance with a downtown plan adopted by the Planning Board, the Board may reduce the fee specified in the paragraph above by an amount equal to the value of the donation, up to the total amount of the fee.*
- 4. Any waiver of off-street parking approved under this Section shall run with the land, and any subsequent changes of use that calls for more parking shall necessitate subsequent action to satisfy the additional parking requirement. No refund of any payment shall be made when there is a change to a use requiring less parking. Such payment and/or donation shall be made to the Town in total prior to the issuance of a building permit.*

**Alternate language:**

*Where a proposed use in the Village Center cannot meet the off street parking requirements, such requirements may be waived by special permit granted by the SPGA, where the applicant makes a payment in lieu to the Town Parking Mitigation Trust.*

*Payment in lieu shall be calculated using the following formula:*

<b>Number of required off-street parking spaces</b>	<b>Annual Payment</b>
<i>1-5 spaces</i>	<i>\$100.00/space</i>
<i>Each additional space 6-15</i>	<i>\$75/space</i>
<i>Each additional space after the first 15</i>	<i>\$50/space</i>

**STRATEGY # 8 SHARED PARKING**

Shared parking is a parking lot or facility that serves multiple destinations, and is most effective when the destinations either share patrons, so that people park once and visit multiple destinations, or have different time periods when parking demand is highest. Shared parking is also effective in mixed use developments, where retail and/or office demand for parking occurs during the daytime hours, and residential demand peaks in the evening (overnight). Establishing a shared parking policy can also assist with redevelopment of strip malls as planners and property owners develop an understanding of realistic parking demands across a spectrum of uses.

The following chart illustrates the potential for shared parking among different land uses:

<b>Land Uses by Time of Peak Parking and Demand</b>		
<b>Weekday Peak Parking</b>	<b>Evening Peak Parking</b>	<b>Weekend Peak Parking</b>
Banks and public services	Auditoriums	Religious institutions
Offices and other employment centers	Meeting halls	Parks
Park & Ride facilities	Restaurants	Shops and malls
Schools, daycare centers and colleges	Theaters	Mixed Use retail component
Factories and distribution centers	Hotels	
Mixed Use office component	Dance halls and bars	
Medical clinics	Mixed Use residential component	
Professional services		

Establishing the number of spaces required in a shared parking situation requires consideration of the following factors:

- The physical layout of the development(s), particularly the ease of pedestrian access from the parking spaces to the different uses
- The type of users typically parking at each type of facility, and their parking patterns.  
For example, employees who park full day vs. customers who park for an hour or two
- The total number of parked vehicles expected for each use during different time periods.

Many shared parking regulations use the following method below to determine the total minimum number of spaces required for a shared parking facility:

1. Determine the minimum amount of parking required for each land use or destination by time period as if it were a separate use
2. Sum the number of required parking spaces in each time period across all uses
3. Set the minimum requirement at the maximum total across time periods.

Another method is to allow the parties sharing the parking to determine the appropriate number of spaces. The Urban Land Institute has published **Shared Parking**, which offers analytic methods and time-of-day parking utilization curves for local governments and developers to use to calculate parking needs for specific projects.

### **Suggested Bylaw Language**

*Parking required for two (2) or more buildings or uses may be provided in combined parking facilities where such facilities will continue to be available for the several buildings or uses. The total number of required spaces may be reduced by up to one-half (1/2) if it can be demonstrated that the hours or days of peak parking need for the uses are so different that a lower total will provide adequately for all uses served by the facility. The following requirements shall be met:*

1. Evidence of reduced parking needs shall be documented and based on accepted planning and engineering practice satisfactory to the **Town Engineer, Planner or Highway Superintendent**.
2. The **Town Planner** shall determine how a combined or multiuse facility shall be broken down into its separate (constituent) components.
3. If a lower total is approved, no change in any use shall thereafter be permitted without further evidence that the parking will remain adequate in the future, and if the evidence is not satisfactory, then additional parking shall be provided (either on-site, offsite, or via a fee in lieu of parking) before a change in use is authorized.
5. Evidence of continued availability of common or shared parking areas shall be provided to the Town counsel and shall be documented and filed with the Site Plan if applicable and at the Registry of Deeds.

### **Alternate Language**

*Notwithstanding any other parking requirements set forth in this bylaw for individual land uses, when any land or building is used for two or more distinguishable purposes (including joint or mixed use development), the minimum total number of parking spaces required to serve the combination of all uses shall be determined in the following manner:*

1. Multiply the minimum parking requirement for each individual use (as shown in Town Bylaw Section/Chapter \_\_\_) by the appropriate **percentage** (as shown in the Parking Credit Schedule Chart) for each of the five designated time periods.
2. Add the resulting sums from each vertical column.
3. The column total having the highest total value is the minimum shared parking space requirement for that combination of land uses.

<b>Parking Credit Schedule Chart</b>					
	<b>Weekday</b>	<b>Weekday</b>	<b>Weekday</b>	<b>Weekend</b>	<b>Weekend</b>
<i>USE</i>	<i>Night Midnight to 7:00 a.m. (percent)</i>	<i>Day 7:00 a.m. to 5:00 p.m. (percent)</i>	<i>Evening 5:00 p.m. to Midnight (percent)</i>	<i>Day 6:00 a.m. to 6:00 p.m. (percent)</i>	<i>Evening 6:00 p.m. to Midnight (percent)</i>
<i>Residential</i>	100	60	90	80	90
<i>Office/Industrial</i>	5	100	10	10	5
<i>Commercial/Retail</i>	5	80	90	100	70
<i>Hotel</i>	70	70	100	70	100
<i>Restaurant</i>	10	50	100	50	100
<i>Restaurant associated with hotel</i>	10	50	60	50	60
<i>Entertainment/recreation (theaters, bowling allies, cocktail lounges and similar)</i>	10	40	100	80	100
<i>Day-care facilities</i>	5	100	10	20	5
<i>All other (unless documentation is submitted by a registered engineer, etc.)</i>	100	100	100	100	100

**Key Considerations for Managing the Parking Demand**

**Implementation**

It may be difficult to encourage property owners and developers to adopt new ways of thinking about parking, and to prepare the necessary documentation. Some of these Strategies will also require additional management by municipal employees.

**Challenges**

A major challenge when adjusting parking requirements is to minimize the potential for spillover effects. Sufficient parking for a given use must be available, or the drivers will park elsewhere, creating “spillover”, or will forgo stopping at this location, resulting in a loss for the local economy. Having parking lots available nearby that are not at full capacity (even if that requires a charge to park) as well as access to the site via non-auto modes increase the chances of success.

Another concern is that if new developments (or redevelopments) are not required to provide parking and previous developments were, the burden of providing parking may be unfairly distributed on the properties that have been there longer. If this is a concern, one alternative is to maintain required minimums but allow developers to pay a fee in lieu of each required space not provided, with the fees to be used for providing public parking. Another alternative is to allow

those with an existing parking supply that exceeds their needs to rent or sell it to newcomers who can't add parking to their sites.

In some cases, developers may be constrained by requirements from lenders that they provide a certain amount of parking.

Another challenge with shared parking is working out an agreement between land owners or developers if the uses are not all on the same property. The municipality may wish to provide a model agreement that the parties can use.

Mixed use projects involving residential condominiums that deed specific parking spaces with units would make it impossible to share those spaces unless an agreement was reached with either the individual unit owners or the condominium association. Mixed use rental projects would offer more opportunity for shared parking.

### **III. MANAGING THE ENVIRONMENTAL IMPACTS OF PARKING** **Reduce the Impervious Surface**

#### **Context**

Parking lots with large amounts of pavement can be detrimental to the environment in a number of ways. Most pavement materials (asphalt and concrete) are impervious, or impermeable.

- The impervious surface does not allow rainwater/stormwater to penetrate into the ground to recharge groundwater; instead, it is usually channeled to storm sewers or directly to streams.
- Oil and other fluids that leak from parked vehicles contaminate the stormwater.
- The pavement absorbs the heat of the sun and causes heat island effects.

Parking can be designed and managed to mitigate environmental impacts, particularly those associated with stormwater run-off. SWAP communities wanted information on how to do this effectively, primarily by decreasing the amount of impervious surface. Improved parking lot design can also promote increased pedestrian access and connectivity.

There are four parking strategies and model bylaws under this Topic:

- Pervious Paving Materials
- Parking Reserves
- Landscaping for Shade and Air Quality
- Location of Parking

#### **STRATEGY # 9 PVIOUS PAVING MATERIALS**

Pervious paving materials are designed so that rainwater is able to infiltrate or penetrate into the soil underneath the parking lot. This is important in order to recharge or renew groundwater. Groundwater provides drinking water for the majority of SWAP communities via aquifers and well systems. Reducing the amount of water running into storm sewers or directly to surface waters is one goal of town bylaws dealing with stormwater.

The different types of pervious paving materials include:

- Turf blocks or grass pavers-these are paving blocks that have an open area that is filled with soil and planted with turf or moss. Constructed of concrete or a synthetic material, they distribute the weight of the traffic and prevent compression of the underlying soil.
- Paving stones are typically brick, stone, concrete or a synthetic that is impermeable, but they are set on a prepared sand base and the joints between the paving blocks are filled with sand or stone dust that allows water to percolate into the ground.
- Pervious concrete or porous asphalt are mixed with a very low content of fine sand, so the water can pass through small openings within the pavement.

Pervious materials are not recommended for high traffic volume areas (more than 500 average daily trips), or for parking located near public or private drinking water wells. They may be best suited for walkways, plazas and overflow parking areas. SEE **STRATEGY # 10: PARKING RESERVES.**

***Suggested Bylaw Language for Village Centers and Mall/Strip Developments***

*Parking areas composed of pervious surfaces are encouraged for all land uses and lots, unless there are environmental limitations, and may be provided to meet all or part of any required parking on a lot.*

**Alternate Language**

[NOTE: This is for bylaws that indicate the amount of allowable lot coverage. By counting only a percentage of the pervious surfaces as lot coverage, less of the total parking area is counted toward allowable lot coverage. This leaves more land for building coverage, and is an incentive for using pervious surfaces. Setbacks and landscaping requirements still need to be met.]

*Parking areas composed of pervious surfaces are encouraged for all land uses and lots, unless there are environmental limitations, and may be provided to meet all or part of any required parking on a lot. Up to 40% of the pervious surfaces shall be counted as part of the overall allowable lot coverage.*



Parking reserve with permeable pavers



Parking lot with pavers and grass



## STRATEGY # 10 PARKING RESERVES

Many parking bylaws require more parking than is actually needed most days of the year. Landscaped parking reserves try to address this situation by allowing developers to pave and provide a reduced number of parking spaces but set land aside in case the parking is needed in the future. This technique is useful in phased developments, for uses where parking demand is uncertain due to lack of data, or because of unusual operating characteristics. A variation is to allow land to be paved with a permeable surface for overflow parking, those peak monthly or yearly times when the parking is actually needed.

***Suggested Bylaw Language: This technique is not suited to village centers because it reduces the development potential, unless the reserve parking provides an amenity, such as pedestrian connectivity or desirable open space (with the understanding this may be a temporary amenity).***

*The Planning Board may allow the applicant to reserve a number of parking spaces to be designated “Reserve Parking” on the Site Plan, subject to the following:*

- *The applicant must provide documentation that the proposed use does not need the number of spaces required under Section \_\_\_ of this zoning bylaw.*
- *The Reserve Parking shall not exceed 40%-75% of required parking spaces.*
- *The Reserve Parking may remain as existing natural vegetation or be developed as a new landscaped area, as approved in the Site Plan.*
- *The Reserve Parking is not to be counted toward the minimum open space required.*
- *No structure or mechanical equipment may be placed in the Reserve Parking area.*

### Alternate Language

*The Planning Board may allow the applicant to reserve a number of parking spaces to be designated “Reserve (or Overflow) Parking” on the Site Plan, subject to the following:*

- *The applicant must provide documentation that the use does not typically need the number of spaces required under Section \_\_\_ of this zoning bylaw.*
- *The overflow parking will be paved. At least % will be paved with a pervious-type paving material unless there are environmental limitations.*

## STRATEGY # 11 LANDSCAPING FOR SHADE AND AIR QUALITY

Landscaping in parking lots is a usual component in either site plan or parking bylaws. With additional requirements in Massachusetts to treat storm water run-off, landscaping in parking lots takes on an additional role to help address stormwater control measures. For this reason, any change to landscaping requirements, whether in the site plan or parking section of the bylaw ought to be coordinated with stormwater control regulations. Sometimes these regulations are also in the zoning bylaw, or they may be found within the General Bylaws of a community.

Treed islands provide some shade to reduce heat from the asphalt, and also provide some air quality benefits. They also can be designed to deal with stormwater, through techniques termed Low Impact Development or LID. LID is defined as landscaping and design techniques that attempt to maintain the natural, pre-development ability of a site to manage rainfall. LID

techniques capture water on site, filter it through vegetation, and let it soak into the ground where it can recharge the local water table rather than being lost as surface runoff.

NOTE: IF a community wishes to coordinate landscaping requirements for parking lots and LID techniques, general guidelines are better than strict requirements. This is because every site is unique, and engineers need flexibility to design for LID and not be overly restricted by landscaping requirements. The LID should organically achieve landscaping standards desired by a community. For additional information see <http://www.mapc.org/resources/low-impact-dev-toolkit>

### **Suggested Bylaw Language emphasizing Low Impact Development (LID)**

*Parking areas for 8 or more vehicles shall be drained through catch basins equipped with grease and oil traps and sediment traps unless the topography of the site prevents their use.*

*To reduce stormwater discharge and improve the attenuation of pollutants, applicants are required to use stormwater control Best Management Practices (BMPs) and Low Impact Development (LID) techniques in parking lot design (i.e. interior landscaping, vegetated/grassy swales, infiltration planters, permeable pavement, rain gardens, etc.)*

#### Alternate language

*Parking areas with more than 10 spaces shall contain 150 sq ft of planted areas for every 1,000 sq ft of parking proposed, including aisles, appropriately situated within the parking area. The planted areas shall contain a mix of trees and other plants with an emphasis on plant species native to Massachusetts and/or drought resistant plantings. Minimum acceptable size of tree to be planted shall be 1.5" trunk caliper at 4 ft. above grade.*

*The surfaced area of parking lots and all entrance and exit drives shall be set back and landscaped with grass and shrubs a minimum of five feet from all lot lines, except when an access drive crosses the street layout.*

### **STRATEGY # 12 LOCATION OF PARKING**

Typically, parking is located in front of a business so that it is readily visible and easily accessible. Unfortunately, this design detracts from the pedestrian environment and makes the area less attractive for shoppers to linger. Large expanses of parking are common not only in shopping malls, but also in downtown areas where buildings are demolished to make way for stores with the parking located front and center. Accommodating the auto drives the site design. There is an alternative: requiring that parking for new buildings in a downtown or any area that is intended (eventually) to be pedestrian friendly be located behind the building, away from the street. A few spaces, perhaps for compact cars and alternate modes, could be located on the side of the building or along the driveway to the rear of the building.

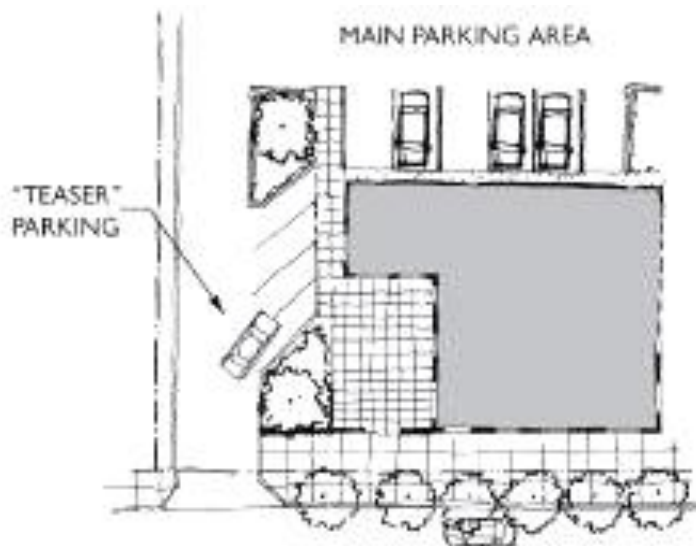
### **Suggested Bylaw Language: For Village Centers and Strip Development**

*Motor vehicle parking spaces shall be located behind or beside buildings to the maximum extent possible. Motor vehicle parking is discouraged directly between the building and the street alignment [within the front yard setback].*

*No employee parking shall be permitted directly between the building and the street alignment.*

Additional language to require a landscaped buffer between the lot and the street:

*A landscaped buffer area at least 20 feet in width as measured from the layout of the roadway providing street frontage shall be established. The buffer area shall be planted with grass, shrubs and trees. As appropriate, street trees shall be planted at least every 40 feet along the frontage. Access ways and walkways may be provided in the landscaped buffer.*



*From: Van Meter Williams Pollack and Urbsworks, Inc. "Parking Design Issues", Report for the City of Palo Alto, CA, 2004.*

## **Key Considerations for Managing the Environmental Impact of Parking**

### **Implementation**

These techniques will usually be implemented during a site plan review or special permit review process.

### **Challenges**

Providing pervious paving materials and parking reserves may be difficult because it could prove costly to a property owner or developer. For changing the location of parking, obtaining “buy in” from merchants and property owners will be a challenge. The idea that shoppers will be willing to park behind a store is a radical departure from the conventional and accepted wisdom. This will be easiest to implement where on-street parking is provided.

## PUTTING IT ALL TOGETHER WITH SITE PLAN REVIEW

Many of these regulations can be implemented simultaneously. For instance, requiring parking lots to be located in the rear of buildings, with a small amount of parking on the side is a good opportunity to provide small car, bicycle and/or motorcycle parking along the driveway, if space permits. A shared parking arrangement may benefit from parking maximums. The best way to implement many of these parking techniques is through a comprehensive review of proposed parking for a given project. The best way to do this is through a site plan review process. Site Plan Review regulations can be modified to reference desired parking design and techniques.

### **Suggested Site Plan Review Language**

[This language could also be incorporated into the Parking section of the bylaw]

### **General Design for Parking**

*Off-street parking facilities and connecting drives between the parking facilities and the street shall be designed to insure the safety and convenience of persons traveling within or through the parking area, and between the parking facility and the street.*

*The proposed project shall not degrade safety for pedestrians, bicyclists, motor vehicle occupants, or property owners and shall minimize the impact on scenic roads, historic districts, natural resources, and community character.*

### **Pedestrian and Vehicular Access: For Mall/Strip Development**

*To the extent feasible, access to nonresidential uses and structures shall be provided via a common driveway serving adjacent lots or premises.*

*Safe and convenient pedestrian access shall be incorporated into plans for any parking area. This shall be shown on the Site Plan [or Parking layout plan]. Access shall be designed so that the flow of pedestrians can be directed through a system of convenient routes that bring them to main walkways leading to main entrances. All walkways shall be constructed to provide for:*

- *Safe separation of the walkways from motor vehicle traffic through the use of raised sidewalks and/or landscaping between sidewalks and parking spaces and/or driving aisles.*
- *A minimum of 4 feet in width and constructed for universal access*
- *Marked pedestrian crossings, signs and lighting*



This example is from Burlington, MA (signage and lighting not visible in picture)

**INCENTIVES**

One of the most difficult challenges is to encourage developers and property owners to include these parking management tools in their projects. The suggested bylaws are written in a permissive rather than prescriptive style. A community could mandate these measures, rather than grant permission to utilize them. Given the economy however, it is likely that communities will be cautious in mandating improvements that could add significantly to development costs. Providing incentives is one way to encourage the use of these techniques. Following are various suggestions for providing incentives to encourage use of the parking strategies.

**Potential Incentive for Including Alternative Vehicle Parking**

The decrease in paved area devoted to parking could provide additional land for development. Note: While the number of spaces required does not change with small car spaces, the total parking area to be paved is reduced. Any additional allowed development would have to supply some additional parking.

The example below is for a project with 200 required parking spaces

All Standard	200	Standard spaces @ 162 sf x 200	32,400 sf
Compact @ 30%	60	Small car spaces @ 128 sf x 60	7,680 sf
Standard	140	Standard spaces @ 162 sf x 140	22,680 sf
		TOTAL	30,360 sf
		Decrease in paved area	2,040 sf

**Potential Incentive for Including Bicycle Spaces**

If bicycle parking is provided, parking may be reduced by 10-15% up to a maximum of \_\_\_ in a Village Center or a maximum of \_\_\_ in strip Mall/Strip Development without access to designated bike lanes. If covered bicycle parking and showers are available for employee use, parking may be further reduced by .5? space per covered bicycle rack.

**Potential Incentive for Providing Connectivity**

Rather than require a pedestrian path through a mall/strip development parking lot, a community might wish to adjust the required parking if such a path is provided. For example:

If interior pedestrian paths are constructed that link to a continuous sidewalk network, a community path, residential area or otherwise enhance and promote pedestrian access, the number of required parking spaces may be reduced by 5%.

OR

If the development provides a bus shelter, suitable structure to post the bus schedule, and if requested by the bus operator, a bus turn-around, required parking may be reduced by 5%.

### **Potential Incentive for Providing Employee Parking Remotely (Village Center)**

If employee parking is provided so that employees do not utilize on-street parking, required off-street parking may be reduced by 1 space per 3 employees.

### **Potential Incentive for Providing Car Pool or Van Pool Parking: For Office Parks/Large Employers**

If car pool and/or van pool parking is provided the amount of required parking may be decreased by 75% of the expected number of persons using car pools/van pools. The Planner/Planning Board may request the number of decreased spaces be held in reserve.



### **Discretion to Waive Parking Requirements**

Including one or several of these parking strategies in a town's zoning bylaw is a good start. It is also important that the Planning Board or other Board that conducts development review has the ability to evaluate required parking, and as appropriate, waive the requirements.

#### ***Suggested bylaw language***

*In applying for a building permit or certificate of use and occupancy, the applicant must demonstrate that the following parking requirements will be met, unless, in performing site plan review, the Planning Board determines that special circumstances render a lesser provision adequate for all parking needs. If a lesser revision is allowed, the Planning Board may impose such conditions as it deems necessary.*

## **CONCLUSION**

Individual parking strategies have limited impacts, typically reducing parking requirements by 5% to 15% for each strategy implemented. Combining the different strategies as appropriate to the location and to the specific project offers the opportunity to reduce previously required parking by 20% to 40%, increase economic development potential, and address some of the environmental impacts of parking.

APPENDIX I

REVIEW OF EXISTING REGULATIONS

Parking Regulations	Issues	Request to Include in Scope	Other Resources
<b>BELLINGHAM</b>			
<p><b>Zoning By-Law (2010))</b></p> <p><b>Section 3300</b> 3310 Number of Spaces</p> <p>3320 Schedule of Requirements</p> <p>3330 Parking Area Design and Location</p> <p>3340 Loading Requirements</p> <p>Appendix Rules and Regulations for Development Traffic Impact analysis ARTICLE IV. SPECIAL REGULATIONS - 4100. Accessory Uses 3400. Major Proposals - 3533. Parking Area Plantings</p>	<ul style="list-style-type: none"> <li>• Parking regulations are generally over-designed for retail and industrial uses.</li> <li>• Restaurant and industrial requirements are hard to understand.</li> <li>• Limited flexibility for either the number of spaces or design.</li> <li>• Retail question of how to design for the busiest days (i.e. post Thanksgiving) without over-designing parking.</li> <li>• 2010 Master Plan's Circulation Chapter recommends considering a zoning amendment in requiring bike racks in all large parking lots.</li> <li>• No recent changes to parking regulations</li> <li>• Want to keep Section 3312 allowing the Planning Board to give a waiver for parking regulations under certain circumstances</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce impervious surface while still maintaining appropriate amount of parking.</li> <li>• Allow for alternative dimensions for alternative vehicle parking (motorcycles etc) that would count toward parking spaces.</li> <li>• Encourage more green spaces in parking and alternative parking layouts (i.e. parking in the rear etc, shared parking).</li> <li>• Encourage alternative vehicle spaces (electric, hybrid, bicycles) and give incentives for business in appropriate areas to promote walking (this will only work in the more dense neighborhoods and may not be appropriate to all locations in a town, so it will need to be worded very carefully).</li> <li>• Like and want to continue that the Planning Board can give a waiver for parking regulations under certain circumstances (3312).</li> </ul>	<p><b>Bellingham Master Plan - 3/25/10</b></p> <p>Bellingham Library - need to increase parking (p 19)</p> <p>Bellingham Senior Center - parking concerns for future (p 20)</p> <p>Consider a zoning amendment to require bike racks in all large parking lots (p 26)</p>



Parking Regulations		Other Resources
HOPKINTON	No Issues or Scope Requests Noted	
<p><b>Bylaws (2010)</b></p> <p>Article VIA - Downtown Business (BD) District - 210-20.4 -street . Off parking</p> <p>Article IX - Professional Office (P) District - 210-44. Off-street parking</p> <p>Campus Style Development (CSD) District - 210-80. Off-street parking</p> <p>Article XVIII - Supplementary Regulations - 210-124. Off-street parking</p> <p>Article XXVI - Open Space Mixed-Use Development Overlay District - 210-169. Parking</p> <p>Chapter 190 - Vehicles and Traffic - Article II Handicapped Parking ARTICLE XVIII Supplementary Regulations</p> <p>§ 210-124. Off-street parking.</p> <p>C. Shared and Off-Site Parking [Added 5-5-2008 ATM, Art. 2711]</p> <p>D. Landscaping and screening requirements. [Amended 5-5-2008 ATM, Art. 27]</p> <p>§ 210-125. Conversions of residential property.</p> <p>§ 210-126. Accessory family dwelling unit.</p> <p>§ 210-169. Parking</p> <p>2. The provisions of the Design Guidelines shall supersede the provisions of § 210-124 pertaining to the design of parking facilities.</p> <p>§ 210-44. Off-street parking. The requirements of § 210-124, Off-street parking, shall apply. The Planning Board, in the site plan approval process, may, however, permit buildings within the development site to share parking areas and may permit a portion of the required spaces to be set aside as reserve or planned spaces to be constructed as future needs require.</p>		<p><b>Downtown Parking Study, Hopkinton Planning Board, January 4, 2010</b></p> <p>The number of parking spaces downtown may need to be expanded in the future if buildings are expanded and/or demolished and replaced with larger buildings with more commercial space or with new development. Although parking is not a problem at the present time, a lack of parking spaces in the future could limit redevelopment in the downtown. The situation should be monitored, and plans to add parking spaces implemented when it appears that a lack of spaces is restricting redevelopment of existing structures and lots. A municipal lot should be considered for the downtown area as it grows.</p> <p>Some land owners currently share parking lots, and there are additional opportunities to do that within the downtown. The Town may want to consider looking at the dimensions of on-street spaces to determine if they meet standards, and re-stripe as necessary.</p> <p><b>Town of Hopkinton Master Plan, 2007</b> GOAL: Develop specific design standards for the business and industrial zoning districts. - The standards should address...parking...so that the new construction is compatible with the surrounding area and minimizes adverse visual and environmental impacts. (p 5)</p>



<p>§ 210-47. Design. Curb cuts on streets shall be minimized, and to the greatest extent possible, buildings shall be located away from streets and surrounding noncommercial or industrial uses. Parking lots shall include islands with shade trees. Buildings, roadways and parking lots shall be designed to accommodate the landscape and natural site features, and disturbance to the site shall be minimized so that as many trees and natural features are retained as possible. Outdoor lighting fixtures shall be shielded and directed to prevent illumination from falling onto adjacent lots and streets.</p> <p>§ 210-47. Design. Curb cuts on streets shall be minimized, and to the greatest extent possible, buildings shall be located away from streets and surrounding noncommercial or industrial uses. Parking lots shall include islands with shade trees. Buildings, roadways and parking lots shall be designed to accommodate the landscape and natural site features, and disturbance to the site shall be minimized so that as many trees and natural features are retained as possible. Outdoor lighting fixtures shall be shielded and directed to prevent illumination from falling onto adjacent lots and streets.</p> <p>5 APPLICATION FOR PERMITS AND REQUESTS FOR DETERMINATION 5.3 Subdivision Roadways and Parking Lots - long discussion of impervious surfaces</p>	<p>GOAL: Improve existing recreation facilities and create new facilities to serve the needs of Hopkinton residents. -Provide parking and signage where public hiking trails exist or are being developed. (p 6)</p> <p>GOAL: Coordinate with regional &amp; state agencies to assist in meeting federal Clean Air Act requirements &amp; other federal and state environmental laws &amp; policies. - Provide all-day parking and/or shuttle service for carpooling and rail commuters. (p 7)</p> <p>Business District regulations. New regulations approved at the 2006 Annual Town Meeting...regulations...allow a parking facility by special permit in order to provide more off -street parking. (p 43)</p> <p>GOAL: Develop specific design standards for the business and industrial zoning districts. (p 45) - includes parking needs to develop more trails and provide parking at trail heads. (p 54)</p> <p>GOAL: Improve existing recreation facilities and create new facilities - Provide parking and signage where public hiking trails exist or are being developed. (p 55)</p> <p>All day parking near Hopkinton Center and South Street would be required to make a shuttle service viable. - (p 63)</p> <p>GOAL: Coordinate with regional &amp; state agencies to assist in meeting federal Clean Air Act requirements &amp; other federal and state environmental laws and policies. - Provide all-day parking and/or shuttle service for carpooling and rail commuters. - (p 63)</p>
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Parking Regulations	Issues	No Scope Requests Noted	Other Resources
<b>MEDWAY</b>			
<p><b>General By-Laws (published 1978 and amended)</b>                      ARTICLE V. DEVELOPMENT STANDARDS                      s. 205 - 3 Traffic                      D. Pedestrian and Bicycle Access and Connections                      1) Pedestrian-friendly connections shall be provided along sidewalks and in front of the stores and within the site. Sidewalk areas shall be provided within larger parking lots. For pedestrian safety and site design enhancement, on-site crosswalks between parking areas and the building(s) and where possible, on adjacent roadways shall have a change in materials. Sidewalk payers such as cobblestones, bricks or textured concrete shall be incorporated into all crosswalks.                      s. 205 - 6 Parking                      A. General - Parking lots should be located to the side or rear of the lot.                      Placement of parking</p>	<p>1. Definition of Gross Retail Area - Storage space and rest rooms should not be included in the definition of Gross Retail Area. In Medway it appears that it is which increases the amount of parking spaces or decreases the size of a building to make sure there is sufficient parking. From an economic development perspective there should be more building space because that creates jobs and property taxes.</p> <p>2. Parking Requirement Ratio - In Medway you need 1 space for each 200 feet of retail area. Where does this number come from? Is it appropriate?</p> <p>3. Parking for Restaurants - In Medway you need 1 space for every 3 seats. Where does this number come from? Is it appropriate? Perhaps the number should vary based upon whether people walk to or drive to a restaurant? Medway's parking space requirement does not take into consideration motorcycle parking spaces and does not take into account people walking to a restaurant.</p> <p>4. Parking on Ways - The regulations for businesses do not take into account people parking on public or private ways. This creates an increase in parking areas that may not be necessary and also increases drainage and water quality issues, seems anti business rather than business friendly.</p> <p>5. There are two (2) sets of rules that govern capacity of a building. First the Massachusetts Building Code. Second the community bylaw related to parking. In almost every case in Medway the building code allows for more people than the site plan would allow for creating a large parking area. This does not seem to be in the business owners, property owners, or community's best interest. (Paul Yorkis, 6/24/11 e-mail)</p>	<p><b>Medway Master Plan, June 2009</b>                      C-1 Re-development - [T]he case was made that the maximum build out allowed by current zoning, 30% building coverage of lots, was likely not achievable due to a combination of the zoning bylaw's dimensional requirements and the parking requirements. (p 20)</p>	

<p>areas should not be near a high volume of traffic where it can obstruct traffic flow. Parking should be hidden to the maximum extent possible and located near the side and rear of the site. Parking should not create a hazard to abutters, vehicles or pedestrians. Where or when parking does exist near the street, plantings or appropriate fences, i.e. picket or post &amp; rail, should be incorporated into the design to screen parking areas and reduce their visual impact.</p> <p>D. NON-CONFORMING USES  M. INDUSTRIAL DISTRICT I  I. COMMERCIAL DISTRICT III</p> <p>ARTICLE IV SITE PLAN SUBMISSION  s. 204 -1 Board of Selectmen Submittals  d) Parking Impact  (1)A Parking Impact Assessment is needed if the project proposes the addition of thirty (30) or more parking spaces.  (2)A Parking Impact Assessment documents existing parking conditions,</p>		
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<p>evaluates off-site impacts of the proposed parking and proposed ways to mitigate any adverse parking impacts on the neighborhood. (3)A Parking Impact Assessment shall: (c) propose mitigation measures including screening, creative parking lot design, use of alternative paving materials, and planting of trees for shading and buffer.</p>		
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Parking Regulations	Issues	Request to Include in Scope	Other Resources
<b>SHERBORN</b>			
<p><b>Zoning By-Law</b>  <b>Section 5 - Special Regulations</b>                      5.1 - Off-Street Parking</p> <p>5.1.1 - Minimum Parking Requirements</p> <p>5.1.2 - Nonconforming Parking Exemptions</p> <p>5.1.3 - Parking Area Plans</p> <p>5.1.4. - Joint Use of Parking Facilities</p> <p>5.1.1 - Screening of Parking Areas</p> <p>3.2 - Schedule of Use Regulations - 4) Home Occupation, 5) Professional Occupation,</p> <p>31A) Accessory Municipal Use</p> <p>4.6 - Application for Special Permit - location of parking spaces</p> <p>5.3 Special Permits in Business Districts (Add. 1981, amend.1987,1994)</p>			<p><b>Sherborn General Plan (October 2001)</b>                      Resident's Survey taken in conjunction with the General Plan:</p> <p>Residents did support improved sidewalks to encourage pedestrian and bicycle use [and] interconnected parking areas. (27)</p> <p>Recommendations RE: the Town Center:</p> <ul style="list-style-type: none"> <li>• Ensure that businesses continue to furnish parking for their customers. (p 8)</li> <li>• Linked parking lots would achieve substantial circulation benefits with a minimum of disruption and cost. (p 30)</li> <li>• Businesses have traditionally provided their own parking.</li> <li>• Business parking is presently adequate, but linking lots would improve the efficiency of available parking. Parking for the recreation facilities has also been an issue, and is insufficient at peak times. (pp 30-31)</li> <li>• The Town should work with Town Center property and business owners to secure linked parking. (p 67)</li> </ul>

Parking Regulations	Issues	Other Resources
<b>WRENTHAM</b>		<b>No Scope Requests noted</b>
<p><b>Zoning By-Law (last amended 11/8/10) Article 6.4 6.4 - On-Site Parking Requirements</b></p> <p>2. Uses Required to Provide Off-Street, On-Site Parking</p> <p>3. Parking Spaces</p> <p>4. Accessible Parking</p> <p>5. Snow Storage</p> <p>6. Storage Containers</p> <p>7. Drainage</p> <p>8. Display of Merchandise</p> <p>9. Pedestrian Circulation</p> <p>10. Parking Space Size Modifications</p> <p>11. Reserve Parking Spaces</p> <p>12. Shared and Off-Site Parking</p> <p>i. Parking Lot Landscaping</p>	<ul style="list-style-type: none"> <li>• Change minimum parking requirements. Several of Wrentham’s categories include spaces for employees and that number is too hard to nail down to be effective. A recent large project will require 300 extra spaces due to the employee provision. That’s 3 extra acres of land that probably would not need to be paved.</li> <li>• Add a provision for downtown.</li> <li>• Improve buffering to adjacent uses, such as residential.</li> <li>• Downtown has limited opportunity for parking lots and would like a provision to reasonably address. A draft zoning article was written for the Town Center Overlay District in 2005 which was never passed. (Paige Duncan, Wrentham Town Planner, 4/29/11 e-mail)</li> </ul>	<p><b>Wrentham Master Plan (June 2004)</b>            Shared Parking Strategies (v, 85)            Impervious surfaces should be restricted, additionally to overall lot coverages. Model bylaws should be reviewed to determine ratios, techniques and language suitable to Wrentham. Encouragement to reduce the areas covered by driveway and parking areas, patios, walks and plazas, which employ non-porous surfacing materials, and which prevent the recharge of stormwater to the ground should be minimized to the extent possible. (p 128)</p> <p>Allow and identify off-site parking options (leased or shared parking) in Town Center. Many retail parcels in the Town Center have very little space for parking. Parking requirements for small, upper-story apartments should be linked to the number of bedrooms (rather than the present 3 spaces per townhouse) and options for leased or shared parking should be developed. (p 141)</p> <p>Reduce the 3-space parking requirement for multi-unit housing. The current 3-space on-site parking requirement for multi-unit housing is excessive and acts as a disincentive. Parking requirements should be tied to the number of bedrooms in the units. Provisions should be made for the possibility of nearby but off-site shared or leased parking. (p 143)</p> <p>Allow multi-family mixed use and by right clustered development in designated areas.</p> <p>Villages Housing Strategy - Designate five village development areas: Downtown, Wampum Corner, Wrentham Developmental Center, Premium Outlets area, Sheldonville</p> <p>Reduce 3-space parking requirement for multi-unit residential to 2 High Priority - p 157</p> <p>Reduce required parking ratios - Shared Parking encouraged (p 168, 174)</p> <p>A key to boosting future values will be to reverse this recent trend, seeking higher lot coverage ratios through techniques such as:</p> <ul style="list-style-type: none"> <li>• Reduced parking ratio requirements</li> <li>• Shared parking strategies</li> <li>• Parking structures and parking placed beneath buildings (p 174)</li> </ul> <p>Downtown - Recommendations include introduction of a district wide shared</p>

		<p>parking plan to identify side street and parking lot opportunities. (p 179)</p> <p>Creating a shared parking plan, to allow needed parking to be used for different purposes throughout the day can benefit the entire Downtown district. (p 183)</p> <p>Town Common, Park &amp; Parking improvements - Public parking is at a premium, and much nearby parking seems to go largely unused through lack of awareness. The study should also seek to craft a shared parking strategy, allowing the flexible use of public and private parking areas by the public through the week, leveraging the utility of parking lots that today may be empty for all but a few hours weekly. (p 185)</p> <p>The Zoning review process should examine the minimum required parking and circulation requirements for vehicles on commercial properties. Satisfaction of these requirements has led to reductions in potential building area and impervious surfaces, with lower developed property values in contrast to larger building masses. Consideration should be given to reduced parking ratios, area shared parking strategies, TDM and other methods of reducing vehicle demands without affecting project and business viability. Site design review can also identify methods to reduce impervious lot coverage, with beneficial environmental aspects. (p 196)</p> <p>A District Shared Parking Plan would help make the available parking areas of the district and nearby areas better able to serve increasing retail trade. (p 198)</p> <p>Appropriate Development Revise parking ratios - high priority (p 203)</p> <p>Town Center - reduce parking ratios and permit and coordinate shared parking - high priority (p 205)</p> <p>Downtown shared parking study and program (p 211)</p> <p>Parking provision on site should be held to the rear of the parcel, without dominating the streets, and parking management should include shared use programs, to maximize its utility and ability to help support other Downtown businesses and uses. (p 239)</p>
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Parking Topic	Definition/Concept	Examples	SWAP Meeting Comments 7/27/11 Meeting in Sherborn 8/24/11 Meeting in Wrentham
<i>Dimensional Standards for Vehicles</i>			
<ul style="list-style-type: none"> <li>• <b>Compact (Small) Cars and Reduced Stall Dimensions</b></li> </ul>	<p>Requiring a percentage of parking spaces to be set aside for small/compact cars Keep parking stalls as small as feasible and allow smaller spaces for long-term parking (residents and employees) than for short-term parking (customers). Developers of large parking lots can be encouraged or required to provide some compact car spaces with reduced dimensions. This can help reduce the amount of pavement required to supply parking spaces.</p>	<p>Many communities in Massachusetts allow some percentage of spaces in large parking lots to have smaller dimensions and be reserved for compact cars. In Marlborough compact car spaces can represent up to 33% of the total spaces in lots used by residents or employees, but extra open space must be provided at least matching the area conserved with the smaller stall dimensions. In Needham up to 50% of off-street parking spaces can be designed for compact cars with reduced dimensions. <i>Medway references compact spaces-ck the zoning bylaw</i></p>	<p>Pay attention to layout and design of the lots. Need good design. (LD) How are these spaces counted? (PY) Need these to be distributed throughout a parking lot. Can have size modification for parking; land preserved for open space. (PD- Ck <b>Wrentham ZBL</b>)</p>
<ul style="list-style-type: none"> <li>• <b>Motorcycles</b></li> </ul>	<p>Dimensional requirements for motorcycles in parking lots.</p>	<p>In Northborough parking lots containing more than 50 parking spaces, 10% of the required parking spaces may be designed for small-car or motorcycle use. Small-car parking spaces shall be not less than 8 feet in width nor less than 16 feet in length. Motorcycle spaces shall be not less than 4 feet in width nor less than 8 feet in length. Spaces designed for small-car or motorcycle use shall be grouped in one or more contiguous areas and identified by appropriate signage.</p>	<p>Some of these suggestions will work for office parks, R&amp;D (compact spaces), but may not work for retail.  Include incentives for having motorcycle parking.  Medway has spaces for motorcycle parking.</p>
<ul style="list-style-type: none"> <li>• <b>Bicycles</b></li> </ul>	<p>Making bicycling an attractive option for accessing a site can reduce the traffic and parking demand at the site Requirement based on number of units and square</p>	<p>Arlington, Belmont and Norwood provide bike parking for public facilities and require bike parking for new developments. None of these communities has allowed reductions to vehicle parking in exchange for bike parking. In Portland, OR, every 5 bike parking spaces beyond the required number can substitute for 1 required car parking space.</p>	<p><b>Look at "Complete Streets" wording</b> Need flexibility in the proposed zoning language. (SW)  Reducing amount of</p>



<p><b>Bicycles, cont.</b></p>	<p>feet and add spaces as demand exceeds supply.</p> <p>A community can determine if it wants to provide parking for public facilities, and/or require bike parking for new developments.</p> <p>The type of facilities will depend on the site and the users: short-term users (shoppers) will need convenient parking close to building entrances; long-term users will value security and protection from the elements for their bikes, and employees are likely to value shower and changing facilities.</p>	<p><i>Medway and Norfolk have bicycle parking in the zoning—look at these</i></p>	<p>pavement is a goal. (SW) <i>What are the current dimensions/standards for regular, compact, electric cars? Provide for next mtg.</i></p>
<p><b>Parking Topic</b></p>	<p><b>Definition/Concept</b></p>	<p><b>Examples</b></p>	<p><b>SWAP Meeting Comments</b> <i>7/27/11 Meeting in Sherborn</i> <i>8/24/11 Meeting in Wrentham</i></p>
<p><i>Flexible Parking Requirements for Businesses that are Pedestrian Accessible and/or Promote Walking within the Community</i></p>			
<ul style="list-style-type: none"> <li><b>Parking Minimums</b></li> </ul>	<p>Most communities have standards for the minimum amount of parking required for new developments included in their zoning code. These minimums are generally based on the Institute of Transportation Engineers Parking Generation Handbook and/or other communities' parking requirements</p> <p>One way to improve parking</p>	<p>Newton has lower minimum parking requirements for state or federally subsidized low-income or elderly housing developments.</p> <p>Braintree allows reductions in required parking as part of a special permit or site plan review based on completion of a parking study and determination that the parking to be provided will be adequate.</p> <p>Belmont allows the Planning Board to reduce parking requirements based on age or other characteristics of site users and on implementation</p>	<p><i>Check what was just done under the Weymouth Landing Project.</i></p>

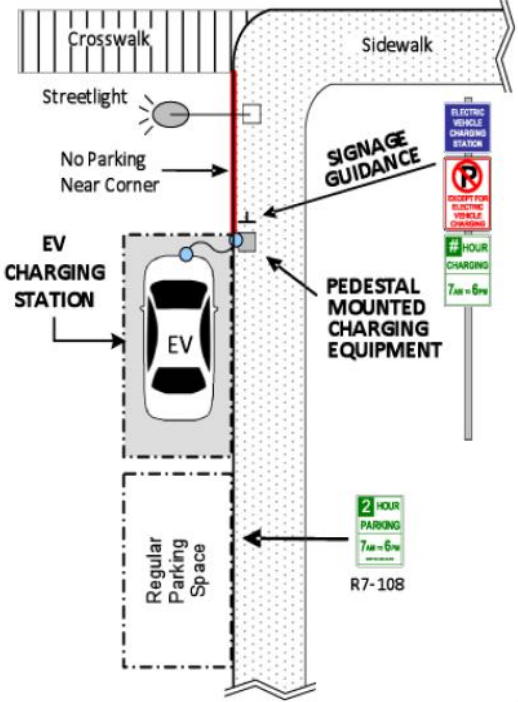

<p><b>Parking Minimums, cont.</b></p>	<p>requirements is to allow flexibility based on certain considerations, such as:                  Access to transit;                  Presence of nearby complementary destinations within walking/biking distance and/or potential for shared parking;                  Overall auto ownership rates in the community;                  Implementation of programs to reduce demand for parking, such as parking cash out, unbundled parking, priority parking for carpools, bike parking spaces, or car sharing.</p>	<p>of parking demand mitigation strategies. Projects in one Local Business district may count on-street parking in some circumstances.                  Norwood allows on-street parking to count towards requirements in some Special Districts, and has reduced requirements for residential uses in the CBD.                   Weymouth allows non-residential uses in the Neighborhood Center District to count nearby on-street parking towards minimum off-street requirements in some cases.</p>	
<p>• <b>Parking Maximums</b></p>	<p>Parking Maximums establish an upper limit or cap on parking supply. Either type of maximum can be imposed in addition to or instead of minimum parking requirements. Establishing a maximum allowable amount of parking can prevent developers from building excessively large lots. Setting parking maximums requires substantial effort in planning to determine the appropriate number of spaces and to allocate them to specific development projects. If not implemented carefully, a restricted parking supply can present problems with spillover effects. Restricting</p>	<p>Belmont has maximum numbers of parking spaces allowed for each subdistrict of the McLean Hospital property and in the Belmont Uplands District (without parking minimums).                   Bedford has maximum parking allowances for certain uses.                   Burlington lists both maximum and minimum parking requirements for most uses throughout the town.                   Cambridge has caps on the number of off-street parking spaces that may be provided within certain Special Districts and maximums for certain uses throughout the city.                   Somerville provides parking maximums (in addition to minimums) for the Assembly Square Mixed Use District and the Planned Unit Development Overlay District that will go into effect when a new MBTA station is operational there.</p>	<p><i>Walpole has this—Wrentham considered this, but did not adopt. (PD)</i></p> <p><i>Check Milford — has reduced required parking. Developers want to maximize development, and provide minimum parking.</i></p> <p><i>Review Site Plan requirements: % of open space, % impervious space; % green space—for larger sites. Can approve with an expansion area. (LD)</i></p> <p><i>Certain retailers look for max. parking – supermarkets, for example. (EL)</i></p>

<p><b>Parking Maximums, cont.</b></p>	<p>the parking supply can work in places where the benefits, such as rapid transit service, attractive pedestrian environments, or concentrations of businesses and services, outweigh any inconvenience from reduced parking.</p> <p>To improve flexibility, planners can set up the parking maximums as transferable parking entitlements, so that the allowed number of parking spaces can be transferred or sold to another development if they are not needed. This allows for area-wide control of parking supply without restricting developments that need more parking.</p>		
<ul style="list-style-type: none"> <li><b>Fees-in-Lieu of Parking Spaces</b></li> </ul>	<p>Developers pay fees into a municipal parking or traffic mitigation fund in lieu of providing the required parking on site. The fees can then be used to provide centralized public parking. The community may wish to establish the fund so that it can also be used for transit, bicycle, and pedestrian improvements that also reduce parking demand.</p> <p>By consolidating parking in centralized public lots or structures and allowing</p>	<p>New uses or changed uses on constrained sites in the Town of Braintree Village Zoning District that are unable to meet their minimum off-street parking requirements may be required as part of a Special Permit to pay an annual fee per space to allow the Town to provide the off-street parking.</p> <p>Northampton makes special provisions for the CBD to meet off-street parking requirements: payment of a fee in lieu of providing required off-street parking is allowed by right. The one-time fee of \$2,000 per space is used to add parking spaces, improve the utilization of existing spaces, or reduce the need for new parking in the CBD.</p> <p>Oak Bluffs allows uses proposed for the B-1 Business District that are unable to meet the off-</p>	<p>Does this work best in business districts?</p>

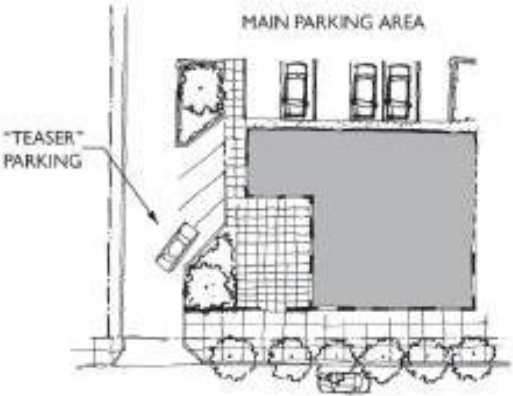
	<p>developers an alternative to providing parking on-site, a fee-in-lieu system can encourage in-fill development and redevelopment in existing downtowns. It can also improve the overall efficiency of parking provision by addressing the needs of the area as a whole, rather than the needs of each individual site.</p>	<p>street parking requirements to make a payment in lieu of providing the spaces. The payments are annual per space and depend on the number of required spaces, but range from \$50 to \$100 per space each year.</p> <p>In Ashburnham's Village Center District, the Zoning Board may allow non-residential uses to pay a fee in lieu of providing required parking spaces. The fee is based on the fair market value of the parking spaces waived plus the cost of building that number of spaces.</p>	
<ul style="list-style-type: none"> <li>• <b>Shared Parking</b></li> </ul>	<p>Shared parking is a parking facility that serves multiple destinations . It is most effective when destinations either share patrons, so that people park once and visit multiple destinations, or have different periods when parking demand is highest. . For example an office building sharing parking with a restaurant or movie theater. Most of the office workers (and cars) will be gone in the evenings when there is the most demand for parking from the restaurant or theater. Shared parking is also effective in mixed use developments. Shared parking improves efficiency of existing parking supply and reduces localized congestion</p>	<p>Marlborough allows shared parking in all districts for uses with different peak periods, allowing reductions of up to one-half of the minimum parking required for the uses separately. The city requires additional provision of open space for each parking space not provided as a result of shared parking.</p> <p>In Waltham, the parking requirement for any mixed use parcel or building is calculated by using a time table of parking requirements by use.</p> <p>Stoneham allows shared parking by special permit with the approval of the Planning Board. Up to 50% of required spaces may be shared with uses having different operating hours. The parties must sign a joint use agreement.</p>	<p><i>Hopkinton allows this by Special Permit. (EL)</i></p> <p><i>Milford also allows with SP. Trying to manage this is the issue.</i></p> <p><i>Sliding scale to reduce parking:</i>  <i>5 stores 5% reduction</i>  <i>10 stores 10% reduction</i>  <i>15+stores 15% reduction</i>  <i>Explain a sliding scale.</i></p>

<ul style="list-style-type: none"> <li><b>Unbundling</b></li> </ul>	<p>Unbundling means that parking is rented or sold separately, rather than automatically included with building space.</p> <p>The cost of parking for residential and commercial units is often passed on to the occupants indirectly through the rent or purchase price ("bundled") rather than directly through a separate charge.</p> <p>For example, a three bedroom unit might come with two parking spaces included in the purchase price or rent. This means that tenants or owners are not able to purchase only as much parking as they need, and are not given the opportunity to save money by using fewer parking spaces. The alternative is to unbundle parking - rent or sell parking spaces separately, rather than automatically including them with building space.</p>	<p>The Massachusetts Transit-Oriented Development (TOD) Bond Program awarded funding for a mixed-use affordable housing development, Dudley Village, in Dorchester. The development has unbundled parking and 0.7 parking spaces per unit.</p>	<p>There was a general consensus that this would work in an urban setting, but would not be favorable in a suburban setting. Unbundling is seen as a conflict between planners who want to see no sprawl and the town who would like to see growth.</p> <p>With unbundling, there is the potential to lose control of adequate parking.</p> <p>Instead of unbundling, should instead strive to be as close as possible to <u>designated parking ratios</u>.</p> <p>Unbundling could possibly work in downtown Franklin (Gino).</p> <p>Could be implemented as location specific and would be issued as a special permit or in a specific zoning district.</p> <p>There is an age restricted development in Sherburne with 24 units and 12 garage spaces.</p>
<p>Parking Topic– (Note: The following topics included were well received.)</p>	<p>Definition/Concept</p>	<p>Examples</p>	<p><b>SWAP Meeting Comments</b>  <b>7/27/11 Meeting in Sherborn</b>  <b>8/24/11 Meeting in Wrentham</b></p>
<p><i>Reducing Impervious Surface Required for Parking Facilities</i></p>			
<ul style="list-style-type: none"> <li><b>Pervious Paving Materials</b></li> </ul>	<p>Materials that permit water to enter the ground by virtue of their porous nature or by</p>	<p>Pervious paving materials are part of a demonstration project for a parking lot at Silver Lake Beach in Wilmington. Funded by an EPA</p>	<p>Good idea, but the DPW not interested in pervious paving for public areas—okay with it</p>

	large spaces in the material.	Targeted Watershed Grant, the lot includes repaving the parking lot with a combination of porous materials.	for private areas (SW – 8/9/11 e-mail). Won't work in Wrentham, but would work in Sherborn. Could be implemented with new stormwater parking permits. It is important that the parking lot be structurally sound. This was implemented at the <b>University of New Hampshire</b> . Look up. Would this work in a septic system or a drainage field?
<ul style="list-style-type: none"> <li><b>Landscaped Parking Reserves</b></li> </ul>	<p>Require or allow new developments to pave a reduced number of parking spaces, but hold sufficient land in reserve to provide additional spaces that might be required.</p> <p>As long as the additional parking is not needed, the land can be landscaped or used to provide other valuable amenities such as a playground or park.</p>	<p>Marlborough allows the use of temporary parking reserves in cases where there will be a reduced parking demand for at least a year, such as with a large phased development. Reductions of up to 50% of the requirement are allowed subject to Site Plan approval.</p> <p>In Dennis, the Planning Board may allow applicants to designate a number of parking spaces as a reserve area that can be converted to parking if needed. No limits are specified in the ordinance as to the maximum reduction allowable, but the applicant must be able to justify the reduction in parking.</p>	<p>Bellingham has something similar to Dennis, but with less flexibility b/c the applicant has to show the reserve can hold the exact number of spaces being reduced. Bellingham would like to have more flexibility with this—it has been useful in reducing parking surfaces if the site allows it (SW – 8/9/11 e-mail).</p>
<ul style="list-style-type: none"> <li><b>Landscaping for Shade and Air Quality</b></li> </ul>	<p>Most communities have landscaping requirements for larger parking facilities and require, at a minimum, that large surface parking lots include landscaped islands with trees can provide shade to reduce heat from the asphalt and can provide air quality benefits.</p>	<p>Acton has an extensive section in the zoning bylaws specifying landscaping requirements for parking lots of over 5 spaces, and in the East Acton Village District, consolidated bioretention areas may be substituted for interior landscaping.</p>	<p><b>Wrentham</b> recently passed a bylaw requiring that 50% of parking lots be landscaped in 50 years. Need to ensure that trees are strategically placed so they don't block site distances and the parking lot can be snowplowed in the winter – these are potential safety issues.</p> <p>Trees should be placed so they don't 'shed' on cars.</p>

Parking Topic	Definition/Concept	Examples	SWAP Meeting Comments 7/27/11 Meeting in Sherborn 8/24/11 Meeting in Wrentham
<p><i>Promoting New Technologies</i></p>			
<ul style="list-style-type: none"> <li>• <b>Electric Vehicles</b></li> </ul>	<p>Encourage infrastructure for electric vehicles which includes the machinery and equipment needed to support an electric vehicle, such as charging stations.</p>	<p>In 2009 the Washington State passed legislation to encourage electric vehicles. The purpose of the law is to encourage the transition to electric vehicle use and requires that all local governments in Washington State allow electric vehicle charging stations in most of their zoning categories. Diagram is an On-Street Electric Vehicle Charging Station</p> 	<p>Hopkinton to have 2 stations: one at Caliper Corp and another at Legacy Farms. (EL)</p> <p>Incorporate incentives to do this. (SW)</p> <p>Photo and diagram courtesy Puget Sound Regional Council</p> 



Parking Topic	Definition/Concept	Examples	SWAP Meeting Comments 7/27/11 Meeting in Sherborn 8/24/11 Meeting in Wrentham
<p><b>Location of Parking</b></p>	<p>Businesses often want parking to be as readily visible and easily accessible as possible so that potential patrons arriving by car will know that they will be able park nearby quickly and easily. Building parking in front of buildings where it is most visible from the street can seriously detract from the pedestrian environment. When buildings front directly on the street, they create a lively and inviting environment where people can feel comfortable walking from store to store, rather than getting back in the car to drive a block or two to their next destination. One solution to this issue is to require new buildings to locate their parking behind the building, away from the street.</p> <p>In diagram - Label street, add bike rack and handicapped ramp.</p> <p>How would pedestrians have access? – look at interconnections. Two-way entrance doesn't necessarily mean a higher price tag.</p>	<p>The MAPC worked with Millis, Stoughton, and Bedford to develop and adopt bylaws defining mixed use overlay districts that includes the strategic location of parking: "To maintain a pedestrian-friendly environment, motor vehicle parking spaces shall be located behind or beside buildings to the maximum extent possible. Motor vehicle parking shall not be located directly between the building and the street alignment."</p> <p>Beverly prohibits accessory off-street parking within the front yard of any district and employee parking within the front yard in the restricted industrial, research and office district.</p> <p>The Town of Acton prohibits parking between the front of a building and the street in its 4 villages.</p> <p>In more auto-oriented areas, a few "teaser" spaces can be provided along the side of the building on the driveway that takes drivers to the lot in back.</p> 	<p>Bellingham tried requiring parking in the rear and businesses just won't go for it (SW – 8/9/11 e-mail).</p> <p>This parking topic can be used as an economic incentive.</p> <p>Look at as a way to reduce parking numbers.</p> <p>In Norfolk's B-1 District, buildings are 6-20 feet set back from the lot line.</p> <p>How will motorcycling and handicapped parking be incorporated?</p> <p>Look at Wellesley' intersection of Route 9 and Route 128.</p> <p>Consider adding bike racks to these types of places.</p> <p>The buildings have two front façades.</p> <p>Example of an interconnection: Store in North Conway, NH – between LL Bean and Timberland stores.</p> <p>Diagram, left: from Van Meter Williams Pollock and Ursbworks "Parking Design Issues" for the City of Palo Alto, CA, March, 2004</p>



Parking Topic	Definition/Concept	Examples	SWAP Meeting Comments 7/27/11 Meeting in Sherborn 8/24/11 Meeting in Wrentham
<b>Regulating Employee Parking</b>	Employee parking programs may include establishing designated lots or portions of parking facilities for employees with a permit program to restrict use and/or require employees to register their cars so that if they park in valuable on-street spaces they can be ticketed. Employee parking areas are generally less conveniently-located than other parking but allow all-day parking and where parking is priced offer a discounted rate. This encourages employees to leave the most convenient spaces for customers.	<p>Lexington has an employee permit parking program for Lexington Center that provides lower-cost parking around the outskirts of the downtown for employees in order to free up meter spaces for visitors. Permits cost \$225-250 for the year, depending on the lot.</p> <p>Brookline has a commercial parking permit program with a limited number of spaces for businesses in Coolidge Corner and Brookline Village. One program allows qualified businesses to purchase a pass guaranteeing a space in an unmetered lot, with a maximum of 2 per business. The other gives a hang tag to businesses that allows employees to parking in metered spaces all day, but they must still pay the meter fees plus a small annual fee.</p> <p>Amherst has a Town Center permit parking area that provides permits to people living or working within the designated area. Employers and employees may obtain one vehicle permit per person, and eligible employers or employees may obtain two permits for two vehicles. Fees are \$35 for a single permit and \$45 for two vehicles.</p>	<p>Parking topic is urban in nature and is more of a TMA-type service. May not be directly applicable to the SWAP subregion.</p> <p>Is more part of a site plan review than a by-law.</p> <p>This is done in <b>Needham</b>.</p>
<b>Parking Cash-Out</b>	Many employers offer their employees free parking. Though the parking seems free, the costs may be borne by employees indirectly, so that all employees pay for parking, even if they don't use it. A parking cash-out program offers employees who do not drive the value of a parking space as cash.	Studies in California showed that cashing out employer-subsidized parking reduced driving to work by 11%. In California, state law stipulates that employers who offer free parking must offer cash out programs as an alternative, and that cities must grant reduced parking requirements for developments that offer cash out programs.	Parking topic is urban in nature and is more of a TMA-type service. May not be directly applicable to the SWAP subregion.

	This financial incentive not to drive can reduce parking demand.		
<b>Shuttle Service</b>	<p>Shuttle service can be provided to a site from a transit stop, allowing users to forgo driving completely for the trip.</p> <p>Public parking lots or structures can be built at the edges of a downtown area and shuttle service can be provided within the downtown, encouraging people to park once on the outskirts rather than drive into the downtown, potentially making several stops. In some cases, park-and-ride lots can be used for this purpose.</p>	<p>The Ipswich-Essex Explorer provides seasonal shuttle bus service from the commuter rail station in Ipswich to Crane Beach and several other local destinations.</p> <p>Rockport, which has a high summer parking demand and limited parking downtown, offers free parking in a park-and-ride lot and shuttle service into downtown.</p>	<p>What about not just from transit stops (Only Franklin and Norfolk have train stations in the SWAP region), from other designated places, like the high school for after school jobs? (SW – 8/9/11 e-mail)</p> <p>Parking topic is urban in nature and is more of a TMA-type service. May not be directly applicable to the SWAP subregion.</p> <p>Shuttle service could possibly work at Forge Park Train Station.</p>
<b>Residential Carshare Program</b>	<p>Car sharing programs provide a fleet of vehicles distributed throughout neighborhoods that members can rent on an hourly or daily basis. The cars typically have reserved parking spaces at transit nodes and in neighborhoods where they can easily be reached on foot.</p> <p>Developers may be required to contribute funding towards set up costs and/or to provide dedicated parking for the car-sharing vehicles.</p>	<p>The City of Seattle, WA allows a reduction of up to 5% in the required parking spaces for projects that provide parking for a recognized car-sharing program.</p> <p>Several developments in San Francisco, CA have been allowed significant reductions in their parking requirements, in part because of participation in car sharing programs.</p>	<p>Since we are suburban, almost everybody has a car of their own (SW – 8/9/11 e-mail).</p>

Other Comments:

***Some of these parking topics are urban in nature and are more TMA-type services.***

They may not be directly applicable for the SWAP subregion.

***Reduce Parking Requirements for Businesses that Promote Access for Other Modes (transit, bicycle, pedestrian)***

What about allowing a reduction in spaces (or some other incentive) if locker rooms or showers are provided to promote people to ride or walk to work? This came about in a discussion with a teenager whose car was not working, and could ride a bike to work, but didn't want to get to work and be sweaty (SW – 8/9/11 e-mail).

***Determine if a Reduction in Number of Required Spaces is Feasible and/or Desirable for Pedestrian-Accessible Locations***

***Examine the Potential for Incentives for Business Owners to Modify Existing Parking Areas to Conform to New Parking Requirements***

***Promote Sidewalk Construction and Connectivity***

Additional information is available from MAPC's Parking Toolkit

<http://mapc.org/resources/parking-toolkit>

and the State's Smart Growth/Smart Energy Bylaw-Smart Parking Model Bylaw

[http://www.mass.gov/envir/smart\\_growth\\_toolkit/bylaws/SP-Bylaw.pdf](http://www.mass.gov/envir/smart_growth_toolkit/bylaws/SP-Bylaw.pdf)