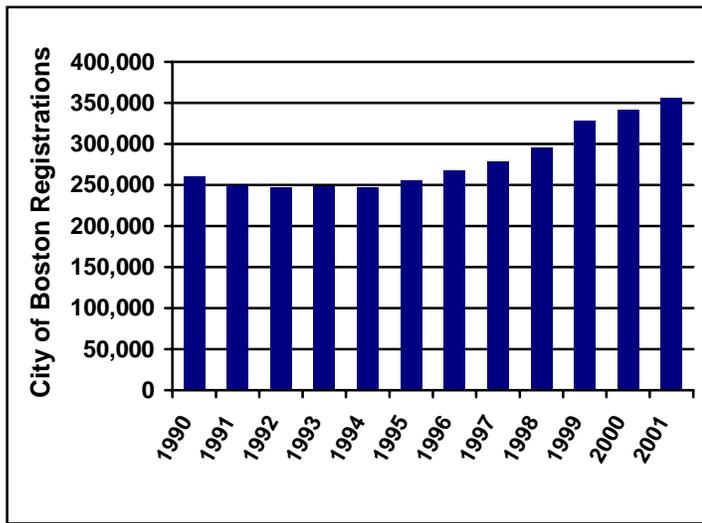


1. INTRODUCTION

Figure 1
Growth in Auto Ownership



Auto ownership in Boston increased 36% between 1990 and 2001. Nearly all of the growth occurred since 1995. (Source: BTD)



Transit and other modes that reduce auto use must be part of the solution to improve parking management.

The role of parking as a catalyst for auto travel is an important economic development and quality of life issue in Boston. Proposals for new parking lots and garages have raised concerns from residents and advocacy groups concerned with quality of life and environmental issues. Better economic times have brought more autos to residential neighborhoods as auto ownership levels continue to increase. Future increases in parking challenge the City’s ability to facilitate equal sharing among different users and modes of travel.

Economic Growth and Parking

Boston is an important part of the regional economy: home to one in every seven Massachusetts jobs and one in every thirteen New England jobs. The number of jobs in the city increased by 15% in the 1990s, reaching 671,000 in 1998, making Boston one of only three major cities in the nation with more jobs than residents. Office vacancy rates dropped from 17% in 1991 during the recession to 3.3% in 1998. Boston is also a major destination for visitors and tourists. The Greater Boston Convention and Tourism Bureau estimates that 12.9 million people visited Boston in 2000, an increase of 8.4% from 1999.

The recent period of economic growth has increased parking demand in Boston. As illustrated in Figure 1, auto ownership in Boston increased 36% between 1990 and 2001, adding additional demand for all-day parking in many neighborhoods. The higher demand for parking by employees and commuters has fueled a general increase in parking rates at many lots and garages, particularly for short-term parking by shoppers and visitors. Because parking operates on a "first come, first serve" basis, long-term parkers reduce the availability of parking for short-term parking by shoppers and visitors. Another result of the high parking demand is an increased demand for on-street parking and a higher level of illegal parking by drivers who are willing to risk getting a parking ticket. The fee for illegal parking is often less than the charge for off-street parking for three or more hours. In busy commercial areas, more commercial vehicles are also looking to use on-street loading zones, putting increased pressure on limited curb resources and congestion on city streets.

The Role of Non-Auto Alternatives

The characteristics of Boston’s parking supply vary by location. The parking supply is constrained in some locations by regulatory limitations, the availability of transit and the physical limitations of the city’s streets. These constraints reduce the total amount of parking needed to support the city’s economic centers. By comparison, development in suburban areas will generally add 8 to 10 times the amount of parking that accompanies downtown development.



All-day parking in downtown lots can exceed \$30 in areas of high parking demand within the downtown.

Despite high parking costs, many commuters continue to choose to drive into Boston. For some commuters, the high parking costs are offset by subsidies from their employer. Other commuters absorb the full parking costs.

BTD encourages the use of non-auto modes as a means the best approach to reduce traffic parking demands and traffic congestion. The City supports the expansion of the transit system to support economic growth in the downtown and outside. This approach reduces, but does not eliminate the need for new parking. Better transit service also provides alternatives for residential neighborhoods that reduces auto ownership demands. Bicycling is often also a convenient and fast way get around town. The City’s Bicycle Program seeks to improve conditions for cyclists and promote bicycling.

Competition for Parking

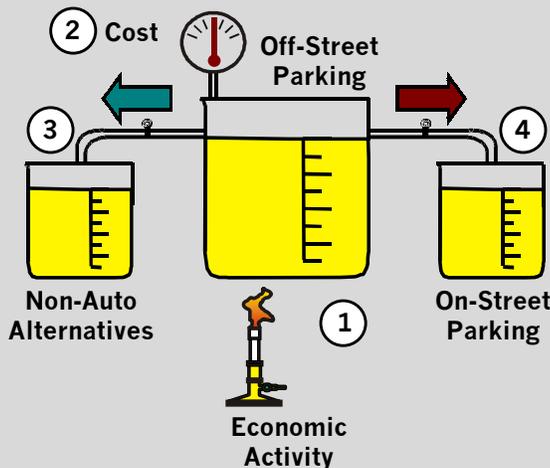
Table 1 provides examples of different types of competing and complementary parking and loading demands. The competition for parking is most apparent during the day when commuters compete with other users, usually consuming most of the off-street parking capacity before 10:00 a.m. This reduces availability for short-term parkers who arrive after 10:00 a.m. to shop or visit tourist attractions. Residential parking demands occur during the day and night, since many residents leave their vehicles on street and use other modes to travel during the day. Resident Permit Parking programs provide relief from external demands such as employee parking, but are not effective against the growing trend of households with multiple auto ownership. Many dense residential neighborhoods have little off-street parking.

Parking demands compliment each other when they occur during different times of the day, facilitating the joint use of parking spaces by different types of users. In commercial areas in the downtown and in the City’s neighborhoods, the high demand for short-term parking and loading requires an on-street parking management approach that encourages turnover – the use of one parking space by several vehicles over the course of a day – for both automobiles and commercial vehicles. Striking a balance among the users in both areas requires prioritizing different types of users at different times of day to reduce conflicts. The City also designates parking spaces for nighttime use by residents.

“CHEMISTRY OF PARKING”

Parking cost and availability affects auto ownership and travel decisions. Figure 2 describes in schematic form the relationship between the on-street and off-street parking supply, as well as the role played by non-auto modes to relieve parking demands.

Figure 2
“Chemistry” of Parking



1. Increased economic activity at major employment centers will “fuel” an increase in parking demand.
2. Unless the off-street parking supply is increased, the increased parking demand of an expanding economy will increase parking costs for individual motorists.
3. In response to higher costs and reduced parking availability, some motorists will choose to shift modes and take transit, bicycles or other alternatives to private autos.
4. Some motorists will seek cheaper on-street parking instead of parking off-street in a lot or garage.

Table 1 – Examples of Parking Demands

CATEGORY	DURATION	DAYTIME PARKING DEMANDS	NIGHTTIME PARKING DEMANDS
Long-term	4 hours or more (Typically 8+ hours)	<ul style="list-style-type: none"> • Residents • Employees • Commuters • Students 	<ul style="list-style-type: none"> • Residents • Students • Overnight shift workers
Intermediate	2-4 hours	<ul style="list-style-type: none"> • Shoppers • Visitors • Hospital outpatient • Students • Building maintenance and service 	<ul style="list-style-type: none"> • Restaurant (valet and non-valet) • Entertainment and cultural venues • Sports events • Visitors
Short-term	Less than 2 hours	<ul style="list-style-type: none"> • Shoppers • Visitors • Delivery of goods 	<ul style="list-style-type: none"> • Restaurant (valet and non-valet) • Visitors

Approaches in Other U.S. Cities

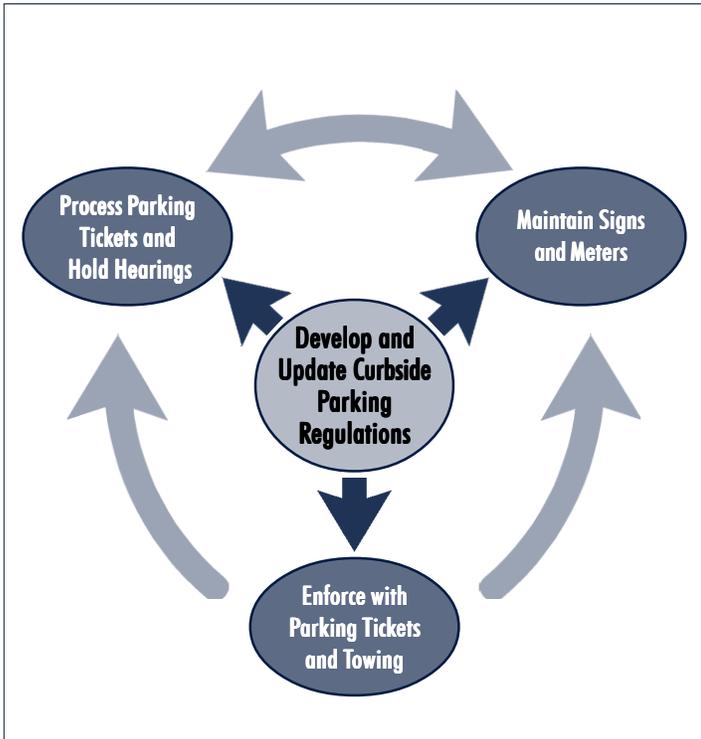
Boston’s off-street parking roles and responsibilities are different from other U.S. cities. Most municipalities exercise some control over parking supply. Most large U.S. cities either have a parking authority or a contract for off-street parking services with an outside vendor. Depending on the level of control exercised by the municipality, the rate structure can be used to support different types of parking, such as short-term shopper and visitor parking. Boston operated off-street parking in downtown prior to selling its garages to offset 1980s budget losses related to Proposition 2½.

The San Francisco Department of Traffic and Parking operates eighteen garages with 14,600 parking spaces. Parking is priced at \$1.00-2.00 per hour and increases uniformly per hour to the maximum daily rate as compared to \$0.75 for 30 minutes of parking (maximum at metered spaces). In some garages, vehicles parked for less than 4-hours represent 80-85% of the total vehicles entering or exiting the facility.

Few examples exist of cities with a cap on the number of off-street spaces. Portland, Oregon capped its downtown spaces in 1975, but increased the number of spaces during the 1980s. Portland is also using parking maximums in its zoning as part of a regional effort to reduce vehicle miles traveled through the reduction in the number of off-street spaces per capita.

Under contract to the City of Portland, the Association for Portland Progress (APP) operates six short-term garages with 3,400 spaces. The rates in the garages are oriented toward short-term parking. Two garages provide electric recharging for vehicles.

Figure 3
BTD's On-Street Parking Management Responsibilities



BTD maintains the City's parking meters.

BTD Roles and Responsibilities

BTD has both on-street and off-street parking responsibilities. Management of the city's curb is a core function of BTD. As illustrated in Figure 3, BTD undertakes a set of interrelated activities to manage this limited resource. BTD administers and enforces parking regulations and installs, fabricates and maintains all street name, traffic, and parking signs on Boston streets. BTD also regularly coordinates with other city departments, state agencies and utility companies to manage requests for signage and regulations for new roadway improvements and temporary construction conditions. BTD uses more than 40 different curb regulations to manage on-street parking by passenger and commercial vehicles. Some key regulations include:

- **parking meters and two-hour parking limits** to accommodate short-term parking demands
- the **Resident Permit Parking Program** restrictions for residents only
- **valet parking** to promote the more efficient use of limited on-street parking spaces near restaurants and other attractions
- designated **loading zones for commercial vehicles** that actively load or unload for one hour or less

Curb regulations are also used to prohibit parking, standing or stopping at the curb and to address public safety and traffic management needs. These regulations are intended to ensure that emergency vehicles can efficiently negotiate city streets, that pedestrians have safe and accessible streets and sidewalks, and that traffic can flow efficiently during peak hours and around special events and construction activities. BTD also restricts curb parking to support transit and high occupancy vehicle use by designating MBTA bus stops, vanpool drop-off/pick-up areas, tour bus stops and sightseeing trolley stands.

BTD currently maintains and operates off-street parking facilities through its Off-Street Parking Division. These facilities are primarily located in neighborhoods outside the downtown. BTD regulates and permits off-street parking through the following roles:

- Determine the appropriate amount of parking in new development projects through the **Article 80 zoning** review process.
- Negotiate parking and supportive Travel Demand Measures (TDM) in the **Transportation Access Plan Agreements** required for new development projects.
- Oversee the City's Parking Freeze through the **Boston Air Pollution Control Commission (BAPCC)**.

- **Issue Permits for open-air parking lots** citywide.
- Construct, enforce and maintain parking lots in **neighborhood commercial districts**.

Advocacy for Alternative Modes

Access to transit can reduce auto use, which reduces traffic and parking demands in congested downtown and neighborhood areas. Therefore, the City has adopted a “transit first” approach that looks at public transportation solutions to address access and mobility needs of the city’s residents, employees and visitors before considering automobile alternatives. The City is embracing a comprehensive, multimodal view of transportation that considers the relationships between all modes and the role of transportation in the creation and support of high quality and attractive urban environments. BTD advocates for the use of transit and bicycling in the following areas:

1. **Advocacy for quality transit service** through BTD’s role on the MBTA Advisory Board and the Metropolitan Planning Organization.
2. Coordination with the BRA to encourage **transit-oriented development**.
3. Support **Transportation Management Associations**.
4. Support of **CARAVAN for Commuters efforts** to encourage the use of alternative modes including carpools and vanpools.
5. Development and implementation of the Boston Bicycle Plan with **bicycle** parking recommendations.
6. Development of design plans and other efforts to support **pedestrian access and mobility**.

BTD OFF-STREET PARKING DIVISION

Some of the real property owned by the City is dedicated as municipal parking facilities. BTD has care, custody and control of these sites. The Off-Street Parking Division, through the use of private contractors, maintains these neighborhood lots, which offer parking to the public without charge. BTD’s Off-Street Parking Division also oversees the following:

- Licensing of privately owned fee parking lots, the licensing of valet permits and the care, custody and control of City owned parking lots and facilities.
- The annual renewal of parking lot licenses through a tri-party arrangement among BTD, the Inspectional Services Department and the Boston Fire Department.
- The issuance of valet permits on an annual basis and, in addition to collecting an annual fee, the verification that applicants adhere to mandated criteria for permit issuance.



Members of the Mayor’s Advisory Committee on Transportation facilitated discussions at Public Workshops.

Public Process

Parking management policies were reviewed and discussed in the *Access Boston 2000-2010* public participation process. On-street parking was reviewed and discussed during an April 2000 Public Workshop and as part of two Discussion Group sessions that preceded the Public Workshop. The development of new parking lots and garages was discussed during a March 2000 Public Workshop and two Discussion Group sessions that were held prior to the Public Workshop. These forums were used to identify key issues and review potential recommendations. Public input was solicited through a variety of mechanisms that included question and answer session, breakout discussion at the workshops and roundtable discussions. Table 2 summarizes the key parking issues from the public process by topic area.

Table 2 – Key Discussion Points from Public Process

TOPIC AREA	KEY DISCUSSION POINTS
Off-street Parking	<ul style="list-style-type: none"> • Parking supply constraints and increasing prices can be used as tools to discourage unnecessary driving and encourage a shift to non-auto modes. • Parking can act as a magnet to attract auto traffic and create congestion. • The lack of parking and its high costs are seen as a frustrating aspect of urban living in Boston.
Metered Parking	<ul style="list-style-type: none"> • The cost of metered parking has risen relative to the cost of parking at parking lots and garages and puts additional pressure on street parking. • The practice of “meter feeding” by motorists seeking cheaper long-term parking alternatives to parking lots and garages reduces parking availability for short-term parking. • New parking meter technologies provide opportunities to offer more flexible meter pricing approaches, to improve customer convenience, and to increase meter reliability.
Loading Zones	<ul style="list-style-type: none"> • The lack of adequate off-street loading docks at some buildings increases demand at on-street loading zones, highlighting the need to provide adequate loading dock capacity in new development projects. • Double parking around loading zones is related to the amount of loading zone space, the illegal use of the loading zones and the level of enforcement. • The use of on-street loading zones by building contractors and commercial vehicles that are not performing delivery functions reduces the availability of these loading zones for goods delivery.
Neighborhood Commercial Districts	<ul style="list-style-type: none"> • All-day parking on street by commuters, residents and even merchants and their employees reduces turnover at the curb and decreases the availability of parking for short-term parking by customers. • A multi-modal approach must also consider transit, bicycle and pedestrian access into and within a neighborhood commercial district.
Resident Permit Parking	<ul style="list-style-type: none"> • The approach to addressing resident parking must seek to reduce the increasing levels of auto ownership through demand management strategies, such as car-sharing options or restrictions on RPP permits. The ratio of permits to spaces is high. • Off-street parking arrangements in existing and new lots and garages could relieve demand in some areas with limited on-street parking opportunities.