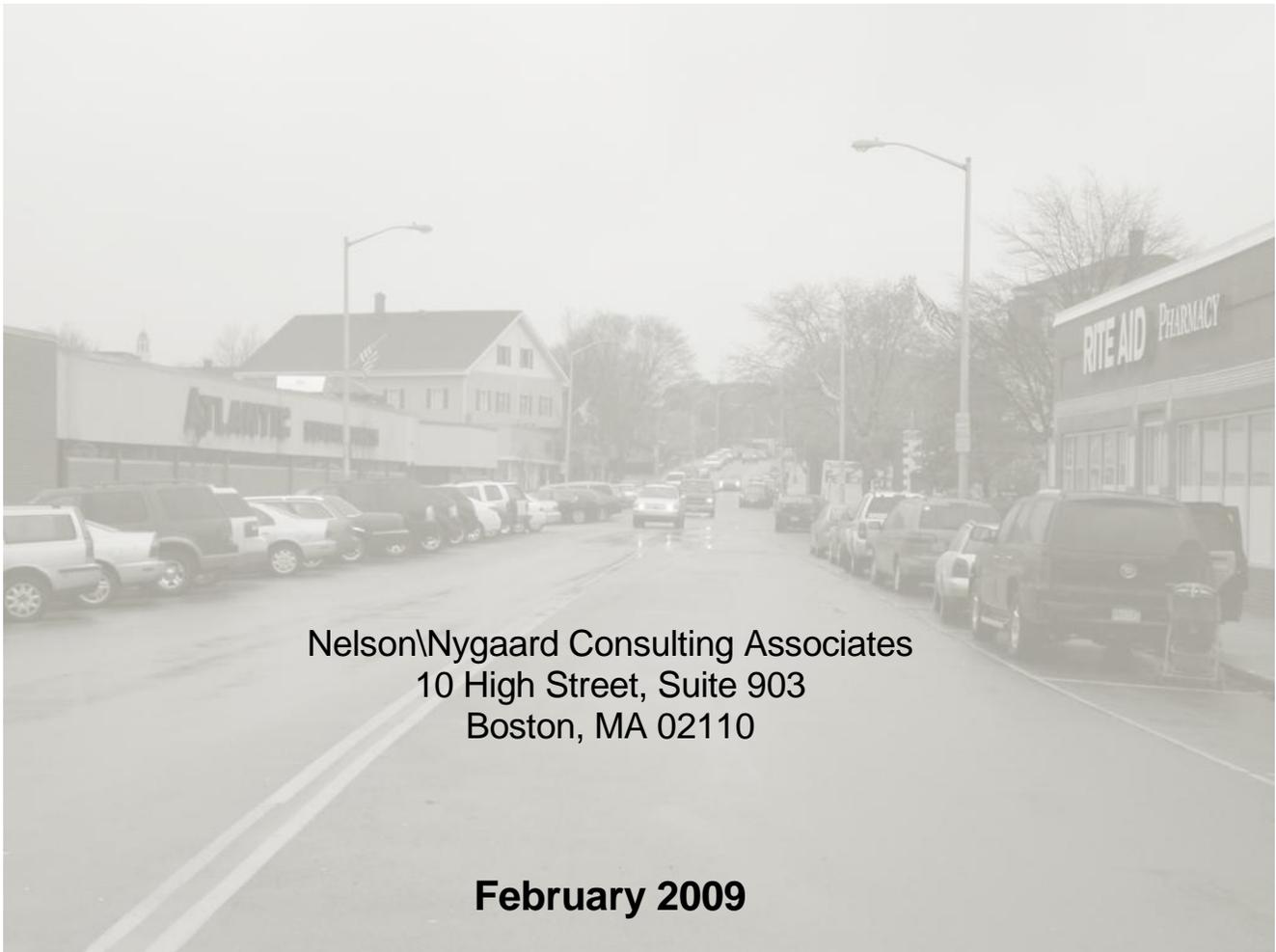


TOWN OF READING

Comprehensive Parking Program

Final Report



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Chapter 1. Introduction

The downtown area of the Town of Reading is an historic business area that has enjoyed renewed activity in its commercial and retail sectors. A \$6 million Downtown Improvement Project, funded by the Massachusetts Highway Department, is currently under construction on Main Street, and it will be completed by the end of 2009. In addition, the Town has begun developing a “Smart Growth” zoning district in the downtown area to integrate residential uses into upper levels of commercial businesses with an eye towards attracting transit-oriented-development.

Given consistent demand, any increase in the intensity of land uses is accompanied by an increase in the demand for parking spaces. Recognizing the growing pressure on downtown’s parking supply, the Town of Reading has sought to develop a comprehensive strategy for addressing parking needs. In addition to addressing the physical requirements for parking, the Town’s Master Plan for downtown calls for creation of a vibrant, urban, pedestrian-friendly environment that can only exist in an area with sufficient parking. This includes evaluating the possibility of structured parking.

Recognizing the potential importance of structured parking for the realization of the goals of the Master Plan and the vision of the Smart Growth planning, the Town formed an ad hoc Task Force in 2006 to begin assessing the need for new parking supply and alternatives in downtown Reading. The Task Force was formed on the heels of an employee survey that spring which indicated that downtown Reading’s employers were using 419 out of 466 parking spaces but would need 549 spaces before the end of 2007. The Task Force analyzed the survey findings and conducted additional analyses of existing and projected parking demand. It concluded that there was a shortfall of 280 spaces for employees and 120 spaces for customers visiting downtown.

While the Task Force report recommended further analysis by a professional consultant, it helped begin a conversation about many of the parking and transportation demand management programs that are recommended in this report. The following “comprehensive parking program” is intended to provide the Town with a blueprint for the creation and management of all the parking necessary to support a thriving downtown Reading for years to come.

Report Structure

The following report documents the existing parking conditions in Reading and presents recommendations that will both assure an appropriate level of parking development/capacity as well as encourage Reading’s residents, visitors and commuters to use alternatives to the single-occupant-vehicle to the maximum extent possible. The recommendations also include demand management strategies to help the Town accommodate new economic development without being overwhelmed by new traffic.

The report can be separated into two different sections: chapters 2, 3 and 4 document existing conditions, and chapters 5, 6, and 7 evaluate current and future parking demand with strategies to effectively accommodate that demand. In order to establish a baseline understanding of the parking issues confronting Reading, Chapter 2 analyzes the Town’s current regulations governing the provision and use of parking as compared to some of the best recommended practices in use in the United States. Chapter 3 evaluates the perceptions and experiences of visitors, employees, and residents parking in Reading as recorded through interviews and a parking users survey. Actual utilization Reading’s public and private on- and off-street parking supply is documented in Chapter 4. Based on the data collected in Chapters 2-4, future parking demand is projected in Chapter 5, along with an assessment of the need for a parking garage or other expansion of parking supply. The feasibility of such a garage is assessed in Chapter 6, with Nelson\Nygaard’s recommendations to the Town presented in Chapter 7.

Comments Welcome

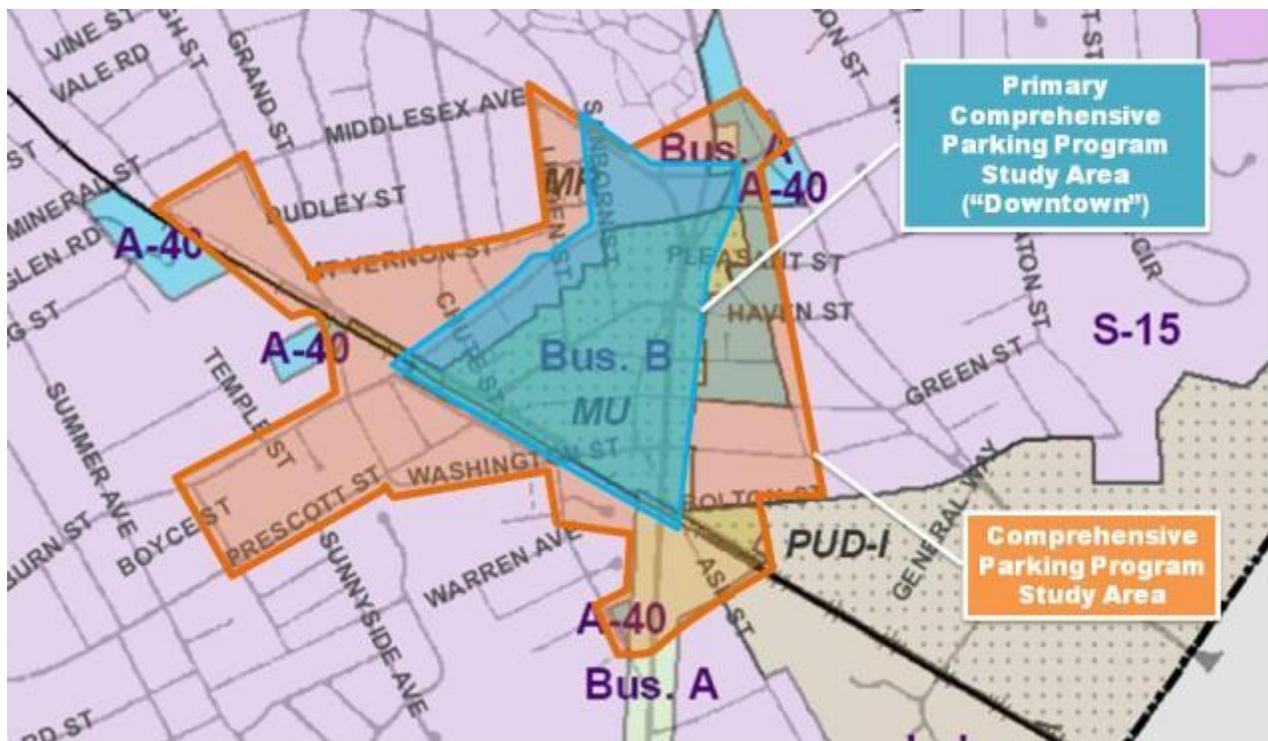
The Town and Nelson\Nygaard welcome input and comment from the public – especially those who utilized downtown Reading as a place to visit, work or live. The recommendations presented in this report are by no means the final set of actions the Town will take. Good planning is a community process, and continued public input helps refine a vision into reality. Comments on this report and the study that supported it can be addressed to the Town Manager's office at the Town of Reading, 126 Lowell Street, Reading MA.

Chapter 2. Regulatory Analysis

Communities around the world regulate the provision parking through zoning regulations. The following Chapter reviews Reading’s existing zoning regulations and makes recommendations on how development controls such as minimum parking requirements can be updated to ensure adequate off-site parking is provided for new development while also encouraging economic development and investment in the downtown area.

The primary area of focus for the comprehensive parking program study – what will be referred to as the “downtown” – is almost entirely zoned Business B (Bus. B) with a Mixed Use Overlay (MU). The remaining area is primarily Single-family 15 (S-15), with a mix of Apartment 40 (A-40) and Business A (Bus. A), as illustrated in Figure 1. While the general parking requirements shown in Table 1 apply to the Bus. B, Bus. A, S-15, and A-40 districts, the awarding of a special permit under the MU overlay activates a different set of parking requirements, as shown in Figure 1.

Figure 1: Zoning Regulations within Study Area



Zoning By-Laws Parking Requirements

General Parking Requirements

In our review of the most up-to-date zoning by-laws (April 2008), it appears that in most cases Reading’s general parking requirements are generally higher than the peak parking demand rates found in *Parking Generation 3rd Edition* (Institute of Transportation Engineers, 2004), as illustrated in Figure 2. The peak parking demand rates found in the ITE guide are primarily derived from studies conducted in pure auto-dependent suburban sprawl settings. These rates are generally considered to be very conservative and when applied as minimum requirements in a more dense setting –such as the current study area- these are likely to reproduce a similar auto-dependent suburban sprawl setting that is not conducive to the intent of Reading’s proposed 40R district. The current parking requirements exceed the ITE rates for every described land use with the exception of the nursing

home, which is a virtually insignificant difference of 0.06 spaces per 1,000 square feet lower than the ITE rate.

Figure 2: General Parking Requirements under Reading’s Zoning By-Laws

Principal Use	Existing Regulation	ITE Peak Parking Demand Rates	Reading vs. ITE
One Family Detached	Two spaces plus one space for each room offered for rent, one additional space for each two rooms used for said business or profession.	1.83 spaces per dwelling unit	Above
Two Family	One and one-half spaces for each dwelling unit plus one space for each room offered for rent and one space for each two rooms used for customary home occupation.	N/A	N/A
Apartment Dwelling	One and one-half spaces for each dwelling unit.	1.20 spaces per dwelling unit	Above
Hotels, Motels, Tourist Homes, and Senior Centers	Two spaces plus one space for each separate rental unit used for such purposes.	0.91 spaces per room	Above
Nursing Home	One space for each three (3) licensed beds.	0.39 spaces per bed	Below
Retail Stores, Offices and Consumer Service Establishments	One space for each three hundred (300) square feet of gross floor area or fraction thereof.	Office (suburban): 2.84 spaces per 1000 square feet Retail: 2 to 4 spaces per 1000 square feet (depending on type)	Above
Office and Professional Building	One space for each three hundred (300) square feet of gross floor area or fraction thereof.	Office (suburban): 2.84 spaces per 1000 square feet	Above
Townhouse and Townhouse Devt	Two spaces for each dwelling unit.	1.73 spaces per dwelling unit	Above
Restaurant	1 space for every 4 seats, plus 1 space for every employee on the largest shift. For restaurants with no seating, one space for every 75 square feet of net area, and no less than 10 spaces.	0.5 spaces per seat for sit-down restaurants, 9.9 spaces per 1000 square feet of gross floor area for restaurants with a drive-through window.	Above

Mixed Use Overlay District Parking Requirements

As mentioned above, receiving a special permit for a land use allowed under the mixed use overlay district regulations activates a different set of parking requirements for the subject land uses, as shown in Figure 3 below. The requirements set out in the mixed use overlay regulations closely mirror the rates reported in the ITE guide with the exception of the retail requirements. The retail parking requirements are below the peak parking demand rates for the numerous potential land uses under the definition of retail. Though closer to the standard ITE rates than the general zoning district parking requirements, the statement above still holds true: this is likely to produce the auto-dependent suburban sprawl condition that Reading is attempting to offset through the 40R process.

Figure 3: Mixed Use Overlay District Parking Requirements under Reading’s Zoning By-Laws

Principal Use	Existing Regulation	ITE Peak Parking Demand Rates	Reading vs. ITE
Residential Uses	1 space per dwelling unit of 550 to 700 square feet 2 spaces per dwelling unit of 701 to 1,100 square feet	Single-family detached: 1.83 spaces per dwelling unit Low/mid rise apartment 3+ units/1-4 floors (urban): 1 space per dwelling unit Low/mid rise apartment (suburban): 1.2 spaces per dwelling unit	In-line/Above
Commercial/Office	3.5 spaces per 1,000 square feet	Office (urban): 2.4 spaces per 1,000 square feet Office (suburban): 2.84 spaces per 1,000 square feet Medical/dental office: 3.53 spaces per 1,000 square feet Government office: 4.15 spaces per 1,000 square feet	In-line
Retail	1.5 spaces per 1,000 square feet	2 to 5 spaces per 1000 square feet (depending on type of retail)	Below

Smart Parking Regulatory Instruments

Parking Minimums and Maximums

Most minimum parking requirements take into account only two variables, namely land use and the size of development. As with Figure 1 and Figure 2 above, they are typically expressed in terms of number of spaces required per 1,000 square feet of a particular land use, per residential unit or (for restaurants and stadiums) number of seats. In reality, however, parking demand is affected by many more variables, such as the geographic context, demographic characteristics of the community, availability of transit or other alternatives to the car, traffic demand management programs, vehicle ownership rates, housing unit size, share of affordable housing units, etc.

As currently configured, the Reading Zoning By-Laws establish minimum parking requirements for a variety of land uses but do not provide a cap or limit on the maximum number of spaces.

In contrast to minimum parking requirements, parking maximums restrict the total number of spaces that can be constructed. Reasons for setting maximum requirements may include a desire to restrict traffic from new development, promote alternatives to the private automobile, or limit the amount of land that is devoted to parking. Parking maximums can be introduced anywhere where there are or could be measures in place to combat overspill. While the policy is most likely to be appropriate in transit corridors, downtown and areas with high levels of traffic congestion, it can be useful in any district that wants to limit traffic or the amount of land devoted to parking.

Figure 4: Parking Minimum and Maximum Requirements under Reading’s Zoning By-Laws

Existing Regulation	Best Practices
Parking Minimums	<p>Reduced Parking Minimums: In a number of municipalities parking minimum requirements can be reduced when certain conditions are met, such as central business districts, or with a specific percentage of affordable housing.</p> <p>Removed Parking Minimums: Some places have done away with minimum parking requirements for the entire municipality while others have targeted specific zoning districts.</p> <p>Parking Maximums: In a growing number of municipalities, parking minimums have been replaced with parking maximums. In some cases, the amount required as a minimum is directly converted to a maximum. In others, the current standards are rejected altogether and a new analysis is carried out based on local auto ownership rates and commuting patterns.</p>

Shared Parking

Mixed-use developments, offer the opportunity to share parking spaces between various uses, thereby reducing the total number of spaces required compared to the same uses in stand-alone developments. This is a primary benefit in mixed-use development contexts of moderate-to-high density. Shared parking operations offer many localized benefits to the surrounding community, including a more efficient use of land resources and reduced traffic congestion. The Town’s parking code for the mixed use overlay district does not directly address the opportunity to share parking between uses. On the other hand, the Town’s parking code for Gateway Smart Growth District (GSGD) illustrates awareness of the benefits of a shared parking arrangement by encouraging shared parking.

Figure 5: Shared Parking under Reading’s Zoning By-Laws

Existing Regulation	Best Practices
<p>All parking has to be provided on the same lot as the use for which it is required. This requirement may be waived by permission of the Board of approval, but even with the exemption, “no parking shall ever be more than 300 feet from the use for which it is required” (6.1.1.2).</p> <p>Exception The exception is the Gateway Smart Growth District (GSGD), where shared parking “is strongly encouraged” (4.11.8.2). Minimum parking requirements may be reduced if it can be demonstrated that shared spaces will meet demand.</p>	<p>Shared parking can be provided as of right at least a 5 minute walk from the associated use (1,000 feet).</p> <p>Required parking spaces for all uses in all districts need not be limited to use by residents, employees, occupants, guests, visitors, or customers of such uses and may be used for general public parking. This enhances the inherent “park-once” efficiency of a downtown area.</p>

Change of Use Exemptions

Situations arise where the minimum parking requirements interfere with the ability of the owner/occupant to change the use of their property. As discussed above, often the minimum parking requirements set out in the zoning code require more off street parking that is feasible within the constraints of the property. In mid- to high density town centers where lots are small and available space is limited this can become a serious obstruction to sensible redevelopment.

Reading has allowed the Community Development and Planning Commission (CDPC) to consider waving or reducing the minimum parking requirements if it is determined that it is infeasible for the property owner to provide parking and there will be no adverse impact.

Figure 6: Change of Use Exemptions under Reading’s Zoning By-Laws

Existing Regulation	Best Practices
Exemptions or reductions may be waived during site plan review for change of use within Bus. C district Exemptions or reductions may be waived for change of use within the MU overlay district	When buildings and parcels are converted to new uses, exemptions from parking requirements may be granted when providing the required amount of parking on-site is infeasible.

Dimensional Requirements

Requiring buildings to provide a minimum setback encourages greater dispersal of development and decreases the likelihood that one will walk between various uses. Allowing or requiring parking between the building and the street increases the incentive for drivers to use their vehicle to travel between nearby destinations.

The zoning by-laws have eliminated minimum setback requirements for mixed use developments, prohibited parking in the front of buildings for the Apartment 40 district, and encouraged parking in the rear or side yard for buildings in the Mixed Use overlay district.

Figure 7: Dimensional Requirements under Reading’s Zoning By-Laws

Existing Regulation	Best Practices
Most zones have minimum front yard setbacks, and allow parking in front yards.	No front yard parking in downtown area.
<p>Exceptions</p> <p>The A-40 district requires parking for apartments to be located to the rear of the building.</p> <p>The MU overlay district establishes a maximum front yard of 20 feet and no minimum front yard. Parking within the MU district “shall be primarily located at the rear or side of buildings (4.6.6.2)”</p>	Reduced or eliminated minimum setback requirements in downtown area.

Driveway Curb Cuts

Driveway curb cuts are a major source of vehicle-pedestrian-bicycle conflicts as well as introducing more congestion on busy thoroughfares due to left turns in and out of the driveway. When alternatives are available and feasible, limiting or prohibiting driveway curb cuts along key vehicle, pedestrian and bicycle routes reduces or eliminates these conflicts, providing safer, more efficient, and less congested public rights-of-way.

The zoning by-laws provide guidance on the location of curb cuts to reduce these conflicts, including – for instance – the proximity of the curb cut to an intersection. They also establish a general maximum of two driveways per parcel. Within the MU overlay district adjacent properties are encouraged to share curb cuts.

Figure 8: Curb Cut Guidance under Reading’s Zoning By-Laws

Existing Regulation	Best Practices
<p>One-way driveways limited to a maximum width of 15’, two way driveways to a maximum of 30’.</p> <p>Generally, any one parcel is limited to a maximum of two driveways. Additional driveways shall not be permitted “unless there is a clear necessity for them.”</p> <p>Wherever possible, driveways are to be set back 50 feet or more from a street corner, measured between the nearest edge of the driveway and the cross road edge of pavement.</p> <p>The grade of a driveway may not exceed 10% for a distance of at least 20 feet from the property line into the lot.</p> <p>Any driveways for a commercial or industrial use will require approval from the Board of Public Works.</p> <p>The MU overlay code may require one curb cut and may require additional if deemed necessary. It also encourages adjacent developments to share curb cuts.</p>	<p>In transit-oriented zoning districts, reviews emphasize a prohibition of curb cuts and driveway openings along key transit, bicycle, and/or pedestrian routes whenever possible. Where curb cuts are present, standards expect a level crossing for pedestrians (raised driveway) and clear sightlines for exiting motorists to see pedestrians</p>

Car Sharing

Car-sharing provides individuals with access to a fleet of shared vehicles, allowing them to avoid owning a car, or a second or third car. Car-sharing can also be a tool for businesses and government organizations, which can use it to replace their fleet vehicles. At the same time, car-sharing at the workplace allows employees to take transit, walk or cycle to work, since a car will be available for business meetings or errands during the day.

The zoning by-laws do not address car sharing.

Figure 9: Car Sharing Regulations under Reading’s Zoning By-Laws

Existing Regulation	Best Practices
None.	A minimum number of car share spaces are required to be provided free of charge to car share services (such as zipcar), in relation to the amount of parking provided.

Unbundling Parking Costs

Unbundling parking costs changes parking from a required purchase to an optional amenity, so that households and employers can freely choose how many spaces they wish to lease. Especially among households with below average vehicle ownership rates (e.g., low income people, singles and single parents, seniors on fixed incomes, and college students), allowing this choice can provide a substantial financial benefit. Unbundling parking costs means that these households no longer have to pay for parking spaces that they may not be able to use or afford.

Charging separately for parking is the single most effective strategy to encourage households to own fewer cars, and rely more on walking, cycling and transit. According to a study by Todd Litman (2004), unbundling residential parking can significantly reduce household vehicle ownership and parking demand.

The zoning by-laws do not address the bundling of parking cost.

Figure 10: Unbundling of Parking Cost Regulations under Reading’s Zoning By-Laws

Existing Regulation	Best Practices
None.	Any parking spaces offered to tenants of a new development must be offered as a fee-based option distinct from charges established for renting, leasing, or purchasing primary-use space within the development. These fees shall reflect market realities (i.e., the actual value of parking).

Parking In-Lieu Fees

In some communities new developments can waive their minimum parking requirements by making an annual payment (in-lieu of providing parking) to the municipality. The fee is usually utilized for transportation improvements, particularly shared public parking facilities. This allows the redevelopment of constrained sites and provides a revenue stream to support the construction/maintenance of shared public parking facilities such as a central lot or garage.

The zoning by-laws allow relief from parking requirements within the MU overlay district if the developer provides an impact fee of a one-time \$20,000 per required space that is not provided.

Figure 11: Parking In-Lieu Fee Regulation under Reading’s Zoning By-Laws

Existing Regulation	Best Practices
Within the MU overlay district an impact fee of \$20,000 per space can be paid in-lieu of providing the minimum required parking. This money can only be used for short and long term parking solutions in the MU overlay district.	Where zoning requirements for minimum numbers of parking spaces exist, a parking in-lieu fee or payment has found great success in the U.S. at reducing parking supply for dense mixed-use areas that have lower parking demand or high potential for sharing. Fees vary widely.

Bicycle Parking

Bicycle parking is an essential part of encouraging bicycling and typically serves two important markets. Long-term parking is needed for bicycle storage for residents and employees. This parking is located in secure, weather-protected, restricted access facilities. Short-term parking serves shoppers, recreational users and other. As well as security, convenient locations are a priority – otherwise, bicyclists will tend to lock their bicycles to poles or fences close to their final destination. Bicycle improvements increase mobility, reduce auto dependency, congestion and air pollution and can be a very important mode of transportation for lower-income families.

The zoning by-laws do not specify any bicycle parking requirements.

Figure 12: Bicycle Parking Regulation under Reading’s Zoning By-Laws

Existing Regulation	Best Practices
None	Minimum bike parking facilities are provided in relation to the scale of development, and minimum design standards for such parking facilities are specified.

Transportation Demand Management Measures

Transportation Demand Management (TDM) refers to a package of strategies to encourage residents and employees to drive less in favor of transit, carpooling, walking, bicycling and teleworking. It

encompasses financial incentives such as parking charges, parking cash-out or subsidized transit passes; Guaranteed Ride Home programs to give employees the security to carpool or ride transit; compressed work schedules; and information and marketing efforts. TDM programs have been shown to reduce commuting by single-occupant vehicle by up to 40%, particularly when financial incentives are provided.

The zoning by-laws do not address a TDM program.

Figure 13: Transportation Demand Management Measures under Reading’s Zoning By-Laws

Existing Regulation	Best Practices
None	<p>Pre-Tax transit benefits – Employees are provided with access to “transit checks”, vouchers, or debit card systems that allow the use of pre-tax income for purchase of transit fares.</p> <p>Preferential parking for carpooling, for instance 10% of all parking spaces are set aside for carpool vehicles prior to 9:00 AM on weekdays, or provide carpool parking in prime locations.</p> <p>Provide ride-sharing services, such as a carpool and vanpool incentives, customized ride-matching services, a transportation information package for new employees and residents, a Guaranteed Ride Home program (offering a limited number of emergency taxi rides home per employee), and an active marketing program to advertise the services to employees and residents.</p>

Review of Massachusetts General Law Chapter 40R

Massachusetts General Law Chapter 40R provides financial incentives for cities and towns to zone for and build smart growth development. The incentives target two specific goals: encouraging smart growth zoning and encouraging real physical development (i.e., issuing building permits) within the smart growth zones.

In developing a new smart growth district pursuant to 40R, cities and towns may amend the underlying zoning to allow for more density as well as modifying dimensional and parking requirements. The minimum housing densities in the district must be 20 units per acre on multifamily dwellings, 8 units per acre on single family dwellings, and 12 units per acre on 2 and 3 family dwellings. The district must have pedestrian access to an “activity centre” such as a transit station.

Upon approval of the plan for the smart growth district, the commonwealth provides the municipality with a financial bonus according to the number of planned housing units, as illustrated in Figure 14 below. If no building permits are issued in compliance with the plan for three years, the money has to be returned to the state. In addition to this zoning bonus, the municipality receives a onetime payment of \$3,000 for each building permit that is issued for a new residential unit within the smart growth district.

Figure 14: Chapter 40R Incentive Payment Schedule

Projected Units of New Construction	Payment
Up to 20	\$10,000
21 to 100	\$75,000
101 to 200	\$200,000
201 to 500	\$350,000
501 or more	\$600,000

Reading's Chapter 40R Efforts

The initial stage of a 40R rezoning project is currently underway in Reading. A phased redevelopment of a core area – closely aligned with what is termed “downtown” above in Figure 1 – around the MBTA station has been proposed. A conceptual map from the rezoning proposal is exhibited as Figure 15 below. The final vision for the area includes building heights up to 4 stories. The development path described suggests densities on small sites where sufficient parking under the current requirements simply could not be provided. The proposal includes suggested sites for new parking garages, but the current off-site parking exemption applies only for retail and office space. Given the addition of new housing units, under the current minimum parking requirements finding parking for residential uses would be difficult to impossible.

Figure 15: Proposed 40R Smart Growth District in Reading



Chapter 3. User Profile

This chapter documents the collection of qualitative input from parkers in the Town of Reading regarding their parking activities, experiences, perceptions, and preferences. Efforts to collect this type of data included a short written survey (twelve question), an extended written survey (twenty-three question), and targeted stakeholder phone interviews. Participants in either of the written surveys were given the option of filling out a physical paper survey or an alternative online survey. The phone surveys were conducted with willing business owners to gather greater detail on employer and employee experiences, perceptions, and preferences.

Methodology and Overview

The parking surveys were written to solicit two types of information. The first was to provide the Project Team with data regarding the public's parking patterns, destinations, and options for modal shift. The second objective was to provide Reading's daily visitors, residents, and employees the opportunity to provide qualitative input on how well the current supply of parking is serving their needs. The short survey was designed to solicit key information from the casual respondent, such as length of stay, time spent searching, etc. The extended survey was designed to gather more detailed information from individuals with more than a casual interest in parking in Reading. The extended survey included all of the questions in the short survey, expanding on each of the topics, but principally focusing on pricing information. Both of the written surveys included an open ended comment space at the end for respondents to identify any concerns not addressed elsewhere in the survey. Copies of the written survey forms are included in Appendix X.

Survey Distribution

The project team distributed these surveys throughout the downtown area using a variety of methods including directly attaching to the windshields of parked cars, leaving surveys at key businesses with heavy customer traffic, and including an online survey on Reading's town website. Surveys could be turned in at the Reading Town Hall, by mailing them to Nelson/Nygaard's office, or filling out the online version.

Survey Responses

There were a total of 118 responses. A total of ninety-eight short surveys were submitted. Of these ninety-eight, a total of eighty-five (86-percent) were completed with responses for each required question, and 35 people (36-percent) provided voluntary open-ended comments. Twenty (20) people responded to the extended survey. Of these twenty, a total of thirteen (65-percent) were completed and ten people (50-percent) provided voluntary open-ended comments (a full account of the comments is available separately). Due to the nature of the distribution effort an unknown number of surveys were distributed which makes it difficult to estimate the rate of return.

User Profile

The following section analyzes the characteristics of travelers stopping in Reading's downtown, specifically focusing on their purposes for visiting, how often they visit, and the modes used to travel downtown.

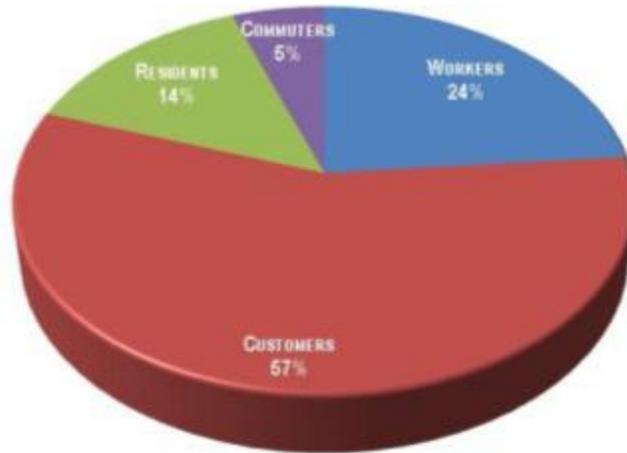
Reasons for Visiting Downtown Reading

In order to ease the identification of their distinct needs and concerns, the survey participants were divided into distinct user types: customer, worker, resident, or commuter rail rider. Due to the nature of the responses, the groups are not exclusive – some respondents may fit into more than one user

type. It is assumed that each of these groups will share similar perspectives and experiences as others in their group. For instance, the parking needs of a resident are likely similar to other residents but different from the needs and experiences of customers. For some topics the responses from customers and workers are analyzed in further detail.

Customers are those who identified dining, shopping, or errands/appointments as their primary purpose for coming to Reading. Customers make up 57-percent of all respondents. Workers are those who identified work as their primary purpose for visiting Reading. Workers account for 24-percent of the survey respondents. Residents are those respondents that identified themselves as living in the downtown area. Residents make up 14-percent of the survey respondents. The commuter rail group is made up of those respondents that identified the commuter rail depot as their primary purpose for visiting Reading. The commuter rail group accounts for only 5-percent of the total respondents.

Figure 16: Respondent Groups



Frequency of Downtown Visits

People visit traditional town centers for a number of reasons: some people come a few times a month; and some come a few times a day. The normal visitor travels to Reading repeatedly during the week. Most of the respondents to the survey travel downtown nearly every day of the week. Only a small number of people visit downtown several times a day.

Figure 17: Frequency of Downtown Visits



A few simple findings can be identified about travelers to Reading’s downtown:

- Most of Reading’s guests visit repeatedly throughout the week
- Most customers visit Reading repeatedly throughout the week. Roughly equal portions of customers visit “two to three days” and “nearly every day.” A few customers visit less than once a week.
- The customers reported visiting across a wide range of purposes without any clear frequency pattern
- Half of the workers visit Reading nearly every day and a few visit more than once a day.
- Most workers travel downtown nearly every day of the week.

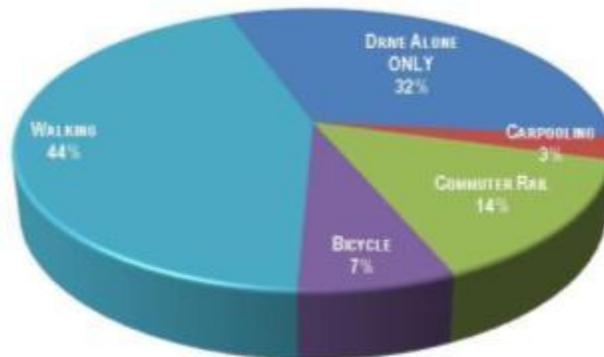
Figure 18: Frequency of Downtown Visits by Respondent Group



Mode of Travel

Among the forms of alternative transportation available to downtown travelers, walking is the most popular alternative (44-percent of respondents). More than half of the respondents get downtown by walking or biking at least once a week. Roughly two-thirds of the downtown parkers use alternatives to driving alone at least once a week.

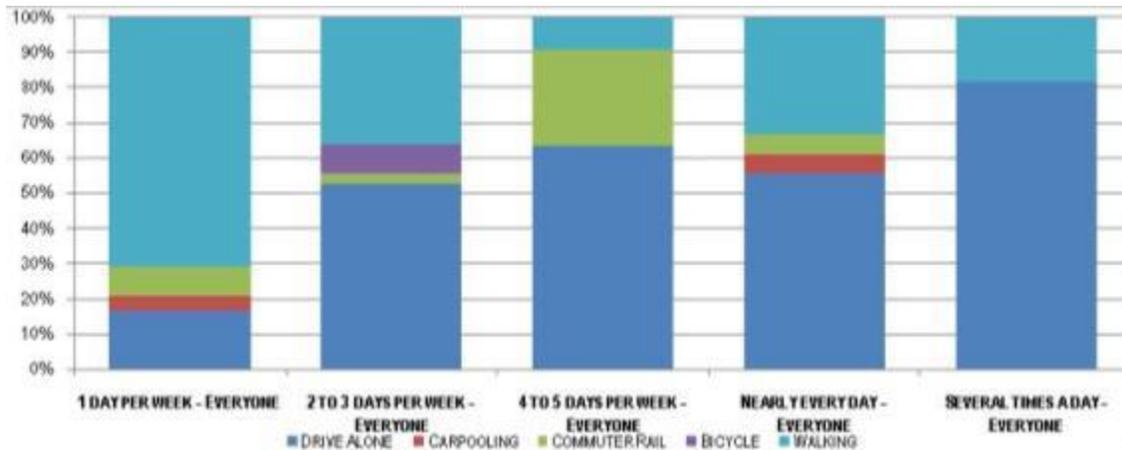
Figure 19: Mode of Travel



Other findings include:

- Over 70-percent of people walk downtown at least once a week.
- A number of people travel by bike two to three days a week.
- Nearly a quarter of people traveling downtown four to five days a week use the commuter rail.
- Interestingly, roughly one third of people who identified walking do so nearly every day.
- Although walking is a major alternative choice, for those who travel downtown more than once a day driving is still clearly dominant.

Figure 20: Downtown Travel Frequency by Mode



Customers' Mode of Travel

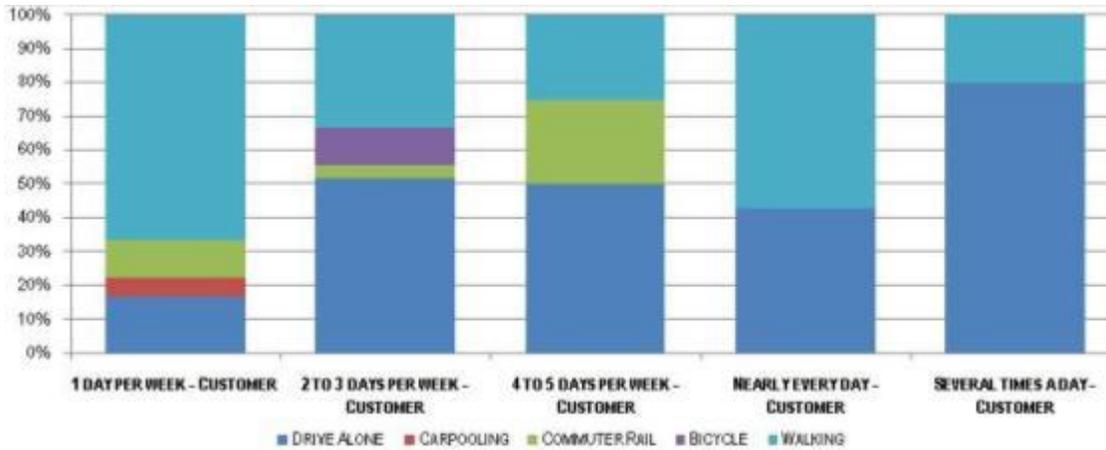
Almost half of customers walk downtown and just shy of three quarters use transportation other than driving alone. Only a quarter of customers exclusively drive alone when traveling downtown.

Figure 21: Customers' Mode of Travel



Nearly every day over half of the customers reported walking to town – more than reported driving alone exclusively. Ten percent of people travel downtown two to three times a week. For customers visiting several times a day, driving alone is still the dominant mode with roughly 80-percent.

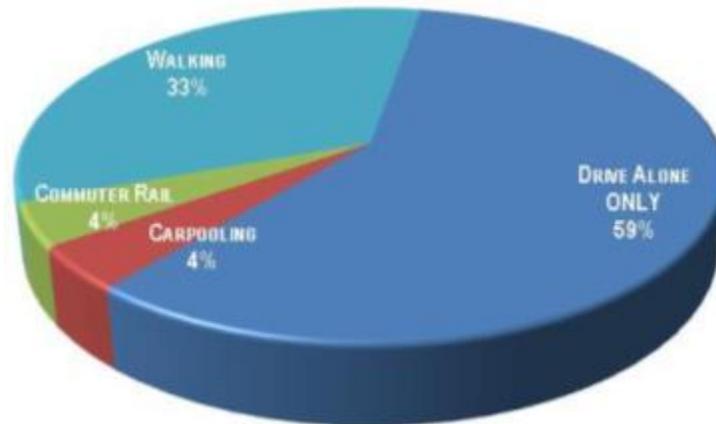
Figure 22: Customers' Travel Frequency by Mode



Workers' Mode of Travel

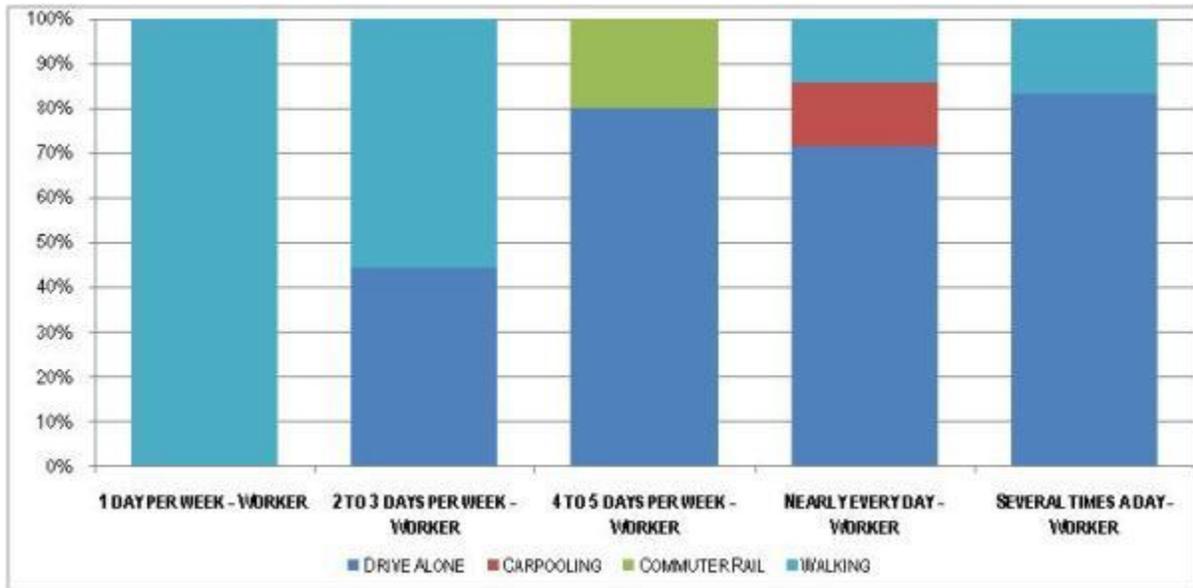
People coming to Reading for work predominantly reported driving alone as their only mode of travel – almost twice as much as all other modes combined and more than double the drive alone rate for customers. Even so, a third of the workers still identified walking as an alternative.

Figure 23: Mode of Travel – Worker



Roughly half of workers walk two to three times a week; otherwise most of the workers travel only by driving alone. With most of the workers traveling downtown nearly every day, nearly 15-percent walk, another 15-percent carpool and the remainder only drive alone.

Figure 24: Workers' Travel Frequency by Mode



Perceptions of Parking in Downtown Reading

The following section explores respondents' experiences, perceptions, preferences, and patterns as they relate to parking in downtown Reading. Questions focus on travelers' considerations when choosing parking, their awareness of alternative parking options, the amount of time spent searching, the amount of time spent downtown, and how close people park to their destination.

Reasons for Choosing a Parking Space

Many considerations are factored in when someone is searching for parking. For instance: will there be a space for me? Is it close enough? Does it cost too much? Do I feel safe parking there? Location is by far the most common factor for choosing where to park. More than half of all parkers cited this as their primary consideration. Ease of finding a space and a sense of safety/security tie as the second most common reason for all parkers. Pricing is the least important reason identified.

Figure 25: Reasons for Choosing a Parking Space



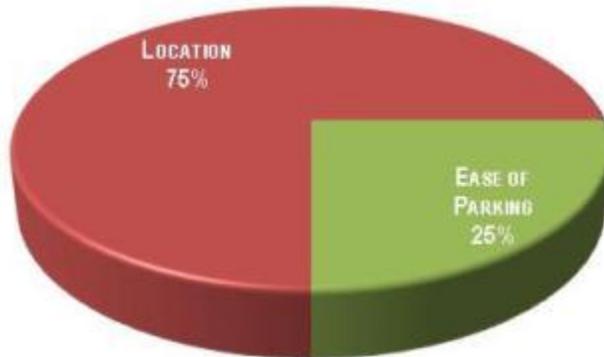
Just short of a quarter of parking respondents indicated that they “always park” where they were parked on the day of the survey. These parkers are sometimes tied to a specific location by a parking

permit, but sometimes they have arrived at a favored location, based on location, prices, ease and comfort of use, or a combination thereof. While most have learned how to ensure a space each morning, they do not have specific spaces to which they always return.

Customers' Reasons for Choosing a Parking Space

Customers predominantly cite location as the most important consideration when choosing a place to park. The second reason for choosing parking was the ease of finding a space. Neither the price of parking nor the safety/security of parking were considerations for customers.

Figure 26: Customers' Reasons for Choosing a Parking Space



Workers' Reasons for Choosing a Parking Space

No workers cite ease of parking as their reason for choosing their parking. Workers identify location, safety/security, and price as equally important considerations.

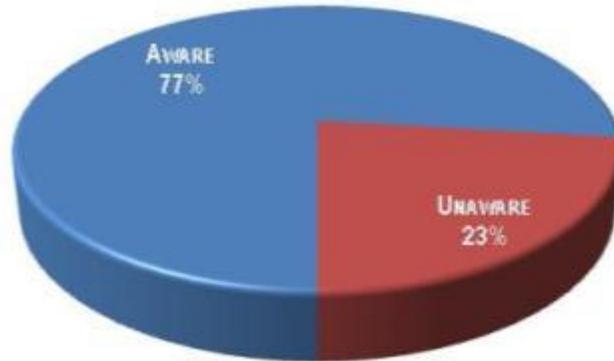
Figure 27: Workers' Reasons for Choosing a Parking Space



Knowledge of Alternatives

When one visits a location more than once, they usually begin to learn about the variety of parking options in the area. Awareness of alternative parking locations likely reduces the amount of time one must spend in search of parking. Nearly three-quarters of participants confirmed having knowledge of alternative parking options nearby their destination. There was little difference between customers and workers.

Figure 28: Awareness of Alternative Parking Options



Search Time

Searching for parking is considered by many drivers as the most tedious aspect of driving. Searching for a parking space for more than five minutes once they have arrived at their destination is frequently considered by the public to be the limit before aggravation sets in.

On the day the respondents answered the survey, the average search time was 2 minutes and 24 seconds with some people finding parking instantly and others searching for up to twenty minutes. When asked about an “average” day, the average search time was 3 minutes and 37 seconds with some finding parking instantly and others searching for up to thirty minutes¹. In the worst case, respondents’ said the average search time was 7 minutes and 57 seconds with some finding parking instantly and others deciding to give up and return home or serve their needs elsewhere.

Figure 29: Cumulative Parking Search Time

Search Time	Today	Average Day	Worst Day
Less than 1 Min	60%	41%	10%
Up to 5 mins	89%	84%	41%
Up to 10 mins	93%	92%	70%
Average Search Time	2:24	3:37	7:57

Over 60-percent of the respondents stated that they found parking within one minute on the day of the survey and over 40-percent found parking within one minute on the average day. On the worst day, 10-percent of the respondents were still able to find parking within one minute. Nearly 90-percent of respondents to the question indicated that they found their parking space within five minutes on the day of the survey, and 84-percent indicated they find parking within five minutes on the average day. Even considering the worst possible day, over 40-percent of the question respondents stated a search time of five minutes or less.

It should be noted that 18-percent of the respondents to the “worst day search time” question stated they never find a space and head home or go to another location that serves their needs. Potential customers or visitors that give up on finding parking are a serious problem for any downtown given all of the alternatives. This may be an issue with supply on these days but more likely this is due to a lack of knowledge about parking availability in the less visible on- and off-street locations.

¹ While it is highly unlikely that it would take up to 30 minutes to find parking in downtown Reading, this is an indication of driver frustration as the perception of delay heightens when ideal parking cannot be found.

As illustrated in Figure 30 below, a clear majority of the respondents are accustomed to finding parking within the ideal five minute period before frustration begins to set in. On the average day virtually everyone is able to find parking within ten minutes of circling around. Even on the worst day 70-percent find parking within ten minutes and only 12-percent take over ten minutes. However, a substantial number of people (18-percent) stated that they are unable to find parking on the worst day.

Figure 30: Parking Search Time



As discussed above, searching for more than five minutes signals the average time before aggravation sets in. Under most circumstances searching for more than ten minutes will lead to the individual either parking illegally (e.g., double-parking, handicap parking, etc.) or giving up completely and satisfying their needs elsewhere. In general, individuals will not search for more than twenty minutes unless no alternatives exist, such as residents without off-street parking or those parking for an appointment, a service or a product that cannot be found elsewhere. As shown in Figure 30 above, when asked to estimate the search time on the worst day, 18-percent of the respondents stated they had failed to find parking and returned home or shopped elsewhere. When asked if they had ever failed to find parking, 44-percent stated they had failed to find parking at least once in the past.

Customers' Search Time

It is assumed that customers have less search time flexibility than others. When the search takes too long customers can often decide to defer their purchase to another day/time or travel to a different location altogether. On the day of the survey 65-percent of customers were able to find parking immediately (less than one minute), 90-percent within the five minute aggravation window and 98-percent in under ten minutes. The results were similar for the average day with the exception that only 51-percent were able to find parking immediately. The portion of customers reporting having experienced the "never find a space" worst day scenario mirrors the experience of the everyone group.

Workers' Search Time

Unlike customers, workers are likely to put up with longer search times than customers. Most people would consider getting to work to be more essential than purchasing an item and there are not usually other work options to drive to as is the case with shopping. On the day of the survey a large portion of workers found parking within five minutes (96-percent), a higher share than the same for customers (90-percent). On the average day more workers (8-percent) spend over ten minutes searching compared to customers (2-percent). On the worst day far fewer workers (2-percent) reported having not found a space than customers (18-percent).

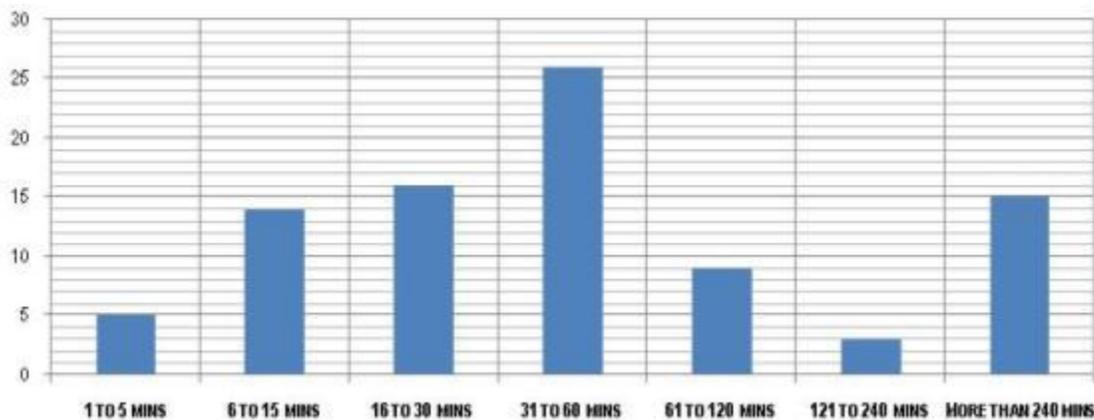
Summary of Search Time Findings

- Most of the respondents do not generally experience a serious problem with the amount of time they have to spend in search of parking
- Aside from the worst case scenario, the amount of time spent searching for parking seems acceptable.
- A clear majority find parking within the five minute frustration window
- Even on the worst day a majority find parking within a ten minute period
- Nearly a fifth of customers reported never finding a space on the worst day scenario and close to half of everyone reported having experienced not finding a space once before
- Customers exhibit a lower acceptance threshold for “search times longer than ten minutes” than workers
- Compared to customers, a much larger portion of workers are willing to accept search times of more than ten minutes
- A much smaller portion of the workers decide to give up on the worst day than customers

Length of Stay

Some people need to make a quick stop, and if convenient parking is available, they will only stay for a few minutes. Others stay for the entire day. These two groups are often in conflict, competing for the most convenient parking. Most of Reading’s visitors stay between six and thirty minutes followed closely by those staying between thirty minutes and one hour. A substantial number of people stay over two hours.

Figure 31: Parking Duration



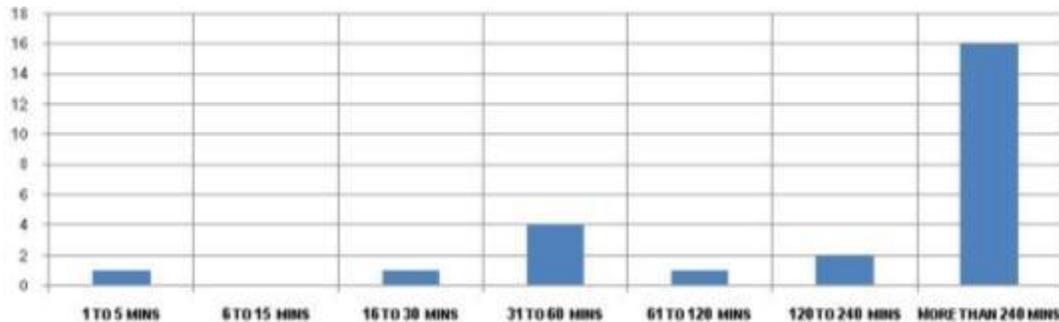
The average duration of customer visits was just shy of an hour with a shortest stay of three minutes and the longest for ten hours. The number of customers increases for each parking duration category up to an hour at which the number drops dramatically. Most of the customers reported staying less than an hour.

Figure 32: Customer Parking Duration



The average length of stay for workers was five hours and forty minutes, well beyond the two hour parking limit on many spaces. Most workers reported staying in Reading for more than two hours and virtually none reported staying less than an hour. On the day of the survey, workers stayed anywhere from five minutes to ten hours.

Figure 33: Worker Parking Duration



Parking When Time is Critical

Situations often arise where the individual is under a time constraint and the reason for a trip is essential but cannot be postponed to a more convenient time. If there are no convenient readily available parking spaces, these individuals simply do not have time to find available parking that may be less convenient, in a sense “forcing” them to park or stand illegally. According to the survey, 21-percent of the respondents have found themselves in the situation where they must park illegally. The most common location, as identified by respondents, was around CVS, both on-street and off-street.

Parking Once

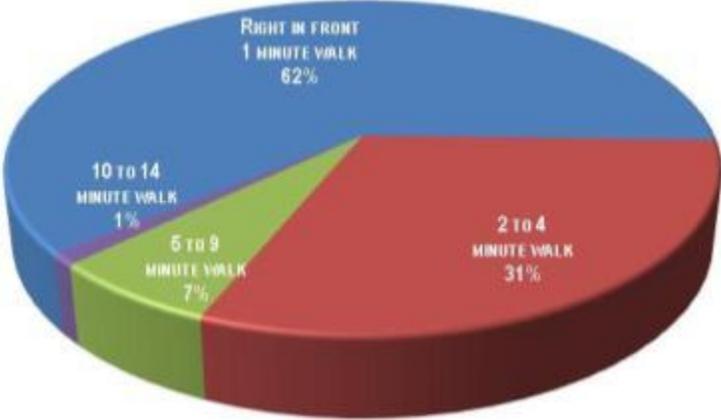
One of the great successes of a downtown is the ease of parking at one location to explore all of the district’s many destinations. The combination of a relatively dense and compact area, a quality pedestrian network, accommodating sidewalks and destinations, and parking that satisfies users’ needs combine to encourage visitors to leave their car in one place while enjoying downtown. This is reflected in survey responses, which indicate that only a few of those parking in downtown end up parking again before leaving (25-percent).

Proximity to Destination

As seen above, location is the most important consideration for people when finding parking. Most people prefer to park as close to their destination(s) as possible, often spending extra time searching for the closest possible space even when other spaces are available. In many cases the time saved by parking closer to one’s destination is lost in the extra time spent searching for that “golden space.”

The perfect metaphor is borne out in the “mall parking mentality” where an individual will spend more time searching for a space near the entrance to the mall than saved in walking from that space to the entrance. Oddly enough, individuals often have the misperception that one has arrived at their destination upon entering the mall while their actual destination might be nowhere near that entrance. In most cases their final destination is much further from their mall parking space than if they had visited a downtown but were unable to park directly in front of their downtown destination. Furthermore, when visiting downtown the individual has the potential advantage of parking directly in front of their destination, a rare opportunity at the mall. In other words, as compared to a mall, a traditional downtown such as Reading’s allows individuals the opportunity to park “within the mall.” As seen in Figure 34 below, this tendency is exhibited in Reading, with most respondents finding parking either directly in front of their destination or within a one minute walk. Almost all parkers find “convenient” parking (within four minutes).

Figure 34: Proximity of Parking to Destination

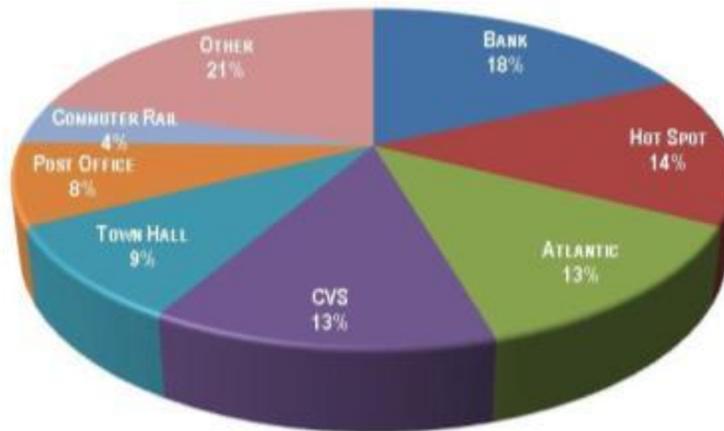


Customers were slightly less likely (57-percent) to park directly in front of their destination when compared to the entire group (61-percent). Almost every customer (95-percent) was able to find “convenient” parking less than five minutes from their destination.

A much larger share of workers find parking directly in front than both the entire group (61-percent) and customers (57-percent). Every worker that responded to this question had convenient parking (within four minutes).

Some people provided the addresses or names of the destinations they visited or would visit that day. Many locations were popular destinations mentioned by a number of respondents, making them worth identifying in Figure 35. The most popular destinations were banking, the Hot Spot, the Atlantic Market, and CVS – accounting for more than two-thirds of all destinations.

Figure 35: Final Destinations



Some key findings about final destinations include:

- A clear majority of people find parking within a four minute walk of their destination
- Over half of the participants find parking right in front of their destination/ within a one minute walk
- Over half of customers find parking directly in front
- Nearly all customers find parking within a four minute walk
- Compared to workers, a much smaller portion of customers park directly in front
- Customers were more likely to park two to four minutes away
- Some customers had to park up to a ten minute walk away
- All workers found “convenient” parking –within a four minute walk
- A large majority of workers found parking directly in front, more than customers

Paid Parking

Virtually everyone involved in the survey used free parking. Customers were less likely than the group as a whole to use paid parking facilities. A much larger portion of workers use paid parking, nearly 15-percent as compared to only 3-percent of customers.

Front Door Parking for \$0.25 Per Hour

Everyone was asked whether they would be willing to pay a nominal fee of \$0.25 an hour to park directly in front of their destination. Reading does not have any on-street metering so this would mean charging people for parking they are used to getting for free. Fifteen-percent of people said they would be willing to pay for these spaces.

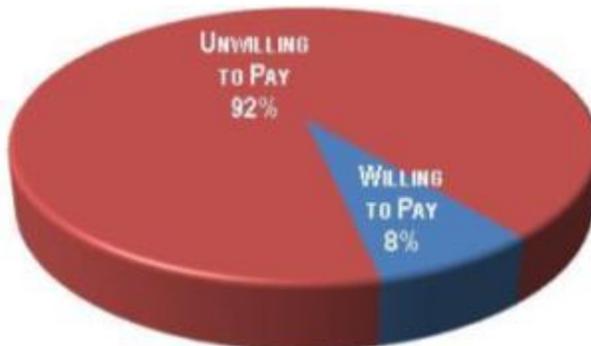
Figure 36: Willingness to Pay for Front Door Parking



Customers were very open to the idea of paying for front door parking. A quarter of customers expressed a willingness to pay for the extra convenience of front door parking spaces. On the other hand, workers were unwilling to pay for front door parking.

Survey participants were also asked if they would be willing to pay a higher fee if this would ensure they could dependably rely on front door spaces being available when they arrive and where they want to park. This was intended to gage the public's tolerance to market based pricing of the most sought after spaces. Fewer people supported this than supported the lower fixed rate.

Figure 37: Willingness to Pay for Reliable Front Door Parking



As with fixed rate pricing, a greater number of customers (12-percent) support variable rate pricing if it virtually guarantees parking availability in key locations. Workers are not open to any pricing plans regardless of the benefits this might afford them.

Summary of Key Findings from User Survey

Users

- Most of the people responding to the survey were customers
- A quarter of the participants were workers
- Most of the visitors to Reading travel downtown repeatedly throughout the week
- Customers visit the full range of options, from less than once a week to several times a day
- Half of workers report coming to town almost every day
- Two-thirds of everyone uses alternative modes at least once a week
- Half of the respondents identify walking as a mode they use at least once a week
- Two-thirds of customers use modes other than driving alone
- Ten percent of customers use a bicycle two to three times a week
- Half of workers use only their own car

Parking

- Location is the most important reason for choosing parking
- Three-quarters of customers identified location as their reason
- Ease of finding a space is important to customers but not workers
- Price was not a consideration for customers
- Most people are aware of alternative parking options
- A third of workers are not aware of nearby parking options
- A clear majority find parking within the five minute frustration window
- Even on the worst day a majority find parking within a ten minute period
- Close to half of everyone reported having experienced not finding a space once before
- Customers exhibit a lower acceptance threshold than workers for “search times longer than ten minutes”
- Nearly a fifth of customers reported never finding a space on the worst day scenario
- Most people stay in Reading for an hour or less
- Customer’s average stay is fifty-eight minutes
- Worker’s average stay is over five and a half hours
- A clear majority of people find parking within a four minute walk of their destination
- Over half of the participants find parking right in front of their destination
- Over half of customers find parking directly in front
- Nearly all customers find parking within a four minute walk
- Compared to workers, a much smaller portion of customers park directly in front
- Customers were more likely to have to park two to four minutes away
- Some customers had to park up to a ten minute walk away

- All workers found “convenient” parking –within a four minute walk
- A large majority of workers found parking directly in front, more than customers

Pricing

- Almost everyone parks for free
- Some workers pay for parking
- Some people would be willing to pay for front door parking
- A quarter of customers would be willing to pay for front door parking
- Some customers would be willing to pay variable rates if they could dependably rely on front door parking availability
- Workers are absolutely unwilling to pay for convenient parking

Summary Points from Phone Interviews

Based on phone interviews with some downtown Reading businesses and landowners, the following summary of emerging trends was prepared.

- Most employees drive because other transportation options do not work for them
- No one has a program to encourage alternate transportation
- Many businesses have limited or ad hoc parking arrangements for employees, but these do not meet all of their needs
- Many would consider funding alternate designated parking, but not at great difficulty or expense
- No one is open on Sundays, but Saturdays are extremely busy
- Most expressed a problem with employee parking rather than customer parking
- The two hour parking is problematic for most businesses because it is too rigid
- Few businesses knew of the employee sticker program
- Very few business take advantage of the employee sticker program
- Opinions vary on current enforcement levels, but many have more problems with the regulation than the enforcement
- Lack of dedicated space significantly hinders the ability to lease/sell buildings in Reading
- Information & clarity on parking rules and regulations is needed, including signage.
- Evening parking in the needs attention
- There are relatively minor traffic, pedestrian and signage issues that should be evaluated
- Very few employees or customers seem to use public transportation
- Businesses have perception that very few customers walk
- More people walk than the businesses perceive, and walking should be encouraged
- Residents that live in or near downtown take up some of the critical spaces needed by businesses

Conclusions on Downtown Parking User Profile

Users

While people come to Reading for a variety of reasons, appointments/errands are the most common reason, followed closely by shopping and then employment. Most people return to town repeatedly throughout the week, especially workers who reported returning nearly every day. While driving alone is the dominant mode of travel, most people use alternatives at least once a week. Walking is the predominant alternative to driving alone, acknowledging the convenience of walking in compact downtown settings and in face of limited parking. Customers are more inclined to alternatives, especially walking. Workers are much less likely to use alternatives to driving alone – most reported only driving alone, but a third do walk at least once a week.

Parking

People want to park as close to their destination as possible. When parking in downtown Reading, people cited the location of the space as the most important reason for making their choice. Price was the least important consideration. Most people were able to find conveniently located parking (up to a four minute walk) on the day of the survey. Ease of finding a space and the safety/security of parking were equally important considerations. On the average day, a majority of people are able to find parking immediately and almost everyone spends less than five minutes searching. Even on the worst day a majority spend less than ten minutes searching. Unfortunately, a substantial number of people reported never finding a space and giving up on their worst day although this is likely a lack of information or incompatible regulations rather than a lack of available parking. A lot of Reading's guests are aware of alternative nearby parking options should their first choice be unavailable.

Location is an especially important consideration for customers. Customers want convenience and only want to stay a short period. As a result, they are more inclined to want parking directly in front of their destination or within a short walk. A majority of customers found parking directly in front of their destination and almost every customer was able to find conveniently located parking. Virtually all customers reported staying for less than an hour.

Customers also cited ease of finding a space as an important consideration. There are days when the capacity is perceived to be insufficient to meet the demand, causing individuals to give up when they fail to find a space. Very few customers reported searching for parking for more than ten minutes. Even on the worst day, few customers spent more than ten minutes searching and a very small portion gave up and left, even though the utilization study shows that there are plenty of spaces available to fulfill the level of demand. With location as the most important consideration for many of these parkers, they appear to be seeking "front door" spaces and are willing to spend more than five minutes hunting for the closest possible space but not more than ten. This is likely to generate the perception among customers that parking is "hard to find." Many such customers may believe that their additional time spent searching for a front door space is due to a lack of off-street parking; instead the cause appears to be many parkers desiring the same front door spaces and ignoring the availability of parking slightly further away. This leads to the conclusion that the failure to find parking must be due to a lack of information regarding available parking capacity, parking alternatives or a total unwillingness on the part of the individual to park in a location slightly less convenient than the front door. Even though most customers stated an awareness of alternative parking options their search time acceptance threshold allows many to find parking without having to "resort" to these alternatives.

Location, price, and safety/security were cited as equally important considerations for workers. Workers need reliable parking where they will not get tickets for working a long day. They want safe, conveniently located spaces that have low or no cost. Every worker found convenient parking, and a

huge majority parked directly in front of their destination – more than the number of customers seeking front door parking. Workers did not cite the ease of finding a space as an important consideration, signaling willingness to search for parking that is cheap/free, convenient and safe. In general a larger portion of workers find parking within a five minute window, but a larger portion of workers than customers are willing to spend more than ten minutes searching for parking.

Customers and workers are in competition for the most convenient front door parking. Customers are less willing to spend time searching for this coveted parking and spend less time occupying it. Workers find it more necessary to find parking and will spend more time searching but appear to be getting more convenient parking than customers. This may be due to workers securing the spaces in the morning before customers arrive and occupying most of the front door spaces for longer periods of time. On extremely busy days a substantial portion of customers give up and leave in face of long search times and/or only inconvenient parking options. Workers do not want to have to pay for parking and customers didn't consider it important. Therefore, pricing the most convenient spaces may offer one way to guarantee the availability of front door parking for customers.

Chapter 4. Parking Utilization

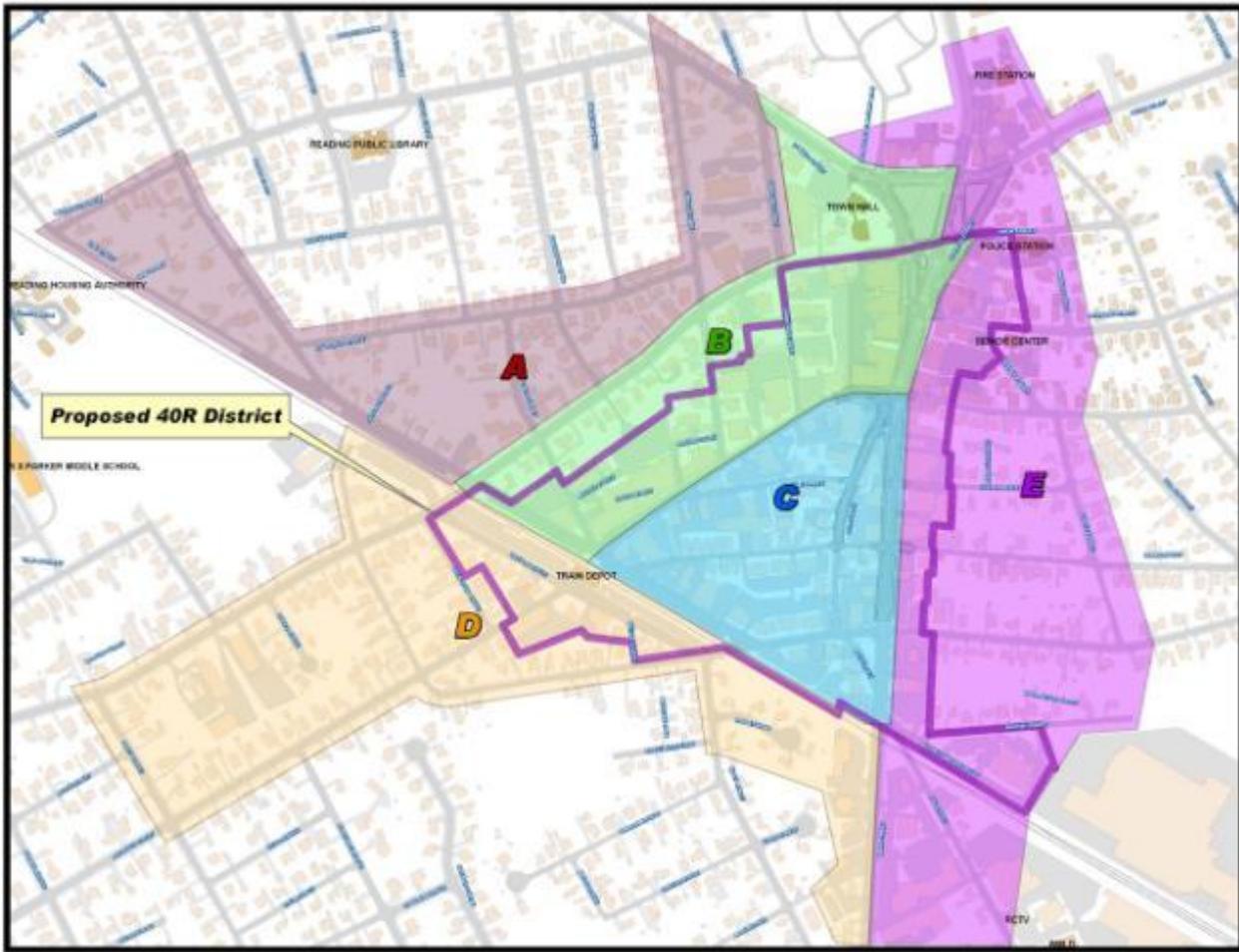
A complete understanding of parking supply and demand is essential to a coherent and cost-effective parking program. In order to evaluate this, Nelson\Nygaard and McMahon Associates staff conducted parking utilization and turnover counts in downtown Reading on Thursday, September 25, 2008 and Saturday October 4, 2008. The following chapter reports the findings of these data collection efforts, providing a vision of the level of parking supply and demand experienced on an average day both during the week and on the weekend.

Methodology

A baseline existing conditions parking inventory and map was provided to Nelson\Nygaard by the Town's GIS coordinator. McMahon Associates conducted a field check of this data to make minor corrections and insertions where data was missing. McMahon also expanded the scope of the inventory beyond the downtown core to accommodate all areas where parking utilization counts were expected to be conducted. The baseline parking inventory is displayed in Figure 38.

Parking utilization data was collected between the hours of 8AM and 10PM on a typical weekday and between 8Am and 2PM on a typical Saturday in dry fair weather conditions. Downtown Reading was divided into two primary data collection areas: the downtown core area bound approximately by Main, Woburn and Washington Streets (Zones B&C) and the surrounding area within a 5-minute walk of the core (Zones A,D&E). These are depicted in Figure 39 with the proposed 40R district boundary for reference. Beginning at 8AM, staff counted the number of parked cars and vacant spaces in all on-street parking areas and in all off-street parking lots with a capacity of greater than 4 cars. This was repeated for all locations every 1-2 hours in the core zones and every 3 hours in the surrounding zones.

Figure 39: Data Collection Zones



Findings

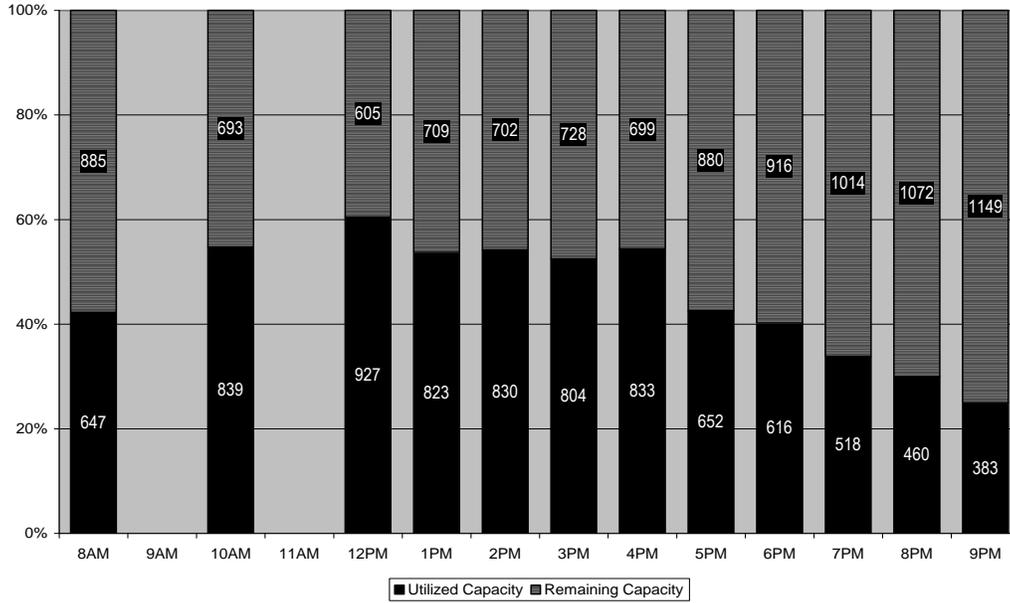
Within Reading’s downtown core (Zones B&C), there are approximately 820 on- and off-street parking spaces under private and municipal control (see Figure 40). Over 300 on-street public spaces are conveniently located in front of most retail destinations. Three municipal lots within the downtown core provide an additional 205 spaces of public parking. The remaining spaces are under private control for the use of employees, customers and residents.

Figure 40: Summary of Downtown Core Parking Supply

	Private	Public	Total
On Street	0	302	302
Off Street	314	205	519
Total	314	507	821

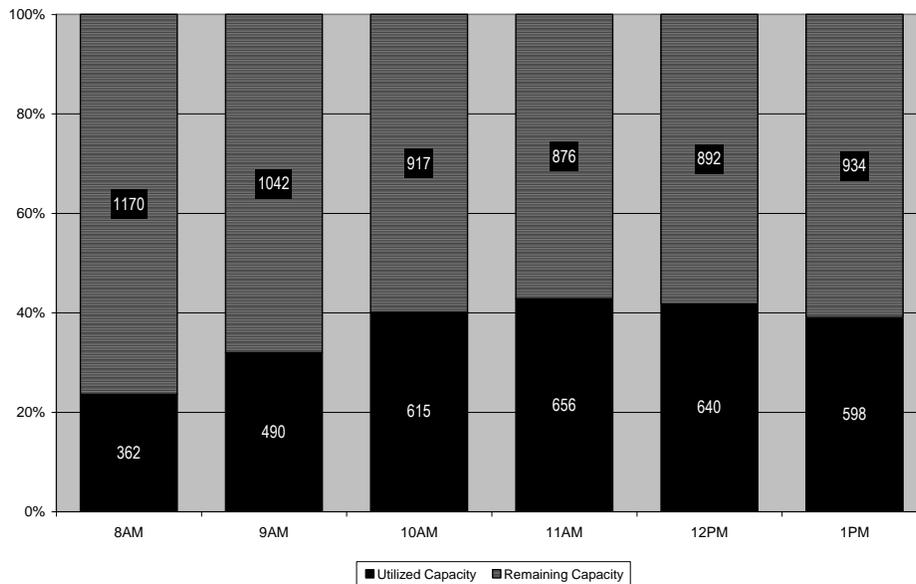
Figure 41 summarizes the utilization of these spaces throughout the course of an average weekday by hour. As shown, no more than 61-percent of these spaces are utilized at the busiest period of the day.

Figure 41: Downtown Core Weekday Parking Utilization Profile



Utilization of these spaces on Saturdays is significantly lower than weekday utilization, as shown in Figure 42. As a result, data was only collected during the morning and early afternoon.

Figure 42: Downtown Weekday Parking Utilization Profile



Detailed Findings

Figure 43 & Figure 44 break-out the overall parking utilization (Figure 41) results into on- and off-street spaces. Figure 45 breaks out the off-street utilization profile (Figure 44) into private and public spaces. In general, each of these categories of downtown parking has a similar daily utilization profile with most categories of parking at least 40-percent vacant at all times. Only the public off-street lots reach a peak one-hour utilization of 76-percent (155 of 205 spaces) at approximately 3PM on weekdays.

Figure 43: Downtown Core Weekday Parking Utilization Profile – On-Street

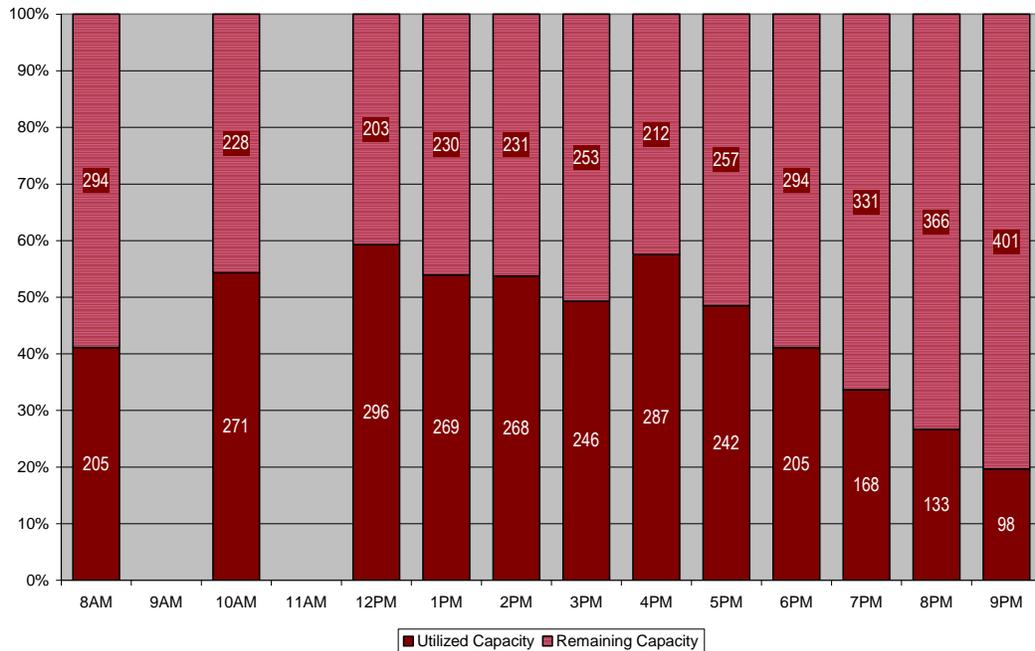


Figure 44: Downtown Core Weekday Parking Utilization Profile – Off-Street

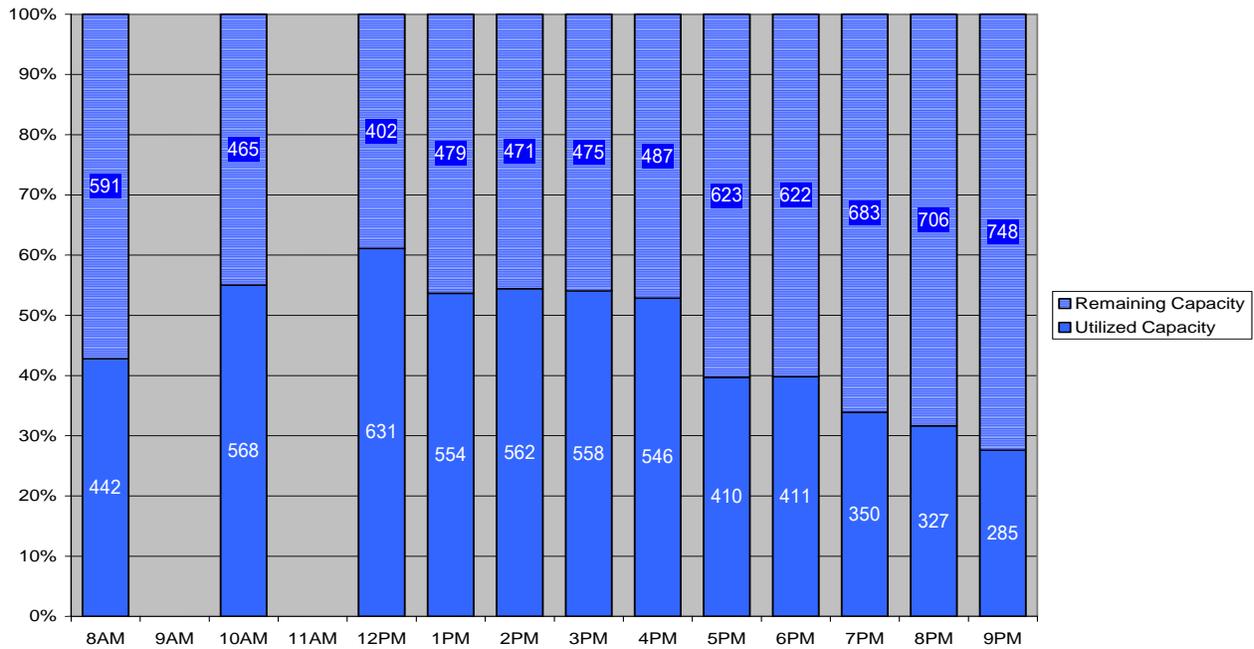
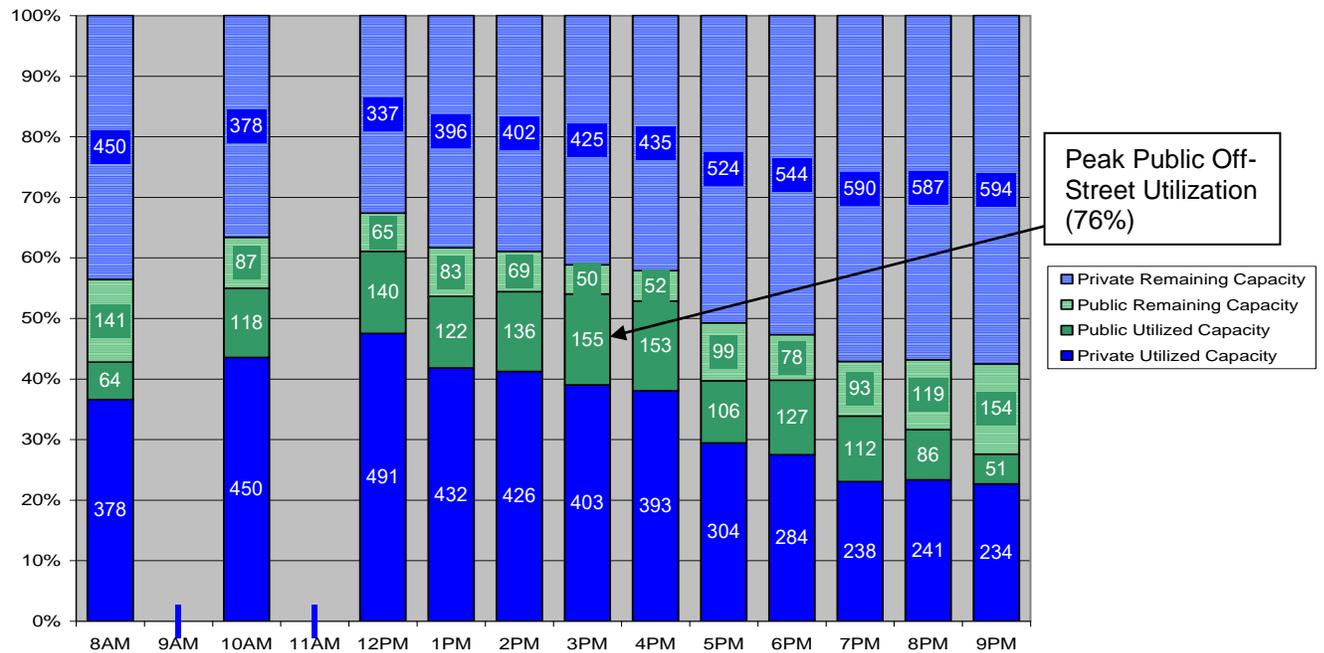


Figure 45: Downtown Core Weekday Parking Utilization Profile – Off-Street by Ownership



Within a five minute walking radius of the core are another 2,800 on- and off-street parking spaces. In the combined downtown core and 5-minute walking radius, there are 3,600 parking spaces. Figure 46 summarizes the parking utilization profile for this entire parking supply in three time periods: AM, midday, and PM. In this broader area, peak utilization never exceeds half of the available parking supply.

Figure 46: Weekday Parking Utilization Profile for the Downtown Core and Within a 5-Minute Walk of Downtown

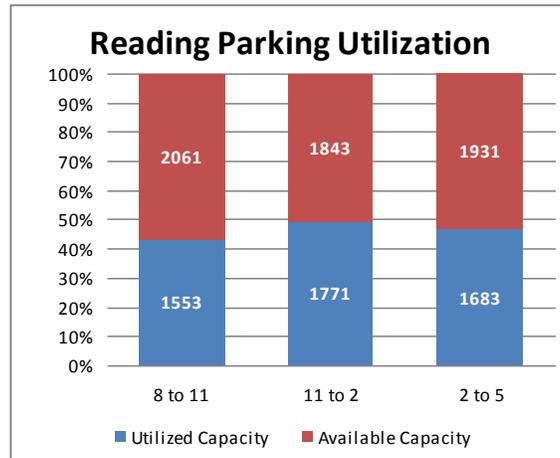


Figure 47 summarizes the weekday parking utilization profile exclusively for the three data collection zones outside of the downtown core (see Figure 39). Only Zone D – which is immediately east of Main Street – shows peak utilization above 40-percent of the available on-street supply. No information for off-street spaces in these zones was collected.

Figure 47: Weekday Parking Utilization Profile Outside of the Downtown Core and Within a 5-Minute Walk of Downtown

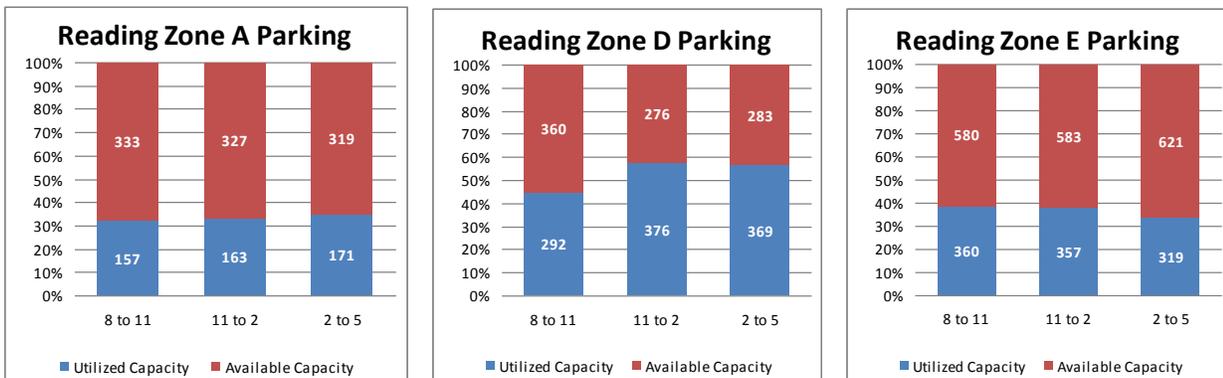


Figure 48, Figure 49, and Figure 50 graphically summarize weekday parking utilization in the entire study for all zones. It should be noted that utilization in several specific locations occasionally hits 100-percent during the day, including short stretches of Woburn and Haven Streets at lunchtime. However, nearby locations remain under-utilized.

Figure 49: Weekday Midday Parking Utilization

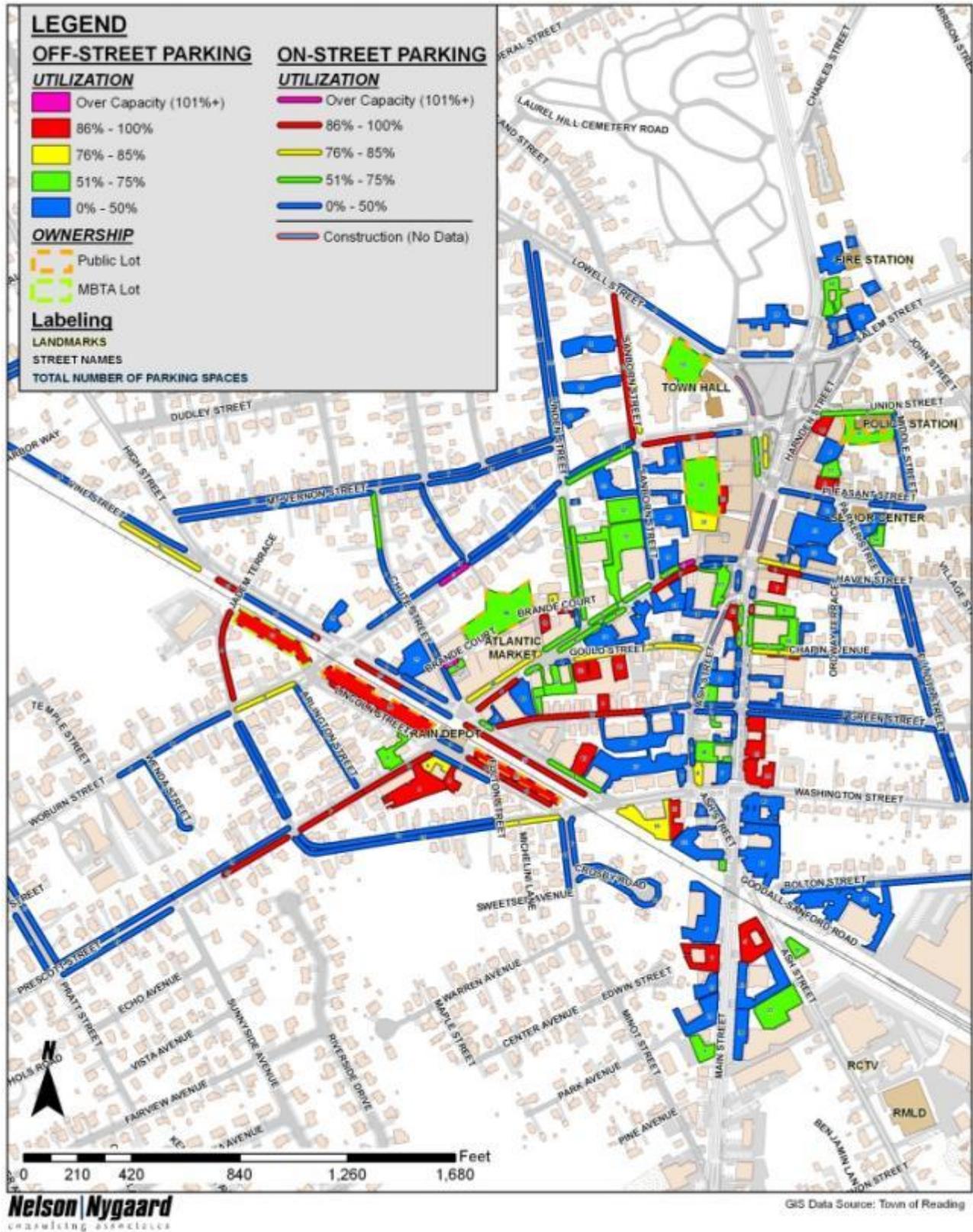
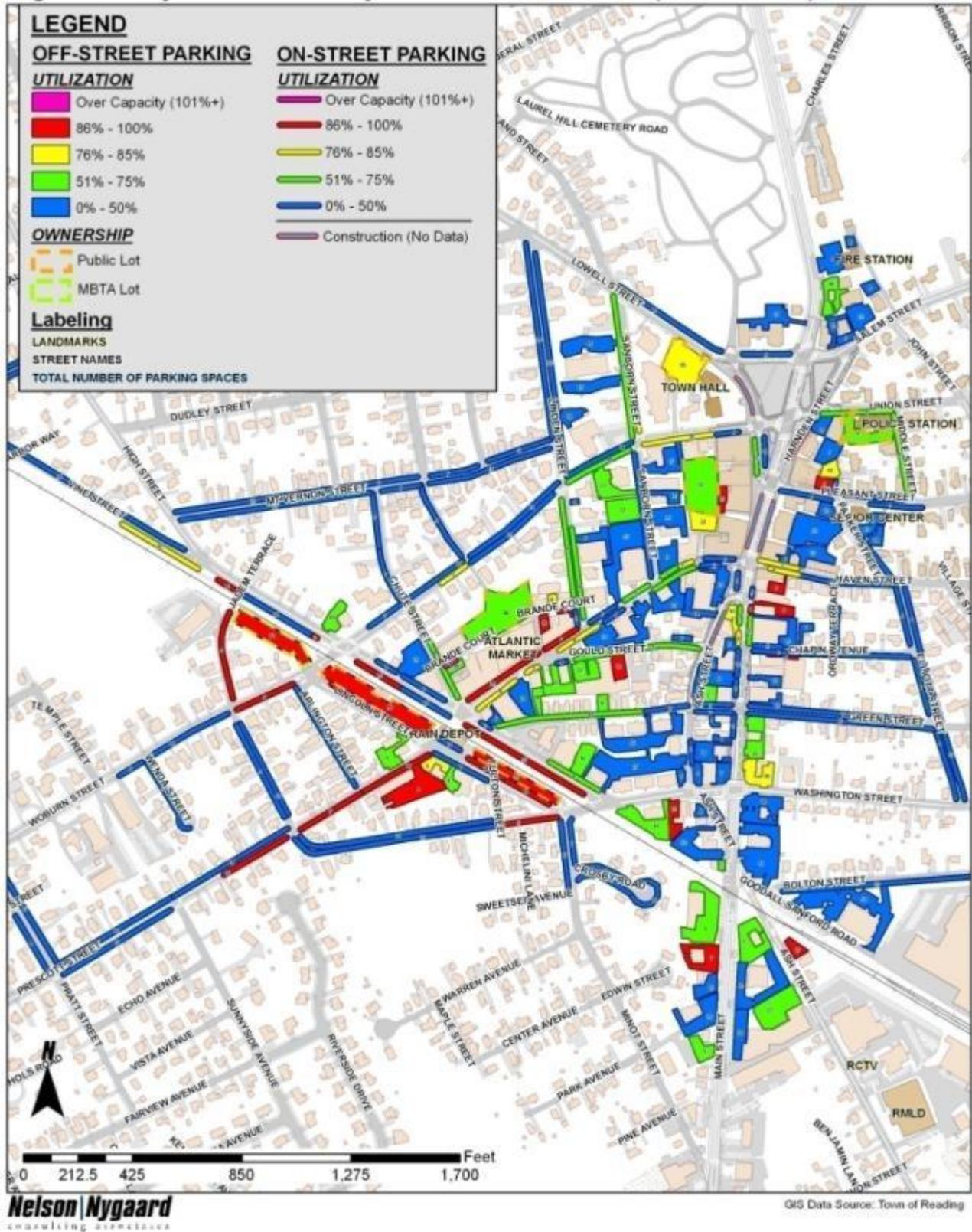


Figure 50: Weekday Afternoon Parking Utilization



Turnover Counts

Detailed turnover observations were conducted in two high-demand areas of downtown: Main Street in front of CVS and upper Haven Street near Main Street (see Figure 50). The observations entailed a detailed observation of the time and duration (in 15-minute increments) parked by each car in every space throughout the day on a Thursday and a Saturday. This information is valuable for understanding parking utilization patterns in a downtown as compared to existing regulations. Due to the existence of regulations, it is not a definitive accounting of how long people like to park, but the profile helps to understand trends and preferences: if average and 85th percentile durations are lower than time-limit

Figure 51 Turnover and Utilization on Upper Haven Street

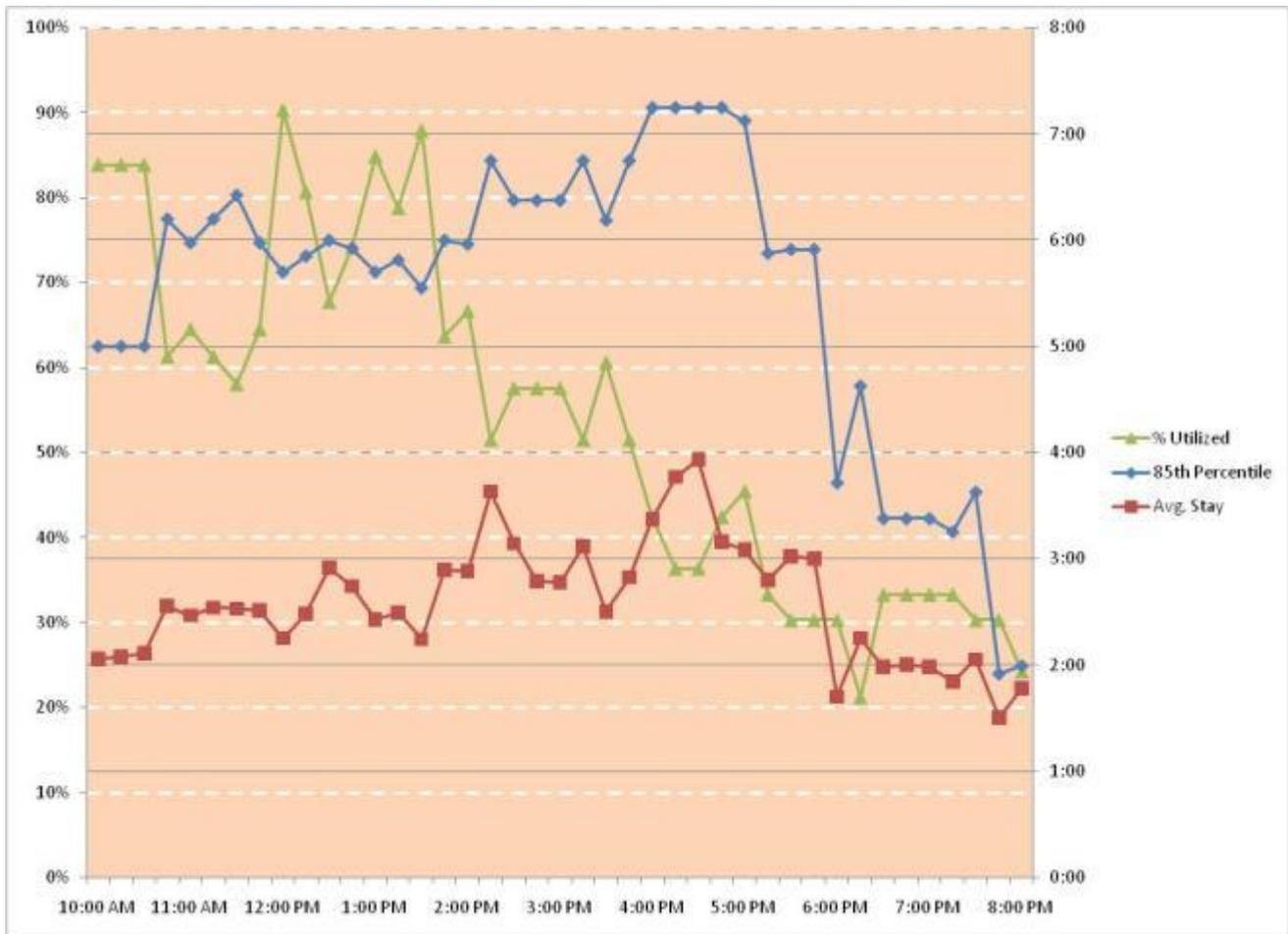


Figure 52 Turnover and Utilization in Front of CVS



Key Observations

Based on a review of the detailed utilization information, the following observation highlights can be made.

Weekdays

- Parking at the train station for commuters is full or nearly full by 8 AM and remains at that level until 5 PM.
- Town Hall parking lot is most full during mid-morning (10 – 11 AM) and late afternoon (4-5 PM).
- The public parking lot behind the CVS is most full from 7 – 8 PM at between 81% and 100% utilization. During the rest of the day the maximum utilization is 80%.
- The parking on Main Street in front of the CVS is most heavily used in the evening after 5 PM.
- The public parking lot behind the Atlantic Supermarket is most full from 12:00 PM to 5 PM, but only reaches a maximum of 80% utilization.
- The on-street parking on Haven Street by the Atlantic Supermarket is heavily used from about 10 AM to 6 PM and is ALWAYS more occupied than the public lot.
- On-street parking along Woburn Street is generally less than 20% utilized. The only heavily-used section is the south side – east of Sanborn Street – which is 100% occupied from about 8 AM to 3 PM and less than 50% utilized thereafter.
- On-street parking along Gould and Green Streets is heavily used (over 80% occupied) during the mid-day and early afternoon.
- On Main Street, parking utilization appears to be sporadic during the day with low utilization early in the day and in the evening.

Saturdays

- Parking on Main Street in front of the CVS is full or nearly full from 11 AM to 2 PM.
- The maximum utilization for both public parking lots (behind the CVS and behind the Atlantic Supermarket) is 80% from 12 PM to 1 PM.
- On-street parking utilization appears to be heaviest from 10 AM to 1 PM.
- On-street parking utilization appears to generally be lower on Saturdays than on weekdays.
- Parking near the train station for commuters experiences a maximum of 20% utilization on Saturdays.
- Parking utilization on Salem Street in front of the church is over capacity from 1 – 2 PM. The on-street parking utilization on Lowell Street just west of this location is well under capacity.

Chapter 5. Parking Demand Projections

This chapter discusses the expected parking demand increases inherent with any future development in downtown Reading. With any development it can be expected that an increase in the demand for parking follows. In most downtowns it is hard to find space available for increasing the parking supply. There are a number of ways to address this cost-effectively, including increasing the supply of public parking, investing in alternative forms of transportation, or managing the supply differently. One solution that Reading is considering is the construction of a downtown public garage. In this chapter we will be covering the fundamentals of a shared parking model in Reading's context and how this management policy can help accommodate growth in parking demand until a structure is necessary.

Shared Parking Analysis

Mixed-use developments settings offer the opportunity to share parking spaces between various uses, thereby reducing the total number of spaces required compared to the same uses in stand-alone developments. This is a primary benefit in mixed-use development contexts of moderate-to-high density. Shared parking operations offer many localized benefits to the surrounding community, including a more efficient use of land resources and reduced traffic congestion.

There are two basic types of shared parking opportunities: 1) proximate uses with staggered demand peaks, and 2) internal capture of trips between proximate uses.

Staggered Peaks

The first shared parking opportunity offered by mixed-use development comes from the staggered demand peaks associated with each use. Different land uses generate unique levels and patterns of parking demand. Parking supplies at mixed-use locations accommodate these demand fluctuations more efficiently than segregated supplies by accommodating peaking uses with spaces left vacant by other uses. Thus, the same parking lot that was full of workers' vehicles during the day can be used for residents at night.

Internal Capture

Mixed-use districts such as downtown Reading allow for parking efficiencies through "internal capture" trips. Such trips are made by patrons who, having already parked, travel between uses without accessing their vehicle. Restaurants and retail services are common generators of internal capture trips in mixed-use developments, as they serve both employees and residents within the same development. Not only does this proximity of uses present an opportunity to conserve land area from parking uses, but it reduces localized congestion as local employees and residents are presented with daily goods and services within walking distance.

Captive Market Methodology

The first step in the analysis of the actual parking demand for the downtown was to apply a captive market reduction of 10% for commercial uses and 5% for residential uses compared to industry standard parking generation rates published by the Institute of Transportation Engineers (ITE) and the Urban Land Institute (ULI).

Parking Demand Management and Operational Efficiencies

The Project has an opportunity to implement several effective parking demand management and trip reduction tools. Many parking demand reduction measures have been shown to reduce vehicle trips and parking demand in comparable development contexts. Figure 53 shows the maximum potential reduction for each of these parking reduction factors based on a survey of the academic literature and best practices.

We estimate that implementation of parking management, trip reduction, and operational efficiency measures will result conservatively in an estimated parking demand reduction of 15% for residential uses and 15% for all other uses. We believe this is conservative because as the Figure 53 makes clear, significantly greater reductions have been documented.

Figure 53: Impact of Trip Reduction Measures on Estimated Parking Demand

	Residential ⁽¹⁾	Non-Residential
Physical Measures		
Net Residential Density	Up to 55%	N/A
Mix of Uses	Up to 9%	Up to 9%
Local-Serving Retail	2%	2%
Transit Service	Up to 15%	Up to 15%
Pedestrian/Bicycle Friendliness	Up to 9%	Up to 9%
Physical Measures subtotal	Up to 90%	Up to 35%
Demand Management and Similar Measures		
Parking Supply ⁽²⁾	N/A	No limit
Parking Pricing/Cash Out	N/A	Up to 25%
Free Transit Passes	25% * reduction for transit	25% * reduction for transit service
Telecommuting ⁽³⁾	N/A	No limit
Other TDM Programs	N/A	Up to 2%, plus 10% of the credit for transit and ped bike friendliness
Demand Management subtotal ⁽⁴⁾	Up to 7.75%	Up to 31.65%

Notes:

(1) For residential uses, the percentage reductions shown apply to the ITE average trip generation rate for single-family detached housing. For other residential land use types, some level of these mitigation measures is implicit in ITE average trip generation rates, and the percentage reduction will be lower.

(2) Only if greater than sum of other trip reduction measures.

(3) Not additive with other trip reduction measures.

(4) Excluding credits for parking supply and telecommuting, which have no limit.

Staggered Parking Analysis

Further parking efficiency gains are possible by implementing a shared parking arrangement among different project uses with staggered parking demand peaks. In recognition of the fact that parking demand for different land uses fluctuate throughout the day, each land use in the downtown has a variable parking demand rate by time of day. This varying demand is expressed as “occupancy rates” a percentage of spaces allocated for a particular land use that are likely to be occupied at any given time. If parking is shared, then the total demand for parking is the sum of the number of parking spaces occupied for all land uses at the busiest hour. As the different land uses become more concentrated, such as under the new 40R zoning, more opportunities for shared parking emerge.

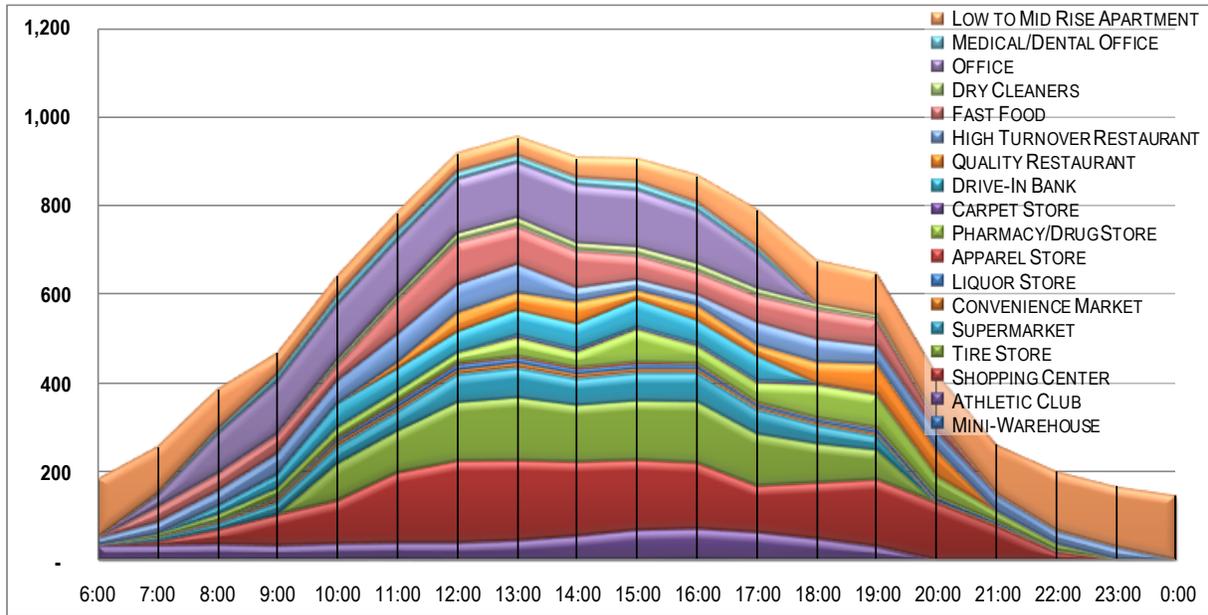
The shared parking analysis evaluated the entirety of Reading’s downtown “core,” bordered by Woburn Street, Main Street, Washington Street and High Street (see Figure 39). Within this area, over 400,000 square feet of commercial floor space and 182 multi-family residences have been identified. The total number of residential units and commercial floor area by use is summarized in Figure 54.

Figure 54: Land Uses Within the Downtown Core

DOWNTOWN CORE		
Land Use	Square Feet	Units
RETAIL/RESTAURANT		
Mini-Warehouse	16,838	
Athletic Club	21,817	
Shopping Center	78,615	
Auto Service/Fuel	39,120	
Supermarket	33,769	
Convenience Market	2,804	
Liquor Store	4,400	
Apparel Store	5,150	
Pharmacy/Drug Store	42,001	
Carpet Store	4,900	
Drive-In Bank	26,920	
Quality Restaurant	5,000	
High Turnover Restaurant	13,550	
Fast Food	11,130	
Dry Cleaners	15,512	
OFFICE		
Office	70,242	
Medical/Dental Office	6,860	
RESIDENTIAL		
Low to Mid Rise Apartment		182

These land uses were inserted into a shared parking spreadsheet model that adjusts ITE and ULI parking demand rates according to the captive market effects and operational efficiencies noted above. Demand is projected across the hours of the day by use. As a result of the fluctuations of hourly parking demand patterns among different uses, Figure 55 illustrates the parking efficiencies the project will be able to take advantage of by mixing different uses with different peak parking demands.

Figure 55: Shared Parking Demand for Downtown Reading



Combining the reasonable reductions for captive market effects and demand reduction measures, we estimate a peak parking demand of 954 spaces. Allowing for a 15-percent reserve capacity for special events and ease of finding a space, the maximum supply would not need to be more than roughly 1,100 spaces – over 200 fewer spaces than recommended by ITE, and nearly 600 fewer spaces than observed in downtown, as summarized in Figure 56 below. It is also worth noting that the shared parking peak demand demonstrates a slightly conservative predictive accuracy with a prediction only 2-percent higher than the observed peak demand.

Figure 56: Comparison of Shared Parking Demand with Traditional and Field Observed Demand

	Reading			ITE Shared Parking Estimate	ITE, ULI and TDM Shared Parking Estimate				
	Field Observation				Parking Estimate	Shared Parking Comparison		VS. Standard ITE	
	On Street	Off Street	Total			VS. Reading's Observed			
Office Demand				193	149			(44)	-23%
Retail/Restaurant Demand				1,007	879			(128)	-13%
Residential Demand				224	179			(45)	-20%
Total Peak Demand	296	631	927	1,112*	954*	27	2%	(158)	-14%
Total Supply	499	1,033	1,532	1,278	1,097	(435)	-28%	(181)	-14%
Remaining Capacity	203	402	605	420	578				

* Total demand is less than sum of individual uses due to staggered peaks.

Potential Growth Projection

The initial stage of a 40R rezoning project is currently underway proposing a phased redevelopment of the downtown core. An element of this 40R rezoning project is to concentrate growth and increase density around the downtown core area. The development described suggests densities on small sites where – under the current requirements – sufficient parking simply could not be provided. The project considers sites for new parking garages, but the current off-site parking exemption applies

only for retail and office space. While new housing units are envisioned in the 40R project, the current residential parking requirements make finding parking for this use difficult. In order to accommodate this planned downtown growth, Reading has decided to consider a number of different parking garage options as well as more innovative parking demand management techniques.

Methodology

In order to understand the level of parking demand that can be expected, two basic questions needed to be solved:

1. How would the proposed land uses impact the existing parking supply?
2. At what point would it become necessary to increase the supply?

The 40R rezoning project has not proposed a specific level of development that can be modeled – largely due to the concern over how much parking might be available to support the plan. Without clear projections on the future land uses planned for downtown, it is hard to provide parking demand projections. However, it is possible to explore what level of development *could* occur within a shared parking model given the current parking supply and with the addition of a parking garage of a fixed number of spaces.

To that end, Nelson\Nygaard developed a dynamic calculation tool for exploring growth potential within adjustable constraints (parking supply, garage capacity, housing unit size, etc.). The intent was to expand general categories of residential, commercial, or office land uses to achieve the ideal utilization rate of 85- to 95-percent occupied during the peak hour.

According to our field observations and the Town's geographic information systems this downtown area of Reading contains 1,532 parking spaces (on-street & off-street, not including private driveways). During the average day's peak hour of demand 927 spaces were observed occupied, representing a peak utilization rate of roughly 60%, as seen in Figure 57. In other words, during the hour of the downtown's heaviest use of available parking, less than two-thirds of the spaces are occupied.

Growth Projection Model

The shared parking model projection of existing parking demand shown in Figure 57 very closely mirrors the observed parking utilization profile shown in Figure 41. In light of the accuracy of the shared parking model in predicting the utilization rate we decided to use it as the basis for our growth projections.

Excess Capacity

The ideal utilization rate for any parking system is between 85- and 95-percent occupied during the peak hour. This allows for a 5- to 15-percent reserve that provides for ease of finding a space and for the community to handle special events that may increase peak demand on certain occasions. The 85-percent occupied mark is the target for any parking system to operate at peak efficiency.

Existing Supply

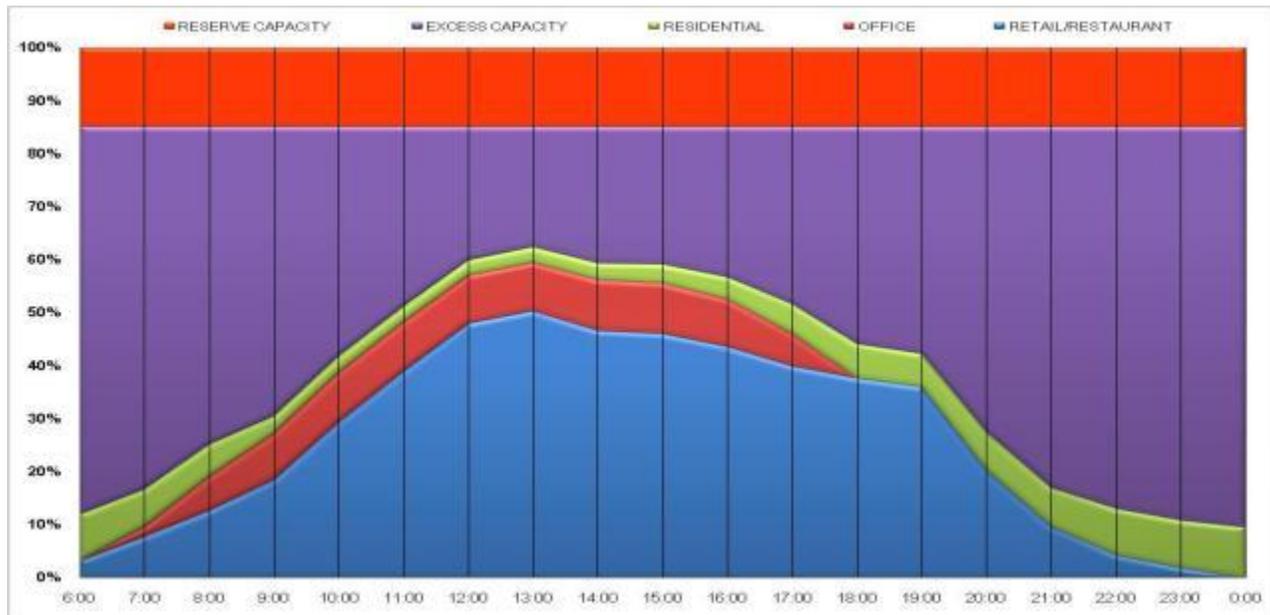
As mentioned above, the shared parking model projects a peak utilization rate of roughly 60%, or 954 occupied spaces (nearly the same as observed). Maintaining the existing parking supply, the ideal utilization rate is just over 1,300 spaces (out of 1,532), which leaves nearly 350 spaces available for expansion. Once this ideal utilization rate is achieved, there remains a 15-percent buffer of 230 spaces for ease of finding a space and special events.

Supply Expansion - Parking Garage

According to the garage feasibility analysis in Chapter 6, the current fifty-five space CVS lot could be replaced with a five-level 373 space garage, resulting in a net supply increase of 318 spaces. If this garage were to be constructed, the excess capacity at the peak hour of current parking demand would increase from 348 to 619 spaces with a 15-percent buffer of 278 spaces for overrun situations.

Figure 57 below shows the excess capacity within the target 85-percent utilization rate as the purple area and the remaining 15-percent vacancy is represented as the brighter red area. The goal of this exercise is to project growth that will fill as much of the excess capacity (purple area) as possible without consuming any of the remaining buffer vacancy (red area).

Figure 57: Shared Parking Demand Projection Profile



Residential Development Scenario

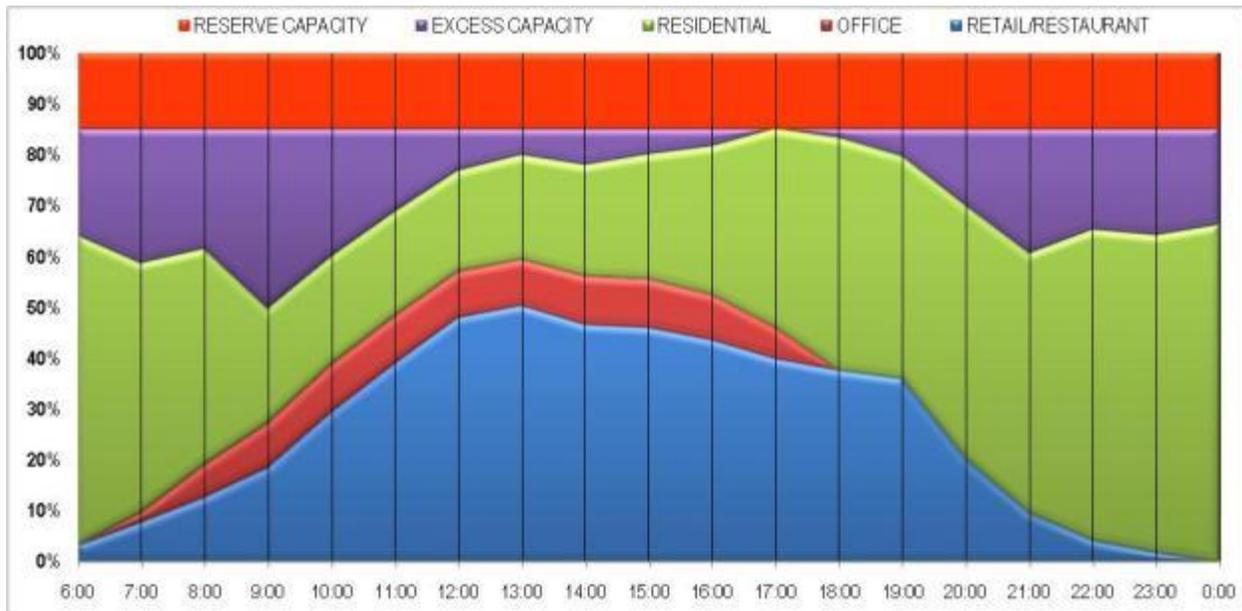
Reading's core has twenty-three single family homes and one hundred eighty-two multi-family housing units. Housing represents roughly 30-percent of the downtown's total floor area; 8-percent single-family and 23-percent multi-family housing. Most single family homes have private driveways that exclusively serve the parking needs of the household and are not available for use by others. The parking supply and demand generated by single family homes are assumed as zero sum, excluding it from consideration in the scenario. All of the residential considered in this scenario is assumed to be multi-story, multi-family housing, also known as low to mid rise apartments. Multi-family housing is preferred to single-family housing in situations such as this where the goal is increasing density and supporting growth.

Most of the evening and late night parking is utilized by the residents but during the day very little. This allows for a large expansion in the housing base because the residential peak hour does not coincide with the commercial or office peak hour and thus is not limited by the existing peak hour excess capacity. As seen in Figure 41 and Figure 57 the current peak hour is between noon and 1 pm and –though less apparent- the residential peak is at the end of the night and the beginning of the day.

Residential Projections

Assuming no increase in parking supply, downtown Reading is able to handle an expansion of nearly 1,100 multi-family housing units, nearly six times the current number of housing units. The addition of the CVS garage would allow for over 1,600 new multi-family housing units, nearly nine times the current number of residential units. As seen in Figure 58, this housing expansion would change the demand profile. Reading's current peak hour (12 to 1 pm) has a utilization rate of around 60-percent which would increase up to roughly 80-percent. The peak hour would change to 5 pm with a utilization rate of 85-percent. A growth in housing of this magnitude would greatly increase foot traffic, generating an energetic pedestrian environment, supporting downtown activity and creating a more vibrant and lively town center.

Figure 58: Demand Profile of Residential Expansion Scenario



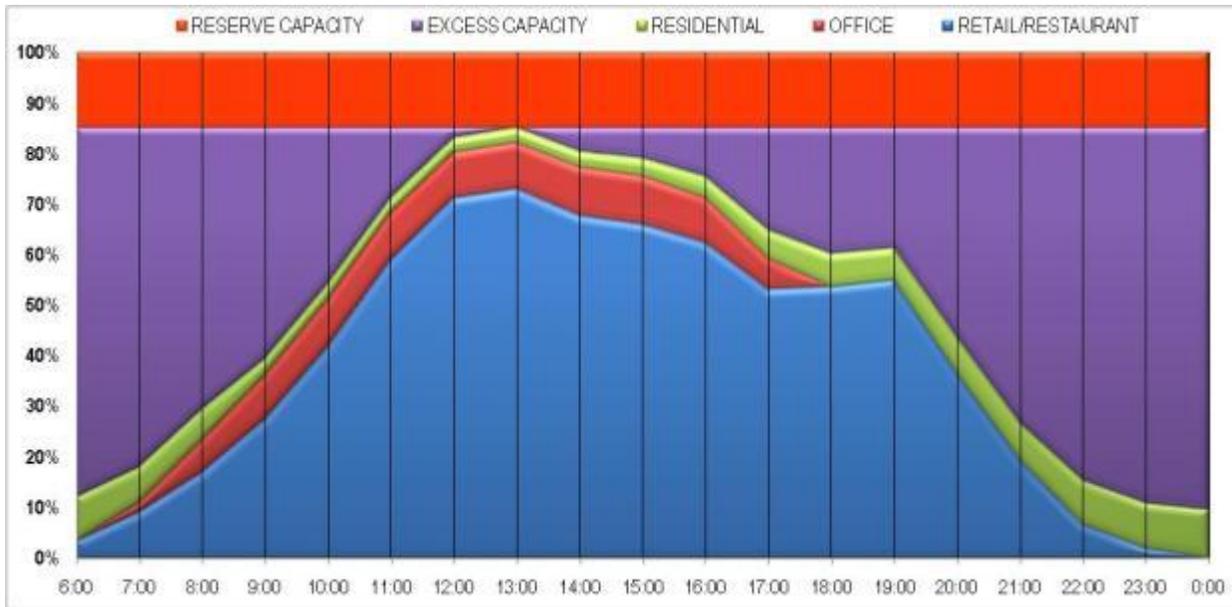
Retail/Restaurant Development Scenario

Commercially oriented land uses dominate downtown accounting for nearly 60-percent of the downtown's total floor area with roughly 377,000 square feet of gross floor area. The retail and service industry require parking for both employees and customers, often representing the largest generators of the peak hour parking demand. As seen in Figure 57, retail and restaurant land uses already account for consumption of nearly 50-percent of the existing capacity during the peak hour. The commercial development potential is limited by the current peak hour, ultimately limiting the possibility of commercial expansion.

Retail/Restaurant Projections

Assuming no increase in parking supply, downtown Reading is able to handle a commercial expansion of 153,000 square feet, a 40-percent increase over the existing 377,000. The addition of the parking garage would allow for an expansion of 273,000 square feet or a roughly 70-percent increase. Though the peak represents 85-percent utilization (versus the current 60-percent), the demand profile under the commercial development scenario remains roughly the same as the current profile, just higher utilization rates.

Figure 59: Demand Profile of Retail/Restaurant Expansion Scenario



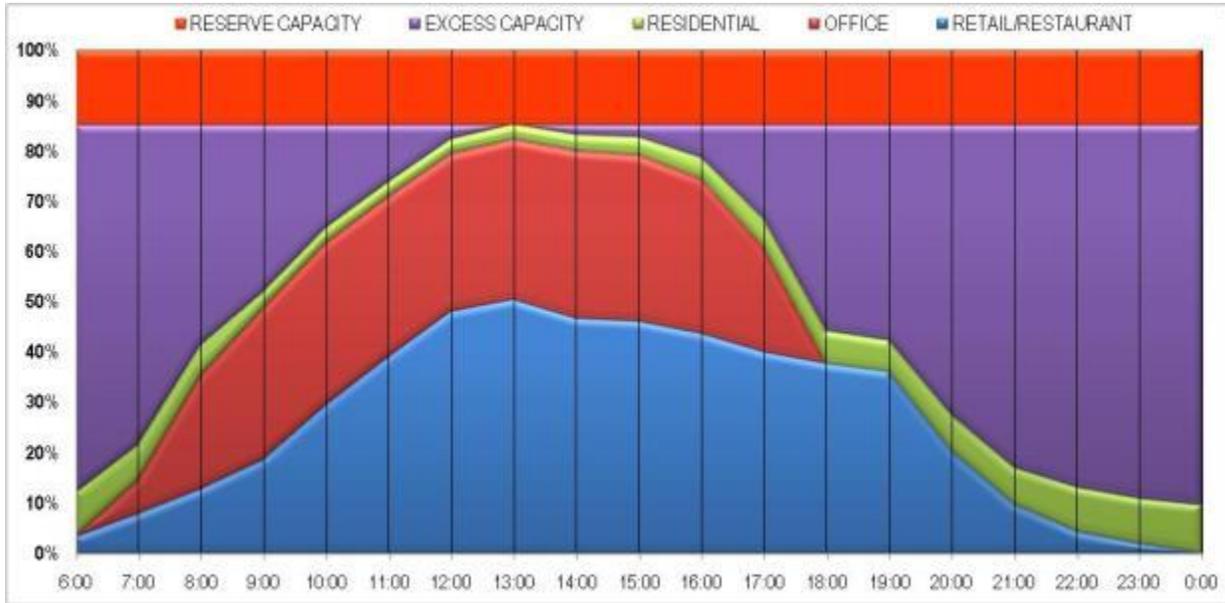
Office Development Scenario

Office oriented uses are the least represented land uses in downtown Reading, accounting for only about 12-percent of the total floor area with roughly 77,000 square feet of gross floor area. Offices require parking for both employees and visitors, much like retail establishments, but represent a lower level of demand per thousand square feet of floor area. As seen in Figure 57, office land uses account for consumption of less than 10-percent of the existing capacity during the peak hour. The office development potential is limited by the current peak hour, ultimately limiting the possibility of expansion but it currently represents a small share of the overall demand allowing more expansion than commercial land uses.

Office Projections

Assuming no increase in parking supply, downtown Reading is able to handle an office expansion of 196,000 square feet, a 250-percent increase over the existing 77,000. The addition of the parking garage would allow for an expansion of 347,000 square feet or a roughly 450-percent increase. During the peak hour, office demand would account for a much larger share -nearly 40-percent- of the total consumption (see Figure 60). Though the peak would represent 85-percent utilization, the demand profile would remain roughly the same as the current profile.

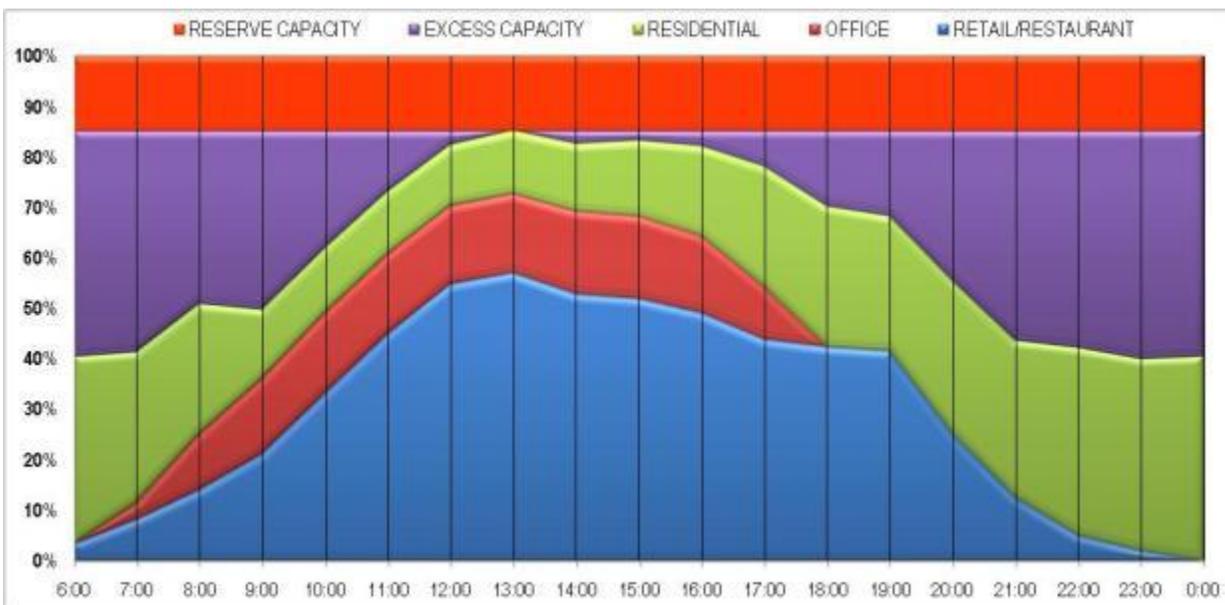
Figure 60: Demand Profile of Office Expansion Scenario



Mixed Growth Scenario

Focusing all growth into only one of these three sectors is not a likely scenario for downtown redevelopment, rather a mixed growth scenario is much more likely. In this case we assumed that 50-percent of the potential growth would be allocated to housing, 25-percent to commercial, and 25-percent to offices. Assuming no increase in supply, Reading would be able to handle 513 new multi-family housing units (330-percent growth), 44,000 square feet of new commercial space (12-percent growth), and 56,000 square feet of new office space (73-percent growth). If the garage was built Reading could handle 1,053 new housing units (580-percent growth), 79,000 square feet of new commercial space (21-percent growth), and 100,000 square feet of new office space (130-percent growth).

Figure 61: Demand Profile of Mixed Growth Scenario



Balanced Growth Scenario

Finally, a balanced distribution of the potential development across all three sectors would allocate 33-percent of the potential growth to residential, commercial, and office expansion. Assuming no increase in parking supply, downtown Reading would be able to handle 404 new housing units (222-percent growth), 55,000 square feet of commercial space (15-percent growth), and 70,000 square feet of new office space (91-percent growth). Adding the garage would allow this to increase to 715 new housing units (400-percent), 98,000 square feet of new commercial space (26-percent), and 123,000 square feet of new office space (160-percent).

Figure 62: Demand Profile of Balanced Growth Scenario

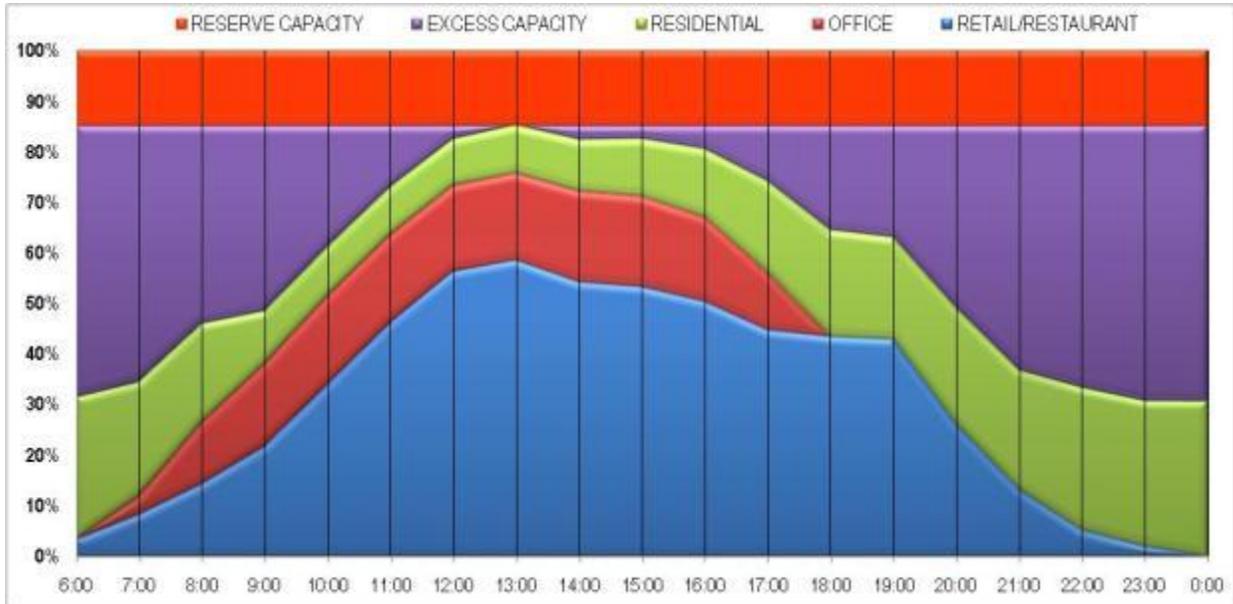


Figure 63: Development Scenario Comparison

DISTRIBUTION OF EXCESS CAPACITY	EXISTING SUPPLY (1,532 spaces)			EXPANDED SUPPLY (+ 318 space garage = 1,850 spaces)		
RESIDENTIAL GROWTH SCENARIO						
100% Residential	1,085	units	596%	1,627	units	894%
COMMERCIAL GROWTH SCENARIO						
100% Retail/Restaurant	153,000	square feet	41%	273,000	square feet	72%
OFFICE GROWTH SCENARIO						
100% Office	196,000	square feet	254%	347,000	square feet	450%
MIXED GROWTH SCENARIO						
50% Residential	593	units	326%	1,053	units	579%
25% Retail/Restaurant	44,000	square feet	12%	79,000	square feet	21%
25% Office	56,000	square feet	73%	100,000	square feet	130%
BALANCED GROWTH SCENARIO						
33% Residential	404	units	222%	715	units	393%
33% Retail/Restaurant	55,000	square feet	15%	98,000	square feet	26%
33% Office	70,000	square feet	91%	123,000	square feet	160%

Chapter 6. Parking Garage Feasibility

In support of Reading’s efforts to establish a comprehensive parking policy, this chapter outlines the capital and operating costs for potential parking facility types, discusses parking management practices and technologies that optimize utilization and revenue for on- and off-street facilities, and provides sample pro forma for parking facilities that are appropriate for Reading.

Potential Parking Facility

In order to completely assess the need for a parking structure in Downtown Reading, Simon Design and Engineering (SDE) conducted a conceptual feasibility assessment for the development of a parking structure on the municipal parking lot behind the CVS. The “CVS lot” is accessed via a one-way entrance driveway from Woburn Street and a two-way driveway through a smaller private parking lot off of Haven Street (Figure 64.)

Figure 64: CVS Lot Layout



The downtown area where the potential garage site is located is zoned Business B and has a Mixed Use Overlay which regulate height and set-back of structures (see Figure 1). Due to the narrow configuration of this site, it was necessary to assume that zoning variances would be allowed in order to locate a viable structure on this site. Fortunately the site is surrounded only by the backyards and rear entrances of abutters.

Figure 65: Dimensional Requirements in Zoning

	Minimum Yard					Maximum		
	Frontage Ft.	Front Ft.	Side Ft.	Rear Ft.	Landscape	Coverage % of Lot	Building Height	FAR
In BUS-B Districts	N.A.	N.A.	N.A.	20	N.A.	85	45	N.A.
Under MU overlay	40	Max 20 No Min	No Min Min 15 between Buildings	15	25% of lot area	40	42	0.8

The MU zoning allows for the construction of stand-alone parking facilities. However, it requires that parking spaces are assigned to specific uses. This requirement would be difficult to meet for a public parking structure and likely necessitates a variance.

Garage Configuration

The “CVS lot” is a very constrained site for a parking garage. Typical minimum floor width would be 120-feet plus set-backs for landscaping, maintenance access, fenestration, etc. The CVS lot has a maximum parcel width of 120-feet. While a structure is possible in this width, it necessitates a lighter yet more expensive construction technique that utilizes steel beams versus concrete. Examples of this technique are shown in Figure 66 and Figure 67. This structure can have fenestration added to clad the more industrial look, but the site makes this difficult. Fortunately, its back-lot location minimizes the need for greater aesthetic appeal.

Given a full 120-foot width, a standard parking tray with a single two-way helical drive aisle can be constructed (see Figure 68), which eliminates the need for dedicated vehicular ramps. The length of the site is limited to 180-feet, which can only accommodate a maximum of 78-cars per deck with a drive aisle. More importantly, in order to keep internal grades to a reasonable pitch, standard height limits are recommended between decks, which prevents vehicles over 7-feet high from using the garage. Handicap parking could only occur in designated spaces near elevators that occur on the nearly flat ends of each level.

The MU zoning height limit allows up to 5 parking decks as shown in Figure 68. Therefore, a maximum of 373 parking spaces could be constructed on a five-level garage that meets the height limit of the overlay district. A sketch of this garage concept is shown in Figure 69. The first floor could accommodate up to 80 cars; decks 1 through 4 would have 78 cars each; and the roof would park 59 cars.

Figure 66: Union Place Garage



Figure 67: Comverse Garage, Wakefield



Figure 68: Schematic of Tray Configuration

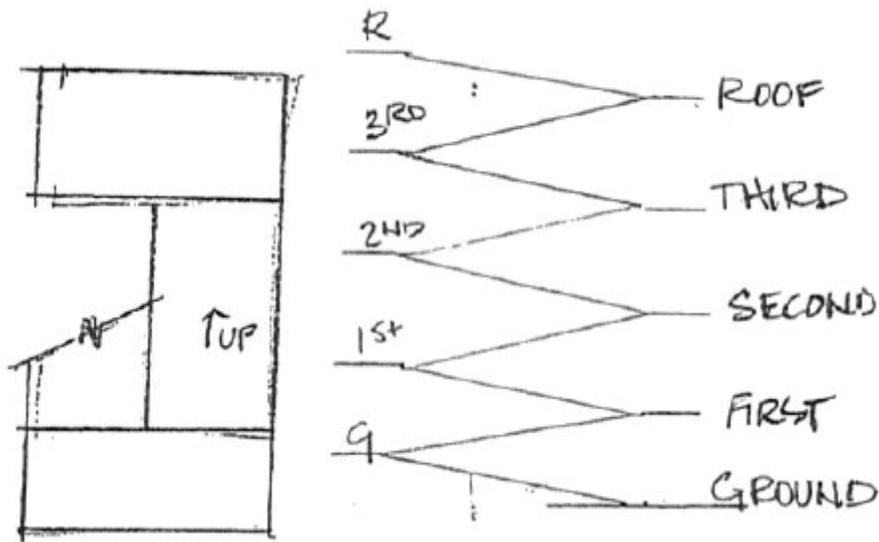
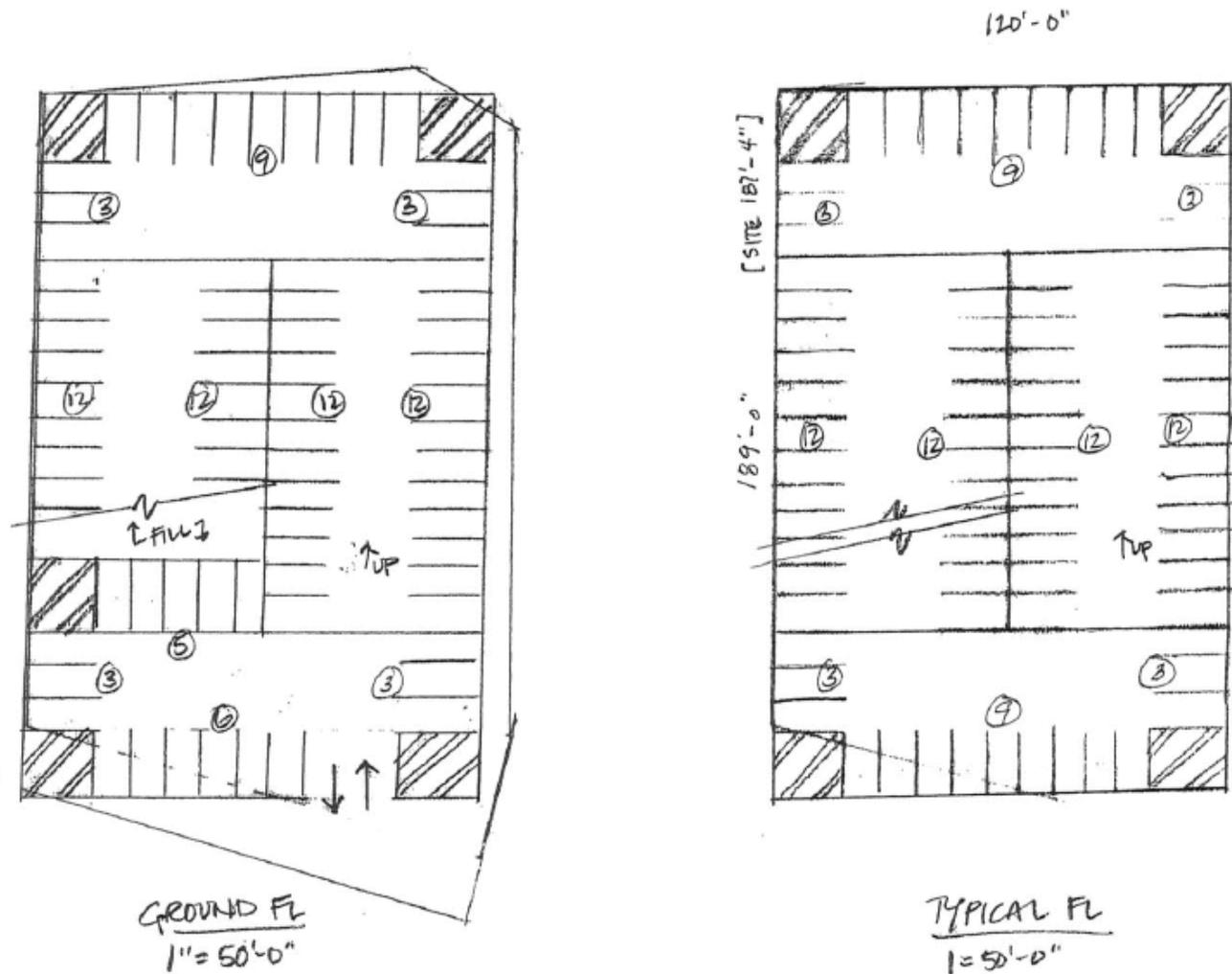


Figure 69: Sketch of Garage Layout



Cost Estimate

Based on the conceptual garage layout above, Simon Design Engineers (SDE) developed a cost estimate for building a 373-space garage on the upper “CVS” lot site in Reading. Minimum total cost, including all “soft” design, permitting, etc. costs plus actual “hard” costs, including materials and labor, is approximately \$7.25M in 2008 dollars (see Figure 70).

SDE cautions about the transferability of unit parking costs from site to site. Although generic relative pricing for efficient parking structures can be done effectively, quite often site inefficiencies, soil conditions, or other constraints can create wide variations in the net cost per parking space. This can affect this estimate depending on the actual conditions found when surveying the upper lot in detail.

Comparables

The estimate for this construction was based on a number of recently bid and completed garages in the region, including the following:

- Ocean gateway parking structure, Portland, Maine
- 25 Marston Street, Lawrence
- Union Square, Somerville Housing Group
- Worcester Municipal Parking structure (and associated comparables), Worcester
- Wellesley Talbot Lot study, Wellesley
- Plymouth Town Center Parking, Plymouth
- Beverley Hospital Parking structure, Beverley

Assumptions

Several assumptions guided the development of this specific estimate:

- Any legal costs for necessary set-back and other zoning variances are not included
- The site does not require extensive preparatory site work
- There is no environmental remediation necessary
- The parking structure is strictly functional with no fenestration
- Pricing is non-union and does not need to follow MA Ch. 141 filed sub bid laws

Typical Add On Costs

The following additional costs are not included in the estimate, though they may be additional cost considerations for this structure:

- Land acquisition
- Lost revenue from any impact on business during construction
- Marketing
- Security systems
- More than one elevator
- Snow melting
- Green roof/photovoltaic roof panels

Figure 70: Estimated Garage Costs

PROJECT : CVS Garage		Order of Magnitude Cost Estimate							
LOCATION: Reading, MA		SIMON DESIGN ENGINEERING							
DESCRIPTION: 5 Levels including grade for 373 Cars Steel Framed & Precast		Estimator: WMV Wellesley, MA							
Est. Date: 09-Dec-08									
Print Date: 29-Jan-09									
DIVISION	DESCRIPTION	Total 373 Spaces	Add 0 Spaces	Not Used	Base Bid				
	Square Footage	121,200	Add 0 Level	Blank	121,200				
01100	GENERAL CONDITIONS	1.16	140,056	0.00	0	0.00	0	1.16	140,056
01100	TEMPORARY CONSTRUCTION	1.05	126,950	0.00	0	0.00	0	1.05	126,950
01150	PRECONSTRUCTION	0.26	31,800	0.00	0	0.00	0	0.26	31,800
02070	DEMOLITION	0.00	0	0.00	0	0.00	0	0.00	0
02000	SITework	2.44	295,714	0.00	0	0.00	0	2.44	295,714
03000	CONCRETE & FORMWORK	1.97	238,760	0.00	0	0.00	0	1.97	238,760
03450	PRECAST CONCRETE	14.55	1,763,520	0.00	0	0.00	0	14.55	1,763,520
04000	MASONRY	0.13	16,000	0.00	0	0.00	0	0.13	16,000
05000	STRUCTURAL STEEL	13.88	1,681,890	0.00	0	0.00	0	13.88	1,681,890
05500	MISCELLANEOUS METALS	3.46	418,750	0.00	0	0.00	0	3.46	418,750
06100	ROUGH CARPENTRY	0.00	0	0.00	0	0.00	0	0.00	0
06400	FINISH CARPENTRY	0.00	0	0.00	0	0.00	0	0.00	0
07200	FIREPROOFING	0.00	0	0.00	0	0.00	0	0.00	0
07270	FIRESTOPPING	0.00	0	0.00	0	0.00	0	0.00	0
07500	MOISTURE PROTECTION	0.60	72,720	0.00	0	0.00	0	0.60	72,720
08000	DOORS & HARDWARE	0.02	3,000	0.00	0	0.00	0	0.02	3,000
08800	GLASS & GLAZING	0.00	0	0.00	0	0.00	0	0.00	0
09250	PLASTER & DRYWALL	0.00	0	0.00	0	0.00	0	0.00	0
09300	TILE	0.00	0	0.00	0	0.00	0	0.00	0
09500	ACOUSTICAL	0.00	0	0.00	0	0.00	0	0.00	0
09650	RESILIENT & CARPET	0.00	0	0.00	0	0.00	0	0.00	0
09800	SPECIAL COATINGS	0.00	0	0.00	0	0.00	0	0.00	0
09900	PAINTING	0.31	37,380	0.00	0	0.00	0	0.31	37,380
10000	SPECIALTIES	0.34	41,500	0.00	0	0.00	0	0.34	41,500
11000	EQUIPMENT	0.66	80,000	0.00	0	0.00	0	0.66	80,000
12000	FURNISHINGS	0.00	0	0.00	0	0.00	0	0.00	0
13000	SPECIAL CONSTRUCTION	0.00	0	0.00	0	0.00	0	0.00	0
14200	ELEVATORS	2.68	325,000	0.00	0	0.00	0	2.68	325,000
15300	FIRE PROTECTION	0.58	70,000	0.00	0	0.00	0	0.58	70,000
15400	PLUMBING	1.50	181,800	0.00	0	0.00	0	1.50	181,800
15500	H. V. A. C.	0.06	7,500	0.00	0	0.00	0	0.06	7,500
16000	ELECTRICAL	3.75	454,500	0.00	0	0.00	0	3.75	454,500
DIRECT CONSTRUCTION COST		49.40	5,986,840	0.00	0	0.00	0	49.40	5,986,840
	CONSTRUCTION CONTINGENCY 3.00%	1.48	179,605	0.00	0	0.00	0	1.48	179,605
	BUILDING PERMITS 1.00%	0.51	61,664	0.00	0	0.00	0	0.51	61,664
	BUILDERS FEE 5.00%	2.57	311,405	0.00	0	0.00	0	2.57	311,405
	A&E DESIGN SOFT COSTS	3.09	375,000	0.00	0	0.00	0	3.09	375,000
	LIABILITY INSURANCE 0.80%	0.43	52,316	0.00	0	0.00	0	0.43	52,316
	Owner/Developer Contgy 5%		\$299,342		\$0		\$0		\$299,342
	TOTAL CONSTRUCTION COST	19.480	\$7,266,173	0	\$0	0	\$0	19.480	\$7,266,173
			373 Spaces						373 Spaces

Cost Comparison

The \$19,480 per space cost estimate is based largely on the per space cost of other regional above-grade garages with similar construction techniques. This cost also compares favorably with other national estimates, as compiled by Nelson\Nygaard and summarized in Figure 71.

Figure 71: Parking Stall Cost Study (September 2005)

Location	Status	Date	Number of Spaces	Retail?	Cost per Stall
Irvine (UCI)	Under Construction	2005	1980	No	15,800
CSU Pomona	Built	2003	2378	No	15,800
Irvine Transfer Station	In Plans?	2004	260	No	17,300
Menlo Park	Quote	2005	395	No	34,340
Claremont	Bid	2005	477	Yes	20,545
South Tahoe	Built	2002	422	Yes	21,300
Mountain View	Built	2004	405	Yes	36,000
San Luis Obispo	Built	2005	242	Yes	41,735
Menlo Park	Quote	2005	337	Yes	52,000
Studies					Cost per Stall
Victoria Transportation Policy Institute		(Bay Area Cost - Adjusted for 2005)			25,200
Data from Walking Consultants		\$20,000 construction; \$4,000 soft c			24,000
Quote from Steve Craig		(Construction only)			16,000

Sources: California League of Cities listserv, local redevelopment agencies, newspaper articles, American Planning Association, Garth Nagel, Victoria Transportation Policy Institute, and Walker Parking Consultants

The monies to build a parking structure are rarely available in a single lump sum. Typically, garages are financed through a variety of means, including private revenue bonds, municipal general obligation bonds, state and federal grants, and special assessments. Bonds or loans are typically amortized over the course of 15-years for publicly-financed facilities and at least 30-years for private facilities. To minimize debt service, a mix of refinancing options are typically utilized to extend payment over a 35-year amortization, which is the industry standard life expectancy for a parking structure without significant renovations.

Figure 72 demonstrates a simple cost pro forma for both a municipally-financed and a privately-financed parking garage. Each pro forma's assumptions are documented above the cost breakout. The breakout provides an estimate of the monthly and daily operating costs, demonstrating the amount of revenue that is necessary to cover these costs and debt service. If a parking structure on the upper "CVS" lot were to be constructed with typical municipal bond financing, a daily average charge of \$9.42 would be necessary in order to avoid supplementing garage costs with tax revenues and/or rents. With the best possible private financing, the needed per space revenue would drop to \$7.30. It should be noted that this revenue estimate does not reflect a likely parking charge. Given typical turnover and minimal vacancy for customer friendliness, average daily revenues would need to be at least 10 to 15 percent higher to cover costs.

Figure 72: Cost Pro Forma Comparison

Assumptions:			
Variables	Inputs:		
	For Municipal Financing	For Private Financing	
	full term of amortization	15	35
	long-term interest rate (i.e., discount rate):	4.50%	6.00%
workdays per month:	21.72	21.72	
Definitions			
<p>"Construction Costs" (aka "Hard Costs") are the brick-and-mortar expenses. Hard costs include all the costs for visible improvements, such as grading the site, pouring concrete, steel and steel workers, electrical work, carpentry and plumbing.</p> <p>"Soft Costs" Soft costs are the costs that you cannot visibly see, such as architectural and engineering fees, environmental reports and any government fees, such as building permits. In the spreadsheet below, soft costs are entered as a percentage of construction costs. A typical rule of thumb is that soft costs will be equal to 27% of construction costs.</p> <p>"Project Cost" equals Construction Costs plus Soft Costs.</p> <p>"Inflation Factor" is defined as the cumulative rise in the building cost index since the year the structure was built, using the Engineering News Record Building Costs Index for the region, as reported at http://enr.construction.com</p>			

Capital Costs for Upper Lot Garage

		Municipal Financing	Private Financing
a.	Spaces Built	373	373
b.	Spaces Displaced	55	55
c.	Net Spaces Gained (c=a-b)	318	318
d.	Hard Costs (From SDE)	\$5,986,840	\$5,986,840
e.	Soft Costs	21%	21%
f.	Original Project Cost (f=d*(1+e))	\$7,266,173	\$7,266,173
g.	Year Completed	2010	2010
h.	Inflation Factor	1.00	1.00
i.	Project Cost in Current Dollars (i=f*h)	\$7,266,173	\$7,266,173
j.	Gross Cost per Space in Current Dollars (j=i/a)	\$19,480	\$19,480
k.	Cost per Space Gained in Current Dollars (k=i/c)	\$22,850	\$22,850

Resulting Costs Per Space Per Year

	Annual Debt Service, per Space	\$2,128	\$1,576
	Operations & Maintenance, per Space (US avg.)	\$327	\$327
	Total Annual Cost per Space per Year	\$2,455	\$1,903

Resulting Parking Cost

	Total Annual Cost per Space per Month	\$205	\$159
	Total Annual Cost per Space per Workday	\$9.42	\$7.30

Chapter 7. Recommendations

The analysis conducted for Reading's Comprehensive Parking Program has demonstrated that there is plenty of parking supply in the downtown to support all existing uses as well as a substantial amount of future growth. However, this ideal scenario is only possible through the efficient management and sharing of all parking resources in public and private hands. While it is not likely that all existing parking resources can be utilized to their maximum extent during all hours of the week, many communities in America have made great strides at sharing this valuable land resource among a variety of users.

Inherent to improved sharing is an improved parking management program. The analysis of Reading's downtown parking supply makes it clear that significant parking resources that are available to the general public are entirely underutilized during periods of peak demand. Even if the cost of a new parking structure were not prohibitive, simply increasing off-street supply would not eliminate the persistent parking problems experienced by Reading's residents, employees and visitors today. Reading does not have an undersupply of parking; it has a supply management problem.

Parking and Transportation Demand Management

Some of the most successful small downtowns in America are benefitted by a mixed-use core with a welcoming walking environment that allows residents, employees and visitors alike to experience most of the downtown's services and entertainment by parking only once and walking between destinations. Even in communities where parking is mismanaged and visitors are forced to search for spaces or park remotely, walking connections are welcoming, well-signed and safe. This creates an environment that people enjoy being a part of – even if they must walk a couple minutes to get to their destination. In communities that manage their parking well, visitors easily find convenient parking spaces, helping to encourage activity while minimizing traffic congestion created by the hunt for parking.

Communities like Reading that seek to boost economic activity in their downtowns can learn a lot from the experiences of communities that manage their parking well. The recommended parking management program below includes several best practices from around the United States that can serve Reading's goals very well. These best practices include some of the most progressive transportation demand management (TDM) programs available, which have helped to significantly reduce parking demand and congestion while improving the attractiveness of walking, biking and transit. These elements are designed to meet several goals:

- Provide shoppers, employees and residents with sufficient parking, in a manner that is convenient and cost-effective.
- Provide additional transportation choices, including transit, carpool, bicycle and pedestrian facilities and services.
- Advance the broader goals of Reading by creating a neighborhood that is genuinely oriented towards transit, walking and bicycling.

It is important to keep in mind that parking and transportation policies have powerful effects not merely on parking demand, but on development feasibility, housing affordability, the amount of traffic produced by new developments, the quality of urban design, and many other fundamental aspects that make downtown Reading a place.

Phased Implementation Plan

The following recommended programs and policies have been organized in a phased action plan with short, medium and long term actions. This organization recognizes that certain changes to policy or infrastructure can take some time to plan, finance and/or implement. However, several short-term actions have been identified that could be implemented immediately by the Town, resolving critical issues while creating some momentum for further action.

Short-Term Actions

The following actions are recommended to be implemented within the next 6 months. They are grouped into parking management and TDM actions.

Parking Management:

1) Expand the Employee Parking Permit Program

Today, residents of Reading who work in downtown can park at over 350 on-street resident-only spaces with their \$25 per year Community Access Sticker – in addition to any private off-street parking privileges they may have. However, most employees come from other communities. The Town provides a \$20 per month, or \$240 per year, Employee Parking Permit that allows these employees to park in 70 on-street and 27 off-street spaces in downtown (see Figure 73). This program is oversubscribed, with all available permits sold-out by the beginning of the calendar year. Heavy utilization of many employee permit parking spaces was observed. However, some areas, such as eastern Haven and Chapin, are underutilized. The parking survey and interviews revealed that the majority of employees do not know that this program exists, but they were very interested in obtaining these permits in the future.

Therefore, based on the rapid sell-out of existing permits and the evident latent demand, the number of employee permit permits should be increased to meet demand as soon as possible. The Town should also consider expanding employee permit parking locations, depending on the utilization of existing spaces and the feedback of employees who are not using the underutilized spaces today.

Figure 73: Employee Parking Permit Areas



Careful Expansion of Regulation

Likely locations for converting existing on-street regulations to the “2-Hr Parking or All-Day With Employee Permit” regulation include areas where daytime on-street utilization is low. In the commercial areas of downtown, this includes Ash Street between Washington and Haven, Sanborn Street between Woburn and Haven, and Woburn Street west of Sanborn. These areas have low demand from other users and have no direct impact on primarily residential streets. This would add another 88 spaces to the employee permit parking program and at least another 100 or more permits, depending on the average daily vacancy rate the Town chooses to employ.

Other areas on the edge of the commercial core of downtown Reading have private residences with tenants and homeowners frequently needing to park on-street. These areas tend to be an untapped resource for downtowns, even though there is a fear of negative impacts on residents. Most of the time, residents are entirely unaffected by daytime employees parking on residential streets for two basic reasons: 1) if a resident commutes to work by car, their on-street space is vacant for employee use during the day, and the employee has usually left before the resident returns home; and 2) if a resident remains at home or stores a car on-street, their vehicle is usually occupying the space early in the morning before any employees would arrive to park.

There are a large quantity of residential on-street spaces within a short walk of downtown businesses that stay vacant throughout the workday. These represent a great opportunity for the Town to expand its employee permit program in pace with demand. Residents at workshops held during this study encouraged this activity if it would help the Town’s parking problems, as long as there was protection against losing a place to park when residents returned home. For instance, the unregulated stretch of Green Street east of Main is a likely candidate for this regulation.

This resident-employee dynamic changes when restaurant workers are included, who often work night shifts after residents are home. Fortunately, the number of available on-street spaces in commercial areas opens up dramatically after 5PM, so employee permit parking on residential streets can easily be limited to daytime work hours only.

Increase Outreach and Visibility

The Town has the potential to greatly increase the effectiveness of its employee permit program while resolving many of the observed parking utilization problems in the downtown. By working with the business community to market the availability of employee permits and the areas where they can be used, enrollment could increase dramatically in a short time. Simple employer notices, information on the Town's website, and outreach from the Chamber of Commerce can reach most of Reading's employees who do not know about the program today.

Evaluate Permit Cost

The current cost of \$20 per month or \$240 per year should cover all administrative costs, but it is unclear whether this also covers the Town's enforcement costs. It may be prudent for the Town to evaluate the labor cost per parking space that is enforced today by the Town's parking control officer to determine if this fee is adequate to cover the enforcement cost for the portion of downtown spaces that are regulated for employees. Adjustments to the permit fee may be warranted.

Nonetheless, \$20 per month (or approximately \$1.00 per workday) is a fairly low parking cost in the greater Boston area, where off-street parking is generally available starting at \$50 per month². If demand for employee permits continues to remain strong after the quantity of permits and spaces is increased, permit prices should be increased.

Annual Reporting

Municipal fees are often met with opposition from many residents and employees, regardless of their justification. The Town would be greatly benefitted by revealing the costs and revenues of their permit program on an annual basis in order to deflect complaints that the system is a "money grab" or something to "pad the general fund." More importantly, any surplus revenues should be clearly identified and dedicated to improvements or programs that benefit the business community in downtown Reading. This has the effect of showing that the Town is giving back to its employees a benefit for their fee, which may include measures such as sidewalk improvements, façade improvements, marketing and signing, or future parking facilities. Details of a comprehensive benefit program like this can be found in Recommendation 2 below.

2) Establish a Parking & Transportation Fund

Surplus revenues from the employee permit program and other additional revenue sources, such as additional ticket revenue (see Recommendation 4) or in-lieu of parking fees (see Recommendation 11), should fund public improvements that benefit the downtown. If downtown parking revenues seem to disappear into the General Fund, where they may appear to produce no direct benefit for downtown businesses, there will be little support for parking policies that may ultimately benefit business, such as increased permit fees, installing parking meters, or adjusting regulations. When Reading's merchants and residents can clearly see that the monies collected are being spent for the benefit of their downtown, on projects that they have helped to choose, they become willing to support parking policies that generate revenue for the Town. If experience from other cities is any guide, many will become active advocates for the concept.³

² Based on a review of parking spaces for rent in the greater Boston area on craigslist.com.

³ Parking Benefit Districts are currently in place in Pasadena, Boulder, San Diego, Austin, Seattle, and Aspen.

To develop support for parking regulation changes, and to build support for charging fair market rates for permits, it is crucial to give local stakeholders a strong voice in setting policies for the downtown, deciding how downtown parking revenues should be spent, and overseeing downtown investments to ensure that the monies collected from employees and customers are spent wisely.

Potential uses for Parking and Transportation Fund revenues include:

- Landscaping and streetscape greening
- Increased frequency of trash collection
- Street cleaning, power-washing of sidewalks, and graffiti removal
- Parking, transit, pedestrian, and bicycle infrastructure and amenities
- Additional parking enforcement
- Marketing and promotion of Reading's merchants
- Additional programs and projects as recommended by downtown stakeholders and approved by the Board of Selectmen

A number of different organizational structures can be used to establish and oversee a Parking and Transportation Fund. The fund can be managed by a quasi-public entity, similar to a Business Improvement District. Alternatively, the fund can be established as simply a financial entity (somewhat like an assessment district), which would require by ordinance that parking revenues raised within the downtown be spent to benefit the downtown. Under this arrangement, the fund would be managed and housed within an existing Town department, such as the Department of Public Works.

3) Adjust Time-Limits

Many downtowns suffer from a common problem. The most visible and most convenient parking spaces are frequently entirely full, while simultaneously, parking spaces just behind a building or a block away sit largely vacant. The result is often a perceived parking shortage, even when a downtown as a whole has hundreds of vacant parking spaces available. In many downtowns, employees occupy the best spaces, even when time limits are instituted to try to reserve these spots for customers. As one downtown merchant describes the situation in his town, "Parking is a problem for businesses because employees park on Main St. and side streets and prevent customers from parking...We need parking management and enforcement strategies to prevent employees from doing the '2-hour shuffle' downtown."

The most common mechanism that communities use to create vacancies in prime parking spaces is to set time limits and give tickets to violators. Time limits, however, bring several disadvantages: enforcement of time limits is labor-intensive and difficult, and downtown employees, who quickly become familiar with enforcement patterns, often become adept at the "two hour shuffle", moving their cars regularly or swapping spaces with a coworker several times during the workday. Even with strictly enforced time limits, if there is no price incentive to persuade employees to seek out less convenient, bargain-priced spots, employees will probably still park in prime spaces.

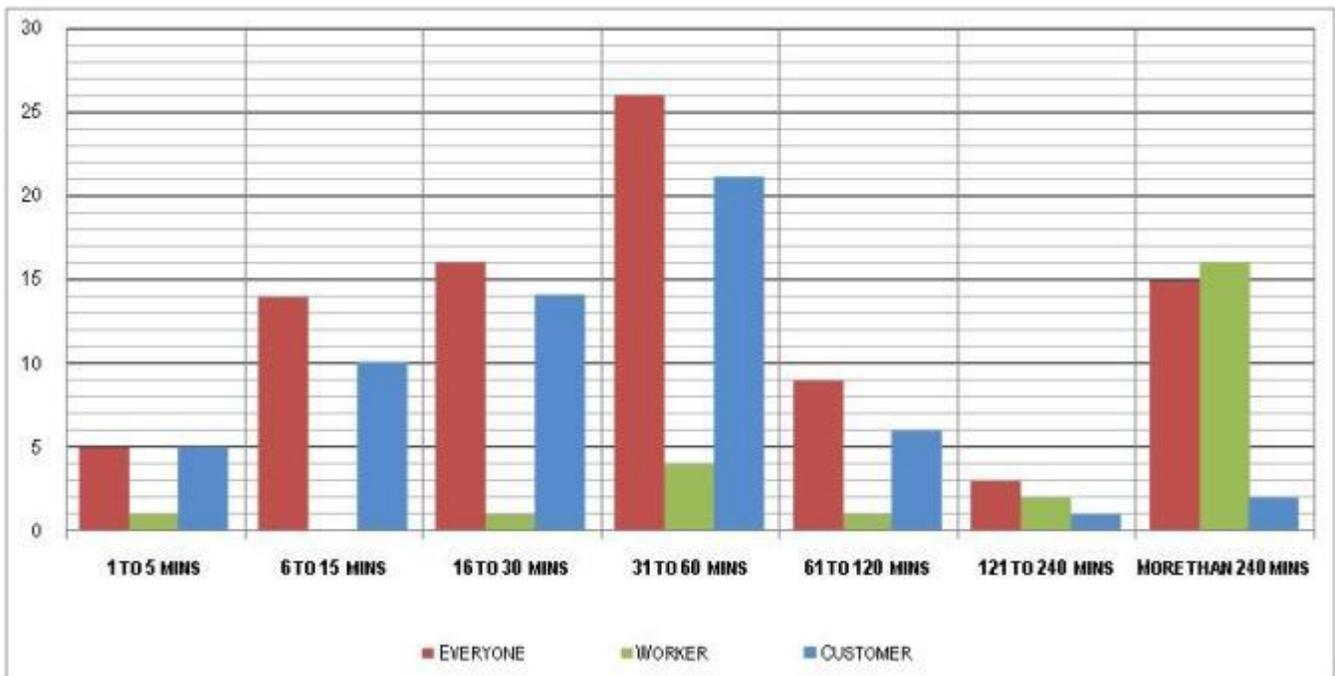
For customers, strict enforcement can bring "ticket anxiety" – the fear of getting a ticket if one lingers a minute too long (for example, in order to have dessert after lunch). As Dan Zack, Downtown Development Manager for Redwood City, CA, puts it, "Even if a visitor is quick enough to avoid a ticket, they don't want to spend the evening watching the clock and moving their car around. If a customer is having a good time in a restaurant, and they are happy to pay the market price for their parking spot, do we want them to wrap up their visit early because their time limit wasn't long enough? Do we want them to skip dessert or that last cappuccino in order to avoid a ticket?"

While on-street pricing is the preferred mechanism to turn-over spaces, even in small downtowns like Needham's, it is a difficult measure to implement without a lot of political support and extended education. In the long-term, on-street pricing is entirely appropriate for Reading, since it would solve many of the problems that exist today. However, time-limits are the tool of choice in Reading today.

Establishing the best time-limit that accommodates customers conveniently while encourages adequate turnover is an inexact science. While some parkers may be satisfied with the existing time limit, many others are not. Lengthening a time limit may induce some parkers to stay longer; attract new parkers who appreciate the added time; and push away short-term parkers who can't find a space as conveniently. Shortening a time-limit may drive some employees out of customer spaces but also drive away some customers who want to stay longer. Reading's most predominant time-limit throughout downtown is 2-hours. While this time may have some historical precedent, it is most defensible as a common value used in most Massachusetts downtowns.

The data supporting a better time limit is mostly inconclusive. The user survey revealed a wide spectrum of parking durations in downtown, as shown in Figure 74.

Figure 74 Surveyed Length of Stay



While customers tend to have shorter stays and employees longer, the turnover studies of two prime customer areas on upper Haven (Figure 75) and in front of CVS (Figure 76) demonstrate that the average stay per car in a customer parking area is nearly 3-hours throughout the entire day. The predominant length of stay that satisfies 85-percent of parkers (the 85th-percentile) exceeds 4-hours. On upper Haven it approaches 7 hours during work hours. It should be noted that both areas have 2-hour time limits.

Figure 75 Turnover and Utilization on Upper Haven Street



Figure 76 Turnover and Utilization in Front of CVS



While the ultimate effect of changing time-limits cannot be predicted well due to induced parking activity, the turnover data suggests that a longer time-limit (3-hours or more) would match the average duration of more parkers in front of the CVS. This would be a very customer-friendly approach that reduces complaints, and it would not impact availability significantly during daylight hours when utilization is low. A three or more hour limit would also accommodate more parkers on upper Haven, though many parkers would still be exceeding the time-limit each day (note the 85th percentile line).

However, lengthening time-limits in areas of relatively high demand is counter-intuitive. Only on upper Haven after 1PM would longer time limits work well since utilization drops off significantly. In areas of high demand, this policy would essentially reward those who seek to park for longer periods in locations that should be dedicated to shorter-term parking. Therefore, the turnover data is most valuable for understanding the duration preferences of parkers within an entire district, as opposed to the given block face where data is recorded. The data from upper Haven and Main Street in front of CVS indicate that a longer time-limit would be valuable, but not necessarily in these specific locations where turn-over and availability can benefit the shorter-term visits of nearby retail and banking customers. Likely target areas for increasing time limits to accommodate those staying over 3-hours are lots and on-street parking with lower demand that are further from these key destinations.

The most heavily utilized 2-hour zones in downtown Reading are:

- Upper Haven, especially during midday
- Main Street, in front of CVS in the late afternoon and evening
- Lower Haven, in front of the Atlantic Market all day

Both municipal lots are within a short walk of these locations and experience lower utilization throughout daytime hours. These would be ideal locations to attract longer-term parkers who might be more willing to walk the extra minute or two, freeing up availability for shorter-term parkers on-street. Especially if combined with the signing Recommendation 5, the time-limits in each of these lots should be extended to at least 3-hours if not 4-hours. Utilization of the lots and on-street spaces should be closely monitored for at least 30 days after implementation. If on-street availability does not increase, time-limits at these high-demand spaces should be reduced to 1-hour, as long as appropriate signing for the longer-term lots is in place.

Extend Hours of Regulation

The data from the parking in front of CVS illustrates another key parking dynamic that occurs due to the current time-limits in Reading. Shortly before as well as after the end of time-limited parking at 6PM, utilization of this parking spikes to nearly 100-percent. This also occurs in the public lot behind CVS. Without a fear of penalty, parkers quickly occupy these spaces, which happen to be those closest to prime dining destinations. While an intercept survey of these motorists was not within the scope of this study, it is evident that restaurant employees and patrons are occupying these prime spaces.

If the time span for time-limited parking (and appropriate enforcement) were extended through dining hours in these locations, longer-term parkers would have to find spaces that were more accommodating, leaving these prime spaces available for customers and restaurant patrons. As long as clear employee parking spaces are designated nearby between the hours of 6PM and 10PM (see Recommendation 1), the more valuable spaces – in front of the CVS, on upper Haven and on the end of Woburn close to Main – can have their time-limit regulations extended until 10PM. From 6PM until 10PM, the time-limits in these areas would better serve restaurant patrons if they were extended to 3-hours.

4) Expand Parking Enforcement Hours

The Town of Reading has a very limited budget for parking enforcement today. Enforcement occurs only 5 days per week for less than 5-hours each day. With only one staff person, it is focused on the downtown core almost exclusively. At current budget levels, it is not expected that this level of enforcement can be increased.

Nonetheless, enforcement is an essential part of supporting parking regulations. As structured today, enforcement hours and activity is mostly penalizing those who dominate downtown parking during midday weekday hours: employees and merchants. Given the current set of regulations, this enforcement program is necessary. However, it targets the community most responsible for economic activity in Reading. As the Town works to improve its economic climate and attract business, it would be appropriate to change the enforcement focus – especially given the observations supporting Recommendations 1, 2 and 3.



If more employee permit parking is advertised and provided to employees in mutually agreeable locations, time-limit violations in higher-demand areas will drop, since most daytime customers do not stay more than 2-hours today. Midday enforcement will become far less necessary. Meanwhile, some of the biggest parking complaints come during evening dining hours and Saturdays when customers are trying to find spaces for dinner, errands and shopping. Enforcement of existing Saturday and new evening regulations would help relieve this problem for customers. By shifting existing enforcement

hours strategically, the Town can improve enforcement revenue and value to the community without increasing costs.

The most valuable hours for enforcement to occur are: Saturdays between 10AM and 1PM and between 6PM and 10PM; and weeknights (especially Thursday and Friday) between 6PM and 10PM. It would also be appropriate to continue midday/lunchtime enforcement at least one day per week. Hypothetically assigning enforcement personnel to cover these hours results in the schedule shown in Figure 77.

Figure 77 Key Enforcement Hours

Saturdays between 10AM and 12PM	2 hours
Saturdays between 6PM and 9PM	3 hours
Thursday and Friday between 6PM and 9PM	6 hours
One random weekday between 10AM and 2PM	4 hours
Total	15 hours per week

While greater enforcement should be considered in the future, this focused schedule would help maximize enforcement revenue and value.

5) Improve Parking Signing

While regulatory signing for parking regulations is prominent and plentiful in Reading, signing that helps direct parkers to available parking areas is very limited. With only one small parking sign per lot entrance, there is no clear indication to visitors – or welcoming reminder to regulars – that convenient off-street parking exists (see Figure 78). As Reading seeks to attract new business and customers, greater ease of finding parking spaces is important.

Figure 78 Existing Parking Signs in Reading



Many communities employ a clear and consistent signing system that helps direct visitors to off-street parking easily (see examples in Figure 79). Given Reading’s desire to resolve utilization issues in on-street spaces during high demand times in the evening and on Saturday’s, clear signing to the existing municipal lots is an important component of the time-limit changes in Recommendation 3.

Figure 79 Parking Signs in Framingham



Another important part of a signing system that communities frequently overlook is directing departing motorists to exits and nearby arterials. While finding an exit to Reading’s municipal lots is not a difficult task, simple signs in the lots and at critical turns on surrounding streets that direct motorists to Route 28 and Interstate 93 can be very helpful and make a customer’s experience in Reading more accommodating – hopefully increasing the chance that they will return. Combined with a downtown wayfinding system, departure signs can help keep cars on preferred commercial roads and keep them away from residential neighborhoods.

Pedestrian Signing

The most commonly overlooked signing need for parking facilities is pedestrian signing to and from the parking facility. Especially in compact vernacular downtowns like Reading’s, visitors can easily confuse which street or alley to use to get back to their parked car. Regulars to a downtown may not even know the best access routes. And signs that direct new arrivals to prime streets or destinations help to increase the overall accommodation of downtown Reading as a place to shop and do business.

Fortunately, pedestrian wayfinding signs are very inexpensive to design, purchase and install. The investment can be very worthwhile and improve the overall walkability of the downtown. Many simple examples exist in the region, and they can be coordinated with parking signs for motorists to keep a consistent memorable message (see Figure 80).

Figure 80 Pedestrian Signs in Framingham



If time-limits are extended into the evening near restaurants, pedestrian signing to and from the CVS lot will be important. These should help parkers find driveway and walkway connections to and from Haven, Main and Woburn Streets.

Similarly, connections to and from the “Atlantic” lot should be clearly signed along Haven, Chute, Woburn and Linden Streets.

The Walgreen’s lot would also be benefitted by pedestrian signing to and from Main, Pleasant and Woburn Streets.

6) Incentivize Sharing of Private Parking

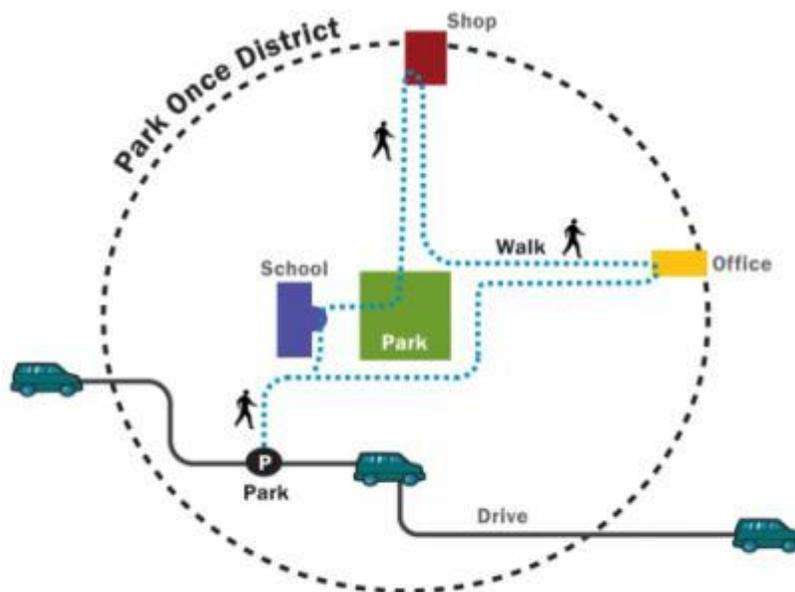
As Reading seeks to grow its downtown and encourage economic development, parking will become a significant obstacle under the current operating and regulatory framework. While some shared municipal parking exists that can serve multiple uses, the vast majority of off-street spaces are locked up in private hands. Even though the utilization study clearly demonstrates that these spaces are poorly utilized throughout the entirety of the day, there is little incentive to increase their efficiency by sharing these spaces across different parcels or landowners.

With the standard practice of building individual private lots or garages for each building in place in Reading, the result is a lack of welcome for customers: at each parking lot, the visitor is informed that his vehicle will be towed if he or she visits any place besides the adjacent building. When this occurs, nearby shopping malls gain a distinct advantage over a district with fragmented parking. Mall owners understand that they should not divide their mall's parking supply into small fiefdoms: they operate their supply as a single pool for all of the shops, so that customers are welcomed wherever they park.

The compactness and mixed-use nature of downtown Reading lends itself to this kind of "Park Once" strategy. Operating the downtown parking supply as a single shared pool results in significant savings in daily vehicle trips and required parking spaces, for three reasons:

1. **Park once.** Those arriving by car can easily follow a "park once" pattern: they park their car just once and complete multiple daily tasks on foot before returning to their car (see Figure 81).
2. **Shared Parking among Uses with Differing Peak Times.** Spaces can be efficiently shared between uses with differing peak hours, peak days, and peak seasons of parking demand (such as office, restaurant, retail and downtown apartments).
3. **Shared Parking to Spread Peak Loads.** The parking supply can be sized to meet *average* parking loads (instead of the *worst-case* parking ratios needed for isolated buildings), since the common supply allows shops and offices with above-average demand to be balanced by shops and offices that have below-average demand or are temporarily vacant.

Figure 81 "Park Once" District



Based on an original illustration by Walter Kulash.

The most successful "Park Once" districts manage parking as a public utility – just like streets and sewers – with public parking provided in strategically-placed lots and garages. Development is prohibited (or strongly discouraged) from building private parking. Tenants that require a guarantee of a certain number of spaces at particular hours (e.g., Monday through Friday, 9 a.m. to 5 p.m.) can lease those spaces in a public lot or garage, with the exclusive right to use them during the hours required. As described above, such arrangements leave the parking available during evening and weekend hours for other users (e.g., the patrons of restaurants), resulting in an efficient sharing of the parking supply and lower costs for all.

In the long term, a fully implemented "Park Once" strategy:

- Is more welcoming of customers and visitors (fewer "Thou Shalt Not Park Here" signs scattered about).
- Allows for fewer, strategically placed lots and garages, resulting in better urban design and greater development opportunities.
- Enables construction of larger, more space-efficient (and therefore more cost-effective) lots and garages.

Reading cannot achieve this ideal system in the short-term. However, many initial policies can begin to improve the efficiency of the downtown parking system, enabling much more development to occur without the cost and urban design impacts of new parking:

1. Incentives to encourage participation by existing parking facility owners and operators need to be in place. These can take the following forms:
 - a) Increased regulatory flexibility to encourage sharing. At the very least, this means the elimination of the 300-foot distance requirement for accessory parking in the downtown; elimination of any use stipulation on shared parking; implementation of a ULI shared parking model to allow reduced minimums; and elimination of any code-based requirements that discourage public access, merging of lots, etc.
 - b) Identification of available pooled liability protection whereby multiple parking facility owners can purchase a replacement joint policy to allow public access for lower rates than existing policies.
 - c) Creation of a parking authority or other public-private entity that manages the shared off-street (and on-street) parking supply. This entity can offer greater economies of scale than individual parking operators can afford, greatly reducing labor, security, insurance, maintenance, and other related costs, while also allowing greater purchasing power. Under Massachusetts law, the Town's limited liability exposure allows it to manage this supply and absorb any private liability concerns. The Town can offer a guaranteed lease payment to the landowner that exceeds what revenues that landowner may now be receiving from the lot. The Town can give the landowner a guarantee of accessing a minimum quantity of spaces in that or adjacent shared lots when needed, while leasing the remainder of spaces throughout the entire day to other users. Even if the Town charges no more per space than it pays the landowner, there will be increased revenues simply on account of more parkers being able to share the spaces that went unutilized at other times of day. The Town can use this revenue to maintain and improve the lot, further increasing the appeal to landowners to participate in the program.
2. The parking supply for the retail, office and residential users in downtown Reading should be shared among all users, with the following exception: residents and employees who are willing to pay a premium rate for exclusive, assigned spaces should be allowed to do so (residents of market rate units are most likely to take advantage of this option.) To implement this policy, parking leases in lots owned or managed by the Town can be structured in the following manner:

- a) Under the *standard lease rate*, the parking permit holder is guaranteed that a parking space will be available within the shared pool of spaces for him or her to use, but no particular space is marked with his or her name.
 - b) Under the *premium rate* for assigned spaces, the parking permit holder has a particular space designated (with signs and markings) for his or her use. For example, an assigned residential space may be marked "Reserved for Unit #101", while assigned employee spaces may be marked reserved for an individual permit holder ("Reserved for Permit #81"). Two types of premium spaces should be made available. The most expensive option is a space that is reserved 24 hours per day, seven days a week for the permit holder's exclusive use. The less expensive alternative is reserved for the permit holder's exclusive use only during the hours when the space is typically needed. For example, a typical retail tenant may wish to choose a space that is reserved for his or her firm's use only when the business is open -- say, from 9 a.m. to 5 p.m. on Monday through Friday, in the case of a realtor's office. (With this latter alternative, the retail tenant saves money by having the space assigned for their use only part-time, and the space becomes available for other users -- such as restaurant patrons -- on evenings and weekends).
3. As future properties are developed, their parking supplies should also become part of the Park Once district. This may be accomplished either by creating additional new joint public parking facilities as part of development agreements for each site or through conditions of approval that require that the privately-owned parking supply be made available for public use.

7) Establish Valet Parking Regulations

Valet parking has been suggested in workshops as a possible solution for limited parking availability in the evenings near busy restaurants. While the time-limit and enforcement recommendations above should help to alleviate the problem, valet parking can still be valuable and should be accommodated in downtown Reading.

Valet parking allows the most effective use of out-of-the-way parking spaces and can increase the effective parking supply by allowing for parking of additional vehicles in parking aisles and in tandem parking arrangements. If well-written licensing regulations are established, valet operations can greatly improve the appeal of downtown to visitors while improving the overall image of the downtown for the community.

Several key elements should be a part of any valet parking regulation in Reading:

- Applicants should clearly describe the entire valet operation in writing to the Town, including hours of service, number of valets, number of valet spaces needed, valet sign mock-up, location of remote parking, walking and driving route and times to and from remote parking, form of communication between valets and valet manager, and current insurance coverage.
- The valet space should be located so as to provide the maximum amount of safety to passing motorists and pedestrians. This includes finding a location with clear sightlines, lighting and ADA access to the destination.
- The driving route to remote parking and the return valet trip by foot should take only an acceptable amount of time at posted driving speeds or brisk walk speeds. If the round-trip time exceeds a minimum threshold (typically 2-minutes), additional valets should be working.
- Staging and temporary standing must be regulated.
- A Town phone number for complaints should be clearly posted at the destination.
- The license should be held by the destination (restaurant), not the valet company. The license should require a nominal fee and be renewable annually, allowing the Town to review operations, implement changes as necessary or revoke the operation.

It should be noted that valets are an excellent means for maximizing the use of a parking facility while providing convenience to certain customers. However, they are not an appropriate solution for solving

downtown parking availability problems – even though that is what many businesses and communities resort to before trying to fix their curb regulations.

8) Expand On-Street Parking Supply

The parking utilization study shows that Reading has an abundance of available parking spaces in downtown at all times of day. The parking demand projections demonstrate that a large amount of development can occur without building any new parking. Therefore, Reading should not attempt to increase on-street parking supply as a tool to increase availability.

However, on-street parking has a great benefit to urban form and the walkability of downtowns. Some of America’s most walkable downtowns are lined with on-street parking. Meanwhile, many pedestrian-only streets or malls have not fared well. Planners generally believe this irony is due to two strong effects of on-street parking: 1) the act of entering and exiting a car provides a base level of pedestrian activity that is lost without on-street spaces; and 2) parked cars provide a visual, sound and safety buffer from traffic, helping to make sidewalks more enjoyable for walkers. In fact, numerous studies have demonstrated that one of the most effective ways to “calm” traffic speed is to install on-street parking adjacent to travel lanes, causing a degree of perceived “friction” to motorists, which slows traffic. Therefore, increasing on-street parking can be very beneficial in many regards.

In Reading, a few key streets that must be regularly crossed by pedestrians are wide and deserving of traffic calming, including lower Haven, High, and Main Street. While all of these streets already have on-street parking, the introduction of angled parking can serve to greatly reduce speeds while significantly increasing on-street capacity. This solution is unlikely on Main Street, which is a state route. However, High Street is a prime candidate for this solution.

The use of reverse-angle parking (see Figure 82) in commercial districts has proven successful at increasing on-street supply up to 40%, calming traffic speeds, increasing the ease of parking, and improving safety for cyclists. Backing into a reverse angle space is easier than parallel parking and safer than backing out of a traditional forward-angle space. The position of the parked car allows the driver to see approaching cars and bicycles before exiting; the direction of opening doors protects passengers (particularly children) from entering the street; and the trunk of the car is conveniently at the curb.

Figure 82 Reverse Angle Parking



Reverse angle parking is still new in the United States, though its use is escalating dramatically due to its safety benefits⁴. Installing the spaces should be preceded by an outreach and education campaign, complete with posters, flyers, signs (Figure 83) and variable message boards in the weeks before implementation.

Figure 83 Reverse Angle Parking Signing

⁴ Reverse angle parking is in use in Arlington VA, Birmingham AB, Charlotte NC, Chico CA, Everett WA, Tucson AZ, Honolulu HI, Knoxville TN, Salt Lake City UT, Vancouver WA, Kelowna BC, Baltimore, Wilmington DE, Seattle WA, Washington DC, Montreal QC, Portland OR, Pottstown PA, Salem OR, Indianapolis IN, New York City, Conshohocken PA, Penticton BC, Emeryville CA, Knoxville TN, Bethlehem PA, Plattsburgh NY, Birmingham AL, Ventura CA, Burnaby Canada, Olympia WA, Marquette MI, and Ketchum ID.

Figure 84 and Figure 85 illustrate how reverse angle parking would look on High Street near the train station. It is estimated that over 20 new spaces could be added on High Street, helping to alleviate some of the demand by commuters to park on residential streets. More significantly, the treatment can reduce vehicle speeds in this important pedestrian area. Coupled with appropriate curb extensions, the pedestrian realm can be greatly enhanced.



Figure 84 High Street Reverse-Angle Parking – Plan View



Figure 85 High Street Reverse-Angle Parking – Perspective View



TDM Actions

9) Reduce Minimum Parking Requirements

The traditional method of managing the supply of off-street parking in communities across the country has been to set minimum standards that require a minimum number of spaces per unit, square foot of building area, employee, etc. for each and every possible land use. Most minimum parking requirements were adopted to "alleviate or prevent traffic congestion and shortages of curbside parking spaces." For half a century, virtually every modern city has had minimum parking requirements, and yet not only has traffic congestion gotten worse, it is projected to steadily worsen.

History of Minimum Parking Requirements

The essential concept of minimum parking requirements was that if each destination provided ample parking, with enough spaces available so that even when parking was free there would be plenty of room, then there would be plenty of spaces at the curb. Motorists would no longer need to circle the block looking for a space, and so traffic congestion would be lessened.

Minimum parking requirements, however, had unintended consequences for traffic. Communities set minimum parking requirements that were simply high enough to satisfy the demand for parking even when parking was given away for free. The predictable result was that roads were overwhelmed with excess traffic induced in large part by free parking.

However, if prices for curb parking are set correctly to ensure at least one or two vacancies per block, off-street minimum parking requirements are not needed to prevent shortages of on-street parking. Instead, they only act to worsen traffic, and to discourage developers, employers, residents and other property owners from implementing strategies that reduce traffic and parking demand.

The communities with the strongest records of reducing vehicle trips and traffic congestion, such as London, have eliminated minimum parking requirements entirely (in fact, nationwide). The great majority of these communities instead now have maximum parking requirements (that is, they *limit* the

number of spaces allowed at each building). They now regard maximum parking requirements - the opposite approach - as an essential tool for preventing traffic congestion.

Reading's Parking Requirements

Reading has taken a fairly progressive approach to minimum parking requirements in its downtown with the mixed-use overlay district requirements. While Chapter 1 demonstrates that Reading's base zoning requires far more parking per use than the highest demand modeled by the conservative ITE approach, the mixed-use overlay district is generally in-line with or below ITE's requirements. However, given true utilization data by use from throughout the northeast as well as the parking utilization data collected in downtown Reading, the Town should lower these parking minimums much further – especially if it intends to encourage investment in downtown and reduce traffic impacts:

- Residential requirements should not exceed 1 space per unit, regardless of the size of the unit. Hundreds of parking spaces go unused in downtown Reading every night and weekend.
- Office requirements should not exceed 2 per 1000. The Town's employee permit program and plenty of reserve on-street capacity can accommodate a couple hundred thousand square feet of new office space.
- Retail requirements should be eliminated in the downtown. While shared parking incentives (Recommendation 6) will enable most residences and offices to find minimum parking supplies in the downtown, retailers operate on tight margins in this market area. With ample on- and off-street parking for customers, retail should have no minimum parking requirement.

10) Establish an In-Lieu of Parking Payment

Parking in-lieu fees have been in place in dozens of communities throughout America for years. By making a payment to the municipality, new developments can waive their minimum parking requirements. The fee is usually utilized for transportation improvements, particularly shared public parking facilities. An in-lieu fee has a number of advantages, as summarized by Donald Shoup⁵

- 1) Enables developers on constrained sites to build less parking.
- 2) Encourages development of shared parking facilities financed by in-lieu fees. A public parking facility shared by many users requires fewer total spaces than multiple individual developments due to the inherent overlap of peak demand times.
- 3) Shared public parking facilities financed by in-lieu fees can be placed strategically to serve many while reducing the potential impact to pedestrian and bicycle movements. This also frees up development parcels to create appropriate urban streetscapes without curb cuts and garage entrances.
- 4) Eliminates the need for zoning variances, fairly leveling the playing field for all developers and allowing planning boards to focus on design features as opposed to parking quantities.
- 5) Allows for historic preservation by enabling redevelopment of buildings without adding new parking.

In-lieu fees can be an effective method for cost-effectively providing parking in remote locations out of the control of individual land owners. By using fees to subsidize remote parking at locations with cheaper construction or leasing costs, communities can facilitate development financing while establishing a means to encourage appropriate development standards for participating developers. When fees are set appropriately, more efficient and better quality designs can be enabled while appropriate parking is provided off-site.

⁵ "In Lieu of Required Parking," Donald Shoup.

In more progressive communities, the success of in-lieu fees has evolved into the lowering of minimum parking requirements. Dozens of communities in the United States have completely removed minimum residential and commercial parking requirements in downtown districts, including Eugene, OR; Fort Myers, FL; Fort Pierce, FL; Los Angeles, CA; Milwaukee, WI; Olympia, WA; Portland, OR; San Diego, CA; Seattle, WA; Spokane, WA; and Stuart, FL.

Program Details

The majority of communities in America that employ in-lieu fees have a consistent standard for all new projects. However, the motivation for specifying a rate varies considerably. In many communities with excessive parking supplies, the fee is low to reduce the growth of parking. Other communities have a moderate rate that is designed specifically to contribute to a shared parking facility. Several communities have arbitrarily high fees that permit yet discourage the practice. In downtown Reading, the primary goals of an in-lieu fee is to: 1) remove the cost and design complexity of building parking in downtown, while also 2) enabling the development of cheaper remote parking or alternative transportation systems through payments to the parking and transportation fund (Recommendation 2). Therefore, it is important to give a cost savings to developers while having a fee high enough to support a robust fund. Based on estimated garage construction prices of at least \$20,000 per space, it is estimated that an average fee of \$10,000 per space be implemented – annualized as a payment to the fund of approximately \$800 per year for 35 years (the industry-standard lifespan of a parking structure).

The specific fee for a particular project may vary in direct proportion to the number of required spaces. Smaller projects that only require a few spaces may not see much incentive to reduce parking at \$10,000 per space. A fee of only \$2,500 may be appropriate. Larger projects with dozens of spaces are likely to have more substantial financing that is prepared to build expensive underground parking spaces that cost over \$45,000. Such projects may see great benefit paying as much as \$15,000 per space to avoid the complexity of structured parking. Therefore, the final in-lieu payment schedule would be best expressed as a rate that increases with the number of total spaces required for a project.

11) Provide Zoning Relief for Parking Unbundling

Parking costs are generally subsumed into the sale or rental price of housing for the sake of simplicity, and because that is the more traditional practice in real estate. But although the cost of parking is often hidden in this way, parking is never free. The expected cost for each space in new residential parking garage is over \$20,000 per space. Given land values in the area, surface spaces will be at least as valuable.

Looking at parking as a tool to achieve the Town's goals for more affordable housing and less traffic requires some changes to status quo practices, since providing anything for free or at highly subsidized rates encourages use and means that more parking spaces have to be provided to achieve the same rate of availability.

For both rental units and condominiums, the full cost of parking should be unbundled from the cost of the housing itself by creating a separate parking charge. This provides a financial reward to households who decide to dispense with one of their cars and helps attract that niche market of households who wish to live in a walkable, transit-oriented neighborhood where it is possible to live well with only one car (or even no car) per household. Unbundling parking costs changes parking from a required purchase to an optional amenity, so that households can freely choose how many spaces they wish to lease. Among households with below average vehicle ownership rates (e.g., low income people, singles, single parents, seniors on fixed incomes, and college students), allowing this choice can provide a substantial financial benefit.

It is important to note that construction costs for residential parking spaces can substantially increase the sale/rental price of housing. This is because the space needs of residential parking spaces can restrict how many housing units can be built within allowable zoning and building envelope. For example, a study of Oakland's 1961 decision to require one parking space per apartment (where none had been required before) found that construction cost increased 18% per unit, units per acre decreased by 30% and land values fell 33%.⁶

As a result, bundled residential parking can significantly increase "per-unit housing costs" for individual renters or buyers. Two studies of San Francisco housing found that units with off-street parking bundled with the unit sell for 11% to 12% more than comparable units without included parking.⁷ One study of San Francisco housing found the increased affordability of units without off-street parking on-site can increase their absorption rate and make home ownership a reality for more people.⁸ In that study, units without off-street parking:

- Sold on average 41 days faster than comparable units with off-street parking
- Allowed 20% more San Francisco households to afford a condominium (compared to units with bundled off-street parking)
- Allowed 24 more San Francisco households to afford a single-family house (compared to units with bundled off-street parking)

Charging separately for parking is also the single most effective strategy to encourage households to own fewer cars and rely more on walking, cycling and transit. According to one study, unbundling residential parking can significantly reduce household vehicle ownership and parking demand.⁹ These effects are presented in Figure 86.

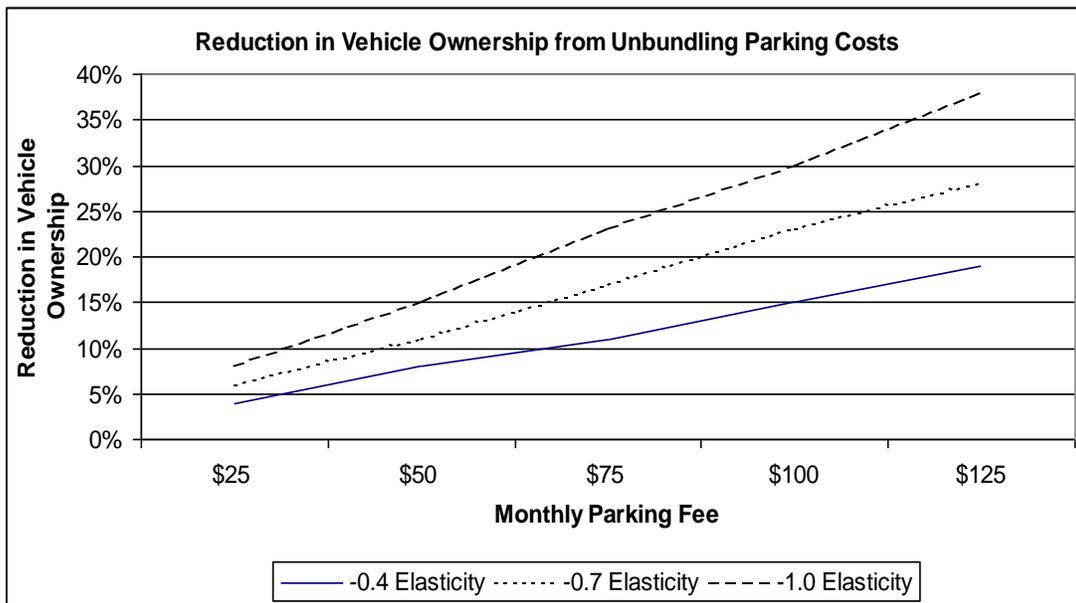
⁶ Bertha, Brian. "Appendix A" in *The Low-Rise Speculative Apartment* by Wallace Smith UC Berkeley Center for Real Estate and Urban Economics, Institute of Urban and Regional Development, 1964.

⁷ Wenyu Jia and Martin Wachs. "Parking Requirements and Housing Affordability: A Case Study of San Francisco." University of California Transportation Center Paper No. 380, 1998 and Amy Herman, "Study Findings Regarding Condominium Parking Ratios," Sedway Group, 2001.

⁸ Ibid.

⁹ Litman, Todd. "Parking Requirement Impacts on Housing Affordability." Victoria Transport Policy Institute, 2004.

Figure 86 Reduced Vehicle Ownership with Unbundled Residential Parking



Source: Litman, Todd. "Parking Requirement Impacts on Housing Affordability." Victoria Transport Policy Institute, 2004.

Program Details

Instituting a parking unbundling program is a simple matter of requiring that any approved parking within downtown Reading have its own lease or deed that is rented or purchased separate from the cost of housing.

For rental units, unbundling parking costs is straightforward: the fees charged for the parking spaces will cover the full cost of providing the parking spaces. Then rents for the housing can be reduced up to an amount equal to the amount of parking revenue collected.

In the case of for-sale condominium units, the title to the property should give the owner the right to lease at least one parking space (and these owners will have first priority for leasing parking spaces in a garage). However, as with renters, owners would not be required to lease any parking spaces and could rent as many or as few as they choose. The resulting parking revenue should be used to reduce the amount of the condominium owners' association dues that the owners would otherwise have to pay.

It is critical that residents and tenants are made aware that rents, sale prices and lease fees are reduced because parking is charged for separately. Rather than paying "extra" for parking, the cost is simply separated out, allowing residents and businesses to choose how much parking they wish to purchase. No tenant, resident, employer or employee should be required to lease any minimum amount of parking.

12) Monitor Parking Utilization

An important part of maintaining the success of any of these recommendations will be monitoring parking utilization on a regular basis. A recurring annual or biennial monitoring regime can allow the Town to modify its time-limits, zoning requirements, shared-parking incentives and other key policies. Based on the detailed utilization information collected for this study, a much smaller and targeted

utilization effort can be conducted (potentially in-house or with the use of students or volunteers) by focusing on area of high demand and only casually observing other areas to confirm the results of this effort. Where parking patterns appear to change, a more detailed utilization count would be warranted.

13) Install Bicycle Racks

In all workshops held for this study, a large portion of residents within walking distance of downtown Reading chose to walk into town versus driving. This is also demonstrated in the user survey data in Chapter 3. These residents help reduce the burden on the parking supply while also eliminating vehicle trips.

The same effect is possible for a much broader radius around downtown Reading by making bicycling more convenient and accommodating in town. There are very few bicycle parking facilities in the downtown today. The simple addition of inexpensive post and ring racks on Main, Haven and other key downtown streets would greatly increase the attractiveness of bicycling to downtown. With the cost of bicycles today, most riders want to be sure they can safely secure their investment. If coupled with smart placement in areas that are shaded and/or sheltered, the Town can truly encourage reduced parking and driving demand.

14) Install Bus Shelters

Reading is benefitted by two bus lines that operate on Woburn and High Streets in downtown, providing regular service to and from Wakefield, Melrose and the MBTA's Orange Line. In commute hours, these buses have a combined headway of only 15-minutes – a high level of service for a suburb outside of I-95. Unfortunately, this service is not very prominent in Reading – there are no schedules posted and no bus shelters in the downtown.

These bus routes provide a great commute alternative for employees working in Reading that live in nearby communities or almost anywhere on the MBTA's rapid transit system. The Town and the Chamber of Commerce should work to promote this service, especially as it represents an opportunity to reduce parking demand and vehicle trips in Reading.

While new bus shelters cost over \$10,000 apiece, the MBTA offers many programs to share costs. The Town should also explore opportunities with abutting private landowners to incorporate shelter elements into existing building facades – a treatment that adds architectural appeal to many buildings (see Figure 87).

Figure 87 Integrated Bus Shelter in Belmont



Medium Term

15) Initiate a New Commuter Permit Program

Reading has had a long history with commuter rail in its downtown. The impact of commuters parking on downtown streets pushed the Town to begin constraining access to the station from outside Reading many years ago. The development of the Anderson RTC station helped alleviate a lot of commuter demand at the Reading Depot, and non-resident commuter spaces at the Depot are few. However, in-town commuters continue to flood available parking around the station today. The utilization study revealed that commuter parking at the station and up several residential streets to the west was fully utilized.

While an expansion of supply (such as Recommendation 8) will help alleviate some pressure on residential streets in the short-term, the high demand for access to commuter rail service will continue to fully utilize all available spaces. As a result of this high demand, choice spaces are available on a first-come, first-served basis, with only the proof of a \$25/year community access sticker. As a result, commuters who do not go into work early are often faced with the difficulty of finding parking or a long walk from an available space. An unknown number of would-be rail commuters are discouraged and drive to their jobs.

The Town has an opportunity to provide this park & ride privilege to more people while helping improve the area around the Depot. By implementing a tiered pricing structure at more market-based rates, the Town can allow more residents to have the opportunity to park at the station while encouraging a better commuter profile in town as well as towards Boston. Higher prices would be charged for the closest spaces with one or more tiers of lower priced permits for spaces further from the station.

With the introduction of a limited quantity of higher-priced permits for prime station parking, commuters will be affected in a number of positive ways:

- Spaces close to the station will become available all day long, allowing commuters who avoid the area after the early part of the rush hour to catch a train, as opposed to driving in the more congested mid-morning hours.
- Many existing commuters who pay so little to park will be encouraged to carpool, walk, bike or take the bus to the Depot.

- Commuters who are happy to walk further from their parking space will be rewarded by paying a reduced price to park.

If the Town sets a fair rate that is comparable to the cost of parking at other commuter rail stations in the area (which now charge at least \$2 per day, or over \$480 per year), it can use the revenues to make improvements to the station area and especially the residential streets where many commuters park today. In turn, if the Town clearly directs surplus revenues at these neighborhoods, these residents will have an incentive to put their own cars off-street when possible, generating even more revenue for their neighborhood.

16) Conduct a Paid Parking Pilot

As discussed in Recommendation 4, time-limited parking is a blunt instrument that only satisfies the majority of parkers who happen to complain about time-limits – which is a very small percentage of everyone who parks. Turnover data suggests a wide variety of durations are parked by travelers to downtown Reading. No one time limit can work well.

Pricing through the use of meters or pay stations has been in use in the United States since 1936, and many small communities like Reading use it today, including Needham, Framingham, and Concord. However, meters have a very bad reputation in America, both for the difficulty of finding change to put into them as well as the hassle of getting overtime tickets. Ironically, the concept of paying money to park on-street is actually not as much of a complaint. A recent Redwood City staff report summarizes the results found in downtown Burlingame, California:

In a recent "intercept" survey, shoppers in downtown Burlingame were asked which factor made their parking experience less pleasant recently... The number one response was "difficulty in finding a space" followed by "chance of getting a ticket." "Need to carry change" was third, and the factor that least concerned the respondents was "cost of parking." It is interesting to note that Burlingame has the most expensive on-street parking on the [San Francisco] Peninsula (\$.75 per hour) and yet cost was the least troubling factor for most people.

This is not an isolated result. Repeatedly, surveys of downtown shoppers have shown that the *availability* of parking, rather than price, is of prime importance.

Always available, convenient, on-street customer parking is of primary importance for retail to succeed. To create vacancies and rapid turnover in the best, most convenient, front door parking spaces, the most effective mechanism is to have price incentives to persuade some drivers -- especially employees -- to park in less convenient spaces in lots or on-street parking a block or two away: higher prices for the best spots and cheap or free prices for the less convenient, currently underused spaces.

Motorists can be thought of as falling into two primary categories: bargain hunters and convenience seekers. Convenience seekers are more willing to pay for an available front door spot. Many shoppers and diners are convenience seekers: they are typically less sensitive to parking charges because they stay for relatively short periods of time, meaning that they will accumulate less of a fee than an employee or other all-day visitor. By contrast, many long-stay parkers, such as employees, find it more worthwhile to walk a block to save on eight hours worth of parking fees. With proper pricing, the bargain hunters will choose currently underutilized locations, leaving the prime spots free for those convenience seekers who are willing to spend a bit more.

After new time-limits, permits, and signing programs are in place, the Town should watch its parking monitoring results in a year to 18-months – particularly on Main Street in front of CVS. If utilization continues to be high and availability of spaces is a complaint of customers or businesses, the Town should consider a pricing pilot for these prime spaces. Not only is this location in prime need of

availability for customers, its location is relatively confined – customers who seek the adjacent destinations are not likely to go further down Main or up Woburn Street to find free parking.

What is the right price for on-street parking?

If prices are used to create vacancies and turnover in the prime parking spots, then what is the right price? An ideal occupancy rate (*on each and every block*) is approximately 85% at even the busiest hour, a rate which leaves about one out of every seven spaces available¹⁰. This provides enough vacancies that visitors can easily find a spot near their destination when they first arrive. Ideally, parking occupancy for each block of on-street spaces and each garage should be monitored carefully, and prices adjusted regularly to keep enough spaces available. In short, prices should be set at market rate, according to demand, so that just enough spaces are always available. Professor Donald Shoup of UCLA advocates setting prices for parking according to the "Goldilocks Principle":

The price is too high if many spaces are vacant, and too low if no spaces are vacant. Children learn that porridge shouldn't be too hot or too cold, and that beds shouldn't be too soft or too firm. Likewise, the price of curb parking shouldn't be too high or too low. When about 15 percent of curb spaces are vacant, the price is just right. What alternative price could be better?¹¹

If this principle is followed, then there need be no fear that pricing parking will drive customers away. After all, when the front-door parking spots at the curb are entirely full, under-pricing parking cannot create more curb parking spaces for customers, because it cannot create more spaces. And, if the initial parking meter rate on a block is accidentally set too high, so that there are too many vacancies, then a policy goal of achieving an 85% occupancy rate will result in lowering the parking rate until the parking is once again well used (including making parking free, if need be).

Remove Time Limits

Once a policy of market rate pricing is adopted, with the goal of achieving an 85% occupancy rate, then time limits need not be instituted. With no time limits, much of the worry and "ticket anxiety" for downtown customers disappears. In Redwood City California, where this policy was recently adopted, Dan Zack describes the thinking behind the City's decision in this way:

Market-rate prices are the only known way to consistently create available parking spaces in popular areas. If we institute market-rate prices, and adequate spaces are made available, then what purpose do time limits serve? None, other than to inconvenience customers. If there is a space or two available on all blocks, then who cares how long each individual car is there? The reality is that it doesn't matter.

17) Develop a Commuter Benefits Program

Many employers in downtown Reading provide free or reduced price parking for their employees as a fringe benefit. This is a customary practice in most suburban workplaces. Unfortunately, it hides the cost of providing parking, does nothing to reduce parking demand and gives no reward to those who forgo a car in their commute. Therefore, many communities in American who are seeking to reduce parking demand and encourage the use of alternate modes of transportation have begun instituting a "Parking Cash-Out" requirement. Under a parking cash-out requirement, employers can continue to give away their parking to employees *on the condition that they offer the cash value of the parking subsidy to any employee who does not drive to work*. The programs essentially require employers to pay employees who do not drive. While at first take this sounds like an entirely unreasonable burden,

¹⁰ This rate is a widely-accepted industry standard that provides a high level of convenience for parkers and largely eliminates the circling for parking which contributes to increased driver frustration, traffic congestion and collisions.

¹¹ Shoup, D. (2005) *The High Cost of Free Parking*. Chicago: Planners Press.

it has proven to be so cost-effective that major employers in America are now instituting these programs of their own accord in order to reduce the cost of supplying parking.

The success of parking cash-out has saved large universities and corporations millions of dollars in parking construction or leasing costs, and their employees are much happier because they are getting paid for their decision not to drive. The payment is typically less than the cost of leasing or maintaining a parking space, but it is a substantial benefit to employees that is also a cost-saver for business.

Reading should consider working with its employers to offer this benefit to employees. The programs are so successful that they are now in Federal Highway guidance and have become law in California and Rhode Island.

Benefits of Parking Cash Out

The benefits of parking cash out are numerous, and include:

- Provides an equal transportation subsidy to employees who ride transit, carpool, vanpool, walk or bicycle to work. The benefit is particularly valuable to low-income employees, who are less likely to drive to work alone.
- Provides a low-cost fringe benefit that can help individual businesses recruit and retain employees.
- Employers report that parking cash-out requirements are simple to administer and enforce, typically requiring just one to two minutes per employee per month to administer.

In addition to these benefits, the primary benefit of parking cash-out programs is their proven effect on reducing auto congestion and parking demand.

Figure 88 illustrates the effect of parking cash-out at seven different employers located in and around Los Angeles. It should be noted that most of the case study employers are located in areas that do not have good access to transit service, so that a large part of the reduced parking demand that occurred with these parking cash-out programs resulted when former solo drivers began carpooling.

Figure 88 Effects of Parking Cash-Out on Parking Demand

Location	Scope of Study	Parking Fee in \$/Month (2006 \$)	Decrease in Parking Demand
<i>Group A: Areas with little public transportation</i>			
Century City, CA ¹	3500 employees at 100+ firms	\$107	15%
Cornell University, NY ²	9000 faculty and staff	\$45	26%
Warner Center, CA ¹	1 large employer (850 employees)	\$49	30%
Bellevue, WA ³	1 medium-size firm (430 empl)	\$72	39%
Costa Mesa, CA ⁴	State Farm Insurance employees	\$49	22%
Average		\$64	26%
<i>Group B: Areas with fair public transportation</i>			
Los Angeles Civic Center ¹	10,000+ employees, several firms	\$166	36%
Mid-Wilshire Blvd, LA ¹	1 mid-sized firm	\$119	38%
Washington DC suburbs ⁵	5500 employees at 3 worksites	\$90	26%
Downtown Los Angeles ⁶	5000 employees at 118 firms	\$167	25%
Average		\$135	31%
<i>Group C: Areas with good public transportation</i>			
University of Washington ⁷	50,000 faculty, staff and students	\$24	24%
Downtown Ottawa ¹	3500+ government staff	\$95	18%
Average		\$59	21%
Overall Average		\$89	27%

Sources:

¹ Willson, Richard W. and Donald C. Shoup. "Parking Subsidies and Travel Choices: Assessing the Evidence." *Transportation*, 1990, Vol. 17b, 141-157 (p145).

² Cornell University Office of Transportation Services. "Summary of Transportation Demand Management Program." Unpublished, 1992.

³ United States Department of Transportation. "Proceedings of the Commuter Parking Symposium," USDOT Report No. DOT-T-91-14, 1990.

⁴ *Employers Manage Transportation*. State Farm Insurance Company and Surface Transportation Policy Project, 1994.

⁵ Miller, Gerald K. "The Impacts of Parking Prices on Commuter Travel," Metropolitan Washington Council of Governments, 1991.

⁶ Shoup, Donald and Richard W. Wilson. "Employer-paid Parking: The Problem and Proposed Solutions," *Transportation Quarterly*, 1992, Vol. 46, No. 2, pp169-192 (p189).

⁷ Williams, Michael E. and Kathleen L. Petrait. "U-PASS: A Model Transportation Management Program That Works," *Transportation Research Record*, 1994, No.1404, p73-81.

In addition to promoting parking cash-out, the Town can work proactively with employers to promote ridesharing, transit passes, bicycling, flexible work hours and guaranteed ride home programs.

Long Term

18) Implement Parking Maximums

Maximum parking requirements generally alleviate traffic congestion and reduce auto use through a simple three step process:

1. Maximum parking requirements are set low enough to so that if parking at a location is given away for free, there will be a shortage.

2. Parking at these locations is then provided to the people who use it for a price that covers at least part of the cost to finance and operate the parking, so that the cost is revealed. Alternately, employers and other parking providers find it cost effective to provide strong subsidies for alternative transportation (such as free transit passes or a parking cash out program), rather than incur the cost of building additional parking. Furthermore, providing maximum choice to tenants and customers.
3. Removing parking subsidies (or providing equally strong subsidies for other modes) then brings travel choices into balance, toward public transit, cycling and walking.

Maximum requirements must be complemented by the correct pricing for both on and off-street parking that ensures a 15-percent vacancy rate in all parking facilities, in order to prevent parking shortages (or surpluses).

19) Implement Demand-Responsive Pricing

Building upon the success of the parking pricing pilot, Reading should consider a full demand-responsive on-street pricing program as its downtown builds out into its parking supply. Using pay stations on every block, prices would be set at rates that create a 15% vacancy rate on each block (with no time-limits). Ideal hourly parking rates vary according to the time of day. The first 20 minutes may be free but every additional hour is priced according to the best value at that period of time in the day. Morning hours are generally cheaper, lunch hours demand a higher fee, afternoon hours reduce in price, and evening hours – especially on weekends – are likely to demand the highest rates. This rate structure makes parking free or cheap for short-stay visitors (such as retail customers), makes all day parking much more expensive, and creates availability during high demand dining and entertainment hours. Employees and residents are discouraged from parking at the meter spaces that are intended for customers, and are encouraged to purchase a monthly permit. Because of the variable rates, monthly permits (intended for residents and employees) are less expensive than parking all day at the meters.

After an initial trial period, occupancy rates for each block and each parking facility should be reviewed and then adjusted down or up to achieve the 85% occupancy goal, as described earlier. For each block and each parking lot in Reading, the right price is the price that will achieve this goal. This means that pricing should not be uniform: the most desirable spaces need higher prices, while less convenient spots are cheap or may even be free.

20) Expand Walking Network

Ultimately, the success of the best downtowns rides on the ability of visitors, workers and residents to get around easily on foot. Reading already has a robust sidewalk network in downtown. As the downtown grows and progressive transportation and parking policies are implemented, the demand to connect by foot into downtown from a wider and wider radius will grow. Reading should anticipate this need and continue to program walking network expansions outward from downtown in the years to come.

Appendix A – Survey Forms

READING COMPREHENSIVE PARKING STUDY – 2008

Downtown Parking - Extended Survey

On behalf of the Town of Reading, we are conducting a survey of parking activity and preferences. Your accurate responses will help to guide our recommendations to the Town.

YOUR RESPONSE IS VERY IMPORTANT. Please submit your answers one of four ways:

- Leave on your windshield for us to collect;
- Fill out online at http://www.surveymonkey.com/s.aspx?sm=LtBgFElaW3_2fweSTUakojOw_3d_3d
- Drop off at the Town Clerk's Office; or
- Mail to the address provided at the bottom of the form.

1. *How many times per week do you travel to downtown?*

- Less than 1 day per week 2 to 3 days per week nearly every day
 1 day per week 4 to 5 days per week several times a day

2. *What is your primary purpose for coming downtown today?*

- Work Shopping I live here Commuter Rail
 Dining Errands/Appointments Other (please describe): _____

3. *How many times per week do you travel to downtown for that purpose?*

- Less than 1 day per week 2 to 3 days per week nearly every day
 1 day per week 4 to 5 days per week several times a day

4. *What is the primary purpose that brings you downtown most frequently?*

- Work Shopping I live here Commuter Rail
 Dining Errands/Appointments Other (please describe): _____

5. *Do you always park in the same place or do you search?* Same Space I Search

6. *How long did it take you to find a spot today? _____ minutes*

➔ *On average?* _____ minutes ➔ *The worst day?* _____ minutes

7. *Are there other parking options nearby?* Yes No

8. *If there are other nearby parking options, why did you park here today?*

- No spaces there today Price is better here Location is safer/more secure
 Typically fewer spaces there This is closer to my destination Other _____

9. *What is the most important consideration for you in choosing where to park in downtown Reading?*

- Location Ease of finding a space Other (please explain) _____
 Price Safety/security _____

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READING COMPREHENSIVE PARKING STUDY – 2008

Downtown Parking - Extended Survey

10. How close to your destination did you park?

- Right in front / 1 minute walk 5 to 9 minute walk 15+ minute walk
 2 to 4 minute walk 10 to 14 minute walk

→ What is the name or address of your destination(s)? _____

11. Approximately, how long will you be staying today? _____ hours _____ minutes

12. Do you expect to park at any other downtown location before leaving? Yes No

→ If yes, where? _____

13. Have you ever failed to find parking? Yes No

14. Are you ever in a rush and forced to park or stand illegally? Yes No

→ If yes, where does this occur for you most frequently? _____

15. Do you typically pay to park in Reading? Yes No

→ If yes, how much? \$ _____ per _____ (day, week, month)

16. How would you describe the pricing of the parking space you used today?

- No cost, free parking Fair No opinion
 Too high Too low

17. Is the cost of you parking today paid for, in part or in full, by anyone else?

- No cost, free parking Employer pays partial Parking included in lease
 I pay all cost Employer pays full Other (please describe): _____

18. Would you be willing to pay \$0.25 per hour to park directly in front of your destination?

- Yes No

19. Would you be willing to pay a higher hourly fee if you could confidently depend on a space being available directly in front of your destination? Yes No

20. If you ever use different means of travel for downtown trips what other modes do you use AND how many times per week?

- Personal Car Only Commuter Rail, _____ times per week Bike, _____ times per week
 Carpool, _____ times per week Bus, _____ times per week Walking, _____ times per week

21. What means of travel, other than your current primary mode, is the most attractive to you for making trips to downtown Reading?

- Private auto/Carpooling/Parking Bus Walking
 Commuter Rail Bike Will never change current mode

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Downtown Parking - User Survey

On behalf of the Town of Reading, we are conducting a survey of parking activity and preferences. Your accurate responses will help to guide our recommendations to the Town.

YOUR RESPONSE IS VERY IMPORTANT. Please submit your answers one of four ways:

- Leave on your windshield for us to collect;
- Fill out online at http://www.surveymonkey.com/s.aspx?sm=uFfMcXrwPzRDBTdjFCjmw_3d_3d
- Drop off at the Town Clerk's Office; or
- Mail to the address provided at the bottom of the form.

1. *How many times per week do you travel to downtown?*
 Less than 1 day per week 2 to 3 days per week nearly every day
 1 day per week 4 to 5 days per week several times a day
2. *What is your primary purpose for coming downtown today?*
 Work Shopping I live here Commuter Rail
 Dining Errands/Appointments Other (please describe): _____
3. *How many times per week do you travel to downtown for that purpose?*
 Less than 1 day per week 2 to 3 days per week nearly every day
 1 day per week 4 to 5 days per week several times a day
4. *If you ever use different means of travel for downtown trips what other modes do you use? How many times per week?*
 Personal Car Only Commuter Rail, _____ times per week Bike, _____ times per week
 Carpool, _____ times per week Bus, _____ times per week Walking, _____ times per week
5. *How long did it take you to find a spot today? _____ minutes*
→ *On average?* _____ minutes → *The worst day?* _____ minutes
6. *Have you ever failed to find parking?* Yes No
7. *Approximately, how long will you be staying today?* _____ hours _____ minutes
8. *What is the name or address of your destination(s)? _____*
→ *How close to your destination did you park?*
 Right in front / 1 minute walk 5 to 9 minute walk 15+ minute walk
 2 to 4 minute walk 10 to 14 minute walk
9. *Do you always park in the same place or do you search?* Same Space I Search
10. *Are you ever in a rush and forced to park or stand illegally?* Yes No
→ *If yes, where does this occur for you most frequently?* _____
11. *Do you typically pay to park in Reading?* Yes No
→ *If yes, how much?* \$ _____ per _____ (day, week, month)
12. *If you have any other thoughts on parking or parking-related experiences in downtown, please feel free to use the back of this sheet.*

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Appendix B – Open-ended comments

Parking	I think a garage is the best idea, either behind CVS or somewhere else. I don't like the idea of near the senior citizen center.
Business	Downtown needs more businesses to attract people. Sense of Wonder moving was a great loss.
Walking	I usually walk downtown
Roadwork	Woburn st going to main st across lowell st. Is going to be problems. Going north on main st and turning at methodist church to go towards town hall has its problem. Third as you go south main and haven you used to meld two lanes into one. Now no melding across from inside lane sidewalk juts out blocking any meld
Roadwork	As a taxpayer in this town it irks me beyond belief that with all the changes made downtown we still have to squeeze into one lane through the Emperor's Choice/Pizza World blocks. I think it is a travesty. Eliminating all the fancy bricks and widening the road just a little would have been such a relief for the traffic pressures through that area. Very disappointing. I pretty much avoid shopping downtown.
Parking - Employee	Since I live so close it is a real problem to have employees park on the street. Make getting out of the driveway hazardous. Business need a place for their employees to park without getting tickets. Getting tickets in the downtown area around the Holidays, makes people decide to shop elsewhere. This happened to a friend of mine who she ran in to Atlantic for an item.
Parking	Parking Structure locations (other than CVS and Atlantic) should be considered (structures at Town Hall, Sr Center, School parking lots) for shuttling employees, rail commuters, etc. These other municipal properties could be evaluated for having SMALLER impact on neighboring private properties.
Parking - Roadwork	Downtown improvements eliminated parking in front of some stores. Parking plan is terrible as part of new downtown design. Too many islands and unused areas. A lot of the parking issues and lack of spaces are self created by town decisions.
Parking – Detailed Ideas/Questions	1)Commuter Rail overflow parking in neighborhoods clogs streets and obstructs driveways. 2) I like the "Park in central location and walk concept" -- Walkways MUST be improved to be inviting to pedestrians. 3) Shuttle bus to bring locals to Comm Rail (and Seniors/Teens around town) is great idea to reduce volume. 4) I view the Parking "Problem" as one (significant) factor in an overall development plan for the town -- The solution must be integrated into a long term vision which considers the overall Quality of Life for the citizenry. 5) Other than CommRail people, How many come to downtown Reading from surrounding towns? (How many reasons are there for Non Readingites to come to Downtown Reading? If we create some/more, how would that impact future parking needs?
Parking - Business	A parking garage might ease congestion. Our Creative Arts families and students often have difficulty finding parking on Sanborn Street for their classes and lessons. Since we can not currently use the Town Hall Parking Lot, it would be nice to have designated spots in that lot for their use. Also people who park for the commuter rail need more spaces.
Parking - Business	People that work in the downtown are should have a place to park. The parking situation hampers people who have anything other than a retail business.
Parking	The type of parking (backing out) is so dangerous if you can't see what's coming due to a large vehicle parked next to you.
Parking	I park on Pleasant Street past Senior Center. Please keep these spaces available and free.
Roadwork	The road design heading north on Rt 28 at the intersecting streets of Wlaker's Brook and Green are TERRIBLE! There are two lanes which quickly drop down to one lane in front of the Sunoco Gas station and the sidewalk juts out into Main Street. There are NO road signs advising drivers of 'Right Lane for Right Turn Only' or 'Lane Ends, Merge Left'. If you do have to take a right onto Green Street, you have to try to swing out to the left and then make a sharp right onto Green Street, hoping you do not clip a car in the left lane or oncoming on Green Street, or those ridiculous granite pillars boarding the sidewalk. I can imagine that this intersection will end up on the States list of most accidents by side-swiping vehicle heading same direction, oncoming traffic on Green Street, scratched or damaged vehicles from the granite pillars, or blown tires attempting to make the turn. Wait until winter time, what a headache. Or when the first snowplow takes out all those obstacles. Lousy design!
Parking	it's been frustrating to go to CVS only to find the rear parking lot is completely filled, forcing me to drive down Haven St., which also another location where it's generally hard to find parking spots. Of note, Venetian Moon patrons, typically at night, seem to fill all the available spaces.
Parking	The traffic enforcement officer is nothing but a "looking for money" job. He is like a detective waiting for you to be 1 min over the limit. It is a joke - his only purpose is to collect money for the town. His salary and vehicle expenses could well be used for other purposes. The parking after 5 is another joke. The Martini bar takes all the spaces. There are NO spaces for CVS. And now you want to add another restaurant in the same lot. All you think about is the money - never the citizen. More money for the Town Manager to spend on his pet peeve

	projects - nature walks, tennis courts, etc. The roads are falling apart and all he talks about is the recreational projects. Those can wait till after the economy gets better. Thank God the state income tax passed or he would have our tax rate at 10k.
Parking	I feel sadness for business and patrons alike that they each have lost business due to the construction. They will continue to lose business due to even less parking than before. I can appreciate the wonderful changes however, parking was an issue before and it still is, what was/is to be gained by beauty and not brains?
Roadwork	Finish the roadwork on Rt. 28 by Pizza World and the Seafood Restaurant. It's taken all year and it's still not complete.
Parking	I think what you're doing with the street parking on Main Street seems to be an improvement. I'm not sure if there will be changes to Haven Street parking but I never have problems there. The two places I have problems are the parking lots (the one behind CVS and the Town Hall parking lot). Very cramped and hard to get around sometimes.
Parking – Business	a parking garage behind CVS would be a great addition to downtown, it would enable shoppers to shop on Main Street and Haven Street
	Everything seems fine (thank you).
Issue	very difficult to get to CVS, etc
Parking	I have heard discussions of a parking garage. My opinion is a garage would be underused - they are unattractive, inconvenient and scary.
Parking – Disabled	During the winter, it would be nice if the handicap parking spots were shoveled and salted instead of piled with snow and iced over. It's very hazardous for our handicap people and the elderly
Parking – Employees	I have a small business in downtown, but my employees get parking tickets every week. Everyday, they are worried about the tickets, some of them quit their jobs because of that. In order to help the business, I suggested the town give the business two or three free stickers.
Parking	the parking for CVS is very limited during the opening hours of the Venitian Moon Restaurant. I have had to go to other pharmacies due to lack of parking!
Parking	<ul style="list-style-type: none"> • Honestly there is not a problem parking, except for employees • The current 2-hour limit is cause for the employee parking issue • There is no such thing as free parking. In some way, shape or form, we pay for parking. I would much prefer to have a direct pay system in place to encourage better practices • A paradigm shift is required to move away from the "must park within 10 yards of my destination" attitude. To be successful this needs to start with town leadership (town manager, bos, chamber, bus leaders, etc). • Short-sighted attempts to provide parking in immediately proximity of destinations will ultimately lead to failure. • The depot "paid parking" experiment and oversubscription (requiring a lottery) demonstrated that people will pay for parking
Bicycle Parking	More bicycle parking please.
Roadwork	There's plenty of parking. there should be turn lanes at the lights.
Parking Garage	I think a garage on the site of the current town lot (behind CVS etc.) is a great idea, with a very modest fee. Other places I've been have something on the order of 25 or 50 cents an hour.
Parking – Disabled	The handicapped parking needs to be more plentiful, and should be appropriate, i.e., with curb cuts, sufficient loading area, etc. It's currently disgraceful.
Parking	Town should install parking meters top get revenue.
	Tough survey for walkers
Parking	I live and work in Reading and I am in and out of my office frequently during the day. The 2 hour time limit is a real problem for those of us that work in town. I do have parking but it is about 4 minutes from my office and not convenient for someone who is in and out. There is always plenty of parking in the two hour spots and I believe that if you actually work downtown there should be some additional parking sticker that should allow you to park for extended periods in the 2 hour spots. I contribute a fair amount of time and \$ to my town and getting wacked with \$20 parking tickets really bugs me.
Roadwork	I really like the NEW design visually and functionally, it should enhance our area
Parking – Commuter Rail	It would be great if there was more parking in the commuter rail lot.
Parking – Residential	Please put signs on the end of Green Street by Main saying parking for businesses or make it residential parking permit during certain hours.
Parking – Business	There needs to be a few spots in front of CVS, Simms, the Wine Shop etc which are available for people going in for less than 1/2 an hour. Often, I try to give my business to one of these stores only to not be able to find

	parking and then end up going to East Gate for wine, beer, the CVS, pizza etc.
Parking – Employee	As an employer, I paid for the construction of a parking lot for my employees as they were regularly fined for parking in downtown and harassed by residents for parking in front of their homes or businesses.
Parking	after I got a ticket for having lunch downtown and was there 1 hr. and 15 minutes and came out with a ticket (not realizing some spaces were one hour only) I stopped frequenting downtown and even changed my hairdresser
	try parking in Cambridge
	I've never had a problem, but I don't usually try and park M-F between 9 & 5, so it may be different then. I also like to walk. I did not go to town today but the survey made me put a number, so it is useless
Parking – Employee – Business	As a business owner in Reading, I have 2 different issues with parking: 1) employee & 2) customer. While employee parking is provided for the tenants at the M.F. Charles building, there aren't enough spaces for all. I have been forced to park in the CVS lot many times, & have rec'd several tickets as it is difficult to leave my store to move my car during the day. Customers have commented repeatedly that they don't spend much time in the downtown for fear of getting a parking ticket. Many have said they would like to park in the lot & frequent several stores, but don't because they're afraid of going over the 2 hour limit. This isn't good for the downtown businesses!
Parking	The construction and emptying of MF Charles has made parking much easier. Concerned about parking once the downtown settles down. Depot area is difficult during weekdays so I do not bother to look there.