BROCKTON DOWNTOWN PARKING STUDY

FINAL

January 2017

NELSON
NYGAARD

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1 INTRODUCTION

Brockton's success is due to its long-standing status as a business core and regional hub for much of southeastern Massachusetts. As the City develops its master plan and continues to revitalize the downtown area to support both locals and visitors, it recognizes these plans must be supported by smart parking policies in order to be functional and sustainable. An effective parking management plan that helps to strategically maximize existing parking assets, without compromising the character of downtown, will help to support its long-term success.

The Brockton Parking Study began in the fall of 2015 and was a half-year effort to create a comprehensive understanding of the parking system and create strategies to support ongoing growth. The study created a complete inventory of all existing private and publicly owned spaces in downtown Brockton, identified challenges to parking management, and created a program of strategies to support Brockton through future development efforts. The study included conversations with important downtown institutions such as the Health Center and WB Mason, as well as a more general public survey, in order to more fully understand needs for the future.

STUDY PROCESS

The Brockton Parking Authority and Nelson\Nygaard set out to assess quantitative parking data alongside qualitative discussions of how parking functions for actual users. The study began with a count of all parking spaces available in downtown Brockton, as well as a utilization count. In addition, the team conducted interviews and an online survey that reached a broader audience. These two efforts helped the team identify issues and opportunities in the current parking program. A more in-depth financial and land-use based modeling exercise provided additional insights and strategy refinement. The Brockton Parking Authority and its Board reviewed preliminary strategies and guided the selection of the strategies in this document.

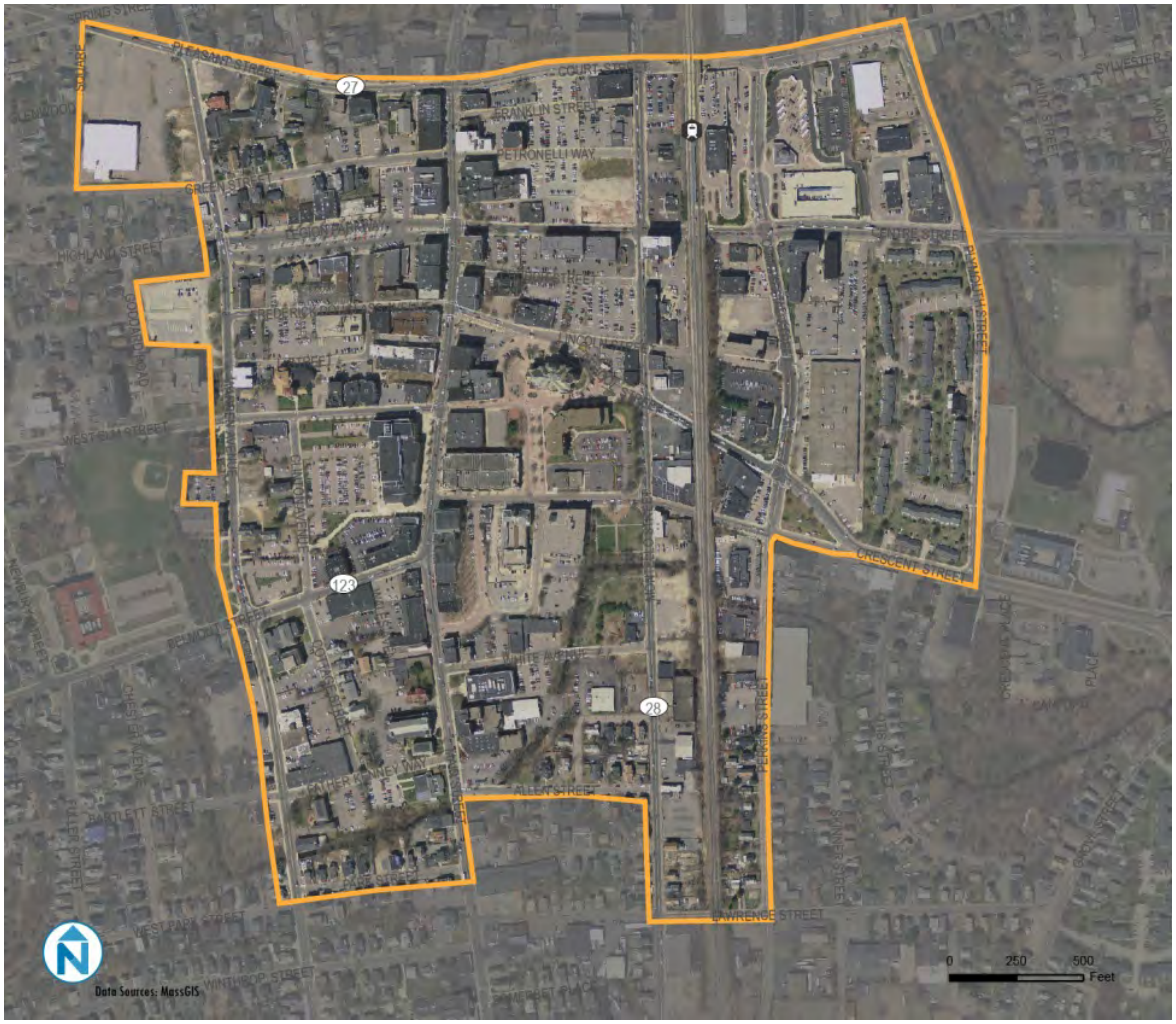
Fall 2015	Project Kickoff
	Parking Inventory and Data Collection
	Stakeholder Meetings and Phone Interviews
	Online Survey
Winter 2015-16	Parking Utilization Data Collection
	Stakeholder Review of Findings
Spring 2016	Preliminary Strategy Development
	Financial and Land Use Analysis
Summer 2016	Final Strategies

STUDY AREA

The Brockton Parking Authority (BPA) guided the study team in selecting the study area for the project, which covers a majority of parking spaces within about 180 acres. As shown below, the study area is generally bounded by:

- Pleasant Street to the north
- Plymouth Street and Perkins Street to the east
- Allen Street, Lawrence Street, and Park Street to the south
- Warren Avenue to the west

The Downtown Brockton study area focuses on the key areas of activity around Main Street, and also includes one to two streets immediately adjacent to the primary areas of interest. Surrounding, often residential, streets are included in the study area to observe any spillover effect of commercial, commuting, and recreational activity.



ABOUT THIS DOCUMENT

This document is a summary of key findings and strategies for the Brockton Parking Study. A series of four technical memoranda supplement this document, including:

- **Existing Conditions:** Parking inventory, utilization, and demand patterns
- **Parking Management:** Assessment of current management practices and how they influence parking patterns
- **Parking Perceptions:** Findings from stakeholder interviews and an online survey related to parking issues in Brockton
- **Land Use and Zoning:** An analysis of current and future parking generation relative to development downtown, as well as a review of current and proposed parking requirements in Brockton's Zoning Code.

KEY FINDINGS

Perceived and Real Parking Shortages

There is no doubt that a perception of full parking exists in Downtown Brockton. The BPA receives complaints, and downtown merchants and City services alike know that customers and visitors struggle with the parking system. However, while many facilities may feel full, there is often capacity right around the corner or at a different time of day. At peak, monthly parking facilities are approximately 60% full (about 300 empty spaces), while other publicly-accessible spaces are around 70% full (just under 200 empty spaces).

Into the near future, significant planned additional developments in downtown Brockton will require access to additional parking supply, which should be provided in a publicly-shared structure.

Rates Do Not Always Match Demand

Rates and parking demand are inconsistent: some of the busiest parking areas in Brockton are free, while there is paid parking in areas that have very low demand. For example, for on-street metered spaces that have the same rates, some blocks are no more than 20% full at peak, while others are consistently 2/3 full. Off-street, the same patterns occur: some of the most desirable off-street parking areas are cheaper than those that are less desirable.

Payment Technology is Not Convenient

Brockton's meters and kiosks are coin and cash only. Visitors and downtown regulars alike are frustrated by having to have change in their possession just to pay the meters.

Permit Program is Challenging

Today's permit program is difficult to administer and use. For the BPA, it manages more than 20 small, scattered lots individually. The system is structured to be inefficient to manage, as the small BPA staff must match up the number of permit holders to the number of spaces in each lot, and empty spaces remain throughout the day in lots that are then only open to specific users. The permit system is also inefficient for permit holders, as they are restricted to parking in a

particular lot, purchasing passes is a manual and monthly process, and the actual permit is a paper-based ticket that must be visible in the vehicle.

High Rate of Driving

92% of respondents to the Brockton Parking Study survey indicated that they drive alone to Brockton, while the census reports that 84% of those coming to Brockton drive alone. This auto-dependent culture increases vehicle parking demand. In contrast, Brockton's short blocks and sidewalk/crosswalk coverage should encourage more travelers to walk, bicycle, and/or take transit in the near future. Already a high rate of internal capture (walking between uses) is observed in Brockton, reducing observed parking demand from what might be seen in a suburban context because downtown employees and residents are walking to local-serving uses.

Regulations and Enforcement are Not Customer Friendly

For customers hoping to stay downtown for more than two hours, the Lincoln Lot and Adams Garage are the only locations downtown available. The time limits are essentially telling visitors to leave, rather than stay and patronize local businesses, come to meetings, or otherwise contribute to a vibrant downtown. Throughout the study, the BPA indicated that it wanted parking to become more user-friendly and welcoming.

Information is Not Readily Available

BPA lot signage has a consistent color scheme, but is not always visible to drivers. In contrast, wayfinding signage around town is limited and does not direct parkers to large parking facilities such as the garage. In addition, some posted regulations conflict with one another.

Safety Perceptions Limit Walking

Stakeholder interviews, the project survey, and the Brockton Urban Revitalization Plan found that safety on the streets is paramount. If people are afraid to walk, they may choose to drive instead, even short distances between locations, adding to traffic and parking crunches.

Infrastructure Limits Walking

Related to safety, not all of Brockton's walking infrastructure is in good repair. Some sidewalks are cracked or uneven, while crosswalks have worn away.

Zoning Does Not Support Compact Development

Current zoning standards require high ratios of parking spaces to active uses. This leads to suburban-style development patterns, which in turn create safety issues as pedestrians walk by parking lots instead of storefronts and offices.

Governance of Parking is Scattered

Currently, the Parking Authority must obtain approval from the Traffic Commission to adjust on-street parking regulations. This leads to other issues, such as signage inconsistencies.

2 STRATEGIES

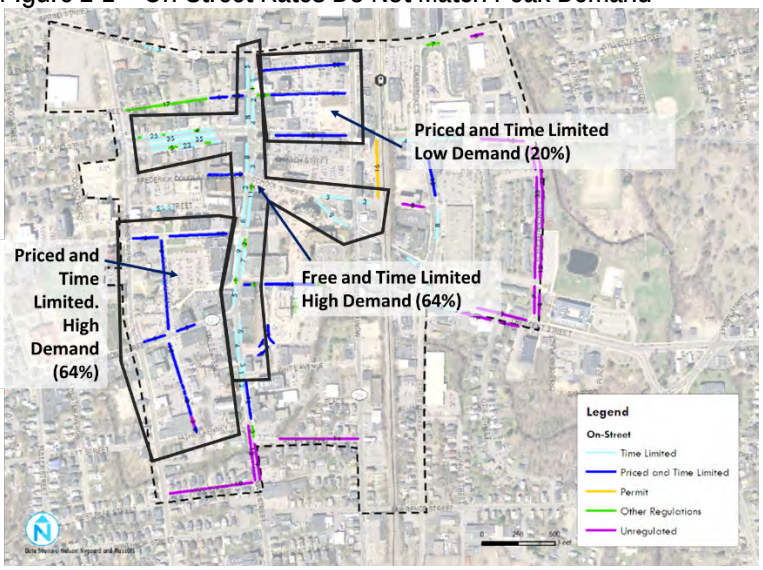
Based on the study findings and in close collaboration with the Brockton Parking Authority, the Nelson\Nygaard team developed a series of strategies to create a customer friendly parking system that will support downtown as it evolves. The strategies were developed to directly address the major challenges identified throughout the study.

MATCH RATES TO DEMAND

WHY DO IT?

In support of local business and fostering a strong economic climate downtown, the City should adopt several strategies to create availability in the areas that have the highest demand, while recognizing the value of parking in those areas. Currently, areas that are in high demand such as the Lincoln Lot or on-street parking by the Courthouse are priced the same way or very similarly to less desirable locations. In contrast, there are parking facilities both on- and off-street that are underutilized and have capacity throughout the day. A more efficient pricing system will lead to more efficient use of all of the parking in Downtown Brockton.

Figure 2-1 On-Street Rates Do Not Match Peak Demand

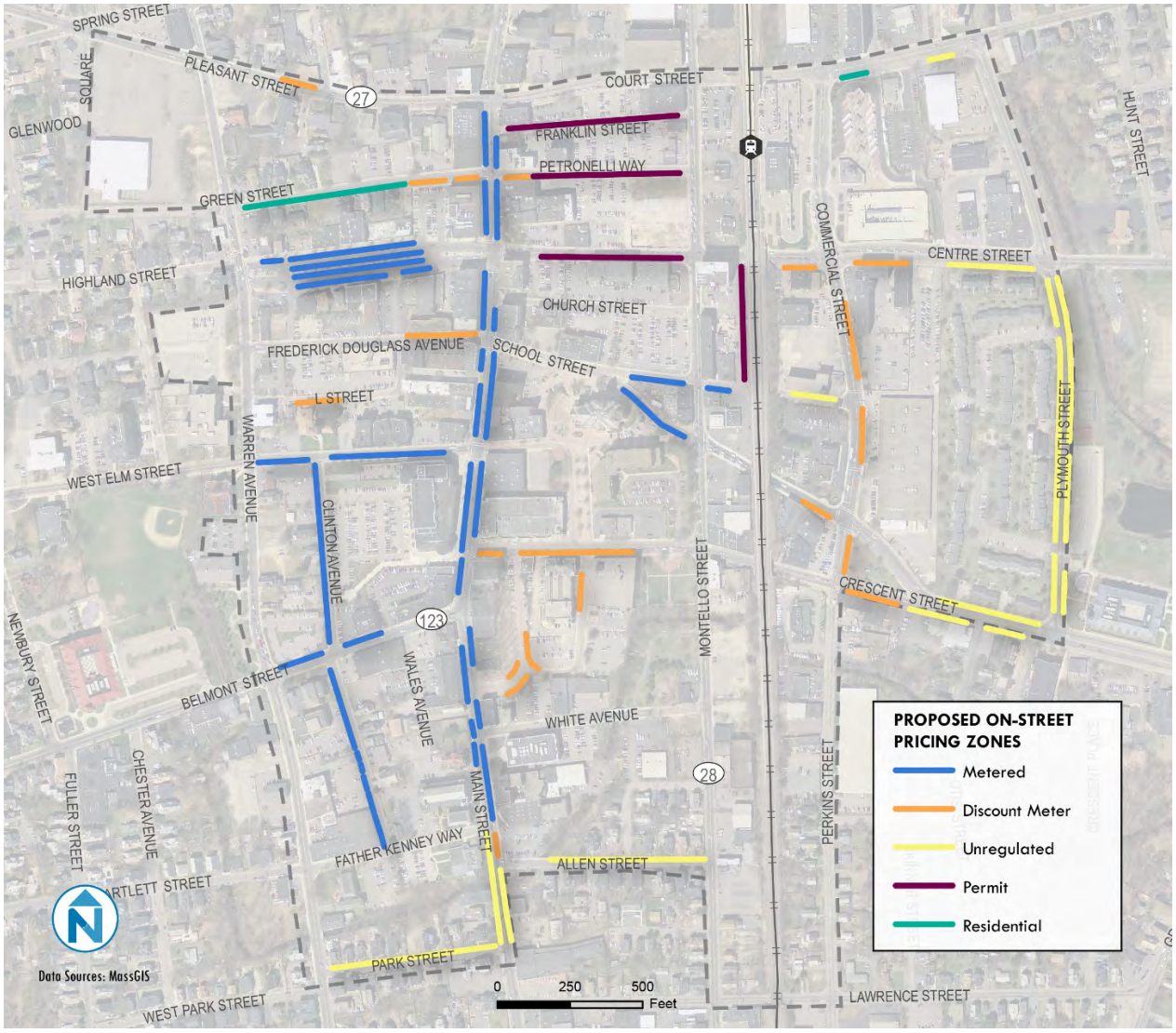


HOW WOULD THIS WORK?

On-Street

- **Set price to match demand.** Consider reducing the price of spaces that have less demand to provide a choice for drivers. To encourage greater parking space availability and increase turnover, rates should be introduced or raised in high demand areas such as:
  - **Legion Parkway.** Legion Parkway should be priced to reflect its high demand throughout the day. Install kiosks or meters on Legion Parkway.
  - **Main Street.** Install kiosks or meters on Main Street.
  - **Consider lower rates at "value meters" in underutilized areas**. Metered spaces that are currently underutilized should be "discount" spaces at reduced prices with no time limits.
- **Rely on price, not time limits.** Remove time limits from all on-street spaces.
- **Change some metered spaces to permit spaces.** Underutilized metered spaces near employment centers can serve as additional permit parking to alleviate the perceived parking crunch.
- Use **"smart meters**" that allow monitoring of utilization as pricing changes go into effect

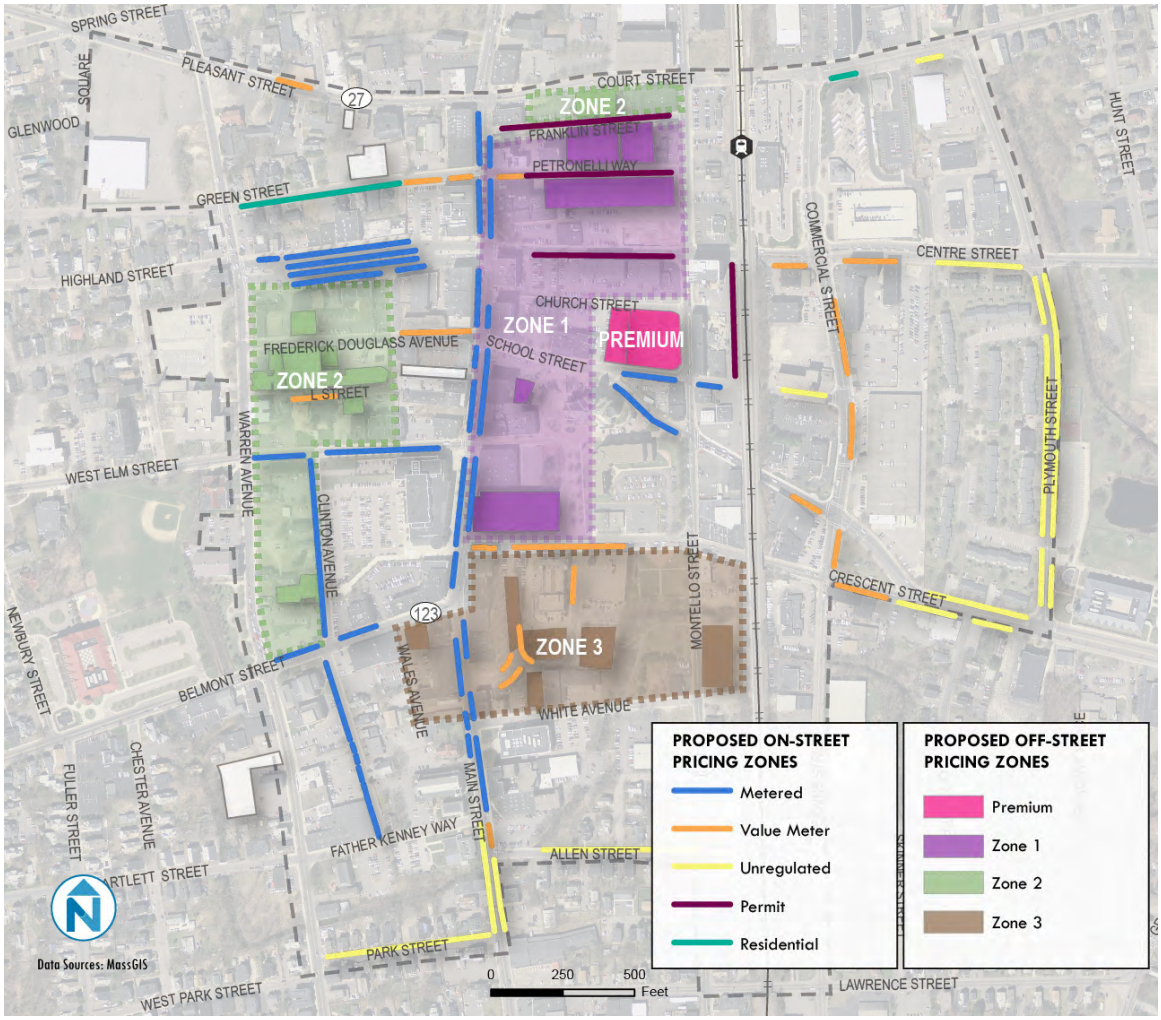
Figure 2-2 Proposed On-Street Pricing Zones



Off-Street

- **Set price to match demand.** Publicly owned facilities that are in higher demand should have higher rates. Lots can be broken into four zones, and to help make the system comprehensible for users, the zones follow utilization patterns as well as being geographically close together:
  - Premium: The Lincoln Lot is clearly a premium location, as it reaches capacity at peak utilization hours. In addition, it is a key lot for visitors, with easy access to destinations such as City Hall or WB Mason. Thus, permit pricing should encourage visitor parking in the Lincoln Lot instead of longer term employees.
  - Zone 1: Lots that are in prime locations relative to key destinations such as the Courthouse and employment centers.
  - Zone 2: Lots that are currently less well-utilized throughout the day but are still close to important destinations.
  - Zone 3: Lots in the lowest demand bracket, including the underutilized Montello Lot. These less expensive permits will encourage use of these underutilized resources.
- **Consider moving permits out of Lincoln Lot**. The Lincoln Lot is consistently full throughout the day, and is the most visible to visitors. In contrast, other permit lots have capacity throughout the day.
- **Implement other permitting improvements.** (p. 2-9) An increase in services will mitigate potential issues with price increases.

Figure 2-3 Proposed Parking Zones



COST + IMPLEMENTATION STEPS

Timeline	Steps	Cost Estimates
Immediate	Vet recommendations with public	$
	Coordinate on-street regulatory changes with Traffic Commission	-
	Evaluate and prioritize zonal boundaries	-
Short-term	Public education campaign on parking changes	$
	Order + install equipment, including pay-by-cell in metered areas	$$$
	Continue to notify public of parking changes	$
Long-term	Monitor demand quarterly (at minimum)	$
	Adjust regulations, including rates, to create availability as needed	-

USE TECHNOLOGY FOR CUSTOMER SERVICE

WHY DO IT?

Existing payment technology is outdated and requires users to have exact change on hand, pressures which can deter customers from visiting downtown.

Since meters were introduced nearly a century ago, parking management technology has advanced to create a more user-friendly customer and visitor parking experience, allowing use of credits cards and payment by mobile phone. For customers with a mobile parking app, one can pay for their parking when they are still in their cars upon arrival and one can extend their parking reservation remotely via text message. Upgraded parking technologies can also make operations easier by providing capacity to monitor and evaluate parking demand and by streamlining the efficiency of parking enforcement personnel.

Figure 2-4 Existing Payment Technology is Outdated and Requires Exact Change

HOW WOULD THIS WORK?

Mechanisms

- **Smart Meters** are single-head meters, with one meter per parking space. These meters accept credit cards, debit cards, and coins. These meters can be connected to a back-end software that provides real-time and historical utilization information.(Figure 2-5)
- **Kiosks** serve approximately 8-10 spaces on-street with one machine. There are many versions, such as pay-by-zone, pay-by-plate, or pay-by-space. Kiosks should also accept all forms of payment and provide real-time occupancy information, including in the Adams garage (Figure 2-6).
- **Pay-by-cell** works as an additional layer on either smart meters or kiosks. Users can sign up for an account and quickly pay for parking on a smartphone app or by calling a provided phone number. The app also allows users to extend time remotely (Figure 2-7)

Figure 2-5 Smart Meter

Figure 2-6 Smart Kiosk

Figure 2-7 Pay-by-Cell

COST + IMPLEMENTATION STEPS

Timeline	Steps	Cost Estimates
Immediate	Review and select pay-by-cell vendor	$
	Publicize pay by cell option	-
	Review technology options and specifications; Draft and release RFP	$
	Install pay-by-cell in currently metered areas	$
Short-term	Remove meters in underutilized spaces	$
	Vendor selection	-
	Order + install equipment, including pay-by-cell in newly metered areas and credit card capable meters in existing metered areas both on- and off-street (Such as the B Lots and Adams Garage)	$$$
	Evaluate LPR enforcement technology	
Long-term	Implement LPR enforcement	$$$
	Evaluate use of technology and update as needed	

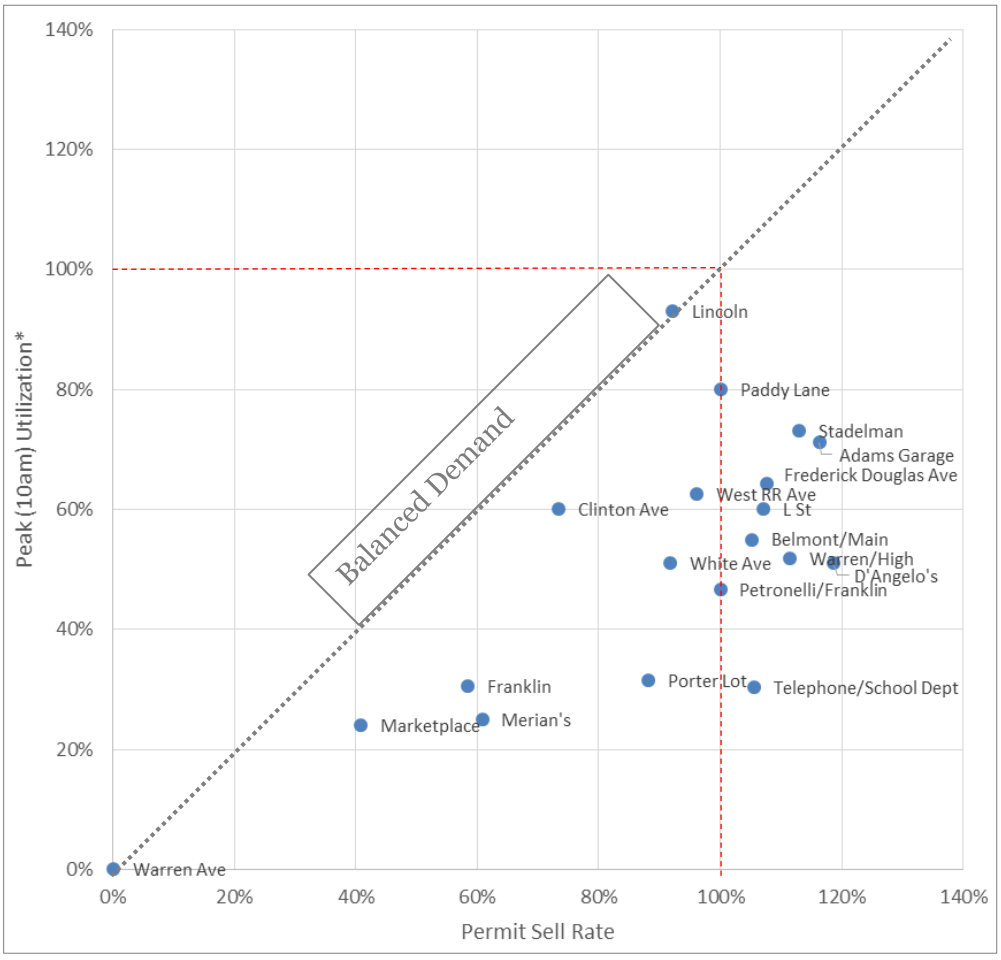
STREAMLINE PERMIT PROGRAM

WHY DO IT?

Brockton's current permit issuing process is time-intensive to administer and inconvenient for most permit holders. The myriad of small lots with permits assigned to each lot creates a significant workload not only for the Parking Authority, but also for employers purchasing these permits for employees. In addition, it limits permit holders in where they can park, which is not an efficient use of resources.

In addition, the permit program pricing does not reflect demand. Permits are priced very low relative to other paid parking, such that buying a permit makes sense if one parks more than a few days per week. This leads to high oversell ratios, which are confusing to administer and understand. Figure 2-8 shows permit sales v. utilization; only the Lincoln Lot has a smart balance of permits sold to cars parked. Permits are also mostly a flat rate relative to one another, although some areas are in much higher demand.

Figure 2-8 Permit Oversell Rate versus Utilization



HOW WOULD THIS WORK?

Zonal Parking Permit System

- **Manage permits in a zonal system** that allows registered vehicles to park anywhere in the zone of their choice (Figure 2-9)
- **Make permits available to purchase online.** As rates increase, so should customer service, Permit holders should be able to buy permits online, which will ultimately create a cost savings in staff time (Figure 2-10).
- **Move the permit system from paper to license-plate based.** Although in the short-term it may make sense to continue using paper permits, ultimately, permits should be registered by license plate, and enforcement should use handheld or vehicle mounted LPR for efficiency (Figure 2-11).
- **Continue to monitor individual lots.** When permit holders are given more choice in where to park, more lots may emerge as "premium" while others are less desirable. The BPA should adjust rates accordingly to most efficiently create availability in the system.

Figure 2-9 Potential Zonal Parking Permit System

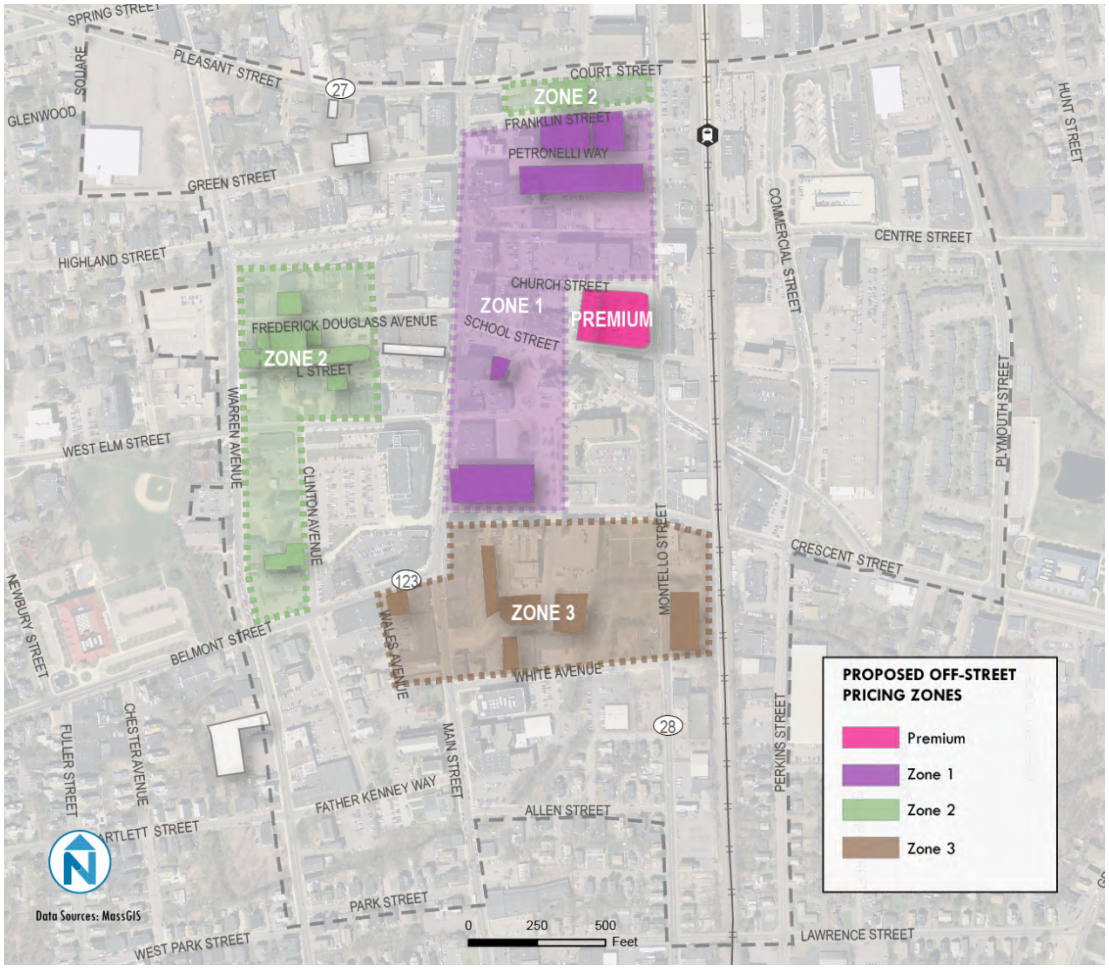


Figure 2-10 Hoboken, NJ Online Permit System

Figure 2-11 Digital Permit Enforcement Using License Plate Recognition (LPR)

COST + IMPLEMENTATION STEPS

Timeline	Steps	Cost Estimates
Immediate	Review + refine proposed zones and prices	-
	Research + meet with online permitting system vendors, including Tyler Technologies to see if system can be integrated with other City functions	$
	Notify permit holders of schedule of upcoming changes	$
Short-term	Select + implement online permit vendor, including credit card capability for monthly permitting.	$$
Long-term	Implement zonal pricing increases	-
	Switch from paper permits to LPR	$$
	Continue to monitor individual facility usage and update regulations as needed	$

ADD PARKING

WHY DO IT?

Additional parking will be required as parking demand expands with new planned developments and expansion of existing businesses. Many of these developments will replace existing parking lots and create a compact and dense core of development north of City Hall. With this increase in development intensity, the City should provide additional parking supply and manage it as part of the larger publicly-accessible system. Each use generates demand at different times of day, and having these spaces available to all users will be the most efficient use of spaces in the new downtown Brockton.

To expand supply, the City should pursue additional on-street supply as well as structured parking. Existing demand, anticipated new immediate demand, and the loss of some existing supply will necessitate additional parking supply in the short-term within the northern part of downtown. This will require structured parking to accommodate the new planned development underway as part of the Transformative Development Initiative. Adding new on-street supply also will be essential as it eaily expands publicly-accessible parking while providing low-cost traffic calming on downtown streets to encourage more walking. A planning-level analysis of the curb-to-curb right of way in downtown Brockton shows that there is potential to accommodate up to 450 more spaces on-street.

HOW WOULD THIS WORK?

Pursue Structured and Shared Parking Supply

The northern half of the Study Area has several existing sources of parking demand that will remain as the construction of new planned developments with additional future demand moves forward. There are two critical surface parking areas for this district—the lots along Petronelli Way and the Lincoln lot—much of which will be removed from the available supply for permit holders, forcing a need for additional parking supply.

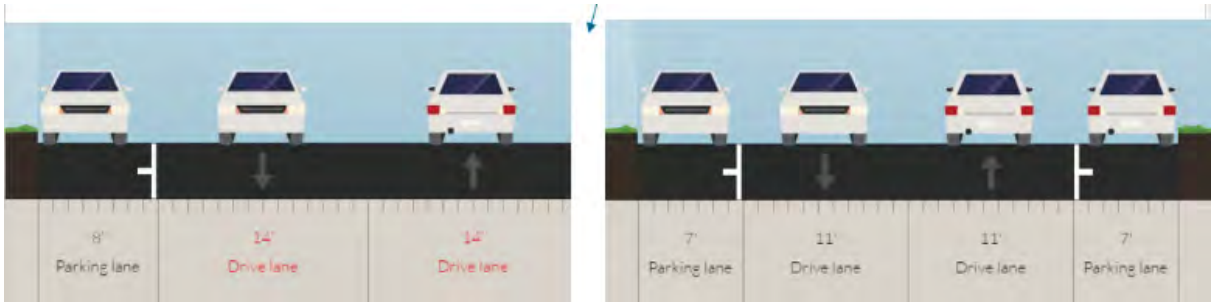
A 474-space garage is proposed as part of the TDI development, and it should be pursued in the short-term to accommodate parking needs from changes to the parking system, expansions of existing local businesses, and to support the first phase of TDI development—all of which are expected to exceed existing nearby parking supply by 40-percent without a garage. It is recommended that this or any other new supply be managed and sized correctly to reflect the nature of shared parking in downtown Brockton. Downtown Brockton already demands (and will continue to demand) less parking than traditional zoning standards would normally expect as a result of natural internal capture and other shared parking effects common in mixed-use downtowns. Details about Brockton's shared supply and the short-term need for a garage can be found in Technical Memorandum 4.

Add On-Street Parking

- **Work with the Traffic Commission to evaluate streets that could accommodate new parking.** The Traffic Commission is tasked with public safety and may place restrictions on certain streets. Starting with the streets listed in this report, a systematic review of street widths and traffic volumes may reveal places where the on-street supply could easily be increased.
- **Work with Traffic Commission to stripe and sign new on-street parking**. New on-street parking spaces could start as unregulated spaces.
- **Begin evaluation to stripe and regulate 7 or 8' parking lanes, or almost 450 total parking spaces**: Petronelli Way, Franklin Street, Church Street (Figure 2-13), Frederick Douglass Avenue, School Street, Crescent Street, Montello Street, Belmont Street, White Avenue, Bartlett Street
- **Manage spaces to meet demand.** New spaces should ultimately be integrated into larger demand-based pricing system.

Figure 2-12 Opportunities to Add New On-Street Parking

Figure 2-13 Opportunities to Add New On-Street Parking



Today **Concept**

COST + IMPLEMENTATION STEPS

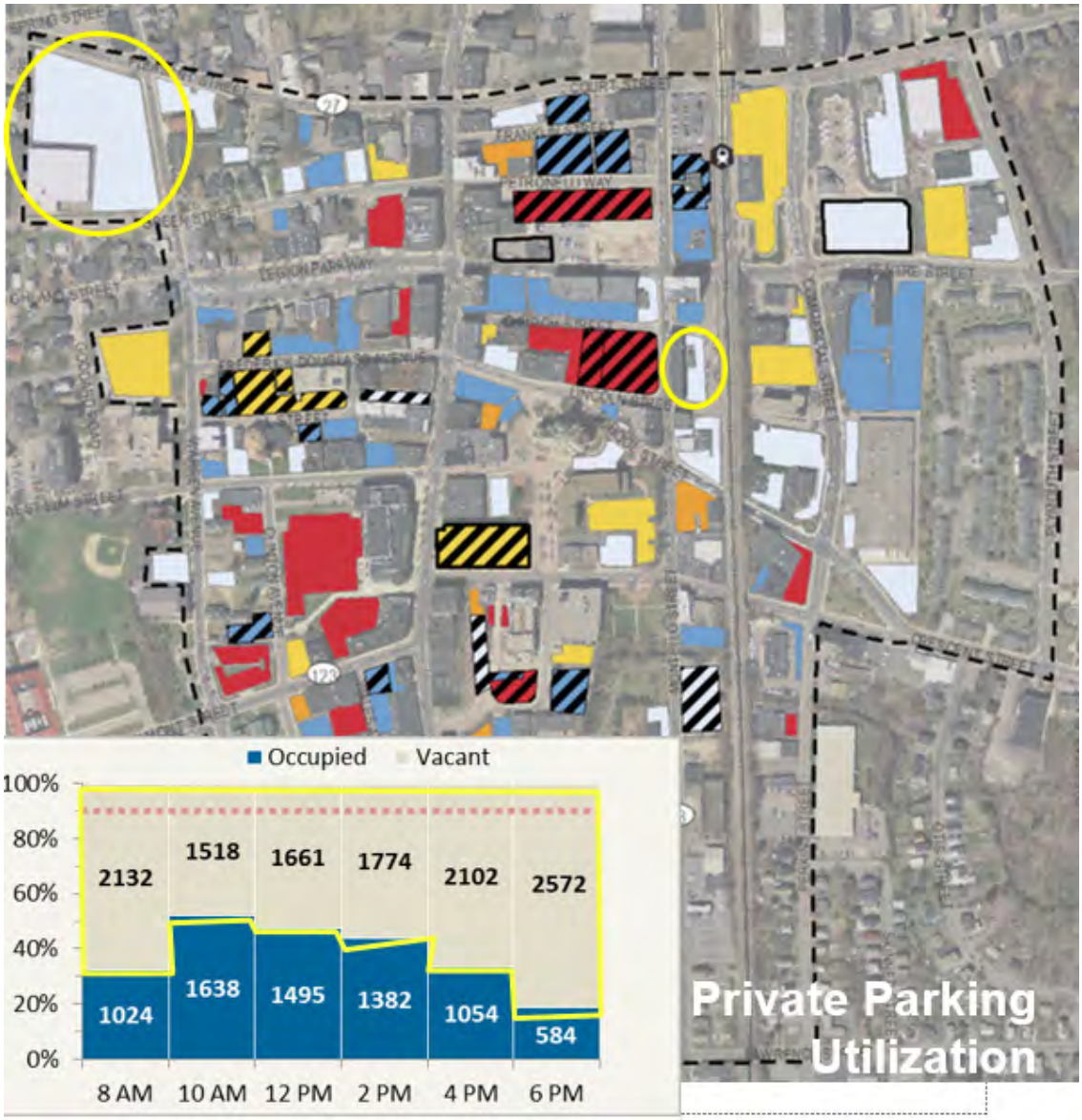
Timeline	Steps	Cost Estimates
Immediate	Evaluate identified on-street spaces with Traffic Commission	-
	Focus on Franklin Street / Petronelli Way / Church Street to alleviate perceived permit parking crunch	-
	Draft striping plans and determine appropriate regulations	-
Short-term	Pursue shared, publicly available structured parking to support new development and to replace parking lost as a result of building on existing lots.	$ - $$$
	Work with Traffic Commission to stripe new spaces	-
	Evaluate use of new spaces and adjust regulations as needed	-
	Prioritize other areas in high demand to add more on-street parking	-
	Draft additional striping plans and determine appropriate regulations	-
Long-term	Monitor use of new spaces and adjust regulations as needed	
	As spaces are added, update public-facing materials and parking map	

BROADEN MISSION OF PARKING AUTHORITY

WHY DO IT?

A variety of departments and decision-making bodies in the City govern different parts of parking, necessitating a high level of coordination to carry out parking-related initiatives. For example, for the BPA to change on-street regulations requires a meeting with and approval by the Traffic Commission. With more autonomy, the Parking Authority could more quickly and proactively manage parking as a system based on data, while still reporting to and being held accountable to authorities such as the City Council and the Traffic Commission.

Figure 2-14 Potential Shared Parking Arrangements and Availability Throughout the Day in the Parking System



HOW WOULD THIS WORK?

Expanded BPA Initiatives and Goals

- **Adopt a parking availability goal.** An availability goal such as 85% occupancy per block or one to two open spaces per block would clearly show that the BPA is working to improve parking availability instead of revenue. This goal could be incorporated in an ordinance or formally adopted by the BPA board. (see sample ordinance languages in Appendix A)
- **Amend code so that BPA sets rates and regulations.** Currently Brockton's Code of Ordinances allows the BPA to set on-street rates but not regulations. To enable the Authority to properly manage parking, the BPA should be able to do both in service of an adopted availability goal.
- **Work with City on Pilot TDM Program.** The BPA is well-positioned to understand the cost of providing parking as compared to other services. As a pilot, the BPA should work with the City to implement a cash-out program for 500 City employees that currently receive a parking permit. Depending on contract negotiations, this could start quite simply, where the BPA offers employees the option to receive the money the City puts toward passes in cash rather than accepting the parking pass.
- **Expand Proactive Management of Shared Parking Program.** At the busiest time of day, 1,500 spaces sit empty, although not all are currently open to the public (Figure 2-14). The BPA currently seeks to lease parking spaces that are underutilized and should continue and expand using the data collected for this study.
  - **Pursue parking for Health Center Employees at Vincente's.** As Legion Parking goes to priced parking, employees will seek a lower cost alternative. The Vincente's supermarket has availability throughout the day and could easily be employee parking. The BPA could manage permits to limit occupancy.
  - **Keep agreements on file**. One obstacle to shared parking can be apprehension about agreements. However, if the BPA had templates "ready-to-go" that property owners could sign with one another or with the BPA itself, it would lower that obstacle to implementation (See Appendix B).
- **Increase Staffing Levels**. The BPA currently operates with three full-time employees, as well as four part-time PCOs. To coordinate all of these efforts, the BPA will need additional staff time.

CASE STUDY:
Plymouth, MA Parking Authority

Park Plymouth manages public parking lots and on-street parking for the Plymouth Growth and Development Corporation (PGDC) – a quasi-public corporation funded by parking revenues. PGDC supports economic development in Plymouth by:

- Partnering with GATRA (the local transit agency) to develop the Plymouth Multimodal Center; funding has not yet been secured for this project
- Investing in bike racks, a new parking lot, feasibility studies and contributions to local events
- Pursuing TDM strategies that take parking pressure off the downtown core

COST + IMPLEMENTATION STEPS

Timeline	Steps	Cost Estimates
Immediate	Meet with Traffic Commission to review Parking Study Goals (expanded mission, Availability Goal, etc.)	-
	Work with Traffic Commission to amend code	-
	Adopt new goals, including Availability Goal, which allows BPA to set rates and regulations on- and off-street	-
	Develop library of sample shared parking agreements	-
Short-term	Pursue shared parking opportunities in areas with parking crunch	-
	Increase staffing levels for parking management	$$
	Meet with City Human Resources, Transportation Coordinator, BAT, and OCPC to discuss TDM opportunities	-
	Enter into new shared parking agreements and add municipal regulations as needed	$
Long-term	Evaluate other municipal TDM programs for employees	-
	Adopt cash-out policy for City employees	$$
	Evaluate shared parking agreements and refine as needed	

FOSTER A CUSTOMER-FRIENDLY APPROACH

WHY DO IT?

Brockton, like many communities, has a parking management system that relies on enforcement to ensure compliance with regulations. The system tells visitors, employees, and residents alike where they cannot park, rather than where they can. Meanwhile, many employees and other regulars know how to shuffle their cars while visitors get tickets and the impression of an unfriendly system.

Instead, the BPA should take a Customer Friendly approach, built on a foundation of management for availability. Improved enforcement, including information as well as a simple street presence, can help downtown Brockton feel more welcoming to all. This will help the City meet its broader Parking Management Goals rather than focusing on compliance. Parking officers can also be part of the solution to address safety issues as they represent additional eyes on the street.

HOW WOULD THIS WORK?

- **Adopt a compliance goal.** The BPA could formally or informally adopt a goal that looks at increasing compliance while reducing violations in contrast to a traditional approach of increasing revenue.
- **Consider a "First Ticket Free" policy.** Warnings, accompanied by information about cheaper/longer-term parking availability, for a driver's first offense per calendar year will create a friendlier atmosphere for infrequent visitors.
- **Equip Parking Control Officers (PCOs) to be "Ambassadors."** Having future PCOs carry maps and other visitor information (Figure 2-15), wear a uniform that includes some branding, and/or train with local police can all help foster an image as Ambassadors rather than ticket-writers. This will also leverage the PCO presence on the street to help increase the perception of safety.

Figure 2-15 Example Information Provided on a Parking Violation Warning (Redwood City, CA)

COST + IMPLEMENTATION STEPS

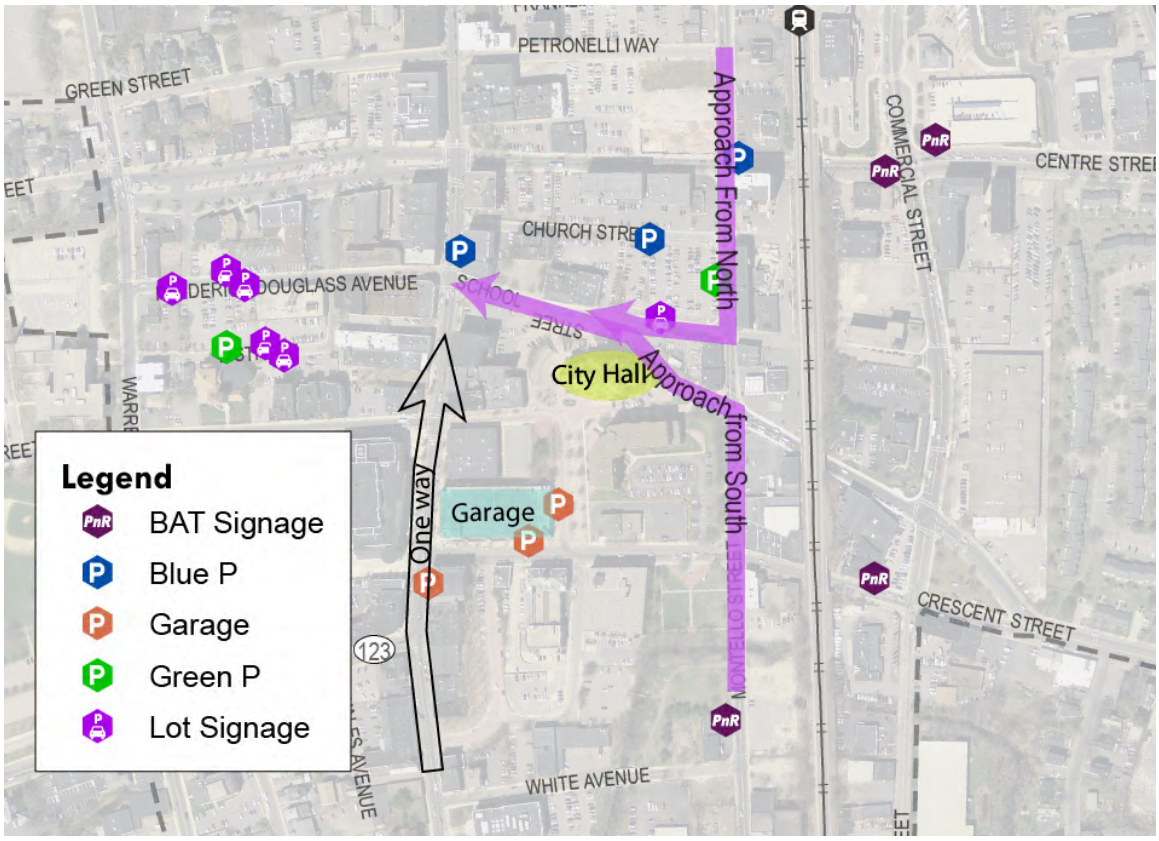
Timeline	Steps	Cost Estimates
Immediate	Discuss plan goals with current PCOs and solicit suggestions	-
	Draft updated PCO policy	-
	Discuss First Ticket Free policy at BPA meeting	-
	Draft and discuss additional staff position at BPA meeting	-
Short-term	Train PCOs on parking changes (technology and permits)	-
	Increase staffing levels for parking management	$$
	Budget for additional materials (i.e. paper maps of parking, updated uniforms)	$
	Prepare for PCO training programs	-
Long-term	Integrate police classes with PCO training	-
	Adopt First Ticket Free policy	-
	Integrate First Ticket Free policy with updated enforcement equipment	$
	Continue to coordinate with PCOs for management feedback and review	-

PROVIDE COMPREHENSIVE INFORMATION

WHY DO IT?

Parkers behave in response to how parking is managed, and signage and information plays a big role in parking comprehension. Easy to read and understand parking and wayfinding signage is a critical component of deciphering a parking system. Signage that guides motorists to on- and off-street parking deters drivers from excessive cruising and frustration. Currently, signage in Brockton is not clear. Figure 2-16 shows how someone driving into Brockton might approach City Hall (marked with a yellow star). By the time they have driven past it and found the Lincoln Lot full, it is a very circuitous route to the garage and not signed.

Figure 2-16 Current Signage Does Not Direct Drivers Early Enough

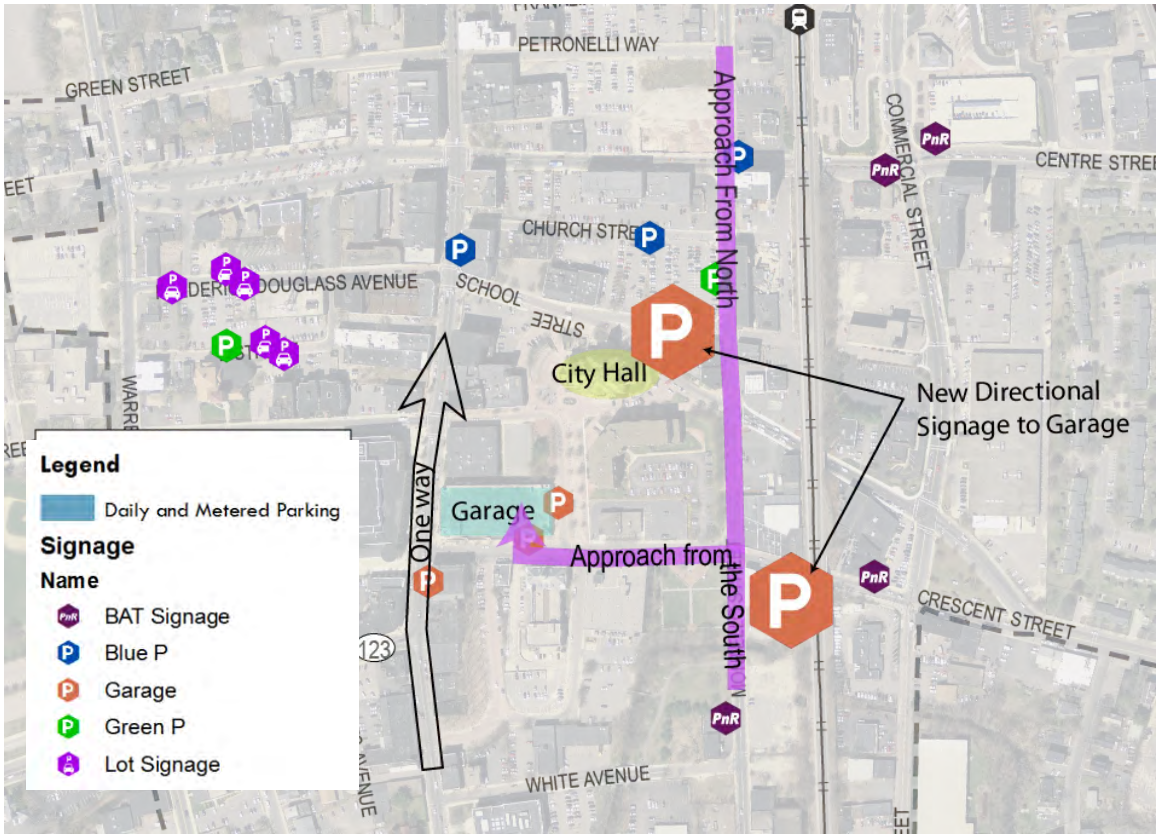


HOW WOULD THIS WORK?

In general, signage and information falls into three categories: before arrival, at arrival, and during the downtown stay.

- **Provide information before arrival.** Several facilities, such as the YMCA, courthouse, and MBTA, provide parking information online for those traveling to Brockton. The BPA should provide one consistent source online and in print for parking information, including rates, a GPS-friendly location, and suggestions for discount parking locations.
- **Provide clear and consistent information at arrival.** For example, all parking wayfinding signage should use a consistent color scheme such as the "blue P" that communities nationwide have adopted.
  - **Signage should direct drivers to large public facilities.** The one-way network in Brockton can make accessing public parking difficult, particularly for those who do not know the area. Figure 2-17 shows suggested locations for new signage directing those visiting City Hall to the Adams Garage.
- **Provide pedestrian-level information.** Wayfinding signage scaled for people walking can help those who have parked find multiple destinations with ease.

Figure 2-17 Additional Signage to Adams Garage



COST + IMPLEMENTATION STEPS

Timeline	Steps	Cost Estimates
Immediate	Create online parking map and information summary with locations of businesses and attractions	-
	Confirm and map locations of existing signage	-
	Distribute online parking map to merchants and others to link to from their websites	-
	Determine number and location of new directional, regulatory, and information signs	
Short-term	Update parking map with new regulations	-
	Develop consistent look and feel for wayfinding signage	-
	Install new signs	$
Long-term	Work with Traffic Commission to print and install new wayfinding signage	$
	Work with Traffic Commission on maintenance plan for signage	$
	Update parking map with new regulations	-

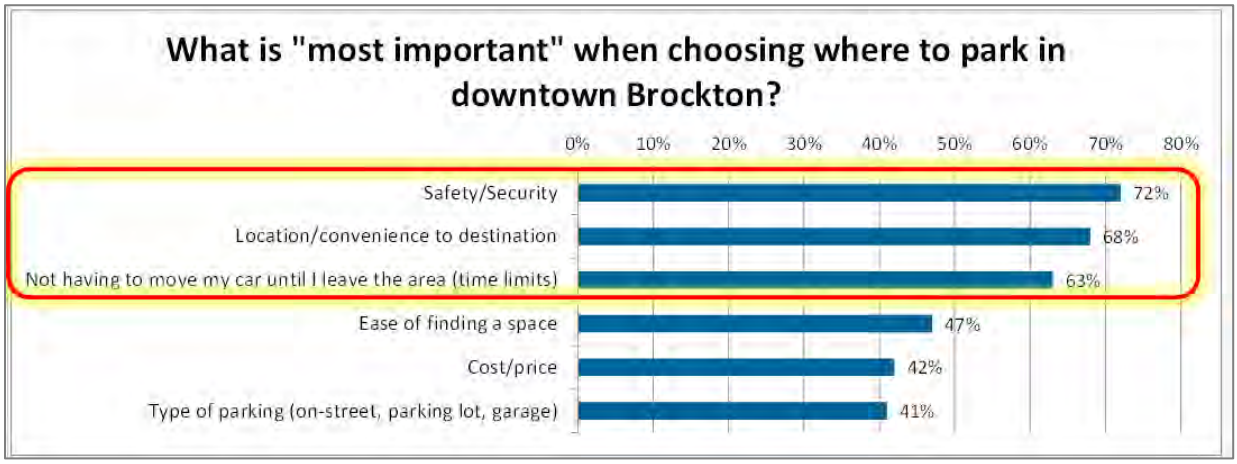
CREATE A MULTIMODAL DOWNTOWN ENVIRONMENT

WHY DO IT?

Parking is not just about parking: it is about getting from the car to your destination or destinations, and then back to the car. In downtown Brockton, the City should explore improvements to the walking environment to encourage a more connected network and more pedestrians on the street, which in turns helps others feel safer. Another important benefit of a more connected pedestrian network is that parking facilities are in closer proximity to the driver's destination.

Encouraging walking, cycling, and transit can help alleviate parking crunches and encourage street life. These improvements help to create a "park once" environment where people park their car and visit multiple destinations on foot, thus effectively reducing the number of parking spaces required to support activity downtown. Relatively small infrastructure investments such as secure bicycle racks encourage and welcome people to travel by bicycle, while improved crosswalks can extend the reach of transit as riders feel safe walking to and from stops.

Figure 2-18 Parking Priorities of Parking Study Survey Respondents



HOW WOULD THIS WORK?

- **Work with OCPC to integrate parking locations in pedestrian-level wayfinding.** Pedestrian-level signage should help facilitate a "park-once" environment by helping pedestrians find their way back to their vehicles.
- **Consider funding lighting, crosswalk improvements, or other repairs with parking revenues.** Lighting the Montello lot that currently goes completely unused could activate it as a viable remote parking option.
- **Use parking revenues to fund streetscape and sidewalk improvements, bicycle parking, and other multimodal facilities.** Provision of secure bicycle racks shows that the City is welcoming to bicyclists and may encourage travel by bicycle instead of by personal vehicle, thus alleviating the parking crunch.

COST + IMPLEMENTATION STEPS

Timeline	Steps	Cost Estimates
Immediate	Meet with OCPC to integrate parking locations onto pedestrian-level map	-
	Assess + determine potential catalytic pedestrian improvements	-
	Evaluate legal uses of parking funds	-
	Create prioritization plan to invest parking revenues in downtown	-
Short-term	Work with Traffic Commission to prioritize and restripe crosswalks	-
	Use parking revenues to fund transportation-related improvements	$$
	Work with City on two-way downtown traffic circulation	$
Long-term	Use parking revenues to fund transportation-related improvements	$$

USE ZONING CODE TO SUPPORT DOWNTOWN

WHY DO IT?

Zoning codes directly impact parking by requiring its construction and often design based on building use. This in turn has impacts on the viability, cost, and form of proposed developments in a community. For example, a coffee shop in Downtown Brockton might not require as much parking as one in a more suburban area, but zoning code limitations could require this expensive addition and limit the active use of the parcel. As downtowns evolve, the level and mix of uses change; parking demand must continually be reevaluated.

The Brockton Planning department is proposing some updates to the Revised Ordinances.[1] As of winter 2016, these proposals were still pending at City Council.[2] The proposals include a range of changes to zoning as a whole as well as in special districts, some of which are key to parking in Brockton. Generally, these ordinances will update zoning provision to reflect Brockton's mixed-use, walkable downtown.

There are some additional changes that could potentially be integrated in the zoning to reflect a more progressive approach to parking provision. These are detailed in Technical Memorandum 4: Land Use, Zoning, and Future Demand, while this section provides a summary.

HOW WOULD THIS WORK?

- **Adopt the Proposed Ordinances**. As written, the proposed ordinances would be beneficial in that they allow reduced parking minimums and increased flexibility for developers in the Smart Growth Overlay district.
- **Consider adopting 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.
- **Expand shared parking abilities.** Increase the walking radius for shared parking from 600 to 1,000 feet. Also, amend zoning language to allow consideration of public parking (on- or off-street) as part of shared supply.
- **Include Transportation Demand Management measures.** Parking provision for car-share vehicles, bicycles, and other TDM standards can encourage fewer vehicle trips, in turn requiring less parking and allowing for more active uses.

[1] Per email from Rob May, 12/22/2015. Nelson\Nygaard reviewed a version titled, "Zoning Text Amendment September 2014"

[2] Per Urban Revitalization Plan Draft 12/23/2105, p.22

COST + IMPLEMENTATION STEPS

Timeline	Steps	Cost Estimates
Immediate	Support adoption of Proposed Ordinances through a memo signed by BPA Board	-
Short-term	Review other zoning codes for best practices related to shared parking and TDM measures	
	Draft Ordinance amendments	-
	Work with City on adopting proposed ordinances	
Long-term	Adopt Ordinance amendments to extend shared parking, parking maximums, and other best practices as outlined in Technical Memorandum 4.	

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Figure 2-19 Summary Implementation Steps and Key Milestones

Milestone

	Immediate (< 1 year)				Short-term (1-3 years)					Long-term (> 3 years)			
Match Rates to Demand	Vet recommendations with public	Coordinate on-street regulatory changes with Traffic Commission	Review technology options and specifications; Draft and release RFP	Evaluate and prioritize zonal boundaries	Public education campaign on parking changes	Vendor selection	Order + install equipment, including pay-by-cell in newly metered areas and credit card capable meters in existing metered areas both on- and off-street	Continue to notify public of parking changes		Monitor demand quarterly (at minimum)	Adjust regulations, including rates, to create availability as needed		
Use Technology for Customer Service	Review and select pay-by-cell vendor	Publicize pay by cell option		Install pay-by-cell in currently metered areas	Remove meters in underutilized spaces			Evaluate LPR enforcement technology		Implement LPR enforcement	Evaluate use of technology and update as needed		
Streamline Permit Program	Review + refine proposed zones and prices	Research + meet with online permitting vendors, including current City vendors		Notify permit holders of schedule of upcoming changes			Select + implement online permit vendor, including credit card capability for permitting.			Implement zonal pricing increases	Switch from paper permits to LPR	Continue to monitor individual facility usage and update regulations as needed	
Add Parking	Evaluate identified blocks with Traffic Commission	Prioritize Franklin Street, Petronelli Way, and Church Street	Draft striping plans and determine appropriate regulations		Build structured parking that is publicly available	Work with Traffic Commission to stripe new spaces	Evaluate use of new spaces and adjust regulations as needed	Prioritize areas in high demand to add more on-street parking	Draft striping plans and determine appropriate regulations	Work with Traffic Commission to stripe new spaces	Evaluate use of new spaces and adjust regulations as needed		
Broaden Mission of Parking Authority	Meet with Traffic Commission to review Parking Study Goals (expanded mission, Availability Goal, etc.)	Work with Traffic Commission to amend code	Adopt new goals, including Availability Goal, which allows BPA to set rates and regulations on- and off-street	Develop library of sample shared parking agreements	Pursue shared parking opportunities in areas with parking crunch	Increase staffing levels for parking management	Meet with City Human Resources, Transportation Coordinator, BAT, and OCPC to discuss TDM opportunities	Enter into new shared parking agreements and add municipal regulations as needed		Evaluate other municipal TDM programs for employees	Adopt cash-out policy for City employees	Evaluate shared parking agreements and refine as needed	
Customer Friendly Approach	Discuss plan goals with current PCOs and solicit suggestions	Draft updated PCO policy	Discuss First Ticket Free policy at BPA meeting	Draft and discuss additional staff position at BPA meeting	Train PCOs on parking changes (technology and permits)		Budget for additional materials (ie paper maps of parking, updated uniforms)	Prepare for PCO training programs		Integrate police classes with PCO training	Adopt First Ticket Free policy	Integrate First Ticket Free policy with updated enforcement equipment	Continue to coordinate with PCOs for management feedback and review
Provide Comprehensive Information	Create online parking map and information summary with locations of businesses and attractions	Confirm and map locations of existing signage	Distribute online parking map to merchants and others to link to from their websites	Determine number and location of new directional, regulatory, and information signs	Update parking map with new regulations	Develop consistent look and feel for wayfinding signage	Install new signs			Work with Traffic Commission to print and install new wayfinding signage	Work with Traffic Commission on maintenance plan for signage	Update parking map with new regulations	
Create a Multimodal Downtown Environment	Meet with OCPC to integrate parking locations onto pedestrian-level map	Assess + determine potential catalytic pedestrian improvements	Evaluate legal uses of parking funds	Create prioritization plan to invest parking revenues in downtown	Work with Traffic Commission to prioritize and restripe crosswalks	Use parking revenues to fund transportation-related improvements	Work with City on two-way downtown traffic circulation			Use parking revenues to fund transportation-related improvements			
Use Zoning Code to Support Parking	Support adoption of Proposed Ordinances through a memo signed by BPA Board				Review other zoning codes for best practices related to shared parking and TDM measures		Draft Ordinance amendments	Work with City on adopting proposed ordinances		Adopt Ordinance amendments to extend shared parking, parking maximums, etc. as outlined in TM4			

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3 EXISTING CONDITIONS

INTRODUCTION

Working closely with the Brockton Parking Authority, the consultant team documented and evaluated the parking environment in downtown Brockton. This memorandum provides data and analysis to aid City staff, officials and other stakeholders to understand the existing transportation and parking conditions in the downtown area of Brockton.

The intent of this effort is to establish a benchmark of current parking supply that is both broad and detailed, as well as regulations and use in the downtown Brockton Study Area. Through close correspondence with the City, the team defined a study area to include all critical parking assets and encompass any perceived parking issues. This documentation of existing conditions will inform the team's recommendations and provided a benchmark for community discussion and policy decisions on parking, the transportation system, and land use.

The existing conditions data summarized in this memorandum were collected in September 2015 by Nelson\Nygaard. The data includes an inventory of the current supply and utilization of on and off-street parking in downtown Brockton.

This memorandum includes maps, tables, and summaries of the Existing Conditions pertinent to the team's key findings. It is organized to present parking information under the following headings:

- **Document Review** (p.3-2) – A review of previous parking studies and plans that relate to the Downtown Brockton Parking Study.
- **Parking Inventory** (p.3-5) – An assessment of all parking spaces by location and regulation.
- **Parking Utilization** (p.3-14) – Observed use of existing parking through the course of a typical weekday and weekend. Includes utilization profiles of "core" areas, general and restricted access lots, and publicly and privately owned lots.

We note that this is the first of several technical memorandums that are being compiled as part of the Downtown Brockton Parking Management Plan.

DOCUMENT REVIEW

As one of the first steps to understanding existing conditions, the team reviewed relevant studies, plans and documents related to parking and transportation planning in Downtown Brockton. These documents provide guidance and context for the parking plan effort and are summarized briefly below.

Parking in Downtown Brockton: A Call for Action Now, Conclusions and Recommendations

October 1998. Prepared by the Mayor's Parking Task Force.

Key findings

- There is a need for on-going system to collect data and information on parking facilities in the downtown area and how they are used, and how various practices, including permits and meter timing, affect patrons of the downtown.
- Employers and merchants have sought free and more readily accessible parking outside the downtown area, in order to compete.

Recommendations

- Streamline governance of parking and traffic by consolidating the Brockton Parking Authority and the Brockton Traffic Commission to establish the Brockton Traffic and Parking Commission
- Security enhancements as lighting, video systems and remote monitoring, in addition to human surveillance; electronic gating and payment systems; and the use of lighting and landscaping to provide a 'sense of security.'
- No/Low Cost Recommendations
  - Hold $30,000 request to purchase meters
  - Exclude permit parking in high-turnover lots
  - Ensure Green Street Lot is used
  - Remove on-street parking meters
  - Reorganize L street lot
- Capital Projects
  - Structured parking: garage behind Enterprise; Deck Lincoln Street Lot
  - Acquire, demolish First Parish Building on Main Street, establishing surface parking there
  - Open 'Stadelman' L street Parking
  - Sell Montello Street Lot and encourage economic reuse of the site.
  - Increase parking violation fine currently at $4 to $10; review current fine structure of other non-moving violations.

Brockton Parking Garage: Final Report

November 2001. Prepared by Parsons Brinckerhoff Quade & Douglas.

This report is focused on the City owned Lincoln Street Surface parking lot and considers the expansion of parking through the construction of a multilevel garage. Various designs and associated financial evaluations were modeled to determine the most cost effective revenue generators for the garage.

Key Findings

- The parking demand from City Hall employees and from the commitments from adjacent businesses is over 210 spaces, and exceeds the current lot count of 150 spaces.
- The parking design alternatives indicate that a garage of 2-levels would be insufficient given parking demand, and that a 3-level garage would accommodate the demand and leave additional parking for visitors to City Hall and local businesses.
- During two separate utilization measurement efforts that the study cites, the Lincoln Street lot was between 90 and 100% occupied in the morning, and 90% occupied in the afternoon. The study determined that the area around City Hall is the nexus of high parking demand.
- The City Hall lot was between 90 and 100% full throughout the day.
- There is illegal on-street parking along Railroad Avenue, which competes with the Adams Garage. The latter garage has only 60% utilization while the parking fines of $5 for illegally parked vehicles are less than the $10 parking fee at the Adams garage.

Recommendations

- The Recommended Lincoln Street parking facility is a three level 350-space parking garage that has the option to convert the first bay of parking fronting city hall to retail space.
- In order to increase the parking demand in the Lincoln Street area parking needs to be discontinued on Railroad Avenue.
- Close all vacant lots to illegal parking.
- Implement ‘no-parking’ during the a.m. and p.m. peak hour on Main Street in anticipation of converting the one-way street circulation system to two-way.
- Increase parking fines on the City Streets to costs that encourage the parking in City owned garages.
- Improve vehicular signage to the downtown parking facilities
- Redevelop underutilized City owned parking lots. Review the Parking Department organizational structure and its ability to secure monies through bonding.

Traffic Impact Study for the Brockton City Parking Facility

October 2005. Prepared by McMahon Associates.

This study assesses the potential traffic impacts and site access issues associated with the proposed City Hall Parking Facility. The study projected forward the 2010 traffic generation and volumes, and intersection LOS, while focusing on the following intersections: Montello Street and Centre Street, Montello Street and Church Street, Montello Street and Lincoln Street, Montello Street and School Street, School Street and Main Street

Key Findings

- The study estimated the new garage would generate approximately 90 new trips per peak period.
- This information was used in coordination with a 1% annual growth estimate to project forward the 2010 traffic volumes.
- Of the five projected intersection LOS estimates, only two were projected to have any change in LOS by 2010. Two streets are expected to have drops in LOS for both the a.m. and p.m. peak periods: Montello Street at School Street and Montello Street at Lincoln Street.
- The intersection at Montello Street at Centre Street, which was modeled as having an F LOS, was expected to continue to have a poor LOS.

Recommendations

- The study team proposes retiming the signal to allow more green time for the failing southbound approach. It is anticipated that these changes will alter the LOS to C for both a.m. and p.m. peaks, with all movements at LOS D or better
- The study team further recommends signal timing and phasing adjustments be made for the intersection of Montello Street and School Street.

PARKING INVENTORY

A complete understanding of parking supply and regulations is the base component to understanding parking patterns and behaviors. This analysis includes all parking within the defined study area, both publicly accessible and privately restricted, and excluding driveways in residential areas. The inventory was compiled and used to create a complete parking database of all parking facilities in downtown Brockton. The database was then geo-coded to spatially display the existing parking locations. This initial work created the base information used throughout the entire project.

Study Area

The Brockton Parking Authority (BPA) guided the study team in selecting the study area for the project, which covers a majority of parking spaces within about 180 acres. As shown in Figure 3-1, the study area is generally bounded by:

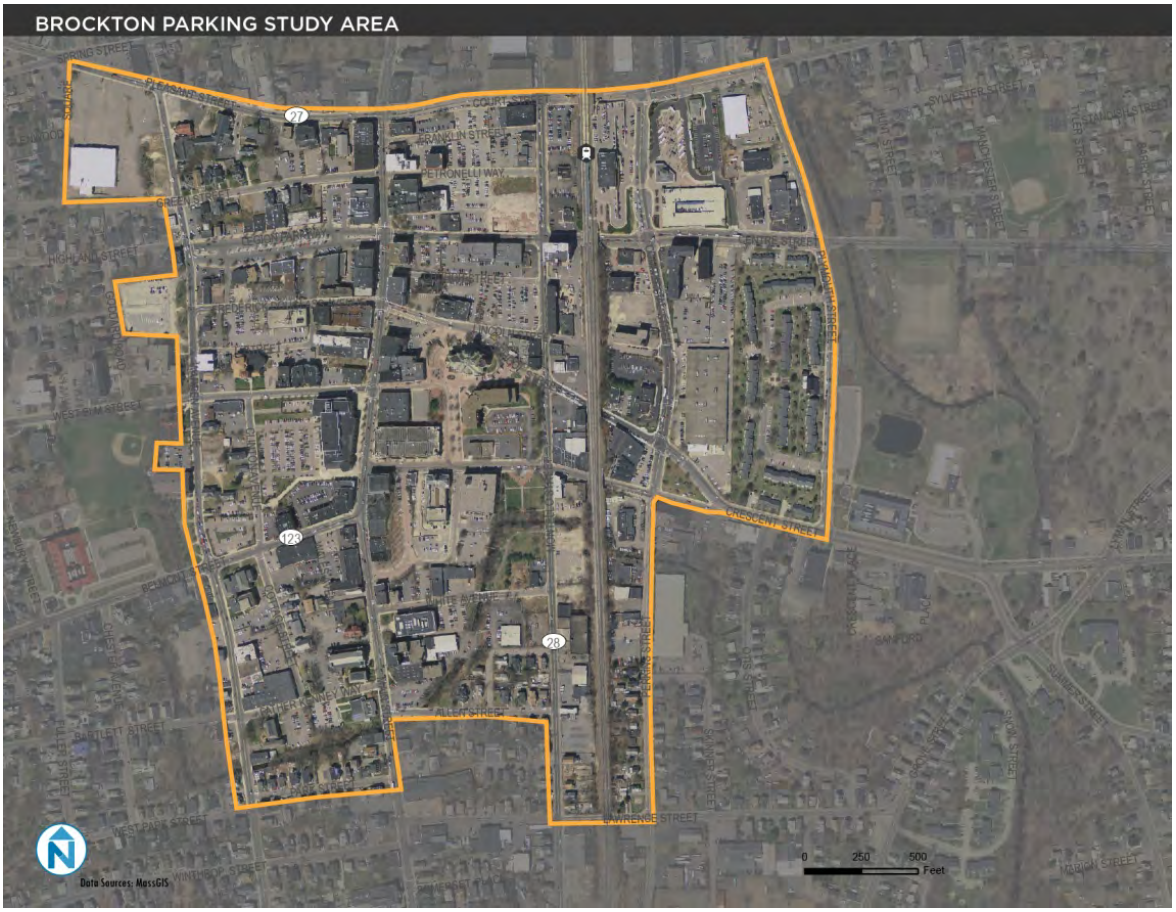
- Pleasant Street to the north
- Plymouth Street and Perkins Street to the east
- Allen Street, Lawrence Street, and Park Street to the south
- Warren Avenue to the west

The Downtown Brockton study area focuses on the key areas of activity around Main Street, and also includes one to two streets immediately adjacent to the primary areas of interest. Surrounding, often residential, streets are included in the study area to observe any spillover effect of commercial, commuting, and recreational activity.

The study area has significant on and off-street parking assets. There are more than 125 parking lots and four parking garages (Adams, Brockton Area Transit Authority Garage (BAT), Centre 50/Enso Flats[1] and Station Lofts). One of these garages is the city-owned Adams Garage, which has both permitted and daily parking. There are also many privately-owned and privately-restricted off-street parking lots for customers of local businesses, visitors, employees, and other specific groups of users. Overall, the study area has nearly 6,000 total parking spaces, including about 1,600 general-access public parking spaces, nearly 900 dedicated permit parking spaces, and almost 3,500 private and/or restricted-access parking spaces.

[1] Owned by Trinity Management, next to the Enterprise lot. See http://trinitymanagementllc.net/our-communities/massachusetts/brockton/ for more information.

Figure 3-1 Downtown Brockton Parking Study Area



Downtown Parking Inventory

KEY FINDINGS

- The study counted nearly 6,000 parking spaces in the study area, including 88% off-street and 12% on-street.
- Of all the parking spaces in downtown Brockton, only 27% (1,584 spaces) are available for general public use, while the remaining 73% is reserved for specific permits or restricted to private use, e.g. resident-only, customer-only, employee-only, and tenant-only parking.
- There are 125 parking lots and four parking garages (Adams, BAT, Centre 50/Enso Flats, and Station Lofts) in downtown Brockton, occupying just over 41 acres. The four garage facilities comprise almost a quarter of the total parking in the study area.
- Approximately 20 lots for permit holders are scattered throughout the downtown, with concentrations in the northern study area[2].

[2] 20 as counted by the City. Does not include Montello lot, where no permits were sold in June.

- About 16% of the parking supply is permitted. Prices for permits are different by location with prices that vary between $10 and $40 per month, but the majority of permits cost $30 per month.
- Of all the on-street spaces, about 26% (192 spaces) are metered and time limited. 37% are time-restricted only, 28% are unregulated, and the remainder is a combination of specific regulations such as Resident Only. Metered spaces are primarily adjacent to Main Street, but are not on Main Street.
- There are 13 different types of on-street parking regulations, which have resulted in a variety of signage and management challenges.
- The majority of on-street spaces on Main Street are time restricted, primarily to one hour, but a handful of spaces are restricted to 15 to 30 minutes. There are also 12 metered (two hour) spaces to the southern end of the Main Street study area.

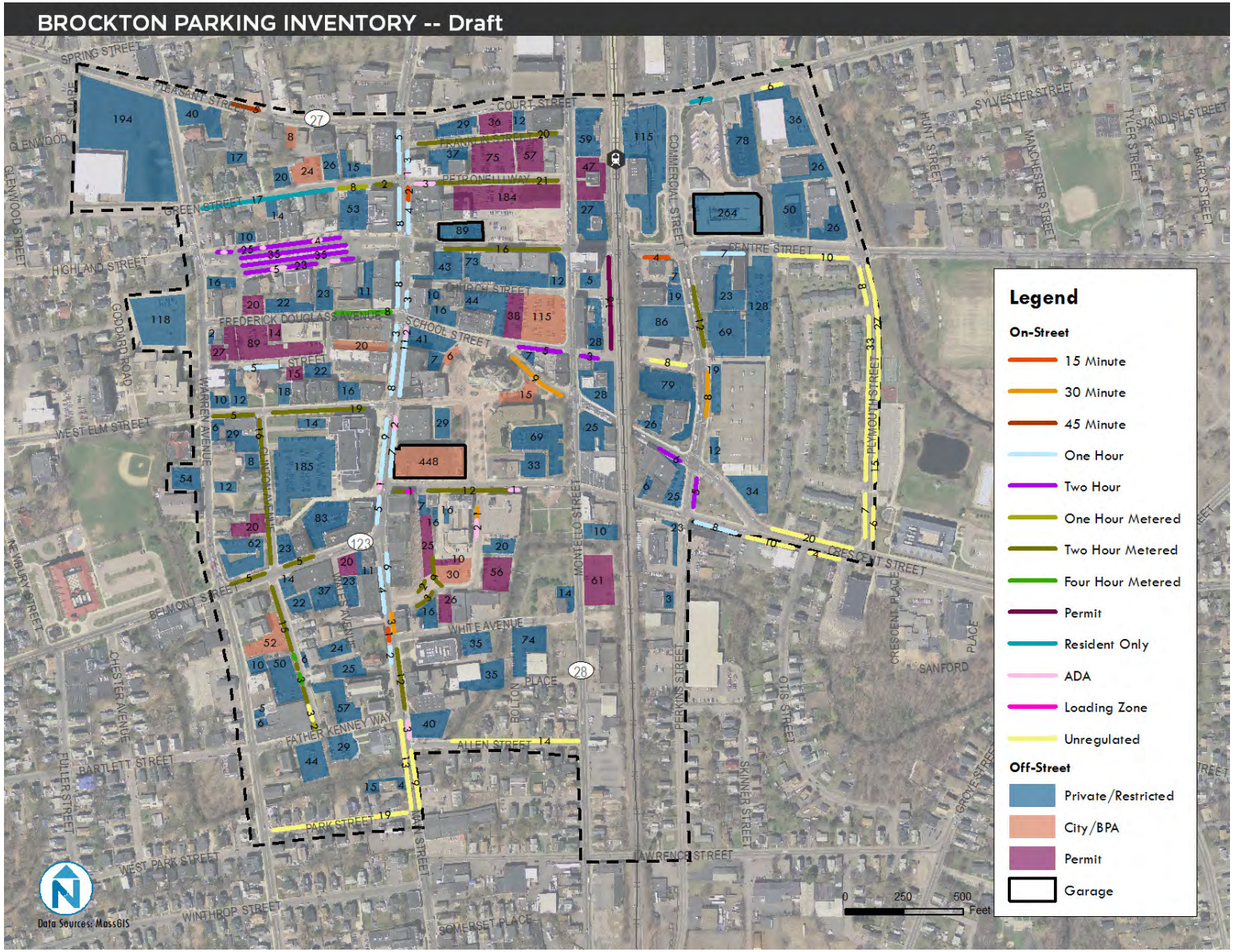
Figure 3-2 is a summary of parking spaces and regulations in the study area. The study team catalogued the ownership, use category, and regulation for all spaces within the study area. A full parking inventory is depicted in the parking regulatory map in Figure 3-3.

Figure 3-2 Parking Inventory by Regulation: Downtown Brockton

Regulation	# of Spaces	Percent of Total
Off-street		
Private/ Restricted	3390	57.0%
Monthly Permit Only	825	14.1%
Daily (Metered) or Permit	608	10.2%
Daily Only	271	4.6%
Municipal Employees	105	1.8%
Off-street Subtotal	*5199*	87.5%

Regulation	# of Spaces	Percent of Total
On-street		
Unregulated	212	3.6%
Two Hour Metered	171	2.9%
Two Hour	137	2.3%
One Hour	106	1.8%
Resident-only	24	0.4%
ADA	24	0.4%
30 Minute	21	0.4%
Permit	16	0.3%
Four Hour Metered	11	0.2%
One Hour Metered	10	0.2%
15 Minute	7	0.1%
45 Minute	5	0.1%
Loading Zone	1	0.0%
On-street Subtotal	*745*	12.5%

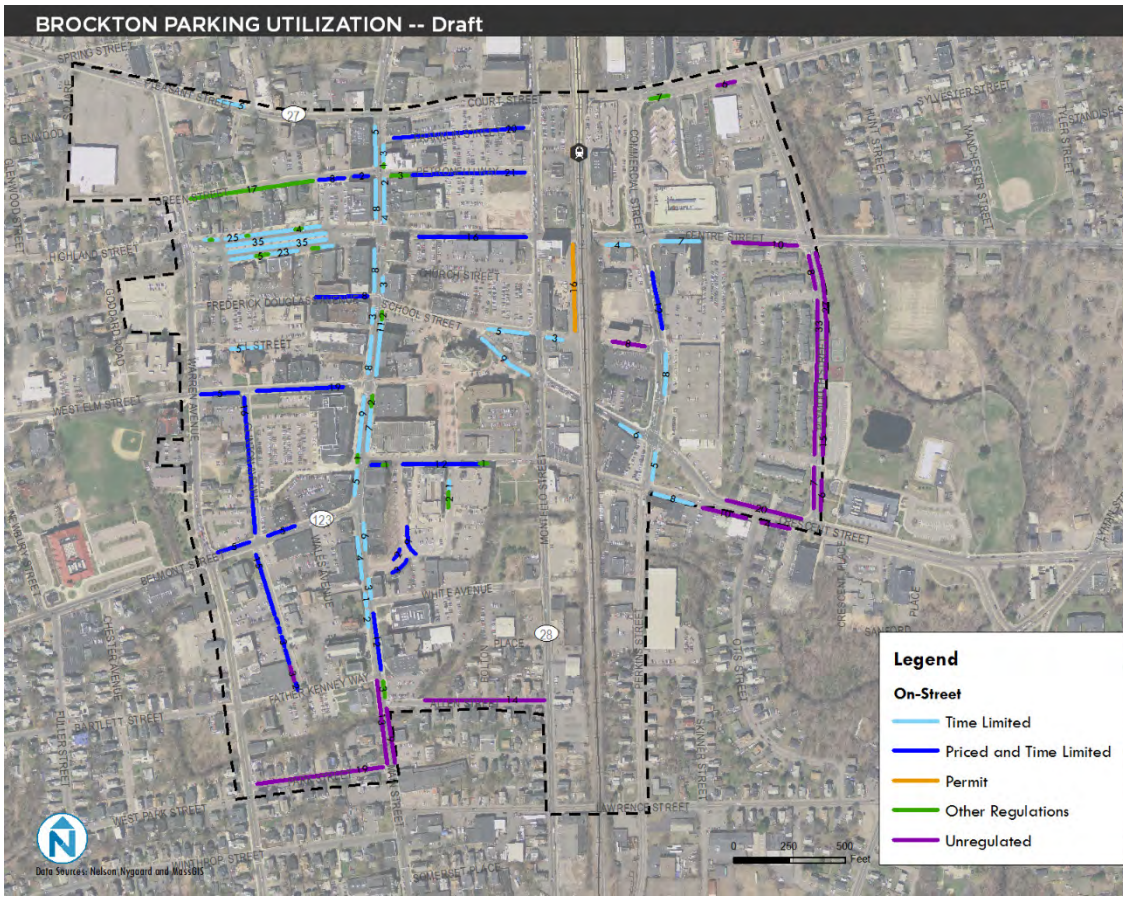
Figure 3-3 Parking Supply and Regulations: Downtown Brockton



On-Street Parking

As shown in Figure 3-5, there are many different on-street parking regulations in the study area. There are time limited metered spaces (26%, 192 spaces) and time limited unmetered spaces (37%, 276 spaces). There are also a small number of resident-only spaces (24 spaces), permitted (16 spaces), and ADA accessible spaces (24 spaces). About 212 spaces are unregulated which accounts for more than a quarter (28%) of the on-street spaces. Figure 3-4 shows the location of these spaces by general type.

Figure 3-4 On-street Spaces by General Category



Most of the on-street parking spaces (63%) in downtown Brockton are regulated by time limits. There are nine types of time restricted spaces: 15 minute unmetered, 30 minute unmetered, 45 minute unmetered, one hour unmetered, one hour metered, two hour unmetered, two hour metered, and four hour metered. These spaces are time-regulated to encourage turnover, preserving them for patrons of the shops and restaurants in downtown Brockton. Time-limited spaces, particularly the one hour unmetered spaces, are located in the heart of the central business corridor along Main Street, while the metered spaces are located on the side streets adjacent to Main Street. Spaces with shorter time limits are primarily located for drop-offs and

quick trips at specific adjacent land uses, such as the Brockton Public Library and the Department of Transitional Assistance.

Approximately 26% (192 spaces) of on-street parking spaces are metered (and time regulated). All meters are $0.25 per 15 minutes. The majority of metered on-street parking is available for two hour periods (171 spaces), while a small number are available for one hour (10 spaces) and four hours (11 spaces). Meters are operated between 8:00 a.m. and 6:00 p.m. Monday through Friday, although enforcement ends at 5:00 p.m.

Figure 3-5 On-Street Parking Regulations: Downtown Brockton

On-street	# of Spaces	Percent of Total
Unregulated	212	28.5%
Two Hour	137	18.4%
One Hour	106	14.2%
Resident-only	24	3.2%
ADA	24	3.2%
30 Minute	21	2.8%
Permit	16	2.1%
15 Minute	7	0.9%
45 Minute	5	0.7%
Loading Zone	1	0.1%
Subtotal	*553*	74.2%
Two Hour Metered ($1 per hour)	171	23.0%
Four Hour Metered ($1 per hour)	11	1.5%
One Hour Metered ($1 per hour)	10	1.3%
Subtotal	*192*	25.8%
TOTAL	745	100%

Off-Street Parking

Off-street parking occupies just over 41 acres in the study area, or about 22%. This parking generally falls into five categories, focused on who can access available spaces:

- *Monthly Permit-only parking* is located in publicly owned lots and requires a purchased parking permit.
- *Daily/Metered/Permit parking* is located in publically owned lots and has spaces that the general public can pay a meter or kiosk to use, or that a permit holder can use with a previously purchased permit.
- *Public daily parking* is available to all on a daily or hourly basis. The bulk of this is the BAT garage.
- *Restricted – Municipal parking* is for municipal vehicles, such as police cars.
- *Restricted - Private parking* is dedicated to a specific population, primarily business that reserve parking spaces for employees and/or customers.

Figure 3-7, the majority of off-street parking is private or restricted. Only 17% of off-street parking in downtown Brockton is available for public use, while 16% is available only for permit holders. Of the spaces available for public use, some are also open to permit holders, effectively increasing the permit parking supply. These spaces may not always be available to the general public due to high demand for long-term parking.

Figure 3-6 Example of Metered/Permit Spaces in the Marketplace Lot

Figure 3-7 Off-street Parking Regulations: Downtown Brockton

Regulations	Space Count	Percentage of Total
Monthly Permits Only	825	16%
Daily/Metered/Permit	608	12%
Daily	271	5%
Restricted – Municipal Employees (i.e. Fire, etc.)	105	2%
Restricted - Private	3,390	65%
Grand Total	5,199	100%

Pricing and enforcement of the private/restricted access lots are the responsibility of and subject to each individual property owner/manager.

Municipal Garage

The Adams Garage is a municipal parking garage owned and operated by the Brockton Parking Authority. It is located on the corner of Main Street and Crescent Street.

The garage opens at 6:00 a.m. and closes at 9:00 p.m. during the week; it is not open on weekends. The general public can purchase a monthly permit for the garage for $40, which permits unlimited access. Daily parking is also available for $2/hour; the maximum fee is $10 per day.

Permits

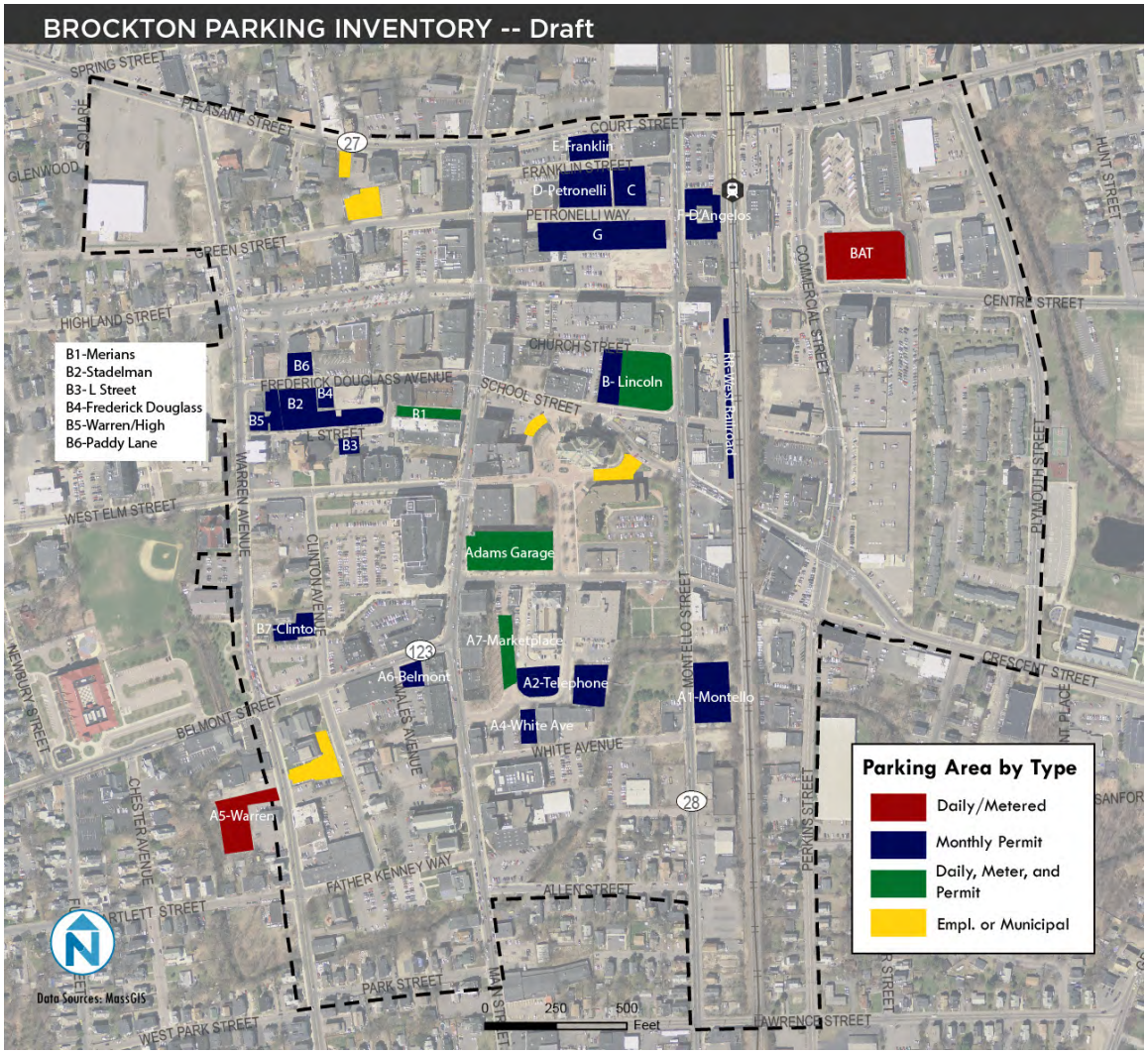
There are 21 permitted lots and garages in Downtown Brockton, as well as some on-street spaces on Railroad Avenue. Figure 3-8 shows these locations. Some of these facilities are owned and operated by the BPA; others are leased by the BPA; and others are owned by other entities (e.g. BAT).

Monthly BPA permits cost between $10 and $35 per month, but the majority of permits cost $30 per month. In June 2015, the permitted parking in Downtown Brockton earned almost $24,000 in permit (daily and monthly) revenues.

To obtain a permit, users contact the BPA directly via phone or email. Some users purchase permit months in advance, while others purchase one permit per month. Regardless, users must obtain a physical permit each month. Groups that purchase parking together can pick up passes in bulk from the BPA. At WB Mason, for example, HR purchases the permits from the BPA, and then these permits are distributed to each employee monthly.

More detail and analysis about the BPA parking permit program, including revenue information, is included in Technical Memorandum #2.

Figure 3-8 City-Owned and Publicly Accessible Off-Street Parking by Type



PARKING UTILIZATION

Parking utilization counts provide a time series of how typical parking demand manifests itself for a typical day in an area. To complete these counts, individuals count parked cars in each on-street segment, lot, and garage at pre-determined time intervals in a study area. Land usage, regulation, pricing, and convenience can drastically impact how even adjacent parking assets are utilized. By compiling parking utilization comprehensively, this effort can begin to clearly identify patterns of high or low usage, the impact of regulations, and demonstrate how much of the parking supply is utilized throughout the day.

Nelson\Nygaard worked with the City to identify "typical" days in Downtown Brockton for parking utilization counts. The team conducted the counts on a Thursday, Saturday, and Sunday in September 2015. Data collectors captured weekday parking demand for 12 hours, beginning at 8:00 a.m. and ending the last count at 8:00 p.m., with counts every two hours. Data collection began in the early morning to identify if/when employee parking would fill to capacity. In the evening, data was collected until 8:00 p.m. to fully assess parking demand associated with the City's evening activities. Weekend parking demand was collected for four hours with two-hour counts at 9:00 a.m. and 11:00 a.m. on Saturday and Sunday to capture the peak morning utilization. Nearly all facilities identified on the Parking Inventory map were open and available for parking utilization counts.

Methodology

It is important to note that the individuals collecting data collected each on-street segment and off-street lot at regular intervals. For example, if the Lincoln lot was counted at 7:05 a.m. in the first loop, then it was counted at 9:05 a.m. in the second loop, etc. This consistency ensured data accuracy to help draw conclusions about trends within two-hour windows. The team coordinated in advance with the city staff to ensure that there were no special events or construction that may influence parking utilization.

The series of charts on the following pages show the public parking utilization profiles throughout the collection days in downtown Brockton. The red lines indicate "functional capacity" of parking, i.e. a vacancy of 15-percent on-street, or about 1 out of 8 on-street spaces is available and ninety-percent for off-street lots, a recognized national standard of when a parking area is effectively full.

Spatial Patterns

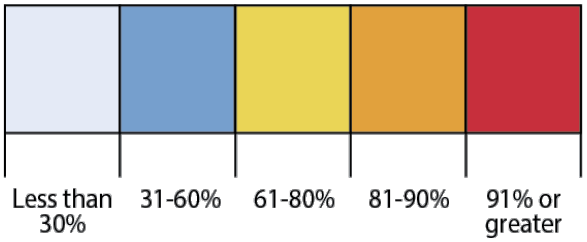
Understanding how downtown parking is used requires being able to describe how parking facilities and on-street parking interact with each other throughout the course of a day. A chart of hourly utilization rates for one specific location is valuable, but seeing how that location behaves among others located nearby can reveal patterns and trends not evident in numbers alone. The lot which is completely full may be right around the corner from another lot that has plenty of availability at the same time.

Using the utilization data, the consultant team developed a series of maps based on the parking inventory map. The colors represent the percentage of spaces utilized at each location based on notable breaks used to evaluate the adequacy of a parking facility:

- **Light blue/blue** refers to 0-30% and 31-60% utilization, points at which on-street blocks and off-street facilities are underutilized. Any resource that consistently performs

at this level, especially during peak-demand periods, should be viewed as having excess capacity.

- **Yellow** refers to blocks and facilities with 61-80% utilization and represents actively used resources. The nearer utilization levels approach the high end of this range, the more efficiently they are being utilized and nearing ideal levels of use.
- **Orange** refers to utilization between 81-90% and is considered at an ideal level of use. Parking demand in these areas is well-used and is approaching functional capacity.
- **Red** denotes parking above the functional capacity of 90%. Despite maximized efficiency, these blocks or facilities are full or near full, and in some cases demand exceeds supply.



Study Area Parking Utilization

OVERALL KEY FINDINGS

- For both weekdays and weekends, no more than about half of all parking is utilized at any time.
- Weekdays and weekends are busiest at the same times: parking is busiest in the late morning from 10:00 a.m. to 12:00 p.m.
- Overall utilization on the weekday morning was more than double the utilization on Saturday morning and almost three times higher than the utilization on Sunday morning.
- At peak, several parking lots along Lincoln Street, Clinton Avenue and Petronelli Way are full or over capacity (red on the maps), while the Adams Garage is underutilized. By 12:00 p.m., demand in these parking lots is significantly reduced.
- On-street spaces along the northern half of Main Street are highly utilized during the peak weekday period, but there are plenty of available spaces a block away.

Weekday Parking Utilization

WEEKDAY PARKING UTILIZATION – KEY FINDINGS

- Parking is busiest between 10:00 a.m. – 12:00 p.m., likely when visitors to the downtown arrive for meetings and/or appointments.
- Parking demand declines steadily after 12:00 p.m. and then drops off significantly after the workday ends.
- The highest parking demand is concentrated in publicly owned parking lots on Lincoln Street, Petronelli Way, Clinton Avenue, and Cottage Street and in the one-hour on-street spaces on the northern half of Main Street as well as the two-hour spaces on Legion Parkway.

- In contrast, several large parking areas have availability throughout the day, including Vincente's, the City-owned Adams Garage, as well as several on-street spaces along the southern half of Main Street.
- Demand for on-street parking on Legion Parkway is high in the late afternoon. Throughout the rest of the day, overall, Legion Parkway has capacity.
- Off-street parking is busier than on-street parking (55% full compared to 44% full, at the busiest time of day). On-street parking is sometimes available right next to well-utilized off-street facilities, such as Petronelli Way next to the Trinity Lot.
- At peak, there are 338 spaces unused in lots for permit parkers only, and another 171 in facilities with permitted and metered spaces. This is a total of 509 available spaces on City-owned or leased land at the busiest time of day, not including parking dedicated to City vehicles.
- Privately owned and restricted lots are only 50% full at peak, with over 1,500 unused spaces.
- On-street, free but time limited spaces are 10-20% fuller than metered spaces. However, at the busiest time of day, metered spaces are used more heavily than free but time limited spaces, indicating that although parkers generally avoid metered parking, when it the system is busy, some turn to metered spaces.
- There is a steep drop in parking demand after 6:00 p.m.
- Legion Parkway's time-limited, free spaces are in high demand

Parking Utilization – Weekdays

Figure 3-9 to Figure 3-14 show time series utilization from 8:00 a.m. to 6:00 p.m. Note that data counts did not distinguish between the utilization of permit parking and daily parking in the lots and garages as the spaces are not always separately marked. Thus, the utilization data reflects the occupancy of **entire facility** represented by the polygons.

Note that the utilization data does NOT include 234 off-street spaces that were inventoried but closed, in mechanic lots, or otherwise inaccessible to data collectors.

Specific patterns include:

- Availability at the BAT garage throughout the day
- High demand in the Health Center lot starting at 8:00 a.m. and continuing throughout the day
- High demand around the courthouse area as well as the Lincoln Street Lot, particularly at the peak hour (10:00 a.m.)
- Availability on-street, particularly West Elm Street, Clinton Street, Cottage Street, Petronelli Way, Franklin Street and the southern half of Main Street. Many of these streets are near to areas of high off-street demand.
- Relatively low demand on either side of the train tracks in off-street facilities
- The Vincente's lot no more than 60% full throughout the day

Figure 3-9 Parking Utilization Thursday 8:00 a.m.

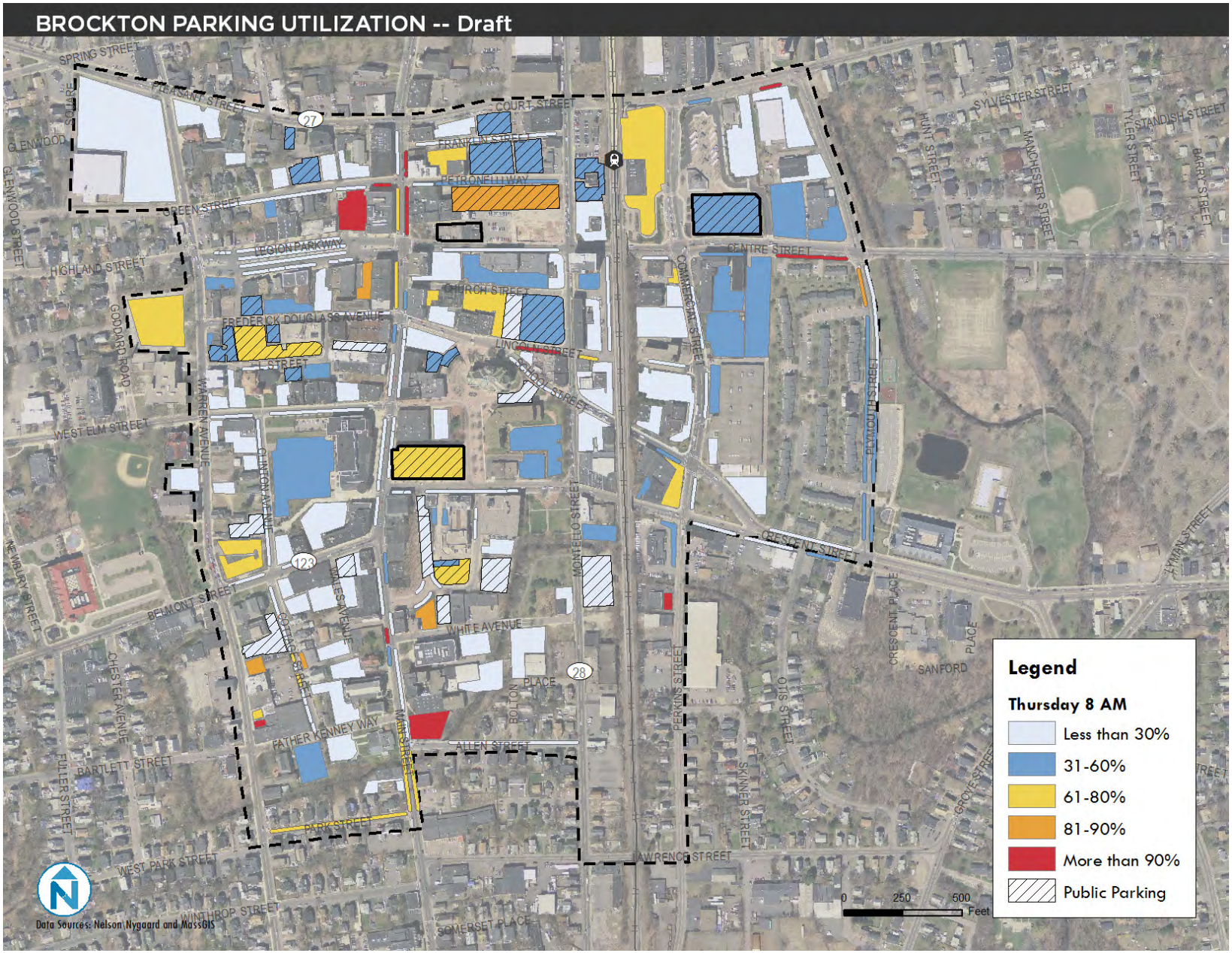


Figure 3-10 Parking Utilization Thursday 10:00 a.m.

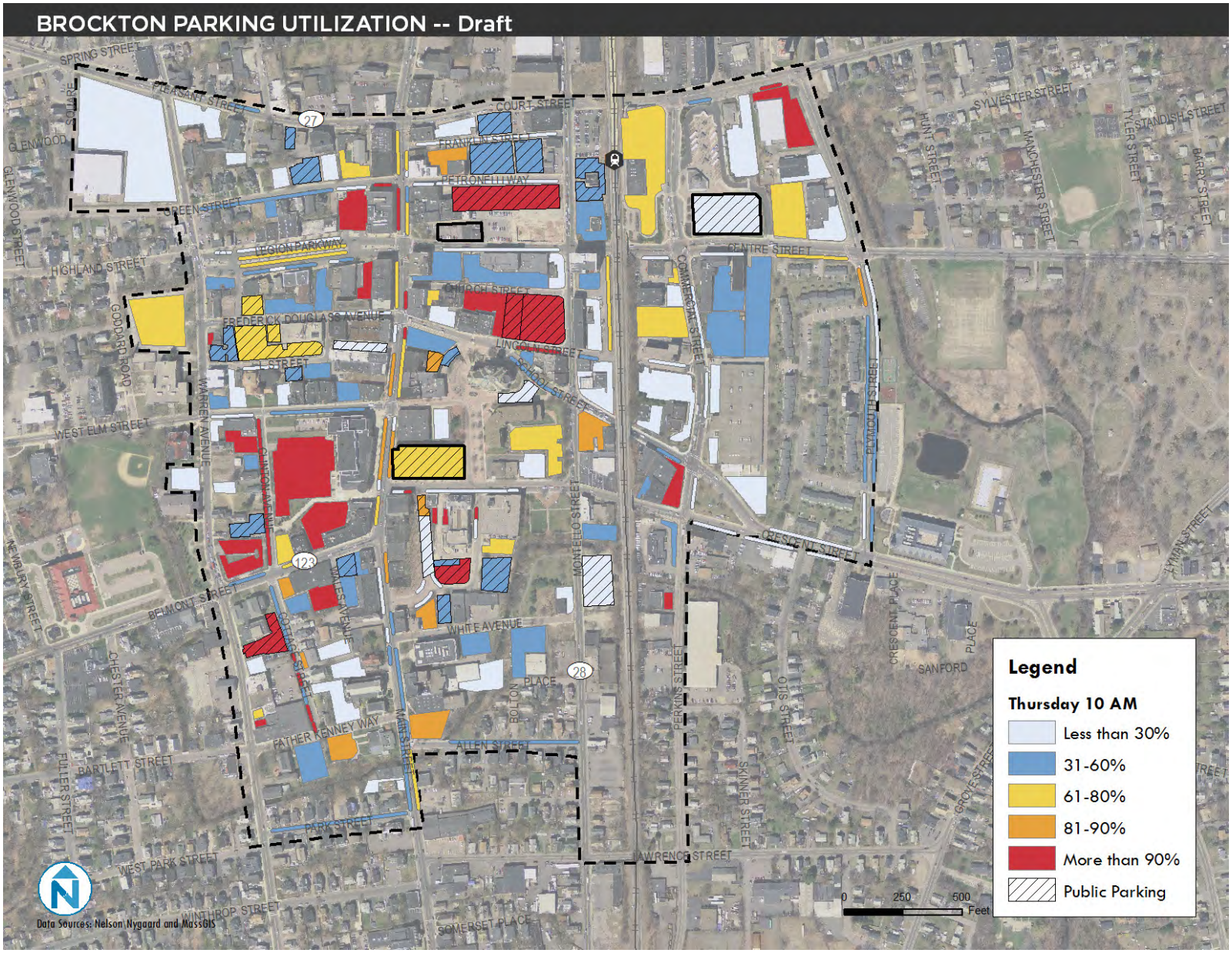


Figure 3-11 Parking Utilization Thursday 12:00 p.m.

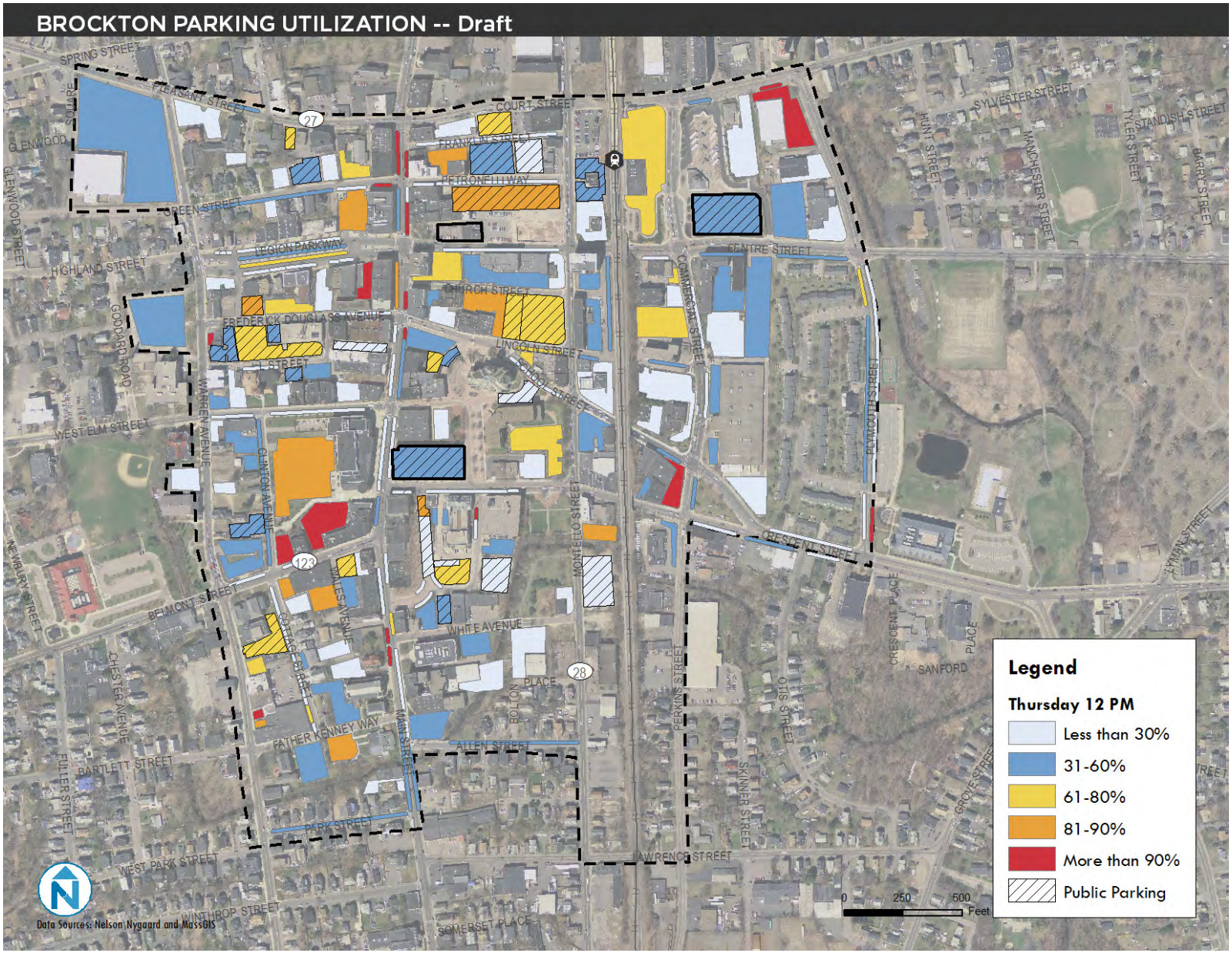


Figure 3-12 Parking Utilization Thursday 2:00 p.m.

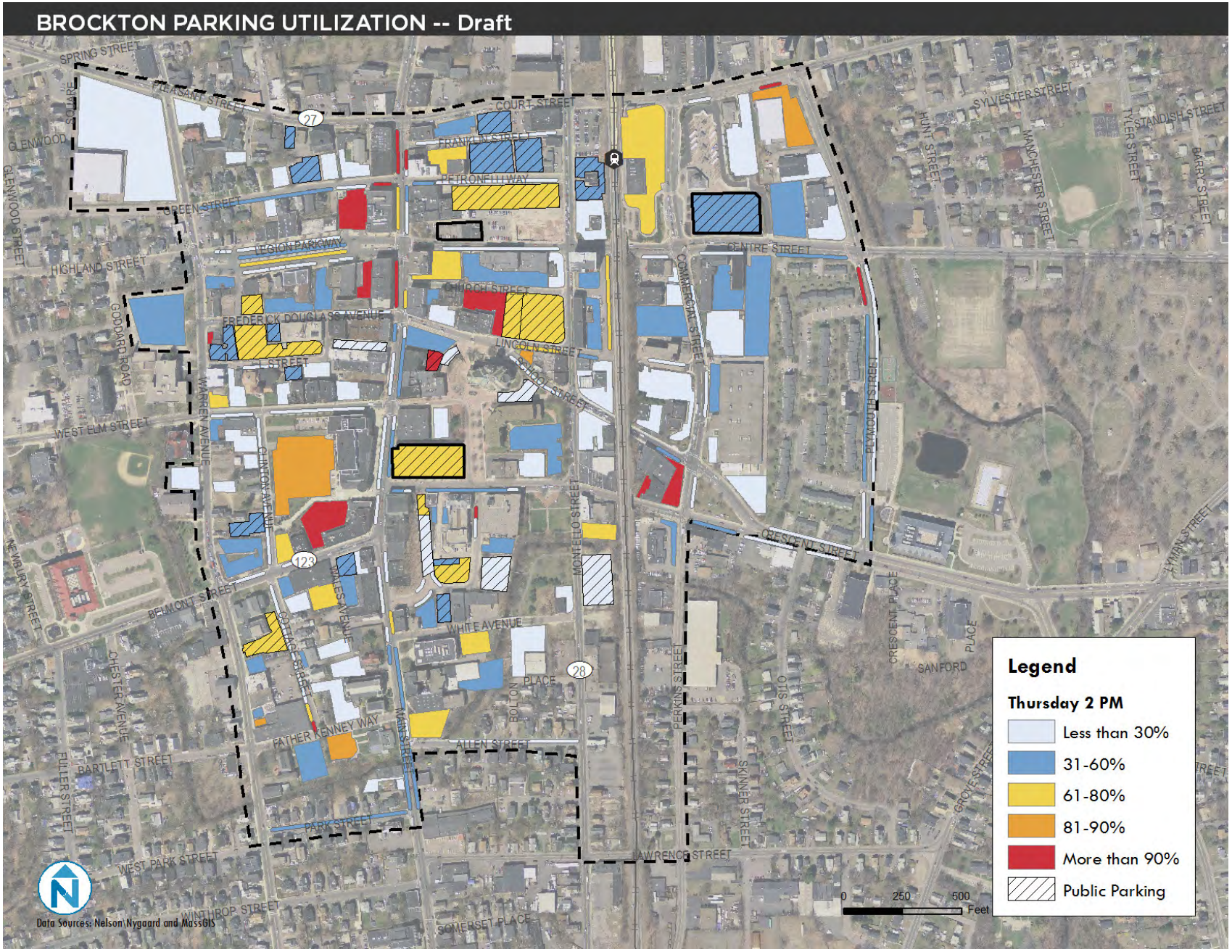


Figure 3-13 Parking Utilization Thursday 4:00 p.m.

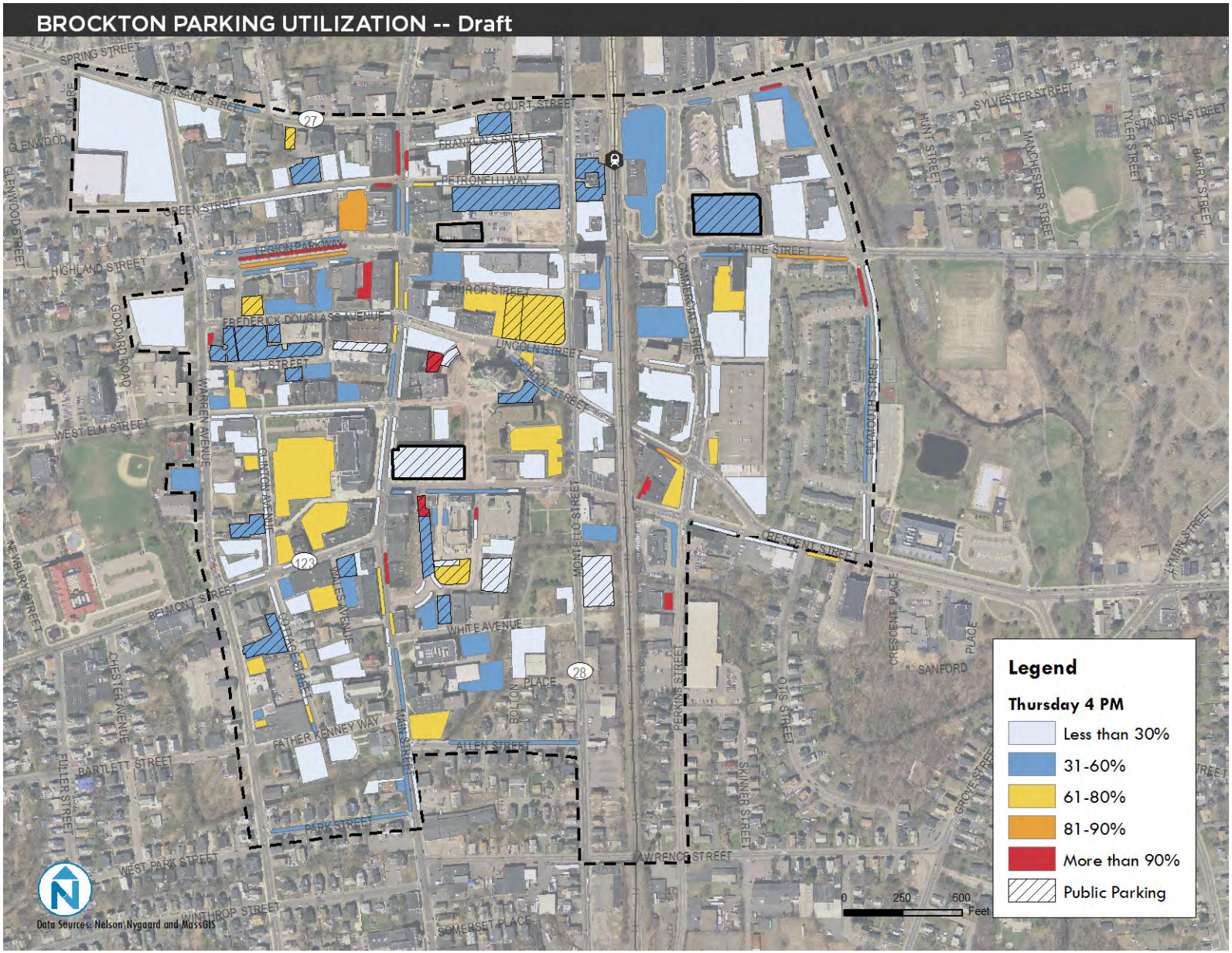
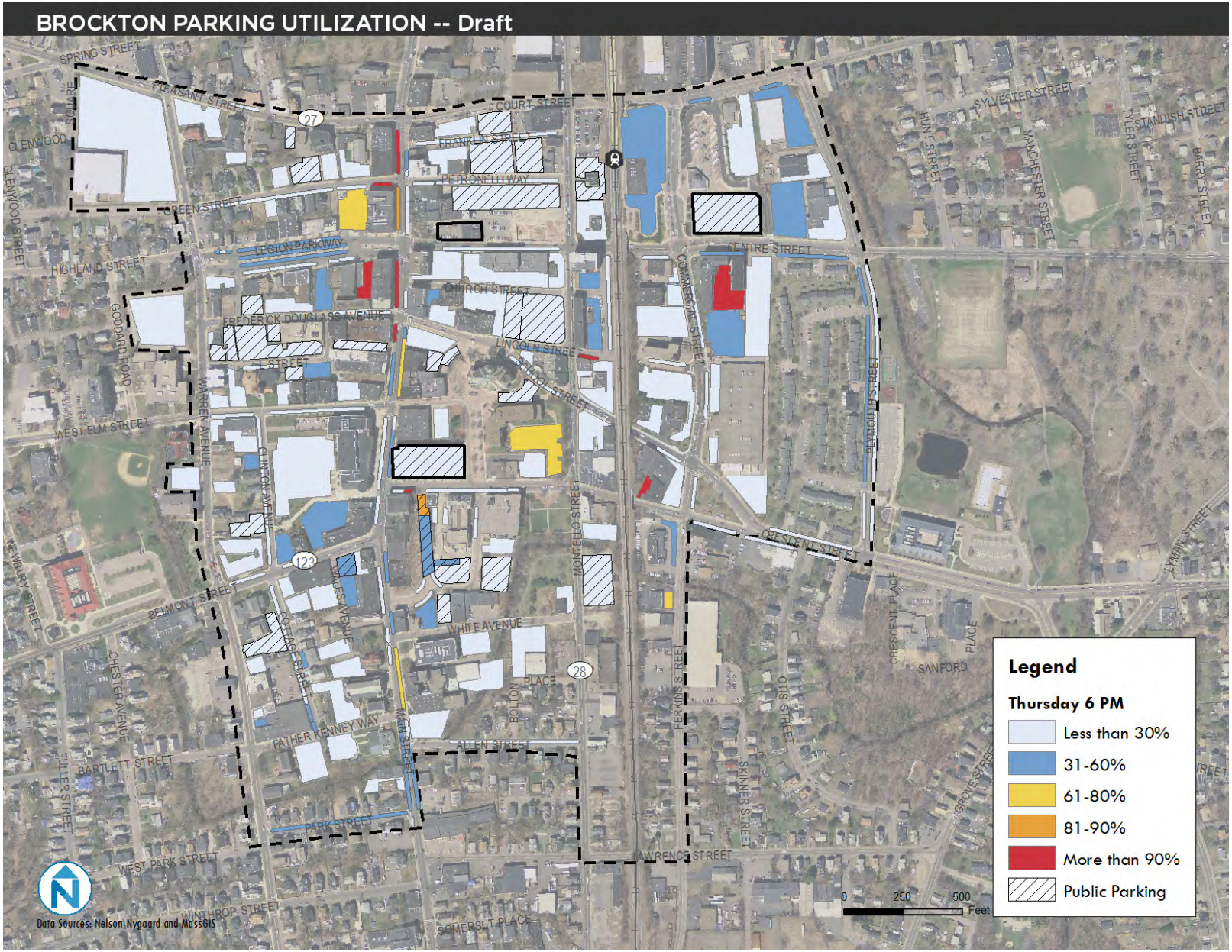


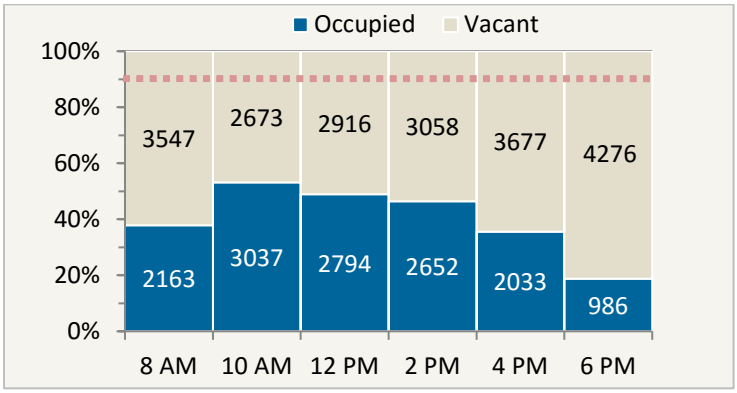
Figure 3-14 Parking Utilization Thursday 6:00 p.m.



All Parking Spaces – Weekdays

As shown in Figure 3-15, of the 5,710 spaces counted within the downtown Brockton study area, the maximum overall utilization observed was 53% (3,037 spaces out of 5,710 total) and occurred around 10:00 a.m. Compared to the 90-percent optimal occupancy[3] (shown by the red dotted line), these results indicate that the study area as a whole has more than adequate parking supply to satisfy its demand – in fact, for all other intervals, the majority of the parking supply was empty.

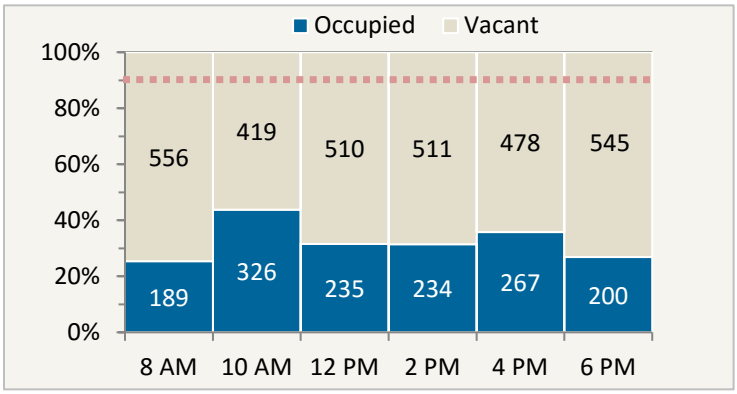
Figure 3-15 Weekdays: All Spaces Demand in Downtown Brockton



On-Street Parking Spaces – Weekdays

As shown in Figure 3-16, peak on-street utilization was 44% (326 occupied out of 745 total on-street spaces) and occurred around 10:00 a.m. This left 419 vacant on-street spaces in the downtown area. On-street parking remained relatively steady for the remainder of the day, dipping down to 27% occupied by 6:00 p.m.

Figure 3-16 Weekday: On-Street Demand in Downtown Brockton

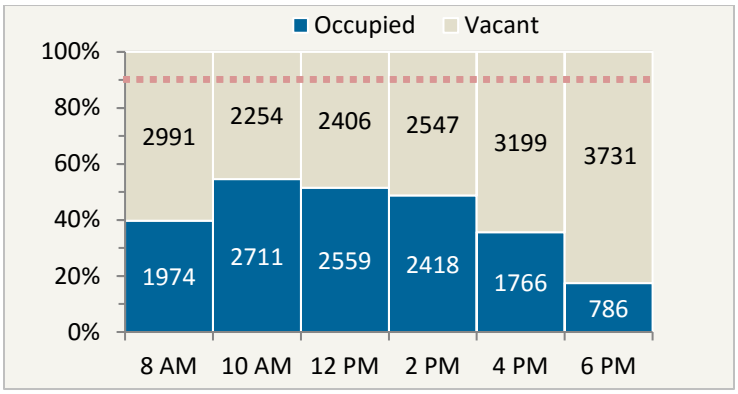


[3] Best national parking management practice suggests that parking is functionally full at 85% on-street (about one of every seven or eight spaces is available) and at 90% off-street.

Off-Street Parking Spaces – Weekday

Figure 3-17 shows that the peak off-street utilization of 55% (2,711 occupied out of 4,965 total counted off-street spaces) occurred around 10:00 a.m., leaving 2,254 vacant off-street spaces in the study area throughout the day. Off-street parking utilization decreased steadily after 10:00 a.m. and dropped off significantly to 17% occupied by around 6:00 p.m.

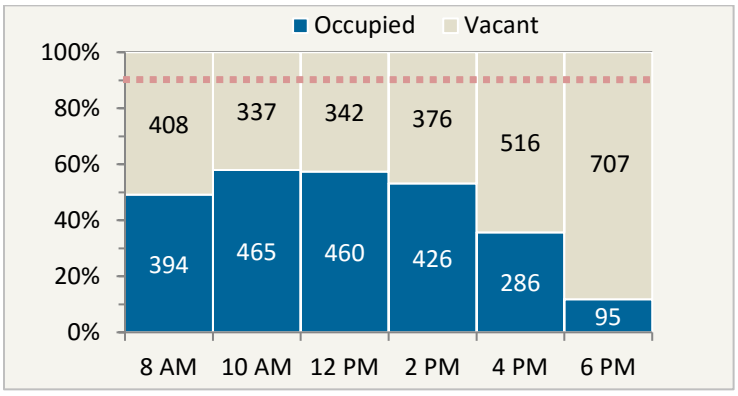
Figure 3-17 Weekday: Off-Street Parking Demand in Downtown Brockton



Monthly Permit Only – Off-Street Parking Spaces – Weekday

Figure 3-18 shows the weekday activity for lots that are permit parking only. Similar to private/restricted off-street parking utilization, permitted off-street parking utilization peaks at 10:00 a.m. between 55% and 60% occupancy and steadily empties out throughout the day, dropping off almost entirely by 6:00 p.m. Supplemental counts in December 2015 indicate that some of the permit only lots can reach 86% at peak; however, national literature indicates that December has much higher trip rates than other months.**Invalid source specified.**.

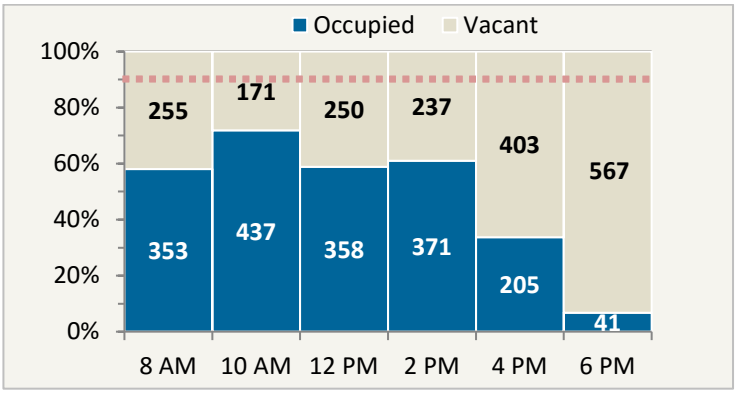
Figure 3-18 Weekday: Permitted Off-Street Parking Spaces



Daily/Metered/Permit Off-Street Parking Spaces - Weekday

Publicly available off-street parking spaces consist of some spaces that are both for those with permits and the general public, such as the Lincoln Lot and Adams Garage. These spaces are the most utilized type of parking space during the week, as shown in Figure 3-19. Utilization is at its highest at about 60% at 12:00 p.m. before dropping off significantly after 2:00 p.m. Even at 60% occupied, public off-street parking is still far below the optimal 90% utilization.

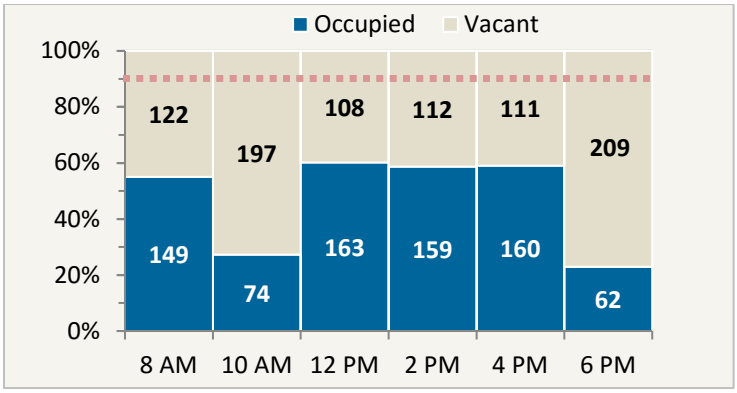
Figure 3-19 Weekday: Daily/Metered/Permit Off-Street Parking Demand



Public Parking – Weekday

Public parking is parking that is open to the public only and is not mixed with permit parking. This is essentially the 264 spaces in the BAT garage in addition to a few spaces outside of Joe Angelo's. These spaces reach a peak of about 40% at 10:00 a.m., but have significant availability throughout the day. Brockton had about 778 boardings per day as of April 2013.[4] Most of these riders are likely not parking in the garage, either getting dropped off, using a different mode, or parking elsewhere.

Figure 3-20 Weekday Public Daily Off-Street Parking

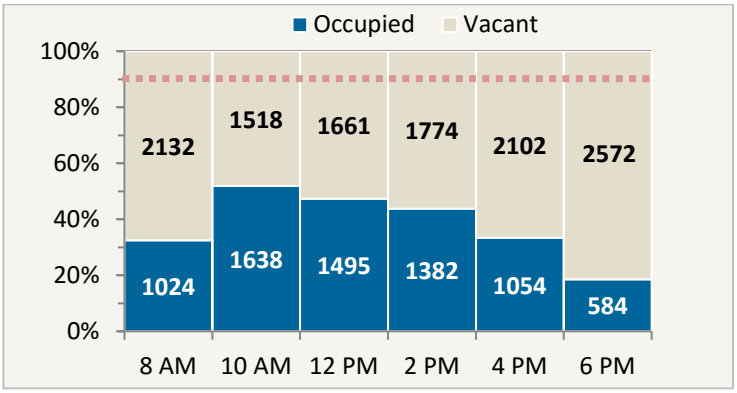


[4] Per MBTA Blue Book. For more information see: http://www.mbta.com/uploadedfiles/documents/2014%20BLUEBOOK%2014th%20Edition.pdf

Private/Restricted Off-Street Parking Spaces - Weekday

Private/restricted parking consists of privately owned parking that is limited to one specific group, i.e. customers of a store or employees. It does not included dedicated parking for City vehicles on City land, an inventory of about 105 spaces. As shown in Figure 3-21, private/restricted off-street parking is about 50% occupied during the 10:00 a.m. peak leaving at least 1,518 available spaces in the area. After 12:00 p.m., private/restricted off-street parking utilization declines steadily for the rest of the day.

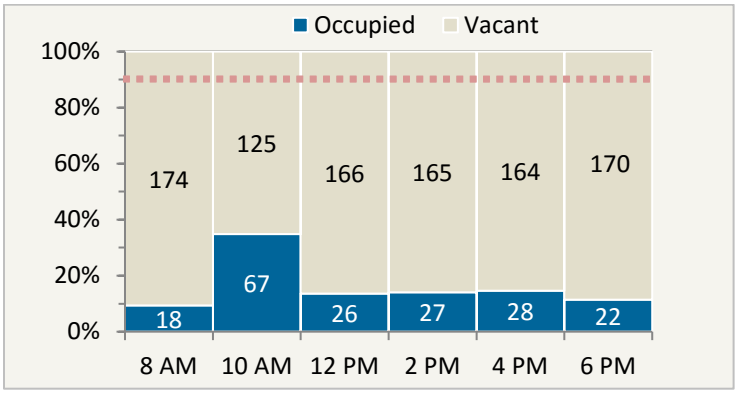
Figure 3-21 Weekday: Private/Restricted Off-Street Parking Spaces



Metered On-Street Parking Spaces – Weekday

Metered on-street parking has very low utilization during the week, as shown in Figure 3-22. During the 10:00 a.m. peak, utilization of metered spaces is at about 35%, which immediately drops off to 14% by 12:00 p.m. and stays very low for the rest of the day.

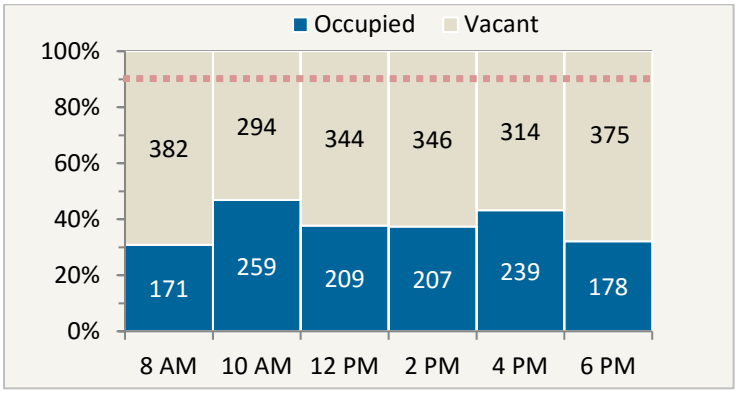
Figure 3-22 Weekday: Metered On-Street Parking Spaces



Non-Metered On-Street Parking Spaces – Weekday

Non-metered on-street parking has a higher occupation rate than metered parking, as shown in Figure 3-23. Non-metered parking peaks at 47% at 10:00 a.m. and stays steadily around 35-40% utilized for the rest of the day.

Figure 3-23 Weekday: Non-metered On-Street Parking Spaces

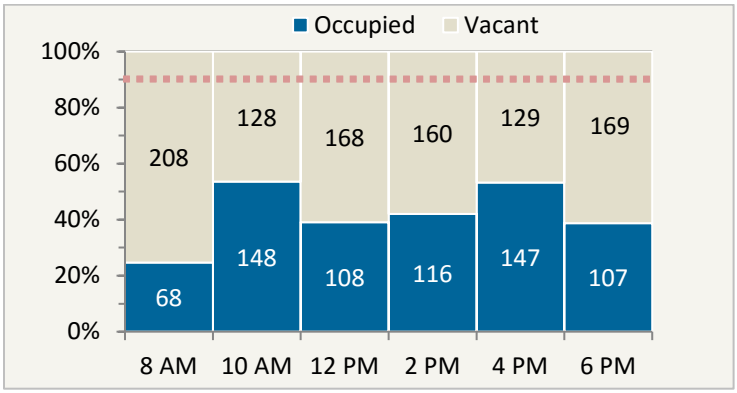


Comparing Figure 3-22 and Figure 3-23 reveals that time limited, non-metered spaces are proportionally more utilized throughout the day (30-40%) than metered spaces (less than 20%). This reflects the perception that many people move their car from time-limited space to time-limited space to avoid meter fees. However, at peak, metered spaces are 35% utilized while non-metered are 47%. This indicates that although parkers generally avoid metered parking, at peak when all spaces, including off-street, are in higher demand, some turn to metered spaces.

On-Street Time Limited Parking Spaces – Weekday

The time limited parking spaces on-street peak at about 53% occupied at 10:00 a.m. and again at 4:00 p.m., as shown in Figure 3-24. There are always at least 128 available on-street time limited spaces in the area.

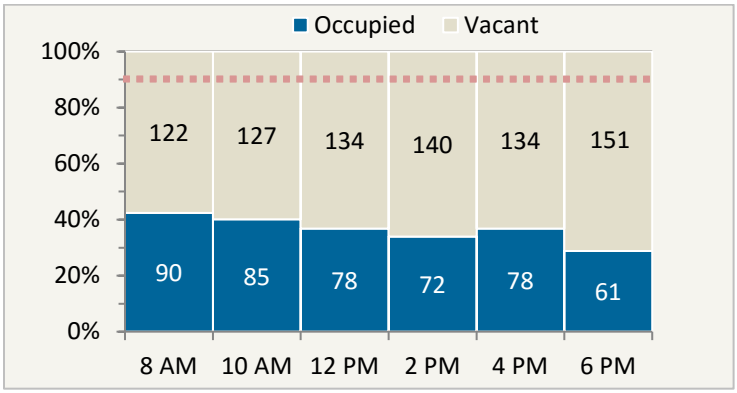
Figure 3-24 Weekday: On-Street Time Limited Parking Spaces



On-Street Unregulated Parking Spaces – Weekday

Unregulated on-street parking peaks at 8:00 a.m. at 42% utilization and declines steadily to 28% occupied by 6:00 p.m. as shown in Figure 3-25.

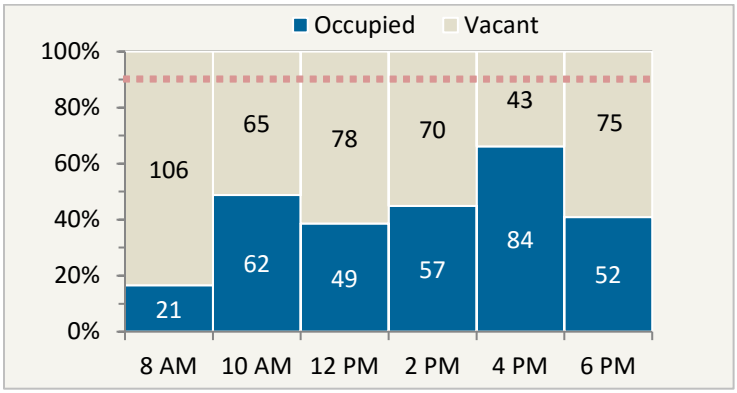
Figure 3-25 Weekday: On-Street Unregulated Parking Spaces



Legion Parkway On-Street Parking Spaces - Weekday

On-street parking along Legion Parkway peaks around 4:00 p.m. at 66% utilization, which is still below the optimal 90% utilization. Parking along Legion Parkway does not surpass 48% utilization for the rest of the day. Even during the peak period there are 43 spaces in this small area that are available for use.

Figure 3-26 Weekday: Legion Parkway On-Street Parking Spaces



Weekend PARKING Utilization

WEEKEND PARKING UTILIZATION - KEY FINDINGS

- Weekend demand was generally much lower than weekday demand with a peak utilization of 22% (1,183 out of 5,246[5] spaces) on Saturday at 11:00 a.m.
- There is plenty of on-street and off-street public parking available on both Saturday and Sunday mornings, especially in the public access parking lots and the on-street timed and metered parking spaces.
- Legion Parkway on-street parking spaces had high utilization between 9:00 a.m. and 1:00 p.m. on Saturday, but there were still 36 spaces available at 9:00 a.m. and 14 spaces available at 11:00 a.m. On Sunday morning, demand for these spaces drops by more than half.
- On-street parking along Main Street is mostly underutilized on the weekend, except for a few blocks that are nearing capacity. A motorist only has to drive to the next block to find plenty of available spaces.
- Church parking lots along Warren Avenue and Pleasant Street are fully occupied on Saturday and Sunday mornings, but there is plenty of public access parking available nearby.

Utilization patterns are displayed in maps from Figure 3-27 to Figure 3-30.

[5] The Adams Garage was not open on the weekend and data was not collected. Additionally, several street segments were also not counted on the weekend. These two omissions account for the total number of spaces being lower on the weekend than during the week.

Figure 3-27 Weekend Parking Utilization Saturday 9:00 a.m.

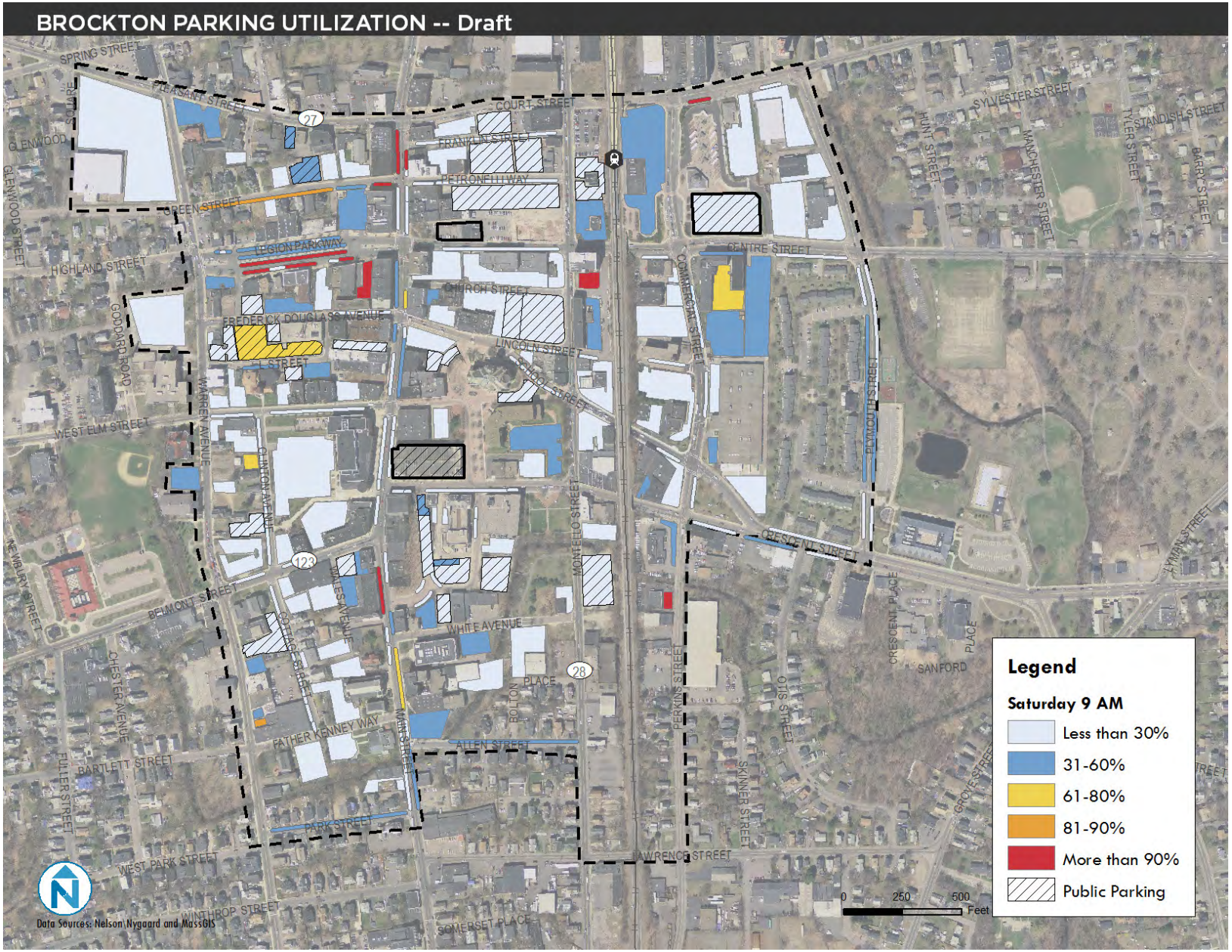


Figure 3-28 Weekend Parking Utilization Saturday 11:00 a.m.

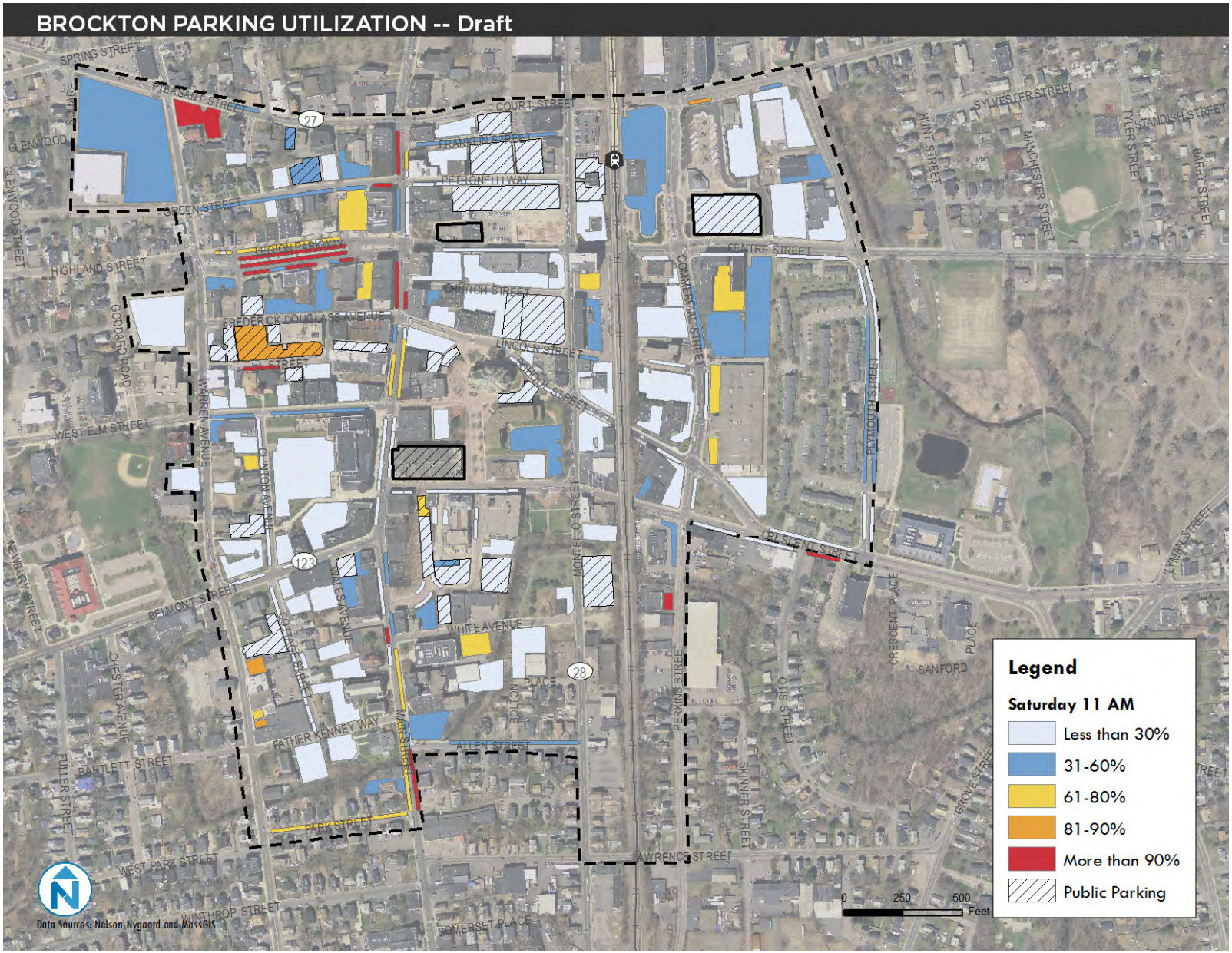


Figure 3-29 Weekend Parking Utilization Sunday 9:00 a.m.

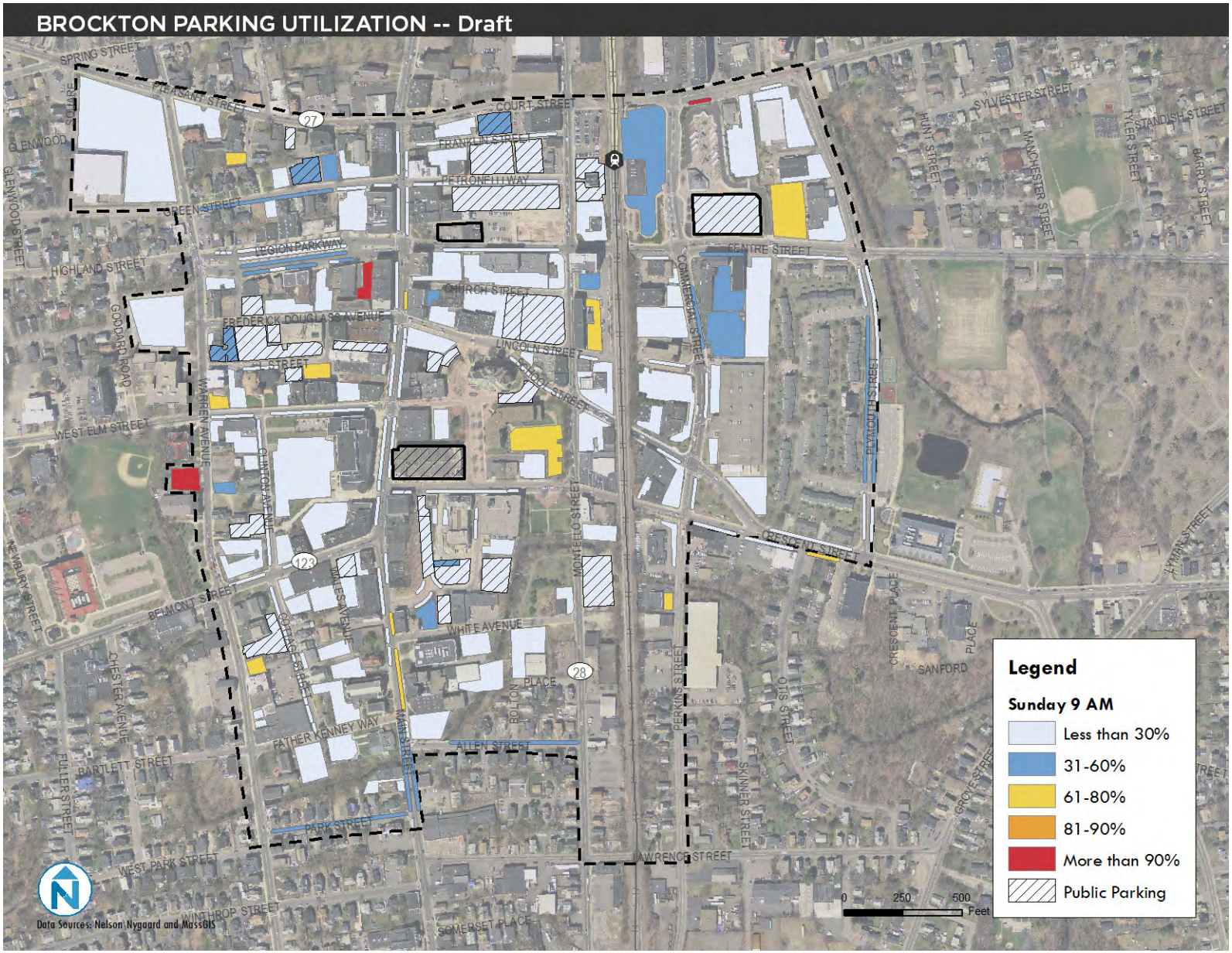
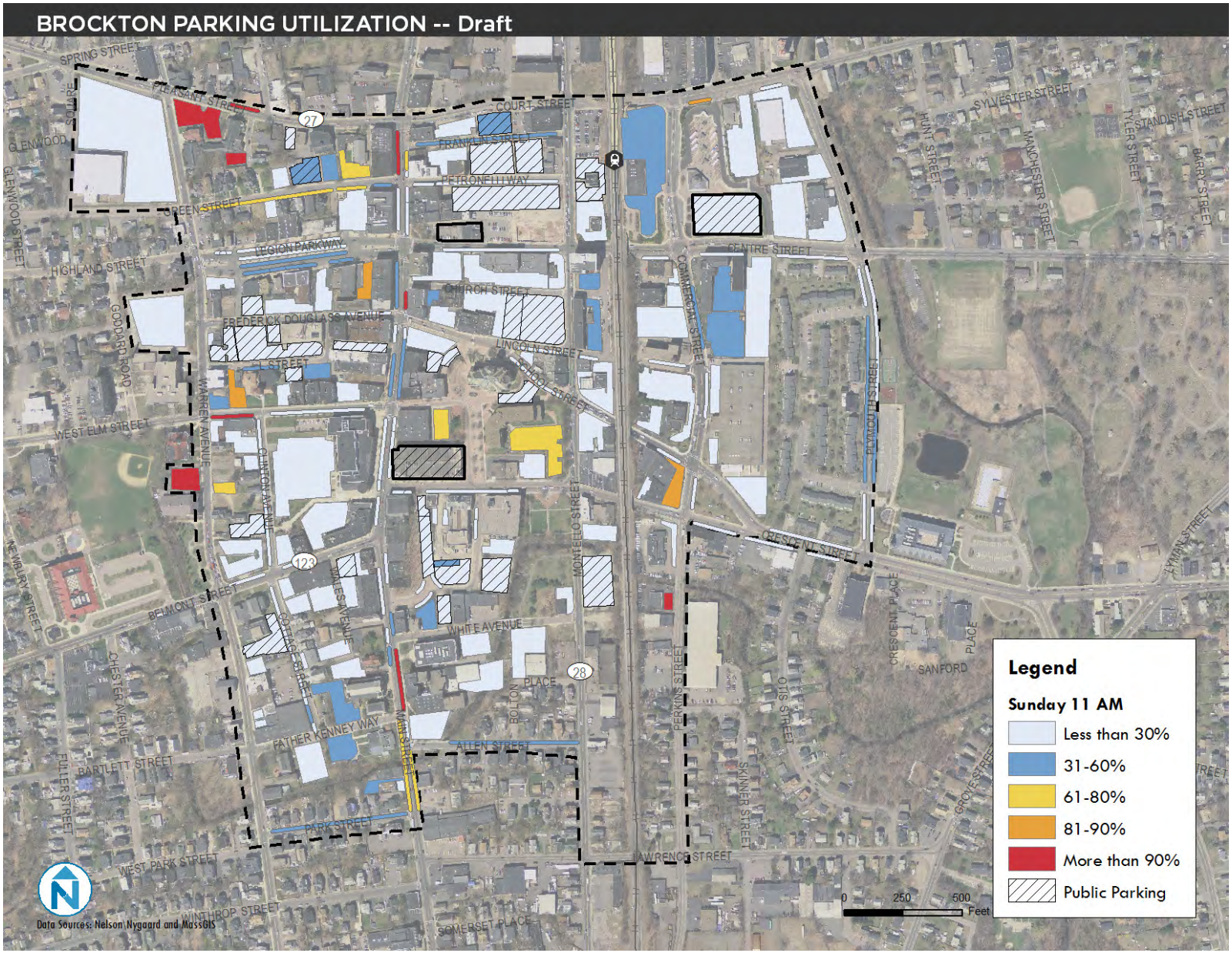


Figure 3-30 Weekend Parking Utilization Sunday 11:00 a.m.



All Parking Spaces - Weekends

As shown in Figure 3-31, of all 5,246 spaces counted in the downtown Brockton study area on the weekend, the maximum utilization was 23% (1,183 spaces of 5,246 total spaces[6]), which occurred around 11:00 a.m. on Saturday. Compared to the 90-percent optimal occupancy (shown by the red dotted line), these results indicate that the study area has more than sufficient parking supply to satisfy its demand on weekend. The parking demand on Sunday is slightly lower than on Saturday and also peaks at 11:00 a.m. at almost 17% occupied. Please note that utilization data does not include one on-street metered parking segment equal to 16 spaces.

Figure 3-31 Saturday: All Spaces Parking Demand

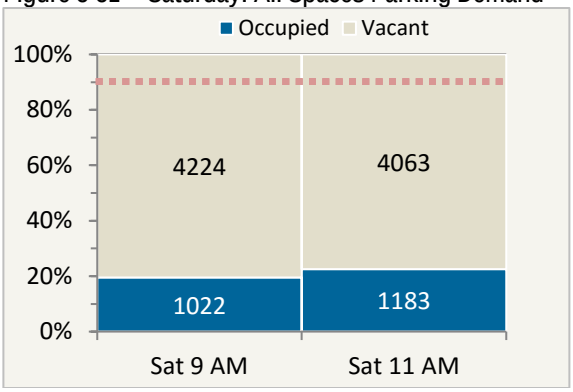
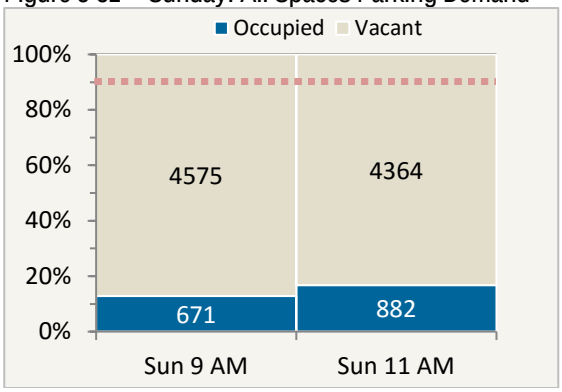


Figure 3-32 Sunday: All Spaces Parking Demand



On-Street Parking Spaces - Weekends

As shown in Figure 3-33, peak on-street utilization on the weekend was 41% occupied (297 occupied out of 729[7] available on-street spaces) and occurred around 11:00 a.m. on Saturday. This left 432 vacant on-street spaces in the study area throughout the day. Again, parking demand on Sunday is slightly lower than on Saturday at peaks at 11:00 a.m. at 28% occupancy.

Figure 3-33 Saturday: On-Street Parking Demand

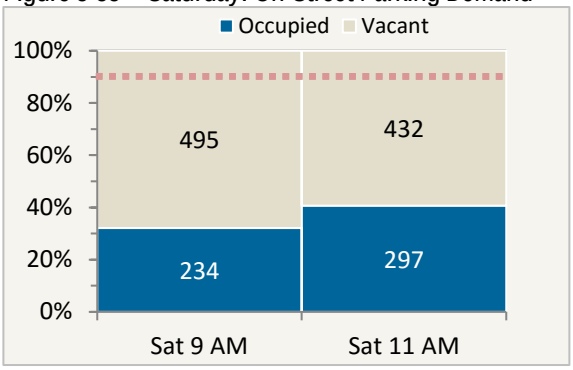
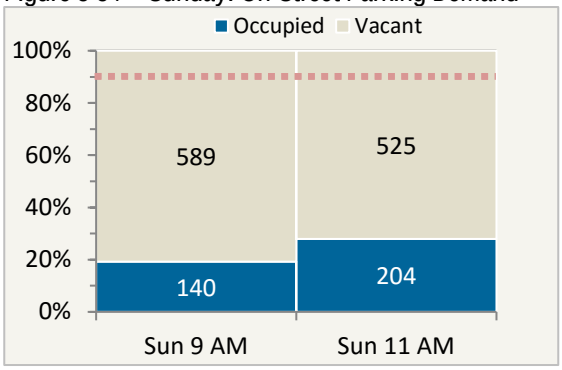


Figure 3-34 Sunday: On-Street Parking Demand



[6] During the weekend utilization counts one on-street segment was omitted from the count, which explains why the total number of spaces is lower on the weekend than during the week.

[7] Same as above.

Off-Street Parking Spaces - Weekends

In Figure 3-35, the weekend peak off-street utilization of 19% (886 occupied out of 4,517 available spaces) on Saturday at 11:00 a.m. leaves at least 3,631 vacant off-street spaces in the study area throughout the day. Off-street parking utilization on Sunday at 11:00 a.m. is around 15% occupied.

Figure 3-35 Saturday: Off-Street Parking Demand

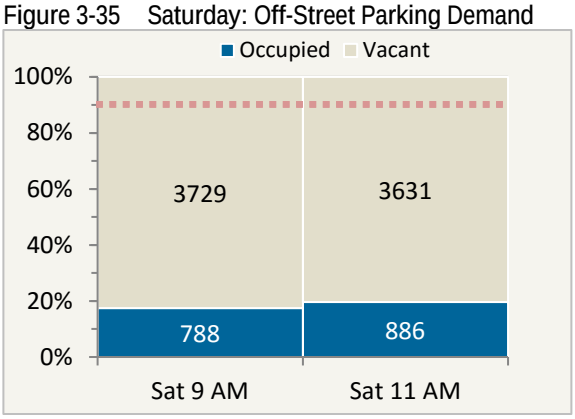
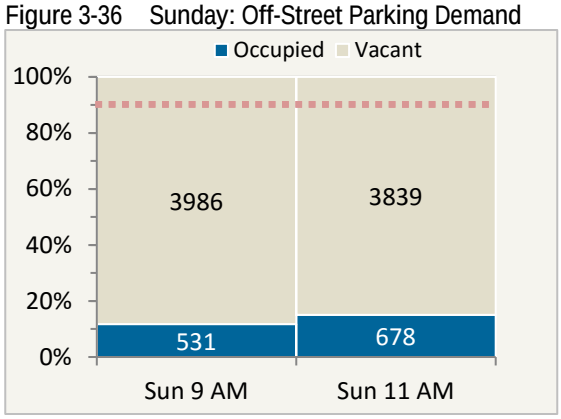


Figure 3-36 Sunday: Off-Street Parking Demand



Monthly Permit Only – Off-Street Parking Spaces – Weekends

As shown in Figure 3-37 and Figure 3-38, permitted off-street parking demand is also very low on the weekends. Utilization of these spaces peaks on Saturday at 11:00 a.m. at 16% occupancy. On Sunday, utilization drops to 9% at 9:00 a.m.

Figure 3-37 Saturday: Permitted Off-Street Parking Demand

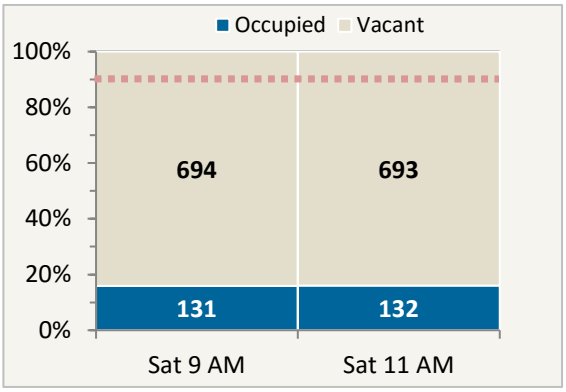
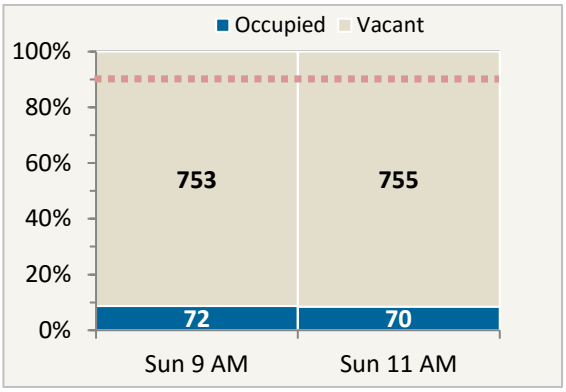


Figure 3-38 Sunday: Permitted Off-Street Parking Demand



Daily/Metered/Permit Off-Street Parking Spaces - Weekends

Publicly available off-street parking spaces consist of some spaces that are both for those with permits and the general public. The overall pool of spaces in this category is significantly lower on weekends as the Adams Garage is closed. Regardless, utilization is very low with over 400 spaces available at all times.

Figure 3-39 Saturday: Off-Street Parking Demand

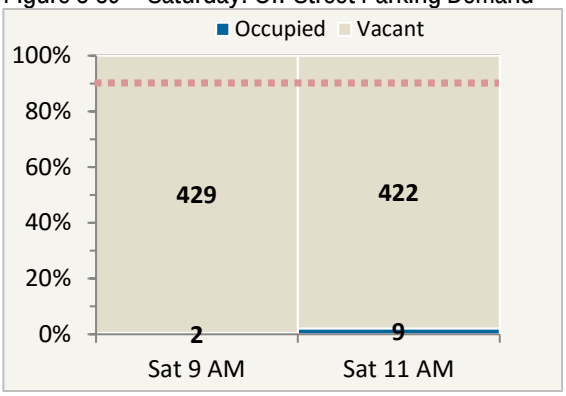
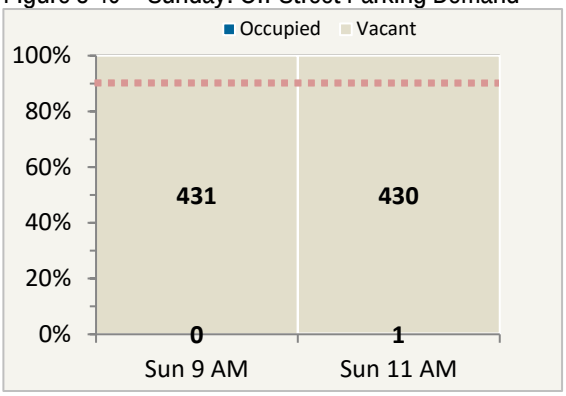


Figure 3-40 Sunday: Off-Street Parking Demand



Public Daily Parking - Off-Street Parking Spaces – Weekends

The BAT garage and other publicly available parking are also not in high demand on weekends, as shown by Figure 3-41 and Figure 3-42.

Figure 3-41 Saturday: Public Off-Street Parking Demand

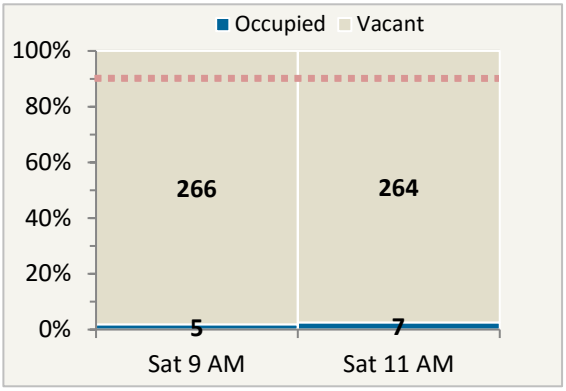
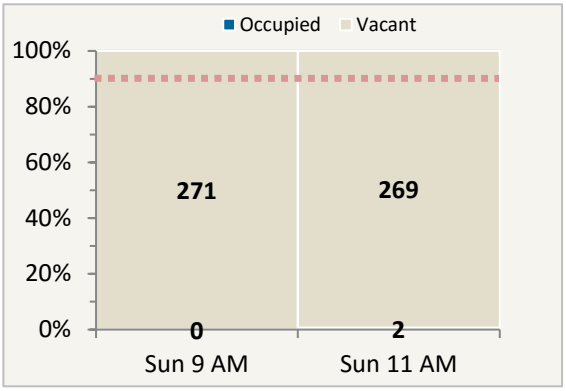


Figure 3-42 Sunday: Public Off-Street Parking Demand



Private/Restricted Off-Street Parking Spaces – Weekends

On the weekend, private/restricted off-street parking peaks on Saturday at 11:00 a.m. with 23% occupancy, leaving about 2,426 spaces available (Figure 3-43) Sunday utilization does not reach more than 19% occupied, leaving 2,557 spaces available.

Figure 3-43 Saturday: Private Off-Street Parking Demand

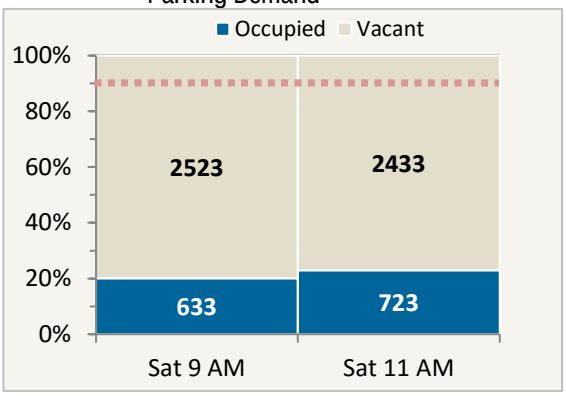
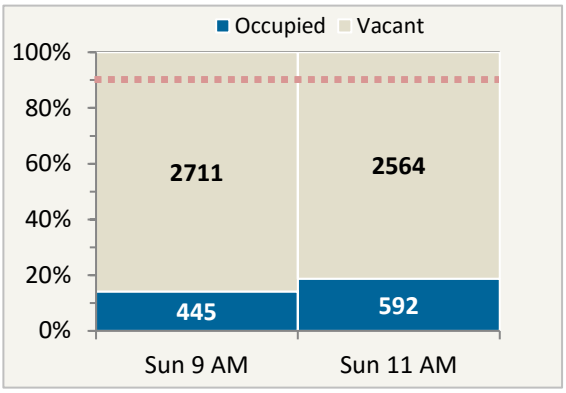


Figure 3-44 Sunday: Private Off-Street Parking Demand



Metered On-Street Parking Spaces – Weekends

Metered on-street parking demand peaks on Sunday at 11:00 a.m. at 23% utilization, while the Saturday utilization of these spaces peaks at 21% at 11:00 a.m.

Figure 3-45 Saturday: Metered Off-Street Parking Demand

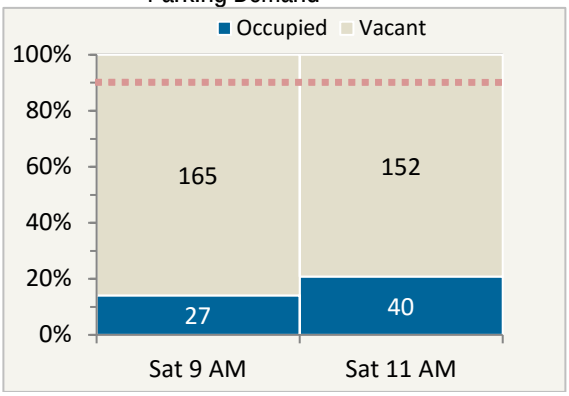
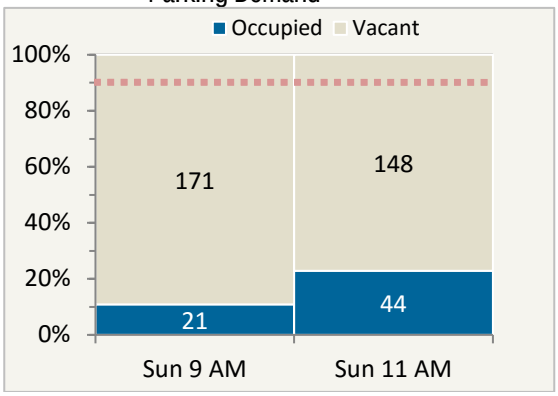


Figure 3-46 Sunday: Metered Off-Street Parking Demand



Non-Metered On-Street Parking Spaces – Weekends

As shown in Figure 3-47 and Figure 3-48, unmetered on-street parking has a higher utilization than any other type of on-street parking on the weekend. During the weekend peak on Saturday at 11:00 a.m. utilization reaches 46%, leaving 296 spaces available in the area. Sunday peak utilization is only 29%.

Figure 3-47 Saturday: Unmetered On-Street Parking Demand

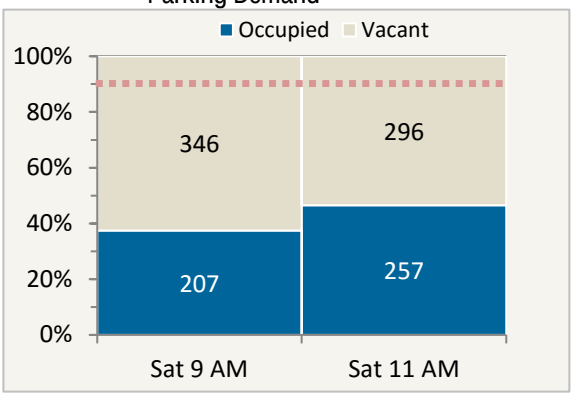
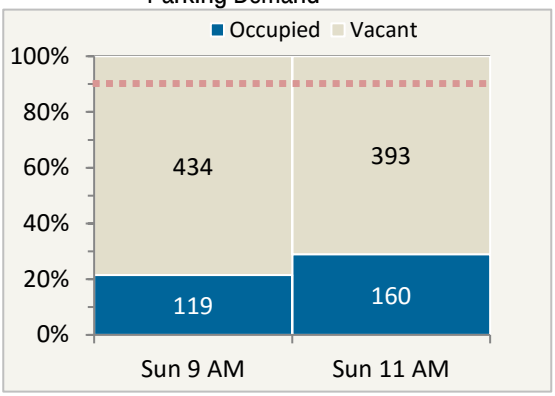


Figure 3-48 Sunday: Unmetered On-Street Parking Demand



On-Street Time Limited Parking Spaces – Weekends

Time-limited parking spaces are more popular on Saturday than Sunday. Many of these spaces are by Legion Parkway, so are actively used during opening hours. These spaces are explored in further detail below.

Figure 3-49 Saturday: Time Limited On-Street Spaces

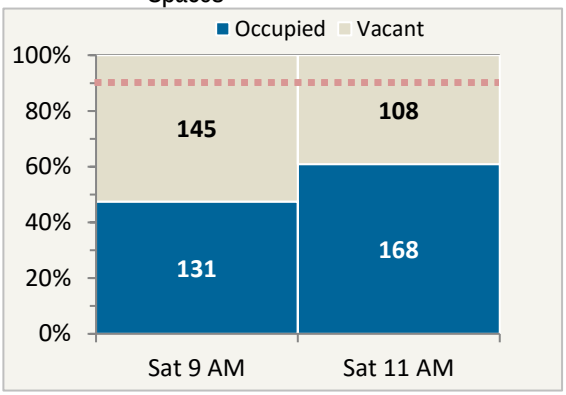
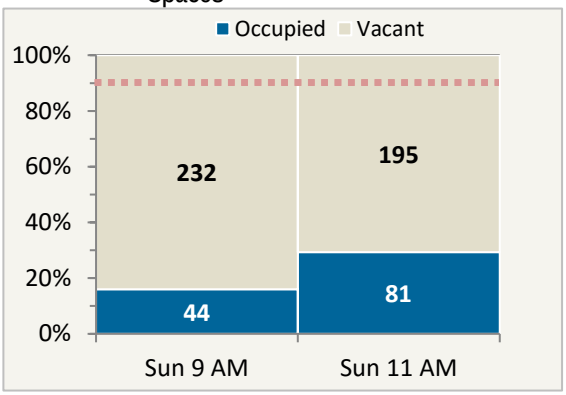


Figure 3-50 Sunday: Time Limited On-Street Spaces



On-Street Unregulated Parking Spaces – Weekends

Use of unregulated off-street spaces on both Saturday and Sunday is lower than 30%, leaving almost 2/3 of spaces unused. During the week, these spaces are utilized at around 40% or less. As the patterns are fairly consistent, several of these vehicles may be residents who do not move their cars during the week.

Figure 3-51 Saturday: Unregulated On-Street Spaces

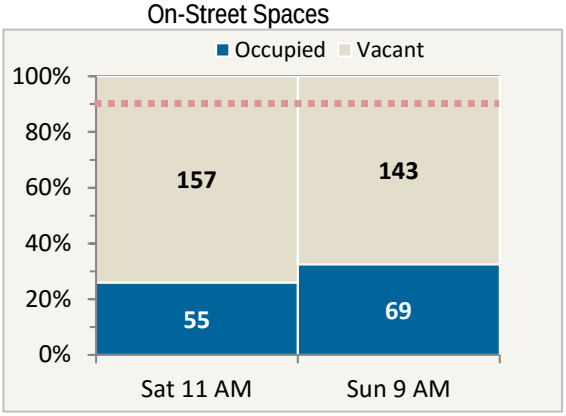
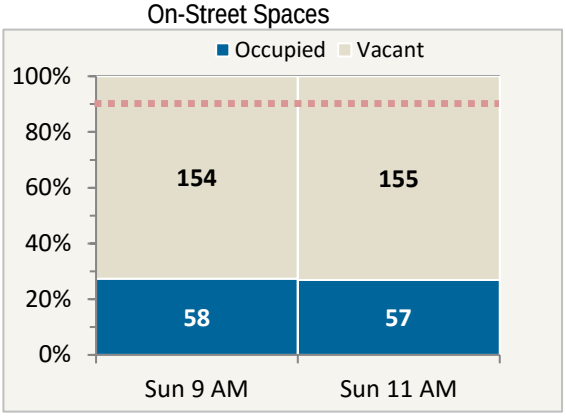


Figure 3-52 Sunday: Unregulated On-Street Spaces



Legion Parkway On-Street Parking Spaces – Weekends

On the weekend, especially Saturday, Legion Parkway parking is in high demand (Figure 3-53). During the 11:00 a.m. Saturday peak, the stretch of on-street parking is almost 90% occupied, which is right at the ideal utilization line. There are still 14 spaces available even during this peak period. On Sunday when the health center is closed[8], utilization of these spaces drops off significantly to only 37% occupied on Sunday at 11:00 a.m.

Figure 3-53 Saturday: Legion Parkway On-Street Parking Demand

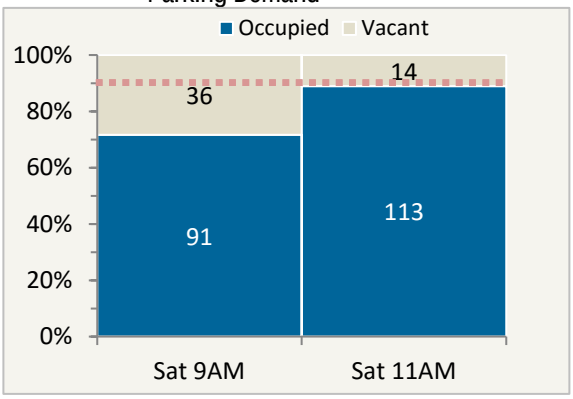
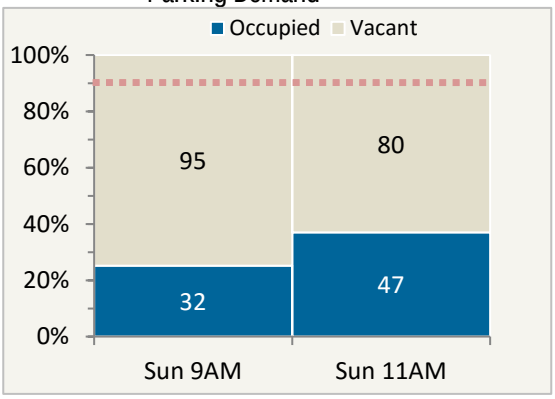


Figure 3-54 Sunday: Legion Parkway On-Street Parking Demand



[8] Per hours listed: http://www.bnhc.org/hours.html

Brockton North Study Area Utilization

In addition to looking at the entire downtown study area, the study team further analyzed two small walking zones in the downtown area. The first of these areas, called the North Study Area, is bounded by West Railroad Avenue to the east, Court and Green Streets along the north, Warren Avenue to the west, and Douglass Avenue to the south as shown in Figure 3-56.

All data shown for this area correspond to weekday parking. Please note that 170 off-street spaces are not included in the utilization data, as these areas were not counted during data collection rounds.

NORTH STUDY AREA PARKING UTILIZATION - KEY FINDINGS

- The North Study Area has 1,360 total parking spaces, as shown in Figure 3-55
- The North Study Area has 578 public off-street parking spaces, in addition to 284 on-street spaces, for a total of 862 public parking spaces.
- The North Study area has a peak parking utilization of 59%, higher than the overall study area's peak of 55%.
- Higher demand exists for off-street parking over on street parking in the study area.
- Public off-street parking has a peak utilization of 72%.
- Public on-street parking has a peak utilization of 44%.

Figure 3-55 North Study Area Inventory

Off-Street	
Regulations	Spaces
Monthly Permits Only	457
Daily/Hourly/Permit	115
Restricted – Municipal Employees (i.e. Fire, etc.)	6
Restricted - Private	658
Sub Total	1,236
On-Street	
Regulations	Spaces
Time Regulated	163
Metered	75
Other	46
Sub Total	284
TOTAL	1,520

Figure 3-56 North Study Area

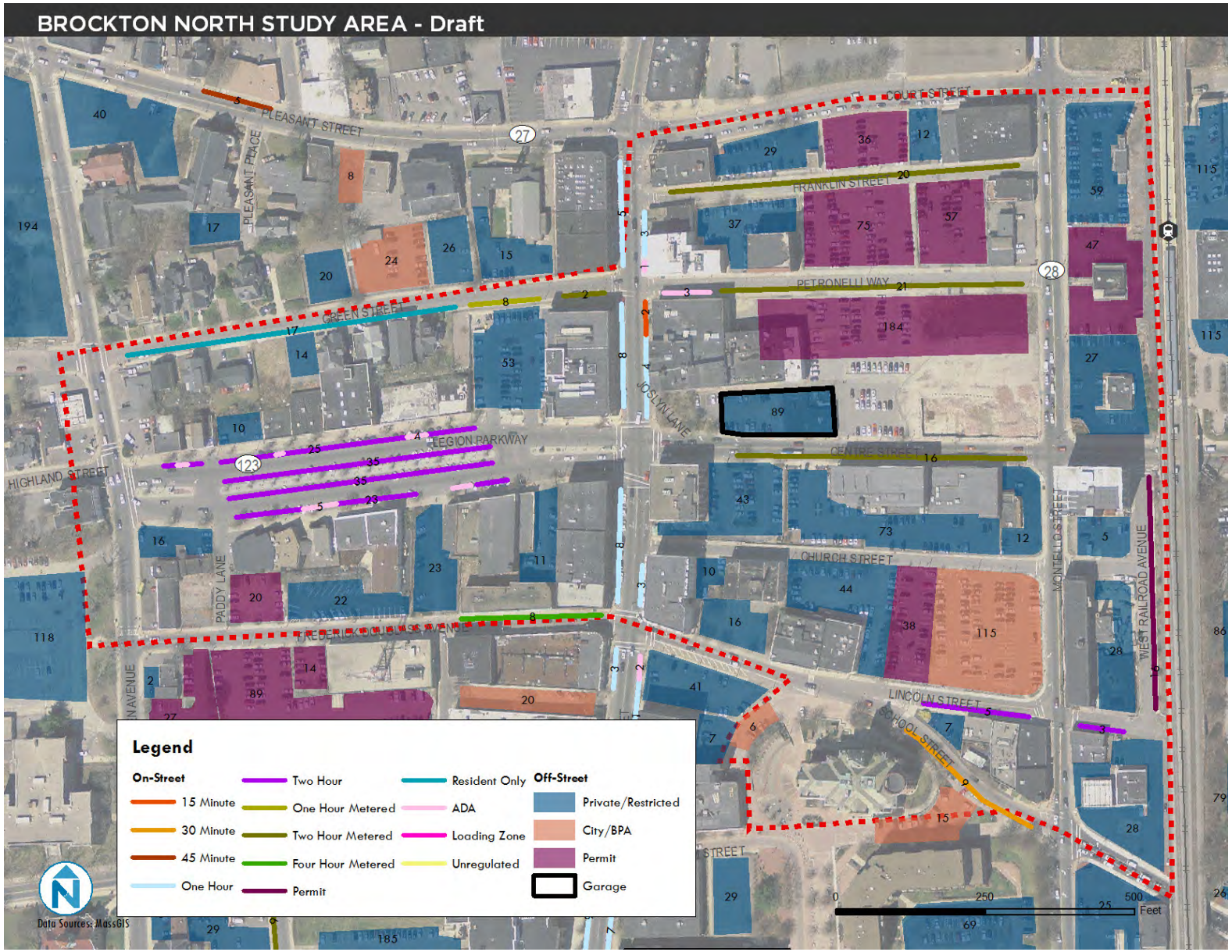
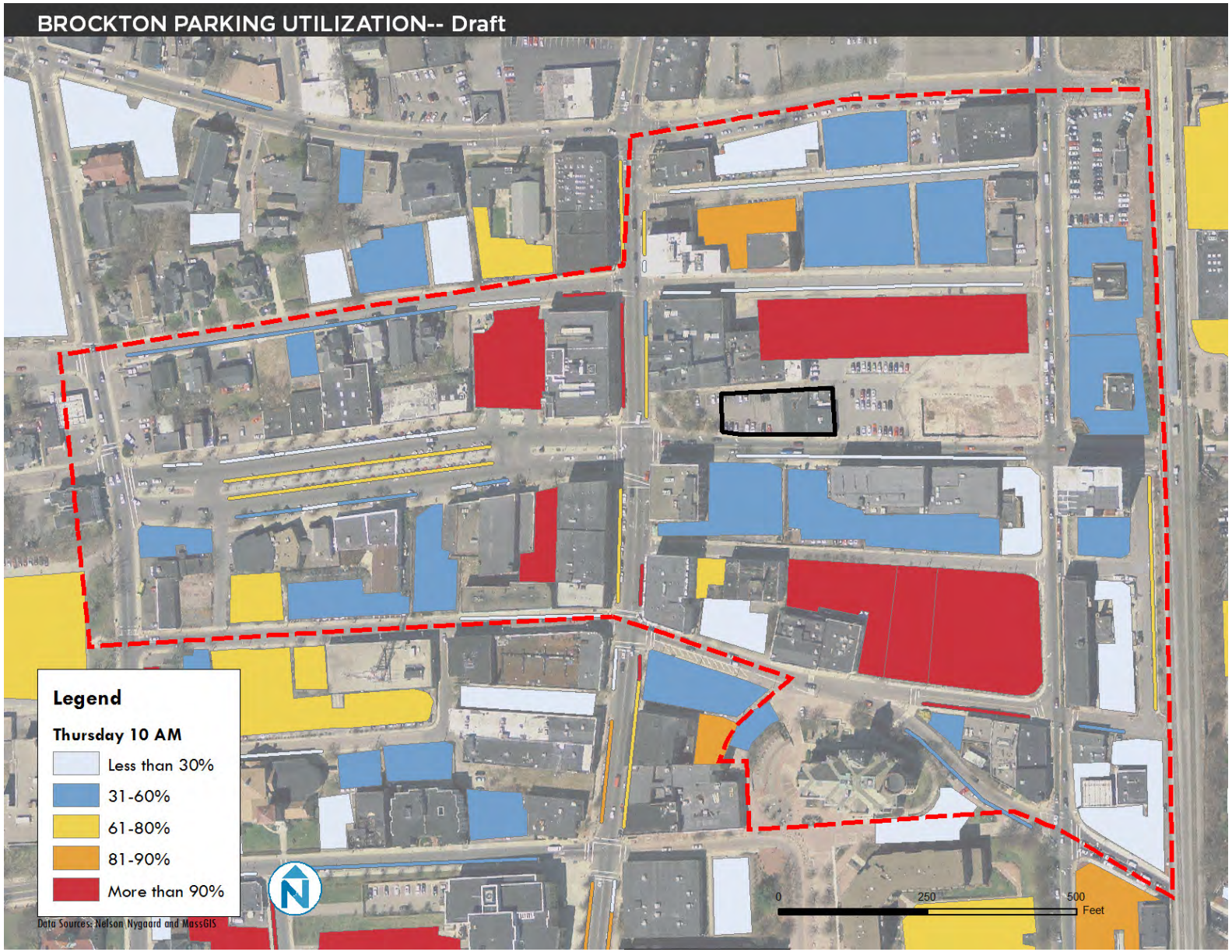


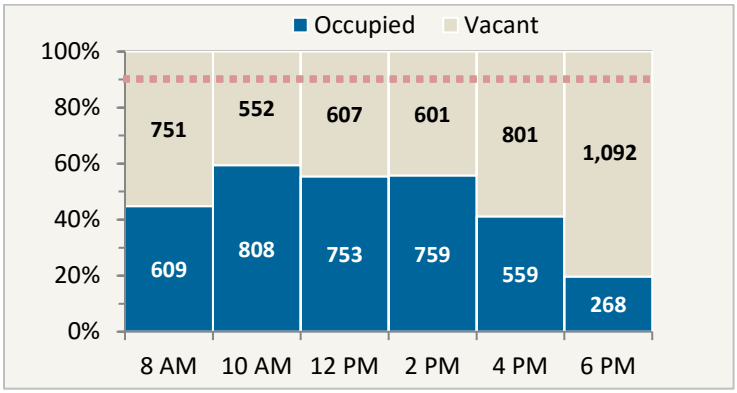
Figure 3-57 North Study Area Peak Utilization



North Study Area Utilization

The peak utilization for the North Study Area occurs at 10 a.m. with 59% of all available spaces occupied. This is slightly higher than the 53% peak utilization for the entire downtown study area. As demonstrated by Figure 3-58, the North Study area still possesses ample parking supply throughout the day, with a minimum of 552 available spaces during peak utilization. However, not all of these are publically accessible.

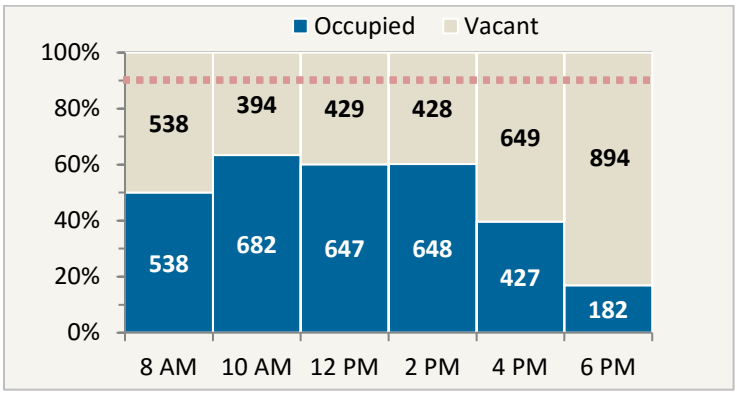
Figure 3-58 North Study Area Overall Utilization



North Study Area Off-Street Parking

Off-street parking patterns closely resemble the overall parking demand pattern for the North Study Area. As shown in Figure 3-59, off-street parking demand peaks at 10 a.m. with 63% of spaces occupied. Between 10 a.m. and 2 p.m. parking demand remains above 60% before falling off after 4 p.m.

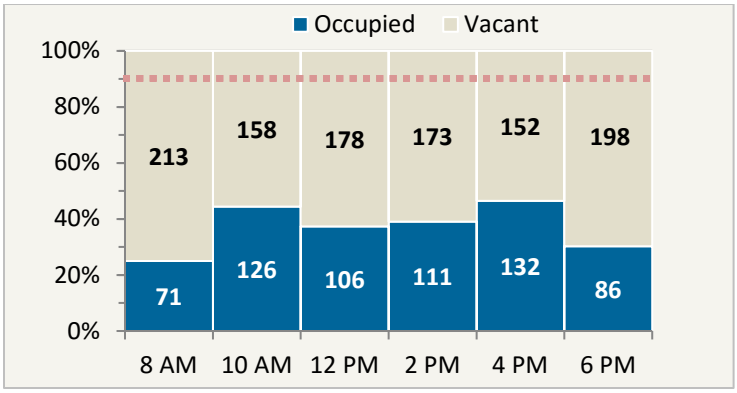
Figure 3-59 North Study Area Off-Street Parking Utilization



North Study Area On-Street Parking

While off-street parking in the North Study Area hovers near 60% during the day, on-street parking peaks at 4 p.m. when parking is approximately half full. The on-street parking pattern in this area deviates from the total study area or North Study Area patterns in that peak demand occurs late in the afternoon. Like the study area, demand at 10 a.m. is also relatively high.

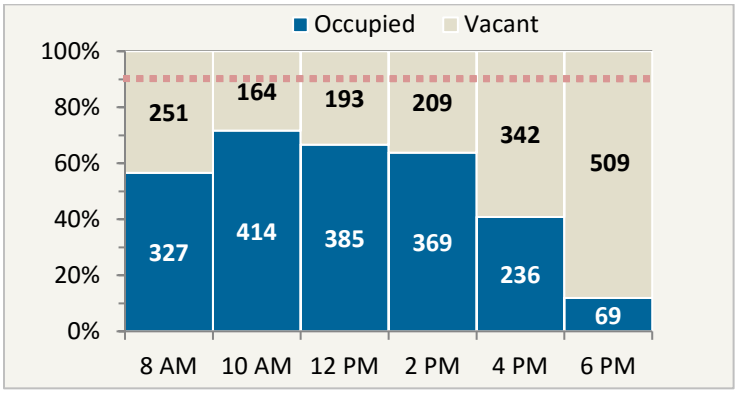
Figure 3-60 North Study Area On-Street Parking Utilization



North Study Area Publicly Owned Parking

As shown in Figure 3-57, the highest demand lots are those that serve the Brockton Neighborhood Health Center, the Trinity permit lot, and City Hall. Public parking within the study area has an overall utilization approximately 70% as shown in Figure 3-61.[9]

Figure 3-61 North Study Area Publicly Owned Parking

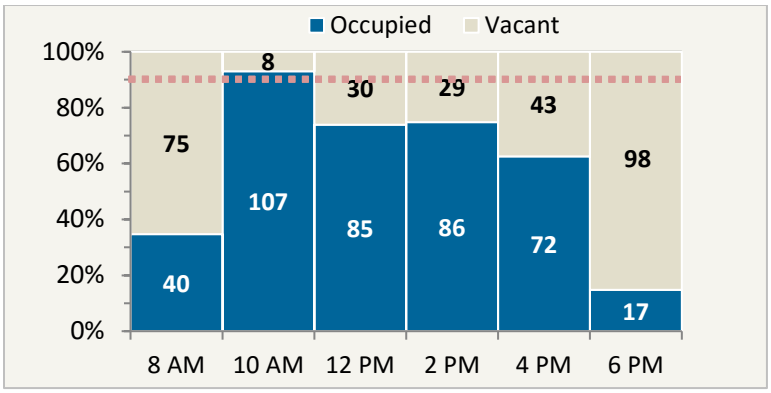


[9] Please note that the Health Center parking lot is not included in the numbers for Figure 3-61

Lincoln Lot

In the North Study area, the Lincoln lot is the only place for daily or hourly off-street parking without a permit, although permit parkers can park there as well. As shown in Figure 3-62, at 10 a.m. the demand for this lot exceeds the optimal 90% of parking demand with only 8 spaces available.

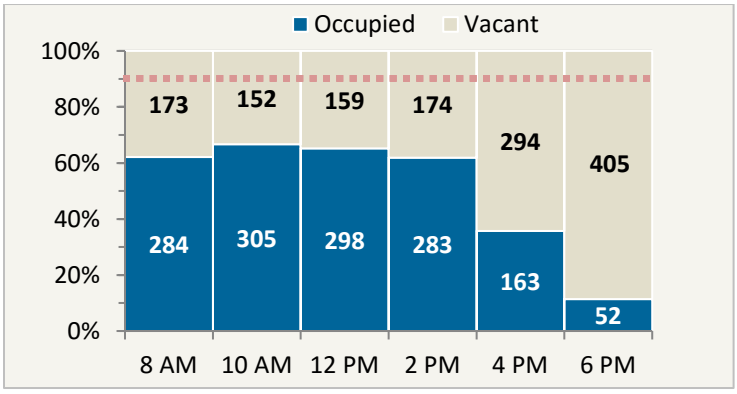
Figure 3-62 North Study Area Daily, Hourly, and Permit Parking



North Study Area Permit Only Areas

Permit only parking areas represent the second most common type of parking in the sub-study area after private and restricted parking. As shown in Figure 3-63 this parking type consistently has demand over 60% during the workday. However, despite this consistency, over 30% of all spaces remain unused throughout the day.

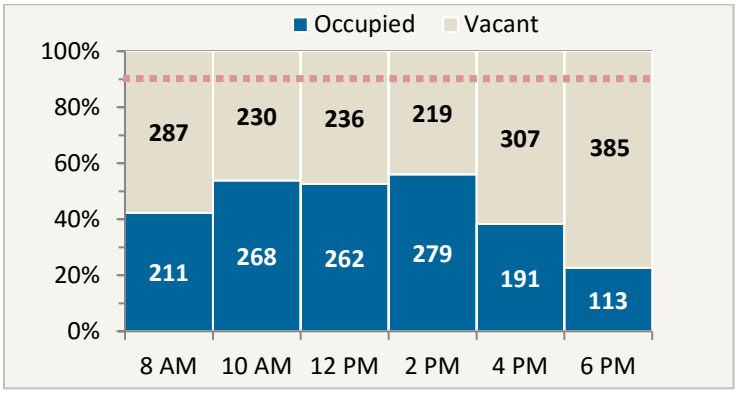
Figure 3-63 North Study Area Permit Only Parking Utilization



North Study Area Private/Restricted Parking

A large proportion of parking in the North Study area is private and restricted parking: nearly 500 spaces. Private and restricted parking demand peaks at 2 p.m. with 56% of all spaces used. Considerable excess parking exists within private and restricted parking areas.

Figure 3-64 North Study Area Private or Restricted Parking Utilization



Brockton South Study Area Utilization

The second sub study area, called the South Study Area, is bounded by Montello Street to the east, School Street, Lincoln Street, and Douglass Avenue along the north, and Warren Avenue to the west. As shown in Figure 3-66, the southern edge of the sub study area runs along a variety of parcels and streets between Warren Avenue and Montello Street.

All data shown for this area correspond to weekday parking. Please note that 14 off-street spaces are not included in the utilization data, as these areas were not counted during data collection rounds.

SOUTH STUDY AREA PARKING UTILIZATION - KEY FINDINGS

- The South Study Area has 1,773 parking spaces overall. The great majority of these are off-street (91%).
- At peak, two thirds of the publically owned off street parking in the study area is full.
- The peak demand for the entire sub study area occurs at 10 a.m. when approximately two thirds of spaces are occupied.
- Demand for off-street parking is significantly higher than for on-street parking, which is mostly time-limited and/or metered.

Figure 3-65 South Study Area Inventory

Off-Street	
Regulations	Spaces
Monthly Permits Only	225
Daily/Hourly	7
Daily/Hourly/Permit	493
Restricted – Municipal Employees (i.e. Fire, etc.)	73
Restricted - Private	824
Sub Total	1,622
On-Street	
Regulations	Spaces
Time Regulated	68
Metered	88
Other	9
Sub Total	165
TOTAL	1,787

Figure 3-66 South Study Area

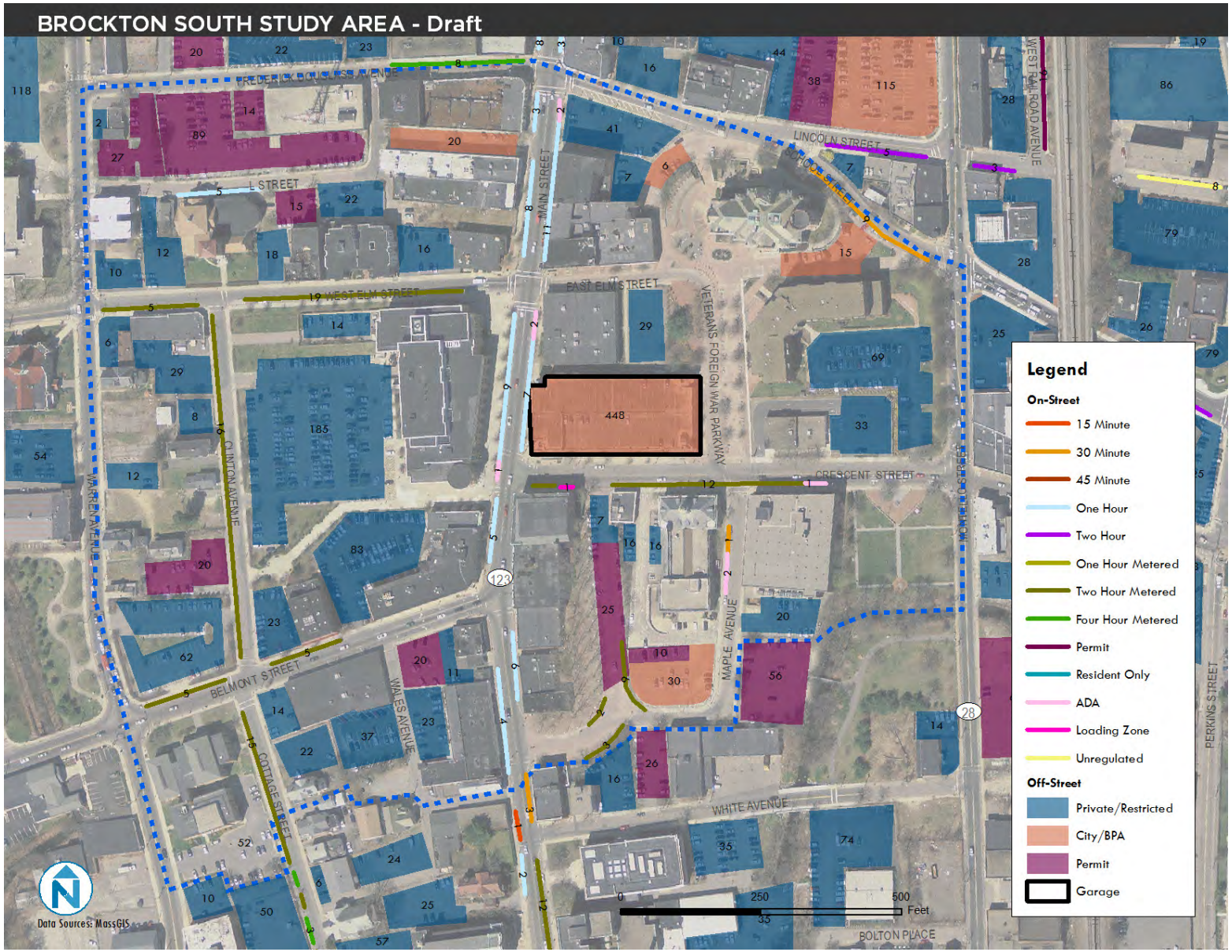
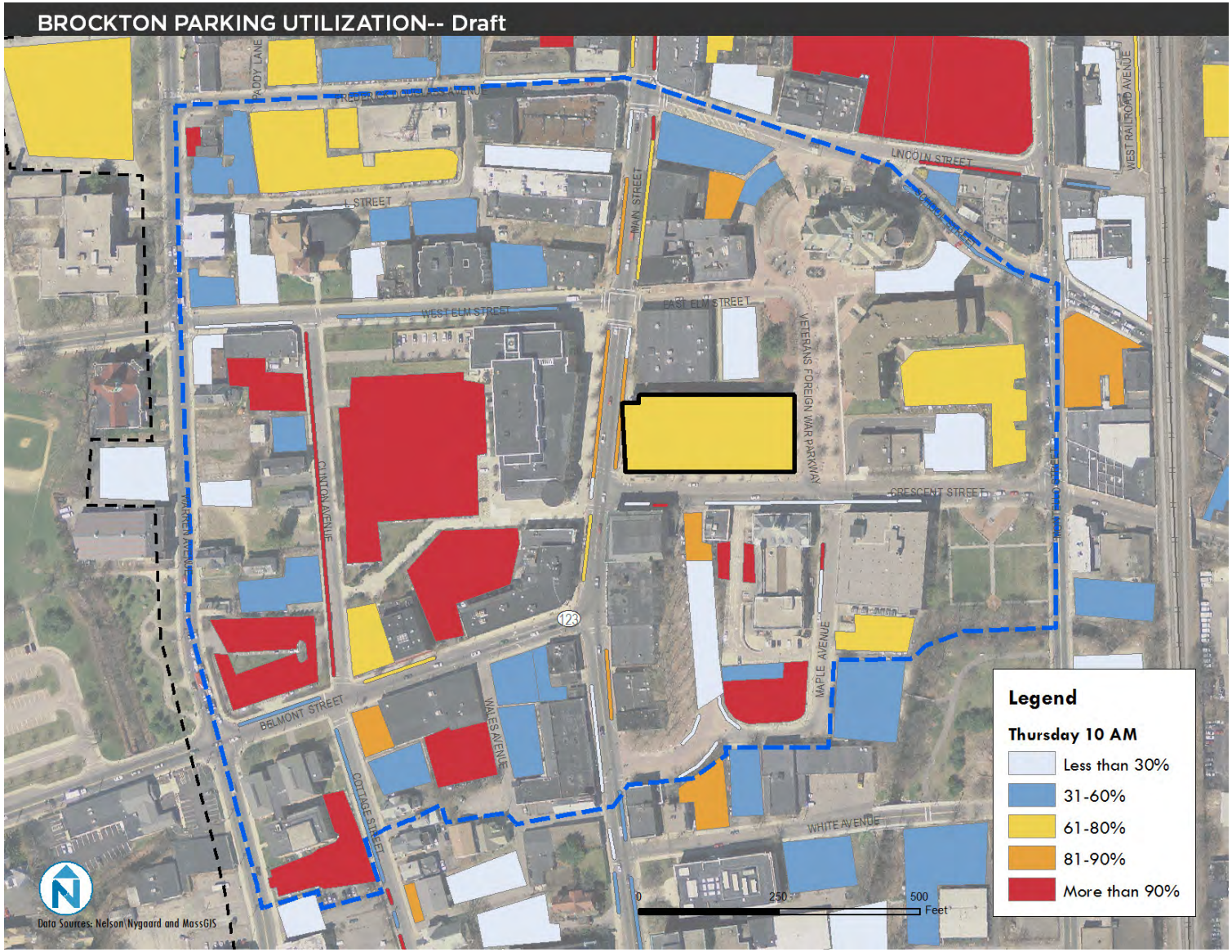


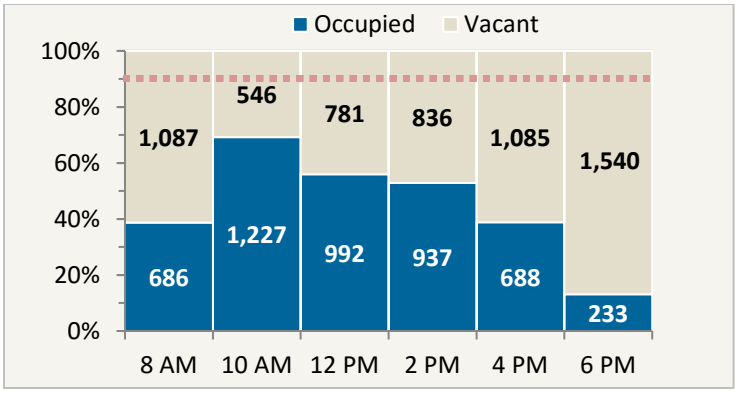
Figure 3-67 South Study Area Peak Utilization



South Study Area

Overall, the South Study Area has excess parking supply throughout the entire weekday, though much of it is currently private or restricted parking. The highest areas of parking demand are for the parking lots immediately adjacent to the Plymouth Probate and Family Court House, as demonstrated in Figure 3-67. In comparison there are a number of other parking lots just one block further from the courthouse that show demand lower than 30% utilization at the peak demand period for the sub study area. As shown in Figure 3-68, even at the 10 a.m. peak, 30% of all spaces are available.

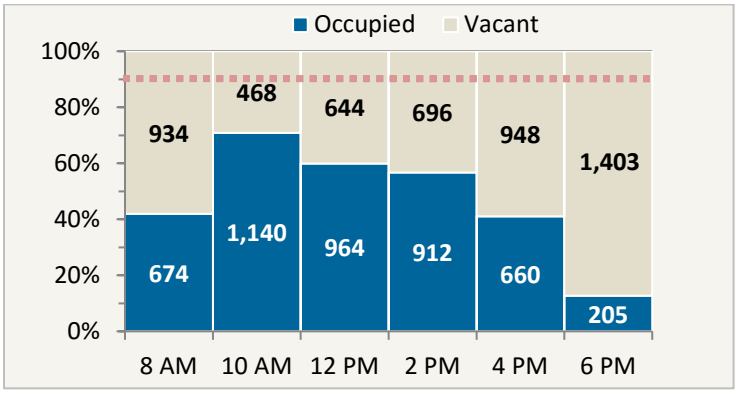
Figure 3-68 South Study Area Utilization



South Study Area Off-Street Parking

Off-street parking patterns follow the overall parking pattern of the sub-study area. As shown in Figure 3-69, off-street parking in the South Study Area peaks at 10 a.m. with 71% of all spaces used. For the rest of the day however, parking demand remains below 60% for off street areas.

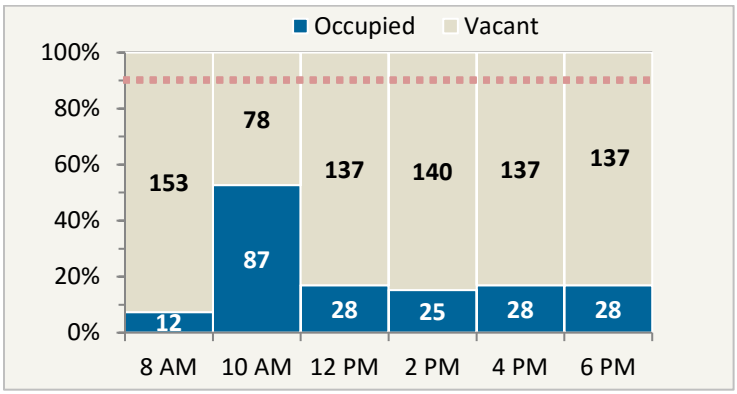
Figure 3-69 South Study Area Off-Street Parking Utilization



South Study Area On-Street Parking

On-street parking utilization in the South Study Area peaks at 10 a.m. with about half of all parking spaces used. At all other points in the day, however, parking demand does not reach 20% of on-street parking supply. As shown in Figure 3-70, parking demand remains consistent at all hours other than 10 a.m. Many of these spaces are metered or time limited to encourage availability, which does not match observed demand in this area.

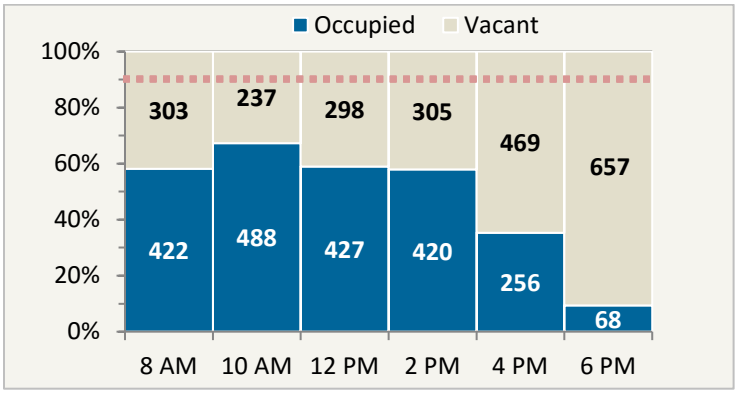
Figure 3-70 South Study Area On-Street Parking Utilization



South Study Area Publically Owned/Operated Lots

Demand for publically owned or operated lots peaks at 10 a.m. with about two thirds of all spaces occupied. At no other time during the day, however, does demand exceed 60%. As shown in Figure 3-71, for most of the day more than 40% of all publicly owned or operated off-street spaces are unoccupied.

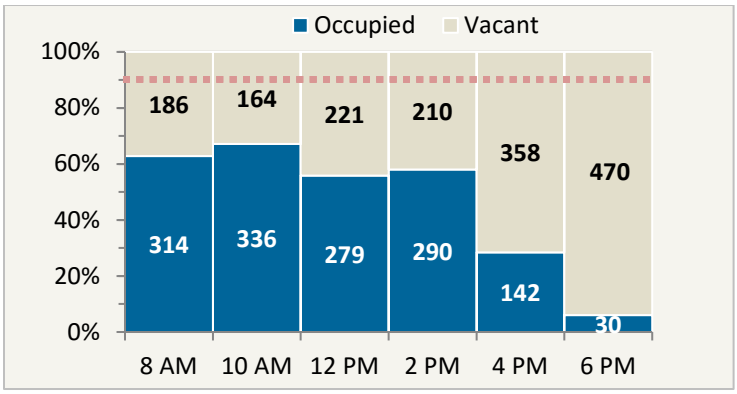
Figure 3-71 Publically Owned/Operated Off-Street Lots



Daily, Hourly, and Permit Parking

Publically owned facilities that allow daily, hourly, and permit parking in this area include the Adams Garage, B1, and Telephone lots. Parking demand at these facilities consistently approaches 60% throughout the day. Demand for these parking lots peaks at 10 a.m. with 67% of all spaces occupied as shown in Figure 3-72. By 6 p.m. however fewer than 10% of all spaces are occupied.

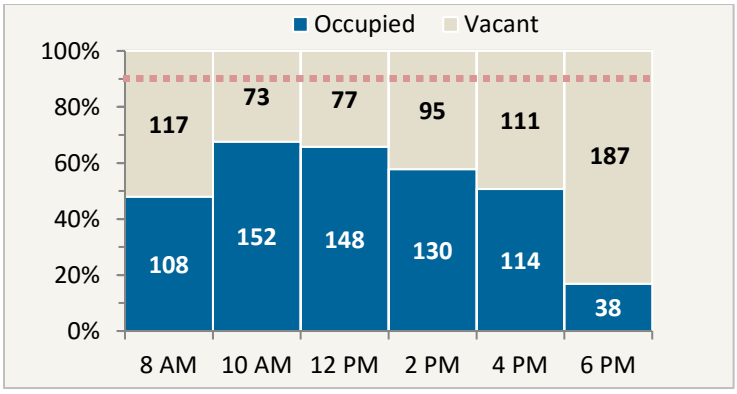
Figure 3-72 South Study Area Off-Street Daily, Metered, and Permit Parking



South Study Area Permit Only Parking

Publically owned facilities that only allow permit parking in the South Study Area includes lots such as those along Frederick Douglass Avenue. As shown in Figure 3-73, parking demand at these facilities peaks at 10 a.m. with 67% of all spaces occupied. After 2 p.m. however parking demand drops.

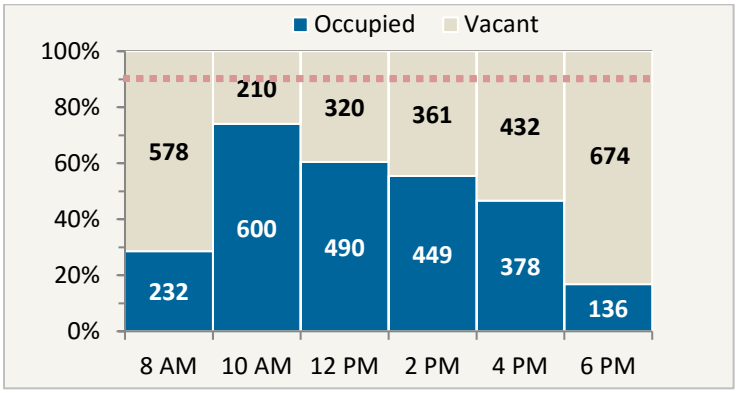
Figure 3-73 South Study Area Off-Street Permit Only Lots



South Study Area Private/Restricted Parking

Parking demand for private and restricted parking has one of the highest peaks of any parking type in the South Study Area. As shown in Figure 3-74 parking utilization for private and restricted parking peaks at 10 a.m. with nearly three quarters of all spaces occupied.

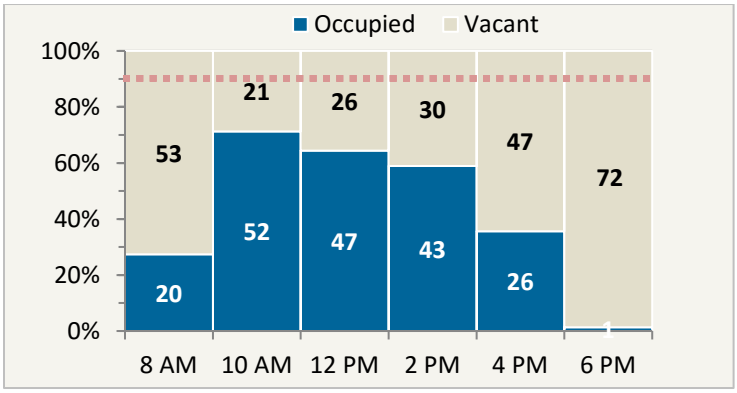
Figure 3-74 South Study Area Private/Restricted Parking Utilization



South Study Area Municipal Parking

The South Study Area has over 70 spaces that are for exclusive use by municipal employees and vehicles owned by the City. As shown in Figure 3-75, demand for these spaces peaks at 10 a.m. with 71% of all spaces occupied. By 6 p.m. these lots are essentially empty. These lots include two in immediate proximity of City Hall, as well as a lot behind the Plymouth County Superior Court House, which is used primarily by the District Attorney's office.

Figure 3-75 South Study Area Municipal Parking Utilization



4 PARKING MANAGEMENT

Parking management is ultimately about human behavior. Parkers behave in response to how parking is managed, such as whether or not a sign is readable, what the regulation is, how parking is priced, and when parking rules are enforced.

Parking supply in downtown Brockton is 53% full at the busiest time of day, which means that there are several unused spaces in downtown. But are those spaces available to all? How are they managed and enforced? What information exists to find those spaces? Can the general public use these spaces? When? The answers to these questions reveal several reasons behind parking patterns downtown.

An important management-related opportunity is the development of Brockton's multimodal environment. BAT and MBTA service, coupled with good sidewalk coverage, mean that not every worker or downtown visitor has to drive. How are these options integrated with parking? How do the perceived and real safety concerns affect users' desire to park in certain locations?

Parking management is explored in this section under the following headers:

- Price and Time Limits
- Technology and Payment Systems
- Enforcement
- Governance
- Signage and Information
- Multimodal Connections

PRICE AND TIME LIMITS

On-Street Parking

Approximately 26% (192 spaces) of on-street parking spaces are metered (and time regulated). All meters are $0.25 per 15 minutes. The majority of metered on-street parking is available for two hour periods (171 spaces), while a small number are available for one hour (10 spaces) or four hours (11 spaces). Meters are in effect between 8:00 a.m. and 6:00 p.m. Monday through Friday, although enforcement ends at 5:00 p.m.

Meters and time limits in Downtown Brockton do not match demand. Meters and time limits are intended to encourage turnover and create availability in prime locations. However, as Figure 4-1 and Figure 4-2 show, metered and time-limited spaces have significant availability throughout the day. Users avoid the meters (and their accompanying time limits) in particular, except at the 10:00 a.m. peak utilization hour. Generally, the on-street spaces are not in high enough demand for users to pay to park. In contrast, either due to price or location, parkers are using the time-limited spaces.

Figure 4-1 Weekday: Metered On-Street Parking Spaces

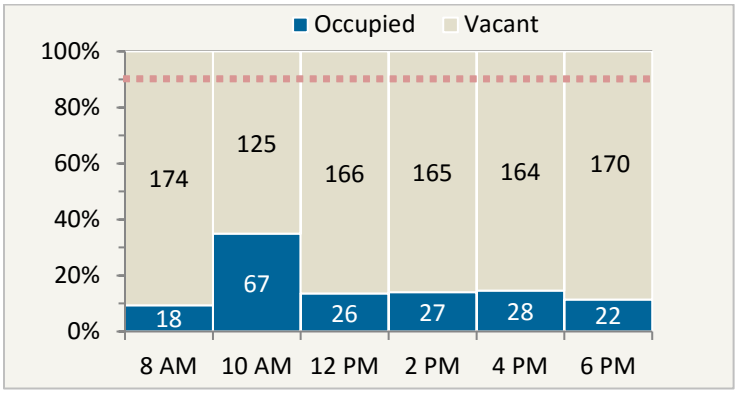
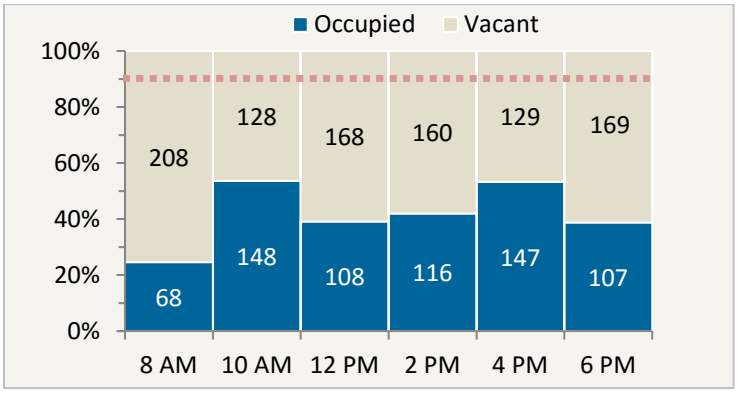


Figure 4-2 Weekday: On-Street Time Limited Parking Spaces



Off-Street Parking

Off-street parking occupies just over 41 acres, or about 22% of the study area. This parking generally falls into five categories, focused on who can access available spaces:

- *Monthly Permit-only parking* is located in publicly owned lots and requires a parking permit purchased from the BPA.
- *Daily/Metered/Permit parking* is located in publically owned lots and garages and has metered spaces available for the general public, or that a permit holder can use with a previously purchased permit. The Adams Garage and Lincoln Lot are two examples of this. In some lots the public uses meters to pay for parking, and others the public pays using a kiosk.
- *Public daily parking* is available to all on a daily or hourly basis. The BAT garage comprises most of this type of parking.
- *Restricted – Municipal parking* is for municipal vehicles, such as police cars or municipal employees.
- *Restricted - Private parking* is dedicated to a specific population, primarily businesses that reserve parking spaces for employees and/or customers.

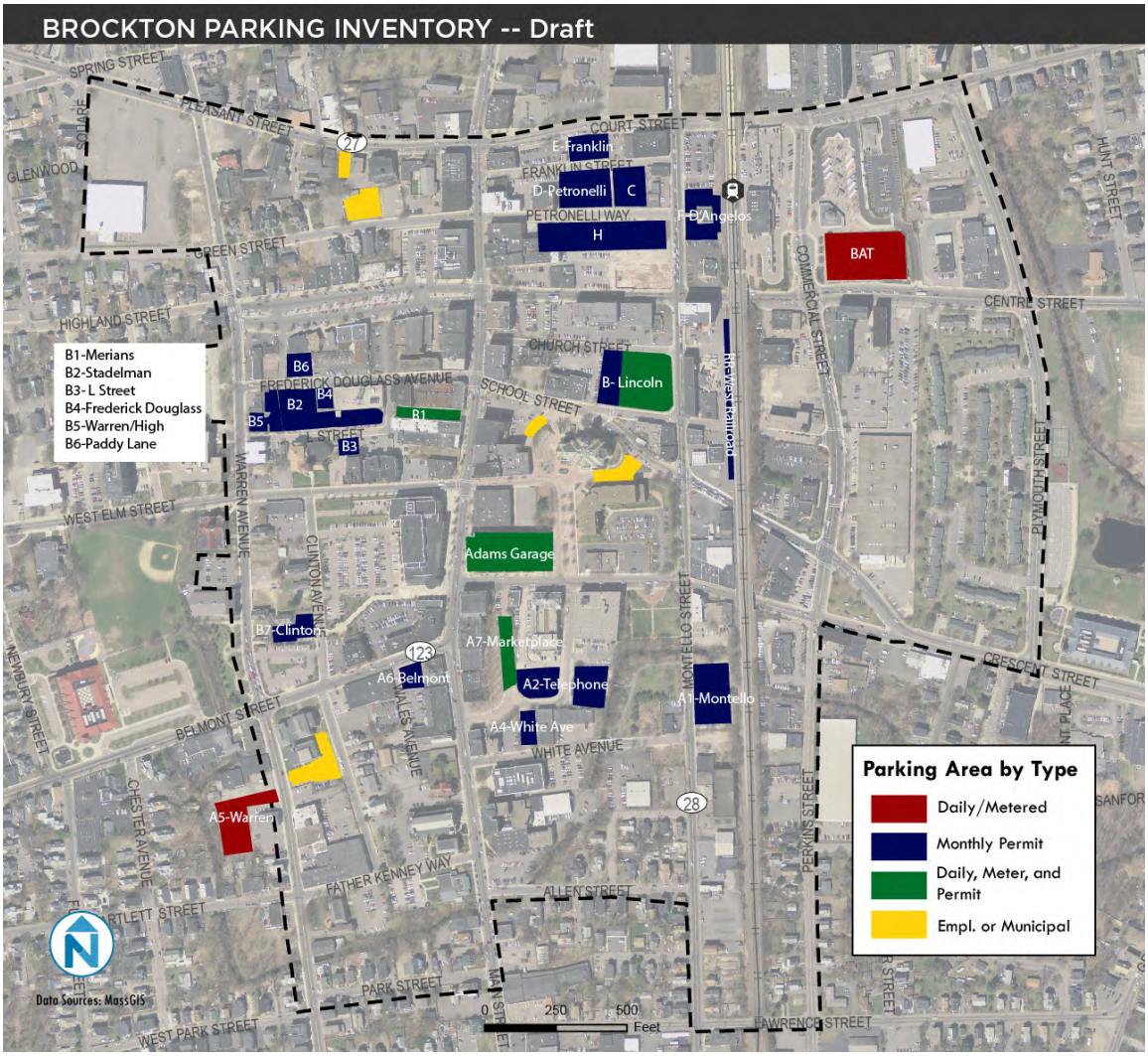
For **a motorist who does not have a City parking permit**, there are a several off-street parking options managed by BPA or BAT. These approximately 450 spaces include:

- Lot B1 off on Main Street (Metered, $1/hour)
- Lot B on Lincoln Street (Metered, $1/hour)
- The BAT garage near the MBTA station ($2-$3 dollars daily depending on payment method)
- The Adams garage near City Hall ($10 max daily, $2/hour)
- The metered parking at the “marketplace” near Joe Angelos (Metered, $1/hour)
- The Warren Avenue lot near the Courthouse (Daily permits available for $5 from attendant)[1]

These lots are shown in Figure 4-3, below.

[1] Note: Warren Street lot is outside of study area, therefore not included in original inventory/utilization counts.

Figure 4-3 Parking Area by Type in Brockton



While many of these publicly accessible facilities are located off Main Street, the BAT garage and Warren Avenue are more remote. However, these are the only facilities where City permit holders do not park at all: the four central parking areas allow permit parking as well. This could potentially create conflict between permit holders and daily visitors such as those visiting shops or running errands at City Hall. This tension is explored more in Figure 4-11.

General access parking is either controlled with meters, garage tickets/gate arms, or a manned booth. Costs range from a max of $3 per day at the BAT garage to a max of $10 per day at the Adams garage.

TECHNOLOGY AND PAYMENT SYSTEMS

The effects of parking payment technology on the system can be hidden, although they deeply affect user perception of parking availability. A traditional analysis might consider only revenue and cost. However, limited by coins-only, customers, employees and even businesses may be frustrated by the search for change just to pay the meters, detracting from the downtown experience. Newer parking technologies can also impact supply management, provide more reliable data, lower overhead costs, improve parking information reliability, and of course streamline parking regulation enforcement.

The Brockton Parking Authority uses the following technologies to collect parking-related fees and manage parking:

- Coin-operated single- and double-headed meters
- Parkeon cash-only kiosks
- Electronic chalking by enforcement officers
- Other payment systems:
  - Kelley & Ryan Associates online parking ticket payment system
  - Purchasing a permit in person or over the phone with the BPA

Meters

Meters in Brockton are mechanical and use quarters only (Figure 4-4). This means that customers must have exact change to use the meters. This can be frustrating for drivers in a rush, or those who worry about receiving a ticket while hunting down change. Drivers who do not carry change or have enough coins may give up and park elsewhere.

Figure 4-4 Double- and Single-Head Meters in Brockton

Kiosks

Some paid lots in Brockton offer electronic kiosks for payment. The lots use Parkeon kiosks, which allow users to pay with any type of coin or bill. Drivers display the receipt for paid parking on the dash.

The current BPA kiosks do not accept credit cards. Drivers therefore must carry cash. Moreover, after paying, drivers must return to their vehicles to place the receipt. If the kiosk is far from one's vehicle and/or the weather is poor, this can be inconvenient for parkers.

Figure 4-5 Kiosk in BPA Lot

Electronic Chalking

To monitor parking activity, the Parking Control Officers (PCOs) use handheld devices and electronic chalking. The name "electronic chalking" derives from an older practice of using chalk to mark tires to indicate if a car has moved or not within a given time frame. Electronic chalking eliminates the possibility of a user wiping chalk from the tires to evade a time limit. PCOs have a handheld device and a printer, and ticket records are uploaded in real-time. PCOs use these devices for all parking tickets except meter violations, and the vendor charges $2/ticket written.

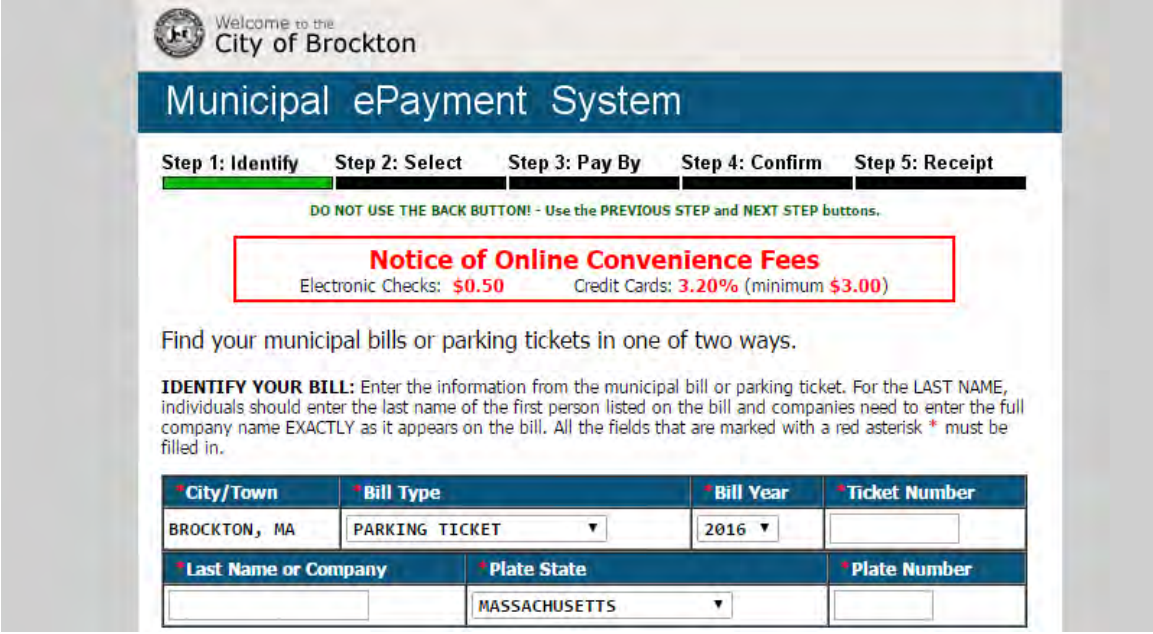
BPA reports that a large percentage of parking ticket appeals are due to inaccuracies in electronic chalking. Appeals are handled by a parking clerk who is a paralegal in the Law Department.

Other Payment Systems

Other parking-related payment systems include paying for violations and paying for permits. These are currently two different systems.

Parking violations may be paid online, shown in Figure 4-6. The system is the same for other municipal taxes (property tax, boat tax, etc.) and allows a user to pay by credit card from home or another convenient location.

Figure 4-6 Online Parking Violation Payment System



In contrast, obtaining a permit is not available online, as described below.

PERMITS

The BPA handles the process of issuing parking permits. However, while other City departments have moved to online processing, including for parking tickets, permits are not available online.

Obtaining a Permit

Permits are available through the Parking Authority office, via phone, email or in person. Permits must be obtained monthly and do not automatically renew. Companies such as WB Mason often pick up the permits in bulk and distribute them internally to employees.

In cases when a motorist has a valid permit, but the lot is full, the permit is honored at the Adams Garage.

Permit Price and Payment

Permits range from $30-$35 monthly, except for the Adams Garage which is $40. Figure 4-7 provides a complete breakdown of permit prices.

Stakeholder interviews indicate that many employers in Brockton pay this cost in full for their employees. Some employers pay part of the cost. The City of Brockton purchases parking passes for all of its employees annually.

Figure 4-7 Permitted Lots Number of Spaces and Monthly Rate: June 2015[2]

Lot	Spaces [3]	Monthly Price ($)
D'Angelo's[4]	43	30
Adams Garage	442	40
Stadelman	85	30
Warren/High	26	30
Frederick Douglas Ave	13	30
L St	14	30
Telephone/School Dept	89	30
Belmont/Main	19	30
Paddy Lane	19	35
Petronelli/Franklin	82	30
West RR Ave	26	30

Lot	Spaces [5]	Monthly Price ($)
BCA	43	30
White Ave	24	30
Lincoln	153	35
Porter Lot	68	30
Clinton Ave	15	30
Merian's	23	30
Franklin	36	30
Marketplace	49	30
Warren Ave	72	30
Montello	87	N/A
Trinity Lot	163	30

[2] BPA, 2015

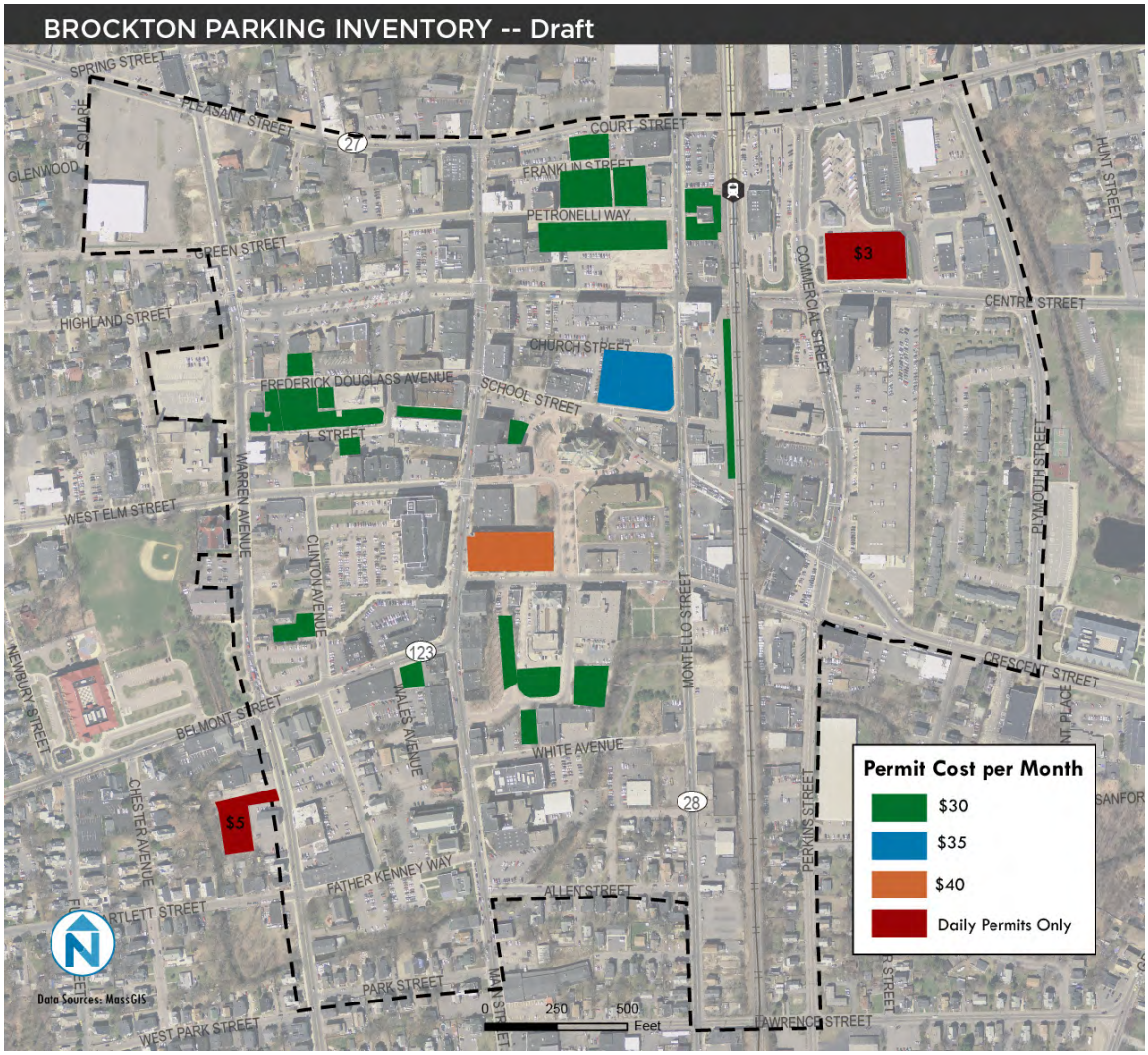
[3] Per BPA inventory

[4] As of Spring 2016, this lot is no longer managed by the BPA

[5] Per BPA inventory

Figure 4-8 provides an overview of permit parking by price and location. With the exception of the Lincoln Lot and Adams Garage, most permits are $30. This includes the spaces that are sold every month to WB Mason and other employers.

Figure 4-8 Permit Parking by Price



Permit rates increased by $5.00 across all lots and the garage in 2013 after several years with no increases. The BPA Board of Directors has the authority to change permit rates.

In context, these permit costs are not high. With a surface parking space costing between $200-$800 to maintain and a monthly MBTA pass to Brockton $2,868 annually[6], the $360 annual cost per spot is relatively low[7]. In addition, a BAT local pass is $35/month, or $420 annually. If an employee does not pay the parking rate his or herself, then the price is irrelevant to them and driving becomes the most attractive option.

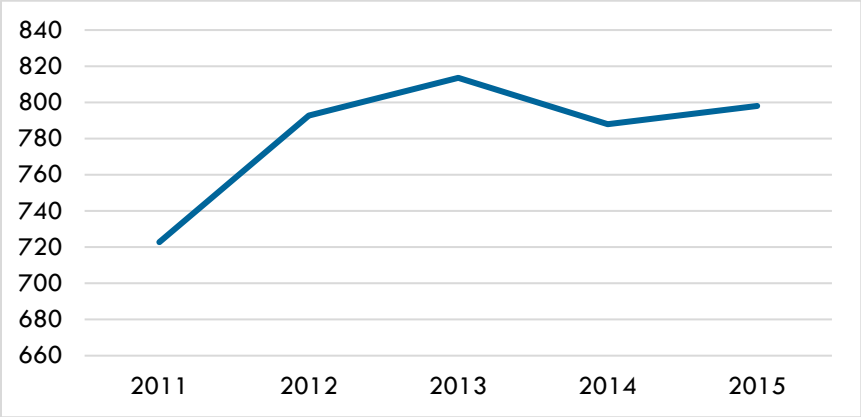
[6] Zone 4 commuter rail passes are $239 as of December 12, 2015.

[7] For structured and surface parking costs, see http://www.vtpi.org/tca/tca0504.pdf

Permits Sold

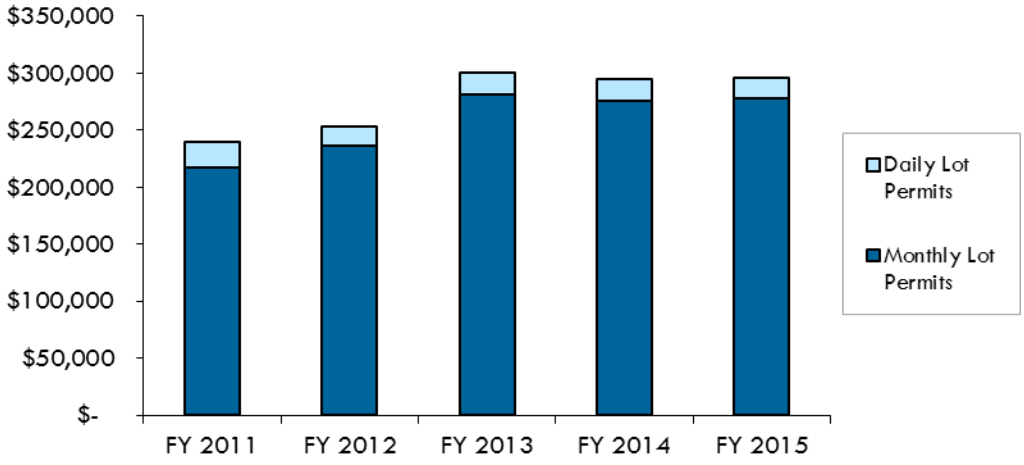
The BPA sells around 800 permits monthly in a fiscal year, for a total of about 9,600. This number has increased steadily since 2011, as shown in Figure 4-9. There is a slight dip from 2013 to 2014, ostensibly when the price increased. This may show some price sensitivity amongst Brockton parkers, but may also represent other changes in the downtown.

Figure 4-9 Average Number of Permits Sold (Monthly)



As shown in Figure 4-10, monthly and daily lot permits earned about $296,230 in FY 2015. The majority of this revenue is from monthly permits.

Figure 4-10 City-Owned Lots: 2011-2015 Revenue for Monthly Permits vs. Daily Permits



Permits by Facility

The lot earning the highest revenue in June 2015 is the Lincoln lot; the BPA issued 141 permits for the Lincoln Lot (out of 151 permits available) earning almost $5,000. In contrast, the BPA issued zero permits for the Montello and Warren Avenue lots; 87 permits are available in the Montello Lot and 72 are available in the Warren Avenue Lot.

Figure 4-11 also shows the number of spaces available to the public if all those holding permits parked in the facility. In total, there are **132 spaces for transient parkers available** in Brockton in City-owned facilities. This number does not account for those holding permits whose facilities may be oversold.

Figure 4-11 Permitted Lots Pricing and Revenues: June 2015[8]

Lot/Location	Available to General Public?	Spaces[9]	Permits Issued	Spaces Available for Public	Monthly Rate	Oversell Rate	June Revenues
D'Angelo's		43	51	-	30	119%	$1,530
Adams Garage	Y	442	514	-	40	116%	$20,560
Stadelman		85	96	-	35	113%	$3,360
Warren/High		26	29	-	35	112%	$1,015
Frederick Douglas Ave		13	14	-	35	108%	$490
L St		14	15	-	35	107%	$525
Telephone/School Dept		89	94	-	30	106%	$2,820
Belmont/Main		19	20	-	30	105%	$600
Paddy Lane		19	19	-	35	100%	$665
Petronelli/Franklin		82	82	-	30	100%	$2,460
West RR Ave		26	25	-	30	96%	$750
BCA		43	41	-	30	95%	$1,230
White Ave		24	22	-	30	92%	$660
Lincoln	Y	153	141	12	35	92%	$4,935
Porter Lot		68	60	-	30	88%	$1,800
Clinton Ave		15	11	-	35	73%	$385
Merian's	Y	23	14	9	30	61%	$420
Franklin		36	21	-	30	58%	$630
Marketplace	Y	49	20	29	30	41%	$600
Warren Ave	Y	72	0	72	30	0%	$0
Montello		87	0	--		n/a	
TOTAL	5	1,428	1,289	132	-	-	$45,435

[8] BPA, 2015

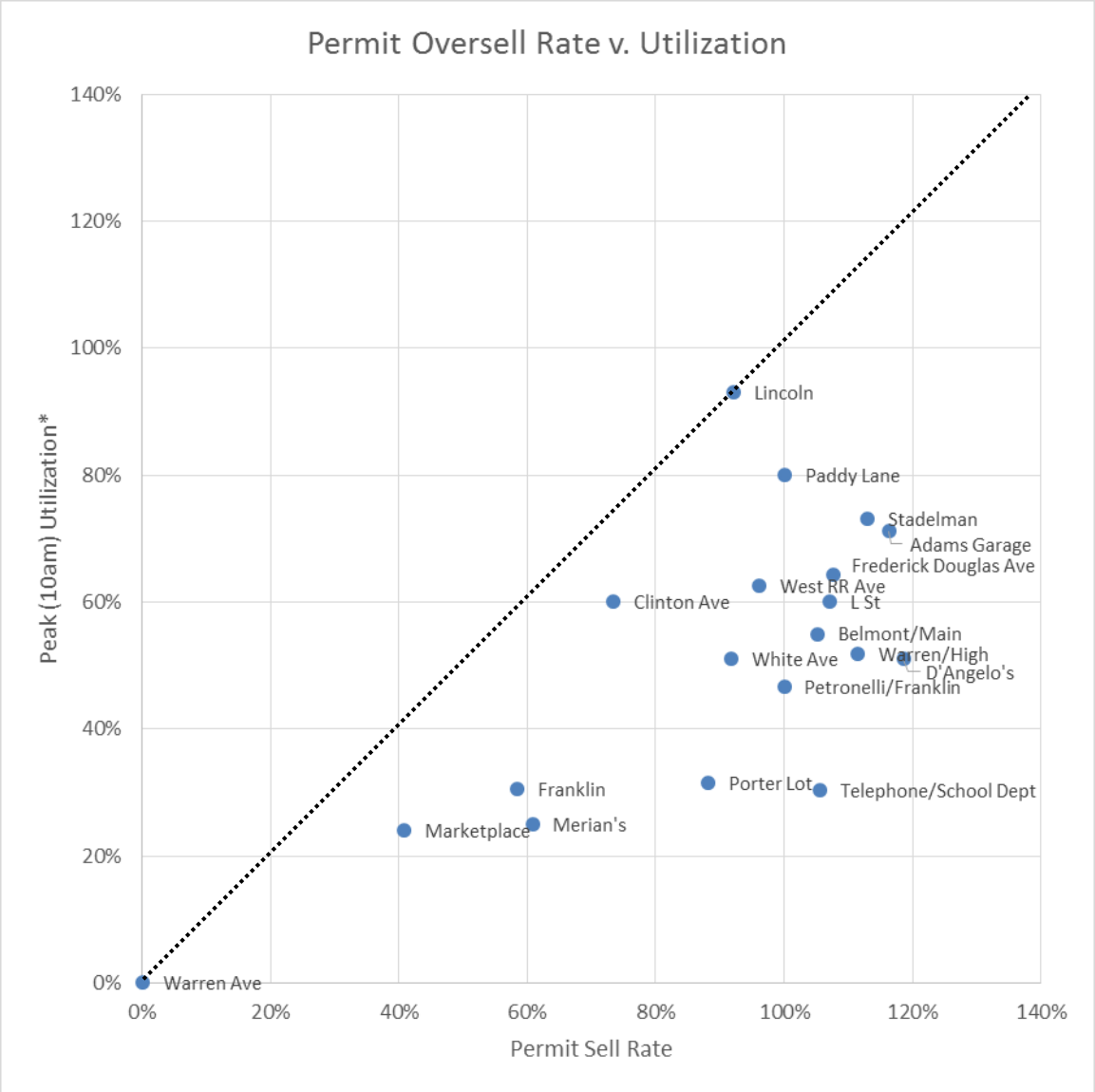
[9] Per BPA inventory

Permit price varies slightly according to lot, as does the oversell rate. Figure 4-11 shows the oversell rate by lot/garage for June. The maximum oversell rate by percentage is 19% at the D'Angelo's lot, while the most by absolute numbers is the Adams Garage (72). This implies that demand is high for these facilities, although does not say anything about real-time space utilization. The price does not correlate with the oversell rate.

Figure 4-12 provides a comparison between the facilities with the highest permit oversell rate and utilization at peak (10:00 a.m.). The BCA lot and Lincoln lots are the only facilities that have similar patterns for both. In contrast, users have permits to several other lots but they are not heavily utilized, such as Warren/High, D'Angelos, and the Telephone/School Department lots.

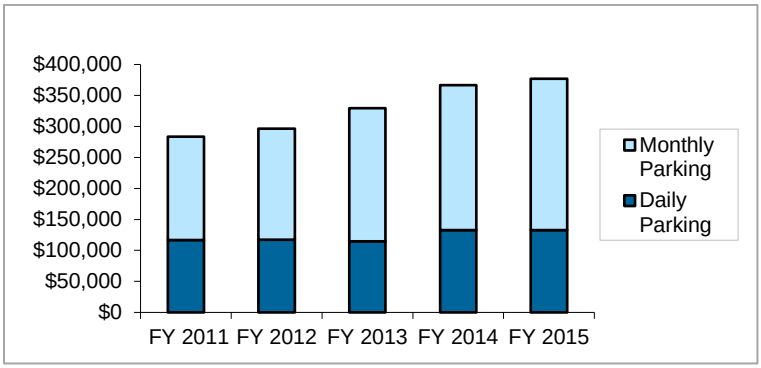
Lots that have a high oversell rate and utilization – such as Paddy Lane or Lincoln likely have a good balance of permit price and desirability.

Figure 4-12 Permit Oversell v. Peak Hour Utilization



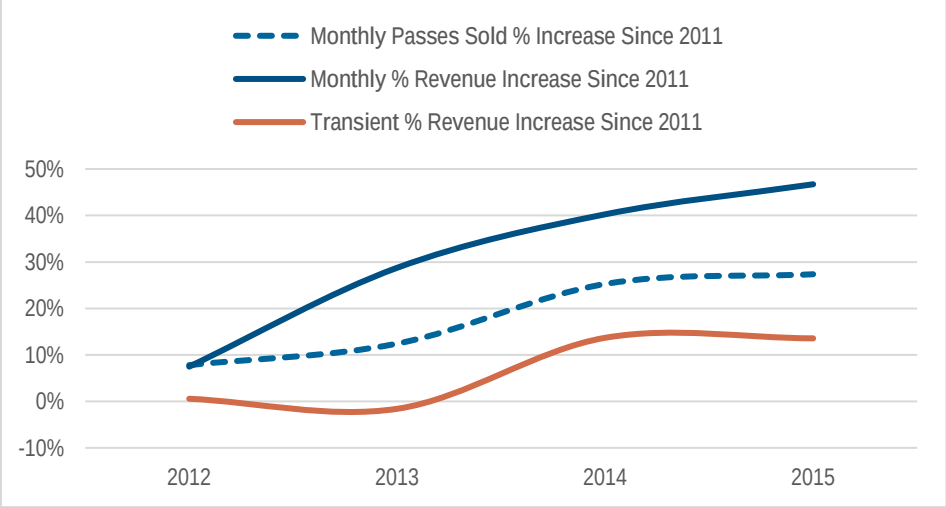
As shown in Figure 4-13, monthly parking permits account for more than half of the revenues (65% in FY 2015) at the Adams Garage. The revenue from permits and daily parking has increased by 33%, or almost $100,000 over time. Revenue increased from about $283,000 in FY2011 to $377,000 in FY2015. As mentioned earlier, this is due to an increase in demand rather than an increase in price.

Figure 4-13 Adams Garage: 2011-2015 Revenue for Monthly Parking vs. Transient Parking[10]



The revenue from monthly permits has increased steadily since 2011, while revenue from daily parkers has been more variable. Figure 4-14 compares the percentage change in revenue since 2011 for these two categories. Overall, daily revenues seem to be holding steady at 14% higher than 2011, while monthly revenues climb steadily. This may mean that those holding monthly permits are occupying spaces in the garage and preventing transient parkers from accessing those spaces. The percentage increase of monthly passes sold is slightly lower than revenues, implying a recent price increase.

Figure 4-14 Adams Garage: Change in Revenue Since 2011 - Monthly Parking vs. Transient Parking[11]



[10] BPA

[11] Nelson\Nygaard analysis of BPA data

ENFORCEMENT

Parking Control Officers

The Brockton Parking Authority (BPA) employs four part-time Parking Control Officers (PCOs) who enforce the City's Parking Ordinances and issue citations. Each PCO works approximately 19.5 hours per week. PCOs patrol the downtown area between 8:00 a.m. and 12:00 p.m. and again from 1:00 p.m. to 5:00 p.m. Monday through Friday each week. The area that the PCOs patrol is bounded by Commercial Street to the east, White Avenue to the south, Warren Avenue to the west, and Pleasant Street to the north.

Enforcement is comprehensive and uses advanced technology, although accuracy is an issue. PCOs monitor all curbs, as well as proper use of ADA accessible spots and improperly parked cars. Fire lane and ADA accessible parking spaces are enforced by PCO even if the parking spots are located on private property. To monitor parking activity, the PCOs utilize handheld technology devices and electronic chalking. PCOs are required to take a photo of each violation from the front and back of the vehicle. BPA reports that many parking ticket appeals are due to inaccuracies in electronic chalking.

While PCOs are comprehensive in their enforcement, they are not instructed to be completely rigid. To enforce parking meters, PCOs are instructed to wait a half hour longer than the meter limit before returning to the area to check if the meter has expired.

Fines and Violations

According to the Fiscal Year 2015 Annual Report, a new downtown parking enforcement program was established in Fiscal Year 2011, which transitioned the enforcement of parking from the Brockton Police Department officers to the PCOs who are Brockton Parking Authority employees. The new parking enforcement program resulted in an overall increase of citations and fees being collected.

However, FY 2015 saw a reduction in violations written due to several construction projects and extreme winter weather. In FY 2014, the PCOs issued 17,017 citations collecting $622,110 in charges and late fees, in addition to $157,437 in charges and late fees collected by the Brockton Police Department. In FY 2015, the PCOs wrote 14,673 violations generating $531,400 in charges and fees, in addition to 2,254 violations and $13,868 in charges and fees issued by the police department.

The traffic commission sets fines, as they apply city-wide, not just in the area that BPA covers. No significant changes to fines have occurred in the last several years. Specific violations and fines are shown in Figure 4-15.

Figure 4-16 shows the top five parking violations from September 2015. As shown, the largest number of violations were meter violations; there were 557 citations and $11,140 collected during that month. Overtime parking, parking in a restricted area, parking over one foot from the curb, and warnings were also frequent citations during the month of September. As shown in Figure 4-17, Main Street and Legion Parkway are the most common locations for violations during September 2015. Lincoln Lot is the most common off-street parking location for violations.

Figure 4-15 Violations and Fines

Violation Description	Fine	1st Penalty	2nd Penalty	RMV Fee	Total
Parking meter violation	$20	$5	$5	$20	$50
Improper Use of Space	$20	$5	$5	$20	$50
Parking over 12" from curb	$15	$5	$5	$20	$45
Parking, Leaving Less than a 10' wide Unobstructed Lane	$25	$5	$5	$20	$55
Parking within 10 ft of a fire hydrant	$50	$5	$5	$20	$80
Wrong direction	$20	$5	$5	$20	$50
Parking within an intersection	$25	$5	$5	$20	$55
All night Parking-Heavy Commercial Vehicle	$25	$5	$5	$20	$55
Parking so as to obstruct crosswalk	$25	$5	$5	$20	$55
Parking so as to obstruct sidewalk	$25	$5	$5	$20	$55
Parking so as to obstruct a driveway	$15	$5	$5	$20	$45
Parking Within a bus stop*	$15	$5	$5	$20	$45
Parking Within a Taxi Stand	$15	$5	$5	$20	$45
Parking in Restricted Area	$25	$5	$5	$20	$55
Parking within 20 ft of an intersection	$20	$5	$5	$20	$50
Overtime Parking	$15	$5	$5	$20	$45
Parking in Restricted Area During Winter Parking Ban	$50	$5	$5	$20	$80
Parking in First Fire District During Restricted Hours	$15	$5	$5	$20	$45
Violation of Parking Rules-Plymouth County Facility	$15	$5	$5	$20	$45
Parking in a Handicapped Parking Area	$150	$5	$5	$20	$180
Obstructing Handicapped Ramp	$100	$5	$5	$20	$130
Parking Within a fire lane	$100	$5	$5	$20	$130
Vehicle Towed					
Other					
Placing Snow Upon a Public Way	$50	$5	$5	$20	$80

Figure 4-16 Top Five Violations (September 2015)

Type	Count	Fine	Paid	Void
Meter Violation	557	$11,140	39%	8%
Overtime Parking	287	$4,305	42%	7%
Parking in a Restricted Area	268	$6,700	38%	10%
Parking over One Foot from Curb	153	$2,295	60%	7%
Warning	126	0	n/a	n/a

Figure 4-17 Top Ten Violation Locations (September 2015)

Street	Count	Fine
Main Street	285	$6,760
Legion Parkway	259	$5,535
Lincoln Lot	126	$2,775
Petronelli Way	97	$2,280
Petronelli Lot	71	$1,775
West Elm	66	$1,320
Clinton Avenue	57	$1,310
Enterprise Lot	53	$375
Marketplace Lot	41	$1,030
Franklin Lot	31	$725

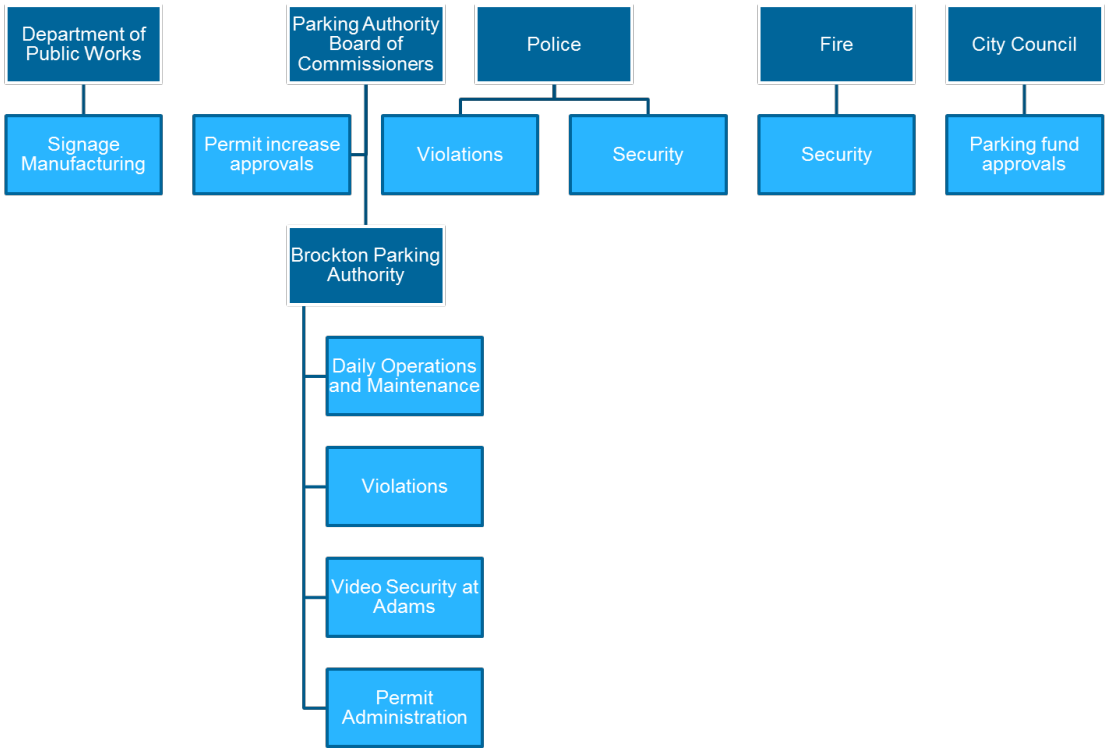
GOVERNANCE

Today, parking is managed and governed among various departments and decision-marking bodies within the City and via other partners, as shown in Figure 4-18.

Security, violations, and other parking-related programs are handled by a various entities, which often makes coordination difficult. For example, although security falls to the police, the BPA, and the Fire Department, it is not clear which department is ultimately responsible for security-related initiatives.

Revenue generated by parking in Brockton goes into two funds, with only some of it ultimately coming back to the BPA. Money collected from meters, permits, and garage revenue goes to the BPA in a Reserve Fund. The BPA submits a budget annually for the use of these funds that City Council must approve. Violation fees, however, go to the General Fund. From this money, which is approximately $750,000, the City Council general appropriates about $250,000 into a revolving fund that the BPA can spend on capital projects. That money must be approved by the BPA board, although some goes to pay the PCO salaries.

Figure 4-18 Governance Structure for Parking in Brockton



SIGNAGE AND INFORMATION

Easy to read and understand parking and wayfinding signage is a critical component of deciphering a parking system. Signage that guides motorists to on- and off-street parking deters drivers from excessive cruising and frustration. In addition to parking facilities, signage should identify historic sites of interest, area businesses, social activity centers, municipal buildings and other points of interest, plus direct patrons to pedestrian pathways around downtown.

A wayfinding program, where signage is intentionally arranged for people walking as well as driving, encourages a “park once” or “park and walk” environment. This type of environment focuses not just on getting cars into the parking facilities, but getting people to visit multiple destinations on foot without moving their cars.

Downtown Brockton has significant parking-related signage, but it is not always clear. In general, signage and information falls into three categories: before arrival, at arrival, and during the downtown stay. The text below explores these categories:

Before Arrival

Making parking information available for visitors and customers before arriving to downtown allows people driving to plan trips ahead of time and find their desired parking location with ease. However, there is no single site or source of information for all parking facilities and/or transportation information.

Many facilities in Brockton provide information on parking, as shown in Figure 4-19, below. This indicates a need for such information for visitors and employees alike.

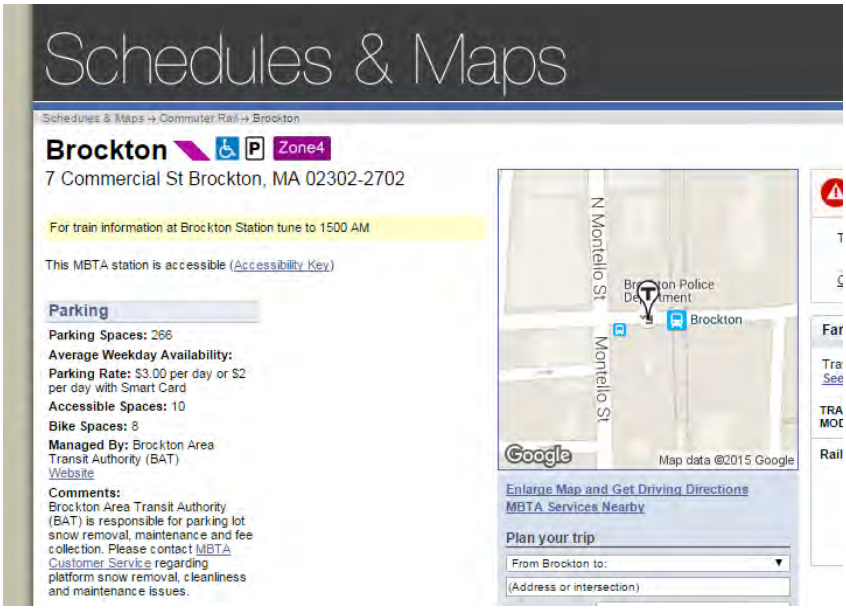
However, the information provided does not provide address for GPS purposes, and minimal maps. The description of parking options is also limited.

Figure 4-19 Parking Information Before Arrival in Brockton

YMCA

Parking: Gated lot adjacent to building requires a parking pass which costs $40 April 1st for the entire year (pro-rated down to $25 at the beginning of October). Other parking is available on both sides of Main Street and FREE parking is available in back of the YMCA at the Bolton Place lot located directly off of Montello Street (parallel to Main Street.)

MBTA



Courthouse

Parking

There is a free parking lot located in the rear of the courthouse as well as metered spaces on the streets surrounding the courthouse. In addition, a public parking garage is located directly across the street from the courthouse.

At Arrival

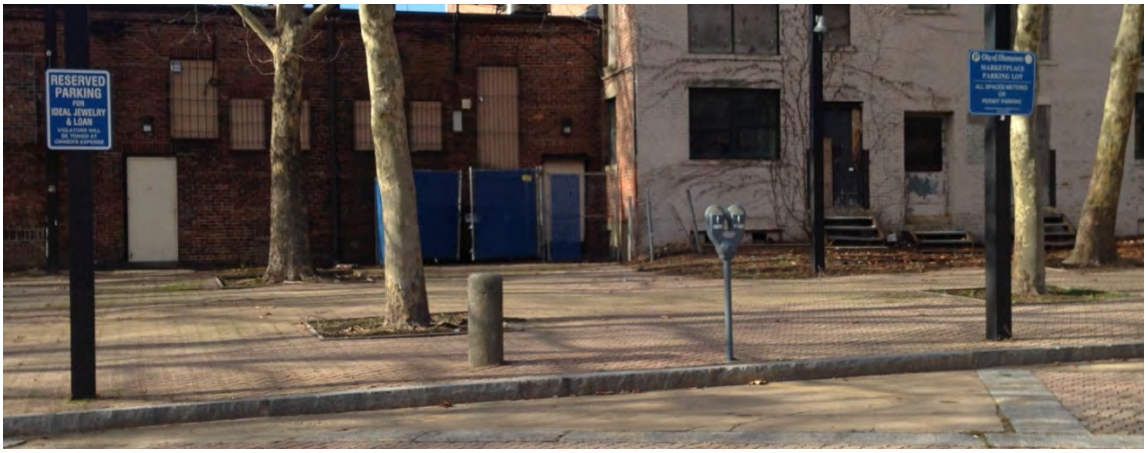
The signage that greets drivers is generally consistent, but not always clear (Figure 4-20). There are a few main types of parking signage, including:

- Lot signage, generally blue, indicating the lot name and parking availability.
- On-street wayfinding to some facilities, also featuring a blue "P"
- Signage on the Adams garage, similar blue and white colors.
- On-street regulatory signage
- Information on meters

Figure 4-20 Signage At Arrival in Brockton

While some lots are clearly marked as permit lots, others are a mix, such as the lot outside of Joe Angelos (Figure 4-21). Here, one sign indicates that "All Spaces Metered or Permit Parking" while another shows that some spaces are actually reserved for customers of a certain business. These spaces are also marked on the ground in yellow paint. This mix is confusing and likely difficult to enforce.

Figure 4-21 Signage Outside Joe Angelos



MULTIMODAL CONNECTIONS

Downtown Brockton has acceptable sidewalk coverage, as well as transit service provided by the Brockton Area Transit Authority (BAT) and the MBTA Commuter Rail. However, there are safety and other concerns about these services that lead the majority of users to drive and park in Brockton. Moreover, there are hidden and not-so-hidden areas downtown that act as pedestrian barriers, effectively becoming points that pedestrians, and even parkers, avoid.

These barriers have different effects on different user groups. Customers and visitors are most likely to want to park close, or in view of their destination. Employees may be willing to park further away, but also have concerns about safety and visibility. Figure 4-22 shows the variety of sidewalk qualities in Brockton. The sidewalk on the left may not be pleasant for users walking into downtown, while the one on the right is wide and inviting, with plantings to help pedestrians feel protected from fast-moving traffic.

Figure 4-22 Sidewalk Qualities in Brockton

Brockton also has vehicular circulation challenges. With several one-way streets in the network, often drivers must circle around the block to get to their destination. For example, the two-way pair of Warren and Main has several streets running between them; these streets are also one-way. Someone driving to the Courthouse north on Main Street must pass Belmont and West Elm before turning left to access the Courthouse lot.

In some areas of the grid, the directionality changes, making it confusing for drivers to get where they need to go. The one-way streets are often upwards of 50 feet wide (curb to curb) and mostly dedicated to moving vehicular traffic. This has made several blocks and intersections unsafe for pedestrians and cyclists; there may be an opportunity to re-prioritize the existing rights-of-way on these broader streets.

5 PARKING PERCEPTIONS

The Downtown Parking Study relies heavily on quantitative data, but parking is about user perception as much as supply and demand. Therefore, the consultant team conducted a series of outreach efforts in order to get a sense of the community perspective of parking in downtown Brockton. Input efforts focused on exploring, in detail, a broad cross-sectional understanding of how the parking system functions. The primary efforts to understand the user perspective included an **online survey**, which garnered almost 300 respondents, and targeted **stakeholder interviews** with about 30 participating individuals and organizations. Individuals and organizations represented diverse interests in the downtown, from business associations to social service organizations to developers and landowners. The team conducted several follow up meetings with many of these groups to discuss project findings and vet and refine ideas.

This memorandum summarizes the findings of these outreach efforts. General community concerns include:

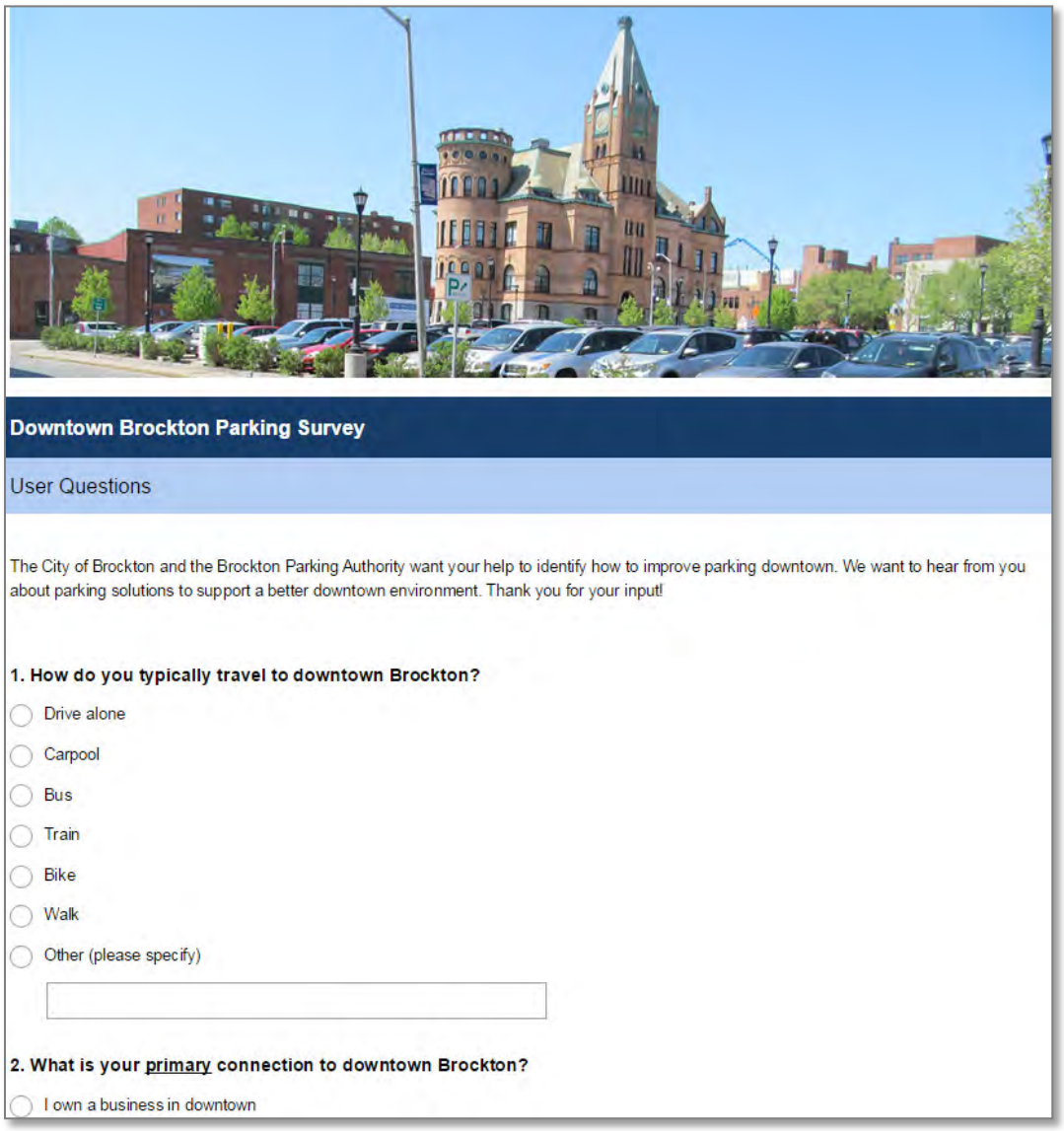
- Desire to adopt a "**customer first**" approach
- Concerns that parking is **price is too low**
- Desire for new parking **technology**
- **Safety** concerns, especially walking and lighting
- Desire for **convenient** garage parking
- One hour **time limits not enough time**
- Consider having employee shuttles from **remote parking**
- Create **on-street permit** parking
- Concerns about **snow/ plowing**
- Desire for meter and parking revenues to be **reinvested in parking/ downtown**

The process on understanding the user perspective is an integral piece of the parking analysis. Understanding the issues by talking with community members provided valuable insight not only on what isn't working today, but also opportunities for improvement. These insights into the community's mobility needs, coupled with quantitative data parking analysis, will help steer the study in a direction that truly addresses parking challenges unique to downtown Brockton.

ONLINE SURVEY

The perceptions, experiences, and preferences of people who park in Downtown Brockton were collected through an online survey. The survey was open from September 17 to November 5, 2015 and attracted 296 respondents. BPA distributed a link to the survey through email lists, as well as on cards attached to monthly permits for October. The survey was also available on the City website. Subsequent sections below outline the responses and trends from survey respondents.

Figure 5-1 Online Parking Survey Interface



ONLINE SURVEY KEY FINDINGS

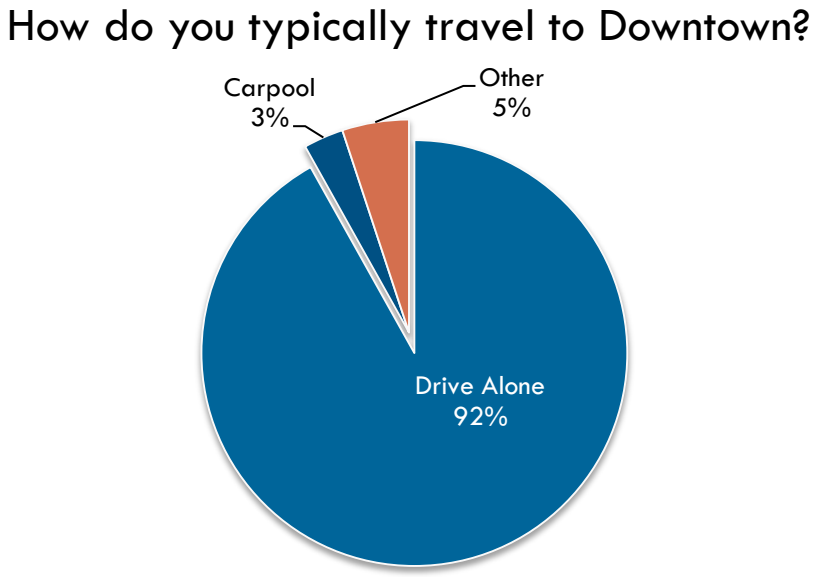
- 92% of total respondents drive alone to downtown, only 5% do not ride in a private vehicle.
- 75% of customers and 81% of employees park within a block of their destination.
- Most employees and customers park off-street.
- Few trips downtown include stops at more than one destination; however, a majority of those that visit more than one place walk between them.
- Finding parking rarely takes more than 5 minutes.
- Both Brockton customers and employees are willing to pay a premium to park closer to their destination. A slightly higher proportion of employees than customers said that they would prefer paid parking close to their front door over free parking with a walk.

Survey Responses

Respondent Characteristics

Only one in ten survey respondents traveled downtown by a mode other than driving alone, as shown in Figure 5-2. In general, Brockton's driving mode share for 2014 was slightly lower, with 78% of residents reporting that they commute by driving alone.[1] Thus, the sample may over represent drivers, potentially those that drive into Brockton for work do not live in the City.

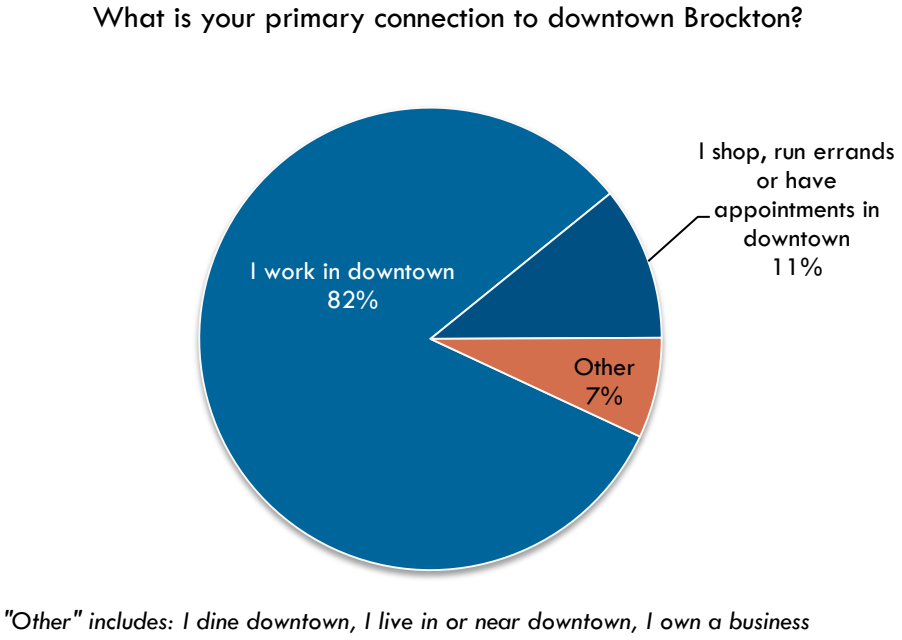
Figure 5-2 Typical Mode Choice



[1] American Community Survey 5-year Estimates, 2014, table S0801

The survey asked respondents to indicate their primary and secondary connections to Downtown Brockton. As shown in Figure 5-3, only 11% of survey respondents come to Downtown Brockton primarily as customers with purposes of dining, running errands or shopping, while 82% of respondents identified themselves as downtown employees coming for work. When secondary reasons for visiting downtown are included, an additional 46% of respondents identify themselves as customers of downtown businesses.

Figure 5-3 Primary Visitation Reason

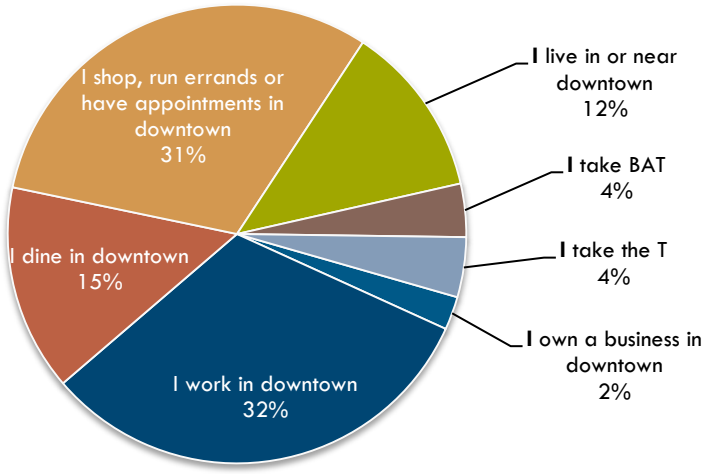


"Other" includes: I dine downtown, I live in or near downtown, I own a business

Figure 5-4 Secondary Visitation Reason

For what other or secondary reasons do you visit downtown Brockton?

Respondents were allowed to select multiple secondary reasons



Based on respondents' primary connections to downtown Brockton, applicable survey responses were classified as either customers or employees and analyzed to compare parking trends and experiences between downtown Brockton's principal user groups. For this survey, customers were classified as survey respondents who dine, shop, run errands, or have appointments downtown; respondents that work downtown were classified as employees. These two categories were compared to determine where customers and employees park, how far from their destination they park, and how long it takes both user groups to locate a parking spot in downtown Brockton ("today", on "average" days, and on the "worst" days).

Location

Figure 5-5 shows that three-quarters (75%) of customers park within one block of their destinations while four-fifths (81%) of employees do the same. This means that although most visitors park very close to their destination, the majority of employees are also parking near the front door. As Brockton grows and has more activities in the downtown, it may be desirable to shift this balance in favor of customer access.

Figure 5-6 shows that the vast majority of responding employees, 89%, parked off-street in either a garage, public lot, or private lot during their last work shift downtown. Alternatively, 52% of respondents who self-identify as customers parked off-street.

Figure 5-5 Distance of Parking from Destination

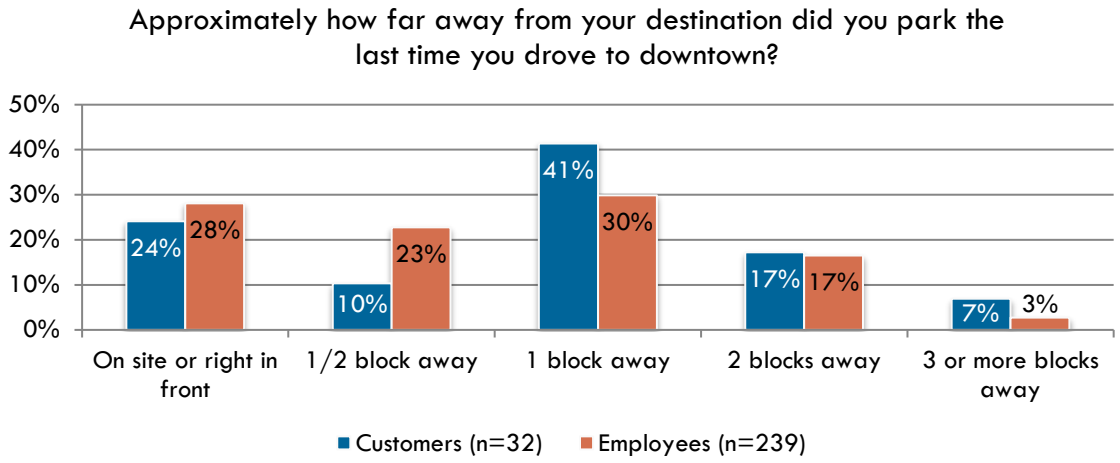
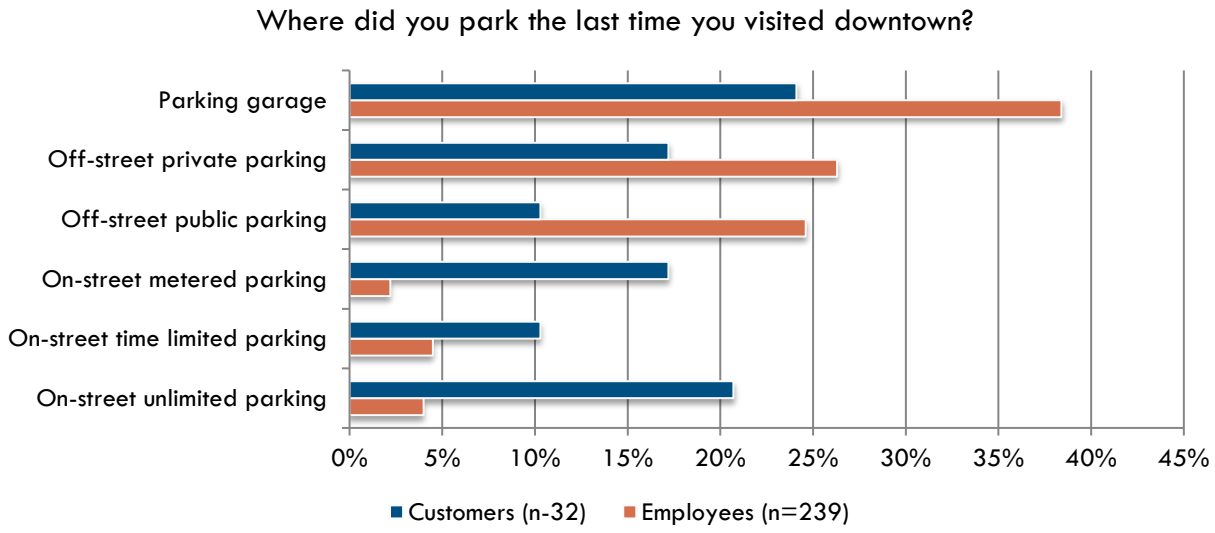


Figure 5-6 Parking Facility Choice



Multipurpose Trips

Over three quarters of the 274 respondents to the question, "How many destinations did you visit on your last trip to downtown Brockton?" only visited a single destination as shown in Figure 5-7. This reflects the nature of the respondent group, as most said they came downtown to work. However, it also indicates that employees do not come downtown to work and then do other things such as go out to lunch or shop.

Of the 66 who did make more than one stop, only 36 provided an answer regarding their mode of travel between the multiple destinations. A majority of these respondents walked between downtown locations. This is in contrast to the picture painted by many stakeholders, who said that walking between destinations was not common due to safety concerns.

Figure 5-7 Number of Destinations Visited

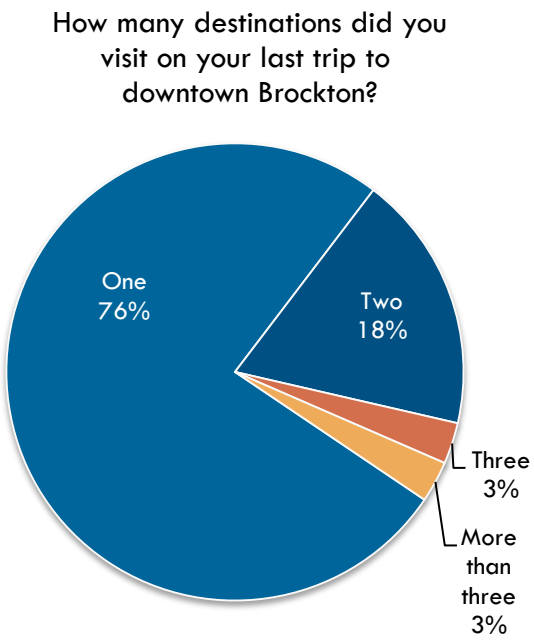
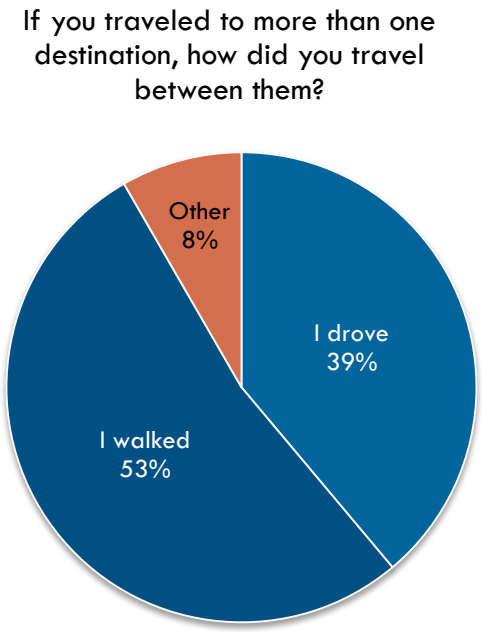


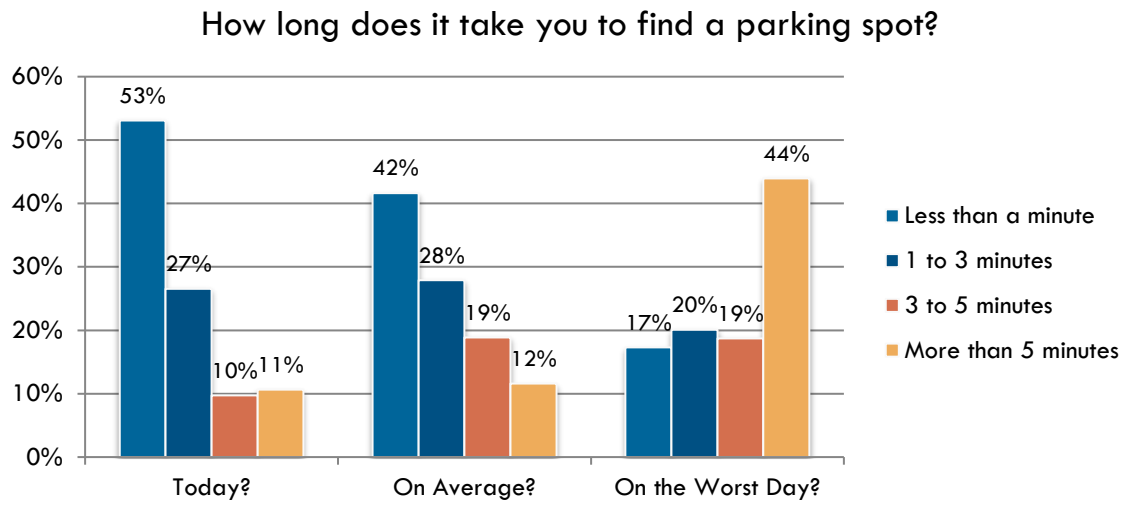
Figure 5-8 Travel Between Destinations



Perception of Parking Availability

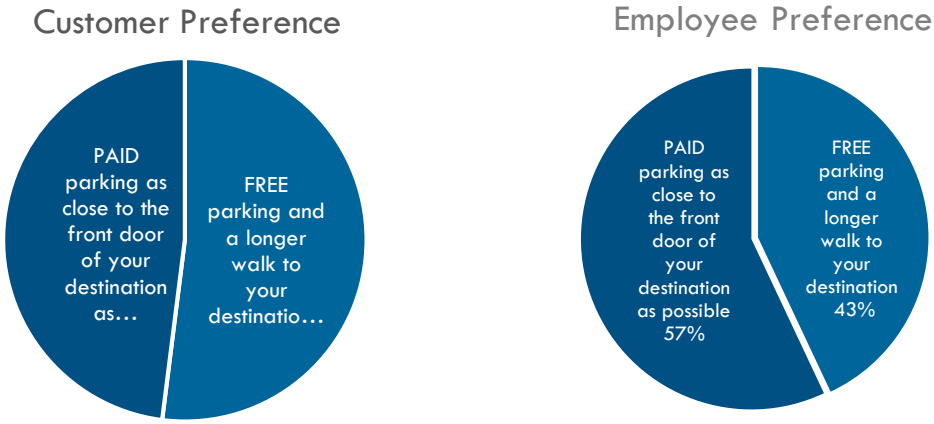
Figure 5-9 paints a noteworthy picture of the parking situation. As the blue and orange bars show, 89% of the respondents were able to find a parking space within 5 minutes of searching on the day they filled out the survey. Most respondents (88%) reported that finding a spot takes less than 5 minutes on the average day, and over half (56%) reported that this was true even on the worst day.

Figure 5-9 Parking Availability Search Time



About half of respondents reported they would be unwilling to pay to park closer to their destinations (Figure 5-10). This perception is not surprising given that a very high percentage (Figure 5-5) of customers already park within one block of their destinations and may have little to gain from paying a higher fee to park even closer. However, nearly half (48%) of customers surveyed and 57% of employees surveyed indicated they are willing to pay to park close to their destination. Coupled with the perception by stakeholders that some parking is priced too low, this finding indicates that there may be room for pricing more convenient spaces slightly higher than those that are farther away. Although fewer customers took the survey, they are slightly less likely to want to pay, while employees slightly prefer paid parking that is close.

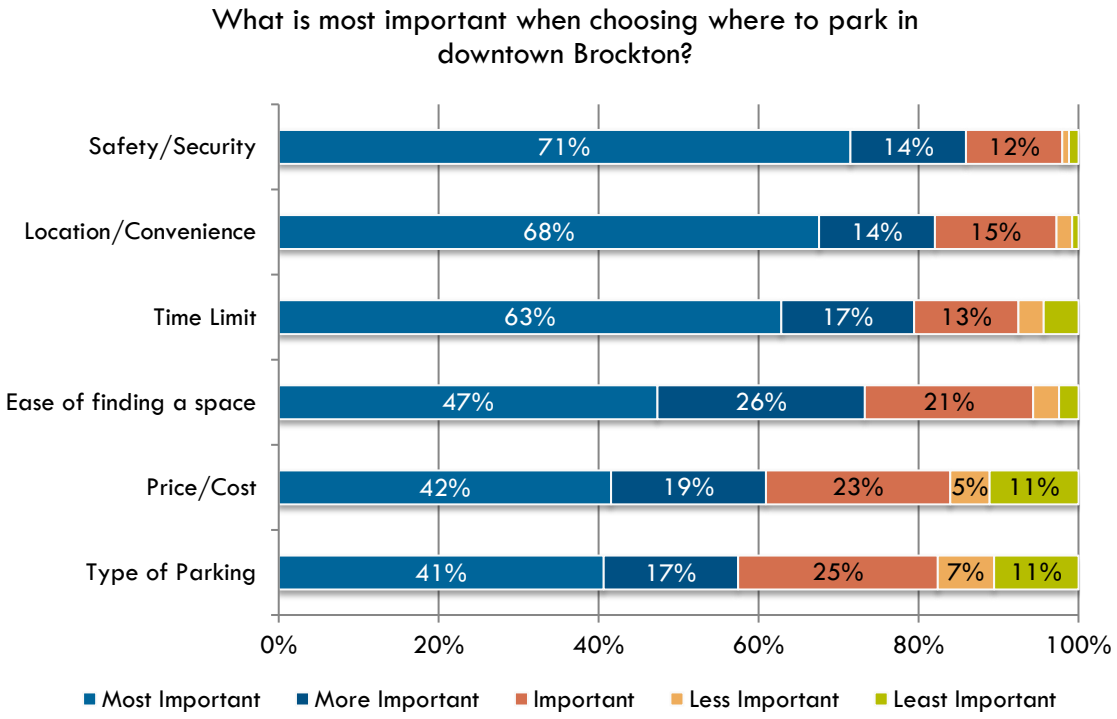
Figure 5-10 Price/Distance Preference



Personal Considerations

When choosing where to park in Downtown Brockton, respondents made their priorities clear with respect to their considerations (Figure 5-11). Safety/security (71%), location (68%) and not having to move one's car until leaving the area (63%) were the top choices considered "most important to me," while cost (42%) and type of parking (41%) were not as important. This shows that the desire to park in a convenient and safe location outweighs the cost and whether motorists park their vehicle in an off-street facility.

Figure 5-11 Prioritization of Parking Location Choice Considerations



STAKEHOLDER INTERVIEWS

Working closely with the BPA, the study team worked with the following stakeholders to better understand the parking experience in Brockton:

- Old Colony YMCA
- WB Mason
- Brockton Mayor's Office
- Brockton Redevelopment Authority
- Trinity Management
- Brockton Neighborhood Health Center
- Brockton Planning Department
- Brockton Area Transit Authority
- Brockton Area Workforce Investment Board
- Station Lofts
- Old Colony Planning Council
- Old Colony Elder Services
- Brockton Public Library
- Brockton Police
- Joe Angelo's

The team also convened meetings with a targeted group including representatives from:

- Brockton Parking Authority Board
- Metro South Chamber of Commerce
- Downtown Brockton Association
- Brockton 21st Century Corporation

The consultants also met with several City departments and the Brockton Parking Authority Board and staff to get the perspective of those administering the parking program.

Summary of Findings

Discussions with these stakeholders provided important insight into how the current parking system functions and what the user experience is like. The following summarizes key insights and thoughts:

"Customer-First" Approach and Technology

- Brockton's parking system is not customer friendly, and there is a desire to adopt a 'customer first' approach. For example, signage that easily guides occasional visitors to public parking or tickets with educational materials on them.
- Frustration with kiosks. For some, a gate-arm system for payment is preferred.
- A desire for the implementation of new parking payment technology. For example, being able to use a credit card and/or EBT card to pay meters.

Pricing and Regulations

- Parking is generally priced too low.
- One hour time limits are too restrictive. Some feel they can only park on-street for very limited purposes that are under that time limit.
- On-street parking regulations do not reflect current demand patterns.

Permit Parking

- The process for picking up permits is arduous and difficult, involving hand-delivery of physical permits.
- A desire for convenient garage parking. In particular, the lower level of the garage may be more convenient for users.
- Consider shuttling employees from remote parking.
- Interest in continuing with on-street permit parking, like on Railroad Avenue.
- Issues with snow removal logistics.

Parking Impressions

- Parking for occasional visitors (Board members, patients, courthouse visitors) is difficult, which can heighten the perception of a crunch.
- Parking demand is not constant – on certain days it can be very full and on others there is more availability.
- Although many people drive, several stakeholders referenced employees and customers who take BAT, take the MBTA commuter rail, walk, or are dropped off to get to their destination.
- Safety is an issue, related to lighting and walking to/from destinations. Some intersections may be unsafe to cross, or have crosswalks that do not align well with ramps. In general, users may not want to walk too far for parking.

Policy

- A desire for parking revenue to be reinvested in downtown.
- A desire to reconsider zoning requirements for residential units.
- Questions about the two-way conversion and how it might impact parking.

Private Parking Arrangements

- Overall, this is something that stakeholders hope to explore.
- YMCA members currently pay to park in lots, either buying an annual pass or a seasonal pass.
- The Health Center has several lease agreements with local entities to lease parking spaces.

These impressions and reflections are an important framework to create parking recommendations. Overall, these comments will help to create a parking system appropriate for the Brockton context that is more flexible, streamlined and easy-to-use. Often, fixing seemingly small issues like a missing crosswalk or out-of-date payment technology can make a big difference in how the system works.

6 LAND USE AND ZONING

A successful downtown parking system is closely connected to the mix of land uses and activities that surrounds it. For downtown Brockton this means the parking system should reflect the opportunities presented by the historic street grid, connections to transit, and mix and proximity of land uses. It also means that the parking system must be flexible and able to adapt as the City continues to evolve. In practice, this means a better balance between hot spots of high parking demand and available parking supply. To work towards a successful parking system, a critical ingredient is the right zoning and regulatory environment: one that fosters best practices and integrates parking solutions with the City's entire transportation system.

This chapter examines existing supply and demand in downtown Brockton and looks at how zoning and land use help shape a modern parking system.

ABOUT THIS CHAPTER

This chapter was the fourth of four technical memoranda that detail the analysis supporting the Downtown Parking Study:

- Technical Memorandum #1: Existing Conditions
- Technical Memorandum #2: Parking Perceptions
- Technical Memorandum #3: Parking Management

This chapter explores the relationship between land use and parking in two distinct study areas by considering the following inputs:

- Existing land use in Brockton activity areas
- Future, expected land use in Brockton activity areas
- Expected parking demand based on land uses in each activity area relative to the predication of the Institute of Transportation Engineers (ITE) in its handbook, "Parking Generation"
- Observed parking demand relative to the parking supply and ITE demand estimates
- Expected future demand relative to the parking supply and ITE demand estimates

Additionally, the chapter evaluates downtown's parking-related zoning code. The Revised Ordinances of the City of Brockton, Massachusetts (adopted in February 1984) covers parking regulations. In addition, the Planning Department has Proposed Ordinances (2014) to update this code; these are included in the analysis.

The Zoning analysis includes:

- Parking Provision
- Parking Design
- Related Measures

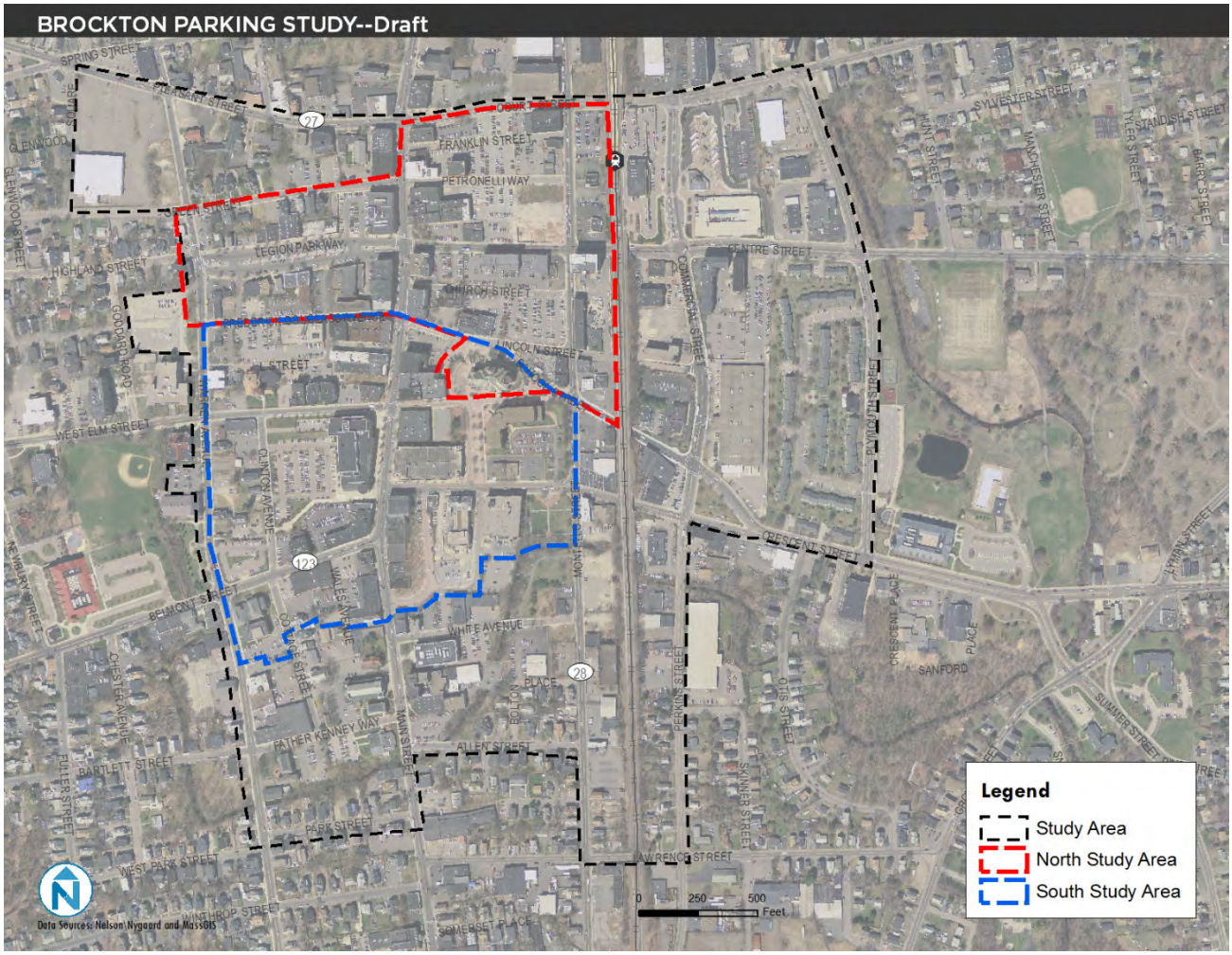
LAND USE ANALYSIS METHODOLOGY

Drawing on local databases and field observations, the team selected two study areas within Downtown Brockton and modeled parking demand for both existing and future development scenarios. These "activity areas" approximate a five-minute walk "isochrones" from key destinations instead of the entire study area to model the parking and built environment relationship from the user's perspective (Figure 6-1).

These areas were identified based on the predominant character of existing land uses. The South Study Area is in the area to the west and south of City Hall and is anchored by the Covett Courthouse on Main Street and the Adams Garage. The North Study Area is to the north of City Hall and is anchored by offices of WB Mason and the Brockton Neighborhood Health Center. Both study areas include City Hall, creating a conservative analysis that accounts for City Hall parking demand as part of either the North or the South study area.

Understanding that there could be multiple boundaries that define various activity areas within the downtown environment, the study team determined that these two areas best represented the most active parking areas in downtown. However, as in any effort to draw a boundary, this analysis cannot account for cross-activity between areas; if a driver parks in one activity area and visits a land use in the other, this type of activity is not reflected in the modeling. Nonetheless, sub-area analyses like these are useful for defining more targeted strategies across a large downtown geography such as Brockton's.

Figure 6-1 Brockton Parking Study Area



Existing Land Use

The City of Brockton's Assessing Database, which includes land use type and gross floor area by building from 2015, is the basis for the existing land use analysis in each activity area.

The team used existing land use data from the Assessor obtained in September 2015. Land use and built environment measures were provided at building-level in a GIS shapefile. The database included detailed information such as building square footage, unit count, use type, and use descriptions for all existing buildings in the study area.

Future Development

To test parking provision, the analysis for each activity area incorporates potential development projects and quantifies their modeled parking demand and planned changes to the parking supply in relation to existing land uses, parking supply, and parking demand.

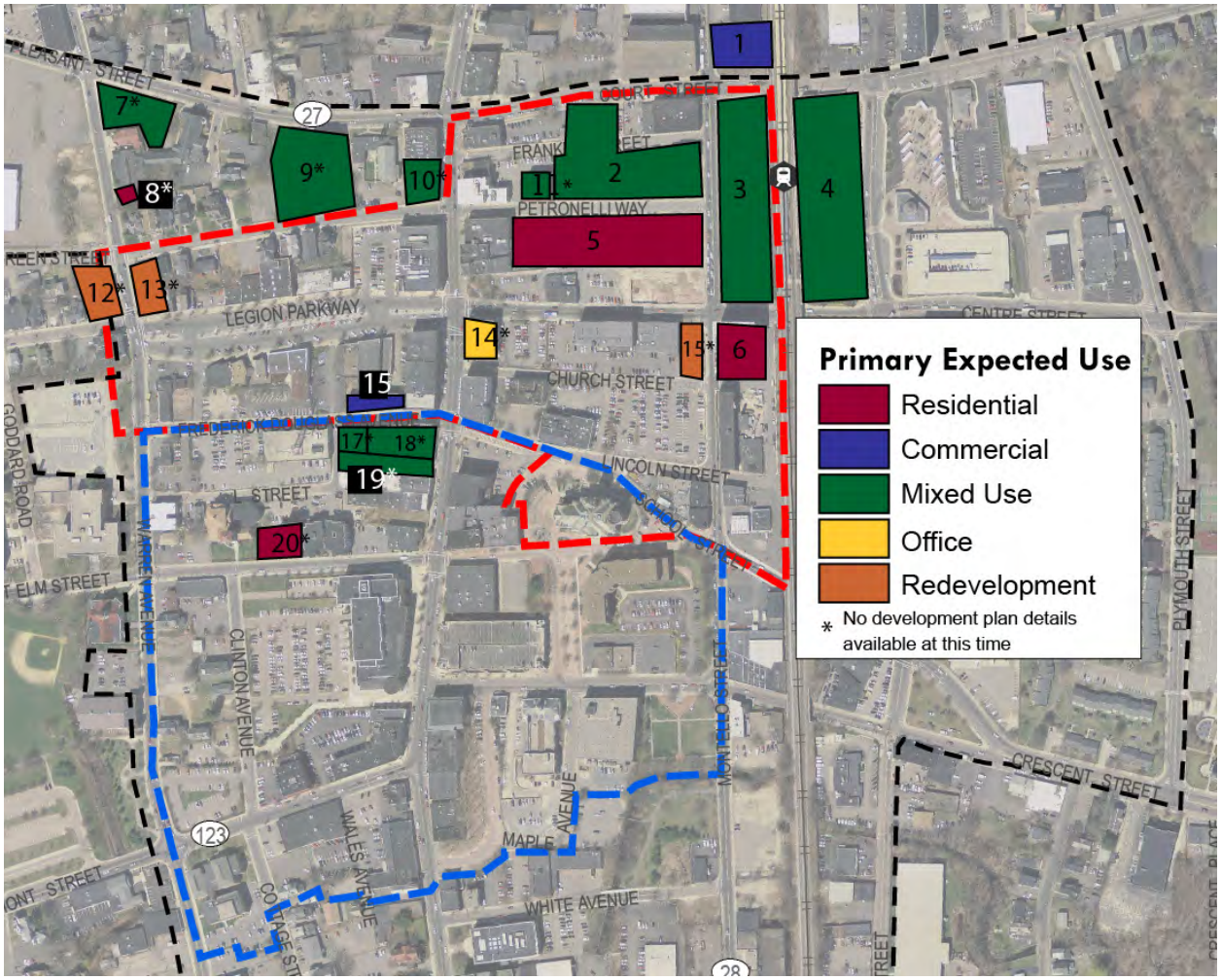
Expected future development projects were added to the existing land use models to understand the impact of new development within each area. Although the details of most expected development projects are not finalized, the team used estimates from the City's current planning initiatives and existing underutilized land uses to estimate the expected building programs, including new or replaced parking supply. Where possible, the future development estimates are accounted for in the future land use and parking estimates. Figure 6-2 shows all known future developments in downtown Brockton, and projects are mapped in Figure 6-3.

Figure 6-2 Expected Future Development in Downtown Brockton

ID	Development	Primary Anticipated Land Use and Building Program Source	Sub Study Area	Included in analysis
1	Pharmacy	Commercial—Brockton Downtown Action Strategy	North Study Area	Yes – outside study area, but included in analysis of future development
2	Petronelli Northside	Mixed Use—Brockton Downtown Action Strategy	North Study Area	Yes
3	Montello Street Mixed Use Development	Mixed Use—Brockton Downtown Action Strategy	North Study Area	Yes
4	Commercial Street Mixed Use Development	Mixed Use—Brockton Downtown Action Strategy	North Study Area	Yes – outside study area, but included in analysis of future development
5	Enterprise Block Phase 2	Residential—Brockton Downtown Action Strategy	North Study Area	Yes
6	Furniture Building: 93 Centre St	Residential—Brockton Downtown Action Strategy	North Study Area	Yes
7	Warren and Pleasant Street Development	Mixed Use—Downtown Brockton Urban Revitalization Plan	Outside Study Area	No—outside study area
8	48 Warren Ave.	Residential—Downtown Brockton Urban Revitalization Plan	Outside Study Area	No—outside study area
9	Fire Station Renovation: 42-52 Pleasant Street	Mixed Use—Downtown Brockton Urban Revitalization Plan	Outside Study Area	No—outside study area
10	19 Main Street	Mixed Use—Downtown Brockton Urban Revitalization Plan	Outside Study Area	No—no existing plan available

ID	Development	Primary Anticipated Land Use and Building Program Source	Sub Study Area	Included in analysis
11	Petronelli Gym Rehabilitation	Mixed Use—Downtown Brockton Urban Revitalization Plan	North Study Area	No—no existing plan available
12	Legion Parkway Gas Station: 81 Warren Avenue	Redevelopment—Downtown Brockton Urban Revitalization Plan	Outside Study Area	No—outside study area
13	Legion Parkway Gas Station: 76 Warren Avenue	Redevelopment—Downtown Brockton Urban Revitalization Plan	North Study Area	No—no existing plan available
14	Shawmut Bank Building: 90 Main Street	Office—Downtown Brockton Urban Revitalization Plan	North Study Area	No—no existing plan available
15	95 Montello Street	Redevelopment—Downtown Brockton Urban Revitalization Plan	North Study Area	No—no existing plan available
16	Restaurant Incubator: 11-15 Frederick Douglass Avenue	Commercial—Downtown Brockton Urban Revitalization Plan	North Study Area	No
17	Hotel Grayson: 28 Frederick Douglass Avenue	Mixed Use—Downtown Brockton Urban Revitalization Plan	South Study Area	No—no existing plan available
18	Kresge Building: 121 Main Street	Mixed Use—Downtown Brockton Urban Revitalization Plan	South Study Area	No—no existing plan available
19	City Lot Infill: 121-137 Main Street	Commercial—Downtown Brockton Urban Revitalization Plan	South Study Area	No—no existing plan available
20	47 West Elm Street	Residential—Downtown Brockton Urban Revitalization Plan	South Study Area	No—no existing plan available

Figure 6-3 Downtown Future Development



PARKING DEMAND MODELING METHODOLOGY

To determine parking demand for a development, a parking analyst typically compares the size of the development with "standard" parking generation rates that are often per 1,000 square feet, per unit, etc. The Institute of Transportation Engineers (ITE) produces a report titled *Parking Generation*, which is the current national standard in determining parking demand for a development. ITE standards are based on parking demand studies submitted to ITE by a variety of parties, including public agencies, developers and consulting firms.

While the most robust available database of observed parking demand, ITE parking rates often do not reflect the actual demand profile of mixed-use downtown areas. Typically, in mixed-use developments, customers and visitors can visit multiple destinations on foot and only park once. Moreover, throughout the day, different uses have different peak demands: for example, an office may have a high demand until 5 p.m., and a restaurant open for dinner may have a high demand only after 5 p.m., indicating "staggered peaks" which can utilize the same parking supply.

To more accurately model downtown parking activity, Nelson\Nygaard used an adapted land use model from the Urban Land Institute's (ULI) Shared Parking Manual (2nd Edition, 2005). Besides capturing the "staggered peaks" of demand from various uses by time of day, the model is tailored to include a parking demand reduction for using the same parking spaces at the same time for different land use activities, which is known as "internal capture." Such trips are made by those who, having already parked, travel between uses without accessing their vehicle. Restaurants and retail services, for example, are common generators of internal capture trips in mixed-use developments, as they serve both employees and residents within the same area. The land use model includes a conservative reduction in demand to account for the mix of Brockton's development patterns.

This Shared Parking analysis estimates how much parking might be required to match demand, and compares the modeled demand to the observed to calibrate. The modeled demand is based on the factors described above, creating the expected actual parking demand throughout the course of an average weekday. Parking utilization survey counts collected within the same activity area are then overlaid on top of the existing modeled shared curve, and the curve is adjusted based on observed demand patterns.

Brockton Model Calibration

The shared parking model for each activity area was adjusted to best reflect the unique environment in downtown Brockton, based on the factors below:

Reserve Parking Supply

The models in this analysis assume that no more than 90% of the parking supply should be full. At 90%, parking feels functionally "full" as only one of every 10 spaces is available. In addition, this 10% reserve accounts for additional operational reserve such as overflow during events.

Vacancy

The existing analysis accounts for commercial retail, office, and residential vacancy adjustments derived from field observations and communication with City staff. Though actual vacancy rates may be higher or lower than estimated, adjusted vacancy rates help to modify and calibrate the existing land use inputs to match observed demand patterns within each activity area. **The study**

estimates a 20% vacancy rate for office, retail, and industrial uses, and a 13% vacancy for housing for both study areas.[1]

Time of Day

Time of day adjustment factors provide a more accurate depiction of parking demand profile throughout the course of a day by land use. For example, residential land uses generate greater demand during the early morning and evening peaks when residents are at home, and office buildings generate greater parking demand during regular working hours. These adjustments were tailored for each type of land use based off of ULI's Shared Parking demand rates by time of day, and help to produce staggered peaks for different land uses. This creates a more accurate depiction of how parking supply is actually used throughout the course of a day.

Internal Capture

Unlike stand-alone shopping centers, downtown Brockton's existing mixed-use and walkable environment encourages and provides opportunities for residents, visitors, and employees to visit multiple destinations on foot, rather than having to drive and park multiple times during a visit. For example, a downtown coffee shop generally does not generate any additional car trips, or need many dedicated parking spaces; most customer trips are generated on foot by nearby employees. This type of behavior is classified as "internal capture". Internal capture reductions were applied to activity areas based on the land use mix. **For both commercial and residential land uses, an internal capture rate of 15% was estimated.**

Transportation Demand Management

Another parking demand reduction factor included in the analysis is an adjustment for transportation demand management (TDM). These types of programs work collectively to change how, when, where, and why people travel and provide transportation options other than the single-occupant vehicle. TDM measures include a range of cycling, walking, transit, and carpooling incentives and infrastructure that can range from simple improvements such as bicycle parking and transit shelters to comprehensive programs such as discounted/free transit passes for employees and even employee shuttle programs.

To model parking demand in the Study Areas, the analysis included a TDM factor of 15% for employees and 10% for residents. This accounts for a small reduction in parking demand due to factors such as BAT service provision, MBTA service to Brockton, and the relative walkability of the environment compared to suburban-style development.

Observed Parking Demand

In September 2015, Nelson\Nygaard worked with the City to identify "typical" days in Downtown Brockton for parking utilization counts. The team conducted the counts on a Thursday, Saturday, and Sunday. Data collectors captured weekday parking demand for 12 hours, beginning at 8:00 a.m. and ending the last count at 8:00 p.m., with counts every two hours. Data collection began in the early morning to identify if/when employee parking would fill to capacity. In the evening, data was collected until 8:00 p.m. to fully assess parking demand associated with the City's evening

[1] Residential vacancy rates: The Enterprise: http://www.enterprisenews.com/article/20150213/NEWS/150218305. Other vacancy rates based on field observations.

activities. Weekend parking demand was collected for four hours with two-hour counts at 9:00 a.m. and 11:00 a.m. on Saturday and Sunday to capture the peak morning utilization.

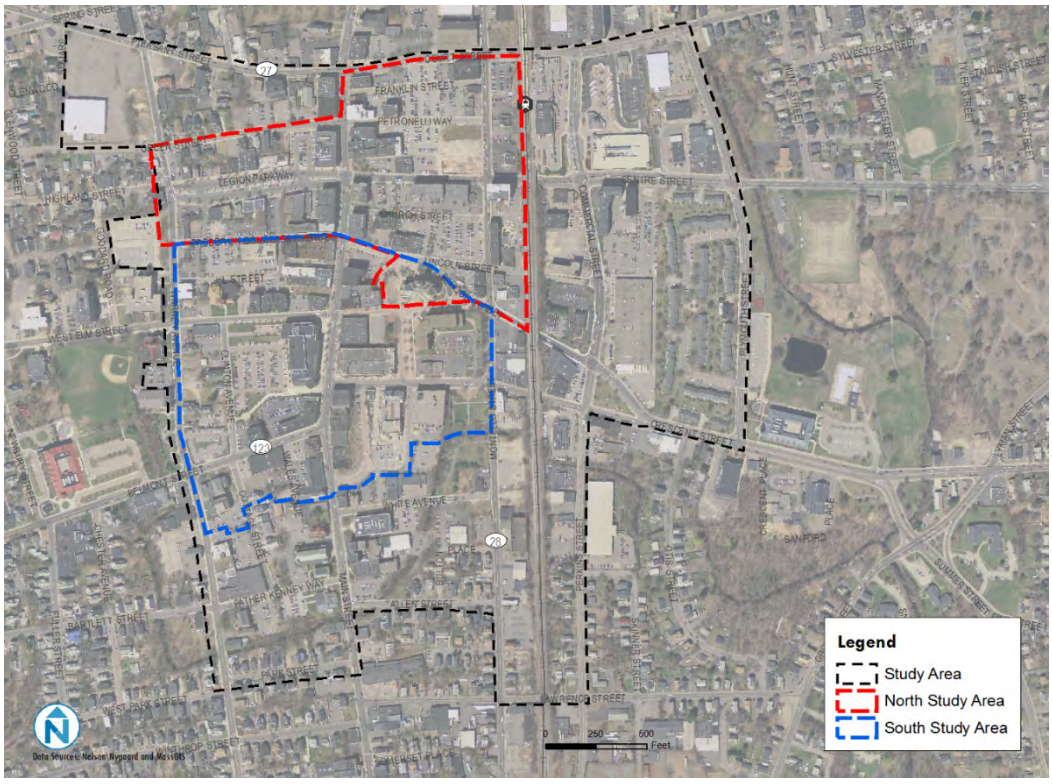
These counts can be aggregated by study area to confirm that the modeling adjustments produce estimates that reflect the Brockton area context.

EXISTING AND FUTURE LAND USE ANALYSIS

This section quantifies the existing and future parking demand for the two study areas, the North Study Area and South Study Area (Figure 6-4). Each analysis includes:

1. An assessment of **existing land use** from the City of Brockton Assessor's database.
2. **Existing parking supply and demand**, which uses the parking supply and utilization information as detailed in Technical Memorandum 1. The information is shown by activity area and identifies the observed surplus or deficit of parking supply by time of day for a typical weekday.
3. **A calibrated "base model" of existing demand** based on national standards, demand by time of day, and Brockton's land use context.
4. Modeled demand if **all vacancies were filled** based on the calibrated parking model.
5. An assessment of **parking demand from expected future development** based on available information and the calibrated parking model.

Figure 6-4 Study Areas for Existing and Future Demand Analysis



NORTH STUDY AREA

KEY FINDINGS: NORTH STUDY AREA

- Brockton's parking demand patterns do not match standard parking ratios that require single-use parking spaces at high, suburban-based rates
- After 6:00 p.m., there is ample parking availability. Thus, the study area could absorb significant residential and/or restaurant uses that peak in the evening.
- If the existing land uses were fully occupied the study area would have approximately 200 unused parking spaces.
- With full build-out of additional planned development from the TDI initiative, parking will reach capacity. If the City is unable to share privately available spaces, the TDI development will require an increase in shared public supply.

Figure 6-5 North Study Area

1. Existing Land Use

The North Study Area includes the City Hall, Department of Transitional Assistance, Brockton MBTA Commuter Rail Station and several other governmental buildings, along with a variety of land uses, with approximately 550,000 square feet of retail and office space, and approximately 290 residential units.

Land uses are grouped as accurately as possible into categories created by the *Parking Generation* manual. Figure 6-6 shows the estimated breakdown of land use by category in the North Study Area.

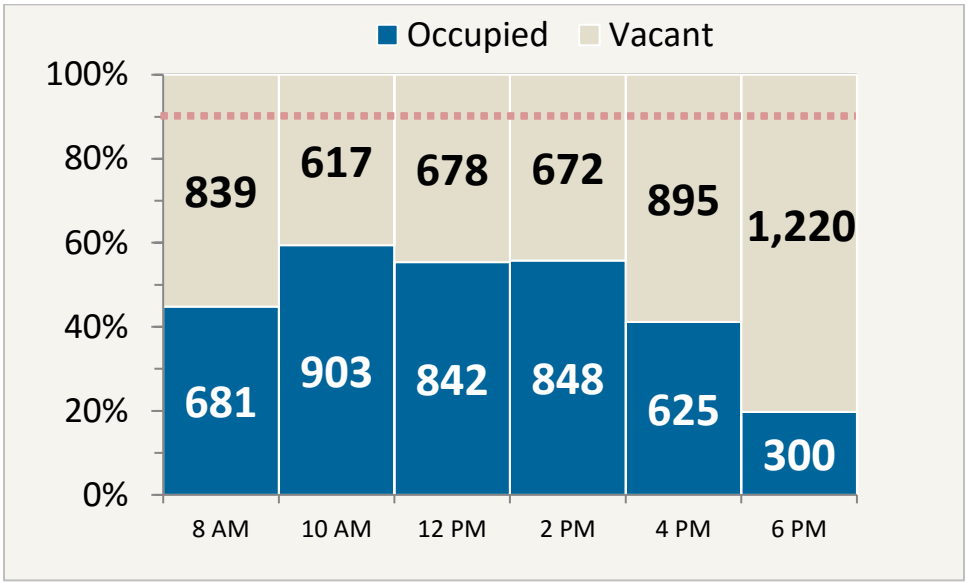
Figure 6-6 Existing Land Uses- North Study Area

Use	Square Feet or Units
Office	122,000
Government Office	102,000
Medical/Dental Office	83,000
Retail	117,000
Restaurant	5,000
Light Industrial	89,000
Coffee/Donut Shop	2,000
Auto Repair/Gas Station	15,000
Bank	8,000
Church	6,000
Low Rise Apartment	289 Units
Estimated Total	549,000 SF 289 Units

2. Existing Parking Supply and Demand

In the North Study Area, there are 1,520 total parking spaces, 856 of which are publically owned on- and off-street facilities. At the time of the counts, there were 588 publicly available, BPA-owned off-street spaces, which are approximately 70% full at peak.[2] Overall, at peak on a weekday, 59% of the parking supply is full with 903 parked cars as shown in Figure 6-7. This count was taken on a typical weekday with no large events.

Figure 6-7 North Study Area Parking Utilization[3]



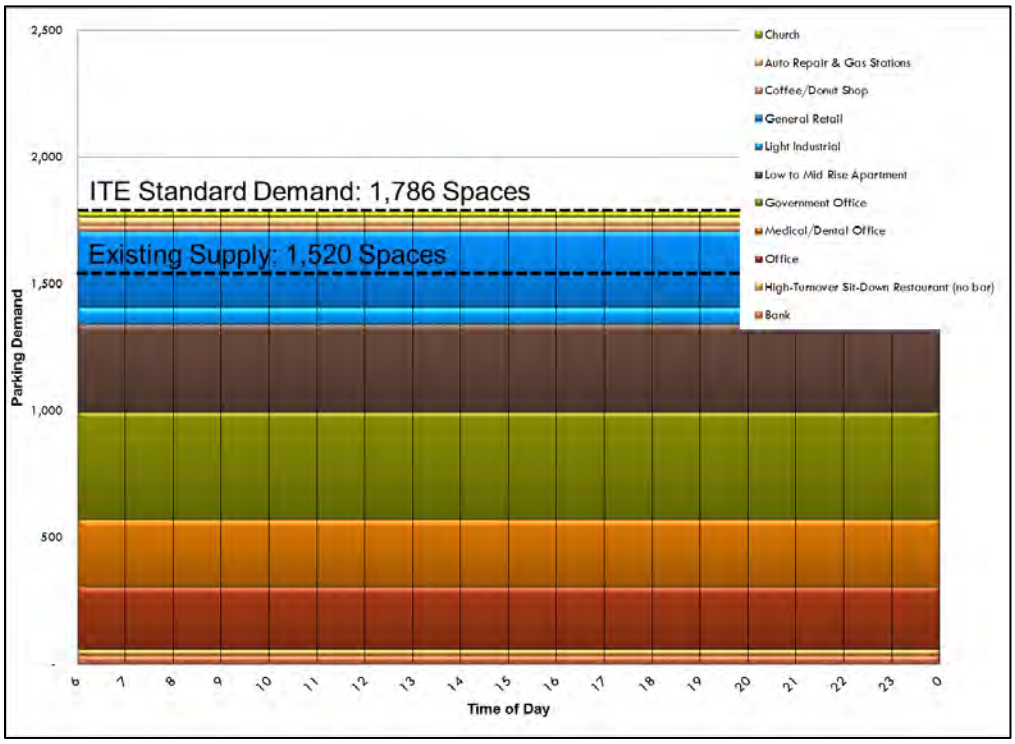
[2] Since the date of parking counts, the BPA has lost 47 spaces in the former D'Angelos lot, bringing the publically owned off-street total down to 541. This is referenced in the North Study Area analysis in comparison to the developments planned there.

[3] Please note that the utilization counts do not include the Trinity Garage, or two auto repair lots, which total 160 spaces. These have been included here to reflect land use patterns, with utilization assumed to be consistent with the rest of the study area.

3. Existing Model Calibration

According to national parking generation rates from ITE, the needed number of parking spaces – assuming that each land use has its own dedicated supply of parking – is 1,786 spaces, as shown in Figure 6-8. The North Study Area has a total of 1,520 spaces. Thus, the parking supply is nearly 270 spaces below what national standards would recommend, and actual observed demand is far less than the available supply (see Figure 6-7, above).

Figure 6-8 Existing ITE-Estimated Parking Demand – North Study Area



To better reflect real demand in downtown, Figure 6-9 shows a model built on methodologies in "Shared Parking," published by the Urban Land Institute, which adjusts parking demand across the hours of the day and accounts for walking between uses, transit and biking access, and building vacancies in the North Study area (see Section 0 for methodology details).

Figure 6-9 shows that modeled demand is far below the existing parking supply, even when considering a lower "reserve supply" that is used to suggest parking is functionally full when 10% or fewer spaces are available.

Figure 6-9 Existing ULI-Estimated Parking Demand – Existing Conditions

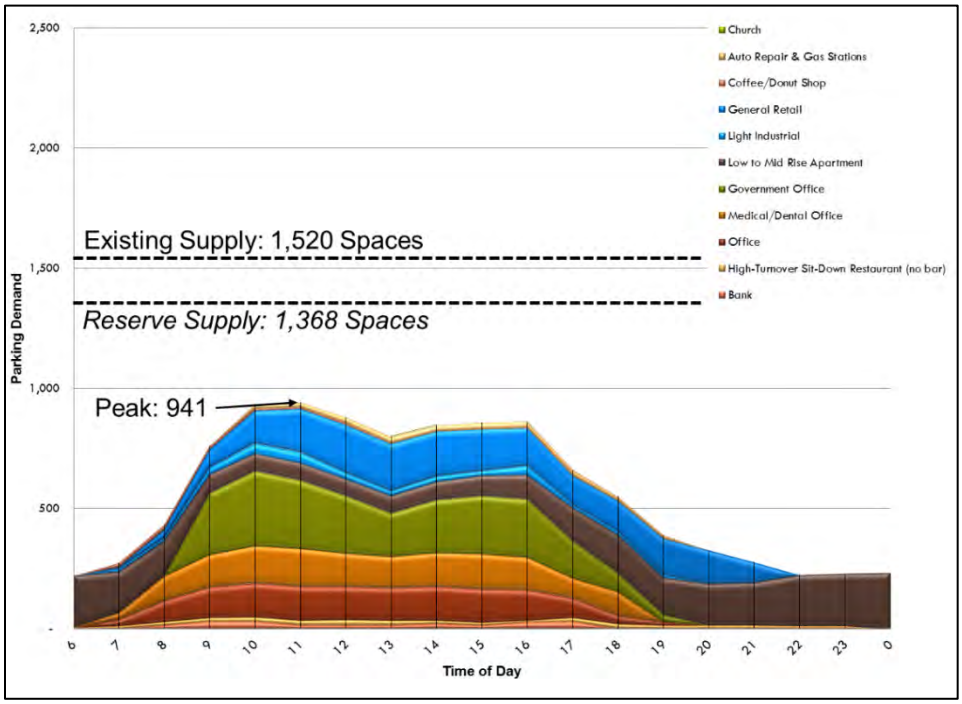
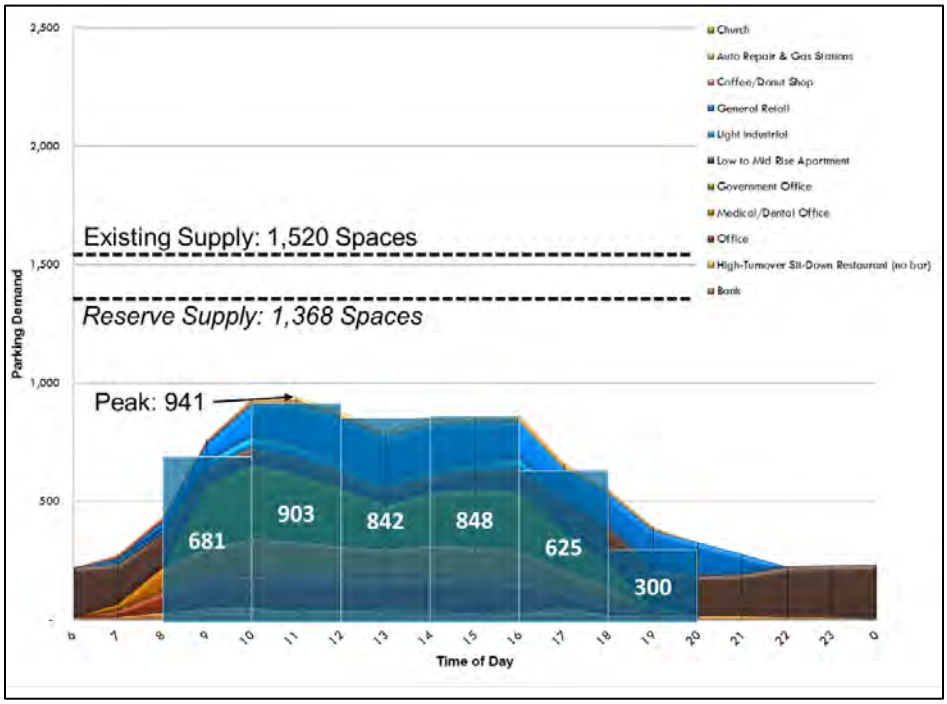


Figure 6-10 shows this model compared to observed demand. The modeled peak result is approximately 40 spaces higher than observed, providing a reliable yet conservative tool for developing future estimates.

The model shows that there is significant opportunity to add land uses, particularly those that peak outside the midday peak, such as residential development and/or restaurants. The parking surplus could potentially also be used to accommodate overflow from other areas, especially in the evening.

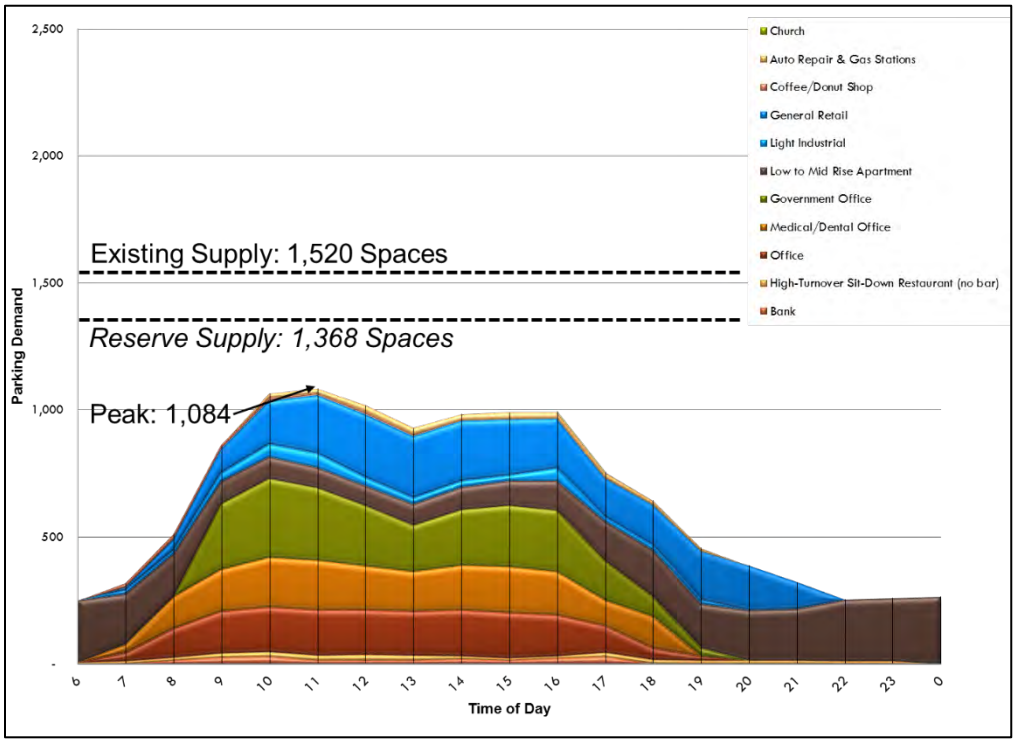
Figure 6-10 Comparison of Shared Parking Model to Existing Observed Demand



4. Parking Demand Without Building Vacancies

Using this calibrated model, the team was able to assess how parking demand would change if all existing building vacancies were filled. Figure 6-11 shows that even at full build-out, there would still be approximately 300 parking spaces available at peak, not including the 150-space reserve.

Figure 6-11 Modeled Parking Demand at Full Occupancy of Existing Building Vacancies



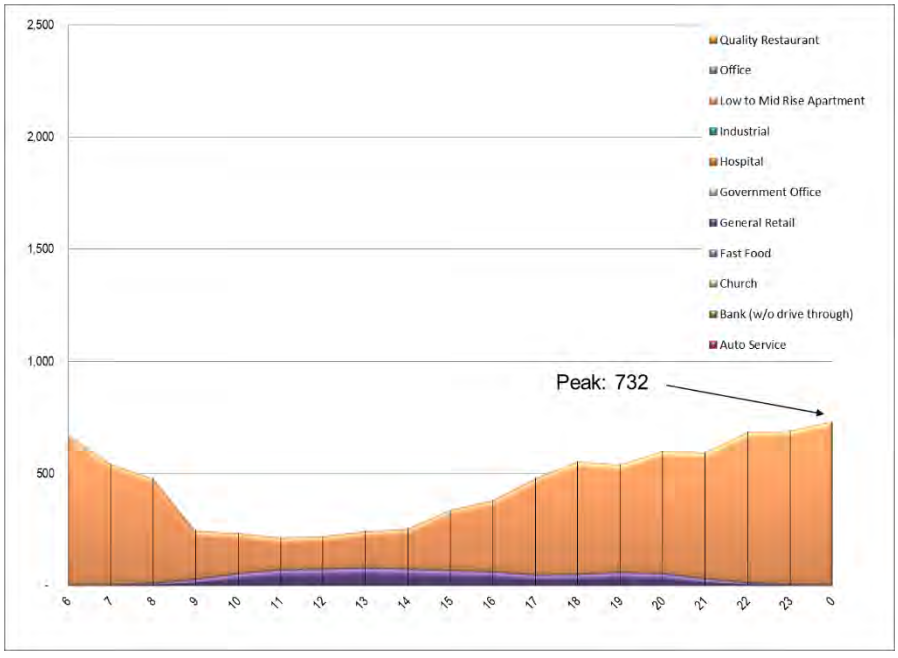
5. Expected Future Development

There are a number of new developments planned in this study area (refer to Figure 6-2), and for the purposes of this study, the team focused on demand related to the sites listed in the Transportation Development Initiative Downtown Action Plan (TDI) and at WB Mason. Parking will need to accommodate these uses in addition to the demand from existing uses today; most of these new uses are replacing vacant or underutilized properties.

Although the above analysis clearly demonstrates that parking demand in downtown is effectively shared by virtue of changes in demand for different uses throughout the day, there are few formalized shared parking arrangements to unlock spare private parking capacity. While the BPA may work to incentivize sharing, insufficient spare public parking capacity exists near this study area, so new supply is likely necessary to accommodate this increased density, as shown in the model results below. The model is conservative in that it does not account for increased internal capture from this increase in activity density, nor does it account for the change in demographics in those living or working in a more urban environment than Brockton currently offers, so future development phases may benefit from needing less new parking construction.

To model demand from the TDI plan and WB Mason, the team first looked at the development in isolation. On its own, the peak demand for the 592 housing units and 31,000 square feet of retail in the TDI development would be approximately 732 spaces overnight, shown in Figure 6-12.

Figure 6-12 Modeled Shared Parking Demand for TDI Development



Accounting for demand at different times of day (also known as “staggered peaks”), the team was able to combine this modeled demand from the TDI development and WB Mason with observed demand to determine capacity needs in the North Study area in the future. The North Study area has several existing sources of parking demand that will remain as the TDI construction moves forward. Figure 6-13 tracks permitted off-street parking demand as TDI developments come online. Note that this analysis is conservative as it assumes almost all new demand must be accommodated off-street, although some drivers may be able to use on-street spaces (for example, trips generated by the pharmacy).

There are several critical supply points for the North Study area, both requiring a combination of demand management and supply expansion. These include:

- Immediate demand from health center employees and opening the Lincoln Lot to daily users
- Year 1-3: Demand from WB Mason's expansion of 180 employees and TDI phases A, C, and D
- Year 3-5: Demand from Petronelli Way housing coupled with a significant loss of parking assets
- Year 5-10: Demand from TDI phase G and loss of temporary parking

A supply expansion in the form of consolidated, structured parking will be necessary during year 1-3 to unlock all of this development. Eventually as the system changes, much of the retail and pharmacy demand may transition to Brockton's more active street environment and to other modes, and overall internal capture rates may have increased in response to the new mix of active uses. Therefore, it is possible that the final phase(s) of parking expansion could be reduced or eliminated. An annual monitoring program tracked against model forecasts would be highly appropriate and potentially save millions of dollars in parking construction costs down the road.

Figure 6-13 Action Strategy Proposed Build-Out

Phase	TDI ID	Description	Daytime Peak Demand (estimated from ULI unless otherwise noted)	Cumulative Tally of Midday Demand in Publicly Owned Lots	Parking Changes Proposed	Cumulative Tally of Publically Owned/Operated Off-Street Parking	Est. Midday Utilization (Lots are functionally full at 90%))
Existing	n/a	Demand in off-street facilities (mostly permit-holders)	422 (observed)	422		541[4]	80%
Immediate	n/a	Loss of public parking due to new road (-30)	n/a	422	-30	511	83%
	n/a	Open Lincoln lot to public and remove from permit pool	n/a	422	-115	396	101%
	n/a	Additional Health Center employee permit requests	20	442		396	112%
Years 1-3	A	New pharmacy, 13,000gsf	33	475		396	120%
	B	Temporary parking lot, 210 stalls		475	+210	606	78%
	n/a	WB Mas Expansion +180 employees	180[5]	655		606	101%
	C	Rehabilitation of 93 Centre for housing, 70 units	22	677		606	112%
	D	Enterprise Phase II, 102 units of housing	30	707	-90[6]	516	140%
	E	Municipal Parking Facility, 474-stall		707	-94[7] +474	896	79%
Years 3-5	F	Petronelli Way Housing, 135 units + 33-stall surface parking lot	35	742	-168 +33	761	98%
Years 5-10	G	Montello Street Mixed-Use, 130 units of housing + 9,000sf of retail + 150 parking stalls	70	772	-210 +150	701	110%
Years 10+	H	Commercial Street mixed-use, 155 units of housing + 9,000sf of retail + 260 parking stalls	60	832	+260	961	86%
Total		13,000gsf pharmacy; 18,000gsf retail; 592 housing units	832			**961**	

[4] Does not include 47 spaces at d'Angelos lot, which BPA leased at the time of parking counts but no longer has access to as of 5/31/2016. Includes only BPA-owned/operated off-street spaces

[5] Assumes 1 parking space per additional employee

[6] 184 spaces in Trinity lot. Assumes 94 spaces in lot for municipal parking facility, 90 in lot for Enterprise Phase II.

[7] 184 spaces in Trinity lot. Assumes 94 spaces in lot for municipal parking facility, 90 in lot for Enterprise Phase II.

SOUTH STUDY AREA

KEY FINDINGS: SOUTH STUDY AREA

- Brockton's parking demand patterns do not match standard parking ratios that require single-use parking spaces at high, suburban-based rates
- After 4 p.m. there are over 1,000 empty parking spaces in the area. After 6 p.m. there are over 1,500 empty parking spaces in the area. This indicates that nighttime-oriented uses such as residential development would fit into the study area without any new parking if parking is fully shared
- If existing uses were fully occupied, there would still be approximately 300 spaces free at peak.

Figure 6-14 South Study Area

1. Existing Land Use

The South Study Area is composed of a variety of uses, including several Plymouth County Court Houses. The South Study Area comprises over 600,000 square feet of active commercial, retail, and other uses. The remaining uses within the South Study area are dedicated to nearly 300 residential units.

This analysis grouped land uses into categories created by the *Institute of Transportation Engineers Parking Generation 4th Edition* (2010). Figure 6-15 shows the breakdown of land use by category in the South Study Area.

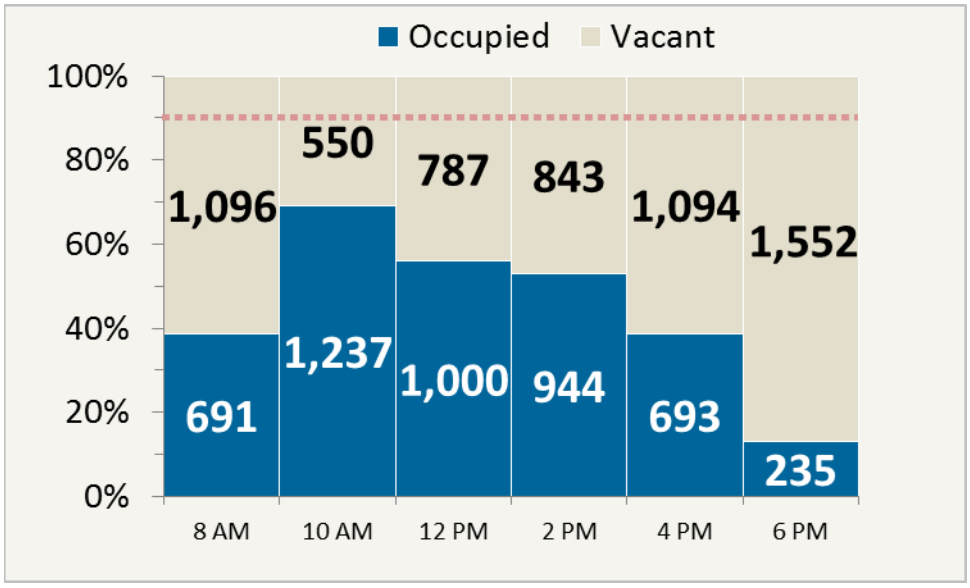
Figure 6-15 Existing Land Uses- South Study Area

Use	Square Feet or Units
Church	12,000
Retail	116,000
Office	240,000
Medical/Dental Office	11,000
Government Office	275,000
Restaurant (No bar)	5,000
Restaurant (With bar)	9,000
Auto Repair & Gas Station	750
Coffee/Donut Shop	1,000
Low Rise Apartment	297 units
TOTAL	670,000 SF 297 Units

2. Existing Parking Supply and Demand

In the South Study Area, there are 1,787 total parking spaces. As shown below in Figure 6-17, weekday parking demand peaks at 69% of the supply, or occupied with 1,227 parked cars. This count was taken on a typical weekday with no large events.

Figure 6-16 South Study Area Utilization[8]

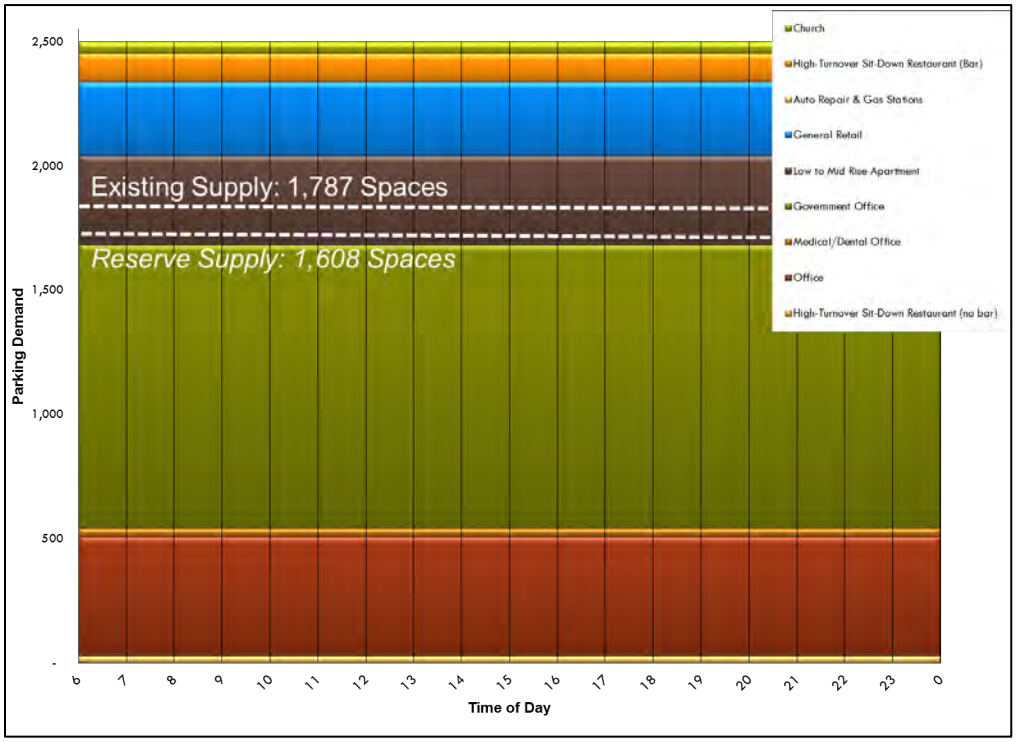


[8] Please note that the utilization counts do not include the 14 spaces used by the Plymouth County Sheriff at the Covett Courthouse. These have been included here and demand is assumed to be proportional to the rest of the study area.

3. Existing Model Calibration

According to national parking generation rates from ITE, the needed number of parking spaces, assuming that each land use has its own dedicated supply of parking, is 2,500 spaces. The South Study Area has a total of 1,787 spaces. As shown in Figure 6-17 the parking supply is approximately 700 spaces below what national standards would suggest. If Brockton were to precisely follow ITE recommendations, there would be over 1,200 unused spaces at peak demand periods.

Figure 6-17 Existing ITE Estimated Unshared Demand- South Study Area



Actual demand, however, varies considerably from the ITE estimates. Figure 6-18 shows a model that adjusts for time of day demand, TDM adjustments, and vacancies in the South Study Area. Specifically the model estimates a 20% vacancy for office, retail, and industrial uses, as well as a 13% housing vacancy rate.

Figure 6-18 Calibrated Model – Existing Conditions

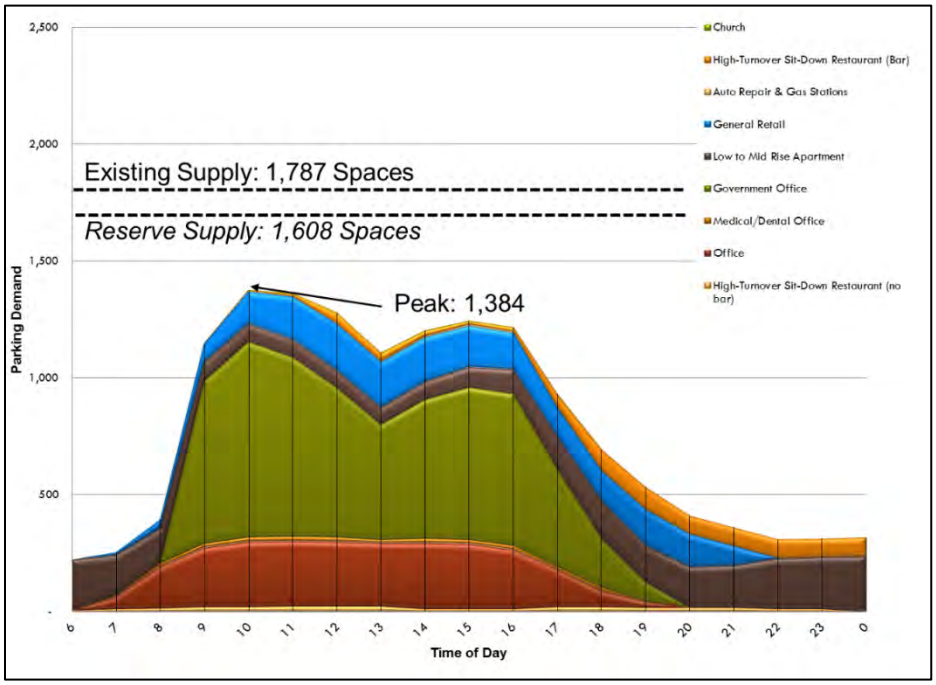
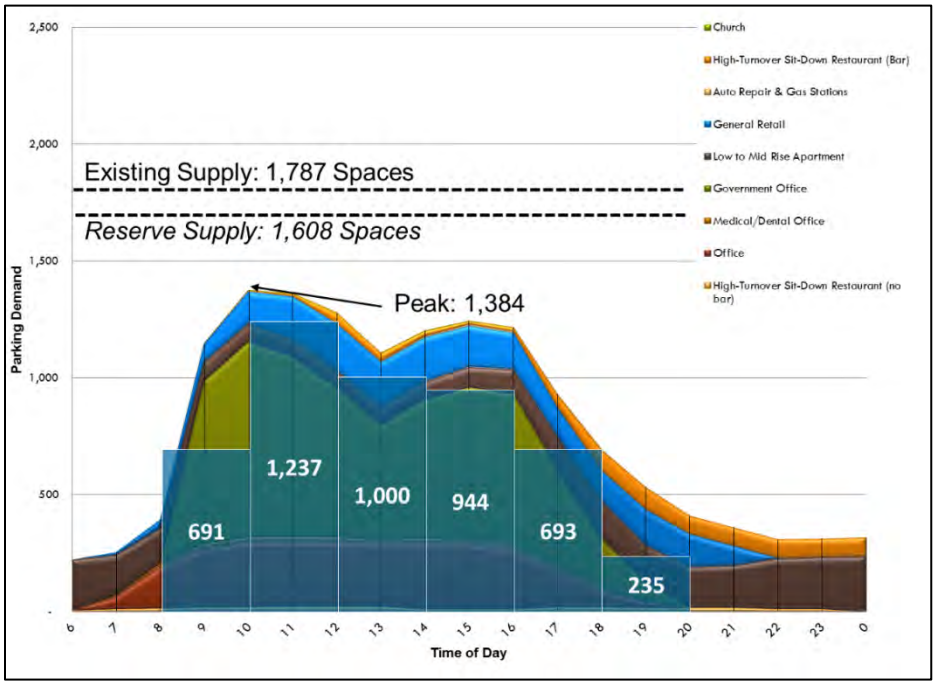


Figure 6-19 compares the above model to actual counts and finds that counts are moderately close to what the model predicts, though the afternoon peak period overestimates demand in the afternoon. The modeled peak is approximately 40 spaces higher than observed, which could be due to factors such as the season, higher vacancies than those modeled, or a higher percentage of people walking, bicycling or taking transit.

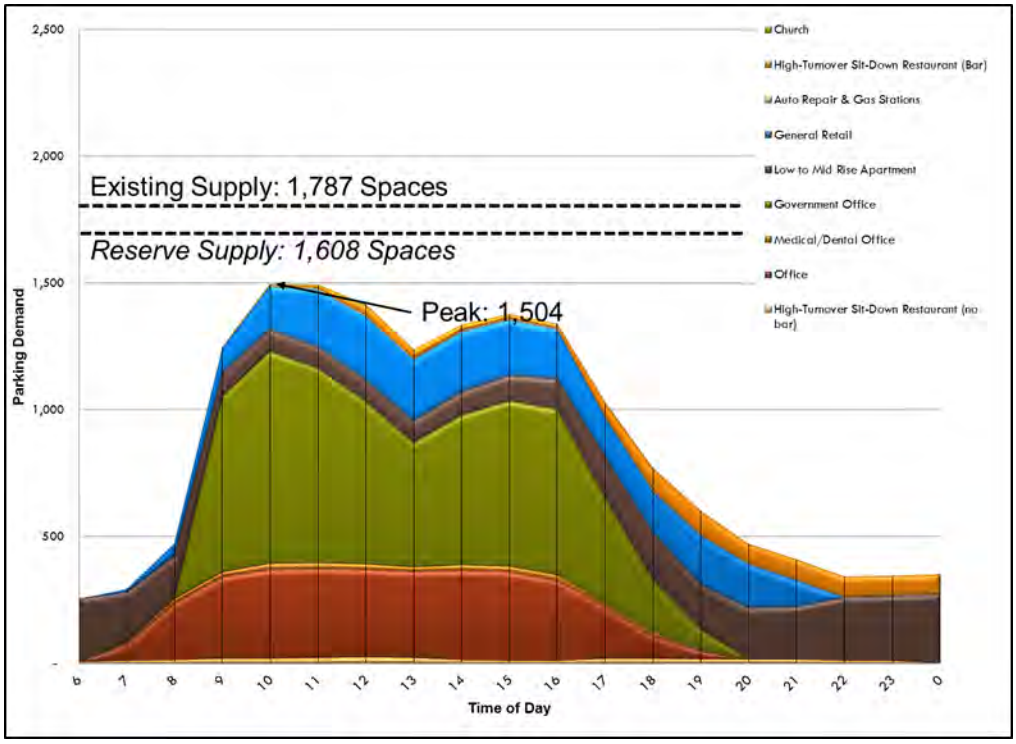
Figure 6-19 Calibrated Model – Existing Conditions with Observed Demand



4. Parking Demand Without Building Vacancies

Using this calibrated model, the team was able to assess how parking demand would change if all vacancies were filled. Figure 6-20 demonstrates that even at full occupancy, there would still be approximately 100 spaces available at the 10:00 am peak, plus a 10% reserve supply.

Figure 6-20 Modeled Parking Demand at Full Occupancy of Existing Building Vacancies



5. Expected Future Development

At this time there are no expected future developments in the South Study Area with sufficient information to project their impacts on parking.

However, the time-of-day analysis highlights the type of uses that the South Study Area could accommodate without constructing additional parking. After 6:00 pm, the parking demand drops off significantly. Thus, uses such as residential, residential, or other nighttime uses would be able to share parking that during the day is taken up by courthouse and office uses. This area could also be used for event parking.

ZONING ANALYSIS

The Revised Ordinances of the City of Brockton, Massachusetts, were adopted in February 1984. Article IX, titled "Off-Street Parking and Loading," defines parking regulations and requirements for general uses, joint facilities, and establishes regulations for the development of parking areas, structures, and loading areas. The Revised Ordinances covers many topics in great detail, but this analysis focuses solely on the provisions related to parking and transportation demand. The off-street parking-related ordinance (Article IX) covers the entire City of Brockton, including the central business zones (C-3). All on-street and off-street metered spaces, parking meter zones, and other parking spaces and facilities are controlled by the Brockton Parking Authority, which establishes rates for parking and fines for overtime parking.

As with most communities, Brockton's zoning requires the provision of parking with land developments, which has impacts on the viability, cost, and form of proposed developments. Therefore, in a comprehensive parking review, reviewing zoning requirements and policy in service of larger downtown development goals becomes necessary. As downtowns evolve, the level and mix of uses change, and parking supply must continually be reevaluated and updated to match demand patterns, often resulting in changes to zoning's prescribed requirements. In this analysis, Brockton's current zoning ordinances are reviewed, summarized, and compared to current national best practices.

In addition, the Brockton Planning department is proposing some updates to the zoning ordinances, referred to below as "proposed ordinances".[9] As of winter 2016, these proposals were still pending at City Council.[10] The proposals include a range of changes to zoning as a whole as well as in special districts, some of which are key to parking in Brockton. These are outlined in the review below where relevant.

KEY FINDINGS

- Many of Brockton's baseline required parking minimums are higher than what national standards from the Institute of Transportation Engineers (ITE) would typically require, despite actual observed demand being demonstrably lower than those standards.
- Provisions for shared parking exist within the Downtown Brockton Smart Growth Overlay District, but they are limited to uses whose peak demand occurs only at night or on Sundays (e.g. churches, assembly halls, and theaters).
- The proposed ordinances do not include requirements for bicycle parking or other multimodal travel incentives, such as electric vehicle parking, transit improvements, or transportation demand management programs.
- The proposed ordinances do not incorporate more progressive tools, such as parking cash-out, car-sharing, or the unbundling of parking cost.
- The proposed ordinances do not significantly change parking provision requirements except in C-3 areas and Smart Growth areas. These standards may appropriately encourage developers to use the more flexible Smart Growth overlay.

[9] Per email from Rob May, 12/22/2015. Nelson\Nygaard reviewed a version titled, "Zoning Text Amendment September 2014"

[10] Per Urban Revitalization Plan Draft 12/23/2105, p.22

Parking Provision

General Parking Requirements

In most cases, **Brockton's general parking requirements are higher than the peak parking demand rates found in *Parking Generation 4th Edition*** (Institute of Transportation Engineers, 2010), as illustrated in Figure 6-21 and Figure 6-22. ITE produces this periodic report, which is the prevailing national standard in determining parking demand for a development. ITE standards are based on parking demand studies submitted to ITE by a variety of parties, including public agencies, developers and consulting firms. These rates are a comparative starting point to determine baseline assumptions.

Although widely considered an industry standard, the peak parking demand rates found in the ITE guide are primarily derived from studies conducted in auto-dependent single-use suburban settings. When applied as minimum requirements in a denser mixed-use environment these tend to require parking at a rate that could reproduce a similar auto-dependent suburban sprawl pattern.

Despite this orientation, many of Brockton's parking requirements exceed even these suburban ITE rates for the described land use. Figure 6-21 and Figure 6-22 compares Brockton's zoning requirements to ITE projected parking demand for a cross-section of uses; we note that for some uses, Brockton's requirement are below ITE rates, most notably for single unit dwellings. However, the Proposed Standards would bring this requirement up above ITE rates to 2.0 spaces per unit.

These parking requirements in the code are important as they guide the required parking - and therefore land - needed to develop an existing or new property in the City. Most of the requirements shown in Figure 6-21 and Figure 6-22 are general City requirements.

Residential Requirements

Brockton's required minimum parking regulations for residential zones are contained in "Permitted Uses" and are fairly static: one parking space is required per housing unit for single-family residential zones (R-1A, R-1B, R1-C) and two parking spaces are required per housing unit for multi-family residential zones (R-2 and R-3). This is actually inverse to observed parking demand that suggests higher need for single family homes (1.8 per dwelling unit, per ITE) and lower for multi-family units (1.2 per dwelling unit, per ITE). Brockton's lone exception to this is for all residential parcels zoned for "Neighborhood Revitalization In-Fill Overlay Zone" (R-4), which are allowed a lower minimum of one parking space per unit (§ 27-9)[11] (Figure 6-21). Meanwhile, parcels zoned for "Senior Residential Community" (R-5) are required to provide two parking spaces for each dwelling unit (DU) on the unit's lot, which is nearly five times ITE's requirement of 0.4 spaces per DU (Ord. No. G008, 8-28-03)[12].

[11] Revised Ordinances of the City of Brockton, Massachusetts: Sec. 27-9: Standards for Residential Zones:

[12] Sec. 27-27.6: R-5 Senior Residential Community:

Figure 6-21 Residential Parking Regulations

Residential Use	Required Spaces	ITE Peak Parking Demand Rates (code)	Brockton vs. ITE	Proposed Ordinances
Single Unit Dwelling (R-1A, R-1B, R-1C)	1.00 per housing unit	1.8 per Dwelling Unit (210)	Below	2.0 per housing unit
Multi-Unit Dwelling (R-2, R-3)	2.00 per housing unit	1.2 per Dwelling Unit (221)	Above	2.0 per housing unit
Neighborhood Revitalization In-Fill (R-4)	1.00 per housing unit	1.2 per Dwelling Unit (221)	Below	2.0 per housing unit
Elderly Housing (R-5)	2.00 per dwelling unit	0.4 per Dwelling Unit (254)	Above	N/A

Non-Residential Requirements

Article IX of Brockton's Revised Ordinances provides minimum parking requirements in several categories of non-residential uses, including medical, civic, industrial, entertainment, and commercial (Figure 6-22). Notably, Brockton's off-street parking regulations lack specific requirements for a range of generic uses and services that are typically regulated in peer cities, such as banks, auto mechanics, gas stations and convenience stores, movie theaters, colleges and universities, grocery stores and supermarkets, liquor stores, and health and fitness clubs. Brockton's shorter list of uses can be very valuable at encouraging development without being overly prescriptive – a best practice approach many municipalities are working towards nationally. With less definitive classifications, specific uses are grouped within broader categories that typically derive parking minimums from a building's existing square footage, simplifying the calculation for applicants. While this simplified approach may not correspond with a given use's distinct peak demand period, it recognizes that the accuracy of being overly prescriptive is very low. For instance, the ITE manual lists 27 variations of retail land use, yet only one of those uses (shopping center) has sufficient data points and a statistical accuracy above 0.75 to make it even remotely reliable for predicting parking need. ITE acknowledges that parking demand is highly dependent on a location's typology (e.g. strip, neighborhood, community, regional, or super regional), yet unfortunately still promulgates average rates across hundreds of unique uses.

Figure 6-22 Sample of General Parking Requirements under Brockton's Zoning Ordinance

Principle Use		Required Minimum Spaces	ITE Peak Parking Demand Rates (code)	Brockton vs. ITE	Proposed Ordinances
Medical	Hospital	1.00 per bed	4.5 per Bed (610)	Below	Unchanged
	Nursing Home	1.00 per bed	0.4 per Bed (620)	Above	Unchanged
	Medical / dental office	6.00 per doctor	3.2 per 1,000 sq. ft (720)	Above	Unchanged
Civic	Community buildings, country clubs, social halls, and lodges	1.00 per 600 sq ft (occupied by principal and accessory structures)	3.2 per 1,000 sq ft (495)	Below	Unchanged
	Churches, synagogues, and houses of worship	1.00 per six seats**	0.2 per seat (560)	Below	Unchanged
Industrial	Manufacturing	1.00 per five employees in the maximum working shift	1.0 per 1,000 sq ft (140)	--	Unchanged
	Wholesale or Warehouse	1.00 per five employees in the maximum working shift	0.5 per 1,000 sq ft (150)	--	Unchanged
Entertainment	Bowling Alleys	4.00 per lane	3.1 per Lane (437)	Above	Unchanged
Commercial	Retail Stores and Shops	1.00 per 225 sq ft	2.6 per 1,000 sq ft (820)	Above	Unchanged
	Hotel, Motel, and Rooming Houses	1.00 per rental unit	0.95 per occupied room^	Above	Unchanged
	Furniture Store	1.00 per 750 sq ft GFA	1.0 per 1,000 sq ft (890)	Above	Unchanged
	Office	1.00 per 300 sq ft	2.8 per 1,000 sq ft (701)	Above	Unchanged
	Restaurants, bars, and cafes	1.00 per four seats	0.5 per seat (932)	Below	Unchanged

* APA standards; ** Except as noted in subsection 5 of 27-53: ^ average of hotel and motel demand

Commercial uses are allowed in a series of commercial zones that vary by permitted building height, lot area, etc. Parking is similar across these uses except the "Central Business Zone," C-3. In C-3, parking is currently only required when rehabilitating commercial and/or industrial buildings to residential use or constructing new residential buildings; one parking space is required for the first bedroom, with 0.5 parking space(s) provided for each additional bedroom unit (Figure 6-23).[13]

The Proposed Standards change that policy to require off-street parking for new uses per off-street loading requirements that are standard in other zones, but allow developers the option to "pay in lieu of parking" rather than providing these spaces. A developer may also choose to use the Smart Growth Overlay rather than the more restrictive C-3 requirements; this still requires the construction of parking but at a lower rate.

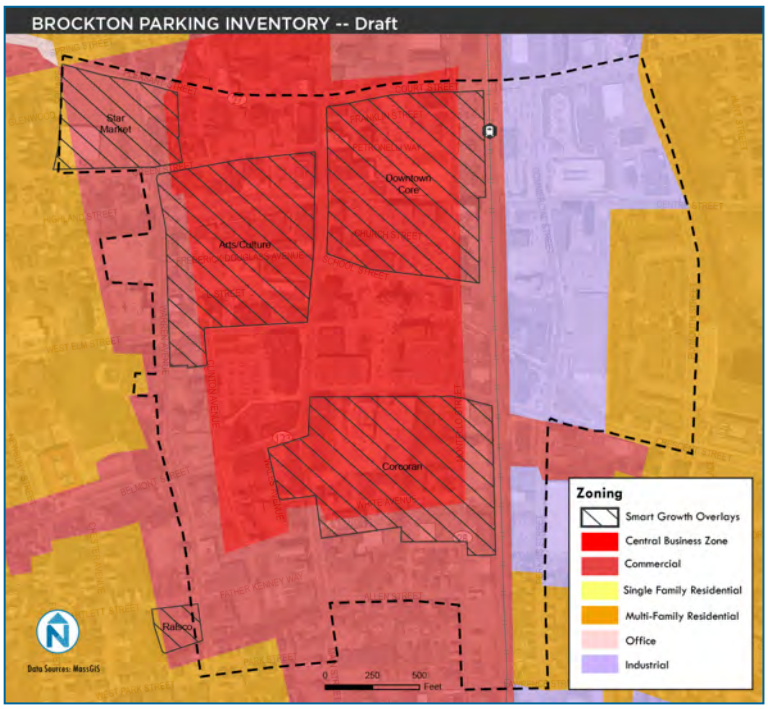
Special District Designations

Several special zoning districts are designated within Brockton, although not all impact parking in Downtown Brockton. Provisions related to parking related to each district are summarized below.

Downtown Brockton Smart Growth Overlay District

Article XVI of the Revised Ordinances establishes off-street parking requirements and regulations for the Downtown Brockton Smart Growth Overlay District (DBSGOD), adopted in July 2007[14]. The design standards for the DBSGOD are pursuant with Massachusetts General Laws Ch. 40R, "Smart Growth Zoning," enacted in 2004.

Figure 6-23 Downtown Brockton Parking Zoning Map



[13] Sec. 27-10, Table 2

[14] ARTICLE XVI: DOWNTOWN BROCKTON SMART GROWTH OVERLAY DISTRICT (DBSGOD):

Five sub-districts were created within the Smart Growth Overlay District: Arts/Culture, Corcoran, Downtown Core, Raslco, and Star Market.[15] Updated minimum off-street parking regulations for the DBSGOD are provided for both residential and commercial uses, detailed in Figure 6-24. Provisions for shared parking exist within the Downtown Brockton Smart Growth Overlay District, but they are limited to uses whose peak demand occurs only at night or on Sundays, e.g. churches, assembly halls, and theaters (§ 27-26.4).

Figure 6-24 Smart Growth Overlay District Minimum Off-Street Parking Requirements

Use	Minimum Required Parking	ITE Peak Parking Demand Rate (code)	Proposed Ordinances	Proposed Standards v. ITE
Retail	3 spaces per 1,000 square feet	2.6 per 1,000 sq ft GLA (820)	3 spaces per 1,000 square feet	Above
Restaurant	3 spaces per 1,000 square feet	5.6 per 1,000 sq ft GFA (932)	3 spaces per 1,000 square feet	Below
Office and Institutional	4 spaces per 1,000 square feet	2.8 per 1,000 square feet (701)	4 spaces per 1,000 square feet	Above
Dwelling Unit (1 bedroom)	1.0 spaces	1.2 per Dwelling Unit (221)	0.8 spaces per unit	Below
Dwelling Unit (2 bedroom)	1.5 spaces	1.2 per Dwelling Unit (221)	0.8 spaces per unit	Below
Dwelling Unit (3 bedroom)	2.0 spaces	1.2 per Dwelling Unit (221)	0.8 spaces per unit	Below
Dwelling Unit (4 bedroom)	2.5 spaces	1.2 per Dwelling Unit (221)	0.8 spaces per unit	Below

Neighborhood Revitalization In-Fill Overlay Zone

The Neighborhood Revitalization In-Fill Overlay Zone allows for the development of in-fill single-family and two-family dwelling units in the R-4 Zone. Residential parcels in R-4 are permitted one parking space per unit (§ 27-27.5.). This is not located in the Study Area.

Regional Shopping Center Overlay Zone

The Regional Shopping Center Overlay Zone (C-6) is unlikely to affect Brockton's Central Business Zones, but it carries significant parking ramifications. Off-street parking minimums require at least 4.0 spaces per 1,000 square feet of gross leasable area of all buildings located in the regional shopping center, and they are calculated without regard to multiple uses. Additionally, all required off-street parking must be located on the same lot as the regional shopping center (§ 27-32.5.6).[16]

[15] Downtown Brockton Smart Growth Overlay District Map: http://www.mass.gov/hed/docs/dhcd/cd/ch40r/maps/40r-brockton-map.pdf

[16] C-6 Zone, Regional Shopping Center Overlay Zone:

Parking Minimums and Maximums

Most minimum parking requirements take into account only two variables: land use and the size of development. As with the requirements shown in the figures above, these are typically expressed in terms of number of spaces required per either a certain square footage of a particular land use, per residential unit, or (for restaurants and theaters) by number of seats. However, real parking demand is affected by many more variables, such as the geographic context, mix of adjacent land uses, 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, Brockton's Revised Ordinances establishes minimum parking requirements for a variety of land uses but does 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 valuable downtown land that is devoted to parking. Parking maximums can be introduced in any place 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, similar to the Revised Ordinance's goals of reducing traffic congestion. Parking maximums have a more direct rational nexus to downtown Brockton's goals than do parking minimums.

Figure 6-25 Parking Minimum and Maximum Requirements under Brockton's Revised Ordinances

Existing Regulation	Best Practices
Parking minimums are required in the Downtown Brockton Smart Growth Overlay District	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. Removed Parking Minimums: Some places have done away with minimum parking requirements for the entire municipality while others have targeted specific zoning districts. 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.

Opportunity: Consider introducing parking maximums in addition to parking minimums, particularly in downtown Brockton.

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. There are multiple parking facilities in downtown Brockton that could likely accommodate shared parking during evening hours and on weekends.

Brockton's Revised Ordinances acknowledges shared parking in two specific zones: the Downtown Smart Growth Overlay District and the Sports and Convention Complex Zone (C-7). For example, the Downtown Brockton Smart Growth Overlay District allows for contract with "intermittent use establishments" that feature peak parking demand at night or on Sundays, within a 600-foot walking radius. The C-7 zone also permits shared, multiuse parking, and it counts shared spaces towards the facility's requisite number of spaces. Additionally, joint facilities for parking or loading may be shared by separate uses, although the total number of spaces must equal the sum of the required individual spaces for each use. The chart below highlights some of the existing shared parking provisions in the varying zones (Figure 6-26).

Figure 6-26 Shared Parking under Brockton's Revised Ordinances

Existing Regulation	Best Practices
Downtown Brockton Smart Growth Overlay District – Off-street Parking: Shared parking is allowed for specific uses as well as any whose peak demand is concentrated in certain time periods like Sunday or during the day. It requires a formal agreement. In addition, spaces must be within 600 feet of a use. (§ 27-96). *C-7 Zone, Sports and Convention Complex Zone:* Shared, multiuse parking is permitted and will be counted in determining whether a use had the requisite number of spaces. Parking requirements within the zone are not cumulative.	Shared parking up to 1,000 foot walking radius is more common. 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. These can be provided publicly or on other private facilities through agreements. Potential to consider public parking (on- or off-street) as part of shared supply

Opportunity: Introduce a more progressive shared parking code that avoids tables, calculations, and models, and instead uses a simple method that lets developers build less than a minimum amount of required parking if they make their spaces fully shared.[17]

[17] Sample language: http://www.mass.gov/envir/smart_growth_toolkit/bylaws/SP-Bylaw.pdf

Change of Use Exemptions

Brockton's downtown contains multiple historic buildings that occupy the entire parcel footprint. Situations arise where the minimum parking requirements interfere with the ability of the owner/occupant to change the use of their property in line with evolving market demands. As discussed above, often the minimum parking requirements set out in the zoning code require more off street parking than is feasible within the constraints of the property. In mid- to high-density downtowns like Brockton's where lots are small and available space is limited, this can become a serious obstruction to sensible redevelopment.

Currently, Brockton's existing and proposed ordinances only allow for the conversion of commercial or manufacturing structures to residential use if strict provisions are followed, including the allotment of at least one off-street parking space per dwelling unit, except in certain districts. The proposed ordinances would expand this requirement to all districts but thus encourage developers to "pay in-lieu" of providing parking.

Figure 6-27 Change of Use Exemptions under Brockton's Revised Ordinances

Existing Regulation	Best Practices
Converting non-residential buildings to housing units requires one parking or more parking spaces per unit.	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. Allow for exemptions in cases where overall building and parcel in use is below a certain size (e.g. 5,000 sq ft). Allow for exemptions in cases where building and parcel in use is to a lower parking intensity.

Opportunity: Encourage flexibility for changes of use, such as requiring a demonstration of shared parking availability (i.e. at "intermittent use establishments"), rather than requiring minimum parking.

Parking In-Lieu Fees

An in-lieu fee allows new developments to waive all or part of their minimum parking requirements by making a one-time or annual payment (in-lieu of providing parking) to the municipality.[18] The fee can be used for transportation improvements or is "banked" to fund current or future shared parking facilities. This provision helps the redevelopment of constrained sites while providing a revenue stream to support the construction/maintenance of shared public parking facilities such as a central lot or garage.

Payment in lieu of parking is included in the proposed ordinance amending Chapter XI of Brockton's Revised Ordinance, which will allow applicants to make either a cash payment in lieu of providing the required parking or a partial cash payment combined with a partial provision of the required parking. Payments will be made to the City of Brockton Parking Authority, and funds will be used for land acquisition, design, and the construction of municipal parking.

Figure 6-28 Parking In-Lieu Fee Regulation under Brockton's Revised Ordinances

Existing Regulation	Best Practices
None, in the current regulations. Payment in lieu of parking is included in the Proposed Standards amending Chapter XI. It would be allowed in the Smart Growth District and C-3 districts, with payments going directly to the BPA. The BPA also can set the amount. This approach is designed to encourage proponents to pay a fee rather than overbuilding parking.	Where zoning requirements for minimum numbers of parking spaces exist, a parking in-lieu fee or payment has great success at reducing parking supply for dense mixed-use areas that have lower parking demand or high potential for sharing. Fees vary widely. It is recommended that these fees incentivize proponents to utilize them rather than building parking by being indexed to a reasonable market price as opposed to replacement costs. Best practice approaches utilize tiers or increasing cost per space rate that makes waiving lower quantities cheap, waiving mid-level quantities on par with construction costs, and high amounts cost-ineffective which encourages change of use and small infill development.

Opportunity: Specifically incorporate in-lieu fees in the zoning ordinances, particularly with modifications to the shared parking zoning language and changes to parking provision guidance.

[18] See Needham, MA In-Lieu Parking Fee for Projects http://www.needhamma.gov/DocumentCenter/Home/View/3274

PARKING DESIGN

Dimensional Requirements

Requiring buildings to provide a minimum setback encourages greater dispersal of development. This requirement can break up attractive village street walls and detract from the continuous active streetscape frontage that makes downtowns like Brockton's special. Allowing or requiring parking between the building and the street decreases pedestrian safety and introduces potential barriers to a walkable environment. Brockton's code works to eliminate these negative parking impacts.

Brockton's current zoning regulations stipulate that parking lots containing four to 25 spaces must maintain a planting strip (18 inches or wider) separating the parking lot from the street or sidewalk. Parking areas with capacity greater than 25 parking spaces are required to provide a minimum of two-percent of the gross parking area to landscaped open space (§ 27-53.). Excluding dwellings, no parking area is permitted with a capacity fewer than three spaces.

Additional stipulations govern setbacks within the Downtown Brockton Smart Growth Overlay District: new structures must be set back a minimum of 10 feet from property lines, parking for new construction is not permitted within required front yard setbacks, and new buildings should conform to the setbacks of existing buildings adjacent to new construction.

The proposed ordinance amending Chapter XI of Brockton's Revised Ordinances stipulates that surface parking lots should be located at the side or rear of building, relative to any public right-of-way (to the maximum extent feasible). Additionally, parking areas must be "shielded" from the public right-of-way by a seven foot wide landscaped buffer, with deciduous shade trees planted.

Figure 6-29 Dimensional Requirements under Brockton's Revised Ordinances

Existing Regulation	Best Practices
Medium-sized (4-25 space) parking lots must have a planting strip between the lot and the street or sidewalk. Lots greater than 25 spaces have a "landscaped open space" requirement. In Smart Growth Overlay District, parking may not be between the street and the building.	No front yard parking in downtown area. Reduced or eliminated minimum building setback requirements in downtown area.

Opportunity: Consider more broad elimination of minimum setbacks and expand to other zoning districts the requirement to have parking behind a given building.

Driveway Curb Cuts

Driveway curb cuts are a major source of vehicle-pedestrian-bicycle conflicts and induce congestion on busy thoroughfares due to left turning vehicles. 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 Revised Ordinances provide clear guidance on the width of curb cuts based on property use but does not elaborate on provisions to accommodate bicyclists or pedestrians.

Figure 6-30 Curb Cut Guidance under Brockton's Revised Ordinances

Existing Regulation	Best Practices
Minimum and maximum widths for driveways, depending on use.	In downtown or village center zoning districts, 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. Encourage joint access to multiple lots through shared driveway/curb-cut access.

Opportunity: Introduce more specific guidance for curb cuts, especially to encourage shared use or combinations of parking facilities to minimize driveways.

RELATED MEASURES

Car Sharing

Car-sharing provides individuals with access to a fleet of shared vehicles, allowing them to not own a car or avoid owning a second 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 Revised Ordinances do not address car sharing.

Figure 6-31 Car Sharing Regulations under Brockton's Revised Ordinances

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 and proximity to transit.

Opportunity: Include car sharing as part of a developer in-lieu package and at developments located near transit.

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, downtown residents who can walk to work with access to transit, 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, unbundling residential parking can significantly reduce household vehicle ownership and parking demand[19].

Brockton's Revised Ordinances do not explicitly address the bundling of parking cost. Owners of rehabilitated residential buildings can either provide on-site parking or can utilize municipal or other such parking facilities nearby – by buying an annual parking pass – to meet parking minimum requirements. However, the ordinance does not identify how the parking spaces are associated with residences, i.e., whether they are offered unbundled or as part of the lease/deed.

There is a reduction in the parking requirement for subsidized low and moderate income housing or elderly housing developments. These types of housing developments are required to provide 1.5 spaces per dwelling unit. Again, this requirement does not unbundle the cost of parking, but it does illustrate a recognition of reduced need, which is associated with unbundled parking costs.

[19] Todd Litman, *Parking Management Best Practices* (Planners Press, 2006)

Figure 6-32 Unbundling of Parking Cost Regulations under Brockton's Revised Ordinances

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). Unbundled parking makes housing more affordable for tenants or buyers who do not have a vehicle, without affecting price for others. In addition, it makes the cost of providing parking clear to residential and commercial tenants and buyers, and to help them make more informed decisions about their transportation needs. Typically, unbundled parking leads to reduced parking demand, which in turn lets developers build less parking and more of the functional building space (whether that is living units, commercial space or office space). Typically unbundled parking reduces parking demand by 10-30%[20] depending on circumstances. A conservative approach may be to ease minimum requirements by 20%.

Opportunity: Specifically include unbundling in the zoning ordinances, especially in denser areas.

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 visitors. 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 Revised Ordinances do not specify any bicycle parking requirements.

Figure 6-33 Bicycle Parking Regulation under Brockton's Revised Ordinances

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.

Opportunity: Include short and long term bicycle parking standards in the zoning ordinance, including bicycle rack standards and provision of on-street or publicly available bicycle parking.

[20] Todd Litman, Victoria Transport Policy Institute.

Transportation Demand Management Measures

Transportation Demand Management (TDM) refers to a package of strategies to encourage residents and employees to drive alone less in favor of taking 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.

Brockton's Revised Ordinances do not address Transportation Demand Management.

Figure 6-34 Transportation Demand Management Measures under Brockton's Revised Ordinances

Existing Regulation	Best Practices
None.	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. 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. 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.

Opportunity: Have a menu of TDM appropriate options for Brockton for developer negotiations, or as part of reduced parking requirements.

Appendix A

Sample Ordinance Language with Availability Targets

Appendix A Sample Ordinance Language with Availability Targets

PROVIDENCE, RI

Sec. 15-14. - Parking meters—Multi-space parking meters and spaces.

(a) A multi-space meter is a device installed by the city for acceptance of required parking fees for more than one (1) parking space. A multi-space meter may regulate multiple parking spaces on-street (curbside or angled spaces) or off-street (parking lots or garages.) Use of a multi-space meter may require a motorist to display a receipt on the curbside window or curbside dashboard of their vehicle, or may require a motorist to enter a space number in conjunction with making a payment. Multi-space meters may accept a variety of payment options, which may include coins, credit cards or stored value cards, such as smart cards. At all times, payment in advance is required at any single meter or multi-space meter.

(b) Multi-space meter spaces are defined as any parking space, designated or not, where at least one (1) posted sign states requirement for payment at a multi-space meter. Multi-space meter spaces may not be adjacent to a multi-space meter, but shall be in close proximity to the parking space.

(c) Multi-space meters shall operate in one (1) of the following ways: for street parking, the motorist shall park their vehicle, proceed to the nearest meter, pay the required parking fee, then return to their vehicle to affix and display the paid receipt at the curbside window of the vehicle; for off street parking in garages and lots, the motorist shall park their vehicle, proceed to the nearest meter, enter their space number and then pay the required fee. Depending on the type of configuration, a receipt may or may not be issued.

(d) No operator of a vehicle, upon entering a multi-space meter regulated space, shall fail to immediately deposit the required fee for regulated parking, and return to display the receipt.

(e) When parking on a block regulated by multi-space meters and the nearest meter is out of order or cannot issue a receipt, payment shall be made at the next available multi-space meter on the block.

MINNEAPOLIS, MN

478.300. - Payment.

As used throughout this chapter, "payment" shall mean coin or currency of the United States, accepted debit card, credit card, or other officially authorized prepaid service.

78.360. - Duty to deposit payment; overtime parking; physically disabled persons.

(a) When a vehicle is parked in a metered area, the operator of said vehicle shall, upon entering a parking space, immediately deposit or cause to be deposited payment, and the said parking space may then be lawfully occupied by such vehicle during the period of parking time which has been prescribed for the part of the street in which said parking space is located. If a vehicle remains in any such parking space beyond the parking time limit, the vehicle shall be considered as parked overtime and such parking shall be a violation of this Code;

STAMFORD, CT

Sec. 231-5. Parking meters

A. It shall be lawful for the traffic authority of the City to install, use and operate mechanical devices known as "parking meters" within the corporate limits of the City in such places as may be designated as parking meter spaces or zones by the Board of Representatives. The hours of operation and enforcement of said parking meters shall be established by the Board of Representatives.

B. It shall be lawful for the traffic authority of the City, in the operation of such parking meters to designate regulations relating to the use and operation of the same; to post signs stating meter rates and hours or operation; to perform all other incidental duties in connection with the installation, use, operation and repair of the same; and with the prior approval of the Board of Representatives by resolution, to fix the time limits thereon and the amount of money to be deposited therein as established by the Board of Representatives. Violation of traffic authority regulations concerning parking meters shall constitute a Class I violation and shall subject the violator to fines and penalties as set forth in § 231-7A(1) of this Article.

LAWRENCE, MA

10.32.060 - Meter violation and time period for street parking restricted.

A. It shall be unlawful for any vehicle to be placed or remain parked in any metered parking space beyond the time period allowed by the deposit of legal tender or an approved device. The parking meter shall indicate expiration of time and, in that event, such vehicle shall be considered parked overtime and a citation may be issued. A subsequent citation may be issued for each violation of the time limits provided on the legend of the meter. It shall not constitute a defense to prosecution for violation of this section that, at the time the vehicle was parked, the meter registered unexpired time.

Legal parking time is that amount of time afforded by the deposit of legal tender or approved devices.

B. It shall be unlawful for any person to cause, allow, permit or suffer any vehicle to be parked overtime or beyond the period of legal parking time, and any vehicle in any parking zone or parking meter zone longer than the time limit fixed for such zone by sign or ordinance shall be considered to be illegally parked.

C. It shall be unlawful to relocate a vehicle from one parking space within the same parking zone or to relocate a vehicle temporarily from the same parking space unless the vehicle has left the parking zone or parking meter zone for an amount of time equal to or greater than the legal time limit for parking fixed for such zone.

D. It shall be unlawful to roll the tires of a vehicle to remove or obscure or attempt to remove or obscure the markings made by parking enforcement personnel prior to removing the vehicle from the parking zone or parking meter zone.

E It is unlawful for the driver or owner of any vehicle, except in case of an emergency, to park or permit such vehicle to remain unemployed on any street for a period of more than 36 hours. If any vehicle shall be parked on any street for a longer period of time, the police or authorized agent shall be authorized to remove such vehicle or cause its removal to a suitable place at the expense of the owner, to be held there until called for by the owner.

APPENDIX B

Sample Shared Parking Agreements

Appendix – Example Shared Parking Agreements

Model - Shared Use Agreement for Parking Facilities

This Shared Use Agreement for Parking Facilities, entered into this ____ day of _____, _____, between _____, hereinafter called lessor and _____, hereinafter called lessee. In consideration of the covenants herein, lessor agrees to share with lessee certain parking facilities, as is situated in the City of _____, County of _____ and State of _____, hereinafter called the facilities, described as: [Include legal description of location and spaces to be shared here, and as shown on attachment 1.]

The facilities shall be shared commencing with the ____ day of _____, _____, and ending at 11:59 PM on the ____ day of _____, _____, for [insert negotiated compensation figures, as appropriate]. [The lessee agrees to pay at [insert payment address] to lessor by the _____ day of each month [or other payment arrangements].] Lessor hereby represents that it holds legal title to the facilities

The parties agree:

1. USE OF FACILITIES
This section should describe the nature of the shared use (exclusive, joint sections, time(s) and day(s) of week of usage.
-SAMPLE CLAUSE-*[Lessee shall have exclusive use of the facilities. The use shall only be between the hours of 5:30 PM Friday through 5:30 AM Monday and between the hours of 5:30 PM and 5:30 AM Monday through Thursday.]*

2. MAINTENANCE
This section should describe responsibility for aspects of maintenance of the facilities. This could include cleaning, striping, seal coating, asphalt repair and more.
-SAMPLE CLAUSE-*[Lessor shall provide, as reasonably necessary asphalt repair work. Lessee and Lessor agree to share striping, seal coating and lot sweeping at a 50%/50% split based upon mutually accepted maintenance contracts with outside vendors. Lessor shall maintain lot and landscaping at or above the current condition, at no additional cost to the lessee.]*

3. UTILITIES and TAXES
This section should describe responsibility for utilities and taxes. This could include electrical, water, sewage, and more.
-SAMPLE CLAUSE-*[Lessor shall pay all taxes and utilities associated with the facilities, including maintenance of existing facility lighting as directed by standard safety practices.]*

4. SIGNAGE
This section should describe signage allowances and restrictions.
-SAMPLE CLAUSE-
[Lessee may provide signage, meeting with the written approval of lessor, designating usage allowances.]

5. ENFORCEMENT
This section should describe any facility usage enforcement methods.
-SAMPLE CLAUSE-*[Lessee may provide a surveillance officer(s) for parking safety and usage only for the period of its exclusive use. Lessee and lessor reserve the right to tow, at owners expense, vehicles improperly parked or abandoned. All towing shall be with the*
approval of the lessor.]

6. COOPERATION
This section should describe communication relationship.
-SAMPLE CLAUSE-*[Lessor and lessee agree to cooperate to the best of their abilities to mutually use the facilities without disrupting the other party. The parties agree to meet on occasion to work out any problems that may arise to the shared use.]*

7. INSURANCE
This section should describe insurance requirements for the facilities.
-SAMPLE CLAUSE-*[At their own expense, lessor and lessee agree to maintain liability insurance for the facilities as is standard for their own business usage.]*

8. INDEMNIFICATION
This section should describe indemnification as applicable and negotiated. This is a very technical section and legal counsel should be consulted for appropriate language to each and every agreement.
-NO SAMPLE CLAUSE PROVIDED-

9. TERMINATION
This section should describe how to or if this agreement can be terminated and post termination responsibilities.
-SAMPLE CLAUSE-*[If lessor transfers ownership, or if part of all of the facilities are condemned, or access to the facilities is changed or limited, lessee may, in its sole discretion terminate this agreement without further liability by giving Lessor not less than 60 days prior written notice. Upon termination of this agreement, Lessee agrees to remove all signage and repair damage due to excessive use or abuse. Lessor agrees to give lessee the right of first refusal on subsequent renewal of this agreement.]*

10. SUPPLEMENTAL COVENANTS
This section should contain any additional covenants, rights, responsibilities and/or agreements.
-NO SAMPLE CLAUSE PROVIDED-

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date Set forth at the outset hereof.

[Signature and notarization as appropriate to a legal document and as appropriate to recording process negotiated between parties.]

Please return to: Administrative Staff, Cary Planning Department, P.O. Box 2008, Cary, NC 27512-8005

STATE OF NORTH CAROLINA
COUNTY OF WAKE

SAMPLE
Shared Parking Agreement

This Shared Parking Agreement ('Agreement') entered into this _____ day of _____, 200__ by and between _____, whose address is _____, and Parcel Identification Number (PIN) is _____ ('Lessor') and _____, whose address is _____, and Parcel Identification Number (PIN) is _____ ('Lessee').

1. To relieve traffic congestion in the streets, to minimize any detrimental effects of off-street parking areas on adjacent properties, and to ensure the proper and uniform development of parking areas throughout the Town, the Town of Cary Land Development Ordinance ('LDO') establishes minimum number of off-street parking and loading spaces necessary for the various land uses in the Town of Cary; and
2. Lessee owns property at _____, Cary, N.C. ('Lessee Property') which property does not have the number of off-street parking spaces required under the LDO for the use to which Lessee Property is put; and
3. Lessor owns property at _____, Cary, N.C. ('Lessor Property') which is zoned with the same or more intensive zoning classification than Lessee Property and which is put to a use with different operating hours or different peak business periods than the use on Lessee Property; and
4. Lessee desires to use some of the off-street parking spaces on Lessor Property to satisfy Lessee Property off-street parking requirements, such shared parking being permitted by the Town of Cary LDO, Section 7.8.3; and
5. Town LDO requires that such shared use of parking spaces be done by written agreement.

NOW THEREFORE, in consideration of the premises and the information stated above, the parties agree as follows:

1. SHARED USE OF OFF STREET PARKING FACILITIES

Per Section 7.8.2, Town of Cary Land Development Ordinance (Off-Street Parking Space Requirements), Lessor is required _____ off-street parking spaces and has _____ existing off-street parking spaces, which results in an excess of _____ off-street parking spaces. Lessee is required _____ off-street parking spaces and has _____ existing off-street parking spaces.

Lessor hereby agrees to share with Lessee a maximum of _____ off-street parking spaces associated with Lessor's Property, which is described in more detail on Attachment 1, attached hereto and incorporated herein by reference ('Shared Spaces').

Lessee's interest in such parking spaces is non-exclusive. The Lessee's shared use of parking shall be subject to the following:

[describe the time, days etc of the use and the nature of the shared use, limits on time vehicles may be parked, etc.]

2. TERM

This Agreement shall be effective upon execution by both parties and shall be accepted by the Planning Director and shall not be amended and/or terminated without written consent of both parties and the Cary Planning Director, or his/her designee.

3. SIGNAGE

Directional signage in accordance with Chapter 9, Town of Cary Land Development Ordinance and the written approval of Lessor may be added to direct the public to the shared parking spaces.

4. COOPERATION

The parties agree to cooperate and work together in good faith to effectuate the purpose of this Agreement.

5. SUPPLEMENTAL COVENANTS

No private agreement shall be entered into that overrides this agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date Set forth at the outset hereof.

(Lessor)	(Date)
(Lessee)	(Date)
(Planning Director)	(Date)

_____**COUNTY, NORTH CAROLINA**

SWORN TO AND SUBSCRIBED before me this _____ day of _____, 20_____

(Official Seal)

_____
Signature of Notary Public

_____
My Commission Expires

_____**COUNTY, NORTH CAROLINA**

SWORN TO AND SUBSCRIBED before me this _____ day of _____, 20_____

(Official Seal)

_____
Signature of Notary Public

_____
My Commission Expires

THE CITY OF SAN DIEGO

RECORDING REQUESTED BY:
THE CITY OF SAN DIEGO
AND WHEN RECORDED MAIL TO:

_____

_____

_____

(THIS SPACE IS FOR RECORDER'S USE ONLY)

SHARED PARKING AGREEMENT

This SHARED PARKING AGREEMENT ("Agreement") is entered into and effective _____, 20_____, by and between _____, _____and the City of San Diego.

RECITALS

WHEREAS, pursuant to sections 142.0535 and 142.0545 of the Land Development Code, the City of San Diego specifies criteria which must be met in order to utilize off-site shared parking agreements to satisfy on-site parking requirements.

NOW, THEREFORE, in consideration of the recitals and mutual obligations of the parties as herein expressed, _____, _____ and the City of San Diego agree as follows:

1. _____ the owner of the property located at _____, agrees to provide _____ the owner of the property located at _____ with the right to the use of (____) parking spaces _____ from _____ as shown on Exhibit A to this Agreement on property located at _____.

   1.1 Applicant: _____ Co-Applicant: _____
   Assessor Parcel No: _____ Assessor Parcel No: _____
   Legal Description: _____ Legal Description: _____
   _____ _____

2. The parking spaces referred to in this Agreement have been determined to conform to current City of San Diego standards for parking spaces, and the parties agree to maintain the parking spaces to meet those standards.

3. The Parties understand and agree that if for any reason the off-site parking spaces are no longer available for use by _____, _____ will be in violation of the City of San Diego Land Development Code requirements. If the off-site parking spaces are no longer available, Applicant will be required to reduce or cease operation and use of the property at Applicant's address to an intensity approved by the City in order to bring the property into conformance with the Land Development Code requirements for required change for required parking. Applicant agrees to waive any right to contest enforcement of the City's Land Development Code in this manner should this circumstance arise.

   Although the Applicant may have recourse against the Party supplying off-site parking spaces for breach of this Agreement, in no circumstance shall the City be obligated by this agreement to remedy such breach. The Parties acknowledge that the sole recourse for the City if this Agreement is breached is against the Applicant in a manner as specified in this paragraph, and the City may invoke any remedy provided for in the Land Development Code to enforce such violation against the Applicant.

Continued on Page 2

4. The provisions and conditions of this Agreement shall run with the land for those properties referenced in paragraph 1 of this document and be enforceable against successors in interest and assigns of the signing parties.

5. Title to and the right to use the lots upon which the parking is to be provided will be subservient to the title to the property where the primary use it serves is situated.

6. The property or portion thereof on which the parking spaces are located will not be made subject to any other covenant or contract for use which interferes with the parking use, without prior written consent of the City.

7. This Agreement is in perpetuity and can only be terminated if replacement parking has been approved by the City's Director of the Development Services Department and written notice of termination of this agreement has been provided to the other party at least sixty (60) days prior to the termination date.

8. This Agreement shall be kept on file in the Development Services Department of the City of San Diego in Project Tracking System (PTS) Project Number: _____ and shall be recorded on the titles of those properties referenced in paragraph 1 of this document.

In Witness whereof, the undersigned have executed this Agreement.

_____
Applicant

Date: _____

_____
Party/Parties Supplying Spaces

Date: _____

_____
Deputy Director

Business and Process Management, Development Services

Date: _____

NOTE: ALL SIGNATURES MUST INCLUDE NOTARY ACKNOWLEDGMENTS PER CIVIL CODE SEC. 1180 ET.SEQ.

DRAFT

PARKING EASEMENT AND MAINTENANCE AGREEMENT

Preamble and Recitals

This Agreement is entered into on _____2014 by and between Church of the Ascension, hereafter referred to as "Church," and Congregation Beth David, a California Non-Profit Religious Corporation , hereafter referred to as "Synagogue." Together, Church and Synagogue may be identified as the "Parties" herein.

A. Whereas, Church is the owner of certain real property situated in the City of Saratoga, Santa Clara County, California (hereafter referred to as "Parcel 1"), commonly known as 12033 Miller Rd., Saratoga, CA 95070, APN: _____ and more particularly described in Exhibit A, which is attached to this Agreement and hereby incorporated by reference.

B. Whereas, Synagogue is the owner of certain real property situated in City of Saratoga, Santa Clara County, California County, California (hereafter referred to as the "Parcel 2"), commonly known as 19700 Prospect Rd., Saratoga, CA 95070, APN: 386-35-071 and 386-35-070 and more particularly described in Exhibit B, which is attached to this Agreement and hereby incorporated by reference.

C. Whereas, since the early 1970s, Church and Synagogue have shared parking and maintenance costs for those portions of Parcel 1 and Parcel 2 that are identified as a parking lot, as described by the parking diagram attached hereto as Exhibit C, and incorporated herein by reference. This Agreement is intended to memorialize the long-standing agreement in writing.

NOW, THEREFORE, in consideration of the mutual benefits bestowed by this Agreement, the Parties acknowledge that the above recitals are true and correct, and hereby agree to:

Grant of Easement

1. Church grants to Synagogue, and Synagogue grants to Church cross-easements, for parking on the terms and conditions set forth in this Agreement.

Description of Easement

2. The easement granted in this Agreement is an easement for parking on the cross-hatched areas identified in the Parking Lot Diagram attached hereto as Exhibit C.

A. Synagogue grants to Church the right to park on Synagogue's parking lots at any time where Church's parking needs exceed the available spaces on Church's own lots, (for example, but not limited to: Christmas and Easter);

B. Church grants Synagogue the right to park on Church's parking lots at any time where Synagogue's parking needs exceed the available spaces on Synagogue's own lots, (for example, but not limited to the Jewish High Holy Days).

C. Church grants to Synagogue an easement for shared used of the middle section of the parking lot indicated on the cross-hatched areas set forth in Exhibit C, attached and incorporated herein as if fully set forth.

Maintenance of Easement

3. The Parties may establish and assign maintenance, insurance and other obligations to each other that may be mutually acceptable without an amendment of this Agreement.

Indemnity

4. Synagogue will indemnify and defend Church for any claims filed by a visitor to Synagogue who utilizes Church's parking areas and files a claim against Church. Church will indemnify and defend Synagogue for any claims filed by a visitor to Church who utilizes Synagogues parking areas and files a claim against Synagogue.

Attorneys' Fees

5. If any legal action or proceeding arising out of or relating to this Agreement is brought by either party to this Agreement, the prevailing party shall be entitled to receive from the other party, in addition to any other relief that may be granted, the reasonable attorneys' fees, costs, and expenses incurred in the action or proceeding by the prevailing party.

Entire Agreement

6. This Agreement constitutes the entire agreement between Church and Synagogue relating to the above easement. Any prior agreements, promises, negotiations, or representations not expressly set forth in this Agreement are of no force and effect. Any amendment to this Agreement shall be of no force and effect unless it is in writing and signed by Church and Synagogue.

Binding Effect

7. This Agreement shall be binding on and shall inure to the benefit of the heirs, executors, administrators, successors, and assigns of Grantor and Grantee.

Executed on _____[date].

CHURCH OF THE ASCENSION

_____

By: _____, it's _____

CONGREGATION BETH DAVID

_____

By:_____, it's President

Notary Acknowledgment

Attachments:
Exhibit A, Legal Description for Church
Exhibit B, Legal Description for Synagogue
Exhibit C, Parking Diagram

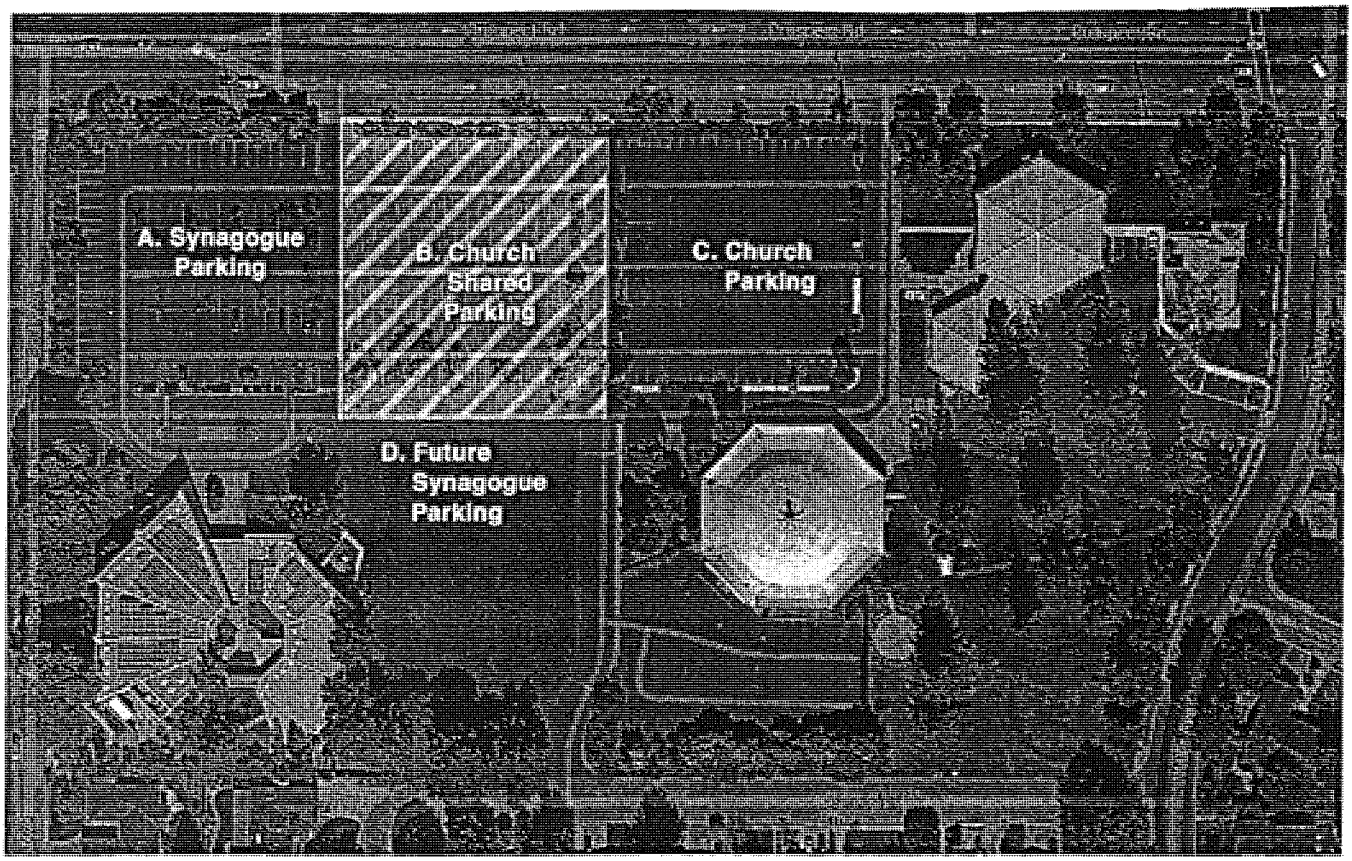
EXHIBIT A
Legal Description
Church of the Ascension

[to be supplied by the Church]

Exhibit B
Legal Description
Congregation Beth David

[to be supplied by Beth David]

Exhibit C
Parking Easement Diagram



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LICENSE AGREEMENT

This Agreement is executed as of _____, 2006 by and between **BOSTON EDISON COMPANY** a Massachusetts corporation and electric company having its principal place of business at 800 Boylston Street, Boston, Massachusetts 02199, hereinafter called the "Licensor", and the **TOWN OF LEXINGTON,** a Massachusetts municipal corporation, having a principal place of business at 1625 Massachusetts Avenue, Lexington, MA 02420, hereinafter called the "Licensee".

RECITALS:

WHEREAS, Licensor is the owner of a certain parcel of real property (the "Property") with an address of 4 Grant Street in the Town of Lexington, Middlesex County, Massachusetts, by virtue of deeds and other instruments recorded in the Middlesex South District Registry of Deeds, including but not limited to Book 3749, Page 370, Book 3773, Page 318, Book 5184, Page 296, and Book 5198, Page 21.

WHEREAS, the Licensee has requested permission from the Licensor to make use of a portion of the Property, said portion located outside the Licensor's electrical substation, hereinafter referred to as the "Licensed Area", which Licensed Area is shown on a plan entitled "Conceptual Parking Plan, 4 Grant Street, Lexington" attached hereto as Exhibit A, for the specific purpose of constructing, maintaining and operating a public, municipal parking lot.

WHEREAS, Licensor is willing to permit the use of the Licensed Area by the Licensee for such purposes, but only upon the terms and conditions hereinafter set forth; and

NOW THEREFORE, for and in consideration of such permission and the payments to Licensor described herein, Licensor and Licensee hereby agree as follows:

1. Licensee, its agents, contractors, employees, and invitees, including members of the public, may enter upon and use the Licensed Area for the purpose of constructing, maintaining, operating and utilizing a municipal parking lot. No other activity on the Licensed Area (specifically including, but without limitation, (a) maintenance, servicing or repair of motor vehicles, or (b) storage of vehicles, other equipment, machinery, or parts) is permitted hereby (with the exception of initial construction activity to prepare the Licensed Area for said permitted use, said construction activity shall proceed as set forth in Section 6). In its sole discretion, Licensor reserves the right under this Section to require Licensee to relocate or remove from the Licensed Area any item Licensor deems reasonably necessary to protect its electric facilities and operations. Upon verbal or written notice by Licensor to Licensee, Licensee shall relocate or remove any such items from the Licensed Area as soon as possible, but in all events within 24 hours.

2. Licensee, its agents, contractors, employees and invitees, shall have the right of ingress and egress over, across and upon the Licensed Area as necessary for the uses permitted hereby.

3. This License shall commence upon the issuance of all approvals and permits from the Town of Lexington or any other entity required by law for the

construction and operation of the Licensed Area for the specific and limited purposes stated herein, and shall continue for three (3) years from the earlier of (a) the date construction is completed and the lot is ready for use, as established by notice given by Licensee to Licensor, or (b) eighteen (18) months after the date of execution hereof (herein the "Construction Completion Date"). After the expiration of the Initial Term, absent a notice of termination pursuant to Section 5 below, the term shall automatically renew for successive periods of one (1) year each. The Licensee shall give the Licensor written notification of its receipt of all the necessary permits and approvals. In the event the Licensee is unable to obtain all necessary approvals and permits required by law within 12 months of the execution of this Agreement, this Agreement shall become null and void, unless the parties agree to extend this period, without any recourse for the Licensee at law or in equity.

4. Licensee agrees, beginning on the Construction Completion Date of this License, to pay Licensor an annual rental equal to Nine Thousand Six Hundred Dollars ($9,600.00) per year, payable to Licensee in monthly installments of Eight Hundred Dollars ($800.00). After year three, and every year thereafter, the annual fee of this License shall be increased by three (3%) percent over the previous year's rent until the termination or expiration date of this License.

5. After the expiration of the Initial Term, Licensor and Licensee shall each have the right to terminate this License at any time, for any or no stated reason, by written notice to the other party. The effective date of such termination shall be one (1) year from the date of the notice of termination, regardless of any then effective renewal term. Notwithstanding any other provision of this License, the parties intend that this Agreement constitute a terminable license, and no interest in real property is created hereby. The Licensor does not hereby dedicate the Property or the Licensed Area to public use.

6. Prior to any installation, preparation, or construction by Licensee of the Licensed Area to accommodate said municipal parking lot, Licensee shall submit plans to Licensor for approval detailing all work to be performed at the Licensed Area. Such approval shall not be unreasonably withheld or delayed. Once approved by Licensor, any such plans will be incorporated as Exhibit B to this Agreement. Licensee agrees to follow any guidelines reasonably set forth by the Licensor, and Licensee shall coordinate any initial construction work in the Licensed Area with the Licensor. Licensee further agrees to reimburse Licensor for all costs associated with any construction activities (including but not limited to Licensor's supervision of said construction activities).

7. It is agreed that Licensee shall not erect or permit any structures or improvements upon, and that Licensee shall make or permit no uses of the Licensed Area, other than those improvements and uses expressly permitted in this License.

8. During the term of this Agreement, Licensee shall maintain the Licensed Area in good order and condition in all respects, free from snow, ice, trash and debris or other nuisance. Prior to the effective date of the termination of this Agreement, Licensee shall remove its personal property and, if necessary, restore the Licensed Area to the same condition as it was in (other than changes made by the

Licensor) prior to Licensee's use. All vehicles will be removed prior to termination.

9. By granting this License, Licensor does not represent or warrant that the Licensed Area is appropriate, safe or suitable for the proposed use, or that it may be used for the purposes specified herein under applicable zoning, environmental or other laws or regulations, nor does Licensor undertake to make the Licensed Area appropriate, safe or suitable for such use, or to obtain any permits, licenses or approvals of any governmental authority which may be required to permit such use. Licensee shall obtain any and all necessary governmental permits, licenses and approvals at its sole cost and expense prior to the commencement of any use of the Licensed Area and Licensor shall cooperate in any efforts by Licensee to obtain any such permits so long as there is no cost or expense for Licensor that is not paid by Licensee. Licensee shall notify Licensor of its intentions to obtain said permits, licenses and approvals and shall provide copies of the same once received.

10. In exercising its rights under this License, Licensee shall at all times and in all respects comply with all applicable laws, ordinances, rules and regulations of all governmental authorities having jurisdiction and shall comply with all licenses and permits or other approvals issued to it by a governmental authority.

11. Licensee hereby represents and warrants, and it is hereby made a condition of this License, that the use of the Licensed Area by Licensee shall not result in the release of any oil or hazardous materials (other than non-reportable quantities associated with typical leaks from automobiles and construction equipment in the ordinary course of operation), as those terms are defined in the Massachusetts Contingency Plan, 310 CMR 40.000, et seq. In the event of any breach of the foregoing warranty and condition by Licensee, Licensor shall, in addition to the right to terminate this License and seek damages, have the benefit of the indemnity provision set forth in Section 12, and injunctive relief.

12. Licensee acknowledges that the Licensed Area is situated in close proximity to an operating electrical substation, which carries inherent risks associated with high voltage operations. Accordingly, to the greatest extent permitted by law, the Licensee, for itself and its agents, contractors, employees, and invitees, hereby releases and shall indemnify, defend and save harmless the Licensor, its officers, agents and employees from and against all demands, claims, actions, damages, costs, expenses, losses or liability whatsoever in any manner resulting from or arising out of the actions of any person with respect to the Licensed Area or the use thereof, or in any manner resulting from or arising out of the use of the Licensed Area by any person, including, without limitation, any failure of any person to comply with any applicable laws or regulations, except to the extent that such liability results from the gross negligence or willful misconduct of the Licensor, its employees, agents or contractors. This provision shall survive the termination of this License.

13. Licensee shall procure and maintain at its expense, at all times during the term of this License Agreement, public liability insurance, including personal injury and property damage, in amounts of $4,000,000 combined single limit, against all claims and demands of any injury to person or property which may occur or

be claimed to have occurred on the property of the Licensor as the result of the use of the Licensed Area by any person. Licensor shall be designated as an additional insured party in such policy. Licensee shall also maintain workers compensation insurance in statutory amounts as required by Massachusetts law. The Licensee shall, before entry upon the Licensed Area for the purposes herein set forth, furnish the Licensor (to the address listed in Section 15) with a valid certificate of such insurances reasonably satisfactory to it. Such policies shall specify that they are not cancelable except upon twenty (20) days' prior written notice to the Licensor.

14. Licensee agrees that in the event a public health, safety or security emergency should arise as determined at the sole discretion of the Licensor, the Licensor, its officers, agents and employees, shall have the right to enter upon the Licensed Area, and undertake whatever action may be necessary, in the Licensor's discretion, to alleviate the emergency, including but not limited to requiring the temporary suspension of Licensee's use and occupancy of the Licensed Area. If in connection therewith Licensor requires the removal of any vehicles, Licensor shall notify Licensee thereof and effect such removal in a safe and reasonable manner. In the event the vehicles need to be removed at any time the Licensor shall contact the Town DPW Department at 1-781-862-0500 to effectuate said removal.

15. Notices, statements and other communications to be given under the terms of this License shall be in writing and delivered by hand against receipt, or sent by first class mail and addressed as follows:

If to Licensor:

Boston Edison Company
Real Estate Department
One NSTAR Way, SE-210
Westwood, MA 02090
Attn: Real Estate Manager
Fax: (781) 441-8909

If to the Licensee:

Town of Lexington
Lexington Town Hall
1625 Massachusetts Avenue
Lexington, MA 02420
Attn: Town Manager
Fax: (781) 861-2921

16. This License is personal to the Licensee, and Licensee shall have no right to assign or transfer its rights and obligations hereunder, in whole or in part to any other person. This provision does not preclude use of the Licensed Area as contemplated hereby.

17. This License contains all the agreements of the parties with respect to the subject matter thereof and supersedes all prior agreements and dealings between them with respect to such subject matter.

18. Licensee acknowledges and agrees that the Licensor shall at all times have convenient and unimpeded access to its electrical substation or any other structures and equipment, which are now or may hereinafter be installed by Licensor within the Licensed Area.

19. Licensee acknowledges that the Licensor will not be providing, and is under no obligation to provide, any security or lighting for the Licensed Area.

20. In the event that the Licensor's Property or a material portion of the Property of which the Licensed Area are a part, shall be taken by any public authority or for any public use, or shall be destroyed or damaged by fire or casualty, or by action of any public authority, then this License shall terminate with respect to the taken, damaged or destroyed area, effective on the date when title vests in the condemning authority, or when the casualty occurs.

21 Irrespective of the form in which recovery may be had by law, all rights to damages or compensation for a taking or casualty for the Licensed Area shall belong to Licensor in all cases. Licensee hereby grants to Licensor all of Licensee's rights to such damages and covenants to deliver such further assignments or endorsements as Licensor may from time to time request.

22. In connection with Licensee's use and maintenance of the Licensed Area, the Licensee shall not endanger or damage the existing buried transmission lines, cad weld connections, grounding grid system or any other structures and equipment in the Licensed Area which are now or may hereafter be installed within the Licensed Area, all being the property of the Licensor. In the event that such damage should nevertheless occur resulting from an act, omission or negligence of Licensee, its agents, contractors and employees, the Licensee shall forthwith notify the Licensor, by calling the Licensor's System Dispatcher at the Licensor's Boston Service Center (telephone number 617-541-7833), so that immediate repairs may be made, and shall also promptly reimburse the Licensor upon request for all reasonable costs or expenses incurred by it in repairing or replacing any such damage to said structures and equipment or to any other property of the Licensor.

23. ADDITIONAL PROVISIONS:

a. Licensee shall post a sign on the Property restricting access to Licensor's existing parking area behind the electrical substation building. The sign shall read "No vehicles beyond this point, NSTAR vehicles only".

b. The Licensee shall perform snow plowing, ice and litter removal for the entire portion of the Property that is outside the substation fence and that includes the Licensed Area, including snow removal on the public sidewalks outside the substation and substation fencing.

c. Licensee agrees to deal with any and all comments, questions or complaints from any abutters and or the general public with regards to the Licensed Area and its permitted use as set forth herein.

IN WITNESS WHEREOF, the parties have executed this License Agreement as a sealed instrument by and through their respective duly authorized representatives, as of the day and year first above written.

LICENSOR:

BOSTON EDISON COMPANY

By: _____
Donald Anastasia
Assistant Treasurer

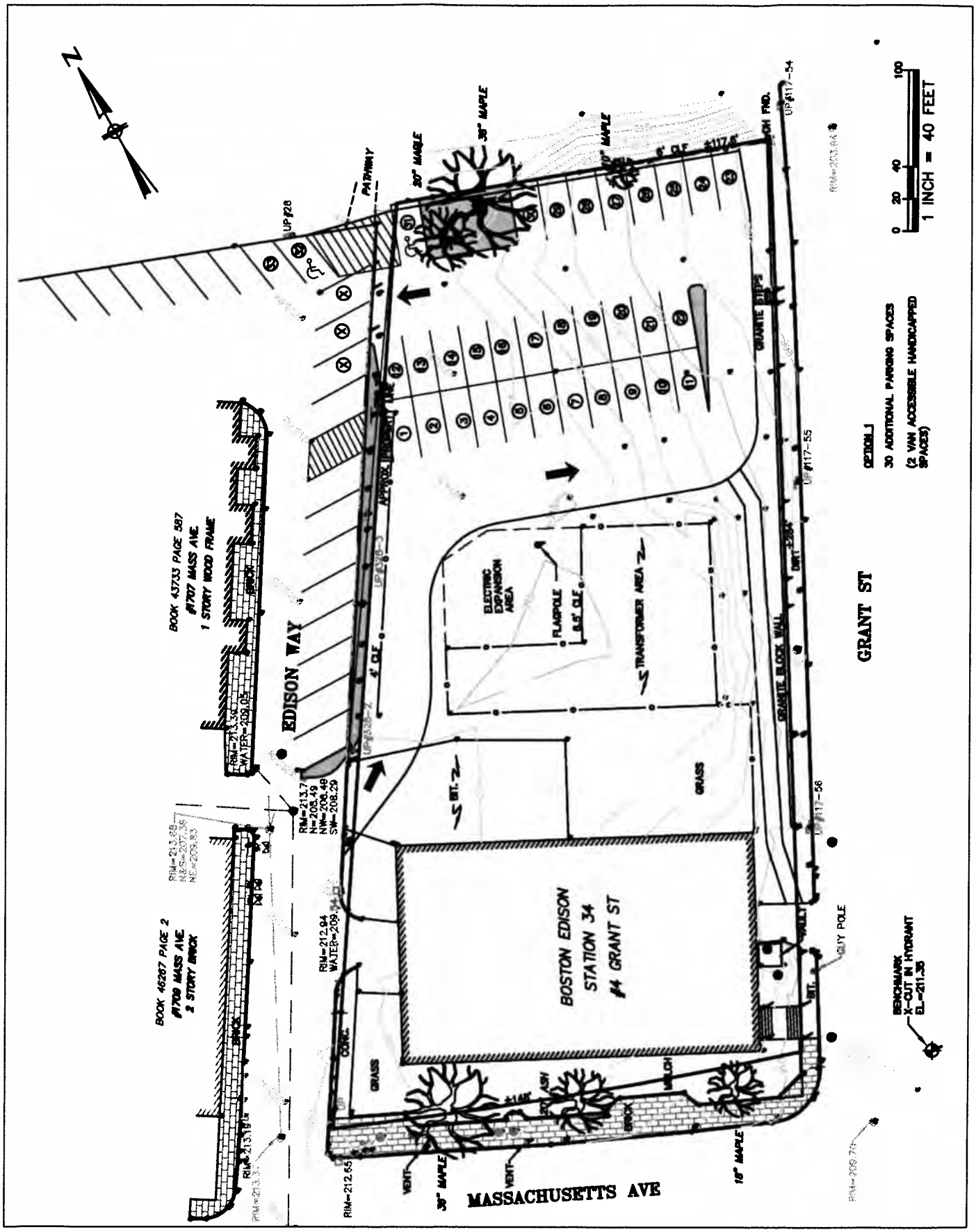
LICENSEE:

TOWN OF LEXINGTON

By:_____
Name: Carl F. Valente
Title: Town Manager

Exhibit A

Conceptual Parking Plan
4 Grant Street, Lexington



RECIPROCAL ACCESS AND PARKING AGREEMENT
BETWEEN
SAINT PETER LUTHERAN CHURCH AND THE VILLAGE CHILD DEVELOPMENT CENTER

This AGREEMENT is made and entered into as of this 4th day of June, 2009 by and between Saint Peter Lutheran Church a Colorado non-profit corporation ("STPLC"), and Belleview and Boston LLC a/k/a The Village Child Development Center, a Colorado Limited Liability Company, ("VCDC").

1-17

A. STPLC owns the tract of land situated in the City of Greenwood Village, County of Arapahoe, State of Colorado more particularly described on Exhibit A, attached hereto and made a part hereof as Exhibit A, (herein referred to as Tract 6).

B. VCDC owns the tract of land situated in the City of Greenwood Village, County of Arapahoe, State of Colorado more particularly described on Exhibit B, attached hereto and made a part hereof as Exhibit B, (herein referred to as "Lot 1")

C. VCDC operates a child care center on Lot 1 and in connection with those operations it uses existing curb cut access between Lot 1 and Belleview Avenue that are located near the western portion of Lot 1 and near the eastern portion of Tract 6.

D. STPLC operates a church on Tract 6 and in connection with those operations it uses existing curb cut access between Tract 6 and Belleview Avenue that are located near the western portion of Lot 1 and near the eastern portion of Tract 6.

E. STPLC wants to create a non-exclusive easement on, over, across and through the paved portions of Tract 6 so VCDC, as the owner of Lot 1, its successors and assigns and their respective, tenants, agents, servants, employees, officers, directors, members, invitees, vendors and those others coming to Lot 1 to benefit its owner or to be benefited by its owner (collectively "VCDC's Licensees"), can use the same for vehicular traffic;

F. STPLC wants to create a non-exclusive easement so VCDC, as the owner of Lot 1, its successors and assigns and VCDC's Licensees can use the sidewalks on Tract 6 for pedestrian traffic.

G. STPLC also wants to create a non-exclusive easement so VCDC, as the owner of Lot 1, its successors and assigns and VCDC's licensees can use the parking spaces on Tract 6 for parking.

H. VCDC wants to create a non-exclusive easement on, over, across and through the paved portions of Lot 1 so STPLC as the owner of Tract 6, its successors and assigns and their respective tenants, agents, servants, employees, officers, directors, members, invitees, vendors and those others coming to Tract 6 to benefit its owner or to be benefitted by its owner, (collectively "STPLC's Licensees") can use the same for vehicular traffic.

I. VCDC wants to create a non-exclusive easement so STPLC as the owner of Tract 6, its successors and assigns and STPLC's Licensees can use the sidewalks on Lot 1 for pedestrian traffic.

ARAPAHOE COUNTY, COLORADO
I HEREBY CERTIFY THAT THIS IS A FULL, TRUE, AND CORRECT COPY OF THE RECORDED DOCUMENT IN MY CUSTODY. DATE JUN 16 2009
NANCY A. DUTY, ARAPAHOE COUNTY CLERK & RECORDER
SEAL

Lee Dehmlow
4754 South Willow St
Denver, CO 80237

Arapahoe County Clerk & Recorder, Nancy A. Duty
Reception #: B9063985
Recording Fee: $86.00
Receipt #: 5481345
Pages Recorded: 17
Date Recorded: 6/16/2009 8:41:05 AM

J. VCDC also wants to create a non-exclusive easement so STPLC as the owner of Tract 6, its successors and assigns and STPLC's Licensees can use the parking spaces on Lot 1 for parking.

K. STPLC and VCDC each want to create a shared access easement to Lot 1 and Tract 6 on, over, across and through the property depicted on Exhibit C, attached hereto and made a part hereof, so that STPLC as the owner of Tract 6, its successors and assigns and STPLC's and VCDC, as the owner of Lot 1, it successors and assigns and VCDC's Licensees and STPLC's Licensees can have ingress and egress from Belleview Avenue to Tract 6, from Belleview Avenue to Lot 1, from Tract 6 to Lot 1 and from Lot 1 to Tract 6.

Now, therefore, in consideration of the Recitals and the mutual covenants and conditions set forth herein STPLC and VCDC agree as follows:

1. Pedestrian Traffic and Vehicular Traffic Easements.
   a. Pedestrian Traffic and Vehicular Traffic Easements Granted by STPLC. STPLC hereby grants a non-exclusive easement appurtenant to Lot 1 so VCDC, it successors and assigns and VCDC's Licensees can use the sidewalks on Tract 6 for pedestrian traffic. STPLC also here grants a non-exclusive easement appurtenant to Lot 1 so VCDC, it successors and assigns and VCDC's Licensees can use the paved portions of Tract 6 and the curb cuts to Tract 6 for vehicular traffic, including, but not limited to vehicular traffic on, over and across Tract 6 to Lot 1 and from Lot 1 to Tract 6 and on, over and across Tract 6; without limiting the generality of the foregoing, but as an example, STPLC grants a non-exclusive shared access easement appurtenant to Lot 1 so VCDC, it successors and assigns and VCDC's Licensees can use the paved portions of Tract 6 shown on Exhibit C for access between Lot 1 and Belleview Avenue and between Tract 6 and Lot 1.

   b. Pedestrian Traffic and Vehicular Traffic Easements Granted by VCDC. VCDC hereby grants a non-exclusive easement appurtenant to Tract 6 so STPLC, it successors and assigns and STPLC's Licensees can use the sidewalks on Lot 1 for pedestrian traffic. VCDC also here grants a non-exclusive easement appurtenant to Tract 6 so STPLC, it successors and assigns and STPLC's Licensees can use the paved portions of Lot 1 and the curb cuts to Lot 1 for vehicular traffic, including, but not limited to vehicular traffic on, over and across Lot 1 to Tract 6 and from Tract 6 to Lot 1 and on, over and across Lot 1; without limiting the generality of the foregoing, but as an example, VCDC grants a non-exclusive shared access easement appurtenant to Lot 1 so STPLC, its successors and assigns and STPLC's Licensees can use the paved portions of Lot 1 shown on Exhibit C for access between Tract 6 and Belleview Avenue and between Lot 1 and Tract 6.

2. Parking Easements.

a. Parking Easement Granted by STPLC. Subject to the terms of Paragraph 2.c., STPLC grants a nonexclusive easement appurtenant to Lot 1 so VCDC, its successors and assigns and VCDC's Licensees can use the parking areas shown on Exhibit D, attached hereto and made a part hereof, for parking. The non-exclusive easement appurtenant granted in this Paragraph 2.a. shall also allow pedestrian traffic on, over and across the paved portions of Tract 6 necessary to allow those using the parking areas shown on Exhibit D to walk from those parking areas to Lot 1.

b. Parking Easement Granted by VCDC. Subject to the terms of Paragraph 2.d. VCDC grants a nonexclusive easement appurtenant to Tract 6 to STPLC, its successors and assigns and STPLC's Licensees can use the parking areas shown on Exhibit E, attached hereto and made a part hereof, for parking. The non-exclusive easement appurtenant granted in this Paragraph 2.b. shall also allow pedestrian traffic on, over and across the paved portions of Lot 1 to allow those using the parking areas shown on Exhibit E to walk from those parking areas to Tract 6.

c. Limitations on Parking Easement Granted by STPLC. The nonexclusive easement appurtenant granted to Lot 1 so VCDC, its successors and assigns and VCDC's Licensees can use the parking areas on Tract 6 shown on Exhibit D shall be limited to using Tract 6 on those days and at those times that the parking areas on Lot 1 are unavailable or they are full and the parking areas on Tract 6 are "available." If and when these conditions exist, VCDC, as the owner of Lot 1, its successor and assigns and VCDC's Licensees have the right to use the parking areas on Tract 6 as shown on Exhibit D. The parking areas on Tract 6 are not "available" at the following times: (i) Every Sunday, from 7AM until 1 PM; each December 24th, from 4 PM until Midnight; each December 25th from 7AM until 1 PM.

Attached hereto and made a part hereof as Exhibit F is a schedule of all the dates and times that the parking areas on Tract 6 are not available for 2009 due to services or events. This schedule is to be updated annually.

d. Limitations on Parking Easement Granted by VCDC. The nonexclusive easement appurtenant granted to Tract 6 so STPLC, its successors and assigns and STPLC's Licensees can use the parking areas on Lot 1 shown on Exhibit D shall be limited to using Lot 1 on those days and at those times that the parking areas on Tract 6 are unavailable or they are full and the parking areas on Lot 1 are "available." If and when these conditions exist, STPLC, as the owner of Tract 6, its successor and assigns and the STPLC's Licensees have the right to use the parking areas on Lot 1 as shown on Exhibit D. The parking areas on Lot 1 are not "available" Monday through Friday from 6:00AM until 6:00PM; provided that the parking areas on Lot 1 are "available" at all times any Christmas Day, New Year's Day, Memorial Day, 4th of July, Labor Day or Thanksgiving that falls on a Monday through Friday or is observed on a

Monday through Friday, or both, and VCDC is not open for business as a day care center on that holiday.

The parking areas on Lot 1 shall not be available on the days when VCDC schedules an event relating to the operation of the day care center on Lot 1, (a "scheduled event"), and the scheduled event either runs past 6:00PM on a Monday through Friday or the scheduled event starts after 6:00PM on a Monday through Friday. Attached hereto and made a part hereof as Exhibit G is a schedule of all the dates and times that the parking areas on Lot 1 are not available for 2009 due to scheduled events. This schedule is to be updated annually.

3. Easement Conditions. The easements appurtenant granted in Paragraphs 1 and 2 are subject to the following terms and conditions:
   a. Clean Condition of Lot 1. Those using Lot 1 as a result of this grant in this Agreement of the easements appurtenant to Tract 6 shall not leave any trash or litter on Lot 1.

   b. Clean Condition of Tract 6. Those using Tract 6 as a result of the grant in this Agreement of easements appurtenant to Lot 1 shall not leave any trash or litter on Tract 6.

   c. No Cost or Fee for Use of Lot 1 Consistent with Easements Granted to Tract 6. The use of the easements appurtenant granted to Tract 6 in this Agreement shall be without cost and without payment of any fee or charge to STPLC, its successors and assigns and STPLC's Licensees.

   d. No Cost or Fee for Use of Tract 6 Consistent with Easements Granted to Lot 1. The use of the easements appurtenant granted to Lot 1 in this Agreement shall be without cost and without payment of any fee or charge to VCDC, its successors and assigns and VCDC Licensees.

   e. Traffic Control on Tract 6 and on Lot 1. If allowed by the Governmental authorities having jurisdiction over Tract 6 and Lot 1, the owner of either may control the flow of traffic on, over and across its property by the use of one way restrictions and speed restrictions; provided, however, that the owner of Tract 6 and the owner of Lot 1 may not do anything to change the fact that there is and will be two way traffic over the paved portions of Tract 6 and Lot 1 shown on Exhibit C so that each of them, their successor and assigns and their respective licensees may: (i) access Tract 6 and Lot 1 from Belleview Avenue over the property shown on Exhibit C; and (ii) access Belleview Avenue from Tract 6 and from Lot 1 over the property shown on Exhibit C.

4. Unimpeded Access & Temporary Interference with Easements Appurtenant Granted. Except as the result of temporary construction on either Lot 1 or Tract 6 or to allow STPLC to physically make Tract 6 unavailable to VCDC, its successors and assigns and VCDC's Licensees on Sundays, no barricade or other divider will be constructed between Tract 6 and Lot 1 to prohibit or discourage the use of the easements appurtenant granted in the Agreement.

5. Dominant and Subservient Estates Created by Easements Appurtenant. Each easement appurtenant granted in this Agreement creates a dominant estate and a subservient estate; the dominant estate is the property owned by the party to this Agreement that grants the easement appurtenant. Each easement appurtenant granted in this Agreement shall also be a covenant running with the land that is made by the party to this Agreement that grants such easement in favor of the party to this Agreement who owns the land benefited by such easements and such owner's its successors and assigns, including, but not limited to its lessees, its grantees and every other person or entity having a recorded interest from time to time in Tract 6 or in Lot 1, as applicable.

6. Construction and Maintenance. Subject to the provisions of Paragraph 3.d. the owners of Tract 6 and Lot 1 each agree to improve and maintain the sidewalks, the paved areas and the parking areas on their respective properties shown on Exhibits D and E in good condition and repair, including, but not limited to, lighting according to applicable codes of governmental agencies having jurisdictions over those properties.

7. Indemnification. The owner of Tract 6 shall comply with all applicable laws, rules, regulations and requirements of all public authorities as to Tract 6 and shall indemnify, defend and hold VCDC, its successors and assigns and VCDC's Licensees harmless from and against all claims, demands, losses, damages, liabilities, expenses and all suits, actions and judgments, including, but not limited to, costs and reasonable attorneys' fees, arising out of or resulting from: (i) its failure to comply with all applicable laws, rules, regulations and requirements of public authorities as to Tract 6; (ii) the failure of such owner to maintain Tract 6 in a safe and proper condition; (iii) occurring as a result of the negligence of STPLC, the negligence of STPLC's successors and assigns or the negligence of STPLC's Licensees; and (iv) its breach of any of the terms of this Agreement.

   The owner of Lot 1 shall comply with all applicable laws, rules, regulations and requirements of all public authorities as to Lot 1 and shall indemnify, defend and hold STPLC, its successors and assigns and STPLC's Licensees harmless from and against all claims, demands, losses, damages, liabilities, expenses and all suits, actions and judgments, including, but not limited to, costs and reasonable attorneys' fees, arising out of or resulting from: (i) its failure to comply with all applicable laws, rules, regulations and requirements of public authorities as to Lot 1; (ii) the failure of such owner to maintain Lot 1 in a safe and proper condition; (iii) occurring as a result of the negligence of VCDC the negligence of VCDC's successors and assigns or the negligence of VCDC's Licensees; and (iv) its breach of any of the terms of this Agreement.

   The owner of Tract 6 and the owner of Lot 1 each agrees to maintain customary commercially reasonable levels of property and liability insurance, which in no event shall be less than $1,000,000 per incident/$2,000,000 cumulatively, covering Tract 6 or Lot 1, as applicable, and to give each other promptly and timely notice of any claim made or suit or action commenced which in any way could result in indemnification hereunder. At all times the owner of Tract 6 and the owner of Lot 1 will obtain and maintain a Joint Waiver of Subrogation with

respect to each insurance policy and it is required to carry under this Agreement and with respect to each claim made under each such insurance policy. However, such Joint Waiver of Subrogation will not compromise, waive or in any other way affect the right of the owner of Tract 6 from pursuing any claim it may have against any of STPLC's Licensees nor will such Joint Waiver of Subrogation compromise, waive or in any other way affect the right of the owner of Lot 1 from pursuing any claim it may have against any of VCDC's Licensees.

8. Duration. This Agreement shall remain in full force and shall be binding on the parties hereto and their respective successors and assigns.

Additionally, if the owner of Tract 6 sells Tract 6 in a bona fide arm's length transaction to an unaffiliated purchaser, (hereinafter referred to as an "arm's length transaction"), at any time after the arm's length transaction to the successor to the owner of Tract 6 unilaterally may terminate the parking easements granted in the Agreement. Specifically, (i) the easement allowing the owner of Lot 1, its successors and assigns and VCDC's Licensees to go on, over and across Tract 6 and to park on it, (the "parking easement"). The unilateral termination by a successor to the owner of Tract 6 who acquires it in an arm's length transaction shall be accomplished by such successor giving written notice for the termination to the owner of Lot 1 and the City of Greenwood Village, and by recording such notice in the real estate records of Arapahoe County, Colorado. The written notice terminating the parking easement must be given at least ninety (90) days before it becomes effective and the successor to the owner of Tract 6 must specify in its notice to the owner of Lot 1 the effective date of the termination.

Additionally, if the owner of Lot 1 sells Lot 1 in a bona fide arm's length transaction to an unaffiliated purchaser, (hereinafter referred to as an "arm's length transaction"), at any time after the arm's length transaction to the successor to the owner of Lot 1 unilaterally may terminate the parking easements granted in the Agreement. Specifically, (i) the easement allowing the owner of Tract 6, its successors and assigns and STPLC's Licensees to go on, over and across Lot 1 and to park on it, (the "parking easement"). The unilateral termination by a successor to the owner of Lot 1 who acquires it in an arm's length transaction shall be accomplished by such successor giving written notice for the termination to the owner of Tract 6 and the City of Greenwood Village, and by recording such notice in the real estate records of Arapahoe County, Colorado. The written notice terminating the parking easement must be given at least ninety (90) days before it becomes effective and the successor to the owner of Lot 1 must specify in its notice to the owner of Tract 6 the effective date of the termination.

Notwithstanding anything to the contrary contained in this Paragraph 8, the only way in which the shared parking easement shown on Exhibit C can be terminated is by the recording of a document in the real estate records for Arapahoe County, Colorado that is executed by holders of all recorded interests in Tract 6 and Lot 1 as of the date such document is recorded.

This Agreement shall remain in full force and shall be binding on the parties hereto and their respective successors and assigns until terminated. If less than all easements granted in the Agreement are terminated, all other terms and provisions of the Agreement shall remain in full force and effect.

9. The Easements and Covenants in This Agreement are Not a Public Dedication. This Agreement shall be deemed to benefit Tract 6 and Lot 1 and the respective owners of those properties, their respective successors and assigns, STPLC's Licensees and VCDC's Licensees. Nothing in this Agreement shall be deemed to constitute a gift or dedication of Tract 6 or Lot 1 or any portion of either of them to the general public or for the benefit of the general public or for any public purpose whatsoever.

10. Recording. A full original of this Agreement shall be recorded in the Office of the Clerk and Recorder for Arapahoe County, Colorado.

11. Successors and Assigns. The rights and obligations contained herein shall run with the title to Tract 6 and Lot 1, respectively, and shall bind and inure to the benefit of the respective owners of Tract 6 and Lot 1 and their respective successors and assigns.

12. Severability. In the event that any of the terms or conditions of this Agreement shall be deemed invalid, illegal or unenforceable in any respect, the validity of the remainder of this Agreement shall in no way be affected and shall remain in the full force and effect to the fullest extent permitted by law.

13. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original and together all such counterparts shall be deemed one and the same instrument.

14. Notice. All notices and other communications either party to this Agreement, or any successor or assign of either of them wants to give shall be in writing, shall be mailed by certified or registered mail, postage prepaid, hand delivered, or sent by a nationally recognized courier for overnight delivery, shall be deemed given and received on the date of hand delivery, or the day after the same is given to a nationally recognized courier for overnight delivery, or three days after the same is mailed by certified or registered mail. Each such notice or communication shall be addressed as specified below, subject to the right of each party to this Agreement to change the address to which notices or communication are given by sending a notice to that effect to the other party.

To: Saint Peter Lutheran Church:
Pastor David Risendal
Saint Peter Lutheran Church
9300 E. Belleview Avenue
Greenwood Village, CO 80111

To: The Village Child Development Center:
Brett Bennett
Boston & Belleview, LLC

15. Governing Law. This Agreement shall be governed by and interpreted under the laws of the State of Colorado.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

SAINT PETER LUTHERAN CHURCH
a/k/a STPLC

By: _____
Andrew Nakatani, Congregational President

STATE OF COLORADO)
) ss.
COUNTY OF ARAPAHOE)

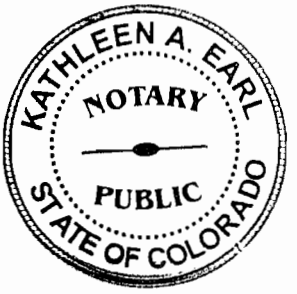
The foregoing instrument was acknowledged by Andrew Nakatani, Congregational President of Saint Peter Lutheran Church, this 9th Day of June, 2009.

WITNESS my hand and official seal.

(SEAL)

_____
NOTARY PUBLIC

My Commission Expires:
5/29/2010



RECIPROCAL ACCESS AND PARKING AGREEMENT
BETWEEN
SAINT PETER LUTHERAN CHURCH AND THE VILLAGE CHILD DEVELOPMENT CENTER

BELLEVIEW & BOSTON LLC.
a/k/a The Village Child Development Center (VCDC)

By: _____
Brett Bennett, Manager

STATE OF COLORADO)
) ss.
COUNTY OF ARAPAHOE)

The foregoing instrument was acknowledged by Brett Bennett as the Manager of Belleview & Boston, LLC, this 9th Day of June, 2009.

WITNESS my hand and official seal.

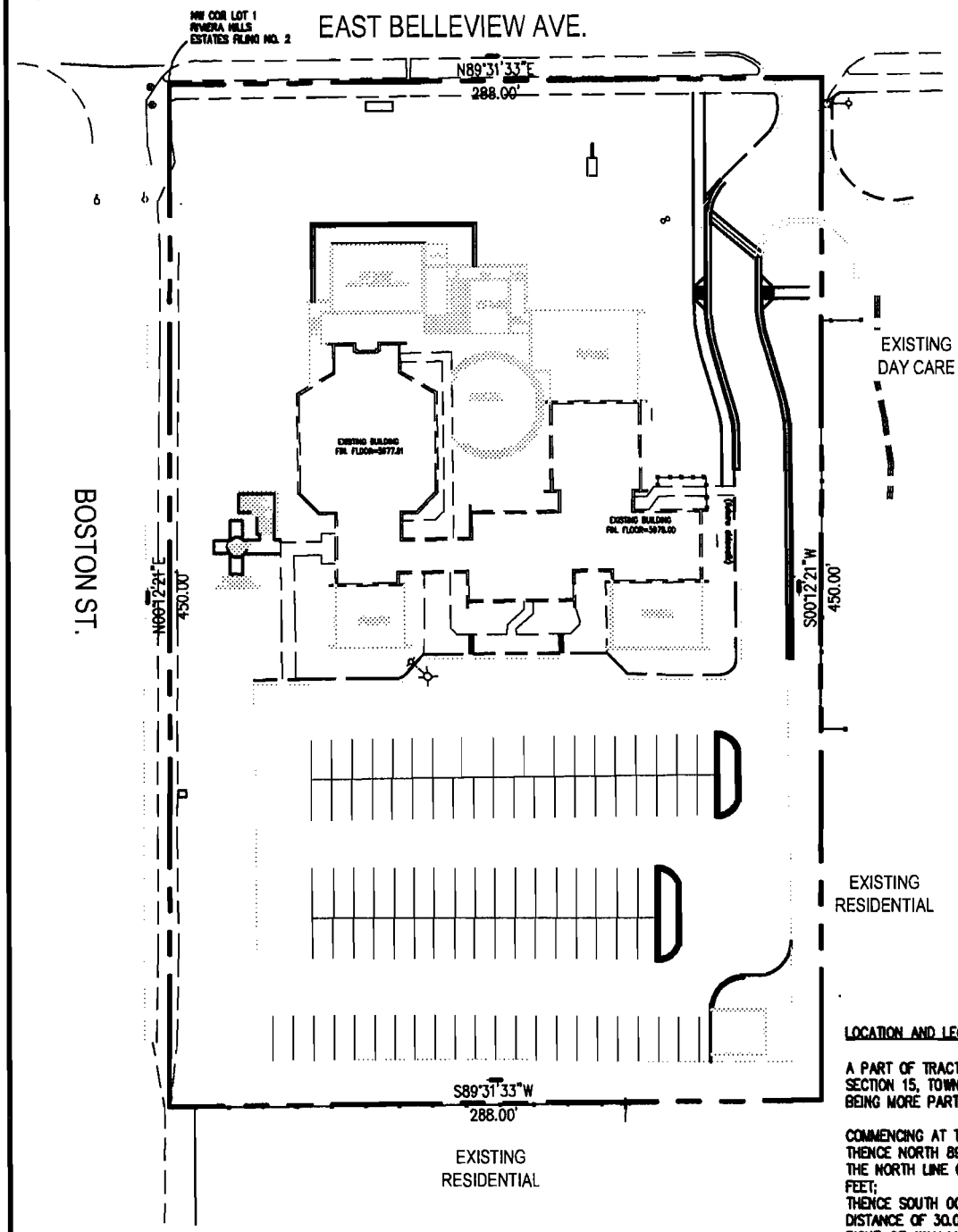
JAMIE MAGNUSON NOTARY (SEAL) PUBLIC STATE OF COLORADO

_____
NOTARY PUBLIC

My Commission Expires: 2-22-2010

Exhibits:

A—Drawing of Saint Peter Lutheran Church Property ("Tract 6")
B—Drawing of VCDC property ("Lot 1")
C—Shared Access Easement
D—Saint Peter Lutheran Church designated parking areas
E— VCDC designated parking areas
F—Listing of dates in 2009 when parking is not available on Tract 6.
G—Listing of dates in 2009 when parking is not available on Lot 1.



LOCATION AND LEGAL DESCRIPTION:

A PART OF TRACT 6, CLARK COLONY, LOCATED IN THE NW ¼ OF SECTION 15, TOWNSHIP 5 SOUTH, RANGE 67 WEST OF THE 6TH P.M., BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 15;
THENCE NORTH 89 DEGREES 31 MINUTES 33 SECONDS EAST ALONG THE NORTH LINE OF SAID SECTION 15, A DISTANCE OFF 1327.62 FEET;
THENCE SOUTH 00 DEGREES 28 MINUTES 27 SECONDS EAST. A DISTANCE OF 30.00 FEET TO A POINT QIN THE SOUTH RIGHT-OF-WAY LINE OF EAST BELLEVIEW AVENUE, SAID POINT ALSO BEING THE TRUE POINT OF BEGINNING;
THENCE NORTH 89 DEGREES 31 MINUTES 33 SECONDS EAST ALONG SAID SOUTH RIGHT-OF-WAY LINE, A DISTANCE OF 288.00 FEET;
THENCE DEPARTING SAID SOUTHERLY RIGHT-OF-WAY LINE SOUTH 00 DEGREES 12 MINUTES 21 SECONDS WEST A DISTANCE OF 450.00 FEET;
THENCE SOUTH 89 DEGREES 31 MINUTES 33 SECONDS WEST A DISTANCE OF 288.00 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF SOUTH BOSTON STREET;
THENCE NORTH 00 DEGREES 12 MINUTES 21 SECONDS EAST ALONG SAID WESTERLY RIGHT-OF-WAY LINE A DISTANCE OF 450.00 FEET TO THE TREE POINT OF BEGINNING.

COUNTY OF ARAPAHOE
STATE OF COLORADO.

EXHIBIT A

Drawing of Saint Peter Lutheran Church Property ("Tract 6")

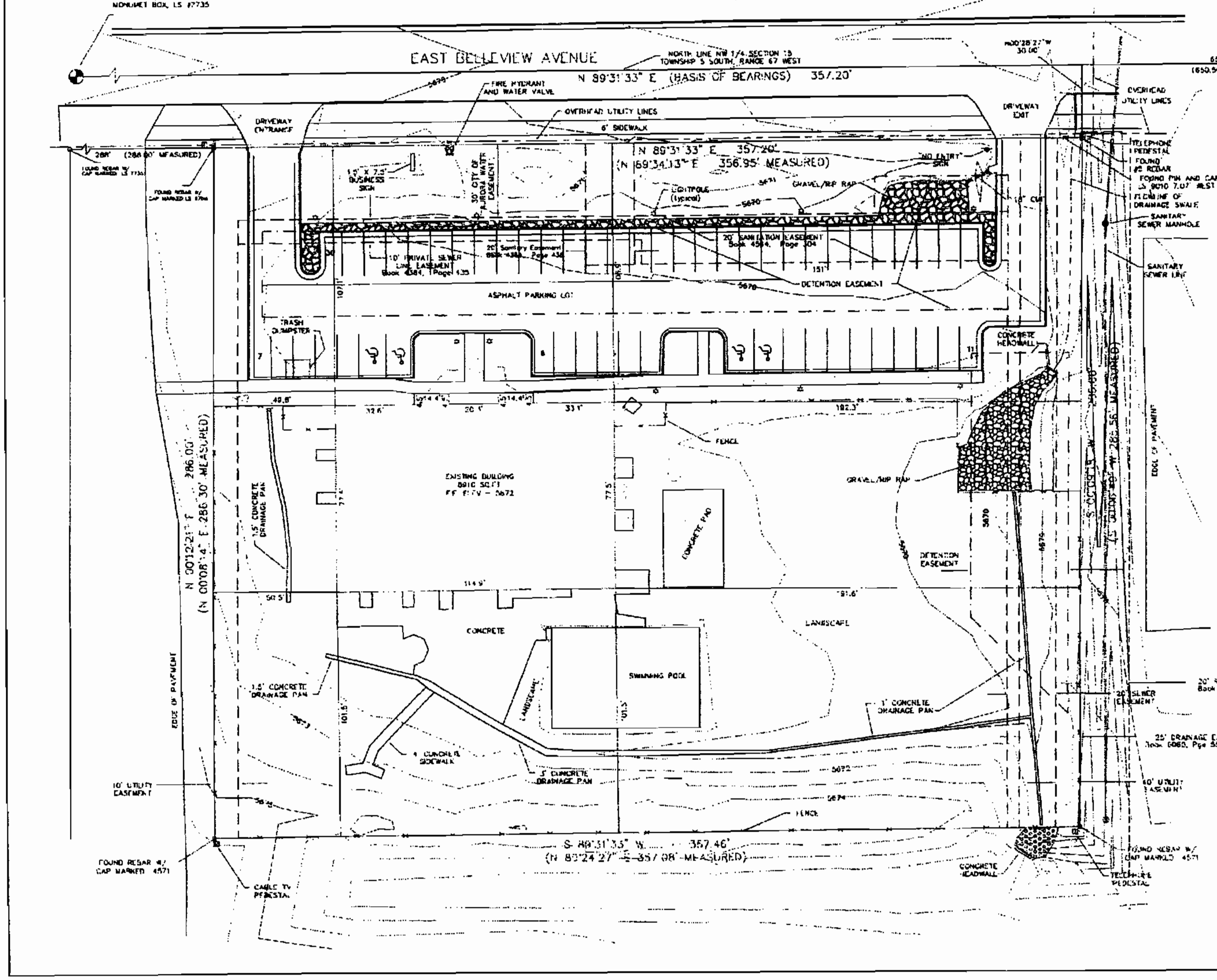
CONSULTANTS OF COLORADO, INC.
CIVIL ENGINEERING · LAND SURVEYING · LAND PLANNING

7901 E. Belleview Avenue
Suite 150
Englewood, CO 80111
Tel: (720) 482-9526
Fax: (720) 482-9546

EXHIBIT B

ALTA/ACSM LAND TITLE SURVEY

PART OF THE NW 1/4 OF SECTION 15, TOWNSHIP 5 SOUTH,
RANGE 67 WEST OF THE 6TH P.M.
COUNTY OF ARAPAHOE, STATE OF COLORADO



LEGAL DESCRIPTION

Lot 1, Riviera Hills Estates, Filing No. 2, according to the recorded plat thereof, City of Greenwood Village, Arapahoe County, Colorado, containing 2.35 acres, more or less.

SURVEYOR'S CERTIFICATE

To CHATEAU DEVELOPEMENT:

This is to certify that this map or plat and the survey on which it is based were made (i) in accordance with "Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys," jointly established and adopted by ALTA, ACSM and NSPS in 1997, and includes items 1,3,4,5,7(A),9 and 10 of Table A thereof, and (ii) pursuant to the Accuracy Standards (as adopted by ALTA and ACSM and in effect on the date of this certification) of an Urban Survey.

Date ______________

RICHARD P. PALMER
Professional Land Surveyor
Colorado Registration No. 25375

NOTICE: According to the Colorado law, you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

GENERAL NOTES:

1. Information regarding easements and rights-of-way was taken from Schedule B – Section 2 of Title Commitment File No. GO5788496-B prepared by SECURITY TITLE GUARANTY CO., dated September 3, 1998.
2. Any underground utilities shown hereon are approximated as located by field survey from existing surface evidence. Other underground utility lines and service lines may exist for which there is no surface evidence, and this survey should not be relied upon for construction without first contacting the appropriate agencies or authorities.
3. All monuments were found as shown. There is a 7' discrepancy in recorded dimensions from existing surface evidence. Other underground utility lines and service lines may of Section 15. Held monuments per survey of Charles J. Lewis, plat of "Riviera Hills Estates", Filing No. 2, recorded January 12, 1988, Book 97, and Page 36.
4. Easements are per Plat "Riviera Hills Estates" Filing No.2, unless noted otherwise.
5. BASIS OF BEARINGS: NORTH LINE OF NW 1/4 SECTION 15, T 5 S, R 68 W, BEARS N 89°31'33" E, PER PLAT OF "RIVIERA HILLS ESTATES" FILING NO. 2

ALTA/ACSM LAND TITLE SURVEY

LOT 1, RIVIERA HILLS ESTATES, FILING NO. 2,
CITY OF GREENWOOD VILLAGE, ARAPAHOE COUNTY, COLORADO

Scale 1"=20'
Sheet 1 of 1

September 10, 2008
30132801

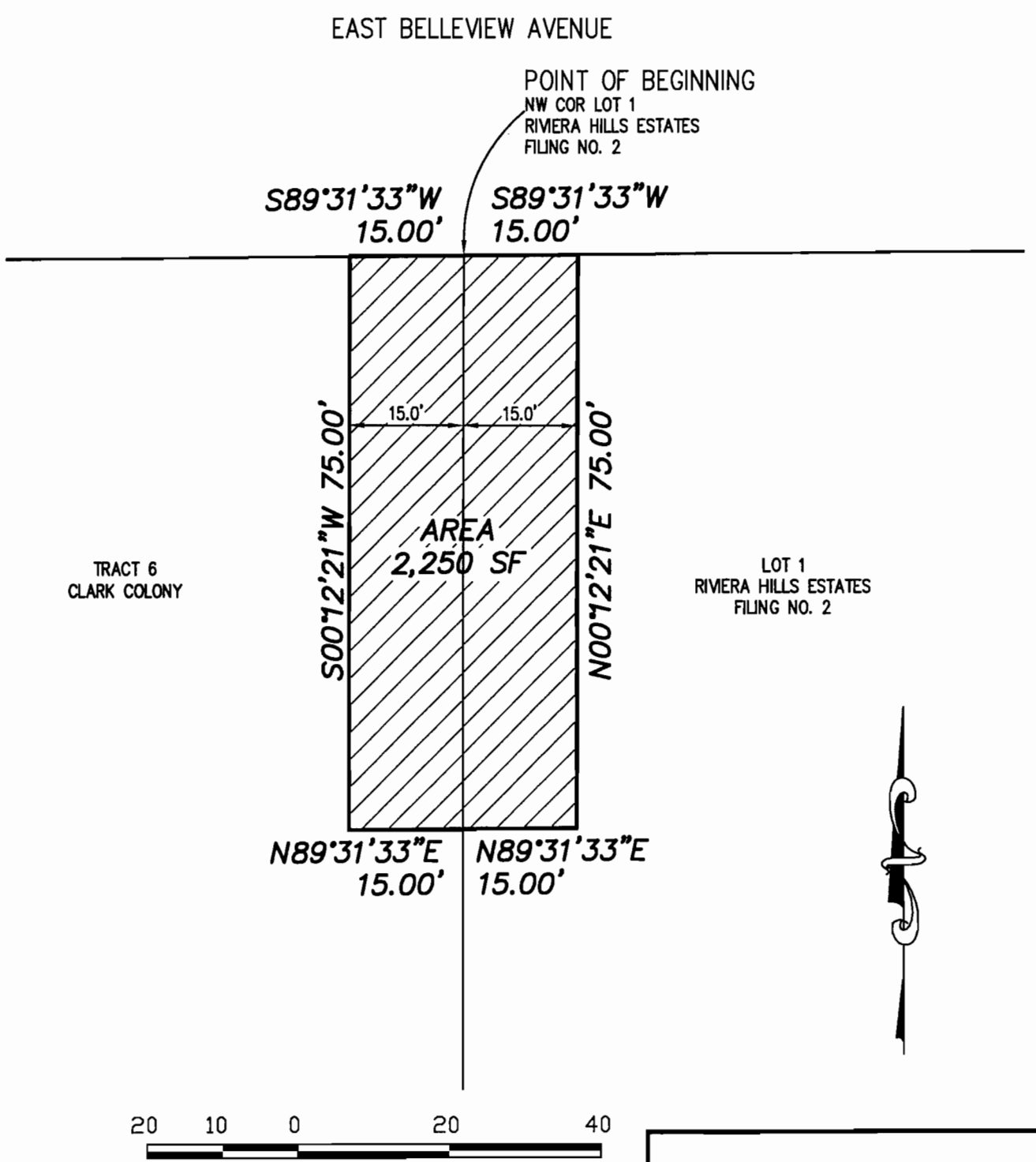
LEGAL DESC
ACCESS EA

A PART OF LOT 1, RIVIERA HILLS E AND A PART OF TRACT 6, CLARK COLONY, L 'EST QUARTER OF SECTION 15, TOWNSHIP [illegible], RANGE 67 WEST OF THE 6th PRINCIPAL MERIDIAN, COUNTY OF ARAPAHOE, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 1, WHENCE THE NORTHEAST CORNER OF SAID LOT 1 BEARS NORTH 89°31'33" EAST, SAID LINE FORMING THE BASIS OF BEARINGS FOR THIS DESCRIPTION;
THENCE SOUTH 89°31'33" WEST ALONG THE SOUTHERLY LINE OF EAST BELLEVIEW AVENUE A DISTANCE OF 15.00 FEET;
THENCE SOUTH 00°12'21" WEST ALONG A LINE PARALLEL WITH AND 15.00 FEET WESTERLY OF THE WESTERLY LINE OF SAID LOT 1 A DISTANCE OF 75.00 FEET;
THENCE NORTH 89°31'33" EAST ALONG A LINE PARALLEL WITH AND 75.00 FEET SOUTHERLY OF SAID SOUTHERLY LINE OF EAST BELLEVIEW AVENUE A DISTANCE OF 15.00 FEET TO THE WESTERLY LINE OF SAID LOT 1;
THENCE NORTH 89°31'33" EAST CONTINUING ALONG A LINE PARALLEL WITH AND 75.00 FEET SOUTHERLY OF SAID SOUTHERLY LINE OF EAST BELLEVIEW AVENUE A DISTANCE OF 15.00 FEET;
THENCE NORTH 00°12'21" EAST ALONG A LINE PARALLEL WITH AND 15.00 FEET EASTERLY OF THE WESTERLY LINE OF SAID LOT 1 A DISTANCE OF 75.00 FEET;
THENCE SOUTH 89°31'33" WEST ALONG THE SOUTHERLY LINE OF EAST BELLEVIEW AVENUE A DISTANCE OF 15.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 2,250 SQUARE FEET.

ACCESS EASEMENT

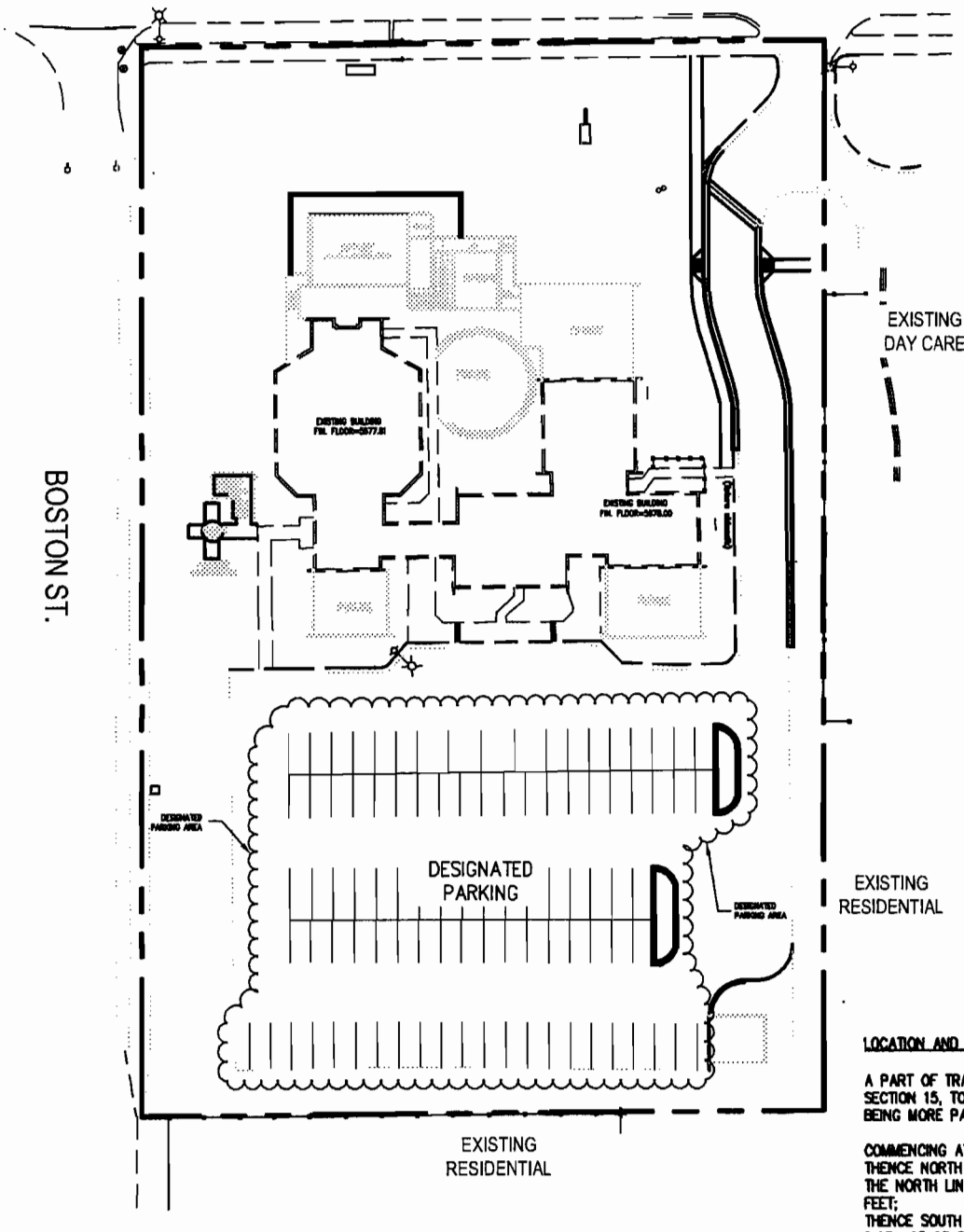


DRFT: JVH
PAGE: 2 OF 2
JOB#: 30132801
DATE: SEPTEMBER 10, 2008

SCALE: 1" = 20'

CONSULTANTS OF COLORADO, INC.
CIVIL ENGINEERING · LAND SURVEYING · LAND PLANNING

7901 E. Belleview Avenue
Suite 150
Englewood, CO 80111
Tel: (720) 482-9526
Fax: (720) 482-9546



LOCATION AND LEGAL DESCRIPTION:

A PART OF TRACT 6, CLARK COLONY, LOCATED IN THE NW ¼ OF SECTION 15, TOWNSHIP 5 SOUTH, RANGE 67 WEST OF THE 6TH P.M., BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 15;
THENCE NORTH 89 DEGREES 31 MINUTES 33 SECONDS EAST ALONG THE NORTH LINE OF SAID SECTION 15, A DISTANCE OFF 1327.62 FEET;
THENCE SOUTH 00 DEGREES 28 MINUTES 27 SECONDS EAST. A DISTANCE OF 30.00 FEET TO A POINT OIN THE SOUTH RIGHT-OF-WAY LINE OF EAST BELLEVIEW AVENUE, SAID POINT ALSO BEING THE TRUE POINT OF BEGINNING;
THENCE NORTH 89 DEGREES 31 MINUTES 33 SECONDS EAST ALONG SAID SOUTH RIGHT-OF-WAY LINE, A DISTANCE OF 288.00 FEET;
THENCE DEPARTING SAID SOUTHERLY RIGHT-OF-WAY LINE SOUTH 00 DEGREES 12 MINUTES 21 SECONDS WEST A DISTANCE OF 450.00 FEET;
THENCE SOUTH 89 DEGREES 31 MINUTES 33 SECONDS WEST A DISTANCE OF 288.00 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF SOUTH BOSTON STREET;
THENCE NORTH 00 DEGREES 12 MINUTES 21 SECONDS EAST ALONG SAID WESTERLY RIGHT-OF-WAY LINE A DISTANCE OF 450.00 FEET TO THE TREE POINT OF BEGINNING.

COUNTY OF ARAPAHOE
STATE OF COLORADO.

EXHIBIT D

Saint Peter Lutheran Church Designated Parking Areas

CONSULTANTS OF COLORADO, INC.
CIVIL ENGINEERING · LAND SURVEYING · LAND PLANNING

7901 E. Belleview Avenue
Suite 150
Englewood, CO 80111
Tel: (720) 482-9526
Fax: (720) 482-9546

EXHIBIT E

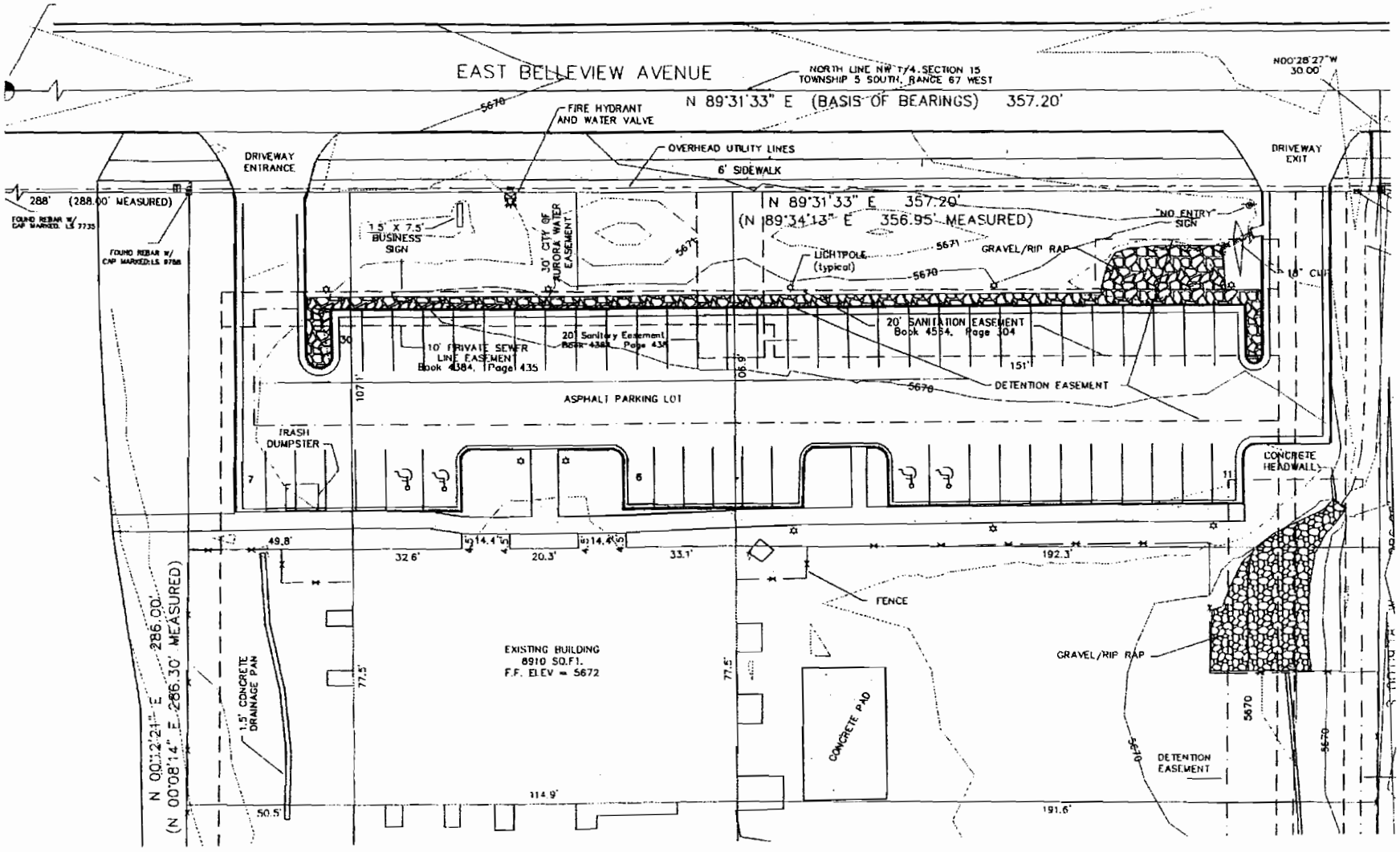

EAST BELLEVIEW AVENUE
NORTH LINE NW 1/4, SECTION 15 TOWNSHIP 5 SOUTH, RANGE 67 WEST
N 89°31'33" E (BASIS OF BEARINGS) 357.20'
N00°28'27"W 30.00'
FIRE HYDRANT AND WATER VALVE
OVERHEAD UTILITY LINES
6' SIDEWALK
DRIVEWAY ENTRANCE
DRIVEWAY EXIT
288' (288.00' MEASURED)
FOUND REBAR W/ CAP MARKED: LS 7735
FOUND REBAR W/ CAP MARKED: LS 9788
1.5' X 7.5' BUSINESS SIGN
30' CITY OF AURORA WATER EASEMENT
N 89°31'33" E 357.20'
(N 89°34'13" E 356.95' MEASURED)
"NO ENTRY" SIGN
LIGHTPOLE (typical)
GRAVEL/RIP RAP
10' CURB
20' SANITATION EASEMENT Book 4554, Page 304
10' PRIVATE SEWER LINE EASEMENT Book 4384, Page 435
20' Sanitary Easement Book 4384, Page 435
DETENTION EASEMENT
ASPHALT PARKING LOT
TRASH DUMPSTER
CONCRETE HEADWALL
49.8'
32.6'
20.3'
33.1'
192.3'
FENCE
EXISTING BUILDING 8910 SQ.FT. F.F. ELEV = 5672
GRAVEL/RIP RAP
CONCRETE PAD
DETENTION EASEMENT
1.5' CONCRETE DRAINAGE PAN
N 00°12'21" E 286.00'
(N 00°08'14" E 286.30' MEASURED)
114.9'
50.5'
191.6'
5670
5671
5672

EXHIBIT F

2009 Dates Saint Peter Lutheran Church (Tract 6) Parking Lot is unavailable.

Thursday, December 24, 2009 after 3 PM.

EXHIBIT G

2009 Dates The Village Parking Lot is unavailable:

Friday, July 31, 2009