Downtown Danvers Parking Study
Final Report

October, 2015

dhcd
Massachusetts

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Introduction

This report was prepared on behalf of the Town of Danvers in part through a "MA Downtown Initiative Technical Assistance Program" competitive grant from the State of Massachusetts' Department of Housing and Community Development (DHCD). The Planning Board and Town staff of Danvers provided oversight and review of the parking management plan, final report and final presentation. In addition, Town residents, visitors and employees provided insight and input into this study through a public meeting held in June, 2015. On behalf of DHCD and the Town of Danvers, we would like to thank all stakeholders for their constructive input to this process.

Background and Understanding

The Town of Danvers is located 17 miles north of Downtown Boston near the northeastern coast of Massachusetts. Danvers is an attractive local and regional destination with a total population of more than 25,000. The Town is easily accessible through Interstate 95 and Massachusetts Route 128, and it is well served by several MBTA bus routes. Currently there is no commuter rail service within the town. However, the MBTA Commuter Rail's Newburyport/Rockport Line serves the neighboring cities of Salem and Beverly, about 10-15 minutes away.

Downtown Danvers features a livable mixed use environment, with local walking destinations, retail, and housing. Over the last several years, the Town has made great strides to further support mixed use development and multi-modal improvements in the downtown. Recent major improvements include the Danvers Rail Trail project, which converted the under-used and abandoned "Newburyport Railroad" corridor into a four-mile linear park with a non-motorized shared-use path. This path links schools, downtown Danvers, parks, residential areas, and trails in the neighboring towns of Peabody, Wenham, and Topsfield. The Rail Trail has helped to improve access for local and nearby visitors, aiding downtown Danvers' vitality.

As local growth and development efforts advance within Danvers, the Town has recognized the need for a comprehensive evaluation plan for parking in the downtown area. In order to set the foundation for development and create an attractive and vibrant downtown center, parking policies and practices must align and work in tandem with the broader goals for the community, while addressing the realistic needs of locals and visitors.

An effective parking management plan helps to strategically maximize existing parking assets without compromising the character of downtown Danvers, helping to support the area's long-term success. The development of a parking plan for downtown Danvers helps set a baseline against which to measure and support future investments, land developments, and economic activity.

Existing Conditions

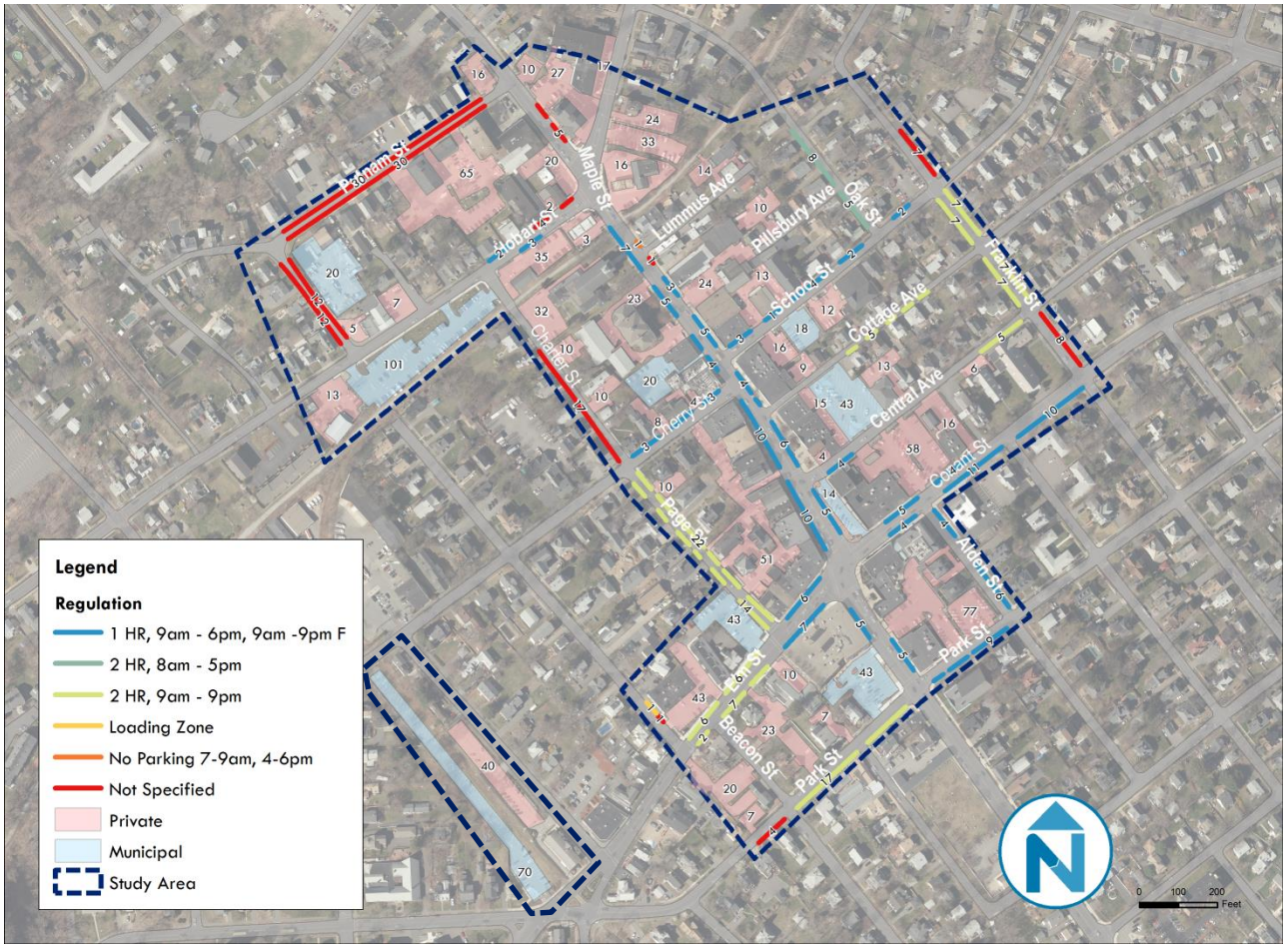
This section documents the current conditions of downtown Danvers parking facilities based on extensive data collection efforts conducted in the summer of 2015. This includes identifying the existing parking assets, how they are used today, and the Town's current parking management strategies.

STUDY AREA

The study area selected for the parking management study encompasses the commercial and mixed-use town center and covers a majority of the public and private parking spaces in downtown. As shown in Figure 1, the study area is within a block of Hobart and Maple Streets between Andrew Street and Park Street.

Within the boundaries of the study area, there are a handful of off-street parking lots, including several municipal lots. The majority of lots contain private off-street accessory parking for customers and employees of downtown businesses. Regulated on-street parking is primarily located along Maple Street, Elm Street, Conant Street, School Street and Park Street. Informal on-street parking exists on most of the remaining residential streets within the study area.

Figure 1: Downtown Danvers Study Area & Parking Inventory



Note: Detailed inventory map in the Appendix.

Existing Conditions

PARKING INVENTORY

Based on field work conducted in June 2015, there are approximately 1,700 public and private parking spaces in the downtown Danvers study area. The parking inventory includes all on- and off-street spaces. As noted in Figure 2, almost half of the total supply is available to the public, meaning that they are not restricted to particular users. A majority of private spaces are restricted to designated users, such as customer-only or employee-only parking.

The full parking inventory is depicted in the parking regulations map in Figure 1. Other key findings from the inventory are shown below.

KEY FINDINGS

- There are approximately 1,700 existing parking spaces in the study area, a quarter of which are on-street;
- Two-hour time limits apply to a majority of the publicly-available parking;
- 28% of all off-street parking is municipal public parking, of which 95% is publicly accessible;
- A majority (72%) of the off-street parking supply is private and restricted to specific user groups;
- There are eight municipal parking lots within the study area. Only one has restricted access, which is for the Department of Public Works. The rest are fully publicly accessible.

Figure 2: Parking Inventory in Downtown Danvers

Parking Location	# of Spaces	Percentage	% Publicly Available	% Restricted Access
On-Street	417	25%	100%	0%
Off-Street	1,252	75%	28%	72%
Total	**1,669**			

Existing Conditions

PARKING UTILIZATION

Parking utilization counts provide a time series of typical parking demand for a typical day in an area. Trained individuals counted parked cars in each on-street segment and lot at pre-determined time intervals in the study area. Land usage, regulation, pricing, and convenience drastically impact how individual parking assets are utilized. By compiling parking utilization for all assets at once, one can begin to clearly identify patterns of high or low usage, the impact of regulations, or how much of the total parking supply is available throughout the day.

In order to ensure that parking management systems are operating efficiently, a certain level of vacancy is preferred both on-and off-street. It is ideal to have at least one empty on-street space per block face in a downtown, ensuring easy customer access to businesses. This typically equates to about 1 out of 8 spaces free, or a target of 15-percent vacant per block face. Similarly a goal of at least 10-percent vacancy is considered ideal in off-street lots. If any facility has less availability, it is effectively at its functional capacity and drivers perceive parking problems.

The project team conducted parking utilization counts on a typical weekday and weekend. Weekday counts were conducted on a typical, summertime Thursday in early June from 11am until 1pm (lunchtime peak) to understand parking demand associated with downtown's peak activities. A typical Saturday was counted during the same week, also from 11am to 1pm.

Spatial Analysis of Parking Utilization: General Analysis

Understanding how downtown parking is managed requires being able to describe how parking facilities and on-street parking interact with each other during the peak times of 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. Color represents the percentage of spaces utilized at each location based on notable breaks used to evaluate the adequacy of a parking facility:

- **"Cool" light blue/blue** refers to 0-60% and 60-80% utilization, points at which on-street blocks and off-street facilities are viewed as underutilized.
- **"Ideal" green** refers to blocks and facilities with 81% to 90% utilization and represent actively-used resources.
- **"Warning" pink** refers to utilization above 91% and is considered at functional capacity. While fully maximizing efficiency, these blocks or facilities are full or near full, giving the impression of lack of parking.
- **"Critical" red** denotes parking beyond the marked capacity. Resources that consistently perform at this level indicate that demand exceeds capacity.

Existing Conditions

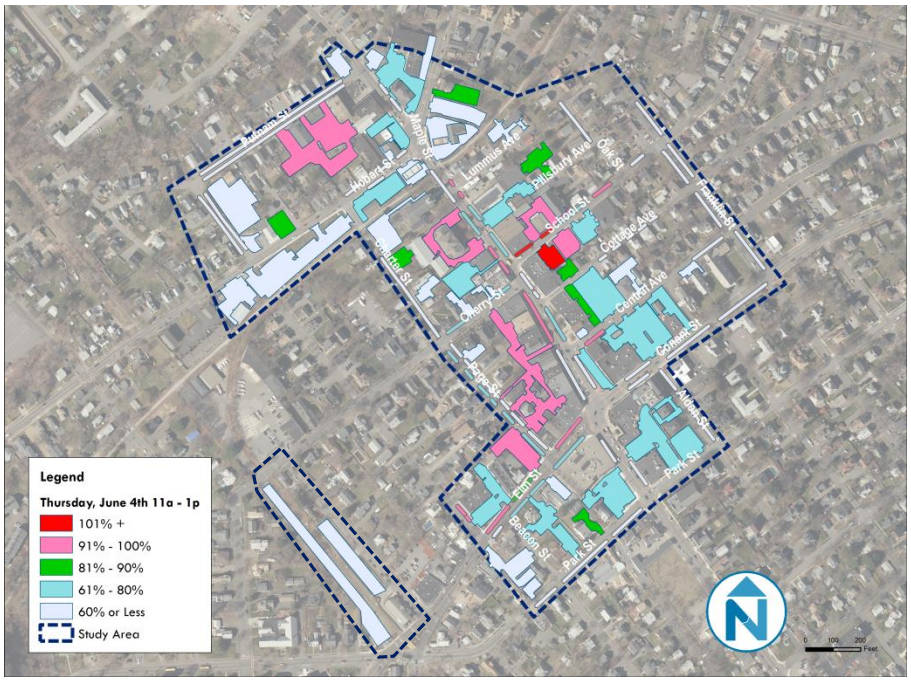
PARKING UTILIZATION

On the right are the key findings for weekday and weekend utilization, followed by the spatial analysis maps below which show the peak utilization for downtown Danvers on a typical weekday (June 4th) and weekend (June 6th), during the lunchtime peak hours of 11am-1pm. These hours are chosen to capture peak hour customer, retail, and residential activity within downtown Danvers. An additional data collection was conducted on June 18th to validate the utilization patterns, which remained the same with only slightly lower intensity. Maps are attached in the Appendices.

KEY FINDINGS

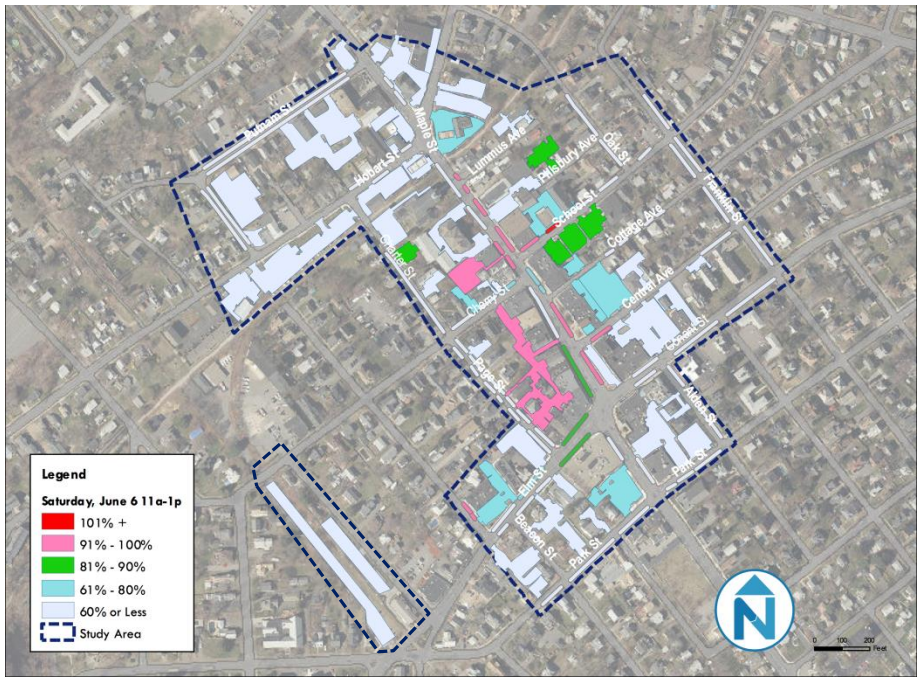
- Overall, there is parking availability during the lunchtime peak period on weekdays and weekends, with only a few public and private lots nearly full, especially west of Maple between Cherry and Elm;
- Thursday has higher utilization than Saturday;
- On-street parking demand is concentrated along Maple Street, School and Elm Street, where shops and major destinations to customers and visitors locate;
- Municipal lots are 60% to 90% full on Thursday.

Figure 3: Danvers Parking Peak Utilization – Thursday June 4th 11am-1pm



Note: Hobart Street lot displays average occupancy for June 4th and June 18th due to unusual high utilization on June 4th

Figure 4: Danvers Parking Peak Utilization – Saturday June 6th 11am-1pm



Note: Detailed utilization maps in the Appendix.

Existing Conditions

PARKING UTILIZATION

The utilization charts show a detailed picture of how full parking gets on-street and off-street. The blue bars indicate how many cars are parked each hour; the beige areas indicate the number of available parking spaces. Based on the detailed data collection effort, the utilization data can be analyzed in multiple ways, including regulations, location, and type of parking. This helps to reveal that parking demand is not uniform throughout the study area.

Overall, downtown Danvers parking supply is under 60% utilized, indicating an adequate availability during the lunchtime peak period. However, most demand is concentrated along Maple Street in the core area, with a nearly 80% utilization (Figure 10)

Figure 5: Utilization Profile of All Parking Within The Study Area

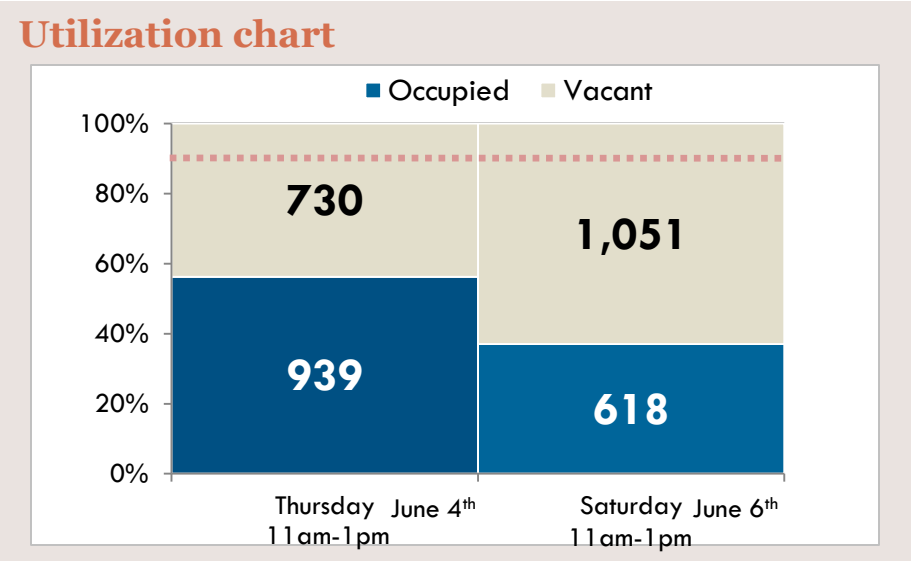


Figure 6: Utilization Profile of On-Street Parking

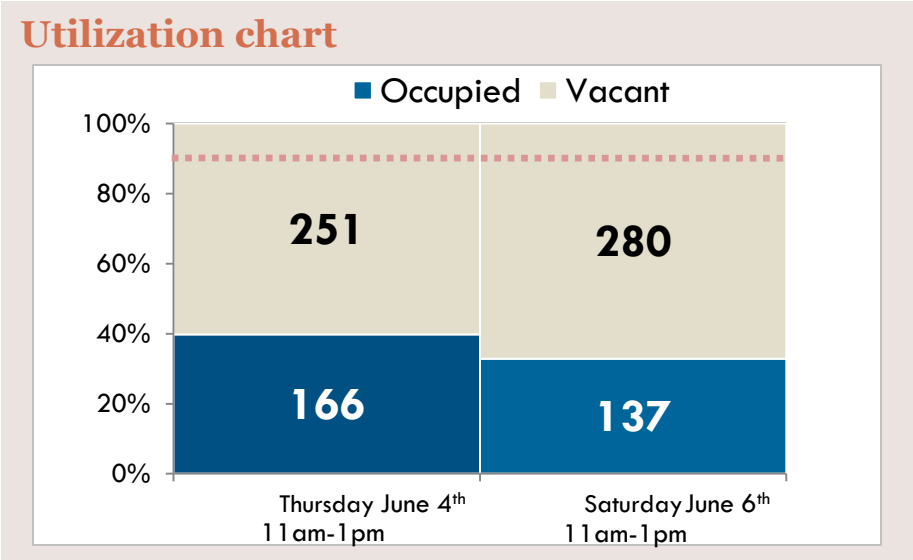
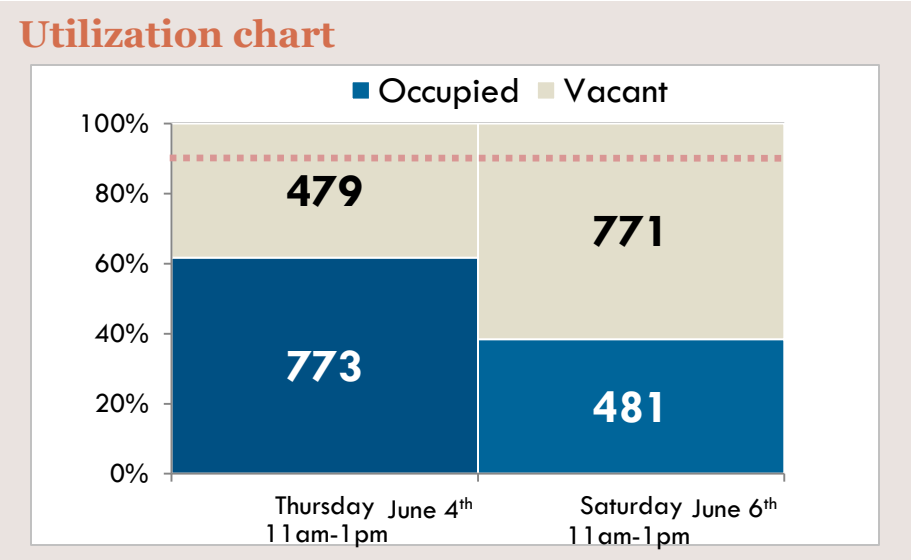


Figure 7: Utilization Profile of Off-Street Parking



Existing Conditions

Figure 8: Utilization Profile of Publicly Accessible Parking (On- & Off-Street)

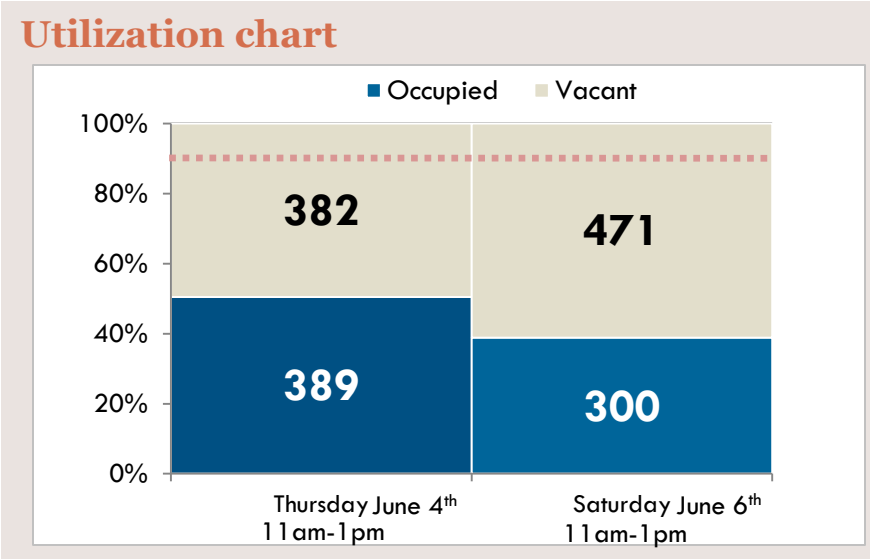
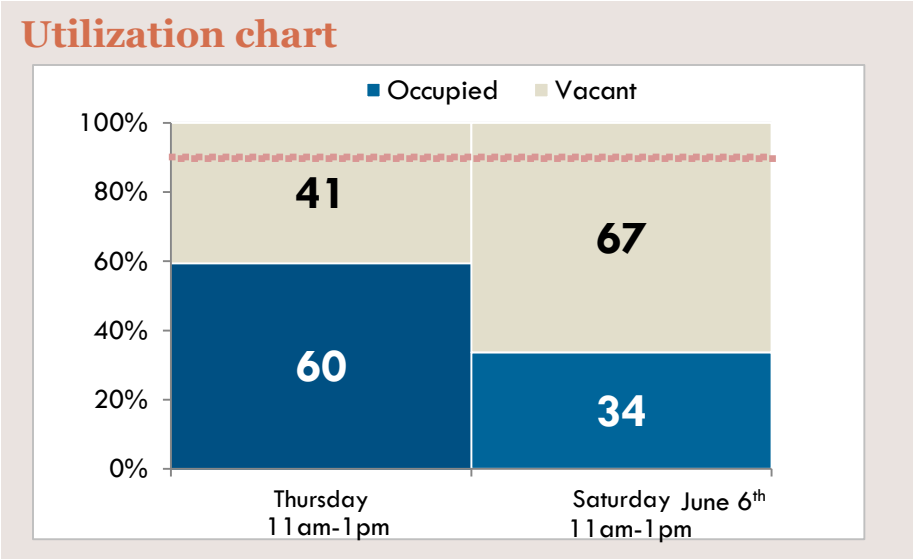
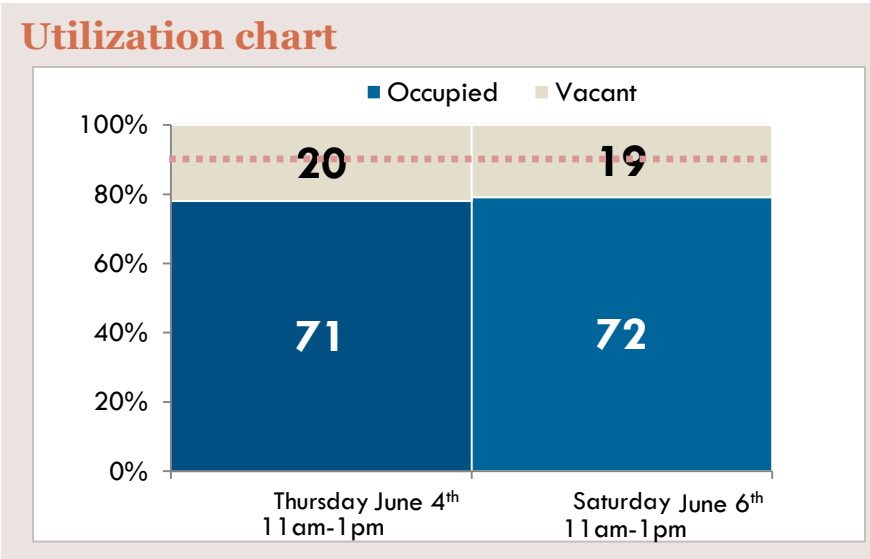


Figure 9: Utilization Profile of Hobart Street Lot**



**Note: Hobart Street lot Thursday utilization displays average occupancy for June 4th and June 18th

Figure 10: Utilization Profile of Core Area* On-Street Parking



*Note: Core area defined as Maple Street and just off Maple (Figure 11).

Figure 11: Core Area On-Street Parking Spaces

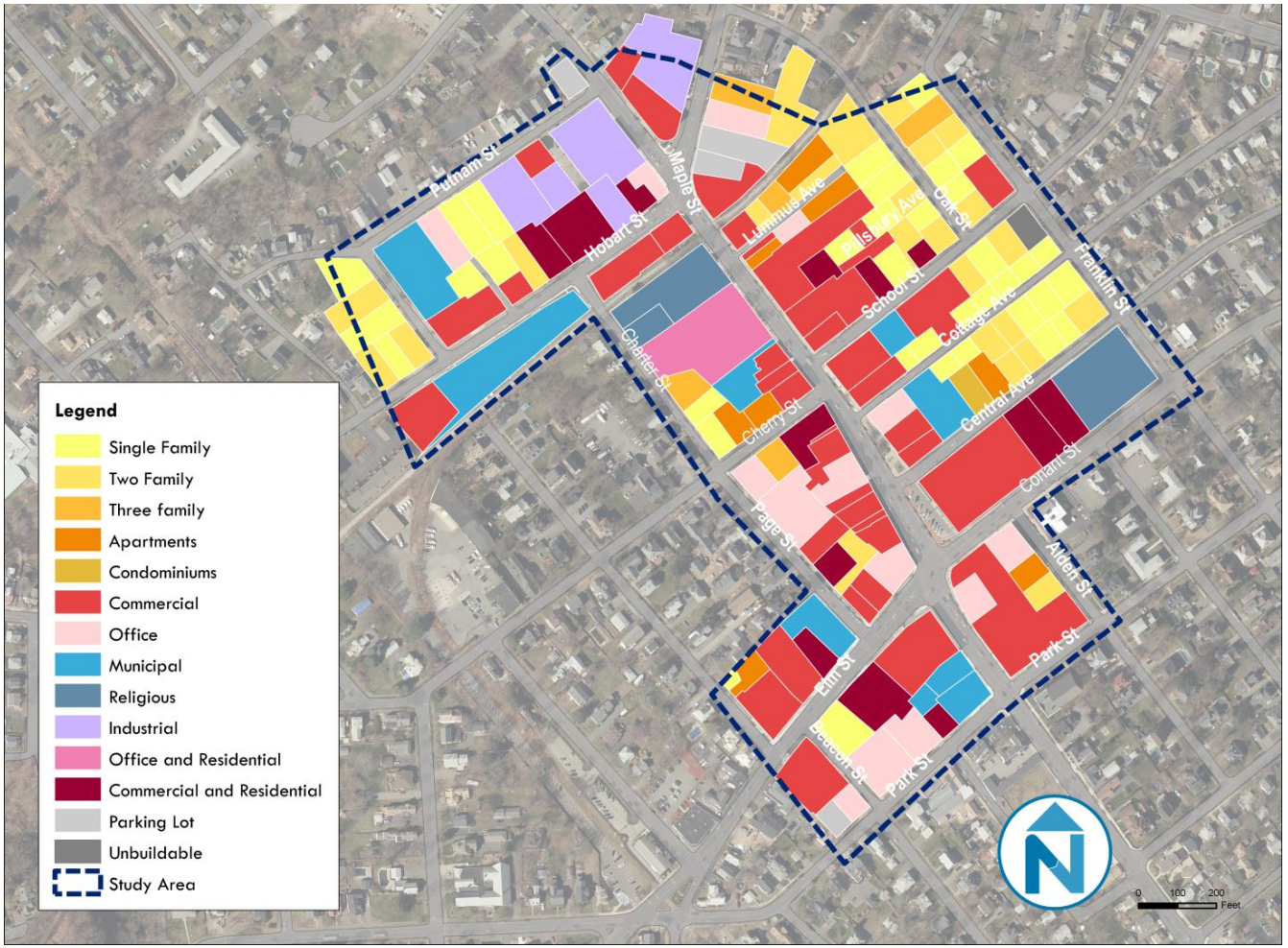
Land Use & Zoning

EXISTING LAND USE

Parking does not exist independently, but it is intricately intertwined with the overall mix of land uses and activities it serves. Unlike other neighborhoods, downtown Danvers does not currently represent typical suburban development. The mix and proximity of land uses and small-scale retail has the bones of a highly walkable environment. As downtown Danvers continues to evolve and attract a variety of land uses, the balance and relationship between land use and parking is critical. Careful consideration of what the land is dedicated to (built environment, roadways, open space, parking) has a significant impact on the vitality of the downtown.

This following land use and parking analysis helps to illustrate the existing ratio of land use and parking supply to expected demand in downtown Danvers. The combined results of these analyses are then compared to the actual observed parking demand. The model determines how much parking would be needed assuming that parking is often shared between land uses and people (customers, employees, visitors) visiting multiple destinations.

Figure 12: Danvers Study Area Land Use



Note: Detailed land use map in the Appendix.

Land Use & Zoning

PARKING REQUIREMENTS

A review of the most up-to-date Zoning Ordinance (February 2015) indicates that Danvers' parking requirements are higher than industry standard peak parking demand rates promulgated by the Institute of Transportation Engineers (ITE). ITE produces a periodic report titled *Parking Generation*, 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.

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 suburban settings. When applied as minimum requirements in a more dense setting –such as downtown Danvers - these tend to reproduce a similar auto-dependent parking ratio that is incongruous with downtown Danvers' mixed-use development.

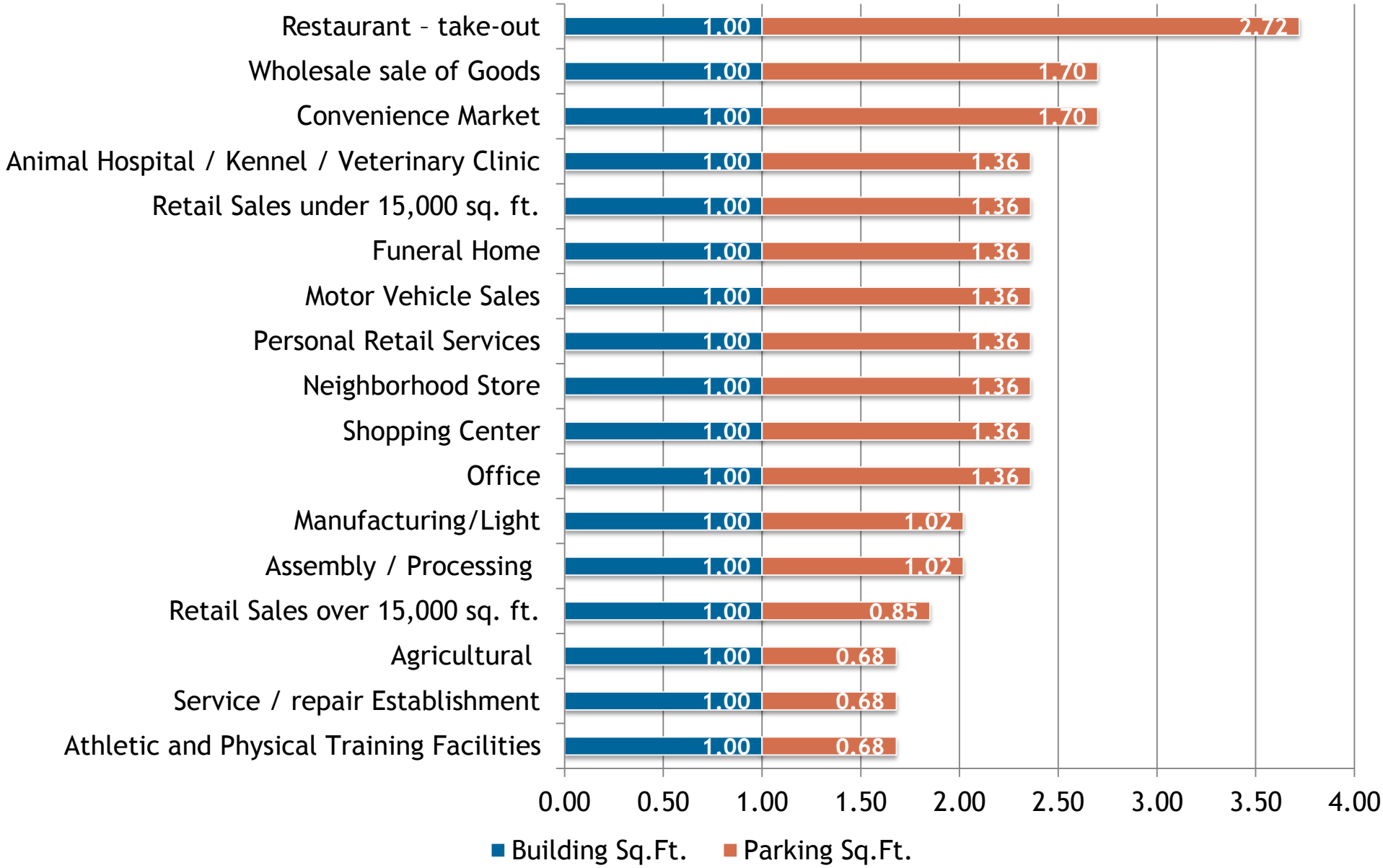
Many of Danvers' parking requirements exceed most current ITE rates (*Parking Generation, 4th Edition, 2010*) for the described land use (Figure 13); though some are in-line with or even below the ITE rates. These parking requirements in the code are particularly important, as they guide the required parking - and therefore land - needed to develop an existing or new property in the town. Other land uses have different measurements for parking requirements. Figure 14 indicates that land dedicated to parking is sometimes far more than the land for the building itself.

Figure 13: Sample of General Parking Requirements under Danvers Zoning Ordinance

Principal Use			Danvers Regulation	ITE Peak Parking Demand Rates	Danvers vs. ITE
Residential	Multi-Family residential	1 or2- bedroom unit	2 per Dwelling Unit	1.38 per Dwelling Unit	Above
		More than 2 bedrooms	3 per Dwelling Unit	1.38 per Dwelling Unit	Above
	Assisted Living		0.2 per unit + 1 per employee on largest shift	0.41 per Dwelling Unit	--
	Nursing Home		0.2 per unit + 1 per employee on largest shift	0.35 per Bed	--
Institutional	Elementary School		0.2 per student + 1 space per faculty	0.17 per student	Above
	Middle School		0.2 per student + 1 space per faculty	0.09 per student	Above
	High School		0.33 per student +1 space per faculty	0.23 per student	Above
	Day Care		0.1 per student + 1 per employee on largest shift	0.24 per student/ 1.38 per employee	Below
	Church		0.25 per seat	0.01 per seat	Above
Commercial/Retail	General Office		4 per 1000 sq ft	2.84 per 1000 sq ft	Above
	Restaurant		0.33 per seat + 1 per employee on largest shift + 1 per 100 sqf function area	0.47 per seat	--
			0.33 per seat + 1 per employee on largest shift	0.52 per seat	--
	Shopping Center		4 per 1000 sq ft	2.55 per 1000 sq ft	Above
	Convenience Market		5 per 1000 sq ft	5.5 per sq ft	Below
	Motor Vehicle Sales		4 per 1000 sq ft + 1 per employee on largest shift	1.78 per 1000 sq ft	Above
	Hotel/Motel		1 per room + 1 per employee on largest shift	0.71~0.89 per room	Above
Recreation	Athletic and Physical Training Facilities		2 per 1000 sq ft	3.55 per 1000 sq ft	Below
	Screen Cinema / Theater		0.25 per seat	0.26 per seat	Same
Industrial	Manufacturing/Light		1 per employee on largest shift, but > 3 per 1000 sq ft	0.75~1.02 per 1000 sq ft/ 0.64~0.97 per employee	Above
	Warehouse / Distribution		0.67 per employee + 1 per 1000 sq ft + 0.5 per 1000 sq ft for the 2nd 20,000 sq ft + 1 per 4000 sq ft for areas in excess of 40,000 sq ft.	0.78 per employee/ 0.5 per 1,000 sq ft	--
Medical	Hospital		2 per bed	4.49 per bed	Below
	Animal Hospital / Kennel / Veterinary Clinic		4 per 1000 sq ft	1.6 per 1000 sq ft	Above

Land Use & Zoning

Figure 14: Land Required for Parking Spaces Under Danvers' Zoning Ordinance by Land Use



Land Use & Zoning

ITE EXPECTED DEMAND

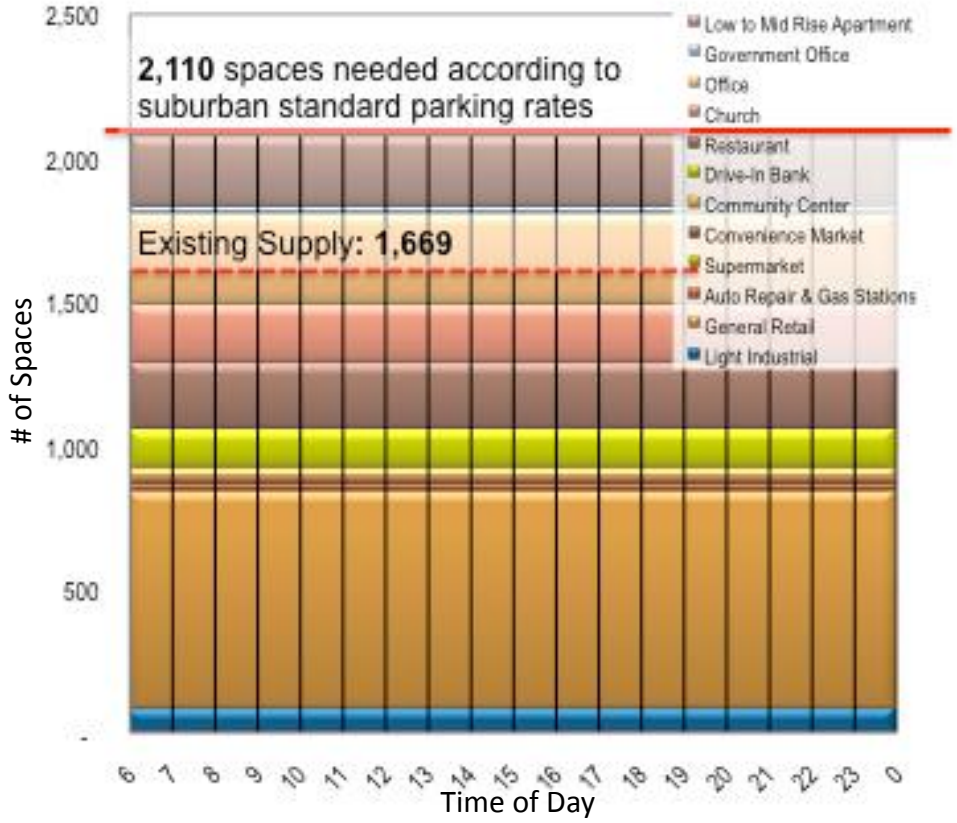
Within the study area, there is approximately 730,000 square feet of commercial, office and retail space, and 200 residential units (single-family houses not included). Below, individual land uses are grouped as accurately as possible into categories created by ITE's *Parking Generation, 4th Edition* in order to calculate the expected amount of parking needed to support the level of development and activity within the study area.

Figure 15: Danvers Study Area Existing Land Use

Land Use	SF/ Units
General Retail	296,504 SF
Church	53,662 SF
Industrial	111,674 SF
Office	121,675 SF
Government Office	6,233 SF
Warehouse	35,559 SF
Community Center	14,617 SF
Restaurant	40,709 SF
Bank	33,543 SF
Auto Repair & Gas Stations	9,243 SF
Convenience Market	5,177 SF
Apartment/ Condo	200 units
Total	**728,596 SF** **200 units**

Based on national suburban standards, ITE shows an expected demand of approximately 2,110 spaces to meet the study area's existing land uses. This assumes that every land use would have their own dedicated parking supply which would not be shared between other uses. The existing inventory within the downtown study area is almost 1,700, approximately400 spaces below what ITE would recommend.

Figure 16: ITE "Unshared" Modeled Demand



Land Use & Zoning

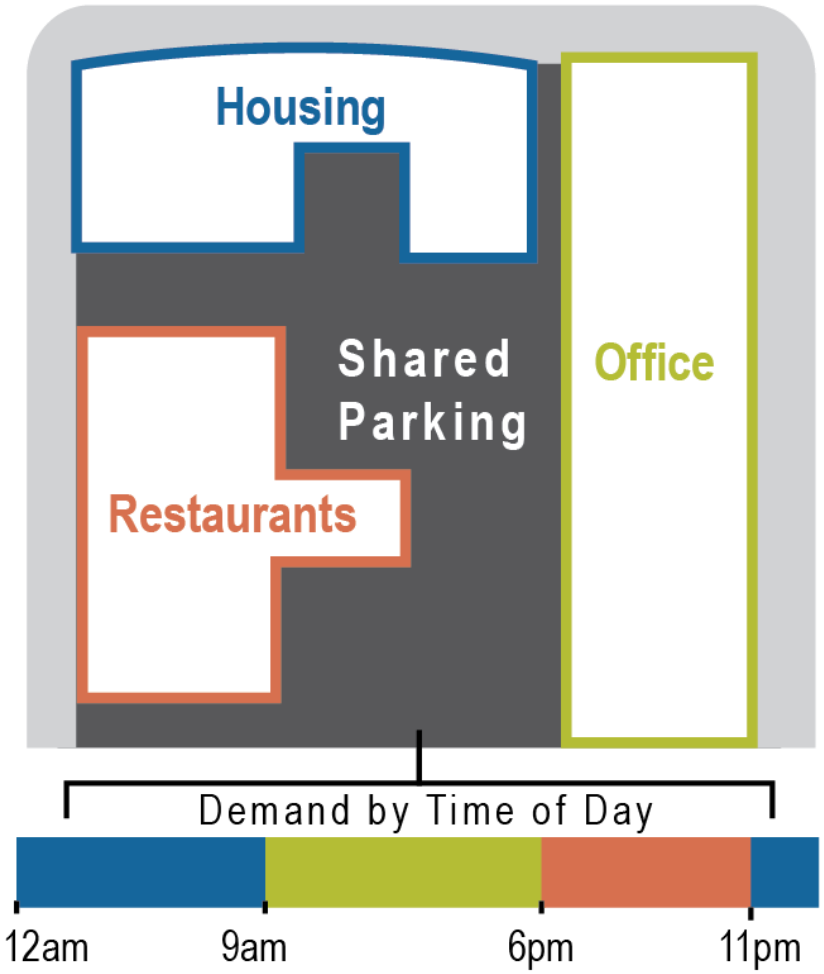
SHARED PARKING DEMAND

National experience indicates that projections using standard ITE parking rates tend to overestimate demand for downtown areas like Danvers. Mixed-use areas offer the opportunity to use one parking space for multiple land uses. This reduces the total number of spaces which would be required by the same land-uses in stand-alone developments.

To demonstrate the efficiency of a park-once environment, Nelson\Nygaard used an adapted shared parking model using inputs from the Urban Land Institute's (ULI) *Shared Parking Manual (2nd Edition, 2005)* and *ITE's Parking Generation (4th Edition, 2010)*.

Demand for parking varies by use throughout the day: Office space creates parking demand during business hours; Parking for residential housing is often most full overnight as residents take their cars during the day; and Restaurant uses peak at lunch and dinner. The shared parking model aggregates parking demand by time of day across all land uses to derive an overall parking expectation within the study area.

Besides demand by time of day, the model is calibrated for downtown Danvers with a reduction for internal capture. Mixed-use downtowns allow for parking efficiencies through "internal capture" or "captive market" trips. Such trips are made by patrons who, having already parked, walk between uses without accessing their vehicle. The model includes a conservative percent reduction to account for the mix of Danvers' development patterns.

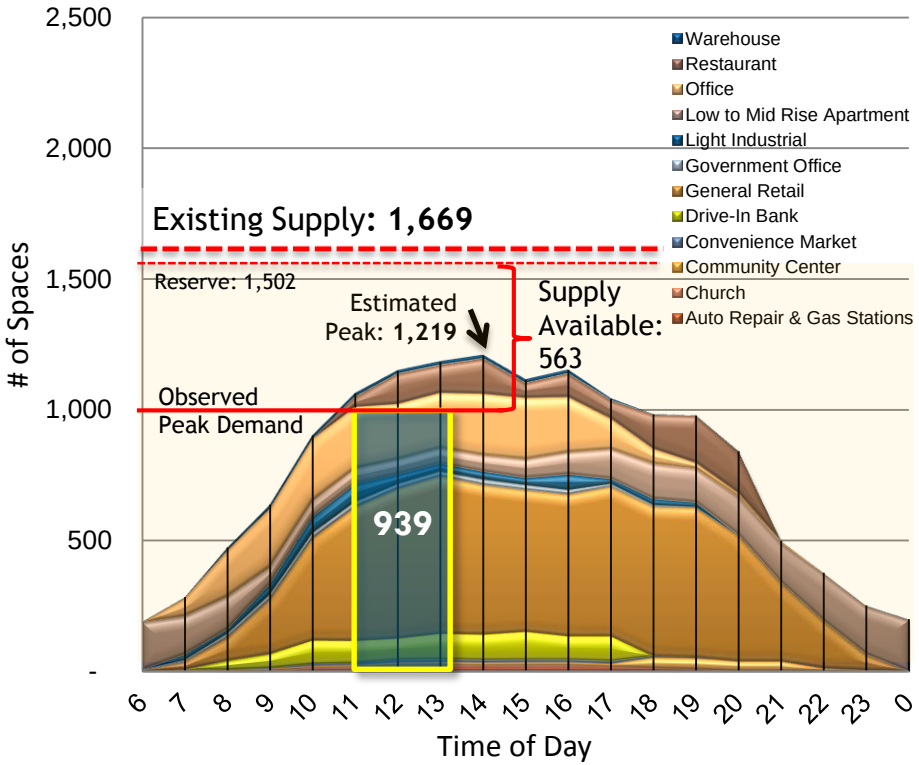


Land Use & Zoning

MODELED SHARED PARKING ANALYSIS

The same land use figures were used in the modified ULI Shared Parking Model to show the number of parking spaces needed after factoring in time of day demands by land use and Danvers' mixed-use environment. The estimates show that the peak demand at 2pm is only 1,219 spaces, indicating that there is adequate supply to meet demand, with a surplus of 283 spaces* during the peak demand period. This assumes full use of downtown's land uses, which today only peak at 939 spaces, suggesting an even higher surplus is already available.

Figure 17 Modeled "Shared" Demand



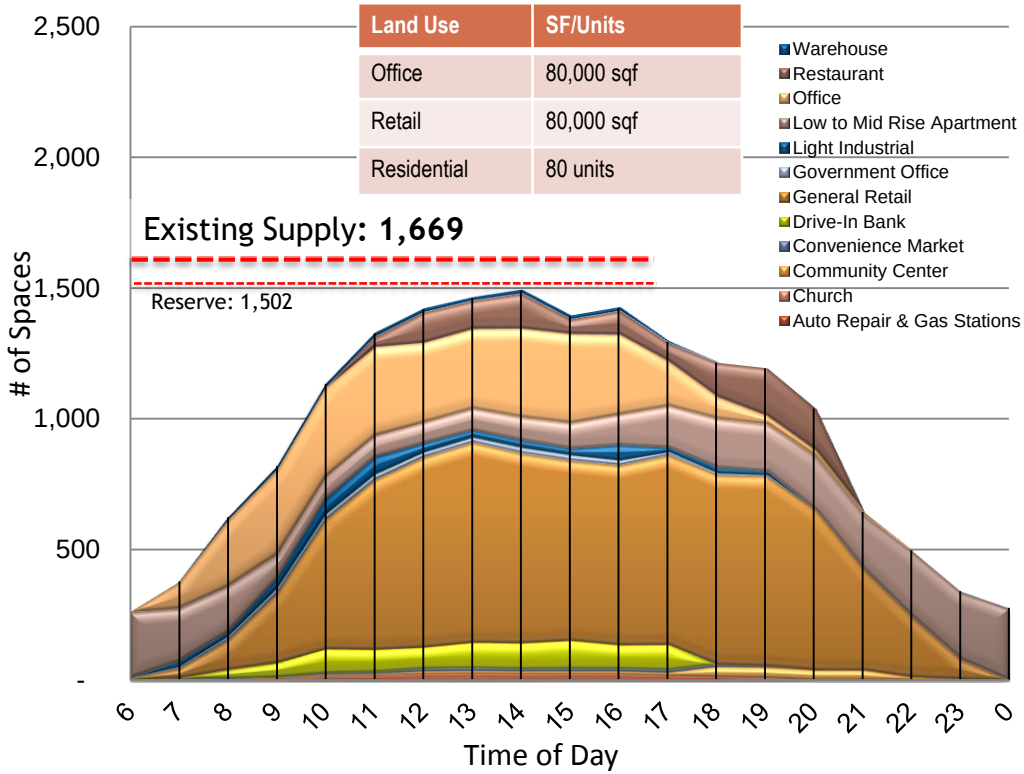
*Note: This available parking "surplus" includes an assumption for a 10% operational reserve.

HYPOTHETICAL FUTURE PARKING PROJECTION

To quantify the amount of development downtown Danvers could potentially absorb with existing resources, a hypothetical mixed-use development scenario was modeled. The team estimated how much land development existing parking spaces could support without building additional parking.** As shown in the figure below, the current supply can support a mixed development of 80 KSF of office, 80 KSF of retail and 80 residential units, while preserving a 10% reserve.

Figure 18 Future Shared Parking Projection

Land Use	SF/Units
Office	80,000 sqf
Retail	80,000 sqf
Residential	80 units



**Note: The supply in the Hobart Street lot is assumed to remain constant, with or without the relocation of a historic train station to the site.

Public Process

The success of a more effective management plan for downtown Danvers' parking supply is dependent on the input of town residents, visitors, and various stakeholders. The parking system must work for all users. Thus, a critical component of the parking study effort was community involvement. As a primary means of hearing from town residents and visitors, the Town hosted a public meeting in June that was facilitated by the consulting team. The meeting was oriented at gaining a better understanding of the public's issues and ideas as they relate to parking and circulation in downtown.

OPEN HOUSE

Nearly 50 downtown residents, employees and visitors participated in an open-house style public meeting hosted at Danvers Town Hall on June 4, 2015. The Open House included a brief presentation of the Study, and a number of engagement and interactive activities. These included a hands-on priority voting dot exercise, a map identification exercise, and a question and answer period.

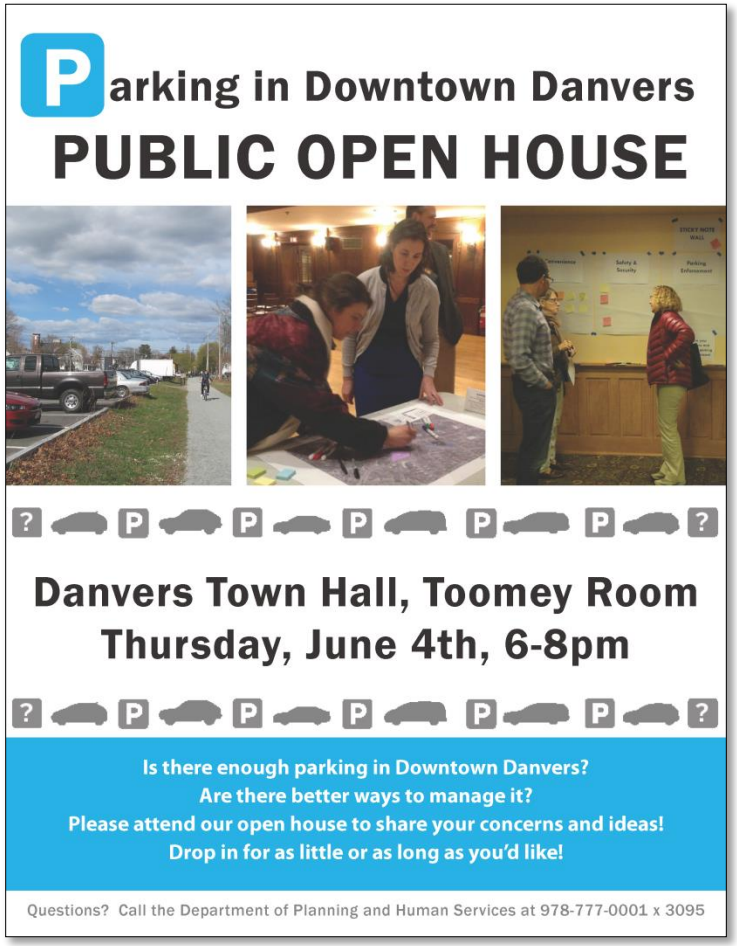
Parking Priorities Voting Exercise

Open house participants were invited to "vote" for the parking-related priorities that were of greatest concern to them. With eight potential priorities and only six possible votes, the participants were encouraged to strongly consider their priorities. All six votes could be used on a single statement, one vote each on six statements, or any mix in between. Voting results by user groups (resident, visitor & employee) are shown in Figure 20.

KEY FINDINGS

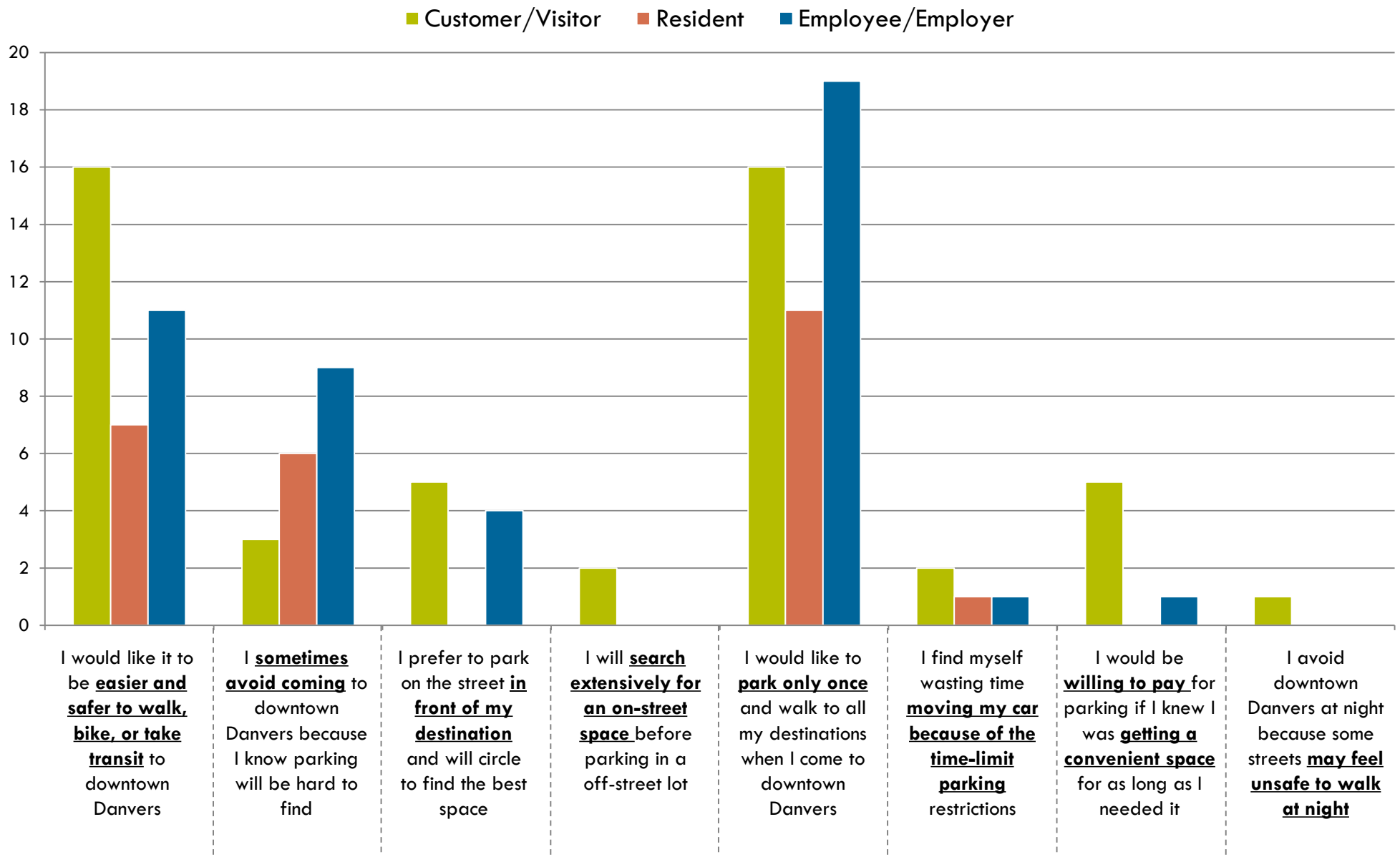
- Participants surveyed prefer to park only once and walk to all their destinations when coming to downtown Danvers;
- Participants also expressed a desire to have a more multi-modal downtown, with better walking, biking environment and public transit services.

Figure 19: Open House Flyer (June 2015)



Public Process

Figure 20: "Dot Voting" Parking Priority Exercise Results



Public Process

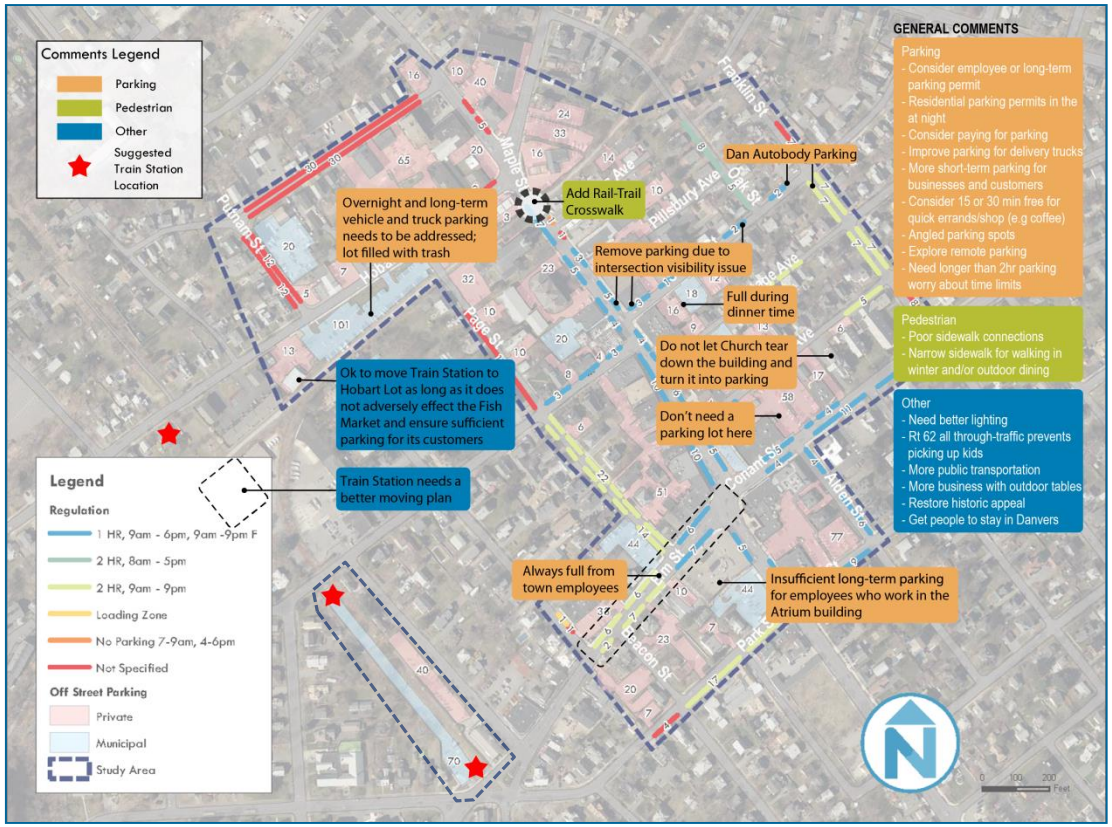
OPEN HOUSE

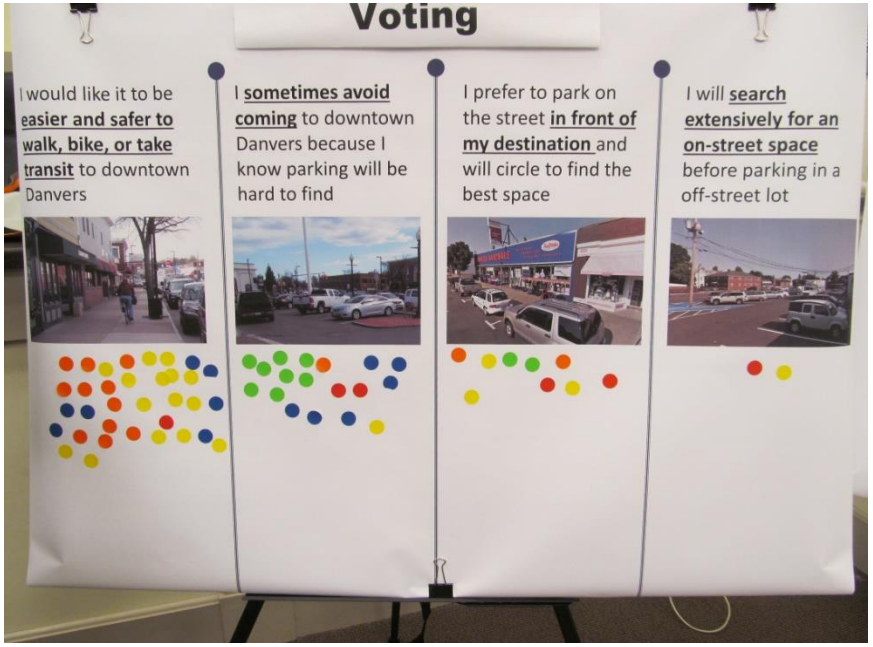
Mapping Exercise

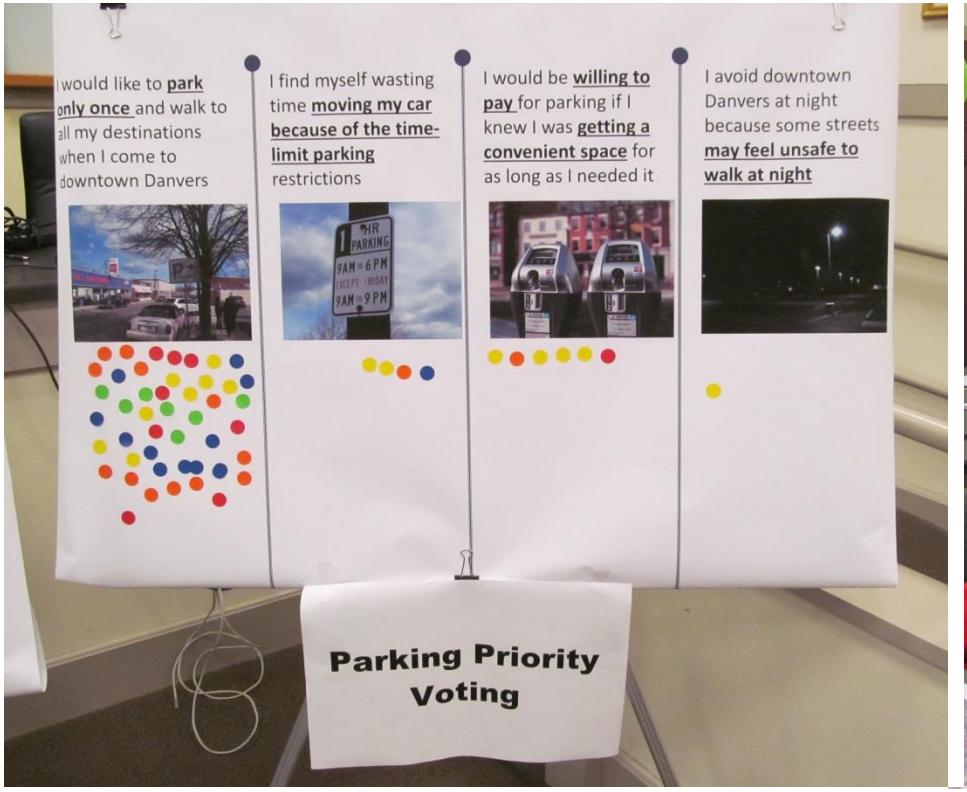
Participants were invited to share their comments about what works and does not work for transportation and parking in Downtown Danvers. Figure 21 shows the key words mentioned by the public on the "sticky wall." Participants and facilitators marked up maps directly to indicate specific places of concern or where good ideas for possible changes could occur. All maps were compiled into the electronic version in Figure 22 which summarizes the notations on the maps, including strengths of the parking system, areas for improvement, and specific suggested changes.

Figure 21: "Sticky Wall" Open Comments Key Words

Figure 22: Mapping Exercise Comments




Voting
I would like it to be easier and safer to walk, bike, or take transit to downtown Danvers
I sometimes avoid coming to downtown Danvers because I know parking will be hard to find
I prefer to park on the street in front of my destination and will circle to find the best space
I will search extensively for an on-street space before parking in a off-street lot


I would like to park only once and walk to all my destinations when I come to downtown Danvers
I find myself wasting time moving my car because of the time-limit parking restrictions
I would be willing to pay for parking if I knew I was getting a convenient space for as long as I needed it
I avoid downtown Danvers at night because some streets may feel unsafe to walk at night
Parking Priority Voting

Sticky Wall
What Do You Like?
What Don't You Like?

Recommendations

By looking at parking comprehensively through previous efforts, what this study uncovered is that parking issues in downtown Danvers are rarely about the parking supply itself, but are integrally tied with many factors : economic vitality, local business health, resident and visitor friendliness, development potential, and the walking and biking environment, among others.

The following recommendations are intended to serve as guidance for the implementation of changes to the downtown Danvers parking management system. These recommendations reflect the conclusions of the consulting team, observations of the downtown, review and analysis of various Town data, and most importantly, input from the participants of the public open house. These suggestions are also informed by parking management best practice as evidenced in a number of similar communities across America that recognize one important point: poorly managed parking spaces constrain economic opportunity for local merchants and business owners ,while good parking management supports thriving downtowns. Full implementation of these recommendations will not be possible without continued Town and private business/landowner coordination and conversations and a common interest and commitment to improving parking in downtown Danvers.

The recommendations of this study emphasize zoning, regulatory and design strategies that will help to utilize downtown Danvers' existing resources effectively. A specific design of the Hobart Street Lot is also included to solve the potential relocation of a historic train station.

RECOMMENDATIONS

Supporting A Shared Prosperity

- Shared parking district
- Parking lot reconfiguration

Creating Availability From Existing Supply

- Demand-based management
- Encouraging off-street parking
- Discovering the hidden supply

Accommodating Growth and Access

- Expanding opportunity
- Better parking design

Enhancing Downtown Experience

- Parking Benefit District
- Better parking & wayfinding signage
- Streets for all downtown users

Recommendations

Figure 23: Recommendations Overview

1. Supporting A Shared Prosperity

1A. SHARED PARKING DISTRICT

Danvers's zoning encodes parking requirements that consistently go beyond the national standards set by ITE. Higher parking requirements discourage efficient growth, and add to the costs of development. Sharing existing parking spaces between various uses (bank, school, retail, churches, etc.) reduces the total number of spaces required compared to the same uses in stand-alone developments. Shared parking allows these different groups to use the same parking supply, thus requiring fewer parking spaces to be built or maintained.

In order to provide for a more efficient land use in the downtown area, the Town of Danvers can create a shared parking district. Within the shared parking district a separate set of parking standards would be created. These zoning changes would not demand new developments to build as many parking spaces as previously required. Further these zoning changes would allow and encourage organizations and businesses to cooperate in order to provide sufficient parking at peak hours for the relevant group. It is recommended that downtown Danvers:

- Implement zoning changes to support shared parking and shared parking models for development in downtown;
- Create a cap on the maximum number of parking spaces per use and allow exemptions for changes-of-use;
- Lease private parking for sharing, with the Town either directly leasing spaces or acting as agent between two private entities and offering maintenance services; and
- Utilize existing supply before investing in more parking.

RECOMMENDED ZONING CHANGES

Create Zoning Maximums

The parking study recommends that parking maximums within downtown Danvers be instituted within the boundaries of the study area to cap the maximum number of parking spaces associated with commercial and residential uses in new developments. In order to maximize the use of existing parking resources before investing in others, variances can be granted for small (<10,000 SF) or change-of-use developments. Larger developments should have the option to pay a fee in-lieu of required parking.

In-Lieu Fees

As a best practice, many communities have allowed developers to build less than the required or desired number of spaces by making a payment in-lieu of providing parking to a municipality. This one time or annual fee can be built into the zoning code to be used toward other improvements. These funds can help support the overall parking system (streetscape, bicycle, pedestrian, or other parking improvements), or be "banked" towards the future provision of parking by the Town. In order to implement in lieu fees as part of zoning, the Town should develop a rate schedule for an in-lieu fee option.

1. Supporting A Shared Prosperity

1B. LOT RECONFIGURATION – DOING MORE WITH LESS

Mixed-use areas tend to have complimentary parking use patterns, which in turn offer the opportunity to share parking spaces between various uses. Jointly-used facilities utilize parking spaces more efficiently, reduce the amount of land dedicated to parking, and reduce traffic congestion. This is a primary benefit in mixed-use downtowns where visitors are able to park once and walk to multiple shops throughout their visit, thereby reducing the total number of spaces required compared to the same uses in stand-alone developments.

Downtown Danvers' parking utilization analysis revealed that throughout the course of a weekday, most off- street parking facilities have a significant amount of available parking. To address future demand needs, parking resources should be used more efficiently. Public and private sectors should collaborate to better utilize the under-utilized parking spaces for public use.

One recommendation for public supply expansion is through shared parking lease agreements with nearby property owners. Shared parking agreements may be for certain days of the week or times of day. For example, during evening events, the Town or a private entity may consider working with churches, banks, or schools – land uses that typically have little evening activity – to lease parking to accommodate the large demand associated with events. Through broader mutual agreements, parking lots' configurations also can be redesigned to to accommodate more spaces. An example of a redesign of one Danvers municipal lot and two private lots is shown on the right. Other suggested locations are shown in Figure 25.

Lots in the downtown area can easily be combined to create a more walkable environment, and at the same time to increase parking supply. By merging multiple lots, curb cuts can be eliminated as fewer driveways and exits are needed. In addition to combining lots, some lots could also be closed to make way for new development in downtown.

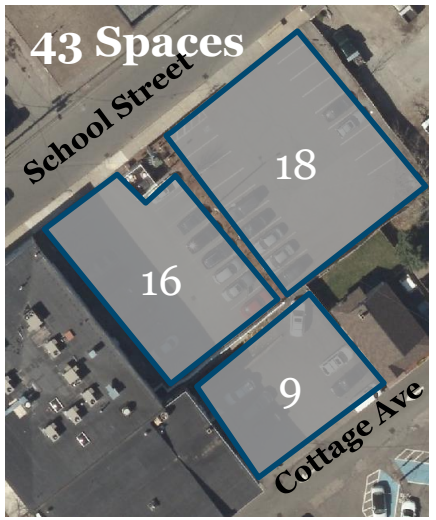
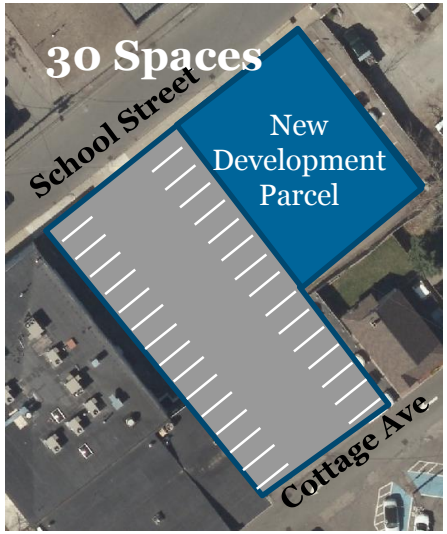


Figure 24: School Street Lot Redesign Options



1.Supporting A Shared Prosperity

Figure 25: Locust Street Shared Parking Opportunity

2. Creating Availability From Existing Supply

2A. DEMAND-BASED MANAGEMENT

The data collection and analysis in previous chapter helps to reveal that parking supply is not the main issue in downtown Danvers –the perception of low availability is the problem. Introducing demand-based management is an opportunity for Danvers to better utilize existing parking resources and create parking availability without removing buildings or building an expensive garage to add supply.

Existing parking utilization patterns indicate clear boundaries of high and low demand for on-street spaces in downtown Danvers. Parking along Maple Street, and parts of School and Elm Street, is almost 90% full during the peak hours, while the rest of the on-street parking is less than 40% utilized. The regulations and pricing should be changed to be reflective of the demand of these areas.

The team recommends a strategy of pricing on-street parking in the core of downtown Danvers in the busiest, most desirable areas (Figure 26) from 10 a.m. to 4 p.m. weekdays and Saturdays. The pricing should be moderate, to alter long-term employee parkers' behavior, but not to drive customers away. Prices should be set to maintain availability and allow parkers to self-select where they are going to park based on their own price sensitivity and willingness to walk further. Proposed on-street metered spaces are illustrated on the right. With appropriate technology, a 15- or 20-minute free period can be provided to accommodate quick errands for free.

An interim approach could simply be to lengthen time-limits in lots and use signing to advertise the longer-term spaces (see next page). However, the Town should work to manage demand with pricing and actually eliminate all time limits, given that pricing is the only mechanism that creates *availability*. Time limits only encourage *turn-over*, and employees frequently just roll to another space when their time is up, not improving availability. Replacing time limits with pricing allows customers to stay as long as they desire. Open house attendees repeatedly pointed out how existing time limits were scaring off customers who wanted to park longer.

Figure 26: Proposed Metered Parking

ELIMINATING TIME LIMITS

Having priced parking eliminates the need for time limits and gives visitors and customers the option to stay as long as they want, which will have a positive impact on the local economy.

2.Creating Availability From Existing Supply

2B. ENCOURAGING OFF-STREET PARKING

Today's management of public off-street assets does not encourage long-term parking. Out of the total 350 publicly-accessible parking spaces in municipal lots, a quarter have 15-minute time limits while the rest are 2-hour. Time-limited parking was intended to encourage turnover, but in reality, it often limits customer and visitor stays and causes anxiety when one is enjoying his/her dining or shopping.

Therefore, the team recommends that the Town revisit its municipal lot parking regulation and eliminate or dramatically lengthen most of the time limits to encourage patrons to stay longer in downtown while leaving the most valuable curbside parking to short-term meter users. Off-street management practices should work in tandem and complement the proposed on-street pricing and management recommendations in order to ensure and enhance the availability of the most desirable spaces for those who are willing to pay, while providing convenient and free off-street parking around the corner for those who are more price sensitive.

HOBART STREET LOT REDESIGN

To restrain commercial vehicle storage, especially in the Hobart Street Lot, a 24-hour time limit should be enforced. The Town should also work with the key nearby stakeholders to establish special reserved spaces, such as 30 minute parking from 4 to 6 p.m. Monday to Friday for Fish Market customers, as well as Sunday parking for the Church. To accommodate potential the Train Station relocation, an example of lot reconfiguration is shown on the next page.

2C. DISCOVERING THE HIDDEN SUPPLY

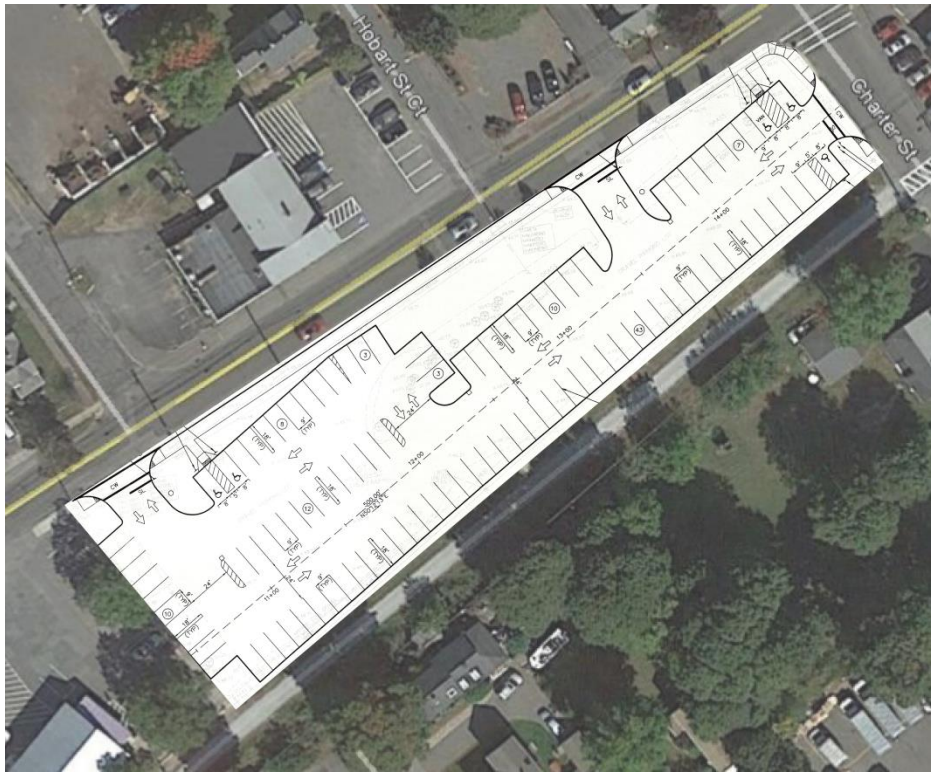
Throughout the downtown are parking areas that often are overlooked. In particular there are multiple streets with existing on-street parking, and yet little designation of the spaces. This is particularly notable along Locust Street, Franklin Street, and Conant Street. These sections of parking should be striped in order to encourage more on-street parking in these areas and to expand the perceived parking supply in downtown, without actually having to add on-street spaces.

A further enhancement would be the creation of improved sidewalks along Central Street. While improving pedestrian access along the street, it will further allow for more on-street parking where there are only excessive curb cuts today.

Figure 27: Proposed Street Improvements

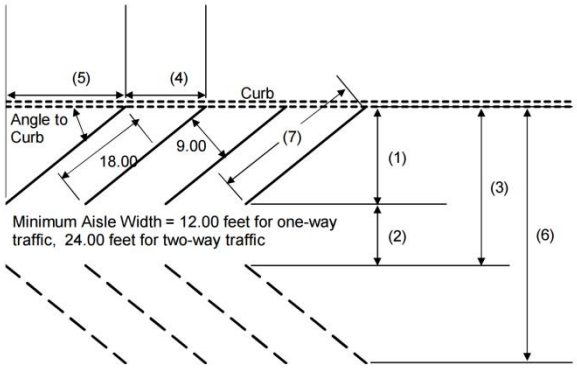
2.Creating Availability From Existing Supply

Figure 28: Hobart Street Lot Reconfiguration



BEFORE: 101 parking spaces

AFTER: 106 parking spaces



Engineering Division
Town of Danvers, Massachusetts

June, 2001
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STANDARD ANGLE
PARKING STALL AND AISLE DIMENSIONS

using a turning radius of 24.00 feet and
based on stalls 9.00 feet wide 18.00 feet long

Angle to Curb degrees	(1) Stall Depth perpendicular to aisle feet	(2) Minimum Aisle Width feet	(3) Stall plus Aisle feet	(4) Stall Width parallel to aisle feet	(5) Offset feet	(6) 2 stalls plus Aisle feet	(7) Line Length feet
60	20.09	12.00	32.09	10.39	11.60	52.18	23.20

3. Accommodating Growth and Access

3A. EXPANDING OPPORTUNITY

Danvers is seeing continuous growth in recent years in terms of job market and population. To accommodate future growth, the Town is helping to identify potential development opportunities. The block bounded by North Putnam, Maple, and Hobart Streets is expected to see increased development with continued mixed-use zoning – but at higher densities. This would demand parking solutions both in the short and longer terms.

As shown in Figure 29, there are multiple available parking lots currently existing on that block. These lots are already well-positioned to allow multiple users to share the same parking areas. It is recommended that any zoning or permitting for this block allow or even require fully-shared parking to be accommodated. By encouraging these parcels to share parking, the total parking requirement of the area can be lowered, creating a more efficient parking environment in the short-term without compromising development opportunities or impacting other nearby parking resources.

As densities within the block increase in the longer term, the shared parking solution also will allow new, higher-density developments to benefit from lowered parking requirements, and any new parking can serve as a shared resource for future development on other nearby blocks. The resulting "shared parking district" can have lower costs and can dedicate more resources to other beneficial improvements in downtown.

The unemployment rate in Danvers, MA, is 4.90%, with job growth of **1.15%**. Future job growth over the next ten years is predicted to be **37.40%**.

- http://www.bestplaces.net/

Figure 29: Opportunities for Shared Parking

3. Accommodating Growth and Access

3B. BETTER PARKING DESIGN

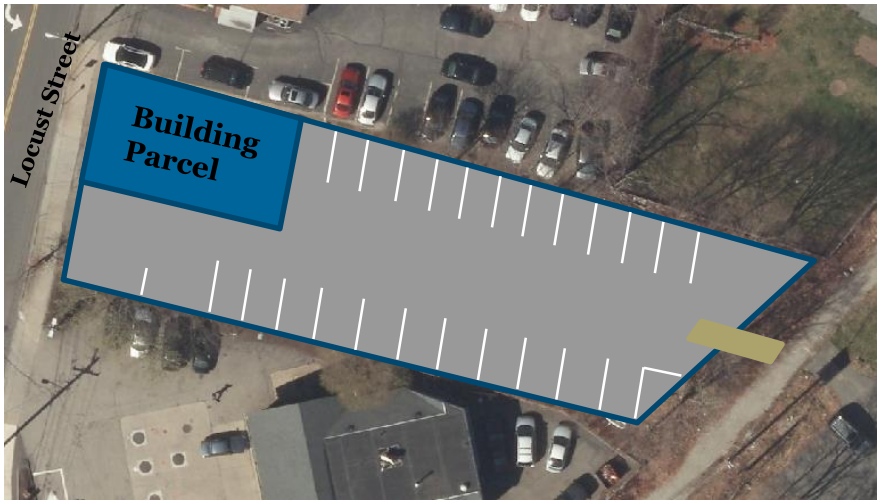
As new parking solutions are identified and implemented in downtown, a shared approach to parking management throughout the downtown will encourage opportunities for infill development or improved pedestrian-oriented spaces.

One example is the Locust Street parking lot, which today hosts a large curb cut and has cars parked directly next to the sidewalk. With a landscape buffer or even a new building, the lot could provide a better streetscape along Locust Street to enhance the attractiveness of nearby parcels, as suggested in Figures 31 and 32. Any potential loss in parking could easily be offset by the increased amenity of the site, as well as enhancement of nearby on-street spaces that should be marked out.

Figure 30: Locust Street Parking Lot

Figure 31: Locust Street Redesign – Landscape Option

Figure 32: Locust Street Redesign – Development Option



4.Enhancing Downtown Experience

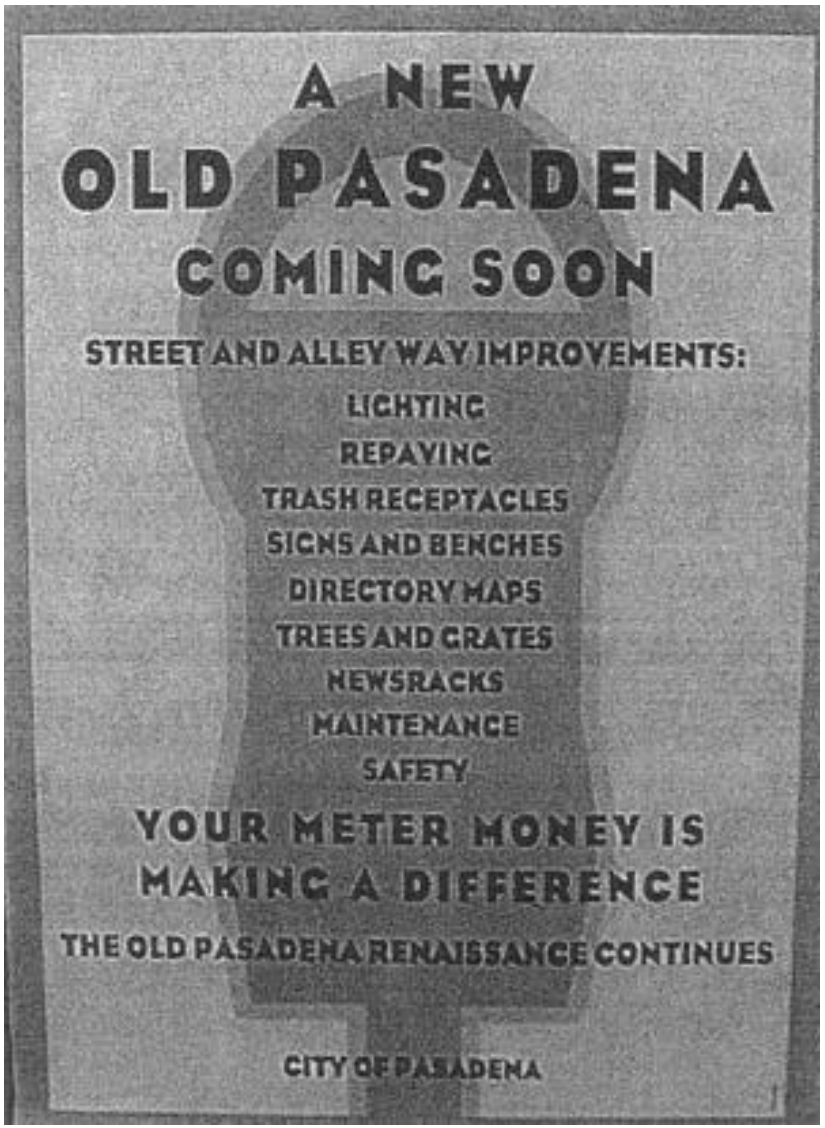
4A. PARKING BENEFIT DISTRICT

Many improvements to the parking system, such as restriping lots or making sidewalk improvements as recommended in previous sections, will require additional funding from the Town that may not be readily available.

A best practice is to use net revenue from parking citations, parking meter fees, and in-lieu fees as contributions to a fund for a Parking Benefit District that is designed to re-invest proceeds back into the downtown district where they were collected. This program would be transparent to the public, so when a patron drops a quarter into a meter, that person knows that their payment first pays for the parking infrastructure but then goes directly towards downtown improvements. When Danvers' merchants, customers, and residents can clearly see that the monies collected are invested in physical downtown improvements – alleyways, planting, lighting, façade improvements, safety and security, signage, bicycle infrastructure, sidewalks and more – many are willing to support parking policies that generate tangible benefits for downtown Danvers.

Such funds are allowed under State law and new legislation may spell this out more clearly given their success around the county. In all examples, communities have developed support for parking management changes by not only giving local stakeholders input into developing new parking policies but also by letting them decide how municipal parking revenues should be spent.

Figure 33: Transparency of Parking Benefit Fund - Old Pasadena



4.Enhancing Downtown Experience

4B. BETTER PARKING & WAYFINDING SIGNAGE

Despite the proximity of public parking lots in downtown Danvers, many customers – especially out-of-town visitors – are unaware of free empty parking spaces located just around the corner. Parking and wayfinding signage that is easy-to-read and understand is a critical component to deciphering a parking system. Signage that guides motorists to on and off-street parking deters drivers from excessive cruising and frustration.

A wayfinding program should encourage a "park once" or "park and walk" environment, focusing not just on getting cars into the parking facilities, but getting people to visit multiple destinations on foot without moving their cars. In addition to parking facilities, signage should identify key sites of interest and their approximate walking distance (in minutes), such as area businesses, social activity centers, municipal buildings, and other points of interest.

The team recommends installing wayfinding signage to guide those new to Danvers or those that only come once or twice a year. The signage should aim to accomplish four things:

- Define clear parking rules
- Identify free and long-term parking
- Identify major points of interests
- Guide pedestrians walking around downtown and back again to their car

Using street names to rename and brand the municipal parking lots based on their locations also can go a long way to making the system more accommodating.

Figure 34: Signage Example - Before & After

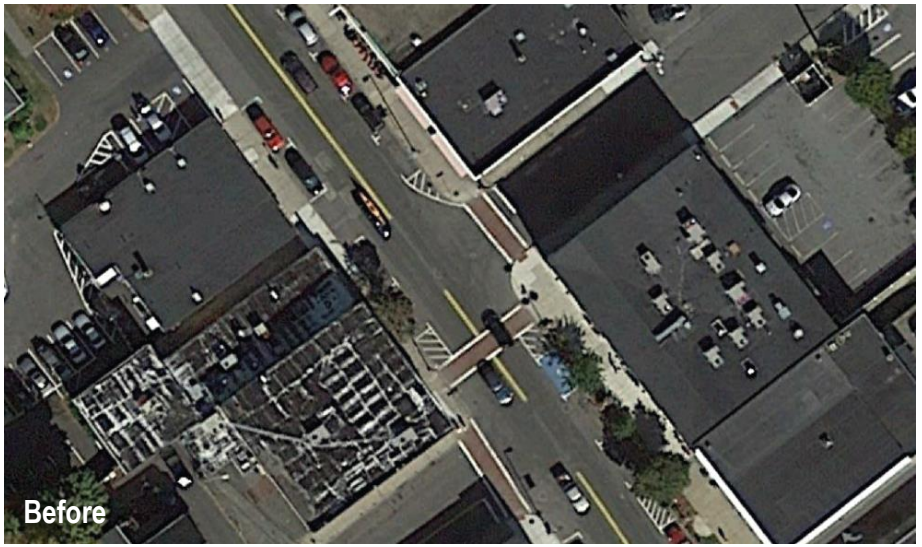
4.Enhancing Downtown Experience

4C. STREETS FOR ALL DOWNTOWN USERS

Downtown Danvers is blessed with a dense and walkable street network that encourages ground-floor activities and mixed-use development, but open house participants still desired better sidewalks and bicycling infrastructure, improved public spaces, and more convenient storefronts. Maple Street, for example, serves as State Route 35 and has lots of through traffic that can operate at speeds too high for a walkable downtown due to its excessive street width. The Town should consider making complete and safer streets for all downtown users by redesigning major intersections with curb extensions (an example is shown on the right). More biking facilities, such as bike sharrows, bike lanes, and bike racks should be installed to accommodate the growing demand to bike. These improvements can be funded through a Parking Benefit District fund.

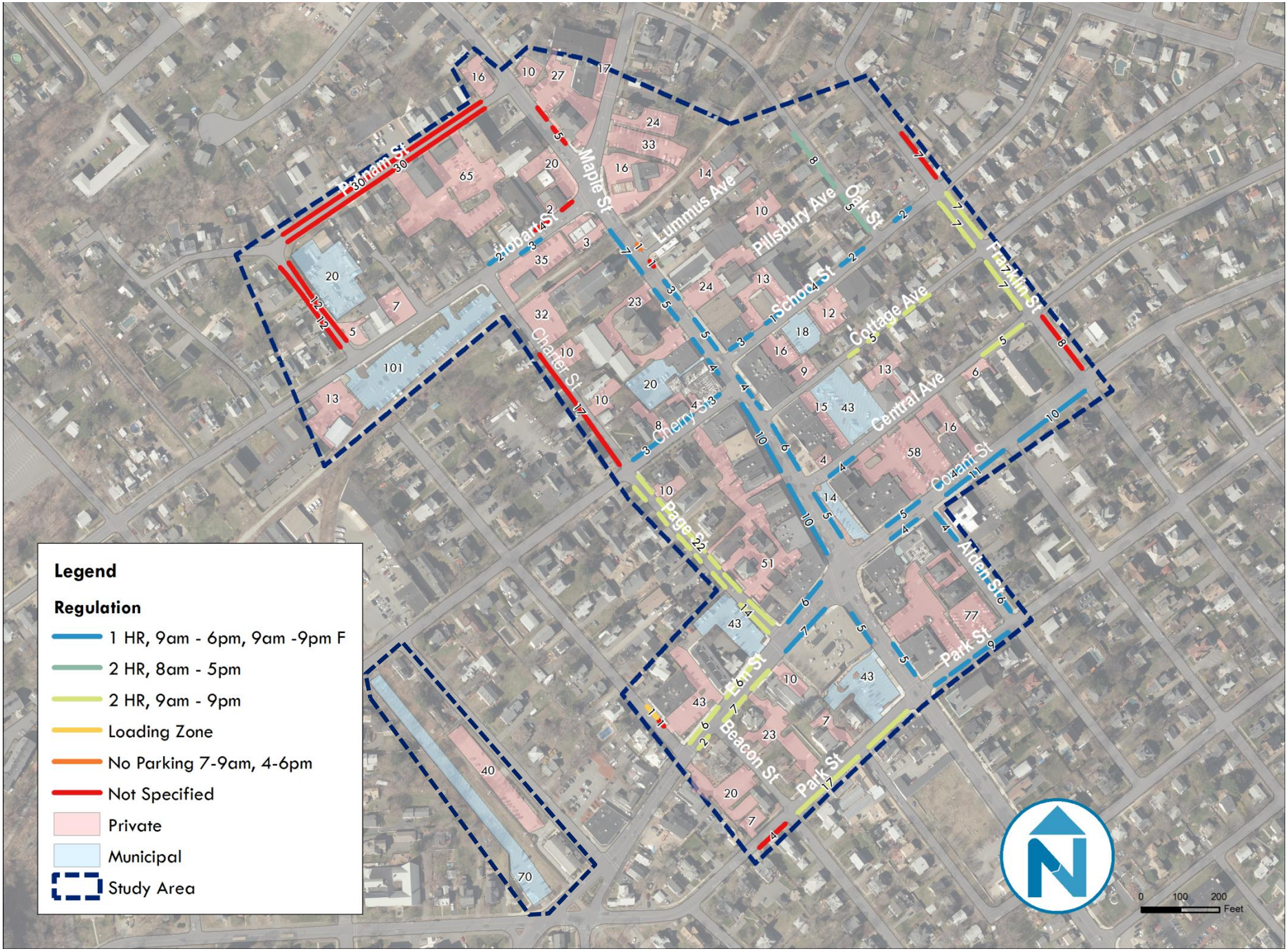
Figure 35 Complete Street Design Example - Neighborhood Main Street

Figure 36: Curb Extension Example - Before & After

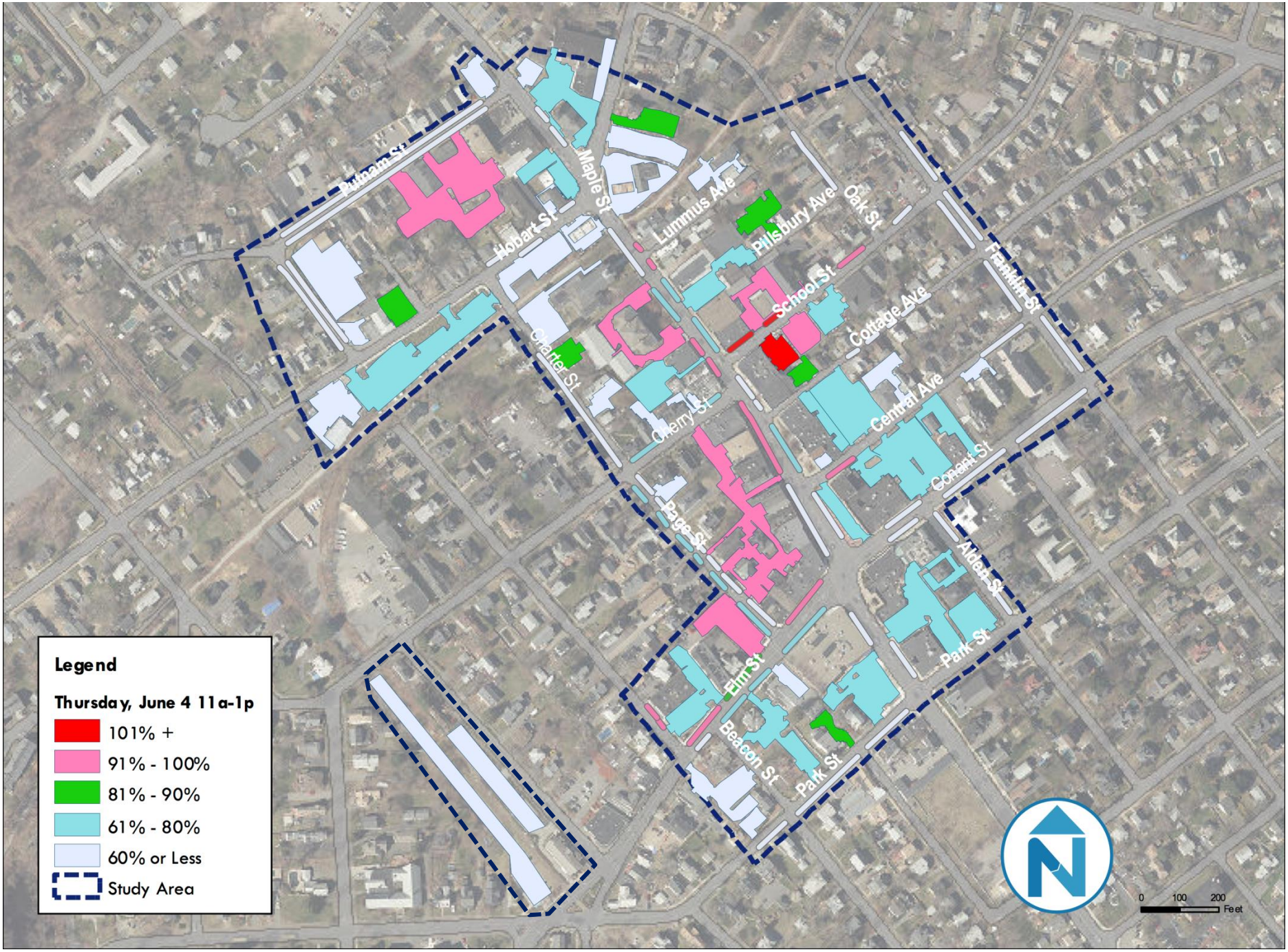


TECHNICAL APPENDICES

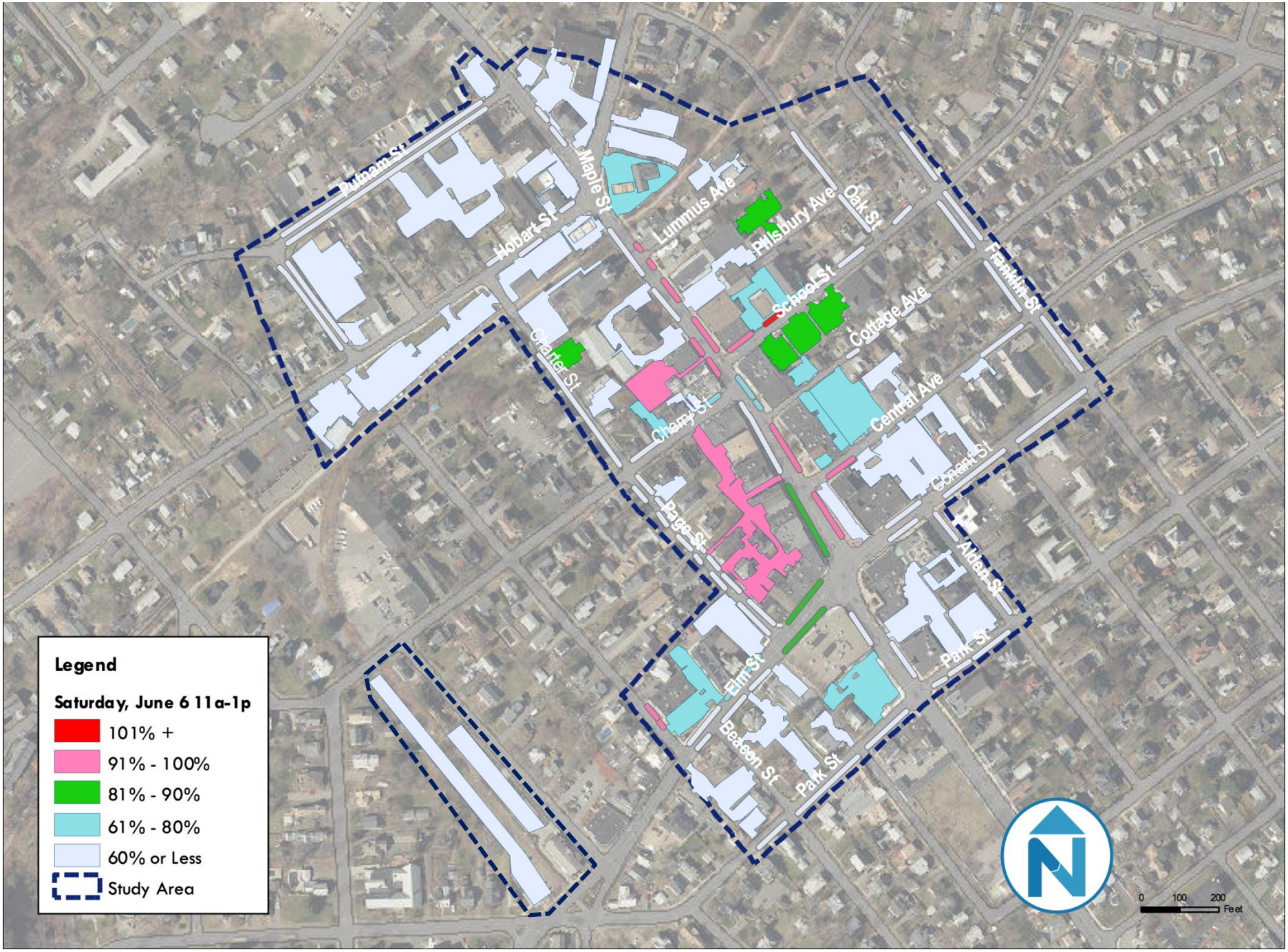
Appendix Figure 1: Downtown Danvers Study Area Parking Inventory



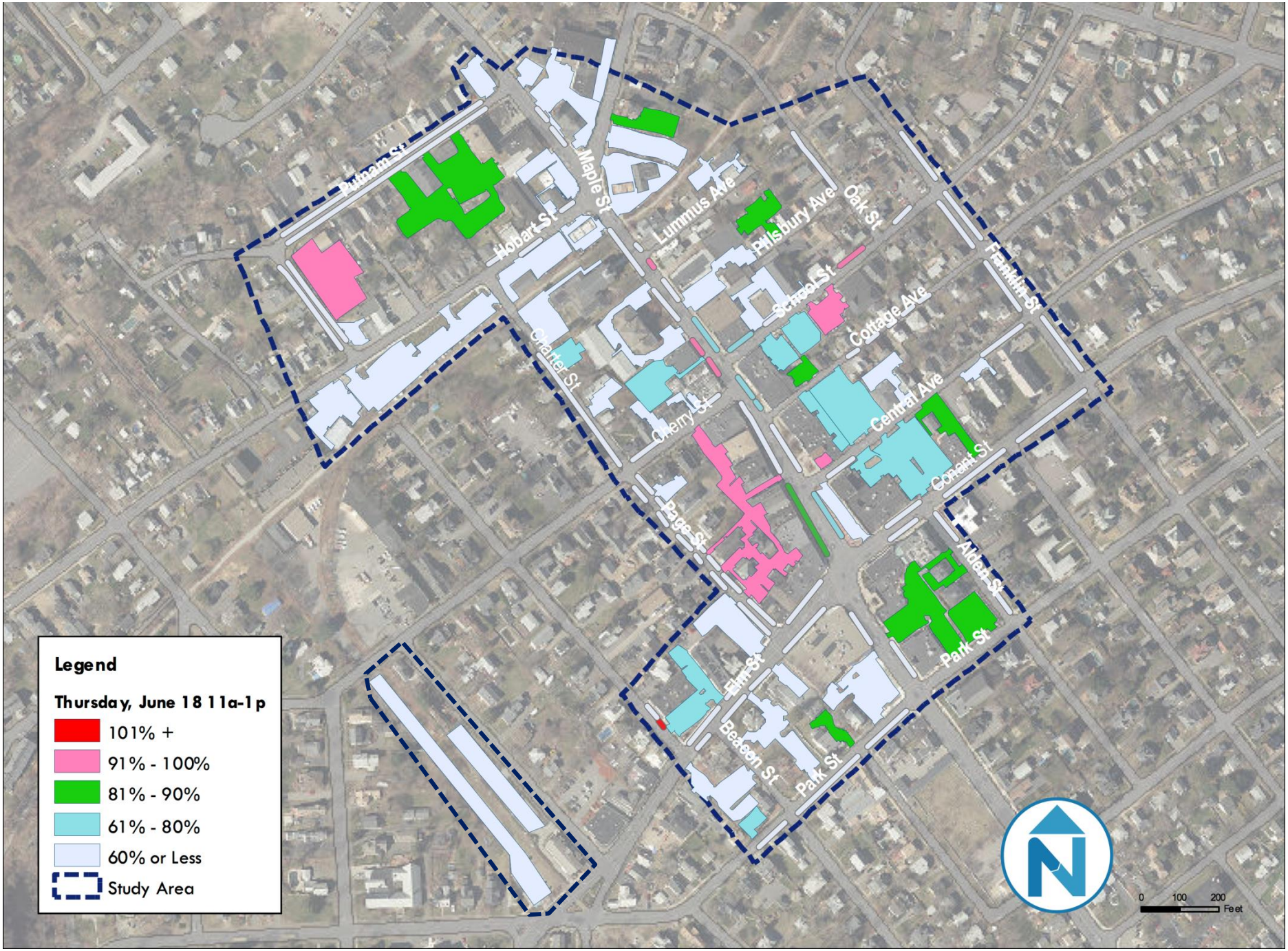
Appendix Figure 2: Downtown Danvers Parking Peak Utilization – Thursday June 4th 11am-1pm



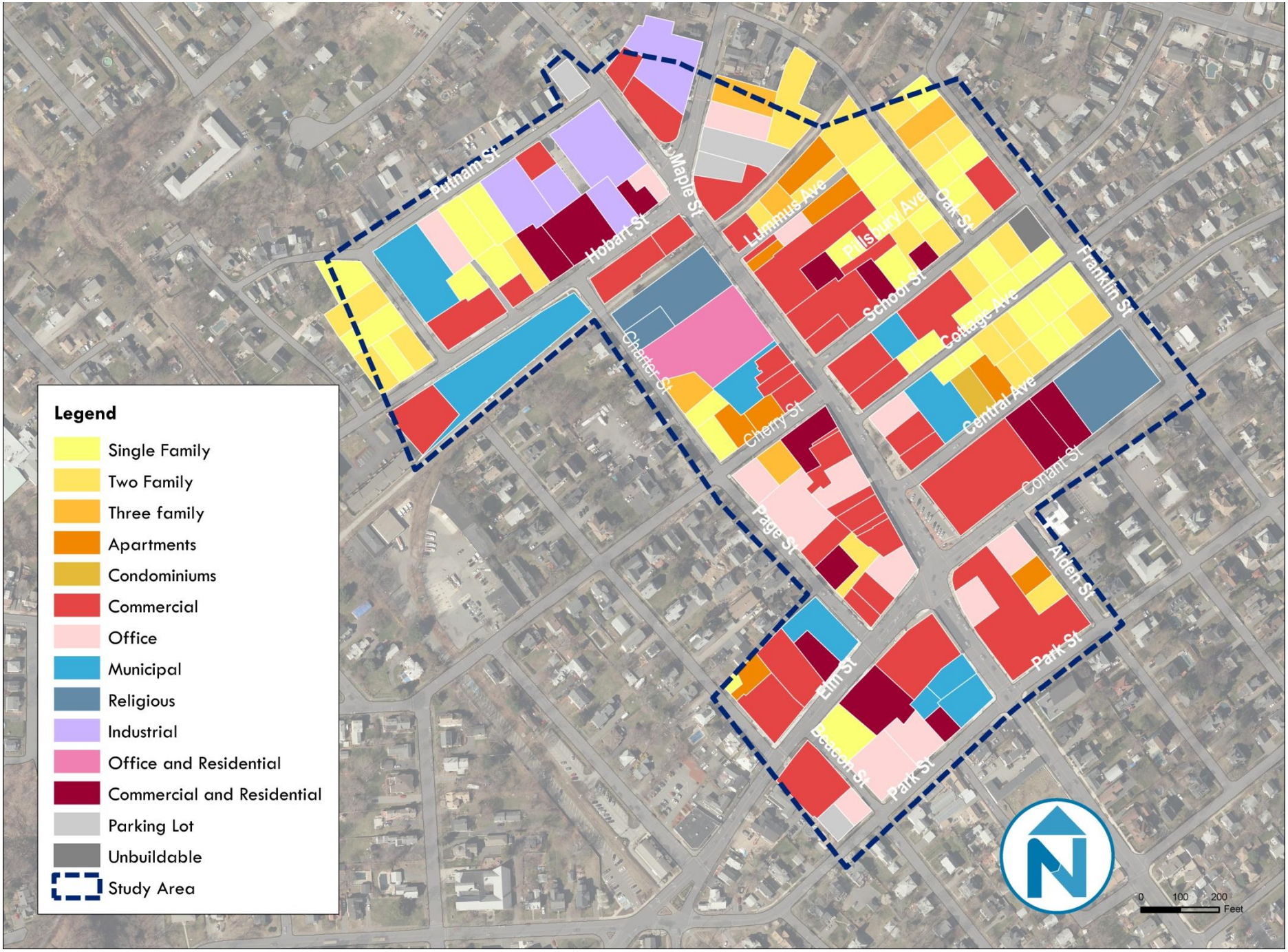
Appendix Figure 3: Downtown Danvers Parking Peak Utilization – Saturday June 6th 11am-1pm



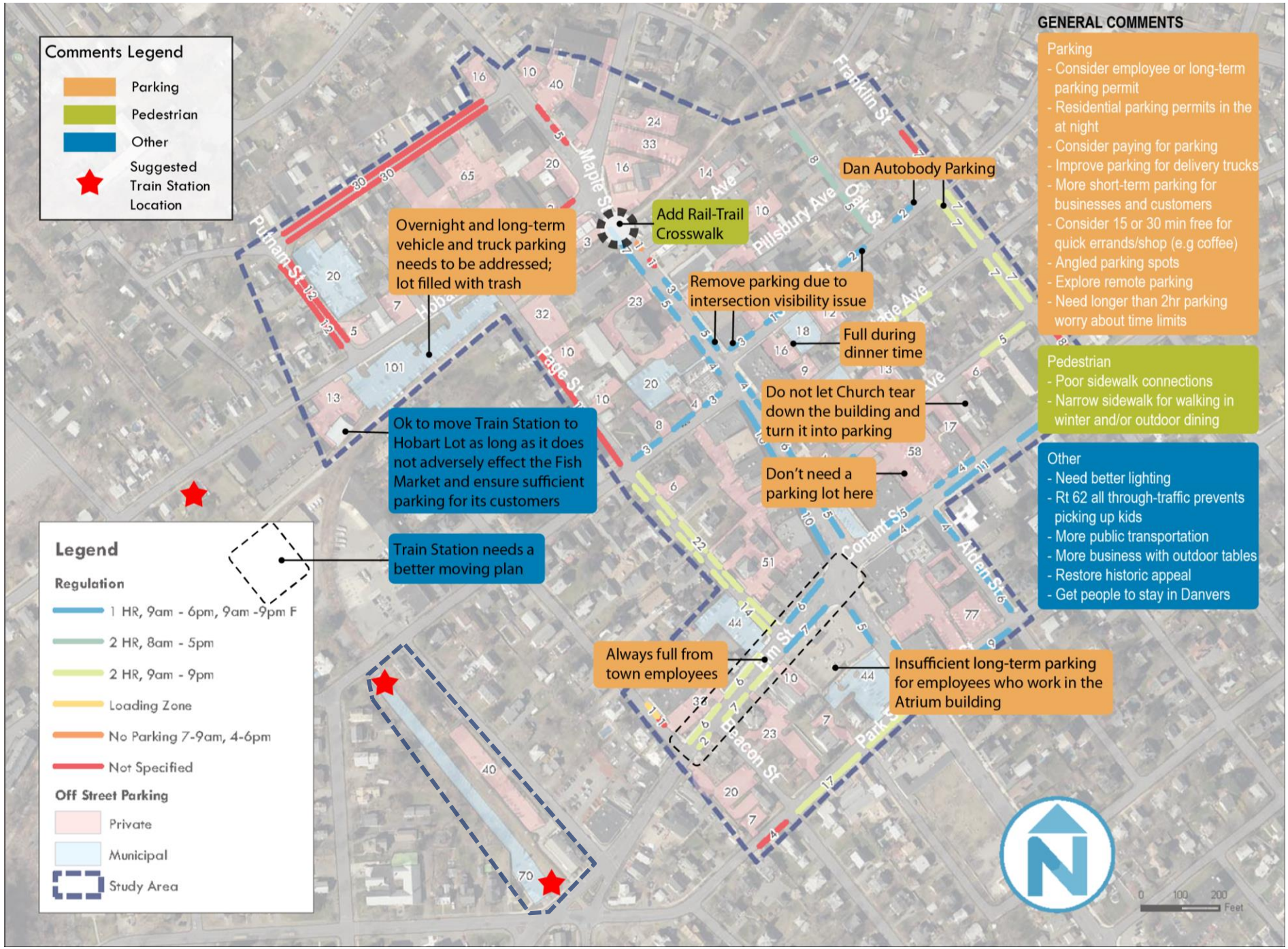
Appendix Figure 4: Downtown Danvers Parking Peak Utilization – Thursday June 18th 11am-1pm



Appendix Figure 5: Downtown Danvers Study Area Land Use



Appendix Figure 6: Open House Mapping Exercise Comments



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