Hi Dave,

Thank you for reaching out to MAPC to discuss the appropriate parking ratio for the proposed development at 104 Boston Post Road in Weston. As you know, through our Perfect Fit Parking research, MAPC has begun to explore how parking supply at multifamily developments may be better aligned with actual parking demand, thus reducing the construction of excess parking spaces. Oversupplying parking can present a slew of negative consequences, including increasing housing construction costs, contributing to pollution associated with increased stormwater runoff and overall environmental degradation, and encouraging more driving. Through our research assessing parking utilization at multifamily developments in 5 communities north of Boston, we found that parking is routinely oversupplied, with an average of 25% of parking spaces constructed at observed developments left vacant. Therefore, we applaud your efforts to think proactively about the appropriate amount of parking needed for your development.

Given our previous research, we agree with you and feel 2 spaces per unit at 104 Boston Post Road will likely lead to the construction of excess parking. Therefore, we support reducing the parking ratio in a manner that is appropriate with the context of the development, and we encourage the reinvestment of funds that would otherwise go toward parking to support local pedestrian and bicycle infrastructure improvements.

Thank you again for reaching out, and please do not hesitate to follow up with any questions.

Sincerely,

Kasia

Kasia Hart
Transportation Policy Associate
South West Advisory Planning Committee Coordinator
Metropolitan Area Planning Council
60 Temple Place
Boston, MA 02111
khart@mapc.org | 617-933-0745
Please be advised that the Massachusetts Secretary of State considers e-mail to be a public record, and therefore subject to the Massachusetts Public Records Law, M.G.L. c. 66 § 10.
Metro Boston Perfect Fit Parking Initiative

Phase 1 Executive Summary

Report by the Metropolitan Area Planning Council
February 2017
Parking is a point of contention in communities across Metro Boston, and a matter of great importance to the region's housing, transportation, and economic future. Yet many deliberations about the topic occur in the absence of hard data about the amount of parking that is actually utilized. Parking requirements for new housing developments tend to rely more on precedent, neighborhood concerns, and instinct than they do empirical analysis. While some municipalities are taking data-driven approaches to parking management in their downtowns, few have yet to take a systematic approach to creating demand-based parking requirements for multifamily residential developments. A demand-based parking approach uses field observations and statistical models about likely parking demand as the basis for determining off-street parking requirements, and uses parking policy as a tool to discourage vehicle ownership and reduce vehicle miles traveled (VMT) in highly transit-accessible and walkable locations.

The Metropolitan Area Planning Council (MAPC) has begun an initiative to develop the data and tools that communities need to establish informed, sustainable, and economical parking policies. This report summarizes Phase 1 of that effort, which entailed field surveys of 80 multifamily residential developments to measure actual parking utilization, and statistical modeling of the results to assess what neighborhood and building factors are associated with parking demand. Phase 1 was limited to five municipalities north of Boston: Arlington, Chelsea, Everett, Malden, and Melrose. Future phases of the work will include data collection in additional parts of the region, refinement of the parking demand model, and creation of digital tools to support community decision-making. In doing so, MAPC references the work of the Center for Neighborhood Technology, which has conducted similar work in three other major metro areas: Seattle, Washington D.C., and Chicago.

While there is a tremendous range of parking issues that can be explored in the Metro Boston area, Phase 1 focuses on municipal off-street parking requirements for multifamily developments. Historically, these requirements have been determined outside the context of actual parking utilization data, and tend to remain unchanged for long periods of time. The relatively arbitrary nature of determining parking requirements is reflected in the surveyed municipalities; among these five communities, parking requirements for multifamily developments range anywhere from 1 to 2 spaces per unit. Several have already taken steps to move away from a single parking requirement for all multifamily developments within a community, regardless of context, and instead allow for fewer spaces to be constructed in some of the most walkable and transit-oriented neighborhoods. Ideally, the Perfect Fit Parking Initiative will encourage cities and towns to continue to move in this direction of creating context-specific parking requirements that are based on up-to-date parking utilization data. We also hope it will encourage developers to propose an amount of parking that is consistent with actual demand, rather than frequently exaggerated expectations.

The results of Phase 1 are twofold. First, MAPC field surveys found that approximately one in four multifamily residential parking spaces were unused during the hours when most people are at home and asleep, precisely the time one would expect the highest utilization. On average, each housing unit has 1.15 spaces available, but utilizes only 0.65 spaces. In all, MAPC counted nearly 1,200 empty spaces sitting unused across the 80 surveyed properties. This finding alone suggests that municipalities would be well-advised to revisit the standards that are creating excess parking. It also suggests that developers and property managers would benefit from limiting unnecessary parking, which can be expensive to build and maintain. Figure 1 below demonstrates the range of utilization rates observed across the 80 surveyed properties.

Metro Boston Perfect Fit Parking Initiative | Phase 1 Executive Summary
OVERBUILT PARKING
Average parking across five municipalities

The lot is 74% full

Figure 1: Observed Trends in Parking Utilization at Surveyed Multifamily Developments
Second, statistical modeling suggests that parking demand may be induced by abundant parking supply: the number of parking spaces available per housing unit is the single biggest factor associated with parking demand per housing unit. The analysis seems to indicate that "if you build it, they will park." Continued research may document other important factors, but preliminary results suggest that local parking regulations can (and should) do more than respond to parking demand; they may actually be able to influence vehicle ownership and the resulting VMT and traffic congestion. Ultimately, there is an opportunity cost to excess parking. Figure 2 below demonstrates the financial impact of the unnecessary construction of parking spaces.

**Oversupplied**

**EXCESS PARKING SPACES**

In Arlington, Chelsea, Everett, Malden, and Melrose combined, MAPC observed 1,187 unused parking spaces. This means that for every 10 housing units in the surveyed buildings, there are, on average, 3 excess parking spaces.

- **1,187** unused parking spaces
- **356,100 sq ft** at empty space
- **$11,870,000** in unnecessary construction

At 300 square feet per parking space, that translates into 356,100 square feet of unused space and, with construction costs at $10,000 per surface lot parking space, $11,870,000 of unnecessary spending.

**Lost Opportunity**

**HOUSING AND OPEN SPACE**

Overbuilt parking spaces observed in Arlington, Chelsea, Everett, Malden, and Melrose could instead be used to build 427 2-bedroom housing units or 8 acres of parks, playgrounds or open space.

- **900 square feet of space could be used for:**
  - Three parking spaces with aisles: 30' x 30' (900 sq ft)
  - One 900 sq ft 2-bedroom apartment: 36' x 25'
  - One 900 sq ft park

*Figure 2: Implications of Excess Parking*
The purpose of this report is to serve as a first step in addressing the lack of reliable and up-to-date data around parking utilization at multifamily residential developments. The upcoming phases of MAPC's work will include collecting data from additional multifamily developments in different communities, using that data to create a more robust statistical model, and working with cities and towns to create parking requirements and parking polices that are better aligned with actual parking demand.

A more data-driven approach to developing parking requirements could facilitate more housing in walkable, transit-oriented neighborhoods. It could also lower housing costs, create more space for housing, amenities, or open space, and reduce traffic congestion in the neighborhoods where housing is built— all good reasons to look seriously at changing parking policy.
Metro Boston Perfect Fit

Parking Initiative

Phase 1: New Metrics and Models for Parking Supply & Demand

Kasia Hart

Kate Ito
Aligning Parking Supply and Demand

Perfect Fit Parking

Multi-family developments
Supply and demand at
Relationship between parking
Insight into the existing
Goal: Collect data to gain
Data Collection

Surveyed 126 multifamily properties

Conducted overnight parking counts at 80 multifamily properties
4,511 parking spaces counted

Serving 3,913 housing units

1,187 unused parking spaces
356,100 sq ft of empty space
How full were the parking lots?

Parking Utilization Rate by Surveyed Property (N=80)

Average: 74%
How full were the parking lots?

Parking Utilization Rate by Surveyed Property (N=80)
How full were the parking lots?

Parking Utilization Rate by Surveyed Property (N=80)
0.2 to 2.2 parking spaces supplied per unit

Parking Supply per Unit by Surveyed Property (N=80)

Average: 1.15
On average, parking lots were 74% full.
Excess Parking per Unit by Surveyed Property

Excess Parking per Unit
- Less than 0.15
- 0.15 - 0.25
- 0.25 - 0.5
- Greater than 0.5
- Full Lots

Surveyed Municipalities

Data Sources: MAPC, MassGIS
Date: November 2016
Phase 1 Model

BUILDING CHARACTERISTICS
- Parking supply per unit
- % of affordable units
- Tenure
- Average number of bedrooms/unit
- Average Rent
- Parking cost included
- Building square footage
- Floor Area Ratio
- % building coverage of lot

NEIGHBORHOOD CHARACTERISTICS
- Number of jobs accessible by transit within 30 minutes
- WalkScore
- Block size
- Median rent
- InfoUSA
- AllTransit score
- Transit Connectivity Index
- Transit as percentage of income
Location matters...

- Jobs Accessible by Transit within 30 minutes

![Graph showing the relationship between number of jobs accessible by transit and parking demand per unit.](image-url)
...but supply may drive demand

- Parking supply
Don't let past thinking dictate future planning

Collect Data
Engage Stakeholders
Context-Specific!
Phase 2 Sampling Frame Criteria

- Located in the Inner Core
- Apartments with 9 units or more
- Transit accessibility
- Vehicle ownership per household
Thank you!

Kasia Hart, MAPC  
khart@mapc.org | 617-933-0745

Kate Ito, MAPC  
kito@mapc.org | 617-933-0729

Supported by the Barr Foundation and the Boston Region Metropolitan Planning Organization's Unified Planning Work Program