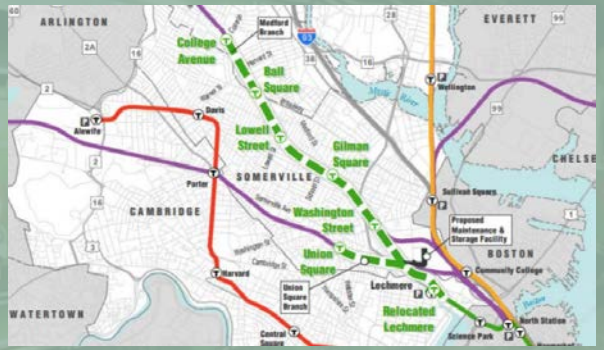
Parking Requirements in Somerville and the Green Line Extension



Peter Kimball Charles Mills

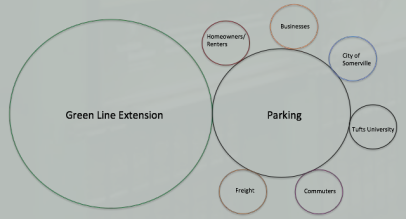
Spring 2018

Process

Context

Case Studies

Analysis



Recommendations and Next Steps

- Sustainability
- Economy
- Design and Urban Form
- Transportation

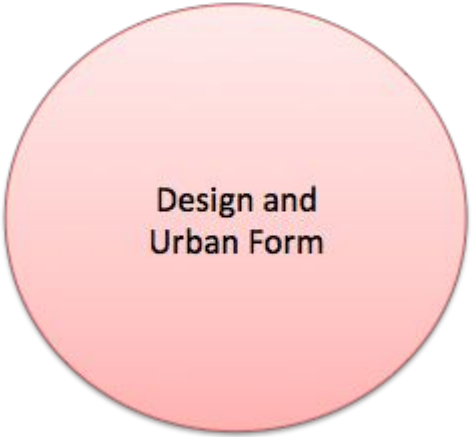
What strategies can enable **reduction in parking requirements** in Somerville, with the advent of the Green Line Extension?

Abstract

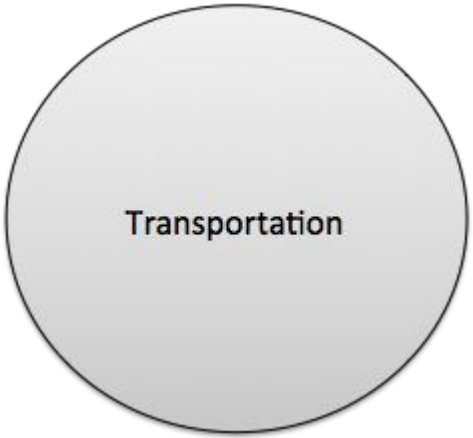
Parking has always been a hotly debated topic that reflects the demographic, building, and neighborhood characteristics of a given community. Car parking is a routine yet highly complex part of daily life for both drivers and those affected by parking. Transportation infrastructure, design, and travel behavior all affect the role that parking plays within a community. The presence of technological advances has changed the way that we view parking. This study aims to unravel the effects the Green Line Extension will have in **leveraging parking requirements** within Somerville. In addition, we will be looking at how certain stakeholders value demand and the way that the building of the Green Line Extension will alter the parking situation in Somerville. The decision to not build any dedicated parking for each transit stop has been a concern of several stakeholders, which will allow commuters the opportunity to drive to different commuter stops and park on side streets. **Excess parking encourages more driving**, by providing drivers with more available options to park. The price of land in Somerville affects parking requirements. Overbuilt parking lots reduce the amount of land that can be used to generate economic indicators. Ultimately, rather than building parking garages, the excess land can be used for housing and mixed-use development. Minimum Parking requirements have been a mainstay in cities throughout the past 50 years, it is only until now that these requirements are being rolled back to promote more sustainable development. In this study, we will analyze the role that the building of a light rail has had on commuters while also analyzing the effects of eliminating minimum parking requirements. This analysis will allow us to develop policy recommendations to see if the Green Line Extension should be leveraged as a catalyst in **reducing parking requirements in Somerville**.

Achieving Minimum Parking Requirements

- Pollution, GHG
- Social Equity
- Physical Activity



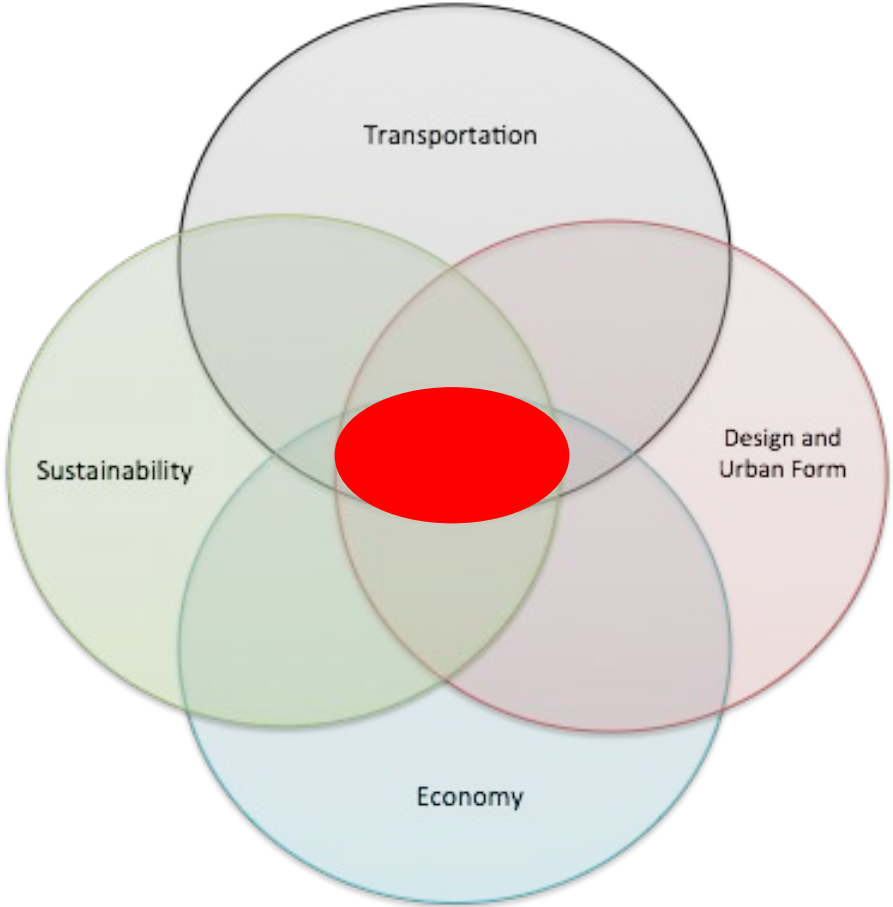
- Site Design
- Sprawl



- Competitive Modes
- System Resilience

- Development Costs
- Business Costs

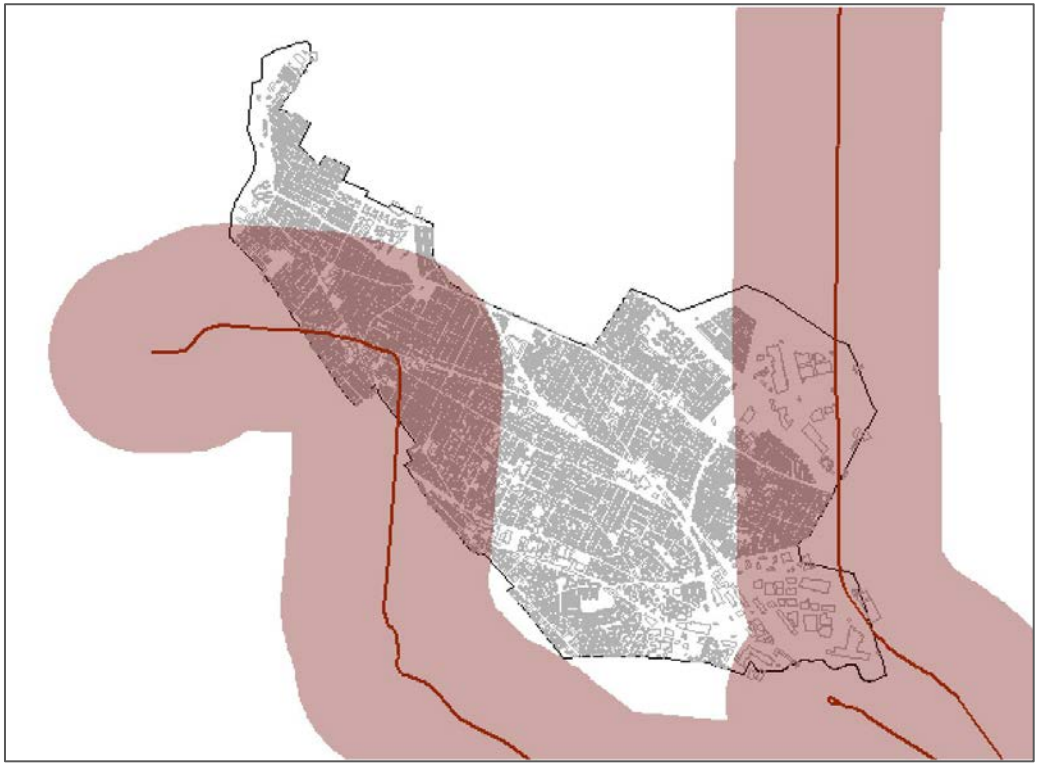
Optimal Parking



With all factors taken into consideration, the zone of optimum parking is identified.

Why is the GLX beneficial to Reducing Parking Requirements?

Somerville, MA



Somerville currently has two MBTA subway stations: Assembly Square and Davis Square being apart of the Orange and Red Lines, respectively.

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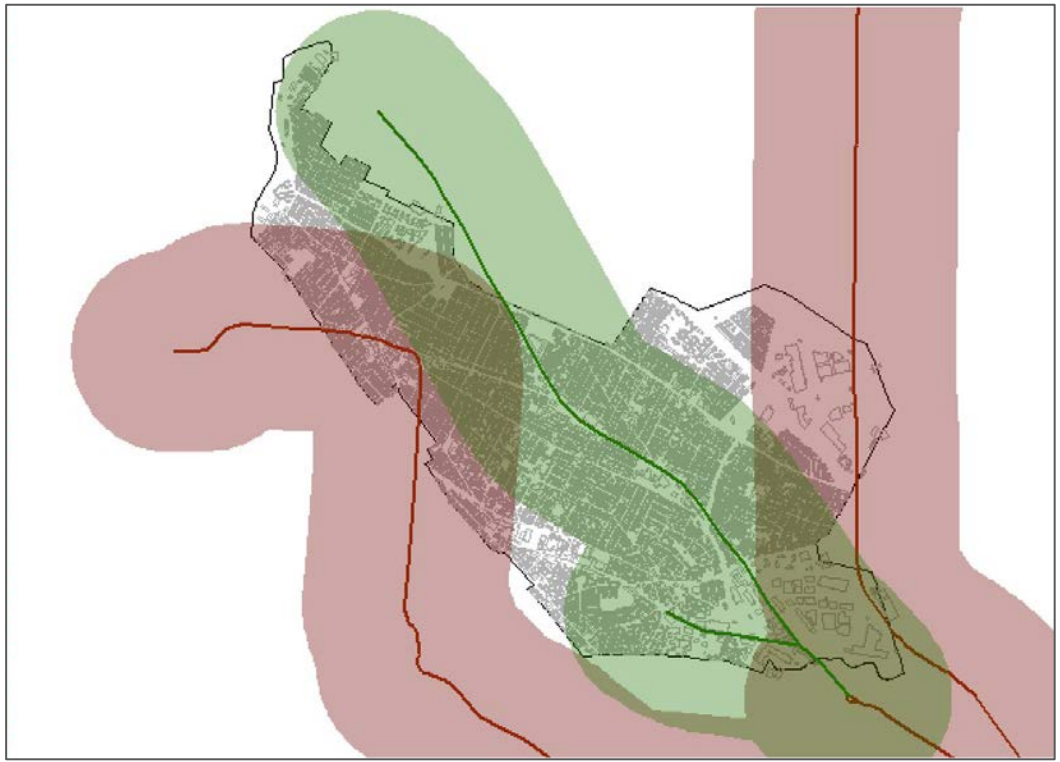
Why is the GLX beneficial to Reducing Parking Requirements?

Somerville, MA



The GLX will increase the community's walkable access to public transit from ***25% to 80%***.

Legend

- MBTA Existing Subway
- 0.5 Mile Walkshed
- MBTA Green Line Extension
- 0.5 Mile Walkshed

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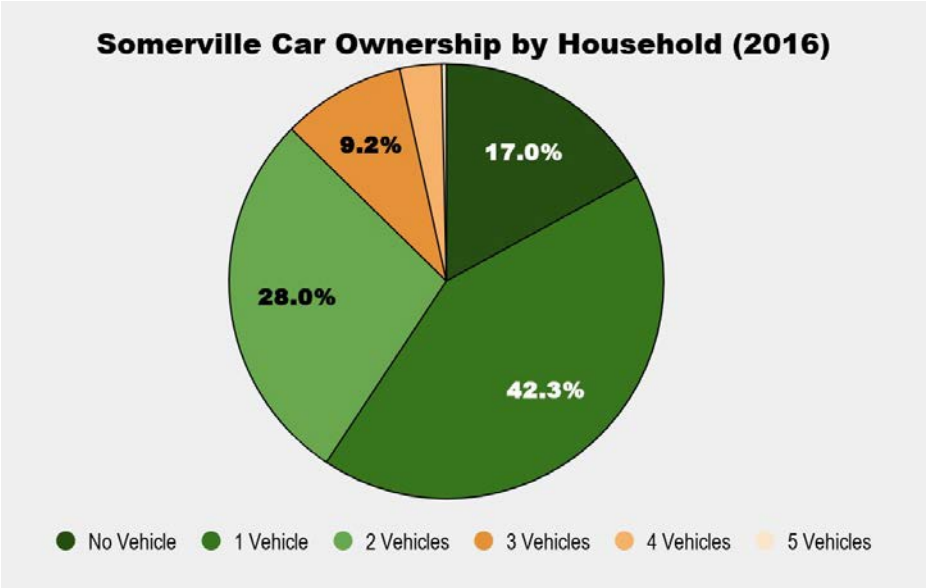
Current Somerville Parking Data



Somerville's Current Residential Parking Pass:

- $40 annual fee
- Free for those 65+ or with handicapped plates/placards
- Location: unlimited unless otherwise stated
- Hours: unlimited unless otherwise stated

Somerville Minimum Parking Requirements

Residential Use	Parking Spaces to be Provided
Dwelling Unit in: single-, two-, or three- family dwelling building, townhouses, multiple dwelling building, or mobile home, (including Artist Live/ Work Space)	1.0 per efficiency/ studio unit or Artist Live/Work space; 1.5 per unit with 1 or 2 bedrooms 2.0 per unit with 3 or more bedrooms (unless otherwise specified in article) Plus in all cases: 1.0 for every 6 units (when 6 or more units) for visitors and service vehicles
Senior Citizen Housing (including congregate)	0.75 per unit, 0.40 per unit allowable by special permit

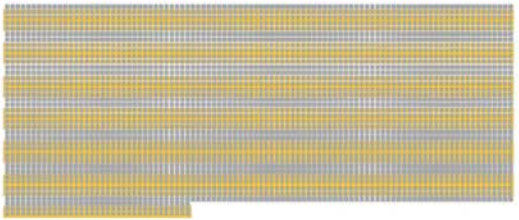
Source: City of Somerville

Parking Supply Lost Opportunity

Oversupplied = Lost Opportunity

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 of empty space

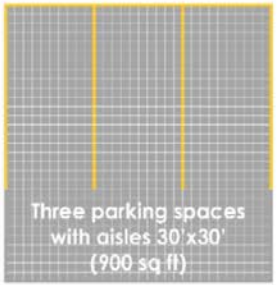
$11,870,000 in unnecessary construction

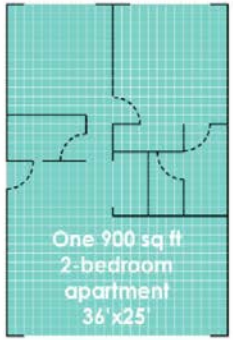
At 300 square feet per parking space, that translates into 356,100 square feet of unused space and, with construction costs at $10,000 per surface lot parking space, $11,870,000 of unnecessary spending.

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:





The minimum parking requirements for the 8,131 households without a car in Somerville is equal to:

2,556,600 sf.

or

3,631 One Bedroom Units

MAPC, Perfect Fit Parking Initiative, 2017

Case Studies

*Requirements for case cities:

- Light rail installed between 2008-2010
- Reduction in number of those who commuted to work by car
- Transportation infrastructure lead to co-benefits

Somerville

Phoenix

Transit Oriented Development

Minneapolis/ Saint Paul

Affordable Housing

Seattle

Sustainable Living

Seattle, Washington

Sustainable Living

Seattle

What?

Reduce parking and discourage driving

Why?

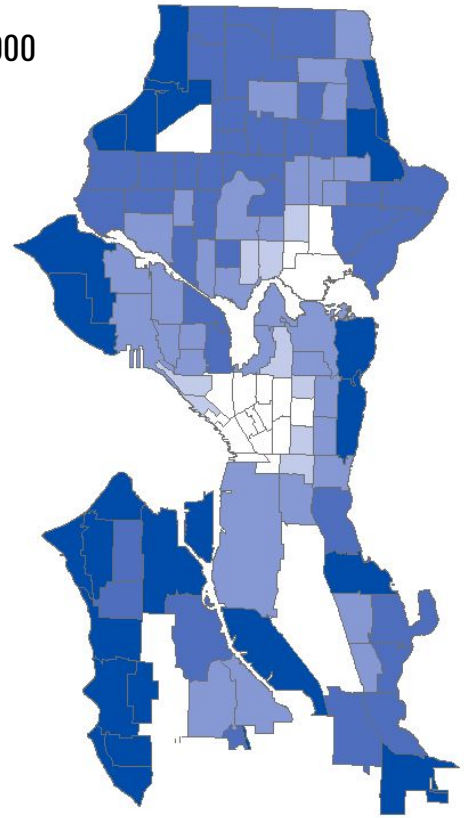
Promote a more sustainable and successful commitment to environmental sustainability

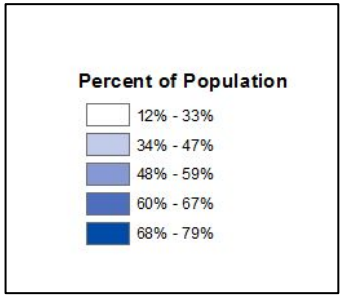
How?

Reduce parking by opening private lots to the public and separating parking from rental leases

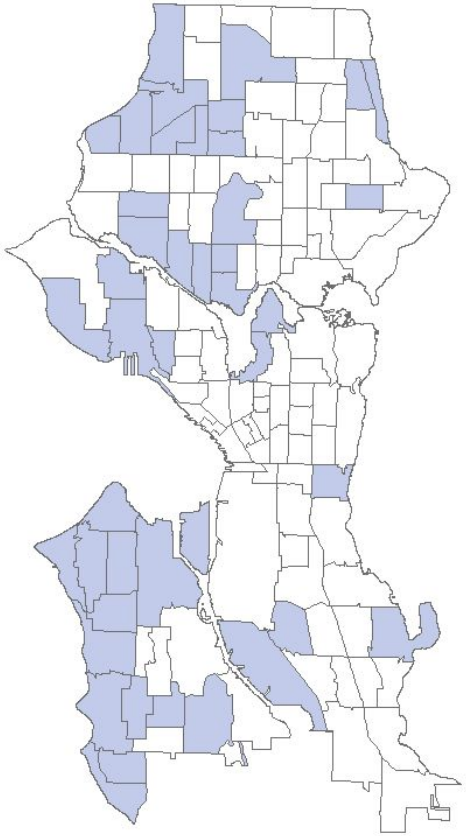
Seattle Transportation Trends - Drove Alone

2000





2016



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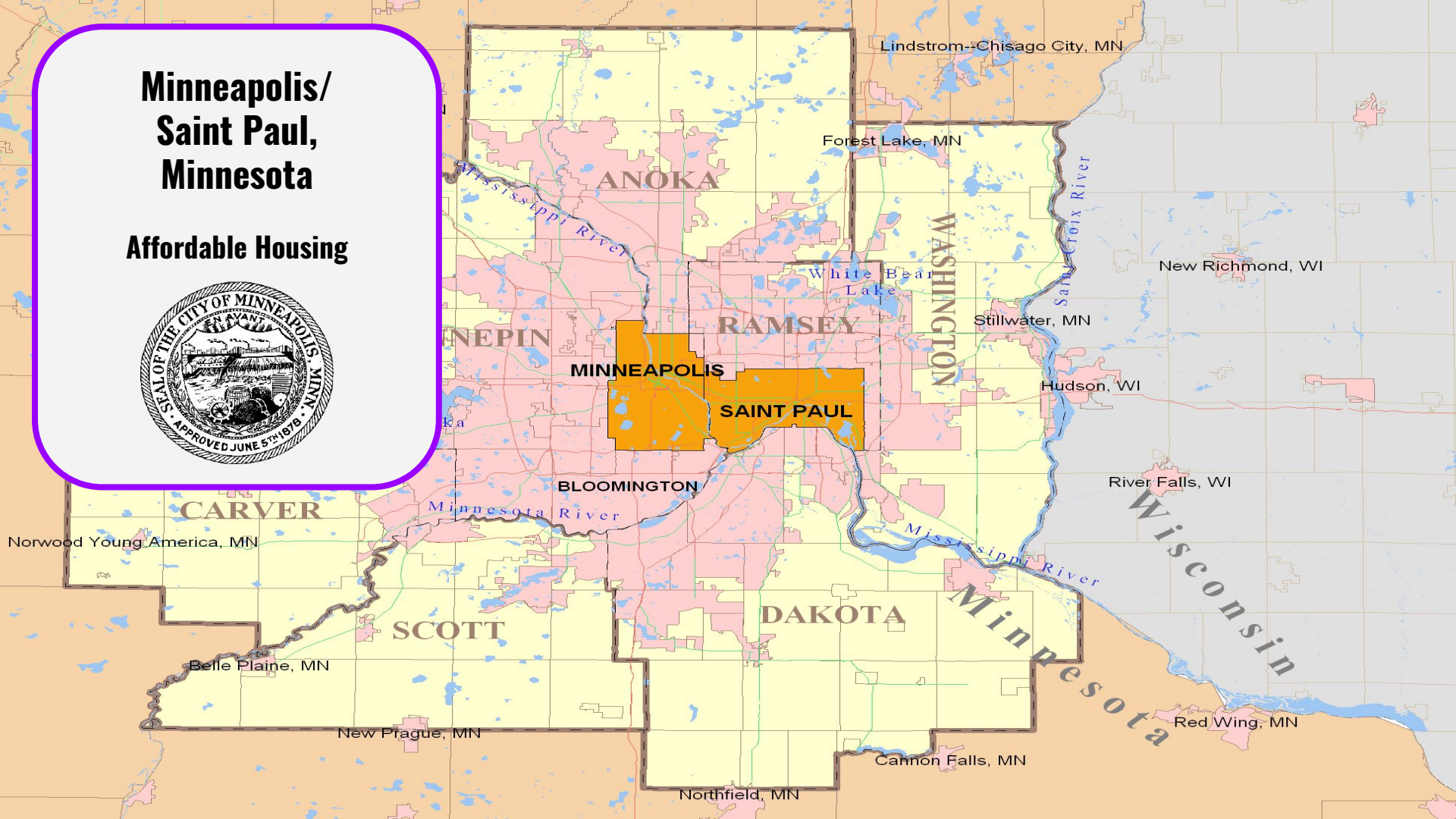
Takeaways - Seattle

01	Promote Biking	• Promote a more sustainable biking environment by emphasizing more bicycle infrastructure.
02	Redefine “Frequent Transit”	• Where there are areas of more “Frequent Transit” there is less of a need to require and provide parking.
03	Flexible-Use Parking	• In areas where there is underused private parking lots, transfer and use these lots as public parking.

Minneapolis/ Saint Paul, Minnesota

Affordable Housing



Minneapolis/St. Paul

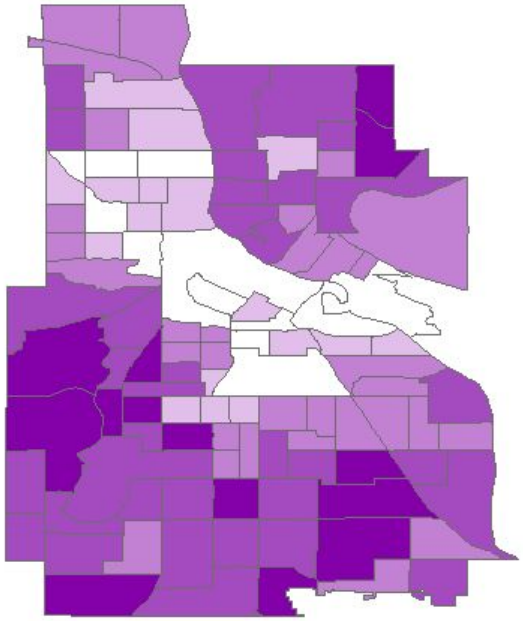
What? Eliminate parking to create more affordability in the TOD Corridor.

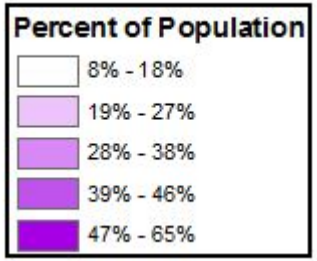
Why? The development of the Light Rail in the TOD corridor has created increasing pressure on the housing market. Eliminating minimum parking will help alleviate this affordability issue.

How? Reduced the number of spaces for all Transit Oriented Development from 1.0 space/unit to 0.7 spaces/unit.

Minneapolis Transportation Trends - Drove Alone

2000





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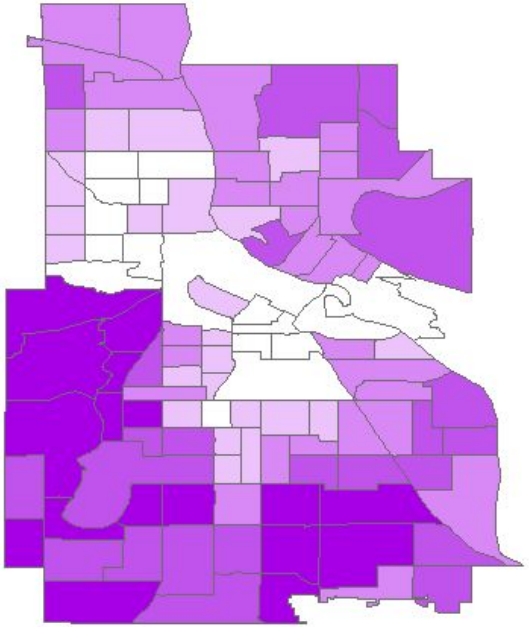

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Saint Paul Transportation Trends- Drove Alone

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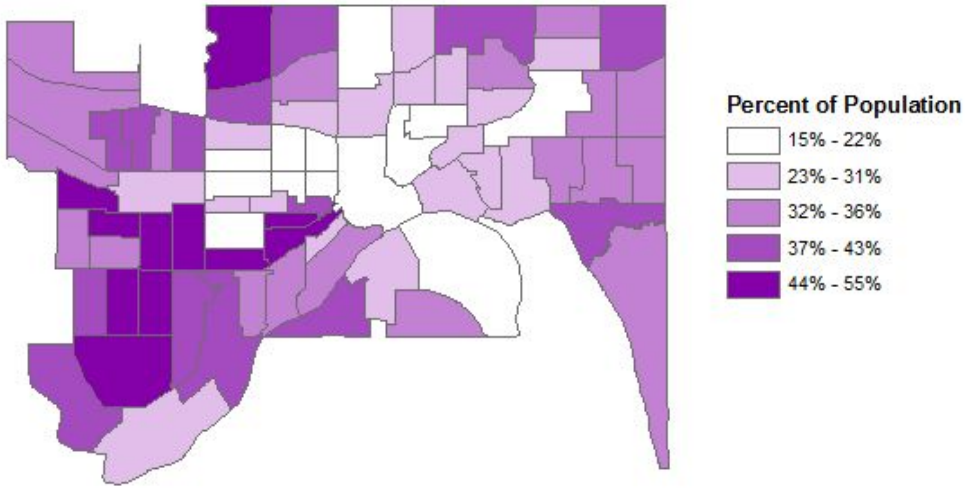

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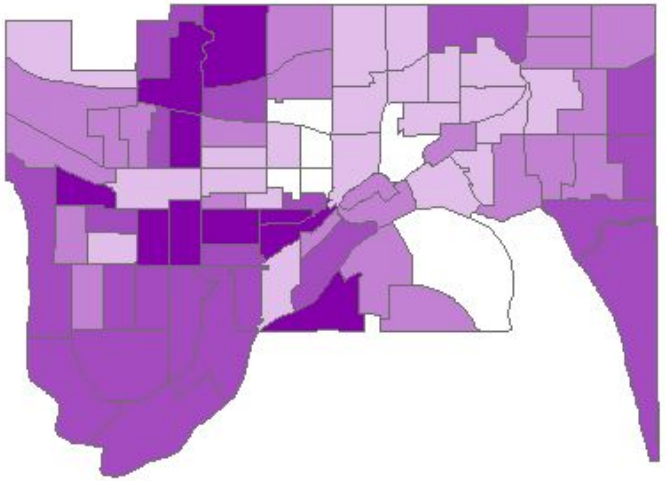

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Takeaways - Minneapolis/St. Paul

01	Parking Correlates to Affordability	• Eliminating Minimum parking requirements increase more available affordable housing. • Increase more affordable development within Somerville.
02	The development of Light Rail increases pressure on the housing market.	• As expected in Somerville, the light rail increased pressure on the housing stock in the Twin Cities that would help be alleviated by eliminating minimum parking requirements.
03	Adapt to the wants and needs of Somerville Residents	• As more and more people move to Somerville after the inception of the Green Line Extension their will be a much less reliance on parking and the automobile.

Phoenix, Arizona

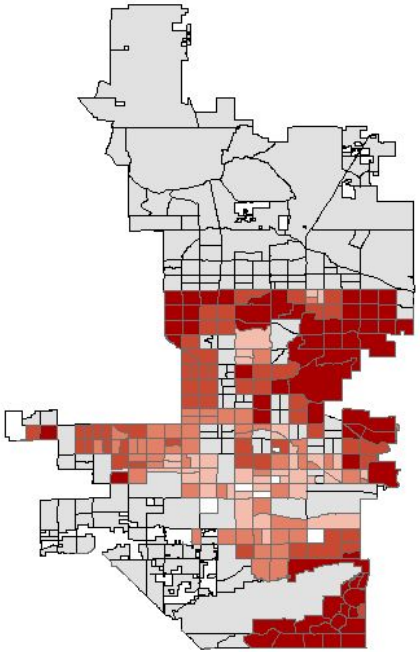
Transit Oriented Development

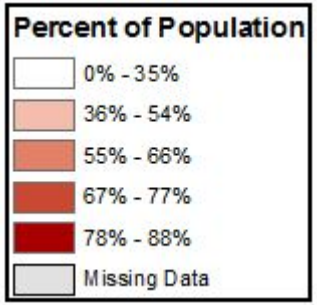
Phoenix

What?	Increase Transit Oriented Development
Why?	Promote a more sustainable and efficient form of transportation
How?	Use Station Area Planning to invest in stations and use this investments to leverage Transit Oriented Development

Phoenix Transportation Trends - Drove Alone

2000





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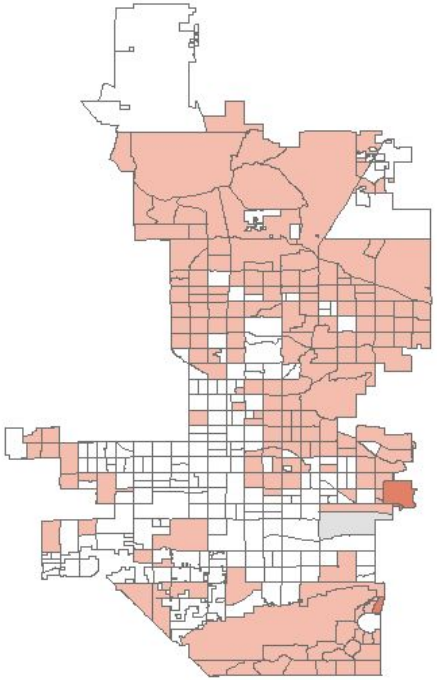

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Takeaways - Phoenix

01	Reduce Parking in Transit Areas	• Households living near stations own fewer cars • More workers take transit to jobs located near transit stations.
02	Reduce Construction Costs in TOD Overlays	• Before Parking Requirements, multifamily residences require 2 spaces per household • Reducing Parking Requirements will decrease construction costs by ~$200,000.
03	Getting the most out of Transit Oriented Development	• Reduce Parking Requirements will allow for greater investment in Station Area which will help leverage Transit Oriented Development • Reduce Development Costs while increasing leverage for Light Rail investment and Station Beautification.

Analysis

Somerville

*Bringing the relevant strategies back to Somerville from each unique city allows for preparedness in stakeholder engagement.

Phoenix

Transit Oriented Development

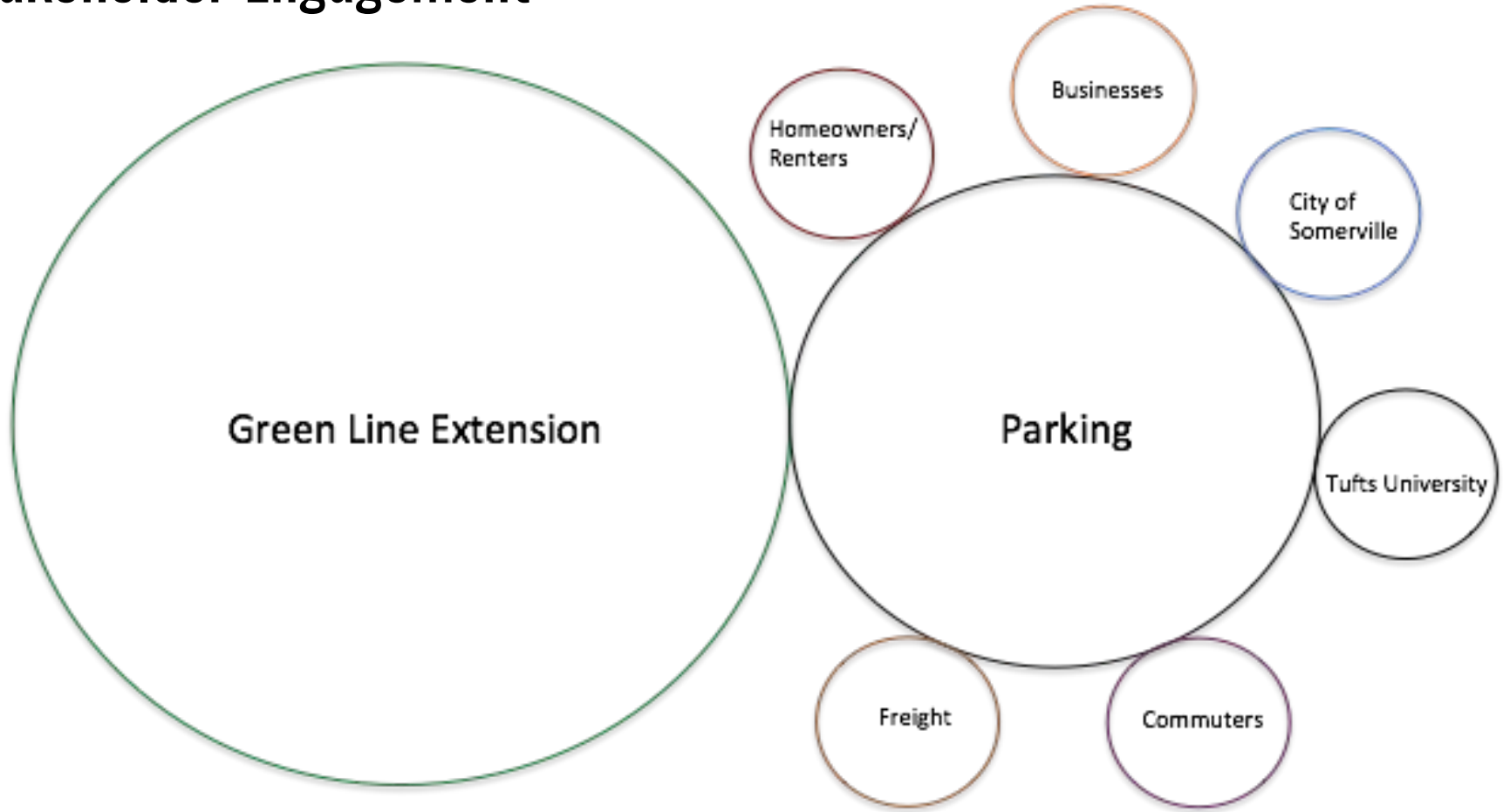
Minneapolis/ Saint Paul

Affordable Housing

Seattle

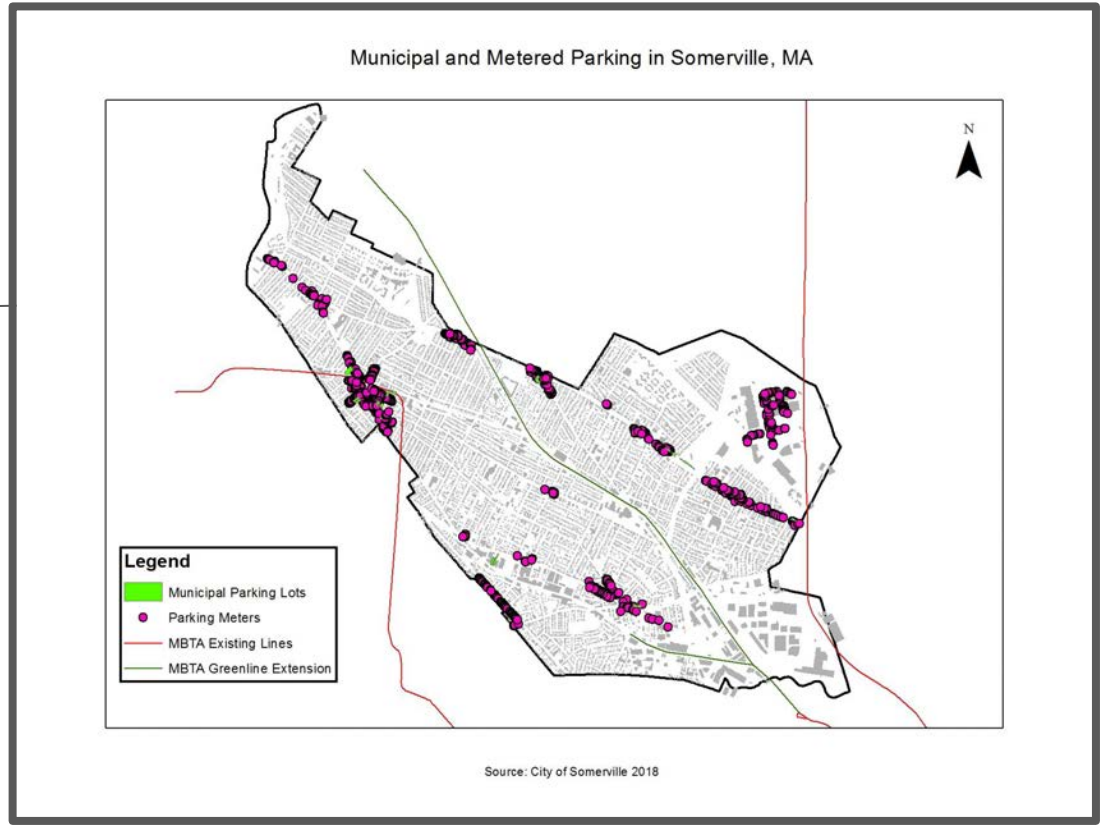
Sustainable Living

Stakeholder Engagement



Content Analysis; Literature Review, Somerville

- Perception vs. Reality
- Map the Parking Supply
- Document Unused Supply
- Self Case Study



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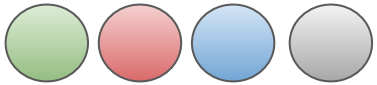
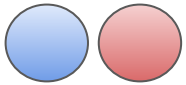
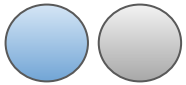
Recommendations for Reducing Parking in Somerville

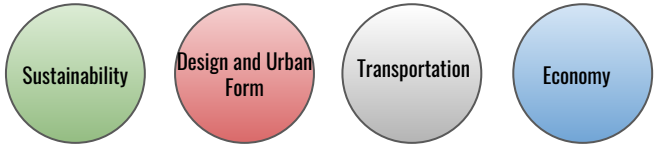
Near Term	Midterm	Ongoing	Future
Eliminate parking minimums within walksheds of 0.25 miles of Green Line Extension stops	Provide developer's tax breaks to increase housing stock	Collect annual data on car ownership in Somerville to accurately determine parking needs and requirement revisions	Promote any future commercial development through walkability and pedestrian infrastructure







Achieving Optimal Parking Requirements:



Conclusion and Next Steps

The Green Line Extension provides an opportunity to eliminate parking requirements and promote sustainable transit oriented development.

Cities that have undergone similar light rail additions in conjunction with reducing parking requirement have seen success.

Begin to engage stakeholders and further research initiatives to further alternative commuting options.

Thank you to all our advisors

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Brandon Wilson

Executive Director

Somerville Historic Preservation Commission

THANK YOU!

Sources

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