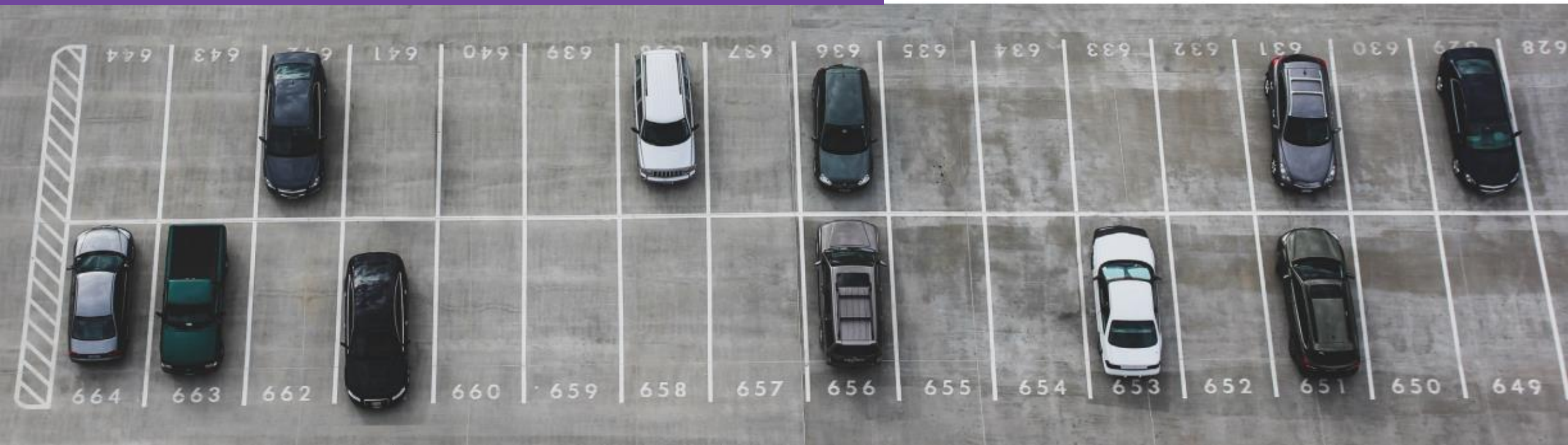


# WestMetro Phase 4 Data Review

## Perfect Fit Parking Initiative



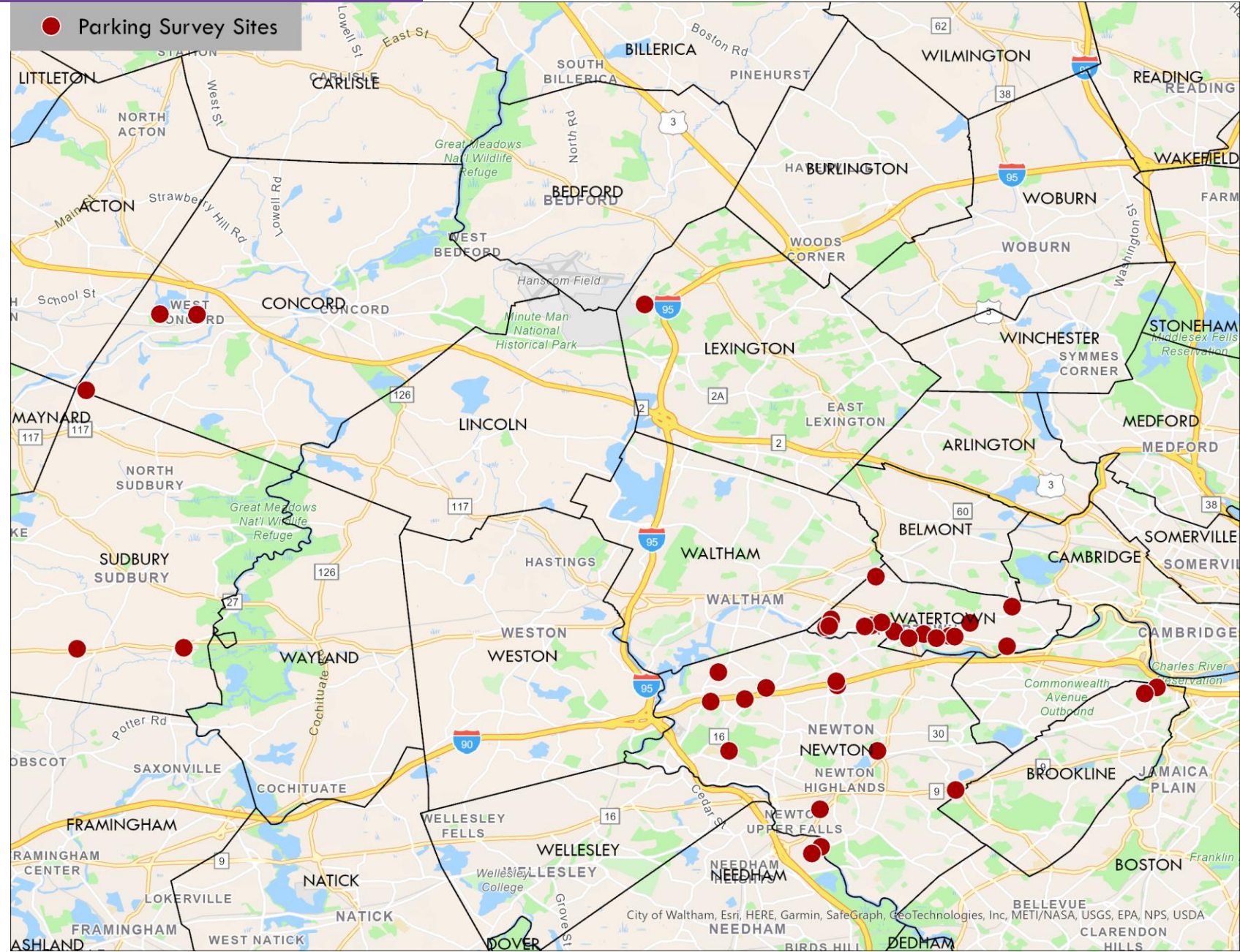
**Metropolitan Area  
Planning Council**

February 2<sup>nd</sup>, 2023  
Conor Gately  
Senior Land Use and Transportation Analyst  
Metropolitan Area Planning Council



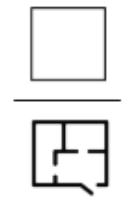
# Perfect Fit Parking Initiative

- Over 40 sites covered by both types of surveys, with 36 having sufficient data to conduct full analysis
- Analysis of parking supply and utilization for each site
- Modeling to determine variables that are strongly associated with parking demand



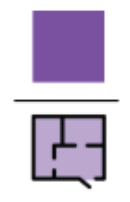
# Perfect Fit Parking Initiative

**Parking Supply per Unit**



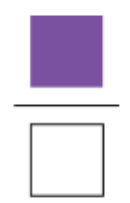
the total number of parking spaces divided by the total number of housing units

**Parking Demand per Unit**



the number of occupied parking spaces divided by the number of occupied housing units

**Parking Utilization**



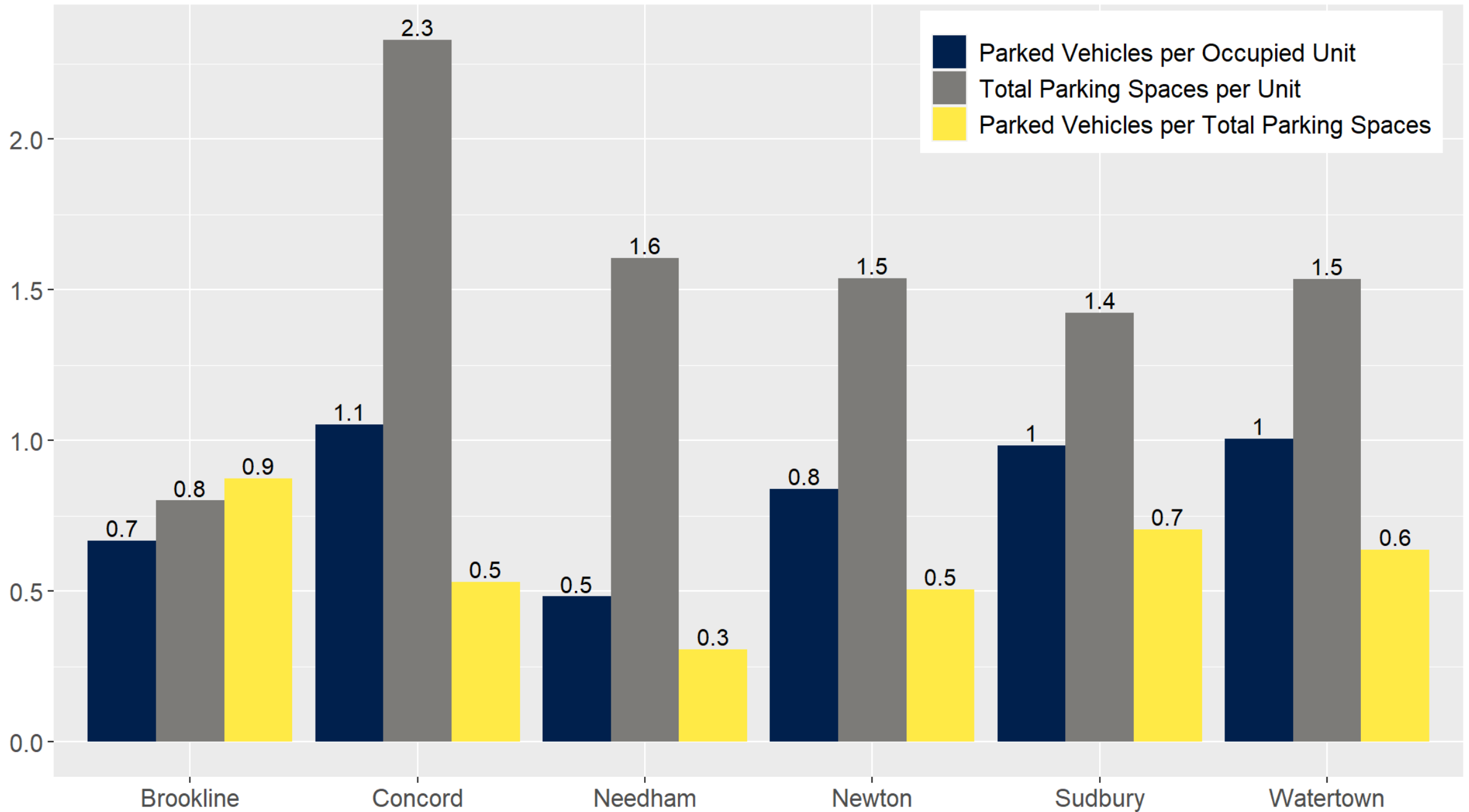
the number of occupied parking spaces divided by the total number of parking spaces

total housing units    unoccupied housing units    occupied housing units    total parking spaces    unoccupied parking spaces    occupied parking spaces

Municipality	Number of Sites	Parking Utilization % Occupied Spaces / Total Spaces	Parking Demand - Occupied Spaces per Occupied Units	Parking Supply - Total Spaces per Total Units
Brookline	2	87%	0.67	0.80
Concord	3	53%	1.05	2.33
Needham	2	31%	0.48	1.60
Newton	10	50%	0.84	1.54
Sudbury	2	71%	0.98	1.42
Watertown	17	64%	1.01	1.53
<b>All Sites</b>	<b>36</b>	<b>59%</b>	<b>0.91</b>	<b>1.56</b>

- Parking supply averages 1.5 spaces per unit – as high as 2.3 in Concord
- Parking demand ranges from 0.48 to 1.05 vehicles per unit
- Parking utilization ranges from 30% to 87% - **on average less than 2/3 spaces are occupied**

# Parking Analysis Results by Town



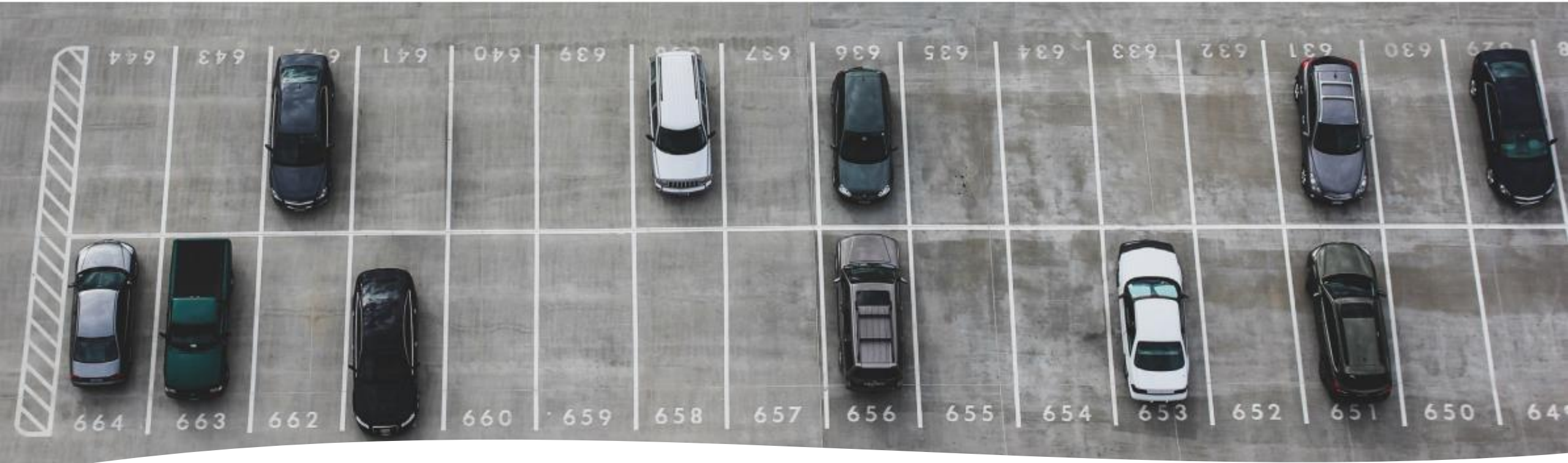
# What factors influence parking demand?

We investigated a total of 25 building and neighborhood variables for their potential influence on the parking demand per unit. These variables are described in Table 1.

- 1. Parking Supply
- 2. Jobs Accessible by Transit
- 3. Percent Affordable Units

Building Features	Parking Features	Built Environment	Socioeconomic Context
<ul style="list-style-type: none"> <li>• Percentage of units that are affordable</li> <li>• Year of construction</li> <li>• Average bedroom count</li> <li>• Average rent or purchase price</li> <li>• Number of units in building</li> <li>• Housing tenure</li> </ul>	<ul style="list-style-type: none"> <li>• Presence of bicycle parking</li> <li>• Parking cost</li> <li>• Ratio of parking cost to monthly rent cost per bedroom</li> <li>• Ratio of parking cost to monthly rent cost per unit</li> <li>• Percent of provided parking spaces that are garaged</li> <li>• Ratio of garage to surface parking spaces</li> <li>• Parking supply</li> </ul>	<ul style="list-style-type: none"> <li>• Number of jobs accessible by 30-minute transit trip</li> <li>• Neighborhood population density</li> <li>• Neighborhood employment density</li> <li>• Neighborhood population and employment density (cumulative)</li> <li>• Presence of MBTA commuter rail station within half-mile</li> <li>• Presence of MBTA rapid transit station within half-mile</li> <li>• WalkScore®</li> </ul>	<ul style="list-style-type: none"> <li>• Median annual income (Census tract)</li> <li>• Average household size for rental households (Census tract)</li> <li>• Average household size for ownership households</li> <li>• Share of households in U.S. Census tract that are renter-occupied</li> <li>• Share of households in U.S. Census tract with zero vehicle</li> </ul>

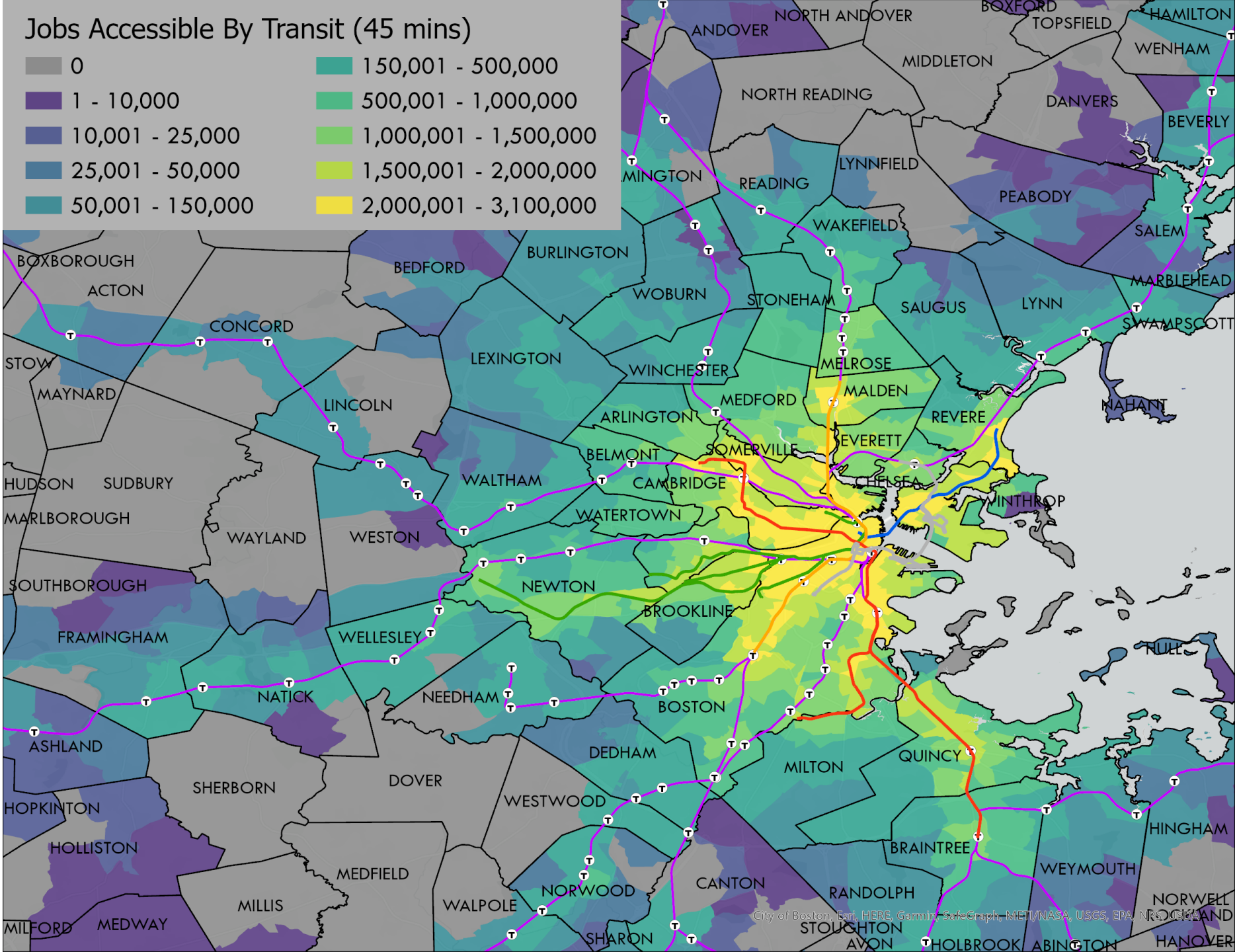
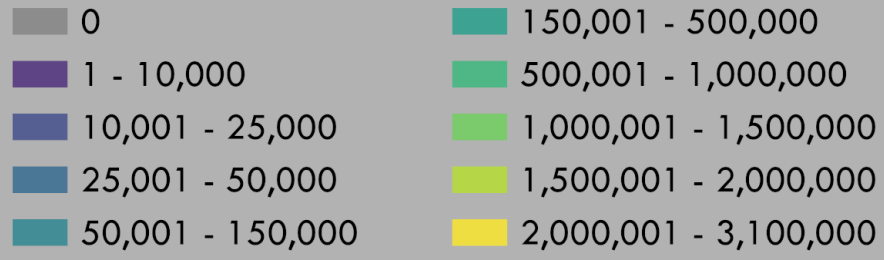
Table 1: Evaluated Building and Neighborhood Characteristics



## Three most influential factors

- Parking supply per unit was the dominant factor associated with parking demand
  - Each additional parking space per unit is associated with an increase of 0.24 parked cars per household
- Job accessibility by transit had a modest negative association with parking demand
- The percent of affordable units also had a negative association with parking demand

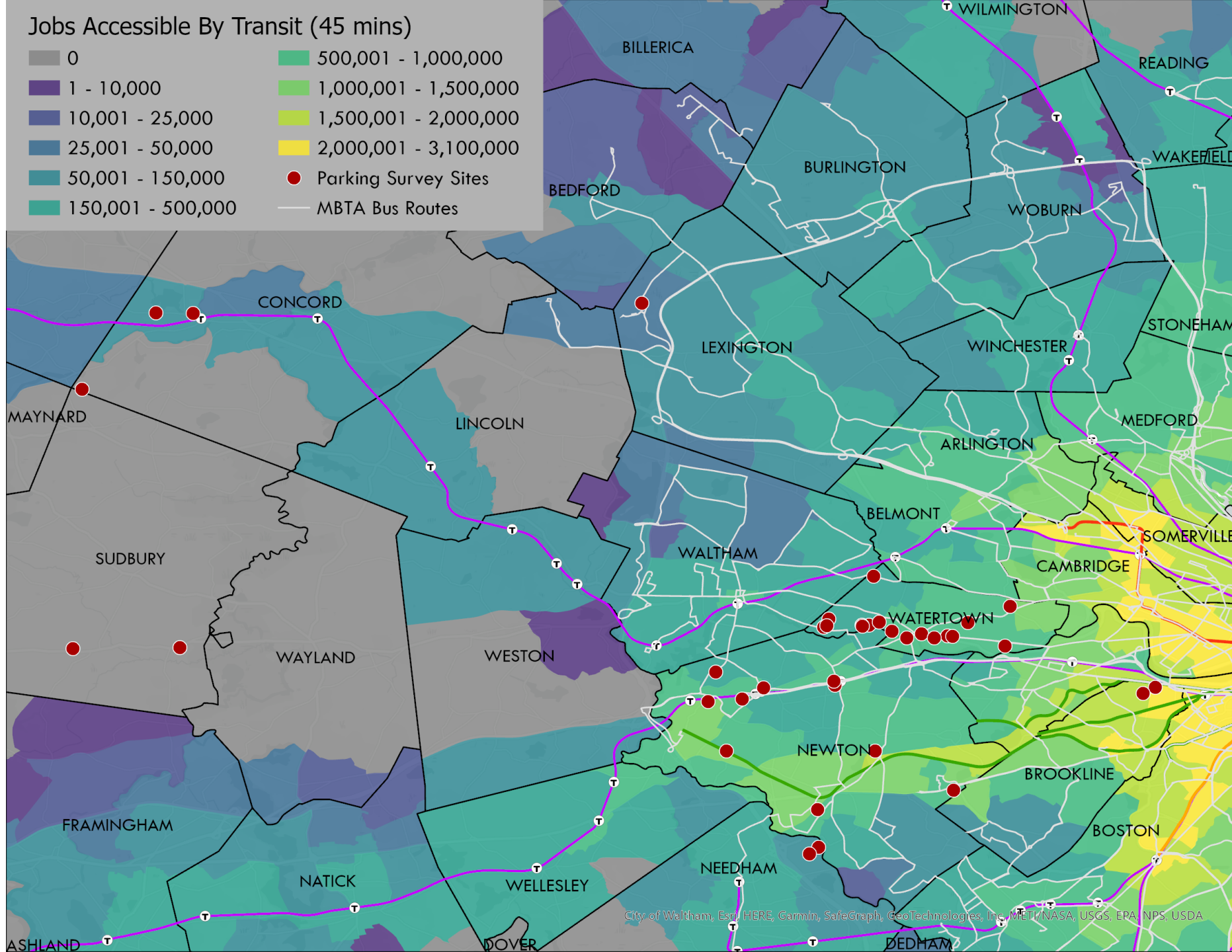
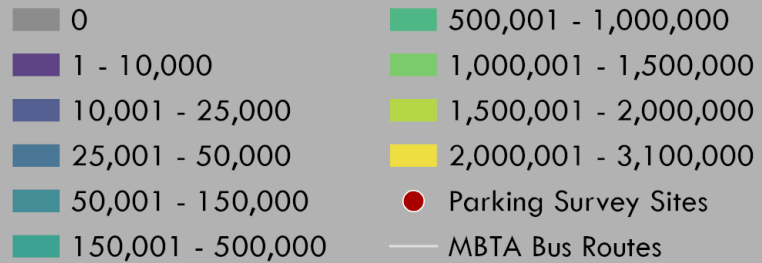
# Jobs Accessible By Transit (45 mins)



City of Boston, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NRC, OpenStreetMap contributors, Swatch, NOAA, GEBCO, Mapbox, Aerion, IGN, Intermap, Inc., Swisstopo, Mapbox, Inc., © 2020



# Jobs Accessible By Transit (45 mins)



# Policy Recommendations

- Shift from parking minimums to maximums
- Reduce parking ratios
- Unbundle parking from housing costs
- Explore strategies for shared parking

# Policy Recommendations

- Require less parking at transit-oriented sites in particular
- Enable lower parking requirements in exchange for more affordable units (especially at transit-oriented sites)

Thank you!

Any Questions?

