



With Community and Environment in Mind:

Bike Share System in Salem, MA

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A stack of several books is visible in the lower right corner, resting on a light-colored wooden surface. The books have various colored covers, including white and brown. A bright, circular light flare is positioned in the upper center of the image, creating a soft glow and casting a shadow on the books. The background is a blurred, warm-toned surface.

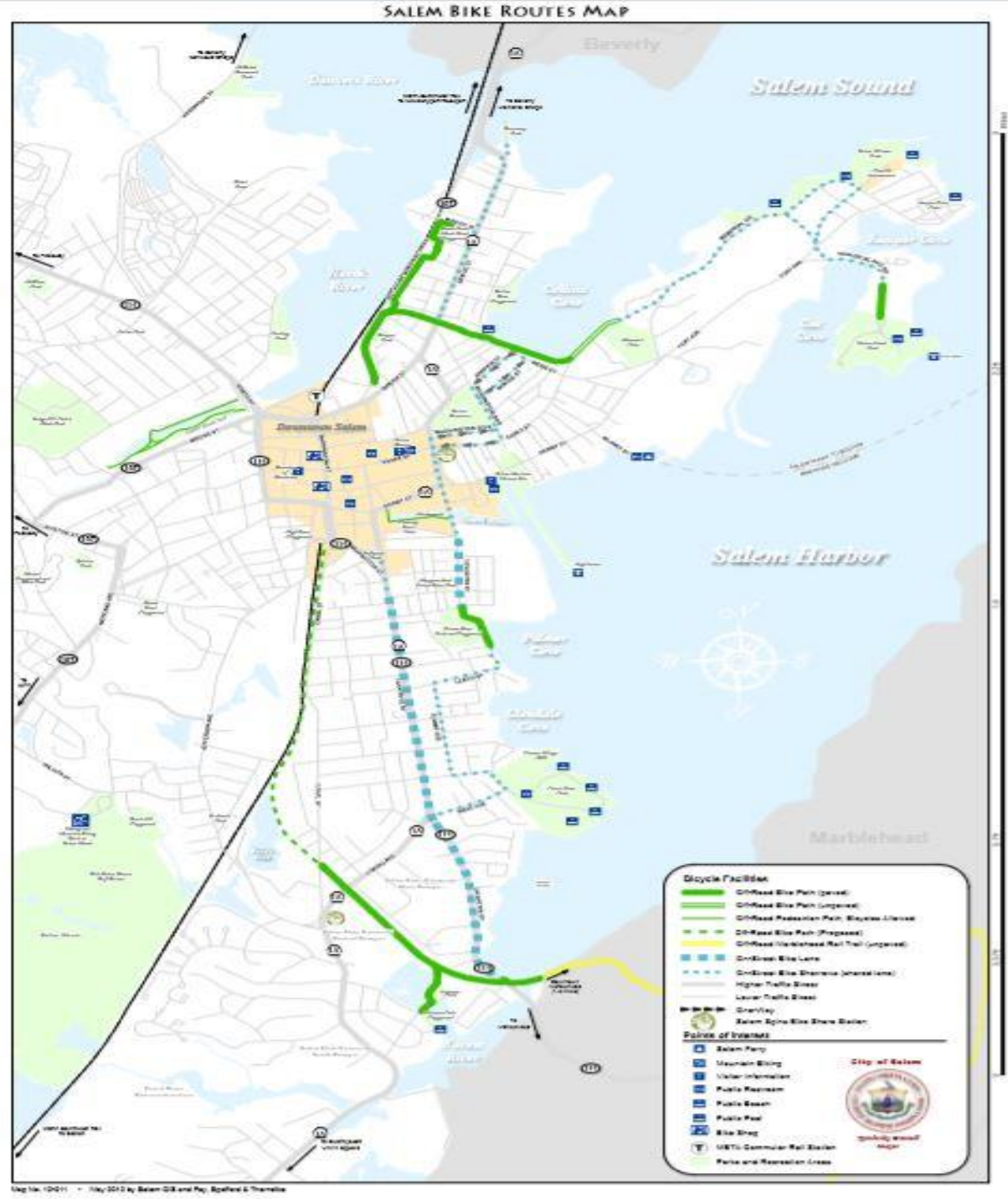
In recent years, there has been a proliferation of **new forms of mobility** in the urban space. Salem, a small tourist town in the northeastern United States, follows this trend. **Sharing bicycles, scooters** and other services offer not only new options for travelers, but also new sources of data that can help municipalities make **better investments in transportation** and policy options. Since 2007, a **bicycle sharing system** has been at the forefront of the **micro-mobility revolution** in the city.

This service is a positive resource for residents, passengers, students and visitors who want to explore the city **faster than walking** and **more sustainable than driving**. As each vehicle has a **GPS** and can be **parked almost anywhere**, the system can provide a **detailed picture of travel patterns** in the region.

Although the start locations of the ride may not be exactly where the cyclist started his journey (since a bicycle may not be available outside its origin), it is likely that the end of the cycle path is very close to the intended destination.

Salem Bike Routes Map:

in 2017, there were 2,500 rides per year. In 2018, it tripled the number of rides to 7,500.



Objectives



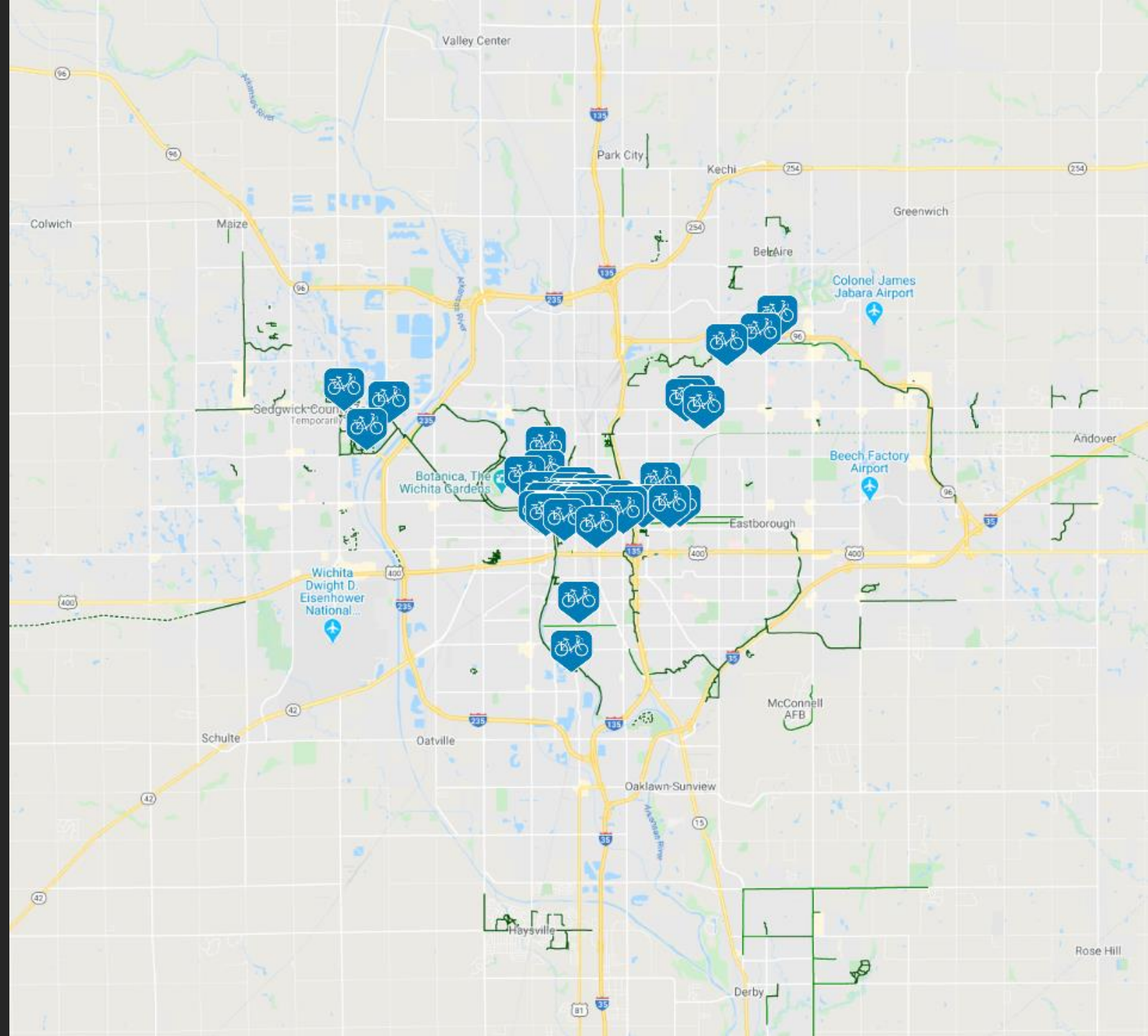
Attributes

Problems

Attributes

Bike share stations in Salem

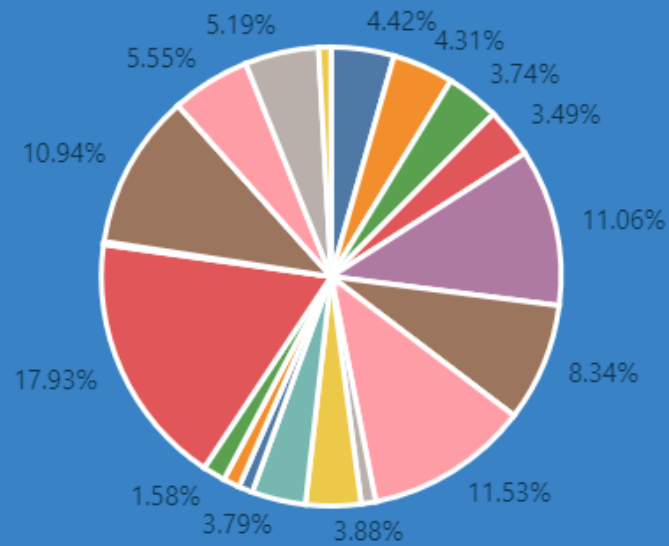
Zagster bikes provide a unique way for people to travel around their communities and around the region, faster than walking and more sustainably than driving.



Street Share Chart in Salem

The regional nature of the system is essential to its utility: 30 % of all trips ended in a different municipality than where they started.

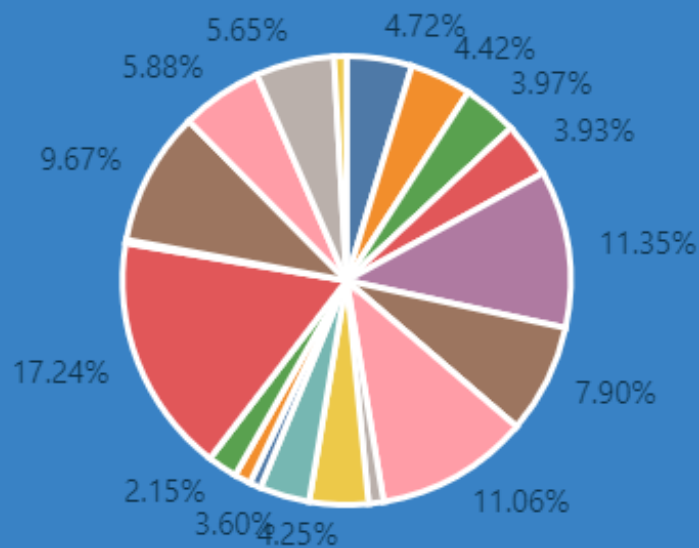
Start Stations



From Station

- Bike Path at Canal & Mill Streets
- Blaney Street/Salem Ferry
- Boston & Essex Streets
- Congress Street / The Point
- Derby Street
- Federal Street/MBTA
- Front Street/Derby Square
- Gassett Virtual Station
- Hawthorne Hotel Pop-Up Station
- MBTA/Lower Level
- MBTA/Lower Level (Inside)
- McGlew Park
- Salem State South Campus Pop Up
- Salem State University / Central Ca...

End Stations



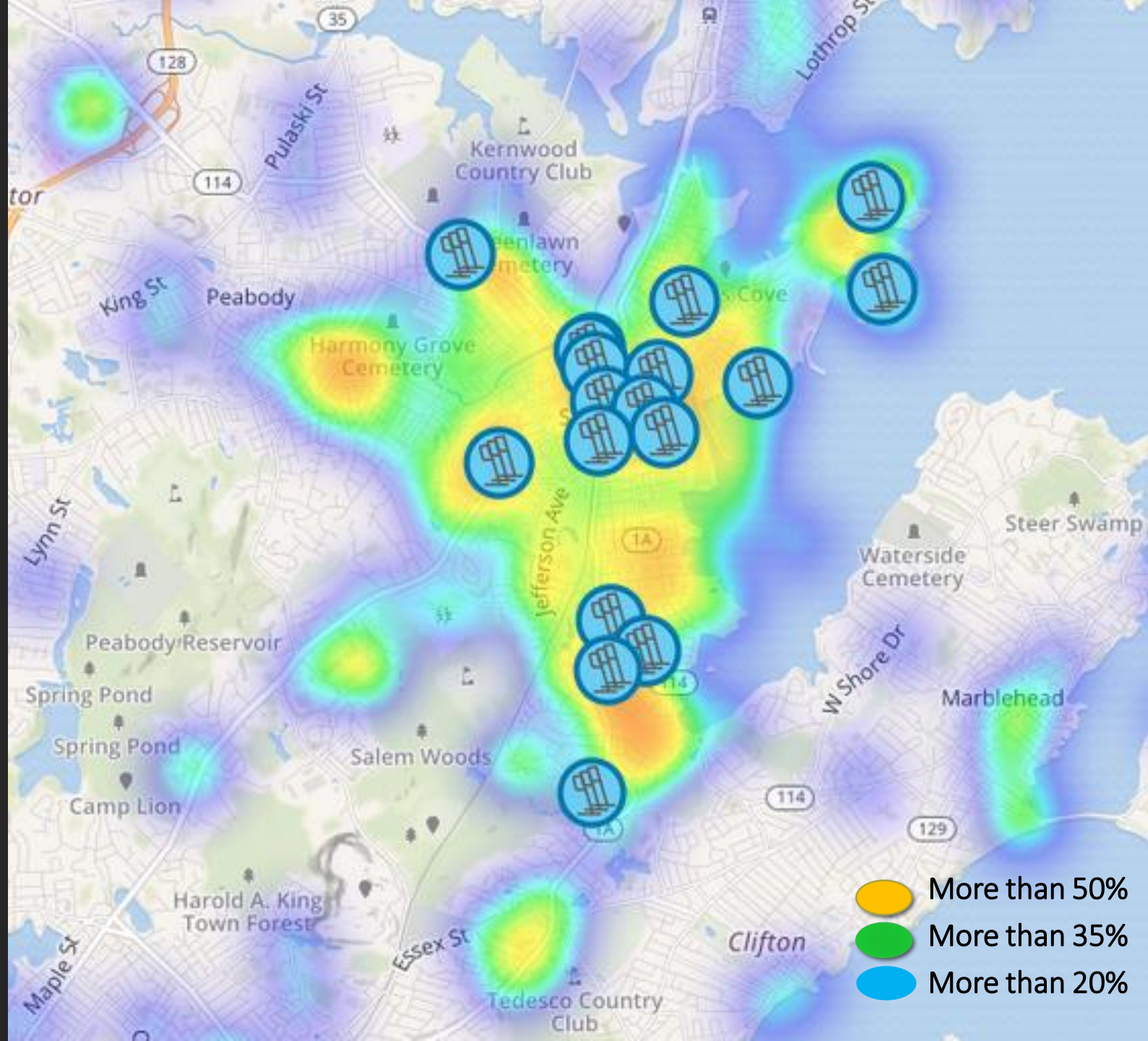
To Station

- Bike Path at Canal & Mill Streets
- Blaney Street/Salem Ferry
- Boston & Essex Streets
- Congress Street / The Point
- Derby Street
- Federal Street/MBTA
- Front Street/Derby Square
- Gassett Virtual Station
- Hawthorne Hotel Pop-Up Station
- MBTA/Lower Level
- MBTA/Lower Level (Inside)
- McGlew Park

Trip Start Heatmap in Salem

Zagster bikes used by residents, tourists and, mainly, by **Salem State University** students

This map shows where **trips are starting** in the system.



A heatmap overlaid on a street map of a city, likely Salem, Massachusetts. The heatmap uses a color scale from blue (low density) to red (high density) to show where trips are most frequently started. The highest density areas are concentrated in the downtown and campus regions, indicated by red and orange colors. Numerous blue circular icons with a bus symbol are scattered across the map, representing individual trip start locations. Major roads like I-95, I-295, and various state routes (128, 114, 129) are visible. Landmarks such as Peabody Reservoir, Spring Pond, and the Kernwood Country Club are also labeled.

Because users are allowed to have off-station trip starts – this explains why **downtown** and **campus** are lighting up quite a bit, with the “hotter” colors representing **more trips started** in that specific region.

Problems



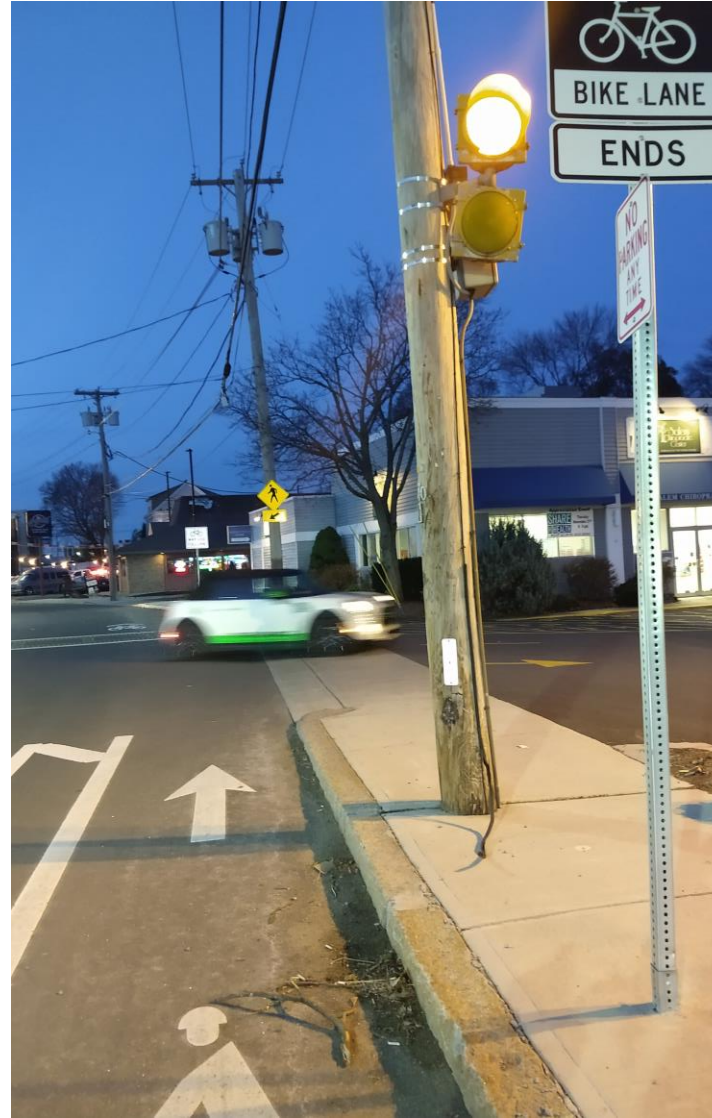
Paved multi-use path: bicyclists should expect to share the path with pedestrians, dog walkers, roller-skaters and other non-motorized users.

Salem Bike Path was officially designated as part of the East Coast Greenway Alliance Trail System in October 2007.

Pictures: Serafat, 2019



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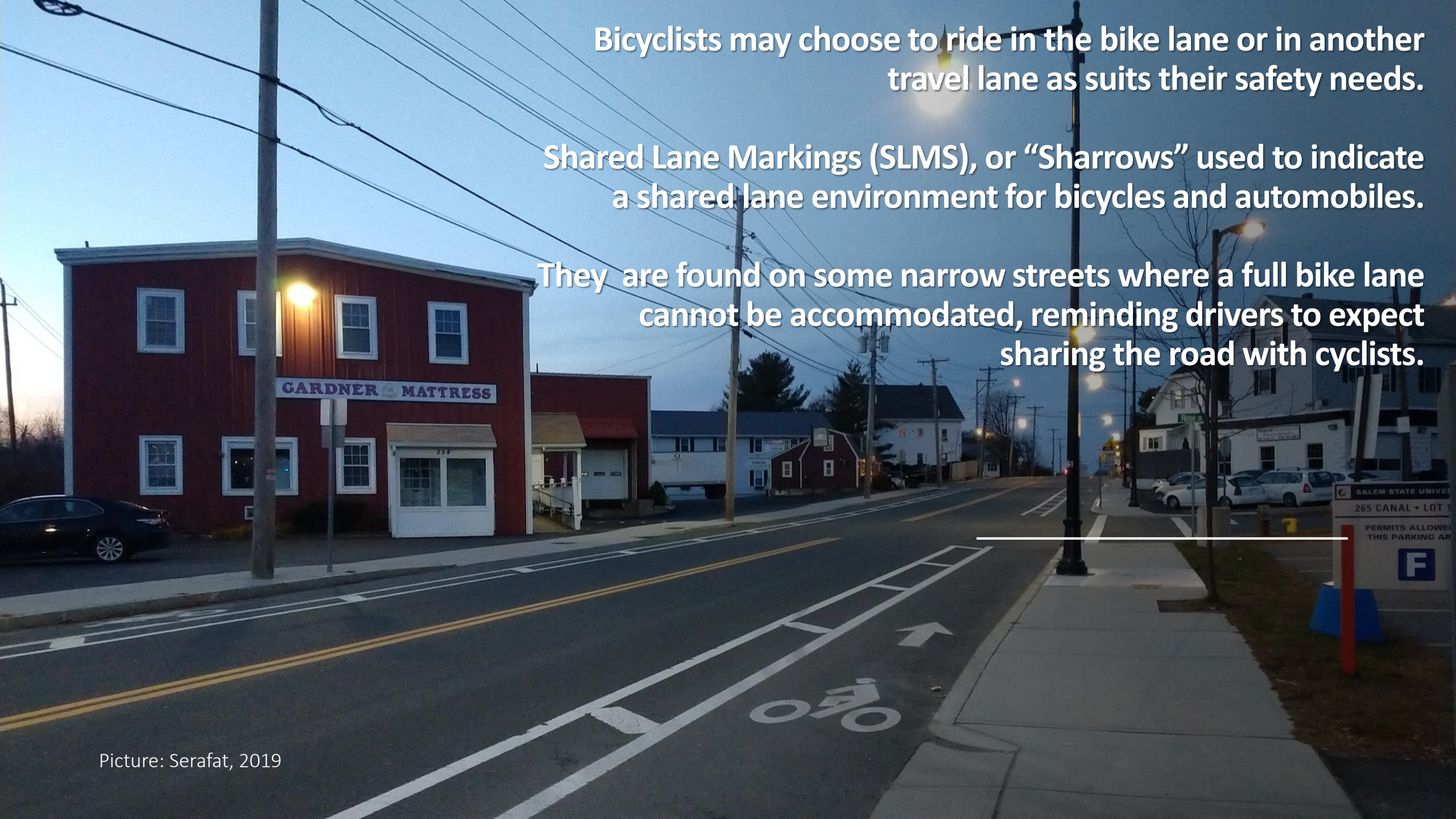
Some wide streets have a dedicated travel lane just for bicycles.

Cars should not drive in them, but may cross them to park or make turns.

Bicyclists may choose to ride in the bike lane or in another travel lane as suits their safety needs.

Shared Lane Markings (SLMS), or “Sharrows” used to indicate a shared lane environment for bicycles and automobiles.

They are found on some narrow streets where a full bike lane cannot be accommodated, reminding drivers to expect sharing the road with cyclists.



Pictures: Serafat, 2019



Zagster bike riders face some tough conditions when riding around the region. Some miles are travelled on roadways classified as “very-high-stress” roadways, with high traffic volumes, multiple lanes in each direction, and no protected bicycle facility.

In many cases, these roadways provide the only direct connection to important destinations.



Picture: Serafat, 2019

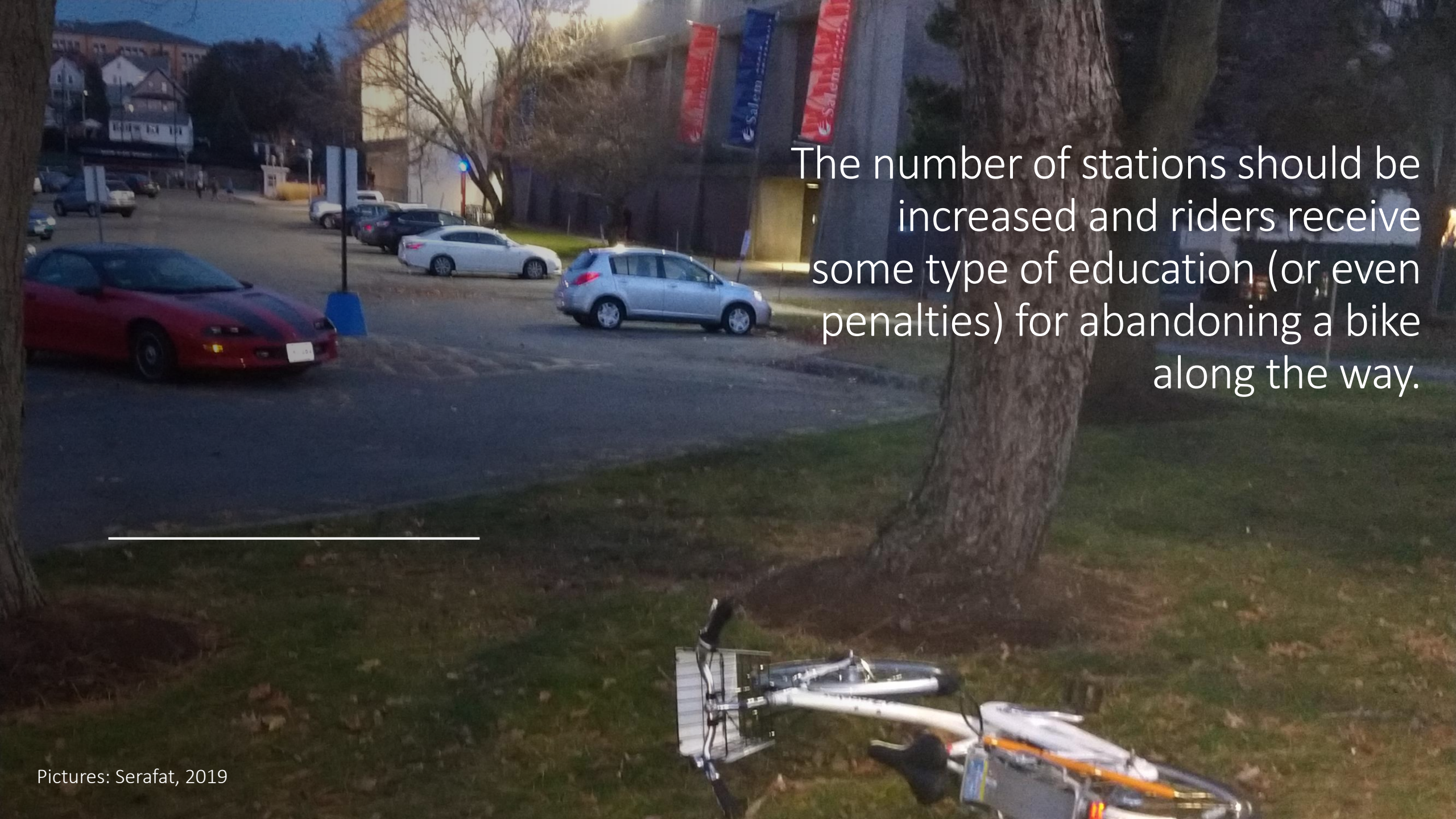
Retrofitting these roadways to fully serve bicyclists will be a challenging endeavor; however, the travel patterns observed here demonstrate how important and urgent it is to redesign this infrastructure to promote safety to bicyclists.

This improvements are needed not only to protect those who are already biking in dangerous and unpleasant conditions, but also to encourage more people to bicycle.



Some routes are not in a good and safe condition for bicyclists.

Pictures: Serafat, 2019

A photograph of a city street at dusk. In the foreground, a bicycle lies on its side on a grassy area. The background shows a street with several cars parked or moving, including a red car on the left and a silver car in the middle. Buildings with banners are visible in the distance. The text is overlaid on the right side of the image.

The number of stations should be increased and riders receive some type of education (or even penalties) for abandoning a bike along the way.



In recent years, the highest ridership was observed from July through October. September was the peak month.

Ridership slowed considerably during the winter, with an average of only 52 trips per day from January through March.



Due to Covid-19 pandemic and social distancing policies, the service was paused.



Picture: Serafat, 2020



Picture: Serafat, 2020

ZAGSTER FAQ'S

Is this a temporary closure or permanent closure?

Like many small businesses, due to the uncertainty regarding the duration of Covid-19 impacts, we are unsure of the long-term effects on our bike shares, but will provide an update when we plan a return to normal operations.

Thank you.

