



SRTA Bus Stop Design Guidelines

Context Analysis

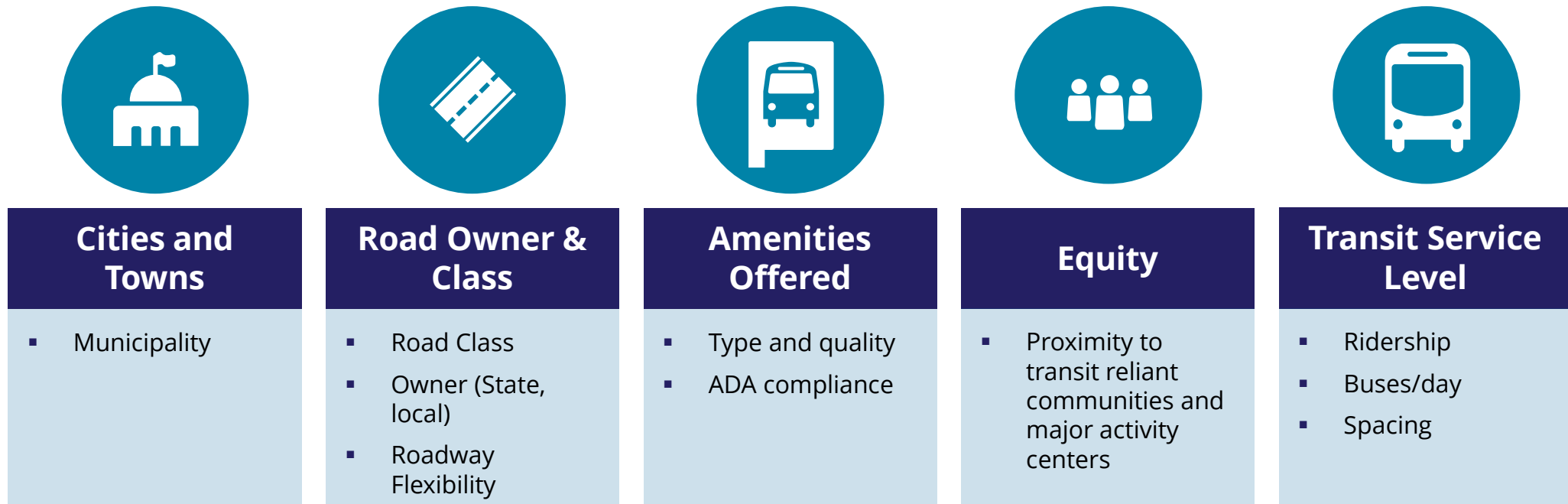
March 2022

Context Analysis

This Context Analysis provides a baseline understanding of the current conditions and policies related to SRTA's bus stops. The purpose of the Context Analysis is to ensure that SRTA's eventual Bus Stop Design Guidelines are appropriate and service a wide range of locations. Specifically, SRTA's Bus Stop Design Guidelines need to reflect real life conditions, and the policies described therein need to reflect the existing operating environment

Data on amenities and ridership was not available for 46 newer SRTA stops.

This Context Analysis studies bus stop characteristics in five different categories:





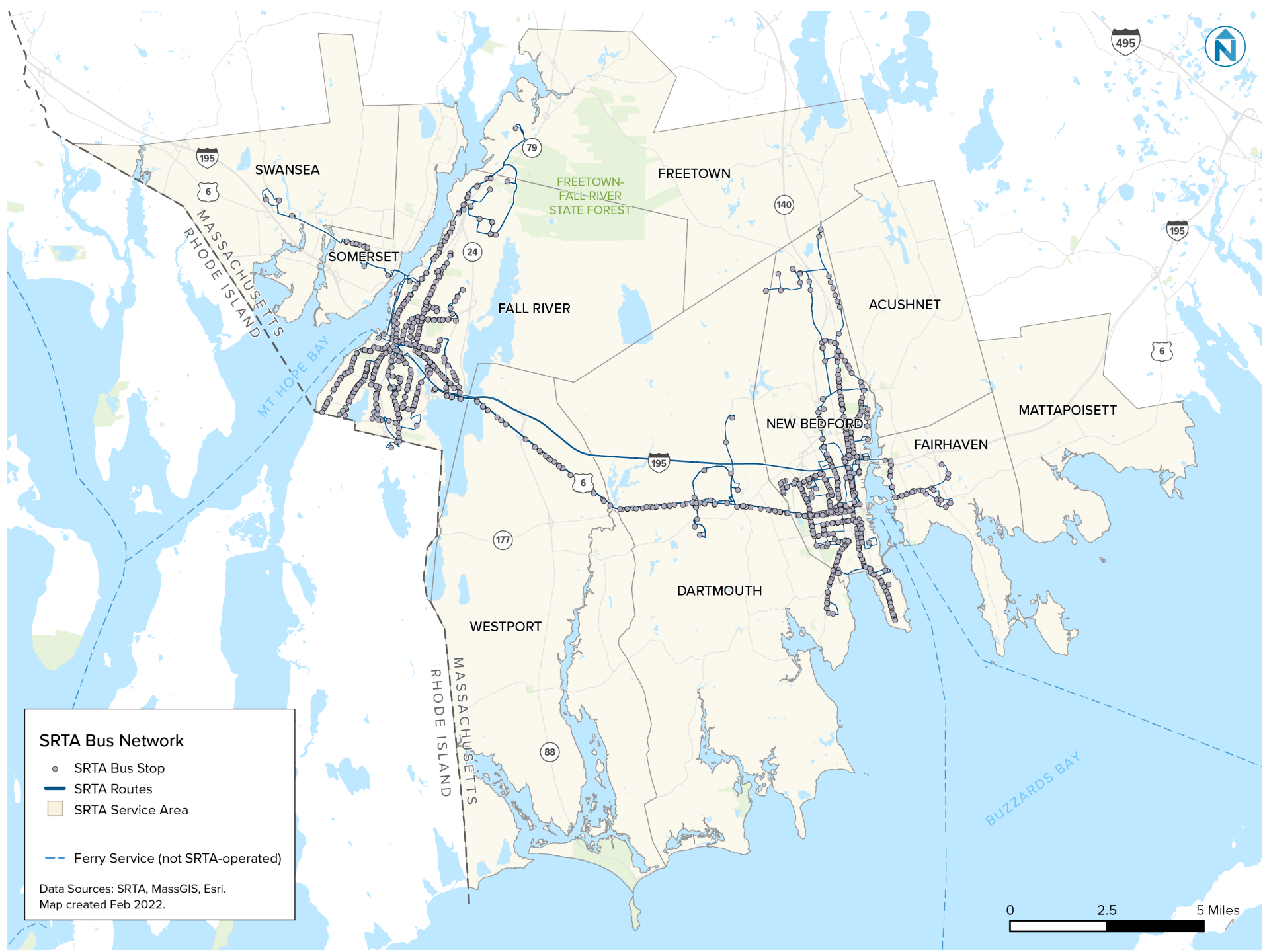
Cities and Towns

Some municipalities and agencies differ in terms of their design review processes and process for adding or removing stops:

- **New Bedford:** The Traffic Commission requires that bus stop locations be specified by the Commission. The Commission bans vehicular parking in bus stops and permits stops to be installed in parking meter zones.
- **Fall River:** All bus stop locations must be adopted into the City's Municipal Code, requiring SRTA to coordinate with the city to modify locations. The Code bans vehicular parking in bus stops and requires that buses only board or discharge passengers at designated bus stops.

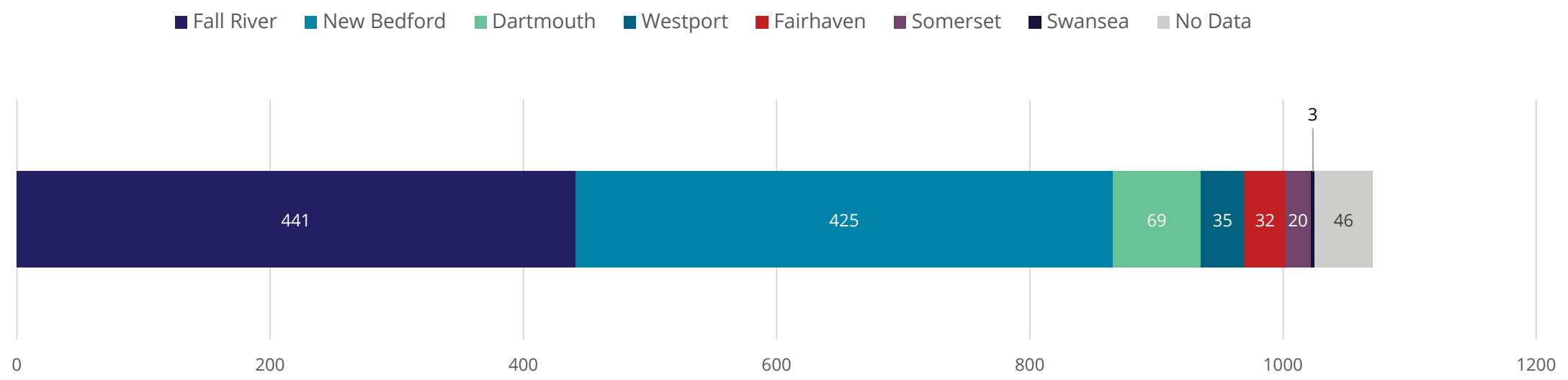
Stops

- SRTA operates 24 routes and serves 1071 stops
- Stops are mainly located in New Bedford and Fall River, radiating out from the respective urban cores
- Stops are also located in Freetown, Fairhaven, Dartmouth, Westport, Somerset, and Swansea



Context Analysis: Municipality

Bus Stops by Jurisdiction



	Stops
Fall River	441
New Bedford	425
Dartmouth	69
Westport	35
Fairhaven	32
Somerset	20
Swansea	3
No Data	46



Road Owner & Class

State-owned (MassDOT) roads have different requirements and processes than locally-owned roads.

- **MassDOT:** A Highway Access Permit is required for the addition, removal, or modification of a bus stop within or impacting State right-of-way or property. The Permit process includes a multi-step design review process.

Additionally, bus stop designs need to consider street functional classifications, which differ in terms of traffic speed and width:

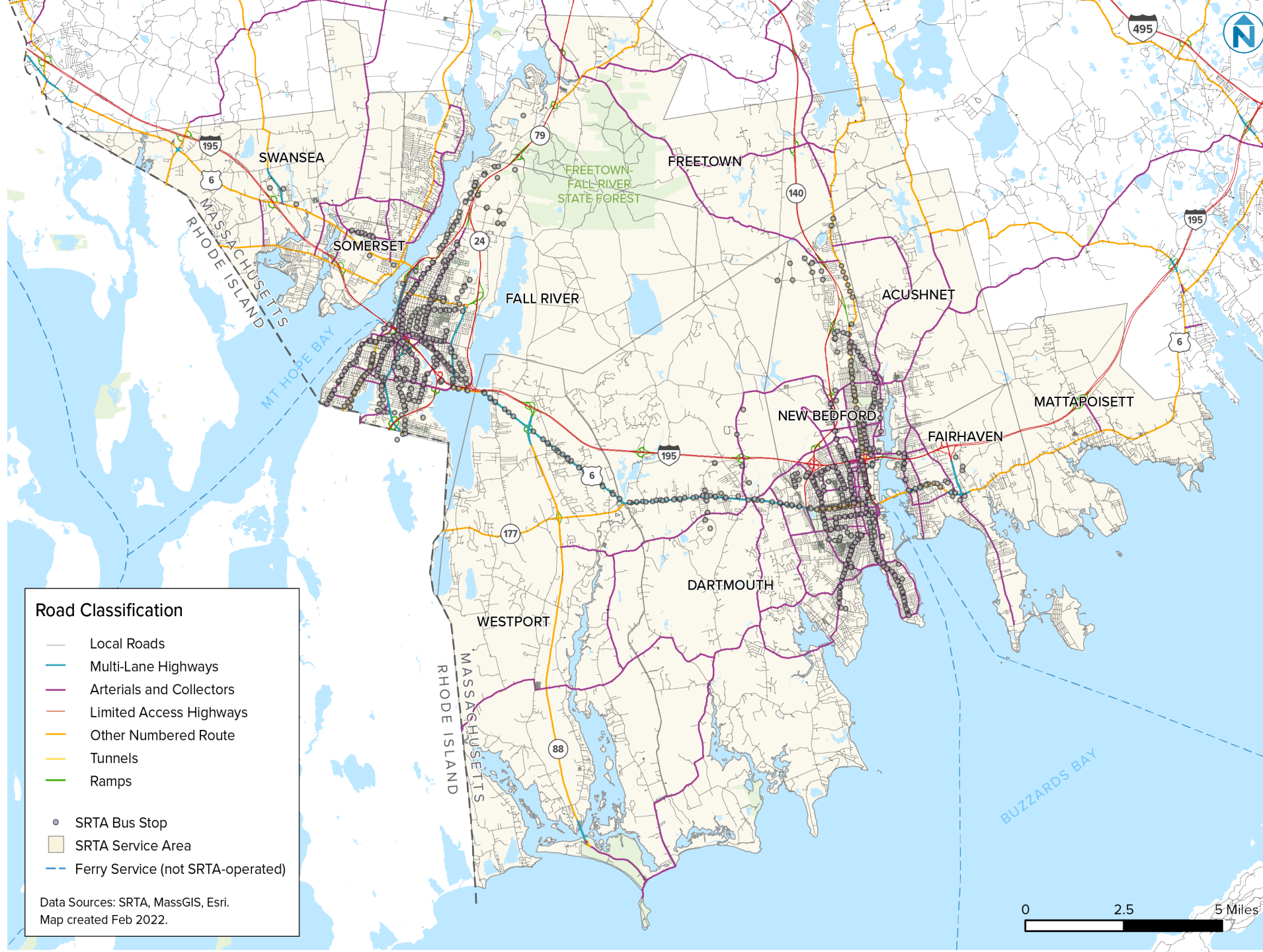
- **Multi-lane highways:** highest speed, widest roads, multiple lanes
- **Arterials and collectors:** higher speeds and wide roads
- **Other numbered routes:** state roads not classified as highways, arterials, or collectors
- **Local roads:** lowest speed and generally 2-lane roads

Roadways differ widely in terms of their **flexibility** for bus stops.

- Rights of way can be **flexible, constrained, or undeveloped.**

Road Class

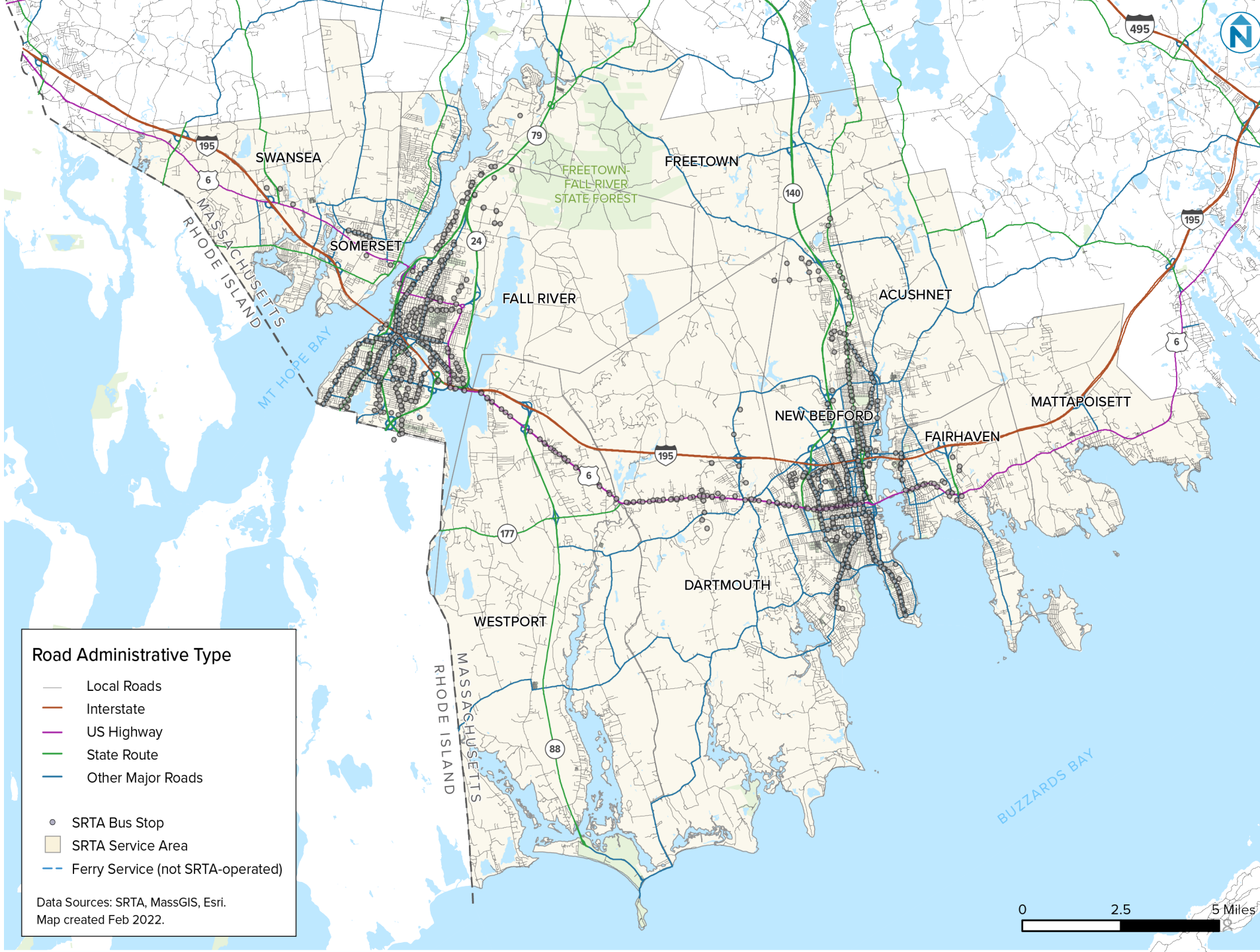
- Routes serving the urban cores of New Bedford and Fall River primarily operate on arterial and collector routes, with some service on local roads.
- The NB9 and NB9X, which connect New Bedford and Fall River, operate on multi-lane and limited access highways respectively.



Road Owner

- 134 stops are located on US highways
- 94 stops are located on state roads

*“Other Major Roads” are major roads that are not numbered routes and lack administrative data



Flexible Roadways



Flexible: Highland Apartments (Fall River)



Flexible: Dartmouth Walmart (Dartmouth)

Constrained Roadways



Constrained: Kempton St and Park St
(New Bedford)



Constrained: State Rd and Wolcott Ave
(Dartmouth)

Undeveloped Roadways



- Undeveloped conditions are common along Route 6 and some other state roads
- Typically lack ADA compliance

Undeveloped: 654 State Rd (Dartmouth)



Amenities Offered

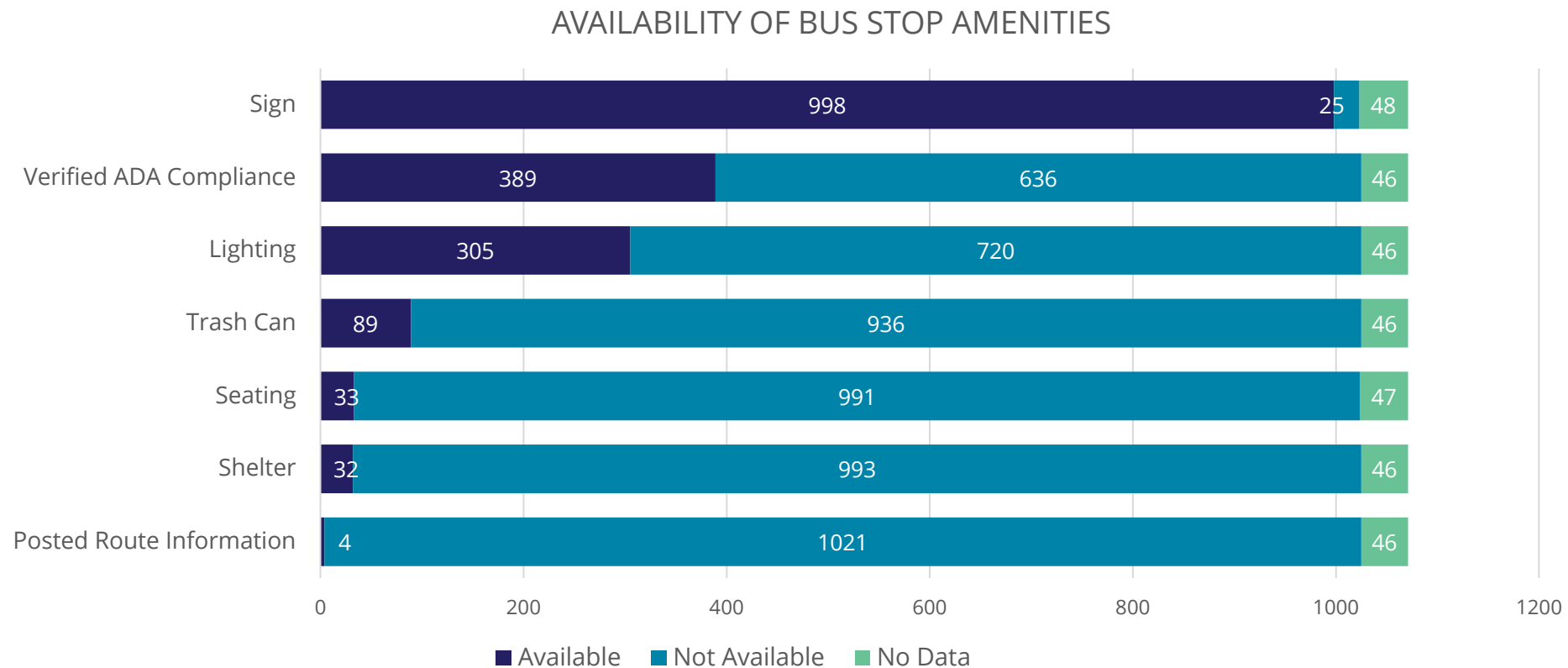
Understanding where amenities are currently offered can guide implementation. High-need stops without any of the following amenities can be prioritized:

- **Sign**
- **ADA compliance**
- **High-quality lighting**
- **Trash cans**
- **Shelter**
- **Benches**
- **Posted route information**

Context Analysis: Amenities

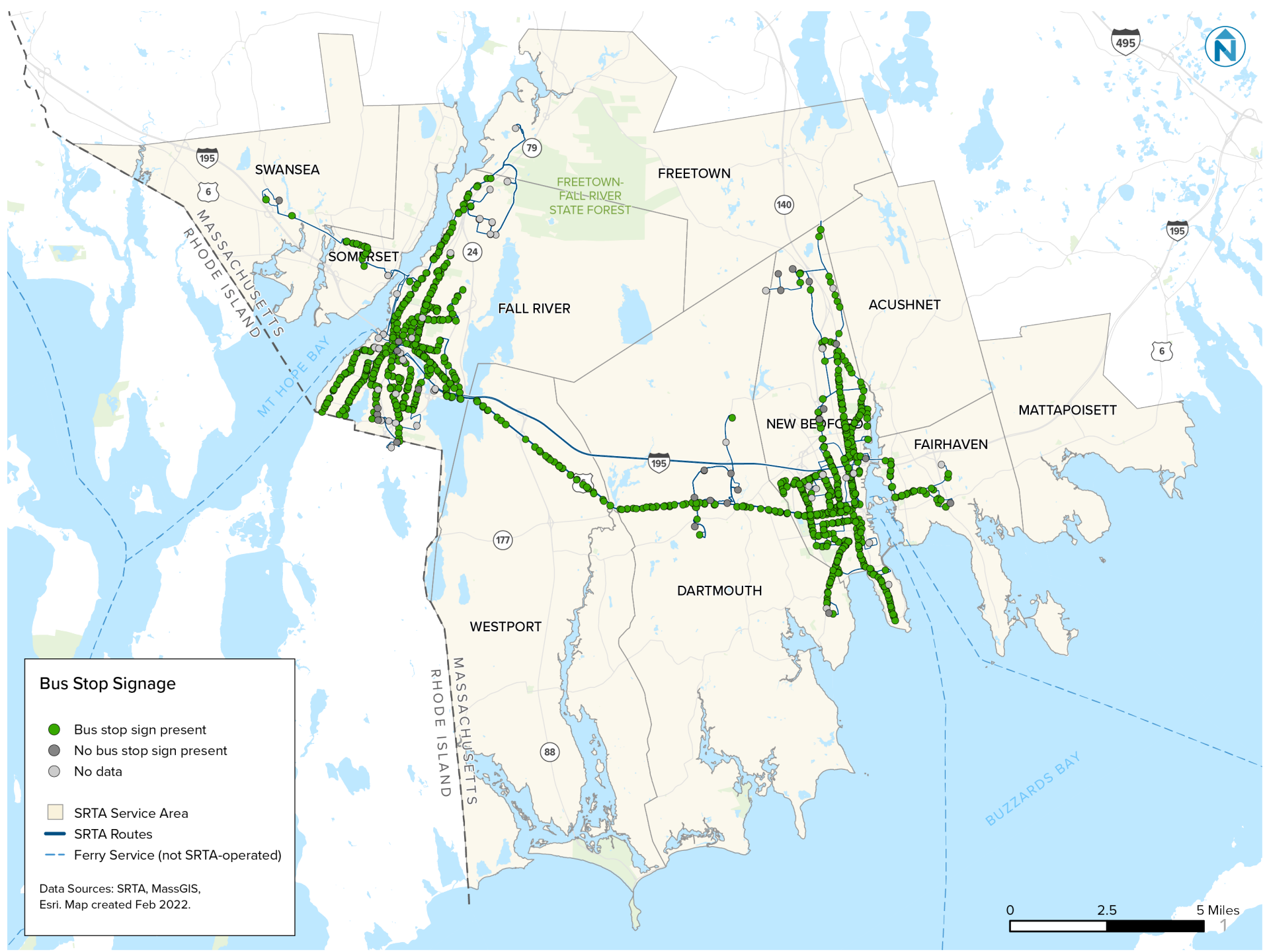
Most SRTA stops have signs, and over a third are ADA compliant. Another common amenity is lighting, which is available at at least 305 stops. Slightly less than 10% of stops have a trash can, and at least 33 stops have seating and 32 have a shelter.

Data on amenities was not available for the 46 newest SRTA stops.



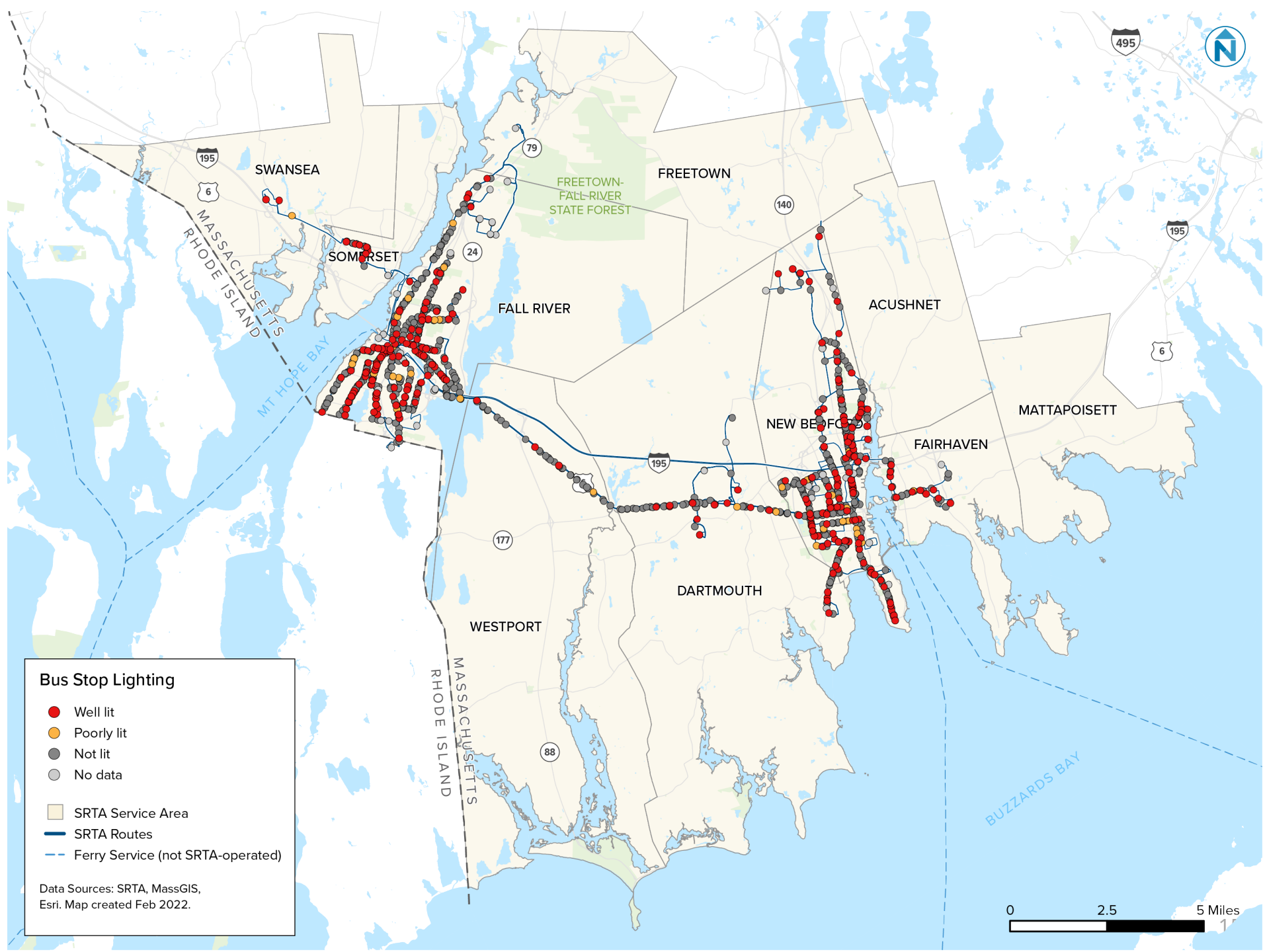
Bus Stop Sign

- At least 25 stops are missing signs.
- Lack of signs is more prevalent on New Bedford lines.



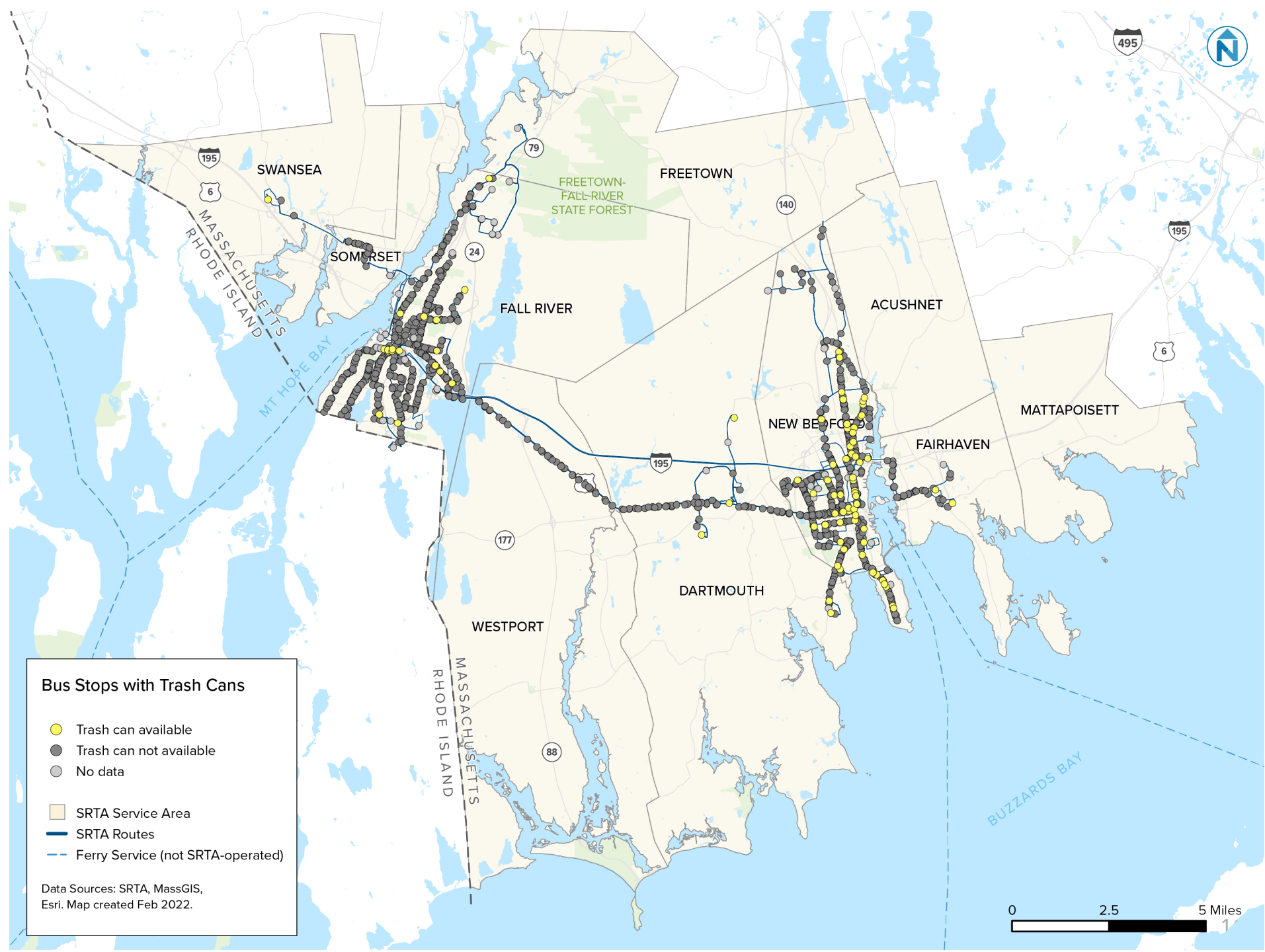
Lighting

- Most downtown stops in Fall River and New Bedford are well lit.
- 720 stops do not have lighting, with less lighting outside of the urban cores.
- Poorly lit stops are spread through the system.



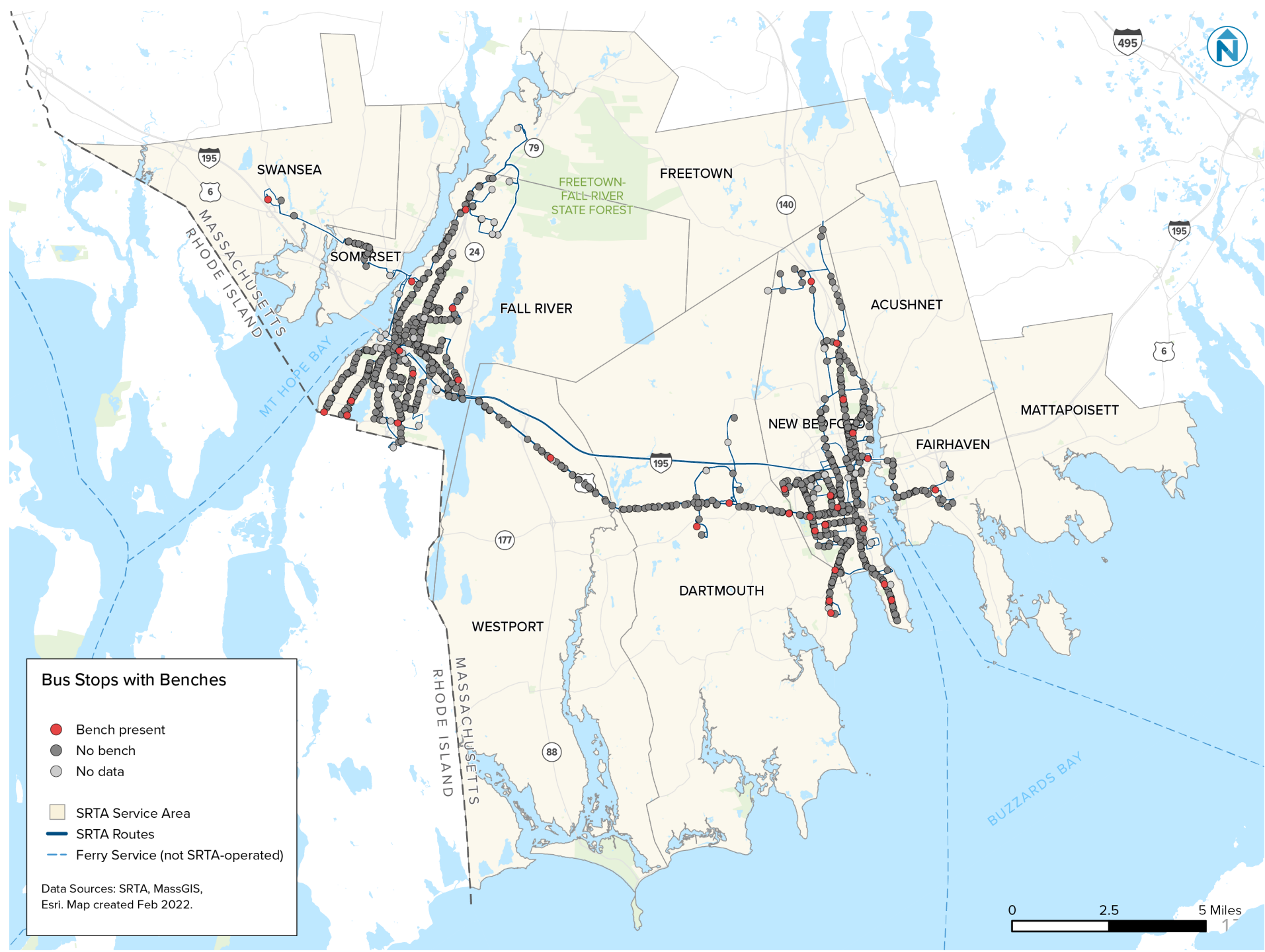
Trash Cans

- 89 stops have trash receptacles, a majority of which are in New Bedford.



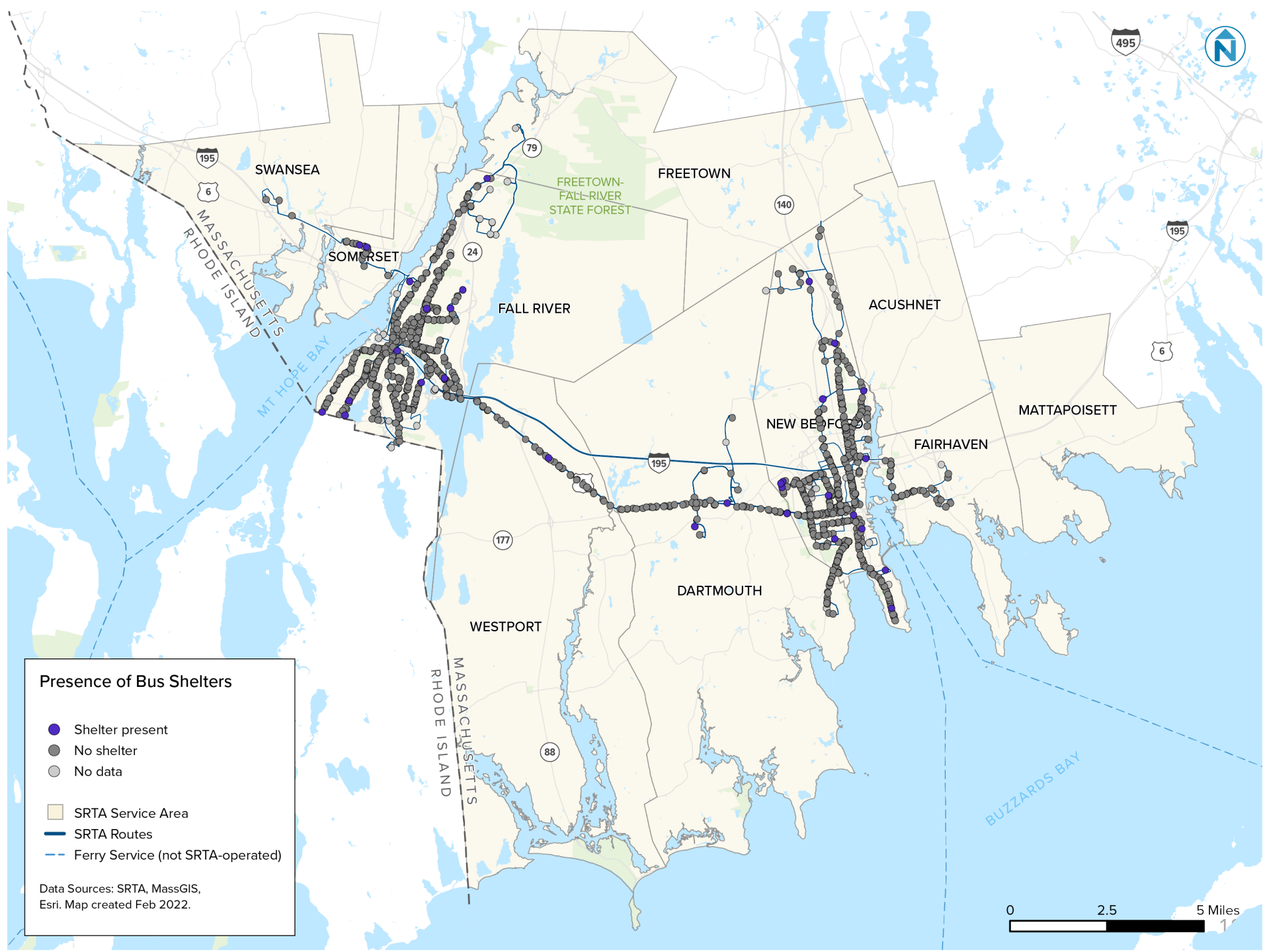
Seating

- Benches are more often present outside of downtown areas.
- At least 991 stops do not have seating.



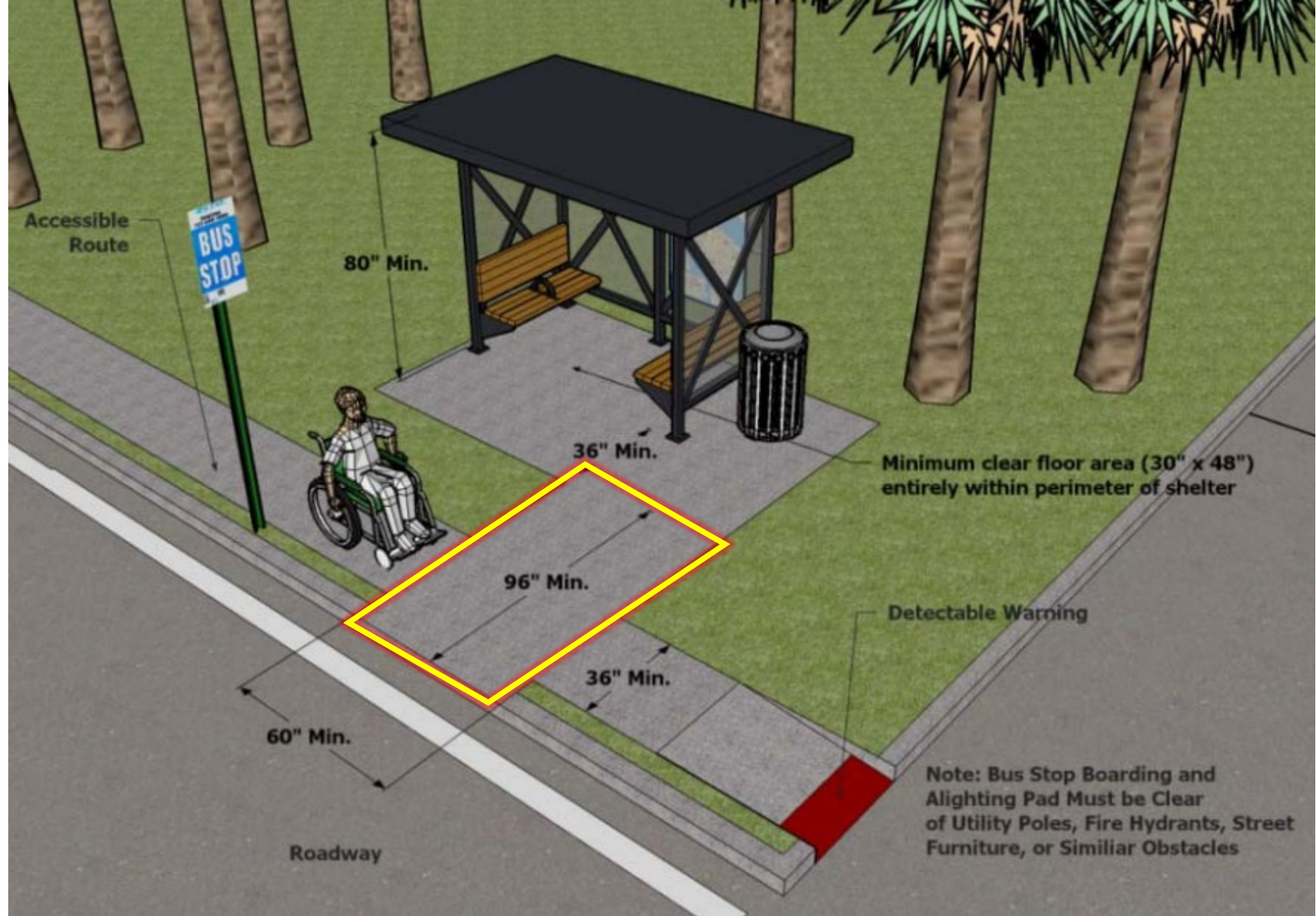
Shelters

- At least 32 stops have bus shelters.
- These are often the same stops that have benches.
- 2 of the shelters are at the main terminals.



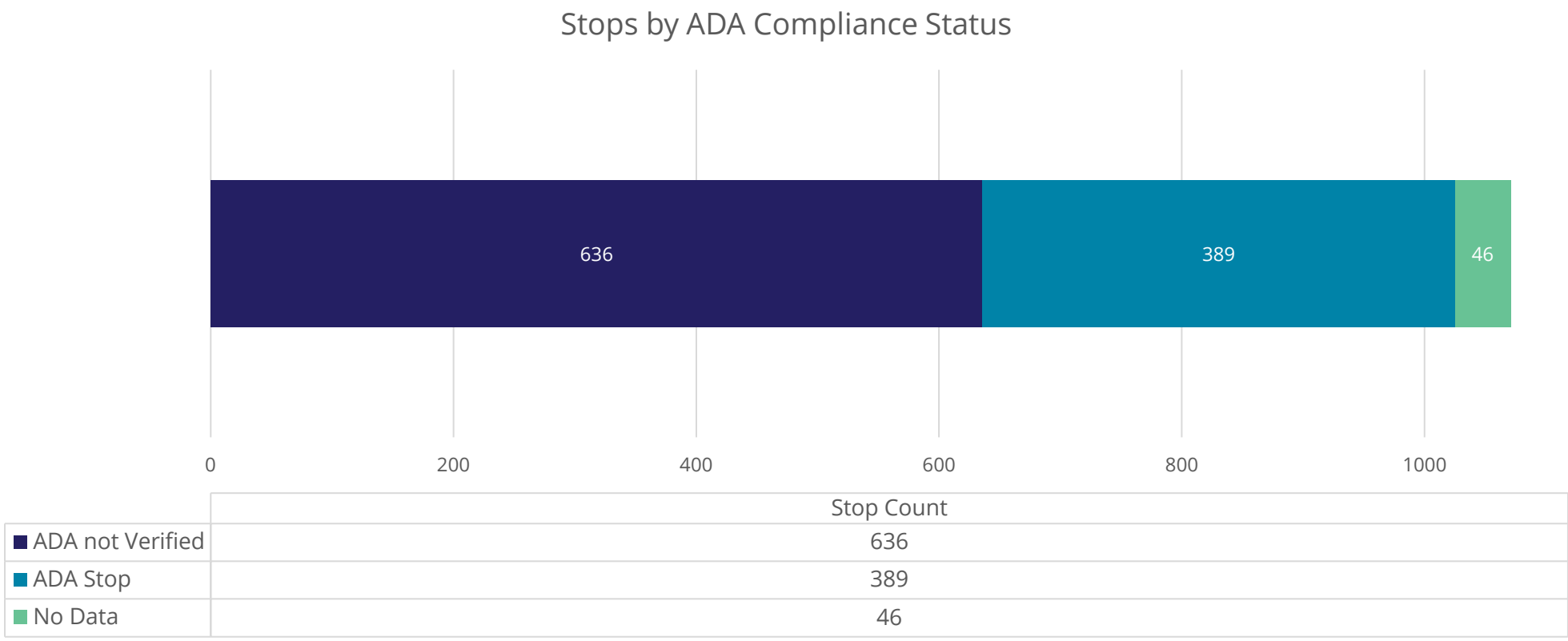
Overview of ADA Compliance

- At a minimum, ADA compliance at bus stops requires an 8' x 5' hard surface boarding and alighting area
- Where shelters, sidewalks, and crosswalks are available, ADA requirements also apply.



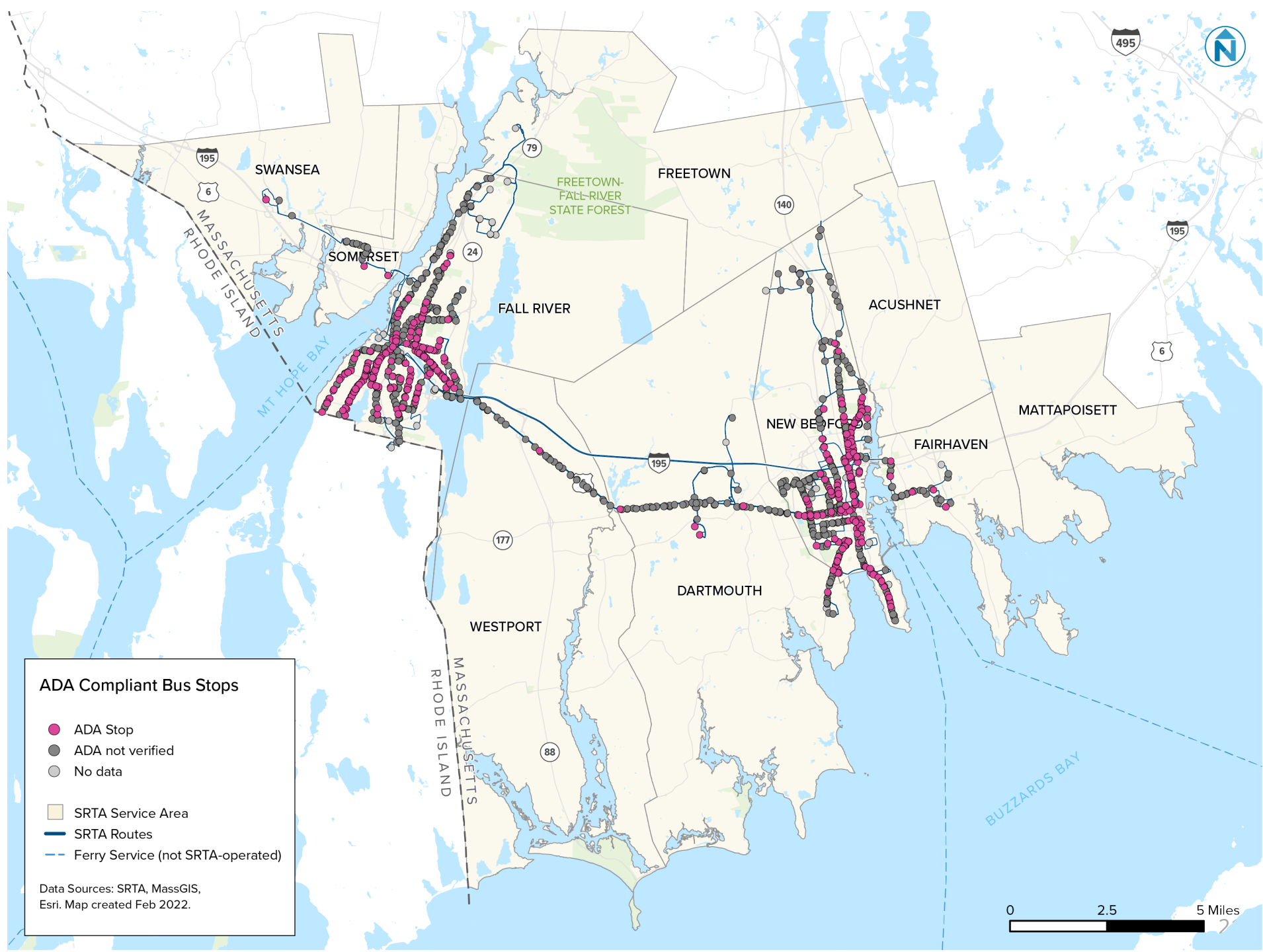
Context Analysis: ADA Compliance

Nearly 400 stops are verified to be ADA compliant. ADA compliance is recorded in multiple ways, and the data likely significantly undercounts the number of ADA-compliant stops by showing likely-compliant sidewalks as “not verified”



ADA Stops

- 389 stops have been verified to be ADA compliant.
- These stops tend to be located near the downtowns of Fall River and New Bedford.
- Most stops along the NB9 and NB9X, which connect New Bedford and Fall River, do not have verified ADA compliance.

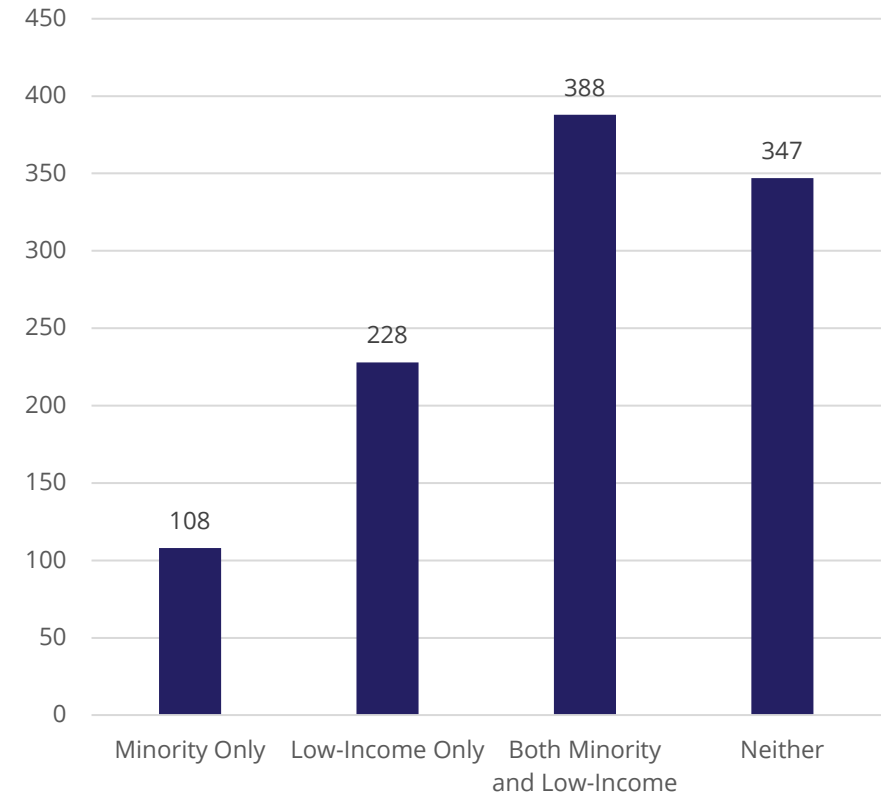




Equity

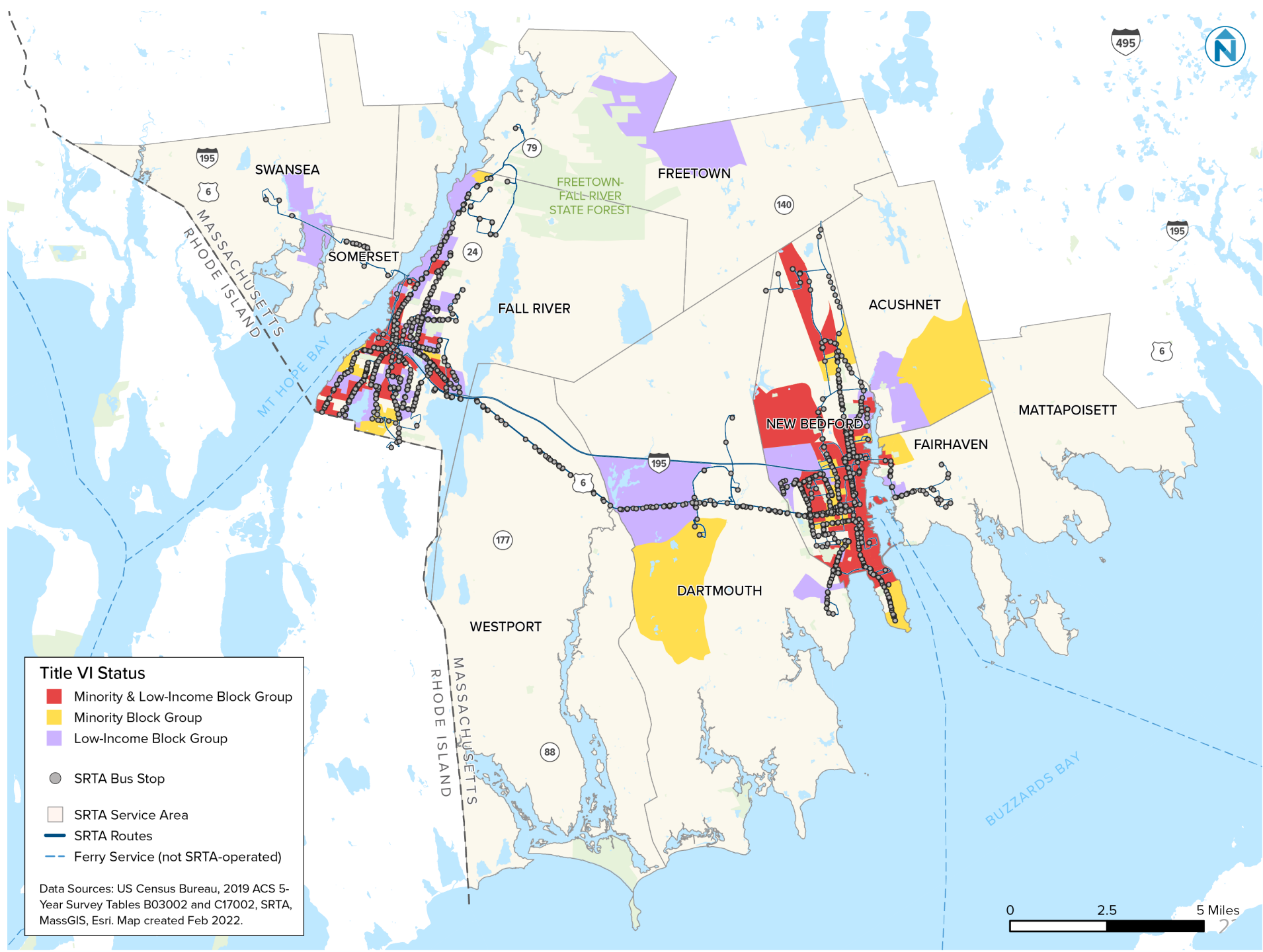
- The SRTA service area has a total population of 311,679, of which 21.5% are Hispanic or Latino or a race other than white, and 22.2% are below the federal poverty guideline.
- For Title VI, block groups where the percentages are higher than the overall service area are considered minority, low-income, or both.
- 388 bus stops are in block groups with higher than average low-income and minority populations.

Bus Stops in Title VI Block Groups



Equity

- Minority and low-income block groups are concentrated in the urban cores where there are many bus stops
- There are some minority and low-income block groups in Acushnet that lack access to fixed route transit service.





Transit Service Level

Bus stops with high levels of transfer and ridership activity may be better suited for investment. Bus stops with very infrequent service may also be well suited for improved passenger information. Investing at the handful of very high ridership stops has the potential of reaching many customers quickly.

Data on ridership was not available for 24 new SRTA stops.

Transit service level includes:

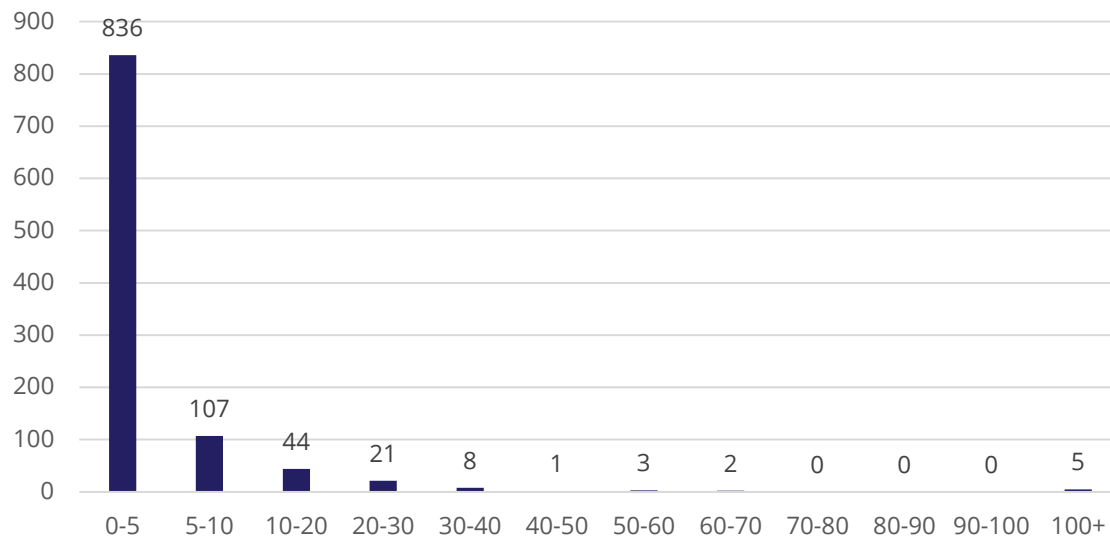
- **Ridership**
- **Routes served**
- **Trips served per day**
- **Stop Spacing by Route**

Ridership Activity

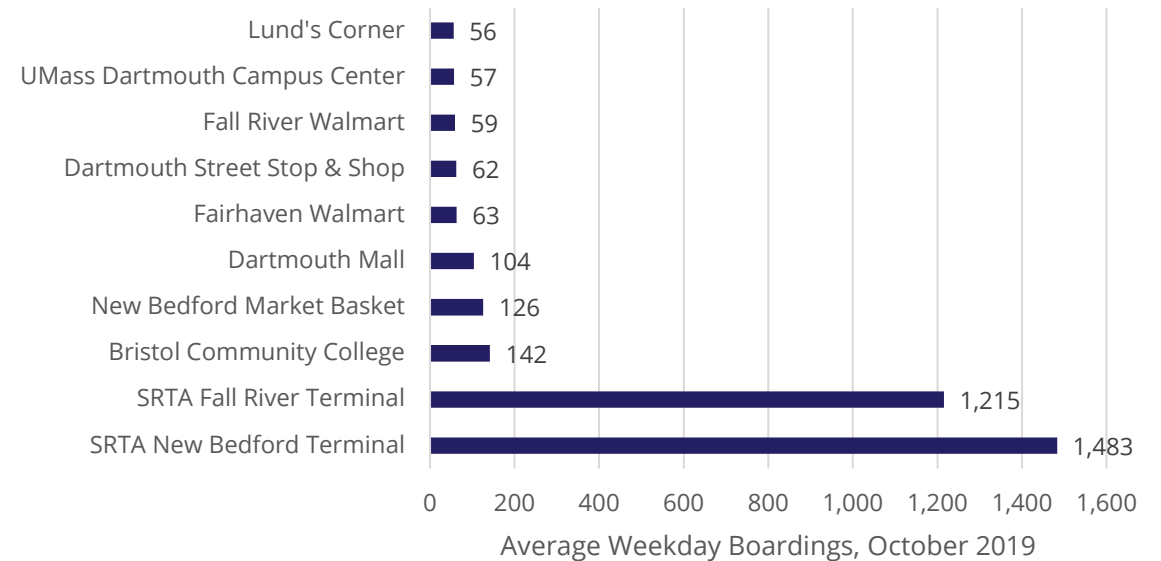
Bus stops with high levels of ridership activity may be better suited for near-term investment. Only 41 stops have more than 20 boardings a day. 44 stops have between 10 and 20 boardings a day.

Outside of the terminals, the highest level of boarding activity occurs at Bristol Community College, area grocery stores, Walmarts, and the Dartmouth Mall. Since these stops are located on private property, there may exist an opportunity to leverage partnerships with these land owners to improve stop quality.

Number of Stops by Average Weekday Boardings,
October 2019

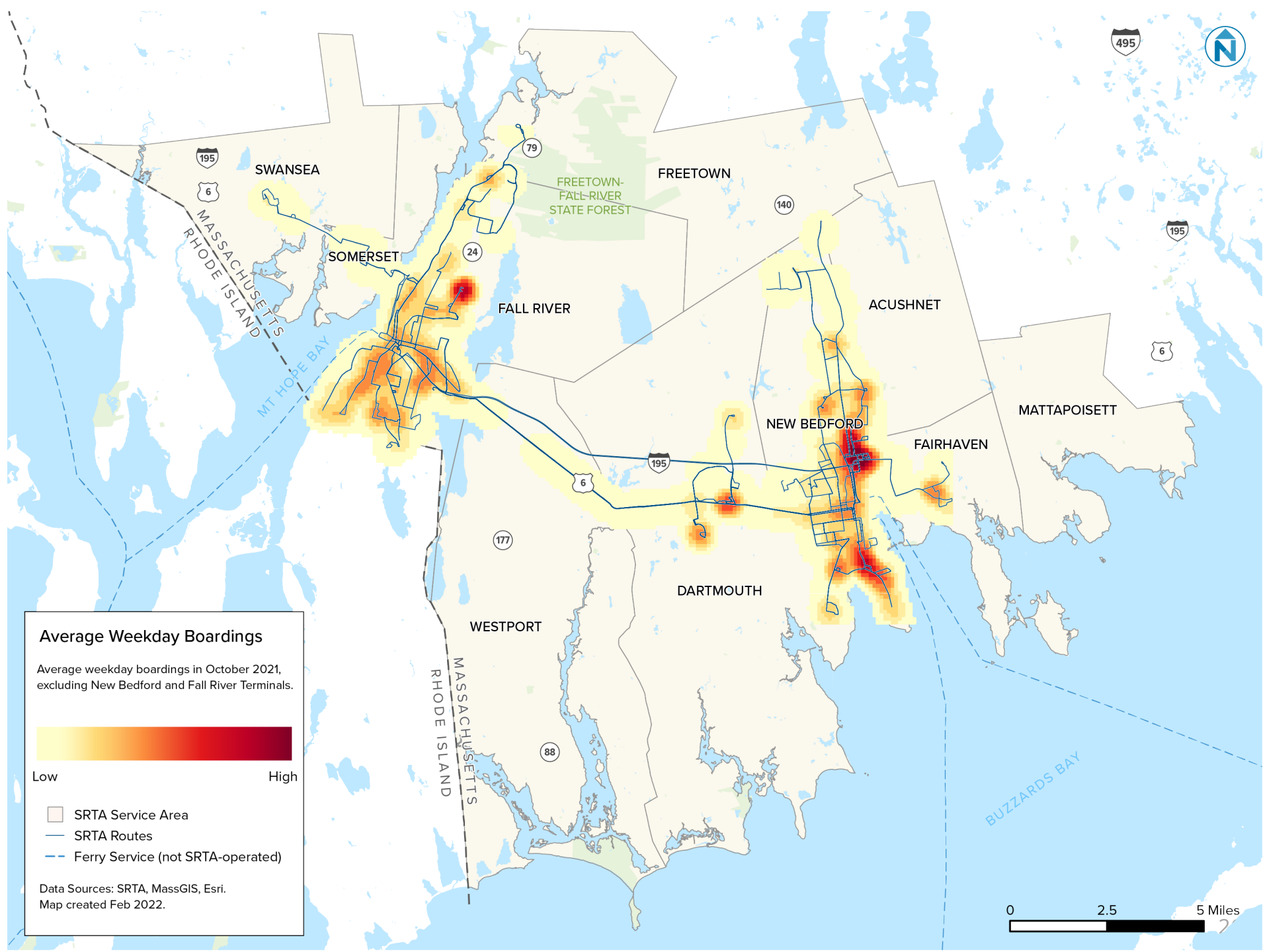


Top 10 Stops by Ridership



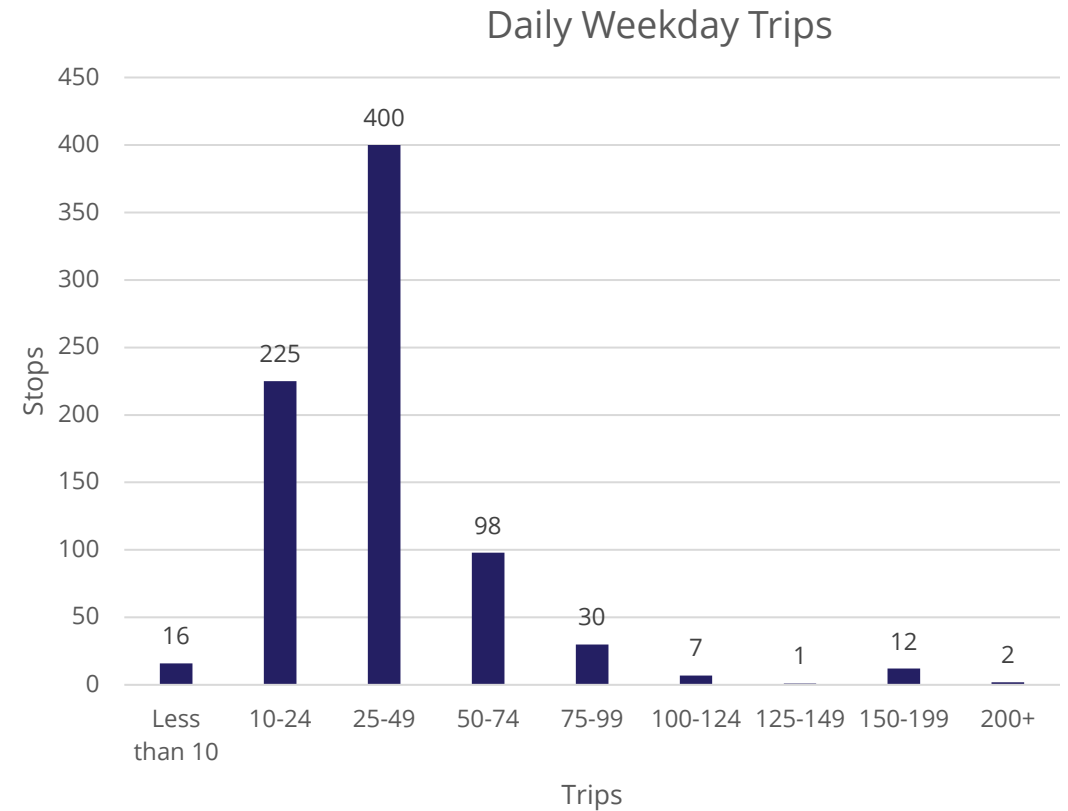
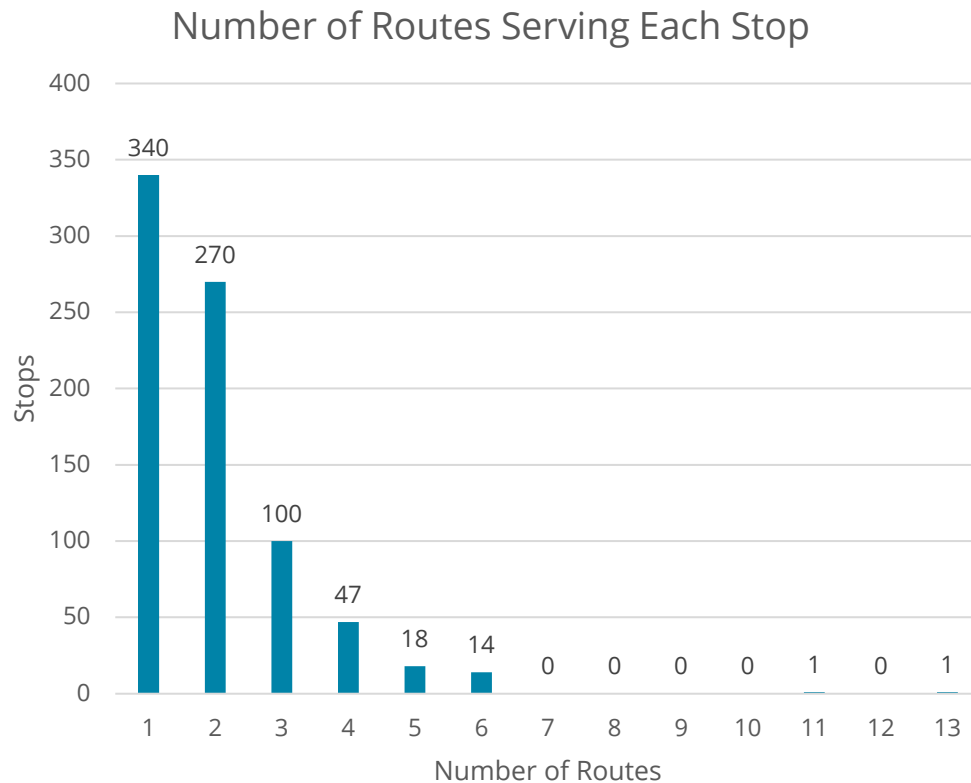
Ridership

- New Bedford Terminal and Fall River Terminal have the highest number of average boardings, serving many lines.
- Outside of the terminals, there is high ridership at major destinations and corridors:
 - Market Basket shopping center in New Bedford
 - Bristol Community College in Fall River
 - Along County Street and Brock Avenue in New Bedford



Level of Service

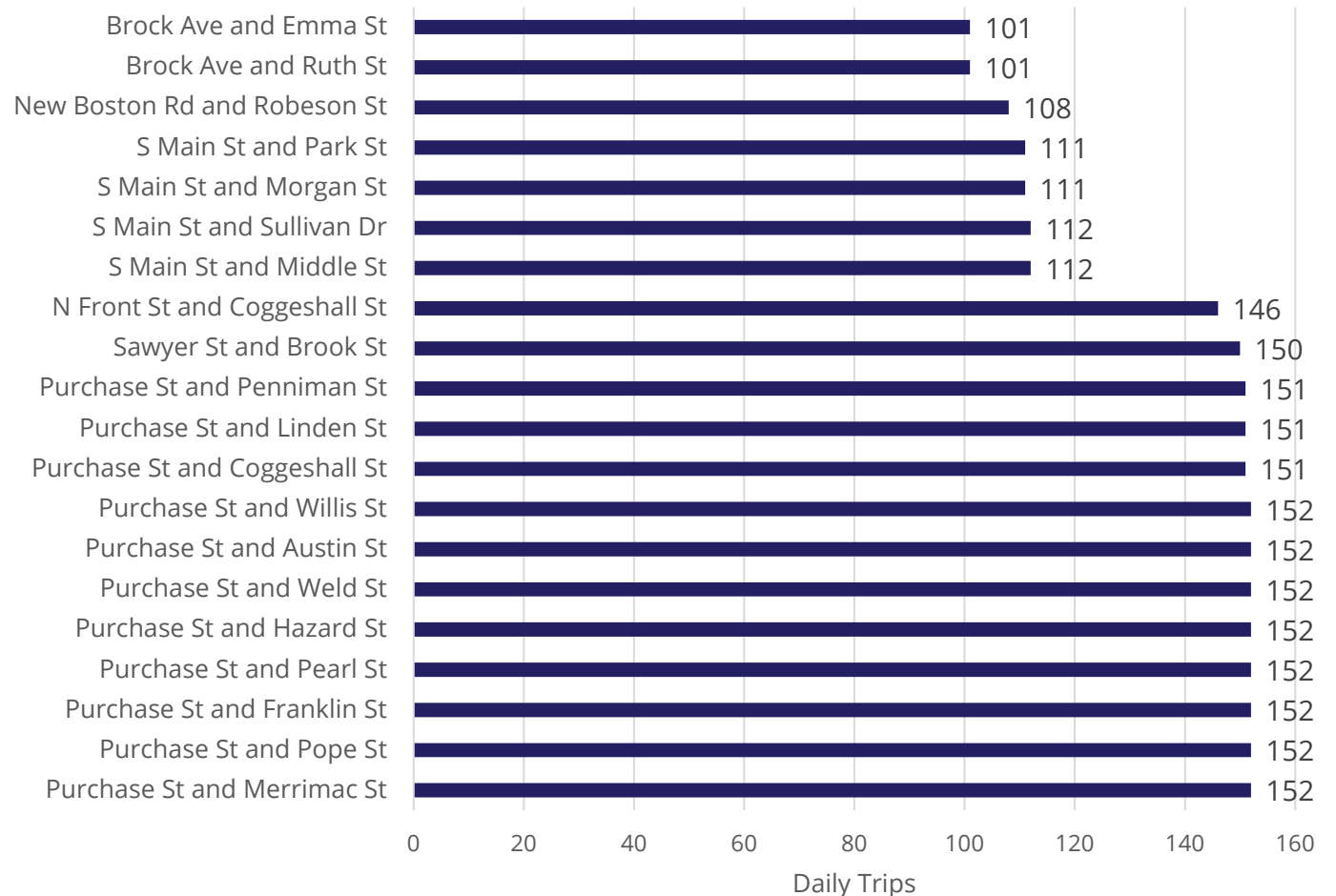
- It is most common for stops to serve a single route.
- Most stops are serviced by fewer than 50 trips per day.



Level of Service

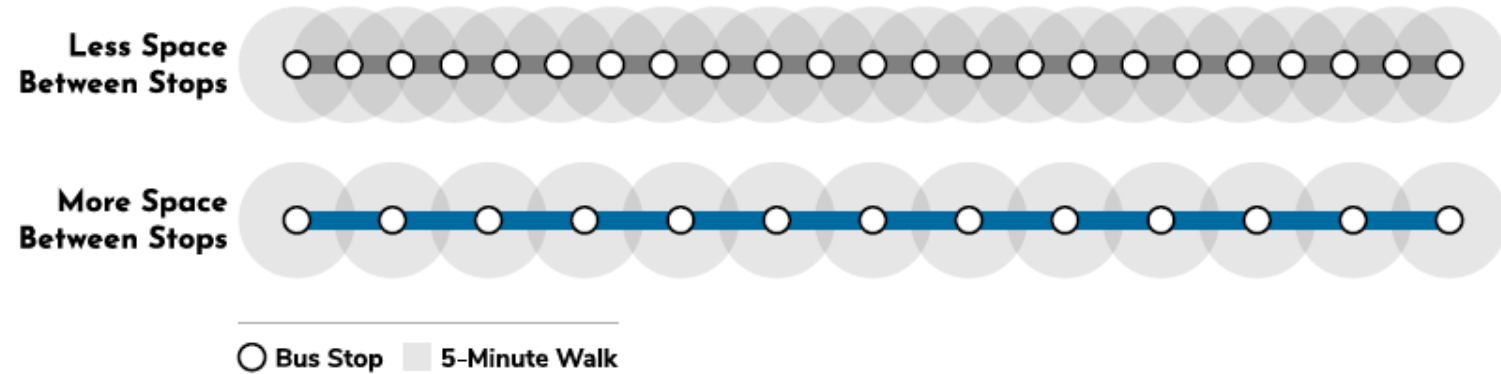
- Excluding the main terminals, 20 stops are served by more than 100 trips per day.
- These stops tend to be along major corridors, such as Purchase St. and S Main St., where multiple routes run along the same street.

Stops With Over 100 Daily Trips, Excluding Terminals



Overview of Stop Spacing

- The distance between stops significantly impacts travel times and route reliability.
- Healthy stop spacing of 4 to 6 stops per mile balances convenience and speed.
- In areas where there are more people living and working, bus stops should be closer together. Closer stop spacing may also be necessary where there are significant operating considerations or connectivity issues limiting placement.



Stop Spacing by Route

Route Number	Average Stop Spacing (feet)	Average Stops per Mile	Route Number	Average Stop Spacing (feet)	Average Stops per Mile
FR1	616	8.6	NB1	688	7.7
FR2	1,365	3.9	NB2	757	7.0
FR3	735	7.2	NB3	775	6.8
FR4	710	7.4	NB4	755	7.0
FR5	955	5.5	NB5	1,386	3.8
FR6	1,111	4.8	NB6	684	7.7
FR7	949	5.6	NB8	755	7.0
FR8	988	5.3	NB9	1,255	4.2
FR9	1,102	4.8	NB9X	76,051	0.1
FR10	761	6.9	NB10	1,448	3.6
FR14	3,256	1.6	NB11	1,512	3.5
			NB21	2,820	1.9
			NB99	1,263	4.2



Context Analysis Findings

Bus stops vary widely in terms of amenities provided, level of service, ridership activity, flexibility for investment, and spacing.

- A high proportion of bus stops are verified ADA compliant
- Stops on regional routes and on suburban roads tend to have the most opportunity for improving amenities
- Shelters and seating are least common amenities available
- 10 routes have very close stop spacing

There is potential to reach many customers with focused investment at a couple dozen bus stops

- Ridership and transit activity is concentrated at a small number of stops

Opportunity to leverage partnerships to improve stops located on private property

- Many high- and medium-ridership stops are located at major activity centers (community colleges, Walmarts, Dartmouth Mall, grocery stores)