# Accessibili-T

## Making Boston's Public Transit
## Easier on Those with Disabilities

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## The Basics

This semester, I have proposed an accessibility-based mobile app for the Massachusetts Bay Transportation Authority (MBTA) to assist its riders in navigating the public transit system in the Greater Boston area. The current accessibility resources available from the MBTA are not mobile-friendly, nor do they provide answers to quick questions that a rider may have before visiting a station or bus stop, such as, "Will I be able to sit down on a bench while waiting for a train at this station?"

My inspiration for this project stemmed from several tweets criticizing the MBTA's lack of communication regarding accessibility. Customers have found themselves at stations with broken accessibility features that had not been announced via social media or the MBTA Alerts text service.

## Current Accessibility Tools

* [Trip planner](#) – allows riders to plan their trips, only displays whether or not stops are wheelchair accessible, does not provide information about amenities such as escalators and benches

* [Public transportation trainings](#) – provides riders with personalized trainings that address specific barriers to accessibility

* ["How-to" videos](#) – show riders how to use accessible fare gates and elevators at stations, show how riders in wheelchairs can board trains with assistance from the driver

In addition to these tools, the MBTA suggests that riders use Google Maps to navigate through the public transit system. Google Maps does not provide accessibility information, and disabled riders may see this as an inadequate option since the system does not provide proper educational resources. These resources all require extensive preparation prior to using the bus or train, a barrier that does not affect able-bodied riders.

## Mission Statement

Accessibili-T aims to make sustainable transportation more accessible by providing riders with easy access to informational resources about MBTA bus stops and stations, primarily accessibility tools (elevators, benches, auditory and visual signaling) as well as amenities (trash and recycling bins, lighting, ticket kiosks) while also allowing riders to provide feedback and report issues to alert the MBTA Maintenance Control Center (MCC) and enable other affected riders to be aware of station issues.

## The Features of the App

✶ **Self-Reporting**

Self-reporting allows riders to report issues seen at MBTA stations, such as broken amenities or path obstructions.  Reports are forwarded to the MBTA MCC or the city's 311 services to resolve the issue. Accessible-T users are able to see open reports, when they were reported, whether they were verified by the MCC/311, and when they are scheduled to be resolved. Reporting users would also receive updates about their reports and be notified when an issue has been resolved.

Since this feature requires collaboration between riders and MBTA officials ("crowdsourcing"), Self-Reporting Kiosks may be implemented at high-traffic stations so that riders outside of the app may assist other passengers and help resolve accessibility issues.

✶ **Station Features**

Users would be able to see whether stations have adequate seating, auditory and visual signaling showing train arrival times and destinations, ADA tiles in front of train tracks, and shelter availability at outdoor stops. Users would also be able to choose which features they are interested in seeing so that their map is not cluttered with unnecessary information.

✶ **Bus Stop Grading System**

Similar to the Station Features portion of the app, the bus stop grading system would help riders see the amenities at bus stops. Amenities include:

- Shelter
- At least one bench
- Trash receptacles
- Lighting
- A map of local bus routes

An 'A' graded bus stop would have all of the above, 'B' through 'D' graded bus stops would have between 1 and 4 of the amenities above, and an 'F' graded bus stop would have only a sign indicator. Busways, like those at Lechmere and Ruggles, would have a separate label on the app.

✶ **Customizable Routes**

Customizable routes would allow riders to input their commute or other common routes and receive alerts about self-reported issues that may affect their travel. When available, the app would also suggest alternative routes that avoid the reported issue. This feature would also alert riders of delays or closures on their route that may affect their travel time.

✶ **Station maps**

Maps of train stations and bus stops showing riders which entrances and exits are closest to the elevator(s). These maps would also help elderly riders find the shortest route out of the station and to their destination with minimal walking. This feature would also be beneficial to tourists and visitors, with or without disabilities, to be able to navigate the public transit system with confidence.

## Criticism and Meeting with MBTA Officials

I met with the Deputy Director of Customer Engagement at MBTA Systemwide Accessibility and some members of their team on April 4th, 2023 to discuss this project and how I may be able to make it better. The team listened to my proposal and made it very clear that the MBTA does not want to be involved in an official MBTA app, but would be open to endorsing a third-party app. I was able to listen and ask questions about their thoughts and took into account the idea that the MBTA is a government organization that receives federal funding and should be able to resolve accessibility issues with this funding. Ultimately, I did use some of their suggestions, but some would have altered the purpose of the app completely.

Their main suggestion was to implement reporting that feeds directly into the MBTA MCC or Local 311 so that the issues may be resolved faster. I support this idea and believe that this would create awareness about the needs of riders and allow issues to be addressed more efficiently. However, one official noted that there are 188 elevators within the MBTA system that often break down, and it is difficult to keep track of what works and what doesn't. I responded that this is an issue that I am trying to solve with this proposal and that more effort needs to be put into the safety and well-being of disabled riders.

The officials also appeared to be against self-reports being visible to the public, to which I responded that riders have a right to know about these issues because they may determine whether a person can access the station. Based on this, I understand that the MBTA does not want riders to report issues within the system because there are currently too many to address in a reasonable amount of time and riders may become frustrated with their seeming lack of progress. I believe that, especially within a system that is explicitly *for the public*, the public should be able to access knowledge regarding a service created to make their lives easier.

## Next Steps

At the end of the day, I am just a student with an idea. I, unfortunately, have no experience with app development and would be unable to bring this project to life in the sense that I had hoped. I hope that, at some point in the future, another EE538 student will be able to give this project the spotlight it deserves and develop an app that serves the people and visitors of Greater Boston. Where there are barriers to making sustainable choices, people often shy away from these choices and opt for a more convenient and environmentally harmful alternative. This app would give people with disabilities the opportunity to make sustainable choices without having to do additional research or waste time trying to figure out a system that should already be easy for them to use.