Over the past two weeks (and a few posts before then), I looked at every single WRTA route in operation. Some of the routes are pretty good, some aren't, and some are in the middle. Living in Worcester County, but outside of the City of Worcester, I knew that the WRTA operated a hub-and-spoke system, with many routes beginning at Union Station downtown and terminating at various points around the city and neighboring communities. What I didn't know before this whole project, was that there are a number of helpful routing and planning decisions made by the WRTA planners that avoid doubling back or taking longer routes. Now it's time to take a look at the system in its entirety and some of the decisions that were made, as well as a handful of suggestions on my part.

With the WRTA being a hub-and-spoke system with routes all originating at Union Station, I expected most routes to follow one or two main roads through downtown Worcester (like what RIPTA's express routes do with the Downcity Loop). Instead, WRTA routes go on various different streets through downtown, and most of downtown is located a short walk from any WRTA route. Routes run on Chandler St, Pleasant St, Main St, Major Taylor Blvd, even the one-way Chestnut St and Linden St see service from the 3. It really helps that the WRTA put their hub at Union Station as well. Union Station is located a short walk away from Worcester's main business district and places such as the DCU Center, the Palladium, Worcester City Hall, and Saint Vincent Hospital. Union Station is also the terminus of the MBTA's Worcester Line on the Commuter Rail, allowing an easier connection for passengers traveling east by train.

In addition to Union Station, I've also noticed that the WRTA often has multiple routes going to popular places, forming smaller hubs at these locations. One such location is Quinsigamond Community College, served by the 14, 30, and 31. Another is Lincoln Plaza, served by the 16, 23, 26, and 31. The most prominent one of these is at Webster Square, with the 8, 19, 25, 27, and 33 all going off in different directions from Webster Square. These smaller hubs allow passengers to go from one route to another without transferring at Union Station. The network's main crosstown, the 8, is especially helpful in connecting Webster Square to the northern side of the city.

Now it is time for my suggestions on how the WRTA can further improve their network. The WRTA does have interlining in place due to most routes meeting at Union Station. However, this interlining changes depending on the day and is not marketed well at all, typically relegated to a footnote on the timetable. For instance, the 19 is interlined on weekends with the 30 on Saturdays, and the 23 on Sundays. This can be quite confusing for many. On weekdays, passengers from the 19 to the 30 have to get off the bus and find the next bus, while on Saturdays, they may not know that they can stay on the same bus. To fix this, the WRTA can combine multiple routes that interline with each other. The 19 can be combined with either the 23 or 30 and signed as just the 19, which would clear up confusion for transferring passengers. It would also let passengers know fewer schedules, as they currently need both the 19 and 30's schedules to complete their trip.

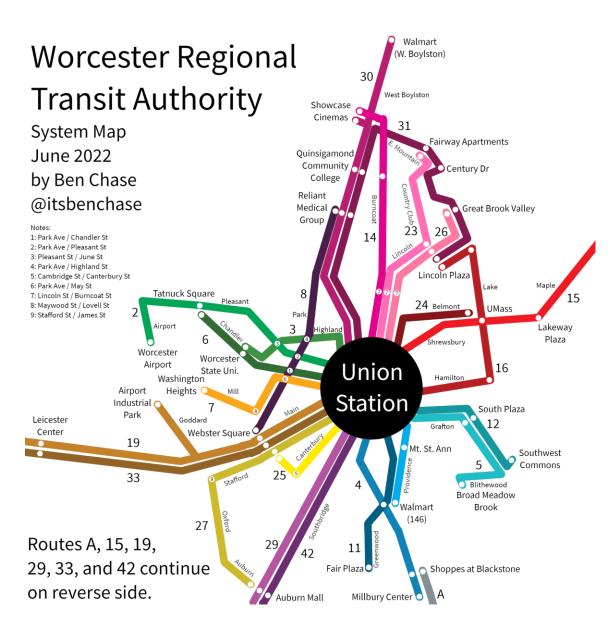
The WRTA also has a get on and get off anywhere system for stops outside of Worcester city limits. This is nice, as it allows passengers to get on and off closer to their origins and destinations. However, the WRTA also marks timepoints on their schedules, and stop signage outside of the city can be helpful.



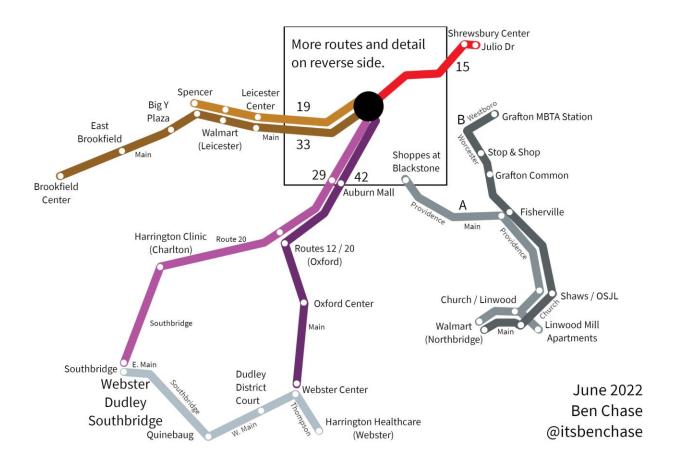
Take this bus stop along the A and B in Northbridge. The Shaw's / OSJL plaza (as the WRTA calls it) is a timepoint on the schedules of the A and B, but there is no sign here. Other timepoints along these routes, and on other routes in communities outside of Worcester city limits, do not have signs at major stops. Issues like these cause locals to not know that a bus stops there, and can cause ridership to be low. This is a short-term fix, though, as making signs is the only required thing for the WRTA to do.

Also, the WRTA has a poorly designed map. It was just within the last few days that the WRTA actually put an updated map on their website. This map is from January 2020 and doesn't even include the new Webster, Dudley, Southbridge Shuttle. The old map was missing much

more, as it was from August 2017. I actually redesigned the map on my own, making it a bit more legible and better showing where multiple routes run along a corridor.



Inside Worcester city limits.



Outside Worcester city limits.

In the medium-term, there are a lot of more impactful decisions the WRTA can make. When I walked around downtown Worcester with my friend in March, I noticed that the city lacks bus lanes. Bus lanes are a tried and tested solution for improving bus speeds in cities around the country. Not every street in the city needs these though, but there are a few key corridors for the city and WRTA to consider adding bus lanes. First is Main St towards Webster Square, with the 19, 27, and 33. The WRTA operates fairly frequent service along this corridor, and with major destinations located here, this is a good contender for bus lanes. Park Ave is home to the 8, an hourly crosstown bus service connecting multiple different routes to places across the city. Park Ave could use bus lanes as well, considering it is a major artery for traffic across Worcester.

The WRTA could also benefit from frequency upgrades. Most routes run between every 45 and 70 minutes on weekdays, with a handful of routes operating service more frequently than that. The most frequent buses see 15 minute headways during some parts of the day, but typically see service every 30 minutes. Maybe clearing up some redundancy can free up buses for more frequent service. Routes like the 26 and 33 can be eliminated and replaced with rerouted and / or extended service on the 23 and 19, respectively. Weekend service lacks as well, with most Sunday service ending at 5 or 6 pm. Take the 27, a route serving the Auburn Mall, a popular weekend destination, has weekend service that doesn't even cover the mall's hours completely. How are people supposed to use transit to get places if the transit doesn't even operate when these places are open? How about the 2, the route going to the city's airport that only serves the airport between 1 pm and 6 pm from Monday to Saturday? If you want people to take transit places, the transit needs to operate when people want to go there.

The most logical long-term goal for the WRTA is to expand service throughout the region. Within the last few years, the WRTA added the 8, 12, and the Webster, Dudley, Southbridge Shuttle to their network. In early 2014, a few months after the A and B started operating in Northbridge and Grafton, there was an article in the Telegram and Gazette (the local Worcester newspaper) about the service. The article mentioned that the route saw low ridership due to a lack of advertisement of the routes. As both the towns of Northbridge and Grafton are in the MBTA district (due to Grafton's train station), each town contributes to the MBTA's budget. With this WRTA service, the towns don't spend any additional money, but some money gets redirected to the WRTA to fund this service. Northbridge hasn't had bus service for decades prior to the WRTA's current service, and the routes contribute to economic development in the area,

especially from those who do not drive. Northbridge and Grafton are two car-dependent suburbs lacking pedestrian infrastructure, so the bus can be a game-changer for many.