TRANSIT FORWARD RI 2040

Transit Strategies

First Mile / Last Mile Connections

For people who ride transit, the journey starts before they board a bus or train, and ends after they get from the bus or train to their destination. The large majority of transit riders walk to and from their bus or train, but other options such as bicycles, rideshare, microtransit, scooters are becoming increasingly available and can extend the reach of transit. People are also becoming much more multi-dimensional in the way they travel – doing one thing one day and another thing another day. To accommodate this, providing different ways to get to and from transit has become increasingly important.

First Mile/Last Mile Connections

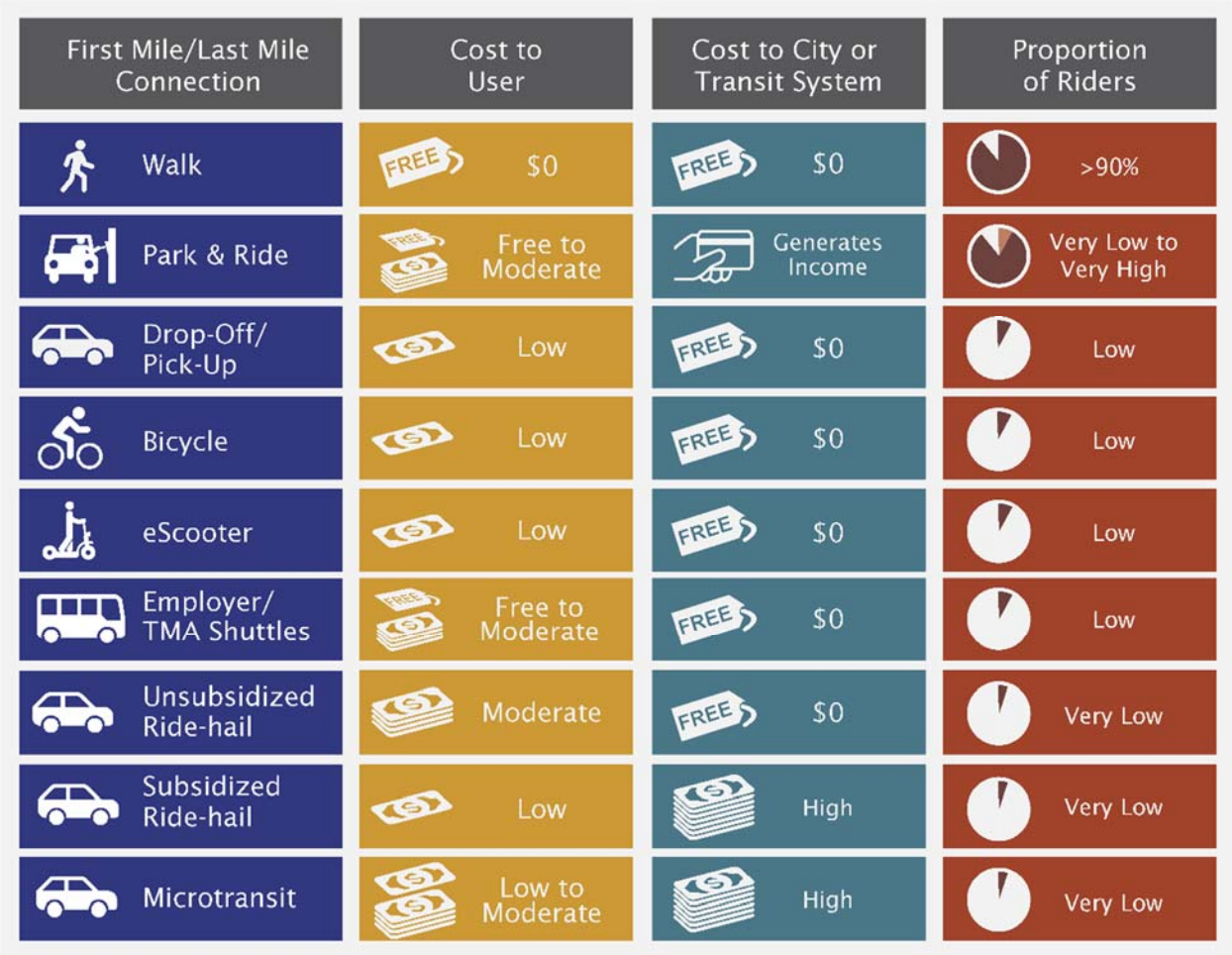
Overview of First Mile/Last Mile Connections

There are many types of first mile/last mile services and options are rapidly expanding. These include:

- **Walking**
- **Pesonal automobiles and park and ride lots**
- **Biking (including bikeshare)**
- **Scooters**
- **Transportation Management Associations (TMAs)/employer shuttles**
- **Ridesharing**
- **Microtransit**

One important consideration with respect to these options is that their costs – to both users and transit systems – vary significantly. At one end of the spectrum, walking is the least expensive, as it is free to both the user and the transit system. At the high end of the spectrum, microtransit connections typically cost $15 per passenger and up. A summary of cost differences is shown in the table on the next page.

First Mile/Last Mile Connections, Costs, and Proportion of Riders



Walking

By far, the most important first mile/last mile connection is walking as over 90% of transit riders walk to and from the bus. With good walking conditions, passengers will walk farther, increasing the reach of transit. Where gaps exist in the pedestrian network, people won't walk as far. It is also the lowest cost first mile/last mile connection, being free to both users and transit providers.

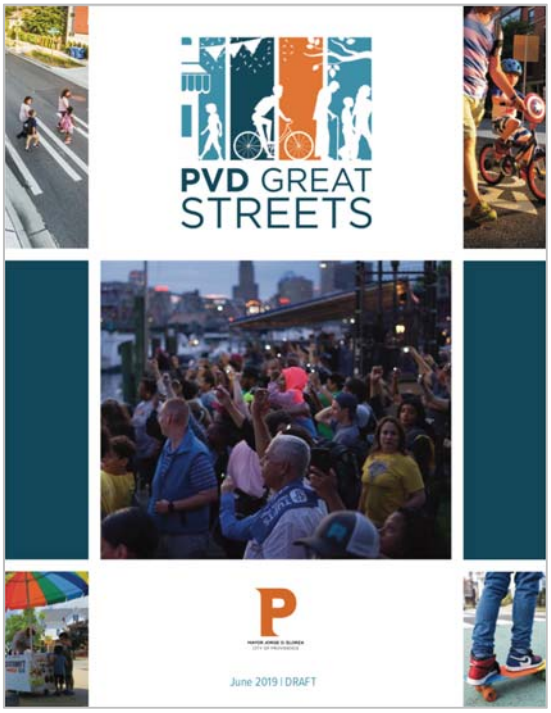
Rhode Island has a mix of walking conditions that range from very good to very poor. Municipalities have begun to adopt complete streets resolutions and ordinances, a particularly comprehensive example of which is Central Falls' Green and Complete Streets ordinance, which "will allow for a transportation system that minimizes environmental impact and creates streets that are safe for everyone, regardless of age, ability, or mode of transportation." The City of Providence is developing a PVD Great Streets plan recommending improvements to:

- Make walking and biking safer
- Calm traffic and reduce speeding and cut-through traffic

- Provide streetscape and placemaking improvements like lighting, trash and recycling cans, landscaping, pocket parks, and benches
- Create a "spine" network of Urban Trails that connect every Providence neighborhood

Initiatives such as these lay the groundwork for making it easier for people to get to and from transit by prioritizing improvements that will increase the distance that people will be willing to walk in order to access the transit network.

PVD Great Streets Plan



Park-and-Ride Lots

Especially for longer distance trips, such as those made by express bus and rail, park and ride access is among the most important. Park and Ride lots also provide for longer "first mile" connections than most other options, typically around five miles. Park and ride lots can also generate revenue through parking fees.

At present, Rhode Island has a network of 21 publicly-owned surface park-and-ride lots plus three large garages at the Newport Visitors Center, the T.F. Green/Warwick commuter rail station, and the Wickford Junction commuter rail station. No fee is charged to park at most of these facilities; exceptions are $5 per day at the Interlink garage and Newport Visitors Center, where parking for RIPTA riders is $2 per day in the summer and free the rest of the year. The Wickford Junction garage is used by University of Rhode Island students and faculty who then take RIPTA service to the URI campus in South Kingstown. In addition, there are a number of municipally and privately owned facilities that allow parking by daily transit users and are marketed on RIPTA's statewide transit map. Looking forward, many of these facilities could be upgraded to mobility hubs that include other first mile/last mile connections, as well as other services. (For more information on mobility hubs, see the Mobility Hubs strategy paper.)

Wickford Junction Station with Parking Garage

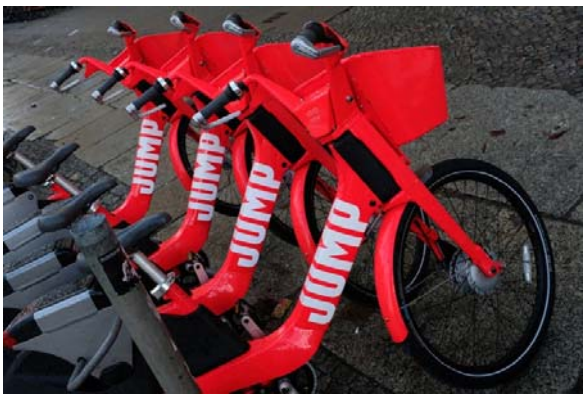
Barrington Park and Ride Lot

Bicycling/Bikeshare

Bicycling is another very cost-effective way to get people to and from transit, with low or no cost to users and no operating costs for transit systems. Bicyclists can also travel longer distances than pedestrians. Strategies to improve bike/transit integration and better support first and last mile connections include:

- **Network Improvements:** Similar to pedestrian access, more people will use bicycles where good facilities provide comfortable conditions. Providence's PVD Great Streets includes many measures to make bicycling much easier and can provide a model for other communities as well.
- **Bike Parking for Personal Bicycles**: Bike parking can include both short and long-term parking facilities. Long-term bike parking is well suited for stops served by commuter-oriented routes.
- **Bikeshare**, which provides an alternative to using personal bicycles. To facilitate bikeshare trips, bikeshare bicycles need to be available at the places that most people want to travel. For transit connections, they need to be available at transit stations and stops. A current trend in bikeshare is a transition to electric bicycles, which in many cases has increased use by ten-fold. RIPTA, as a statewide transit provider, could potentially assist in establishing a statewide bikeshare program for Rhode Island.
- **Onboard Integration**: Allowing transit riders to bring their bikes with them improves first/last mile connectivity. While front-loading bike racks on buses are common, the process of loading a bike onto a bus can increase dwell times. A faster option sometimes used on higher-capacity vehicles is to allow riders to bring their bikes on board.

Providence JUMP Bikeshare



Bikes on Swift BRT (Snohomish County, WA)

Scootersharing

Over the last year, electric scooter-share systems have arrived in many cities around the United States, including Providence. These dockless, battery-powered scooters, operated by private companies like Lime and Bird, generally act as an alternative to walking or biking. Similar to bikeshare, the cost to users is low, and there is no cost to transit systems.

Bird Scooters in Providence

Rideshare Partnerships

Rideshare partnerships are partnerships between transit systems and rideshare companies like Uber and Lyft to provide subsidized service to transit users. The actual services that are provided are very similar to taxi service, but with app-based reservations and fare payment. With transit system-sponsored service, there are typically also accommodations for phone reservations and cash payment. A major challenge with rideshare partnership is high costs. The typical rideshare fare starts at around $7, and depending upon the degree to which costs are shared, poses a high cost to riders and/or transit systems.

The most common partnerships are for first mile/last mile connections to and from fixed-route service. However, they sometimes to provide the entire trip within a defined zone.

Microtransit

Microtransit is a new term that is being applied to services whose common denominators are that they are app-based and use smaller vehicles to transport low volumes of people. There are generally two types of Microtransit services:

- **On-demand point-to-point:** These are essentially the same as traditional on-demand services such as RIPTA's Flex, but with app-based on-demand reservations and fare payment, versus phone-based advance reservation Flex requires.
- **Route deviation shuttles:** These follow a defined route but that will deviate from the route for pick-ups and drop offs. Similar to point-to-point services, the major difference between these services and traditional route-deviation services is the on-demand app-based reservation and payment system.

A number of entities provide Microtransit services. These include transit systems, communities, and private companies. There a two common approaches. The most common is to contract with a

microtransit provider offering both the technology and the service. The second is to purchase the technology and incorporate it into directly provided services. One example is Via, a microtransit company that both provides service and sells its app-based technology to transit systems for their own services.

Similar to rideshare partnerships, a major challenge with microtransit is high costs. The typical cost per trip for Microtransit service is $10 or higher (and sometime much higher). Typically, most of the cost is borne by transit systems.

Trinity Metro Microtransit Vehicle (Fort Worth, TX)

Shuttles

A longstanding form of shared transportation, shuttles typically provide limited service to specific markets. Operated by both public and private entities, examples of shuttle services include:

- **Part-Time/Limited Service Shuttles** that operate for limited hours or and are designed to provide a limited amount of service for non-work trips. They are usually run by transit systems, but often have private sponsors such as the supermarkets or hospitals. These are either fixed-route or provide reservation-based pick-ups and drop-offs at the home end.
- **Worksite Shuttles** that provide connections between transit stops and stations and worksites. These are provided by transit agencies, Transportation Management Associations (TMAs), and individual employers and are focused on getting people to and from work. These are usually fixed-route shuttles.

Transportation Management Associations

Transportation Management Associations (TMAs) are member-controlled, member-funded organizations that provide transportation services for a particular area, such as an industrial park, medical center, commercial district, or mall. Employment areas that lack concentrated density but still form a congregation of employees are prime targets for TMAs, which can partner with transit agencies to provide transportation services. Many TMAs run shuttles to and from major activity centers and transit stops.

- **Social Service Shuttles** that frequently operate to and from senior centers, hospitals, and shopping centers. These are usually reservation-based services that provide home-based pick-ups and drop-offs.
- **Shuttles to Recreation Sites** are sometimes provided by transit agencies from transit stops to destinations outside of the typical service zone, such as hiking trailheads.

Examples of First Mile/Last Mile Connections

Rideshare Partnership: RTC/Lyft/Fanatics, Las Vegas, NV

Fanatics is a sports apparel retailer that has a distribution center in Las Vegas that is located over a mile from the nearest bus route. Through a partnership between the Regional Transportation Commission of Southern Nevada (RTC), which is the local transit provider and Fanatics, employees can use Lyft to connect with six transit routes. During the pilot project, Lyft is charging a discounted rate, RTC contributes $1 to the fare, and Fanatics provides the remainder. It is anticipated that after the end of the pilot, Lyft would charge a rate similar to its Lyft-Line rates. The pilot will soon be expanded to include a nearby Amazon Fulfillment Center. Current ridership is around 10 passengers per day.

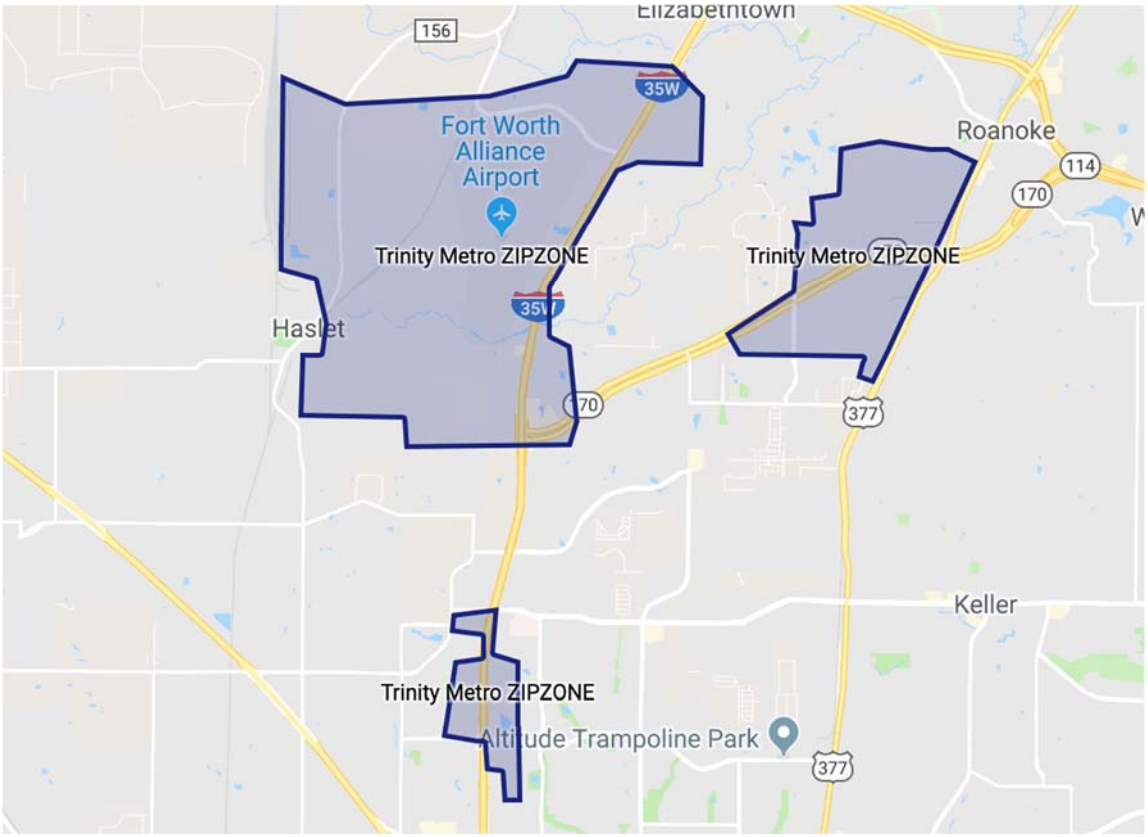
Fanatics Distribution Center, Las Vegas

This partnership is similar to others throughout the U.S., with a significant difference being its very low cost to the transit agency, at only $1 per passenger trip. With most other ongoing pilots, transit systems are paying a much higher share of the rideshare fare.

Rideshare Partnership: Trinity Metro ZIPZONE, Denton County TX

Trinity Metro, in partnership with the Denton County Transportation Authority (DCTA), is piloting a rideshare partnership with Lyft to provide first mile/last mile connections in a designated corridor. The service is available for Trinity Metro riders who travel between mainline transit stops and locations within three designated zones. Riders use the Lyft app to book their trips and enter a promotional code through which the cost of the ride is billed to Trinity Metro and DCTA. The service is free to riders and available on weekdays between 4:30 AM and 7:30 PM and on weekends between 5:30 AM and 7:30 AM and 4:00 PM and 7:30 PM. So far, less than 10 passengers per day are using the service.

ZIPZONE Service Zones



Rideshare and Taxi Partnerships: Pinellas County, FL

The Pinellas Suncoast Transit Authority (PSTA) was one of the first transit systems to enter into rideshare partnerships, and currently offers three rideshare partnerships designed to provide service for areas with no fixed-route access and for people who travel at times after fixed-route service has ended:

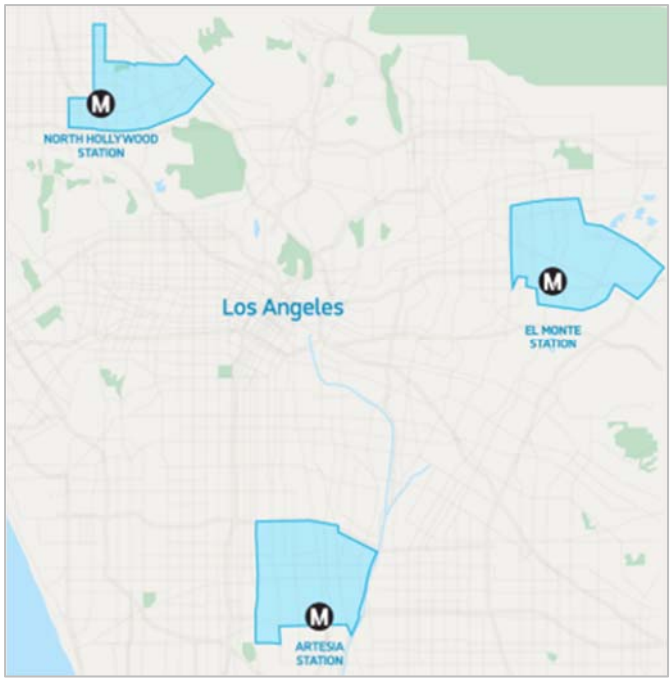
- **Direct Connect** is a rideshare partnership with Uber and a local taxi company that provides service to and from PTSA bus stops. PTSA pays the first $5 of the fare and users the rest. The Direct Connect program currently serves about 30 passengers per day.
- **TD (Transportation Disadvantaged) Late Shift:** Low-income residents are eligible for one free Uber or local taxi ride per day up to 23 trips per month to travel to and from work between 10:00 PM and 6:00 AM when PTSA's fixed-route services are not operating.
- **P4-MOD (Public-Private-Partnership for Paratransit Mobility on Demand)**, through which paratransit riders can request on-demand, same-day rides, versus the previous demand-response system that required 24-hour advanced notice.

PSTA uses these rideshare partnerships to provide service that is more convenient to riders and at a lower cost than running fixed-route services with few passengers.

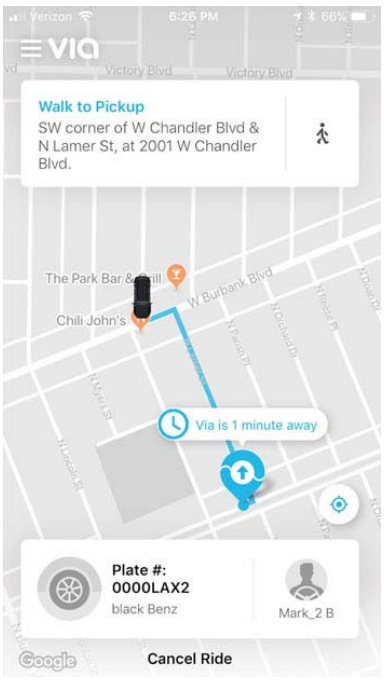
Microtransit: LA Metro and Via, Los Angeles, CA

In January 2019, LA Metro launched a pilot program with Via, a microtransit company, to offer shared, on-demand rides to and from three LA Metro stations that serve minority and low income communities. Service is available on weekdays from 6:00 AM to 8:00 PM. Fares are $1.75 for riders with a TAP card, $3.75 for riders who do not provide a TAP card number, and free for participants of Metro's low-income fare subsidy program. Customers without smartphones will able to hail rides by telephone, and those without access to credit cards will be able to pay through debit or prepaid cards.

LA Metro Microtransit Zones



Via App

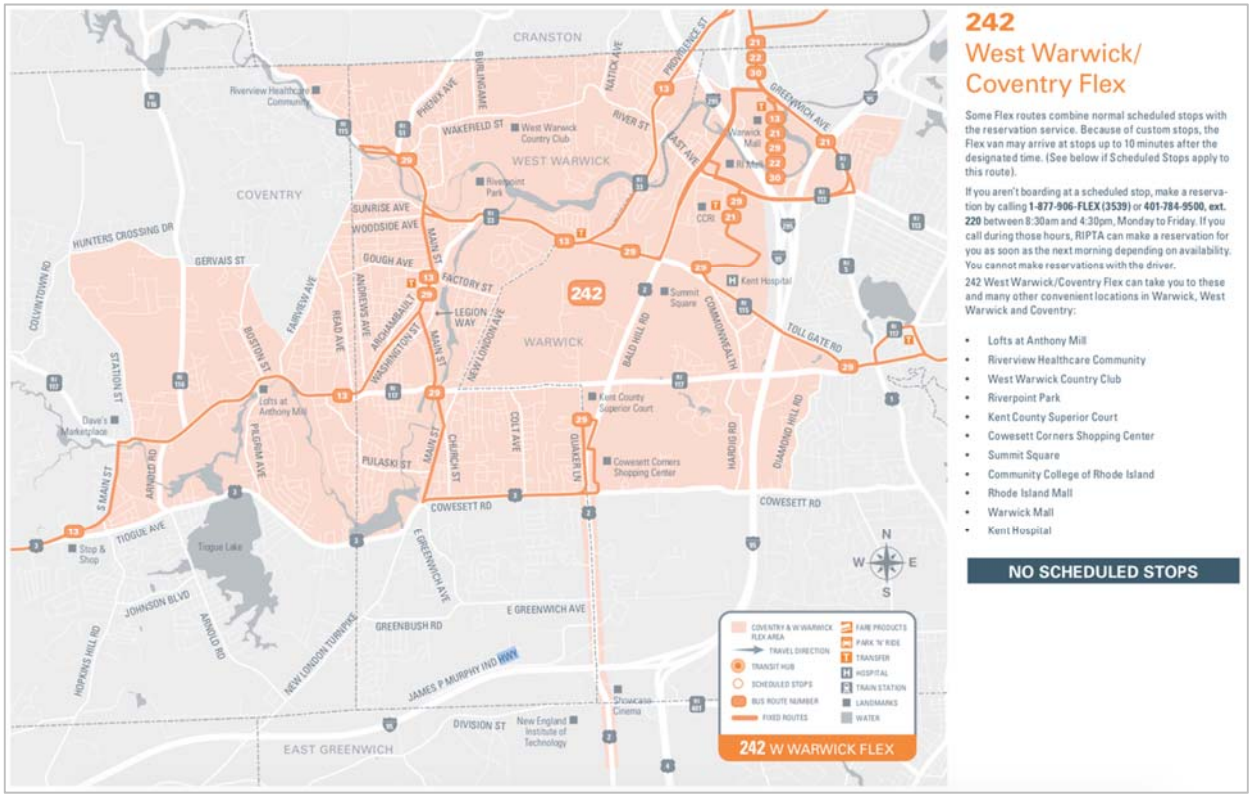


Reservation-Based Point-to-Point Service: RIPTA Flex Services

RIPTA currently operates reservation-based point-to-point "Flex" services in seven small markets, which provide point-to-point service within defined zones, including first mile/last mile connections to mainline RIPTA services. The seven area are:

- Narragansett
- Westerly
- Kingston/URI
- South Aquidneck Island
- West Warwick/Coventry
- Woonsocket
- Pascoag/Slatersville

RIPTA West Warwick/Coventry Flex Service



Each zone has a number of scheduled time points, where passengers can catch the Flex bus in the same manner as a regular bus. For pick-ups at other locations, riders must call 24 hours in advance. This service is very similar to many microtransit services, but requires advance reservations.

TMA Shuttles: Route 128 Business Council, Suburban Boston, MA

In 1985, GTE Laboratories, Polaroid, and The Nelson Companies jointly funded a transportation impact study along the Boston area's Route 128 between Route 2 and Route 20. The study concluded that increased traffic congestion would negatively impact the region if alternative solutions and traffic-reducing measures were not immediately implemented. Two years later, the 128 Business Council was formed to develop alternative transportation solutions, including sustainable and environmentally-friendly practices that would enhance the vitality and economic attractiveness of the 128 West region. The Council is now entering its third decade of service to business, collegiate, and residential community members.

The Route 128 Business Council now operates seven shuttle services—four that provide reverse commute connections from the MBTA's Alewife station at the end of the Red Line, one that provides suburban commute service, and two that provide local circulation.

Shuttle from Alewife Station to Route 128 (Boston Area, MA)

Potential Improvements to First Mile/Last Mile Connections

Just as there are a number of ways to provide first mile/last mile connections, there are a large number of improvements that RIPTA, RIDOT, and State of Rhode Island can make.

Pedestrian Improvements

The most important improvement that can be made to first mile/last mile connections will be to improve pedestrian connections to transit. These improvements can provide greater benefits that all other measures combined. They will also provide benefits that go far beyond transit. From a transit perspective, they are also very cost-effective as riders can get to mainline transit services without any cost to them, RIPTA, or RIDOT.

The Central Falls Green and Complete Streets ordinance and City of Providence PVD Great Streets plans focus on pedestrian and bicycle improvements, and includes a large number of improvements that would make it easier to get to and from transit. These plans can also provide guidance to other communities. Ideally, complete streets plans should denote transit routes and, where applicable, dedicated transit lanes to ensure that a complete array of mobility options is available to community residents.

Bicycling Improvements

Similar to pedestrian improvements, the PVD Great Streets plan provides strategies to improve bicycling, including routes to and from transit. As appropriate, shared bus and bicycle lanes should be explored. Beyond those improvements, additional improvements could include siting additional bikeshare stations and other bicycle facilities at major transit locations.

TMA/Employer Shuttles

Some areas mandate that new developments take measures to mitigate traffic impacts, and these mandates often lead to the development of TMAs that provide bus connections with mainline transit services. This is not the case in Rhode Island, but the state could create incentives for the development of TMAs or employer shuttles. These incentives could include financial incentives that could be less expensive than new publicly funded rideshare partnership and microtransit services. With the development of mobility hubs throughout the state, TMA or employer shuttles could provide connections between mobility hubs and more isolated worksites, including the Quonset Industrial Park.

Ridesharing

In some larger cities, including Boston, Lyft advertises itself to customers as a first mile/last mile connection, primarily to rail services. In these cases, transit systems gain riders at no additional cost. In other cases, transit systems subsidize part or all of the cost of the ride. At one end of the spectrum, such as with Trinity Metro's Alliance ZIPZONE service, the transit system subsidizes all of the cost, and the resulting cost per passenger to the transit system is very high – much higher than the cost per passenger on fixed-route services. To date, because the number of riders has been low, total costs have been low. However, with more riders, costs could increase rapidly. At the other end of the spectrum, some transit systems provide only a partial subsidy, with users or others – often employers – paying the majority of the cost. Perhaps the best example is the Las Vegas RTC/Lyft/Fanatics partnership described above, through which the RTC pays only $1 per passenger, and which is much less than its cost per fixed-route passenger. These types of partnership are much more cost-effective for transit systems, and will thus be much more scalable. Potential markets would be similar as for TMA/employer shuttle plus other major activity centers such as URI. However, ridesharing service is only available in areas with higher demand, which would preclude this option in many areas.

Microtransit

Similar to ridesharing partnerships, microtransit can provide convenient first mile/last mile connections where demand is too low to warrant fixed-route service and provide a way to expand service coverage. Also similar to ridesharing partnerships, the cost per passenger is very high, and typically even higher than for rideshare partnerships. For example, if Trinity Metro achieves its goal of 3.5 passengers per revenue hour for its Mercantile ZIPZONE service, its cost per passenger will be $14. Of this, passengers will pay $3 and Trinity Metro will pay $11. To make these services more affordable for Trinity Metro – and more scalable – it is almost certain that there will need to be stronger funding partnerships with those would benefit from the services, including employers. Potential markets would be similar as for ridesharing partnerships, and since it does not rely on the availability of Uber or Lyft drivers, could be used anywhere in Rhode Island.

Connection Points

A key to making first mile/last mile connections work is ensuring that connection points are convenient and comfortable. As described in the Mobility Hubs strategy paper, mobility hubs are local focal points for transportation and would be logical connecting points for first mile/last mile services.