

Rhode Island Transit Master Plan

OVERVIEW OF TRANSIT
IMPROVEMENT STRATEGIES
SEPTEMBER 2019

TRANSIT RI
FORWARD 2040

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Introduction

Introduction

Transit Forward 2040 is designed to determine the steps that Rhode Island should take to realize its transit potential, and to improve its transit relative to other transportation options. The improvement strategies described in this document are described around four major goals and supporting objectives.

GOAL 1	<p>ENHANCE → Make transit attractive and compelling</p> <p>Objectives:</p> <ul style="list-style-type: none"> • Make existing services more convenient • Improve passenger experience • Better integrate different services • Increase awareness of transit
GOAL 2	<p>CONNECT → Connect people to life's activities</p> <p>Objectives:</p> <ul style="list-style-type: none"> • Connect people with jobs and activities that are part of daily life • Emphasize services that will benefit the largest numbers of people • Develop a unified cross-agency transit decision-making framework
GOAL 3	<p>THRIVE → Grow the economy and improve quality of life</p> <p>Objectives:</p> <ul style="list-style-type: none"> • Prioritize transit improvements that support RI's economic development policies • Provide services that will help Rhode Island retain and attract younger residents • Provide services that help people live independently as they age • Expand service to new areas that are transit-supportive • Build on existing assets including RIPTA services, the Northeast Corridor and proximity to Boston
GOAL 4	<p>SUSTAIN → Ensure financial and environmental sustainability</p> <p>Objectives:</p> <ul style="list-style-type: none"> • Identify and pursue new funding opportunities, including leveraging private funds • Achieve and maintain a state of good repair • Develop cost-effective, implementable transit solutions • Develop services that achieve a high level of public and political support • Work with communities, businesses and others to build partnerships that support proposed transit strategies • Reduce greenhouse emissions

There are many potential ways to improve service for residents and visitors

Transit trips consist of four components, which are to (1) plan, book, and pay for a trip (2) wait for the transit vehicle to arrive, (3) ride the transit vehicle, and (4) get to and from the transit stop.

Plan/
Book/
Pay



Wait/Board



Ride



First Mile/
Last Mile
Connections



For transit to be convenient, each step must be convenient and comfortable, and there are many ways to accomplish this. This document presents an overview of strategies that make improvements in each of these areas, grouped in six categories:

1. **Develop High Capacity Transit Services**
2. **Improve Existing Services**
3. **Expanded Service to New Areas**
4. **Improve Facilities and Amenities**
5. **Improve Access to Transit**
6. **Make Service Easier to Use**



Scenarios

There are many ways in which these strategies could be implemented. In some cases, the differences would differ in how aggressively they would be improved. For example, fewer or more bus stops could be improved, and the quality of improvements could be lower or higher. In other cases, improvements would be mutually exclusive. For example, light rail and Bus Rapid Transit would not be implemented in the same corridor. To examine how these improvements can best work together to produce a better transit future for Rhode Island, the strategies have also been combined into three scenarios, which are:

Scenario 1: Address Most Pressing Needs, which focuses on addressing the largest gaps between the service that is provided and customer demand. Improvements are most heavily focused on the Providence Metro Area and other urbanized areas, but also include improvements throughout most of the state.

Scenario 2: Improve and Expand, which includes most improvements in Scenario 1, plus significant capital expenditures in high demand corridors and the expansion of service to new areas.

Scenario 3: Comprehensive Statewide System, which focuses on the development of robust transit services in all parts of the state where there is moderate or higher demand, plus lifeline services in areas where demand is very low.

This document also presents an overview of how the strategies have been incorporated into the scenarios. For more detailed information on the strategies and scenarios, visit the project website at transitforwardri.com.



Develop High Capacity Transit Services

	Trip Component			
	Plan/ Book/ Pay	Wait/Board	Ride	First Mile/ Last Mile Connections
Light Rail		●	●	
Bus Rapid Transit (BRT)		●	●	
Rapid Bus		●	●	
Regional Rapid Bus			●	

Improve Existing Services



	Trip Component			
	Plan/ Book/ Pay	Wait/Board	Ride	First Mile/ Last Mile Connections
STRATEGY				
Frequent Transit Network		●	●	
More Frequent Service for Longer Hours		●	●	
Transit Priority			●	
Express Bus & Bus-On-Shoulder Operation			●	
Transit Emphasis Corridors			●	
Faster Commuter Rail Service to Boston			●	
More Frequent Commuter Rail Service to Boston			●	
Improve Flex Service	●	●		

Expand Service to New Areas

	Trip Component			
	Plan/ Book/ Pay	Wait/Board	Ride	First Mile/ Last Mile Connections
STRATEGY				
New and Updated Local Services			●	
Crosstown Service			●	
Flex Service			●	●
Special Events/Tourism Services	●		●	
Service Buy-Ups			●	●

Improve Facilities and Amenities



STRATEGY

	Trip Component			
	Plan/ Book/ Pay	Wait/Board	Ride	First Mile/ Last Mile Connections
Better Bus Stops and Facilities		●		
Mobility Hubs		●		●

Improve Access to Transit

	Trip Component			
	Plan/ Book/ Pay	Wait/Board	Ride	First Mile/ Last Mile Connections
STRATEGY				
Walking				●
Driving				●
Biking				●
Rideshare Partnerships	●		●	●

Make Service Easier to Use

<p>STRATEGY</p>	Trip Component			
Integrate Fares	Plan/ Book/ Pay	Wait/Board	Ride	First Mile/ Last Mile Connections
Mobility as a Service	●			●

Improvement Strategies

1. Develop High Capacity Transit Services
2. Improve Existing Services
3. Expand Service to New Areas
4. Improve Facilities and Amenities
5. Improve Access to Transit
6. Make Service Easier to Use

Develop High Capacity Transit Services

- High Capacity Transit Light Rail
- Bus Rapid Transit (BRT)
- Rapid Bus
- Regional Rapid Bus

High Capacity Transit

High Capacity Transit services are those that serve high volumes markets with fast and frequent high-quality service. Examples include rapid transit, light rail, Bus Rapid Transit, and Rapid Bus. The R-Line is an example of Rapid Bus service.

In Rhode Island, there are a number of high-volume markets that could support light rail, BRT, and Rapid Bus.

LIGHT RAIL	BUS RAPID TRANSIT (BRT)	RAPID BUS
<p>TYPICAL FEATURES</p> <ul style="list-style-type: none"> • Two car trains • Service in exclusive rights-of-way <ul style="list-style-type: none"> • Center running in urban arterials • In own right of way • Aerial and underground stations • High quality stations with level boarding • Very frequent service (at least every 10 minutes) • Service from early morning to late night • Limited stops • Transit signal priority • Special branding • Off-board fare collection • Real-time passenger information 	<p>TYPICAL FEATURES</p> <ul style="list-style-type: none"> • 60' articulated buses • Center or side-running on urban arterials • High quality stations • Very frequent service (at least every 10 minutes) • Service from early morning to late night • Limited stops • Transit signal priority • Special branding • Off-board fare collection • Real-time passenger information 	<p>TYPICAL FEATURES</p> <ul style="list-style-type: none"> • Similar to BRT but without exclusive lanes, or only limited exclusive lanes • 40' or 60' articulated coaches • More limited forms of transit priority <ul style="list-style-type: none"> • Transit signal priority • Queue jump lanes • Frequent service, but less frequent than light rail or BRT • Service from early morning to late night, but often shorter span than light rail or BRT

Light Rail

Light Rail Transit (LRT) is electrified rail service that operates in a variety of urban environments including completely exclusive rights-of-way, in exclusive lanes on roadways, and in some cases in mixed traffic. It uses one- to three-car trains and serves high volume corridors at higher speeds than local bus and streetcar service.

Design and operational elements of LRT include level boarding, off-board fare payment, and transit signal priority. Stations are typically spaced farther apart than those of local transit services and are usually situated where there are higher population and employment densities.

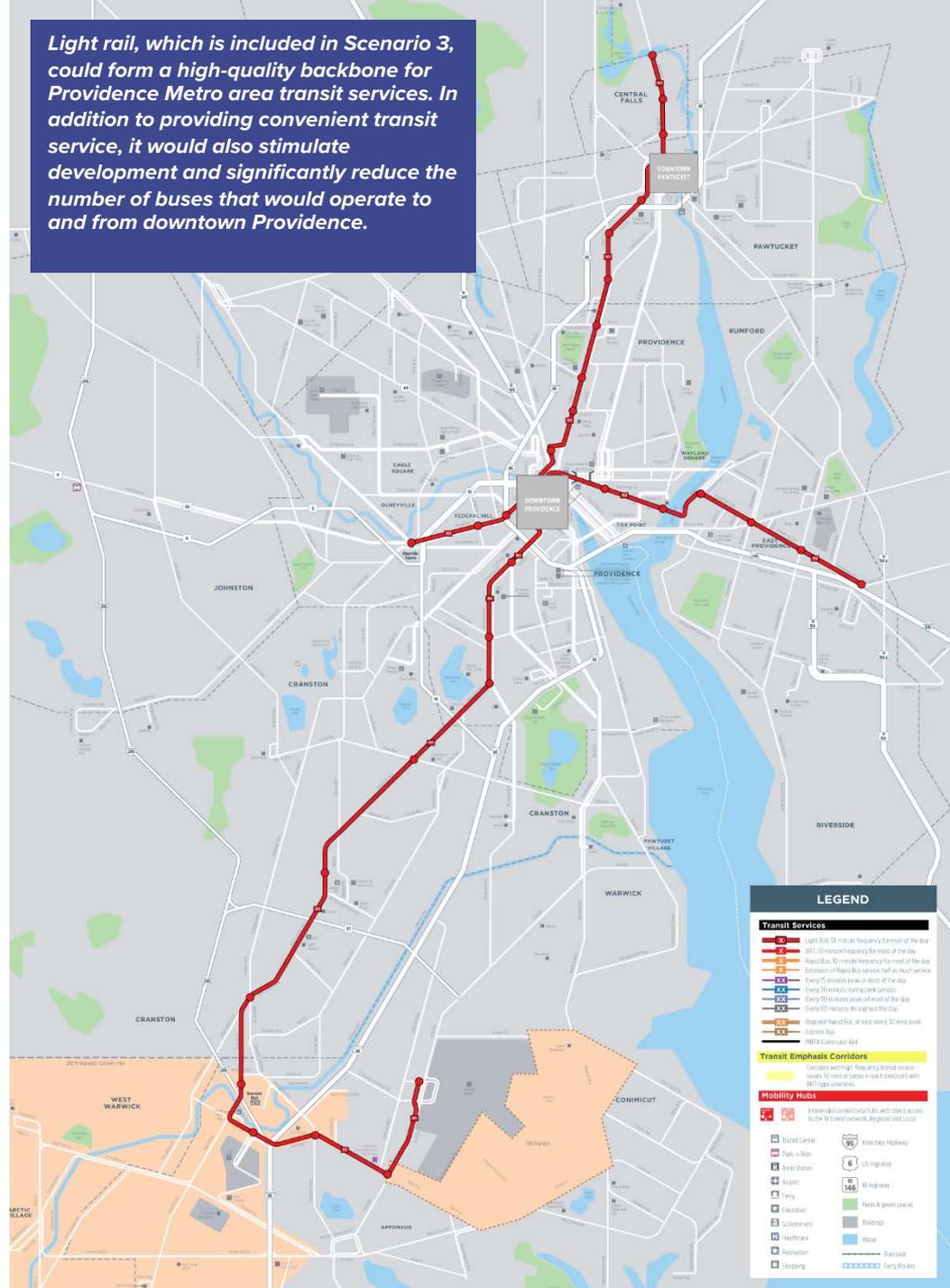
Four corridors in the Providence Metro area have sufficient demand to support light rail, which would provide very convenient service and stimulate development. Light rail would also significantly reduce the amount of buses that operate to and from Kennedy Plaza.

Two light rail lines are included in Scenario 3:

- A north-south line between Central Falls and TF Green Airport via downtown Pawtucket, downtown Providence, Reservoir Avenue, and CCRI Warwick.
- An east-west line between Olneyville Square and East Providence via Federal Hill, downtown Providence, and College Hill. Note that this line would also operate via the currently abandoned East Side tunnel.

Light rail is not included in Scenarios 1 and 2.

Light rail, which is included in Scenario 3, could form a high-quality backbone for Providence Metro area transit services. In addition to providing convenient transit service, it would also stimulate development and significantly reduce the number of buses that would operate to and from downtown Providence.



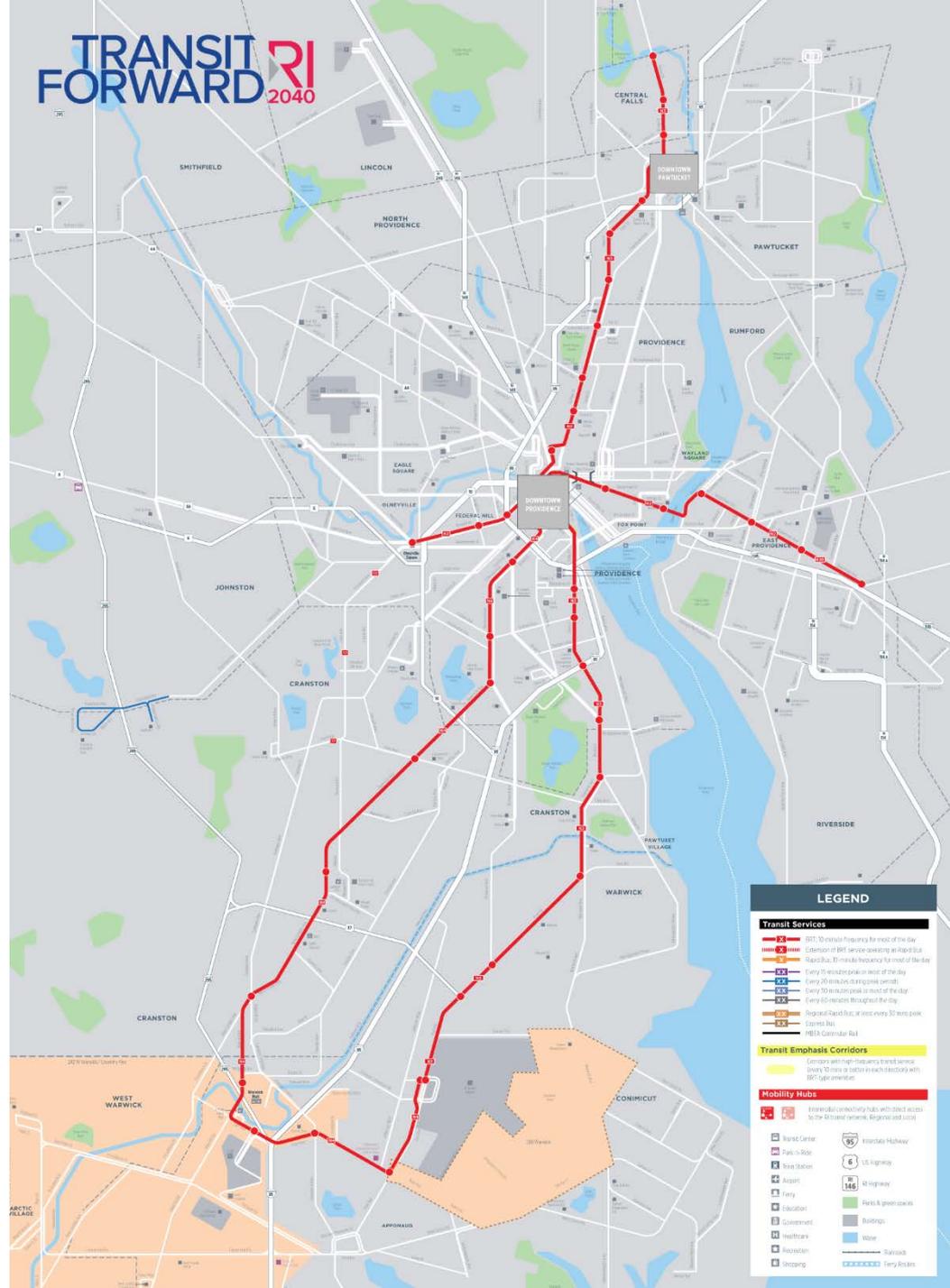
Bus Rapid Transit

Since the late 1990s, nearly 200 cities around the world have developed Bus Rapid Transit (BRT) services that can provide light rail-like service without the high costs associated with rail infrastructure. BRT typically has lower capital and operating costs than Light Rail Transit (LRT) and faster, more reliable, and more easily identifiable service than typical buses.

Characteristics of BRT include:

- Frequent service, typically every 10 minutes or less
- Long span of service, often 18 hours a day or more
- Fast service like light rail, using dedicated lanes
- Direct, operating along major arterials and without deviations.

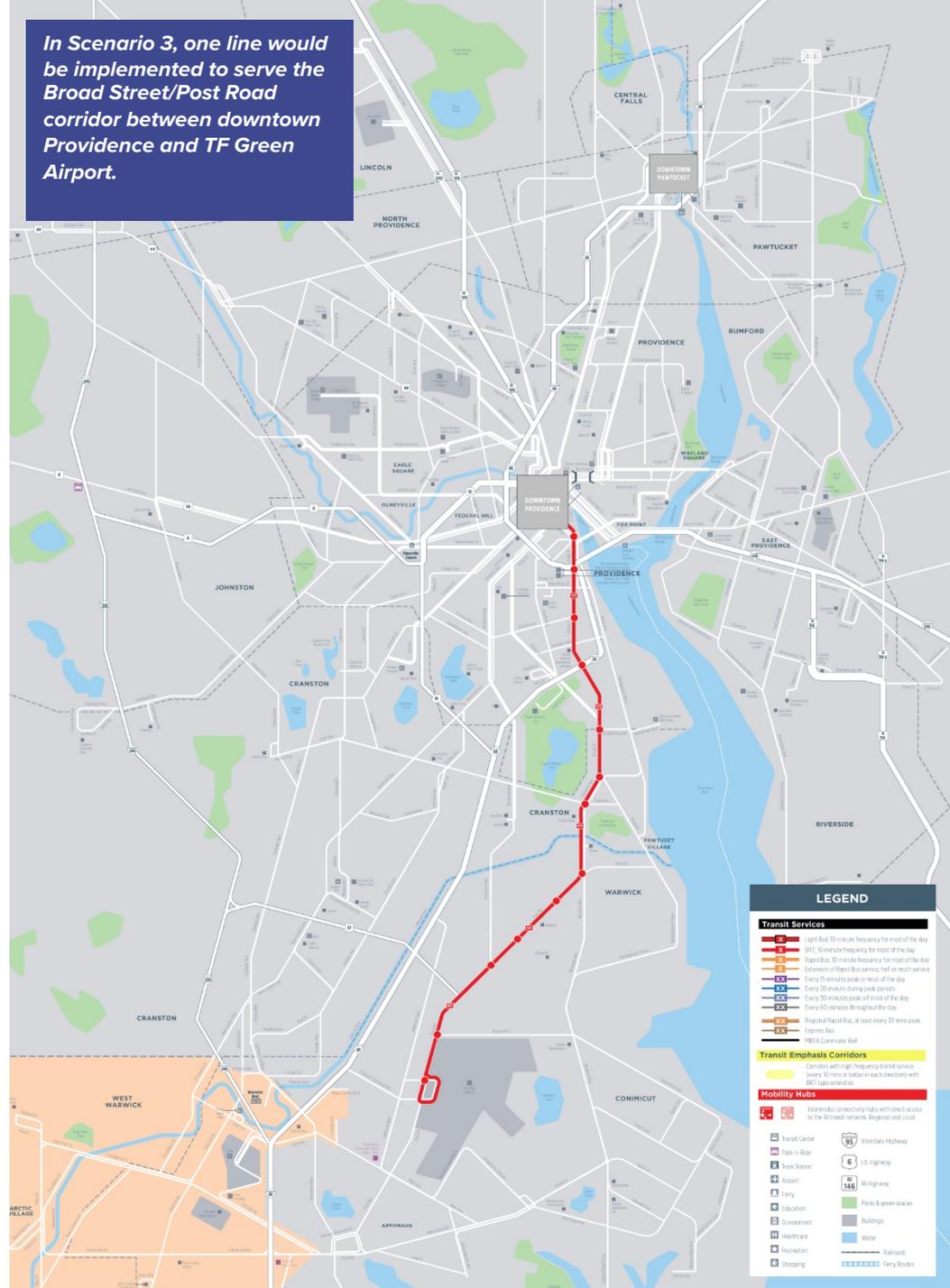
Bus Rapid Transit would be a new service type for Rhode Island. In Scenario 2 (pictured here), it would be implemented as an alternative to light rail. In Scenario 3, one line would be implemented to serve the Broad Street/Post Road corridor between downtown Providence and TF Green Airport. Bus Rapid Transit is not included in Scenario 1.



Bus Rapid Transit

BRT, which is included in Scenarios 2 and 3, could form a high-quality backbone for Providence Metro area transit services. In addition to providing convenient transit service, it would also stimulate development, although to a lesser extent than light rail. BRT could be implemented as a lower cost alternative to light rail in major corridors, as well as a supplement to it in other corridors.

In Scenario 3, one line would be implemented to serve the Broad Street/Post Road corridor between downtown Providence and TF Green Airport.



Rapid Bus

Rapid Bus services have many of the same features as Bus Rapid Transit (BRT) services but operate in mixed traffic rather than dedicated bus lanes. They require fewer resources than BRT systems but provide higher-quality service than local buses.

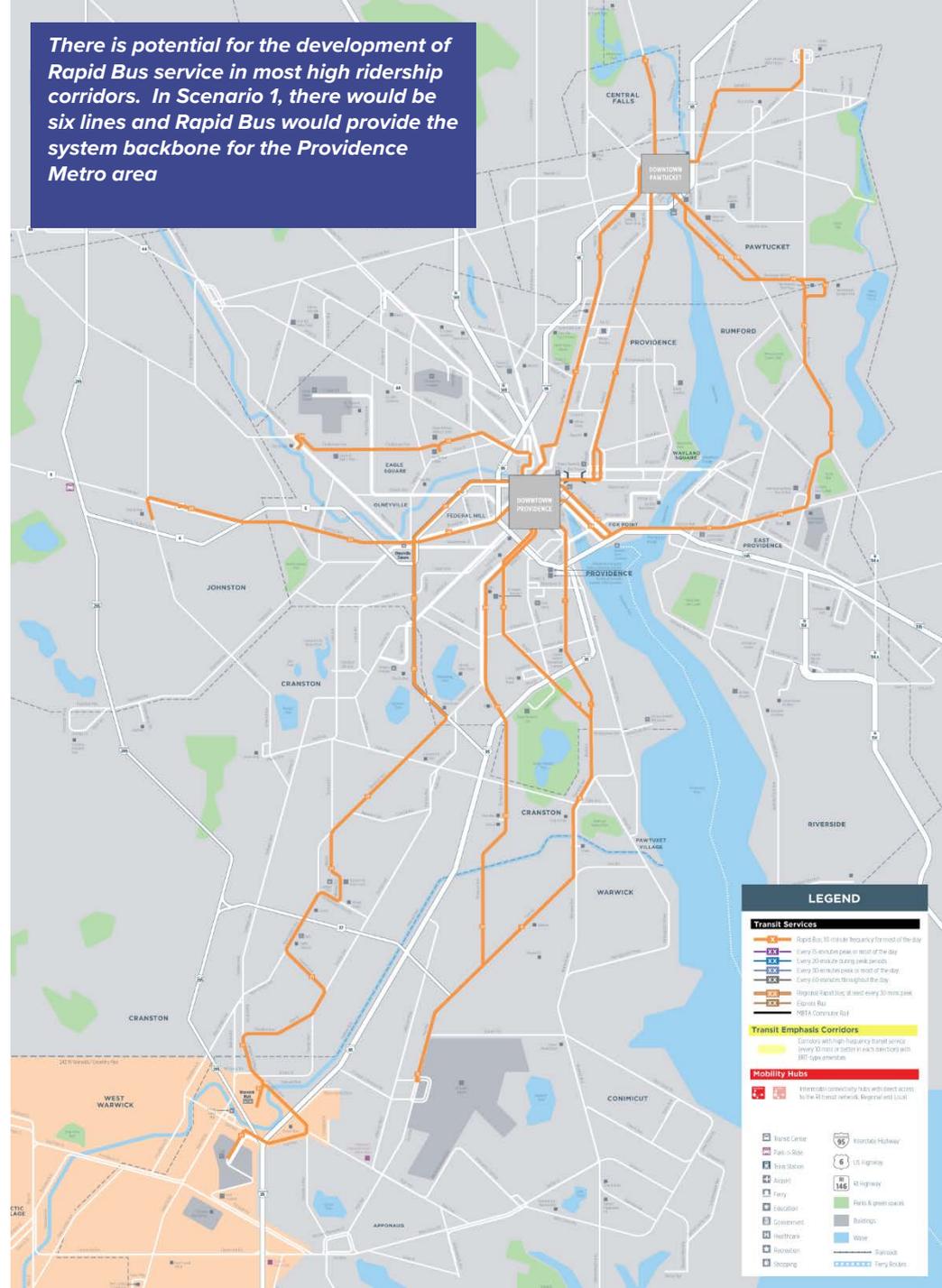
Rapid Bus lines have a combination of the following elements:

- Unique Identity and Branding
- Premium Stations
- Real-Time Passenger Information
- Intelligent Transportation System Technologies
- Effective Connections
- Transit Signal Priority

The R-Line is Rhode Island's only example of Rapid Bus service, and an expansion of this type of service to other high-volume corridors would significantly improve service.

Rapid Bus is included in all three scenarios. In Scenario 1, which does not include light rail or BRT, it would be the highest level of service provided. In Scenario 2, it would supplement BRT, and in Scenario 3, it would supplement light rail and BRT.

There is potential for the development of Rapid Bus service in most high ridership corridors. In Scenario 1, there would be six lines and Rapid Bus would provide the system backbone for the Providence Metro area



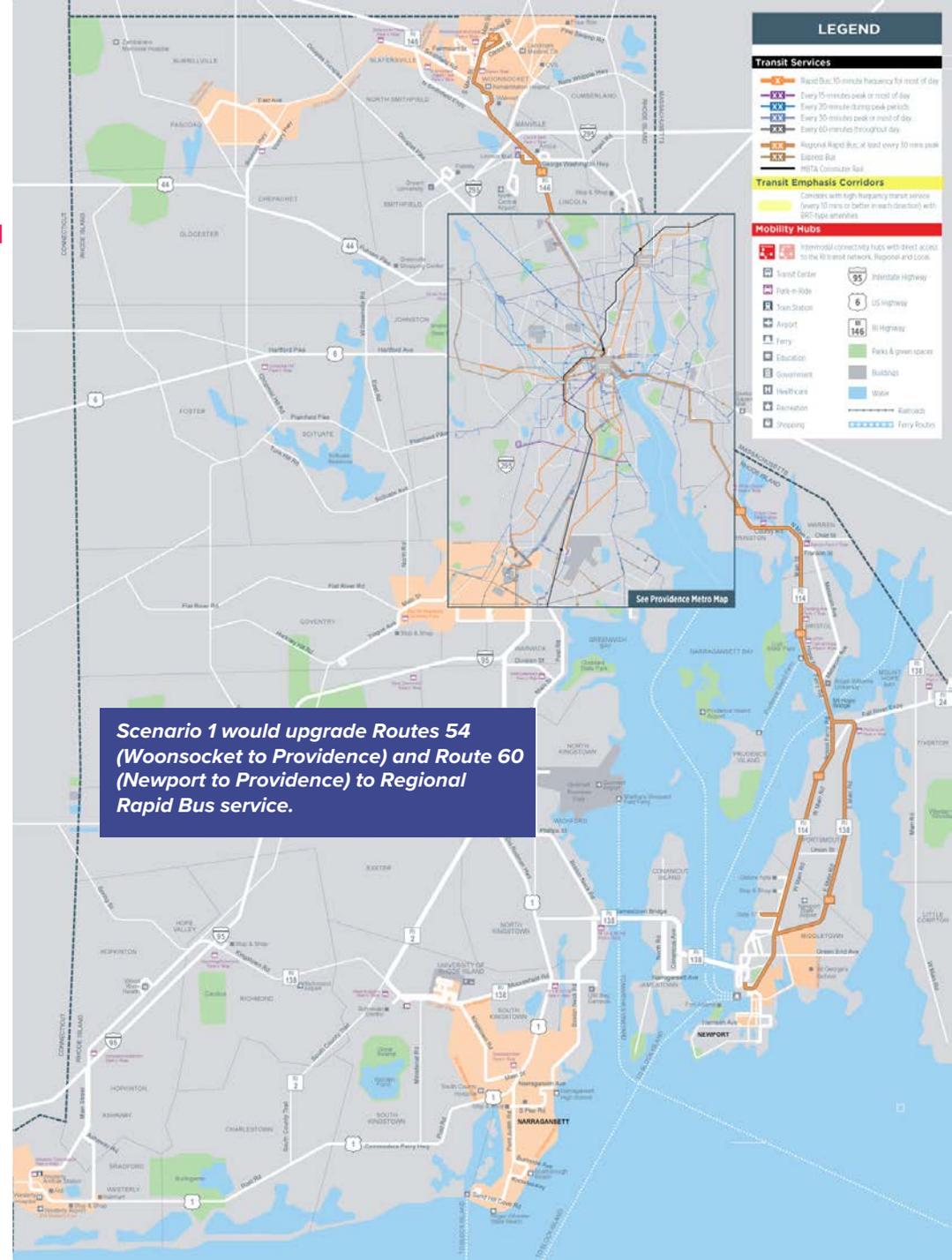
Regional Rapid Bus

Scenario 1 would upgrade two routes to Regional Rapid Bus service:

- Route 54 Woonsocket to Providence
- Route 60 Newport to Providence

Scenarios 2 and 3 would upgrade an additional three routes:

- Route 62 URI
- Route 14 West Bay
- Route 66 URI to Galilee



Improve Existing Services

- Frequent Transit Network
- More Frequent Service for Longer Hours
- Transit Priority
- Express Bus
- Bus-On-Shoulder Operation
- Transit Emphasis Corridors
- Faster Commuter Rail Service to Boston
- More Frequent Commuter Rail Service to Boston
- Flex Service Improvements

Frequent Transit Network

Frequent Transit Networks are designed to provide convenient service between an area's most important destinations and consist of several elements: frequent service (typically every 15 minutes or less), direct routes along major roads, enough routes to create a network that serves all high-demand locations, and special branding to make them more memorable.

Providing frequent service is the single most important way to make transit more convenient and attractive, and nearly all major transit systems operate networks of frequent services. At present, only one RIPTA route operates frequently and for long hours (the R-Line).

All three scenarios include the development of a Frequent Transit Network.

Scenario 1

- 8 Total Routes
- 6 Rapid Bus
- 2 Frequent Local

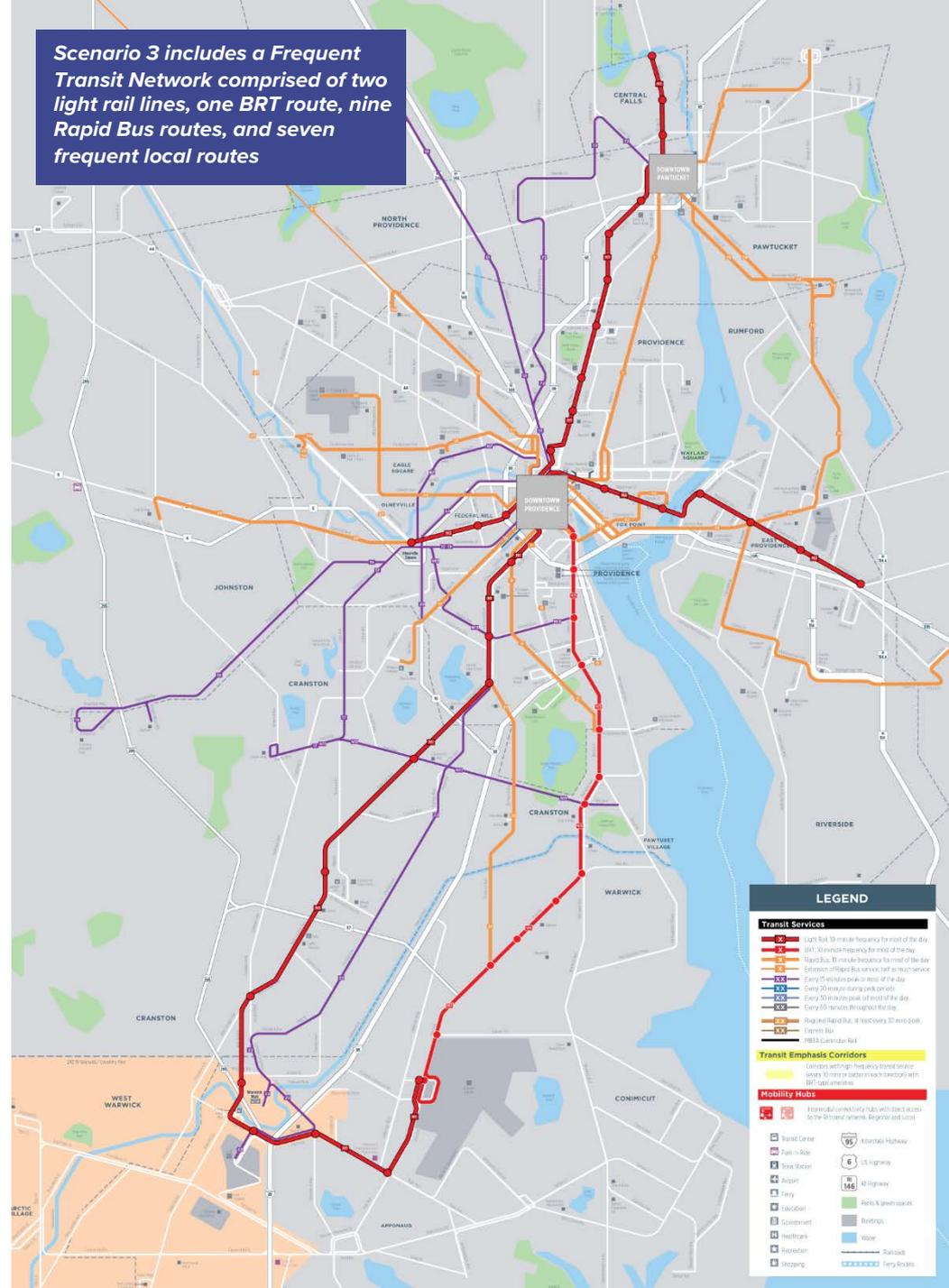
Scenario 2

- 12 routes
- 3 BRT lines
- 5 Rapid Bus routes
- 4 Frequent Local

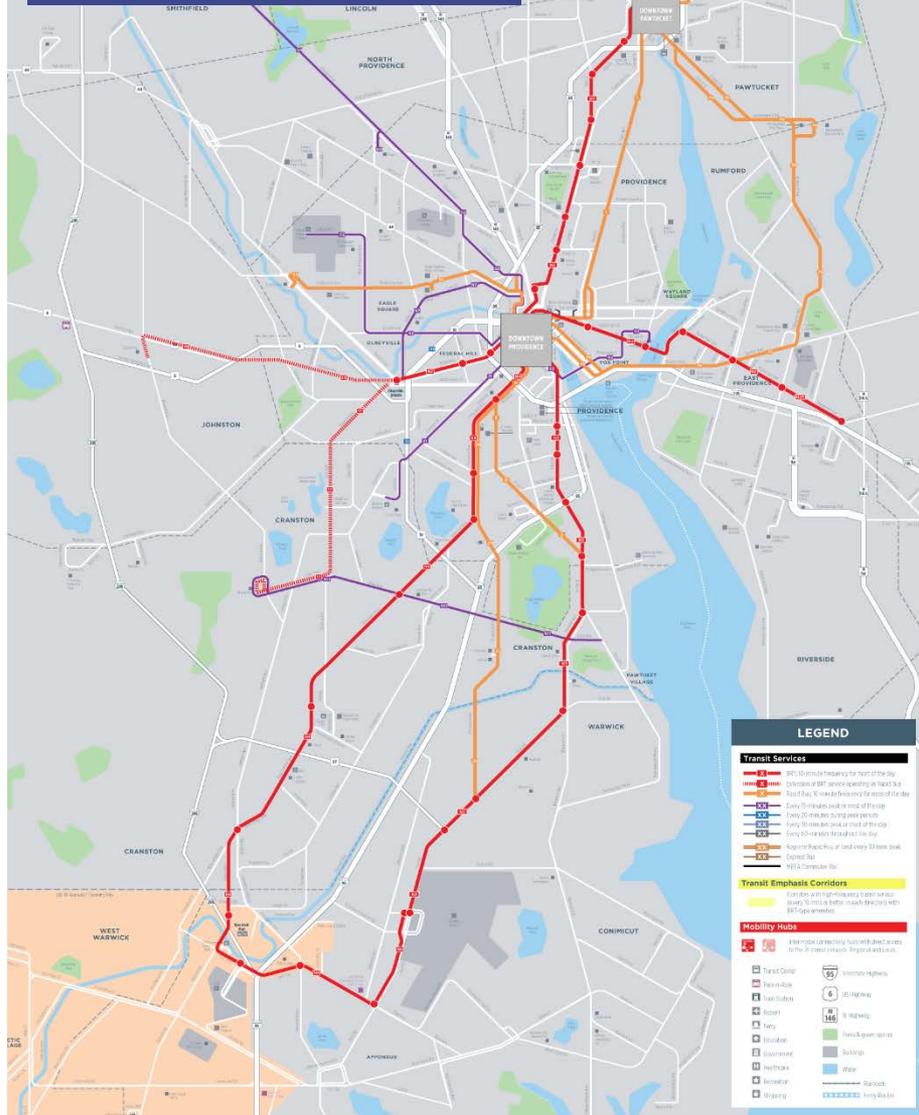
Scenario 3

- 19 Total routes
- 2 LRT lines
- 1 BRT lines
- 9 Rapid Bus routes
- 7 Frequent Local

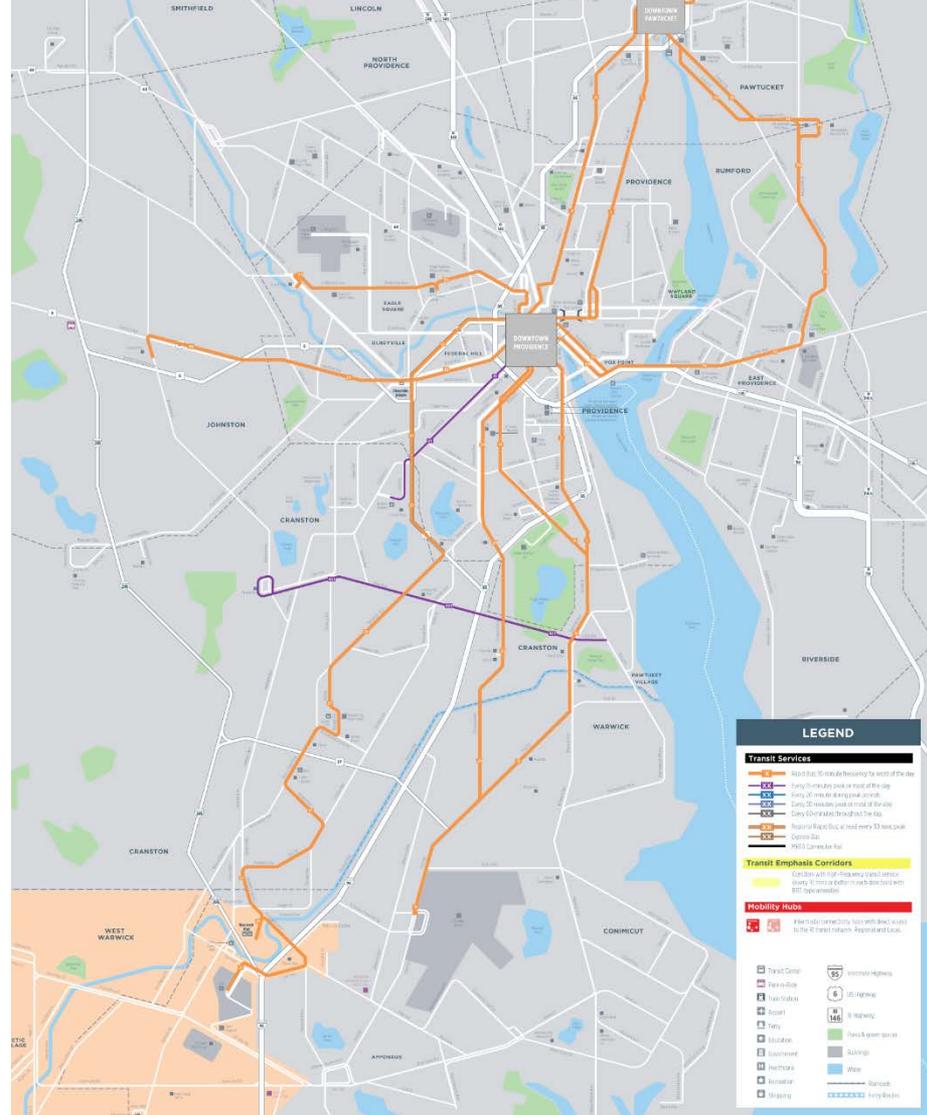
Scenario 3 includes a Frequent Transit Network comprised of two light rail lines, one BRT route, nine Rapid Bus routes, and seven frequent local routes



Scenario 2 includes a Frequent Transit Network comprised of three BRT lines, five Rapid Bus routes, and four frequent local routes



Scenario 1 includes a Frequent Transit Network comprised of six Rapid Bus routes, and two frequent local routes



More Frequent Service and Longer Hours

Transit service consists of two fundamental elements: frequency (how often the service operates) and service span (how long service runs during the day). Combined, these two factors measure the availability of service, which determines how convenient and attractive transit service is to current and potential riders. Transit that operates for longer hours and with more frequent service accommodates a broader cross-section of the population.

Few of RIPTA’s existing routes operate frequently and/or for long hours. For example, on weekdays, only:

- 6 routes provide service every 20 minutes or better during the midday
- 4 routes start service before 5:00 AM
- 5 routes run until midnight or beyond
- 1 route provides frequent service (defined a service every 15-minutes or less all day. The R-Line operates every 10 minutes)

Additionally, only 77% of the RIPTA network operates on Saturdays and only 64% operates on Sundays.

Even with the development of a Frequent Transit Network, most transit service will be provided with local bus routes that operate less frequently than every 15 minutes. More frequent service for longer hours on these routes will be important to improve convenience overall – for example, service every 20 minutes instead of every 30 minutes and later into the night.

All three scenarios include more frequent service for longer hours on most routes, with Scenario 1 providing more modest increases and Scenario 3 providing more aggressive increases.

In Scenario 3, all local routes would operate at least every 30 minutes at peak times on weekdays and for much longer hours

Scenario 3	# of Routes	Frequency (Min)				Span		
		Peak	Midday	Night	Weekend	Weekdays	Saturdays	Sundays
LRT	2	10	10	15	15	5AM-1AM	5AM-1AM	5AM-1AM
BRT	1	10	10	15	15	5AM-1AM	5AM-1AM	5AM-1AM
Rapid Bus	10	10	10	30	15	5AM-1AM	5AM-1AM	5AM-11PM
15 All Day	7	15	15	30	30	5AM-1AM	5AM-1AM	5AM-11PM
20 Peak	10	20	30	60	60	6AM-11PM	6AM-10PM	7AM-9PM
30 All Day	13	30	30	60	60	6AM-10PM	6AM-9PM	6AM-8PM
30 Peak	8	30	60	60	60	6AM-9PM	6AM-9PM	6AM-8PM

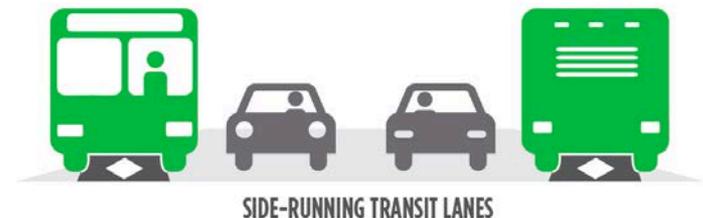
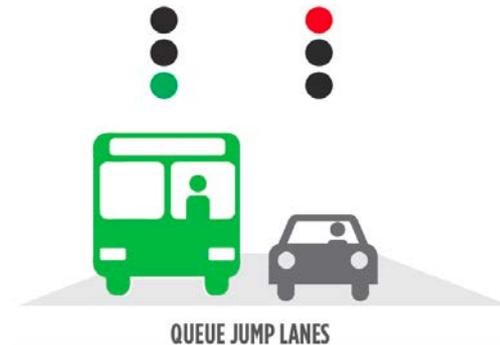
Transit Priority

Transit service is most attractive when the time it takes to make a trip on transit is comparable to the time it takes in a car. To make transit faster, it can be given priority over regular traffic. This can be done through:

- **Grade-separated transitways.** In a similar manner as rail rapid transit, buses can operate in grade-separated busways that are completely separated from general traffic.
- **Exclusive transit lanes,** either center running or side-running or combinations. These would be one of the defining elements of Light Rail or BRT. There could also be limited applications on other routes to bypass chokepoints.
- **Peak period-only bus lanes.** This is an approach that provides better service to transit riders at times when demand and traffic is heaviest and to provide parking to support local business during other periods.
- **Queue jump lanes :** which are short transit-only lanes (or right-turn lanes shared with general traffic) that allow buses to bypass traffic at an intersection. These lanes are often combined with dedicated transit signals, which give buses a green light in advance of vehicles in other lanes.
- **Transit signal priority:** Traffic signals can be programmed to provide preferential treatment to buses at intersections, modifying standard signal times to ensure that buses have minimal delays. The program extends a green light until an approaching bus passes through an intersection or shortens a red light to reduce the time a bus waits at an intersection.

All three scenarios include a much more aggressive use of transit priority.

- **Scenario 1:** Along Rapid Bus lines, in a new Transit Emphasis Corridor between Olneyville Square and East Providence via downtown Providence, and at traffic chokepoints.
- **Scenario 2:** Along BRT and Rapid Bus routes and at traffic chokepoints
- **Scenario 3:** Along light rail, BRT, and Rapid bus routes and at traffic chokepoints.



Express Bus/Commuter Service

Transit is planned based on the demand and potential demand of a location in relation to the rest of the network. For downtown and areas with high density, it is important to provide frequent service over a long span of the day. For more suburban and rural areas, a commuter service may make more sense, especially for agencies with tight budgets that cannot drastically expand service hours.

Express bus services are designed to provide fast service over long distances and are typically designed to transport suburban workers to downtown job. Transit systems in most major urban areas provide express buses as a complement to their local services.

Express buses usually serve park-and-ride lots and often only operate during peak commute times. They also often use commuter coaches instead of regular buses.

The three scenarios include three types of improvements:

- More frequent service, with a minimum of three AM inbound and three PM outbound trips in Scenario 1, four in each direction in Scenario 2, and five in each direction in Scenario 3. Scenarios 2 would also add a single midday route trip and Scenario 3 would add hourly midday service.
- The use of commuter coaches in Scenarios 2 and 3 to provide more convenient service.
- The development of two new express bus services in all three scenarios: Newport-Fall-River-Providence (which is scheduled to begin service in Fall 2019) and Coventry-Providence.



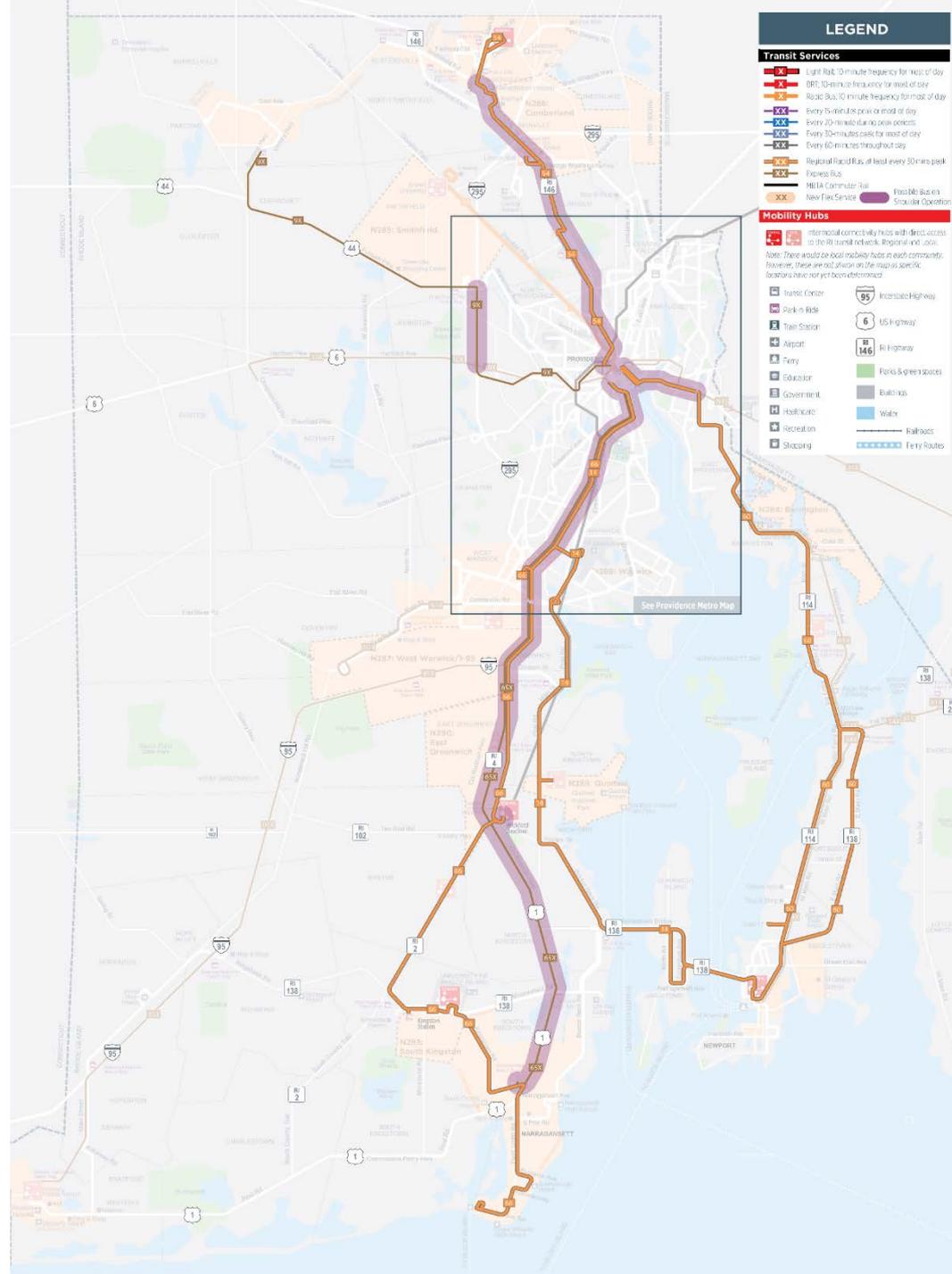
RFTA uses commuter coaches to provide BRT service along a 40-mile corridor between Glenwood Springs and Aspen, Colorado

Improve Existing Services

Express Bus on Shoulder Service

Bus service is usually slower than travel by car, in large part because it is stuck in the same traffic as car and it needs to stop to pick-up and drop-off passengers. With services that operate on highways, buses can be given a travel time advantage when they can use highway shoulders when traffic is congested. This approach is currently in use in at least 14 states, and more are now considering it. Bus-on-shoulder operation is a low-cost way to make highway transit service faster and more reliable.

In 2017, RIPTA began investigating bus-on-shoulder operations for 15 routes that operate on highways and other limited access roads and identified required roadway modifications. Scenario 1 includes bus on shoulder operations in areas where only minor upgrades would be needed, Scenario 2 includes areas where moderate upgrades would be needed, and Scenario 3 would add bus on shoulder service on I-195.



Transit Emphasis Corridors

Transit Emphasis Corridors are corridors that are served by multiple bus, rapid bus, BRT and/or Light Rail routes and feature:

- High-quality shelters with seating, real-time information, lighting, and digital scheduling and wayfinding, that can accommodate more people
- Transit signal priority through extension of green lights and special signal phases
- Dedicated bus lanes on portions of the route
- Bicycle infrastructure through the inclusion of electric bikeshare and bike lanes and signals
- Branding and unique design for shelters so that the corridor is identifiable through a consistent color theme and attractive design

RIPTA is in the process of building the state's first transit emphasis corridor between Rhode Island Hospital and Providence Station, called the Downtown Transit Connector (DTC). It is also developing a shorter Transit Corridor in Pawtucket.

Scenario 1 includes the development of an additional Transit Emphasis Corridor between Olneyville Square and East Providence via downtown Providence and College Hill, primarily along Broadway through Federal Hill and Angel and Waterman Streets through College Hill. Scenarios 2 and 3 include light rail and BRT instead of the Transit Emphasis Corridor.



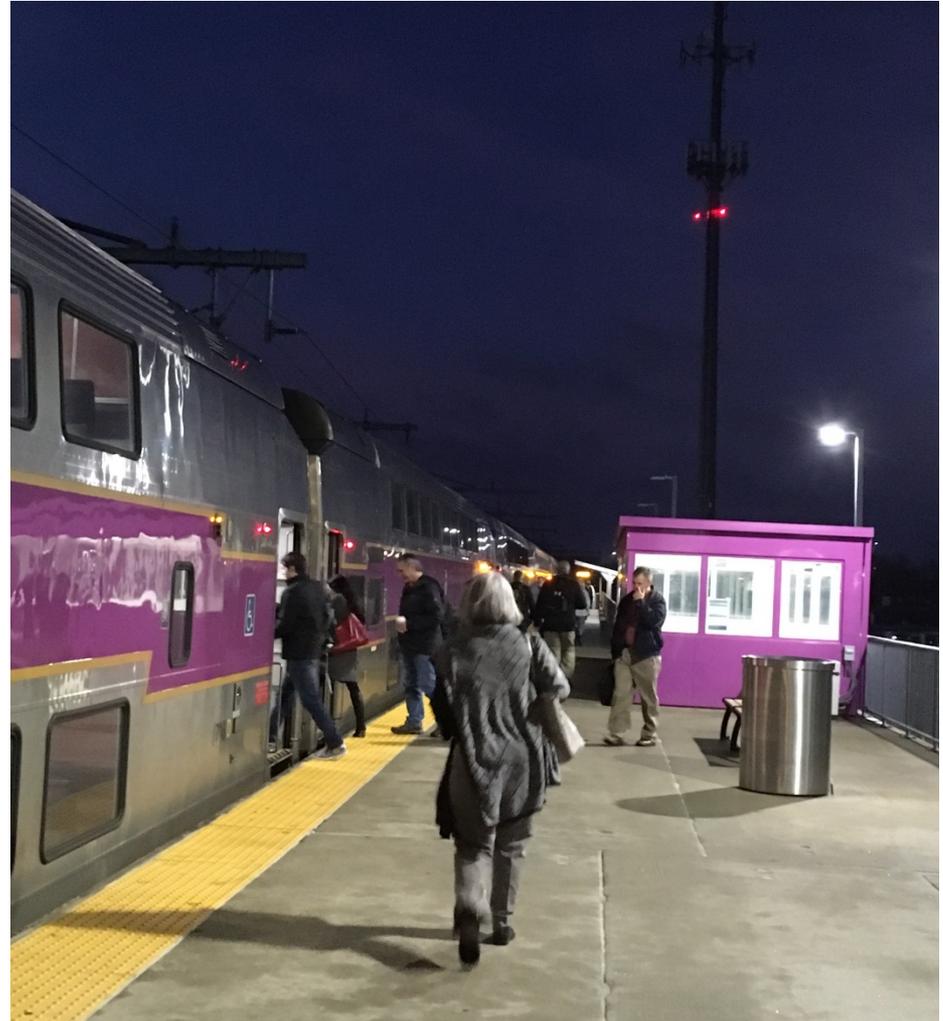
Faster Commuter Rail Service to Boston

Rhode Island is connected to Boston by the MBTA's Providence Line and Amtrak's Northeast Corridor service. The Providence Line provides 20 round trips per weekday and Amtrak 18 through a combination of Acela and Northeast Regional trains. These services, which are already very successful and heavily used, provide important transportation and economic links between Rhode Island and Boston. Improvements to those services could strengthen those links and benefits.

There are five primary ways to make service faster, which include:

- High level platforms and level boarding
- All-door boarding and alighting
- Use of Electrified Equipment and DMUs
- Express service
- Fare integration with Amtrak to provide RI passengers use of faster Amtrak trains

These improvements would need to be undertaken in conjunction with the MBTA and Amtrak. All three scenarios envision that some combination of the above improvements would be implemented to reduce travel times between Providence and Boston to less than 60 minutes.



More Frequent Commuter Rail Service to Boston

The Massachusetts Department of Transportation (MassDOT) is currently examining a wide range of commuter rail service improvements as part of its MBTA Rail Vision project, with improvements aimed at providing more service and faster service. Rather than examining improvements on a line-by-line basis, it is taking a more systemwide approach, with similar improvements on all lines. To date, the project has defined seven alternatives, the major elements of which include:

- Improved service to Urban Core stations within approximately 15 miles of Boston
- Improved service to Key Stations. On the Providence Line, these would be Back Bay, Ruggles, Route 128, Mansfield, and Providence
- More service overall
- High levels of service to Key Stations

The three Transit Forward RI scenarios include Rail Vision improvements, plus weekend service to TF Green, MBTA/Amtrak cross-honored fares, and a new Amtrak Station at TF Green.

Scenario 1 Address Most Pressing Needs

- Weekday service:
 - Every 30 minutes peak/60 minutes off-peak to all stations except Wickford Junction (Rail Vision Alternative 1)
 - 10 round trips per day to Wickford Junction
- Weekend Service to TF Green
- Cross-honor fare with Amtrak to provide more frequent service
- New Amtrak Station at TF Green

Scenario 2 Improve and Expand

- Weekday service:
 - Every 15 mins all day to Providence Station (and key MA stations) (Rail Vision Alternative 3)
 - Every 30 minutes peak/60 minutes off-peak to all other stations except Wickford Junction
 - 10 round trips per day to Wickford Junction
- Weekend Service to TF Green
- Cross-honor fare with Amtrak to provide more frequent service
- New Amtrak Station at TF Green

Scenario 3 Comprehensive Statewide System

- Weekday service:
 - Every 15 mins all day to Providence Station (and key MA stations) (Rail Vision Alternative 6)
 - Every 15 minutes peak/30 minutes off-peak to all other stations except Wickford Junction
 - 10 round trips per day to Wickford Junction
- Weekend Service to TF Green
- Cross-honor fare with Amtrak to provide more frequent service
- New Amtrak Station at TF Green

Improve Flex Service

RIPTA's Flex services now require travelers to call for a reservation at least 24 hours in advance. Some are also full when passengers want to book a ride.

All three scenarios would improve Flex service by incorporating an app-based reservation and booking system (similar to those used by Uber and Lyft) and additional capacity to meet demand. Existing call-in and fare payment systems would also be maintained.



WHAT IS FLEX?

Flex Service brings a public transportation option to areas that have little or no regular service. Flex Service is unique in that it combines designated bus stops with custom reservation options—all in one service! Passengers have the option of picking up the Flex van at a scheduled stop or choosing their own pick-up or drop off points within the designated Flex Zone.

And even though Flex primarily provides local service within its designated zone, it can connect you to our statewide network.

How Flex Can Work For You

- Just **board at a scheduled Flex stop*** or **make a reservation** to be picked up at the curb at any address within your Flex Zone (*please see accompanying map*).
- Once on board, you can request to **get off anywhere in the Flex Zone**—just remember that the Pascoag/Slatersville Flex van operates in the area indicated on the map. Custom stops will be made in the areas the van is traveling.
- If you aren't boarding at a scheduled Flex Stop, you need to **make a reservation** by calling **1-877-906-3539** or **401-784-9500, ext. 220**. You cannot make reservations with the driver.

**Because of custom stops, the Flex van may arrive at stops up to 10 minutes after the designated time.*

Traveling Outside Your Flex Zone

To travel outside your Flex Zone it is necessary to connect to fixed-route service. In Pascoag/Slatersville, the Flex route has scheduled stops on **Sayles Avenue** where you can **transfer to regular RIPTA Route 9X**. There are also scheduled stops at **Wal-Mart** where you can **transfer to regular RIPTA Routes 54 and 59x**. The Flex vehicle cannot travel outside its zone.

Expand Service to New Areas

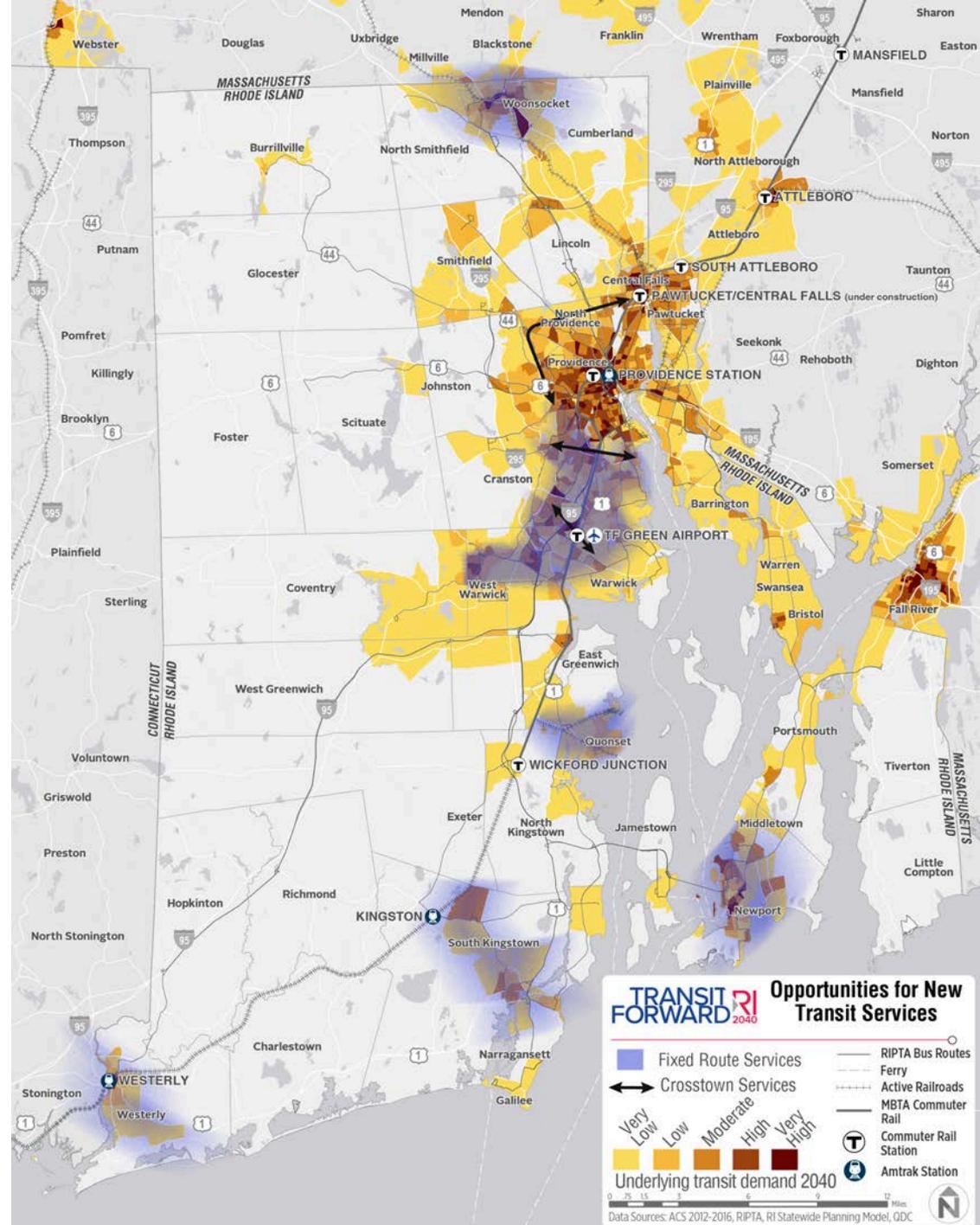
- New and Updated Local Services
- Flex Service
- Crosstown Service
- Special Event/Tourism Services
- Service Buy-Ups

Service to New Areas

There are several areas where there is demand for more local service than is currently provided.

The three scenarios all include new:

- Fixed-route services in Newport, Westerly, and Woonsocket
- Service on Valley Street in Providence
- New crosstown routes (which are described in more detail on the following page)

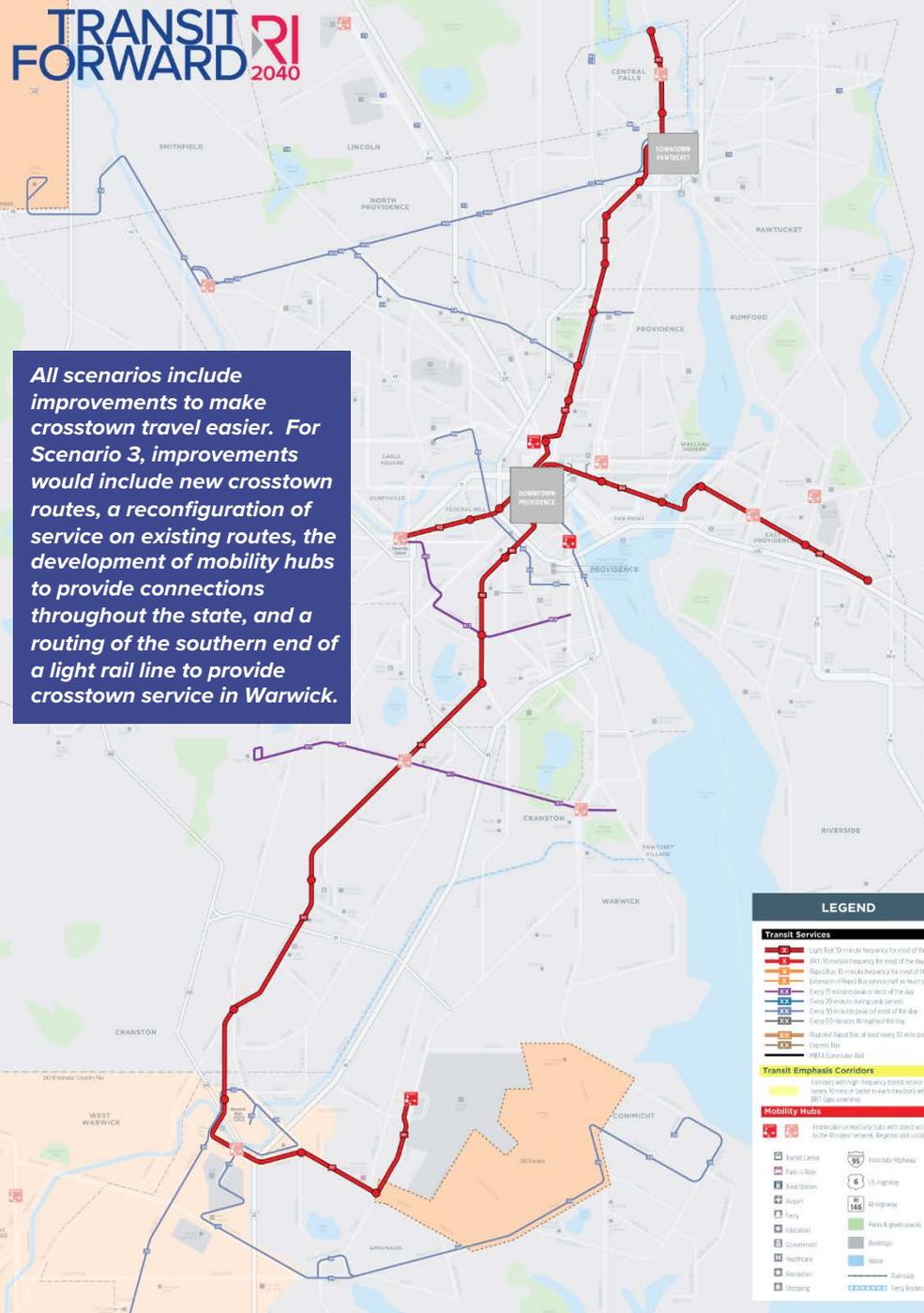


Crosstown Service

Surface transit services necessarily reflect a region’s road network. In older, more traditional cities like Providence, most primary roads radiate to and from downtown. Still large volumes of trips are not radial. In part, because the Providence Metro area has very few major roads that are “crosstown” in nature, these trips are very widely dispersed. No matter how people make these trips – whether by car, bus, or another mode – they are often indirect. They are particularly indirect by transit as nearly all metro area transit routes operate to and from downtown Providence. As a result, whereas people in cars can meander their way between two points in the most direct manner possible, transit riders must travel in and out of downtown, which is much more circuitous.

All three scenarios include four types of improvements:

- New Routes
 - N9 VA Hospital - Eddy St
 - N10 Mineral Spring Ave
 - N11 Cranston/Park Ave
 - N13 Olneyville Square - Eddy Street
- Changes to existing routes to make crosstown travel more convenient
- The development of mobility hubs as a place to make connections outside of downtown Providence
- A reconfiguration of service in Warwick (including LRT, BRT, or Rapid Bus)



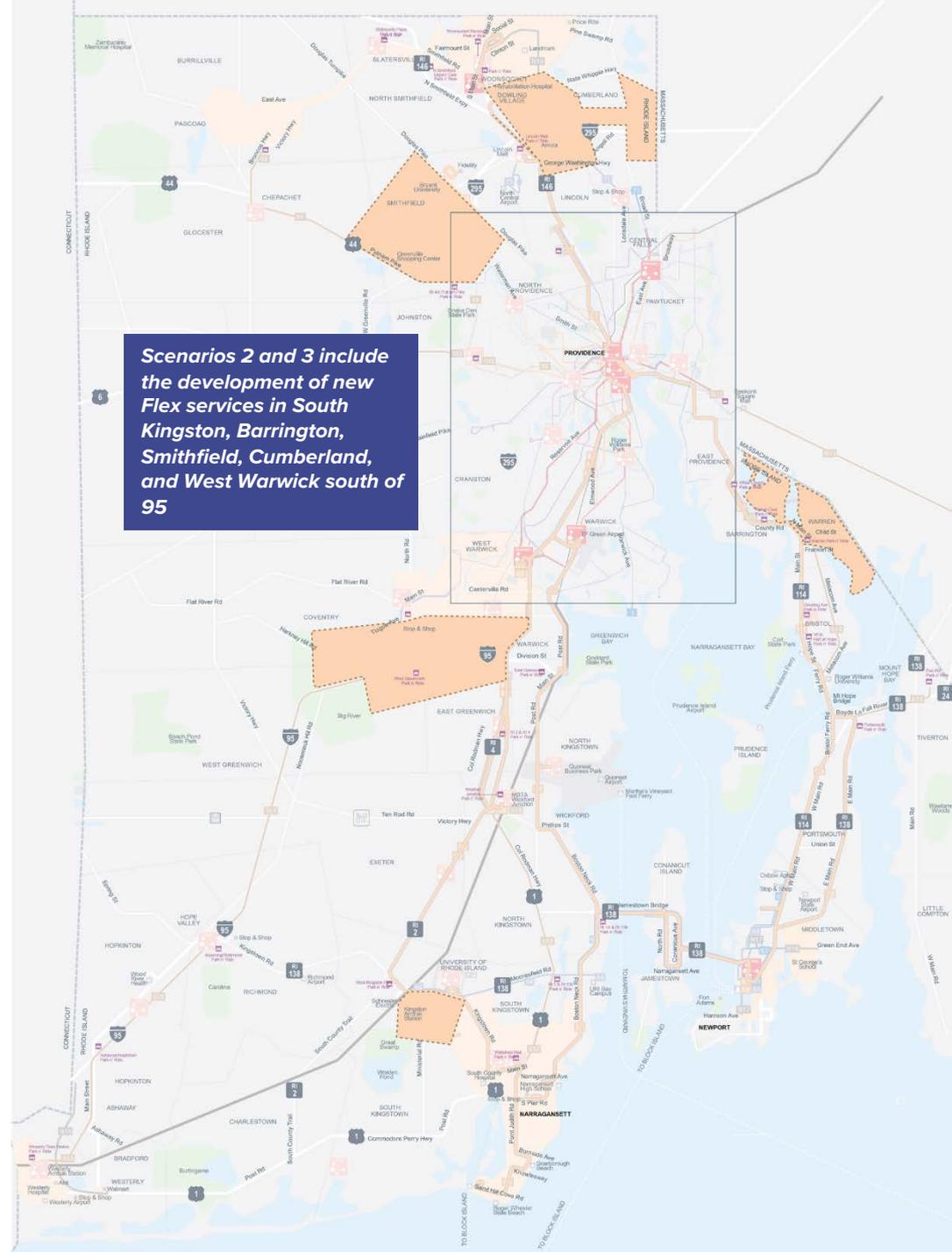
Flex Service

There are a number of areas in Rhode Island where there is transit demand, but not enough to support fixed-route bus services.

Scenarios 2 and 3 include the development of new Flex services in:

- South Kingston, South of URI
- Barrington
- Smithfield
- Cumberland, along RI-122
- West Warwick, near I-95

Scenario 3 also includes development of a funding program to support municipally operated services.



Special Event and Seasonal Services

Many transit and city agencies around the country have expanded their service to serve special events and tourism, often through partnerships with local agencies and private organizations.

Benefits include:

- Increasing access to recreational activities for people who don't own cars
- Reducing demand for parking around recreational sites
- Managing seasonal demand where year-round service is not needed
- Showcasing the convenience of transit over other modes for people who do not normally use transit, especially through removing the hassle of parking at big events

RIDOT currently provides seasonal ferry service to Newport and Bristol, as well as special event ferry service to WaterFire events in Providence. RIPTA provides seasonal services to beaches and in Newport.

To expand these types of services, all three scenarios include annual budget set-asides for the operation of special event services.

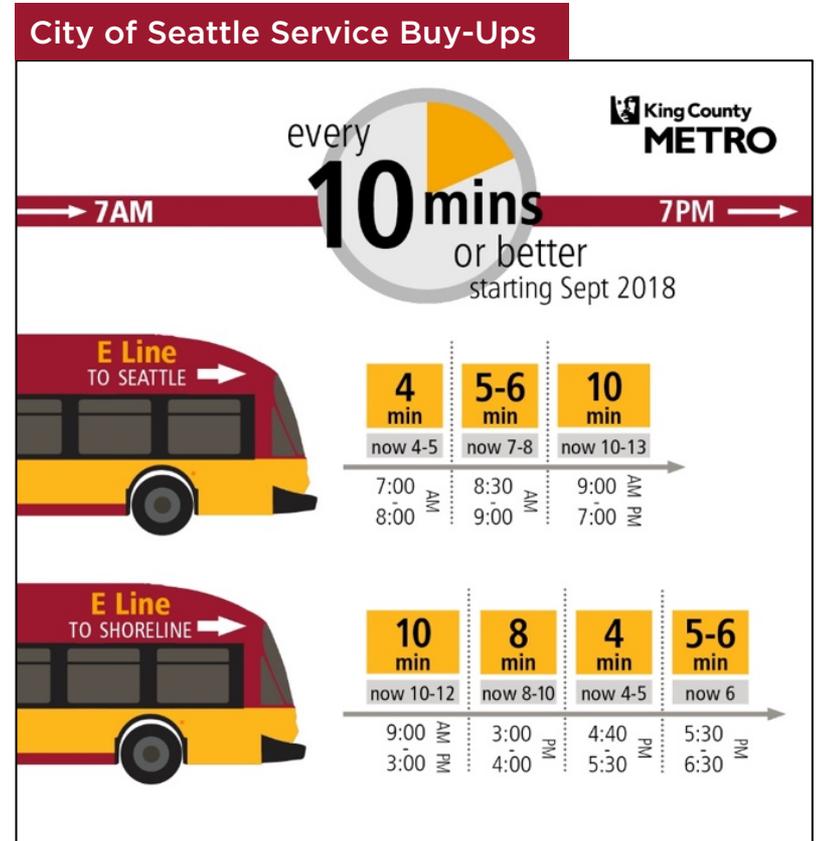


Service Buy-Ups

Due to financial constraints, transit systems can never provide as much service as all constituents want. To provide additional services beyond what could otherwise be provided, several transit agencies have developed programs that enable local governments, businesses, and other entities a way to directly fund specific transit service improvements – a process known “service buy-ups.” These programs enable stakeholders to have greater agency in how transit service is designed and allocated, while providing transit agencies the financial means to satisfy requests for new or expanded services. Service buy-ups have been used to enhance transit services in a wide range of scopes and contexts. These have included:

- A \$40 million-dollar annual contribution from the City of Seattle to King County Metro for expanded bus service.
- Direct investments Amazon and Microsoft to provide more frequent service for longer hours on public transit routes that serve their corporate campuses.
- Purchasing of specific bus trips or routes that enable shift workers to access suburban office buildings in cities like Rochester, NY and Cincinnati, OH.
- The funding of additional service by many communities in the Phoenix area (and there, using funds provided to the communities through the Prop 400 ballot sales tax measure that funded the region’s transit expansion)

All three scenarios include the development of a RIPTA service buy-up program, with varying amounts of state contributions to provide partial funding for service buy-ups.



Improve Facilities and Amenities

- Better Bus Stops and Facilities
- Mobility Hubs

Better Bus Stops and Amenities

Well-designed bus stops enhance the transit experience, decrease perceived wait times for transit services, and increase ridership. Conversely, poorly designed bus stops make transit less attractive to potential new customers and make waiting at stops uncomfortable. The development of better bus stop can be a low-cost, high-reward strategy.

Bus stops and amenities can be improved in the following ways:

- Convenient, comfortable, and safe locations
- Visible and easily identifiable
- Provide information on available services
- Good pedestrian access
- Integration with their surroundings
- Amenities to make the wait comfortable

RIPTA has approximately 3,500 bus stops located throughout the state, and these range from very high ridership stops to low ridership stops. About 375 stops have shelters, representing about 10% of stops. These include large glass shelters at Kennedy Plaza, custom designed shelters incorporating art and enhanced signage, and smaller advertising shelters.

The three scenarios include varying levels of bus stop improvements, with Scenario 1 including more modest improvements and Scenario 3 including the most extensive.

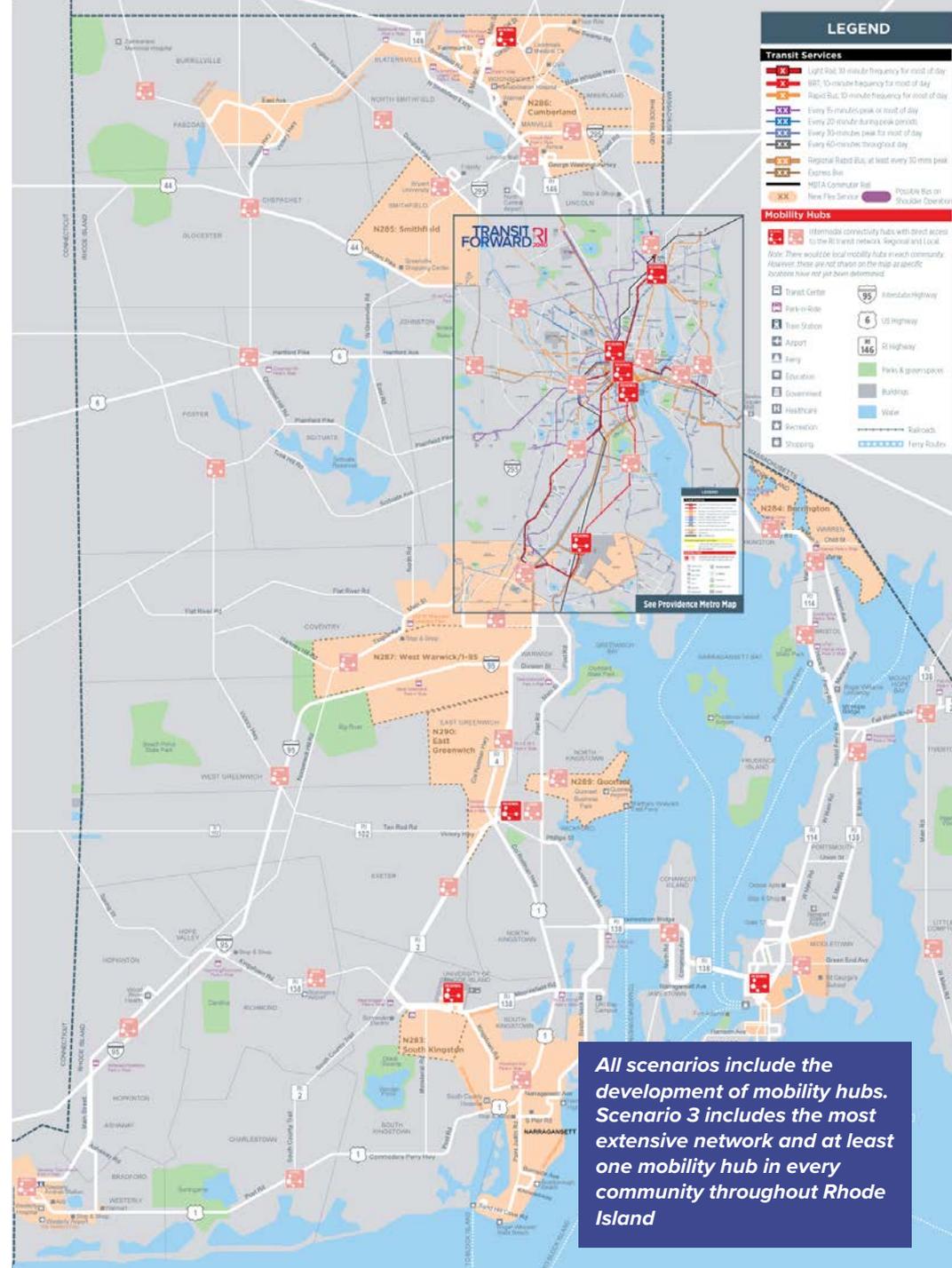


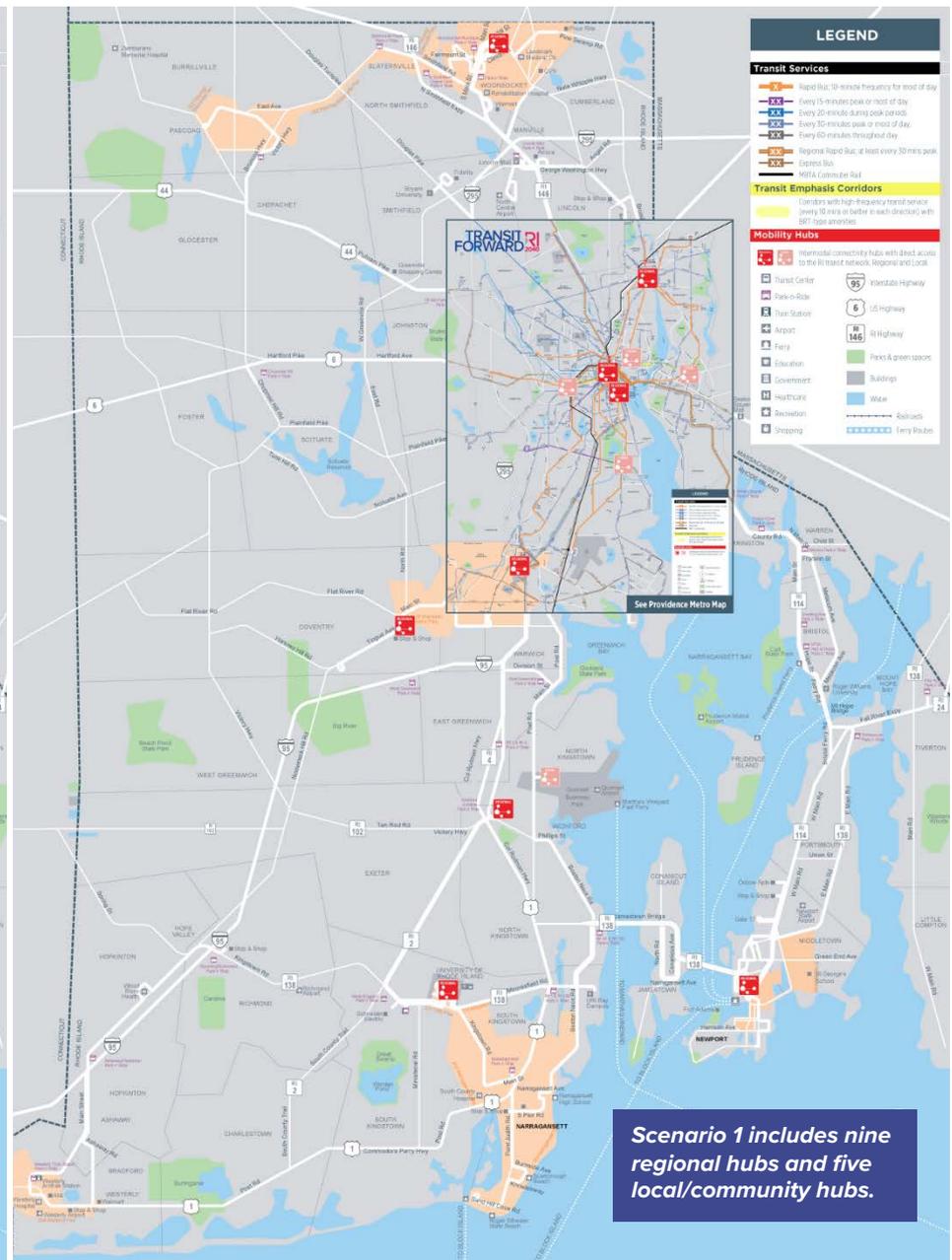
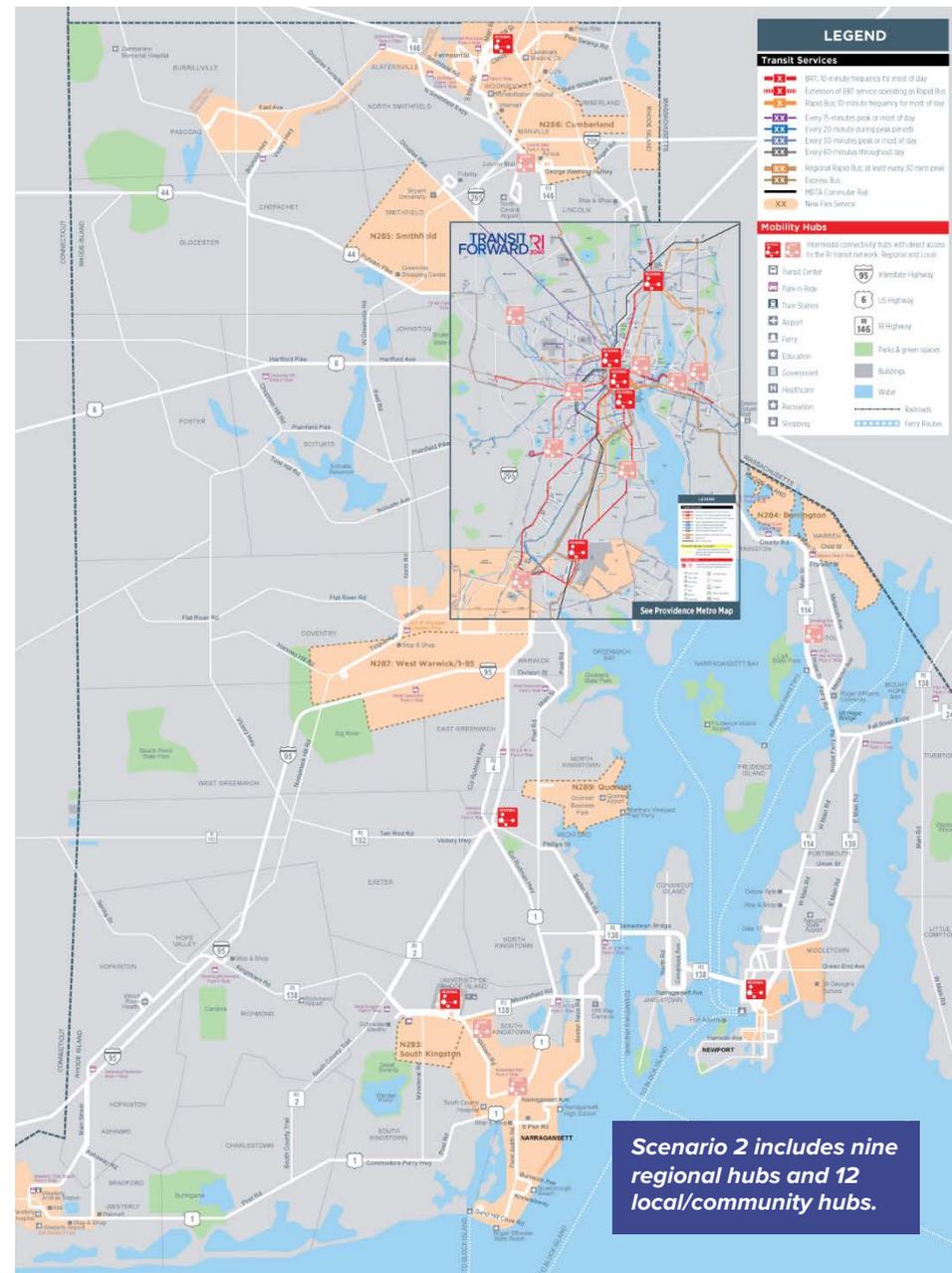
Improve Facilities and Amenities

Mobility Hubs

Mobility hubs provide a focal point for for a variety of transportation, including public transit, rideshare, first mile/last mile connections, carshare and bikeshare, and more. They create convenient, safe, and accessible connections between different modes of transportation at one location; facilitate the use of public transit, biking, or other shared modes over driving private vehicles. They can also provide a neighborhood gathering space for commercial and residential life.

All three scenarios include the development of mobility hubs. Scenario 1 includes five major regional transit hubs and six smaller community hubs. Scenario 2 includes six regional hubs and 11 community hubs. Scenario 3 includes nine regional hubs and at least one community hub in each community throughout the state.





Improve Access to Transit

- Walking
- Driving
- Biking
- Rideshare Partnerships

Walking

Walking is the most prevalent and important way to access transit services. The average transit rider is typically willing to walk a quarter-mile to access fixed-route bus service, and up to a half-mile for high capacity services (such as light rail and bus rapid transit) that operate with higher frequencies and over longer distances.

In Rhode Island, many commuters walk to the bus. With good walking conditions, passengers will walk farther, increasing the reach of transit. Where gaps exist in the pedestrian network, mobility options are decreased, and transit becomes much less attractive.

Scenario 1 includes pedestrian improvements around all mobility hubs, Rapid Bus stops, and urban commuter rail stations. Scenario 2 adds improvements along BRT lines, and Scenario 3 adds them along light rail lines. These improvements include:

- **Connectivity:** Better sidewalk infrastructure around transit stops and in neighborhoods.
- **Pedestrian Crossings:** New pedestrian crossings around transit stops and stations can improve access as well as rider safety and comfort.
- **Wayfinding:** Wayfinding, including signs pointing to transit services (and pedestrian network maps at transit stations)



Driving

Connections to transit via automobile are among the most important, especially for longer distance trips such as by express bus and rail. They also provide for longer “first mile” connections that most other options, and thus can greatly expand the effective reach of transit. Most transit users who use private automobiles to access buses or trains park at stations, so providing park-and-ride spaces is critical. Space must also be provided for “kiss and ride,” or passenger drop-off and pick-up, for those who are dropped off at the beginning of the trip and picked up in the reverse. Pick-up and drop-off spaces are also important for people using ride-hailing services.

All three scenarios include the development of new parking facilities in:

- Coventry
- I-295 and US Route 6 in Johnston
- Near CCRI and Twin Rivers in Lincoln
- Pascoag
- Portsmouth near the Ferry Road and Boyd’s Lane

They also include park and ride spaces at many outlying mobility hubs and some outer Regional Rapid Bus stops and stations.



Biking

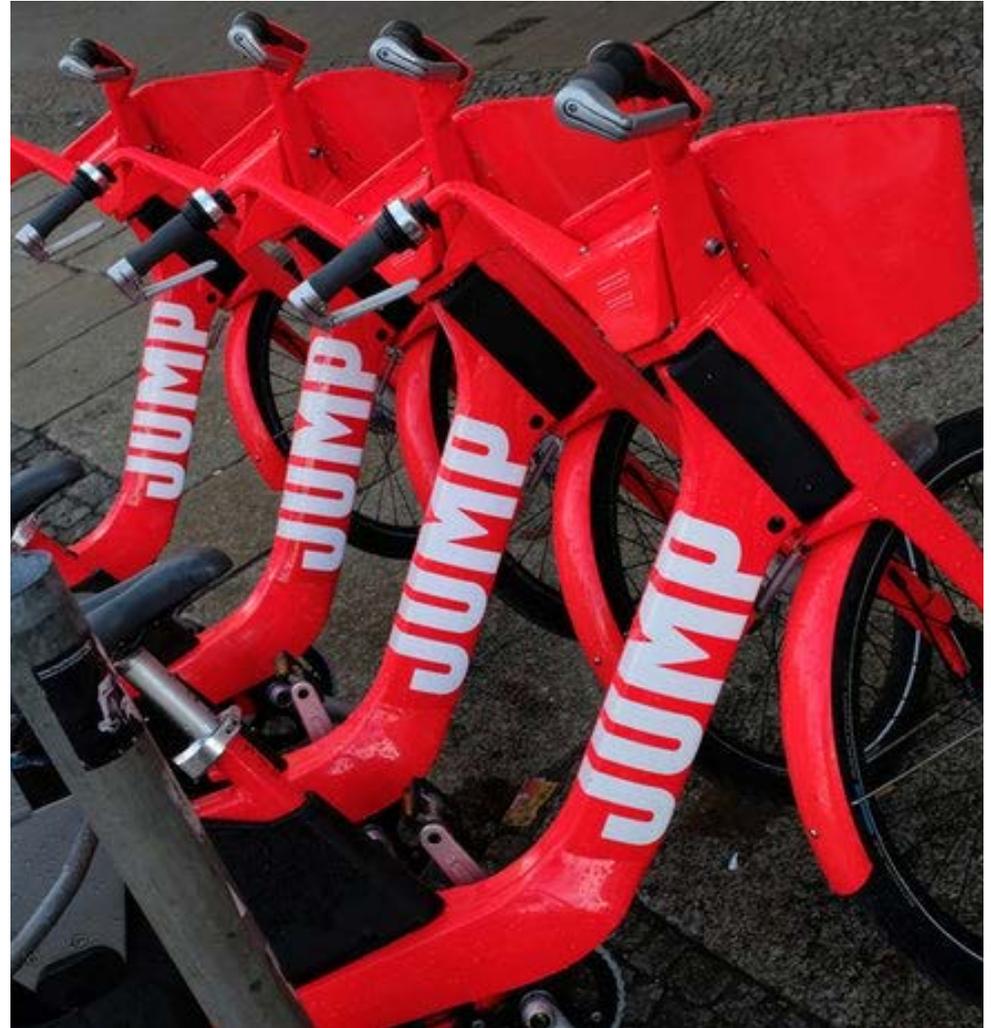
Bicycling, whether by a personal or shared bicycle, is a second important way to make short trips and connect with transit. People are more likely use bicycles if there is a network of safe bike lanes and separated cycle paths.

Bikes can provide an important first and last mile connection if the infrastructure is in place to support those types of trips. Strategies to improve bike/transit integration and better support first and last mile connections include:

- **Bicycle Lanes**, ranging from striped bicycle lanes to separated cycle tracks and bicycle bridges.
- **Bike Parking for Personal Bicycles**: Bike parking can include both short and long-term parking facilities. Long-term bike parking is ideal for stops served by commuter-oriented routes.
- **Bikeshare**, which provides an alternative to using personal bicycles. To facilitate any type of short trip, bikeshare bicycles needs to be available at most places that people want to travel. For transit connections, they need to be available at transit stations and stops.

All three scenarios include:

- **Bikeshare and bike storage at regional mobility hubs**
- **Bikeshare and bike racks at urban rail stations and transit stops**



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.

There are many ways in which these partnerships can be structured:

- Marketing partnerships
- Service for short trips, with transit agencies or others subsidizing all or part of the rideshare fare
- First mile/last mile connections, with transit agencies or others also subsidizing all or part of the rideshare fare

All three scenarios include the development of rideshare partnerships. These would include the development of policies that define acceptable partnerships and funding amounts and budget set-asides to fund the partnerships.

A partnership between the City of Phoenix and Lyft provides riders with a 20% discount off of Lyft riders to and from select transit stops

COMPLETE THE JOURNEY.

New users: redeem up to \$20 in Lyft credit when using transit.
Use code **PHXRIDES**

Existing users: take 20% off your ride to and from select transit stops.
Use code **TRANSITPHX**

lyft | City of Phoenix

For more information on participating stops, visit:
[LFT.TO/FMLM-PHX](https://lft.to/fmlm-phx)

Make Service Easier to Use

- Easier Fare Payment
- Mobility as a Service

Fare Integration

In places that are served by multiple transit providers, fare integration provides a way to provide more service to customers at either no additional cost or a reasonable additional cost. More specifically, fare integration enables riders to use a single pass to ride services provided by multiple transit agencies. Fare integration can take many forms ranging from allowing pass holders of one transit system to ride all services provided by another for free to more limited access.

The most significant fare integration improvement would be the use of MBTA commuter rail passes on Providence-Boston Amtrak service, which would allow travelers to access more service and frequent service. These types of "cross-honor" fare agreements are common throughout the country along lines that have both Amtrak service and local commuter rail service.

All three scenarios include four types of fare integration:

- Use of MBTA Zone 8 passes on Amtrak trains (cross honor fare agreement)
- Use of MBTA Zone 8 and Zone 8-10 intra-zone passes on RIPTA (publicize current de-factor practice)
- Use of SRTA passes on Newport-Fall River-Providence service
- Agreement with MBTA for all use of RIPTA monthly passes in-state only



Mobility as a Service

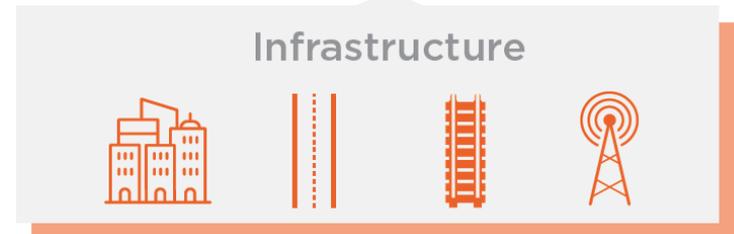
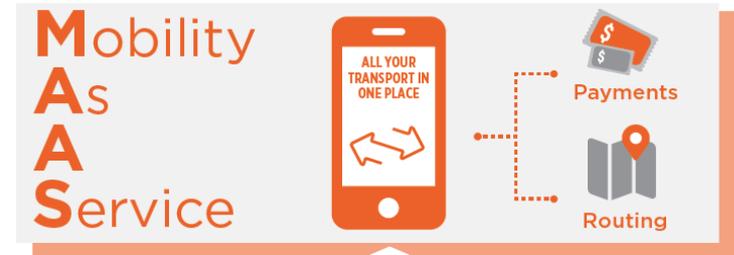
Mobility as a Service (MaaS) integrates various forms of transportation services into a single platform to provide flexibility and convenience for travelers. People increasingly make trips using multiple modes – for example, a bus to a downtown station and then bikeshare to their final destination and maybe Lyft back in the evening if the weather is bad. At present, this usually means that travelers must learn about these options from many different sources and pay separately. MaaS provides the ability to plan, book, and pay for different options using a single smartphone app.

MaaS combines several of the individual strategies in this section into one application, which integrates access to all public and private transportation services into one app, where users can book transportation, pay for it, and understand the multitude of options to travel from point A to point B. Through MaaS, RIPTA could create its own app or partner with an app developer to enable partnerships with private transportation companies to allow subscription transportation service. This subscription would allow passengers to have access to RIPTA-provided transit as well as scootershare and rideshare, for example, all for a fixed cost per month.

It is important to note that MaaS is very much an emerging technology that is still in its infancy. At present, many apps that focus on a single service are starting to provide information on other services. Other efforts are starting from the ground up.

All three scenarios include the development of MaaS as technology allows, with a focus on the following areas:

- Integration of transit and first mile/last mile connections
- Transit schedule and real-time information
- Trip planning and booking
- Fare payment



Next Steps

Next Steps

As described throughout this document, there are many ways in which transit in Rhode Island can be improved. Most can work together to provide a more cohesive system and better mobility options. However, they also vary in terms of multiple factors, including the markets served, the number of people who would benefit, the costs, and the implementation timeframes (as some involve technologies that are rapidly progressing but that aren't yet fully here). Next steps include:

- **Present the strategies and scenarios to the public for comment**
- **Evaluate scenarios for impacts and costs**
- **Create final recommendations package based on scenarios**