

City of Salem Transportation Study

Presented by:
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June 26, 2019



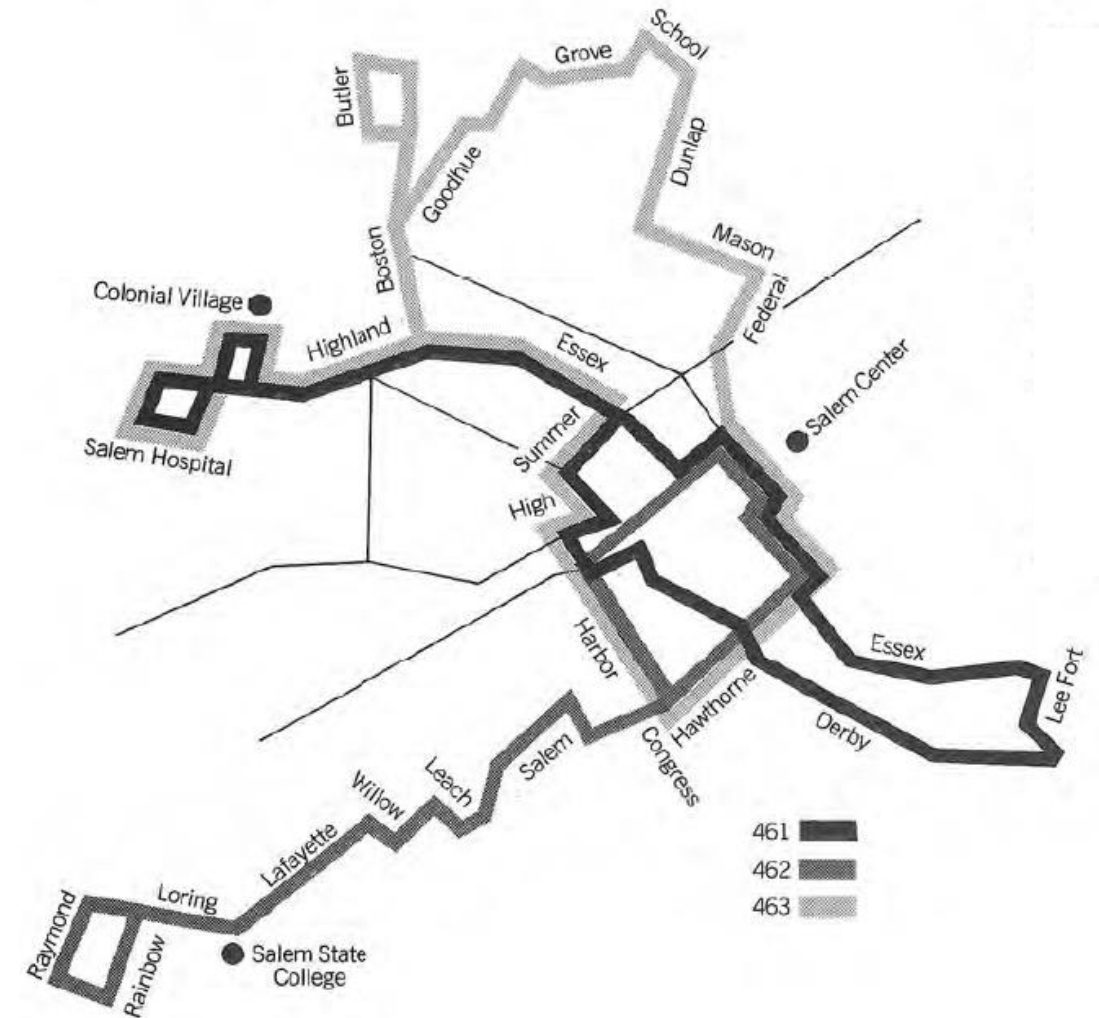
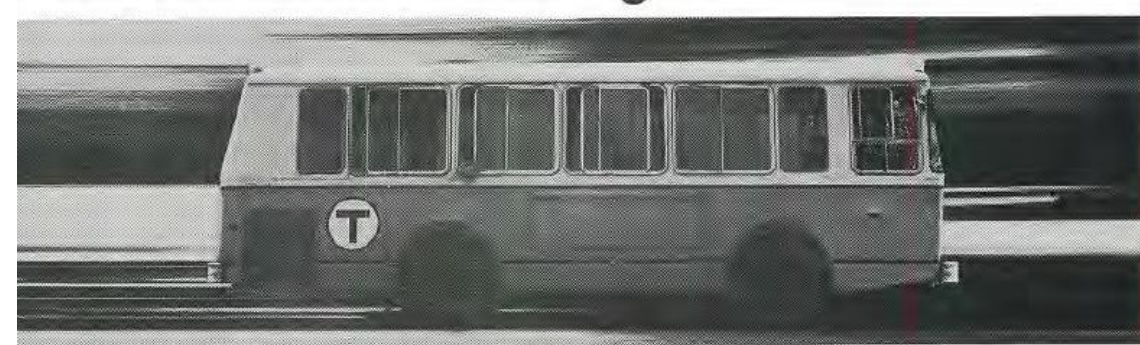
Background



LONG HISTORY OF TRANSIT OPTIONS

MBTA Mini bus

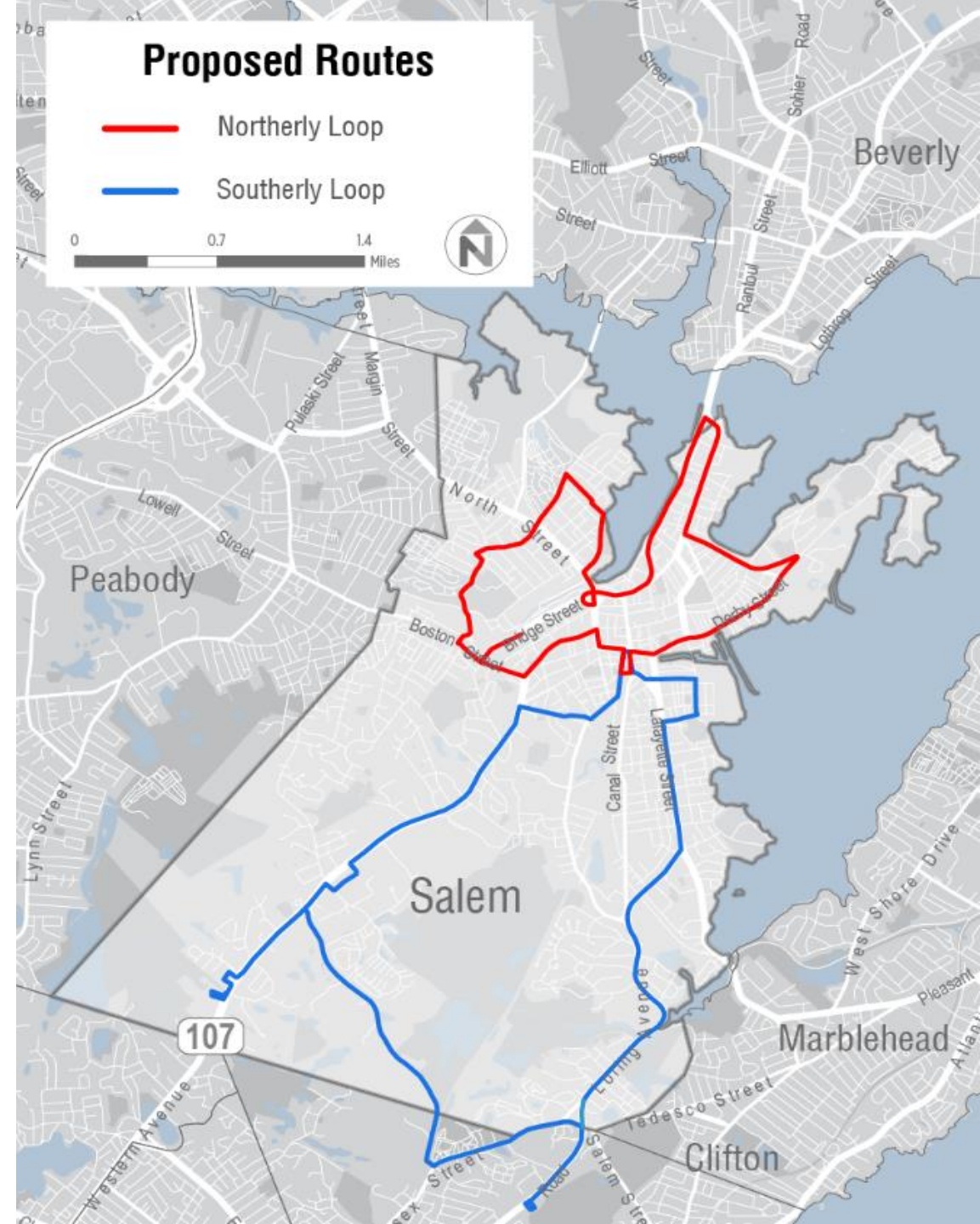
- 1970s
- Flag stop
- 3 routes
- 9 AM – 3 PM, every 60 minutes



PAST PLANNING

Shuttle Bus Feasibility Study and a Qualitative Evaluation of Current Transit Services – 2018

- Recommendation of two circulator shuttles to serve North and South Salem
 - Based on community input
 - Focus on seniors
- 7 AM – 7 PM, every 40 to 60 minutes (one bus)
- Some challenges
 - Loop service does not match travel patterns
 - Out of direction travel
 - Duplicates existing service
 - Limited connections across Salem
 - Does not match market demand

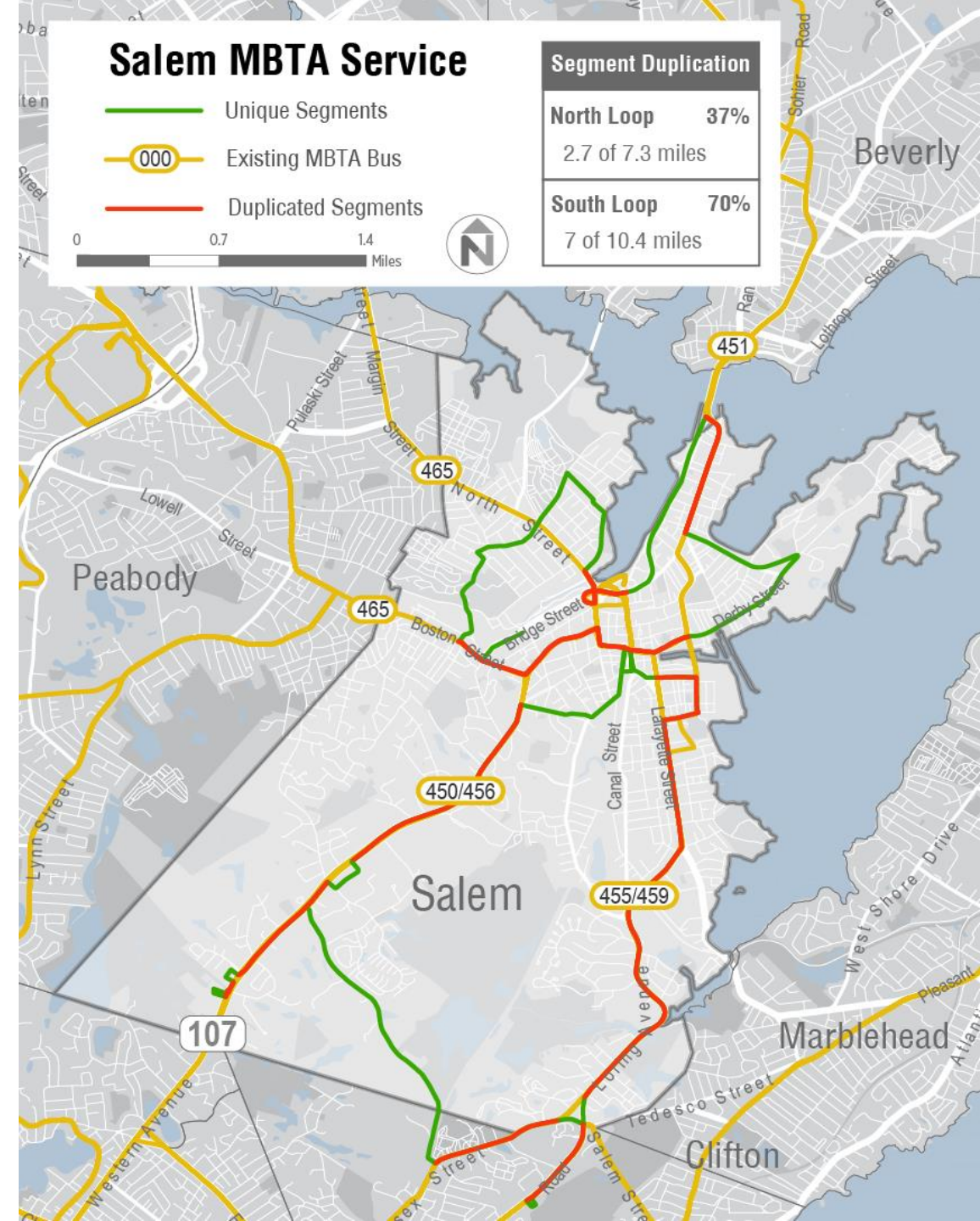


EXISTING MBTA SERVICE

- 6 Bus routes
 - 450, 456, 451, 455, 459, 465

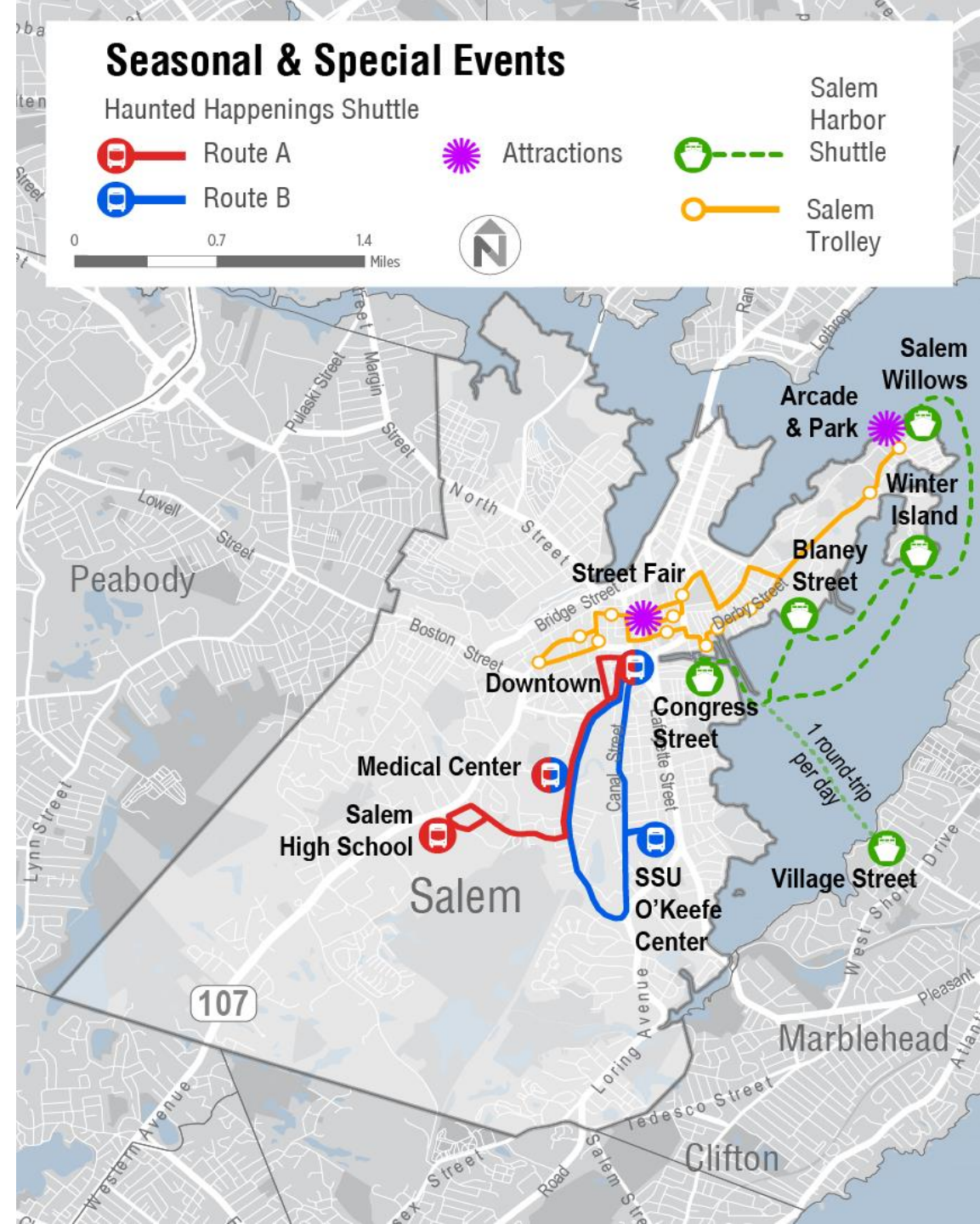
MBTA Route	Weekday Span	Saturday Span	Sunday Span
450	5:00 am – 1:30 am	6:30 am – 12:00 am	8:15 am – 12:00 am
451	6:00 am – 7:10 pm	–	–
455	5:00 am – 12:30 am	6:00 am – 12:00 am	6:00 am – 12:00 am
456	5:00 am – 1:30 am	6:30 am – 12:00 am	8:15 am – 12:00 am
459	5:00 am – 12:30 am	–	–
465	7:00 am – 7:00 pm	9:30 am – 7:00 pm	–

- Commuter rail
- The Ride



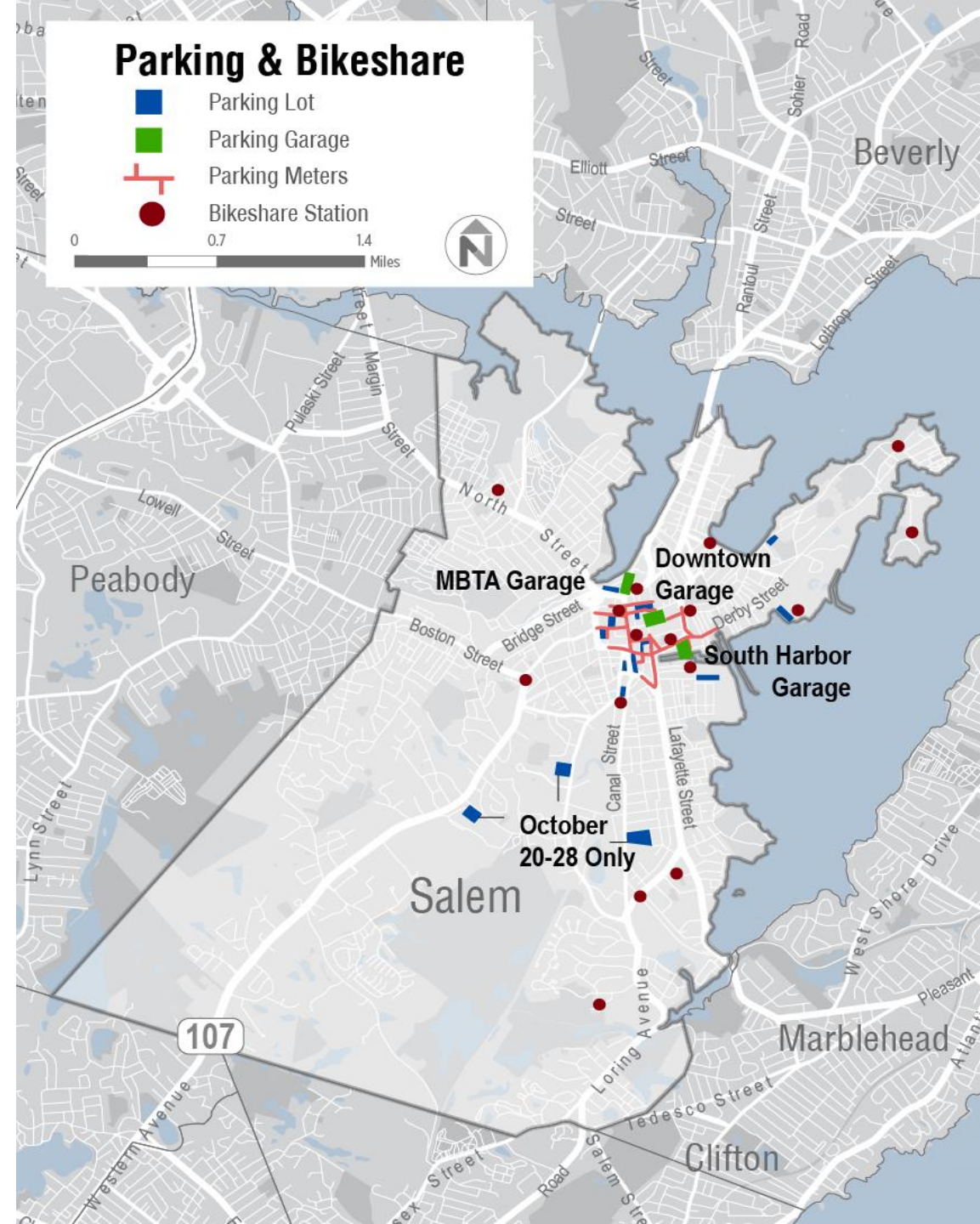
EXISTING SALEM SERVICE

- Haunted Happenings
 - October weekends
- Salem Harbor Shuttle
 - June – September
- Salem Trolley
 - June – September
- Salem Ferry
 - May – October
- Taxi
- Rideshare
- Council on aging
- Salem State University
- North Shore Medical Center Shuttle



EXISTING TRANSIT ALTERNATIVES

- Zagster Bike Share
 - 16 hubs
- Parking
 - Museum Place/Downtown Garage
 - MBTA Garage
 - South Harbor/Waterfront Garage
 - Street meters
 - Parking Lots



02

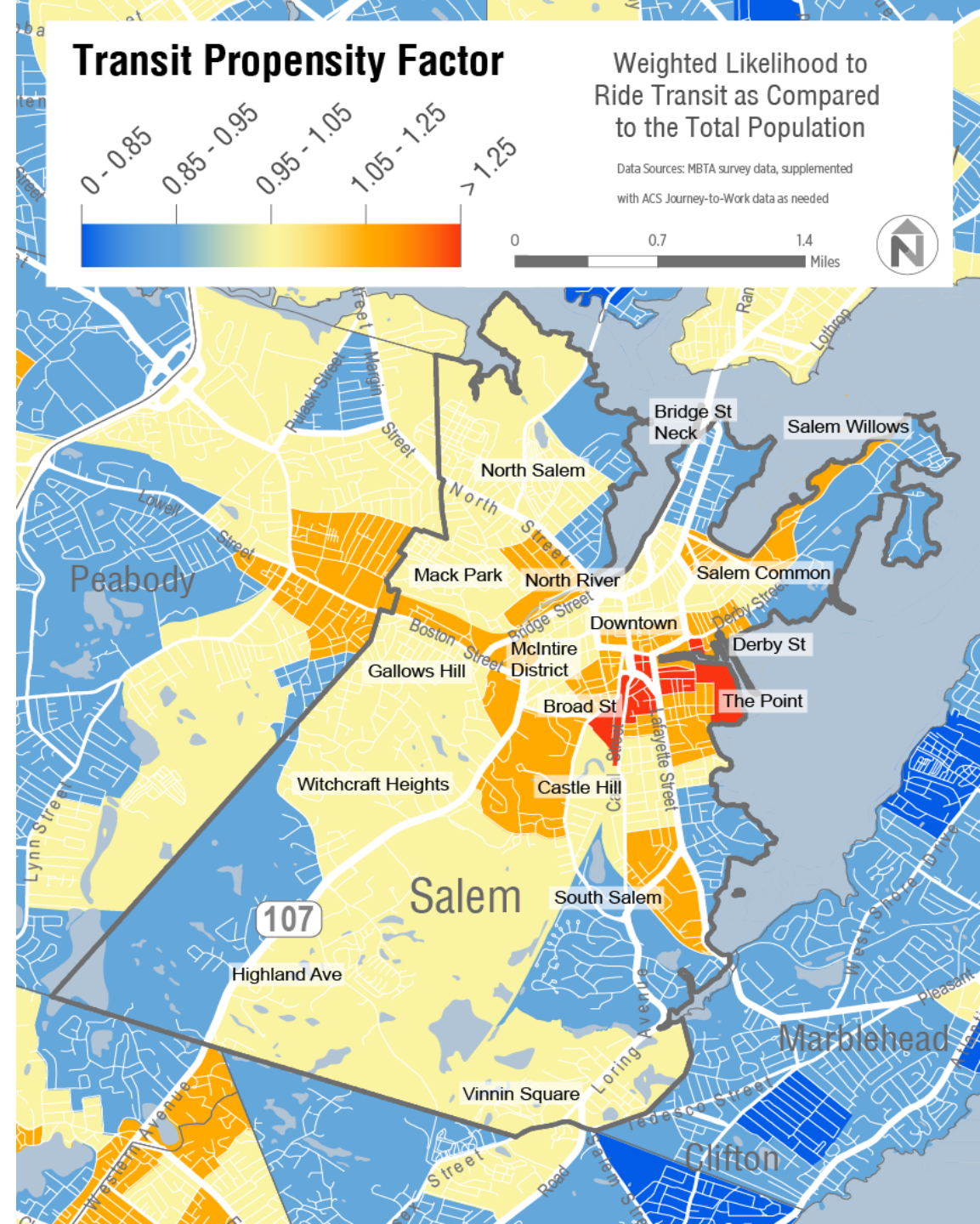
Market Assessment



TRANSIT PROPENSITY

Areas more likely to use transit:

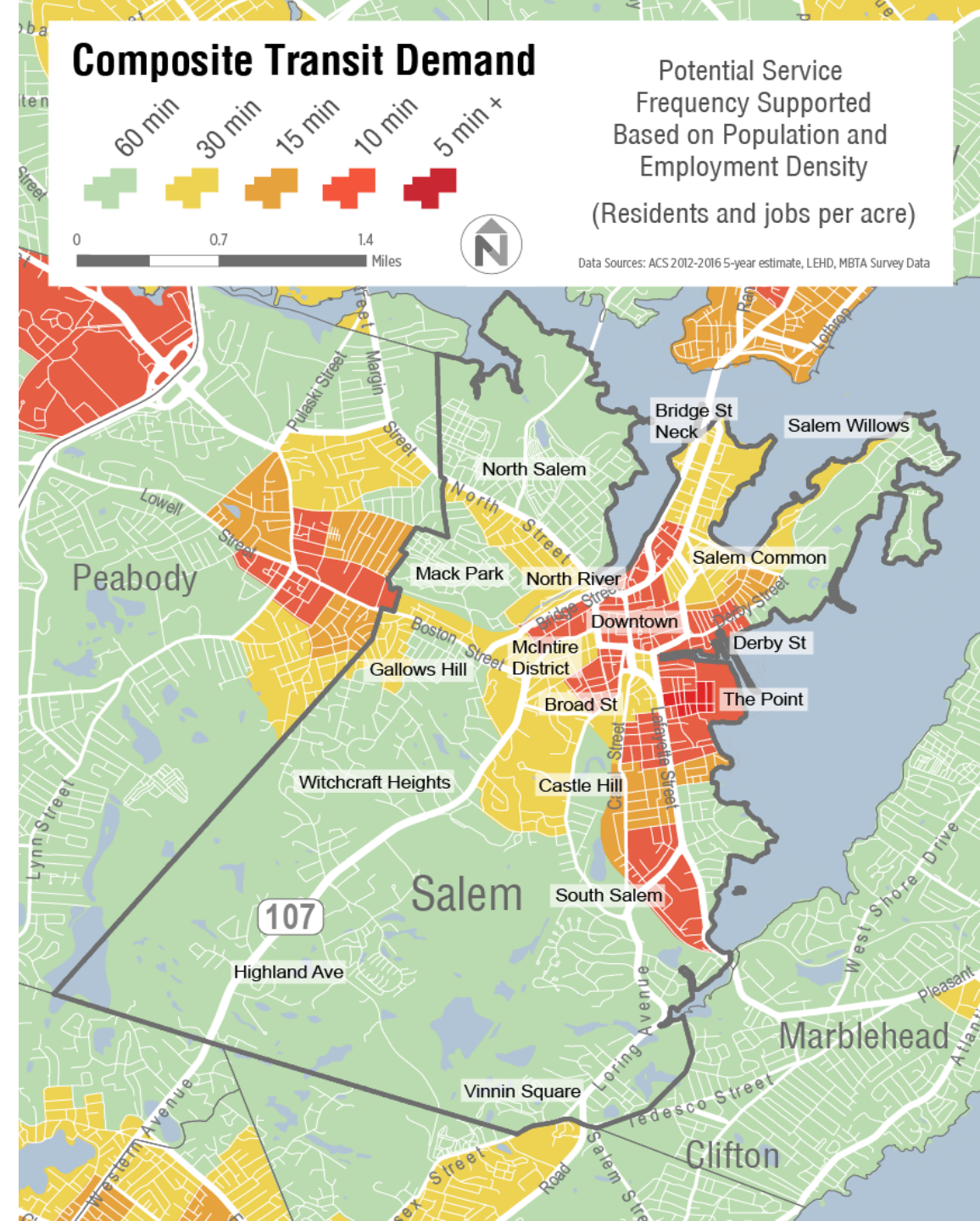
- The Point
- Broad Street neighborhood
- North River
- McIntire District
- Castle Hill
- Derby Street



TRANSIT DEMAND

Areas with the most demand:

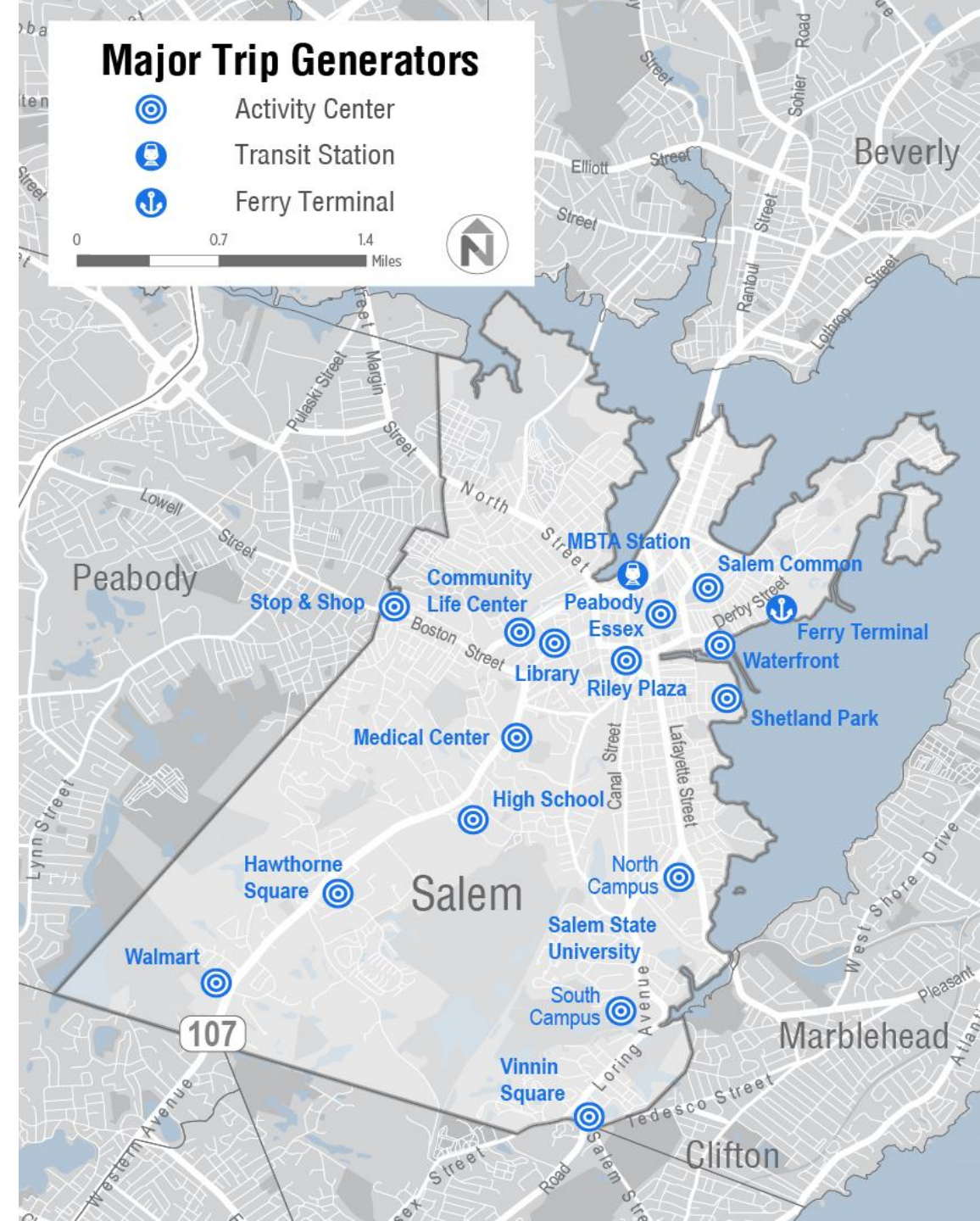
- The Point
- Downtown
- South Salem
- McIntire District
- Derby Street
- North River
- Bridge Street Neck
- Salem Common
- Castle Hill



MAJOR TRIP GENERATORS

Points of Interest

- Large employers
- Schools
- Medical facilities
- Shopping
- Civic buildings
- Tourist attractions
- Transit connections



03

Service Options



SERVICE DESIGN PRINCIPALS



Simple Is Better than Complicated: A simple route structure and simple schedules will attract more riders than a complex system. First and foremost, for people to use transit, they must be able to understand it, and simpler services are easier for riders to understand. Simpler systems also help ensure that they get where they want to go when they want to without experiencing frustration and problems.

Routes Should Operate Along a Direct Path: The fewer turns a route makes, the easier it is to understand. Conversely, circuitous alignments are disorienting and difficult to remember. Routes should not deviate from the most direct alignment unless there is a compelling reason.

Routes Should Serve Well Defined Markets: The reconfiguration of service around more clearly defined markets can help to make service easy to understand, provide a basis for developing premium bus services, and minimize service duplication.

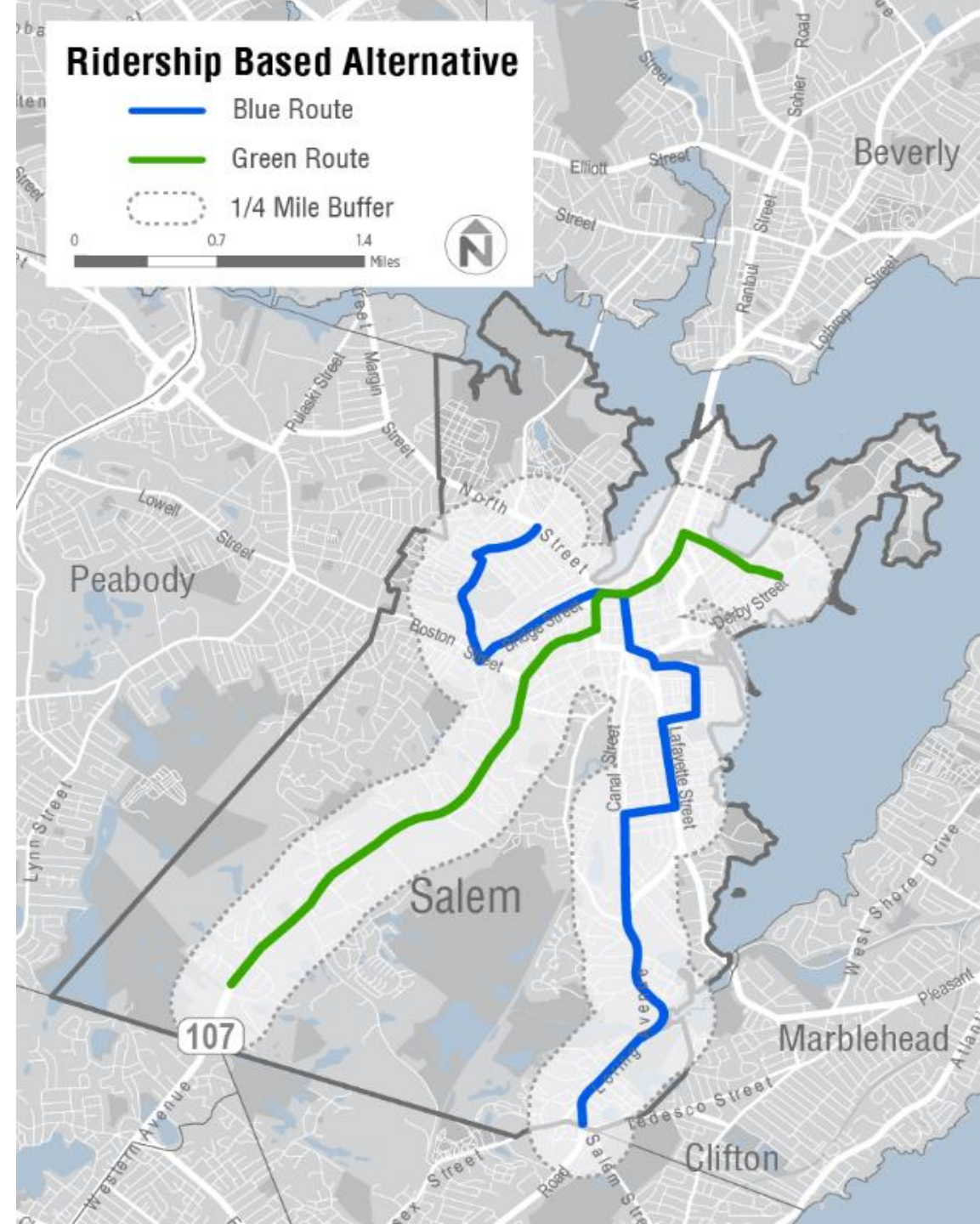
Transit Service Should be Focused Around Landmarks: Most potential transit users have a basic knowledge of major landmarks (and are often traveling to them). When transit service is focused around landmarks, they can also become transit hubs. Travelers traveling in unfamiliar area can more easily find their way to a landmark to make a transfer than to a lesser known area.

Services Should be Well Coordinated: Where different routes connect or operate along the same alignment, schedules should be coordinated to the greatest extent possible to provide short connection times.

RIDERSHIP BASED ALTERNATIVE

- Service
 - 7 AM – 7 PM, every 60 minutes
 - \$737,000

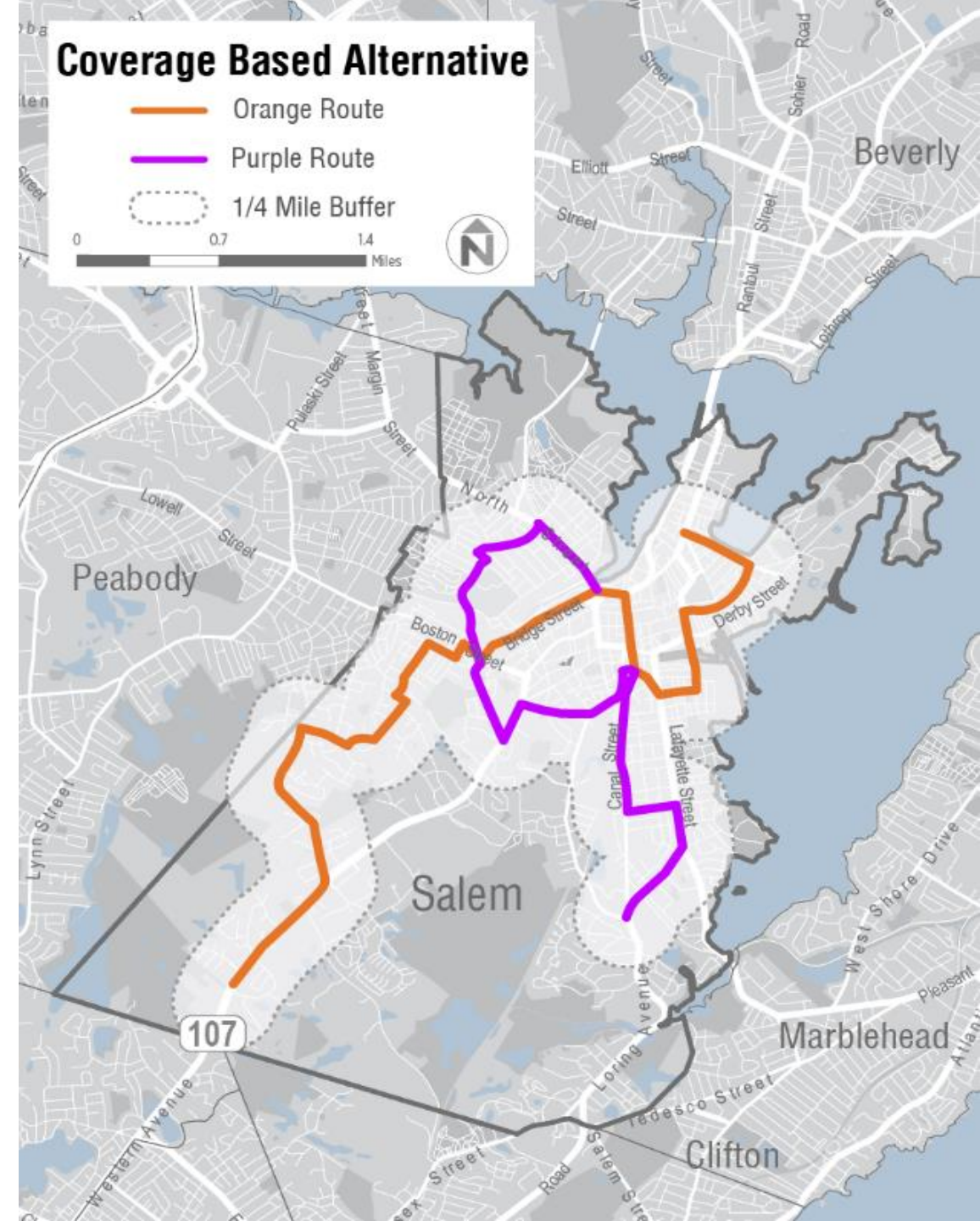
Benefits	Challenges
<ul style="list-style-type: none">▪ Cost per Rider: Lower cost per rider due to higher utilization per trip▪ Predictability: Consistent routes and schedules make service easy to understand▪ Speed and Directness: Typically operates along the most direct path possible, providing fast and attractive service	<ul style="list-style-type: none">▪ Paratransit: Requires complementary paratransit service, which would require additional coordination with MBTA's The Ride▪ Service Area: Limited geographic coverage, with service focused in higher density/demand areas and corridors



COVERAGE BASED ALTERNATIVE

- Service
 - 7 AM – 7 PM, every 60 minutes
 - \$737,000

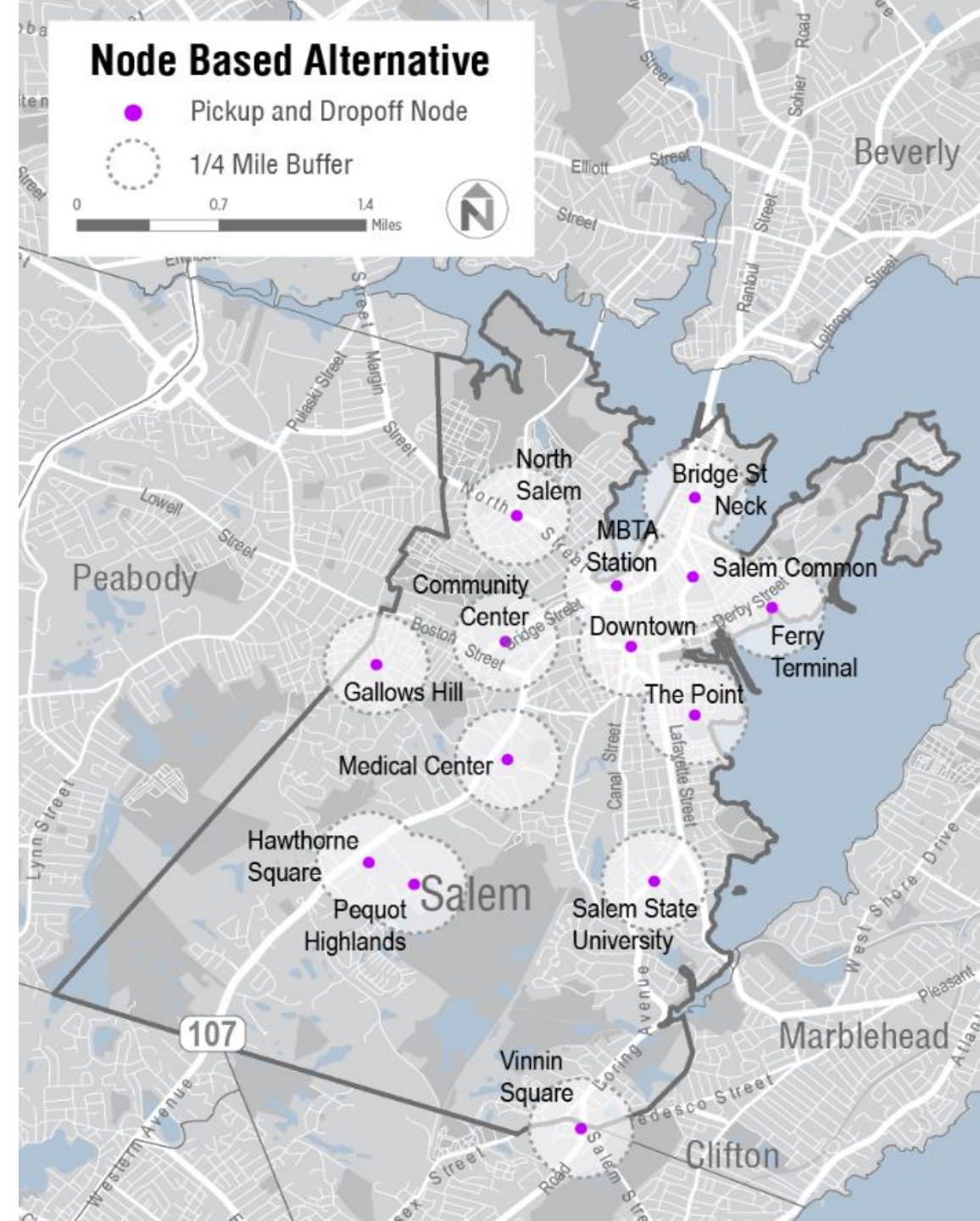
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NODE BASED ALTERNATIVE

- Service
 - 7 AM – 7 PM, 10 – 30 minute wait times
 - \$369,000

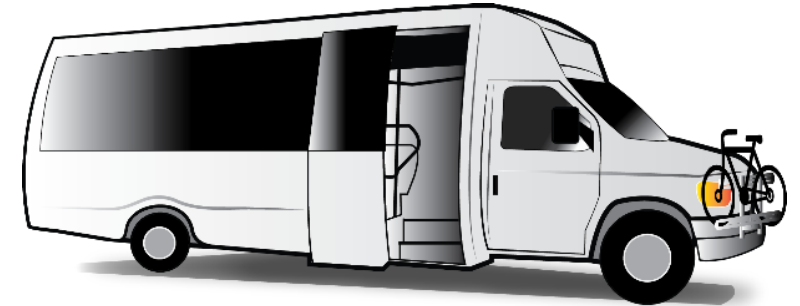
Benefits	Challenges
<ul style="list-style-type: none">▪ Adaptability: Service shifts with travel demands through the day▪ Convenience: New technology is convenient and user friendly, and most systems aim to guarantee fast response times▪ Geographic Coverage: Provides service in areas that are not conducive to fixed-route service	<ul style="list-style-type: none">▪ Cost per Rider: Potentially higher cost per rider due to longer distances traveled by customers to varying destinations▪ Operating Cost: Need adequate number of vehicles in service to guarantee fast response times



CAPITAL NEEDS

Vehicles

- 30' transit bus
 - Seats 20 – 40
 - \$350,000
- Cutaway
 - Seats 8 – 30
 - \$150,000



Shelters

- Basic bus stop
 - \$25,000
- Bus stop and shelter
 - \$30,000
- Node stop
 - \$45,000

BASIC BUS STOP

ELEMENTS:

Bus stop sign
Paved boarding area
Sidewalk connection
Street lighting

APPROXIMATE COST:

\$20,000-\$25,000



BUS STOP + SHELTER

ELEMENTS:

Bus stop sign
Paved boarding area
Shelter and seating
Sidewalk connection
Street lighting
Pavement markings

APPROXIMATE COST:

\$25,000-\$30,000



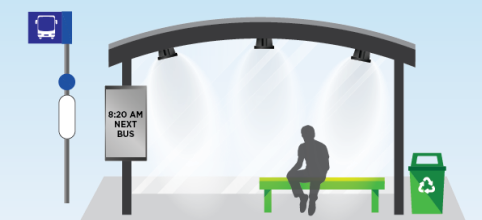
NODE STOP

ELEMENTS:

Bus stop sign
Paved boarding area
Sidewalk connection
Shelter lighting
Pavement markings
Real-time display
Shelter and seating
Trash receptacle

APPROXIMATE COST:

\$35,000-\$45,000



04

Recommendation



RECOMMENDATION

Annual
Operating Costs **\$369,000**

\$
Annual Service
Hours **4,200**


Stops **\$490,000**


Vehicles **\$300,000**

