APPENDIX C

Public Outreach Display Boards: Round 1

(Page Intentionally Left Blank)

BUS NETWORK IMPROVEMENT PROJECT

MTA Maryland
Maryland Department of Transportation

WANT A BETTER BUS SYSTEM? SO DOES MTA.

That's why we've created the Bus Network Improvement Project (BNIP). BNIP is a key component of a larger effort called the Transit Modernization Program (TMP) which is a plan to modernize the entire MTA transit system throughout the state.

Bus: Focus is mainly on the core bus network.

Network: Transit lines do not operate independently; it's the network's job to help people reach their destination.

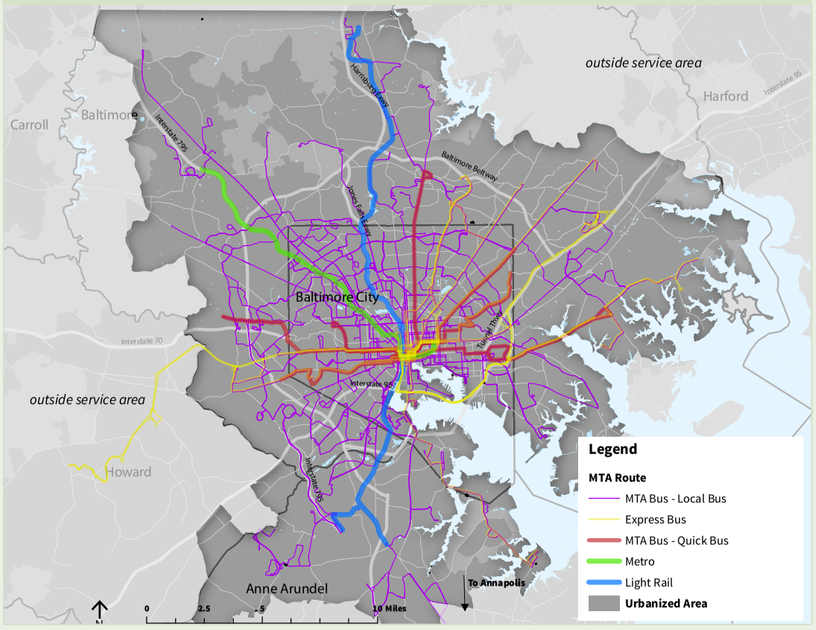
Improvement: We know there are a lot of problems with the system; this project aims to make *real improvements*.

Project: This initiative is a focused, short-term study with public and stakeholder involvement. It needs customer input to make it a success.

PROJECT GOALS

- Improve service quality
- Maximize transit access and connectivity
- Increase network efficiency and effectiveness
- Align the network with existing and projected land-use and trip patterns

MTA CORE SERVICES



TELL US WHAT WE CAN DO TO IMPROVE TRANSIT SERVICE.

MTA is looking to improve its approach to planning and providing bus service, and we need your input to make sure that we come to the right conclusions. With your help, we're out to create a whole new level of service and satisfaction for everyone who counts on MTA buses.

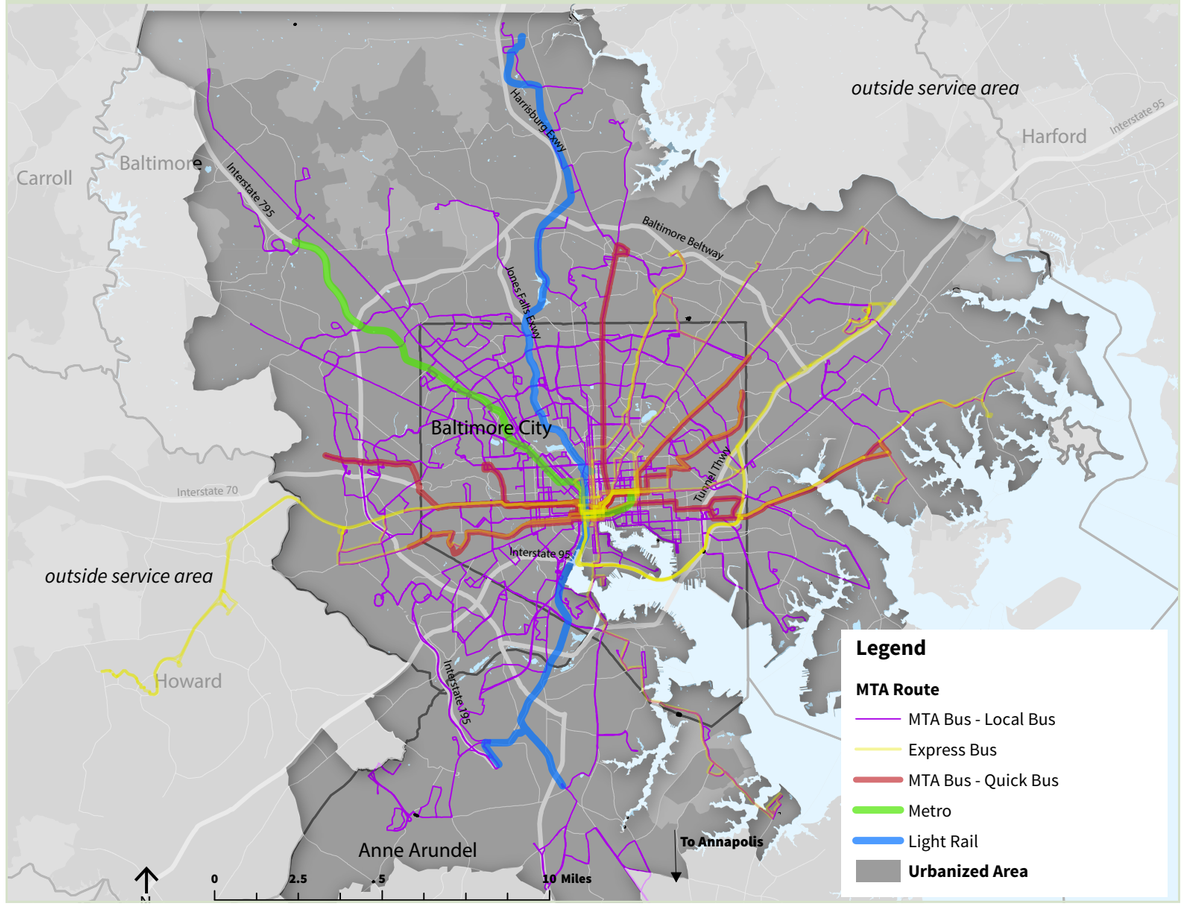
MTA Core Services and Productivity

BUS NETWORK IMPROVEMENT PROJECT

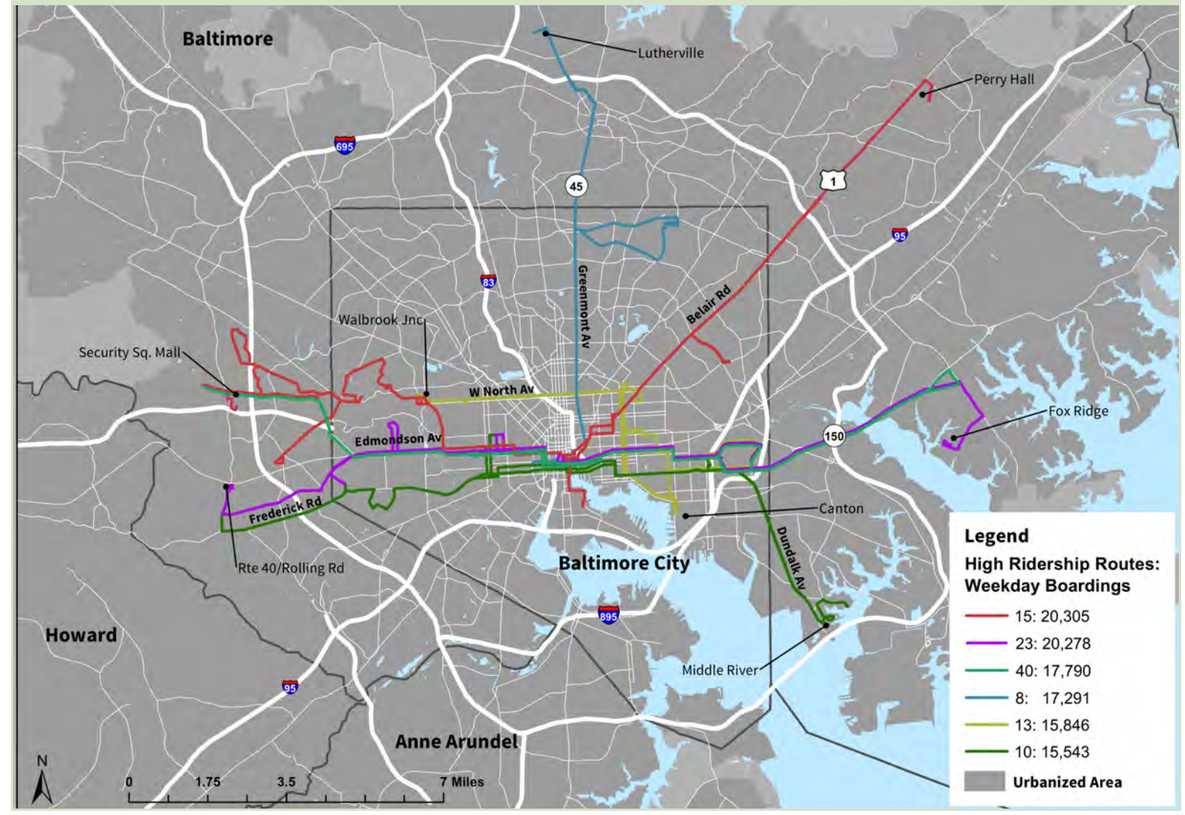
MTA Maryland — Maryland Department of Transportation

- Local Bus
- Quick Bus
- Express Bus
- Metro Subway
- Light Rail
- Mobility

MTA CORE SERVICES



HIGHEST RIDERSHIP BUS ROUTES



PRODUCTIVITY BY ROUTE TYPE

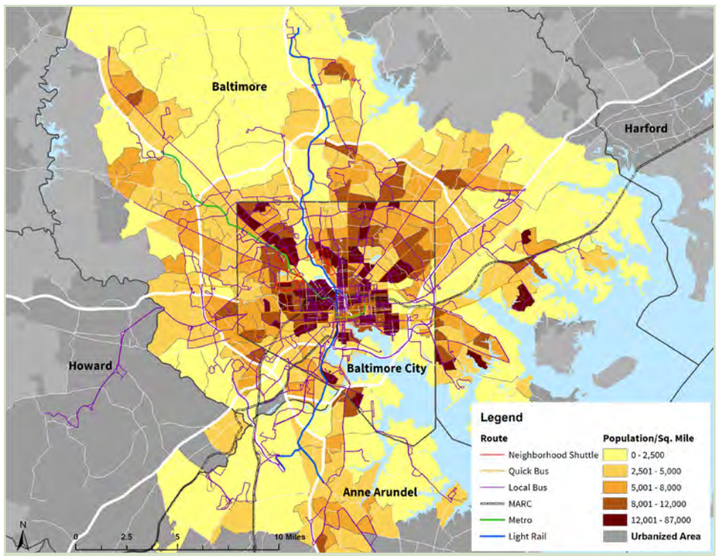
Route Type	Passengers Per Mile	Passengers Per Hour
Circulator	5.4	53.8
Crosstown	5.7	68.7
Express	2.2	35.1
Feeder	3.4	50.6
Quick Bus	5.5	72.0
Radial	6.1	66.9

Demographic Information

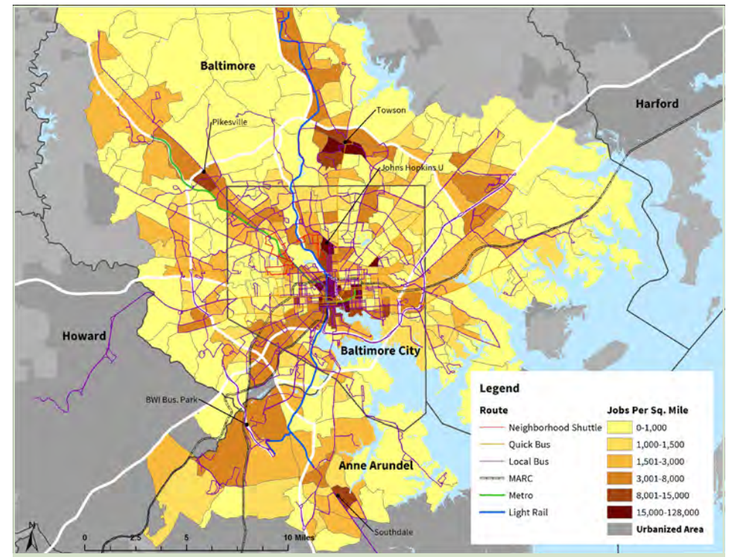
BUS NETWORK IMPROVEMENT PROJECT

MTA Maryland

Maryland Department of Transportation

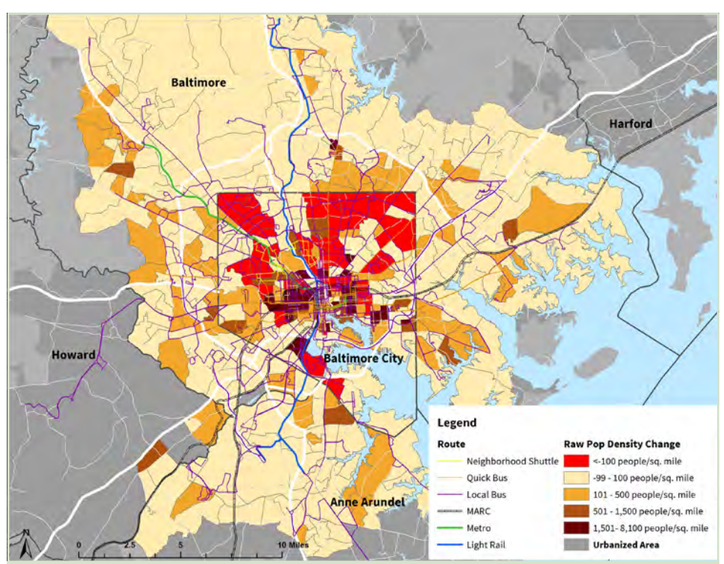


POPULATION DENSITY

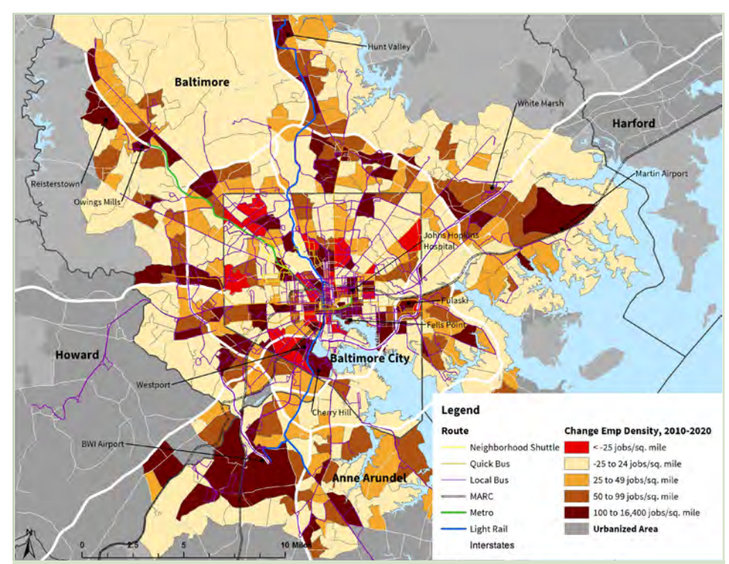


JOB DENSITY

- Areas with high population and job density are more supportive of transit
- Higher population densities mean more people are living and working in the same place, making transit more efficient
- Higher job densities mean more people are commuting to the same place, making transit more efficient



PROJECTED CHANGE IN POPULATION DENSITY



PROJECTED CHANGE IN JOB DENSITY

- Looking to the future is important to ensure that transit service stays viable and serves areas of future population and employment growth

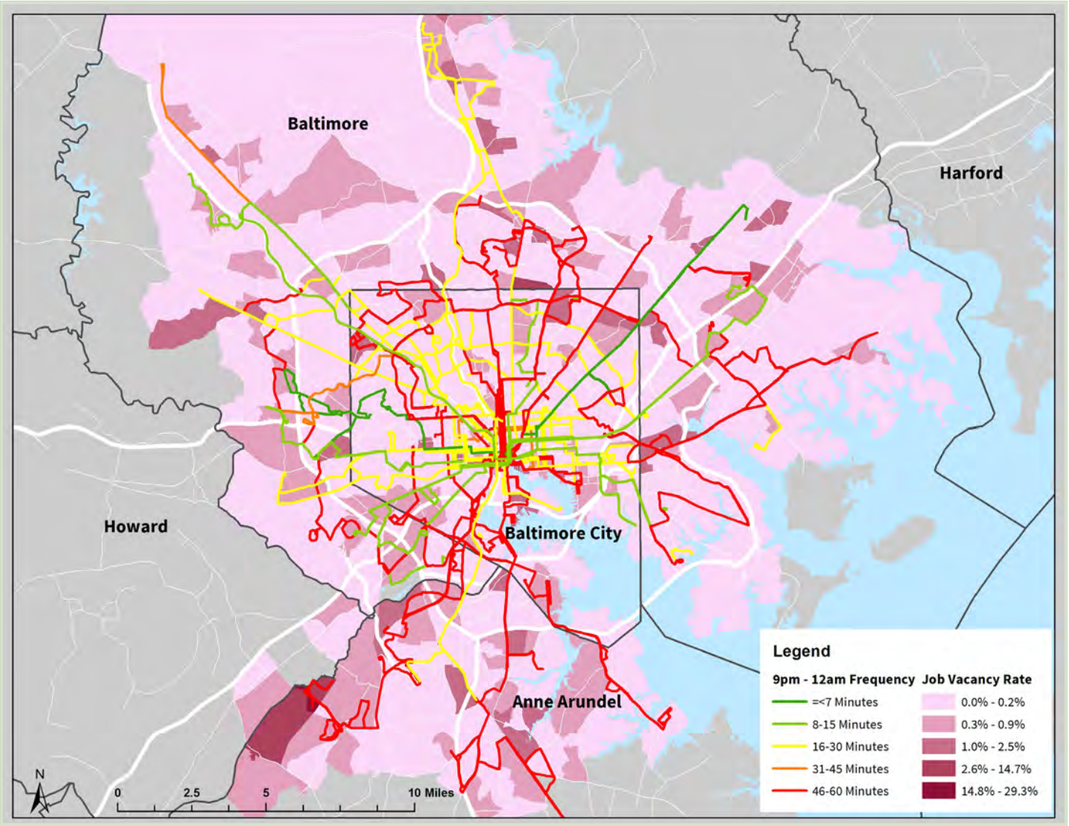
Transit Opportunities

BUS NETWORK IMPROVEMENT PROJECT

MTA Maryland

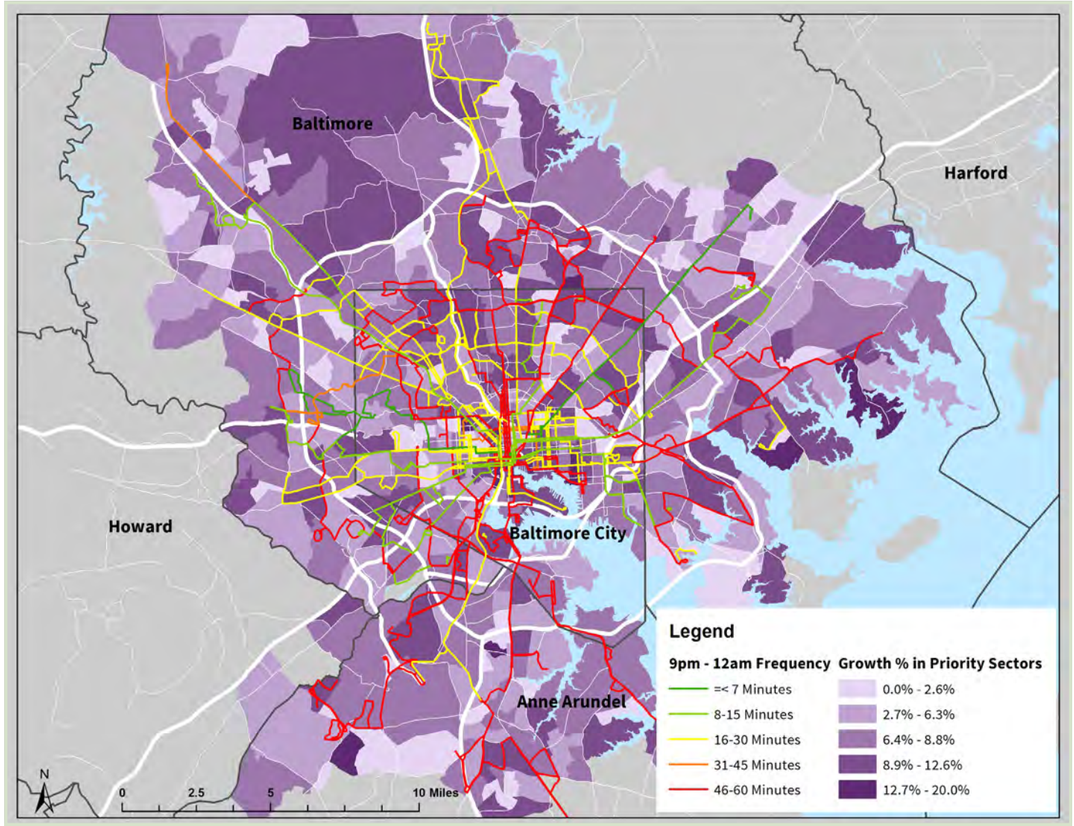
Maryland Department of Transportation

Data provided by the Opportunity Collaborative



JOB VACANCY RATE

- Current job vacancy rates in the Baltimore region are highlighted
- Late Night MTA services provide additional access to these jobs



PROJECTED GROWTH IN PRIORITY SECTORS

- Priority sectors include Business Services, Construction, Healthcare, Information Technology and the combine sectors of Transportation and Warehousing
- The map shows projected job growth in these sectors in the Baltimore region by the year 2020
- Priority industry sectors were identified through the work of the Opportunity Collaborative to connect people in the greater Baltimore region with the best opportunities for family-supporting wages and career advancement (opportunitycollaborative.org)

Transit Need

BUS NETWORK IMPROVEMENT PROJECT

MTA Maryland

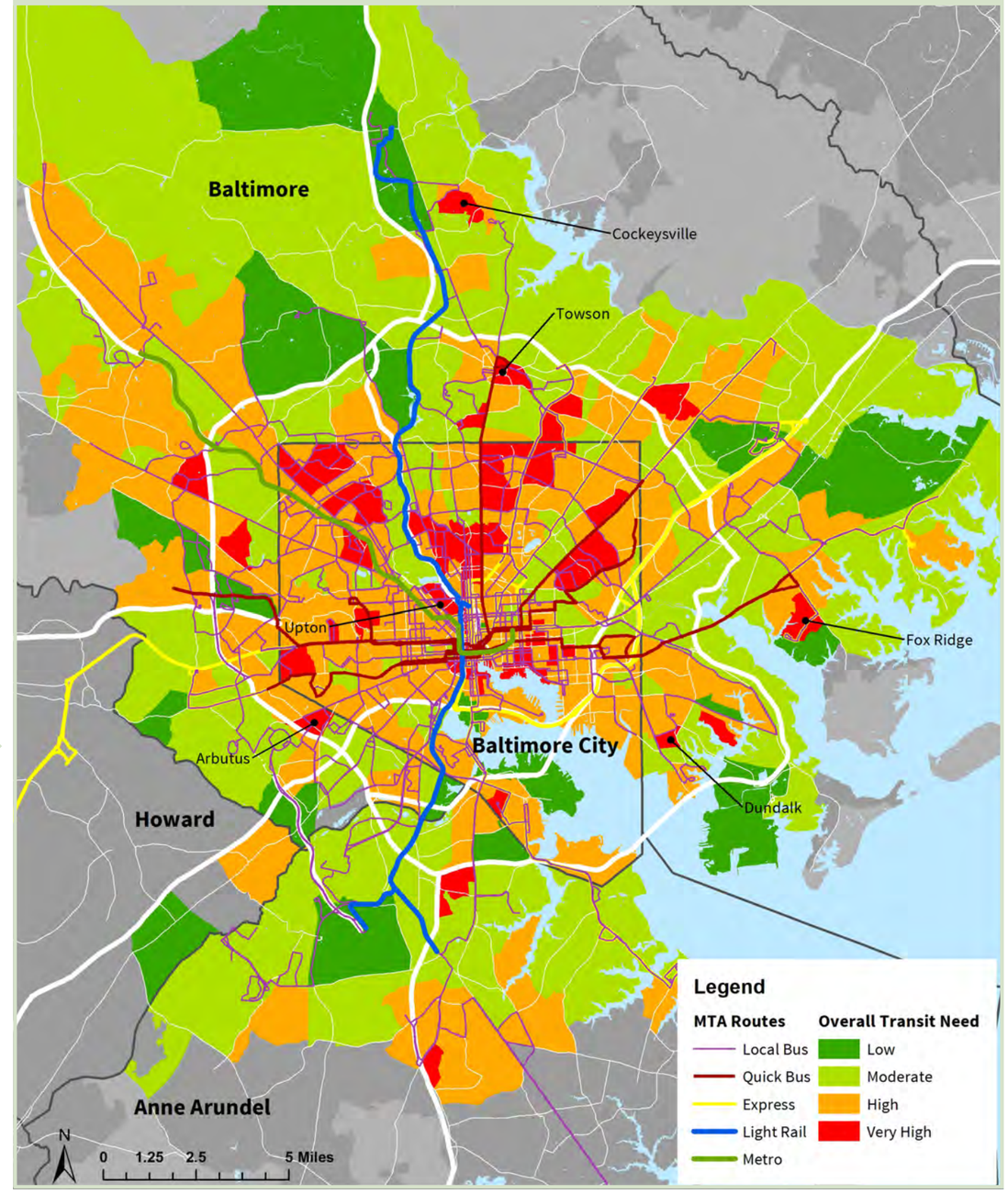
Maryland Department of Transportation

Transit need, or the propensity to use transit, is an overall measure of both the need and demand for transit in a certain area. There are many variables that go into transit propensity, including income levels, population density, age, vehicle ownership, employment and commute mode.

TRANSIT NEED INPUTS
Population
Households
Labor Force
Commute Mode
Income
Age
Vehicle Ownership

The 7 inputs and 33 variables all feed into the calculation of Transit Need

OVERALL TRANSIT NEED



Future Travel Patterns

BUS NETWORK IMPROVEMENT PROJECT

MTA Maryland

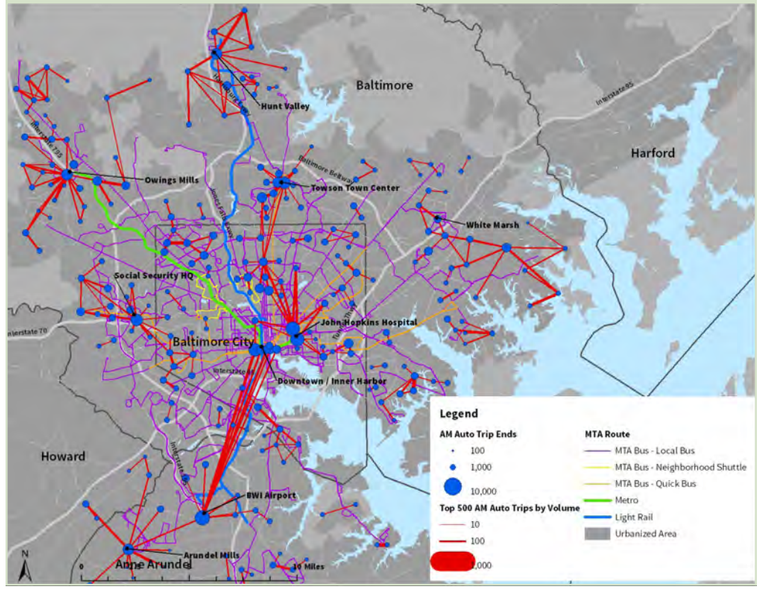
Maryland Department of Transportation

— Understanding travel patterns will allow MTA to better plan services around where people want to go.

— By studying future travel patterns, MTA can design a bus network today that meets future needs.

— The Baltimore Metropolitan Council has developed complex travel demand models that predict future travel patterns. The maps below are based on this data and show the 500 top origin-destination pairs by mode and time of day.

TOP TRIP PAIRS: 2020 AM PEAK AUTO TRIPS



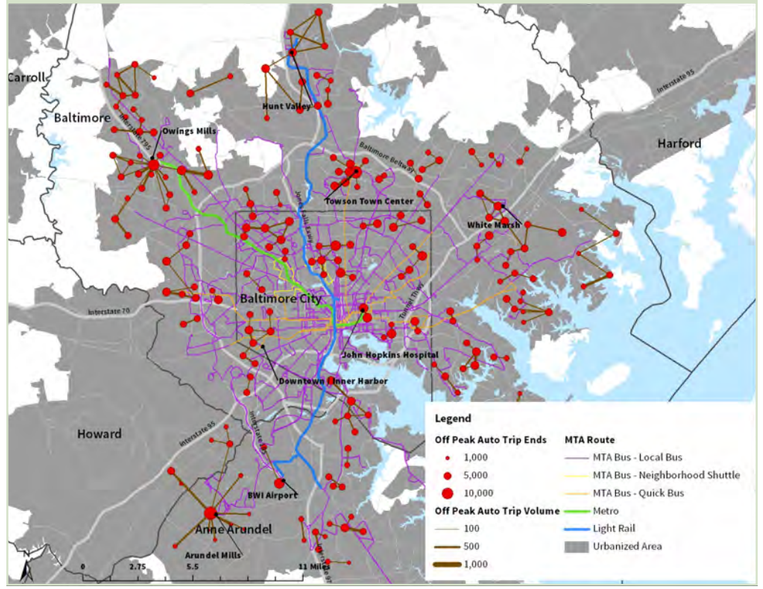
— Morning Peak 6:30-9:30 A.M.

— Good indicator of work trips

— High employment areas:

- Downtown
- The Inner Harbor
- Johns Hopkins Hospital
- BWI Airport
- Arundel Mills
- White Marsh
- Towson
- Owings Mills
- Social Security Administration
- Hunt Valley

TOP TRIP PAIRS: 2020 AM OFF-PEAK AUTO TRIPS

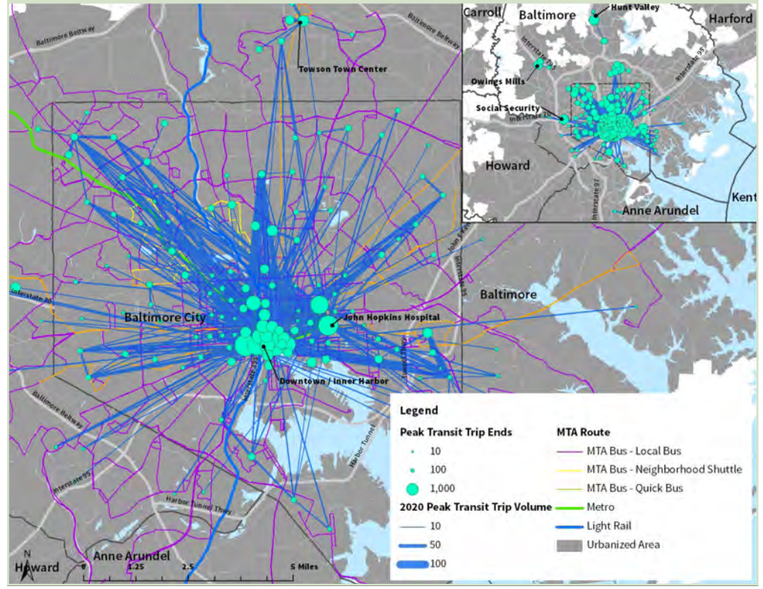


— Midday, evening, late night, early morning

— Good indicator of:

- Work trips with non-traditional hours
- Shopping
- Errands

TOP TRIP PAIRS: 2020 AM PEAK TRANSIT TRIPS



— Morning Peak 6:30-9:30 A.M.

— Based on current transit service

— Good indicator of work trips by accessed by transit:

- Downtown
- The Inner Harbor
- Johns Hopkins Hospital
- Owings Mills
- Social Security Administration
- Towson
- Hunt Valley

Service Evaluation Process

BUS NETWORK IMPROVEMENT PROJECT

MTA Maryland

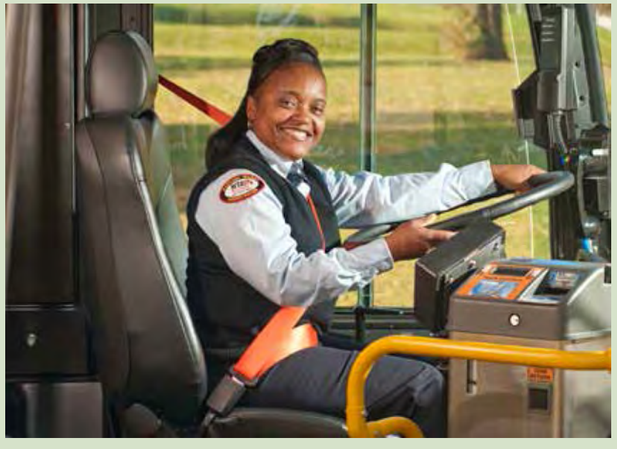
Maryland Department of Transportation

Quantitative Data

— Total Vehicle Miles
— Total Vehicle Hours
— Ridership
— Productivity Measures in Terms of
  – Passengers per Mile
  – Passengers per Hour
  – Passengers per Vehicle

Qualitative Data

— Field Observations
— Bus Operator Interviews
— Street Supervisor Interviews
— Customer Relations Officers Interviews
— Citizens Advisory Committees Input
— Rider and Stakeholder Input



Idea: Changing Level of Service

BUS NETWORK IMPROVEMENT PROJECT

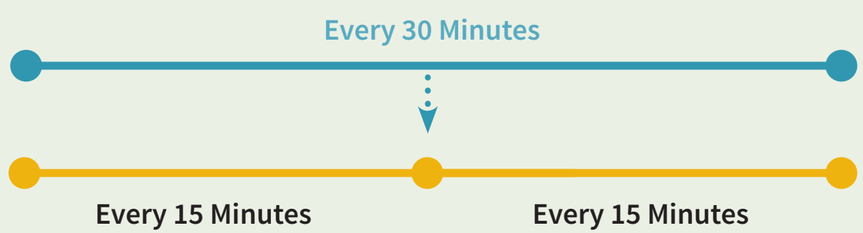
MTA Maryland

Maryland Department of Transportation

Increase Frequency/Hours of Service

There are routes that dictate an increase in frequency, often due to overcrowding. Increasing the amount of service offered either by adding hours earlier in the morning or later in the evening or increasing the frequency of the bus will help alleviate overcrowding and provide a better quality service.

CONCEPT:



Decrease Frequency/Hours of Service

For routes that have low productivity, one of the first options is to decrease their level of service, either by reducing frequency or providing fewer hours of service each day.

CONCEPT:

Questions: What routes do you think need higher or lower frequency?
What routes do you think need to start earlier or end later?

Idea: New Connections

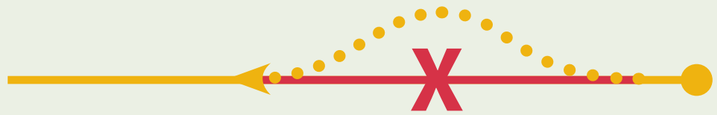
BUS NETWORK IMPROVEMENT PROJECT

MTA Maryland — Maryland Department of Transportation

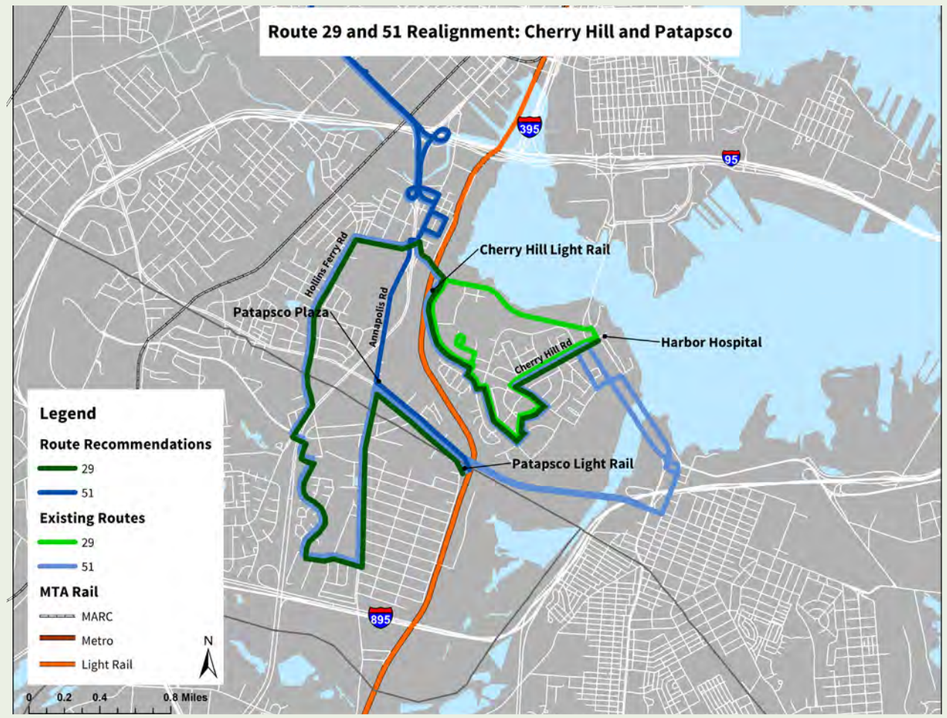
Route and Segment Realignment

A route may be more efficient, attract greater ridership and/or provide better transfer connections if it were to operate on a different alignment.

CONCEPT:



Example

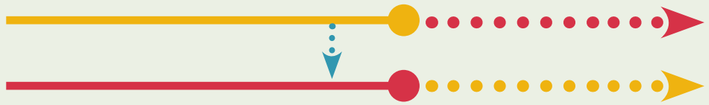


Question: What routes do you think need to be realigned?

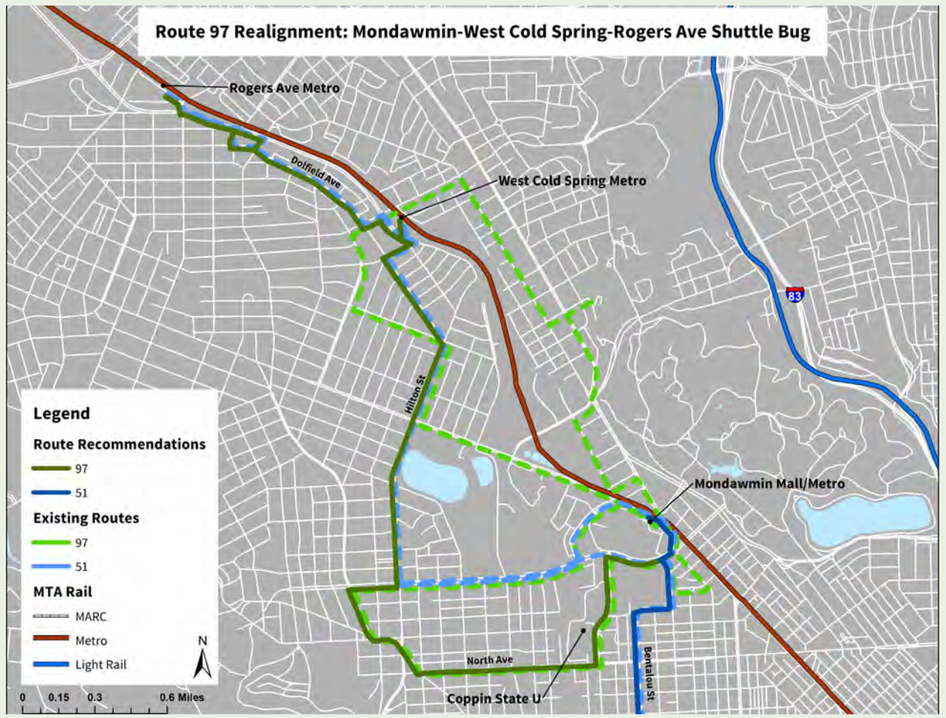
Segment Transfer

Service can become more efficient if a portion of one route were to be transferred or added to the alignment of another route.

CONCEPT:



Example



Question: Are there segments of an existing route you believe would make more sense transferred to another route?

Idea: Combining or Splitting Routes

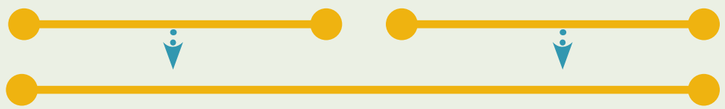
BUS NETWORK IMPROVEMENT PROJECT

MTA Maryland — Maryland Department of Transportation

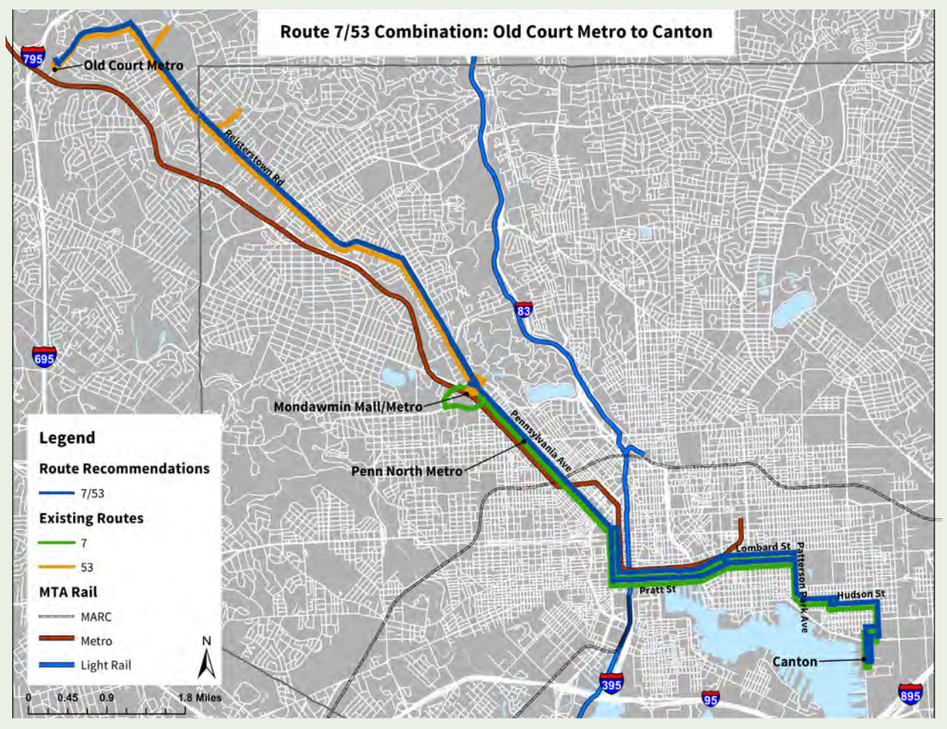
Route Combination

Combining two routes together based on the best elements of each route can improve productivity and efficiency.

CONCEPT:



Example



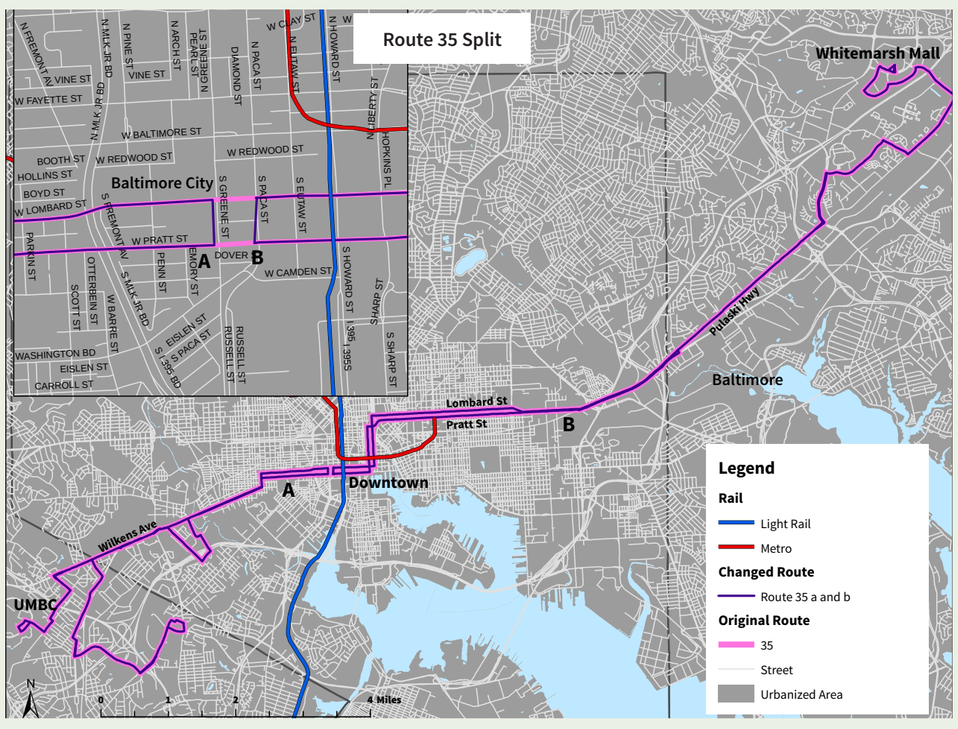
Question: Are there two routes you believe should be combined?

Route Split

Splitting a route's trip distance in half can help improve the route's performance, especially in areas with major bottlenecks.

CONCEPT:

Example



Question: Is there a route you believe should be split in half?

Idea: New Markets

BUS NETWORK IMPROVEMENT PROJECT

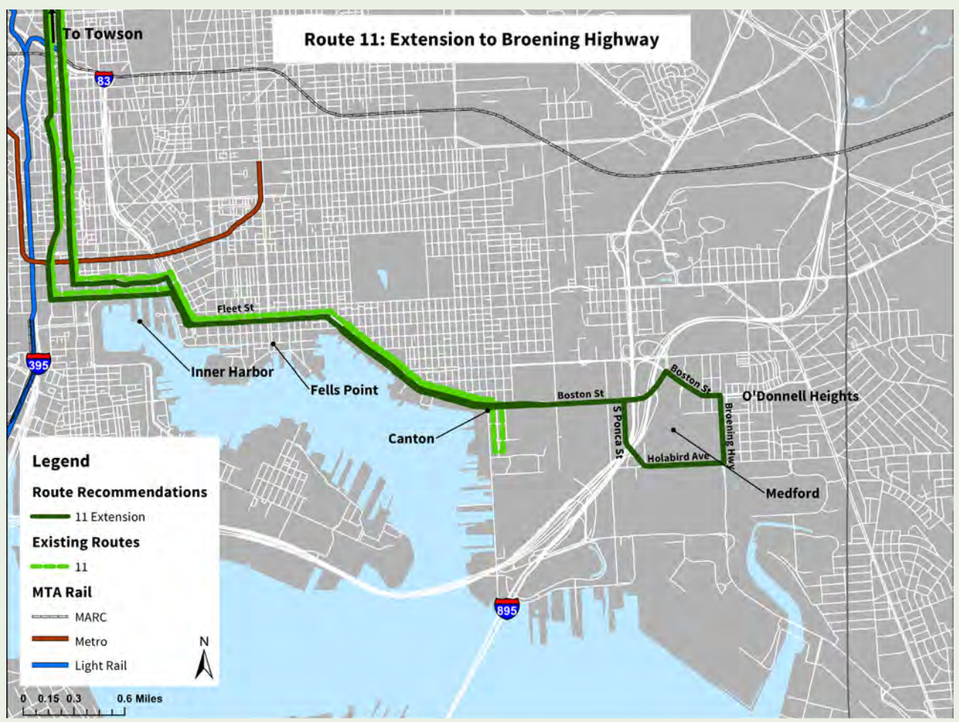
MTA Maryland — Maryland Department of Transportation

Route Expansion

A route's alignment can be lengthened in order to offer service to a new or developing market or serve an area unserved by transit.

CONCEPT:

Example



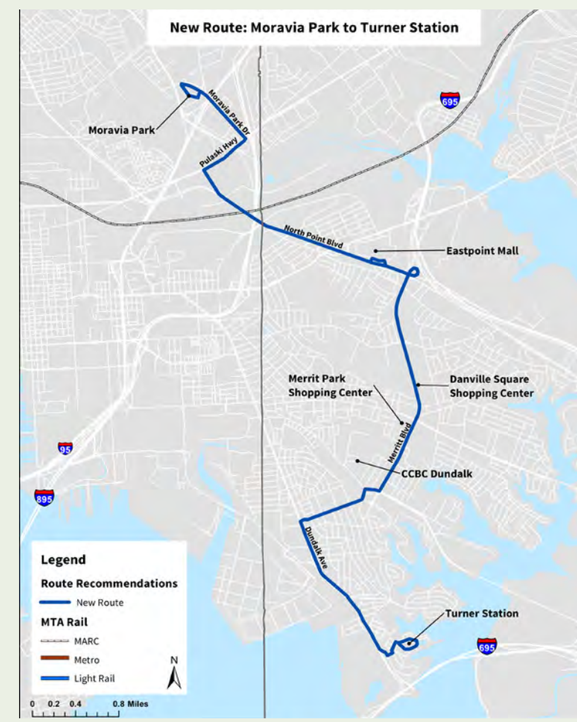
Question: Are there any areas or places you believe a route should be extended to serve?

New Routes

A new route can be developed to meet the needs of new transit corridors or markets.

CONCEPT:

Example



Question: Are there any areas or places you believe a new route should be created to serve?

Idea: New Alignments

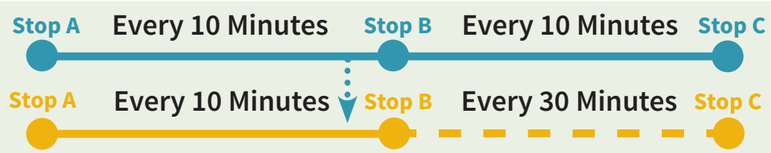
BUS NETWORK IMPROVEMENT PROJECT

MTA Maryland — Maryland Department of Transportation

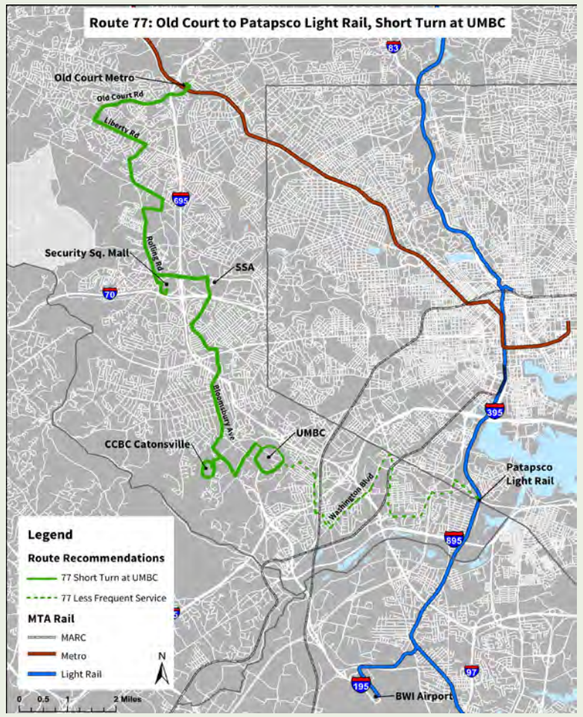
Short Turns

A short turn allows a transit system to focus a higher frequency of service along a more heavily used segment of a route while still serving other portions of the route.

CONCEPT:



Example

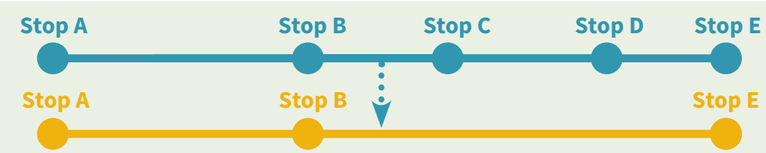


Question: Do you know of any area where a route could be served by a short turn?

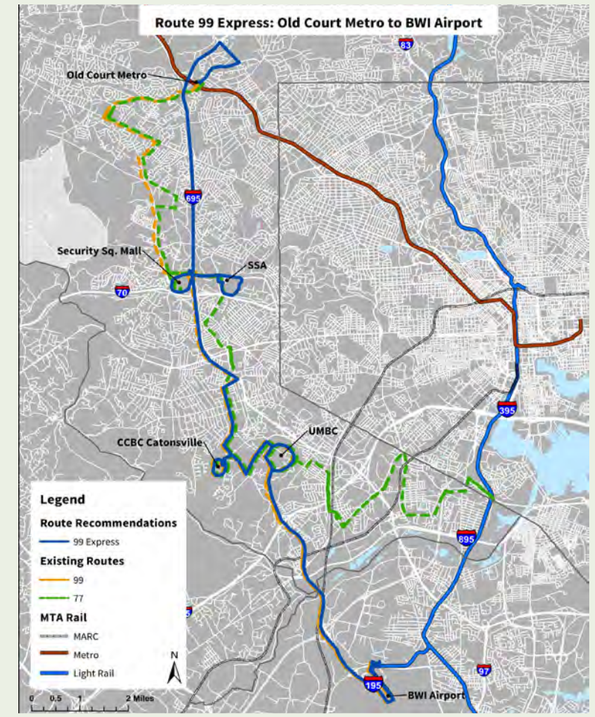
Service Type Revisions

Modifying a route into a different type of service, such as turning a local route into an express route (or adding express trips), can make it better serve passengers.

CONCEPT:



Example



Question: Are there any service types or routes that should be altered to meet the demands of their riders?

Idea: Service Removal and Other Ideas

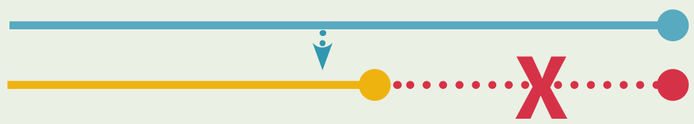
BUS NETWORK IMPROVEMENT PROJECT

MTA Maryland — Maryland Department of Transportation

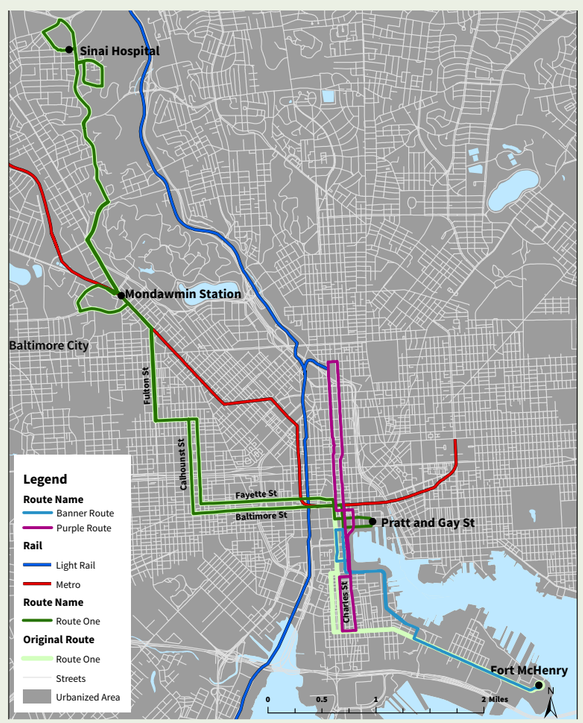
Segment Removal

Some route segments are duplicative of other services and/or hinder the performance of the rest of the route. Eliminating a segment of a route could increase frequency along the high performance segment of the route.

CONCEPT:



Example



Question: Are there any route segments you think should be eliminated?

Route Removal

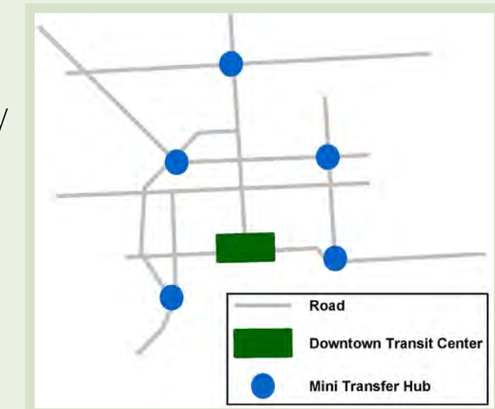
Some routes do not meet productivity goals and do not provide unique service that is not covered by other routes.

CONCEPT:

Question: Are there any routes you think should be eliminated?

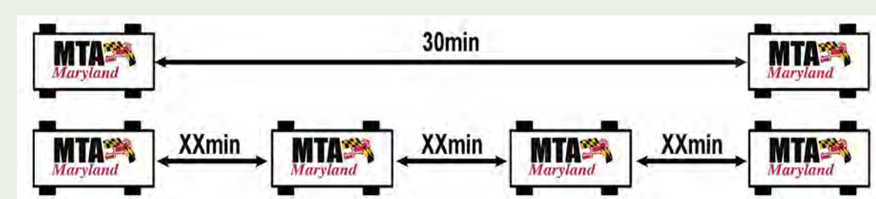
Downtown Transit Center or Several Mini Transfer Hubs

- Create a central transit center for easy transfer movements among many routes, *or*
- Create mini transfer hubs at several easily accessible locations to provide transfer options prior to entering the Downtown area



Frequent Bus Corridors

- Heavily utilized transit corridors with proposed transit improvements
- Buses come every XX minutes (timing to be determined)
- Several bus routes would operate along the corridor



BNIP Timeline and Next Steps

BUS NETWORK IMPROVEMENT PROJECT

MTA Maryland

Maryland Department of Transportation

BNIP TIMELINE

OCTOBER 15
State Center Workshop & Randallstown Walmart Pop-Up*

OCTOBER 16
Mondawmin Metro Station Pop-Up* & Rosedale Library Workshop

OCTOBER 19
North Point Library Workshop

OCTOBER 21
Towson Library Workshop

OCTOBER 23
First Mariner Arena Pop-Up* & Enoch Pratt Library Workshop

OCTOBER 24
Brooklyn Park Library Workshop

DECEMBER 2013
Draft Recommendations

JANUARY 2014
Draft Implementation Plan

FEBRUARY 2014
Final Draft Recommendations & Implementation Plan

APRIL 2014 - JULY 2014
Public Hearings & Comment Period

AUGUST 2014
Implement Phase I Changes

*Pop-up events are weather-dependent

Next Steps

- Compile Comments - all input received by November 30, 2013 will be considered:
  - Public workshops
  - Pop-up events
  - MindMixer
  - Phone, mail, email comments
- Develop draft service recommendations
- Develop implementation plan

To provide further input please visit:

- mtamaryland.mindmixer.com
- mta.maryland.gov/bnip