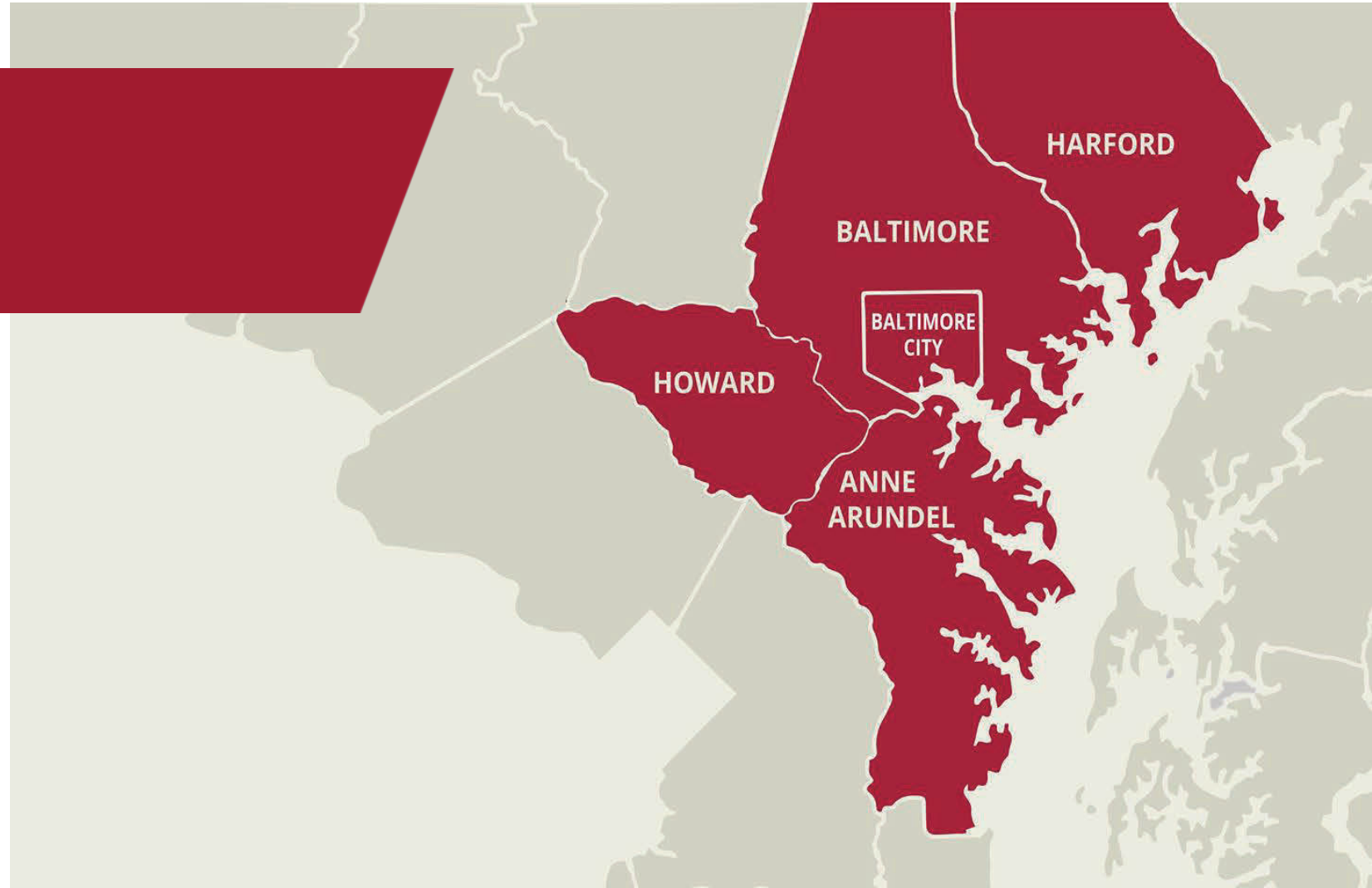


# Connecting Our Future

A Regional Transit Plan for Central Maryland

## COMMISSION MEETING #4

September 20, 2019  
Howard County Miller Library  
Ellicott City, MD





# WELCOME & OVERVIEW

Mike Kelly, Executive Director  
Baltimore Metropolitan Council





# COUNTY EXECUTIVE REMARKS

Calvin Ball, County Executive  
Howard County



# MEETING AGENDA

- June Meeting Minutes Review
- Public Involvement Update
- Introduction and Set Up
- RTP Goals Wrap-Up
- Identifying Transit Needs – Methodology & Analysis Review
- Transit Corridors of Opportunity
- Corridor Prioritization Evaluation
- Public Comment
- Next Steps





# JUNE MEETING MINUTES REVIEW

Kirby Fowler, RTP Commission Chair



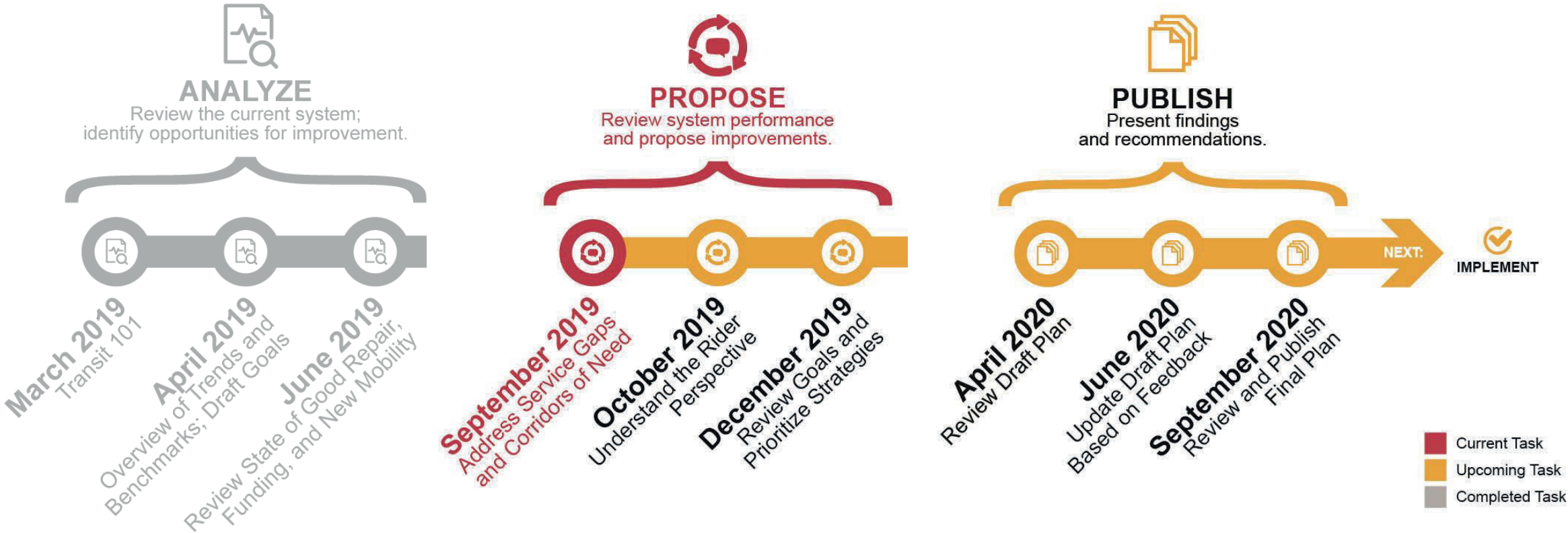


# INTRODUCTION & SET UP

Holly Arnold, Deputy Administrator  
Maryland Department of Transportation  
Maryland Transit Administration



# Plan Development



# Today's Focus

- Update on public involvement
- Affirm draft Goals for the Regional Transit Plan
- Review and discuss draft corridors
- Identify any missing corridors
- Discuss what data or other factors support these additional gaps, needs, and potential corridors

*The project team will use your feedback, in conjunction with our other work, to further refine the list of potential corridors.*



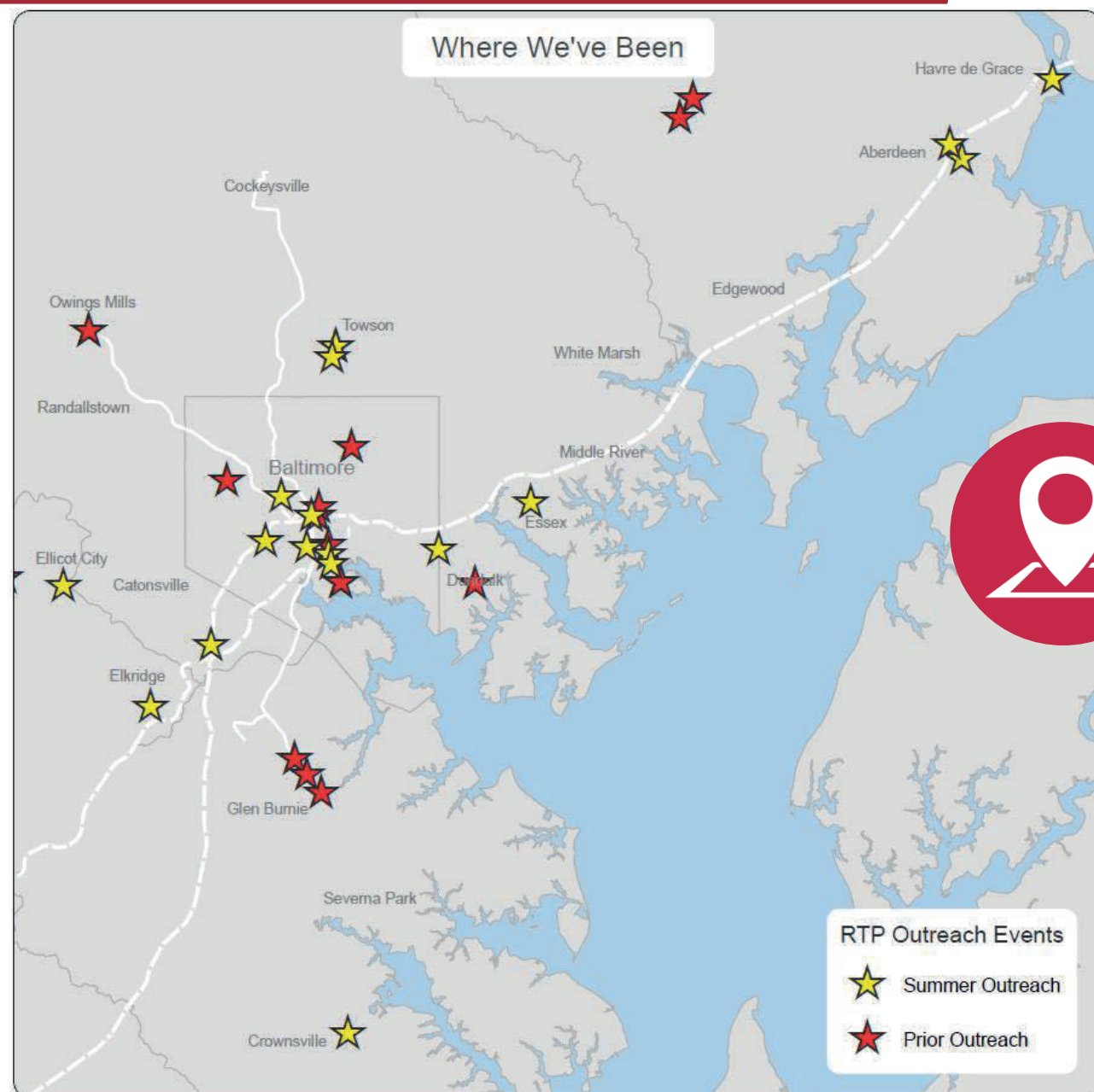


# PUBLIC INVOLVEMENT

Teddy Krolik, Chief of Engagement  
Maryland Department of Transportation  
Maryland Transit Administration

# Summer Pop-Up Events | June – August

Jurisdiction	Event/Location
Anne Arundel County	Fiesta Latina
Baltimore City	Harbor Market McKeldin Square
	Veterans Administration Hospital
	West Baltimore MARC Station
	GWP/GBC Event at AVAM
	Druid Hill Park Farmers Market
	SE Anchor Library
Baltimore County	MICA Resource Fair
	Essex Branch Library
	Halethorpe MARC Station
	Towson Farmers Market
Harford County	Towson University Orientation
	Aberdeen MARC Station
	Aberdeen Branch Library
Howard County	Havre de Grace First Fridays
	Ellicott City Farmers Market
	Elkridge Branch Library





# Interactive Strategies Board



- Members of the public share their strategies, projects, and priorities that fit within each goal
- Staff available to discuss ideas and suggestions



# Fall Open Houses

## October Locations:

- **10/21 Howard County**  
Elkridge Library
- **10/22 Baltimore County**  
Towson Library
- **10/24 Baltimore City**  
Mondawmin Mall
- **10/28 Harford County**  
Edgewood Rec. & Community Center
- **10/29 Anne Arundel County**  
Severna Park Community Center



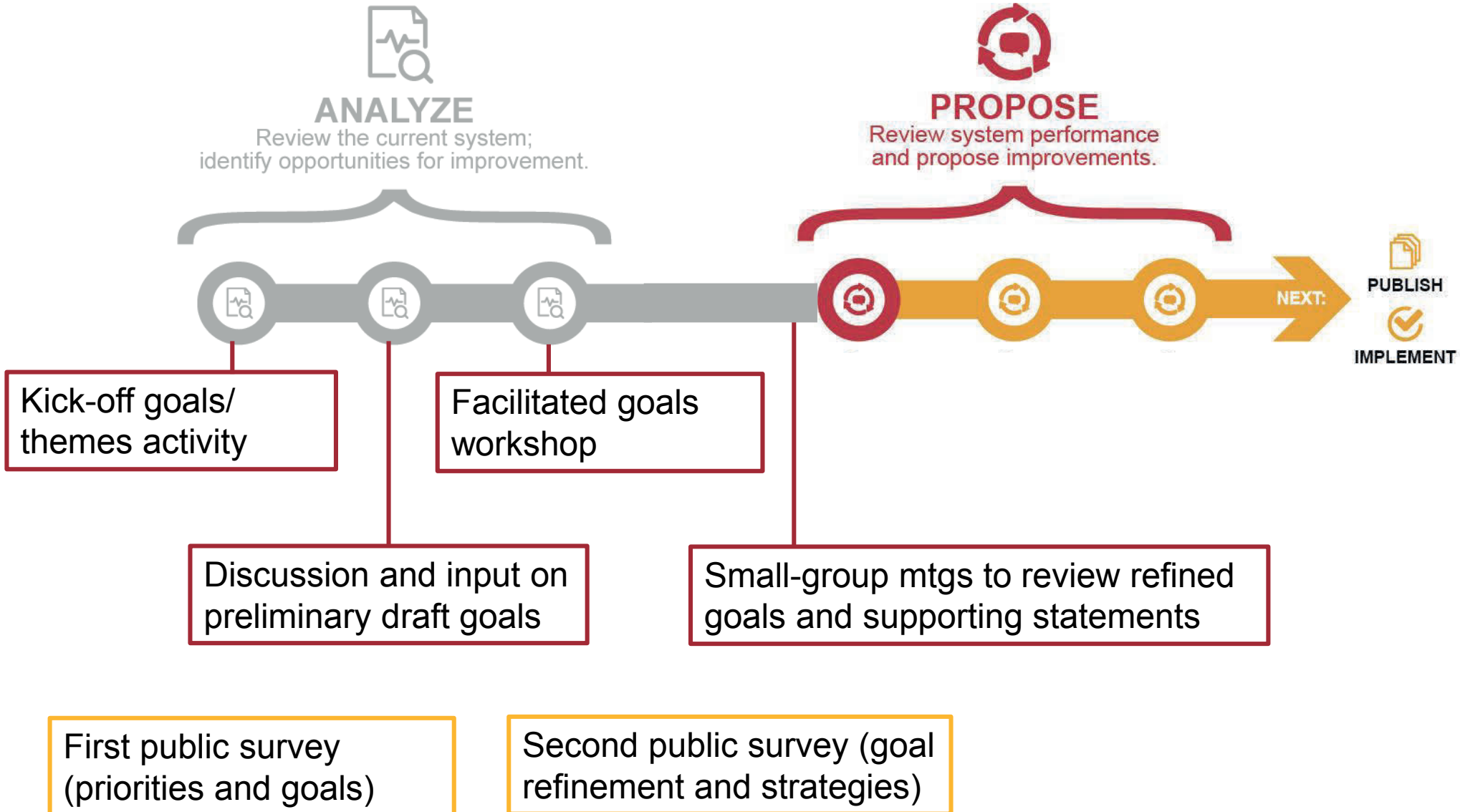




# RTP Goals Wrap-Up

Kimiya Darrell  
RTP Project Team

# Goal Development Timeline





# Revised RTP Goals



Improve connectivity and integration of existing and future transit services



Optimize existing transit services



Enhance fiscal sustainability



## Improve connectivity and integration of existing and future transit services

*Connecting Our Future* should...

- a. Reduce or eliminate gaps in current transit services
- b. Prioritize connection to economic opportunities and services
- c. Prioritize existing and emerging transit-supportive corridors and nodes for new or enhanced services
- d. Increase regional collaboration





## Optimize existing transit services

*Connecting Our Future* should...

- a. Advance equitable access to jobs, education, and services
- b. Promote travel choice, affordability, reduce delay, and reduce emissions
- c. Improve service quality, customer experience, and safety on existing services
- d. Ensure the region meaningfully integrates new transit innovations and technology



## Enhance fiscal sustainability

*Connecting Our Future* should...

- a. Identify transit needs
- b. Identify funding and financing opportunities and innovations to deliver this Plan
- c. Improve cost efficiency of transit services
- d. Maintain assets at defined condition targets





# IDENTIFYING TRANSIT NEEDS: Methodology & Analysis Review

David Miller  
RTP Project Staff

# Identifying Transit Needs | Methodology

## What analysis goes into transit planning?

### Market Analysis:

- Where is there demand for transit service?
- How much demand is there?
- What time of day is the demand?
- Where do people want to go?

### Service & Travel Flow Analysis:

- Where and when do people have access to transit service?
- What quality of service is provided (span, frequency)?
- Where are the linkages?
- How does it perform (ridership, reliability)?
- What is the cost of service?

### Stakeholder Outreach & Existing Plans

- Where do people want to go?
- What issues or gaps have the public and stakeholders identified?
- What service qualities are important?
- How and where should investment take place?
- Where have regional plans identified as priorities?

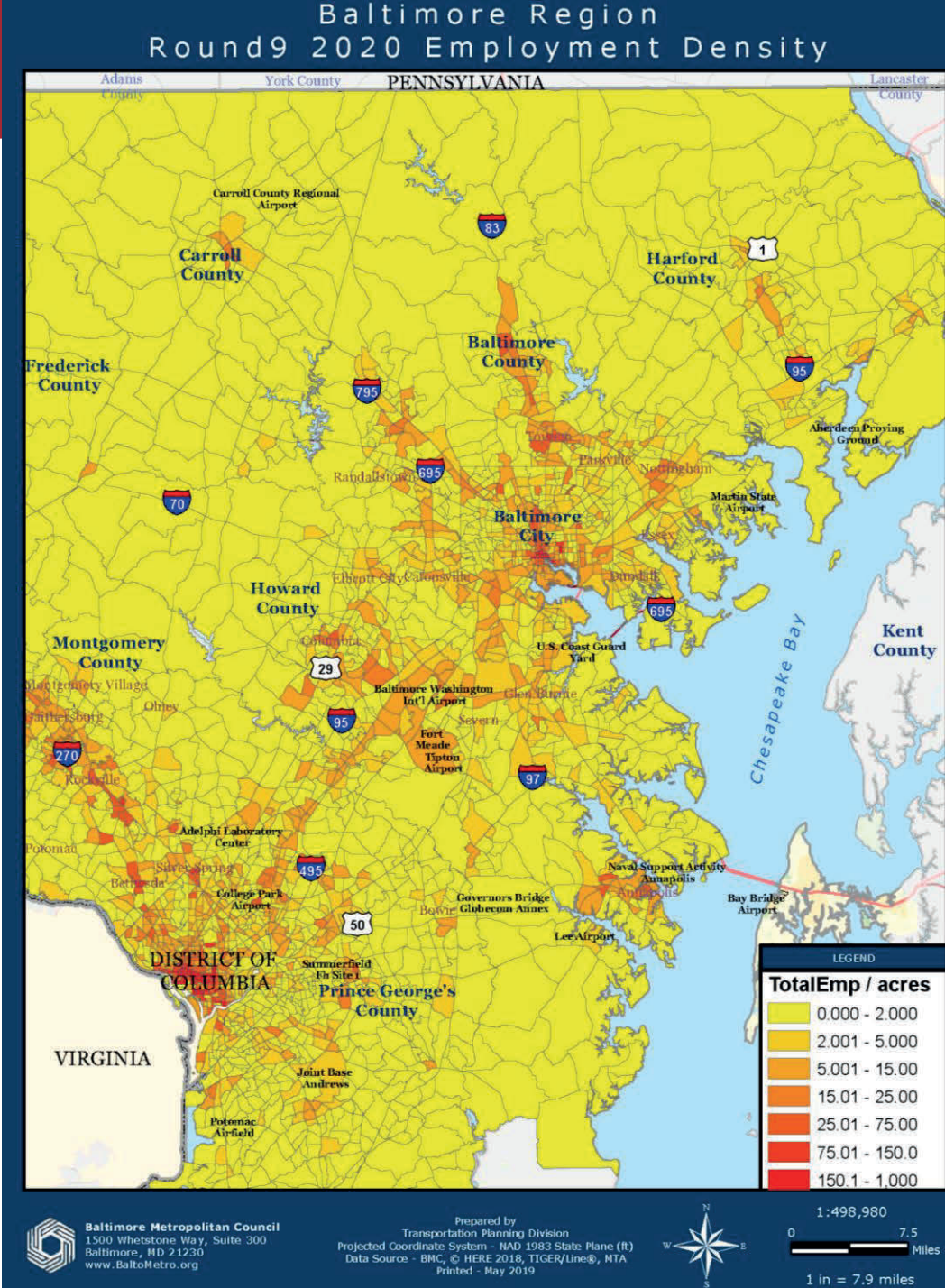




# Market Analysis | Regional Job Density

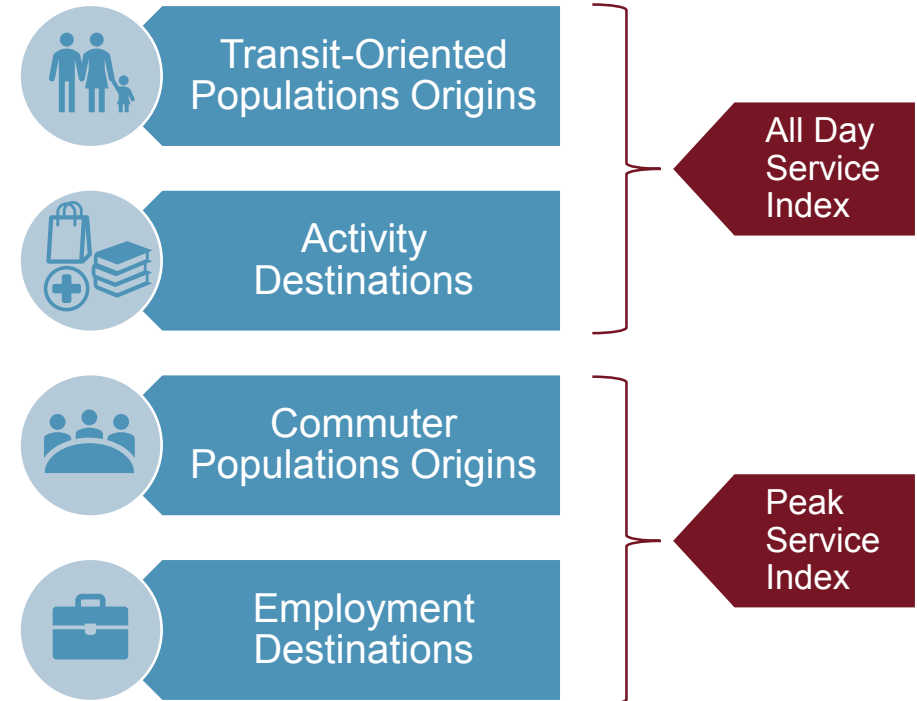
## ■ Jobs are densely populated in these areas:

1. Downtown Baltimore
2. Arundel Mills/BWI
3. Fort Meade
4. Hunt Valley/Lutherville
5. Downtown Towson
6. Downtown Columbia
7. Columbia Gateway
8. Parole / Annapolis
9. US 1 Corridor
10. White Marsh
11. John Hopkins/East Baltimore
12. Owings Mills
13. Reisterstown Plaza
14. Downtown Belair
15. Amazon / Port of Baltimore



# Market Analysis | Transit Propensity

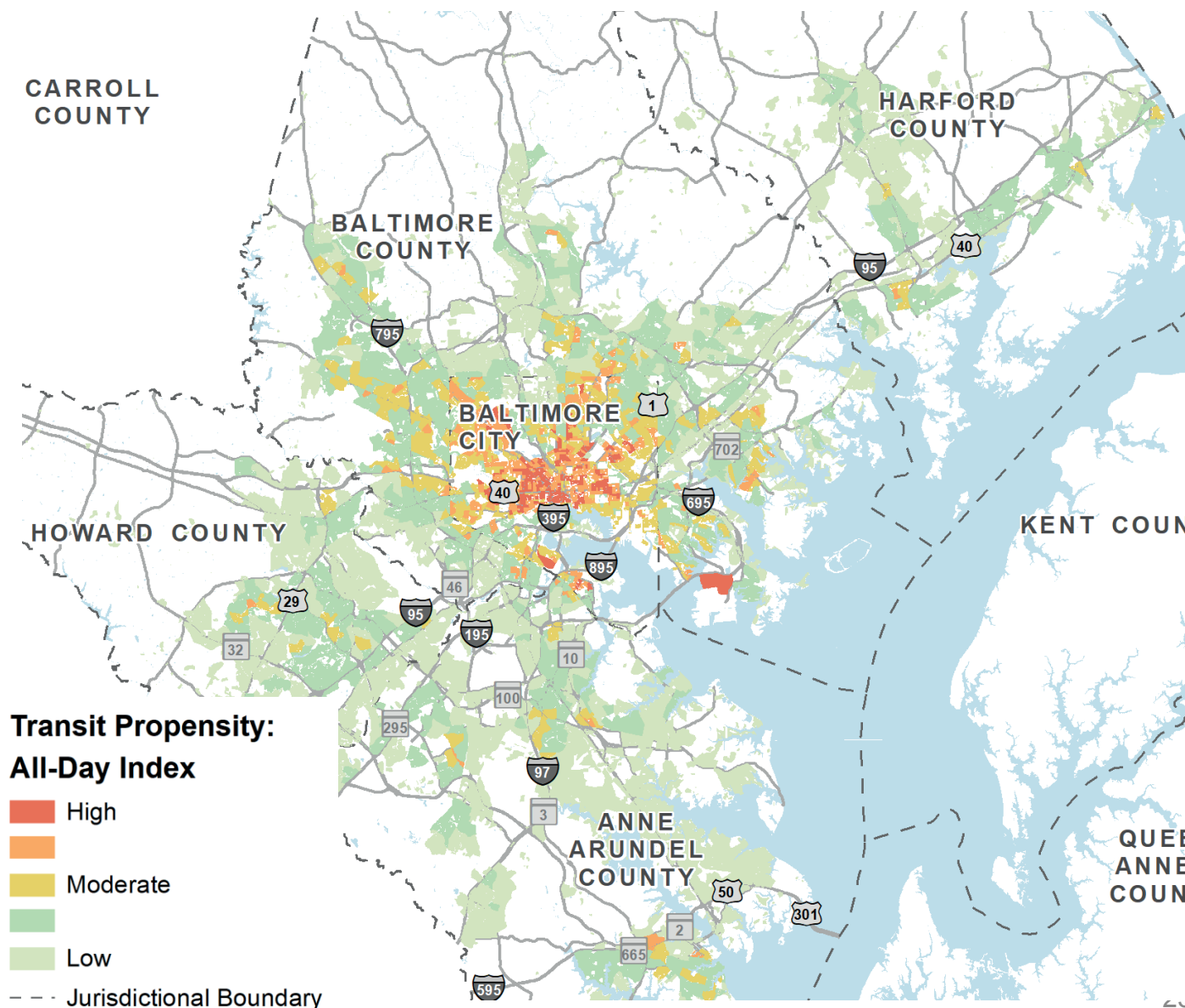
- Transit propensity analysis is a national best practice to assess transit needs
- Transit propensity assesses probability that individual locations or sub-areas have demand for transit
- Based on:
  - Transit-Oriented Populations Origins
  - Activity Destinations
  - Commuter Population Origins
  - Employment Destinations
- Combined to identify:
  - All Day Service Needs
  - Peak Service Needs





# Market Analysis | Transit Propensity – All-Day Index

- High all-day propensity is broadly distributed across Baltimore City
- Moderate all-day propensity is present throughout Baltimore County suburbs
- Sparrows Point is High due to the large number of jobs

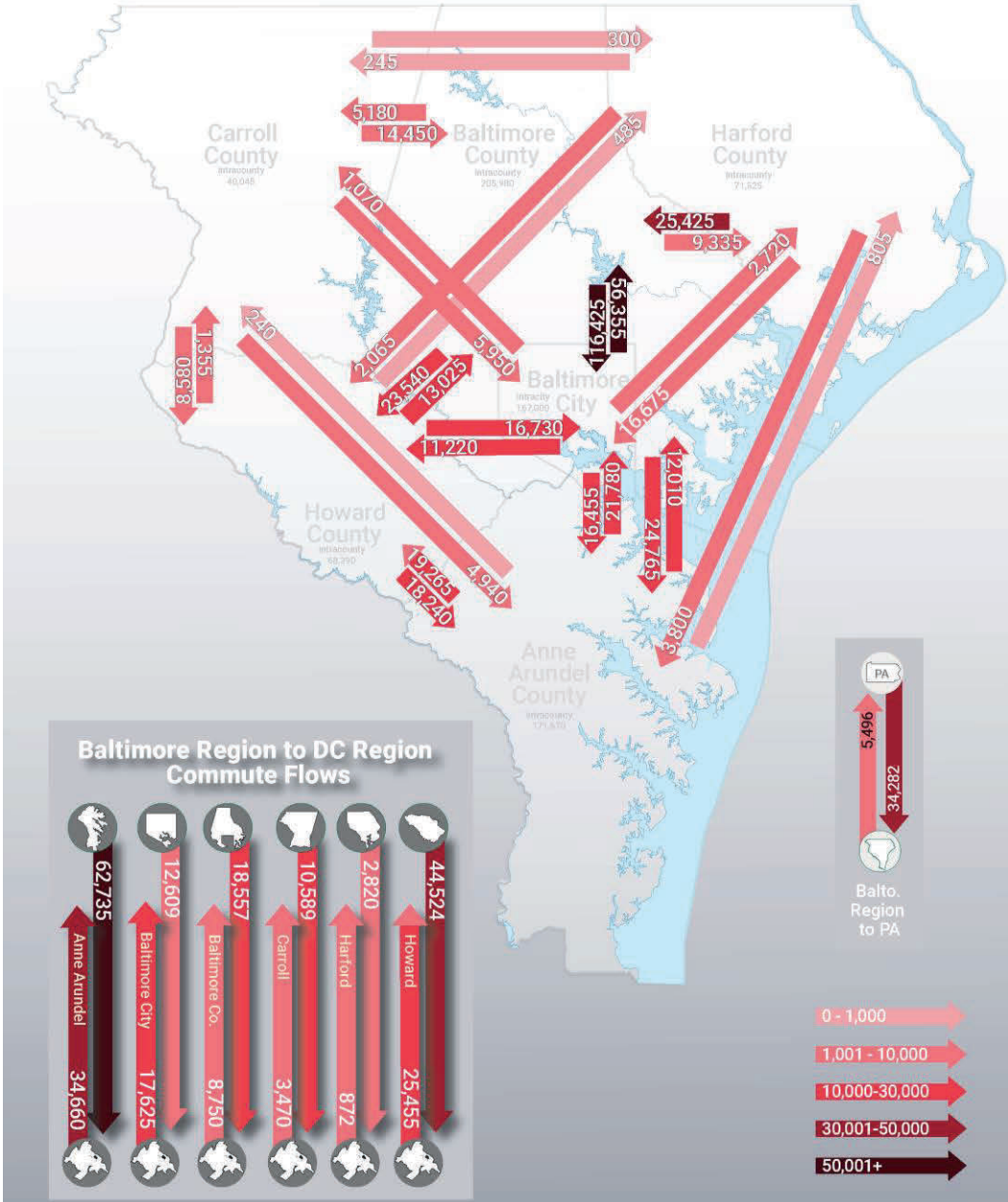


Highest percent of commute trips are within each county's boundaries.

Percent of Commuter Trips from County to County

		From County					
		Howard	Carroll	Anne Arundel	Baltimore City	Baltimore County	Harford
To County	Howard	42%	10%	7%	4%	6%	2%
	Carroll	1%	47%	0%	0%	1%	0%
	Anne Arundel	11%	6%	60%	6%	6%	3%
	Baltimore City	10%	7%	8%	62%	29%	14%
	Baltimore County	8%	17%	4%	21%	51%	21%
	Harford	0%	0%	0%	1%	2%	58%
	DC Region	27%	12%	22%	5%	5%	2%

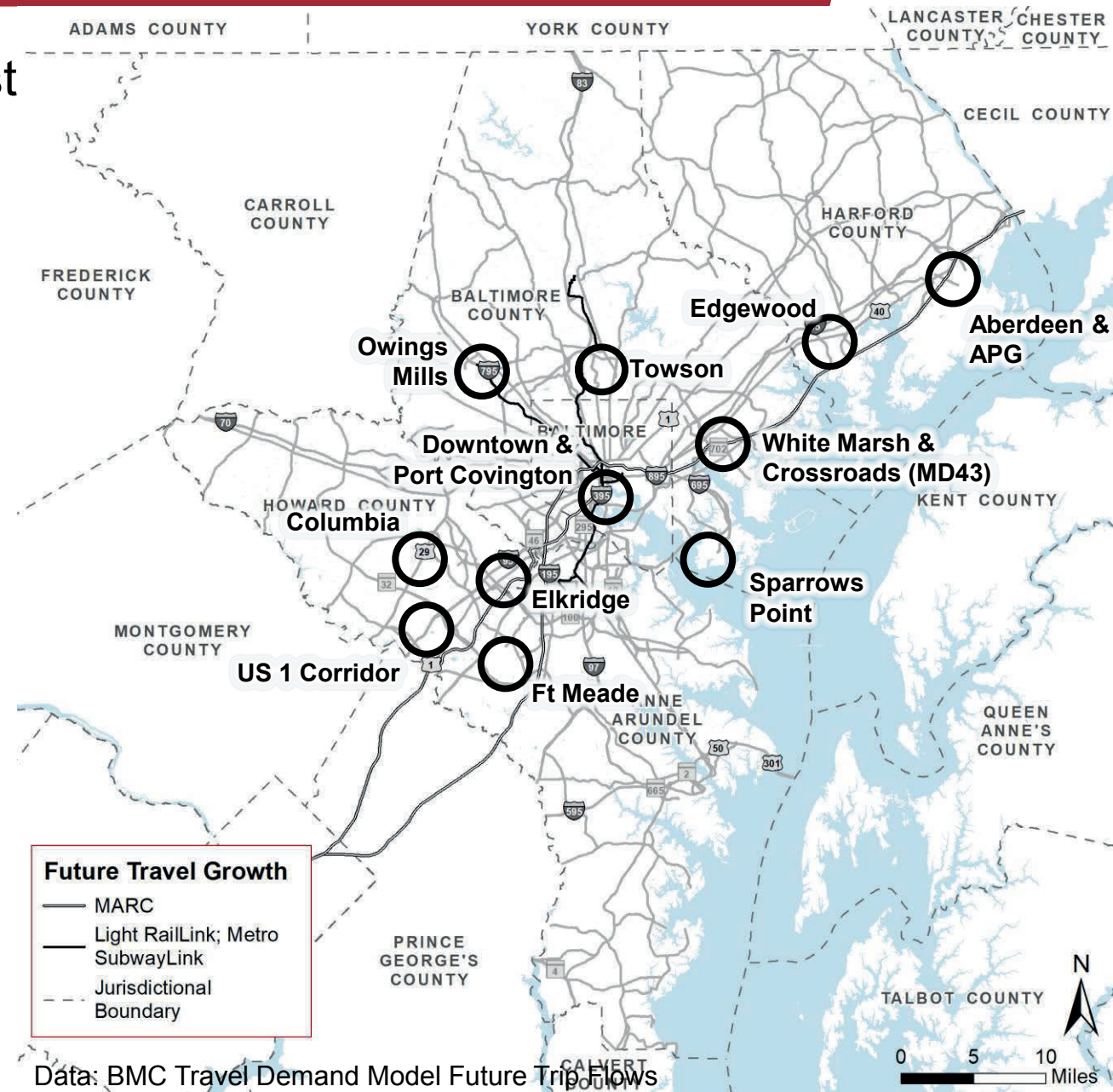
## County-to-County Commuting Flows in the Baltimore Region



# Service & Travel Flow Analysis | Projected Regional Commute Travel Trips

Projected job and population growth suggest commuter trips will increase in several areas:

- Columbia
- US 1 Corridor
- Elkridge
- Downtown Baltimore/Port Covington
- White Marsh/Crossroads (MD43)
- Edgewood
- Aberdeen/APG
- Owings Mills
- Sparrows Point
- Fort Meade
- Towson





# Service & Travel Flow Analysis | Transit-Supportive Densities

- The type and amount of land use directly impacts transit use
- As development increases and diversifies, more transit and more types of transit can be justified
- Many agencies produce guidelines that align transit to land use for planning purposes
- MDOT partners with local jurisdictions for TOD opportunities

Read more about Transit Supportive Densities:  
[reconnectingamerica.org/resource-center/transit-supportive-density](https://reconnectingamerica.org/resource-center/transit-supportive-density)



## General Guidelines

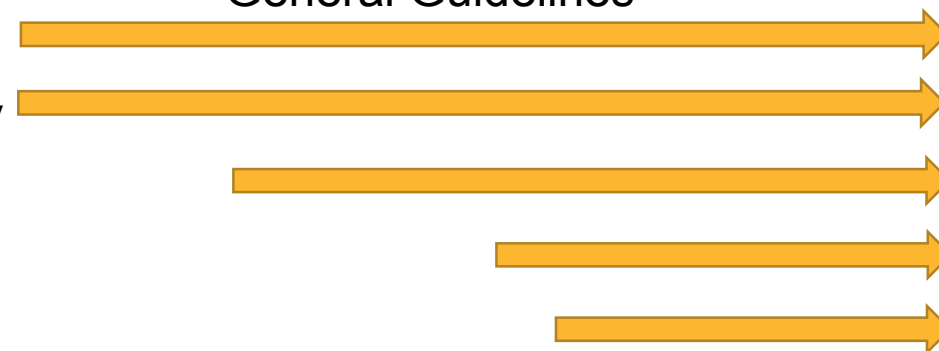
Commuter

Shared Mobility

Fixed Route

Frequent

High Capacity



- Baltimore Regional Transportation Board Maximize2045
- Local comprehensive plans
- Priority Letters
- Jurisdictional growth areas
- Local transit development plans



# Stakeholder Outreach & Existing Plans | Public & Stakeholder Involvement Plan



The Plan will be developed in three phases, with public and stakeholder involvement during each phase

## Stakeholders:

- Meetings with local government planning and economic development staff, and local transit operators are part of stakeholders engagement efforts and validated analysis findings

## Public:

- October 2019 Open Houses are scheduled for all jurisdictions to share corridors and other service improvement areas





# TRANSIT CORRIDORS OF OPPORTUNITY

## Jurisdictional Priorities

Commission Members

# Jurisdictional Priorities

Anne Arundel County



Baltimore City



Baltimore County



Harford County



Howard County





BREAK





# TRANSIT CORRIDORS OF OPPORTUNITY

## Discussion

David Miller, RTP Project Team

# Regional Transit Corridors & Service Improvement Areas

- Project team has identified *potential* corridors and service improvement areas for future investment
- We are at the start of this process, the corridors and service improvement areas on the following slides are not final
- Potential corridors are draft and specific routes will not be determined until further studies are conducted

Potential corridors and service improvement areas identified using several inputs:

- ☑ Analysis of current and expected travel demand
- ☑ Analysis of current and expected land uses
- ☑ Analysis of transit propensities
- ☑ Analysis of existing transit services
- ☑ Stakeholder discussions and meetings with local jurisdictions
- ☑ Today's discussion

## What is a Regional Transit Corridor?



### Available Modes

*Limited Stop or Express Bus*  
*Bus Rapid Transit (BRT)*  
*Light Rail*  
*Heavy Rail*  
*Commuter Bus*  
*Commuter Rail*



### Transit Priority

*Varying use of dedicated roadway/right-of-way space and/or coordinated traffic signals*



### Frequency

*At least every 15 minutes peak*  
*At least every 20 to 60 minutes off-peak*



### Operating Hours

*14 to 24 hours per day seven days a week*



### Stops

*Limited suburban stops*  
*More frequent urban stops*



### Other Characteristics

*Onboard and offboard fare payment*  
*Stops with shelters, wayfinding, and lighting*



# Regional Transit Corridors | Service Example

Current MDOT MTA Regional Transit Corridors:

- Dedicated Bus Lanes
- Light RailLink
- Metro SubwayLink
- MARC (Commuter Rail)





# Regional Transit Corridors | Service Example

Cleveland Healthline: Fully separated guideway BRT connecting the region's largest employment sites (downtown, medical, educational, cultural)

- ❑ **Service:** 24 hours, 7 days per week
- ❑ **Frequency:** 10 minutes peak, 10-15 off-peak
- ❑ **Priority:** Fully separated bus guideway
- ❑ **Stations:** 36 stations
- ❑ **Results:** Reduced travel time 30% and increased ridership, employment, and investment
- ❑ **Length:** 6.8 miles
- ❑ **Cost:** \$200M (Capital) \$8.2M (Op.)



# Regional Transit Corridors Service Example

Seattle RapidRide: Six limited-stop routes that offer frequent service and many BRT features connecting residential areas with job centers using major corridors:

- ❑ **Stations:** 1/2-mile stations
- ❑ **Service:** All time periods except late night, 7 days per week
- ❑ **Frequency:** 5-10 minutes peak, 15 off-peak (15/30 on weekends)
- ❑ **Priority:** Peak period bus lanes, Transit Signal Priority, queue jumps
- ❑ **Results:** Travel time decreased, ridership increased, on-time performance improved to 84%
- ❑ **Length:** 6 routes; 62 total miles
- ❑ **Cost:** \$20M-\$43M (Capital); \$33.9M (Op.)





# Regional Transit Corridors | Defining Features

## **Regional Transit Corridors**

serve major job and activity centers **and** have demand for:

- Additional infrastructure investment(s)
- All-day service

## **Other Transit Network**

**Improvements** address other transit demands. Examples include:

- Local circulation
- Commuter service
- First/last mile access

## Other Transit Network Improvements:



### Local Bus Improvements

*Local buses with new connections, improved frequencies and longer operating hours, stops every 1/4 to 1/2 mile, and onboard fare payment*



### Regional Bus Improvements

*Commuter buses with new connections, improved frequencies and longer operating hours where there is increasing off-peak commuting demand, limited stops, and both onboard and offboard fare payment*



### Water Transportation Improvements

*Water taxis or ferries with new connections, improved frequencies and longer operating hours, limited stops, and both onboard and offboard fare payment*



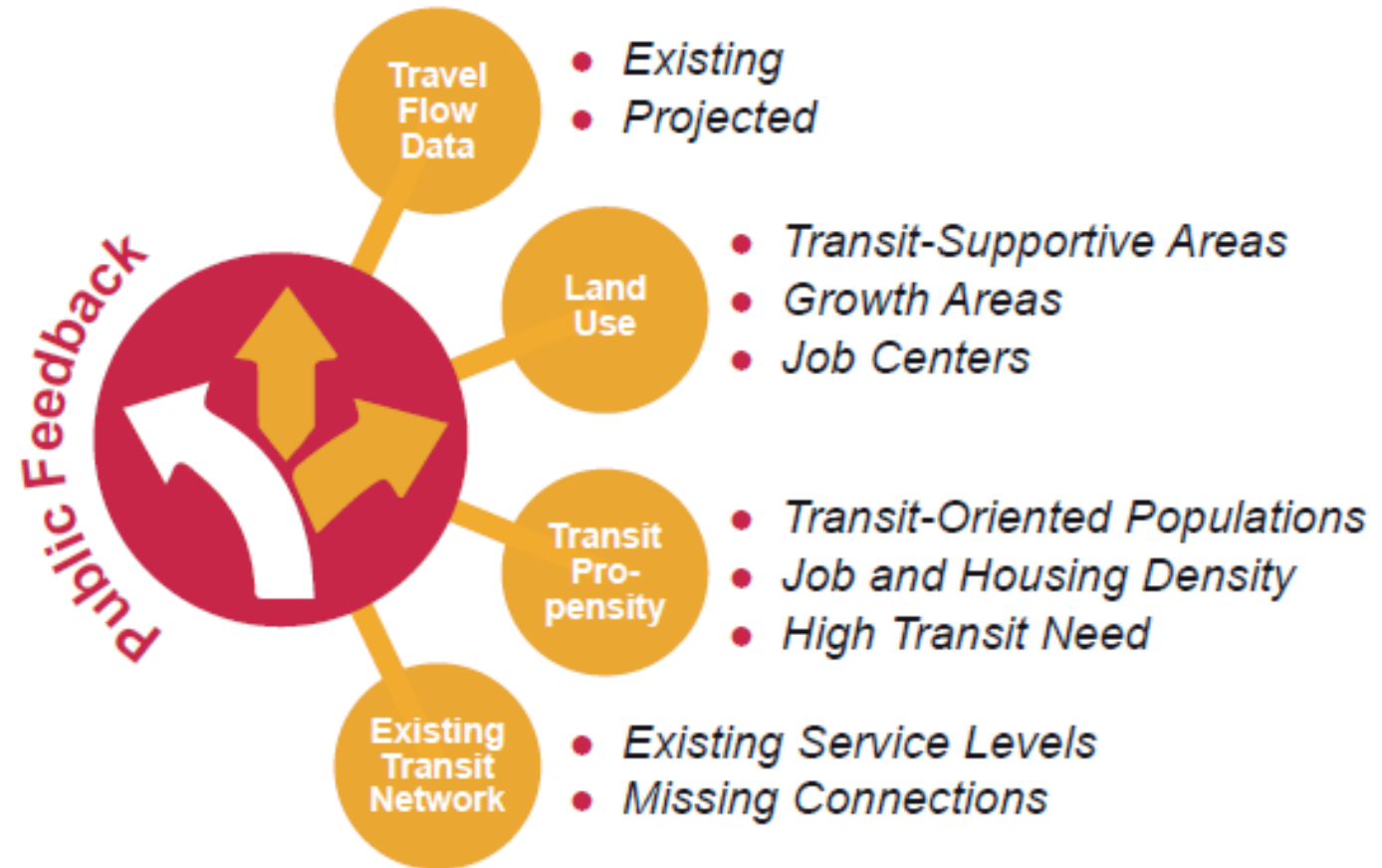
### Shared Mobility

*Microtransit, micromobility, and on-demand connections with limited stops and offboard (app-based) fare payment*

# Regional Transit Corridor Identification Methodology

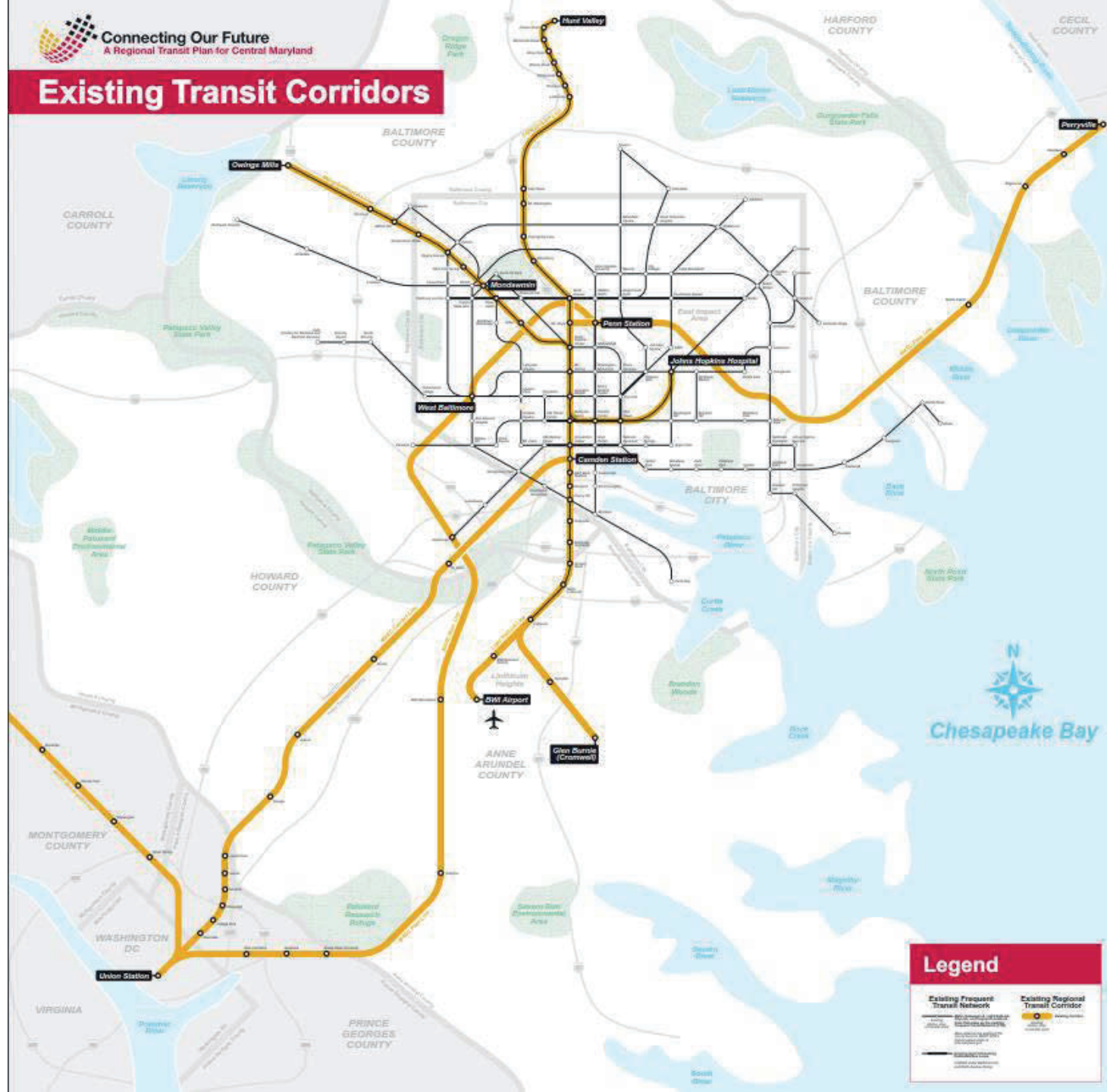
Corridors were identified through multiple inputs

- Analysis of current and expected travel demand
- Analysis of current and expected land uses
- Analysis of transit propensities (demand)
- Analysis of existing transit services
- Stakeholder discussions & existing plans

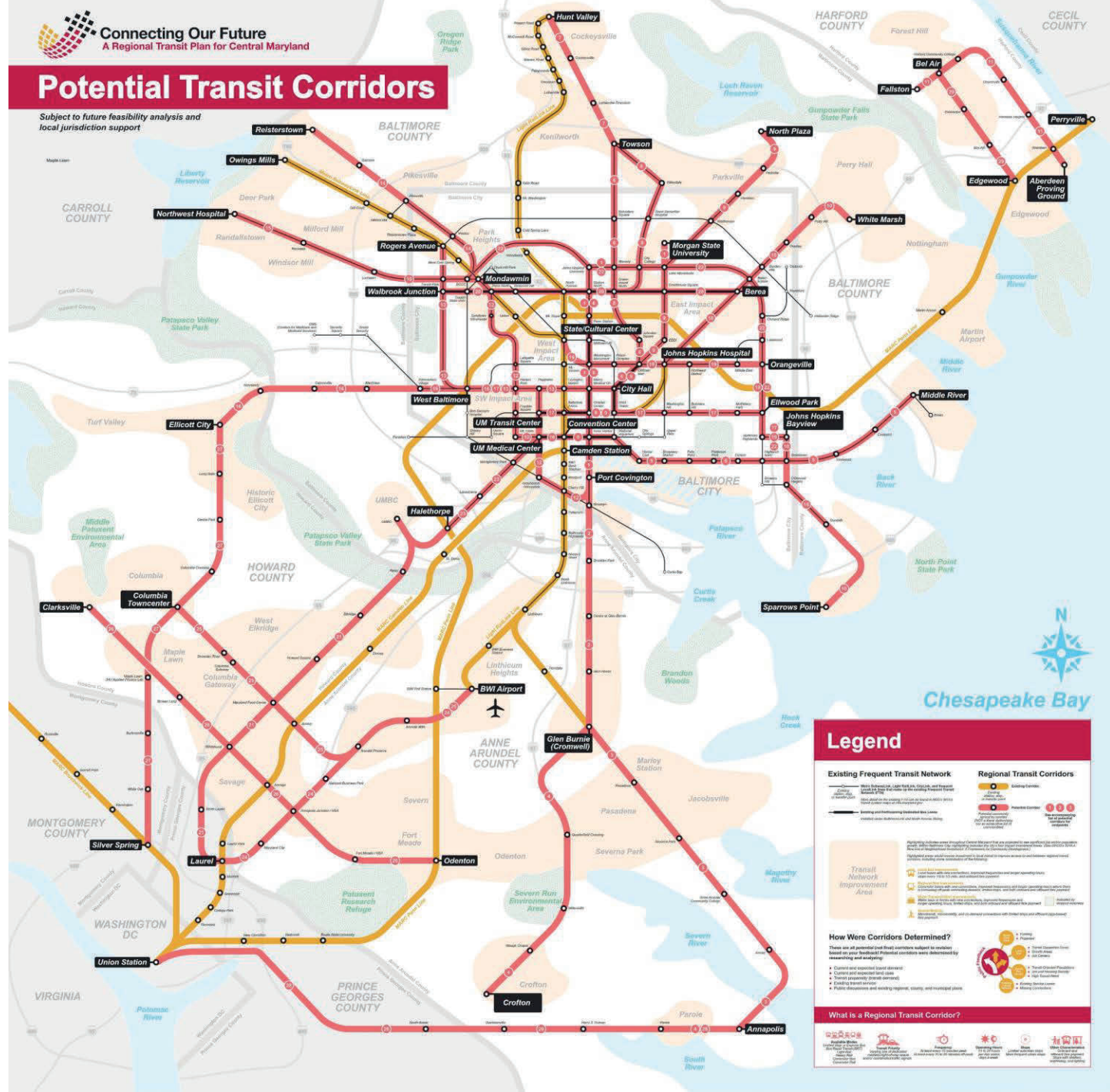




## Existing Transit Corridors



*Subject to future feasibility analysis and local jurisdiction support*





# Potential Regional Transit Corridors (Map Key)

## Potential Regional Transit Corridors:

- |   |   |  |
|---|---|--|
| 1 Morgan State Univ. to Port Covington<br><i>via Johns Hopkins Univ. and Penn Station</i> | 11 Fallston to Aberdeen Proving Ground<br><i>via Belair, Churchville, and Aberdeen</i>            | 21 Laurel to Halethorpe<br><i>via Elkridge and the Maryland Food Center</i>                  |
| 2 Glen Burnie to Port Covington<br><i>via Brooklyn Park and the Centre at Glen Burnie</i> | 12 Mondawmin to Port Covington<br><i>via UM Medical Ctr. and Greyhound/Horseshoe</i>              | 22 Mondawmin to Hopkins Bayview<br><i>via Johns Hopkins University and Orangeville</i>       |
| 3 Glen Burnie to Annapolis<br><i>via Pasadena and Severna Park</i>                        | 13 Rogers Avenue to City Hall<br><i>via Walbrook Junction</i>                                     | 23 Halethorpe to UM Transit Center<br><i>via UMBC and CCBC Catonsville</i>                   |
| 4 Glen Burnie to Crofton<br><i>via Millersville</i>                                       | 14 Mondawmin to Reisterstown<br><i>via Pimlico and Pikesville</i>                                 | 24 BWI Airport to Laurel<br><i>via Arundel Mills and Annapolis Junction</i>                  |
| 5 Convention Center to Middle River<br><i>via Harbor East and Canton</i>                  | 15 Mondawmin to Northwest Hospital<br><i>via Locheam and Rockdale</i>                             | 25 BWI Airport to Columbia Towncenter<br><i>via Arundel Mills, Jessup, and Snowden River</i> |
| 6 Towson to UM Transit Center<br><i>via Belvedere Square and Waverly</i>                  | 16 Ellicott City to Convention Center<br><i>via Catonsville, West Baltimore, and Inner Harbor</i> | 26 Odenton to Clarksville<br><i>via Fort Meade, Savage, and Broken Land</i>                  |
| 7 Towson to Hunt Valley<br><i>via Lutherville-Timonium and Cockeysville</i>               | 17 West Baltimore to Hopkins Bayview<br><i>via Charles Center and Washington Hill</i>             | 27 Ellicott City to Silver Spring<br><i>via Columbia Mall and Burtonsville</i>               |
| 8 Towson to Port Covington<br><i>via Hillendale and Penn Station</i>                      | 18 Sparrows Point to Hopkins Bayview<br><i>via Dundalk</i>  | 28 Annapolis to Union Station<br><i>via Parole and Davidsonville</i>                         |
| 9 North Plaza to UM Transit Center<br><i>via Hamilton and Courthouse Square</i>           | 19 State Center to Hopkins Bayview<br><i>via Johns Hopkins Hospital and Orangeville</i>           | 29 Bel Air to Edgewood<br><i>via Emmorton and Box Hill</i>                                   |
| 10 White Marsh to Johns Hopkins Hosp.<br><i>via Overlea and Berea</i>                     | 20 Walbrook Junction to Berea<br><i>via Coppin State University and Station North</i>             |  |



# Potential Regional Transit Corridors Discussion

- Do these corridors cover the areas you expected?
- Do any seem unjustified?
- Are there missing corridors? Why do you think they should be added?

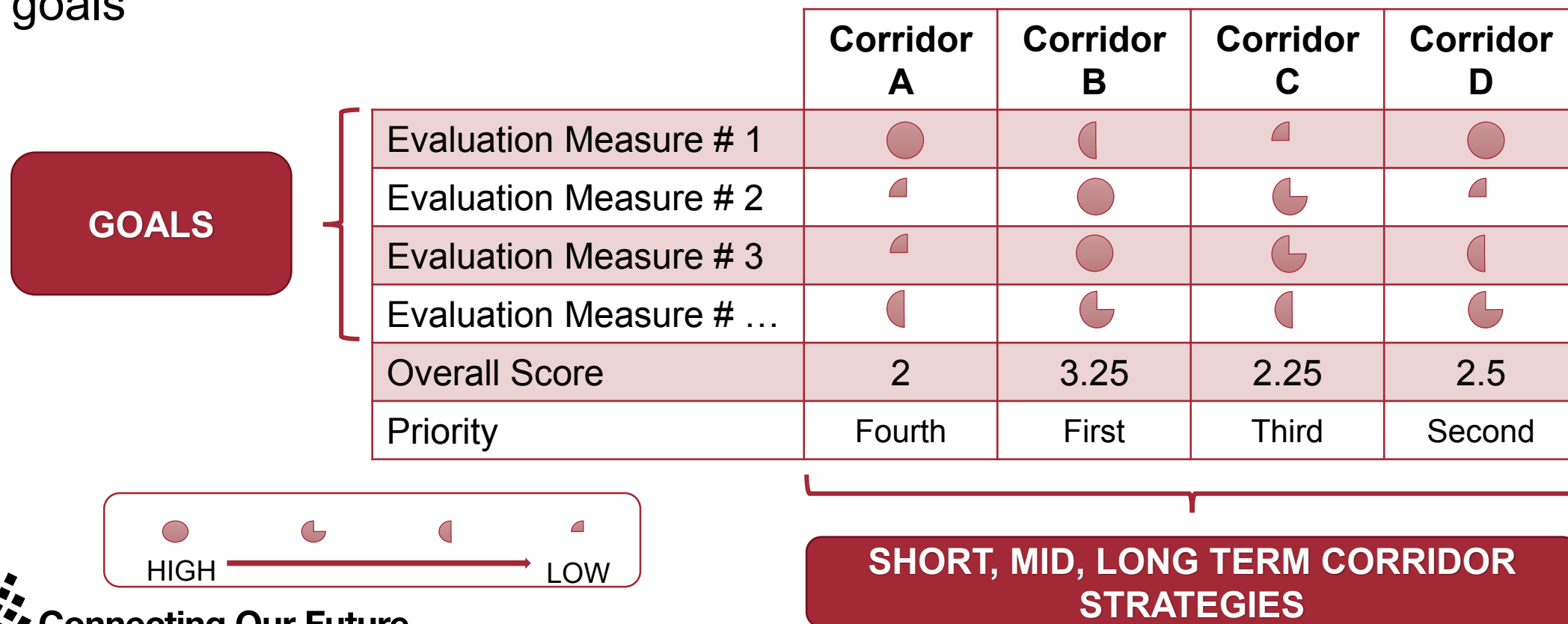


# CORRIDOR PRIORITIZATION EVALUATION

Alvaro Sifuentes  
RTP Project Staff

# Prioritizing Corridors: Methodology

- Legislation requires the plan to “prioritize corridors for planning of new public transportation assets”
- Plan will prioritize corridors by using evaluation measures tied to the goals





# Goal-Based Corridor Prioritization



Improve connectivity and integration of existing and future transit services



Optimize existing transit services



Enhance fiscal sustainability

# Prioritizing Corridors | Evaluation Measures

Does this corridor address a current or future transit gap?

How many existing jobs are accessible to the corridor?

How many future jobs are accessible to the corridor?

Is land use/zoning transit supportive?

Is the corridor within a growth area?

Does the corridor extend beyond a jurisdictional boundary?

How many transit routes can you transfer to?

Is the corridor in existing plans?



**Connecting Our Future**

A Regional Transit Plan for Central Maryland

# Prioritizing Corridors | Evaluation Measures

Does corridor improve existing service?

Does corridor serve areas with long commuting times?

Percentage of minority population within the corridor?

Percentage of low-income population within the corridor?

Percentage of zero car ownership within the corridor?

Percentage of seniors within the corridor?

Percentage of people with disabilities within the corridor?

Number of residences accessible to the corridor?



**Connecting Our Future**

A Regional Transit Plan for Central Maryland





# PUBLIC COMMENT

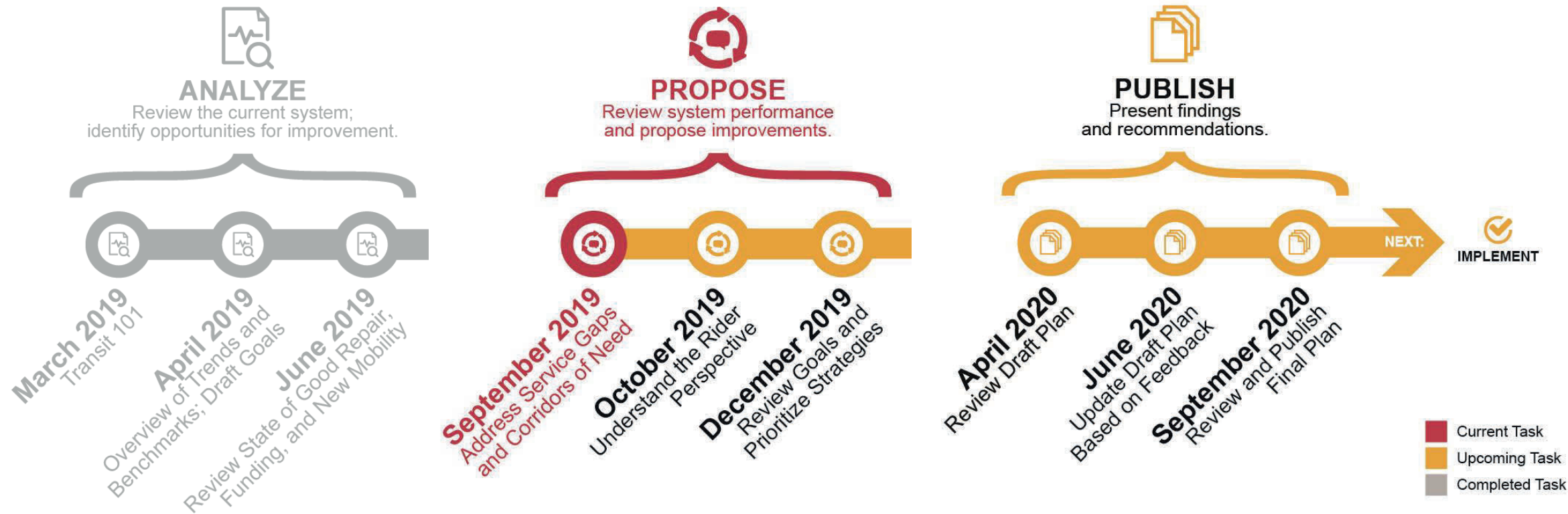


# NEXT STEPS

Holly Arnold, Deputy Administrator  
Maryland Department of Transportation  
Maryland Transit Administration



# Schedule Look-Ahead





# Next Commission Meeting

**October 29, 2019**

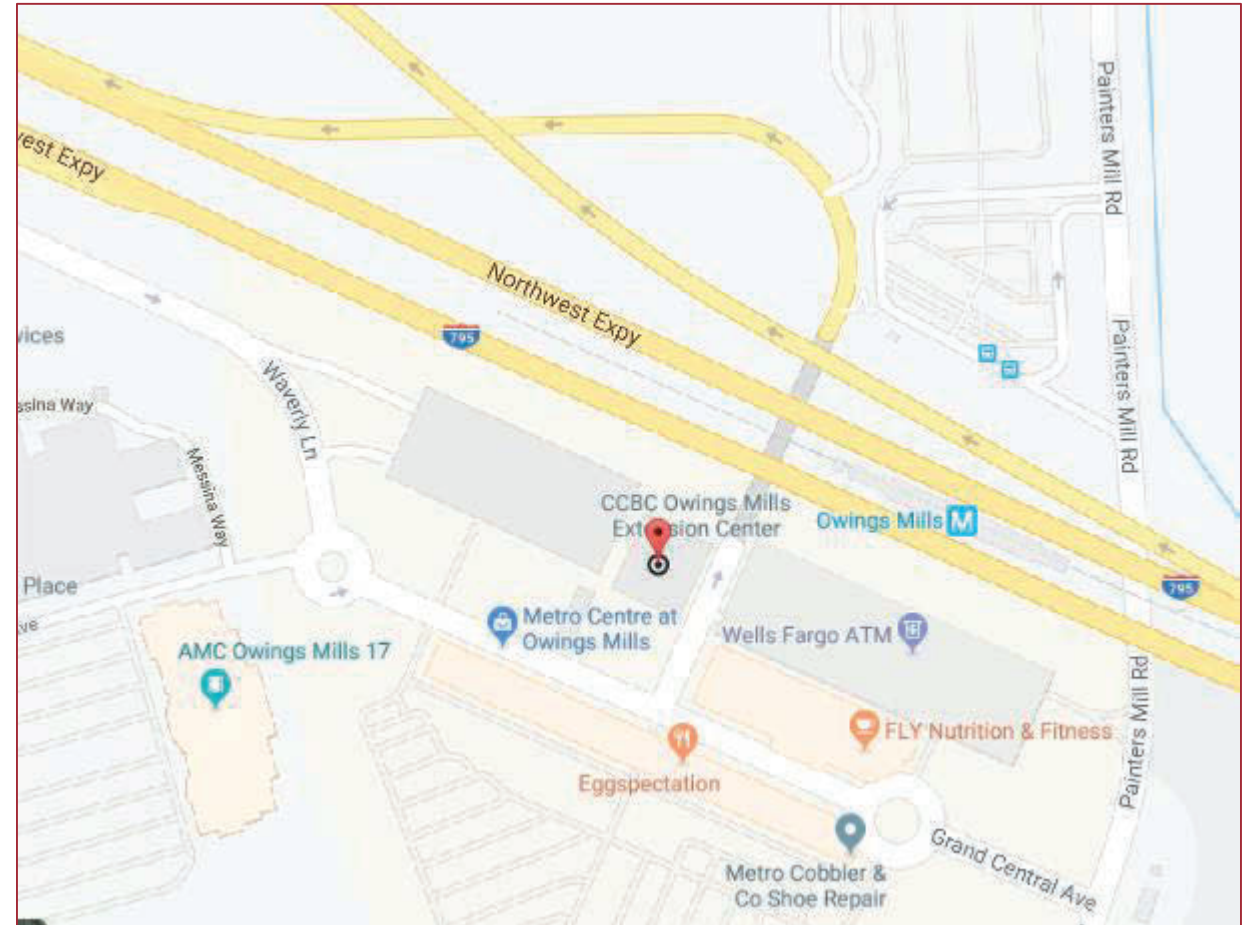
9 AM – 12 PM

Community College of Baltimore County  
(CCBC)

10300 Grand Central Avenue

Room 509 A&B

Owings Mills, MD





# CLOSE

Mike Kelly, Executive Director  
Baltimore Metropolitan Council