



# MARC

## Cornerstone Plan 2019





# MDOT MTA Cornerstones





# MARC Train Service Area



- Mileage – 202 mi
- Stations - 42
- Railcars - 177
- Locomotives - 46



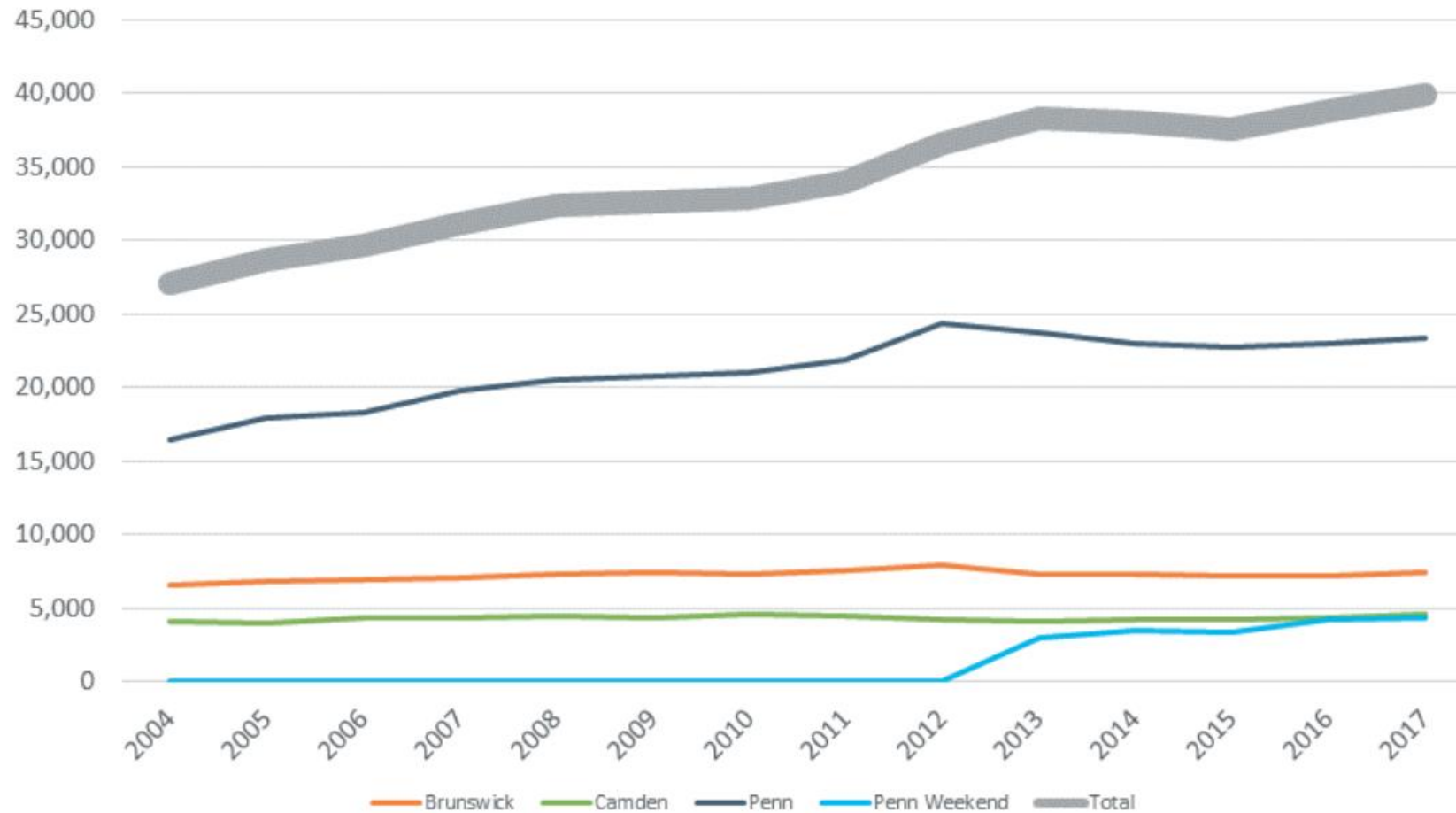
# MARC Train Service Profile

	BRUNSWICK LINE	CAMDEN LINE	PENN LINE
Host Railroad	 CSX Transportation	 CSX Transportation	 AMTRAK
Primary Function	Freight	Freight	Passenger
AM Peak Service	■	■	■
PM Peak Service	■	■	■
Reverse Commute Service	■	■	■
Midday Service	■	■	■
Weekend Service	■	■	■
Hours of Operation (Approximate)	4:30am - 9:30am 3:30pm - 9:00pm	5:00am - 9:30am 3:30pm - 9:00pm	4:00am - 12:00am
Northern Terminus	Martinsburg, WV/Fredrick	Baltimore-Camden	Baltimore-Penn/ Perryville
Average Peak Frequency	20 min (Germantown)	30 min (Baltimore-Camden)	15 min (Baltimore-Penn)
Route Length	74 mi.	39 mi.	77 mi.
Trains Per Weekday	18	21	57

■ provided   ■ limited   ■ unavailable



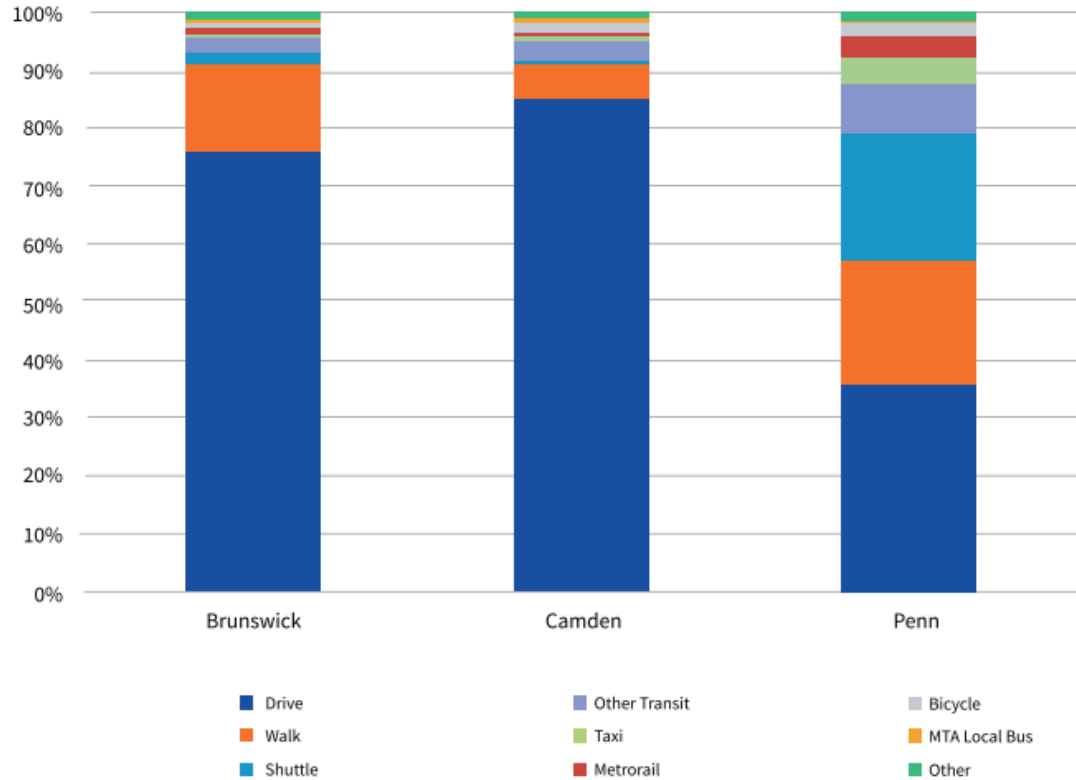
# MARC Train Average Daily Ridership (2002 – 2017)





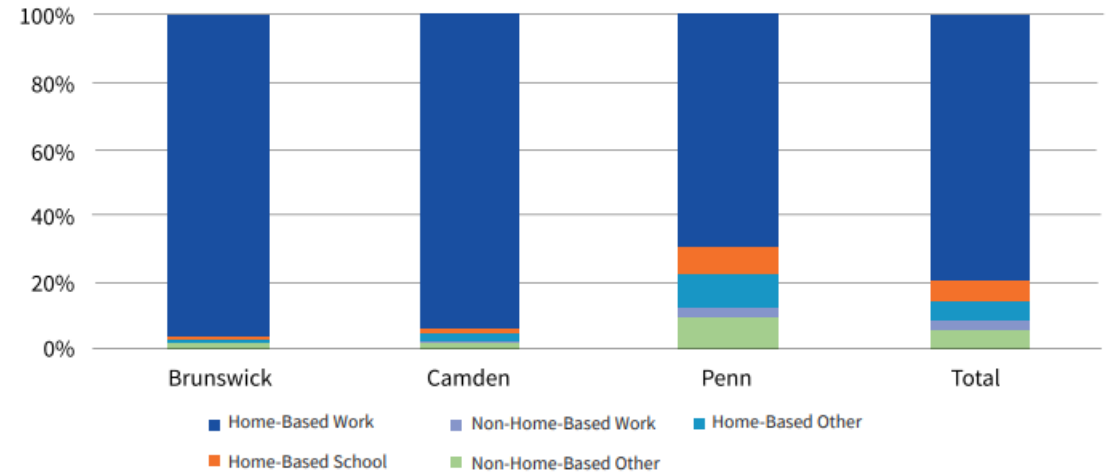
# MARC Train Rider Profile

## MARC Station Access from Home



2016 MARC Origin Destination Survey

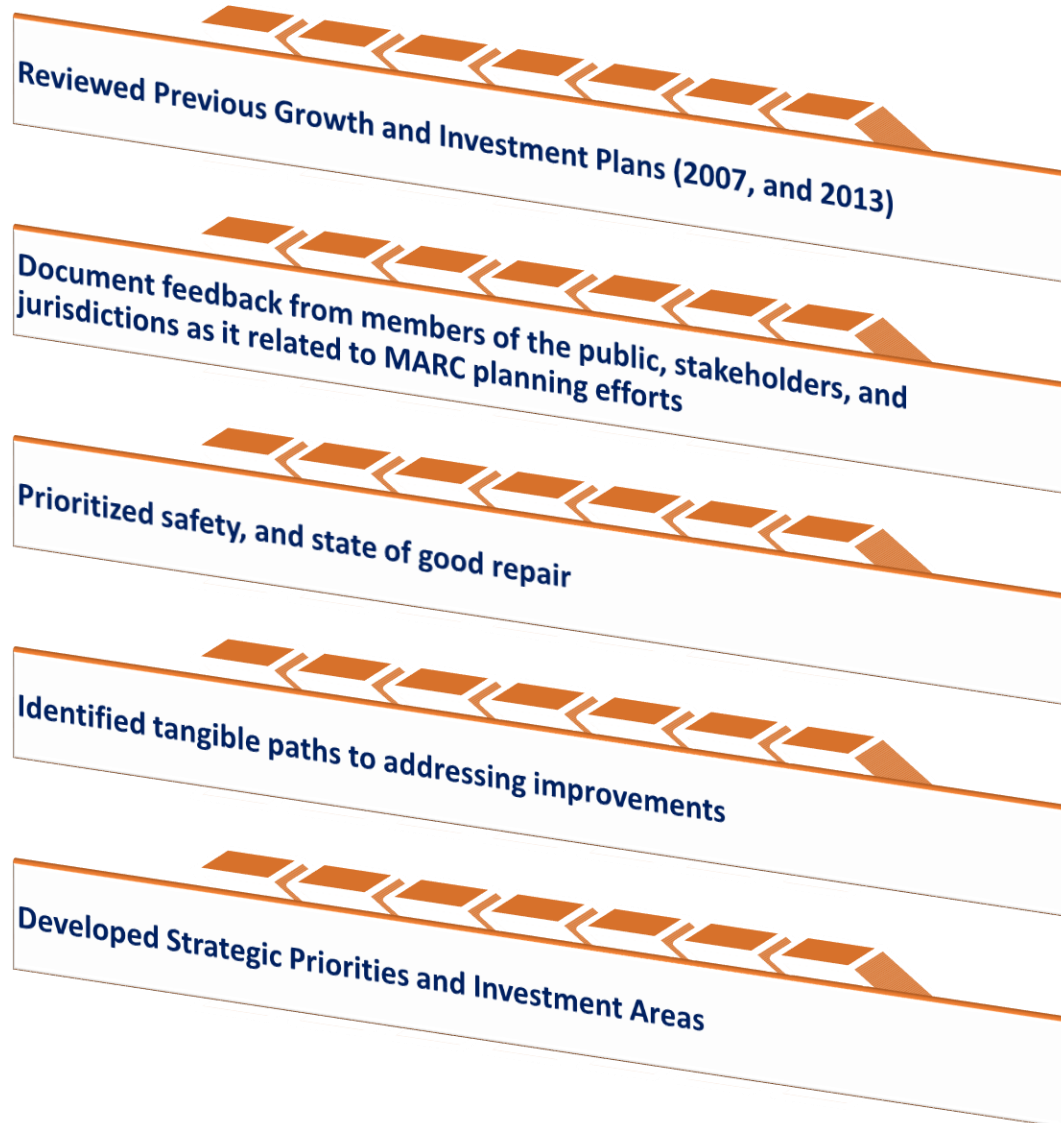
## Trip Purpose



2016 MARC Origin Destination Survey



# Development of the Cornerstone Plan



- The 2019 Cornerstone Plan attempts to combine the strengths of the 2007, and 2013 MGIPs
- Listened to questions and comments from riders, jurisdictions, and agencies
- Attempt to illustrate the link between improvements in service and critical infrastructure needs



# One of Five Modal Cornerstone Plans



Three general guidelines for Cornerstone Plan development:

- Frame around MDOT MTA Cornerstones
- Consistency with other modal Cornerstone plans
- Practical Design





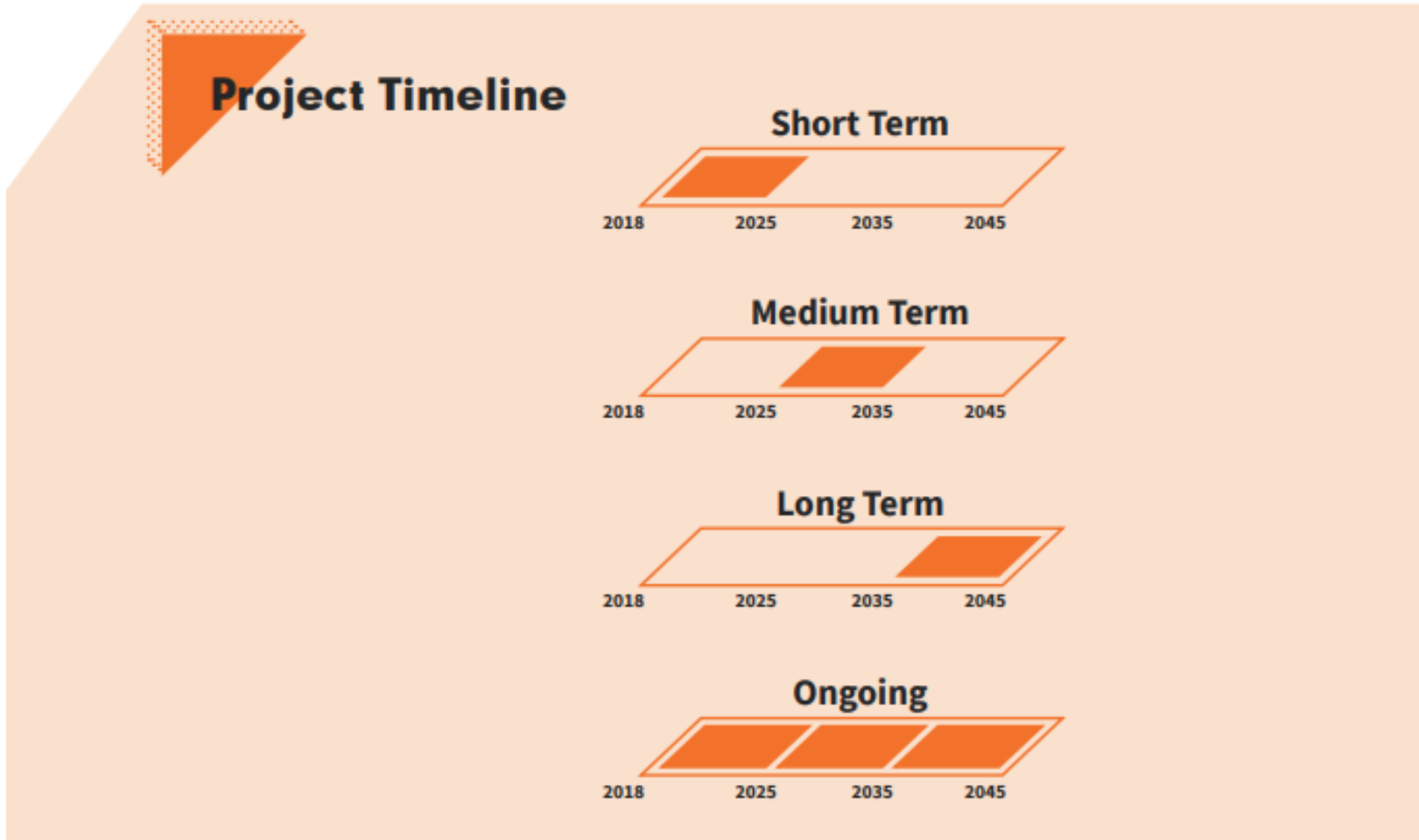
# Investment Areas

Investment Areas	Timeframe	Initiative
Vehicles	Short Term	GP39H-2 Locomotive Mid-Life Overhaul
		MP36PH-3C Mid-Life Overhaul
	Medium Term	MARC III Railcar Overhaul
		MARC IV Railcar Overhaul
	Long Term	Railcar Fleet Replacement
Ongoing	Locomotive Fleet Replacement	
Stations	Short Term	Camden Station Replacement
		BWI Station Improvements
		New Carrollton Second Platform
	Medium Term	Penn Station Transit Oriented Development
		West Baltimore Station
	Long Term	Improve Station Access
		Brunswick Line Station Renovations
		Camden Line Station Renovations
		Penn Line Station Renovations
		Eliminate At-Grade Pedestrian Crossings
		Laurel Transit Oriented Development
		Dorsey Transit Oriented Development
		Monocacy Transit Oriented Development
Germantown Transit Oriented Development		
Guideways	Medium Term	Penn-Camden Connector
	Ongoing	Passenger Rail Investment and Improvement Act (PRIIA) - Penn Line
		CSX Joint Benefits - Brunswick and Camden Lines
		Frederick Branch

Investment Areas	Timeframe	Initiative
Facilities	Short Term	Riverside Heavy Maintenance Building
		Martin's Yard Expansion
	Medium Term	Replacement Penn Line Storage Yard
Systems	Long Term	Brunswick Yard Maintenance Facility
	Short Term	Positive Train Control (PTC)
	Medium Term	Real-Time MARC Tracking
Service	Ongoing	Train Approaching Warning System
		Closed Circuit Television (CCTV)
		Run-Through Service to L'Enfant Plaza and N. Virginia
		Brunswick Line
		Camden Line
		Penn Line



# Cornerstone Plan Timeline



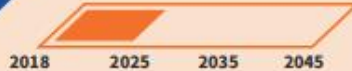


# Vehicles: Locomotives

## GP39H-2 Locomotive Mid-Life Overhaul



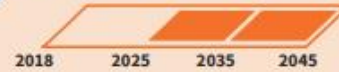
\$ 17 Million



## Railcar Fleet Replacement



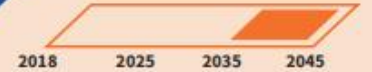
\$ 920 Million



## Locomotive Fleet Replacement



\$ 580 Million





# Stations: Replacements

## Camden Station Replacement



\$ 7 Million



## BWI Station Improvements



\$ 14 Million



## West Baltimore Station



\$ 58 Million





# Stations: Enhancements

## New Carrollton Second Platform



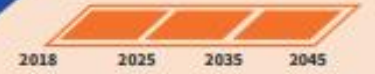
Cost Neutral



## Eliminate At-Grade Pedestrian Crossings



\$ 370 Million



## Improve Station Access



\$104 Million





# Transit-Oriented Development

## Penn Station Transit Oriented Development



Rendering by Gensler  
**Cost Neutral**

2018 2025 2035

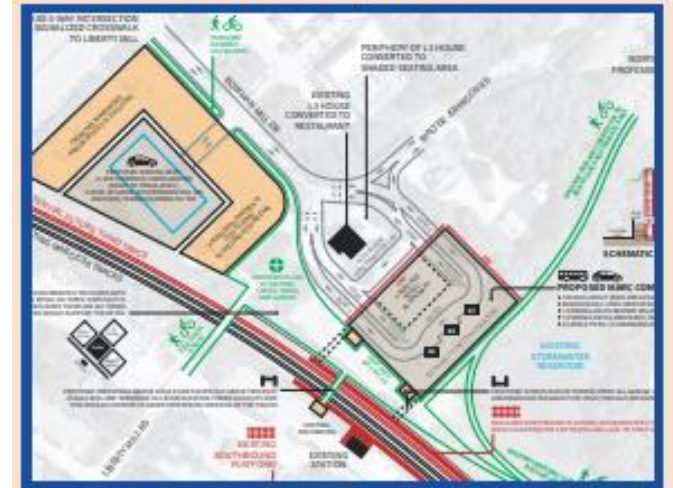
## Dorsey Transit Oriented Development



**Cost Neutral**

2018 2025 2035 2045

## Germantown Transit Oriented Development



**Cost Neutral**

2018 2025 2035 2045



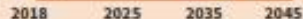
# Guideways

## Passenger Rail Investment and Improvement Act (PRIIA) – Penn



Photo by Ryan Slawky

\$ 600 Million

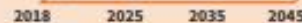


## CSX Joint Benefits – Brunswick and Camden Lines

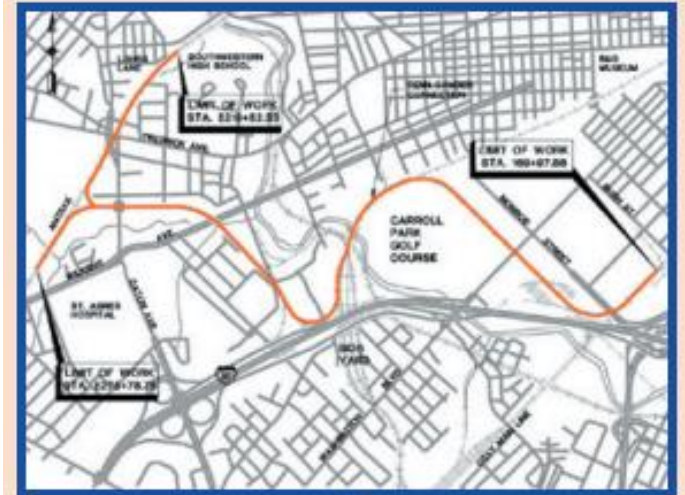


Photo by Baltimore Sun

\$ 135 Million



## Penn-Camden Connector



\$ 40 Million





# Facilities: Storage & Maintenance

STORAGE & MAINTENANCE FACILITY	OVERNIGHT CAPACITY	MAINTENANCE (FULL/PARTIAL)	LOCATION
PENN STATION		PARTIAL	BALTIMORE, MD
MARTIN'S YARD		PARTIAL	RIVER RIVER, MD
RIVERSIDE YARD		FULL	BALTIMORE, MD
BRUNSWICK YARD		PARTIAL	BRUNSWICK, MD
FREDERICK YARD		PARTIAL	FREDERICK, MD
MARTINSBURG YARD		PARTIAL	WASHINGTON, D.C.

OCCUPIED = PENN LINE   
 OCCUPIED = CAMDEN LINE   
 OCCUPIED = BRUNSWICK LINE   
 UNOCCUPIED

**The Availability and Size of Storage and Maintenance Facilities Affect MARC Train's Ability to:**

- Manage crowded trains
- Inspect and maintain vehicles
- Make critical repairs
- Minimize the cancellation of trains due to mechanical failures
- Provide additional service as needed (Assuming the equipment is available)



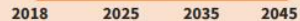


# Facilities: Storage & Maintenance

## Martin's Yard Expansion



\$ 17 Million



## Replacement Penn Line Storage Yard



\$ 40 Million



## Riverside Yard Acquisition and Heavy Maintenance Building



\$ 80 Million





# Systems

## Positive Train Control



\$ 34 Million



## Real-Time MARC Tracking



\$ 5 Million



## Closed Circuit Television (CCTV)

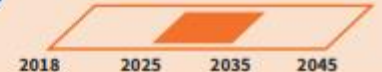
\$ 10 Million



## Train Approaching Warning System

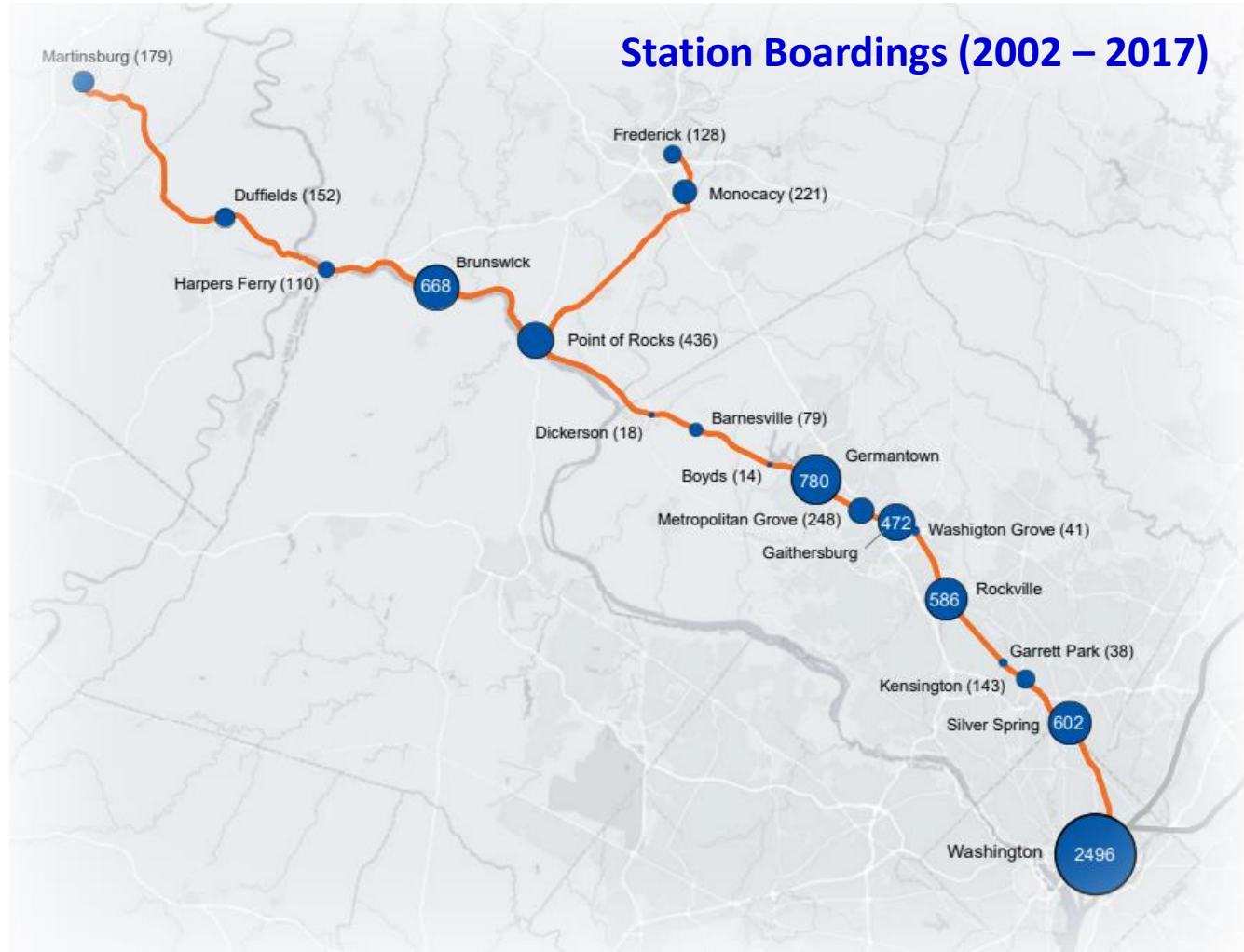


\$ 10 Million





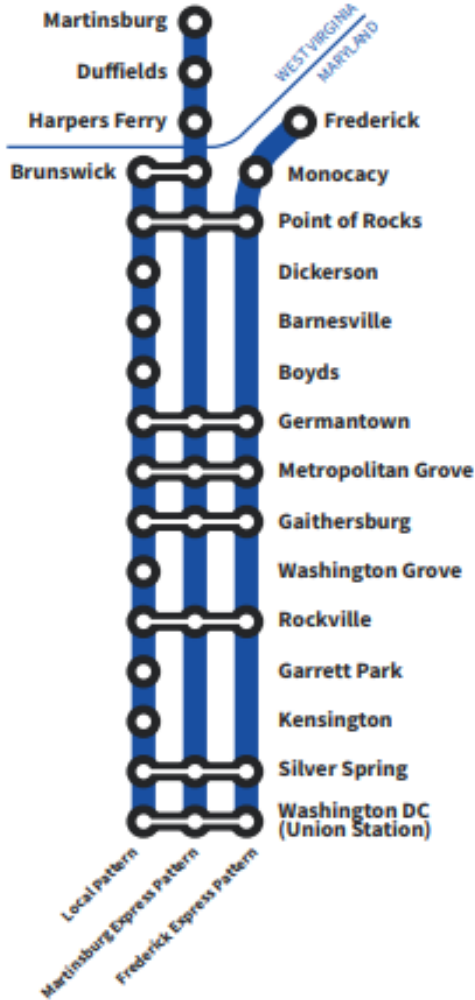
# Brunswick Line Service





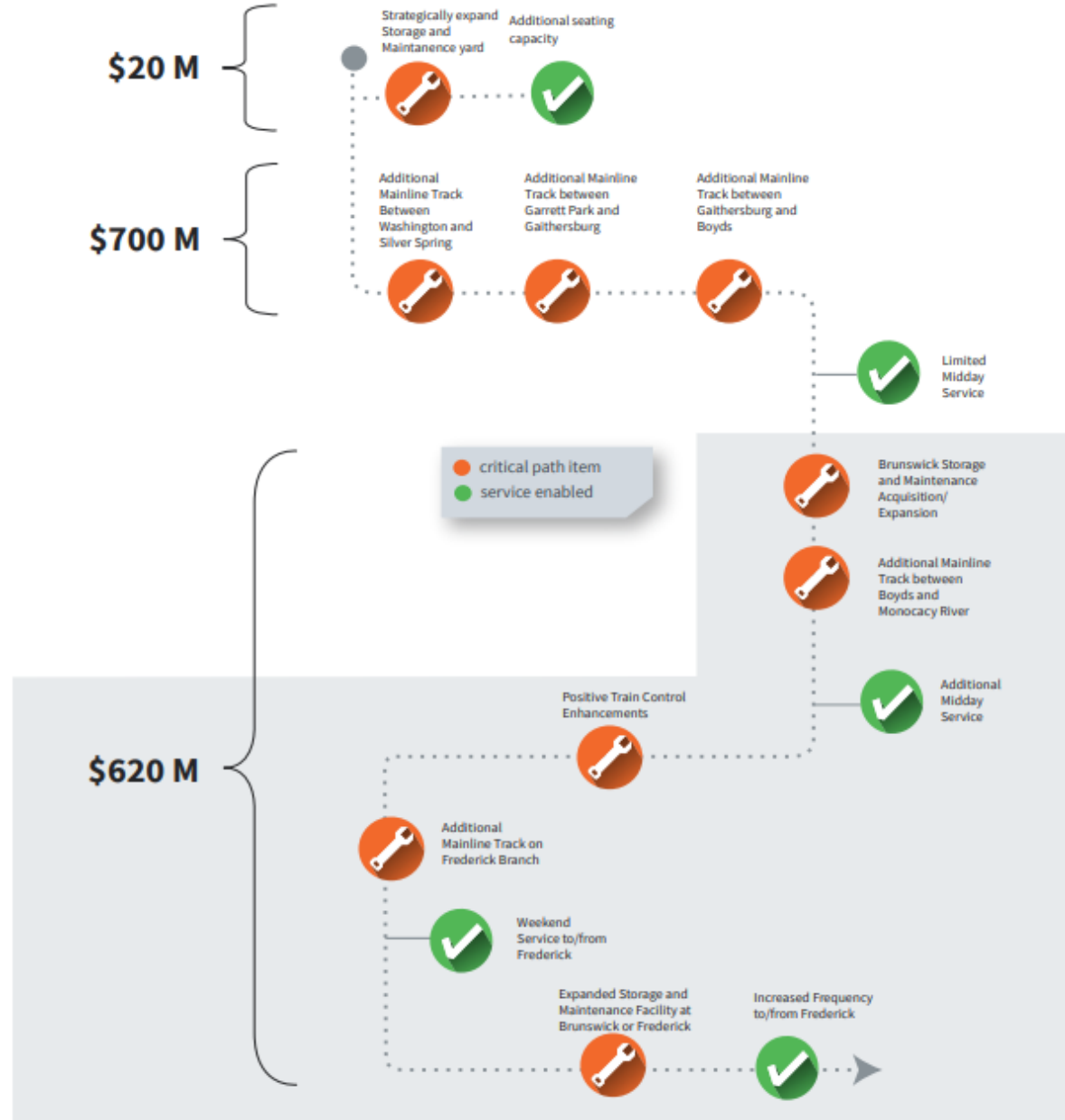
# Service: Brunswick Line

## POTENTIAL FUTURE BRUNSWICK LINE SERVICE



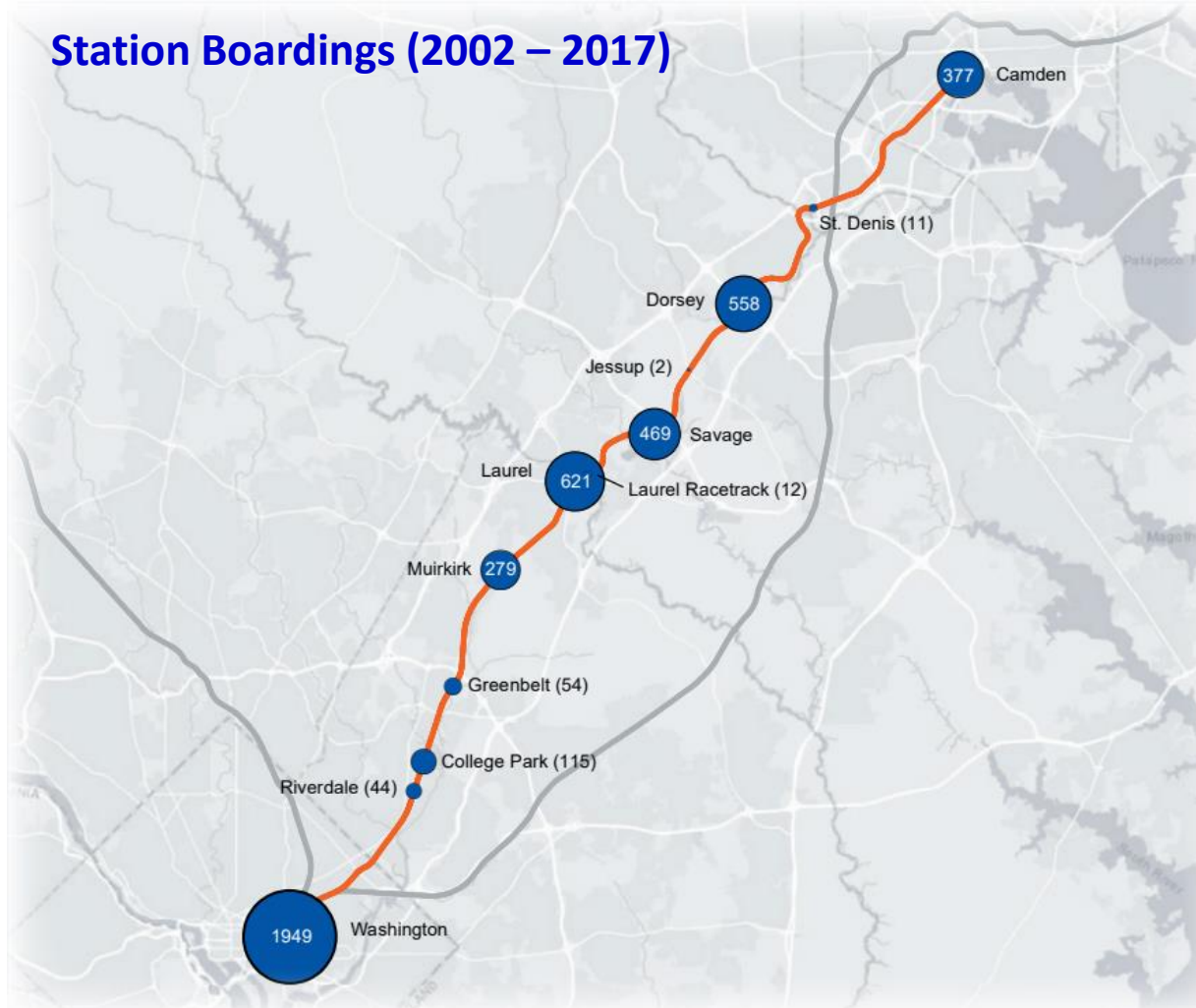
## BRUNSWICK LINE

This illustrates the various types of capital investments necessary for increased service on the Brunswick Line. These improvements would require partnerships with multiple stakeholders including CSX.





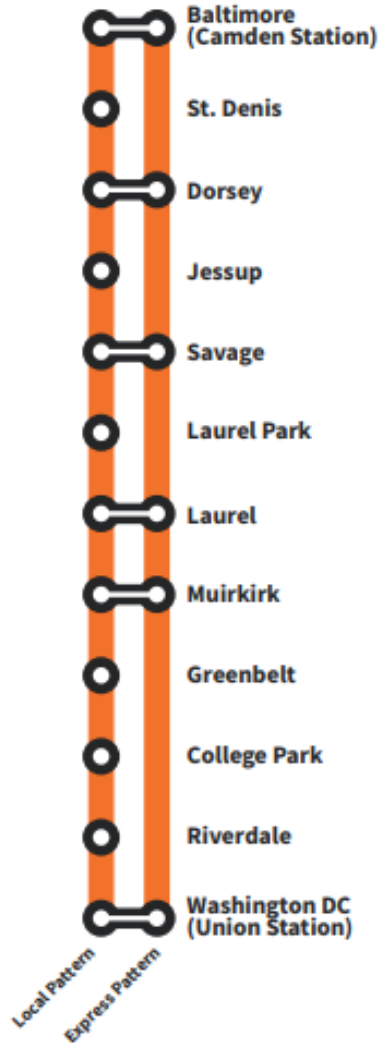
# Camden Line Service





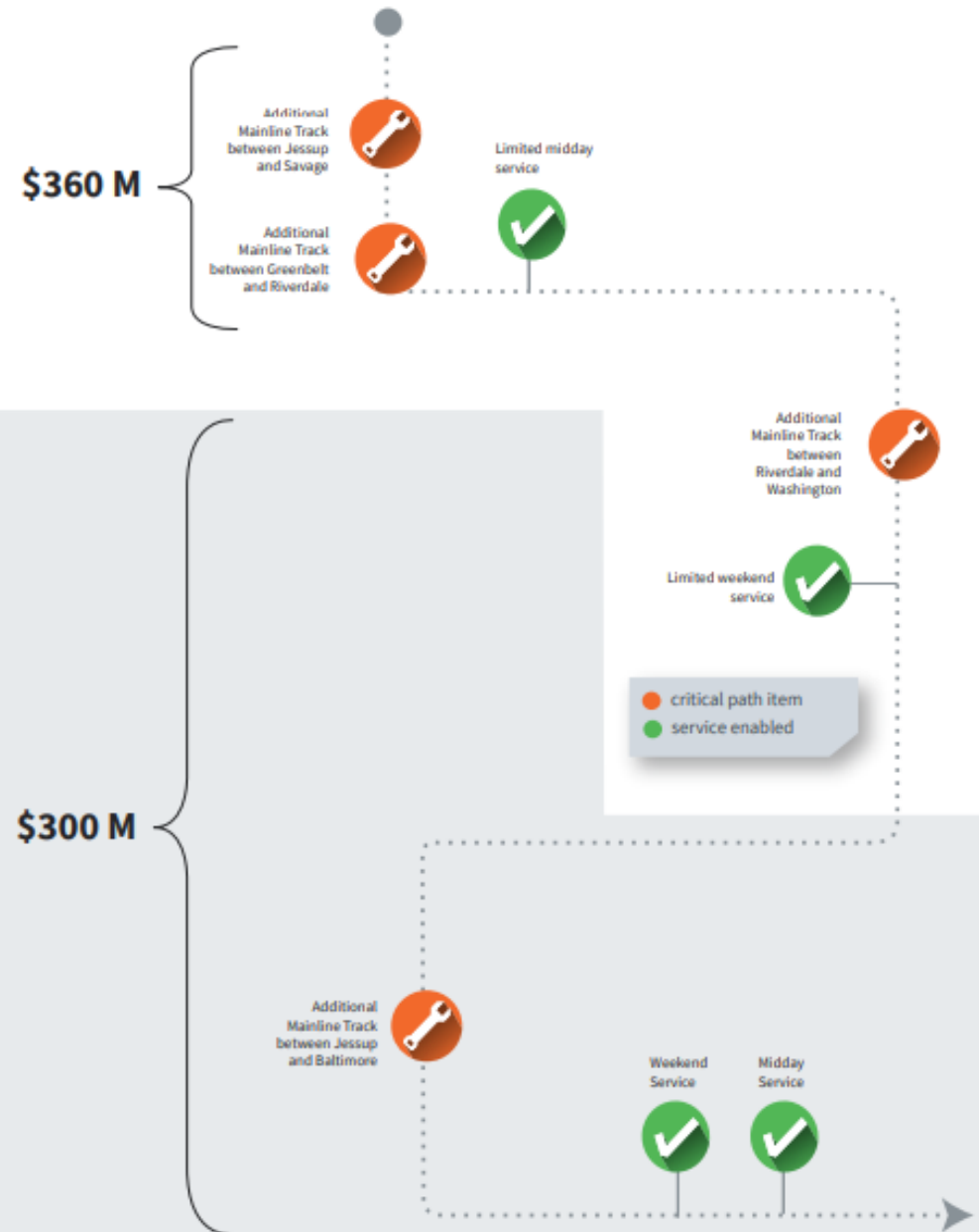
# Service: Camden Line

## POTENTIAL FUTURE CAMDEN LINE SERVICE



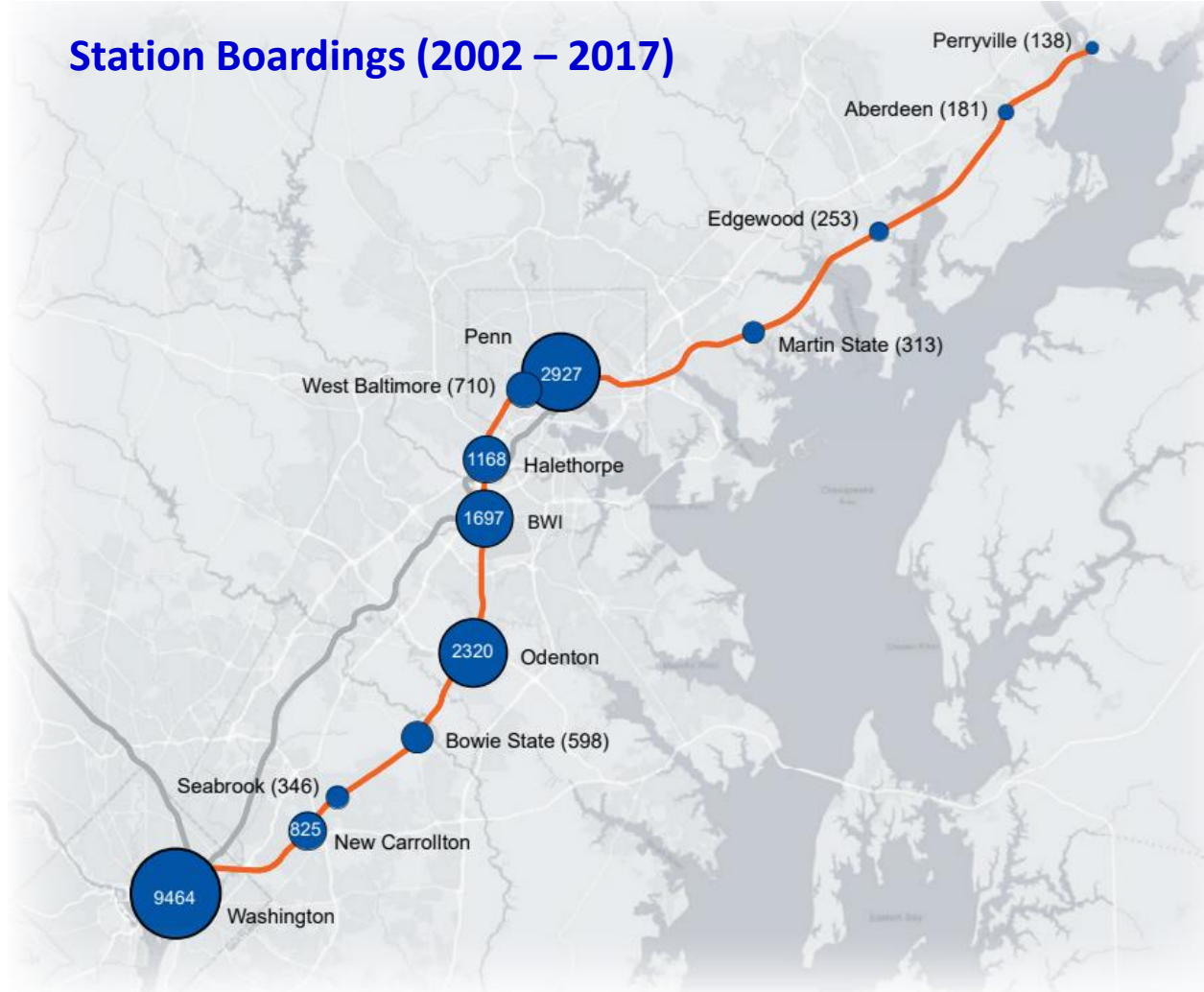
## CAMDEN LINE

This illustrates the various types of capital investments necessary for increased service on the Camden Line. These improvements would require partnerships with multiple stakeholders including CSX.





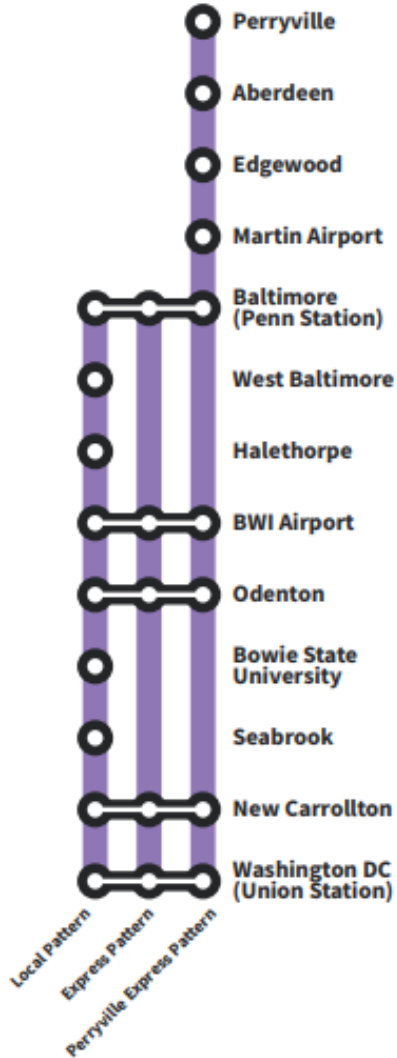
# Penn Line Service





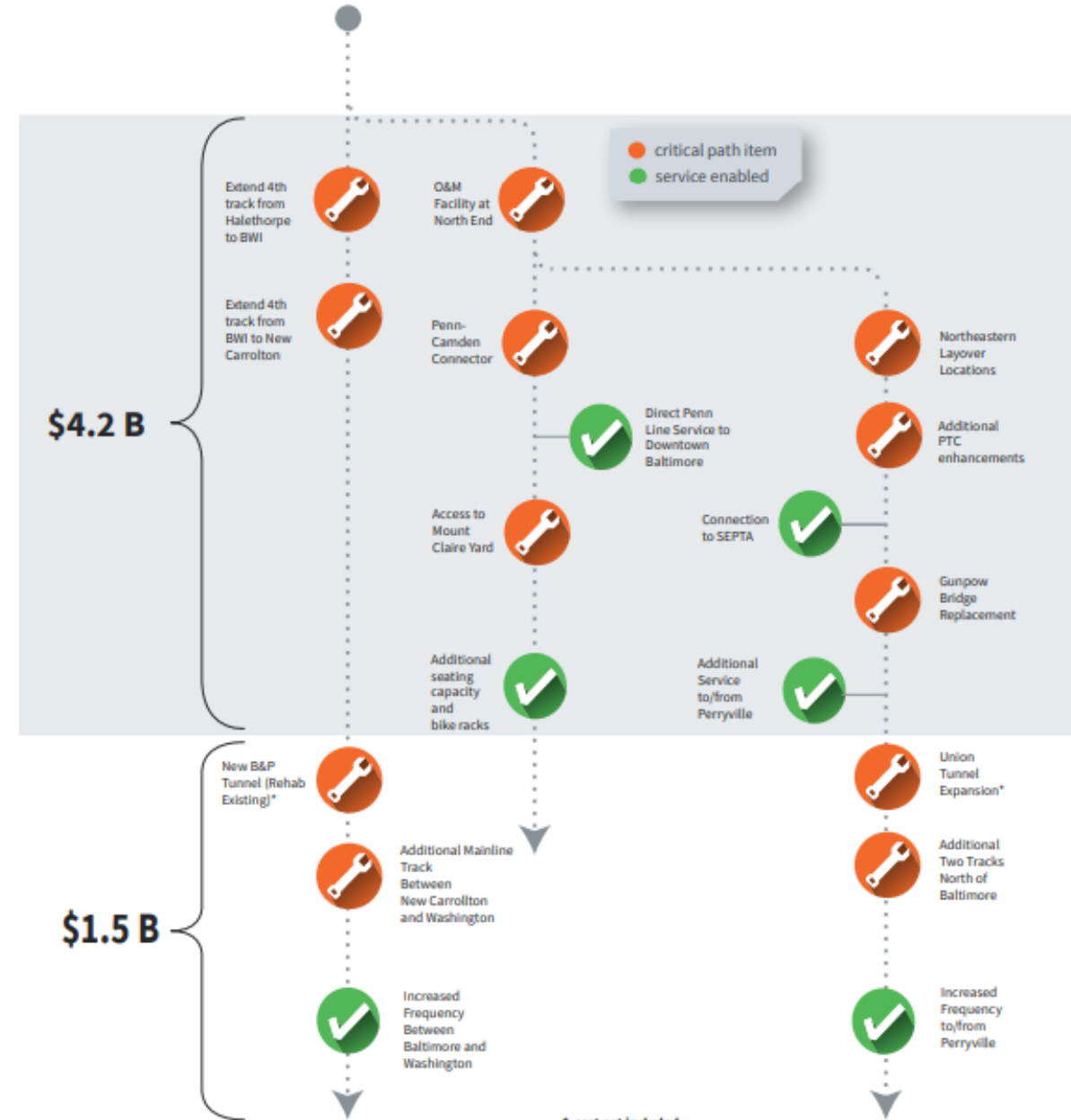
# Service: Penn Line

## POTENTIAL FUTURE PENN LINE SERVICE



# PENN LINE

This illustrates the various types of capital investments necessary for increased service on the Penn Line. These improvements would require partnerships with multiple stakeholders including Amtrak.





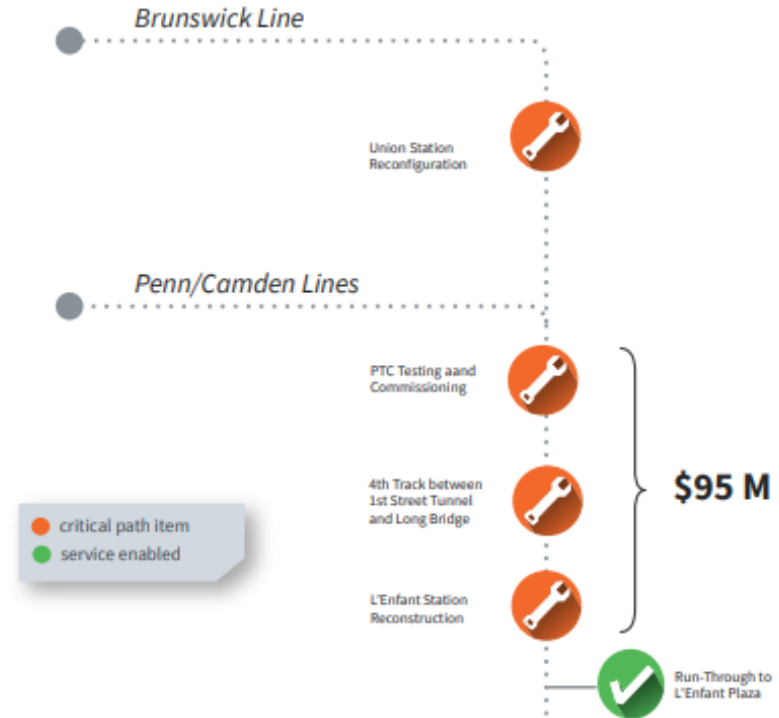


# Service: Run-through to L'Enfant Plaza and Northern Virginia

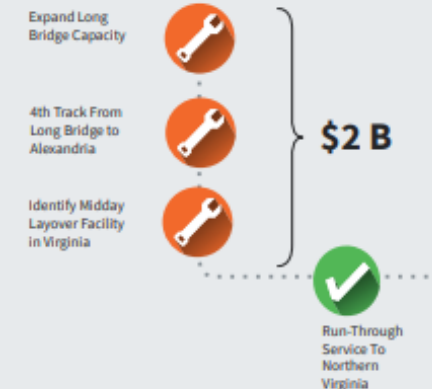


## VIRGINIA RUN-THROUGH

This illustrates the various types of capital investments necessary for run-through service to Northern Virginia. These improvements would require partnerships with multiple stakeholders including District Department of Transportation, Virginia Railway Express, Amtrak, and CSX.



Longer trains may be required to meet additional demand generated by the new service. This increases the dependency on a replacement storage and maintenance facility with adequate storage capacity for longer train sets (see page 50).





**Thank You!**  
**Questions?**



## Contact Information

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