

Blue/Orange/Silver Corridor Capacity & Reliability Study

Progress Update

TPB Technical Committee

November 5, 2021

NOT FOR CIRCULATION



Agenda

- Blue/Orange/Silver Corridor Capacity and Reliability Study (BOS Study) update
- Study purpose
- BOS corridor transit challenges
- Identifying range of alternatives
- Descriptions of current alternatives
- Next steps



BOS Study Area

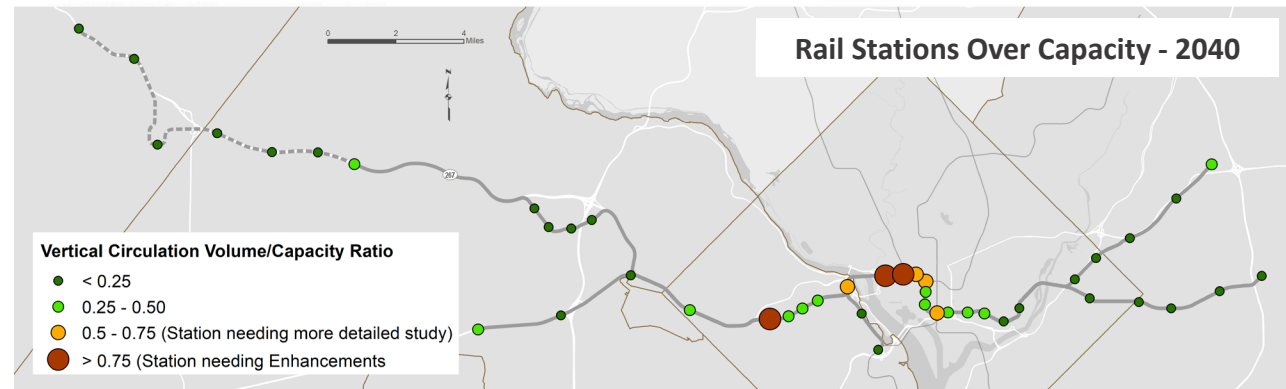
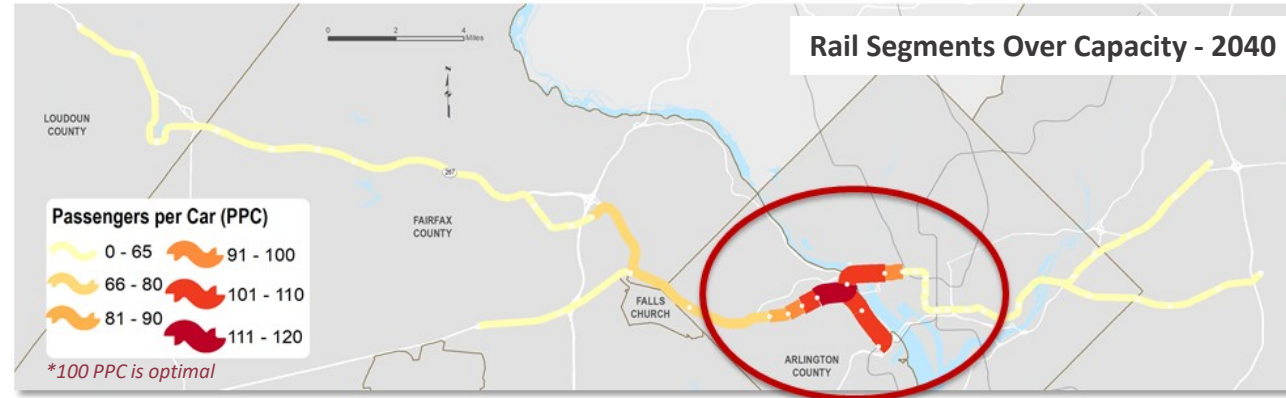
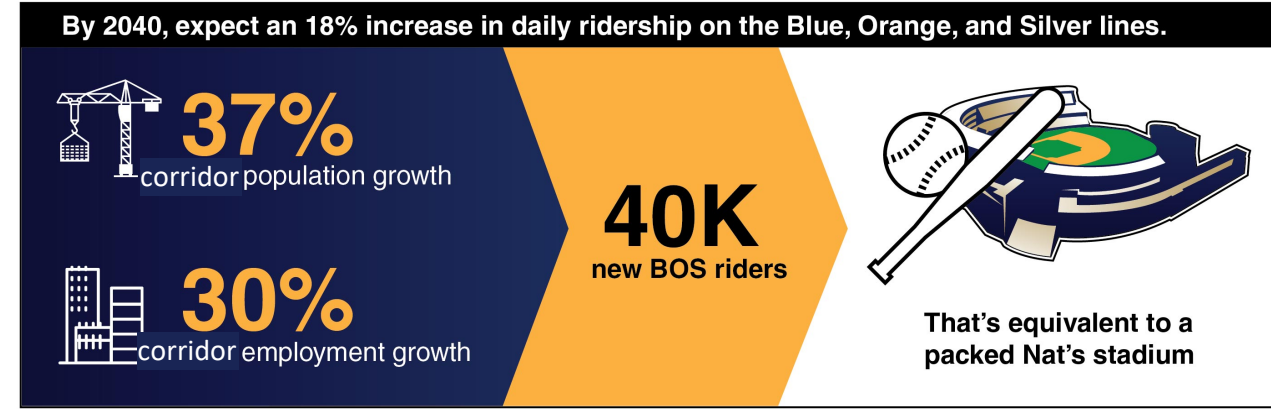
Study purpose

- Launched early 2019 to identify best and most cost-effective solutions to address:
 - Ridership
 - Capacity
 - Service
 - Reliability needs
- Identifies range of options to address corridor-wide concerns
- Study now ready for additional public engagement and input



Growth in jobs and households likely to increase crowding in trains and stations

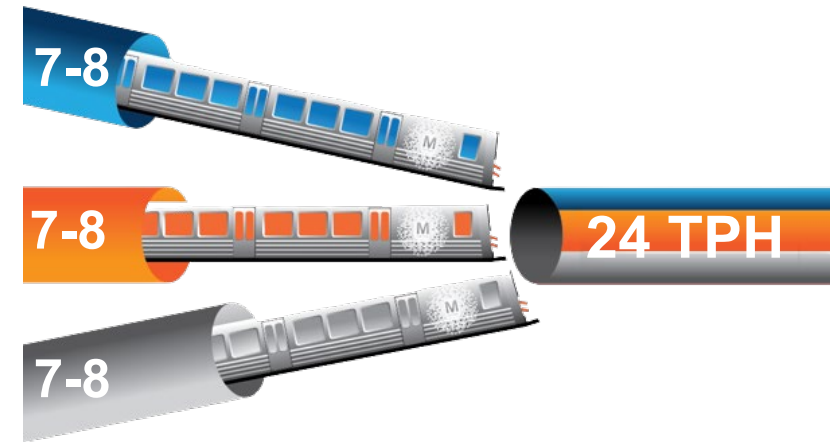
- BOS lines experienced unsafe peak crowding for years before COVID
- Jurisdictions project substantial growth in the BOS corridor by 2040
- Models indicate that growth will increase the severity, duration, and locations of crowding



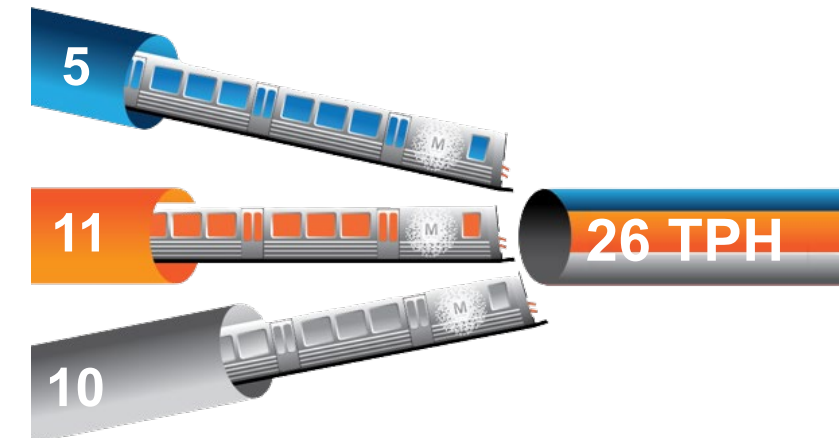
But the existing system can't meet that demand

- Metro can run 26 trains per hour (TPH) per track
- Increasing frequencies from 8 to 6 minutes on two lines would require reducing service on the other
 - Example: Under the previous 6-minute schedule, the BL Line ran every 12 minutes (5 TPH)
- Metro cannot improve headways *and* meet ridership demand on all three lines
- 8-car trains will help but not solve the problem

8-minute headways
26 TPH max / 24 TPH scheduled

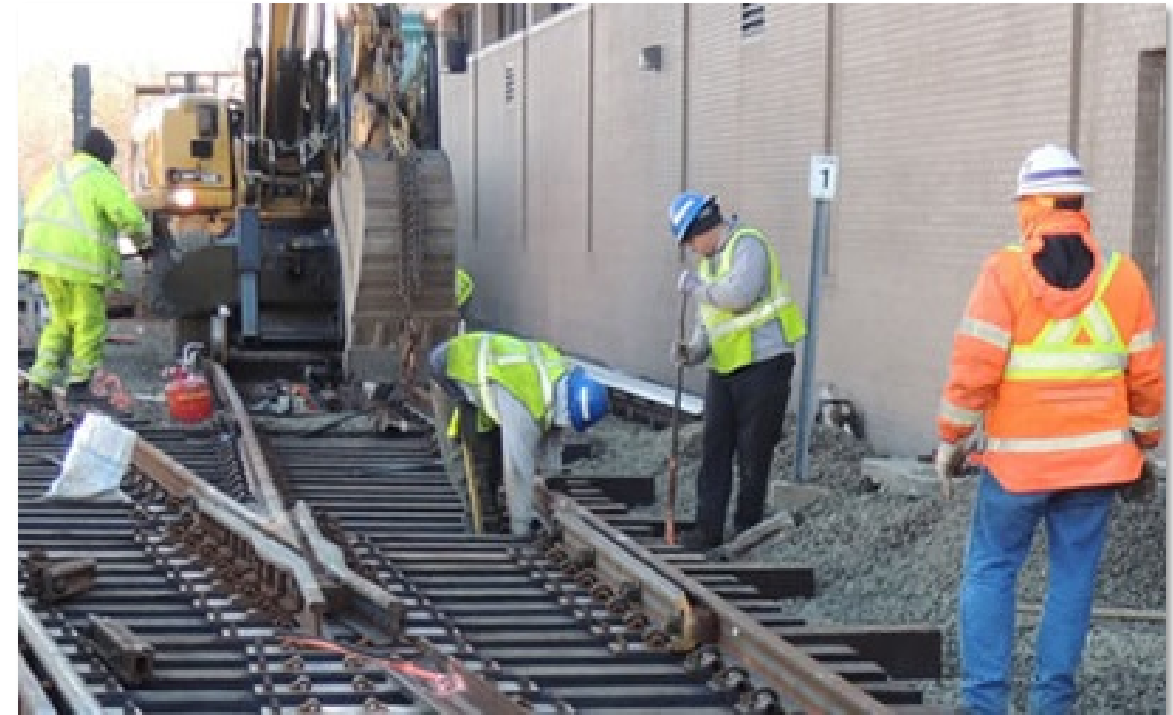
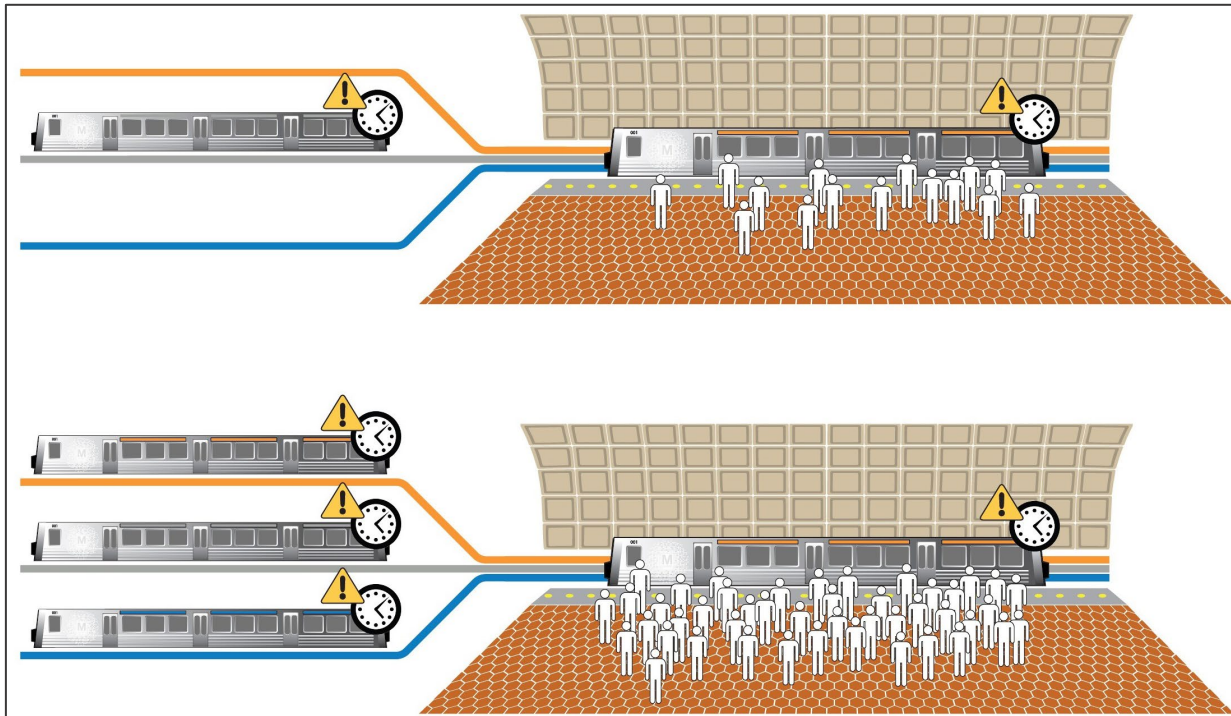


6-minute headways
26 TPH max / 26 TPH scheduled



Interlining* creates (and compounds) the effects of delays and crowding

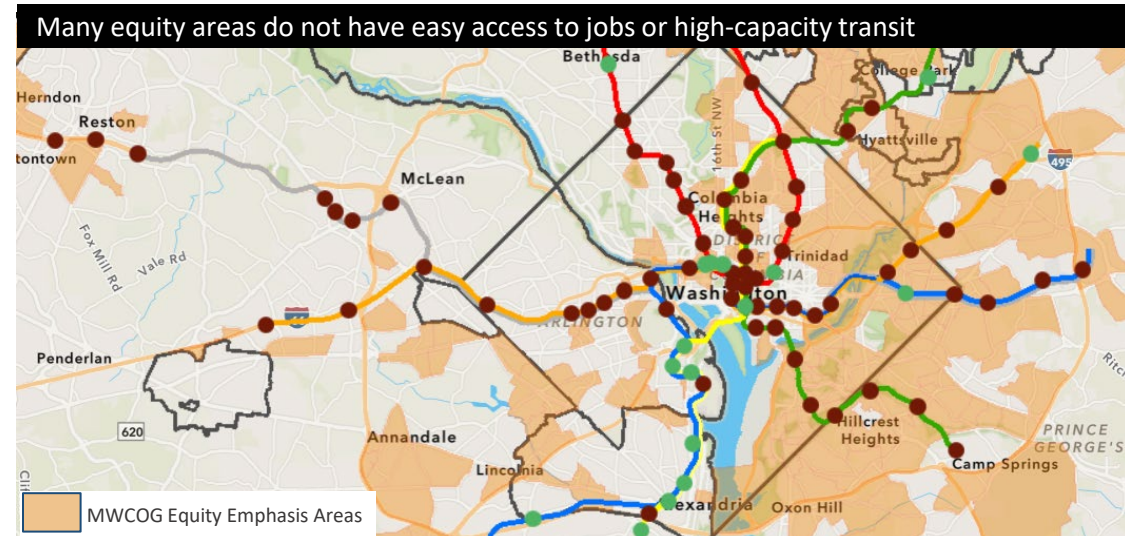
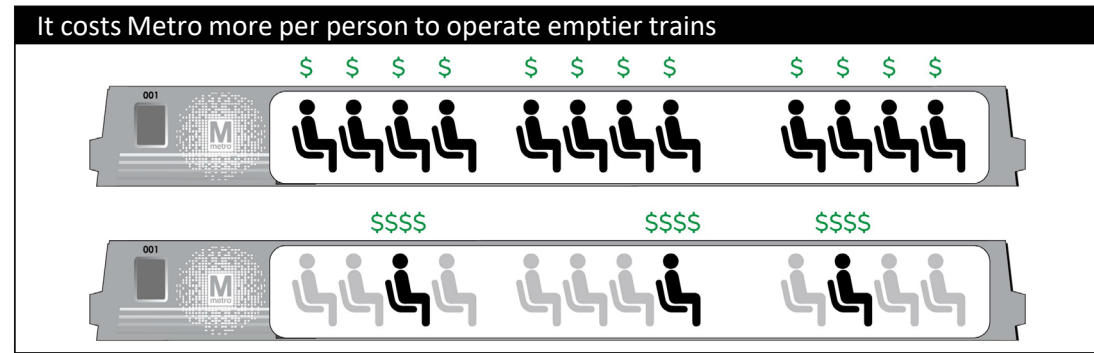
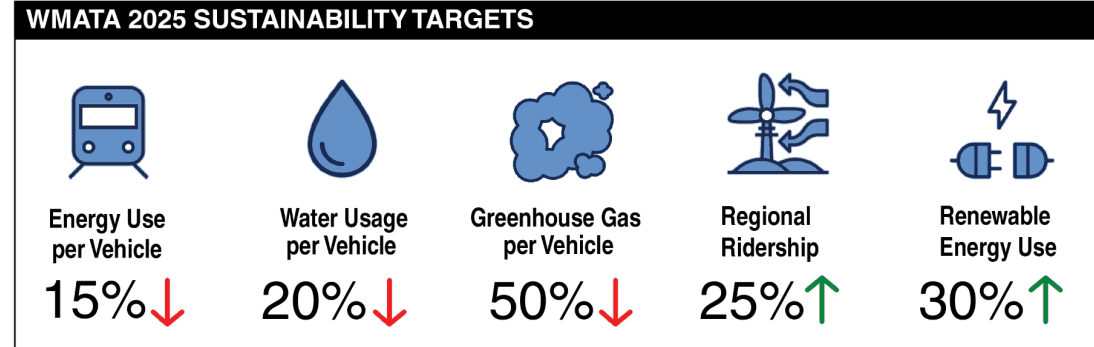
And Metro needs infrastructure to reduce the geographic extent and impacts of construction/disruption



**Interlining: Operating more than one rail line along the same set of tracks.*

Metro also needs to explore strategies for long-term environmental and economic sustainability, such as:

- Attaining Metro’s sustainability goals
- Increasing farebox recovery ratio
- Encouraging shift from cars to transit
- Supporting transit-oriented development
- Expanding access to high-capacity transit and economic opportunities, particularly in equity areas



Solution needs to further four goals



Goal 1:
Provide Sufficient Capacity to Serve Ridership Demand



Goal 2:
Improve Reliability & On-Time Performance



Goal 3:
Improve Operational Flexibility & Cost-Efficiency

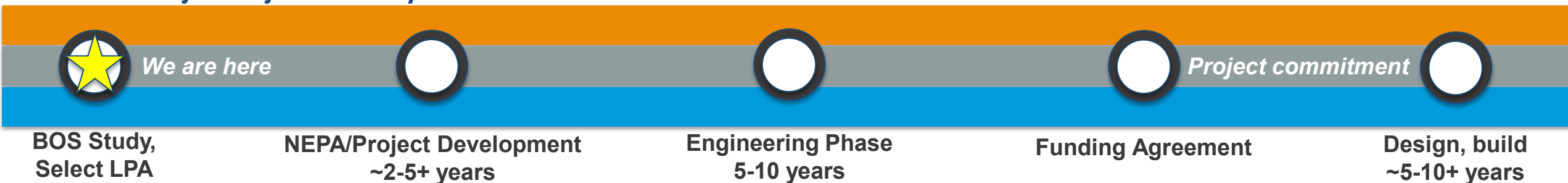


Goal 4:
Support Sustainable Development & Expand Access to Opportunity

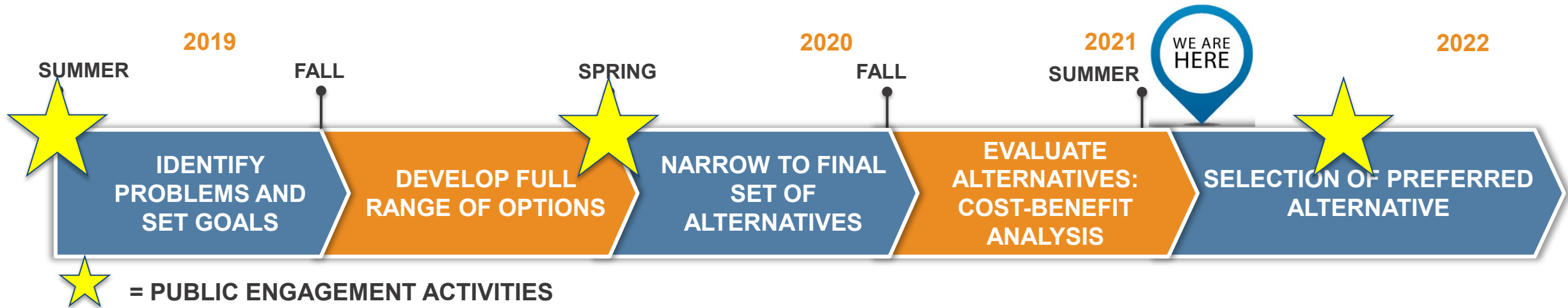
Study aligns with federal project planning requirements

- Major capital projects can take 20+ years to deliver (e.g., Silver Line expansion)
- Following federal requirements to be eligible for Federal funding
- No commitment to build until funding agreement

Illustrative Major Project Delivery Timeline



Study process



- Process based on Federal guidelines for NEPA alternatives analysis
- Continued engagement with customers, public, stakeholders, and elected officials

Public & stakeholder input to date

- Six meetings each:
 - Metro leadership and technical advisory committees
 - Jurisdictional leadership and technical advisory committees
- Two meetings of corridor elected officials
- Workshop for community-based organizations
- 13 pop-up events at Metro stations
- 4 public open houses
- 2,000+ online surveys
- 275 project “concepts” submitted
- Project website and email

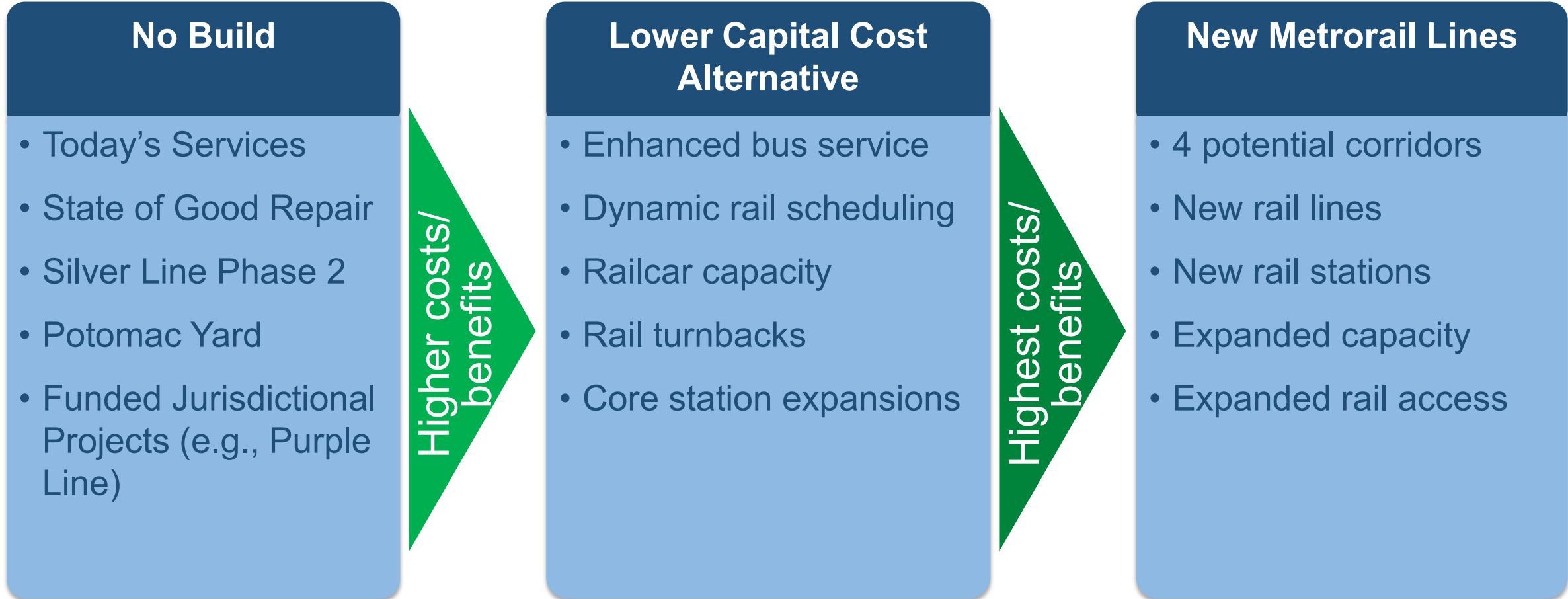
Over 275 Ideas Submitted



Identifying the Locally-Preferred Alternative

- **Six preliminary alternatives developed:**
 - Solution may be one of the six alternatives shown, or a combination of components from different alternatives
 - Recommendation to be made following public participation process and engagement with stakeholders and elected officials
 - **Presentation is not an LPA recommendation**

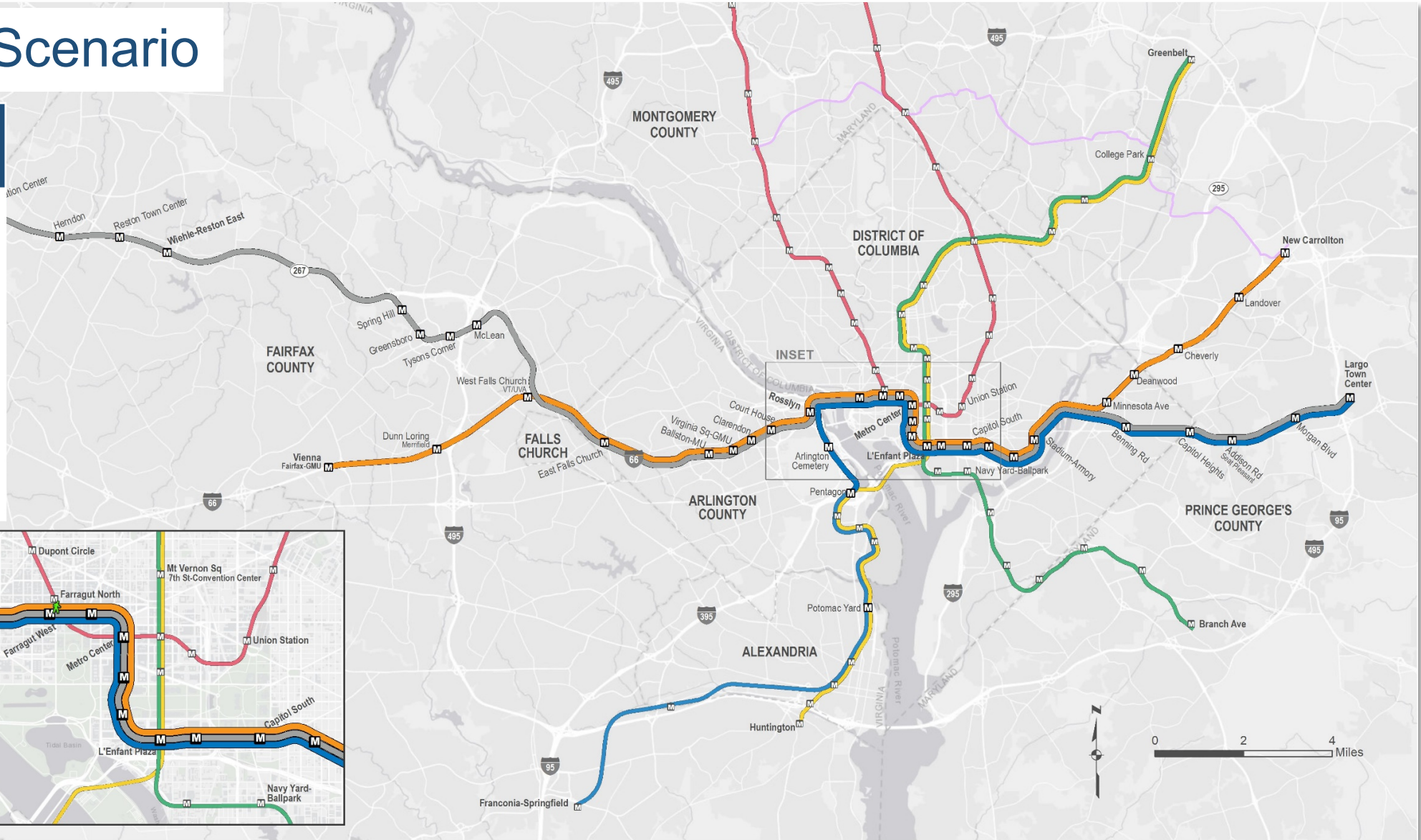
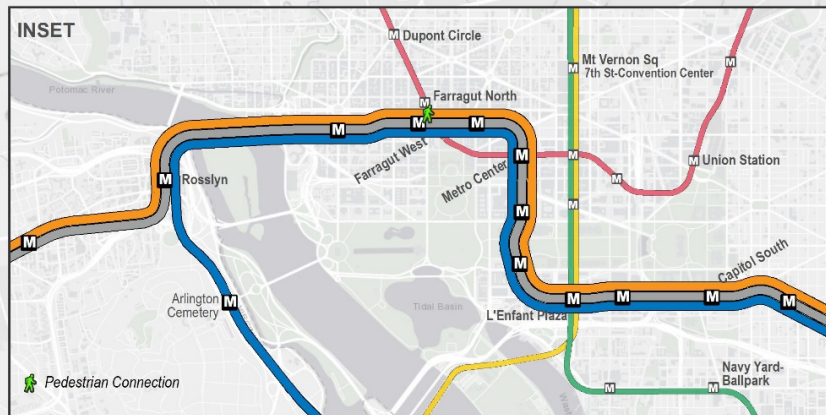
Range of current alternatives



No-Build Scenario

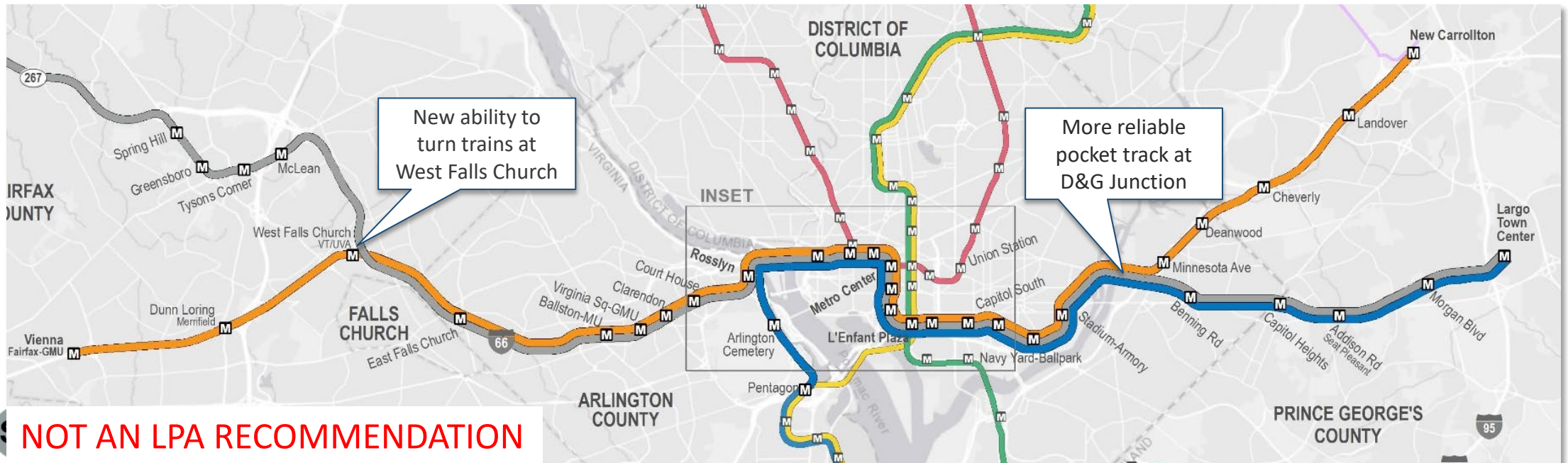
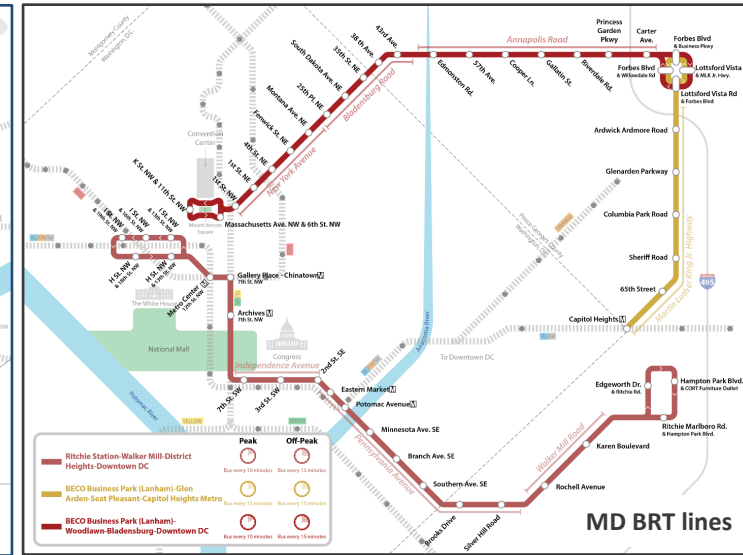
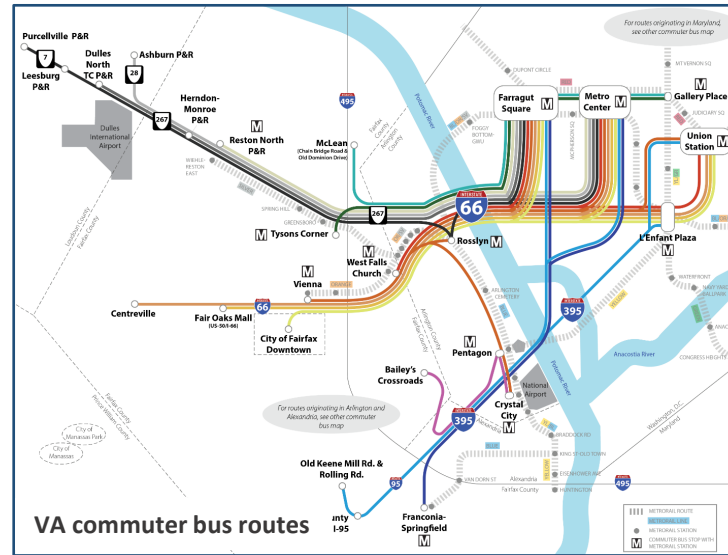
Peak Service Plan 2040

- OR** 6 minutes
- BL** 12 minutes
- SV** 6 minutes
- GR** 6 minutes
- YL** 6 minutes
- RD** 3 minutes



Lower Capital Cost Alternative

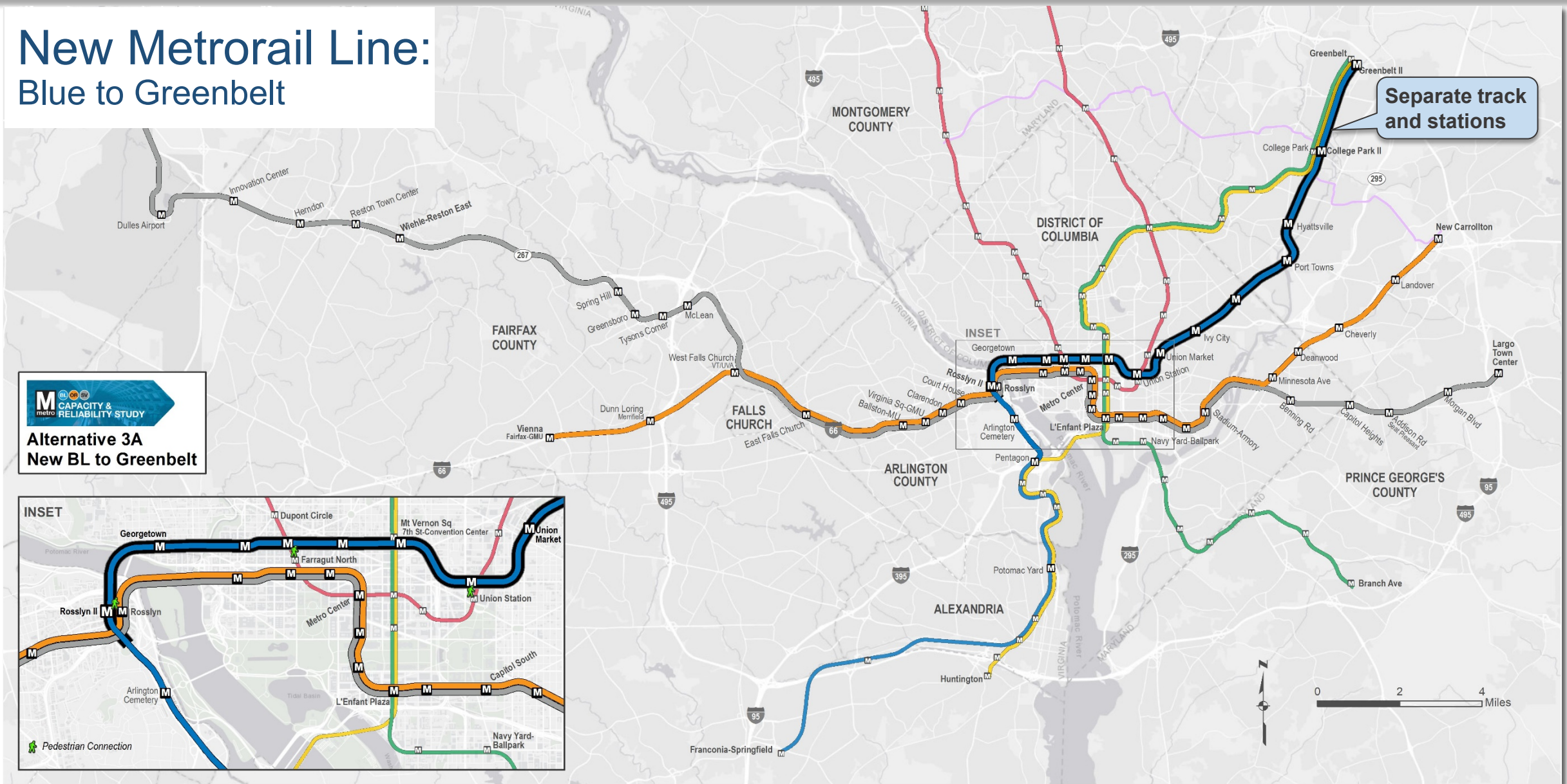
- Enhanced bus service (6 BRT + 54 commuter routes)
- Dynamic rail scheduling
- Railcar capacity
- Rail turnbacks
- Core station capacity improvements



BL OR NOT AN LPA RECOMMENDATION



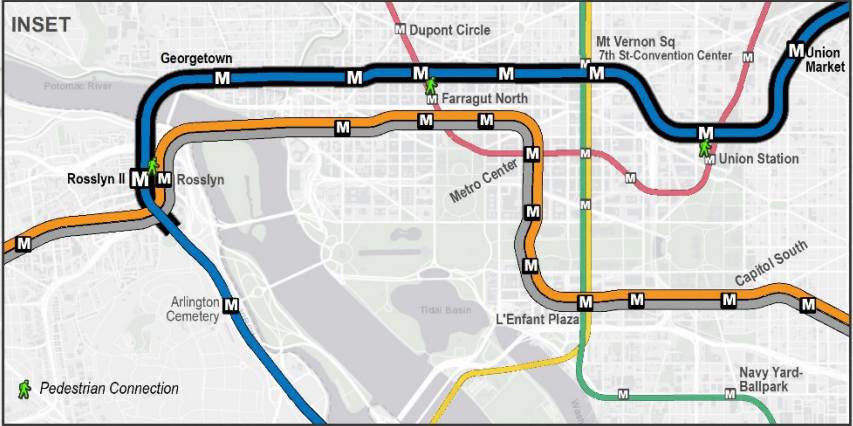
New Metrorail Line: Blue to Greenbelt



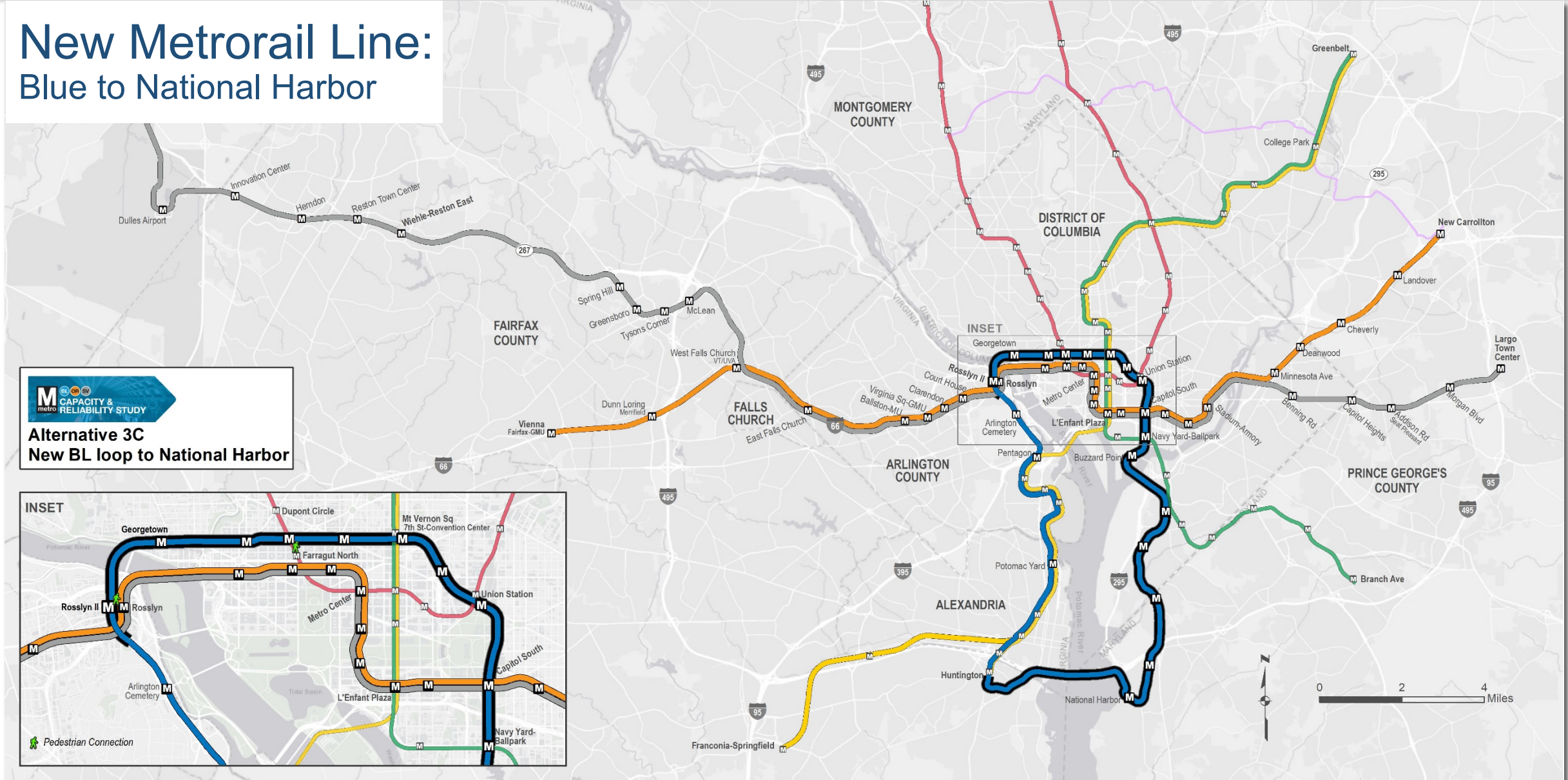
M CAPACITY & RELIABILITY STUDY

Alternative 3A
New BL to Greenbelt

Separate track and stations

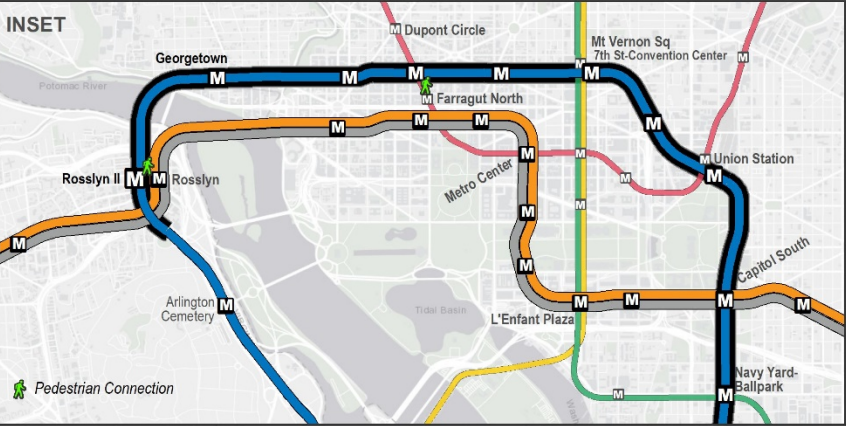


New Metrorail Line: Blue to National Harbor

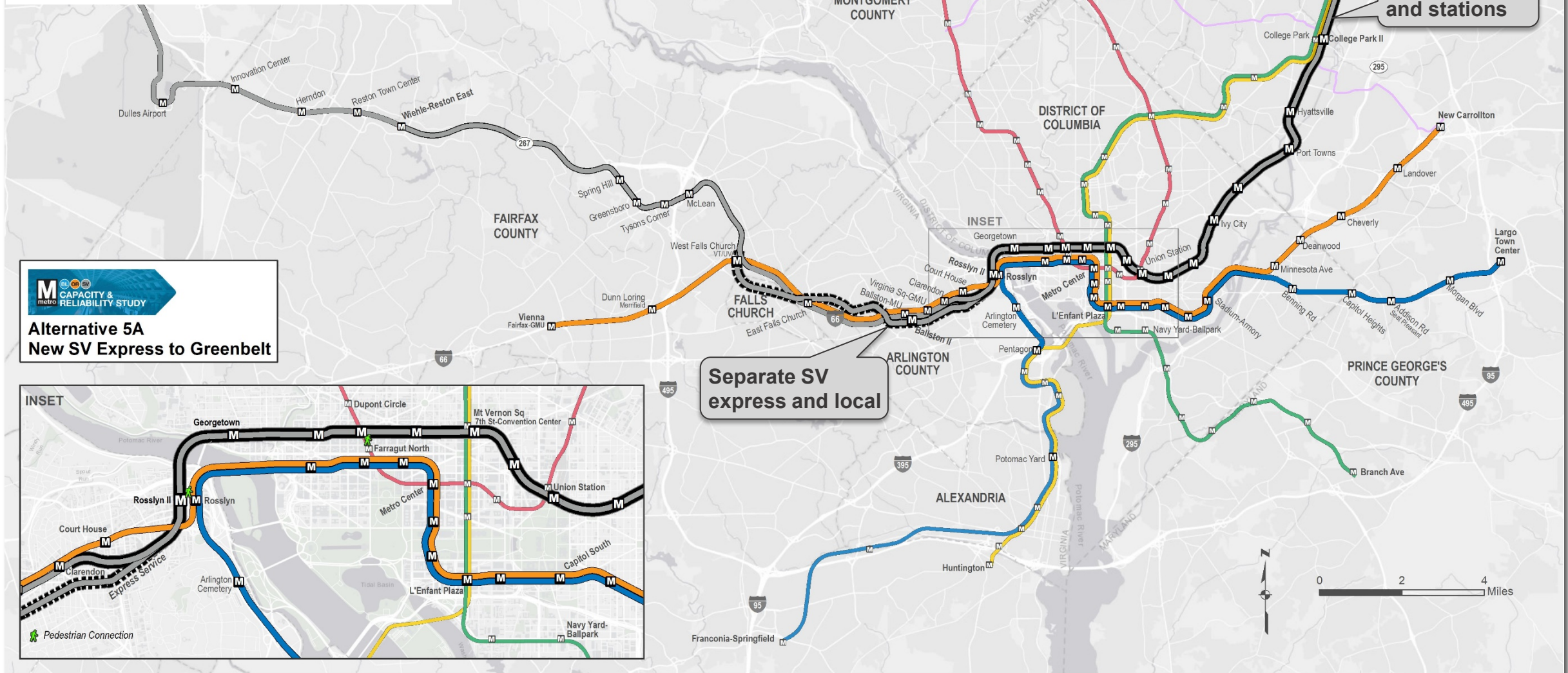


M **BL** **OR** **SV**
CAPACITY & RELIABILITY STUDY

Alternative 3C
New BL loop to National Harbor

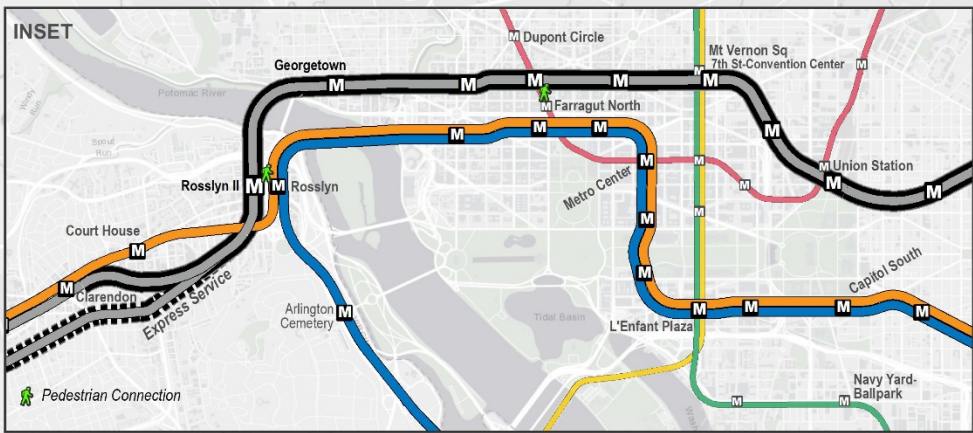


New Metrorail Line: Silver Express in VA

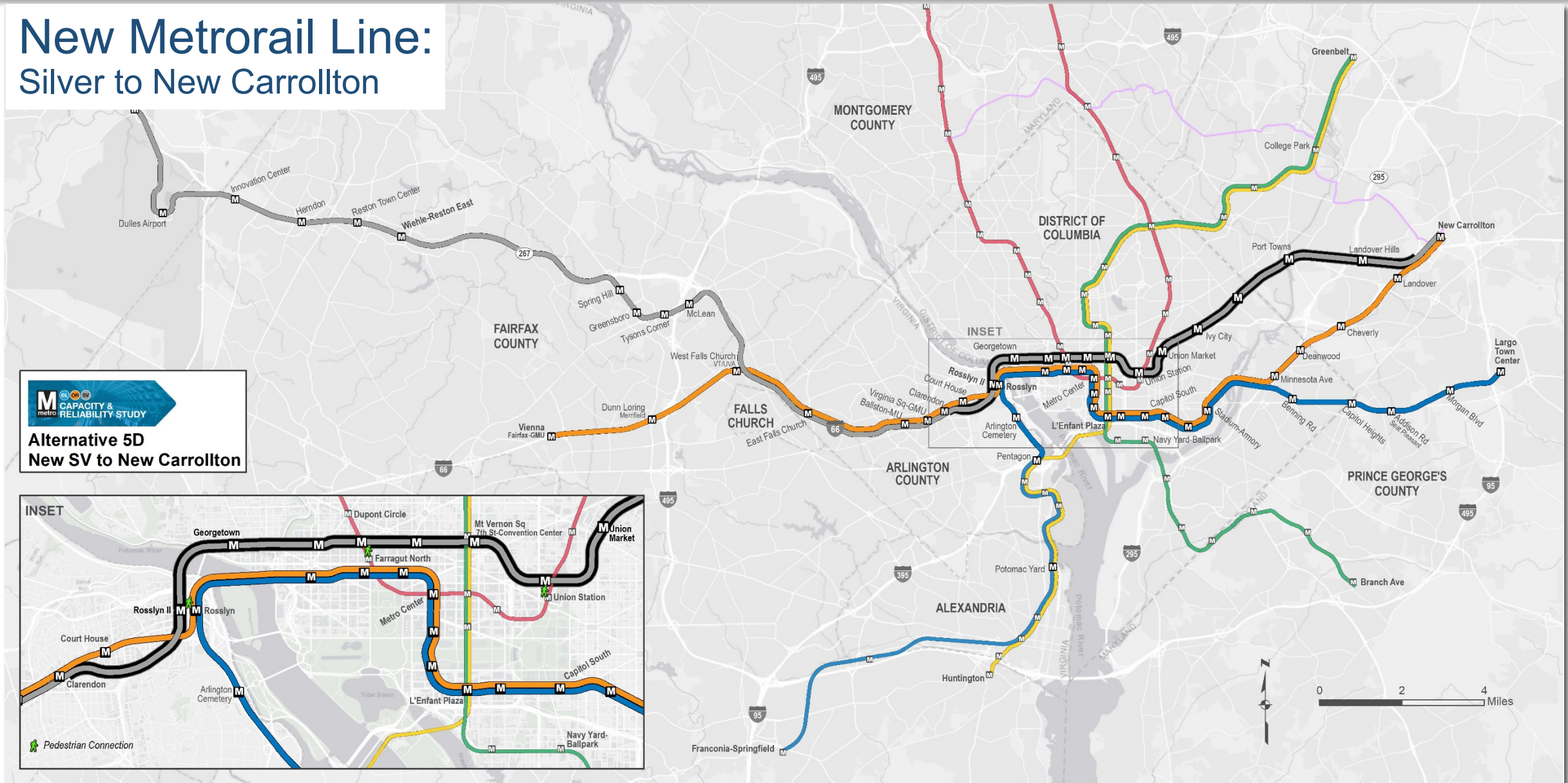


M metro
CAPACITY & RELIABILITY STUDY

Alternative 5A
New SV Express to Greenbelt

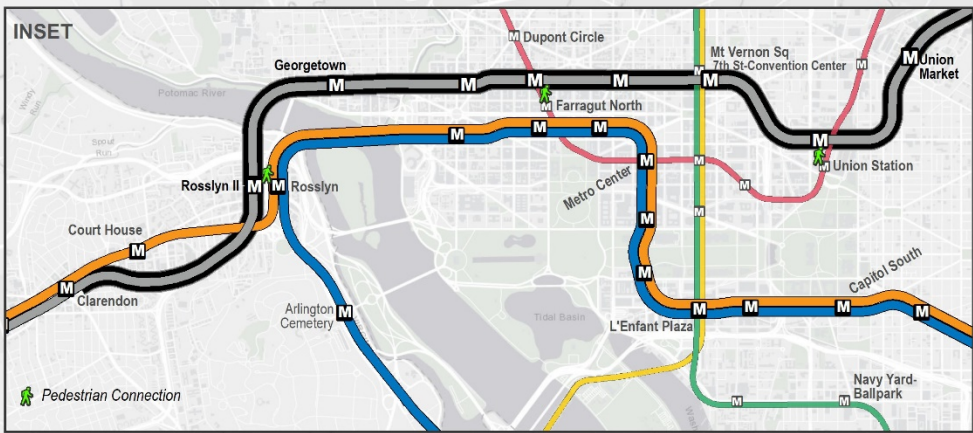


New Metrorail Line: Silver to New Carrollton



M **BL** **OR** **SV**
CAPACITY & RELIABILITY STUDY

Alternative 5D
New SV to New Carrollton

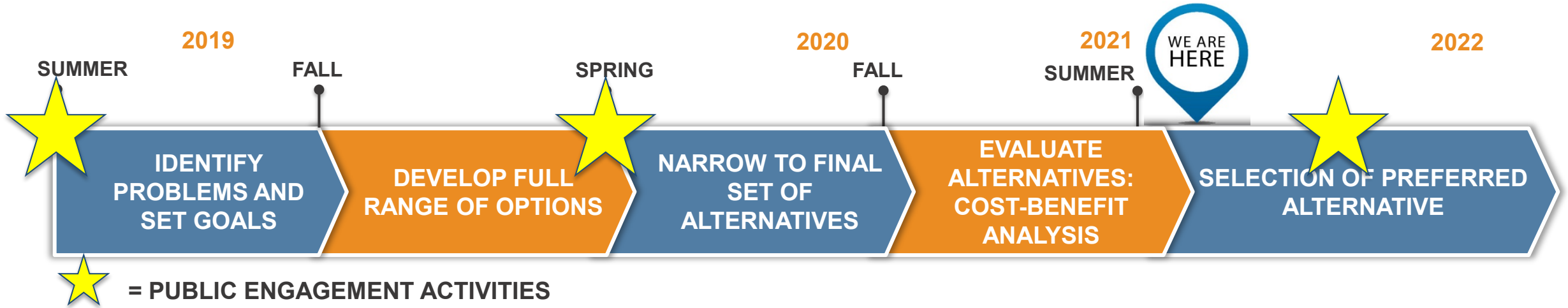


Results of cost-benefit analysis



Selected Metrics				
Alternative	New weekday trips	New annual fare revenue (\$M)	Capital cost (\$B)	Annual O&M cost (\$M)
Blue Line to Natl. Harbor	180K	\$154.2	\$20-25	\$175-200
Silver Line Express in VA	139K	\$119.4	\$20-25	\$150-175
Silver Line to New Carrollton	94K	\$80.4	\$15-20	\$100-125
Blue Line to Greenbelt	92K	\$79.1	\$15-20	\$100-125
Lower Capital Cost	16K	\$33.9	\$0-5	\$75-100

Next steps



- Briefings to elected officials and boards – Fall 2021
- Third round of public engagement – Fall 2021 (tentative)
- Board selection of LPA – 2022 (tentative)