Innovation lives here.

NATIONAL LANDING TRANSPORTATION SOLUTIONS

NOVA is Connected

The Virginia team has evaluated and confirmed the regional and site-specific infrastructure investments needed to support robust, multi-modal connectivity for Amazon's headquarters at National Landing.

To perform this evaluation, we engaged the Virginia Department of Transportation (VDOT), Virginia Department of Rail and Public Transportation (DRPT), and local transportation and planning departments to establish a consensus view.

NOVA Regional Infrastructure Investments

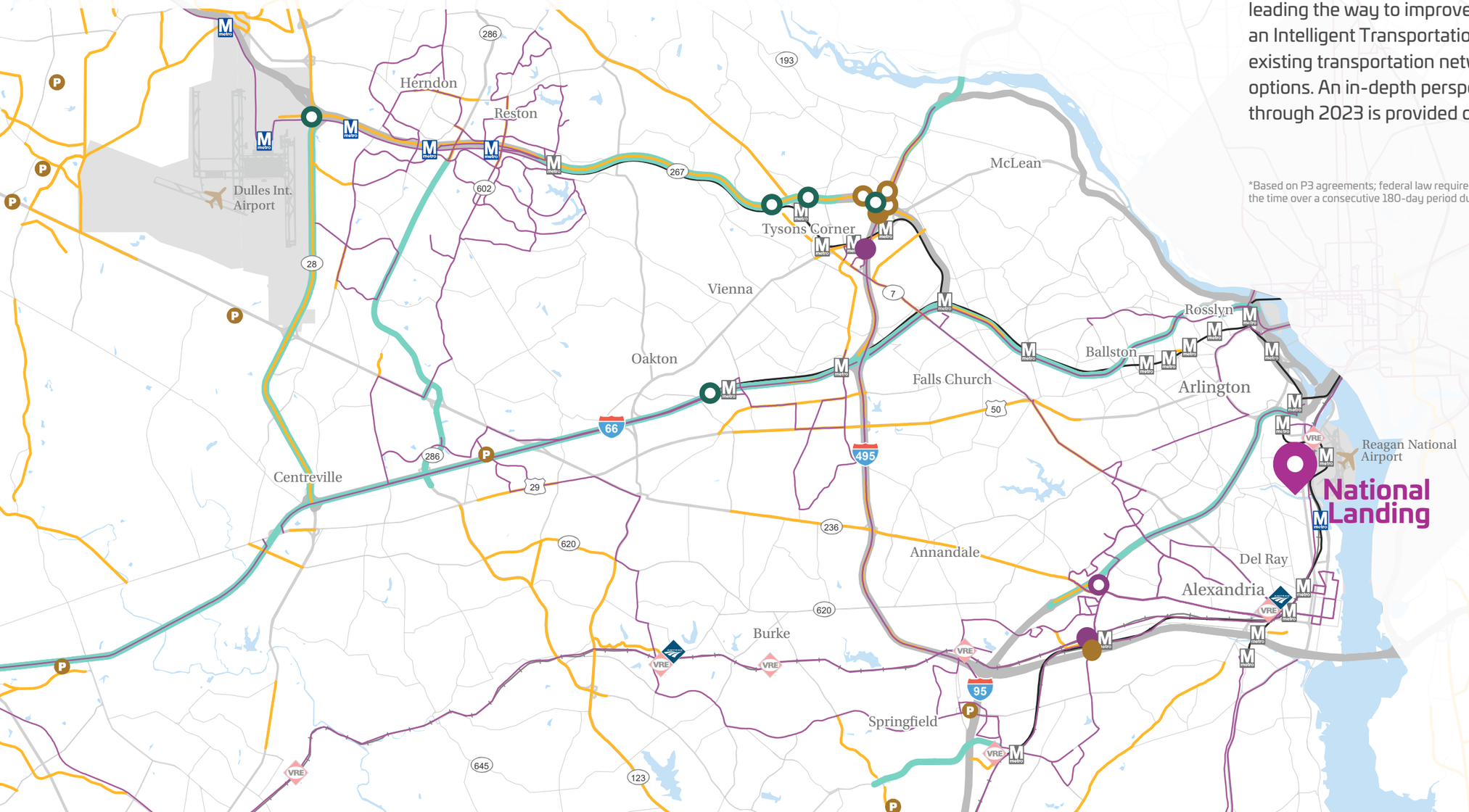
NOVA's global scale means that Amazon's new headquarters would represent manageable growth on an already extensive employment and population base. According to the latest available cooperative forecasts published by the Metropolitan Washington Council of Governments (MWCOG), the region is planning to accommodate more than 615,000 additional jobs through 2030 and a cumulative total of 1.1 million additional jobs through 2045 – roughly 100,000 new direct and indirect/induced jobs from HQ NOVA would equate to about 16% and 9%, respectively, of that forecasted growth in the region.

In that context, NOVA will be the largest recipient of transportation investment in the entire metro through 2030, including $15.0B in committed multi-modal transportation investments by 2023 and an additional $14B planned in the remaining years to 2030.

NOVA is investing in the maintenance and expansion of an extensive multi-modal transportation network, while focusing new growth and development around transit nodes and corridors. Connecting these places with the rest of the region via transit, commuter rail, and other transportation infrastructure, while shaping this growth in a way that establishes or enhances places with high-quality placemaking and amenities, will allow the region to more easily accommodate planned growth with limited impacts.

NOVA's interstate highways will have a comprehensive 90+ mile network of Express Lanes by 2022 that guarantee a high-speed, reliable trip* to those who carpool, use transit, or choose to pay a toll. Today there are more than 40 miles of Express Lanes along I-495 and I-95, with new express lanes being added to I-66 (32 miles), I-395 (8 miles), and I-95 (10 miles). Furthermore, Virginia is leading the way to improve traffic signal infrastructure by deploying an Intelligent Transportation System to enhance the efficiency of existing transportation networks and multi-modal transportation options. An in-depth perspective on fully funded commitments through 2023 is provided on page three.

*Based on P3 agreements; federal law requires a minimum average operating speed of 45 miles per hour 90% of the time over a consecutive 180-day period during certain peak hour periods



Existing
- Roadways
- Metro Line
- Metro Station
- Commuter Rail (VRE & Amtrak)
- Commuter Rail (VRE) Station
- Commuter Rail (Amtrak) Station

Regional Investments through 2030
- Construct/Widen/Improve Roadway
- Improve Interchange
- New Interchange
- New Park and Ride
- Managed Lane Improvement (e.g., HOV, Express Lane)
- New Managed Lane Interchange
- Transit Improvements
- Transit Improvement
- New Station
- New Metro Station

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Near-term Regional Funding Commitments Total $15.0 Billion through 2023

	Project Name	Description	Total Project Cost ($MM)
1	**Dulles airport**	Increases capacity and access, and improves maintenance facility and runways	688
2	**Metro Silver Line extension Phase II**	Increases access and capacity on NOVA's west side	3,000
3	**I-66 Express Lanes**	Improves corridor travel times and reliability (inside and outside Beltway)	3,720
4	**I-95 Fred Ex**	Extends Express Lanes to Fredericksburg and reconstructs Rappahannock River crossing	815
5	**I-395 Express Lanes**	Improves travel time and reliability from I-495 to 14th St. bridge at National Landing	460
6	**Reagan airport**	Increases terminal capacity and access, and improves maintenance facility and runways	1,150
7	**Route 1/ Richmond Highway BRT***	Provides a new, 8.6-mile Bus Rapid Transit (BRT) system; includes direct connections to Metrorail, dedicated bus lanes, and new transit stations	545
8	**Metro annual funding****	Increases capacity and improves service, safety, and reliability	2,490
9	**Commuter rail (VRE)**	Provides new rail cars, extended platforms, and other new facilities	340
10	**Arterials and local roads**	Reduces NOVA congestion delays via construction and widening	1,350
11	**Interstate corridor enhancements**	Provides improvements to I-95, I-66, and I-395 corridors using dedicated P3 funds	452

*Assumes award of Federal Transit Administration New Starts Grant
**Virginia's committed investment to Metro is ~$500 million per year (FY19-FY23)

Total: $15.0 Billion

Projects with Impact Across NOVA
8 9 10 11

Existing
- Roadways
- Metro Line
- Metro Station
- Commuter Rail (VRE & Amtrak)
- Commuter Rail (VRE) Station
- Commuter Rail (Amtrak) Station

Fully Funded Projects Through 2023
- Managed Lane Improvement (e.g., HOV, Express Lane)
- Transit Improvements
- New Metro Station

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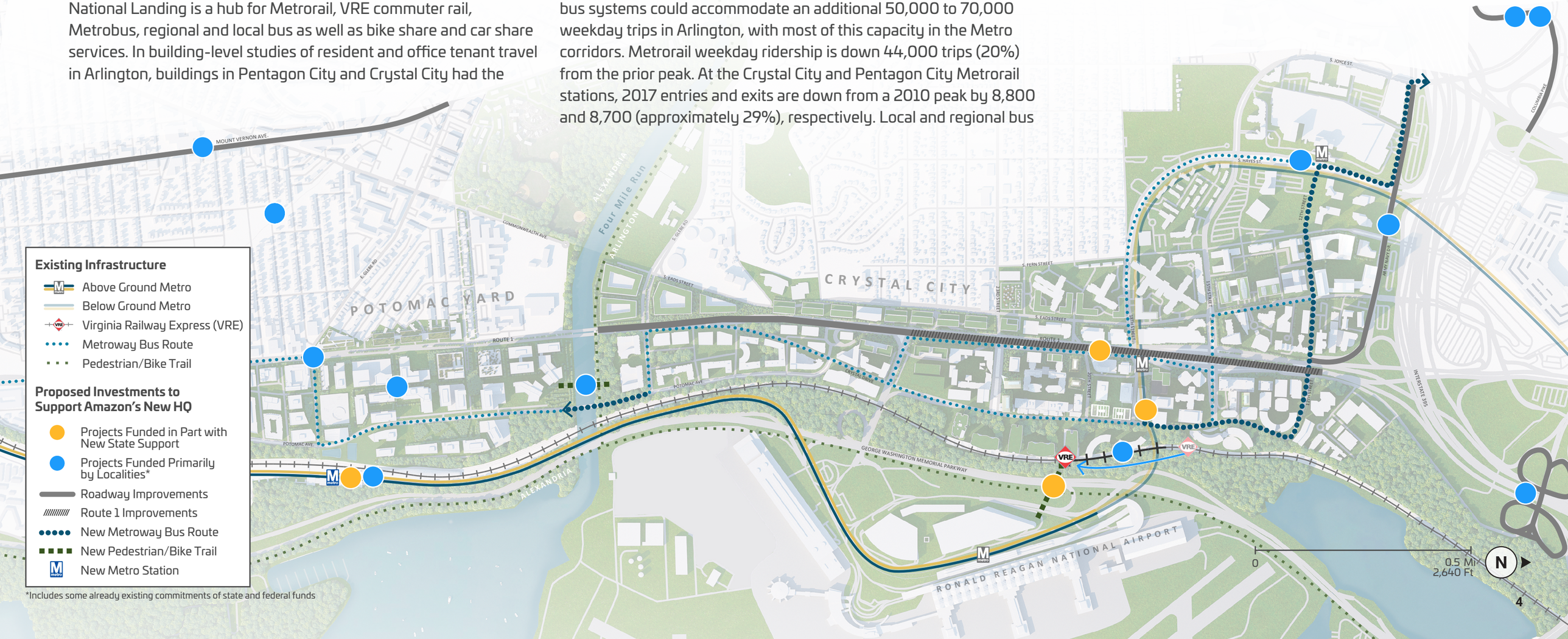
Significant Investments are Planned for National Landing to Support Amazon's New Headquarters

With extensive community input, Arlington (2010, with updates in 2013) and Alexandria (2017) adopted high-density, transit-oriented growth plans that cover most of the land area comprising National Landing. These already-approved plans envision considerably more growth than what Amazon's new headquarters would represent, and the project is consistent with the type of development already envisioned by the community. These plans were developed in a comprehensive and multi-disciplinary manner to ensure that development, transportation, public open space, and other features work in concert to achieve high-quality placemaking and functional urban places.

National Landing is a hub for Metrorail, VRE commuter rail, Metrobus, regional and local bus as well as bike share and car share services. In building-level studies of resident and office tenant travel in Arlington, buildings in Pentagon City and Crystal City had the highest transit-mode share and the lowest single-occupant-driver share in the greater Washington Metropolitan Region except for the most centrally located neighborhoods in the District of Columbia. The site can effectively absorb substantial proposed growth without a commensurate growth in vehicle travel or associated congestion.

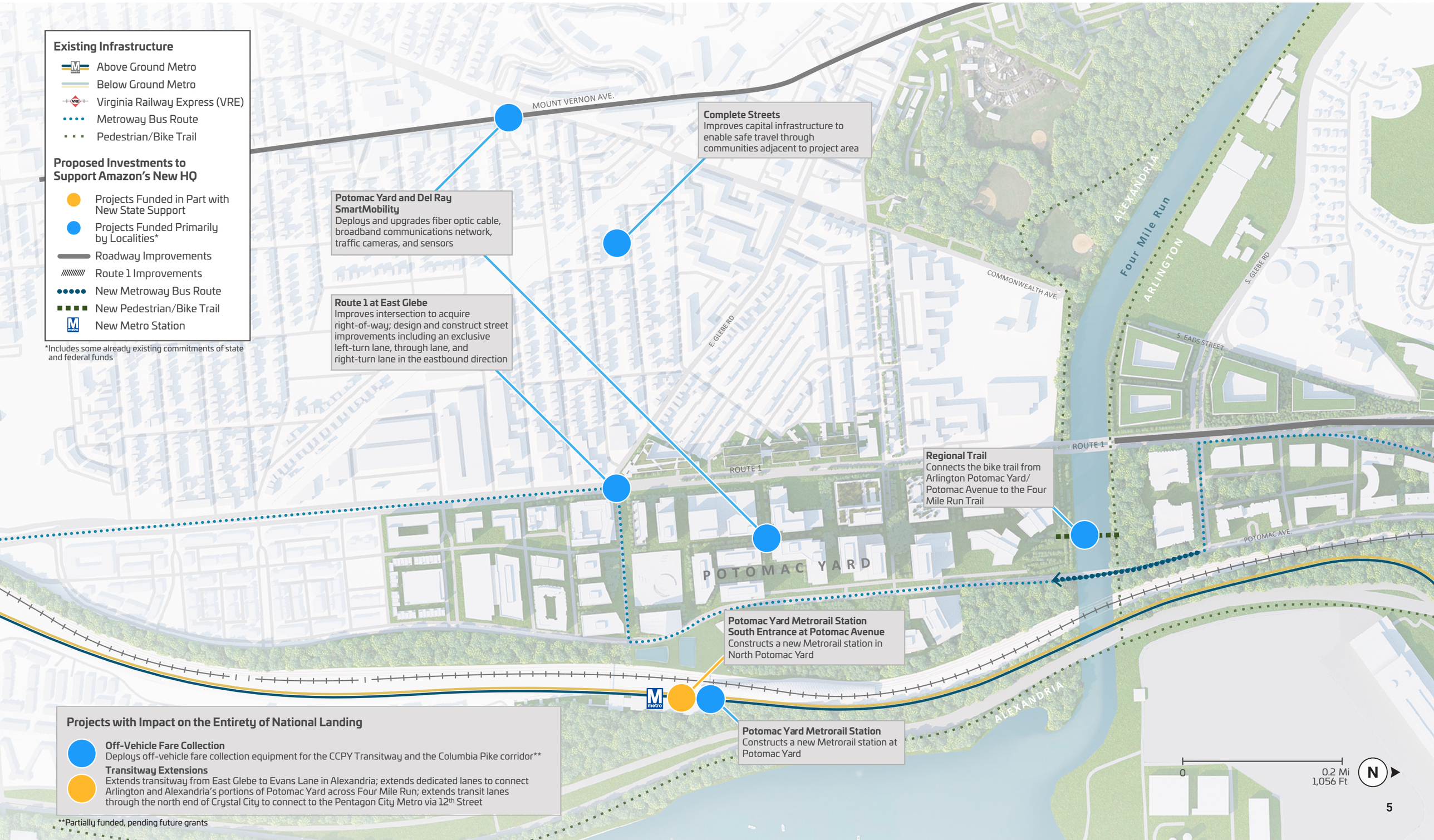
Furthermore, the transportation systems serving the National Landing site (and immediately surrounding area) currently have substantial unused capacity to accommodate additional travelers, given recent declines in travelers to and through the area due to the effects of Base Realignment and Closure (BRAC) and budget sequestration. For example, the Metrorail and the Metro and ART bus systems could accommodate an additional 50,000 to 70,000 weekday trips in Arlington, with most of this capacity in the Metro corridors. Metrorail weekday ridership is down 44,000 trips (20%) from the prior peak. At the Crystal City and Pentagon City Metrorail stations, 2017 entries and exits are down from a 2010 peak by 8,800 and 8,700 (approximately 29%), respectively. Local and regional bus service also has unused capacity, with Metrobus weekday ridership down 10% in the last year and 20% off the prior peak, while ART bus weekday ridership is down 12.5% from the prior peak.

Finally, the Virginia team is making state (up to $295 million) and local ($570 million) financial commitments to a collection of projects tailored to Amazon's growth at National Landing that will directly benefit employees with a focus on multi-modal transportation between office nodes and area amenities. An in-depth perspective on proposed investments to support Amazon's new headquarters at National Landing is presented on pages five and six.



*Includes some already existing commitments of state and federal funds

Proposed National Landing Infrastructure Projects - Alexandria



Existing Infrastructure

- Above Ground Metro
- Below Ground Metro
- Virginia Railway Express (VRE)
- Metroway Bus Route
- Pedestrian/Bike Trail

Proposed Investments to Support Amazon's New HQ

- Projects Funded in Part with New State Support
- Projects Funded Primarily by Localities*
- Roadway Improvements
- Route 1 Improvements
- New Metroway Bus Route
- New Pedestrian/Bike Trail
- New Metro Station

*Includes some already existing commitments of state and federal funds

Potomac Yard and Del Ray SmartMobility
Deploys and upgrades fiber optic cable, broadband communications network, traffic cameras, and sensors

Route 1 at East Glebe
Improves intersection to acquire right-of-way; design and construct street improvements including an exclusive left-turn lane, through lane, and right-turn lane in the eastbound direction

Complete Streets
Improves capital infrastructure to enable safe travel through communities adjacent to project area

Regional Trail
Connects the bike trail from Arlington Potomac Yard/ Potomac Avenue to the Four Mile Run Trail

Potomac Yard Metrorail Station South Entrance at Potomac Avenue
Constructs a new Metrorail station in North Potomac Yard

Potomac Yard Metrorail Station
Constructs a new Metrorail station at Potomac Yard

Projects with Impact on the Entirety of National Landing

Off-Vehicle Fare Collection
Deploys off-vehicle fare collection equipment for the CCPY Transitway and the Columbia Pike corridor**

Transitway Extensions
Extends transitway from East Glebe to Evans Lane in Alexandria; extends dedicated lanes to connect Arlington and Alexandria's portions of Potomac Yard across Four Mile Run; extends transit lanes through the north end of Crystal City to connect to the Pentagon City Metro via 12th Street

**Partially funded, pending future grants

Proposed National Landing Infrastructure Projects - Arlington

Existing Infrastructure

- Above Ground Metro
- Below Ground Metro
- Virginia Railway Express (VRE)
- Metroway Bus Route
- Pedestrian/Bike Trail

Proposed Investments to Support Amazon's New HQ

- Projects Funded in Part with New State Support
- Projects Funded Primarily by Localities*
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*Includes some already existing commitments of state and federal funds

Pentagon City Metrorail Station Second Elevator
Adds a second elevator entrance to the Pentagon City Metro Station from the street to mezzanine level

Columbia Pike Transit Stations
Designs and constructs 21 high capacity transit stations with real time information and other rider amenities

Columbia Pike East End
Realigns Columbia Pike from Oak to Joyce Street; project timing contingent on collaborative work between Arlington, Arlington National Cemetery, and FHWA Eastern Federal Lands Highway

Army Navy Drive Complete Street
Rebalances the right-of-way to permit improved bicycle, pedestrian, and transit accommodations on Army Navy Drive

Crystal City Streetlights
Replaces and upgrades existing streetlights in Crystal City and installs new streetlights along Route 1

Route 1
Modifies Route 1 to improve pedestrian, bicycle, and transit connectivity between Pentagon City and Crystal City

Regional Trail
Connects the bike trail from Arlington Potomac Yard/Potomac Avenue to the Four Mile Run Trail

Boundary Channel Drive Interchange
Reconstructs Long Bridge Park Drive to and through the interchange with I-395 and Boundary Channel Drive to provide a safe and attractive environment for all modes of transportation

Crystal City Metrorail Station East Entrance
Constructs a new entrance to provide easier access from Crystal Drive, the VRE station, and the new Transitway station

Crystal City Virginia Railway Express (VRE)
Expands the platform at the VRE commuter rail station, which would provide a regional intermodal transfer facility, with a 5-10 minute walk to DCA from the train platform (pending feasibility of the CC to DCA Pedestrian Bridge)**

CC to DCA Pedestrian Bridge
Advances the environmental documentation, engineering, and (if feasible) construction of a pedestrian bridge project that would effectively connect Crystal City and DCA airport; implementation of this project requires the support of the National Park Service and the Metropolitan Washington Airports Authority

Project with Impact Across the Arlington Portion of National Landing

Complete Streets
Makes street improvements that transform Crystal City and Pentagon City into vibrant mixed-use districts that maximize opportunities for using transit, walking, and biking

Projects with Impact on the Entirety of National Landing

Off-Vehicle Fare Collection
Deploys off-vehicle fare collection equipment for the CCPY Transitway and the Columbia Pike corridor**

Transitway Extensions
Extends transitway from East Glebe to Evans Lane in Alexandria; extends dedicated lanes to connect Arlington and Alexandria's portions of Potomac Yard across Four Mile Run; extends transit lanes through the north end of Crystal City to connect to the Pentagon City Metro via 12th Street

**Partially funded, pending future grants

CRYSTAL CITY
RONALD REAGAN NATIONAL AIRPORT
ALEXANDRIA
Four Mile Run
S. JOYCE ST.
S. HAYES ST.
S. EADS STREET
POTOMAC AVE.
CRYSTAL DRIVE
ROUTE 1
GEORGE WASHINGTON MEMORIAL PARKWAY
COMMONWEALTH AVE.
S. GLEBE RD
COLUMBIA PIKE
ARMY NAVY DR.
INTERSTATE 395
15TH STREET
20TH STREET
23RD STREET
12TH STREET

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