Envisioning a 21st Century Flight-Connected City
Note from the BID

**Vision:** To directly link Crystal City with DCA via a context-sensitive pedestrian connection that strengthens Crystal City’s office and hotel community, and offers new opportunities to link residents and visitors to an intermodal hub connecting the airport, Metro, commuter rail, regional rail, and trails.

Implementing bold visions requires strong leadership, thoughtful collaboration, and persistence. The Crystal City Business Improvement District’s Crystal City to DCA Feasibility Study (CC2DCA) is the first step towards creating a new pedestrian connection between Virginia’s largest downtown district and its busiest airport.

The Crystal City BID sees an opportunity to leverage the airport’s proximity to Crystal City by bringing it a few steps closer. A new pedestrian connection would enable travelers to connect between Crystal City and the airport through an enjoyable, 5-minute walk.

Such a connection positions the neighborhood for future investments, both public and private, by dramatically strengthening the airport as an economic development catalyst for Crystal City and offering a key amenity for tenants. It would also link the many transportation assets in Crystal City into a multimodal hub, and position the neighborhood to attract additional rail service operations such as Amtrak, regional commuter rail, or even a future high-speed rail station.

A direct, pedestrian connection from Crystal City to DCA is feasible. This conclusion is a key first step towards delivering on this exciting vision for the future of Crystal City—but much work remains. The Crystal City BID looks forward to continuing the conversation with key stakeholders and agency partners. We welcome you to join the Crystal City BID on this journey.

— Robert H. Mandle
CC2DCA Project Manager
Chief Operating Officer
Crystal City Business Improvement District

rmandle@crystalcity.org | 703.412.9430
Opportunity

Many cities across the U.S. are actively pursuing, through significant investment, the idea of an airport-city, or “aerotropolis.” Crystal City has one strategic advantage that other cities do not: its location so close to a thriving, urbanized business district area. No airport has the type or scale of office and retail space accessible within a 15-to 20-minute walk that Crystal City offers.

Developing a CC2DCA pedestrian connection solves three primary challenges that prevent Crystal City from fully capitalizing on its proximity to the airport:

1. The current walking connections between Crystal City and DCA are cumbersome, are not ADA compliant, and are long
2. Existing vehicular routes between Crystal City and DCA are approaching capacity and are indirect
3. Existing transportation amenities serving thousands of passengers per day are not interconnected

The CC2DCA study investigated the potential for a connection that:

- Generates economic development
- Creates a direct and enjoyable experience
- Provides multimodal access and connectivity to the region
- Celebrates and preserves recreational, cultural, and historic resources
- Aligns or integrates with existing and planned infrastructure projects
- Develops a practical and implementable solution
The Project

Uncovered, basic
Like the Mount Vernon Trail overpass near Roosevelt Island

Uncovered, truss
Like the Anacostia Riverwalk Trail Bridge

Covered, open air
Like the Silver Line Metro pedestrian bridges

Covered, climate controlled
Fully enclosed and heated/air conditioned, like this proposed bridge at LAX

Jacked-in-place
Tunnel segments are assembled next to the tunnel, then “slid” under the ground

Cut and cover
A trench is dug for the tunnel to be placed in, and then it’s covered

Partially covered, “High Line” style
Like the High Line linear park in New York City

New Austrian Tunneling Method
Like a tunnel bored through the ground

TYPOLOGIES
Five bridge and three tunnel typologies were developed to help the study team and stakeholders understand the direction a connection could take. Each typology has its own benefits and challenges—future studies will be needed to determine which typology is the right fit.

The renderings show just one possibility of what could be.
ALIGNMENT

The study team partnered with the working group and the public to evaluate potential alignments for a new connection between Crystal City and DCA. The recommended alignment provides:

- The most direct route with the greatest opportunity to connect multimodal assets including VRE’s relocated station in Crystal City and the Mount Vernon Trail.
- The greatest economic development potential of the options studied, by serving more hotel rooms, office space, and residential units within a 15-minute walk of the airport.

OPTIONS

With the preferred route identified, the study team and the working group considered a bridge option and a tunnel option against four evaluation criteria: implementation, connectivity, enjoyment, and cost. Both options require complex engineering, permitting, land acquisition, and construction.

<table>
<thead>
<tr>
<th>Implementation</th>
<th>Connectivity</th>
<th>Enjoyment</th>
<th>Cost</th>
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<tbody>
<tr>
<td><strong>Bridge Option</strong></td>
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<tr>
<td>Requires significant coordination and approvals by NPS and NCPC by crossing the Parkway</td>
<td>Directly connects to VRE’s relocated station and the Mount Vernon Trail</td>
<td>Opportunity to celebrate the Parkway from a unique vantage point</td>
<td>Estimated at $16 million to $26 million</td>
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<tr>
<td><strong>Tunnel Option</strong></td>
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<tr>
<td>Requires significant approvals by NPS and CSXT by crossing the parkway and an active rail corridor</td>
<td>Does not directly connect to VRE’s relocated station or the Mount Vernon Trail; requires underground access at Crystal City &amp; DCA</td>
<td>Has personal safety challenges associated with underutilized tunnels</td>
<td>Estimated at $28 million to $38 million (additional costs include emergency ventilation/egress)</td>
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A Path Forward

A clear path forward is critical to continuing momentum with stakeholders and the public. The CC2DCA connection crosses multiple federal, local, and private ownerships, requiring compliance with varying regulations and approvals. So how do we keep the project moving?

NEXT STEPS...

Steering Committee
Establish a CC2DCA project steering committee with local and federal partners

Arlington County Coordination
Work with Arlington County staff to determine how to incorporate the project into the Capital Improvement Plan (CIP)

VRE Design Coordination
Ensure project parity with the ongoing Crystal City VRE station improvement project, which could serve as a springboard for the connection

Short-Term Improvements
Work with owners on implementing short-term improvements

SHORT-TERM IMPROVEMENTS
The connection will take several years to move from vision to reality. Short-term improvements could help increase the use of existing walking routes between Crystal City and DCA, including the Mount Vernon Trail and 26th Street Bridge.

Wayfinding and lighting
Improved identification of routes through lighting and signage could improve the user experience of the existing walks.

ADA compliance
The existing Mount Vernon Trail connector from Crystal Drive under the CSXT underpass in Crystal City and the 26th Street Bridge ramp are too steep for ADA accessibility.

Sidewalks and crosswalks
A consistent material for sidewalks and a safety plan for intersections should be identified for both existing walking routes.

New linkages
Both routes could be improved through the addition of short connections between existing routes.

Underpass widening
The 4.5-foot-wide Parkway underpass along the Mount Vernon Trail tunnel should be widened or a second tunnel constructed to increase capacity.
PROJECT IMPLEMENTATION STEPS

YEAR 1
PLANNING

For the planning phase the lead federal agency, project sponsor, and appropriate level of environmental review will be established. And as design concepts are refined, a comprehensive funding approach will be solidified and the project will be submitted to the Constrained Long-Range Plan.

YEARS 2-4
DESIGN + ENVIRONMENTAL

During the design and environmental phase, the effects of the CC2DCA project on the natural, built, and human environment will be evaluated, and the project will be subject to an assessment of adverse effects under Section 106 and Section 4(f).

YEARS 5-6
PERMITTING + CONSTRUCTION

For the permitting and construction phase, final approvals will be granted from entities like the Arlington County Board, CSXT, NPS, and MWAA.
Thank you to our working group!

AMTRAK
Arlington County Department of Environmental Services
Arlington Economic Development
Arlington Convention and Visitor Services (ACVS)
CSX Transportation (CSXT)
Crystal City Civic Association (CCCCA)
JBG SMITH
Metropolitan Washington Airports Authority (MWAA)
National Park Service
National Capital Planning Commission
Office of Congressman Don Beyer
Virginia Department of Rail and Public Transportation (DRPT)
Virginia Railway Express (VRE)
Washington Metropolitan Area Transit Authority (WMATA)

Let’s Take the Next Step Together!

A direct pedestrian connection from Crystal City to DCA is feasible, and would bring tremendous value to the neighborhood for residents, businesses, and visitors to the region.

Implementing bold visions like the CC2DCA connection requires strong leadership, thoughtful collaboration, and persistence. By exploring forward-thinking opportunities to implement the project, stakeholders will lay the groundwork for Crystal City to become a true “aerotropolis” unlike any other in the United States. We’ve taken the first step towards a vision for a new pedestrian connection between Virginia’s largest downtown district and its busiest airport—are you ready to help take the next step?

Visit www.cc2dca.com to download the full feasibility study!
MISSION: To build a dynamic, context-sensitive intermodal connector that offers new opportunities to link residents and visitors to a hub of infrastructure connecting the airport, Metrorail, commuter rail, regional rail, surface transit, and recreational amenities.
Investments underway to relocate the Crystal City VRE Commuter Rail station presented an opportunity to leverage the investment into a larger-scale intermodal connection by connecting to the airport and its Metrorail station with a pedestrian connection. The BID’s feasibility study explored this possibility.
Public meetings were held overlooking the project area to help visualize the opportunity. At the kick-off, the project team gathered ideas on where the connection should be though an activity called “pin the tail on the trail”. Meetings were broadcast on Facebook live with more than 2,000 online views.
Given the complex nature of the project with multiple federal agencies, railroads, private land owners, and the local municipality, stakeholder participation was key to the success of the study. Approximately 40 individuals representing 25 different stakeholder groups came together to form the working group to steer the direction of the study and provide direct, relevant feedback.
The project team investigated two alignments for a connection directly linking the Airport to Crystal City. Each option was measured for its connectivity to office, retail, hotel, meeting space, and residential. Alignment A was selected because it brought the Airport closer to the greatest number of commercial and hospitality uses.
The team studied a variety of connection typologies, from uncovered bridge structures, similar to other portions of NPS’s George Washington Parkway and its Mount Vernon Trail, to seamless, yet expensive tunneling options that preserve unobstructed views along NPS's Parkway.
A high line–style bridge structure captures what a connection could be. In Crystal City, the bridge lands on a highly visible plaza that serves as a hub for travelers connecting between Metrorail, Metroway, VRE, the Mount Vernon Trail, and the Airport. Future connections could include Amtrak and MARC service.
Departing the airport, the connection directs passengers to a variety of destinations, from the Mount Vernon Trail, VRE, or businesses downtown. Providing light cover, the connection could also be landscaped to settle the bridge into its park surroundings.
Any structure that crosses over NPS’s Parkway would need to take into consideration mass, height, and lighting impacts. One idea is to pinch the bridge as it crosses the Parkway, bringing two bridge segments together to “kiss” above the Parkway, minimizing the bulk at this sensitive location.
DCA’s multibillion-dollar project, currently underway, will place the entire Airport behind security gates limiting public aviation gazing—a popular pastime for visitors and residents alike. A bridge connection could offer a new vantage point to watch planes land with NPS’s Parkway in the foreground and DC in the distance.
Though costlier than a bridge, a tunnel connection could protect NPS’s cultural and historic resources along the Parkway. The project team determined that this option is feasible if geotechnical conditions are suitable, as NPS’s Parkway was built on fill material.
After the feasibility study’s release in February of 2018, Arlington County included an additional $500,000 in funds in the 10-year capital improvement program, a key recommendation and the only new project added in a difficult budget cycle. In November 2018, it was revealed that CC2DCA was included as one of five core infrastructure investments to be funded as part of the Amazon HQ2 State Package.