DISTRICT DEPARTMENT OF TRANSPORTATION

Delivery Microhub Feasibility Study

Agenda

- Project Overview and Timeline
- What is a microhub?
- Siting Analysis
- Preliminary Findings
- Next Steps

Project Overview

Study Partners

District Department of Transportation

- DDOT is the main project manager and recipient of the technical work
- Handles administration of CNCA contract
- Led by Florence Dwyer and Laura McNeil of the DDOT Freight Program

Metropolitan Washington Council of Governments

- Funding for feasibility study from MWCOG's Transportation/Land Use Connections Program
- COG provides the oversight and is a funder, but generally not a main partner on technical work

CNCA

Carbon Neutral Cities Alliance

- DDOT received competitive funding from CNCA for pilot implementation
- Collaboration of global cities working to achieve carbon neutrality in 10 to 20 years

NELSON NYGAARD

- DDOT is working with consultants at Nelson/Nygaard on this project

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Delivery Microhub Feasibility Study and Pilot

Goals:
Address impacts of delivery activities including traffic volume, roadway congestion, curbside conflicts, safety issues, emissions impacts

Approach:
Develop criteria for defining a feasible service area and for siting a delivery microhub
Consult with stakeholders on microhub approach
Develop evaluation criteria for pilot microhub
Conduct operational pilot and evaluate results

Last Mile Delivery Modes:
Sustainable methods
(hand carts, bikes, e-bikes, similar evolving technologies)

What is a Microhub?

Delivery Microhub

A small-scale urban logistics facility where goods are bundled at a location between a major suburban warehouse and the final delivery destination.

- Serve a limited spatial range (typically no more than 6 square miles)
- Intend to reduce the number of vehicle trips by allowing for a shift to low-emission or zero-emission vehicles or modes (e.g., walking or cargo bikes)
- Serve high-density areas where delivery activities are difficult because of limited curb space for large vehicles, limited access on streets, and restricted traffic conditions
- Can be used by one carrier/operator or designed to allow a range of multi-carrier consolidation efforts

Delivery Microhub Examples

A small-scale urban logistics facility where goods are bundled at a location between a major suburban warehouse and the final delivery destination.

Seattle Neighborhood Delivery Hub

UPS Hamburg Microhub

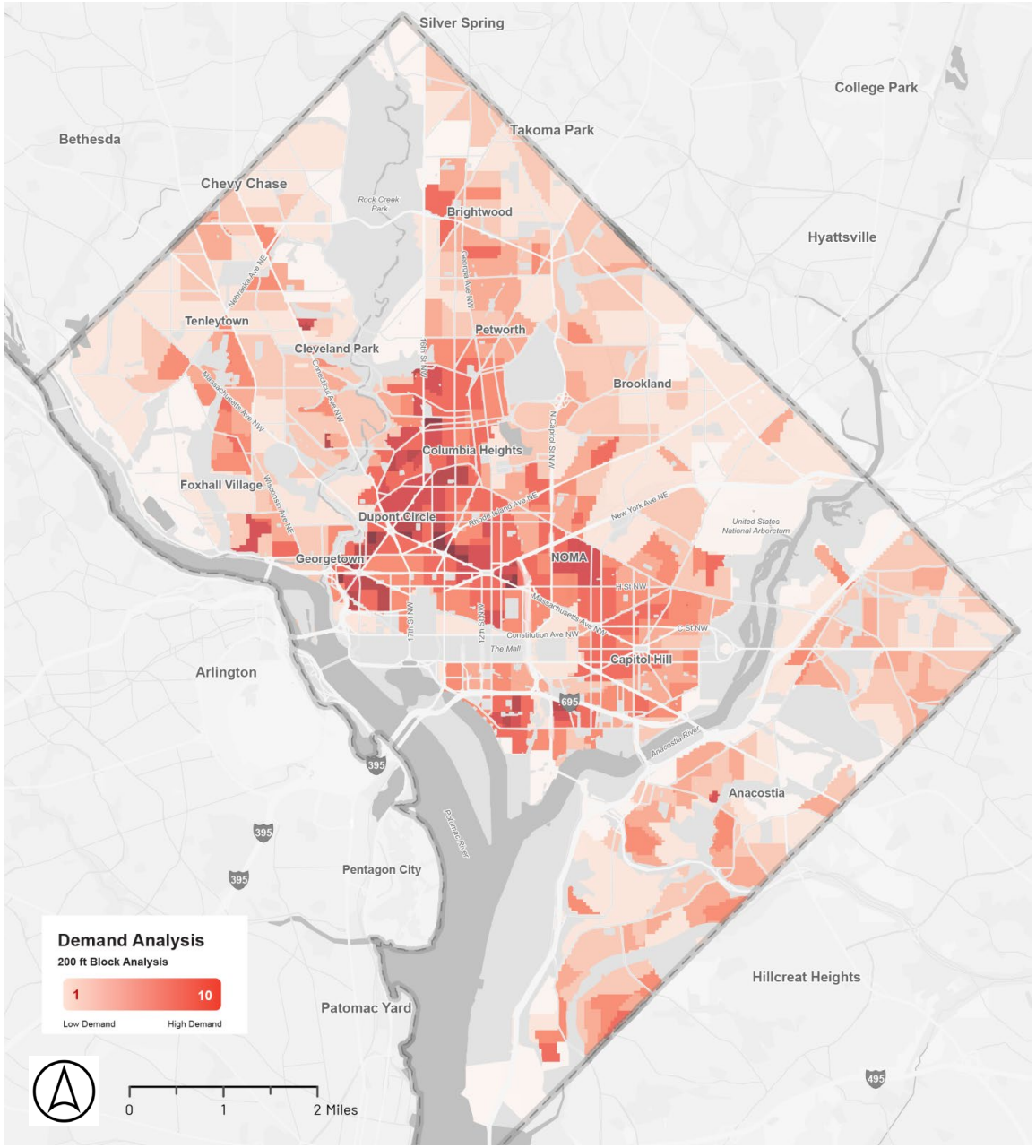
What Makes a Good Microhub Location?

Large demand for packages within potential service area

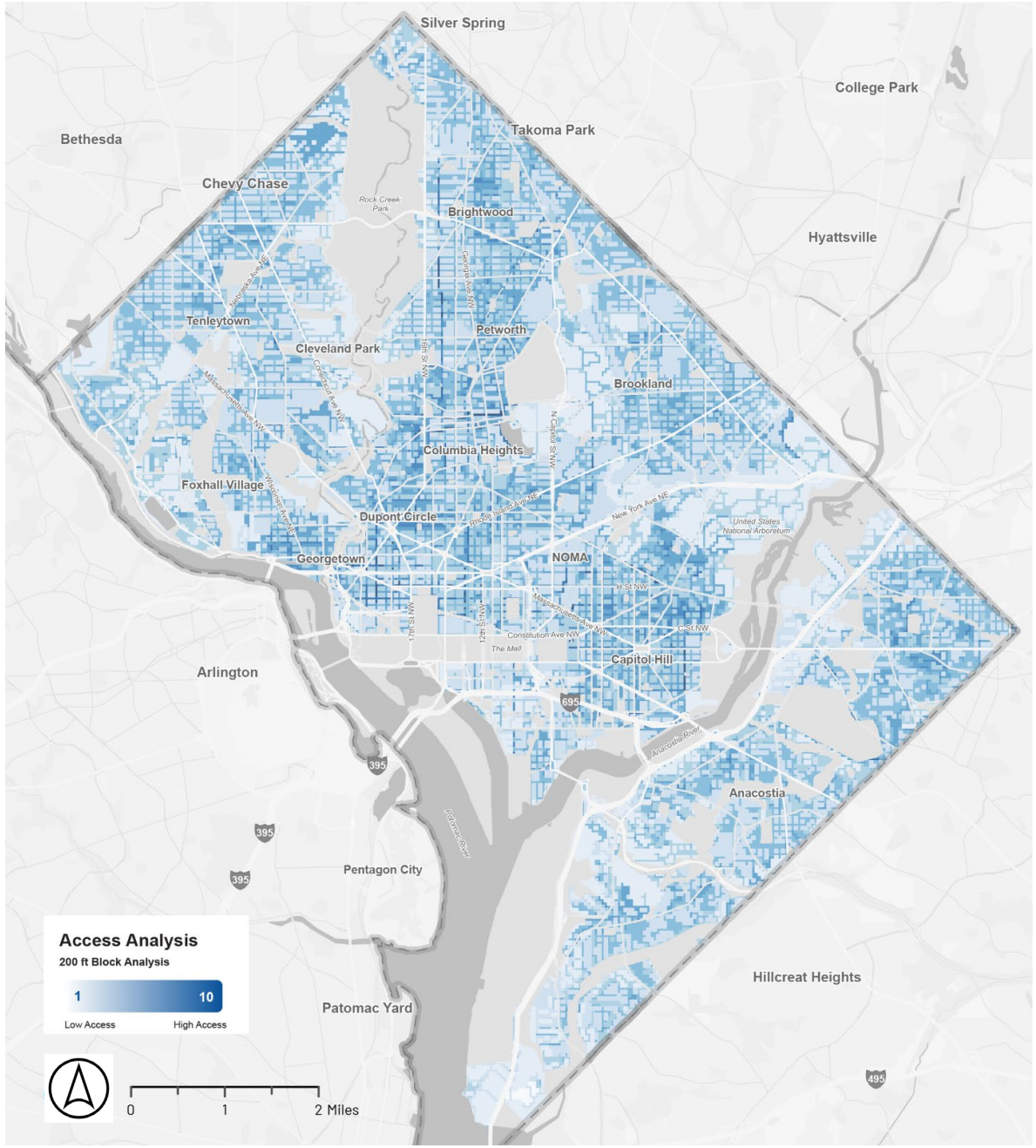
- Higher population demand (most parcel delivery is headed to residential customers)
- Higher residential unit density (more address destinations concentrated)
- Higher employment density (office deliveries can be more predictable and routine to schedule delivery routing)

Easier access for trans-shipment trucks and last-mile modes

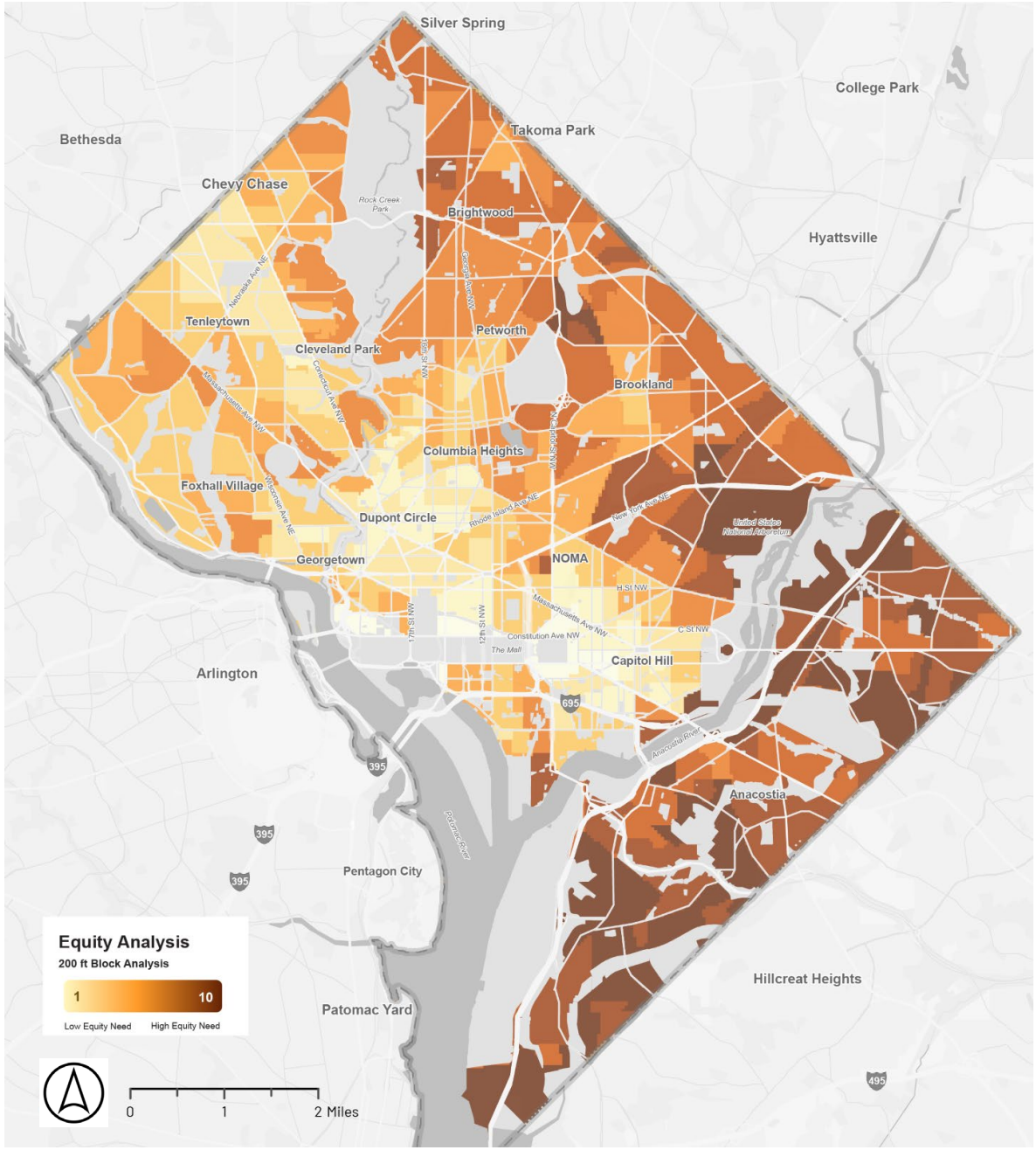
- Level of roadway congestion
- Close to highway ramps incoming from larger distribution centers
- High demand for on-street parking
- Connected and safe bicycle network
- Higher degree of pedestrian comfort with street crossings, sidewalk conditions



Delivery Demand Analysis in DC



Delivery Access Analysis in DC



Mobility Hub Equity Considerations in DC

Preliminary Findings

Preliminary Findings

- Microhubs work best for deliveries that are non-perishable, small in size and weight, and have a short last-mile delivery trip – parcel deliveries determined to be the best use case for a microhub in the District
- Delivery companies do NOT want to share microhub space
- Consider demand, access, and equity metrics to determine a good microhub location

New York City Loading

Next Steps

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