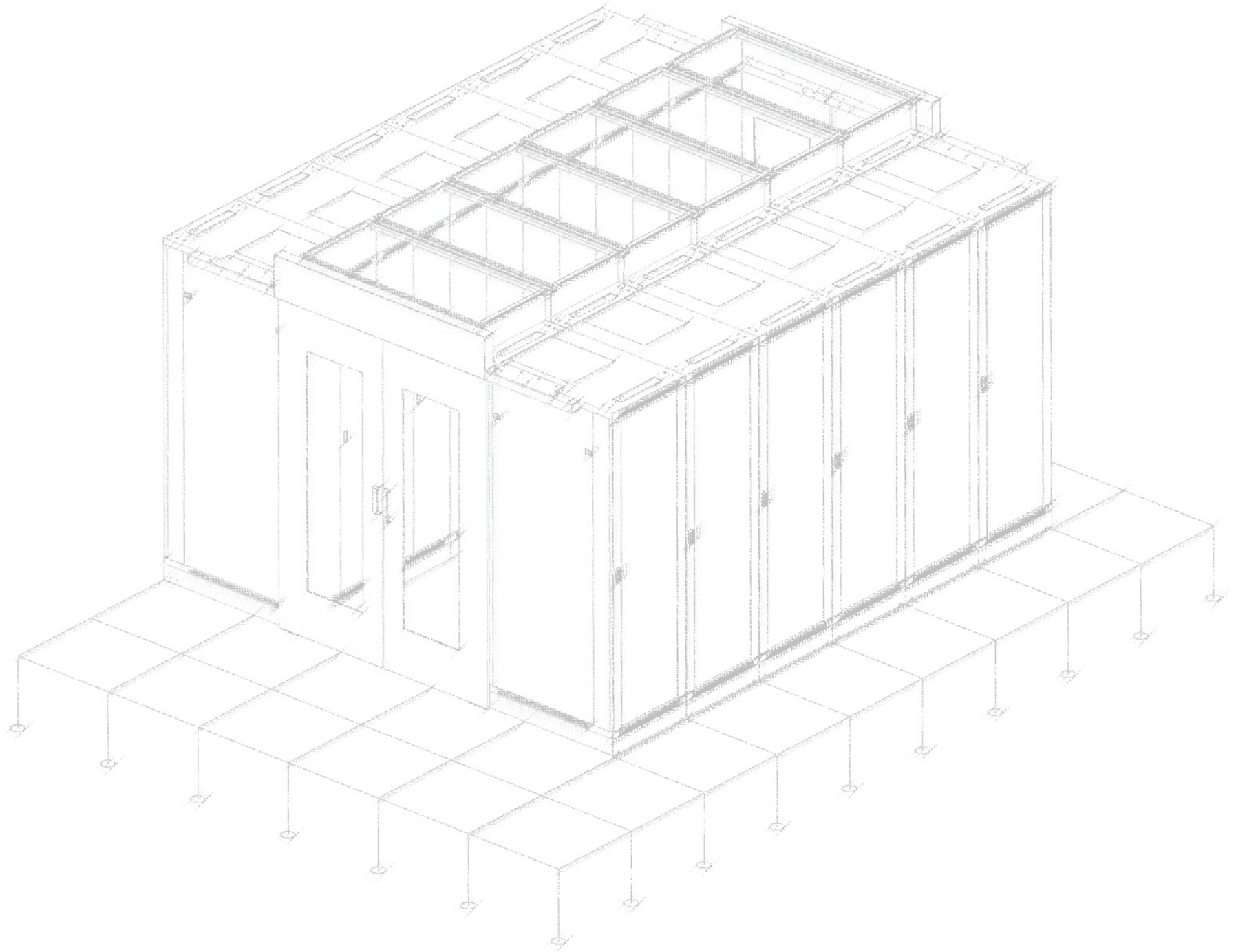


NEF

Data Center

Network Validation

Contents

Metro Infrastructure at the Data Center

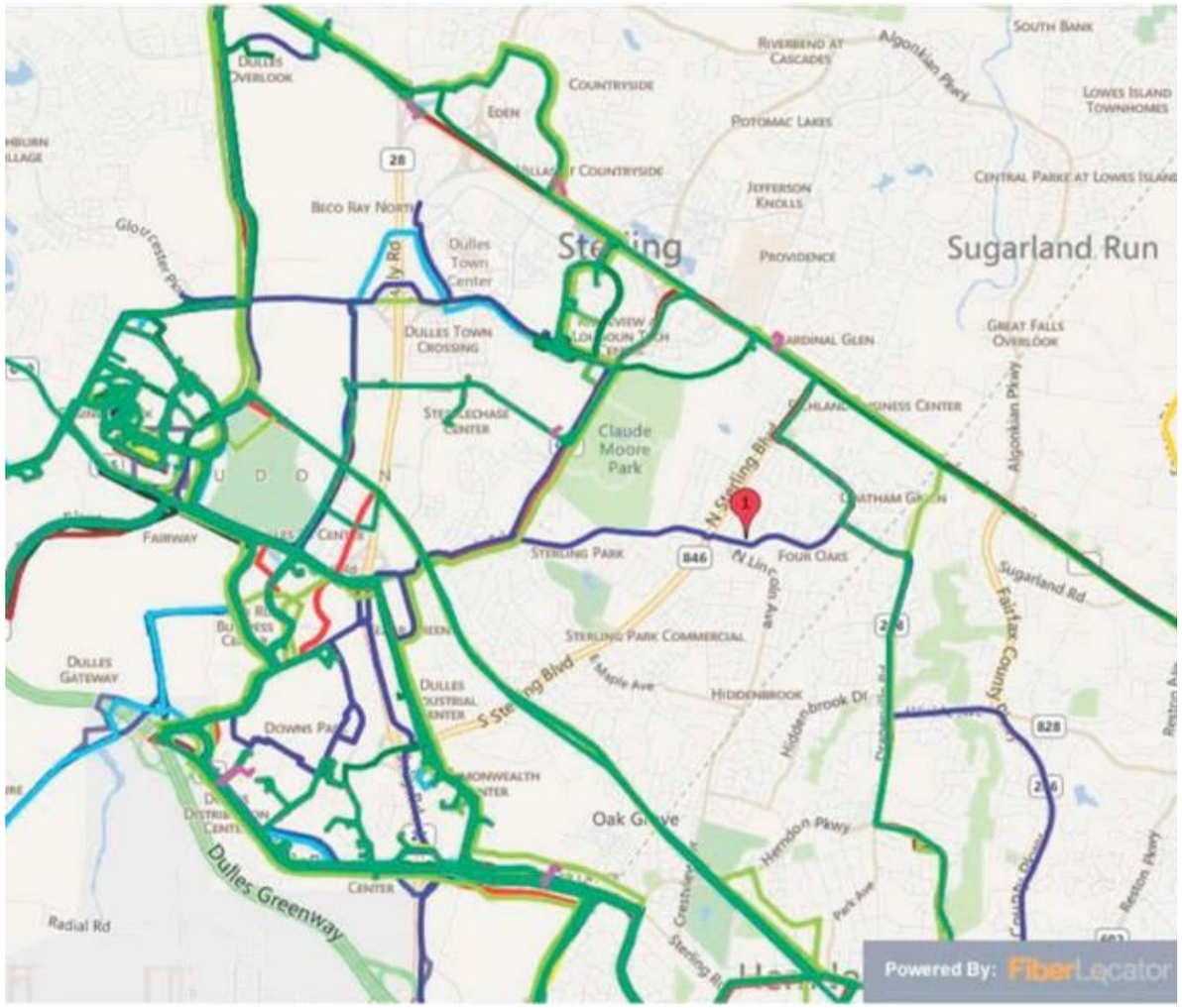
Long-Haul Infrastructure Near the Data Center

Carrier Hotels in the Area

Network Diversity

Background

This report provides data on the providers and maps relevant to the data center at 23070 Shaw Road, Sterling, Va. The network validation also reports on related telecommunications infrastructure information for the area's carrier hotels and potential for network diversity.



Metro Network Summary

Located in one of the most densely populated areas in the country for fiber infrastructure, the 23070 Shaw Road location in Sterling, Va., benefits from its proximity to network connectivity hubs in Ashburn, Va., and the metro area's highly connected carrier hotels.

There is dense metro fiber infrastructure at the target address and the surrounding area. High-capacity optical services are readily available.

Metro Infrastructure

Metro Service Providers at the Data Center

windstream

comcast

at&t

FiberLight

Level (3) COMMUNICATIONS

sunesys

Carriers

Available Providers

	Facilities-Based Service Providers	Type II Providers
On-Net Providers	sunesys	windstream
	at&t	Level(3) COMMUNICATIONS
	zayo GROUP	
Near-Net Providers	comcast	XO communications

Definitions

Facilities-based service providers own and operate their own fiber network. Type II providers access the location by leasing dark fiber or lit service from facility based providers.

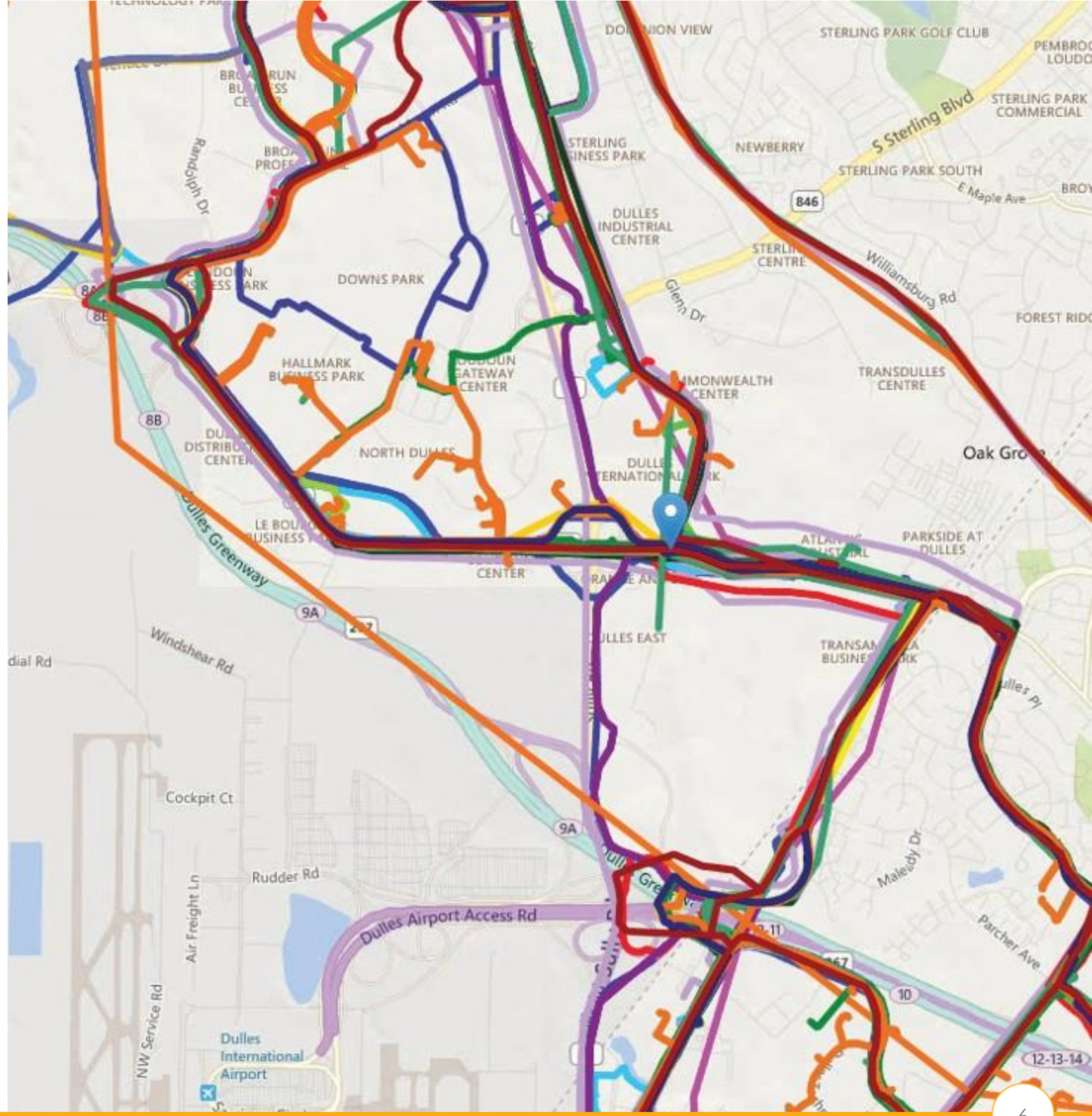
On-net providers are those that have network terminated in the building and can offer it without additional network construction. Near-net providers do not have existing network terminated in the building but are close enough to the designated location that they could build into the building given enough time and revenue.

FiberLocator

1 Mile Metro

Metro Networks

- AiNet
- Atlantech Online
- CenturyLink Metro
- CenturyLink Metro Leased
- Fiberlight
- LIT Networks
- Level3 Metro
- Lightower
- Lightower Leased
- Lumos
- NOVEC
- PEG Bandwidth
- Shentel
- Summit IG
- Sunesys
- USA Fiber - UC
- Windstream
- XO Communications
- Yellow Fiber
- Zayo Dark
- Zayo Metro
- Zayo Planned Routes



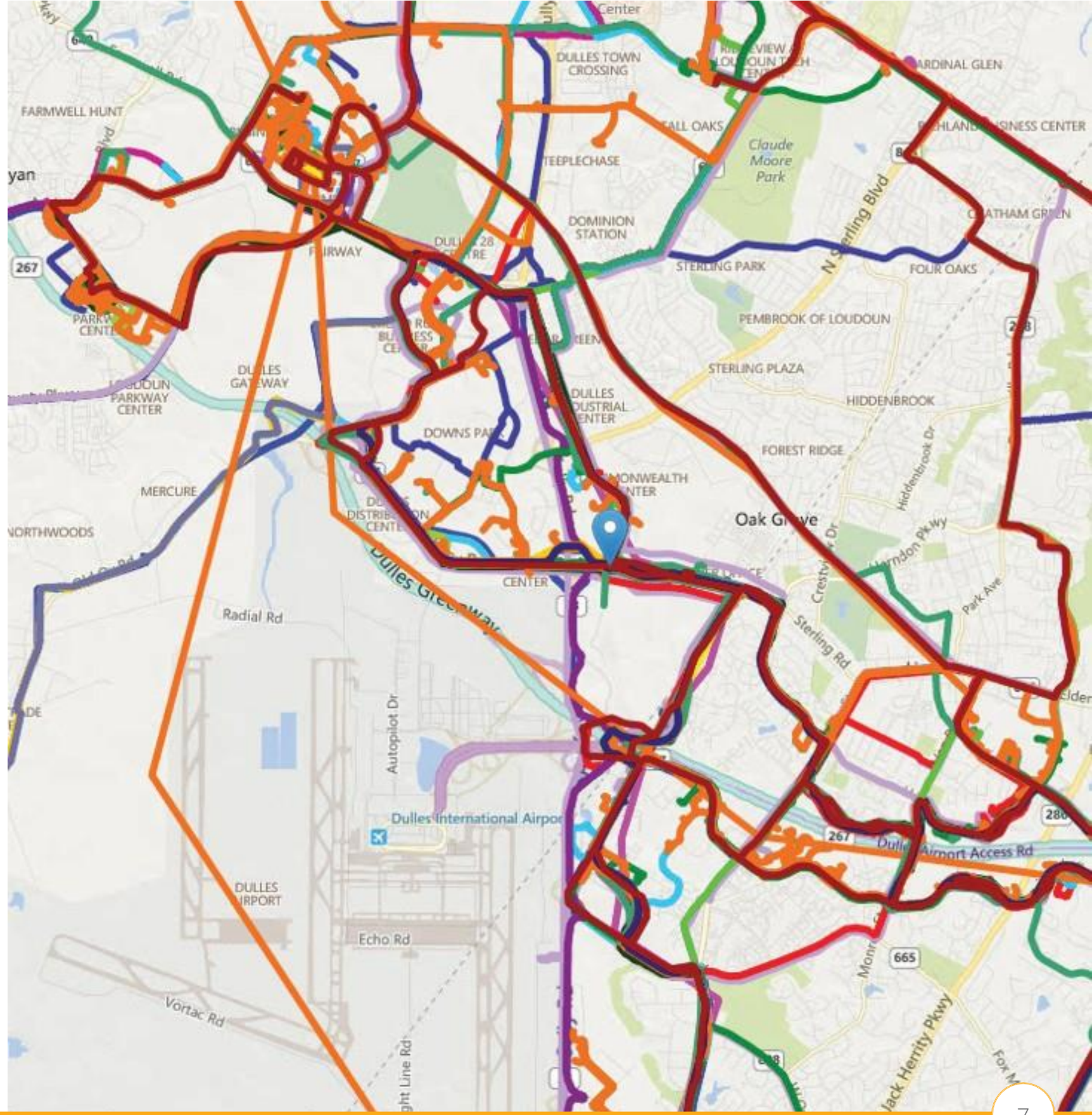
Metro Carrier View — 1 Mile

FiberLocator

3 Mile Metro

Metro Networks

- AiNet
- Atlantech Online
- CenturyLink Metro
- CenturyLink Metro Leased
- Fiberlight
- LIT Networks
- Level3 Metro
- Lightower
- Lightower Leased
- Lumos
- NOVEC
- PEG Bandwidth
- Shentel
- Summit IG
- Sunesys
- USA Fiber - UC
- Windstream
- XO Communications
- Yellow Fiber
- Zayo Dark
- Zayo Metro
- Zayo Planned Routes



Metro Carrier View — 3 Mile

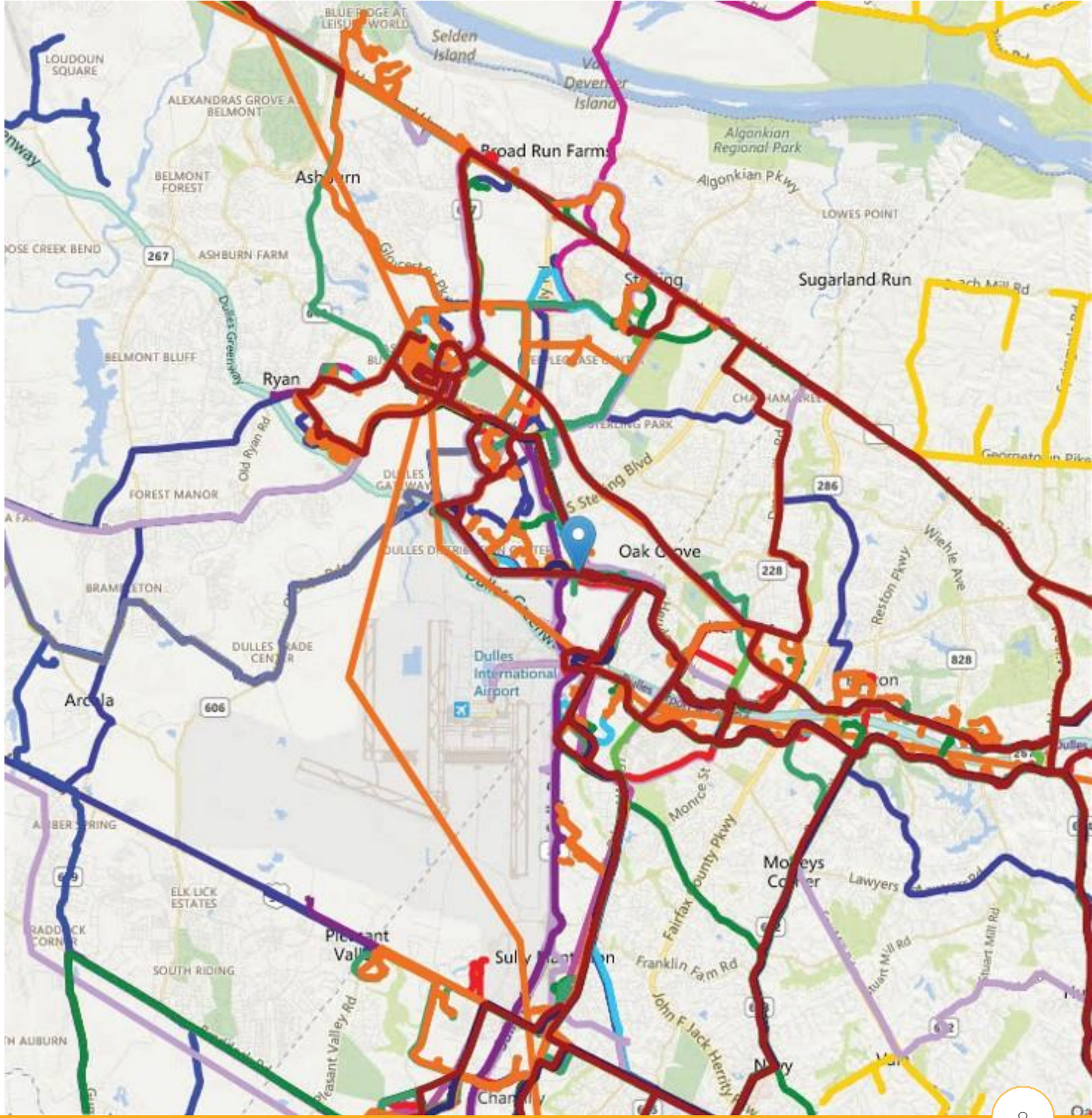
FiberLocator

5 Mile Metro

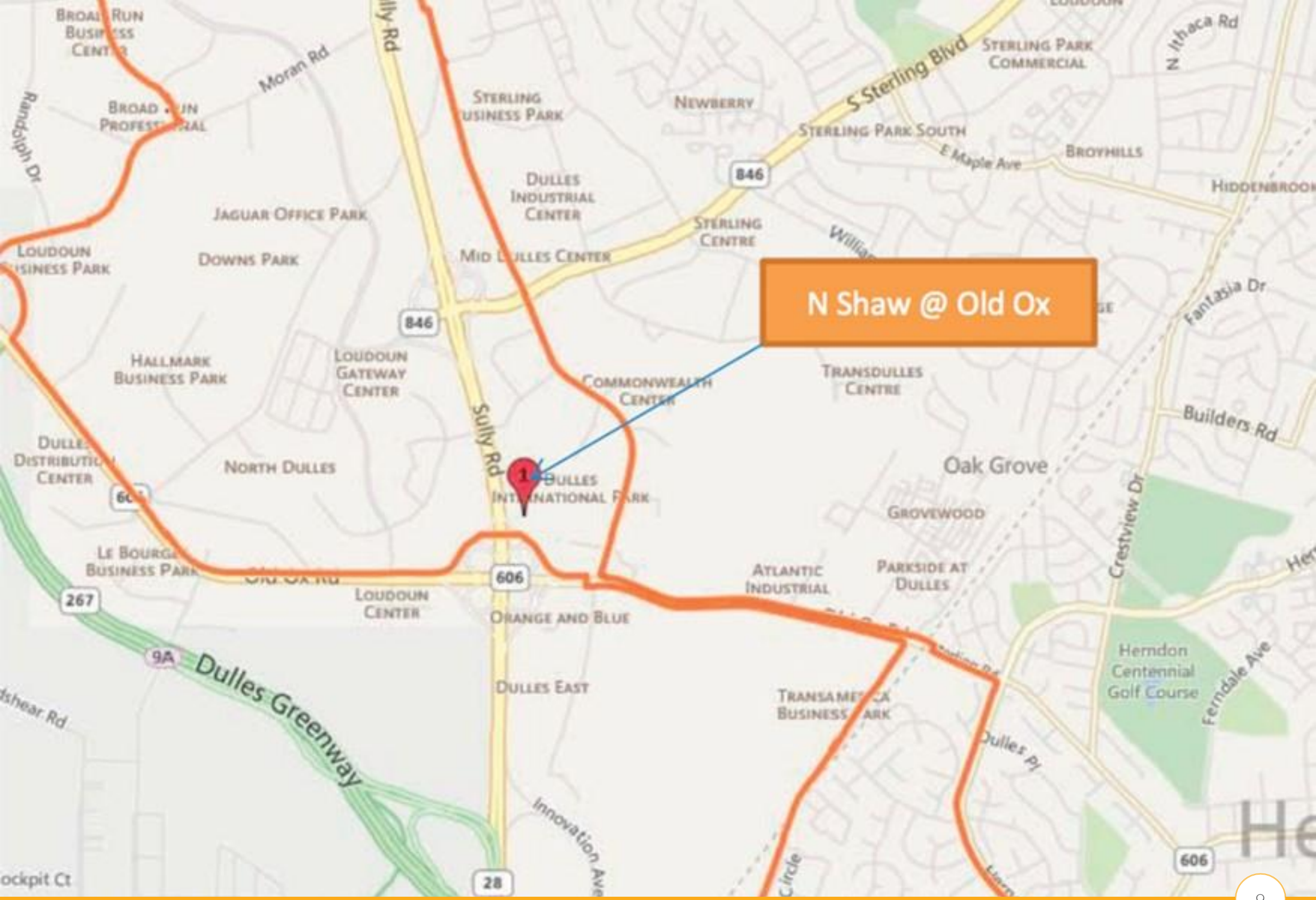
Metro Networks

- AiNet
- Atlantech Online
- CenturyLink Metro
- CenturyLink Metro Leased
- Fiberlight
- LIT Networks
- Level3 Metro
- Lightower
- Lightower Leased
- Lumos
- Maryland Broadband Coo..
- NOVEC
- One Maryland ICBN
- PEG Bandwidth
- RCN
- Shentel
- Summit IG
- Sunesys
- USA Fiber - UC
- Windstream
- XO Communications
- Yellow Fiber
- Zayo Dark

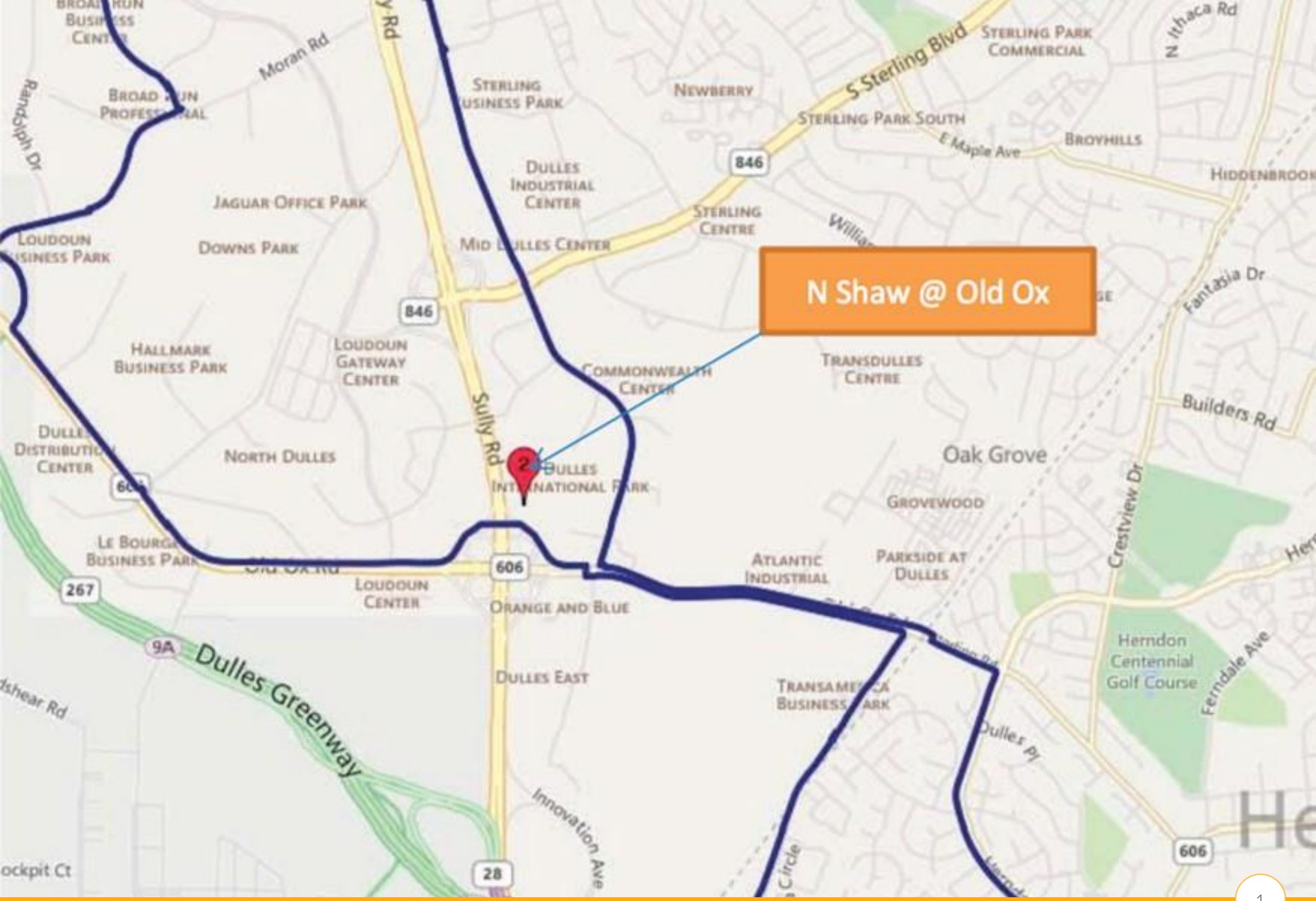
Plus Additional Carriers..



Metro Carrier View — 5 Mile



24/7 Mid Atlantic Networks


N Shaw @ Old Ox
S Sterling Blvd
Sterling Park Commercial
N Ithaca Rd
Sterling Business Park
Newberry
Sterling Park South
E Maple Ave
Broyhills
Hiddenbrook
Dulles Industrial Center
Jaguar Office Park
Sterling Centre
Loudoun Business Park
Downs Park
Mid Dulles Center
846
Fantasia Dr
Hallmark Business Park
Loudoun Gateway Center
Commonwealth Center
Transdulles Centre
Sully Rd
Builders Rd
Dulles Distribution Center
North Dulles
Dulles International Park
Oak Grove
Grovewood
Crestview Dr
Le Bourget Business Park
606
267
Loudoun Center
Orange and Blue
Atlantic Industrial
Parkside at Dulles
Hemdon Centennial Golf Course
Ferndale Ave
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Dulles Greenway
Dulles East
Transamerica Business Park
Dulles Pl
Innovation Ave
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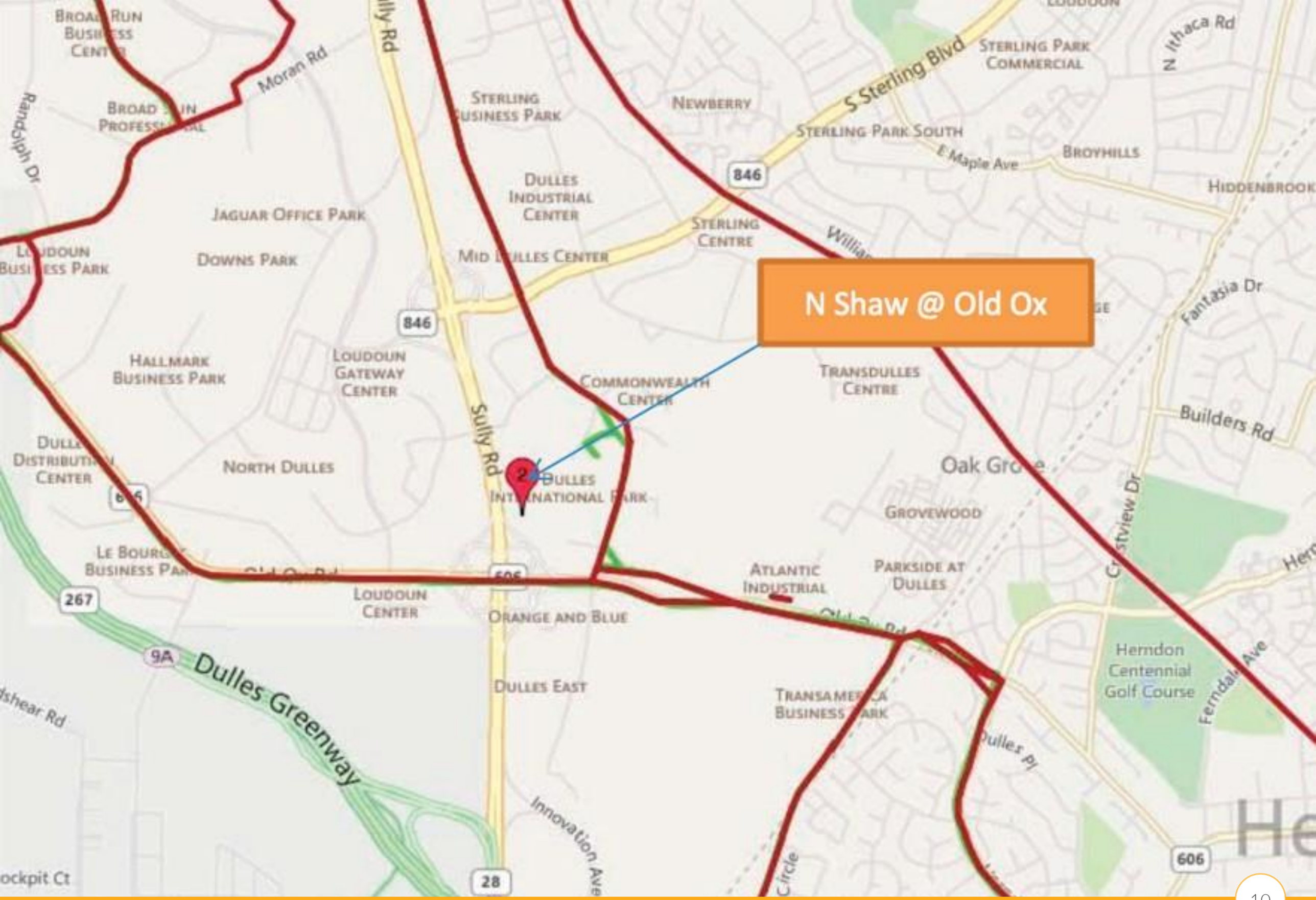
N Shaw @ Old Ox
Broad Run Business Center
Moran Rd
Randolph Dr
Broad Run Professional
Sterling Business Park
Newberry
S Sterling Blvd
Sterling Park Commercial
N Ithaca Rd
Sterling Park South
E Maple Ave
Broyhills
Hiddenbrook
846
Dulles Industrial Center
Jaguar Office Park
Loudoun Business Park
Downs Park
Mid Dulles Center
Sterling Centre
Fantasia Dr
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Transdulles Centre
Builders Rd
Sully Rd
Dulles Distribution Center
North Dulles
Dulles International Park
Oak Grove
Grovewood
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Orange and Blue
Atlantic Industrial
Parkside at Dulles
Herndon Centennial Golf Course
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Dulles Greenway
Dulles East
Transamerica Business Park
Innovation Ave
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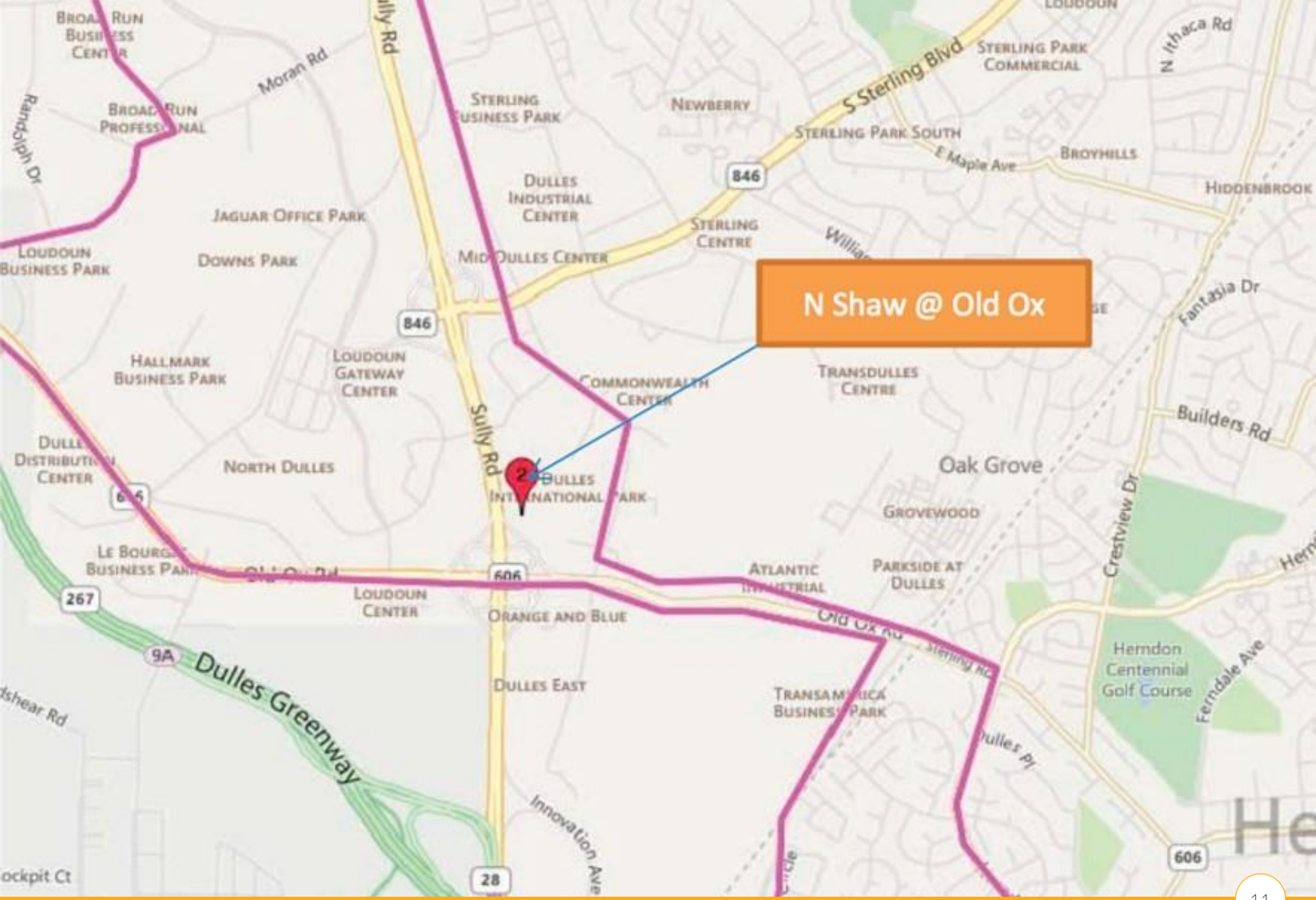
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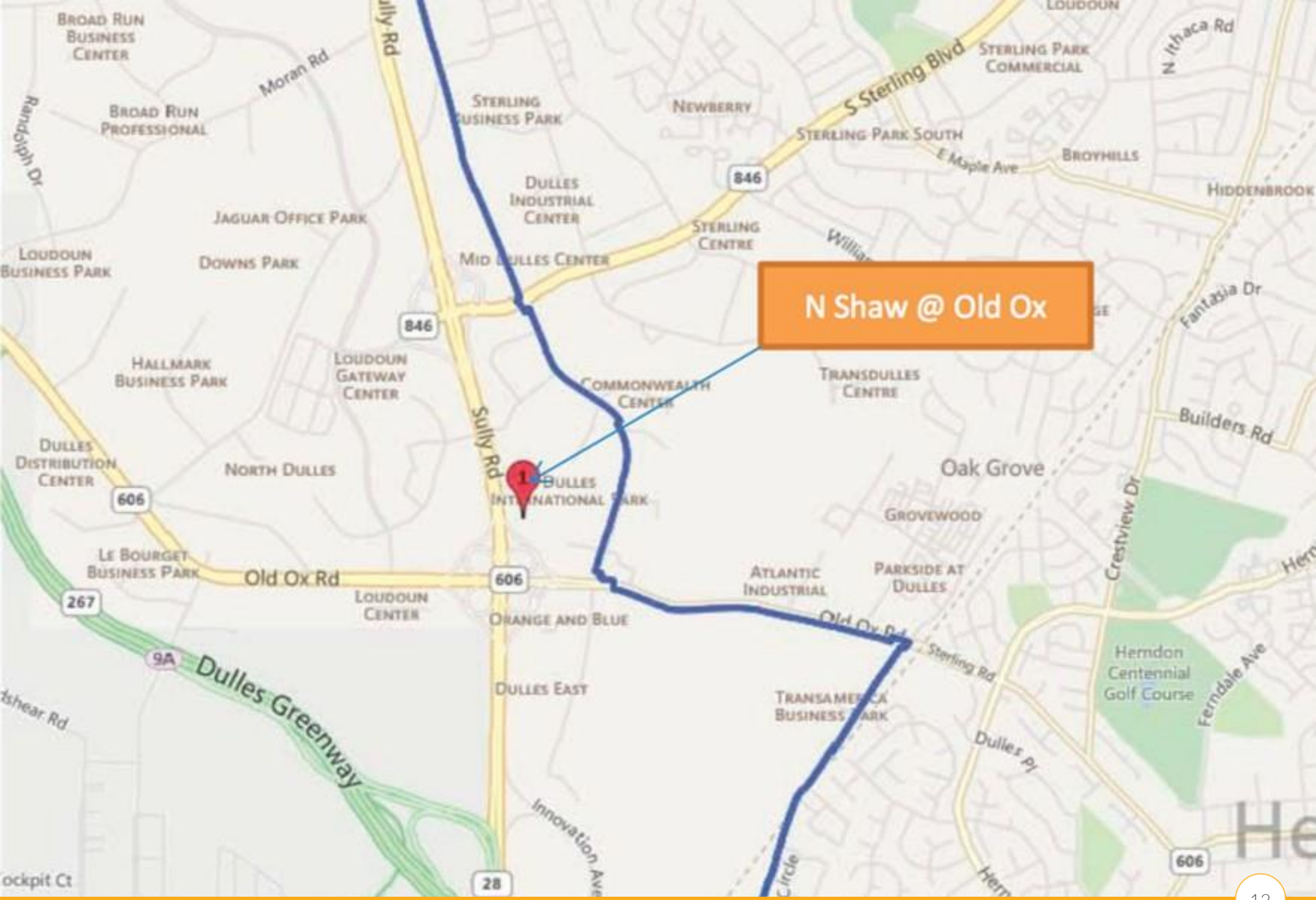
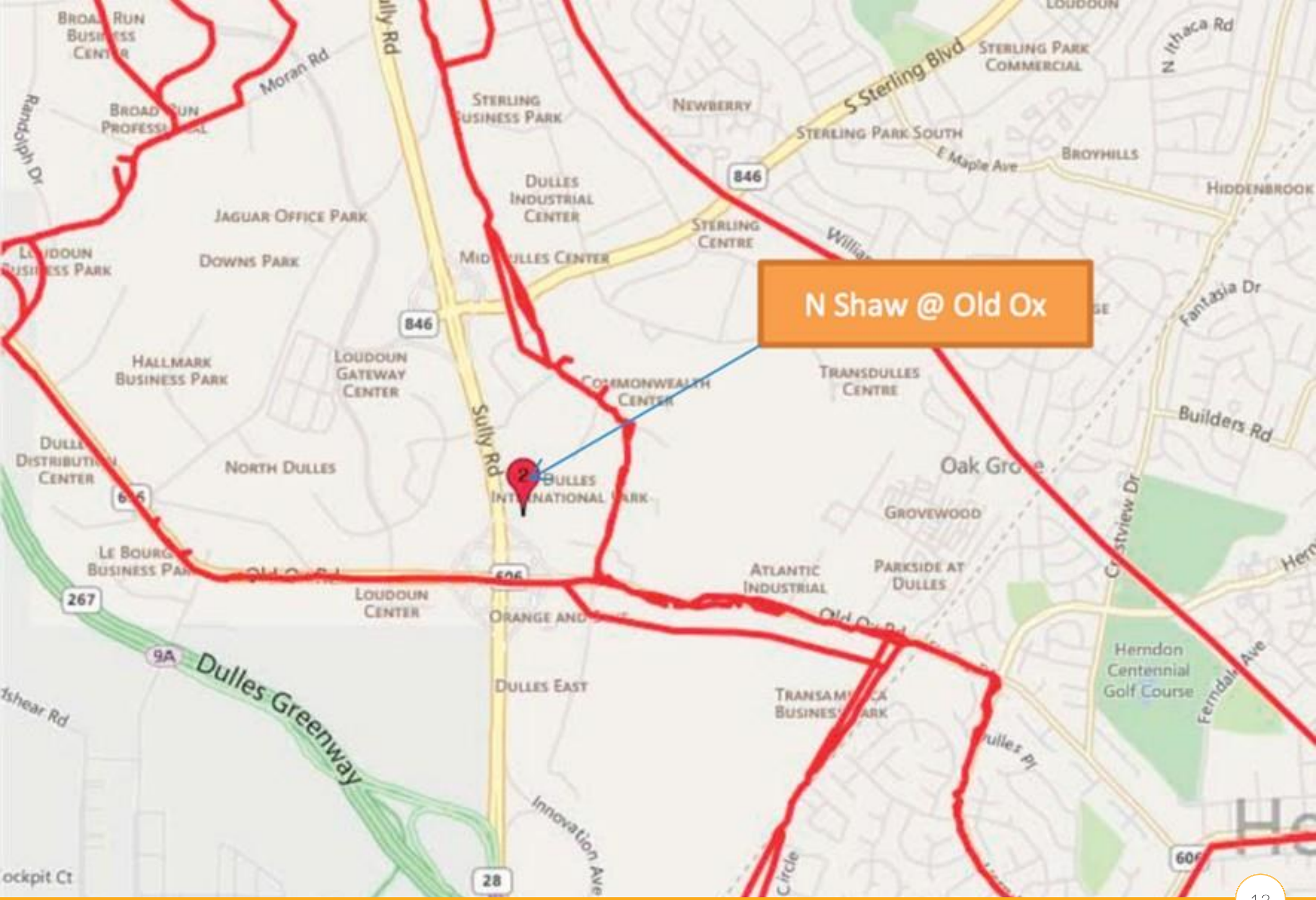


Global Cloud Xchange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Dulles East
Transamerica Business Park
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Ferndale Ave
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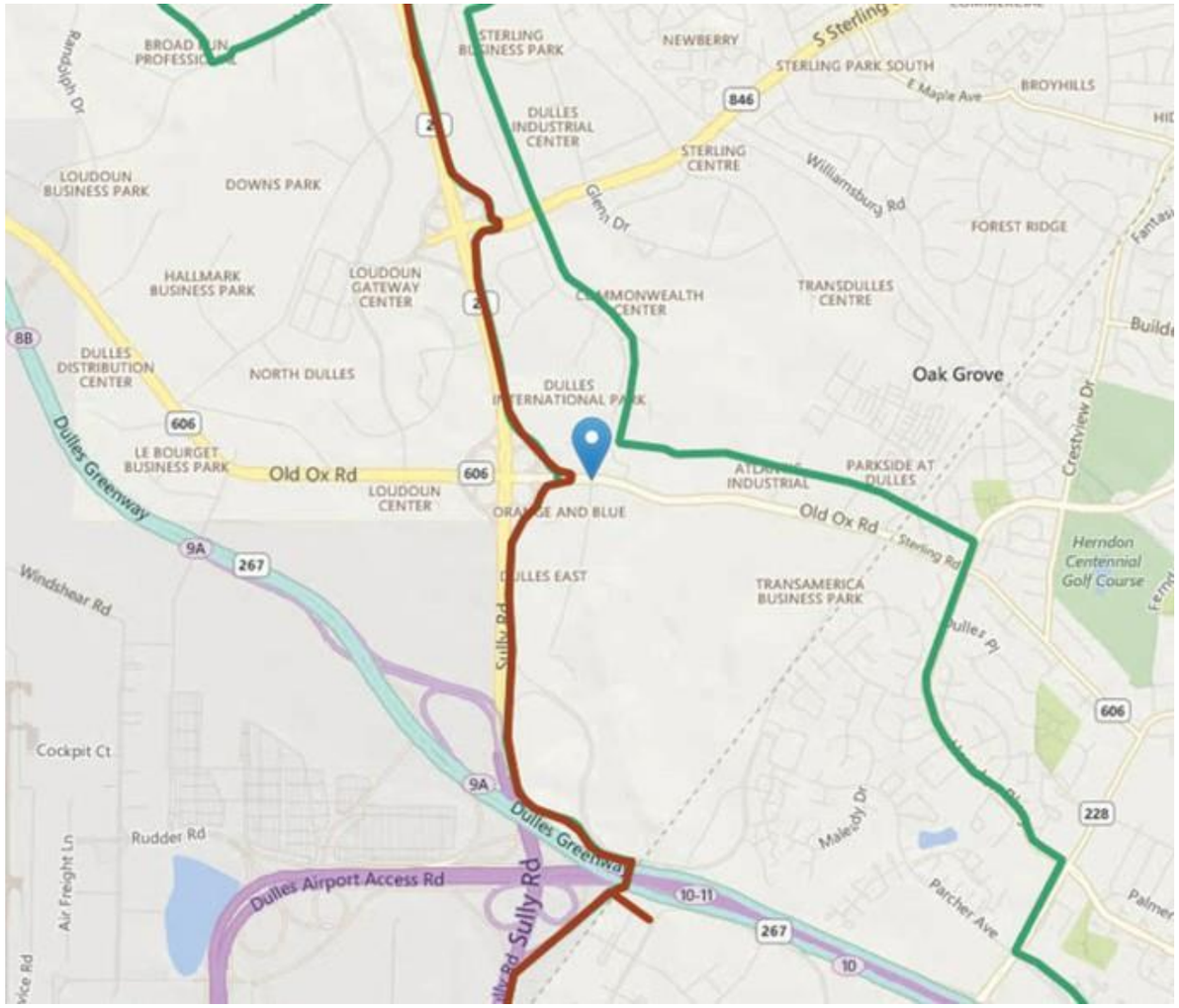
Level 3



Long-haul Network Overview

Long-haul networks carry traffic to and from different metropolitan areas. Typically connecting with metro networks at carrier hotels and other network interconnection locations to exchange traffic.

No long-haul networks are directly accessed at the location. There are long-haul network Points of Presence (PoPs) within close proximity. Most long-haul networks traveling near Sterling add/drop within carrier hotels in Ashburn, Va., and Washington, D.C.

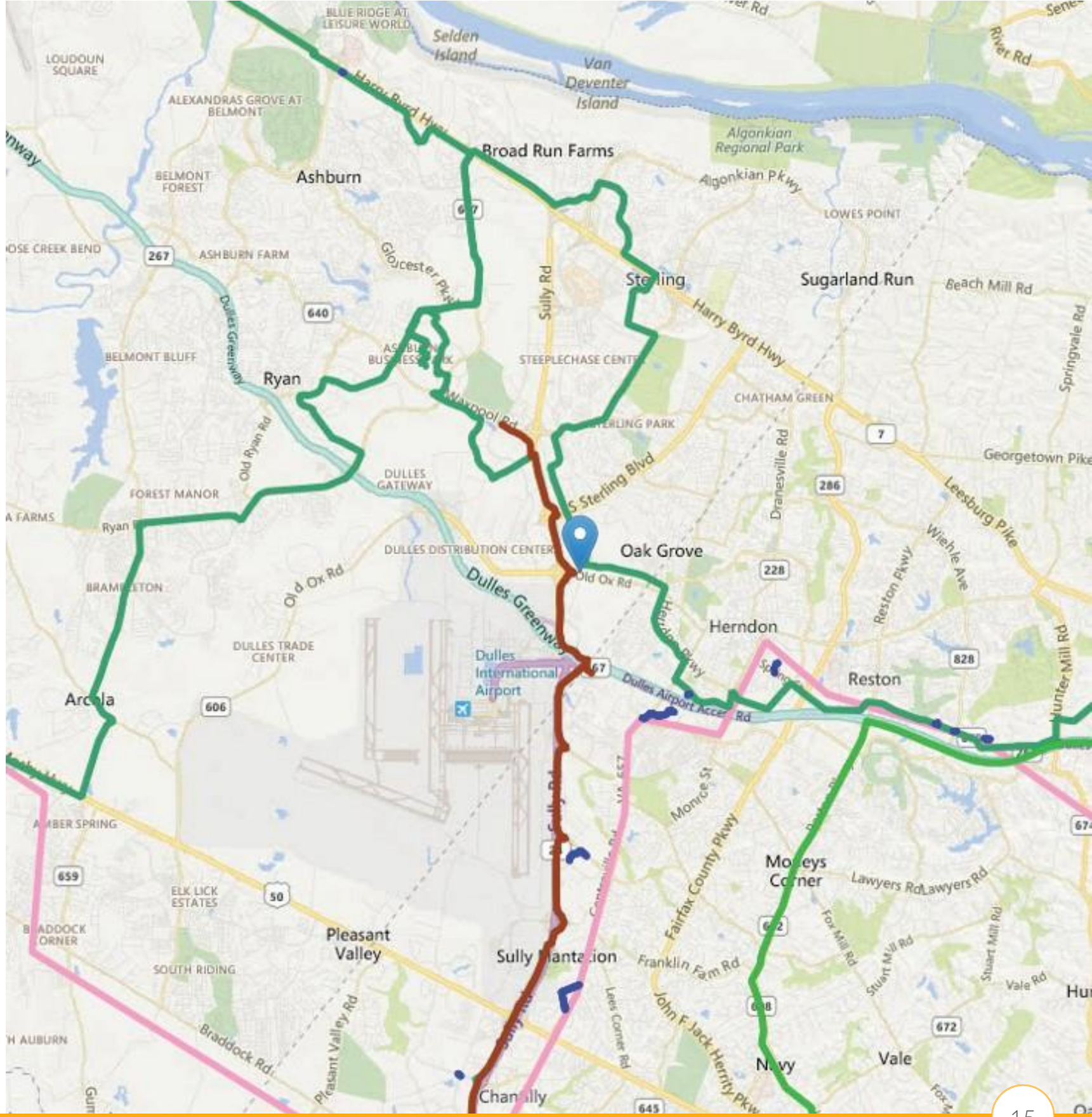
Long-Haul Networks

FiberLocator

5 Mile Long-Haul

Long Haul Networks

- EarthLink Long Haul
- Level 3 Long Haul
- Summit IG Dark Long Haul
- Windstream Long Haul
- XO Long Haul
- Zayo Dark Long Haul
- Zayo Long Haul



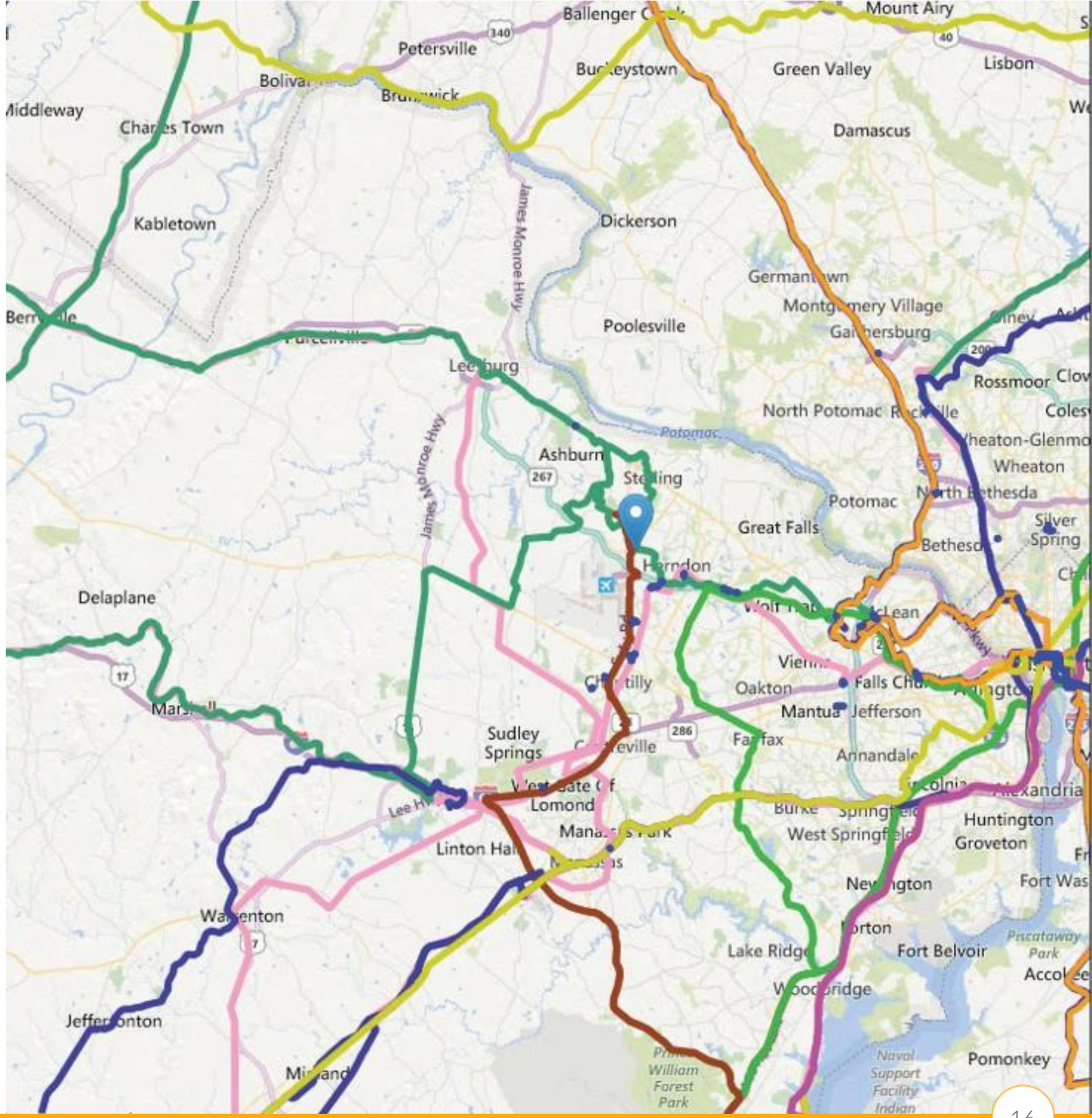
Long-Haul Carrier View — 5 Mile

FiberLocator

20 Mile Long-Haul

Long Haul Networks

- CenturyLink Long Haul
- EarthLink Long Haul
- Level 3 Long Haul
- Sprint Long Haul
- Summit IG Dark Long Haul
- Verizon Long Haul
- Windstream Long Haul
- XO Long Haul
- Zayo Dark Long Haul
- Zayo Long Haul



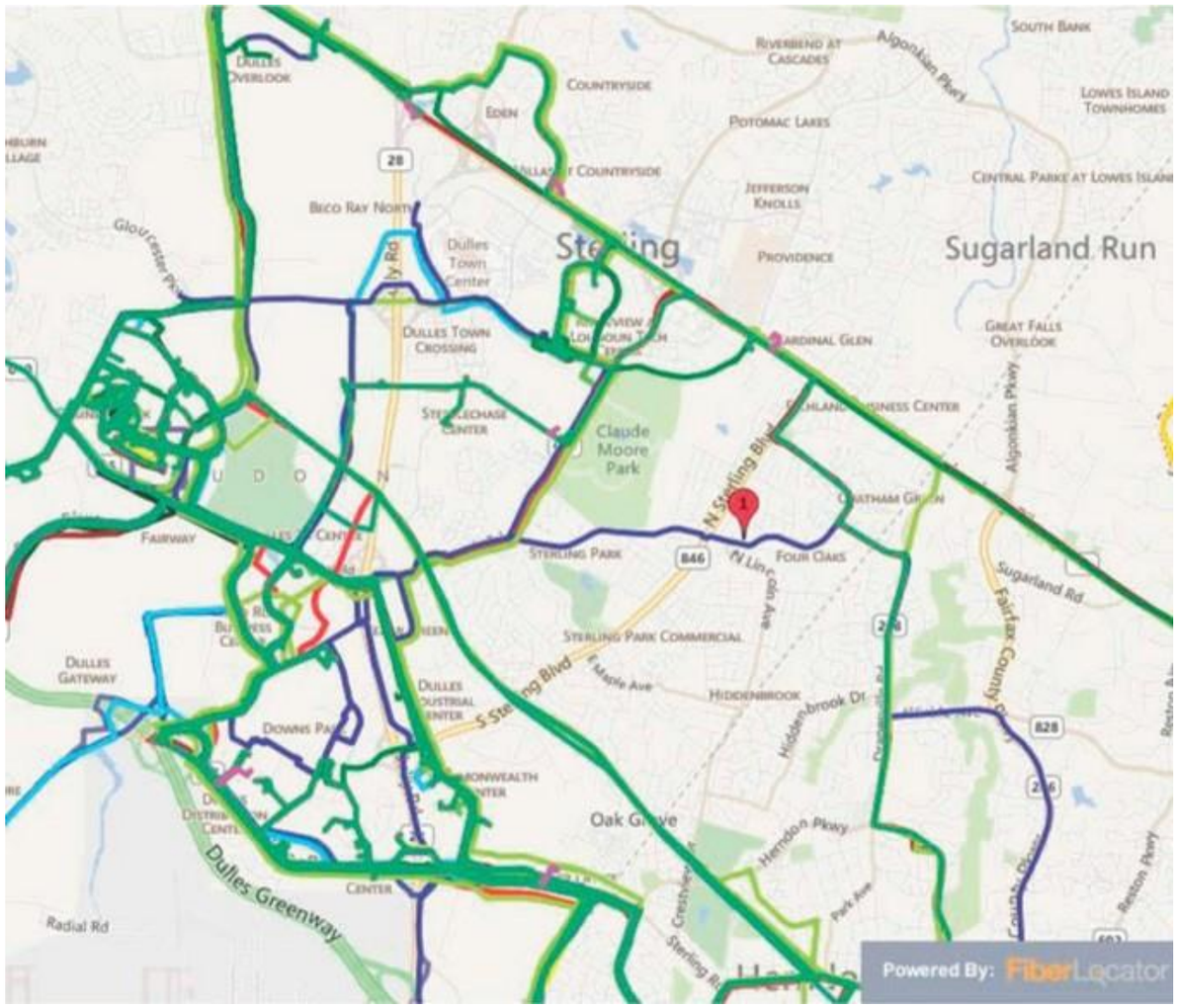
Carrier Hotel Addresses:

- 1275 K St., Washington, D.C.
- 21711 Filigree Court, Ashburn, VA

The carrier hotel locations in the Washington, D.C., metro area are two of the most well-connected facilities in the United States.

Carrier hotels serve as central traffic hubs within a metropolitan area. Most data, voice and video traffic passes through the carrier hotels. There are often several carrier hotel sites within a metropolitan area where networks meet and exchange traffic.

Carrier Hotels



Thanks to plentiful long-haul and metro fiber infrastructure in the nearby area, **carrier and fiber path diversity can be created easily and cost effectively**, ensuring the 23070 Shaw Road data center location in Sterling, Va., can meet the telecom requirements to be classified as a Tier 4 data center.

Network diversity is critical for ensuring services will remain in operation in the event of a systems failure. While many carriers in the metro area share common paths and some carriers operate by leasing fiber from other local providers, this data center possesses the ability offer physical diversity and provider diversity.

Network Diversity

NEF utilizes its proprietary suite of database resources along with tribal knowledge and numerous industry relationships to provide assessments and provider-neutral recommendations, including the following:

- Pricing on available providers
- Physical and provider diversity
- Latency study
- Go/no-go recommendations on feasibility or availability
- Evaluations of telecom connectivity options for specific high-bandwidth applications
- Analyses of the viability of IT and network solutions, including cloud

NEF has created reports and research designed to help organizations make network infrastructure decisions, real estate investments and data center evaluations.

About This Report

This data center validation is intended to provide an overview of the available providers and their metro- and long-haul networks at/near the location of interest. It contains a variety of maps and analyses of the infrastructure in the surrounding area, including carrier-specific routes, data centers and additional background information.

The information in this report is based on carrier-supplied records, in-house research and publically accessible data. The data and records have not been independently verified by New England Fiber, Inc. ("NEF"), and NEF makes no representations or warranties the information is accurate, up-to-date, complete or fit for the purpose for which it is required. NEF disclaims any liability for the use of this information and, to the maximum extent permitted by law, any liability for losses or damages through the use of this report. Third-party information is also referenced for convenience only, for which NEF does not express any opinion and disclaims liability for its use.

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