Fairfax County Travel Demand Forecasting Update

presented to

Travel Forecasting Subcommittee

presented by

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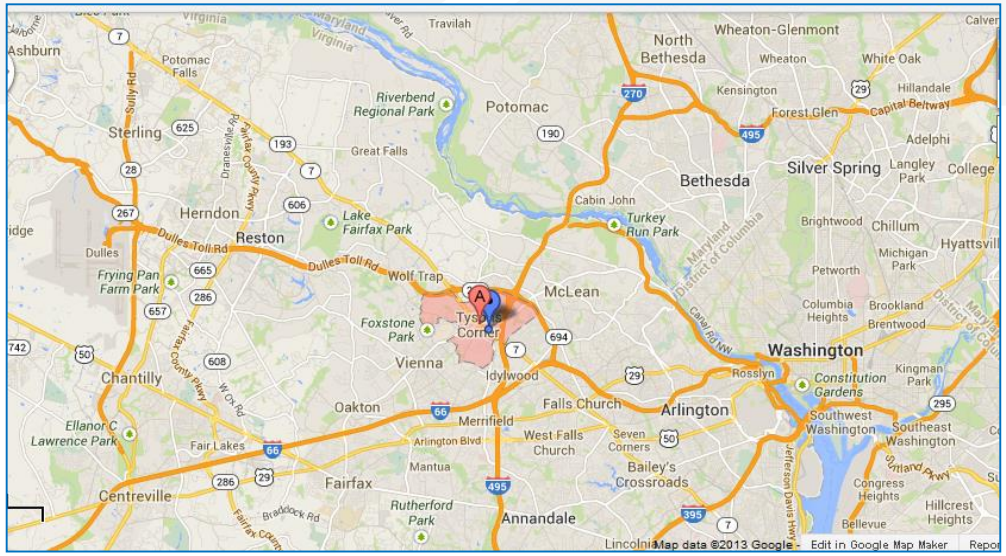
Background

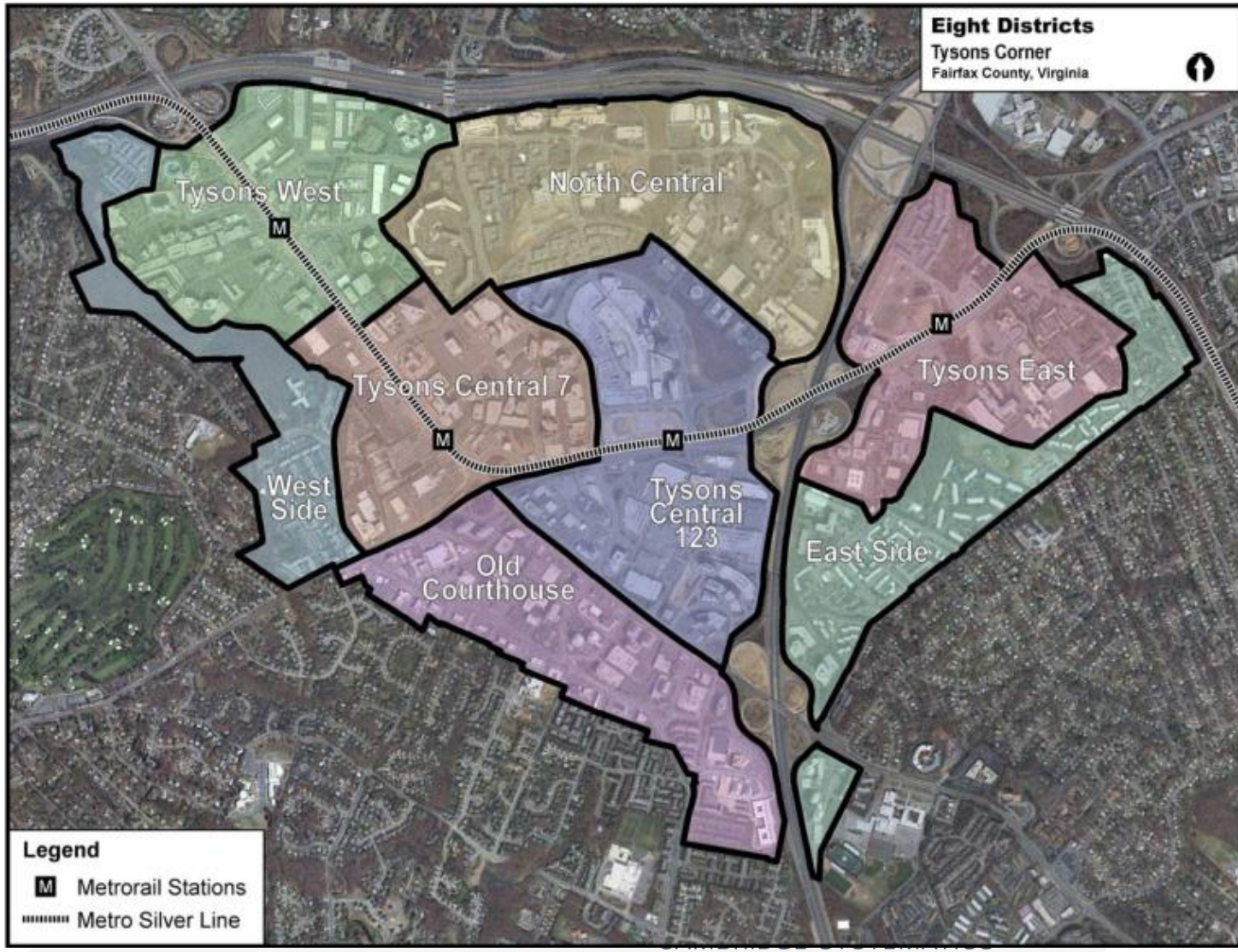
- Transportation Modeling and Travel Demand Forecasting in Support of Planning
  - County Comprehensive Plan Update
  - Subarea Plan Update
  - Corridor Studies

Model Applications

- Tysons/Reston Plan Updates
- Route 1 BRT Study
- Huntington Area Transportation Study
- Braddock Road Multimodal Transportation Study
- Fairfax County Parkway Study
- Dulles Suburban Center Study

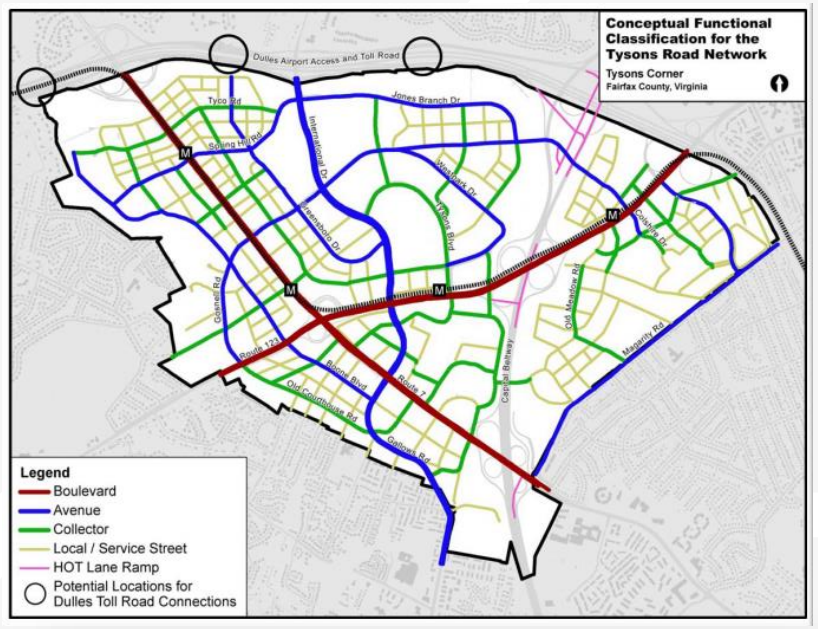
Tysons Study Area





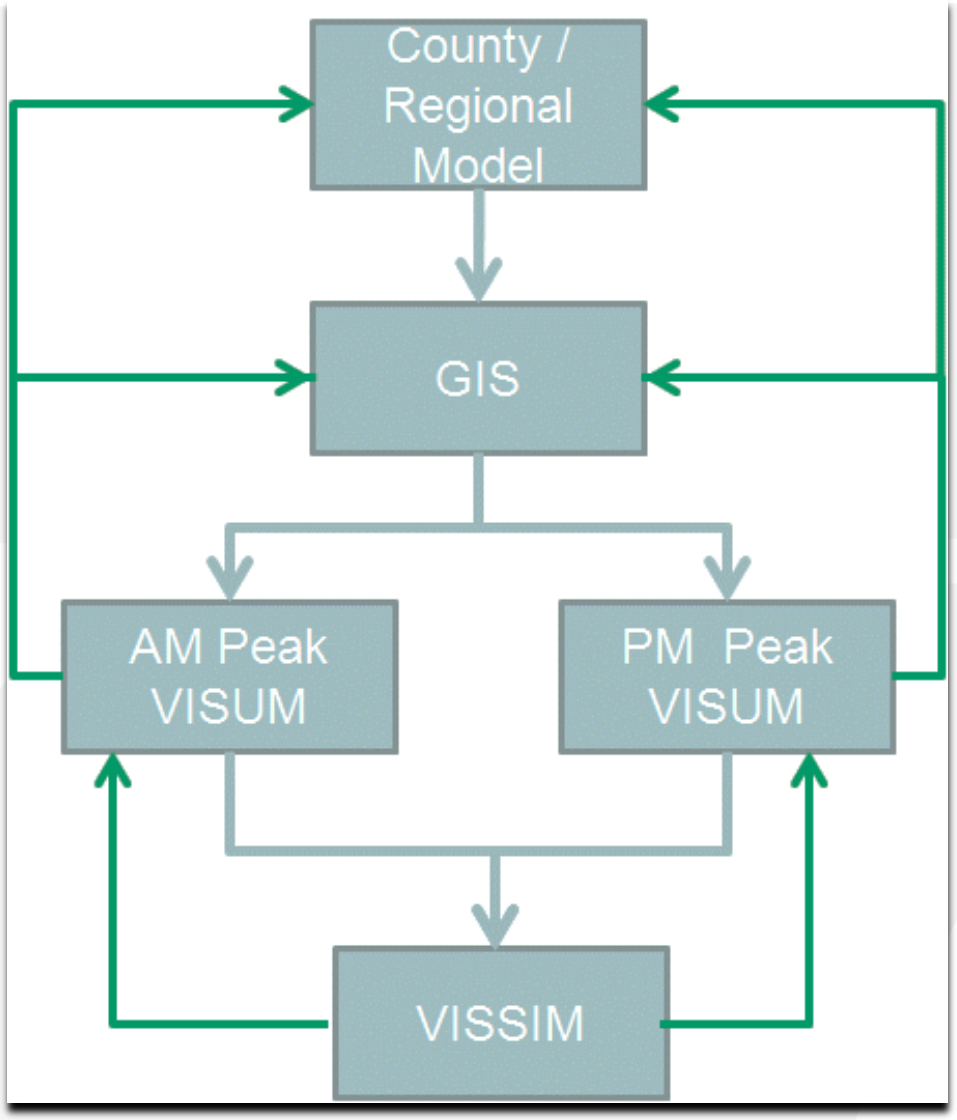
Tysons Study: Objectives

- Analyze “Grid of Streets” network proposed by County
- Establish method of quantifying development impacts
- Corridor and street recommendations



Tysons Study: Methodology

- Multi-Resolution Approach
  - » Region, County, CTIA
- Macro to represent regional travel demand
- Meso to address system wide deficiency
- Micro to mitigate local impacts



US 1 BRT Study

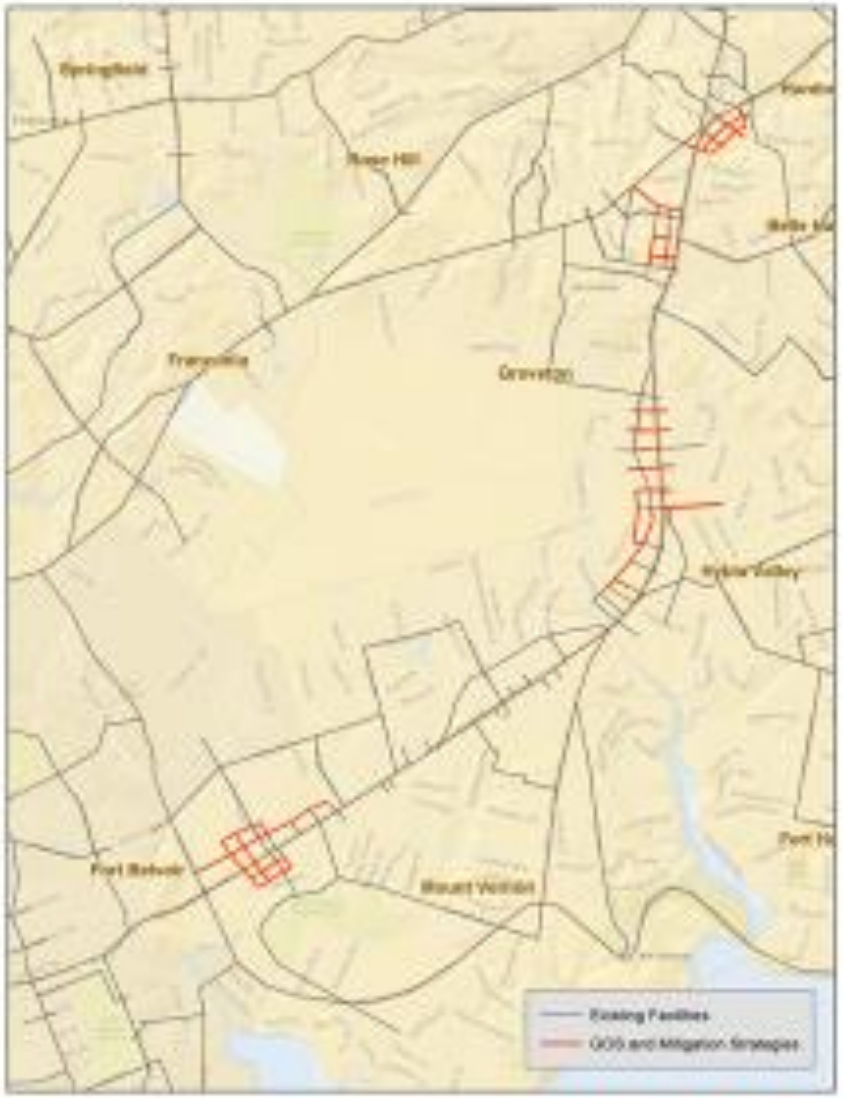
Transportation Analysis

- Estimated transit ridership and BRT performance
- Intersection levels-of-service, delay, queues
- Need for additional north/south road capacity
- Recommended improvements and mitigation

US 1 BRT Study

Grid of Streets and Mitigation Strategies

- Grid of Streets
  - Penn Daw
  - Beacon
  - Hybla Valley
  - Woodlawn
- Comp Plan Mitigations
  - North of Fairview Dr. Connection
  - N Kings Realignment with Shields Ave and School St
  - Sacramento Dr to Cooper Rd Realigning
  - Popkins/Collard Intersection Realigning
  - Boswell/Fordson Signal Signal Consolidation

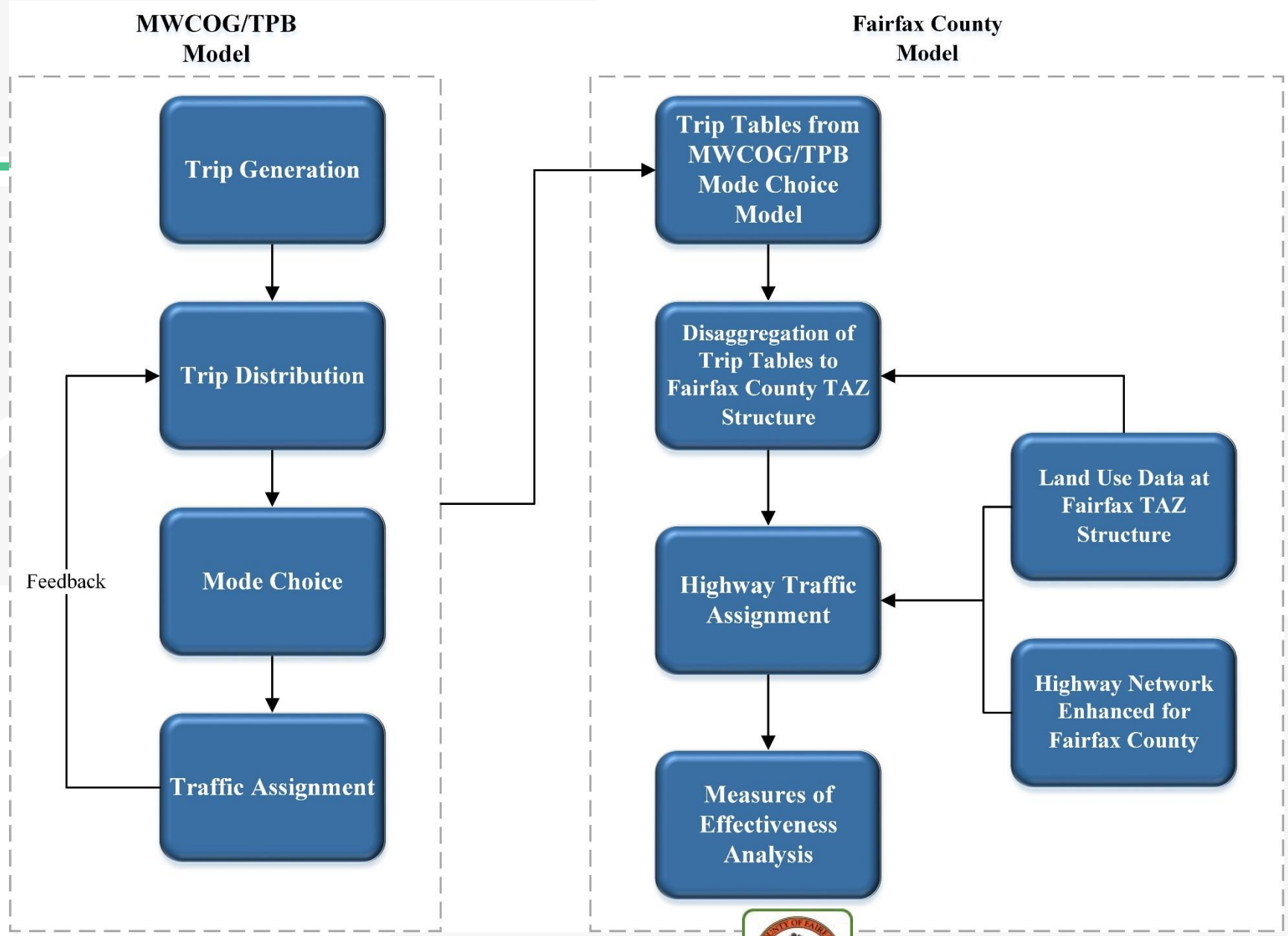


EMBARK RICHMOND HIGHWAY

County Model Update

- Consistency with the MWCOG/TPB Version 2.3.66
- Enhancements
  - TAZ Structure
  - Highway Network
  - Intersection Modeling
  - Drive Access to Transit

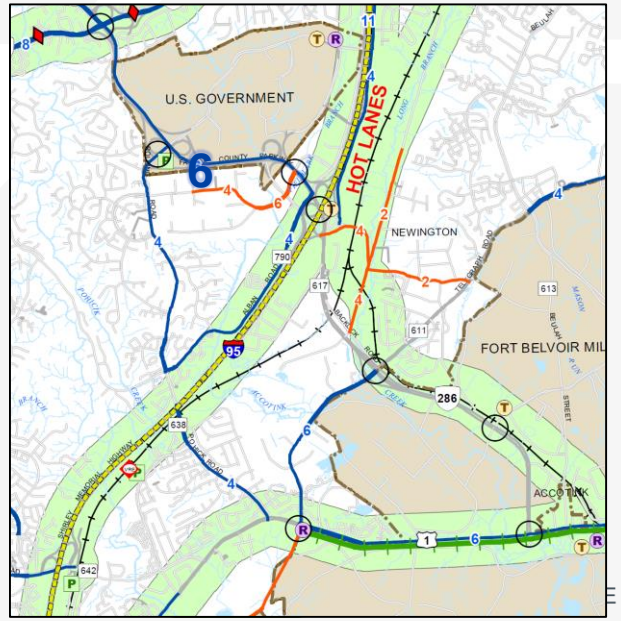
Fairfax County Model

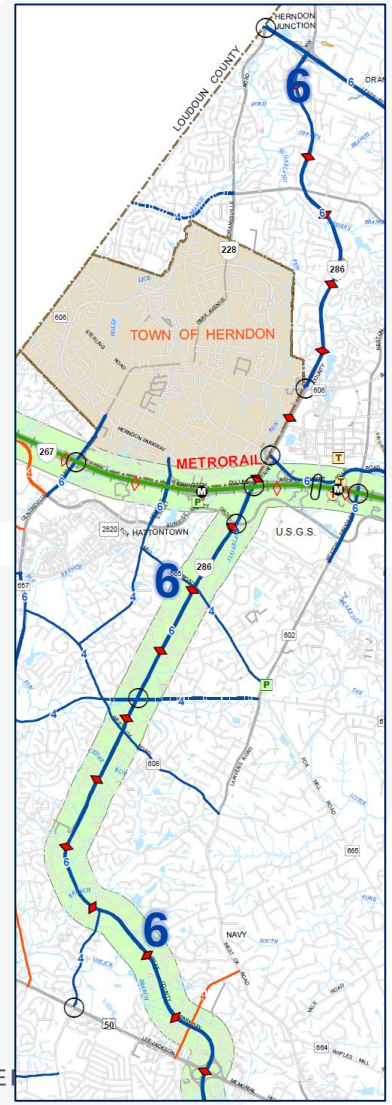


CAMBRIDGE SYSTEMATICS

Fairfax County Parkway Corridor Study

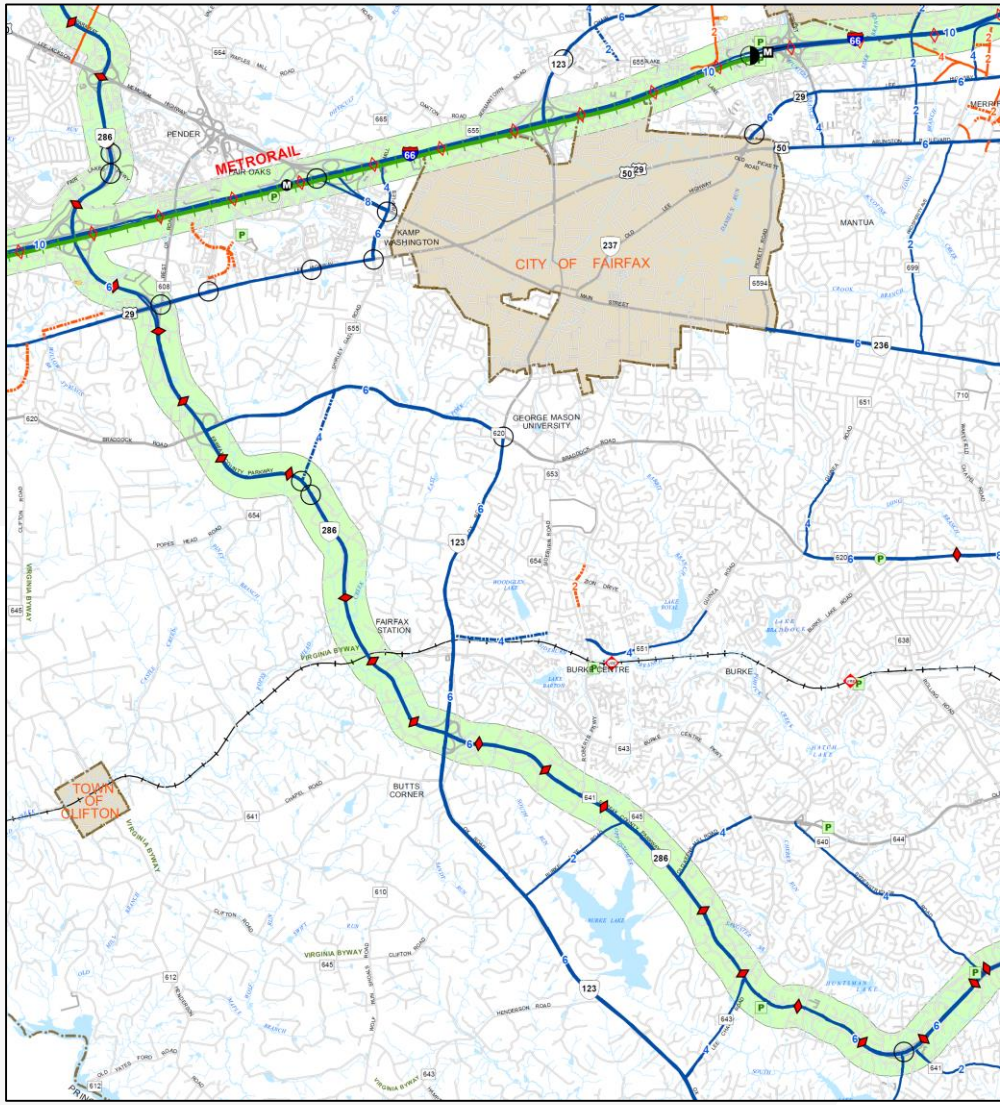
- Multimodal Corridor Study
  - Fairfax County Parkway (Route 286) from Route 7 (Leesburg Pike) to Route 1 (Richmond Highway)
  - Franconia-Springfield Parkway from Beulah St to Rolling Rd
  - approximately 35 miles in length
  - 98 intersections
  - 20 interchanges



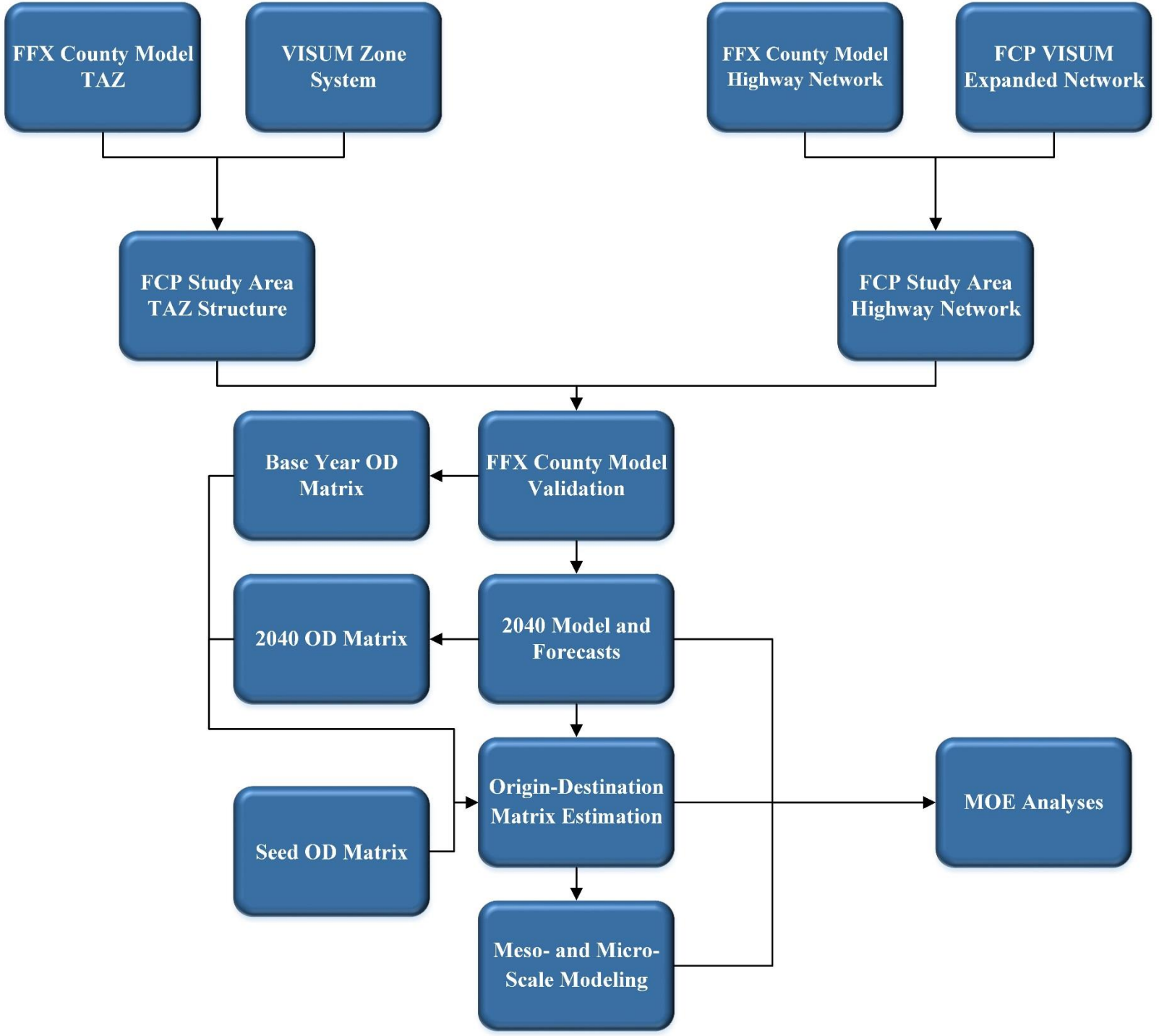


Fairfax County Parkway Corridor Study

- Long Range Planning Study
  - Analyze Comprehensive Plan improvements
  - Identify other needed improvements
  - Prioritization
  - Funding



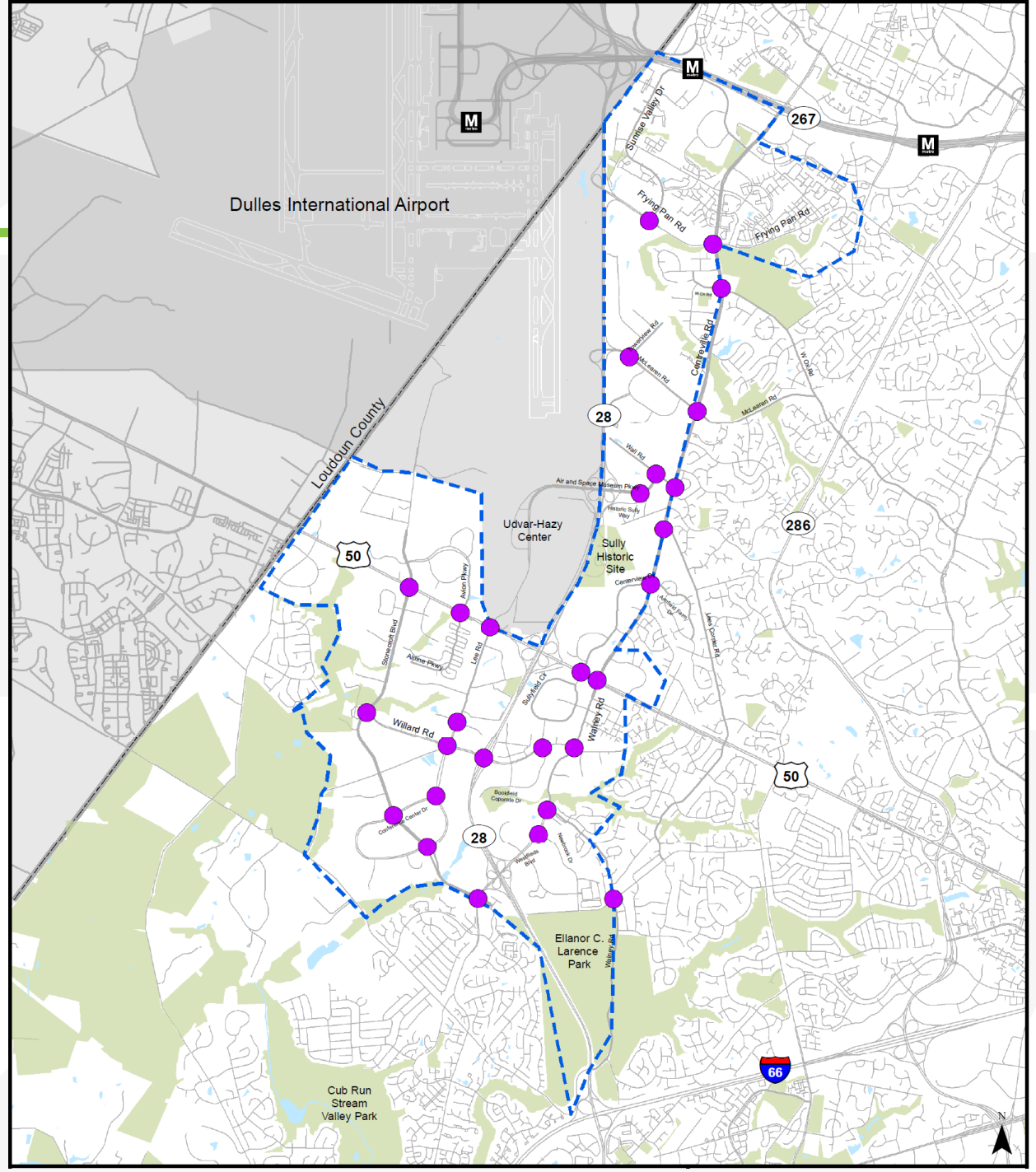
Fairfax County Parkway Study



Dulles Suburban Center Study

- In Support of Comprehensive Plan Update
- Transportation and Land Use Analysis
  - Comprehensive Plan base scenario
  - Zoning potential scenario
  - Alternative future land use scenario

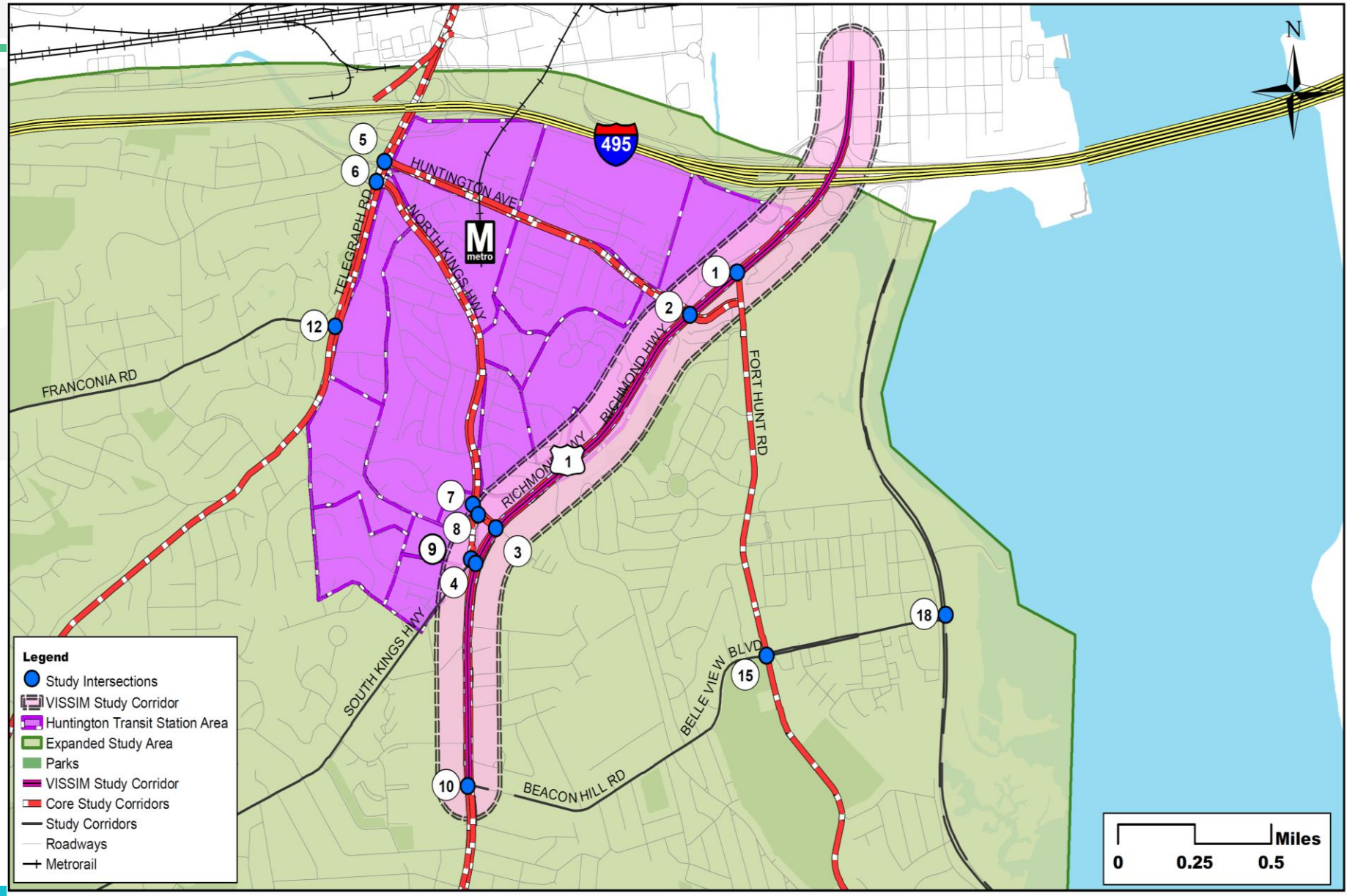
Dulles Suburban Center Study



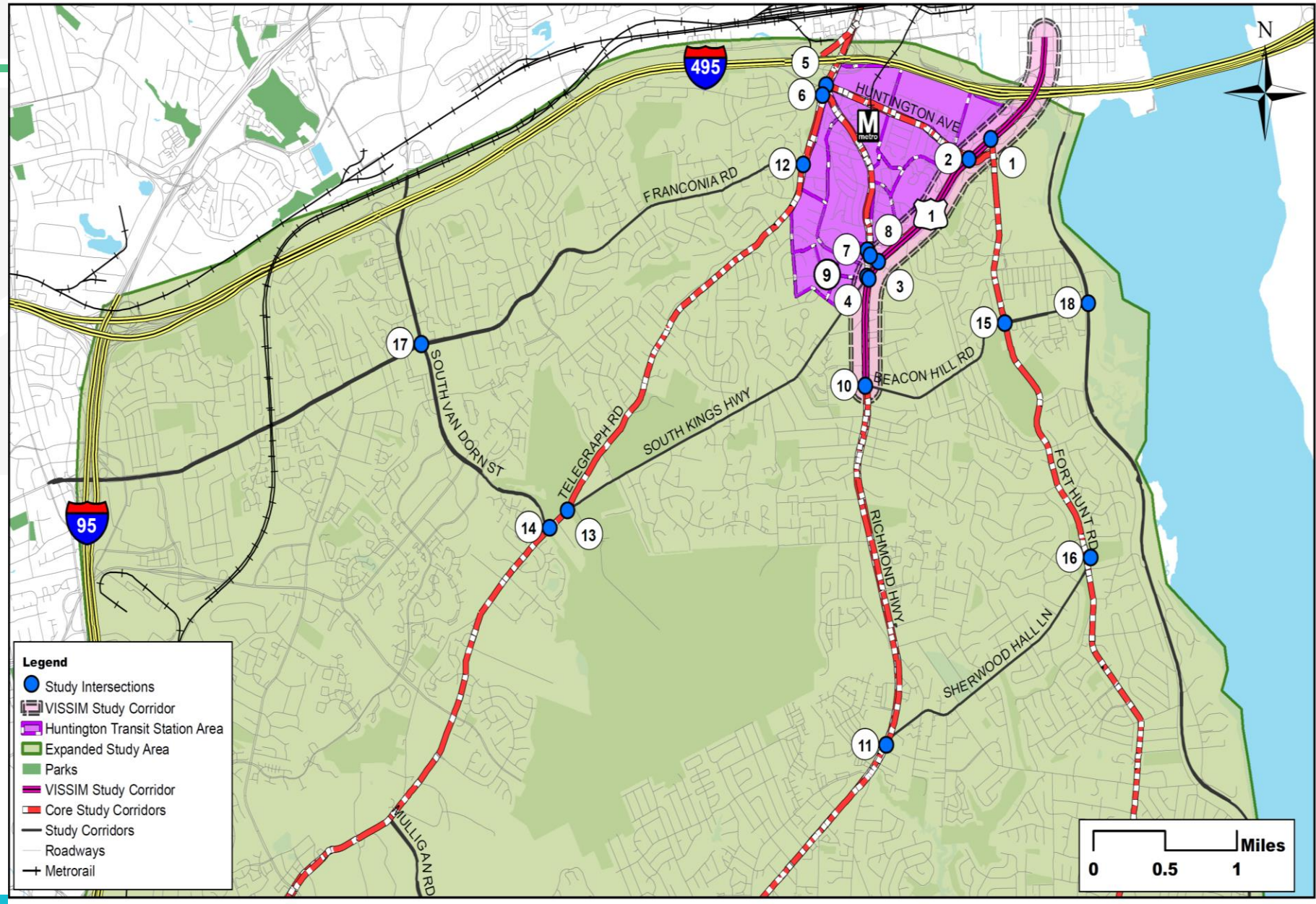
Huntington Area Transportation Study (HATS)

- Identify congestion issues
- Develop multimodal transportation system alternatives
- Evaluate transportation improvements in the existing comprehensive plan, as well as additional transportation mitigation measures
- Develop an amended transportation system plan that considers the transportation needs of both local and regional traffic in an efficient manner.

HATS Core Study Area



HATS Expanded Study Area



Huntington Area Transportation Study (HATS)

- Subarea Intersection Modeling (Fairfax County Model)
- Intersection Traffic Operational Analysis (Synchro)
- Corridor Microsimulation (VISSIM)