



County of Fairfax, Virginia

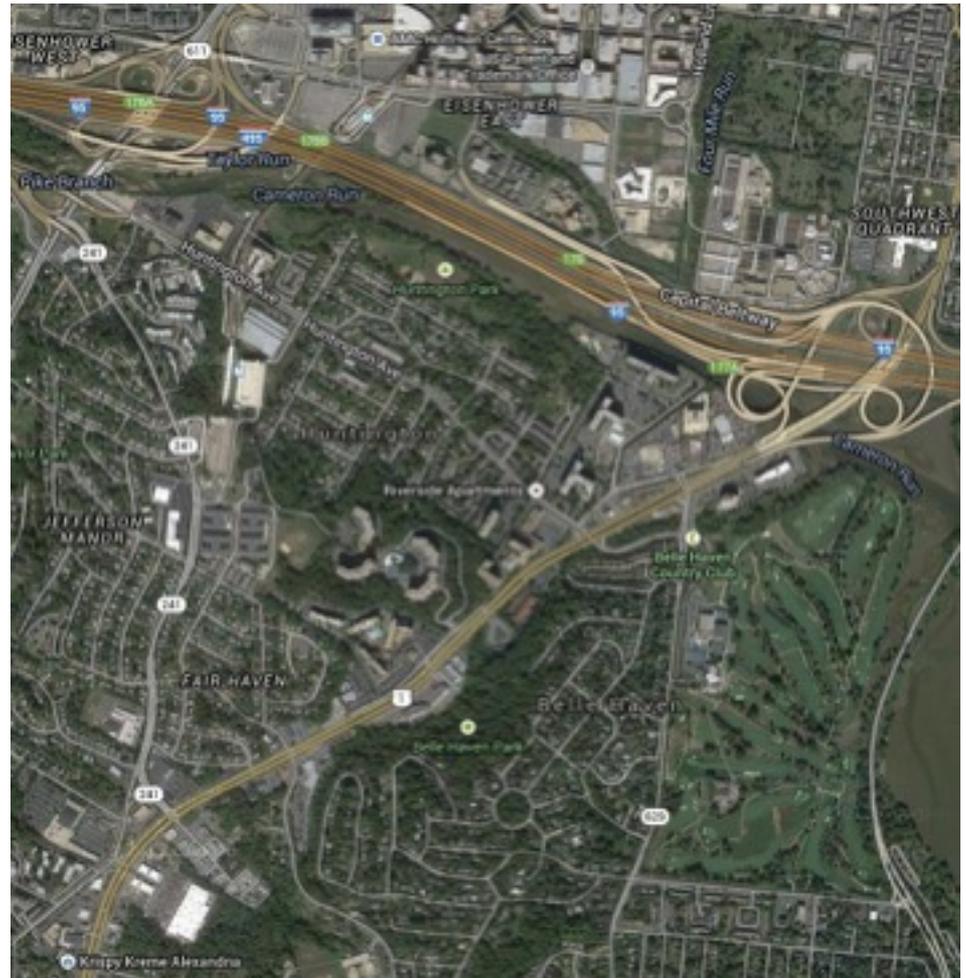
# Huntington Area Transportation Study (HATS)

## *Project Update*

*Presented to:*

***Fairfax County Board  
Transportation Committee***

***January 20, 2015***





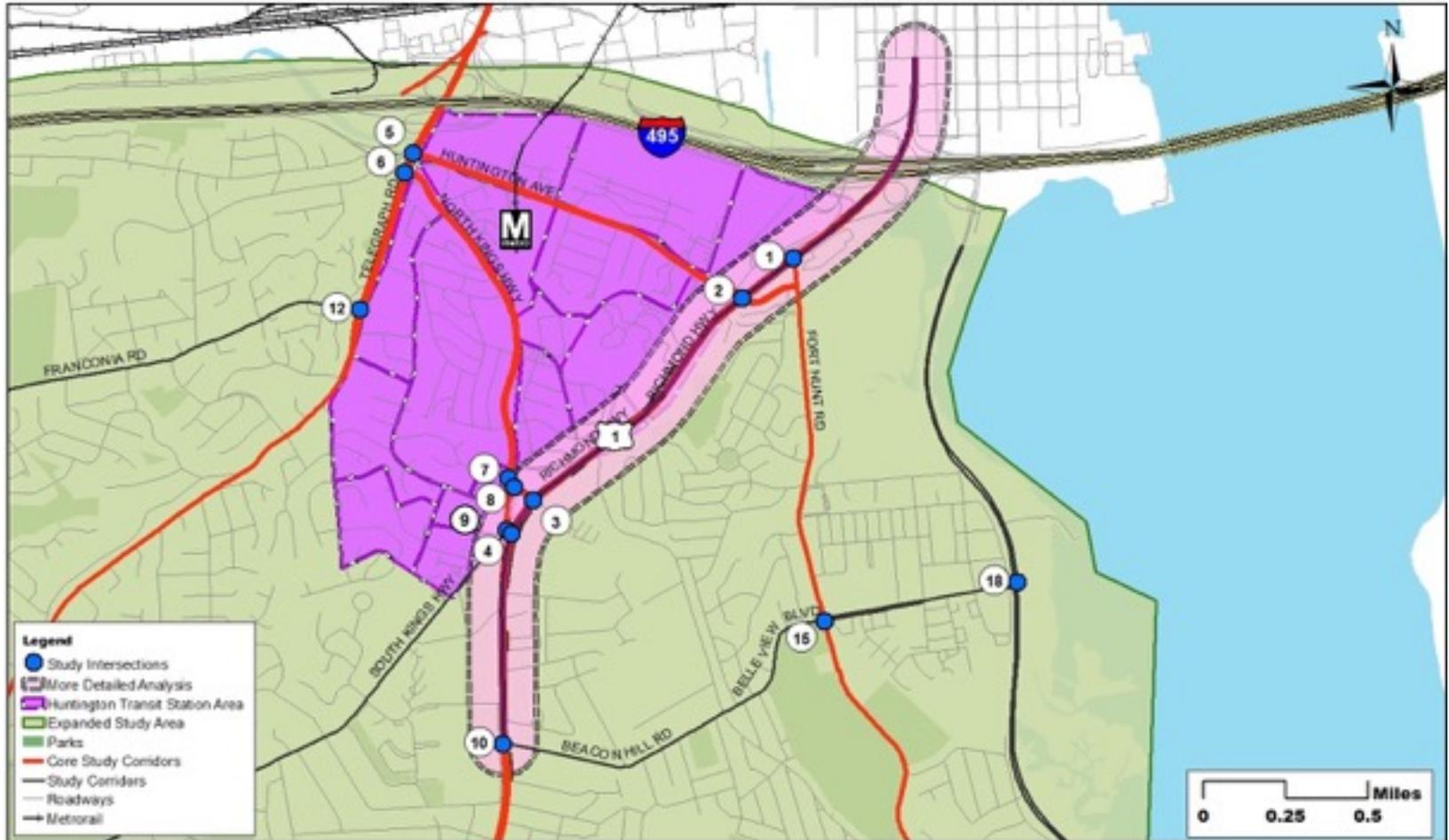
## Study Purpose

- Address transportation deficiencies identified during prior comprehensive planning efforts (Huntington Club, North Gateway APRs)
- Confirm and verify existing and future (projected) transportation issues and concerns within the HATS study area
- Develop transportation improvement strategies and mitigation measures with stakeholder and BOS input
- Evaluate the effectiveness of potential transportation solutions
- Assess potential at-grade solutions, in addition to grade-separated, at Route 1/ Huntington Avenue/Fort Hunt Road
- Evaluate proposed higher land use intensity at North Gateway
- Determine recommendations and conclusions



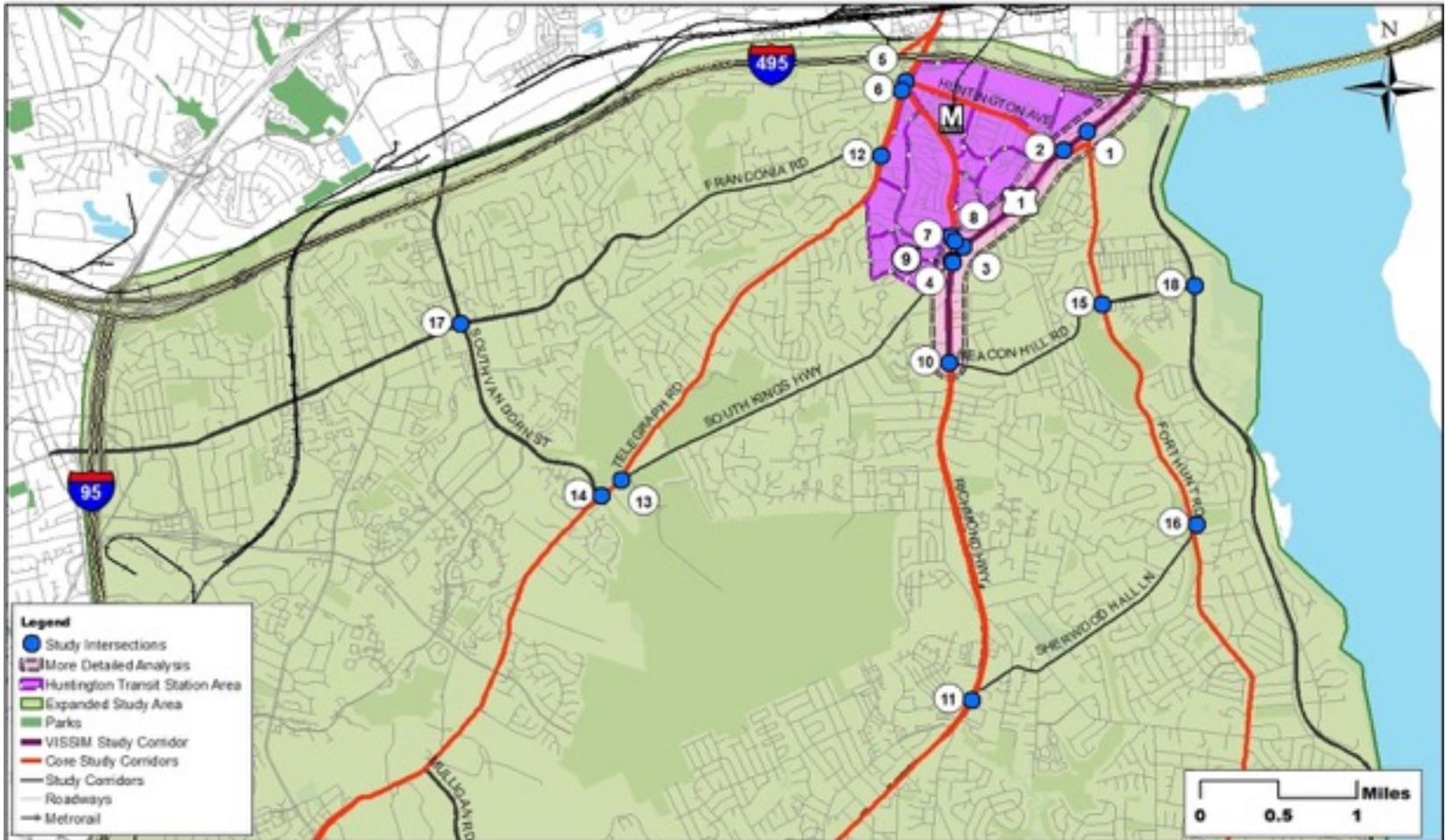
# County of Fairfax, Virginia

## Huntington Area Transportation Study Core Study Area





### Huntington Area Transportation Study Expanded Study Area





## Key Issues

- Several large-scale, high-intensity Transit Oriented Development (TOD) sites recently approved that may negatively impact the feasibility of further TOD within the Huntington Transit Station Area (TSA)
- Desire for an at-grade solution for the intersections of Route 1 and Huntington Avenue and Fort Hunt Road, rather than the grade-separated interchange currently in the Comprehensive Plan
- Proposal for higher land use intensity at the North Gateway site with a need for expedited results to respond to evolving market conditions and support on-going revitalization efforts
- Traffic issues within the Penn Daw CBC – Note that a separate effort to identify improvements along North Kings Highway is nearly complete and results will be incorporated



## Study Overview

- Multimodal Existing Conditions Analysis & Assessment
- Multimodal Model Development & Future Conditions Analysis & Assessment
- Detailed Analysis of Route 1/Huntington Ave/Fort Hunt Rd Intersections
  - Evaluation of At-Grade & Grade-Separated Concepts
- Identification of Congestion Reduction Strategies and Mitigation Measures
- Evaluation of Alternative Land Use for North Gateway Site
- Conclusions & Recommendations

*\*\*\* Stakeholder input will be obtained throughout study \*\*\**



## Measures of Effectiveness (MOEs)

- Evaluation criteria to gauge existing and future performance
  - Average delay per vehicle by intersection and for individual approach movements
  - Queue length and storage for critical individual approach movements
  - Level of Service by intersection and for individual approach movements
  - Average delay per vehicle within the network
  - Average speed within the network
  - Average travel time within the network
  - System-wide delay

\*\*\* *AM and PM peak hours* \*\*\*



## North Gateway Site

- The North Gateway Site was recently approved by the board for a 1.65 Floor Area Ratio (FAR), with further desire for a 2.0 FAR
- Located adjacent to the intersections of Route 1 and Huntington Avenue and Fort Hunt Road, it is unlikely that site can develop to its full potential if a grade-separated interchange is constructed
- Several BRAC and South County Area Plan Review (APR) nominations have been approved by the County in the Huntington core area
- Certain APRs were analyzed and approved contingent on a planned interchange at the Route 1 intersections with Huntington Avenue and Fort Hunt Road
- Citizens and community have concerns about development of an interchange
- Study will analyze at-grade and grade-separated concepts
- Study will meet VDOT traffic impact analysis requirements



# Draft At-Grade & Grade-Separated Concepts

- At-grade and grade-separated concepts to be evaluated for the intersections of Route 1 at Huntington Avenue and Fort Hunt Road
- Multiple concepts under development
- None of these concepts have been tested
- Staff is not making a recommendation at this time
- Two at-grade and two grade-separated concepts will be selected for more detailed analysis
- Looking for initial feedback on elements associated with current set of draft concepts

# At-Grade Option A: Route 1 Left Turn Movements Prohibited



🚫 No left/right turns    XXX Closed roadway

🚦 Existing traffic signal

# At-Grade Option B: "Superstreet" with Side Street Left Turn & Through Movements Prohibited



-  New traffic signal
-  Existing traffic signal
-  Closed roadway

*Right turn on red prohibitions are recommended during peak hours to reduce the speed differentials on Route 1, unless add lanes can be used.*

# At-Grade Option B: "Superstreet" with Side Street Left Turn & Through Movements

Pr



Optional new median break & signal or new signal at an existing median break

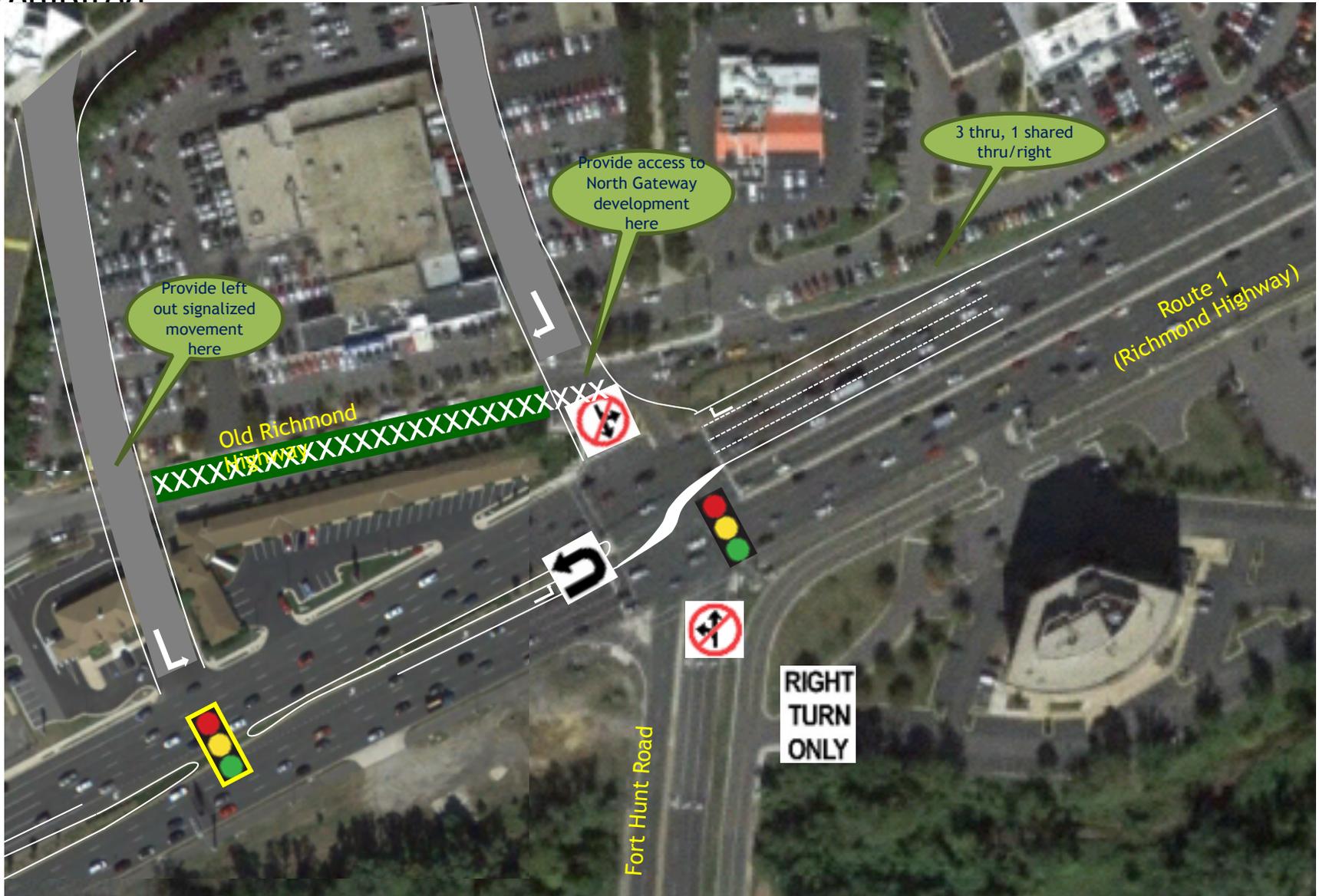
Provide left out signalized movement here

-  New traffic signal
-  Existing traffic signal

 Closed roadway

*Right turn on red prohibitions are recommended during peak hours to reduce the speed differentials on Route 1, unless add lanes can be used.*

# At-Grade Option B: "Superstreet" with Side Street Left Turn & Through Movements Prohibited



 New traffic signal  
 Existing traffic signal

 Closed roadway

*Right turn on red prohibitions are recommended during peak hours to reduce the speed differentials on Route 1, unless add lanes can be used.*

# At-Grade Hybrid (A-B) Option: Route 1 to Fort Hunt Left Turns Shifted to Huntington

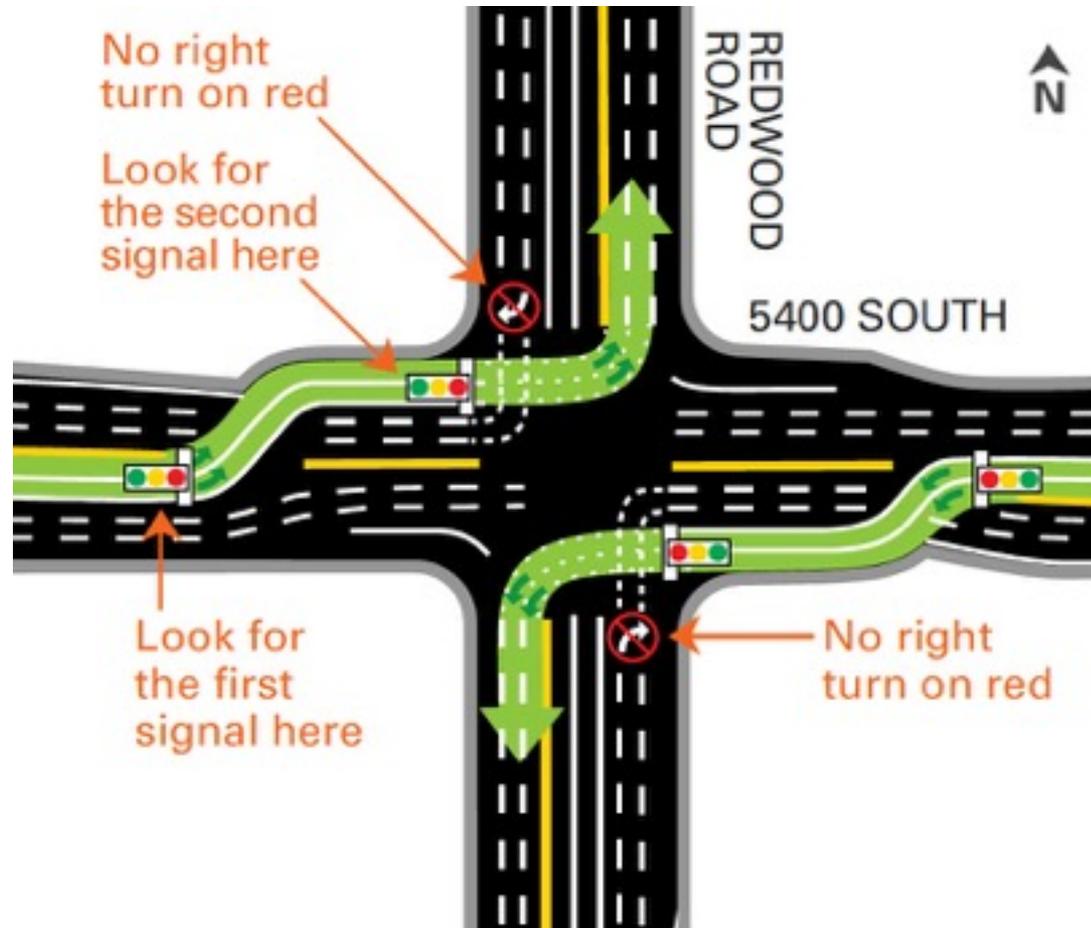


 Existing traffic signal  
 Closed roadway

For this Hybrid Option, Route 1/Fort Hunt Rd operates better. The other two intersections operate slightly worse. Overall, there is a small 3-5% increase in the CLV & v/c ratios when compared to the No Build.

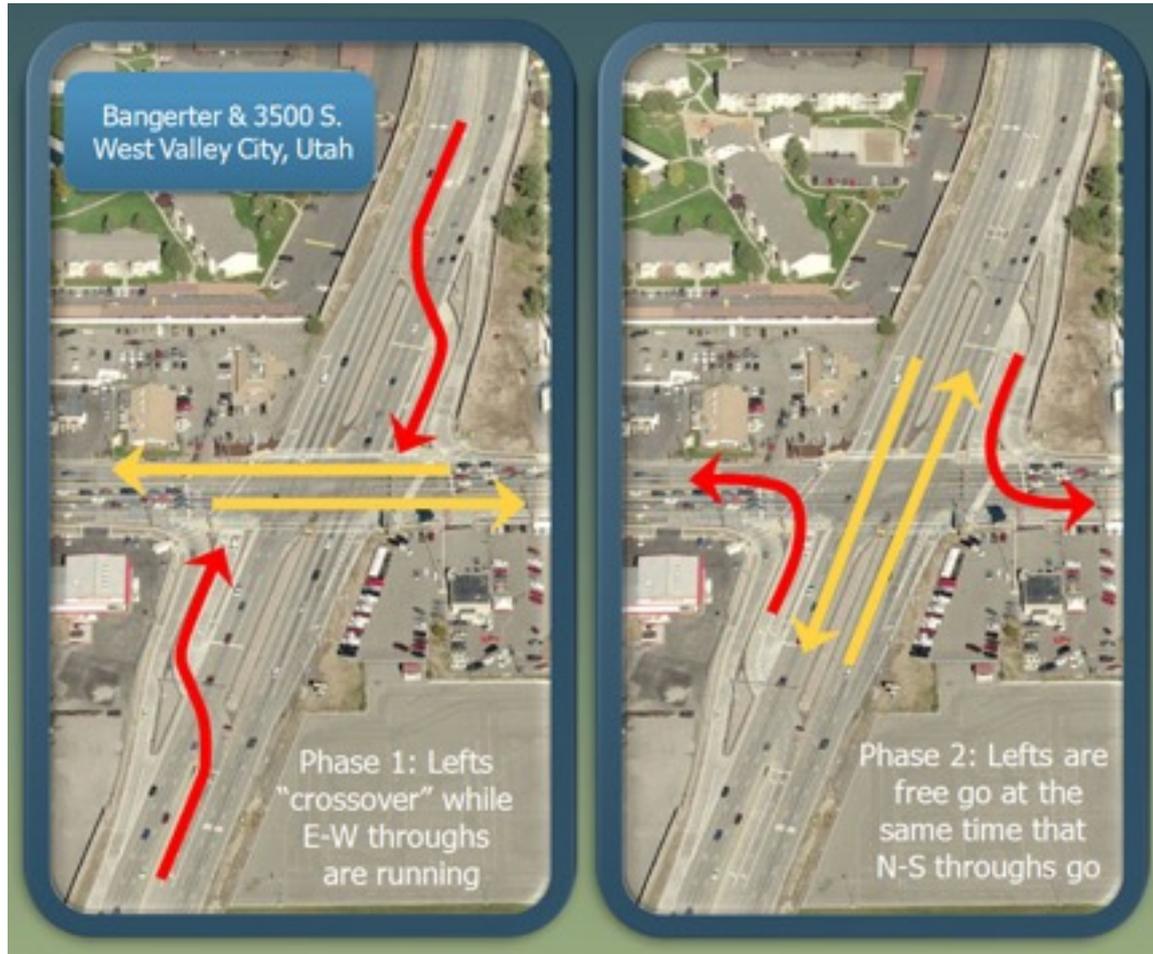


# Displaced Left Turn (DLT) Intersections





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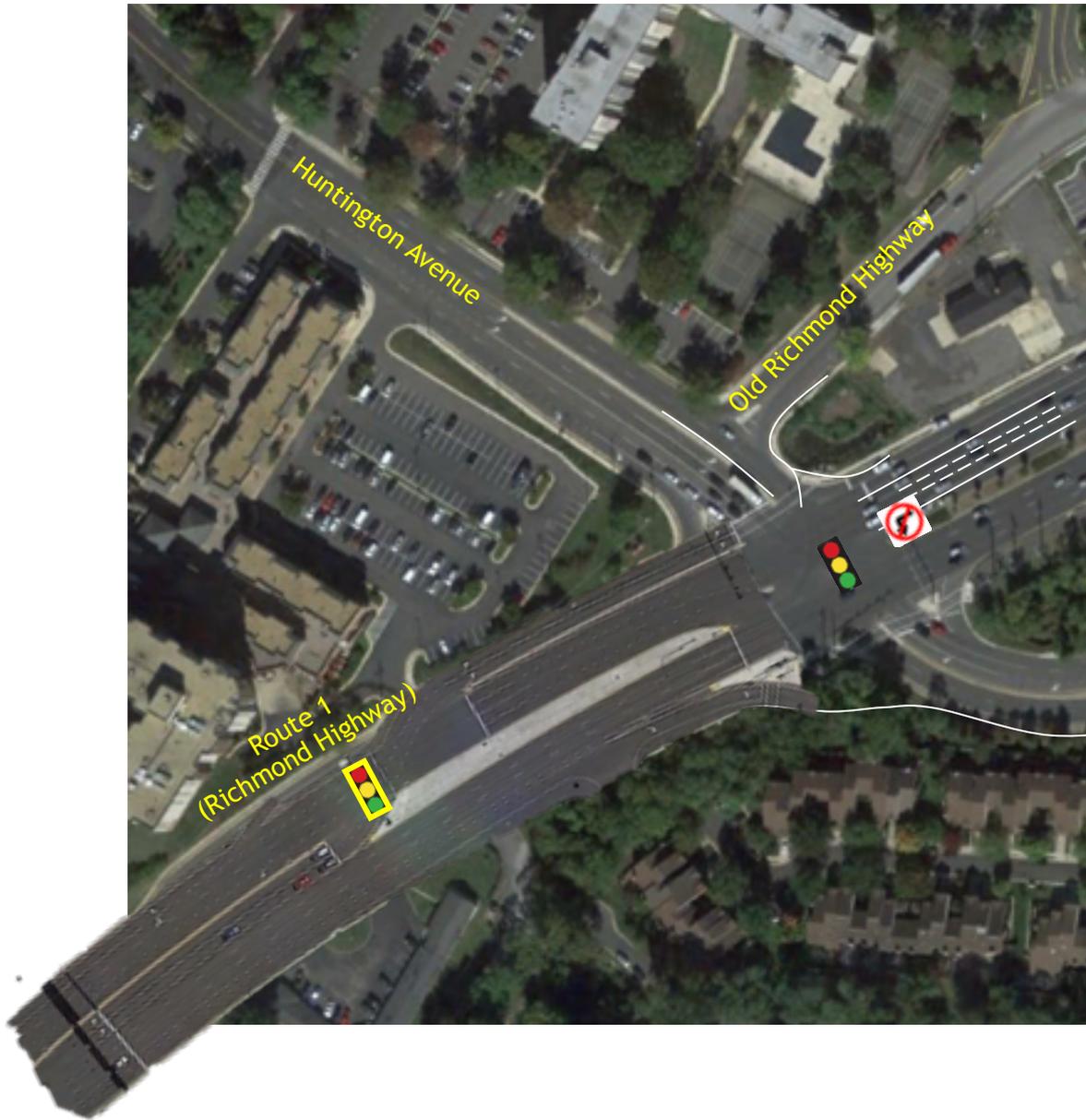


# At-Grade Option C: Partial Displaced Left Turn Intersection



 New traffic signal  
 Existing traffic signal

# At-Grade Option C: Partial Displaced Left Turn Intersection



 New traffic signal

 Existing traffic signal

# At-Grade Option C: Partial Displaced Left Turn Intersection



 New traffic signal

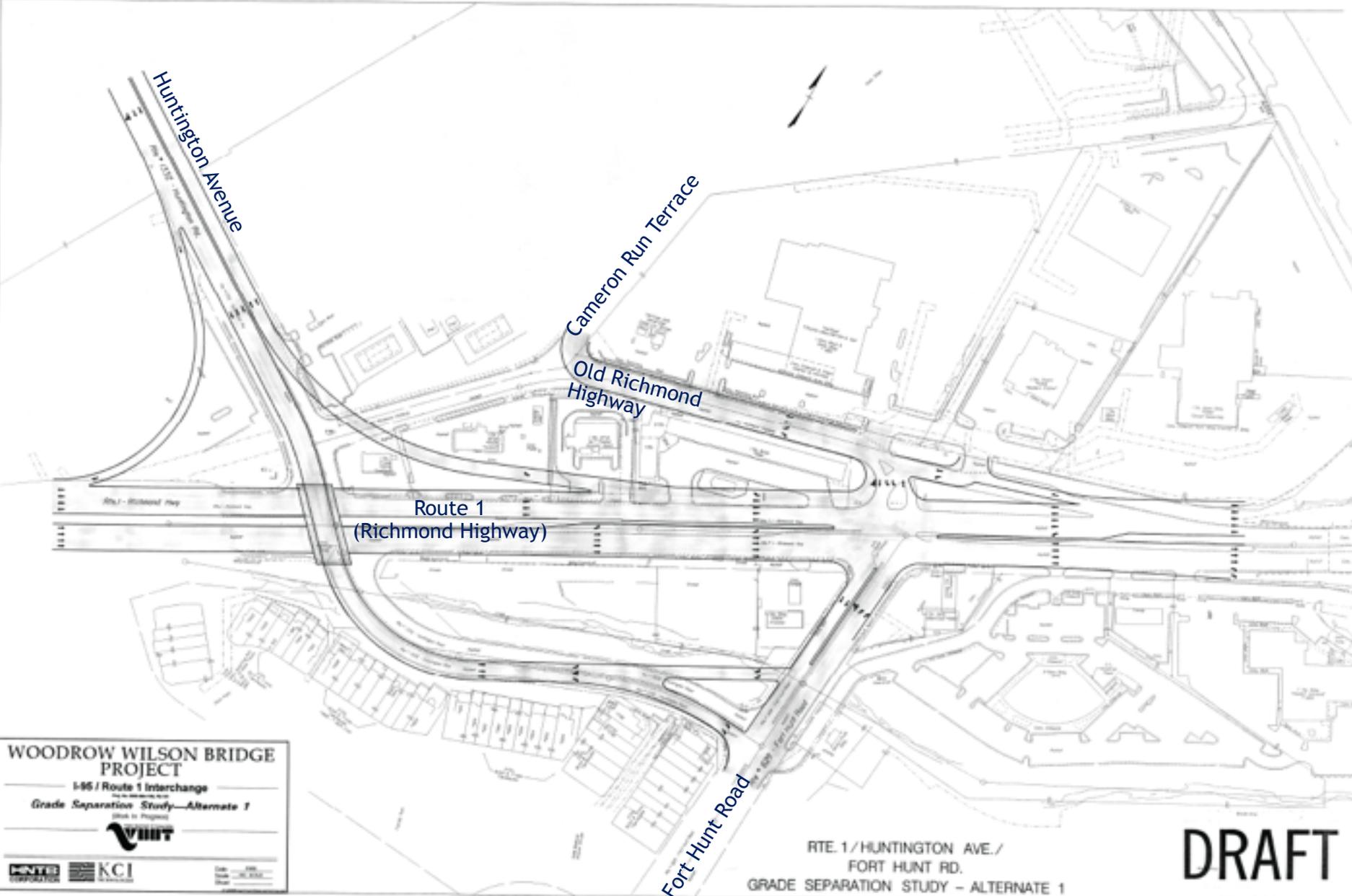


Existing traffic signal  No left turn



Optional no left turn

# Grade-Separated Option D: Woodrow Wilson Bridge Project - Alternate 1



**WOODROW WILSON BRIDGE PROJECT**  
I-95 / Route 1 Interchange  
Grade Separation Study - Alternate 1  
Work in Progress

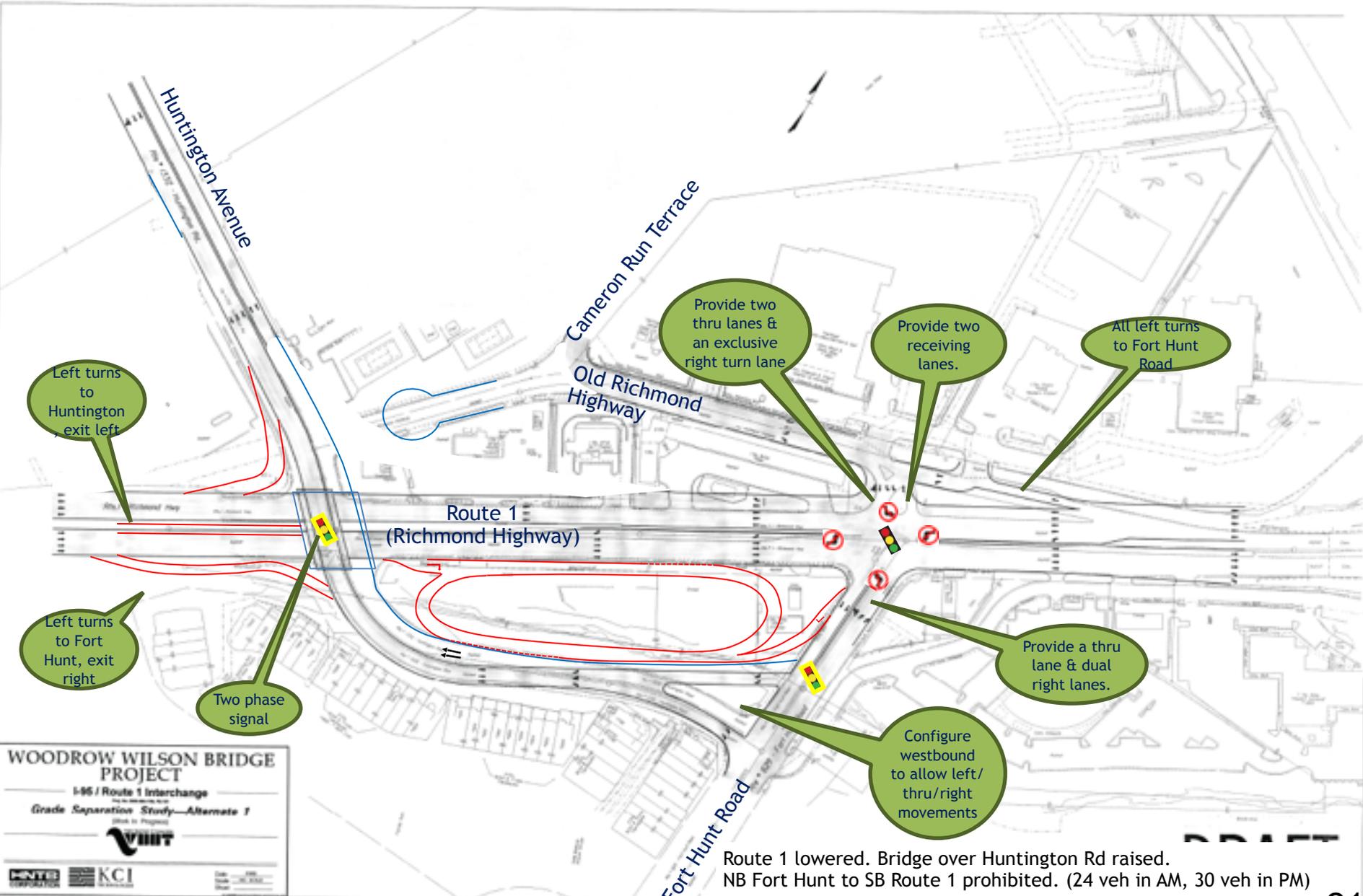
**VHBT**

**CH2M HILL** **KCI**

RTE. 1/HUNTINGTON AVE./  
FORT HUNT RD.  
GRADE SEPARATION STUDY - ALTERNATE 1

**DRAFT**

# Grade-Separated Option E: Huntington Avenue Interchange

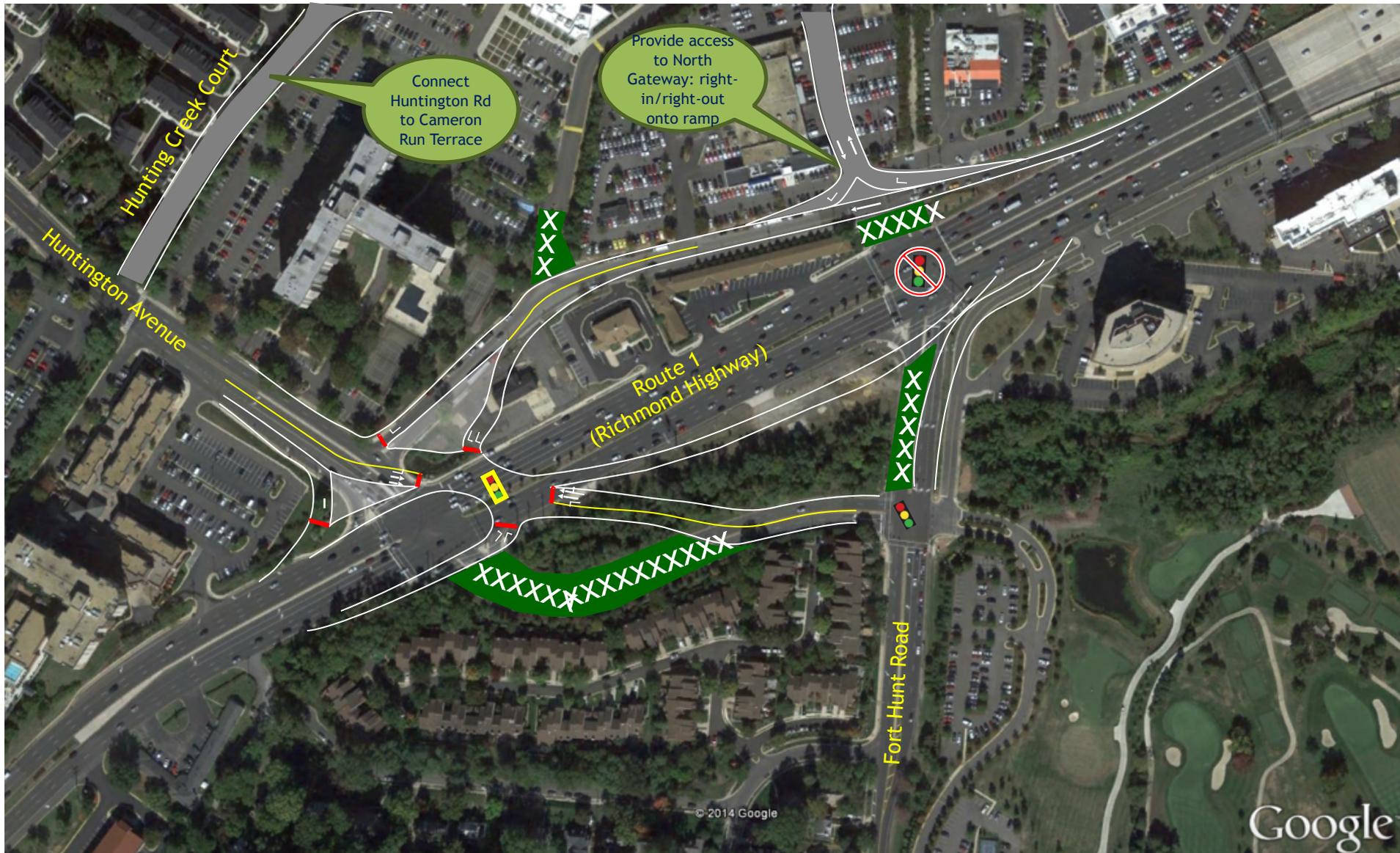


**WOODROW WILSON BRIDGE PROJECT**  
 I-95 / Route 1 Interchange  
 Grade Separation Study—Alternate 1  
 (Work in Progress)

**VHVT**

**KCI**

# Grade-Separated Option F: Single Point Urban Interchange (SPUI)



 New traffic signal



Existing traffic signal  Closed roadway

*Route 1 lowered. SPUI raised. Through movements on Route 1 are uncontrolled.*



## Project Schedule – 2014/2015

Jun-Sep 2014

- Existing Conditions Assessment (Complete)
- Travel Demand Model Development (Complete)

Oct-Feb 2014/15

- Model Assessment (Complete)
- Detailed Route 1/Huntington/Fort Hunt Analysis

Feb-May 2015

- Identification & Evaluation of Mitigation Measures



## Questions / Comments

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