

Neighborhood Conservation Project Design Presentation Project N514 **Williamsburg Blvd. & N. Kensington St. Intersection**



Williamsburg Auditorium
May 13, 2013



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Design Engineering Team

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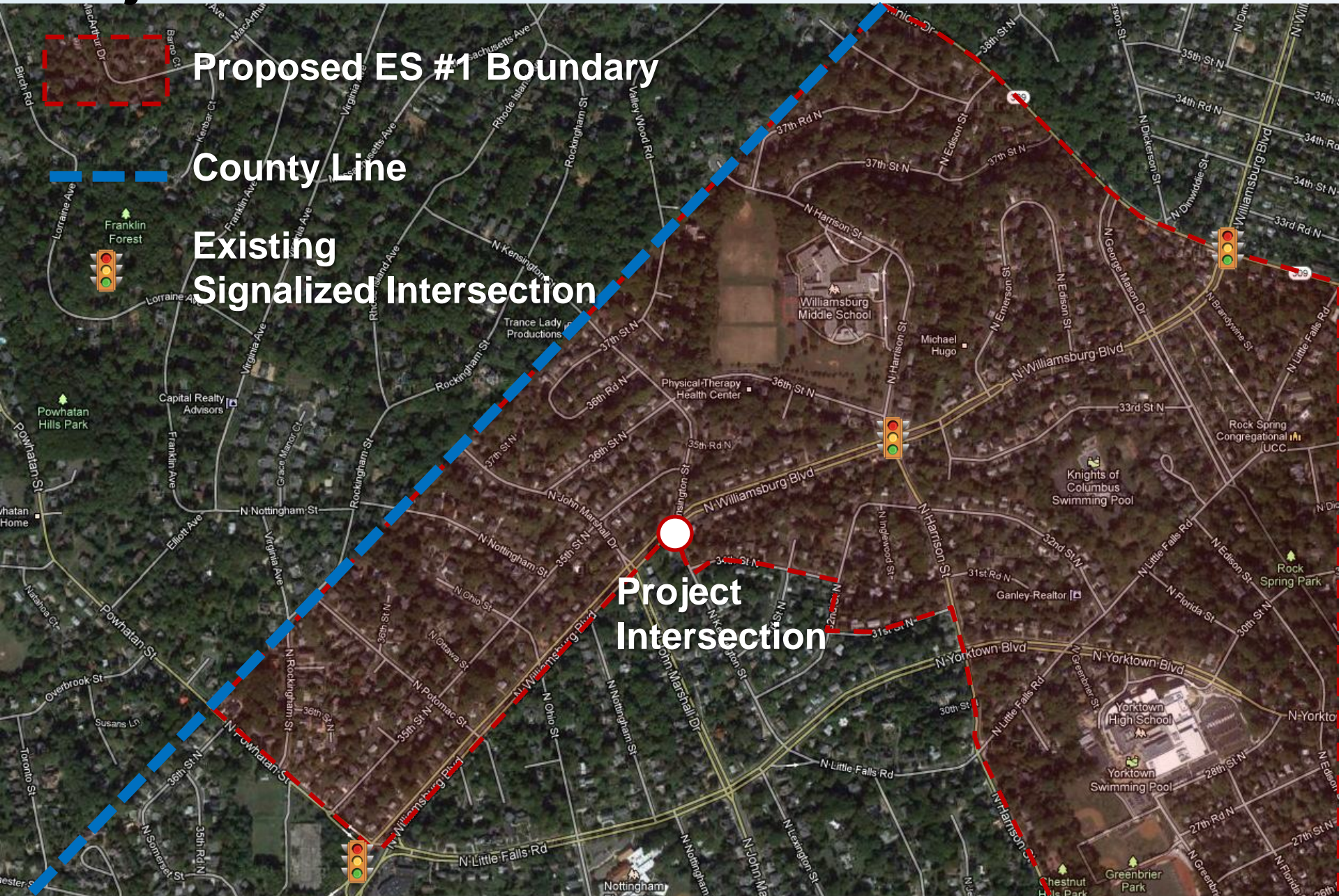
Principal Planner, DES

Transportation Engineering and
Operations Bureau Chief, DES

NC Program

- Created in 1964
- Bond funded program
- Over 50 neighborhoods are active in the program
- Only program dedicated to improving neighborhood infrastructure
- Types of projects include, sidewalk, curb and gutter, park enhancements, beatification, streetlight installation, and neighborhood signs
- Two funding rounds a year – June and December
- Fund projects based on a point system
- All neighborhood representatives make up the Neighborhood Conservation Advisory Committee

Project Location



Proposed ES #1 Boundary

County Line

Existing
Signalized Intersection

Project
Intersection

Existing Conditions



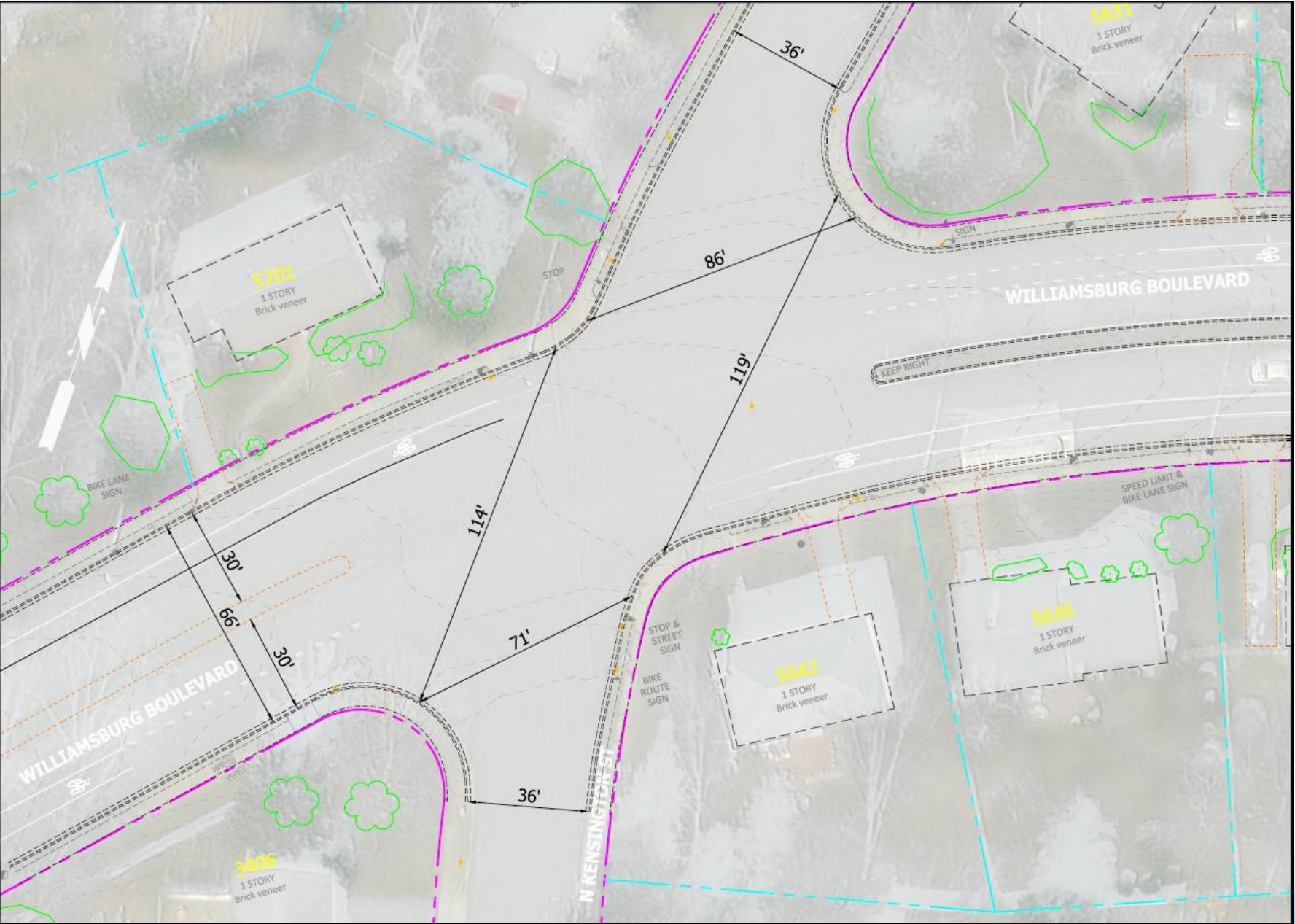
Project Background

- Rock Spring Neighborhood submitted project to NC for funding consideration in June of 2010.
- Project passed two separate petitions in the fall of 2010
- Project was recommended for funding at the Neighborhood Conservation Advisory Committee's (NCAC) fall funding round in December of 2010
- Project was approved by the County Board in February of 2011

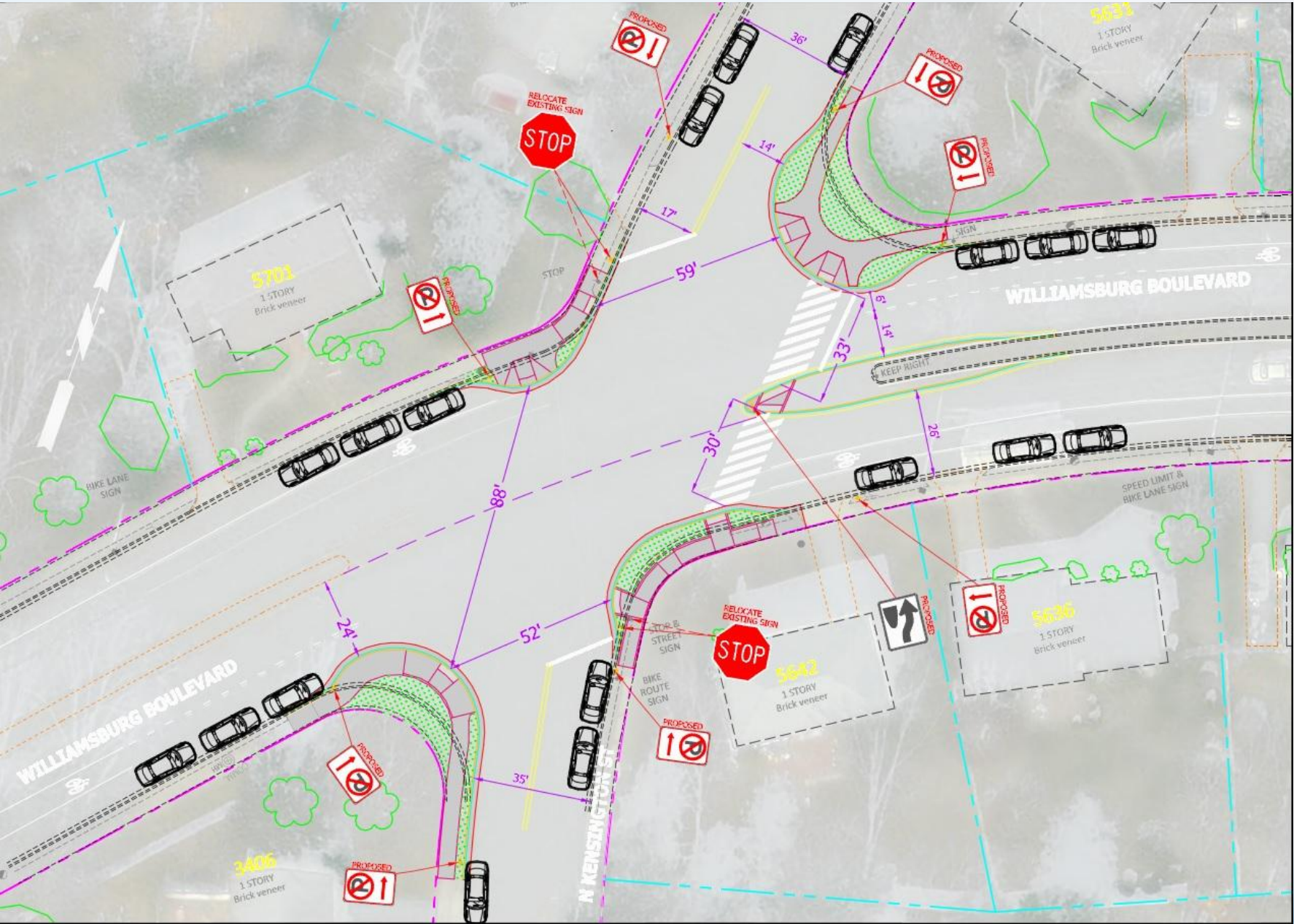
Project Scope

- Pedestrian safety project
- Addition of nubs along Williamsburg Boulevard in order to reduce pedestrian crossing distance
- Reconstruct radius at the northwest corner of the intersection to slow the speed of traffic
- Extend median on Williamsburg which adds a pedestrian refuge area in the middle of the crossing

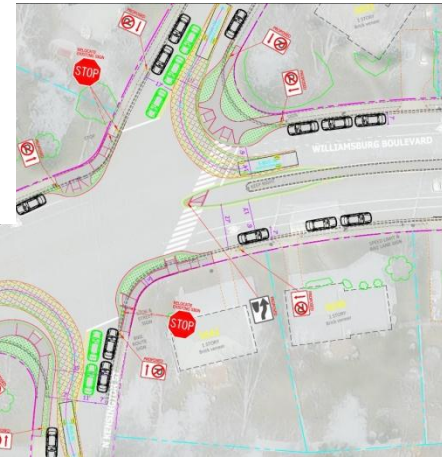
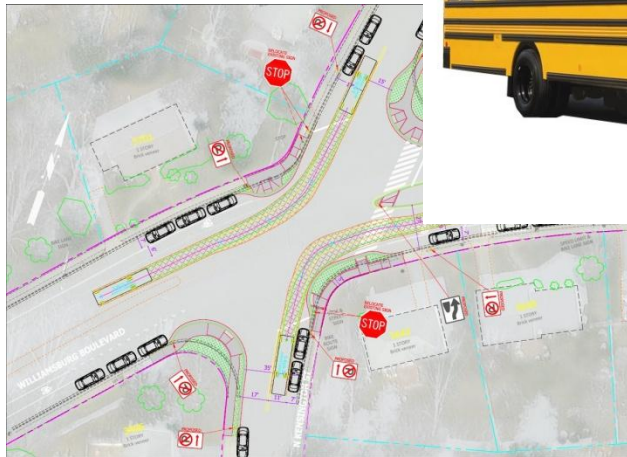
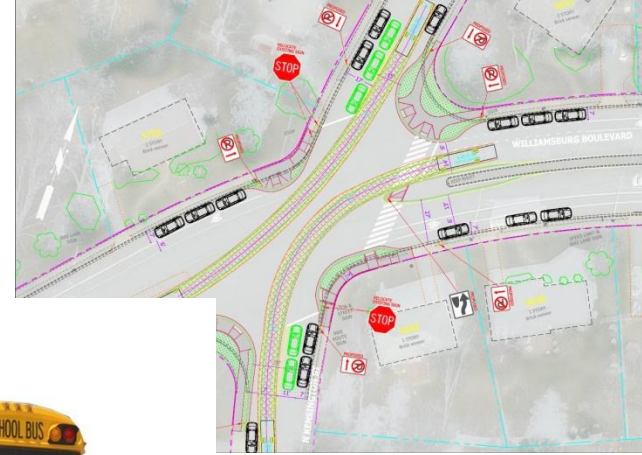
Existing Conditions



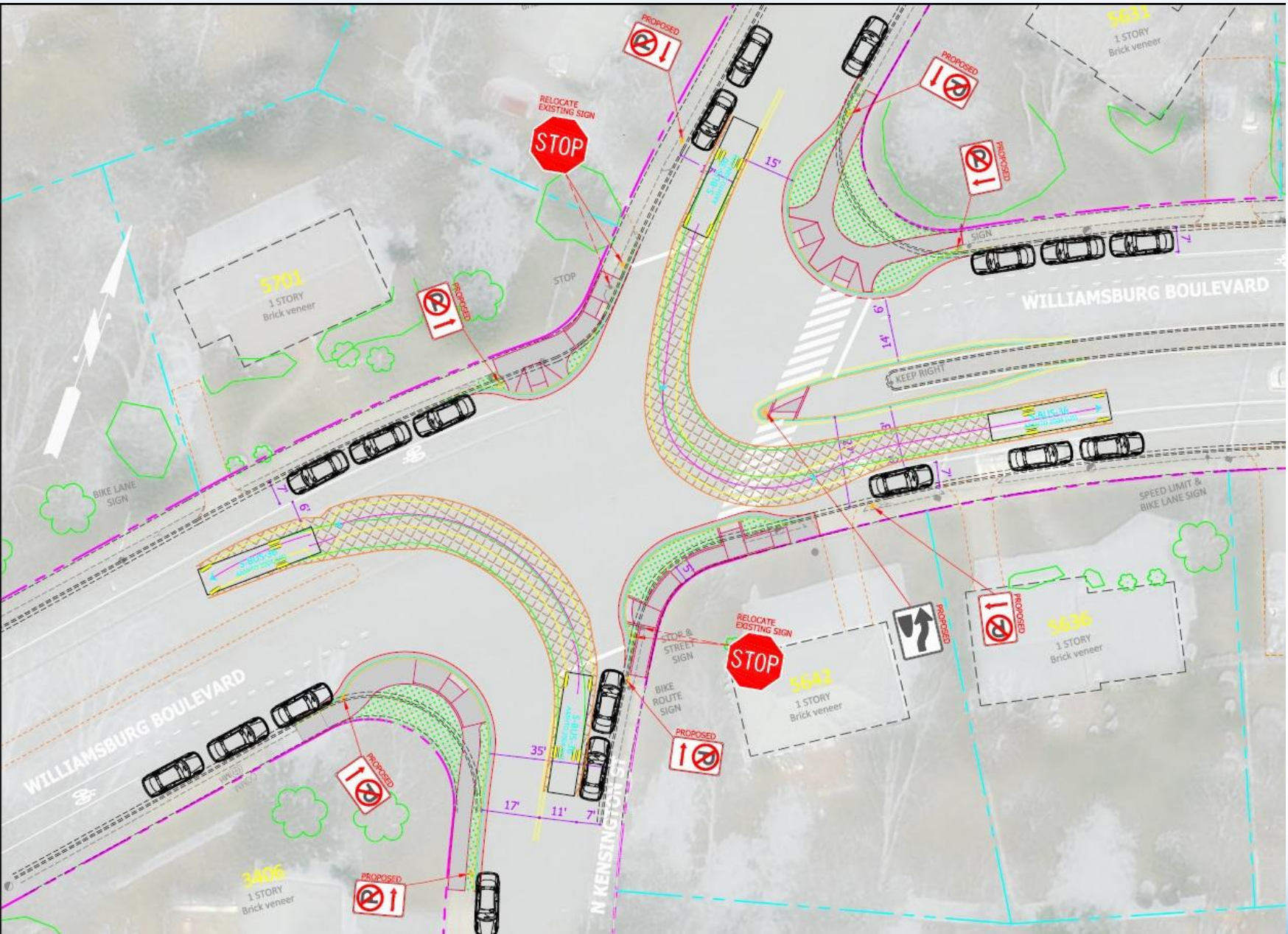
Proposed Plan



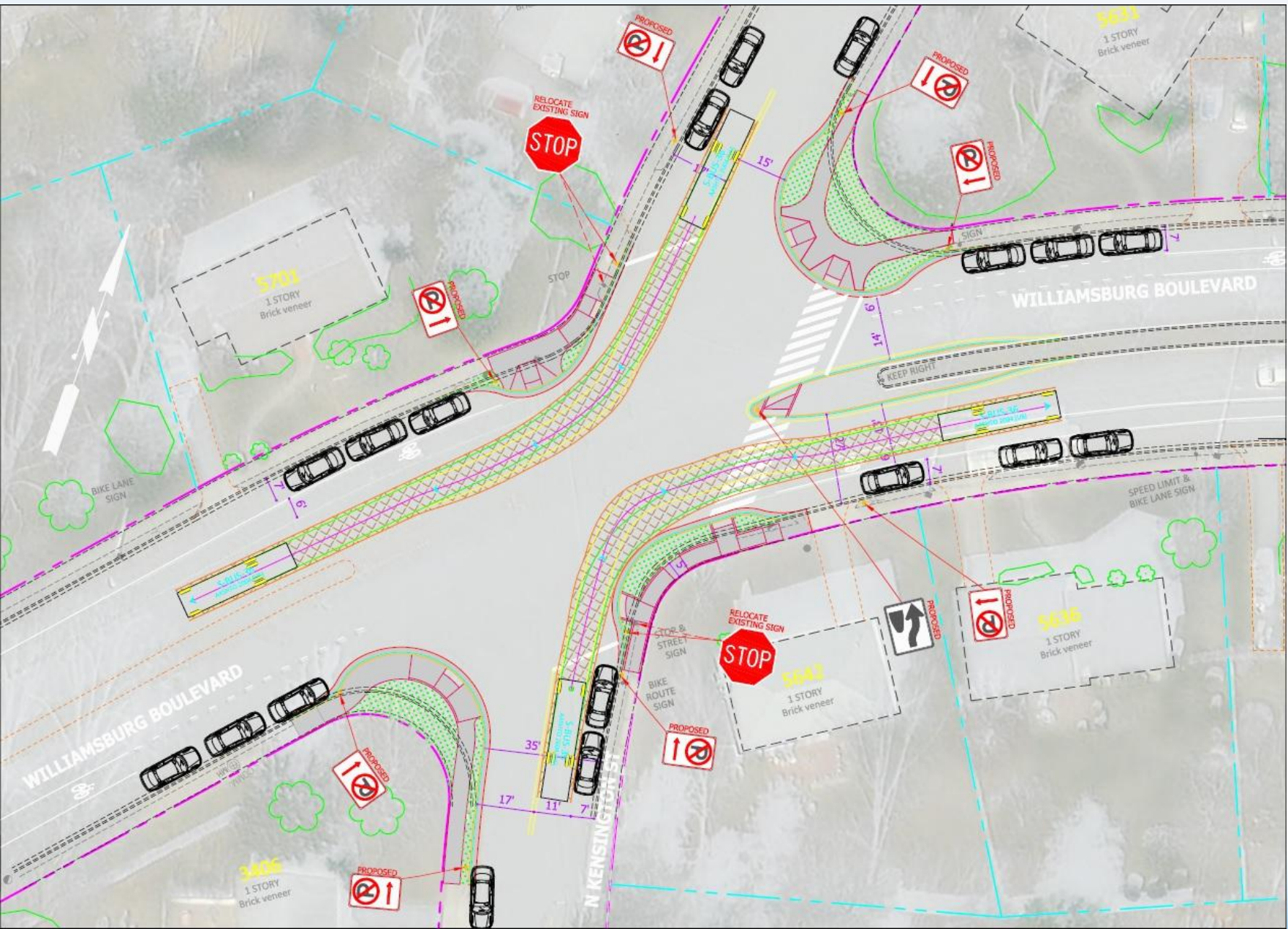
Turning Movement Analysis w/School Bus



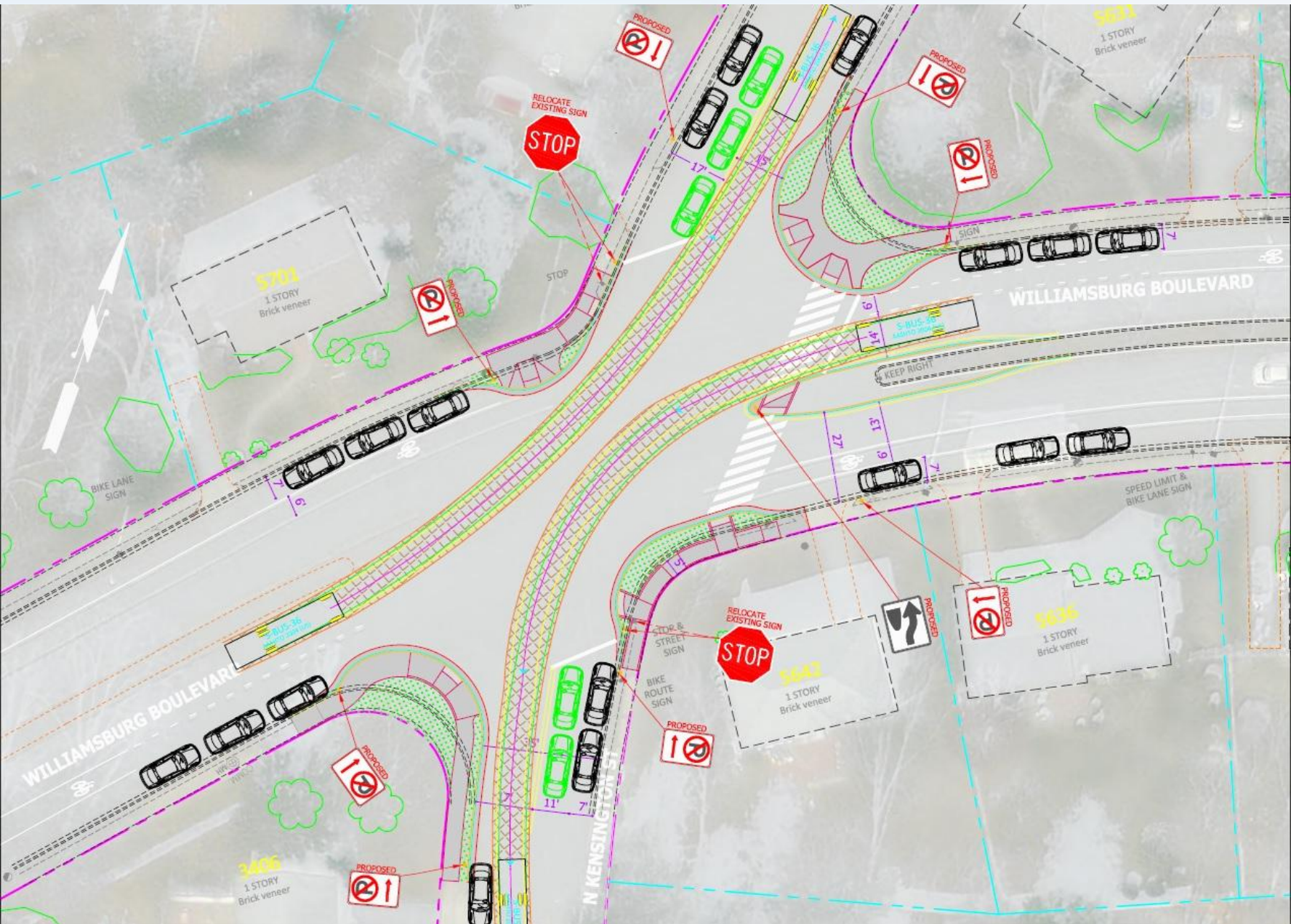
N. Kensington St. NB/SB Left-Turn



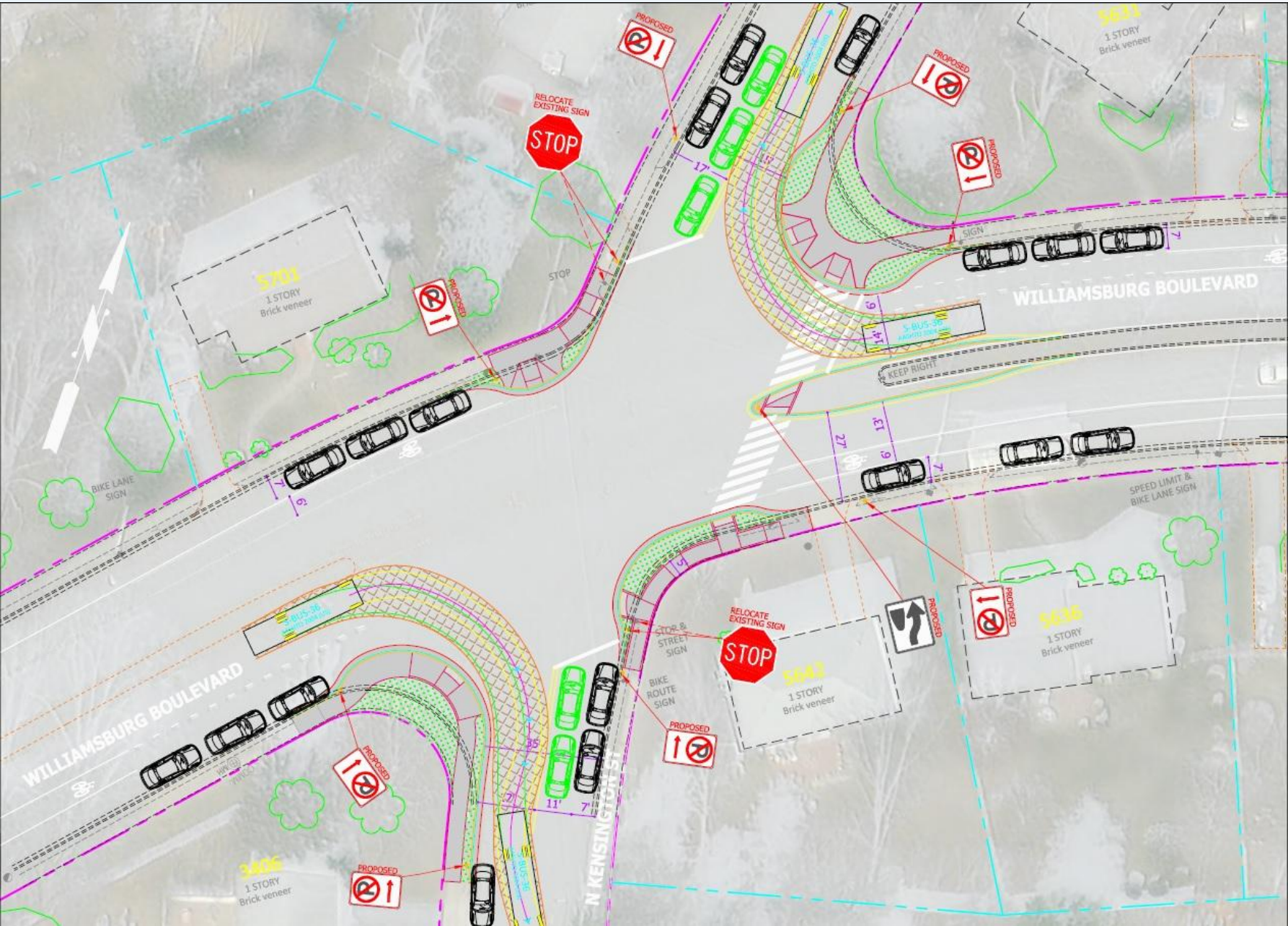
N. Kensington St. NB/SB Right-Turn



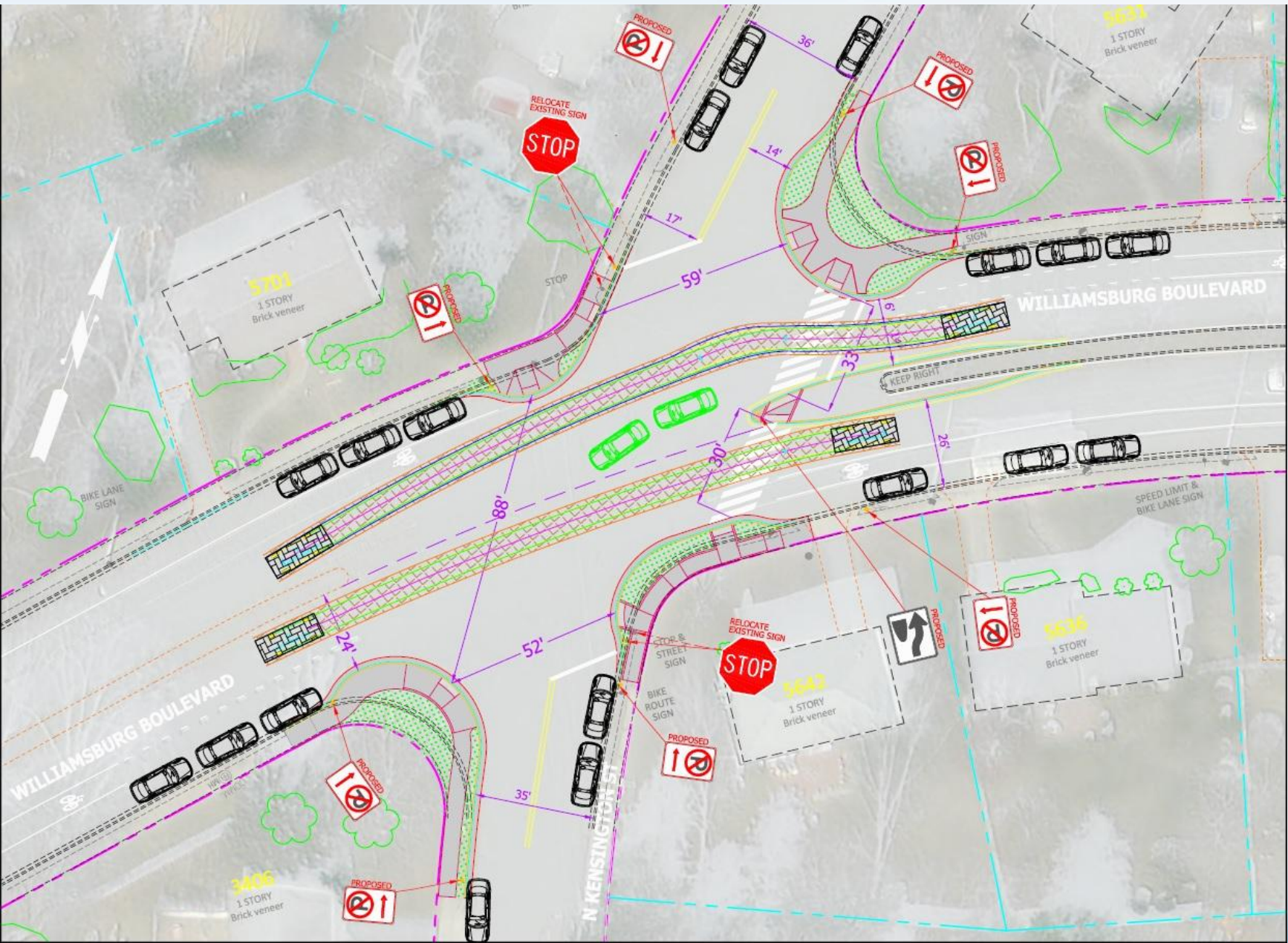
Williamsburg Blvd. EB/WB Left-Turn



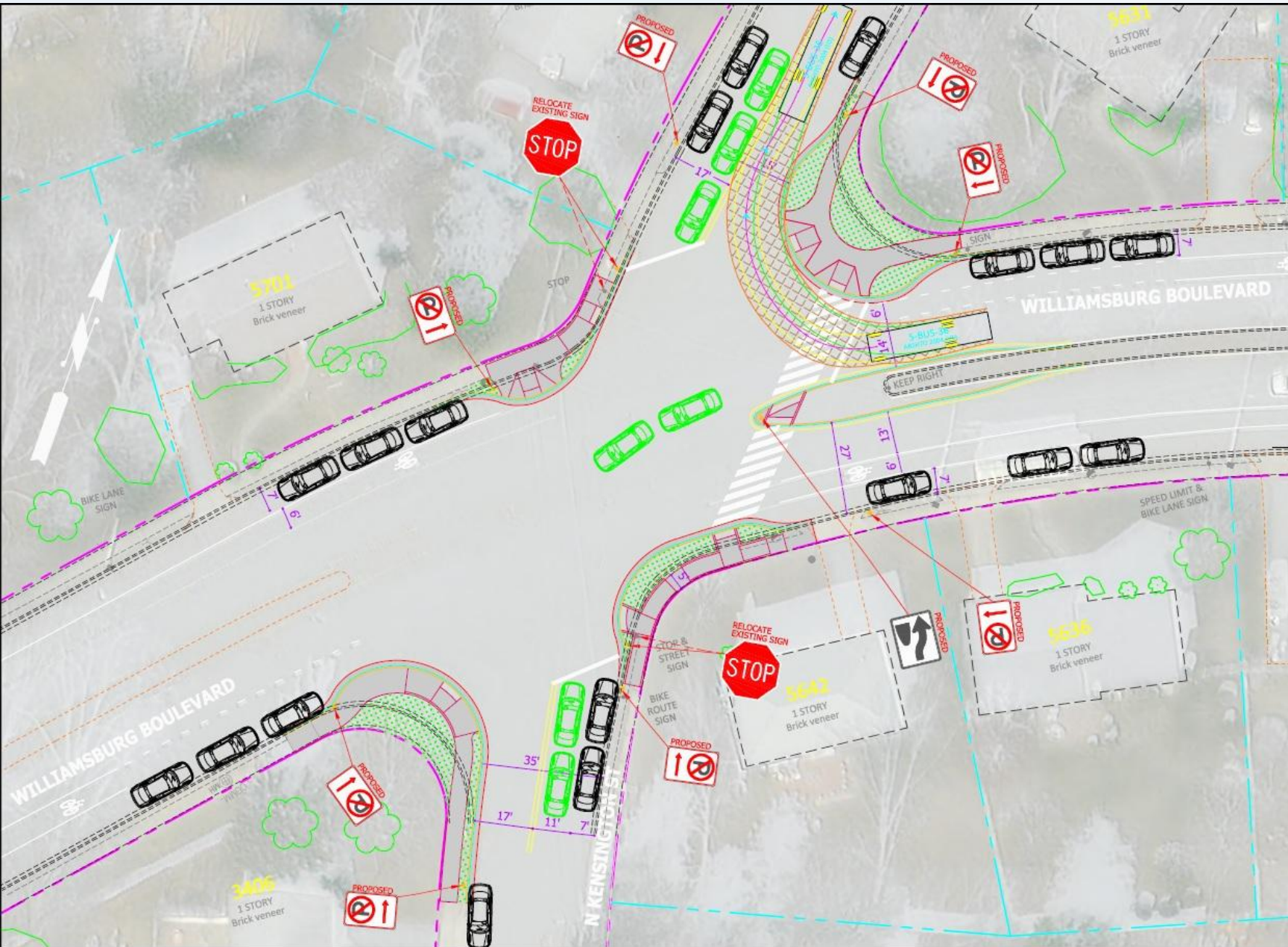
Eastbound/Westbound Right-Turn



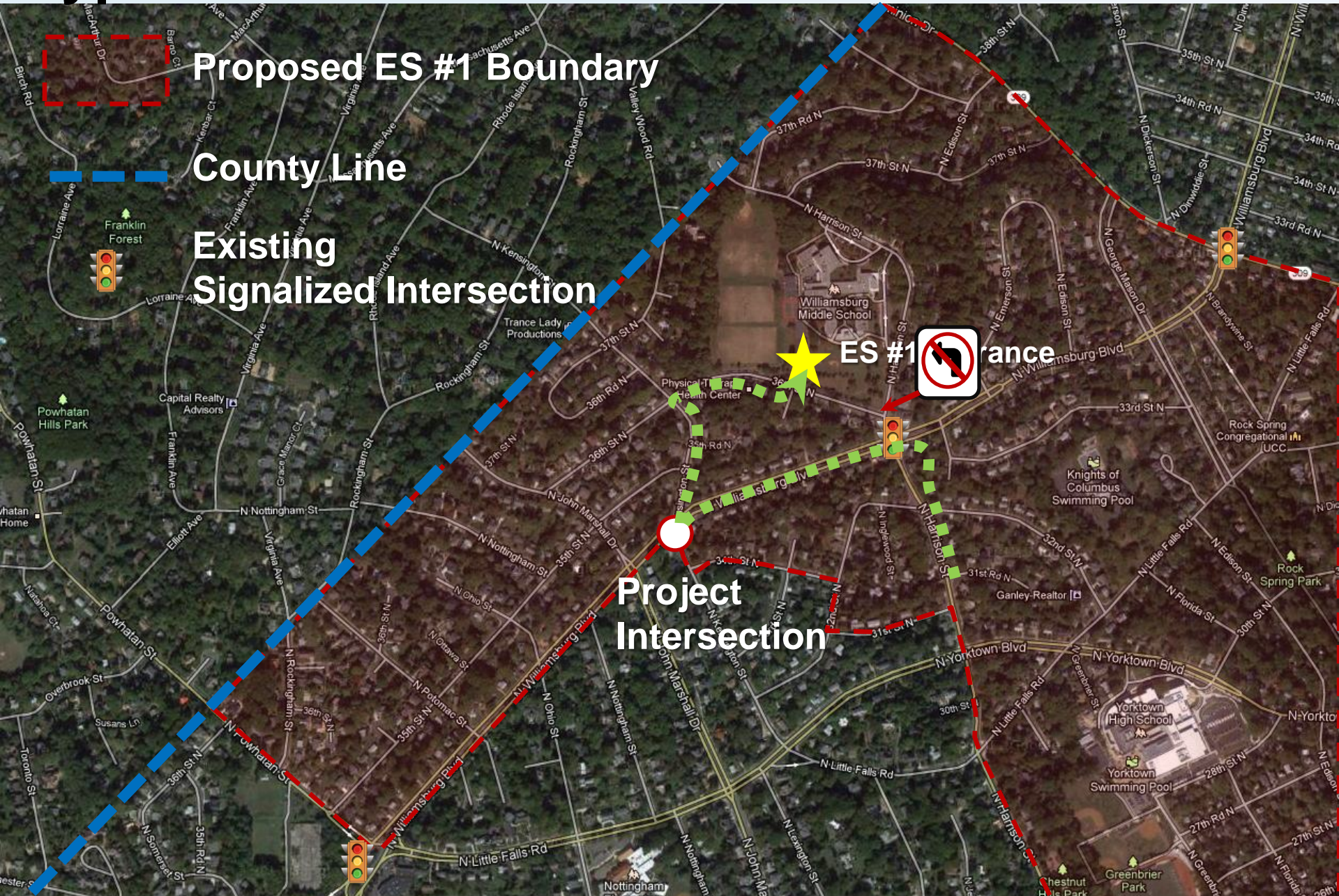
Williamsburg Blvd. WB Left-Turn Queue Study (Through)



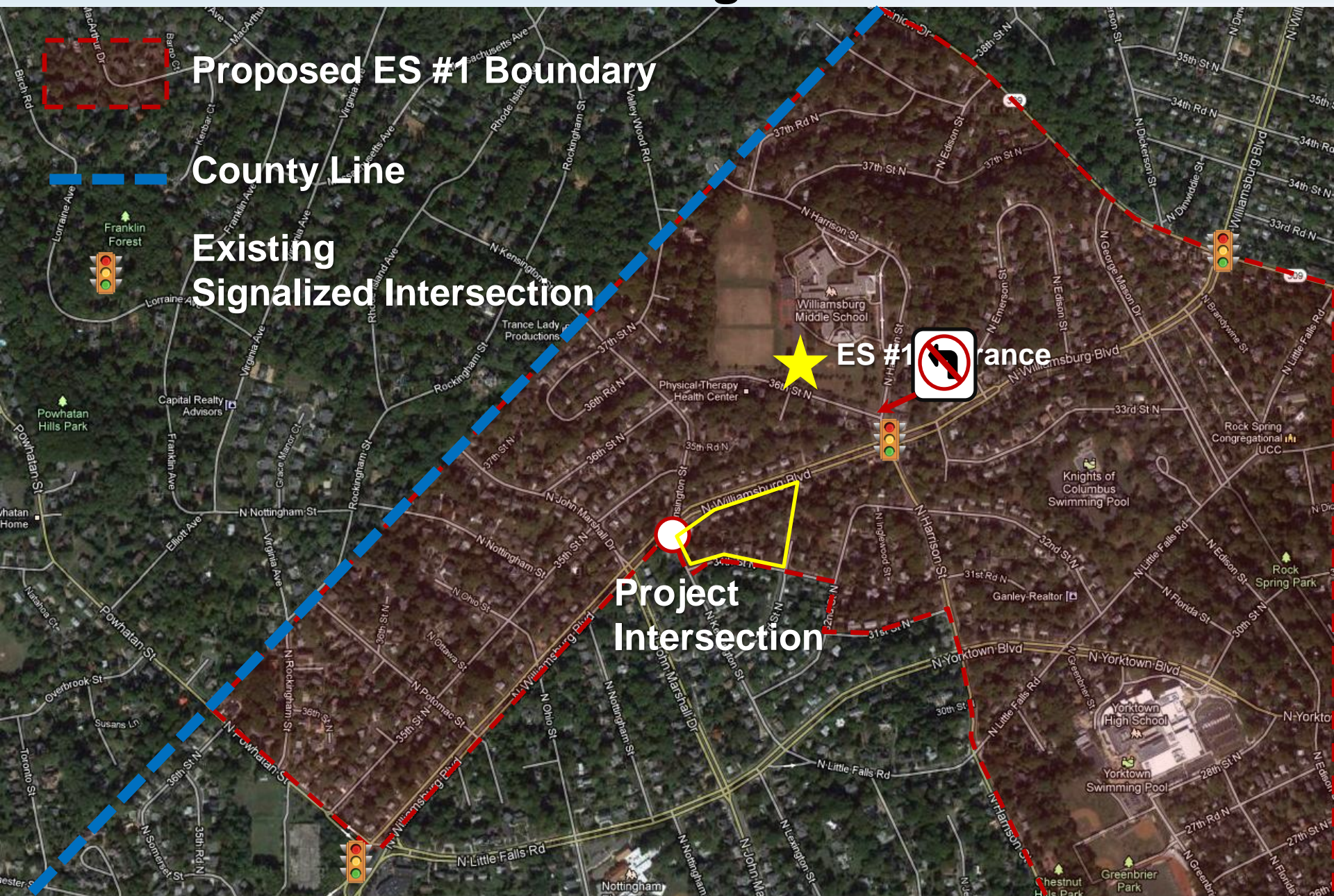
Williamsburg Blvd. WB Left-Turn Queue Study (Right-Turn)



Typical Vehicle Route to New ES #1 Entrance



Students Routed to Crossing Guard at Harrison St.



Proposed ES #1 Boundary

County Line

Existing Signalized Intersection

ES #1 France

Project Intersection



Williamsburg and Kensington Data

Roadway Daily Traffic Volumes

- Williamsburg Blvd. – East of Kensington

8,000 vehicles per day

- N. Kensington St. – North of Williamsburg

800 vehicles per day

Pedestrian Volumes

- AM Peak Hour (7:15 AM – 8:15 AM)

3 crossing Williamsburg Blvd.

- PM Peak Hour (5:00 PM – 6:00 PM)

1 crossing Williamsburg Blvd.

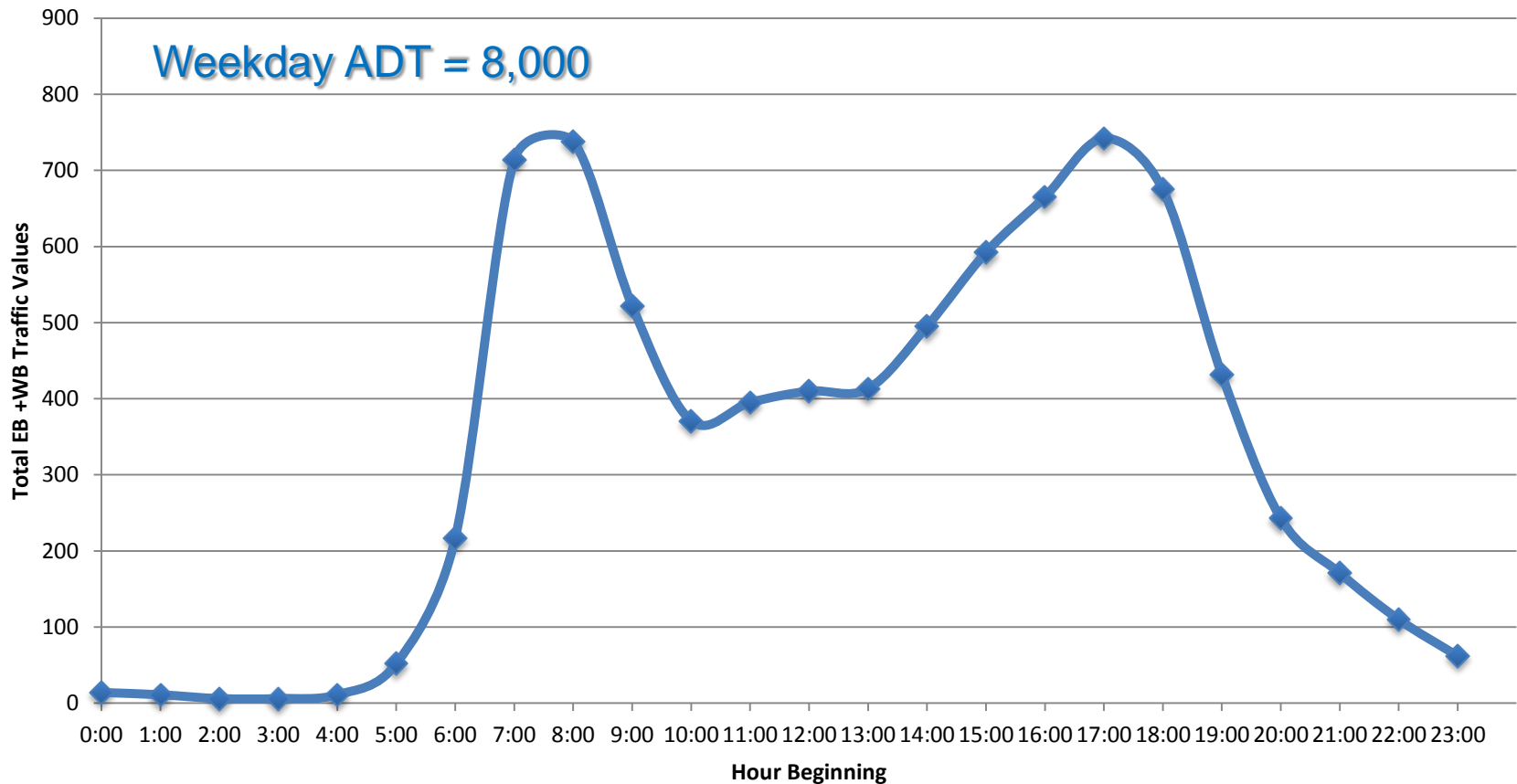
Accident History

- 1 reported accident since 2008 at Williamsburg & Kensington

Williamsburg Blvd. Traffic Volumes

Williamsburg Blvd. Average Weekday Traffic Volumes by Hour of Day

Location: Williamsburg Blvd East of Kensington St. EB/WB



Data Source: Williamsburg Middle School and New Elementary School - School Transportation Plan (by Toole Design Group, 12/18/12)
Counts by Quality Counts, LLC September 25, 2012 through September 30, 2012

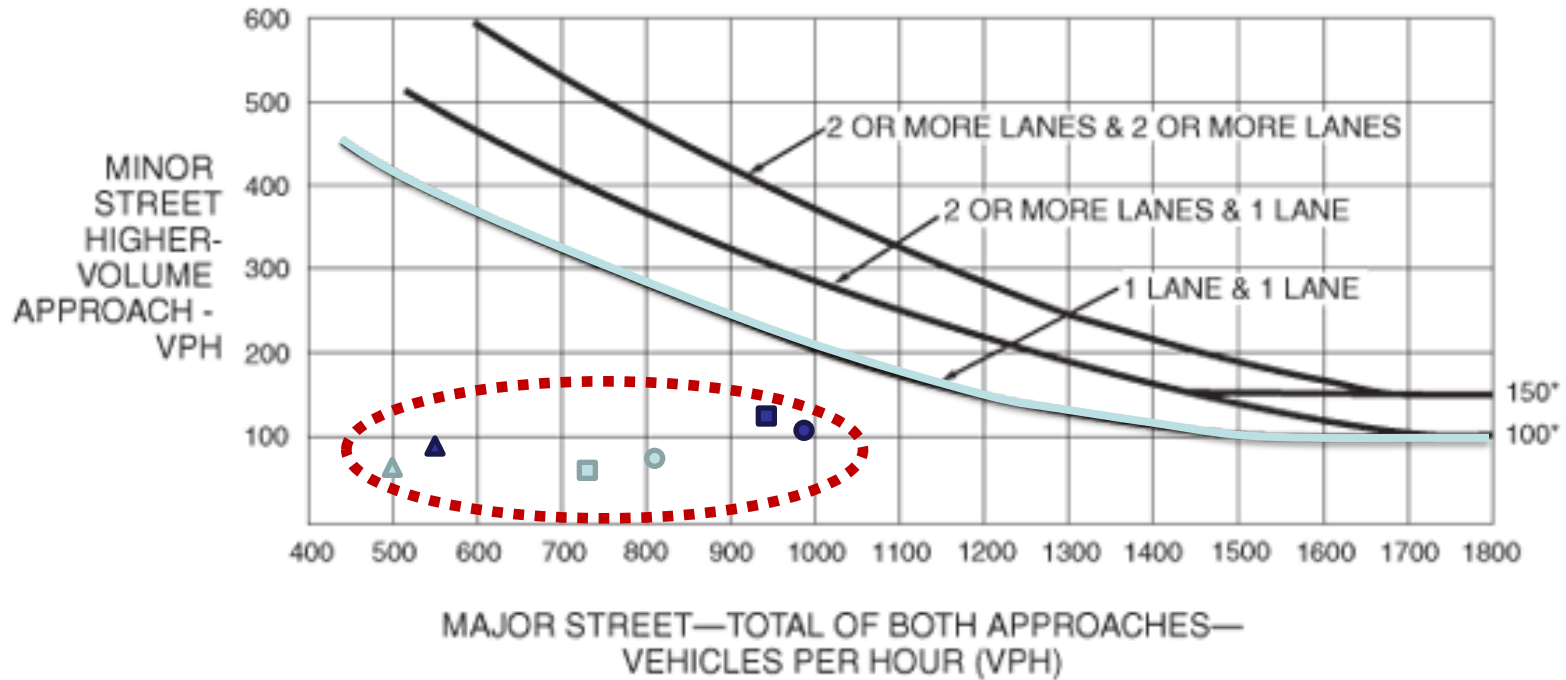
Manual on Uniform Traffic Control Devices (MUTCD)

- **Warrant 1, Eight-Hour Vehicular Volume**
- **Warrant 2, Four-Hour Vehicular Volume**
- **Warrant 3, Peak Hour**
- **Warrant 4, Pedestrian Volume**
- **Warrant 5, School Crossing**
- **Warrant 6, Coordinated Signal System**
- **Warrant 7, Crash Experience**
- **Warrant 8, Roadway Network**
- **Warrant 9, Intersection Near a Grade Crossing**

Warrant 3, Peak Hour

(With ES #1 Sited as Proposed)

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

- Existing 2012
- Future w/ ES #1 and WMS Expansion
(No Left Turn at 36th from NB Harrison)

- WMS Arrival - 7:15 - 8:15
- ES #1 Arrival - 8:00 - 9:00
- WMS Dismissal - 2:15 - 3:15

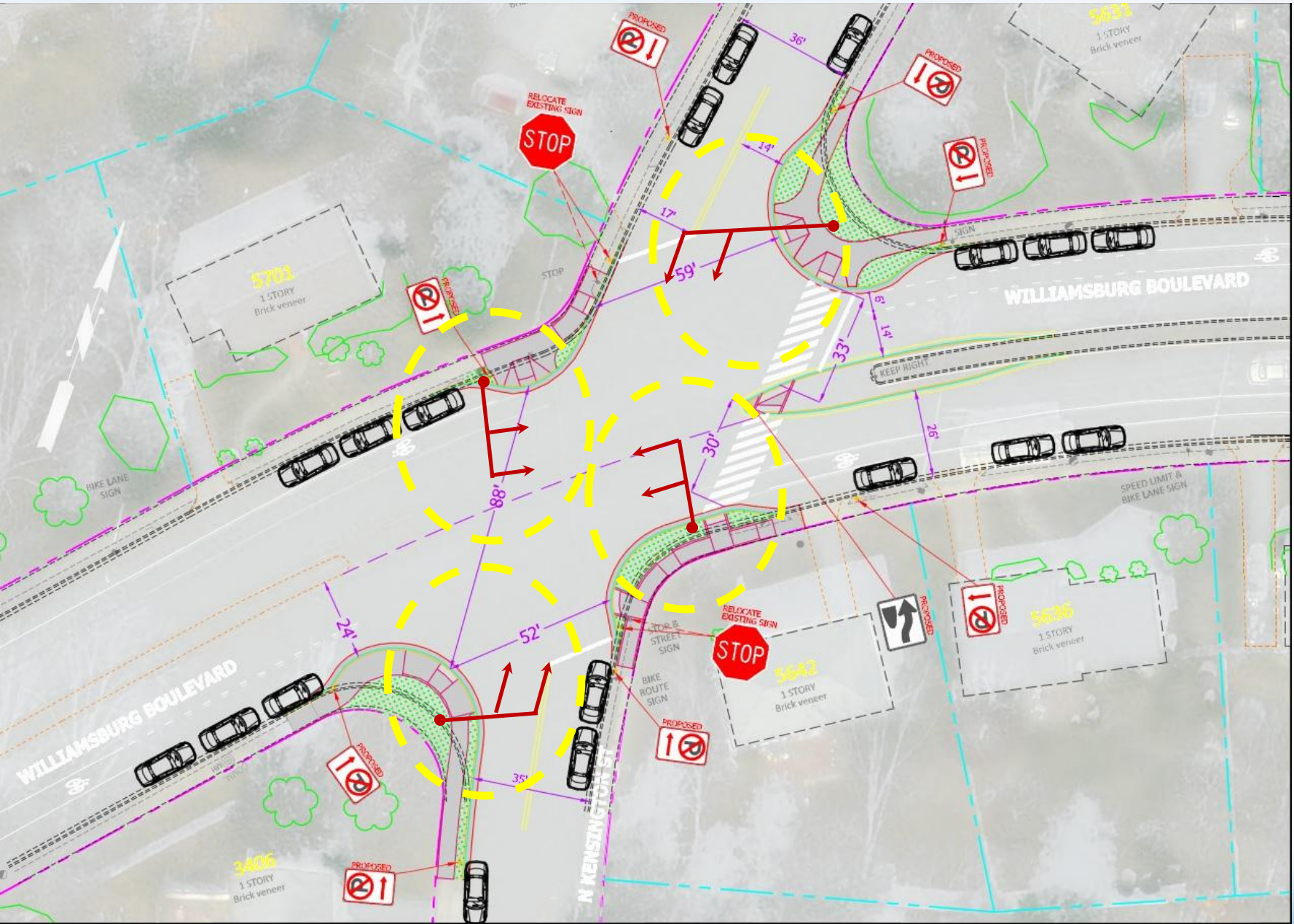
Warrant 7, Crash Experience

Standard:

02 The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

- A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and
- B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and
- C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Condition A in [Table 4C-1](#) (see [Section 4C.02](#)), or the vph in both of the 80 percent columns of Condition B in [Table 4C-1](#) exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Possibility for Signalization



Question and Answer

- Please fill out a question card and pass it up front.
- We will call each person to read their question.
- Please one or two question per person to provide everyone a chance to ask a question if they like.
- We will take questions till 9:00PM