

## Chapter IV Projected Traffic Volumes

This section outlines the methodology and results of estimated future traffic demand used to evaluate alternative transportation concepts.

The type of study conducted is fundamental to the methodology used to project future demand. As a traffic calming study of the corridor, it must be operational in focus – i.e., the safest and efficient use of the current facility – as compared to a capital needs study of the number of traffic lanes and type junction control necessary to accommodate future land use plan build-out. In this study, therefore, the focus is on getting the most use out of the existing 2-lane corridor.

Future volumes for Hunter Mill Road are “constrained” by the capacity of an efficient 2-lane road, and equally important, the limitations of key corridor entry points such as the Dulles Toll Road interchange and Chain Bridge Road intersection. For example, it would be inappropriate to evaluate future corridor travel demand in excess of a 2-lane Hunter Mill Road north of Chain Bridge Road, given there are no plans to significantly upgrade the capacity of the intersection, either by grade separation or widening Chain Bridge Road. To do so would create a road design premised on traffic volumes physically incapable of occurring.

The previously noted typical daily volumes of 16,000 to 18,000 vehicles are slightly below generally accepted 2-lane road daily capacities of 20,000 to 23,000 vehicles for unobstructed flow. Similarly, typical 1,500 to 1,900 peak hour volumes compare to typical 2,000 to 2,200 hourly capacities.

For purposes of this study, the current Hunter Mill Road intersection volumes (Figures 4 and 5) were increased ten percent (10%) on Hunter Mill Road and not changed on the residential cross streets, which are, essentially, built out. The exceptions where all approach volumes are increased are the major locations including Chain Bridge, Dulles Toll Road, and Baron Cameron Avenue. Assuming a two percent (2%) annual growth rate, this more or less equates to, say, year 2011 traffic volumes. These results are depicted in **Figures 11** and **12**.

Typical capacities for a 2-lane road with signalized intersections is 12,000 to 15,000. This explains why certain intersections are above acceptable capacity, why congestion occurs at the signalized intersections, and why residents have difficulty entering or leaving Hunter Mill Road.

# LEGEND

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AM (PM) peak hour volumes



Traffic signal control



Side street STOP sign control



All way STOP control



Alternate Street Design, P.A. Draper Aden Associates  
Planning Services Transportation Services

# NEAR TERM TRAFFIC VOLUMES

## Hunter Mill Road Traffic Calming Study

Fairfax County, Virginia

FIGURE 11

