

Memorandum

TO: Tysons Corner Coordinating Committee Members
Tysons Corner Transportation and Urban Design Study

FROM: Lewis Grimm, Donald Vary
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DATE: September 23, 2005

RE: Response to Committee Member Questions on Transportation Existing Conditions

Following the initial presentation to the Advisory Committee on existing transportation conditions in the Tysons Corner study area, several questions were raised by members of the group. The primary questions related to three topics:

1. Explanation of the large variations in reported average daily traffic volumes on several of the study area roadways between 1995 and 2004;
2. The availability of traffic volume data for more local, internal streets in and around the study area; and
3. An explanation of the differences between average daily traffic volumes and average weekday traffic volumes.

The contents of this memorandum respond to each of these topics.

Explanation of the large variations in reported average daily traffic volumes on several of the study area roadways between 1995 and 2004.

Several committee members noted that the average daily traffic volumes presented for a number of area roadways for the year 2000 appeared to be significantly different from those which would have been expected looking at the long term trend line from 1990 through 2004. Since this information had been extracted and summarized by consultant staff from VDOT's published annual daily traffic volume estimates reports, VDOT staff were contacted in order to address this concern. As a result of these discussions, it was determined that the accuracy of the reported year 2000 traffic volume information was somewhat more questionable than that reported in prior or subsequent years.

VDOT staff indicated that during the 1999-2000 time period they had been implementing a major change in the way in which short duration traffic volume data was collected and factored to provide estimates of average daily traffic. As is frequently the case when such a major change in traditional data collection and analysis processes is implemented, some issues were

subsequently identified with the resulting quality of the reported information. VDOT staff expressed the opinion that traffic volume data for the years 1999 and 2000 should thus be used with caution. However, it is their belief that volume information from 1998 and earlier years and from 2001 and later years, has a higher and more consistent degree of acceptability. It is also important to remember that this information is being used to provide an overall view of current traffic conditions and trends in the study area.

Availability of traffic volume data for more local, internal streets in and around the study area.

Several committee members inquired into the availability of traffic volume information for more of the local, internal streets in the study area. VDOT's annual traffic count program reports at the jurisdiction level, e.g., Fairfax County, provide information on annual average daily traffic volume estimates by defined segment for all public roadways in the county, including local residential subdivision streets that are maintained by VDOT. The complete annual report contains approximately 800 pages of information.

Defined roadway segments range in length from less than 0.10 mile to several miles, depending on the specific roadway facility and its importance to the overall state maintained highway system in Fairfax County. For all defined roadway segments, information is provided on the route number, its name, the length of the segment, the annual average daily traffic volume estimate (AADT), and the quality of the traffic volume estimate. The quality of the information varies considerably, from an average of complete continuous count data from a VDOT permanent traffic count station to a "raw" unadjusted traffic count that is simply reported without any adjustments being made. For all defined roadway segments, the year in which the original traffic volume count was taken is also presented. These can range from the year of the published report (the most recent being 2004) for major routes to as early as 1991 for minor residential subdivision streets. Thus, some traffic volume estimate information exists for every segment of every VDOT maintained roadway in Fairfax County.

Additional traffic count data obtained in connection with development traffic impact studies or other major transportation projects such as the EIS for the Dulles Corridor Transit Project and the VDOT Tysons Circulation Study has also been compiled and is summarized in the transportation existing conditions report. All of this information has been included on the descriptions of the segments of the detailed study area street network that has been developed for use in this study. This computerized highway network does not include every local residential street in the study area, but does include all collector level roadways and all of the local streets which provide access to major residential, commercial, and industrial properties in the study area.

An explanation of the differences between average daily traffic volumes and average weekday traffic volumes.

Several committee members also asked for additional information on the difference between annual average daily traffic (AADT) and annual average weekday traffic (AAWDT). A concern was expressed that the use of AADT information in assessing the effects of increased travel demands generated by potential future land development might underestimate these impacts. As defined by VDOT, Annual Average Daily Traffic (AADT) represents "the estimate of typical

daily traffic on a road segment for all days of the week, Sunday through Saturday, over the period on one year.” Average Annual Weekday Traffic (AAWDT) is defined by VDOT as “the estimate of typical traffic over the period of one year for the days between Monday through Thursday inclusive.”

Based on a review of available information provided by VDOT, AAWDT volumes are consistently greater than AADT volumes, at least on the public roadways within the defined Tysons Corner study area. In general, the greatest variations (on the order of 20 percent) are observed on those major regional routes, such as the Dulles Toll Road west of the Route 7 interchange, which carry larger percentages of commuter traffic. Conversely, facilities such as Lewinsville Road west of Spring Hill Road, which typically carry lower volumes of commuter traffic, experience only an 8-10 percent difference between AADT and AAWDT.

In recognition of these differences, the regional travel demand forecasting model developed and maintained by the Metropolitan Washington Council of Governments (MWCOG) estimates average daily weekday traffic (AAWDT) volumes. This regional level model is the basis from which the detailed Fairfax County subzone model and the still more detailed Tysons Corner area subzone model have been developed and calibrated. The assessment of future year travel demands on the study area street system will be based on the use of average annual weekday traffic volumes and should thus alleviate the expressed concern about potentially underestimating the effects of potential future development.

Concluding Remarks:

We trust that these responses to the group’s questions are satisfactory. Please do not hesitate to contact us if additional clarification on any of these points is desired.