

# APPENDIX C.

## TRAFFIC IMPACTS

### ❖ C.1 Traffic Volumes and Congestion

This section discusses projected changes in traffic volumes and traffic flow conditions between current conditions and projected future conditions in the year 2020. It is important to realize that, from an economic perspective, changes in traffic volume can be a double-edged sword. On the one hand, more traffic can mean more visitors and customers to some businesses. However, it can also mean a slowdown of traffic movement, which can be a negative factor for travelers passing through an area.

Traffic volumes are measured in terms of Average Daily Traffic (ADT), a counting of the number of vehicles passing by a given location (in both directions). All traffic data comes from the I-73 Location Study, Traffic and Transportation Technical Memorandum (draft, August 1999). Table C-1 shows the current traffic counts and projected traffic levels for 2020 under each highway alternative. The percentage changes from "No Build" conditions are shown for each of the I-73 alternatives in Table C-2.

Density of traffic flow is measured in terms of Level of Service (LOS) rating during peak hour. The ratings are parallel to school grades, with an "A" denoting the best possible conditions -- free flow at posted speed limits. An "F" denotes severe congestion with traffic stoppages (and generally stop-and-go movement) during the peak period. The projected level of service ratings (from A to F) are shown in Table C-3, and the direction of changes in level of service (compared to "No Build" conditions) are shown in Table C-4.

Key findings for changes by the year 2020 are as follows:

#### **Changes for I-81 in the Vicinity of Roanoke**

- With the *East* or *Central* alignments of I-73, traffic on I-81 (in the vicinity of Roanoke) would gain an average of 13,000 ADT (ranging from 9,000 to 17,000 for specific segments), a 24% average increase over the "no build" scenario. With the *West* alignment, there would be a smaller change in traffic on I-81, with an average gain of 6,500 ADT (ranging from 2,000 to 9,000 for specific segments), a 12% average increase over the "no build" scenario.