

TRAFFIC VOLUME DATA

AADT

As explained in the foregoing, the AADT has been determined for each of the 3,286 links of the Road Inventory network, and the results are tabulated on pages 1 through 177. Details of the AADT tables are as follows.

Column 1: Maintenance Road Number as indicated on the Functional Classification Highway Maps.

Column 2: Route Number, road name, or street name as shown on the above maps, and is the frequently used name.

Column 3: Ending mileage of the section or roadway link, which is the distance to the nearest of 0.01 mile from the beginning of the maintenance road, or from the end of the previous link's break point to the end of this link.

Column 4: Beginning point or break point identifier in which the first entry in every road number indicates where the road begins. Thereafter each entry describes the point at which the link ends.

Column 5: Annual Average Daily Traffic in vehicles per day for the roadway section or link for the year 2001.

Column 6: Year of last count is indicated.

Column 7: Traffic Pattern Group of the roadway link.

Of particular interest is the AADT for 2002 on the Interstate Highways in Delaware. As stated before, the Interstate Highways constitute only 1.04% of the Road Inventory mileage, but carry 18.07% of the total traffic. A comparison of the AADT for the years 2001 and 2002 at all of the four permanent traffic counter stations on the Interstate Highway, inclusive of the Delaware Turnpike, is presented below.

LOCATION	2001 AADT	2002 AADT	CHANGE%
1. JFK Memorial Highway Toll Plaza	73,907	76,555	+3.58
2. Delaware Memorial Bridge Western Approach	89,952	93,631	+4.09
3. I-95 near Naamans Road Interchange	53,453	53,949	+0.93
4. I-495 near Naamans Road Interchange	36,519	37,958	+3.04
Total of Locations 3 & 4	89,972	91,907	+2.15

As the foregoing table indicates, the traffic at JFK Memorial Highway Toll Plaza increased by 3.58% in 2002, and a 4.09% increase of traffic at the western approach of Delaware Memorial Bridge.

The traffic volume has increased by 3.94% on I-495 and by 0.93% on I-95 near the Naamans Road interchange. The combined increase of 2.15% in the traffic volume on I-95 and I-495 is due to the completion of reconstruction work of I-95 that took place during a part of the year 2001.

K and D Factors

K is the proportion of AADT on a roadway segment or link during the Design Hour, i.e. the hour in which the 30th highest hourly traffic flow of the year takes place.

The Design Hourly Volume of a roadway segment or link is its 30th highest hourly traffic volume of the year in vehicles per hour, and is denoted by DHV.

Thus the **K** factor is given by,

$$DHV = K * AADT$$

D is the proportion of DHV occurring in the heavier direction, and is called the Directional Split.

Thus **D** > 0.5

The Directional Design Hourly Volume, denoted by DDHV, is given by,

$$DDHV = D * DHV$$

From the database of ATR stations, the average values for the 30th Highest Hourly Volume as well as the corresponding Directional Split each Traffic Pattern Group for 2002.

To determine the K and D values of a roadway segment or link, the first course of action is to obtain its TPG. Having known the TPG of the roadway segment or link, its K and D values can be determined for 2002.

TPG	K	D	TRUCK %
1	8.1	52.4	12.0
2	9.6	55.6	6.9
3	10.6	59.1	7.0
5	12.3	57.7	9.0
6	14.4	60.9	6.8
7	13.5	71.5	3.9
8	11.4	57.2	10.2

NOTES:

1. K & D values are shown in percentages. Divide by 100 for computation.
2. Data for TPG 3 may be assumed for TPG 4.

Diurnal Distribution of Traffic

Again from the database of ATR stations, the hour by hour distribution of AADT over the 24-hour period was computed for each TPG as an average of the distributions pertaining to the respective

ATR stations within the TPG. The computations were made separately for weekday and weekend traffic only, and for the total traffic. These tables can be found [here](#).

As explained earlier, when the diurnal distribution of traffic on a roadway segment or link is required, it is necessary to find the TPG to which the roadway segment belongs. Then referring to the aforesaid tables, the hour by hour distribution of AADT over the 24-hour period can be obtained for that roadway segment.