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**Supplement No. 2**

***TRAFFIC FORECASTS  
PART I***

**INTERSTATE**

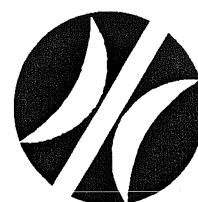
**PENNSYLVANIA**

**95**

PREPARED  
FOR THE  
PENNSYLVANIA  
DEPARTMENT OF  
TRANSPORTATION  
BY THE  
DELAWARE  
VALLEY  
REGIONAL  
PLANNING  
COMMISSION

JUNE 1993

***I-95 Intermodal Mobility Project:  
Heading for the Twenty-First Century***





# TRAFFIC FORECASTS PART 1

I-95 Intermodal Mobility Project

## SUPPLEMENT NO.2



*Prepared for*  
*the*  
**PENNSYLVANIA  
DEPARTMENT OF  
TRANSPORTATION**



*by the*  
**DELAWARE  
VALLEY  
REGIONAL  
PLANNING  
COMMISSION**

*The Bourse Building  
21 South 5th Street  
Philadelphia, PA. 19106  
June 1993*

**HEADING FOR THE TWENTY-FIRST CENTURY**



*This report, prepared by the Delaware Valley Regional Planning Commission, was financed by the Pennsylvania Department of Transportation and the Federal Highway Administration. The authors, however, are solely responsible for its finding and conclusions, which may not represent the official views or policies of the funding agencies.*

*Created in 1965, the Delaware Valley Regional Planning Commission (DVRPC) is an interstate, intercounty and intercity agency which provides continuing, comprehensive and coordinated planning for the orderly growth and development of the Delaware Valley region. The region includes Bucks, Chester, Delaware, and Montgomery counties as well as the City of Philadelphia in Pennsylvania and Burlington, Camden, Gloucester, and Mercer counties in New Jersey. The Commission is an advisory agency which divides its planning and service functions among the Office of the Executive Director, the Office of Public Affairs, and three line Divisions: Transportation Planning, Regional Information Services Center which includes the office of Regional Planning, and Finance and Administration. DVRPC's mission for the 1990s is to emphasize technical assistance and services and to conduct high priority studies for member state and local governments, while determining and meeting the needs of the private sector.*



*The DVRPC logo is adapted from the official seal of the Commission and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole while the diagonal bar signifies the Delaware River flowing through it. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey. The logo combines these elements to depict the areas served by DVRPC.*

# DELAWARE VALLEY REGIONAL PLANNING COMMISSION

## Publication Abstract

|  |                                  |
|--|----------------------------------|
| <b>TITLE</b>                                 | <b>Date Published:</b> June 1993 |
| I-95 INTERMODAL MOBILITY PROJECT             |                                  |
| TRAFFIC FORECASTS PART 1<br>Supplement No. 2 | <b>Publication No.</b> 93025     |

### Geographic Area Covered:

Delaware Valley Region

### Key Words:

1996 Traffic Forecasts, Daily Traffic Volumes, Peak Hour Traffic Volumes, Traffic Characteristics, Base Alternative, Micro-Computer Model.

## ABSTRACT

*This report documents the TRANPLAN based highway and public transit simulation model that DVRPC staff has prepared for use in the I-95 Intermodal Mobility Project. This model produces estimates of 1996 daily or peak hour travel patterns. The regional trip tables as well as the highway and transit networks were focused on the I-95 corridor and downloaded to a personal computer in TRANPLAN format. It is intended for use by the consultant to forecast the impact of various I-95 improvement and reconstruction strategies on travel patterns in the I-95 corridor.*

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## EXECUTIVE SUMMARY

This report documents the TRANPLAN based highway and public transit simulation model that DVRPC staff has prepared for use in the I-95 Intermodal Mobility Project. This model produces estimates of 1996 daily or peak hour travel patterns. It is intended for use by the consultant to forecast the impact of various I-95 improvement and reconstruction strategies on travel patterns in the I-95 corridor.

The 1996 forecasts produced by this model incorporate available socio-economic data from the 1990 census and have been extensively checked for compatibility with the current and year 2015 traffic volumes for the I-95 corridor that were previously prepared by DVRPC. Because of large computational requirements, the regional travel simulation model resident on DVRPC mainframe computer was used to convert updated zonal 1996 socio-economic data into interzonal estimates of highway and transit travel demand (trip tables). This mainframe process required execution of DVRPC's trip generation, trip distribution, and modal split models.

Once these estimates of 1996 travel demand were established, the regional trip tables as well as the highway and transit networks were focused on the I-95 corridor and downloaded to a personal computer in TRANPLAN format. This focusing process removed irrelevant network detail from areas of the region far away from the I-95 corridor. The resulting highway and transit assignment models were much smaller and therefore executed significantly faster in a PC environment.

These assignment models have been transmitted to EBASCO, the prime consultant, for use in ongoing analyses required for the I-95 Intermodal Mobility Project.

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## I. INTRODUCTION

As part of the I-95 Intermodal Mobility Project, DVRPC staff has created a personal computer based highway and public transit simulation model that produces 1996 travel volumes. This model will be used by EBASCO to forecast the impact of various I-95 improvement and reconstruction strategies on travel patterns in the I-95 corridor.

The 1996 forecasts produced by this model incorporate available socio-economic data from the 1990 census and have been extensively checked for compatibility with the current and year 2015 traffic volumes for the I-95 corridor that were previously prepared by DVRPC and presented in I-95 Intermodal Mobility Project Report No.5.<sup>1</sup>

This model development effort was a significant effort by DVRPC staff that is unique in several ways.

- DVRPC staff have made extensive use of micro-computer software (TRANPLAN) in developing and executing travel simulation models.
- A forecasting model has been created expressly for operational use by an outside consultant.
- A peak hour highway assignment model has been developed and calibrated.

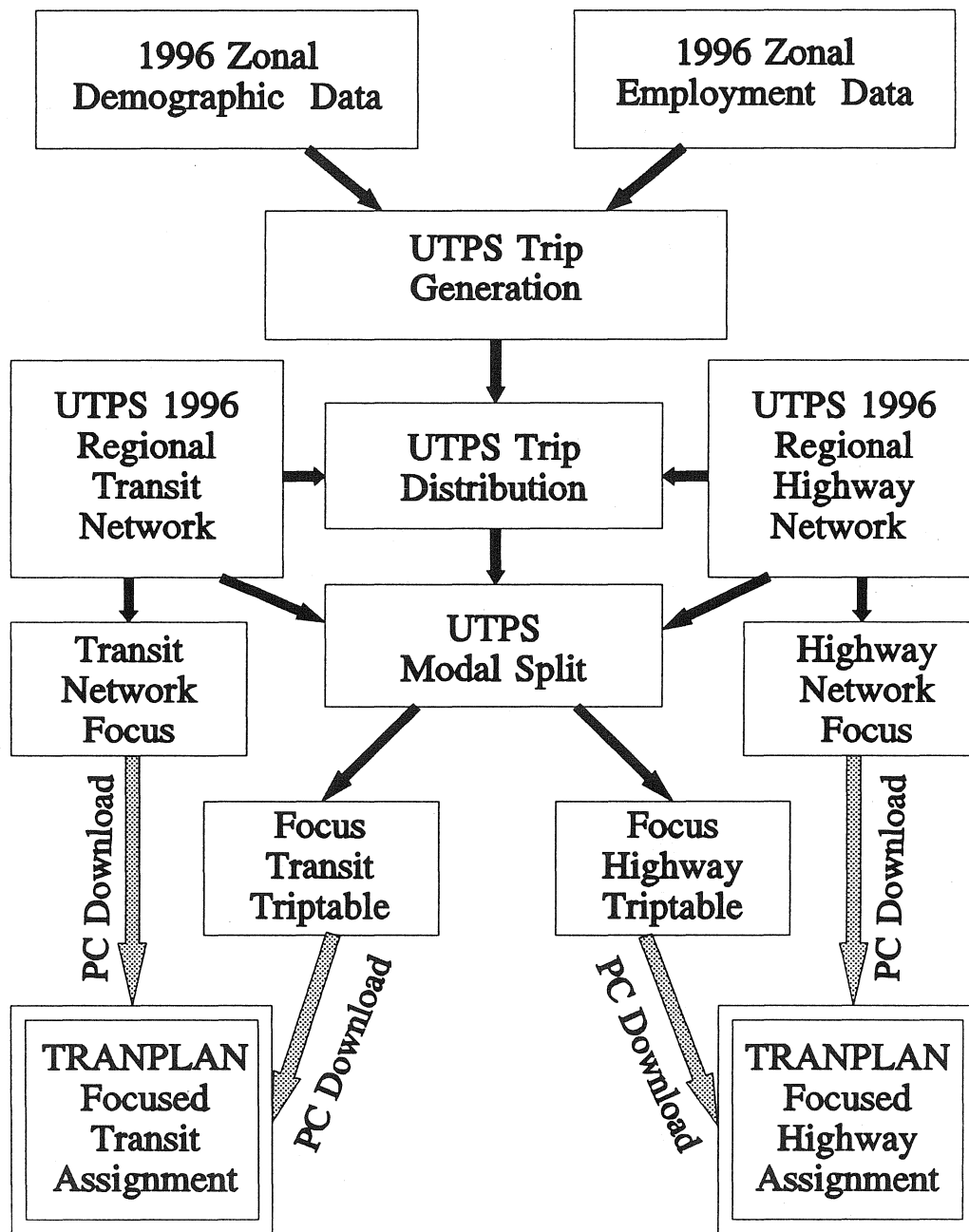
A flow chart of the overall 1996 simulation model process is given in Figure 1. Because of large computational requirements, the regional travel simulation model resident on the DVRPC mainframe computer was used to convert updated zonal 1996 socio-economic data into interzonal estimates highway and transit travel demand (trip tables). This mainframe process required execution of DVRPC's trip generation, trip distribution, and modal split models.

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<sup>1</sup>DVRPC, I-95 Intermodal Mobility Project Report No.5, Traffic Forecasts Part 1, Supplement No. 1, (1991). This will be referenced as the I-95 Intermodal Mobility Report No.5 in later notations.

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**Figure 1: 1996 Focused Highway and Transit Simulation Model for the I-95 Study Corridor**

To validate the resulting forecast, the detailed outputs of the focused highway and transit assignment models were compared on a link by link basis with current traffic counts and the 2015 output of the regional assignment models presented in I-95 Intermodal Mobility Report No.5.

This report documents the 1996 travel simulation models and their outputs. Intermediate model outputs are presented and summarized by County Planning Area, County, State and the Region. These summaries place the I-95 focused data in a regional context and assist in interpreting the results. Finally, statistics associated with focused assignment model outputs are included. The overall outline of this report follows the steps in the simulation process with separate sections devoted to travel simulation model inputs, 1996 travel demand estimation, and the preparation of the assignment models.





## II. TRAVEL SIMULATION MODEL INPUTS

In order to forecast 1996 travel patterns and prepare special micro-computer assignment models focused on the I-95 corridor, a number of significant data preparation activities were required. These activities tend to fall into the categories of areal system definition, estimation of socio-economic forecasts, and the preparation of the highway and public transit networks.

### Areal Systems

Travel forecasting models require that estimates of demographic and employment data be made for small areas or zones. This requirement derives from the need to assign trip making associated with households and businesses to the streets and transit facilities serving them. For regional travel simulations, the traffic zone system is based on census tracts within the nine-county region. The census tracts defined for Center City Philadelphia and one suburban county, however, do not provide sufficient detail for the "grain" of the network, so block groups, the next smaller level of detail, are used to define the traffic zones in these areas. This results in 1,335 traffic zones for the entire DVRPC region, which encompasses an area of 3,833 square miles. Traffic zones are too numerous for most analytical purposes. It is convenient to define a system of aggregate districts. The county planning areas, shown in Figure 2, divide the region into 71 areas along boundaries that were suggested by DVRPC's member governments. These areas are for the most part consistent with the areas used by county planners for their own analyses. Throughout this report, selected inputs and intermediate outputs of the travel simulation models are summarized by county planning area.

Executing the regional highway and public transit assignment models on a micro-computer requires long computation times and large data storage areas. In order to reduce these requirements the regional assignment models were focused on the I-95 corridor by aggregating transportation analysis zones to county planning areas in portions of the region that are far removed from the I-95 corridor (see Figure 3). In these portions of the region, county planning areas replaced traffic zones thereby reducing the number of zonal interchanges to be assigned to the network. Unnecessary highway network detail was also removed to reduce the size of the network. Only the major roadways that feed travel to the I-95 corridor were retained. These modifications cut the computation time requirements for the assignment models by about 50 percent. This I-95 corridor focused area was defined to also include major parallel routes such as US 1, I-295 and the New Jersey Turnpike so that diversions from I-95 to these alternative routes could be studied.

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Figure 2: County Planning Areas

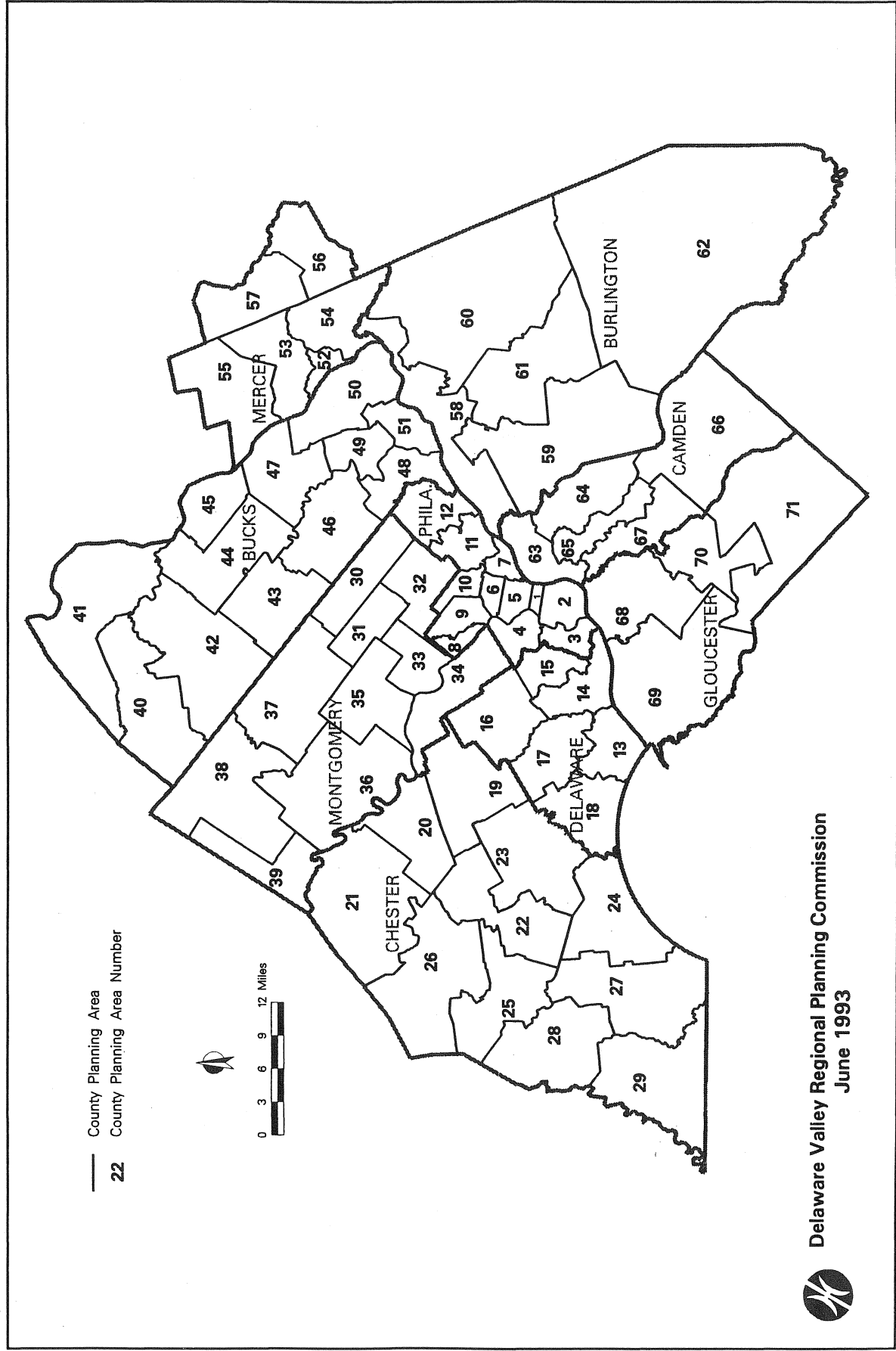
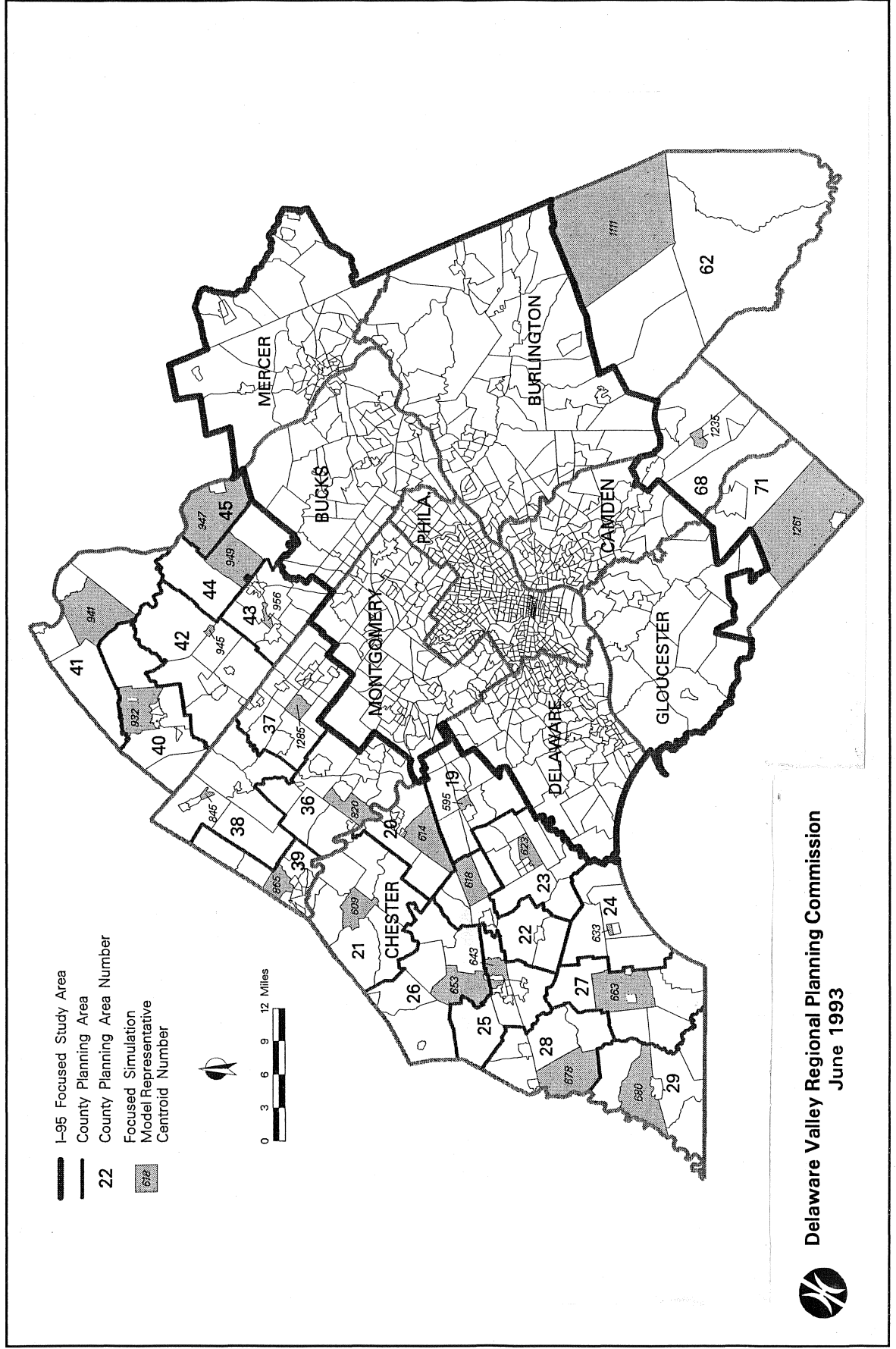


Figure 3: I-95 Cordon Focused Traffic Analysis Zones



## Demographic and Employment Forecasts

The second step in simulating 1996 travel demand involved forecasting demographic and employment data for each zone in the region; this required tabulating available information from the 1990 census, adjusting existing long range forecasts to account for the trends in the 1990 census and estimating the 1996 value by interpolation. Generally, demographic information was available from the 1990 census at the tract level of detail. Census based 1990 employment by place of work was only available by MCD. Traffic zone level estimates were made by factoring the 1987 values based on Minor Civil Division level trends. Estimates for 1996 were made for each of the following variables required by the regional travel simulation model:

- population;
- households, stratified by auto ownership;
- employed residents;
- total automobiles; and
- employment, stratified into twelve Standard Industrial Classification groups.

Overall, the region is projected to grow by 3.0% in population, 4.7% in the number of households, 11.3% in the number of autos, 7.4% in the number of employed residents, and 9.1% in the number of jobs that are located within the region. The number of households is growing somewhat faster than population because of declining household size. Auto ownership is projected to increase at almost four times the rate of population, a continuation of the trends of the 1980's. Employed residents and employment are expected to grow faster than population or households, reflecting the current economic recovery and continued trends toward multi-worker households.

By state, New Jersey is growing faster than Pennsylvania in all categories except auto ownership. The older urban areas, especially Philadelphia, are projected to be stable in population and employment. The fastest growth rates are found in new suburban areas located in Chester, Bucks, and Gloucester counties. Tables 1 and 2 present all of the socio-economic inputs to the travel simulation model, tabulated by county. Appendix A Tables A-1 and A-2 give the tabulations of the 1996 socio-economic inputs by county planning area.

## The Highway and Transit Networks

The 1996 highway and public transportation networks used in this analysis were extensively updated from the 1987 networks that existed in DVRPC's files. A number of highway facilities that were opened after 1987 were added. These include the Mid-County and Vine expressways, the completion of NJ 55, and a number of smaller projects. Except for the planned interchange between I-95 and the Pennsylvania Turnpike which is included, this network can be thought of as the highway system as it existed in 1993. The regional highway network contains virtually every significant street segment within the nine-county area. Figure 4 displays a regional plot of the regional highway network.

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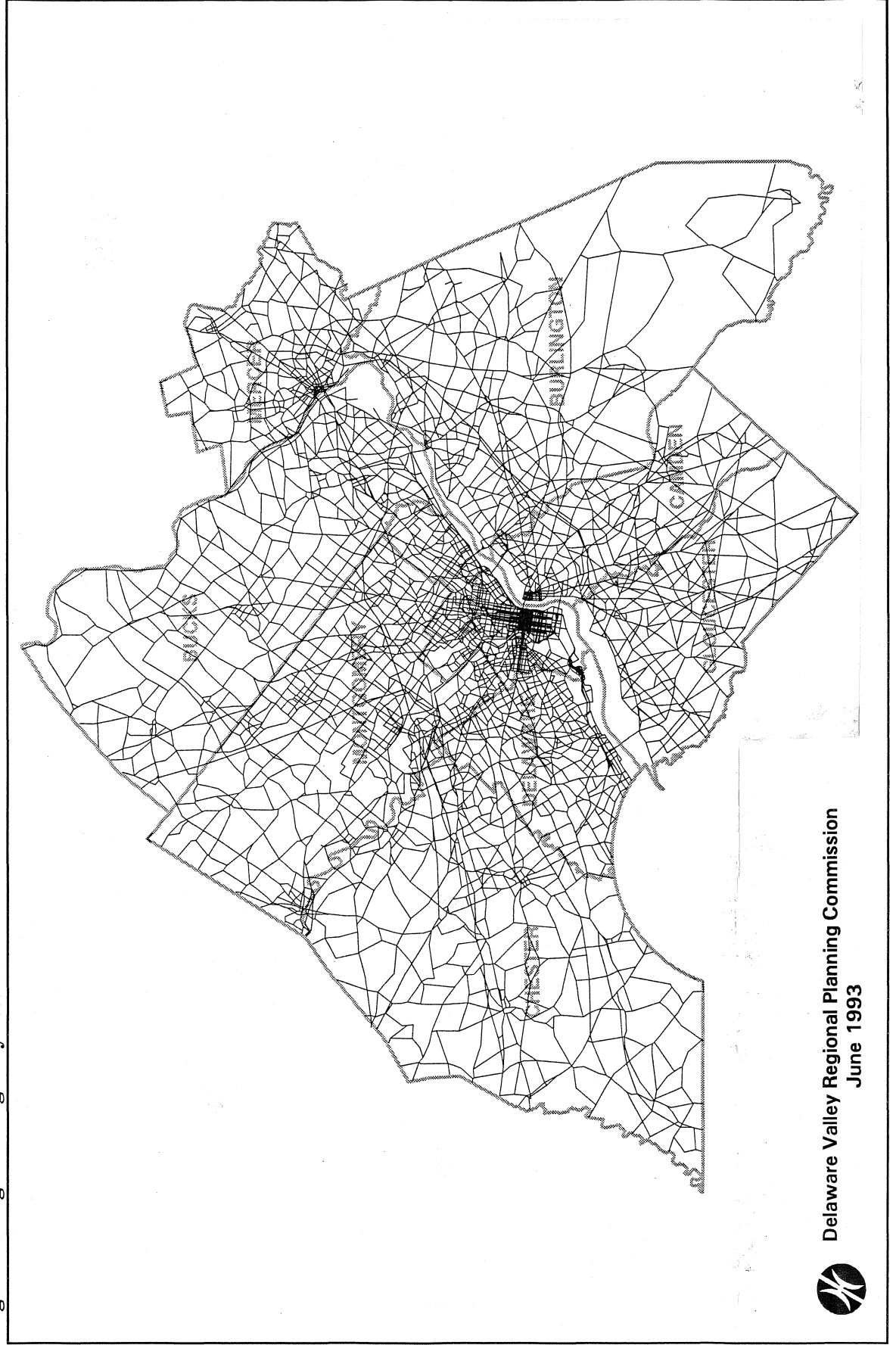
Table 1: 1996 Demographic Data for the Delaware Valley Region

| County                | Population       | Dwelling<br>Units | Total Autos      | Household by Auto Ownership |                |                |                | Employed<br>Residents |
|-----------------------|------------------|-------------------|------------------|-----------------------------|----------------|----------------|----------------|-----------------------|
|                       |                  |                   |                  | 0 Auto                      | 1 Auto         | 2 Auto         | 3+ Auto        |                       |
| Philadelphia          | 1,571,929        | 601,910           | 539,908          | 228,135                     | 240,779        | 108,504        | 24,492         | 642,834               |
| Delaware              | 549,279          | 216,528           | 393,608          | 21,998                      | 62,725         | 82,286         | 49,519         | 294,905               |
| Chester               | 406,015          | 147,145           | 291,978          | 7,573                       | 35,744         | 68,074         | 35,754         | 218,916               |
| Montgomery            | 700,800          | 268,057           | 493,560          | 17,531                      | 81,299         | 114,879        | 54,348         | 378,349               |
| Bucks                 | 578,780          | 207,312           | 409,073          | 9,933                       | 53,270         | 94,370         | 49,739         | 310,792               |
| <b>PENNA</b>          | <b>3,806,803</b> | <b>1,440,952</b>  | <b>2,128,127</b> | <b>285,170</b>              | <b>473,817</b> | <b>468,113</b> | <b>213,852</b> | <b>1,845,796</b>      |
| Mercer                | 340,106          | 121,951           | 202,735          | 14,531                      | 39,787         | 47,258         | 20,375         | 174,745               |
| Burlington            | 415,883          | 146,600           | 281,497          | 6,646                       | 42,430         | 65,117         | 32,407         | 224,592               |
| Camden                | 523,391          | 187,219           | 306,450          | 23,636                      | 62,562         | 70,213         | 30,808         | 252,325               |
| Gloucester            | 249,195          | 85,982            | 161,875          | 5,348                       | 23,654         | 39,131         | 17,849         | 124,948               |
| <b>NEW<br/>JERSEY</b> | <b>1,528,575</b> | <b>541,752</b>    | <b>952,557</b>   | <b>50,161</b>               | <b>168,433</b> | <b>221,719</b> | <b>101,439</b> | <b>776,610</b>        |
| <b>TOTAL</b>          | <b>5,335,378</b> | <b>1,982,704</b>  | <b>3,080,684</b> | <b>335,331</b>              | <b>642,250</b> | <b>689,832</b> | <b>315,291</b> | <b>2,622,406</b>      |

Table 2: 1996 Employment by Sector in the Delaware Valley Region

| County       | Agric.        | Mining       | Constr.        | Manufac.       | Transp.        | Whole-Sale     | Retail         | F.I.R.E.       | Service        | Govmnt         | Military      | Total            |
|--------------|---------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|------------------|
| Philadelphia | 726           | 313          | 20,333         | 87,215         | 42,677         | 47,071         | 129,662        | 79,077         | 304,102        | 146,733        | 4,943         | 862,852          |
| Delaware     | 1,695         | 383          | 14,675         | 33,267         | 10,243         | 11,278         | 44,267         | 17,547         | 82,031         | 22,191         | 103           | 237,680          |
| Chester      | 8,203         | 380          | 14,261         | 32,851         | 8,365          | 11,930         | 32,011         | 17,612         | 62,825         | 17,962         | 80            | 206,480          |
| Montgomery   | 5,968         | 478          | 29,591         | 82,795         | 15,989         | 30,106         | 83,141         | 46,667         | 161,729        | 30,305         | 739           | 487,508          |
| Bucks        | 4,144         | 480          | 17,929         | 44,001         | 7,625          | 15,537         | 55,745         | 15,686         | 80,320         | 22,451         | 646           | 264,564          |
| PENNA        | 20,736        | 2,034        | 96,789         | 280,129        | 84,899         | 115,922        | 344,826        | 176,589        | 691,007        | 239,642        | 6,511         | 2,059,084        |
| Mercer       | 1,402         | 98           | 6,799          | 29,697         | 7,971          | 9,886          | 30,394         | 15,050         | 79,502         | 56,831         | 153           | 237,783          |
| Burlington   | 2,171         | 61           | 11,345         | 23,286         | 8,308          | 12,237         | 35,845         | 15,901         | 54,408         | 20,629         | 16,217        | 200,408          |
| Camden       | 1,148         | 178          | 13,331         | 29,546         | 10,243         | 19,549         | 45,015         | 17,387         | 77,459         | 26,682         | 346           | 240,884          |
| Gloucester   | 3,060         | 91           | 6,312          | 12,986         | 4,141          | 5,725          | 20,566         | 4,058          | 23,872         | 11,729         | 91            | 92,631           |
| NEW JERSEY   | 7,781         | 428          | 37,787         | 95,515         | 30,663         | 47,397         | 131,820        | 52,396         | 235,241        | 115,871        | 16,807        | 771,706          |
| <b>TOTAL</b> | <b>28,517</b> | <b>2,462</b> | <b>134,576</b> | <b>375,644</b> | <b>115,562</b> | <b>163,319</b> | <b>476,646</b> | <b>228,985</b> | <b>926,248</b> | <b>355,513</b> | <b>23,318</b> | <b>2,830,790</b> |

Figure 4: Regional Highway Network



Similarly, the transit network contains all transit routes and their morning peak service patterns. Walk and auto links connect residential and commercial zones with the appropriate stations and stops. The transit network was completely reviewed, and where necessary, recoded for this project to reflect transit routes, service levels and fare structures that were in effect in February of 1993. Figure 5 contains a plot of the regional transit network. Overall, the transit network is more radial in nature, being for the most part focused on the City of Philadelphia and its central business district.

## Network Coding Standards and Data Formats

As part of the I-95 study, DVRPC staff developed procedures to convert both the highway and public transit networks to TRANPLAN format. Although the general network conventions and coding methodology are unchanged, the network data formats contained in DVRPC's documentation of the simulation process do not always agree with the new TRANPLAN formats.

### Highway Network

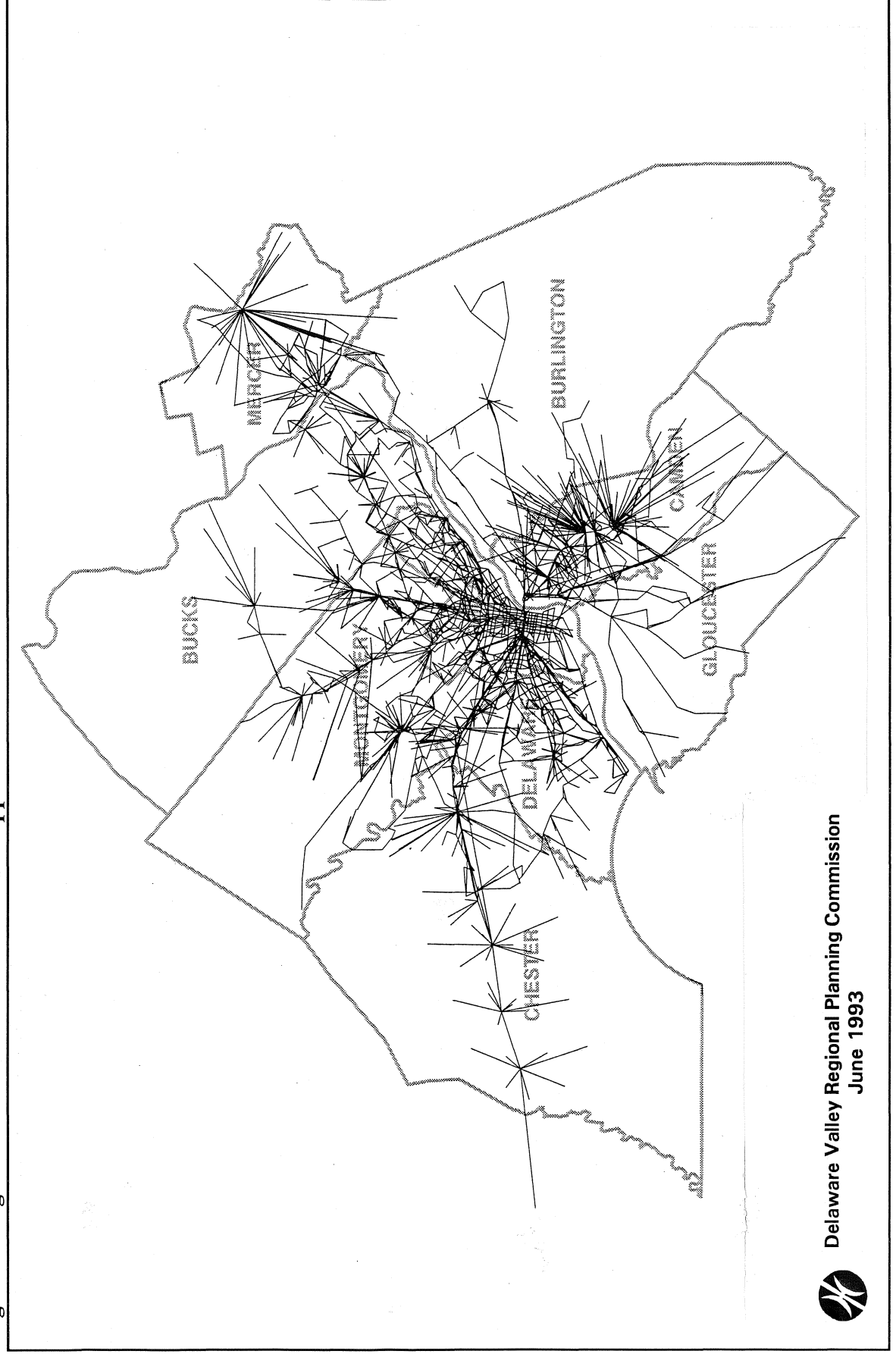
The link and node field record descriptions used in the I-95 highway network are shown on Page 16. These network link and node records were created on DVRPC's mainframe computer from the network data bases associated with UTPS program UROAD. Although these field descriptions closely follow the recommendations in the TRANPLAN manual, the download methodology has been designed to accommodate any micro-computer package with an equilibrium assignment model. Coding conventions that tend to be unique to a particular package, such as bridge or turnpike tolls, have been converted to equivalent time using an appropriate \$/hour parameter. Micro-computer packages other than TRANPLAN can be accommodated simply by rearranging the link and node information, and by focusing the network links on the corridor under study if the package is unable to process DVRPC's very large highway network. This focusing algorithm is described in detail in the next section. Descriptions of the network codes used to describe functional class, area type, and direction are also shown on Page 17.

For network links other than those used for approach, dummy, or toll purposes, speeds and capacities are inserted by TRANPLAN program HWYNET from a lookup table disaggregated by assignment group (functional class), area type, and the number of lanes. This feature allows conversion of a network from daily to peak hour simply by replacing the HWYNET look up table. Generally, daily capacities are defined by dividing the product of hourly capacity and number of lanes by the fraction of daily travel that occurs in the peak hour (2KD factor). Thus, if a two-lane road has a capacity of 1000 vehicles per hour (500 per lane) and 10 percent of the daily traffic volumes occurred during the peak hour, the daily capacity would be 10,000 vehicles per day. The peak hour assignment model utilizes the hourly capacity directly, although the daily speeds required adjustment during the peak hour assignment calibration. The daily and peak hour speed and capacity lookup tables used in the I-95 highway networks are given in appendix B.

---



**Figure 5: Regional Transit Network with Auto Approaches**



## I-95 TRANPLAN Highway Network Record Descriptions

| <i><u>Record<br/>Columns</u></i>  | <i><u>Field<br/>Name</u></i> | <i><u>Contents</u></i>                             |
|-----------------------------------|------------------------------|--|
| <u>Link Field Record Contents</u> |                              |  |
| 1-5                               | Anode                        | Anode  |
| 6-10                              | Bnode                        | Bnode  |
| 11                                | Assign                       | Functional Class                                   |
| 12-15                             | Distance                     | Distance in hundredths of a mile                   |
| 17-20                             | Speed1/Time1                 | Daily Speed or Time <sup>2</sup>                   |
| 25-26                             | Direction Code               | Compass orientation of link                        |
| 27-28                             | LG1                          | Area Type  |
| 29-30                             | LG2                          | Number of Lanes                                    |
| 31-32                             | LG3                          | County Planning Area                               |
| 33-38                             | Capac1                       | Directional Daily Capacity <sup>3</sup>            |
| 74                                | DVRPC Way Code               | 1=One way 2 = Half of two way couplet <sup>4</sup> |

Node Field Record Contents

|       |              |                              |
|-------|--------------|------------------------------|
| 1     | Record Id.   | "N" denotes node record      |
| 2-6   | Node         | Node Number                  |
| 9-17  | X-coordinate | UTM in hundredths of a mile. |
| 20-28 | Y-coordinate | UTM in hundredths of a mile. |

---

<sup>2</sup> This network format is intended to be a universal network description that can be input to any planning battery with an equilibrium assignment. To facilitate this, all turnpike or bridge tolls or toll plaza penalties in the UROAD format network are converted to equivalent time and hard coded in the "time1" field. Similarly, approach and dummy links are given an appropriate value in the "time1" field. All other links receive their speed (and capacity) during network building from a look up table stratified by assignment group, area type and number of lanes.

<sup>3</sup> For network links (assignment groups 1-6 and 8) daily capacities are input from a look up table by assignment group, area type and number of lanes. Approach and dummy links have a hard coded capacity of "0" to disable the capacity restraint algorithm.

<sup>4</sup> All links in the card image input to HWYNET are coded one way. Thus two-way links have two entries in the file, one from A to B, and the other from B to A. The code in column 74 is provided to assist in identifying two way links. If a "2" is coded, another record in the B to A direction is located elsewhere in the file.

---

## Selected Highway Network Codes and Functional Class Codes

| <u>Code</u> | <u>Correspondence</u>   | <u>Code</u> | <u>Correspondence</u> |
|-------------|-------------------------|-------------|-----------------------|
|             | <u>Functional Class</u> |             | <u>Area Type</u>      |
| 1           | Freeway                 | 1           | CBD                   |
| 2           | Expressway              | 2           | Fringe                |
| 3           | Principal Arterial      | 3           | Urban                 |
| 4           | Secondary Arterial      | 4           | Suburban              |
| 5           | Unused                  | 5           | Rural                 |
| 6           | Collector/Local         | 6           | Open Rural            |
| 7           | Approach Link           |             |                       |
| 8           | Ramp                    |             | <u>Direction Code</u> |
| 9           | Dummy Link              | 1           | Predominately North   |
|             |                         | 2           | East                  |
|             |                         | 3           | South                 |
|             |                         | 4           | West                  |

## Public Transit Network

TRANPLAN format transit network record descriptions are presented below. The link and node records perform the same function as in the highway network. Since transit involves fixed route vehicles, modeling this service requires an additional record to model vehicle paths and service headways--the line record. This data record lists the nodes traversed by a given transit route. For example, the Market Frankford Line "A" service pattern traverses a series of stations (defined as nodes) with a given AM peak headway between trains. All paths through the transit network must traverse line cards. Wait times are calculated from the route headways.

As in the highway network, the TRANPLAN transit network was downloaded from the mainframe from the data bases associated with DVRPC's UTPS formatted transit network, after making adjustments needed for TRANPLAN coding conventions. The transit company and travel mode codes used in this network are also given below. A correspondence between line record number and operator route designation is given in Appendix C.

## I-95 TRANPLAN Transit Network Record Descriptions

| <i><u>Record<br/>Columns</u></i>  | <i><u>Field<br/>Name</u></i> | <i><u>Contents</u></i>                         |
|-----------------------------------|------------------------------|--|
| <u>Link Field Record Contents</u> |                              |  |
| 1                                 | Record Id.                   | "1" denotes link record                        |
| 2-6                               | Anode                        | Anode  |
| 7-11                              | Bnode                        | Bnode  |
| 12-13                             | Mode                         | Transit submode                                |
| 18-21                             | Distance                     | Distance in hundredths of a mile               |
| 22-24                             | Speed                        | Am peak speed MPH if time not coded)           |
| 25-27                             | Travel Time                  | Am peak time in tenths of a minute             |
| 31-33                             | Impedance                    | Weighted sum of time and fare                  |
| 40                                | Direction Code               | 1 = one way; 2 = two way                       |
| 63-66                             | Fare                         | Transit fare in tenths of a cent               |
| <u>Line Field Record Contents</u> |                              |  |
| 1                                 | Record Id.                   | "2" denotes line record                        |
| 2-3                               | Company                      | Transit Operator Code                          |
| 5-7                               | Line Card Number             | Number denoting transit line                   |
| 8                                 | Card #                       | Sequence number of record                      |
| 9                                 | Direction Code               | 1 = one way; 2 = two way                       |
| 25-69                             | Node String                  | Up to nine node numbers describing route path. |
| 72                                | End Flag                     | "T" denotes end of line                        |
| 76-80                             | Company Id.                  | Operator route designation (eg. R5)            |
| <u>Node Field Record Contents</u> |                              |  |
| 1                                 | Record Id.                   | "4" denotes node record                        |
| 3-6                               | Node                         | Node Number                                    |
| 13-20                             | X-coordinate                 | UTM in tenths of a mile                        |
| 23-30                             | Y-coordinate                 | UTM in tenths of a mile                        |

## Selected Transit Network Codes

| <u>Transit Company Number</u>   |   | <u>Travel Modes</u>   |   |
|---------------------------------|---|-----------------------|---|
| SEPTA City Transit Division     | 1 | Walk                  | 1 |
| SEPTA Suburban Transit Division | 2 | Auto Penalty          | 2 |
| SEPTA Frontier Transit Division | 3 | Auto Connector        | 3 |
| NJT Mercer Division             | 4 | SEPTA Bus and Trolley | 4 |
| DRPA                            | 6 | NJT Bus               | 5 |
| NJT All Other                   | 7 | Subway & Elevated     | 6 |
| AMTRAK                          | 8 | Commuter Rail         | 7 |
| SEPTA Regional Rail Division    | 9 | PATCO                 | 8 |

**Focused Highway and Transit Networks**

Although DVRPC has procured a special version of TRANPLAN which will accommodate DVRPC's regional simulation networks, the computation times and data storage requirements associated with running the highway and transit assignments are very large. For instance, executing the regional I-95 assignment for 15 iterations on DVRPC's 50 Mhz 486 (the fastest available) micro-computer requires 12 to 14 hours. The "paths" data set alone in the regional transit assignment requires 30 million bytes of disk storage, almost the total hard disk space available on most micro-computers. As traffic analyses typically require the simulation models to be run many times to test various alternatives and fine tune the results, these computer requirements should be reduced to accomplish the required analyses in a timely and cost effective manner.

Two basic strategies are available--reduce the number of zones and reduce the number of links in the network. The standard method to accomplish this is to extract a study area (a small area) out of the regional network, completely eliminating zones and network links outside of this area. External-local and through travel associated with the study area is accommodated by converting all network links that cross the study area boundary to cordon station centroids and loading external travel based on the points of entry and exit in the no-build alternative.

The focusing technique is inappropriate for the I-95 study because this roadway is regional in its impacts. Points of entry and exit from the study area may well be impacted by I-95 study alternatives. For this reason, DVRPC developed a new focusing method that reduces detail in the zone structure and networks outside of the detailed study area, but still maintains a skeleton network of major highways outside of the study area to feed traffic to the I-95 study area in response to the alternatives under consideration.

### Highway Network Focusing

The number of zones to be assigned outside of the study area is reduced by compressing traffic zone interchanges to county planning areas. In this compression, a centroid within each planning area is chosen to represent the entire area (see Figure 3). After compression, all travel to, from, or within the planning area is associated with this centroid, and it is no longer necessary to build paths from or load travel from the other centroids within the area.

After the trip table compression, much of the highway network outside of the I-95 study corridor is unnecessary. In order to cull the network of these superfluous links, a single iteration, unrestrained highway assignment to the regional network is performed. Links needed to load the county planning areas will have volumes in this assignment and superfluous links zero volumes. To cull the network, a special version of the mainframe download program was created to eliminate zero volume links outside of the study area. To insure that this culling process retains the important roadways outside of the I-95 corridor, representative centroids were chosen to be near the most important highways within each county planning area. Figure 6 presents a plot of the focused I-95 network. Comparing this plot with the regional network in Figure 4 shows that a significant portion of the highway network outside of the I-95 corridor has been removed.

The retained links outside of the study area function as aggregate links that represent a number of roadways. These links cannot be restrained with the regional network capacities. In the focused network, capacity restraint on these links was turned off by coding the capacity to zero. Inside of the I-95 corridor, capacity restraint is unaffected by this focusing process as are the simulated traffic volumes. Overall, the focusing process cut the computation time for 15 iterations of equilibrium highway assignment by over 50 percent - to about 6 hours.

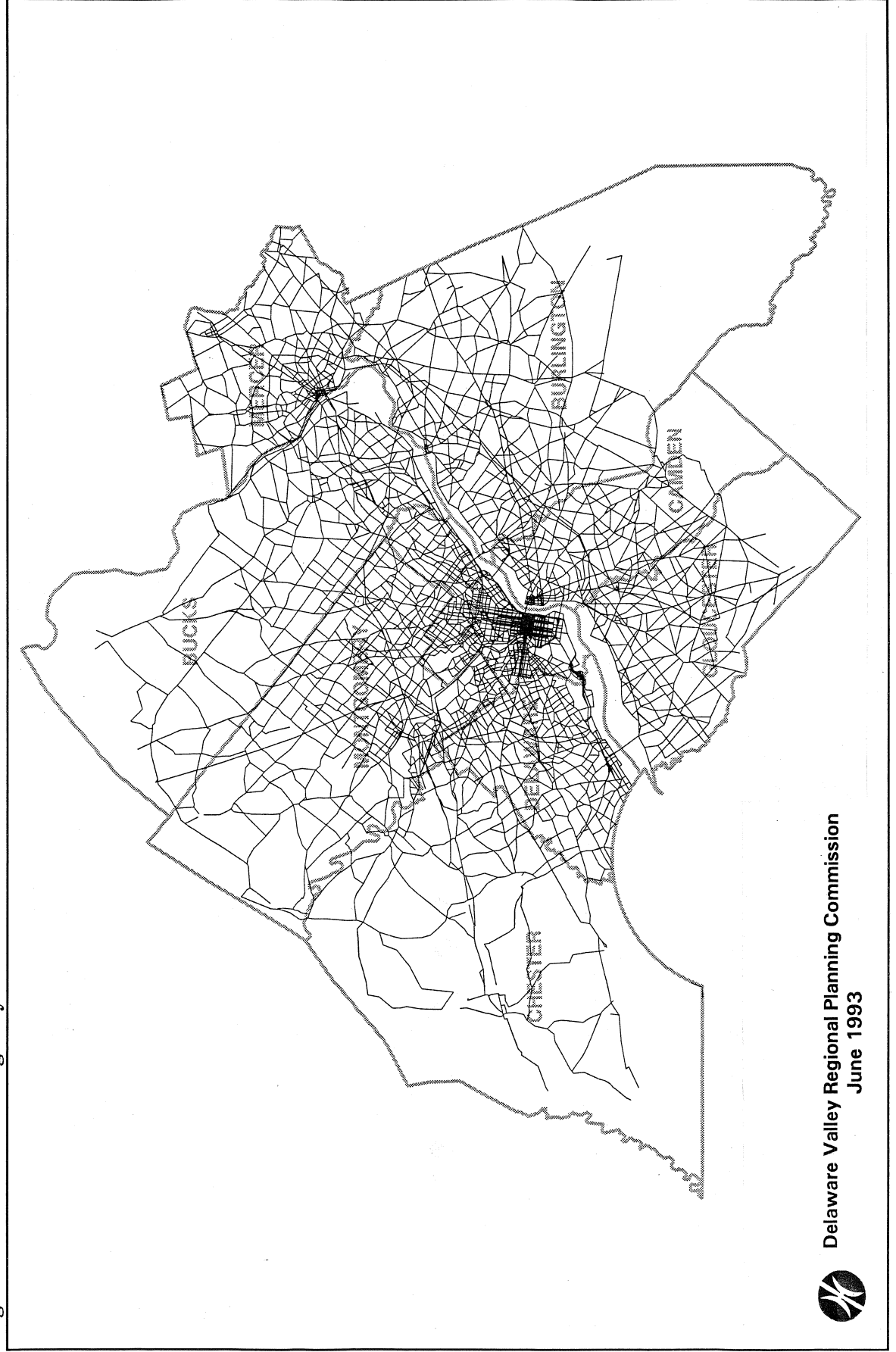
### Public Transit Network Focusing

As the transit network is not capacity restrained, computation times are more reasonable. However, the line card information in the transit network creates large amounts of path detail as minimum paths transfer from one route to another. This detail tends to make the output data sets very large. As the number of minimum paths to be stored is proportional to the square of the number of zones, the initial compression to county planning areas greatly reduces data set size. Network culling for transit is limited to removing superfluous approach links from eliminated zones.

As in the highway network, assignment results outside of the I-95 corridor can no longer be interpreted as facility volumes. However, within the study area, transit assignment results are unaffected by this focusing technique.

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**Figure 6: I-95 Focused Highway Network:**







### III. ESTIMATION OF 1996 TRAVEL DEMAND

The process used to generate 1996 travel forecasts for the I-95 Corridor was based on the focused regional travel simulation process developed by DVRPC's staff to evaluate long-range plans and corridor level studies. In 1985 this forecasting process was subjected to extensive validation and recalibration, based on the data from the 1980 Census Urban Transportation Planning Package (UTPP).<sup>5</sup> Available 1990 Census data was incorporated into the model runs, and the simulated output cross checked with the I-95 2015 travel forecasts prepared by DVRPC in January of 1991.

Basically, DVRPC's regional simulation process consists of applying the following models in sequence:

- Trip Generation - forecasts overall trip productions and attractions;
- Trip Distribution - estimates trip movements between traffic zones;
- Modal Split - divides trips into highway and transit components; and
- Travel Assignment - assigns trips to specific highway or transit facilities.

The following report sections document this 1996 travel simulation process. Intermediate model outputs are included summarized by County Planning Area, County, State and the Region to place the I-95 focused data in a regional context and to assist in interpreting the results. The travel assignment sections included in part IV of this report also present a series of comparisons between the focused assignment outputs and the current volumes and forecasts presented in I-95 Intermodal Mobility Project Report No.5.

#### Trip Generation

Both internal trips (those made within the region), and external trips (those which cross the boundary of the region), must be considered by any model purporting to simulate regional travel. Internal trip generation is based on the 1996 zonal forecasts of population and employment, whereas external trips are extrapolated from cordon line traffic counts based on population and employment growth inside and outside the DVRPC region. The latter also includes trips which pass through the Delaware Valley Region. Estimates of internal trip productions and attractions by zone are established on the basis of trip rates applied to the zonal estimates of demographic and employment data.<sup>6</sup>

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<sup>5</sup>DVRPC, Testing and Adjusting DVRPC Travel Simulation Models with 1980 Census Data, (1985). This will be referenced as the Simulation Report in later notations.

<sup>6</sup>Simulation Report, Ch. III and IV.

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Table 3: 1996 Trip Generation in the Delaware Valley Region

| County       | Work      |           | Non-Work  |           | Nonhome-Based |           | Light Truck |           | Heavy Truck |         | Taxi    |         | External-Local |         |
|--------------|-----------|-----------|-----------|-----------|---------------|-----------|-------------|-----------|-------------|---------|---------|---------|----------------|---------|
|              | PROD.     | ATTR.     | PROD.     | ATTR.     | ORIG.         | DEST.     | ORIG.       | DEST.     | ORIG.       | DEST.   | ORIG.   | DEST.   | PROD           | ATTR.   |
| Philadelphia | 962,736   | 1,256,450 | 1,542,692 | 1,676,685 | 782,663       | 782,663   | 280,722     | 280,722   | 157,420     | 157,420 | 71,747  | 71,747  | 0              | 75,833  |
| Delaware     | 459,617   | 341,339   | 1,132,140 | 998,416   | 389,044       | 389,044   | 125,498     | 125,498   | 74,787      | 74,787  | 12,600  | 12,600  | 0              | 112,680 |
| Chester      | 337,926   | 298,344   | 941,762   | 827,842   | 316,183       | 316,183   | 109,668     | 109,668   | 64,826      | 64,826  | 9,446   | 9,446   | 0              | 100,388 |
| Montgomery   | 588,323   | 699,063   | 1,542,106 | 1,836,047 | 704,371       | 704,371   | 218,156     | 218,156   | 138,011     | 138,011 | 22,884  | 22,884  | 0              | 103,162 |
| Bucks        | 484,348   | 379,325   | 1,309,229 | 1,280,123 | 480,968       | 480,968   | 149,277     | 149,277   | 87,917      | 87,917  | 12,071  | 12,071  | 0              | 93,078  |
| PENNA        | 2,832,950 | 2,974,521 | 6,467,929 | 6,619,113 | 2,673,229     | 2,673,229 | 883,321     | 883,321   | 522,961     | 522,961 | 128,748 | 128,748 | 0              | 485,141 |
| Mercer       | 270,645   | 343,349   | 560,459   | 690,298   | 290,970       | 290,970   | 96,533      | 96,533    | 63,822      | 63,822  | 11,746  | 11,746  | 0              | 226,166 |
| Burlington   | 349,546   | 263,766   | 899,311   | 812,142   | 311,455       | 311,455   | 106,104     | 106,104   | 63,457      | 63,457  | 9,233   | 9,233   | 0              | 94,066  |
| Camden       | 394,159   | 345,155   | 967,609   | 978,133   | 377,917       | 377,917   | 118,690     | 118,690   | 71,690      | 71,690  | 12,563  | 12,563  | 0              | 75,671  |
| Gloucester   | 193,704   | 133,915   | 528,829   | 469,645   | 181,514       | 181,514   | 60,496      | 60,496    | 34,220      | 34,220  | 4,029   | 4,029   | 0              | 86,544  |
| NEW JERSEY   | 1,208,054 | 1,086,185 | 2,956,208 | 2,950,218 | 1,161,856     | 1,161,856 | 381,823     | 381,823   | 233,189     | 233,189 | 37,571  | 37,571  | 0              | 482,447 |
| TOTAL        | 4,041,004 | 4,060,706 | 9,424,137 | 9,569,331 | 3,835,085     | 3,835,085 | 1,265,144   | 1,265,144 | 756,150     | 756,150 | 166,319 | 166,319 | 0              | 967,588 |

Trip generation totals by county and for the region are presented in Table 3. The first three categories--home based work, home based non-work, and non-home based--represent person trips internal to the region. The remaining categories cover trips which are not included in the person-trip models, such as truck and taxi trips and auto trips with one or both ends beyond the DVRPC region. These trips are classified as external-local auto, light truck, heavy truck, and taxis. Appendix A-3 presents county planning area tabulations of the trip generation outputs.

In total, 17.3 million person-trips and 3.2 million vehicle trips are projected to be made within the Delaware Valley region on an average weekday in 1996. Of these person trips, 4.1 million will be home based work trips, 9.5 million home based non-work, and 3.8 million non-home based. About 20 percent of total travel represents commutation to work.

In the summer of 1988, DVRPC conducted a complete review of cordon stations around the nine-county region. Altogether, 114 cordon stations were identified as significant regional entry/exit points for which a sufficient history of traffic counts existed. A composite growth factor was prepared for each external station, based on anticipated growth in travel across the cordon line. This factor was prepared by establishing growth trends for each station based on 1970, 1975, 1980, 1985, and 1990 traffic counts. The trends implicit in these counts were then extrapolated to 1996. Total cordon traffic is expected to grow to more than 1.3 million daily trips, which is 13 percent higher than that measured in 1990. Cordon traffic represents the fastest growing component in the vehicle-trip simulation model. The 1996 traffic estimates for each of the 114 cordon stations around the Delaware Valley Region are given in Appendix D.

### **Trip Distribution**

Trip distribution is the process whereby the zonal trip ends established in the trip generation analysis are linked together to form origin and destination patterns in the trip table format. It is not sufficient to know how many trips will originate or be destined to a zone on a daily average; it is necessary to know between what pairs of zones these trips will occur. This is the function of the DVRPC distribution model, a gravity-type model.

The basic premise of the gravity-type distribution models is that the number of trips between a pair of zones is directly proportional to the number of trips produced in the origin zone times the number attracted to the destination zone, and inversely proportional to the highway and public transit travel times and costs, which measure physical separation between the origin and destination zones, raised to a specified exponential power.

For the simulation of 1996 travel demands, a series of seven gravity-type distribution models were applied at the zonal level. These models follow the trip purpose and vehicle type established in trip generation. The first three models were used to distribute the person-trips internal to the region by all modes of travel, and models four through seven were used to distribute certain vehicular trips by autos, trucks, and taxis. The through vehicle-trip distribution was prepared manually based on surveyed trip patterns between each pair of cordon stations, and did not require

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an application of the distribution model. Average trip length and other selected characteristics of the seven trip distribution models are given below. Average trip lengths range from 9.48 minutes for light truck, where almost one-half of the trips are intrazonal, to 38.14 minutes for external-local vehicle travel where, by model construction, none of the trips begin and end in the cordon station.

### General 1996 Trip Distribution Model Attributes

| Model Number                       | Trip Category       | Total Trips | Average Trip Length* (Minutes) | Standard Deviation of ATL* (Minutes) | Percent Intrazonal Trips |
|------------------------------------|---------------------|-------------|--------------------------------|--------------------------------------|--------------------------|
| <i><u>Persons Trip Models</u></i>  |                     |             |                                |                                      |                          |
| 1                                  | Home-Based Work     | 4,041,765   | 22.86                          | 16.29                                | 5.7%                     |
| 2                                  | Home-Based Nonwork  | 9,425,243   | 15.96                          | 14.52                                | 18.2%                    |
| 3                                  | Non-Home Based      | 3,835,211   | 14.01                          | 11.70                                | 23.6%                    |
| <i><u>Vehicle Trips Models</u></i> |                     |             |                                |                                      |                          |
| 4                                  | External-Local Auto | 1,996,735   | 38.14                          | 35.62                                | 0%                       |
| 5                                  | Light Trucks        | 1,291,575   | 9.48                           | 8.88                                 | 45.5%                    |
| 6                                  | Heavy Trucks        | 804,451     | 13.40                          | 15.34                                | 33.5%                    |
| 7                                  | Taxi                | 166,329     | 12.83                          | 9.35                                 | 17.9%                    |

\* The interzonal travel times that are used in the calculation of average trip length and the standard deviation of the average trip length include a terminal time at both ends of the trip as well as the system travel time. Intrazonal travel times consist of an assumed intrazonal time plus twice the terminal time for the zone.

Overall, average trip times have increased slightly from 1990 as a result of disproportionate increases in travel in the suburban and rural parts of the region.

### Modal Split

Once the distribution of internal person-trips in the Region is determined, trips must be allocated to either the highway or transit system. The modal split model subdivides highway trips into auto drivers and passengers. Those trips allocated to the transit system are ready for assignment to the transit network in order to generate individual facility volumes. Auto driver trips are added to the truck, taxi, and external vehicle trips in preparation for assignment to the highway network.

The model calculates the fraction of each person-trip interchange volume in the trip table which should be allocated to transit, and then assigns the residual to the highway side. The choice

between highway and transit usage is made on the basis of comparative cost, travel time, frequency of service, and other aspects of modal choice. In general, the better the transit service, the higher the fraction assigned to transit, though trip purpose and auto ownership also affect the allocation. The highway and transit networks and the transit service assumptions are listed in the Simulation Report mentioned earlier.<sup>7</sup>

As part of the modal split operations, the internal person-trip tables allocated to highway-oriented travel were converted into vehicular travel by the car occupancy model. The external-local auto driver trips, light and heavy truck trips, and taxi trips from the vehicular distribution models were added to the internal vehicle trips from the modal split model. The 1996 external-external travel (through trips) for autos and trucks were then combined with the other trip tables to form the total vehicle trip table.

The total vehicle trip table produced by these operations accounts for all daily automobile and truck travel. It does not, however, include trips made by public transit vehicles or school buses. In addition, vehicle trips to and from the transit system (auto approaches) are excluded from the trip table. The transit trip table produced by the modal split process represents all internal transit person trips except those made on dedicated school buses.

A regional summary of the results of the modal split process follows. Overall, transit's

#### 1996 Regional Modal-Split Model Results

| Trip Purpose        | Modal Split                  |                                |             |
|---------------------|------------------------------|--------------------------------|-------------|
|                     | Total Person Trip<br>(000's) | Transit Person<br>Trip (000's) | % Transit   |
| Home-Based Work     | 4,041.8                      | 520.0                          | 12.9%       |
| Home-Based non-Work | 9,425.2                      | 269.4                          | 2.9%        |
| Non-Home Based      | 3,835.2                      | 85.1                           | 2.2%        |
| <b>Total</b>        | <b>17,302.2</b>              | <b>874.6</b>                   | <b>5.1%</b> |

| Trip Purpose        | Auto Occupancy         |                        |                |
|---------------------|------------------------|------------------------|----------------|
|                     | Auto Person<br>(000's) | Auto Driver<br>(000's) | Auto Occupancy |
| Home-Based Work     | 3,521.7                | 3,076.6                | 1.15           |
| Home-Based non-Work | 9,155.8                | 5,436.2                | 1.68           |
| Non-Home Based      | 3,750.0                | 2,967.9                | 1.26           |
| <b>Total</b>        | <b>16,427.6</b>        | <b>11,480.7</b>        | <b>1.43</b>    |

<sup>7</sup>Simulation Report, Ch. VII.

share of regional trips is projected to be 5.1 percent in 1996. This estimate reflects continuing growth in residential and commercial activity in suburban and rural areas unserved by transit. Actual transit ridership is projected to be slightly more than 874,000 trips on an average weekday out of a total person trip demand of 17.3 million daily trips, with the remainder utilizing the automobile, either as driver alone or as carpoolers. The modal split varies significantly by purpose, however, ranging from 12.9 percent for home-based work trips to 2.2 percent for non-home based travel.

The average automobile moving on the region's highways is projected to carry 1.43 persons. Persons are most likely to drive alone when traveling to or from work, averaging an occupancy of 1.15, and least likely when traveling between home and non-work destinations, when the occupancy is 1.68. Regional automobile trips are expected to total approximately 11.5 million trips per weekday, with commutation accounting for 26.8 percent of weekday automobile trips internal to the region.

Table 4 shows the percentage of trip productions allocated to transit by trip purpose and county. The corresponding modal split for trip attractions is shown in Table 5. Appendix A Tables A-4, A-5, and A-6 contain the corresponding county planning area tabulations of the 1996 simulation modal split output. Generally, the modal split is highest in Philadelphia (especially the CBD where 59 percent of trip ends are made by transit) and declines significantly in the low density suburban and rural portions of the region. In these suburban areas modal splits range from 2.5 down to almost zero percent transit.

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Table 4: Percent of 1996 Person Trip Production Made by Transit by Trip Purpose

| County        | HBW<br>Person<br>Trips | HBW<br>Transit<br>Trips | HBW<br>Percent<br>Transit | HBNW<br>Person<br>Trips | HBNW<br>Transit<br>Trips | HBNW<br>Percent<br>Transit | NHB<br>Person<br>Trips | NHB<br>Transit<br>Trips | NHB<br>Percent<br>Transit | Total<br>Person<br>Trips | Total<br>Transit<br>Trips | Total<br>Percent<br>Transit |
|---------------|------------------------|-------------------------|---------------------------|-------------------------|--------------------------|----------------------------|------------------------|-------------------------|---------------------------|--------------------------|---------------------------|-----------------------------|
|               |                        |                         |                           |                         |                          |                            |                        |                         |                           |                          |                           |                             |
| Philadelphia  | 962,981                | 328,504                 | 34.1                      | 1,543,123               | 192,023                  | 12.4                       | 782,711                | 70,363                  | 9.0                       | 3,288,815                | 590,890                   | 18.0                        |
| Delaware      | 459,663                | 64,026                  | 13.9                      | 1,132,367               | 27,532                   | 2.4                        | 389,067                | 4,244                   | 1.1                       | 1,981,097                | 95,802                    | 4.8                         |
| Chester       | 338,057                | 7,607                   | 2.3                       | 941,966                 | 3,264                    | 0.3                        | 316,182                | 774                     | 0.2                       | 1,596,205                | 11,645                    | 0.7                         |
| Montgomery    | 588,371                | 30,424                  | 5.2                       | 1,542,307               | 12,457                   | 0.8                        | 704,410                | 3,259                   | 0.5                       | 2,835,088                | 46,140                    | 1.6                         |
| Bucks         | 484,393                | 12,175                  | 2.5                       | 1,309,309               | 2,730                    | 0.2                        | 480,985                | 516                     | 0.1                       | 2,274,687                | 15,421                    | 0.7                         |
| PENNA         | 2,833,465              | 442,736                 | 15.6                      | 6,469,072               | 238,006                  | 3.7                        | 2,673,355              | 79,156                  | 3.0                       | 11,975,892               | 759,898                   | 6.3                         |
| Mercer        | 270,652                | 9,847                   | 3.6                       | 560,499                 | 3,061                    | 0.5                        | 290,978                | 740                     | 0.3                       | 1,122,129                | 13,648                    | 1.2                         |
| Burlington    | 349,695                | 15,444                  | 4.4                       | 899,285                 | 8,788                    | 1.0                        | 311,446                | 1,309                   | 0.4                       | 1,560,426                | 25,541                    | 1.6                         |
| Camden        | 394,195                | 41,688                  | 10.6                      | 967,623                 | 16,441                   | 1.7                        | 377,921                | 3,681                   | 1.0                       | 1,739,739                | 61,810                    | 3.6                         |
| Gloucester    | 193,758                | 10,317                  | 5.3                       | 528,764                 | 3,144                    | 0.6                        | 181,511                | 235                     | 0.1                       | 904,033                  | 13,696                    | 1.5                         |
| NEW<br>JERSEY | 1,208,300              | 77,296                  | 6.4                       | 2,956,171               | 31,434                   | 1.1                        | 1,161,856              | 5,965                   | 0.5                       | 5,326,327                | 114,695                   | 2.2                         |
| <b>TOTAL</b>  | <b>4,041,765</b>       | <b>520,032</b>          | <b>12.9</b>               | <b>9,425,243</b>        | <b>269,440</b>           | <b>2.9</b>                 | <b>3,835,211</b>       | <b>85,121</b>           | <b>2.2</b>                | <b>17,302,219</b>        | <b>874,593</b>            | <b>5.1</b>                  |

Table 5: Percent of 1996 Person Trip Attraction Made by Transit by Trip Purpose

| County        | HBW<br>Person<br>Trips | HBW<br>Trips   | HBW<br>Percent<br>Transit | HBW<br>Person<br>Trips | HBW<br>Trips   | HBW<br>Percent<br>Transit | HBNW<br>Person<br>Trips | HBNW<br>Trips | HBNW<br>Percent<br>Transit | NHB<br>Person<br>Trips | NHB<br>Trips   | NHB<br>Percent<br>Transit | Total<br>Person<br>Trips | Total<br>Trips | Total<br>Percent<br>Transit |
|---------------|------------------------|----------------|---------------------------|------------------------|----------------|---------------------------|-------------------------|---------------|----------------------------|------------------------|----------------|---------------------------|--------------------------|----------------|-----------------------------|
|               |                        |                |                           |                        |                |                           |                         |               |                            |                        |                |                           |                          |                |                             |
| Philadelphia  | 1,263,432              | 446,782        | 35.4                      | 1,619,810              | 227,429        | 14.0                      | 804,971                 | 75,503        | 9.4                        | 3,688,213              | 749,714        | 20.3                      |                          |                |                             |
| Delaware      | 335,390                | 15,750         | 4.7                       | 1,021,923              | 9,512          | 0.9                       | 391,537                 | 2,323         | 0.6                        | 1,748,850              | 27,585         | 1.6                       |                          |                |                             |
| Chester       | 286,983                | 3,797          | 1.3                       | 855,731                | 1,831          | 0.2                       | 308,487                 | 612           | 0.2                        | 1,451,201              | 6,240          | 0.4                       |                          |                |                             |
| Montgomery    | 675,536                | 13,446         | 2.0                       | 1,775,400              | 6,366          | 0.4                       | 702,383                 | 1,662         | 0.2                        | 3,153,319              | 21,474         | 1.7                       |                          |                |                             |
| Bucks         | 377,084                | 1,914          | 0.5                       | 1,234,272              | 970            | 0.1                       | 475,221                 | 177           | 0.0                        | 2,086,577              | 3,061          | 0.1                       |                          |                |                             |
| PENNA         | 2,938,425              | 481,689        | 16.4                      | 6,507,136              | 246,108        | 3.8                       | 2,682,599               | 80,277        | 3.0                        | 12,128,160             | 808,074        | 6.7                       |                          |                |                             |
| Mercer        | 315,104                | 10,529         | 3.3                       | 591,844                | 3,086          | 0.5                       | 290,726                 | 717           | 0.2                        | 1,197,674              | 14,332         | 1.2                       |                          |                |                             |
| Burlington    | 273,570                | 6,402          | 2.3                       | 804,192                | 6,729          | 0.8                       | 301,559                 | 1,049         | 0.3                        | 1,379,321              | 14,180         | 1.0                       |                          |                |                             |
| Camden        | 370,362                | 19,875         | 5.4                       | 1,018,007              | 12,561         | 1.2                       | 382,483                 | 2,996         | 0.8                        | 1,770,852              | 35,432         | 2.0                       |                          |                |                             |
| Gloucester    | 144,304                | 1,537          | 1.1                       | 504,064                | 956            | 0.2                       | 177,844                 | 82            | 0.0                        | 826,212                | 2,575          | 0.3                       |                          |                |                             |
| NEW<br>JERSEY | 1,103,340              | 38,343         | 3.5                       | 2,918,107              | 23,332         | 0.8                       | 1,152,612               | 4,844         | 0.4                        | 5,174,059              | 66,519         | 1.3                       |                          |                |                             |
| <b>TOTAL</b>  | <b>4,041,765</b>       | <b>520,032</b> | <b>12.9</b>               | <b>9,425,243</b>       | <b>269,440</b> | <b>2.9</b>                | <b>3,835,211</b>        | <b>85,121</b> | <b>2.2</b>                 | <b>17,302,219</b>      | <b>874,593</b> | <b>5.1</b>                |                          |                |                             |



## IV. PREPARATION OF THE ASSIGNMENT MODELS

The final step in the travel forecasting process involves assigning trips to the highway and transit networks to obtain facility volumes. Because of their unique characteristics, the assignment procedures differ by mode and will be treated separately.

The regional simulation process estimates daily travel volumes on the facilities under study. The consultant requested that a peak hour highway assignment also be prepared. DVRPC staff developed and calibrated a new peak hour assignment model using the TRANPLAN version of the focused highway assignment and recent home interview survey data.

### Highway Assignment

The procedure for the highway assignment in both the regional and focused assignments is based on the "equilibrium" restraining method. In an equilibrium assignment, the trips between zones are allocated to alternate paths in such a way that the travel time over each path is equal, and therefore, no faster path can be found, given prevailing congestion levels. For the daily focused I-95 assignment, 15 iterations of equilibrium capacity restraint were required to adequately forecast I-95 traffic volumes.

Once route assignments are made, link volumes, vehicle miles of travel and other assignment statistics can be calculated. For the focused assignment, these statistics are limited to the I-95 corridor as the aggregate nature of the highway network links outside of this corridor and coarse centroid loadings prohibit the calculation of link based statistics. Also, neither the regional nor the focused assignment consider VMT resulting from traffic volumes on local streets not included in the regional network. These roadways are numerous, perhaps two-thirds of the total roadway miles in the region. However, these missing streets typically carry small traffic volumes and contribute only about 12.5 percent of the total VMT that occurs in the region. The 1996 highway network, off-network and total VMT estimates by county are shown below. In total on an average day, about 93.2 million vehicle miles of travel takes place on the highways of the Delaware Valley Region.

### Consistency Check of the Daily Highway Assignment

An extensive consistency check of the 1996 daily focused highway assignment was performed to insure that the travel forecasts that result from this TRANPLAN model are consistent with the UTPS based Year 2015 forecasts published in I-95 Intermodal Mobility Report No.5. This check compared the link volumes for selected links along I-95 and for important intersecting and parallel roadways.

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## 1996 Regional Travel Simulation Highway VMT by County

| County       | Network<br>VMT | Off-Network<br>VMT | Total<br>VMT |
|--------------|----------------|--------------------|--------------|
| Bucks        | 9636.9         | 1,395.1            | 11,032.0     |
| Chester      | 8,453.3        | 1,105.5            | 9,558.8      |
| Delaware     | 8,244.3        | 1,266.3            | 9,510.6      |
| Montgomery   | 13,898.5       | 1,658.0            | 15,556.5     |
| Philadelphia | 13,363.5       | 1,855.2            | 15,218.7     |
| Sub-Total PA | 53,596.5       | 7,280.1            | 60,876.6     |
| Burlington   | 8,667.9        | 1,259.8            | 9,927.7      |
| Camden       | 8,697.9        | 1,406.9            | 10,104.8     |
| Gloucester   | 4,842.6        | 715.4              | 5,558.0      |
| Mercer       | 5,759.9        | 968.1              | 6,728.0      |
| Sub-Total NJ | 27,968.3       | 4,350.3            | 32,318.6     |
| Total Region | 81,564.8       | 11,630.4           | 93,195.2     |

Statistical comparisons were made between the TRANPLAN focused assignment and estimated 1996 volumes. These 1996 volumes were prepared by straight line extrapolation between the current traffic counts and 2015 daily estimates presented in the I-95 Intermodal Mobility Report No.5. The results of this analysis are shown below.

## Statistical Analysis of the I-95 Daily Assignment

| Link Category      | 1996 Average Link Volume (000's) |                                   |                  |      |
|--------------------|----------------------------------|-----------------------------------|------------------|------|
|                    | DVRPC<br>Report                  | Focused<br>TRANPLAN<br>Assignment | Percent<br>Diff. | R*   |
| I-95 North of Vine | 92.3                             | 98.6                              | 6.8%             | 0.92 |
| I-95 South of Vine | 104.2                            | 107.5                             | 3.2%             | 0.78 |
| Parallel Roadways  | 35.8                             | 36.3                              | 1.4%             | 0.97 |
| Intercity Roadways | 33.6                             | 32.4                              | 3.7%             | 0.94 |
| All Links          | 56.0                             | 57.4                              | 2.5%             | 0.96 |

\* Correlation Coefficient between the links of the focused assignment and DVRPC report.

Generally, the TRANPLAN daily model produced results that are consistent with the DVRPC's published forecasts, with less than 3 percent different overall. Almost all link volumes produced

by the TRANPLAN focused assignment are somewhat larger than the volumes implied by the DVRPC report. This growth in traffic volumes for the most part resulted from the use of available 1990 Census data in the TRANPLAN model. The 1990 census data was not available when DVRPC's original forecast reported in the I-95 Intermodal Mobility Report No.5 was made.

### **Peak Hour Traffic Assignment Model**

To analyze the impact of selective ramp closing and improvements as well as other measures related to the reconstruction of I-95, the consultant requested that DVRPC staff prepare a peak hour assignment model calibrated for 1996 travel. This peak hour model was developed from the daily assignment model by estimating a series of peak hour factors, stratified by area type of origin and trip purpose. A peak hour 1996 highway loading matrix was then estimated by multiplying the daily interzonal highway trip table by these peak hour factors.

A preliminary estimate of these peak hour factors was made from the time of travel information included in DVRPC's 1988 home interview survey. The maximum hour of highway travel was found to occur for trips arriving at their destination between 8:00 and 9:00 AM. The resulting peak hour factors are given above the diagonal in Table 6.

These factors were tested for the I-95 corridor by assigning the peak hour trip table to the focused highway network, and comparing the results with the AM Peak traffic estimates included in DVRPC's I-95 Report, again estimating 1996 traffic volumes by extrapolating between the current and 2015 AM peak volumes. As noted above, this peak hour network was identical to the daily focused network, except that peak hour roadway capacities were substituted for the daily values in the table lookup.

Upon examination of the assignment results, it was found that the I-95 traffic volumes output by the peak hour model were somewhat low, compared to the traffic counts and published volumes. To compensate for this under assignment, the peak hour factors from the home interview survey were increased by about 15 percent across the board. The resulting assignment adequately replicated the extrapolated 1996 values, but still required about 6 hours to complete the required 15 iterations of equilibrium restraint.

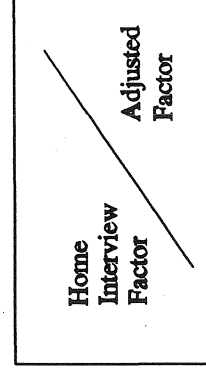
The final step in the development of the peak hour assignment model involved reducing the required computation time by reducing the number of iterations from 15 to 3. Generally, 3 iterations of capacity restraint will underestimate traffic volumes on I-95, particularly on the portion of this roadway between Vine Street and Philadelphia International Airport. This stretch of roadway provides a less congested but more circuitous route, vis-a-vie arterial facilities such as Broad Street. Capacity restraint is required to divert travel to I-95 from heavily congested parallel routes. The basic strategy used was to reduce the required number of iterations of restraint. This was accomplished by improving the efficiency of the starting point of the restraint algorithm. The initial speeds of I-95 links were increased, on a link by link basis, until the assignment results after 3 iterations matched the 15 iteration calibration result. For most I-95 links, this speed increase was

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Table 6: Highway Peak-Hour Factors by Area Type and Trip Purpose\*

| Area Type<br>Trip Type | C B D          | Fringe         | Urban          | Suburban       | Rural          |
|------------------------|----------------|----------------|----------------|----------------|----------------|
|                        |                |                |                |                |                |
| Home Based Work        | 0.160<br>0.184 | 0.150<br>0.173 | 0.150<br>0.173 | 0.170<br>0.196 | 0.170<br>0.196 |
| Home Based Non-Work    | 0.104<br>0.120 | 0.104<br>0.120 | 0.051<br>0.059 | 0.049<br>0.056 | 0.041<br>0.047 |
| Non-Home Based         | 0.015<br>0.017 | 0.015<br>0.017 | 0.015<br>0.017 | 0.045<br>0.052 | 0.038<br>0.044 |

All other trip types (external/local, truck, taxi) are assigned a rate of 0.1



\* Peak Hour is defined as all trips ending between 8 and 9 am

from 33 to about 45 mph. This 3-iteration process executed in a little over one hour on DVRPC's 50 MHZ micro-computer.

A statistical comparison of the 1996 peak hour assignment model results for I-95 links with the extrapolated values from DVRPC's I-95 study, is given below. As in the daily assignment, the peak-hour volume produced by the TRANPLAN assignment are somewhat higher than the volumes implied by straight line interpolation between current and 2015 link volumes in DVRPC's I-95 study report. As in the daily assignment, this volume increase may have resulted from the influence of 1990 census data on the TRANPLAN estimates.

### Statistical Analysis of the 1996 I-95 Peak-Hour Assignment

| Link Category      | 1996 Average Link Volume |                             |               |      |
|--------------------|--------------------------|-----------------------------|---------------|------|
|                    | DVRPC Report             | Focused TRANPLAN Assignment | Percent Diff. | R*   |
| I-95 North of Vine | 4,158                    | 4,628                       | 11.3%         | 0.85 |
| I-95 South of Vine | 4,416                    | 4,660                       | 5.5%          | 0.66 |
| All Links          | 4,165                    | 4,500                       | 8.1%          | 0.84 |

\* Correlation Coefficient between the links of the focused assignment and DVRPC report.

### Focused Daily Transit Assignment

The transit network assignment procedure accomplishes two major tasks. First, the transit person-trip table produced by the modal split model is "unlinked" to include any transfers that occur either between transit routes or between auto approaches and transit lines. An unlinked trip is defined as one taken aboard a single transit vehicle. Second, the unlinked transit trips are associated with specific transit facilities to produce the daily line, link, and station volumes. This assignment of transit trips is based on the minimum impedance paths constructed throughout the transit network. Unlike the highway network assignment, no capacity restraints are built into the transit network; it is assumed that sufficient buses and rail cars can be supplied to meet demand.

As in the highway assignment model, the transit assignment has been focused on the I-95 corridor and, therefore, can produce accurate facility level volumes only within this area. A comparison of 1996 simulated versus the most recent station boarding counts (1989) for Commuter Rail and Elevated facilities within the corridor, tabulated by line segment, is given below. Overall, 1996 simulated commuter rail volumes are about 16 percent higher than 1989 station counts, while

patronage on the Market Frankford line is projected to decline by about 3 percent. Overall, rail and elevated transit volumes within the corridor are projected to increase by about 1.6 percent over 1989 station boarding counts.

### Transit Station Boardings in the I-95 Corridor

| Line                      | Total Boarding*<br>(Daily Volume) |                                |
|---------------------------|-----------------------------------|--------------------------------|
|                           | 1989<br>Count                     | 1996<br>TRANPLAN<br>Assignment |
| R1 Airport                | 860                               | 1,049                          |
| R2 Marcus Hook**          | 2,932                             | 3,865                          |
| R3 Media-Elwyn            | 3,964                             | 4,136                          |
| R3 West Trenton           | 2,842                             | 3,749                          |
| R7 Trenton                | 3,797                             | 3,991                          |
| Subtotal Commuter Rail    | 14,395                            | 16,790                         |
| Market-Frankford Elevated | 51,724                            | 50,368                         |
| <b>Total Rail Transit</b> | <b>66,119</b>                     | <b>67,158</b>                  |

\* Limited to boarding on station within the study area.

\*\* Excluding Wilmington and Claymont Station.

## **APPENDIX A (A-1 TO A-6)**

### **1996 SIMULATION MODEL INPUT BY COUNTY PLANNING AREA**





**Appendix A-1: 1996 Demographic Data by County Planning Area**

| County<br>Planning Area | Population | Dwelling<br>Units | Total Autos | Household by Auto Ownership |         |         |         | Employed<br>Residents |
|-------------------------|------------|-------------------|-------------|-----------------------------|---------|---------|---------|-----------------------|
|                         |            |                   |             | 0 Auto                      | 1 Auto  | 2 Auto  | 3+ Auto |                       |
| 1                       | 45,062     | 28,891            | 13,930      | 16,927                      | 10,299  | 1,437   | 228     | 28,117                |
| 2                       | 169,430    | 65,626            | 45,522      | 31,234                      | 25,200  | 7,756   | 1,436   | 65,977                |
| 3                       | 80,908     | 28,118            | 23,480      | 11,190                      | 11,579  | 4,457   | 892     | 31,918                |
| 4                       | 217,085    | 83,130            | 60,628      | 38,541                      | 31,614  | 10,706  | 2,269   | 86,183                |
| 5                       | 146,150    | 52,086            | 25,908      | 31,526                      | 16,069  | 3,849   | 642     | 42,356                |
| 6                       | 105,045    | 33,786            | 19,297      | 18,819                      | 11,332  | 3,118   | 517     | 30,900                |
| 7                       | 94,114     | 35,662            | 29,172      | 14,318                      | 15,051  | 5,156   | 1,137   | 35,787                |
| 8                       | 42,311     | 17,620            | 22,787      | 2,977                       | 8,171   | 5,239   | 1,233   | 21,203                |
| 9                       | 102,775    | 41,127            | 41,400      | 12,659                      | 18,080  | 8,503   | 1,885   | 46,807                |
| 10                      | 174,656    | 60,511            | 60,963      | 18,767                      | 26,231  | 12,775  | 2,738   | 75,561                |
| 11                      | 235,327    | 96,215            | 108,771     | 23,550                      | 43,529  | 23,991  | 5,145   | 102,208               |
| 12                      | 159,066    | 59,138            | 88,050      | 7,627                       | 23,624  | 21,517  | 6,370   | 75,817                |
| Philadelphia            | 1,571,929  | 601,910           | 539,908     | 228,135                     | 240,779 | 108,504 | 24,492  | 642,834               |
| 13                      | 100,387    | 37,112            | 60,613      | 6,297                       | 10,997  | 12,470  | 7,348   | 50,273                |
| 14                      | 99,083     | 39,879            | 74,712      | 2,896                       | 11,665  | 16,181  | 9,137   | 54,122                |
| 15                      | 165,782    | 64,955            | 101,833     | 9,516                       | 23,098  | 21,993  | 10,348  | 89,474                |
| 16                      | 114,236    | 45,931            | 94,566      | 2,326                       | 10,860  | 19,342  | 13,403  | 62,894                |
| 17                      | 47,537     | 19,765            | 40,577      | 846                         | 4,829   | 8,519   | 5,571   | 25,705                |
| 18                      | 22,254     | 8,886             | 21,307      | 117                         | 1,276   | 3,781   | 3,712   | 12,437                |
| Delaware                | 549,279    | 216,528           | 393,608     | 21,998                      | 62,725  | 82,286  | 49,519  | 294,905               |
| 19                      | 63,039     | 24,784            | 50,189      | 710                         | 6,048   | 12,074  | 5,952   | 35,671                |
| 20                      | 37,842     | 14,560            | 27,072      | 1,015                       | 4,189   | 6,286   | 3,070   | 20,653                |
| 21                      | 26,294     | 9,746             | 21,006      | 378                         | 1,976   | 4,267   | 3,125   | 13,855                |
| 22                      | 51,329     | 18,771            | 38,532      | 519                         | 4,196   | 9,476   | 4,580   | 29,224                |
| 23                      | 79,968     | 28,590            | 56,281      | 1,469                       | 7,180   | 13,158  | 6,783   | 44,299                |
| 24                      | 25,288     | 8,907             | 17,904      | 486                         | 2,122   | 3,956   | 2,343   | 13,731                |
| 25                      | 42,427     | 14,638            | 25,300      | 1,659                       | 4,205   | 6,161   | 2,613   | 20,527                |
| 26                      | 29,033     | 9,655             | 20,492      | 447                         | 1,640   | 4,833   | 2,735   | 14,856                |
| 27                      | 19,393     | 6,806             | 14,474      | 221                         | 1,409   | 3,178   | 1,998   | 10,388                |
| 28                      | 14,389     | 5,034             | 10,082      | 239                         | 1,243   | 2,274   | 1,278   | 7,360                 |
| 29                      | 17,013     | 5,654             | 10,646      | 430                         | 1,536   | 2,411   | 1,277   | 8,352                 |
| Chester                 | 406,015    | 147,145           | 291,978     | 7,573                       | 35,744  | 68,074  | 35,754  | 218,916               |
| 30                      | 69,139     | 27,112            | 51,888      | 1,140                       | 8,140   | 11,881  | 5,951   | 38,948                |
| 31                      | 41,600     | 15,205            | 29,995      | 627                         | 4,029   | 6,965   | 3,584   | 22,060                |
| 32                      | 119,877    | 46,738            | 82,508      | 3,597                       | 15,071  | 19,750  | 8,320   | 62,091                |
| 33                      | 40,084     | 15,765            | 29,013      | 1,000                       | 4,973   | 6,510   | 3,282   | 22,021                |
| 34                      | 95,714     | 38,730            | 69,910      | 2,704                       | 12,402  | 16,068  | 7,556   | 52,727                |
| 35                      | 82,183     | 31,867            | 54,854      | 3,321                       | 9,980   | 12,866  | 5,700   | 44,628                |
| 36                      | 68,743     | 23,492            | 46,467      | 788                         | 6,618   | 10,432  | 5,654   | 35,470                |
| 37                      | 106,970    | 40,598            | 76,565      | 1,994                       | 11,865  | 18,477  | 8,262   | 60,554                |
| 38                      | 30,158     | 10,726            | 22,212      | 445                         | 2,363   | 4,963   | 2,955   | 15,984                |
| 39                      | 46,332     | 17,824            | 30,148      | 1,915                       | 5,858   | 6,967   | 3,084   | 23,866                |
| Montgomery              | 700,800    | 268,057           | 493,560     | 17,531                      | 81,299  | 114,879 | 54,348  | 378,349               |

*Continued*

|              |    |           |           |           |         |         |         |         |           |
|--------------|----|-----------|-----------|-----------|---------|---------|---------|---------|-----------|
|              | 40 | 31,626    | 11,502    | 21,939    | 653     | 3,161   | 5,183   | 2,505   | 16,433    |
|              | 41 | 17,669    | 6,628     | 14,433    | 236     | 1,327   | 2,875   | 2,190   | 9,298     |
|              | 42 | 42,755    | 15,645    | 31,233    | 666     | 3,947   | 7,189   | 3,843   | 23,247    |
|              | 43 | 54,228    | 19,670    | 39,063    | 1,020   | 4,980   | 8,707   | 4,963   | 28,863    |
|              | 44 | 17,186    | 6,098     | 13,792    | 83      | 1,124   | 2,768   | 2,123   | 9,118     |
|              | 45 | 8,175     | 3,548     | 7,310     | 97      | 925     | 1,545   | 981     | 4,810     |
|              | 46 | 98,697    | 33,637    | 71,941    | 1,220   | 6,648   | 15,648  | 10,121  | 54,365    |
|              | 47 | 27,047    | 10,071    | 21,144    | 255     | 1,852   | 5,489   | 2,475   | 15,189    |
|              | 48 | 80,617    | 29,474    | 53,280    | 1,722   | 9,446   | 12,991  | 5,315   | 43,582    |
|              | 49 | 52,079    | 18,150    | 35,980    | 852     | 4,344   | 8,738   | 4,216   | 27,957    |
|              | 50 | 78,455    | 28,719    | 55,641    | 1,294   | 7,607   | 13,637  | 6,181   | 42,587    |
|              | 51 | 70,246    | 24,170    | 43,317    | 1,835   | 7,909   | 9,600   | 4,826   | 35,343    |
| Bucks        |    | 578,780   | 207,312   | 409,073   | 9,933   | 53,270  | 94,370  | 49,739  | 310,792   |
| PENNA        |    | 3,806,803 | 1,440,952 | 2,128,127 | 285,170 | 473,817 | 468,113 | 213,852 | 1,845,796 |
|              | 52 | 90,970    | 30,679    | 34,135    | 9,310   | 11,716  | 7,357   | 2,296   | 38,506    |
|              | 53 | 62,477    | 22,212    | 41,345    | 1,186   | 6,855   | 9,647   | 4,524   | 33,893    |
|              | 54 | 90,213    | 34,240    | 62,717    | 2,341   | 10,446  | 14,562  | 6,891   | 49,492    |
|              | 55 | 16,676    | 6,032     | 12,793    | 138     | 1,237   | 3,007   | 1,650   | 8,994     |
|              | 56 | 35,774    | 13,906    | 24,892    | 662     | 4,767   | 6,144   | 2,333   | 20,713    |
|              | 57 | 43,996    | 14,882    | 26,853    | 894     | 4,766   | 6,541   | 2,681   | 23,147    |
| Mercer       |    | 340,106   | 121,951   | 202,735   | 14,531  | 39,787  | 47,258  | 20,375  | 174,745   |
|              | 58 | 110,070   | 40,672    | 75,490    | 2,731   | 12,523  | 16,484  | 8,934   | 59,187    |
|              | 59 | 171,136   | 62,990    | 124,713   | 1,953   | 16,767  | 29,988  | 14,282  | 95,807    |
|              | 60 | 72,200    | 20,421    | 38,459    | 851     | 6,437   | 8,894   | 4,239   | 38,859    |
|              | 61 | 43,882    | 16,668    | 30,056    | 950     | 5,607   | 6,999   | 3,112   | 21,682    |
|              | 62 | 18,595    | 5,849     | 12,779    | 161     | 1,096   | 2,752   | 1,840   | 9,057     |
| Burlington   |    | 415,883   | 146,600   | 281,497   | 6,646   | 42,430  | 65,117  | 32,407  | 224,592   |
|              | 63 | 141,588   | 45,522    | 53,159    | 13,728  | 16,300  | 11,164  | 4,330   | 53,673    |
|              | 64 | 113,760   | 42,260    | 82,822    | 1,987   | 10,938  | 19,612  | 9,723   | 60,761    |
|              | 65 | 114,137   | 45,534    | 73,229    | 4,607   | 17,976  | 16,065  | 6,886   | 60,138    |
|              | 66 | 57,728    | 18,996    | 35,773    | 955     | 5,325   | 9,024   | 3,692   | 28,071    |
|              | 67 | 96,178    | 34,907    | 61,467    | 2,359   | 12,023  | 14,348  | 6,177   | 49,682    |
| Camden       |    | 523,391   | 187,219   | 306,450   | 23,636  | 62,562  | 70,213  | 30,808  | 252,325   |
|              | 68 | 83,900    | 30,438    | 55,298    | 2,247   | 9,225   | 12,975  | 5,991   | 42,881    |
|              | 69 | 34,830    | 12,087    | 22,725    | 870     | 3,215   | 5,421   | 2,581   | 16,627    |
|              | 70 | 78,908    | 25,988    | 50,502    | 1,190   | 6,391   | 13,041  | 5,366   | 40,334    |
|              | 71 | 51,557    | 17,469    | 33,350    | 1,041   | 4,823   | 7,694   | 3,911   | 25,106    |
| Gloucester   |    | 249,195   | 85,982    | 161,875   | 5,348   | 23,654  | 39,131  | 17,849  | 124,948   |
| NEW JERSEY   |    | 1,528,575 | 541,752   | 952,557   | 50,161  | 168,433 | 221,719 | 101,439 | 776,610   |
| TOTAL REGION |    | 5,335,378 | 1,982,704 | 3,080,684 | 335,331 | 642,250 | 689,832 | 315,291 | 2,622,406 |

## Appendix A-2: 1996 Employment by Sector and County Planning Area

| Planning Area | Agric. | Mining | Constr. | Manufac. | Transp. | Whole-Sale | Retail  | F.I.R.E | Service | Govt.   | Military | TOTAL   |
|---------------|--------|--------|---------|----------|---------|------------|---------|---------|---------|---------|----------|---------|
| 1             | 122    | 116    | 6,804   | 12,779   | 15,298  | 8,553      | 37,502  | 55,666  | 106,976 | 44,373  | 467      | 288,656 |
| 2             | 40     | 10     | 1,970   | 10,891   | 3,545   | 5,370      | 9,183   | 1,845   | 18,599  | 18,066  | 3,936    | 73,455  |
| 3             | 20     | 33     | 953     | 4,750    | 2,765   | 2,825      | 3,192   | 673     | 4,441   | 3,257   | 0        | 22,909  |
| 4             | 132    | 0      | 1,474   | 4,625    | 4,704   | 3,011      | 11,614  | 6,494   | 43,177  | 15,082  | 94       | 90,407  |
| 5             | 103    | 52     | 2,615   | 11,072   | 3,435   | 6,164      | 7,976   | 3,074   | 38,672  | 21,314  | 0        | 94,477  |
| 6             | 15     | 0      | 603     | 8,136    | 2,227   | 3,611      | 4,522   | 938     | 11,714  | 6,091   | 16       | 37,873  |
| 7             | 0      | 32     | 1,132   | 10,866   | 2,469   | 6,081      | 5,607   | 955     | 7,670   | 3,945   | 87       | 38,844  |
| 8             | 37     | 0      | 364     | 2,395    | 418     | 1,003      | 2,095   | 407     | 4,441   | 1,228   | 0        | 12,388  |
| 9             | 43     | 23     | 784     | 1,600    | 680     | 766        | 3,995   | 1,527   | 16,106  | 5,268   | 35       | 30,827  |
| 10            | 32     | 23     | 474     | 3,186    | 1,859   | 1,398      | 4,921   | 1,382   | 12,220  | 3,271   | 35       | 28,801  |
| 11            | 97     | 0      | 2,057   | 7,390    | 2,728   | 4,387      | 20,291  | 4,045   | 25,675  | 13,308  | 240      | 80,218  |
| 12            | 85     | 24     | 1,103   | 9,525    | 2,549   | 3,902      | 18,764  | 2,071   | 14,411  | 11,530  | 33       | 63,997  |
| Philadelphia  | 726    | 313    | 20,333  | 87,215   | 42,677  | 47,071     | 129,662 | 79,077  | 304,102 | 146,733 | 4,943    | 862,852 |
| 13            | 232    | 155    | 2,905   | 9,435    | 2,044   | 2,190      | 4,672   | 1,984   | 14,031  | 3,790   | 25       | 41,463  |
| 14            | 291    | 10     | 2,737   | 9,098    | 2,678   | 1,599      | 12,110  | 3,278   | 14,175  | 3,620   | 24       | 49,620  |
| 15            | 299    | 0      | 2,274   | 4,944    | 3,346   | 2,563      | 9,613   | 3,820   | 17,126  | 4,713   | 54       | 48,752  |
| 16            | 469    | 100    | 4,130   | 5,535    | 1,286   | 3,674      | 10,267  | 5,405   | 21,158  | 3,749   | 0        | 55,773  |
| 17            | 196    | 42     | 1,859   | 2,658    | 540     | 702        | 6,816   | 1,994   | 13,253  | 5,318   | 0        | 33,378  |
| 18            | 208    | 76     | 770     | 1,597    | 349     | 550        | 789     | 1,066   | 2,288   | 1,001   | 0        | 8,694   |
| Delaware      | 1,695  | 383    | 14,675  | 33,267   | 10,243  | 11,278     | 44,267  | 17,547  | 82,031  | 22,191  | 103      | 237,680 |
| 19            | 374    | 72     | 2,843   | 10,471   | 1,989   | 4,901      | 9,451   | 5,011   | 17,367  | 3,554   | 0        | 56,033  |
| 20            | 201    | 11     | 960     | 2,649    | 1,048   | 994        | 2,461   | 1,456   | 6,296   | 2,312   | 44       | 18,432  |
| 21            | 236    | 0      | 657     | 334      | 138     | 46         | 854     | 65      | 3,344   | 730     | 0        | 6,404   |
| 22            | 504    | 65     | 2,407   | 7,553    | 1,728   | 1,763      | 5,307   | 1,705   | 6,730   | 1,677   | 5        | 29,444  |
| 23            | 654    | 112    | 2,802   | 4,780    | 1,075   | 1,164      | 5,444   | 2,818   | 13,664  | 5,830   | 0        | 38,343  |
| 24            | 2,166  | 0      | 908     | 858      | 259     | 395        | 2,120   | 573     | 3,363   | 467     | 0        | 11,109  |
| 25            | 242    | 8      | 1,735   | 4,012    | 1,187   | 1,215      | 3,130   | 5,256   | 6,845   | 1,940   | 24       | 25,594  |
| 26            | 341    | 13     | 414     | 694      | 187     | 671        | 1,685   | 346     | 1,120   | 376     | 0        | 5,847   |
| 27            | 1,424  | 78     | 460     | 680      | 288     | 253        | 411     | 123     | 1,317   | 513     | 0        | 5,547   |

## Appendix A-2: 1996 Employment by Sector and County Planning Area (Continued)

| Planning Area | Agric. | Mining | Constr. | Manufac. | Transp. | Whole-Sale | Retail  | F.I.R.E | Service | Govt.   | Military | TOTAL     |
|---------------|--------|--------|---------|----------|---------|------------|---------|---------|---------|---------|----------|-----------|
| 28            | 800    | 0      | 564     | 573      | 248     | 384        | 526     | 36      | 834     | 220     | 0        | 4,185     |
| 29            | 1,261  | 21     | 511     | 247      | 218     | 144        | 622     | 223     | 1,945   | 343     | 7        | 5,542     |
| Chester       | 8,203  | 380    | 14,261  | 32,851   | 8,365   | 11,930     | 32,011  | 17,612  | 62,825  | 17,962  | 80       | 206,480   |
| 30            | 917    | 0      | 2,807   | 8,718    | 858     | 2,534      | 6,507   | 3,207   | 11,542  | 3,012   | 450      | 40,552    |
| 31            | 267    | 0      | 1,677   | 8,883    | 1,099   | 2,374      | 3,393   | 5,667   | 12,318  | 1,156   | 0        | 36,834    |
| 32            | 457    | 0      | 2,750   | 3,357    | 1,362   | 1,972      | 11,241  | 8,648   | 28,436  | 4,836   | 194      | 63,253    |
| 33            | 312    | 132    | 2,187   | 5,670    | 2,182   | 2,495      | 7,969   | 4,262   | 13,047  | 2,080   | 0        | 40,336    |
| 34            | 688    | 131    | 4,231   | 13,610   | 4,770   | 8,840      | 18,841  | 13,992  | 34,566  | 5,229   | 0        | 104,898   |
| 35            | 444    | 87     | 2,853   | 7,208    | 1,355   | 3,661      | 7,697   | 3,514   | 22,416  | 6,831   | 57       | 56,123    |
| 36            | 534    | 79     | 5,103   | 6,981    | 1,730   | 3,219      | 5,445   | 1,742   | 12,644  | 2,904   | 0        | 40,381    |
| 37            | 1,052  | 27     | 4,345   | 19,599   | 1,151   | 3,432      | 15,644  | 3,418   | 13,319  | 1,917   | 7        | 63,911    |
| 38            | 720    | 7      | 1,440   | 1,500    | 438     | 847        | 1,442   | 398     | 3,242   | 289     | 0        | 10,323    |
| 39            | 577    | 15     | 2,198   | 7,269    | 1,044   | 732        | 4,962   | 1,819   | 10,199  | 2,051   | 31       | 30,897    |
| Montgomery    | 5,968  | 478    | 29,591  | 82,795   | 15,989  | 30,106     | 83,141  | 46,667  | 161,729 | 30,305  | 739      | 487,508   |
| 40            | 335    | 0      | 1,339   | 2,559    | 150     | 463        | 3,200   | 979     | 3,905   | 926     | 0        | 13,856    |
| 41            | 460    | 0      | 282     | 214      | 110     | 52         | 460     | 97      | 755     | 278     | 0        | 2,708     |
| 42            | 523    | 61     | 2,488   | 4,234    | 451     | 1,118      | 1,771   | 790     | 5,916   | 878     | 0        | 18,230    |
| 43            | 1,101  | 144    | 2,092   | 4,621    | 481     | 960        | 5,006   | 1,568   | 10,036  | 3,784   | 12       | 29,805    |
| 44            | 357    | 14     | 849     | 1,423    | 195     | 348        | 1,998   | 311     | 2,491   | 535     | 7        | 8,528     |
| 45            | 72     | 61     | 451     | 123      | 34      | 168        | 872     | 167     | 1,002   | 343     | 0        | 3,293     |
| 46            | 527    | 67     | 1,999   | 5,944    | 1,111   | 3,047      | 6,608   | 2,241   | 9,082   | 5,347   | 581      | 36,554    |
| 47            | 331    | 27     | 1,326   | 1,723    | 311     | 475        | 1,689   | 932     | 7,735   | 966     | 0        | 15,515    |
| 48            | 189    | 20     | 2,002   | 6,795    | 2,138   | 5,421      | 12,561  | 5,162   | 15,781  | 3,299   | 0        | 53,368    |
| 49            | 58     | 18     | 1,666   | 728      | 170     | 442        | 11,747  | 852     | 6,018   | 1,211   | 0        | 22,910    |
| 50            | 183    | 68     | 1,890   | 9,136    | 1,231   | 1,243      | 6,707   | 1,376   | 8,236   | 2,229   | 46       | 32,345    |
| 51            | 8      | 0      | 1,545   | 6,501    | 1,243   | 1,800      | 3,126   | 1,211   | 9,363   | 2,655   | 0        | 27,452    |
| Bucks         | 4,144  | 480    | 17,929  | 44,001   | 7,625   | 15,537     | 55,745  | 15,686  | 80,320  | 22,451  | 646      | 264,564   |
| PENNA         | 20,736 | 2,034  | 96,789  | 280,129  | 84,899  | 115,922    | 344,826 | 176,589 | 691,007 | 239,642 | 6,511    | 2,059,084 |

## Appendix A-2: 1996 Employment by Sector and County Planning Area (Continued)

| Planning Area | Agric. | Mining | Constr. | Manufac. | Transp. | Whole-Sale | Retail  | F.I.R.E | Service | Govtnt. | Military | TOTAL     |
|---------------|--------|--------|---------|----------|---------|------------|---------|---------|---------|---------|----------|-----------|
| 52            | 110    | 41     | 1,775   | 7,004    | 2,168   | 2,339      | 5,888   | 3,244   | 12,555  | 30,767  | 60       | 65,951    |
| 53            | 190    | 0      | 1,421   | 7,329    | 1,609   | 2,482      | 9,822   | 4,592   | 19,022  | 13,136  | 84       | 59,687    |
| 54            | 254    | 0      | 1,145   | 3,784    | 1,925   | 1,598      | 6,058   | 2,153   | 10,020  | 6,177   | 0        | 33,114    |
| 55            | 239    | 7      | 608     | 648      | 111     | 773        | 1,304   | 518     | 3,180   | 611     | 0        | 7,999     |
| 56            | 239    | 0      | 591     | 4,531    | 591     | 1,277      | 3,582   | 969     | 5,418   | 2,498   | 0        | 19,696    |
| 57            | 370    | 50     | 1,259   | 6,401    | 1,567   | 1,417      | 3,740   | 3,574   | 29,307  | 3,642   | 9        | 51,336    |
| Mercer        | 1,402  | 98     | 6,799   | 29,697   | 7,971   | 9,886      | 30,394  | 15,050  | 79,502  | 56,831  | 153      | 237,783   |
| 58            | 275    | 0      | 3,734   | 11,999   | 3,610   | 4,767      | 13,117  | 5,353   | 16,980  | 5,294   | 22       | 65,151    |
| 59            | 634    | 0      | 4,268   | 7,817    | 3,073   | 5,990      | 15,359  | 8,962   | 23,901  | 3,459   | 77       | 73,540    |
| 60            | 540    | 0      | 1,117   | 864      | 728     | 441        | 3,801   | 624     | 6,643   | 9,730   | 16,099   | 40,587    |
| 61            | 314    | 61     | 1,773   | 2,259    | 797     | 915        | 3,297   | 795     | 5,957   | 1,799   | 19       | 17,986    |
| 62            | 408    | 0      | 453     | 347      | 100     | 124        | 271     | 167     | 927     | 347     | 0        | 3,144     |
| Burlington    | 2,171  | 61     | 11,345  | 23,286   | 8,308   | 12,237     | 35,845  | 15,901  | 54,408  | 20,629  | 16,217   | 200,408   |
| 63            | 204    | 40     | 4,045   | 13,065   | 4,238   | 10,139     | 13,171  | 3,358   | 24,070  | 14,589  | 188      | 87,107    |
| 64            | 238    | 14     | 4,087   | 7,327    | 1,391   | 5,339      | 12,887  | 8,334   | 27,582  | 4,390   | 76       | 71,665    |
| 65            | 269    | 17     | 1,901   | 2,849    | 1,909   | 1,571      | 9,284   | 3,564   | 11,755  | 4,315   | 0        | 37,434    |
| 66            | 313    | 76     | 1,640   | 2,350    | 1,027   | 454        | 4,463   | 849     | 6,223   | 1,392   | 0        | 18,787    |
| 67            | 124    | 31     | 1,658   | 3,955    | 1,678   | 2,046      | 5,210   | 1,282   | 7,829   | 1,996   | 82       | 25,891    |
| Camden        | 1,148  | 178    | 13,331  | 29,546   | 10,243  | 19,549     | 45,015  | 17,387  | 77,459  | 26,682  | 346      | 240,884   |
| 68            | 538    | 23     | 1,807   | 4,886    | 1,872   | 3,223      | 11,831  | 1,935   | 11,176  | 4,912   | 91       | 42,294    |
| 69            | 1,586  | 35     | 2,103   | 3,588    | 963     | 1,280      | 2,136   | 406     | 3,782   | 2,924   | 0        | 18,803    |
| 70            | 260    | 33     | 1,233   | 3,082    | 646     | 786        | 4,543   | 1,166   | 6,216   | 2,665   | 0        | 20,630    |
| 71            | 676    | 0      | 1,169   | 1,430    | 660     | 436        | 2,056   | 551     | 2,698   | 1,228   | 0        | 10,904    |
| Gloucester    | 3,060  | 91     | 6,312   | 12,986   | 4,141   | 5,725      | 20,566  | 4,058   | 23,872  | 11,729  | 91       | 92,631    |
| New Jersey    | 7,781  | 428    | 37,787  | 95,515   | 30,663  | 47,397     | 131,820 | 52,396  | 235,241 | 115,871 | 16,807   | 771,706   |
| TOTAL         | 28,517 | 2,462  | 134,576 | 375,644  | 115,562 | 163,319    | 476,646 | 228,985 | 926,248 | 355,513 | 23,318   | 2,830,790 |

## Appendix A-3: 1996 Trip Generation by County Planning Area

| County<br>Planning<br>Area | Work    |           | Non-Work  |           | Nonhome-Based |         | Light Truck |         | Heavy Truck |         | Taxi   |        | External-Local |         |
|----------------------------|---------|-----------|-----------|-----------|---------------|---------|-------------|---------|-------------|---------|--------|--------|----------------|---------|
|                            | PROD.   | ATTR.     | PROD.     | ATTR.     | ORIG.         | DEST.   | ORIG.       | DEST.   | ORIG.       | DEST.   | ORIG.  | DEST.  | PROD           | ATTR.   |
| 1                          | 26,083  | 428,193   | 41,555    | 235,824   | 106,790       | 106,790 | 32,670      | 32,670  | 14,681      | 14,681  | 30,313 | 30,313 | 0              | 13,338  |
| 2                          | 101,003 | 100,584   | 132,102   | 154,840   | 77,910        | 77,910  | 29,979      | 29,979  | 18,534      | 18,534  | 4,701  | 4,701  | 0              | 7,888   |
| 3                          | 49,135  | 33,359    | 71,215    | 61,235    | 29,053        | 29,053  | 11,704      | 11,704  | 6,513       | 6,513   | 1,530  | 1,530  | 0              | 4,204   |
| 4                          | 127,386 | 132,310   | 170,715   | 168,880   | 86,023        | 86,023  | 32,456      | 32,456  | 18,903      | 18,903  | 7,314  | 7,314  | 0              | 9,749   |
| 5                          | 61,670  | 139,016   | 82,879    | 121,764   | 62,866        | 62,866  | 24,204      | 24,204  | 14,034      | 14,034  | 8,132  | 8,132  | 0              | 5,586   |
| 6                          | 46,712  | 55,140    | 59,300    | 70,296    | 35,727        | 35,727  | 14,514      | 14,514  | 8,521       | 8,521   | 2,599  | 2,599  | 0              | 2,887   |
| 7                          | 54,870  | 56,186    | 82,091    | 76,806    | 38,456        | 38,456  | 16,342      | 16,342  | 9,209       | 9,209   | 2,530  | 2,530  | 0              | 3,078   |
| 8                          | 32,685  | 17,926    | 64,474    | 44,955    | 19,178        | 19,178  | 7,024       | 7,024   | 3,893       | 3,893   | 858    | 858    | 0              | 1,966   |
| 9                          | 72,078  | 44,647    | 121,325   | 92,530    | 42,512        | 42,512  | 15,672      | 15,672  | 9,203       | 9,203   | 2,173  | 2,173  | 0              | 3,796   |
| 10                         | 115,877 | 41,808    | 161,767   | 91,873    | 43,997        | 43,997  | 18,028      | 18,028  | 9,661       | 9,661   | 2,559  | 2,559  | 0              | 4,206   |
| 11                         | 156,739 | 116,047   | 277,139   | 209,952   | 107,432       | 107,432 | 41,096      | 41,096  | 22,869      | 22,869  | 5,686  | 5,686  | 0              | 8,020   |
| 12                         | 118,498 | 91,234    | 278,130   | 347,730   | 132,719       | 132,719 | 37,033      | 37,033  | 21,399      | 21,399  | 3,352  | 3,352  | 0              | 11,115  |
| Philadelphia               | 962,736 | 1,256,450 | 1,542,692 | 1,676,685 | 782,663       | 782,663 | 280,722     | 280,722 | 157,420     | 157,420 | 71,747 | 71,747 | 0              | 75,833  |
| 13                         | 77,759  | 59,971    | 157,756   | 110,524   | 46,835        | 46,835  | 18,237      | 18,237  | 10,702      | 10,702  | 2,507  | 2,507  | 0              | 36,145  |
| 14                         | 85,081  | 70,469    | 225,550   | 264,366   | 95,477        | 95,477  | 26,953      | 26,953  | 16,338      | 16,338  | 2,371  | 2,371  | 0              | 21,086  |
| 15                         | 138,997 | 70,179    | 280,506   | 181,770   | 78,040        | 78,040  | 28,266      | 28,266  | 15,715      | 15,715  | 3,155  | 3,155  | 0              | 14,387  |
| 16                         | 98,743  | 79,476    | 281,667   | 279,829   | 101,036       | 101,036 | 29,353      | 29,353  | 18,505      | 18,505  | 2,648  | 2,648  | 0              | 14,313  |
| 17                         | 39,921  | 48,416    | 123,493   | 128,767   | 54,061        | 54,061  | 16,765      | 16,765  | 10,321      | 10,321  | 1,569  | 1,569  | 0              | 14,135  |
| 18                         | 19,116  | 12,828    | 63,168    | 33,160    | 13,595        | 13,595  | 5,924       | 5,924   | 3,206       | 3,206   | 350    | 350    | 0              | 12,614  |
| Delaware                   | 459,617 | 341,339   | 1,132,140 | 998,416   | 389,044       | 389,044 | 125,498     | 125,498 | 74,787      | 74,787  | 12,600 | 12,600 | 0              | 112,680 |
| 19                         | 55,694  | 80,169    | 160,665   | 216,017   | 81,014        | 81,014  | 23,931      | 23,931  | 15,419      | 15,419  | 2,488  | 2,488  | 0              | 9,266   |
| 20                         | 31,887  | 26,711    | 85,596    | 61,369    | 25,283        | 25,283  | 9,378       | 9,378   | 5,383       | 5,383   | 945    | 945    | 0              | 4,569   |
| 21                         | 21,295  | 9,278     | 66,485    | 35,555    | 13,192        | 13,192  | 5,457       | 5,457   | 2,852       | 2,852   | 303    | 303    | 0              | 10,345  |
| 22                         | 45,327  | 43,060    | 129,912   | 131,142   | 50,024        | 50,024  | 16,871      | 16,871  | 9,603       | 9,603   | 1,130  | 1,130  | 0              | 7,565   |
| 23                         | 67,554  | 55,461    | 182,187   | 145,900   | 56,909        | 56,909  | 19,318      | 19,318  | 11,534      | 11,534  | 1,975  | 1,975  | 0              | 14,827  |
| 24                         | 21,175  | 16,160    | 53,409    | 39,966    | 16,305        | 16,305  | 6,536       | 6,536   | 3,884       | 3,884   | 503    | 503    | 0              | 15,071  |
| 25                         | 31,814  | 36,860    | 84,849    | 96,464    | 35,861        | 35,861  | 11,874      | 11,874  | 7,512       | 7,512   | 1,168  | 1,168  | 0              | 10,229  |
| 26                         | 22,871  | 8,526     | 67,294    | 38,434    | 14,421        | 14,421  | 5,706       | 5,706   | 2,692       | 2,692   | 273    | 273    | 0              | 8,847   |
| 27                         | 16,031  | 8,024     | 46,206    | 21,976    | 8,255         | 8,255   | 3,897       | 3,897   | 2,108       | 2,108   | 256    | 256    | 0              | 5,626   |
| 28                         | 11,371  | 6,101     | 31,920    | 17,346    | 6,529         | 6,529   | 3,064       | 3,064   | 1,652       | 1,652   | 179    | 179    | 0              | 5,845   |

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## Appendix A-3: 1996 Trip Generation by County Planning Area (Continued)

| County<br>Planning<br>Area | Work      |           | Non-Work  |           | Nonhome-Based |           | Light Truck |         | Heavy Truck |         | Taxi    |         | External-Local |         |
|----------------------------|-----------|-----------|-----------|-----------|---------------|-----------|-------------|---------|-------------|---------|---------|---------|----------------|---------|
|                            | PROD.     | ATTR.     | PROD.     | ATTR.     | ORIG.         | DEST.     | ORIG.       | DEST.   | ORIG.       | DEST.   | ORIG.   | DEST.   | PROD.          | ATTR.   |
| 29                         | 12,907    | 7,994     | 33,239    | 23,673    | 8,390         | 8,390     | 3,636       | 3,636   | 2,187       | 2,187   | 226     | 226     | 0              | 8,198   |
| Chester                    | 337,926   | 298,344   | 941,762   | 827,842   | 316,183       | 316,183   | 109,668     | 109,668 | 64,826      | 64,826  | 9,446   | 9,446   | 0              | 100,388 |
| 30                         | 60,998    | 57,220    | 163,345   | 169,497   | 62,742        | 62,742    | 19,336      | 19,336  | 12,186      | 12,186  | 1,862   | 1,862   | 0              | 6,967   |
| 31                         | 34,443    | 52,583    | 90,668    | 124,427   | 45,690        | 45,690    | 13,580      | 13,580  | 9,643       | 9,643   | 1,626   | 1,626   | 0              | 3,893   |
| 32                         | 97,357    | 90,163    | 257,702   | 278,187   | 105,195       | 105,195   | 30,460      | 30,460  | 19,613      | 19,613  | 3,170   | 3,170   | 0              | 8,598   |
| 33                         | 34,286    | 57,778    | 90,369    | 173,575   | 63,125        | 63,125    | 17,040      | 17,040  | 11,496      | 11,496  | 1,776   | 1,776   | 0              | 4,320   |
| 34                         | 82,181    | 150,400   | 213,237   | 349,239   | 137,898       | 137,898   | 40,832      | 40,832  | 27,063      | 27,063  | 4,900   | 4,900   | 0              | 12,135  |
| 35                         | 69,381    | 80,608    | 169,387   | 188,862   | 75,830        | 75,830    | 23,769      | 23,769  | 15,397      | 15,397  | 2,751   | 2,751   | 0              | 6,425   |
| 36                         | 54,808    | 58,836    | 158,363   | 155,591   | 59,511        | 59,511    | 20,837      | 20,837  | 12,630      | 12,630  | 1,620   | 1,620   | 0              | 9,920   |
| 37                         | 94,211    | 91,611    | 245,596   | 280,589   | 105,971       | 105,971   | 33,011      | 33,011  | 18,839      | 18,839  | 2,979   | 2,979   | 0              | 11,873  |
| 38                         | 24,718    | 14,975    | 70,297    | 45,534    | 16,832        | 16,832    | 6,806       | 6,806   | 3,805       | 3,805   | 453     | 453     | 0              | 11,700  |
| 39                         | 35,940    | 44,889    | 83,142    | 70,546    | 31,577        | 31,577    | 12,485      | 12,485  | 7,339       | 7,339   | 1,747   | 1,747   | 0              | 27,331  |
| Montgomery                 | 588,323   | 699,063   | 1,542,106 | 1,836,047 | 704,371       | 704,371   | 218,156     | 218,156 | 138,011     | 138,011 | 22,884  | 22,884  | 0              | 103,162 |
| 40                         | 25,370    | 20,116    | 67,305    | 50,491    | 21,258        | 21,258    | 8,082       | 8,082   | 4,425       | 4,425   | 690     | 690     | 0              | 12,222  |
| 41                         | 14,292    | 3,997     | 44,358    | 19,043    | 6,755         | 6,755     | 3,529       | 3,529   | 1,577       | 1,577   | 122     | 122     | 0              | 7,773   |
| 42                         | 36,085    | 26,294    | 104,670   | 72,984    | 26,867        | 26,867    | 10,193      | 10,193  | 6,012       | 6,012   | 792     | 792     | 0              | 6,139   |
| 43                         | 44,739    | 43,309    | 128,524   | 115,209   | 46,514        | 46,514    | 15,779      | 15,779  | 9,341       | 9,341   | 1,320   | 1,320   | 0              | 7,192   |
| 44                         | 14,015    | 12,573    | 45,596    | 42,782    | 16,962        | 16,962    | 5,638       | 5,638   | 3,189       | 3,189   | 317     | 317     | 0              | 4,771   |
| 45                         | 7,435     | 4,751     | 21,665    | 18,147    | 6,656         | 6,656     | 2,513       | 2,513   | 1,340       | 1,340   | 138     | 138     | 0              | 6,966   |
| 46                         | 84,536    | 51,737    | 227,949   | 171,648   | 66,550        | 66,550    | 21,561      | 21,561  | 12,464      | 12,464  | 1,724   | 1,724   | 0              | 11,015  |
| 47                         | 23,356    | 22,844    | 70,189    | 60,278    | 24,304        | 24,304    | 8,470       | 8,470   | 5,286       | 5,286   | 623     | 623     | 0              | 6,586   |
| 48                         | 68,598    | 75,739    | 171,822   | 277,035   | 97,862        | 97,862    | 25,502      | 25,502  | 16,395      | 16,395  | 2,377   | 2,377   | 0              | 9,407   |
| 49                         | 43,892    | 32,807    | 113,342   | 186,412   | 68,213        | 68,213    | 16,358      | 16,358  | 9,332       | 9,332   | 1,029   | 1,029   | 0              | 7,534   |
| 50                         | 66,566    | 45,970    | 179,685   | 162,308   | 59,037        | 59,037    | 18,272      | 18,272  | 10,501      | 10,501  | 1,539   | 1,539   | 0              | 8,780   |
| 51                         | 55,484    | 39,188    | 134,124   | 103,786   | 39,990        | 39,990    | 13,380      | 13,380  | 8,055       | 8,055   | 1,400   | 1,400   | 0              | 4,693   |
| Bucks                      | 484,348   | 379,325   | 1,309,229 | 1,280,123 | 480,968       | 480,968   | 149,277     | 149,277 | 87,917      | 87,917  | 12,071  | 12,071  | 0              | 93,078  |
| PENNA                      | 2,832,950 | 2,974,521 | 6,467,929 | 6,619,113 | 2,673,229     | 2,673,229 | 883,321     | 883,321 | 522,961     | 522,961 | 128,748 | 128,748 | 0              | 485,141 |
| 52                         | 57,747    | 96,407    | 84,019    | 91,268    | 49,695        | 49,695    | 18,840      | 18,840  | 12,347      | 12,347  | 4,228   | 4,228   | 0              | 17,840  |
| 53                         | 53,149    | 85,624    | 123,937   | 228,158   | 90,825        | 90,825    | 24,882      | 24,882  | 17,437      | 17,437  | 2,512   | 2,512   | 0              | 34,013  |

The Delaware Valley Regional Planning Commission

June, 1993

## Appendix A-3: 1996 Trip Generation by County Planning Area (Continued)

| County<br>Planning<br>Area | Work      |           | Non-Work  |           | Nonhome-Based |           | Light Truck |           | Heavy Truck |         | Taxi    |         | External-Local |         |
|----------------------------|-----------|-----------|-----------|-----------|---------------|-----------|-------------|-----------|-------------|---------|---------|---------|----------------|---------|
|                            | PROD.     | ATTR.     | PROD.     | ATTR.     | ORIG.         | DEST.     | ORIG.       | DEST.     | ORIG.       | DEST.   | ORIG.   | DEST.   | PROD           | ATTR.   |
| 54                         | 77,698    | 47,162    | 182,216   | 158,055   | 61,078        | 61,078    | 19,568      | 19,568    | 11,805      | 11,805  | 1,608   | 1,608   | 0              | 46,548  |
| 55                         | 13,919    | 11,575    | 35,738    | 33,435    | 12,544        | 12,544    | 4,710       | 4,710     | 2,792       | 2,792   | 321     | 321     | 0              | 15,187  |
| 56                         | 32,392    | 28,256    | 66,123    | 70,741    | 28,689        | 28,689    | 10,426      | 10,426    | 6,318       | 6,318   | 859     | 859     | 0              | 44,468  |
| 57                         | 35,740    | 74,325    | 68,426    | 108,641   | 48,139        | 48,139    | 18,107      | 18,107    | 13,123      | 13,123  | 2,218   | 2,218   | 0              | 68,110  |
| Mercer                     | 270,645   | 343,349   | 560,459   | 690,298   | 290,970       | 290,970   | 96,533      | 96,533    | 63,822      | 63,822  | 11,746  | 11,746  | 0              | 226,166 |
| 58                         | 92,670    | 93,084    | 239,437   | 299,176   | 110,745       | 110,745   | 32,358      | 32,358    | 20,154      | 20,154  | 2,904   | 2,904   | 0              | 22,853  |
| 59                         | 149,206   | 106,165   | 397,725   | 322,575   | 125,653       | 125,653   | 42,350      | 42,350    | 23,767      | 23,767  | 3,569   | 3,569   | 0              | 23,646  |
| 60                         | 60,284    | 33,794    | 115,506   | 90,699    | 37,147        | 37,147    | 16,716      | 16,716    | 11,704      | 11,704  | 1,813   | 1,813   | 0              | 33,815  |
| 61                         | 33,465    | 26,083    | 106,536   | 82,567    | 31,908        | 31,908    | 11,395      | 11,395    | 6,251       | 6,251   | 826     | 826     | 0              | 7,172   |
| 62                         | 13,921    | 4,640     | 40,107    | 17,125    | 6,002         | 6,002     | 3,285       | 3,285     | 1,581       | 1,581   | 121     | 121     | 0              | 6,580   |
| Burlington                 | 349,546   | 263,766   | 899,311   | 812,142   | 311,455       | 311,455   | 106,104     | 106,104   | 63,457      | 63,457  | 9,233   | 9,233   | 0              | 94,066  |
| 63                         | 83,062    | 125,943   | 161,756   | 196,526   | 90,195        | 90,195    | 31,675      | 31,675    | 19,593      | 19,593  | 4,980   | 4,980   | 0              | 11,392  |
| 64                         | 95,425    | 102,069   | 247,464   | 311,161   | 113,600       | 113,600   | 32,200      | 32,200    | 21,234      | 21,234  | 3,386   | 3,386   | 0              | 17,745  |
| 65                         | 94,470    | 53,325    | 235,972   | 216,438   | 80,375        | 80,375    | 24,119      | 24,119    | 13,837      | 13,837  | 2,001   | 2,001   | 0              | 14,492  |
| 66                         | 43,357    | 27,121    | 120,176   | 104,207   | 39,110        | 39,110    | 12,918      | 12,918    | 7,208       | 7,208   | 848     | 848     | 0              | 18,711  |
| 67                         | 77,845    | 36,697    | 202,241   | 149,801   | 54,637        | 54,637    | 17,778      | 17,778    | 9,818       | 9,818   | 1,348   | 1,348   | 0              | 13,331  |
| Camden                     | 394,159   | 345,155   | 967,609   | 978,133   | 377,917       | 377,917   | 118,690     | 118,690   | 71,690      | 71,690  | 12,563  | 12,563  | 0              | 75,671  |
| 68                         | 66,720    | 61,060    | 185,697   | 234,737   | 89,663        | 89,663    | 25,964      | 25,964    | 15,119      | 15,119  | 1,767   | 1,767   | 0              | 21,335  |
| 69                         | 25,690    | 27,362    | 71,815    | 61,762    | 24,852        | 24,852    | 10,040      | 10,040    | 6,152       | 6,152   | 721     | 721     | 0              | 19,956  |
| 70                         | 62,473    | 29,764    | 166,995   | 114,075   | 44,385        | 44,385    | 15,320      | 15,320    | 8,261       | 8,261   | 986     | 986     | 0              | 23,630  |
| 71                         | 38,821    | 15,729    | 104,322   | 59,071    | 22,614        | 22,614    | 9,172       | 9,172     | 4,688       | 4,688   | 555     | 555     | 0              | 21,623  |
| Gloucester                 | 193,704   | 133,915   | 528,829   | 469,645   | 181,514       | 181,514   | 60,496      | 60,496    | 34,220      | 34,220  | 4,029   | 4,029   | 0              | 86,544  |
| New Jersey                 | 1,208,054 | 1,086,185 | 2,956,208 | 2,950,218 | 1,161,856     | 1,161,856 | 381,823     | 381,823   | 233,189     | 233,189 | 37,571  | 37,571  | 0              | 482,447 |
| TOTAL                      | 4,041,004 | 4,060,706 | 9,424,137 | 9,569,331 | 3,835,085     | 3,835,085 | 1,265,144   | 1,265,144 | 756,150     | 756,150 | 166,319 | 166,319 | 0              | 967,588 |





**Appendix A-4: Percent of 1996 Person Trip Production Made by Transit by Trip Purpose and County Planning Area**  
*(Continued)*

| County<br>Planning<br>Area | HBW             |                  | HBW<br>Percent<br>Transit | HBNW            |                  | HBNW<br>Percent<br>Transit | NHB             |                  | NHB<br>Percent<br>Transit | TOTAL     |        | TOTAL<br>Percent<br>Transit |
|----------------------------|-----------------|------------------|---------------------------|-----------------|------------------|----------------------------|-----------------|------------------|---------------------------|-----------|--------|-----------------------------|
|                            | Person<br>Trips | Transit<br>Trips |                           | Person<br>Trips | Transit<br>Trips |                            | Person<br>Trips | Transit<br>Trips |                           |           |        |                             |
| 24                         | 21,191          | 42               | 0.2                       | 53,409          | 13               | 0.0                        | 16,303          | 1                | 0.0                       | 90,903    | 56     | 0.1                         |
| 25                         | 31,823          | 954              | 3.0                       | 84,849          | 507              | 0.6                        | 35,864          | 109              | 0.3                       | 152,536   | 1,570  | 1.0                         |
| 26                         | 22,882          | 191              | 0.8                       | 67,276          | 93               | 0.1                        | 14,421          | 6                | 0.0                       | 104,579   | 290    | 0.3                         |
| 27                         | 16,066          | 15               | 0.1                       | 46,385          | 13               | 0.0                        | 8,245           | 0                | 0.0                       | 70,696    | 28     | 0.0                         |
| 28                         | 11,376          | 216              | 1.9                       | 31,929          | 125              | 0.4                        | 6,528           | 11               | 0.2                       | 49,833    | 352    | 0.7                         |
| 29                         | 12,943          | 0                | 0.0                       | 33,225          | 0                | 0.0                        | 8,384           | 0                | 0.0                       | 54,552    | 0      | 0.0                         |
| Chester                    | 338,057         | 7,607            | 2.3                       | 941,966         | 3,264            | 0.3                        | 316,182         | 774              | 0.2                       | 1,596,205 | 11,645 | 0.7                         |
| 30                         | 61,001          | 2,141            | 3.5                       | 163,372         | 565              | 0.3                        | 62,745          | 116              | 0.2                       | 287,118   | 2,822  | 1.0                         |
| 31                         | 34,444          | 1,364            | 4.0                       | 90,684          | 451              | 0.5                        | 45,691          | 114              | 0.2                       | 170,819   | 1,929  | 1.1                         |
| 32                         | 97,362          | 8,920            | 9.2                       | 257,751         | 3,434            | 1.3                        | 105,201         | 630              | 0.6                       | 460,314   | 12,984 | 2.8                         |
| 33                         | 34,288          | 2,108            | 6.1                       | 90,383          | 757              | 0.8                        | 63,127          | 228              | 0.4                       | 187,798   | 3,093  | 1.6                         |
| 34                         | 82,194          | 9,507            | 11.6                      | 213,273         | 4,626            | 2.2                        | 137,906         | 1,442            | 1.0                       | 433,373   | 15,575 | 3.6                         |
| 35                         | 69,384          | 2,825            | 4.1                       | 169,411         | 1,030            | 0.6                        | 75,834          | 252              | 0.3                       | 314,629   | 4,107  | 1.3                         |
| 36                         | 54,811          | 613              | 1.1                       | 158,373         | 225              | 0.1                        | 59,514          | 34               | 0.1                       | 272,698   | 872    | 0.3                         |
| 37                         | 94,218          | 1,767            | 1.9                       | 245,613         | 723              | 0.3                        | 105,978         | 181              | 0.2                       | 445,809   | 2,671  | 0.6                         |
| 38                         | 24,723          | 0                | 0.0                       | 70,297          | 0                | 0.0                        | 16,834          | 0                | 0.0                       | 111,854   | 0      | 0.0                         |
| 39                         | 35,946          | 1,179            | 3.3                       | 83,150          | 646              | 0.8                        | 31,580          | 262              | 0.8                       | 150,676   | 2,087  | 1.4                         |
| Montgomery                 | 588,371         | 30,424           | 5.2                       | 1,542,307       | 12,457           | 0.8                        | 704,410         | 3,259            | 0.5                       | 2,835,088 | 46,140 | 1.6                         |
| 40                         | 25,374          | 0                | 0.0                       | 67,307          | 0                | 0.0                        | 21,260          | 0                | 0.0                       | 113,941   | 0      | 0.0                         |
| 41                         | 14,304          | 0                | 0.0                       | 44,345          | 0                | 0.0                        | 6,751           | 0                | 0.0                       | 65,400    | 0      | 0.0                         |
| 42                         | 36,088          | 0                | 0.0                       | 104,677         | 0                | 0.0                        | 26,870          | 0                | 0.0                       | 167,635   | 0      | 0.0                         |
| 43                         | 44,742          | 676              | 1.5                       | 128,527         | 191              | 0.1                        | 46,516          | 47               | 0.1                       | 219,785   | 914    | 0.4                         |
| 44                         | 14,016          | 118              | 0.8                       | 45,598          | 32               | 0.1                        | 16,963          | 4                | 0.0                       | 76,577    | 154    | 0.2                         |
| 45                         | 7,436           | 78               | 1.0                       | 21,665          | 24               | 0.1                        | 6,656           | 3                | 0.0                       | 35,757    | 105    | 0.3                         |
| 46                         | 84,541          | 1,753            | 2.1                       | 227,965         | 361              | 0.2                        | 66,553          | 55               | 0.1                       | 379,059   | 2,169  | 0.6                         |

**Appendix A-4: Percent of 1996 Person Trip Production Made by Transit by Trip Purpose and County Planning Area**  
*(Continued)*

| County<br>Planning<br>Area | HBW<br>Person<br>Trips | HBW<br>Transit<br>Trips | HBW<br>Percent<br>Transit | HBNW<br>Person<br>Trips | HBNW<br>Transit<br>Trips | HBNW<br>Percent<br>Transit | NHB<br>Person<br>Trips | NHB<br>Transit<br>Trips | NHB<br>Percent<br>Transit | TOTAL<br>Person<br>Trips | TOTAL<br>Transit<br>Trips | TOTAL<br>Percent<br>Transit |
|----------------------------|------------------------|-------------------------|---------------------------|-------------------------|--------------------------|----------------------------|------------------------|-------------------------|---------------------------|--------------------------|---------------------------|-----------------------------|
| 47                         | 23,337                 | 290                     | 1.2                       | 70,191                  | 76                       | 0.1                        | 24,305                 | 8                       | 0.0                       | 117,833                  | 374                       | 0.3                         |
| 48                         | 68,602                 | 3,422                   | 5.0                       | 171,839                 | 791                      | 0.5                        | 97,866                 | 195                     | 0.2                       | 338,307                  | 4,408                     | 1.3                         |
| 49                         | 43,895                 | 1,671                   | 3.8                       | 113,357                 | 342                      | 0.3                        | 68,214                 | 68                      | 0.1                       | 225,466                  | 2,081                     | 0.9                         |
| 50                         | 66,570                 | 1,860                   | 2.8                       | 179,698                 | 425                      | 0.2                        | 59,039                 | 64                      | 0.1                       | 305,307                  | 2,349                     | 0.8                         |
| 51                         | 55,488                 | 2,307                   | 4.2                       | 134,140                 | 488                      | 0.4                        | 39,992                 | 72                      | 0.2                       | 229,620                  | 2,867                     | 1.2                         |
| Bucks                      | 484,393                | 12,175                  | 2.5                       | 1,309,309               | 2,730                    | 0.2                        | 480,985                | 516                     | 0.1                       | 2,274,687                | 15,421                    | 0.7                         |
| Penna.                     | 2,833,465              | 442,736                 | 15.6                      | 6,469,072               | 238,006                  | 3.7                        | 2,673,355              | 79,156                  | 3.0                       | 11,975,892               | 759,898                   | 6.3                         |
| 52                         | 57,748                 | 5,671                   | 9.8                       | 84,028                  | 2,087                    | 2.5                        | 49,696                 | 462                     | 0.9                       | 191,472                  | 8,220                     | 4.3                         |
| 53                         | 53,150                 | 1,391                   | 2.6                       | 123,947                 | 278                      | 0.2                        | 90,827                 | 76                      | 0.1                       | 267,924                  | 1,745                     | 0.7                         |
| 54                         | 77,700                 | 1,516                   | 2.0                       | 182,230                 | 401                      | 0.2                        | 61,080                 | 50                      | 0.1                       | 321,010                  | 1,967                     | 0.6                         |
| 55                         | 13,919                 | 62                      | 0.4                       | 35,739                  | 14                       | 0.0                        | 12,545                 | 6                       | 0.0                       | 62,203                   | 82                        | 0.1                         |
| 56                         | 32,394                 | 240                     | 0.7                       | 66,123                  | 48                       | 0.1                        | 28,690                 | 15                      | 0.1                       | 127,207                  | 303                       | 0.2                         |
| 57                         | 35,741                 | 967                     | 2.7                       | 68,432                  | 233                      | 0.3                        | 48,140                 | 131                     | 0.3                       | 152,313                  | 1,331                     | 0.9                         |
| Mercer                     | 270,652                | 9,847                   | 3.6                       | 560,499                 | 3,061                    | 0.5                        | 290,978                | 740                     | 0.3                       | 1,122,129                | 13,648                    | 1.2                         |
| 58                         | 92,674                 | 3,344                   | 3.6                       | 239,443                 | 1,453                    | 0.6                        | 110,749                | 303                     | 0.3                       | 442,866                  | 5,100                     | 1.2                         |
| 59                         | 149,217                | 10,190                  | 6.8                       | 397,723                 | 5,830                    | 1.5                        | 125,654                | 750                     | 0.6                       | 672,594                  | 16,770                    | 2.5                         |
| 60                         | 60,339                 | 813                     | 1.3                       | 115,470                 | 399                      | 0.3                        | 37,143                 | 48                      | 0.1                       | 212,952                  | 1,260                     | 0.6                         |
| 61                         | 33,469                 | 1,097                   | 3.3                       | 106,538                 | 1,106                    | 1.0                        | 31,908                 | 208                     | 0.7                       | 171,915                  | 2,411                     | 1.4                         |
| 62                         | 13,996                 | 0                       | 0.0                       | 40,111                  | 0                        | 0.0                        | 5,992                  | 0                       | 0.0                       | 60,099                   | 0                         | 0.0                         |
| Burlington                 | 349,695                | 15,444                  | 4.4                       | 899,285                 | 8,788                    | 1.0                        | 311,446                | 1,309                   | 0.4                       | 1,560,426                | 25,541                    | 1.6                         |
| 63                         | 83,067                 | 14,810                  | 17.8                      | 161,767                 | 6,955                    | 4.3                        | 90,197                 | 2,153                   | 2.4                       | 335,031                  | 23,918                    | 7.1                         |
| 64                         | 95,430                 | 7,663                   | 8.0                       | 247,474                 | 3,115                    | 1.3                        | 113,602                | 713                     | 0.6                       | 456,506                  | 11,491                    | 2.5                         |
| 65                         | 94,474                 | 9,693                   | 10.3                      | 235,982                 | 3,419                    | 1.4                        | 80,375                 | 520                     | 0.6                       | 410,831                  | 13,632                    | 3.3                         |







**Appendix A-5: Percent of 1996 Person Trip Attractions Made by Transit by Trip Purpose and County Planning Area**  
(Continued)

| County<br>Planning<br>Area | HBW<br>Person<br>Trips | HBW<br>Transit<br>Trips | HBW<br>Percent<br>Transit | HBW<br>Person<br>Trips | HBW<br>Transit<br>Trips | HBW<br>Percent<br>Transit | NBW<br>Person<br>Trips | NBW<br>Transit<br>Trips | NBW<br>Percent<br>Transit | TOTAL<br>Person<br>Trips | TOTAL<br>Transit<br>Trips | TOTAL<br>Percent<br>Transit |
|----------------------------|------------------------|-------------------------|---------------------------|------------------------|-------------------------|---------------------------|------------------------|-------------------------|---------------------------|--------------------------|---------------------------|-----------------------------|
| 47                         | 22,763                 | 58                      | 0.3                       | 56,348                 | 7                       | 0.0                       | 23,581                 | 2                       | 0.0                       | 102,692                  | 67                        | 0.1                         |
| 48                         | 76,440                 | 755                     | 1.0                       | 258,411                | 521                     | 0.2                       | 100,421                | 62                      | 0.1                       | 435,272                  | 1,338                     | 0.3                         |
| 49                         | 32,937                 | 188                     | 0.6                       | 174,040                | 134                     | 0.1                       | 69,153                 | 19                      | 0.0                       | 276,130                  | 341                       | 0.1                         |
| 50                         | 45,670                 | 143                     | 0.3                       | 152,701                | 75                      | 0.0                       | 58,190                 | 14                      | 0.0                       | 256,561                  | 232                       | 0.1                         |
| 51                         | 39,557                 | 268                     | 0.7                       | 97,505                 | 103                     | 0.1                       | 39,861                 | 34                      | 0.1                       | 176,923                  | 405                       | 0.2                         |
| Bucks                      | 377,084                | 1,914                   | 0.5                       | 1,234,272              | 970                     | 0.1                       | 475,221                | 177                     | 0.0                       | 2,086,577                | 3,061                     | 0.1                         |
| Penna.                     | 2,938,425              | 481,689                 | 16.4                      | 6,507,136              | 246,108                 | 3.8                       | 2,682,599              | 80,277                  | 3.0                       | 12,128,160               | 808,074                   | 6.7                         |
| 52                         | 90,654                 | 8,415                   | 9.3                       | 81,161                 | 2,415                   | 3.0                       | 50,183                 | 591                     | 1.2                       | 221,998                  | 11,421                    | 5.1                         |
| 53                         | 79,471                 | 877                     | 1.1                       | 196,133                | 301                     | 0.2                       | 93,042                 | 15                      | 0.0                       | 368,646                  | 1,193                     | 0.3                         |
| 54                         | 43,933                 | 193                     | 0.4                       | 142,278                | 93                      | 0.1                       | 61,278                 | 5                       | 0.0                       | 247,489                  | 291                       | 0.1                         |
| 55                         | 10,532                 | 13                      | 0.1                       | 27,340                 | 6                       | 0.0                       | 11,947                 | 0                       | 0.0                       | 49,819                   | 19                        | 0.0                         |
| 56                         | 24,891                 | 17                      | 0.1                       | 59,748                 | 9                       | 0.0                       | 27,019                 | 1                       | 0.0                       | 111,658                  | 27                        | 0.0                         |
| 57                         | 65,623                 | 1,014                   | 1.5                       | 85,184                 | 262                     | 0.3                       | 47,257                 | 105                     | 0.2                       | 198,064                  | 1,381                     | 0.7                         |
| Mercer                     | 315,104                | 10,529                  | 3.3                       | 591,844                | 3,086                   | 0.5                       | 290,726                | 717                     | 0.2                       | 1,197,674                | 14,332                    | 1.2                         |
| 58                         | 95,022                 | 1,255                   | 1.3                       | 283,923                | 1,090                   | 0.4                       | 107,756                | 227                     | 0.2                       | 486,701                  | 2,572                     | 0.5                         |
| 59                         | 112,468                | 3,786                   | 3.4                       | 327,542                | 4,318                   | 1.3                       | 124,482                | 574                     | 0.5                       | 564,492                  | 8,678                     | 1.5                         |
| 60                         | 34,099                 | 528                     | 1.5                       | 87,489                 | 302                     | 0.3                       | 34,077                 | 42                      | 0.1                       | 155,665                  | 872                       | 0.6                         |
| 61                         | 27,010                 | 833                     | 3.1                       | 83,511                 | 1,019                   | 1.2                       | 29,980                 | 206                     | 0.7                       | 140,501                  | 2,058                     | 1.5                         |
| 62                         | 4,971                  | 0                       | 0.0                       | 21,727                 | 0                       | 0.0                       | 5,264                  | 0                       | 0.0                       | 31,962                   | 0                         | 0.0                         |
| Burlington                 | 273,570                | 6,402                   | 2.3                       | 804,192                | 6,729                   | 0.8                       | 301,559                | 1,049                   | 0.3                       | 1,379,321                | 14,180                    | 1.0                         |
| 63                         | 133,348                | 14,403                  | 10.8                      | 196,252                | 7,144                   | 3.6                       | 92,111                 | 2,175                   | 2.4                       | 421,711                  | 23,722                    | 5.6                         |
| 64                         | 109,599                | 2,679                   | 2.4                       | 320,892                | 2,357                   | 0.7                       | 115,864                | 488                     | 0.4                       | 546,555                  | 5,524                     | 1.0                         |
| 65                         | 57,431                 | 1,188                   | 2.1                       | 224,767                | 1,465                   | 0.7                       | 81,656                 | 221                     | 0.3                       | 363,854                  | 2,874                     | 0.8                         |

**Appendix A-5: Percent of 1996 Person Trip Attractions Made by Transit by Trip Purpose and County Planning Area**  
*(Continued)*

| County<br>Planning<br>Area | HBW             |                  | HBW                |                 | HBNW            |                  | HBNW               |                  | NHB             |                  | NHB                |                  | TOTAL           |                  | TOTAL              |                  |
|----------------------------|-----------------|------------------|--------------------|-----------------|-----------------|------------------|--------------------|------------------|-----------------|------------------|--------------------|------------------|-----------------|------------------|--------------------|------------------|
|                            | Person<br>Trips | Transit<br>Trips | Percent<br>Transit | Person<br>Trips | Person<br>Trips | Transit<br>Trips | Percent<br>Transit | Transit<br>Trips | Person<br>Trips | Transit<br>Trips | Percent<br>Transit | Transit<br>Trips | Person<br>Trips | Transit<br>Trips | Percent<br>Transit | Transit<br>Trips |
| 66                         | 30,171          | 380              | 1.3                | 117,329         |                 | 319              | 0.3                |                  | 37,741          | 20               | 0.1                |                  | 185,241         | 719              | 0.4                |                  |
| 67                         | 39,813          | 1,225            | 3.1                | 158,767         |                 | 1,276            | 0.8                |                  | 55,111          | 92               | 0.2                |                  | 253,691         | 2,593            | 1.0                |                  |
| Camden                     | 370,362         | 19,875           | 5.4                | 1,018,007       |                 | 12,561           | 1.2                |                  | 382,483         | 2,996            | 0.8                |                  | 1,770,852       | 35,432           | 2.0                |                  |
| 68                         | 65,460          | 529              | 0.8                | 241,532         |                 | 243              | 0.1                |                  | 90,458          | 18               | 0.0                |                  | 397,450         | 790              | 0.2                |                  |
| 69                         | 28,569          | 65               | 0.2                | 59,841          |                 | 8                | 0.0                |                  | 23,069          | 0                | 0.0                |                  | 111,479         | 73               | 0.1                |                  |
| 70                         | 32,683          | 578              | 1.8                | 129,406         |                 | 436              | 0.3                |                  | 43,108          | 49               | 0.1                |                  | 205,197         | 1,063            | 0.5                |                  |
| 71                         | 17,592          | 365              | 2.1                | 73,285          |                 | 269              | 0.4                |                  | 21,209          | 15               | 0.1                |                  | 112,086         | 649              | 0.6                |                  |
| Gloucester                 | 144,304         | 1,537            | 1.1                | 504,064         |                 | 956              | 0.2                |                  | 177,844         | 82               | 0.0                |                  | 826,212         | 2,575            | 0.3                |                  |
| New Jersey                 | 1,103,340       | 38,343           | 3.5                | 2,918,107       |                 | 23,332           | 0.8                |                  | 1,152,612       | 4,844            | 0.4                |                  | 5,174,059       | 66,519           | 1.3                |                  |
| TOTAL                      | 4,041,765       | 520,032          | 12.9               | 9,425,243       |                 | 269,440          | 2.9                |                  | 3,835,211       | 85,121           | 2.2                |                  | 17,302,219      | 874,593          | 5.1                |                  |



## Appendix A-6: Percent of 1996 Total Person Trip Ends Made by Transit by Trip Purpose and County Planning Area

| County<br>Planning<br>Area | HBW<br>Person<br>Trips | HBW<br>Transit<br>Trips | HBW<br>Percent<br>Transit | HBWNW<br>Person<br>Trips | HBWNW<br>Transit<br>Trips | HBWNW<br>Percent<br>Transit | NHB<br>Person<br>TRIPS | NHB<br>Transit<br>Trips | NHB<br>Percent<br>Transit | TOTAL<br>Person<br>Trips | TOTAL<br>Transit<br>TRIPS | TOTAL<br>Percent<br>Transit |
|----------------------------|------------------------|-------------------------|---------------------------|--------------------------|---------------------------|-----------------------------|------------------------|-------------------------|---------------------------|--------------------------|---------------------------|-----------------------------|
| 1                          | 456,794                | 306,774                 | 67.2                      | 270,355                  | 150,988                   | 55.8                        | 216,402                | 89,169                  | 41.2                      | 943,551                  | 546,931                   | 58.0                        |
| 2                          | 202,443                | 51,049                  | 25.2                      | 281,315                  | 35,038                    | 12.5                        | 157,573                | 7,297                   | 4.6                       | 641,331                  | 93,384                    | 14.6                        |
| 3                          | 82,499                 | 22,448                  | 27.2                      | 131,628                  | 13,508                    | 10.3                        | 58,667                 | 1,916                   | 3.3                       | 272,794                  | 37,872                    | 13.9                        |
| 4                          | 259,698                | 86,469                  | 33.3                      | 335,103                  | 49,795                    | 14.9                        | 174,228                | 12,229                  | 7.0                       | 769,029                  | 148,493                   | 19.3                        |
| 5                          | 201,434                | 77,033                  | 38.2                      | 200,575                  | 40,435                    | 20.2                        | 127,460                | 13,040                  | 10.2                      | 529,469                  | 130,508                   | 24.6                        |
| 6                          | 102,086                | 30,573                  | 29.9                      | 127,449                  | 16,764                    | 13.2                        | 72,523                 | 3,313                   | 4.6                       | 302,058                  | 50,650                    | 16.8                        |
| 7                          | 111,557                | 29,791                  | 26.7                      | 156,495                  | 16,971                    | 10.8                        | 78,117                 | 3,499                   | 4.5                       | 346,169                  | 50,261                    | 14.5                        |
| 8                          | 50,525                 | 9,508                   | 18.8                      | 107,744                  | 5,898                     | 5.5                         | 38,745                 | 774                     | 2.0                       | 197,014                  | 16,180                    | 8.2                         |
| 9                          | 116,654                | 26,192                  | 22.5                      | 210,948                  | 14,430                    | 6.8                         | 86,040                 | 2,092                   | 2.4                       | 413,642                  | 42,714                    | 10.3                        |
| 10                         | 157,850                | 43,397                  | 27.5                      | 251,097                  | 23,034                    | 9.2                         | 89,184                 | 3,454                   | 3.9                       | 498,131                  | 69,885                    | 14.0                        |
| 11                         | 274,000                | 68,277                  | 24.9                      | 481,204                  | 40,969                    | 8.5                         | 218,282                | 7,451                   | 3.4                       | 973,486                  | 116,697                   | 12.0                        |
| 12                         | 210,873                | 23,775                  | 11.3                      | 609,020                  | 11,622                    | 1.9                         | 270,461                | 1,632                   | 0.6                       | 1,090,354                | 37,029                    | 3.4                         |
| Philadelphia               | 2,226,413              | 775,286                 | 34.8                      | 3,162,933                | 419,452                   | 13.3                        | 1,587,682              | 145,866                 | 9.2                       | 6,977,028                | 1,340,604                 | 19.2                        |
| 13                         | 136,688                | 10,380                  | 7.6                       | 272,558                  | 3,790                     | 1.4                         | 92,370                 | 557                     | 0.6                       | 501,616                  | 14,727                    | 2.9                         |
| 14                         | 154,657                | 10,472                  | 6.8                       | 500,672                  | 4,146                     | 0.8                         | 191,853                | 695                     | 0.4                       | 847,182                  | 15,313                    | 1.8                         |
| 15                         | 208,524                | 38,432                  | 18.4                      | 466,882                  | 19,425                    | 4.2                         | 157,576                | 3,572                   | 2.3                       | 832,982                  | 61,429                    | 7.4                         |
| 16                         | 176,235                | 15,306                  | 8.7                       | 559,057                  | 7,409                     | 1.3                         | 203,719                | 1,107                   | 0.5                       | 939,011                  | 23,822                    | 2.5                         |
| 17                         | 87,348                 | 4,812                   | 5.5                       | 256,855                  | 2,181                     | 0.8                         | 108,498                | 615                     | 0.6                       | 452,701                  | 7,608                     | 1.7                         |
| 18                         | 31,601                 | 374                     | 1.2                       | 98,266                   | 93                        | 0.1                         | 26,588                 | 21                      | 0.1                       | 156,455                  | 488                       | 0.3                         |
| Delaware                   | 795,053                | 79,776                  | 10.0                      | 2,154,290                | 37,044                    | 1.7                         | 780,604                | 6,567                   | 0.8                       | 3,729,947                | 123,387                   | 3.3                         |
| 19                         | 132,216                | 2,190                   | 1.7                       | 369,429                  | 601                       | 0.2                         | 162,269                | 212                     | 0.1                       | 663,914                  | 3,003                     | 0.5                         |
| 20                         | 56,645                 | 1,397                   | 2.5                       | 144,848                  | 780                       | 0.5                         | 49,760                 | 114                     | 0.2                       | 251,253                  | 2,291                     | 0.9                         |
| 21                         | 29,689                 | 0                       | 0.0                       | 103,898                  | 0                         | 0.0                         | 25,341                 | 0                       | 0.0                       | 158,928                  | 0                         | 0.0                         |
| 22                         | 86,273                 | 744                     | 0.9                       | 262,519                  | 243                       | 0.1                         | 99,759                 | 59                      | 0.1                       | 448,551                  | 1,046                     | 0.2                         |
| 23                         | 120,909                | 4,999                   | 4.1                       | 334,012                  | 2,374                     | 0.7                         | 113,216                | 776                     | 0.7                       | 568,137                  | 8,149                     | 1.4                         |

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**Appendix A-6: Percent of 1996 Total Person Trip Ends Made by Transit by Trip Purpose and County Planning Area**  
(Continued)

| County<br>Planning<br>Area | HBW<br>Person<br>Trips | HBW<br>Transit<br>Trips | HBW<br>Percent<br>Transit | HBWNW<br>Person<br>Trips | HBWNW<br>Transit<br>Trips | HBWNW<br>Percent<br>Transit | NHB<br>Person<br>TRIPS | NHB<br>Transit<br>Trips | NHB<br>Percent<br>Transit | TOTAL<br>Person<br>Trips | TOTAL<br>Transit<br>TRIPS | TOTAL<br>Percent<br>Transit |
|----------------------------|------------------------|-------------------------|---------------------------|--------------------------|---------------------------|-----------------------------|------------------------|-------------------------|---------------------------|--------------------------|---------------------------|-----------------------------|
| 24                         | 37,476                 | 42                      | 0.1                       | 99,817                   | 13                        | 0.0                         | 31,725                 | 2                       | 0.0                       | 169,018                  | 57                        | 0.0                         |
| 25                         | 67,155                 | 1,596                   | 2.4                       | 184,618                  | 853                       | 0.5                         | 70,417                 | 202                     | 0.3                       | 322,190                  | 2,651                     | 0.8                         |
| 26                         | 30,908                 | 193                     | 0.6                       | 107,274                  | 93                        | 0.1                         | 27,670                 | 8                       | 0.0                       | 165,852                  | 294                       | 0.2                         |
| 27                         | 24,434                 | 15                      | 0.1                       | 75,423                   | 13                        | 0.0                         | 15,690                 | 0                       | 0.0                       | 115,547                  | 28                        | 0.0                         |
| 28                         | 17,391                 | 228                     | 1.3                       | 51,045                   | 125                       | 0.2                         | 12,354                 | 13                      | 0.1                       | 80,790                   | 366                       | 0.5                         |
| 29                         | 21,944                 | 0                       | 0.0                       | 64,814                   | 0                         | 0.0                         | 16,468                 | 0                       | 0.0                       | 103,226                  | 0                         | 0.0                         |
| Chester                    | 625,040                | 11,404                  | 1.8                       | 1,797,697                | 5,095                     | 0.3                         | 624,669                | 1,386                   | 0.2                       | 3,047,406                | 17,885                    | 0.6                         |
| 30                         | 118,114                | 2,658                   | 2.3                       | 325,842                  | 760                       | 0.2                         | 125,916                | 164                     | 0.1                       | 569,872                  | 3,582                     | 0.6                         |
| 31                         | 86,257                 | 1,716                   | 2.0                       | 208,970                  | 597                       | 0.3                         | 91,694                 | 170                     | 0.2                       | 386,921                  | 2,483                     | 0.6                         |
| 32                         | 187,463                | 11,731                  | 6.3                       | 526,025                  | 4,820                     | 0.9                         | 212,179                | 851                     | 0.4                       | 925,667                  | 17,402                    | 1.9                         |
| 33                         | 90,550                 | 2,863                   | 3.2                       | 253,982                  | 1,178                     | 0.5                         | 126,906                | 300                     | 0.2                       | 471,438                  | 4,341                     | 0.9                         |
| 34                         | 228,107                | 15,225                  | 6.7                       | 549,360                  | 7,117                     | 1.3                         | 278,087                | 2,111                   | 0.8                       | 1,055,554                | 24,453                    | 2.3                         |
| 35                         | 146,782                | 4,129                   | 2.8                       | 345,809                  | 1,680                     | 0.5                         | 151,755                | 440                     | 0.3                       | 644,346                  | 6,249                     | 1.0                         |
| 36                         | 109,322                | 765                     | 0.7                       | 309,797                  | 318                       | 0.1                         | 117,021                | 47                      | 0.0                       | 536,140                  | 1,130                     | 0.2                         |
| 37                         | 182,593                | 2,489                   | 1.4                       | 518,725                  | 1,108                     | 0.2                         | 209,967                | 318                     | 0.2                       | 911,285                  | 3,915                     | 0.4                         |
| 38                         | 38,576                 | 0                       | 0.0                       | 119,192                  | 0                         | 0.0                         | 32,208                 | 0                       | 0.0                       | 189,976                  | 0                         | 0.0                         |
| 39                         | 76,143                 | 2,294                   | 3.0                       | 160,005                  | 1,245                     | 0.8                         | 61,060                 | 520                     | 0.9                       | 297,208                  | 4,059                     | 1.4                         |
| Montgomery                 | 1,263,907              | 43,870                  | 3.5                       | 3,317,707                | 18,823                    | 0.6                         | 1,406,793              | 4,921                   | 0.3                       | 5,988,407                | 67,614                    | 1.1                         |
| 40                         | 44,904                 | 0                       | 0.0                       | 124,641                  | 0                         | 0.0                         | 41,170                 | 0                       | 0.0                       | 210,715                  | 0                         | 0.0                         |
| 41                         | 18,213                 | 0                       | 0.0                       | 69,154                   | 0                         | 0.0                         | 12,739                 | 0                       | 0.0                       | 100,106                  | 0                         | 0.0                         |
| 42                         | 61,534                 | 0                       | 0.0                       | 182,324                  | 0                         | 0.0                         | 51,877                 | 0                       | 0.0                       | 295,735                  | 0                         | 0.0                         |
| 43                         | 87,037                 | 938                     | 1.1                       | 240,263                  | 267                       | 0.1                         | 91,622                 | 70                      | 0.1                       | 418,922                  | 1,275                     | 0.3                         |
| 44                         | 26,268                 | 123                     | 0.5                       | 88,212                   | 32                        | 0.0                         | 32,920                 | 5                       | 0.0                       | 147,400                  | 160                       | 0.1                         |
| 45                         | 12,035                 | 80                      | 0.7                       | 39,071                   | 25                        | 0.1                         | 12,506                 | 3                       | 0.0                       | 63,612                   | 108                       | 0.2                         |
| 46                         | 136,227                | 1,986                   | 1.5                       | 391,686                  | 414                       | 0.1                         | 132,750                | 77                      | 0.1                       | 660,663                  | 2,477                     | 0.4                         |

**Appendix A-6: Percent of 1996 Total Person Trip Ends Made by Transit by Trip Purpose and County Planning Area**  
(Continued)

| County<br>Planning<br>Area | HBW<br>Person<br>Trips | HBW<br>Trips | HBW<br>Percent<br>Transit | HBWNW<br>Person<br>Trips | HBWNW<br>Trips | HBWNW<br>Percent<br>Transit | NHB<br>Person<br>TRIPS | NHB<br>Trips | NHB<br>Percent<br>Transit | TOTAL<br>Person<br>Trips | TOTAL<br>Transit<br>TRIPS | TOTAL<br>Percent<br>Transit |
|----------------------------|------------------------|--------------|---------------------------|--------------------------|----------------|-----------------------------|------------------------|--------------|---------------------------|--------------------------|---------------------------|-----------------------------|
| 47                         | 46,100                 | 348          | 0.8                       | 126,539                  | 83             | 0.1                         | 47,886                 | 10           | 0.0                       | 220,525                  | 441                       | 0.2                         |
| 48                         | 145,042                | 4,177        | 2.9                       | 430,250                  | 1,312          | 0.3                         | 198,287                | 257          | 0.1                       | 773,579                  | 5,746                     | 0.7                         |
| 49                         | 76,832                 | 1,859        | 2.4                       | 287,397                  | 476            | 0.2                         | 137,367                | 87           | 0.1                       | 501,596                  | 2,422                     | 0.5                         |
| 50                         | 112,240                | 2,003        | 1.8                       | 332,399                  | 500            | 0.2                         | 117,229                | 78           | 0.1                       | 561,868                  | 2,581                     | 0.5                         |
| 51                         | 95,045                 | 2,575        | 2.7                       | 231,645                  | 591            | 0.3                         | 79,853                 | 106          | 0.1                       | 406,543                  | 3,272                     | 0.8                         |
| Bucks                      | 861,477                | 14,089       | 1.6                       | 2,543,581                | 3,700          | 0.1                         | 956,206                | 693          | 0.1                       | 4,361,264                | 18,482                    | 0.4                         |
| PENNA                      | 5,771,890              | 924,425      | 16.0                      | 12,976,208               | 484,114        | 3.7                         | 5,355,954              | 159,433      | 3.0                       | 24,104,052               | 1,567,972                 | 6.5                         |
| 52                         | 148,402                | 14,086       | 9.5                       | 165,189                  | 4,502          | 2.7                         | 99,879                 | 1,053        | 1.1                       | 413,470                  | 19,641                    | 4.8                         |
| 53                         | 132,621                | 2,268        | 1.7                       | 320,080                  | 579            | 0.2                         | 183,869                | 91           | 0.0                       | 636,570                  | 2,938                     | 0.5                         |
| 54                         | 121,633                | 1,709        | 1.4                       | 324,508                  | 494            | 0.2                         | 122,358                | 55           | 0.0                       | 568,499                  | 2,258                     | 0.4                         |
| 55                         | 24,451                 | 75           | 0.3                       | 63,079                   | 20             | 0.0                         | 24,492                 | 6            | 0.0                       | 112,022                  | 101                       | 0.1                         |
| 56                         | 57,285                 | 257          | 0.4                       | 125,871                  | 57             | 0.0                         | 55,709                 | 16           | 0.0                       | 238,865                  | 330                       | 0.1                         |
| 57                         | 101,364                | 1,981        | 2.0                       | 153,616                  | 495            | 0.3                         | 95,397                 | 236          | 0.2                       | 350,377                  | 2,712                     | 0.8                         |
| Mercer                     | 585,756                | 20,376       | 3.5                       | 1,152,343                | 6,147          | 0.5                         | 581,704                | 1,457        | 0.3                       | 2,319,803                | 27,980                    | 1.2                         |
| 58                         | 187,696                | 4,599        | 2.5                       | 523,366                  | 2,543          | 0.5                         | 218,505                | 530          | 0.2                       | 929,567                  | 7,672                     | 0.8                         |
| 59                         | 261,685                | 13,976       | 5.3                       | 725,265                  | 10,148         | 1.4                         | 250,136                | 1,324        | 0.5                       | 1,237,086                | 25,448                    | 2.1                         |
| 60                         | 94,438                 | 1,341        | 1.4                       | 202,959                  | 701            | 0.3                         | 71,220                 | 90           | 0.1                       | 368,617                  | 2,132                     | 0.6                         |
| 61                         | 60,479                 | 1,930        | 3.2                       | 190,049                  | 2,125          | 1.1                         | 61,888                 | 414          | 0.7                       | 312,416                  | 4,469                     | 1.4                         |
| 62                         | 18,967                 | 0            | 0.0                       | 61,838                   | 0              | 0.0                         | 11,256                 | 0            | 0.0                       | 92,061                   | 0                         | 0.0                         |
| Burlington                 | 623,265                | 21,846       | 3.5                       | 1,703,477                | 15,517         | 0.9                         | 613,005                | 2,358        | 0.4                       | 2,939,747                | 39,721                    | 1.4                         |
| 63                         | 216,415                | 29,213       | 13.5                      | 358,019                  | 14,099         | 3.9                         | 182,308                | 4,328        | 2.4                       | 756,742                  | 47,640                    | 6.3                         |
| 64                         | 205,029                | 10,342       | 5.0                       | 568,366                  | 5,472          | 1.0                         | 229,466                | 1,201        | 0.5                       | 1,002,861                | 17,015                    | 1.7                         |
| 65                         | 151,905                | 10,881       | 7.2                       | 460,749                  | 4,884          | 1.1                         | 162,031                | 741          | 0.5                       | 774,685                  | 16,506                    | 2.1                         |

**Appendix A-6: Percent of 1996 Total Person Trip Ends Made by Transit by Trip Purpose and County Planning Area**  
(Continued)

| County<br>Planning<br>Area | HBW<br>Person<br>Trips | HBW<br>Transit<br>Trips | HBW<br>Percent<br>Transit | HBWNW<br>Person<br>Trips | HBWNW<br>Transit<br>Trips | HBWNW<br>Percent<br>Transit | NHB<br>Person<br>TRIPS | NHB<br>Transit<br>Trips | NHB<br>Percent<br>Transit | TOTAL<br>Person<br>Trips | TOTAL<br>Transit<br>TRIPS | TOTAL<br>Percent<br>Transit |
|----------------------------|------------------------|-------------------------|---------------------------|--------------------------|---------------------------|-----------------------------|------------------------|-------------------------|---------------------------|--------------------------|---------------------------|-----------------------------|
| 66                         | 73,545                 | 2,711                   | 3.7                       | 237,485                  | 1,065                     | 0.4                         | 76,849                 | 79                      | 0.1                       | 387,879                  | 3,855                     | 1.0                         |
| 67                         | 117,663                | 8,416                   | 7.2                       | 361,011                  | 3,482                     | 1.0                         | 109,750                | 328                     | 0.3                       | 588,424                  | 12,226                    | 2.1                         |
| Camden                     | 764,557                | 61,563                  | 8.1                       | 1,985,630                | 29,002                    | 1.5                         | 760,404                | 6,677                   | 0.9                       | 3,510,591                | 97,242                    | 2.8                         |
| 68                         | 132,185                | 4,123                   | 3.1                       | 427,233                  | 975                       | 0.2                         | 180,122                | 133                     | 0.1                       | 739,540                  | 5,231                     | 0.7                         |
| 69                         | 54,260                 | 387                     | 0.7                       | 131,656                  | 65                        | 0.0                         | 47,921                 | 4                       | 0.0                       | 233,837                  | 456                       | 0.2                         |
| 70                         | 95,170                 | 4,894                   | 5.1                       | 296,379                  | 2,018                     | 0.7                         | 87,492                 | 133                     | 0.2                       | 479,041                  | 7,045                     | 1.5                         |
| 71                         | 56,447                 | 2,450                   | 4.3                       | 177,560                  | 1,042                     | 0.6                         | 43,820                 | 47                      | 0.1                       | 277,827                  | 3,539                     | 1.3                         |
| Gloucester                 | 338,062                | 11,854                  | 3.5                       | 1,032,828                | 4,100                     | 0.4                         | 359,355                | 317                     | 0.1                       | 1,730,245                | 16,271                    | 0.9                         |
| New Jersey                 | 2,311,640              | 115,639                 | 5.0                       | 5,874,278                | 54,766                    | 0.9                         | 2,314,468              | 10,809                  | 0.5                       | 10,500,386               | 181,214                   | 1.7                         |
| <b>TOTAL</b>               | <b>8,083,53</b>        | <b>1,040,06</b>         | <b>12.9</b>               | <b>18,850,48</b>         | <b>538,880</b>            | <b>2.9</b>                  | <b>7,670,42</b>        | <b>170,242</b>          | <b>2.2</b>                | <b>34,604,43</b>         | <b>1,749,18</b>           | <b>5.1</b>                  |

## **APPENDIX B (B-1 TO B-2)**

### **HIGHWAY NETWORK SPEED-CAPACITY LOOKUP TABLES**



Appendix B-1: Focused Daily Highway Network Speed-Capacity Look-up Table<sup>1</sup>

|  |  |
|--|--|
| AG = 1, LG1 = 1, LG2 = 0, LG3 = 1-99, SPD1 = 3330                | AG = 1, LG1 = 4, LG2 = 5, LG3 = 1-99, SPD1 = 3330, CAPI = 93650  |
| AG = 1, LG1 = 1, LG2 = 1, LG3 = 1-99, SPD1 = 3330, CAPI = 18750  | AG = 1, LG1 = 4, LG2 = 6, LG3 = 1-99, SPD1 = 3330, CAPI = 112380 |
| AG = 1, LG1 = 1, LG2 = 2, LG3 = 1-99, SPD1 = 3330, CAPI = 37500  | AG = 1, LG1 = 4, LG2 = 7, LG3 = 1-99, SPD1 = 3330, CAPI = 131110 |
| AG = 1, LG1 = 1, LG2 = 3, LG3 = 1-99, SPD1 = 3330, CAPI = 58500  | AG = 1, LG1 = 4, LG2 = 8, LG3 = 1-99, SPD1 = 3330, CAPI = 149840 |
| AG = 1, LG1 = 1, LG2 = 4, LG3 = 1-99, SPD1 = 3330, CAPI = 80360  | AG = 1, LG1 = 4, LG2 = 9, LG3 = 1-99, SPD1 = 3330, CAPI = 168570 |
| AG = 1, LG1 = 1, LG2 = 5, LG3 = 1-99, SPD1 = 3330, CAPI = 100450 | AG = 1, LG1 = 5, LG2 = 0, LG3 = 1-99, SPD1 = 3530,               |
| AG = 1, LG1 = 1, LG2 = 6, LG3 = 1-99, SPD1 = 3330, CAPI = 120540 | AG = 1, LG1 = 5, LG2 = 1, LG3 = 1-99, SPD1 = 3530, CAPI = 16030  |
| AG = 1, LG1 = 1, LG2 = 7, LG3 = 1-99, SPD1 = 3330, CAPI = 140630 | AG = 1, LG1 = 5, LG2 = 2, LG3 = 1-99, SPD1 = 3530, CAPI = 32060  |
| AG = 1, LG1 = 1, LG2 = 8, LG3 = 1-99, SPD1 = 3330, CAPI = 160720 | AG = 1, LG1 = 5, LG2 = 3, LG3 = 1-99, SPD1 = 3530, CAPI = 50010  |
| AG = 1, LG1 = 1, LG2 = 9, LG3 = 1-99, SPD1 = 3330, CAPI = 180810 | AG = 1, LG1 = 5, LG2 = 4, LG3 = 1-99, SPD1 = 3530, CAPI = 68680  |
| AG = 1, LG1 = 2, LG2 = 0, LG3 = 1-99, SPD1 = 3330                | AG = 1, LG1 = 5, LG2 = 5, LG3 = 1-99, SPD1 = 3530, CAPI = 85850  |
| AG = 1, LG1 = 2, LG2 = 1, LG3 = 1-99, SPD1 = 3330, CAPI = 18750  | AG = 1, LG1 = 5, LG2 = 6, LG3 = 1-99, SPD1 = 3530, CAPI = 103020 |
| AG = 1, LG1 = 2, LG2 = 2, LG3 = 1-99, SPD1 = 3330, CAPI = 37500  | AG = 1, LG1 = 5, LG2 = 7, LG3 = 1-99, SPD1 = 3530, CAPI = 120190 |
| AG = 1, LG1 = 2, LG2 = 3, LG3 = 1-99, SPD1 = 3330, CAPI = 58500  | AG = 1, LG1 = 5, LG2 = 8, LG3 = 1-99, SPD1 = 3530, CAPI = 137360 |
| AG = 1, LG1 = 2, LG2 = 4, LG3 = 1-99, SPD1 = 3330, CAPI = 80360  | AG = 1, LG1 = 5, LG2 = 9, LG3 = 1-99, SPD1 = 3530, CAPI = 154530 |
| AG = 1, LG1 = 2, LG2 = 5, LG3 = 1-99, SPD1 = 3330, CAPI = 100450 | AG = 2, LG1 = 1, LG2 = 0, LG3 = 1-99, SPD1 = 2610                |
| AG = 1, LG1 = 2, LG2 = 6, LG3 = 1-99, SPD1 = 3330, CAPI = 120540 | AG = 2, LG1 = 1, LG2 = 1, LG3 = 1-99, SPD1 = 2610, CAPI = 9220   |
| AG = 1, LG1 = 2, LG2 = 7, LG3 = 1-99, SPD1 = 3330, CAPI = 140630 | AG = 2, LG1 = 1, LG2 = 2, LG3 = 1-99, SPD1 = 2610, CAPI = 18440  |
| AG = 1, LG1 = 2, LG2 = 8, LG3 = 1-99, SPD1 = 3330, CAPI = 160720 | AG = 2, LG1 = 1, LG2 = 3, LG3 = 1-99, SPD1 = 2610, CAPI = 28800  |
| AG = 1, LG1 = 2, LG2 = 9, LG3 = 1-99, SPD1 = 3330, CAPI = 180810 | AG = 2, LG1 = 1, LG2 = 4, LG3 = 1-99, SPD1 = 2610, CAPI = 39560  |
| AG = 1, LG1 = 3, LG2 = 0, LG3 = 1-99, SPD1 = 3330,               | AG = 2, LG1 = 1, LG2 = 5, LG3 = 1-99, SPD1 = 2610, CAPI = 49450  |
| AG = 1, LG1 = 3, LG2 = 1, LG3 = 1-99, SPD1 = 3330, CAPI = 18750  | AG = 2, LG1 = 1, LG2 = 6, LG3 = 1-99, SPD1 = 2610, CAPI = 59340  |
| AG = 1, LG1 = 3, LG2 = 2, LG3 = 1-99, SPD1 = 3330, CAPI = 37500  | AG = 2, LG1 = 1, LG2 = 7, LG3 = 1-99, SPD1 = 2610, CAPI = 69230  |
| AG = 1, LG1 = 3, LG2 = 3, LG3 = 1-99, SPD1 = 3330, CAPI = 58500  | AG = 2, LG1 = 1, LG2 = 8, LG3 = 1-99, SPD1 = 2610, CAPI = 79120  |
| AG = 1, LG1 = 3, LG2 = 4, LG3 = 1-99, SPD1 = 3330, CAPI = 80360  | AG = 2, LG1 = 1, LG2 = 9, LG3 = 1-99, SPD1 = 2610, CAPI = 89010  |
| AG = 1, LG1 = 3, LG2 = 5, LG3 = 1-99, SPD1 = 3330, CAPI = 100450 | AG = 2, LG1 = 2, LG2 = 0, LG3 = 1-99, SPD1 = 2730                |
| AG = 1, LG1 = 3, LG2 = 6, LG3 = 1-99, SPD1 = 3330, CAPI = 120540 | AG = 2, LG1 = 2, LG2 = 1, LG3 = 1-99, SPD1 = 2730, CAPI = 9220   |
| AG = 1, LG1 = 3, LG2 = 7, LG3 = 1-99, SPD1 = 3330, CAPI = 140630 | AG = 2, LG1 = 2, LG2 = 2, LG3 = 1-99, SPD1 = 2730, CAPI = 18440  |
| AG = 1, LG1 = 3, LG2 = 8, LG3 = 1-99, SPD1 = 3330, CAPI = 160720 | AG = 2, LG1 = 2, LG2 = 3, LG3 = 1-99, SPD1 = 2730, CAPI = 28800  |
| AG = 1, LG1 = 3, LG2 = 9, LG3 = 1-99, SPD1 = 3330, CAPI = 180810 | AG = 2, LG1 = 2, LG2 = 4, LG3 = 1-99, SPD1 = 2730, CAPI = 39560  |
| AG = 1, LG1 = 4, LG2 = 0, LG3 = 1-99, SPD1 = 3330,               | AG = 2, LG1 = 2, LG2 = 5, LG3 = 1-99, SPD1 = 2730, CAPI = 49450  |
| AG = 1, LG1 = 4, LG2 = 1, LG3 = 1-99, SPD1 = 3330, CAPI = 17480  | AG = 2, LG1 = 2, LG2 = 6, LG3 = 1-99, SPD1 = 2730, CAPI = 59340  |
| AG = 1, LG1 = 4, LG2 = 2, LG3 = 1-99, SPD1 = 3330, CAPI = 34960  | AG = 2, LG1 = 2, LG2 = 7, LG3 = 1-99, SPD1 = 2730, CAPI = 69230  |
| AG = 1, LG1 = 4, LG2 = 3, LG3 = 1-99, SPD1 = 3330, CAPI = 54540  | AG = 2, LG1 = 2, LG2 = 8, LG3 = 1-99, SPD1 = 2730, CAPI = 79120  |
| AG = 1, LG1 = 4, LG2 = 4, LG3 = 1-99, SPD1 = 3330, CAPI = 74920  | AG = 2, LG1 = 2, LG2 = 9, LG3 = 1-99, SPD1 = 2730, CAPI = 89010  |

<sup>1</sup>The last two digits for the speed (abbreviated as SPD1) are decimals. For example, 'SPD1 = 3330' should be read as speed equals to 33.30 mph.

## Appendix B-1: Focused Daily Highway Network Speed-Capacity Look-up Table (Continued)

|  |  |
|--|--|
| AG = 2, LG1 = 3, LG2 = 3, LG3 = 0, LG3 = 1-99, SPD1 = 2860               | AG = 3, LG1 = 2, LG2 = 2, LG3 = 0, LG3 = 1-99, SPD1 = 2100               |
| AG = 2, LG1 = 3, LG2 = 3, LG3 = 1, LG3 = 1-99, SPD1 = 2860, CAP1 = 8370  | AG = 3, LG1 = 2, LG2 = 2, LG3 = 1, LG3 = 1-99, SPD1 = 2100, CAP1 = 6150  |
| AG = 2, LG1 = 3, LG2 = 3, LG3 = 2, LG3 = 1-99, SPD1 = 2860, CAP1 = 16740 | AG = 3, LG1 = 2, LG2 = 2, LG3 = 2, LG3 = 1-99, SPD1 = 2100, CAP1 = 12300 |
| AG = 2, LG1 = 3, LG2 = 3, LG3 = 3, LG3 = 1-99, SPD1 = 2860, CAP1 = 26160 | AG = 3, LG1 = 2, LG2 = 3, LG3 = 3, LG3 = 1-99, SPD1 = 2100, CAP1 = 19200 |
| AG = 2, LG1 = 3, LG2 = 4, LG3 = 1-99, SPD1 = 2860, CAP1 = 35920          | AG = 3, LG1 = 2, LG2 = 4, LG3 = 1-99, SPD1 = 2100, CAP1 = 26360          |
| AG = 2, LG1 = 3, LG2 = 5, LG3 = 1-99, SPD1 = 2860, CAP1 = 44900          | AG = 3, LG1 = 2, LG2 = 5, LG3 = 1-99, SPD1 = 2100, CAP1 = 32950          |
| AG = 2, LG1 = 3, LG2 = 6, LG3 = 1-99, SPD1 = 2860, CAP1 = 53880          | AG = 3, LG1 = 2, LG2 = 6, LG3 = 1-99, SPD1 = 2100, CAP1 = 39540          |
| AG = 2, LG1 = 3, LG2 = 7, LG3 = 1-99, SPD1 = 2860, CAP1 = 62860          | AG = 3, LG1 = 2, LG2 = 7, LG3 = 1-99, SPD1 = 2100, CAP1 = 46130          |
| AG = 2, LG1 = 3, LG2 = 8, LG3 = 1-99, SPD1 = 2860, CAP1 = 71840          | AG = 3, LG1 = 2, LG2 = 8, LG3 = 1-99, SPD1 = 2100, CAP1 = 52720          |
| AG = 2, LG1 = 3, LG2 = 9, LG3 = 1-99, SPD1 = 2860, CAP1 = 80820          | AG = 3, LG1 = 2, LG2 = 9, LG3 = 1-99, SPD1 = 2100, CAP1 = 59310          |
| AG = 2, LG1 = 4, LG2 = 0, LG3 = 1-99, SPD1 = 2860                        | AG = 3, LG1 = 3, LG2 = 0, LG3 = 1-99, SPD1 = 2400                        |
| AG = 2, LG1 = 4, LG2 = 1, LG3 = 1-99, SPD1 = 2860, CAP1 = 7690           | AG = 3, LG1 = 3, LG2 = 1, LG3 = 1-99, SPD1 = 2400, CAP1 = 6560           |
| AG = 2, LG1 = 4, LG2 = 2, LG3 = 1-99, SPD1 = 2860, CAP1 = 15380          | AG = 3, LG1 = 3, LG2 = 2, LG3 = 1-99, SPD1 = 2400, CAP1 = 13120          |
| AG = 2, LG1 = 4, LG2 = 3, LG3 = 1-99, SPD1 = 2860, CAP1 = 24000          | AG = 3, LG1 = 3, LG2 = 3, LG3 = 1-99, SPD1 = 2400, CAP1 = 20460          |
| AG = 2, LG1 = 4, LG2 = 4, LG3 = 1-99, SPD1 = 2860, CAP1 = 32960          | AG = 3, LG1 = 3, LG2 = 4, LG3 = 1-99, SPD1 = 2400, CAP1 = 28080          |
| AG = 2, LG1 = 4, LG2 = 5, LG3 = 1-99, SPD1 = 2860, CAP1 = 41200          | AG = 3, LG1 = 3, LG2 = 5, LG3 = 1-99, SPD1 = 2400, CAP1 = 35100          |
| AG = 2, LG1 = 4, LG2 = 6, LG3 = 1-99, SPD1 = 2860, CAP1 = 49440          | AG = 3, LG1 = 3, LG2 = 6, LG3 = 1-99, SPD1 = 2400, CAP1 = 42120          |
| AG = 2, LG1 = 4, LG2 = 7, LG3 = 1-99, SPD1 = 2860, CAP1 = 57680          | AG = 3, LG1 = 3, LG2 = 7, LG3 = 1-99, SPD1 = 2400, CAP1 = 49140          |
| AG = 2, LG1 = 4, LG2 = 8, LG3 = 1-99, SPD1 = 2860, CAP1 = 65920          | AG = 3, LG1 = 3, LG2 = 8, LG3 = 1-99, SPD1 = 2400, CAP1 = 56160          |
| AG = 2, LG1 = 4, LG2 = 9, LG3 = 1-99, SPD1 = 2860, CAP1 = 74160          | AG = 3, LG1 = 3, LG2 = 9, LG3 = 1-99, SPD1 = 2400, CAP1 = 63180          |
| AG = 2, LG1 = 5, LG2 = 0, LG3 = 1-99, SPD1 = 3000                        | AG = 3, LG1 = 4, LG2 = 0, LG3 = 1-99, SPD1 = 2500                        |
| AG = 2, LG1 = 5, LG2 = 1, LG3 = 1-99, SPD1 = 3000, CAP1 = 8290           | AG = 3, LG1 = 4, LG2 = 1, LG3 = 1-99, SPD1 = 2500, CAP1 = 7210           |
| AG = 2, LG1 = 5, LG2 = 2, LG3 = 1-99, SPD1 = 3000, CAP1 = 16580          | AG = 3, LG1 = 4, LG2 = 2, LG3 = 1-99, SPD1 = 2500, CAP1 = 14420          |
| AG = 2, LG1 = 5, LG2 = 3, LG3 = 1-99, SPD1 = 3000, CAP1 = 25860          | AG = 3, LG1 = 4, LG2 = 3, LG3 = 1-99, SPD1 = 2500, CAP1 = 22500          |
| AG = 2, LG1 = 5, LG2 = 4, LG3 = 1-99, SPD1 = 3000, CAP1 = 35520          | AG = 3, LG1 = 4, LG2 = 4, LG3 = 1-99, SPD1 = 2500, CAP1 = 30920          |
| AG = 2, LG1 = 5, LG2 = 5, LG3 = 1-99, SPD1 = 3000, CAP1 = 44400          | AG = 3, LG1 = 4, LG2 = 5, LG3 = 1-99, SPD1 = 2500, CAP1 = 38650          |
| AG = 2, LG1 = 5, LG2 = 6, LG3 = 1-99, SPD1 = 3000, CAP1 = 53280          | AG = 3, LG1 = 4, LG2 = 6, LG3 = 1-99, SPD1 = 2500, CAP1 = 46380          |
| AG = 2, LG1 = 5, LG2 = 7, LG3 = 1-99, SPD1 = 3000, CAP1 = 62160          | AG = 3, LG1 = 4, LG2 = 7, LG3 = 1-99, SPD1 = 2500, CAP1 = 54110          |
| AG = 2, LG1 = 5, LG2 = 8, LG3 = 1-99, SPD1 = 3000, CAP1 = 71040          | AG = 3, LG1 = 4, LG2 = 8, LG3 = 1-99, SPD1 = 2500, CAP1 = 61840          |
| AG = 2, LG1 = 5, LG2 = 9, LG3 = 1-99, SPD1 = 3000, CAP1 = 79920          | AG = 3, LG1 = 4, LG2 = 9, LG3 = 1-99, SPD1 = 2500, CAP1 = 69570          |
| AG = 3, LG1 = 1, LG2 = 0, LG3 = 1-99, SPD1 = 2020                        | AG = 3, LG1 = 5, LG2 = 0, LG3 = 1-99, SPD1 = 2610                        |
| AG = 3, LG1 = 1, LG2 = 1, LG3 = 1-99, SPD1 = 2020, CAP1 = 5770           | AG = 3, LG1 = 5, LG2 = 1, LG3 = 1-99, SPD1 = 2610, CAP1 = 7770           |
| AG = 3, LG1 = 1, LG2 = 2, LG3 = 1-99, SPD1 = 2020, CAP1 = 11540          | AG = 3, LG1 = 5, LG2 = 2, LG3 = 1-99, SPD1 = 2610, CAP1 = 15540          |
| AG = 3, LG1 = 1, LG2 = 3, LG3 = 1-99, SPD1 = 2020, CAP1 = 18000          | AG = 3, LG1 = 5, LG2 = 3, LG3 = 1-99, SPD1 = 2610, CAP1 = 24240          |
| AG = 3, LG1 = 1, LG2 = 4, LG3 = 1-99, SPD1 = 2020, CAP1 = 24720          | AG = 3, LG1 = 5, LG2 = 4, LG3 = 1-99, SPD1 = 2610, CAP1 = 33280          |
| AG = 3, LG1 = 1, LG2 = 5, LG3 = 1-99, SPD1 = 2020, CAP1 = 30900          | AG = 3, LG1 = 5, LG2 = 5, LG3 = 1-99, SPD1 = 2610, CAP1 = 41600          |
| AG = 3, LG1 = 1, LG2 = 6, LG3 = 1-99, SPD1 = 2020, CAP1 = 37080          | AG = 3, LG1 = 5, LG2 = 6, LG3 = 1-99, SPD1 = 2610, CAP1 = 49920          |
| AG = 3, LG1 = 1, LG2 = 7, LG3 = 1-99, SPD1 = 2020, CAP1 = 43260          | AG = 3, LG1 = 5, LG2 = 7, LG3 = 1-99, SPD1 = 2610, CAP1 = 58240          |
| AG = 3, LG1 = 1, LG2 = 8, LG3 = 1-99, SPD1 = 2020, CAP1 = 49440          | AG = 3, LG1 = 5, LG2 = 8, LG3 = 1-99, SPD1 = 2610, CAP1 = 66560          |
| AG = 3, LG1 = 1, LG2 = 9, LG3 = 1-99, SPD1 = 2020, CAP1 = 55620          | AG = 3, LG1 = 5, LG2 = 9, LG3 = 1-99, SPD1 = 2610, CAP1 = 74880          |



## Appendix B-1: Focused Daily Highway Network Speed-Capacity Look-up Table (Continued)

|   |   |
|---|---|
| AG = 4, LG1 = 1, LG2 = 0, LG3 = 1-99, SPD1 = 1880               | AG = 4, LG1 = 5, LG2 = 0, LG3 = 1-99, SPD1 = 2400               |
| AG = 4, LG1 = 1, LG2 = 1, LG3 = 1-99, SPD1 = 1880, CAPI = 3290  | AG = 4, LG1 = 5, LG2 = 1, LG3 = 1-99, SPD1 = 2400, CAPI = 5290  |
| AG = 4, LG1 = 1, LG2 = 2, LG3 = 1-99, SPD1 = 1880, CAPI = 6580  | AG = 4, LG1 = 5, LG2 = 2, LG3 = 1-99, SPD1 = 2400, CAPI = 10580 |
| AG = 4, LG1 = 1, LG2 = 3, LG3 = 1-99, SPD1 = 1880, CAPI = 10260 | AG = 4, LG1 = 5, LG2 = 3, LG3 = 1-99, SPD1 = 2400, CAPI = 16500 |
| AG = 4, LG1 = 1, LG2 = 4, LG3 = 1-99, SPD1 = 1880, CAPI = 14080 | AG = 4, LG1 = 5, LG2 = 4, LG3 = 1-99, SPD1 = 2400, CAPI = 22680 |
| AG = 4, LG1 = 1, LG2 = 5, LG3 = 1-99, SPD1 = 1880, CAPI = 17600 | AG = 4, LG1 = 5, LG2 = 5, LG3 = 1-99, SPD1 = 2400, CAPI = 28350 |
| AG = 4, LG1 = 1, LG2 = 6, LG3 = 1-99, SPD1 = 1880, CAPI = 21120 | AG = 4, LG1 = 5, LG2 = 6, LG3 = 1-99, SPD1 = 2400, CAPI = 34020 |
| AG = 4, LG1 = 1, LG2 = 7, LG3 = 1-99, SPD1 = 1880, CAPI = 24640 | AG = 4, LG1 = 5, LG2 = 7, LG3 = 1-99, SPD1 = 2400, CAPI = 39690 |
| AG = 4, LG1 = 1, LG2 = 8, LG3 = 1-99, SPD1 = 1880, CAPI = 28160 | AG = 4, LG1 = 5, LG2 = 8, LG3 = 1-99, SPD1 = 2400, CAPI = 45360 |
| AG = 4, LG1 = 1, LG2 = 9, LG3 = 1-99, SPD1 = 1880, CAPI = 31680 | AG = 4, LG1 = 5, LG2 = 9, LG3 = 1-99, SPD1 = 2400, CAPI = 51030 |
| AG = 4, LG1 = 2, LG2 = 0, LG3 = 1-99, SPD1 = 1950               | AG = 5, LG1 = 1, LG2 = 0, LG3 = 1-99, SPD1 = 1450               |
| AG = 4, LG1 = 2, LG2 = 1, LG3 = 1-99, SPD1 = 1950, CAPI = 3680  | AG = 5, LG1 = 1, LG2 = 1, LG3 = 1-99, SPD1 = 1450, CAPI = 3130  |
| AG = 4, LG1 = 2, LG2 = 2, LG3 = 1-99, SPD1 = 1950, CAPI = 7360  | AG = 5, LG1 = 1, LG2 = 2, LG3 = 1-99, SPD1 = 1450, CAPI = 6260  |
| AG = 4, LG1 = 2, LG2 = 3, LG3 = 1-99, SPD1 = 1950, CAPI = 11490 | AG = 5, LG1 = 1, LG2 = 3, LG3 = 1-99, SPD1 = 1450, CAPI = 9750  |
| AG = 4, LG1 = 2, LG2 = 4, LG3 = 1-99, SPD1 = 1950, CAPI = 15800 | AG = 5, LG1 = 1, LG2 = 4, LG3 = 1-99, SPD1 = 1450, CAPI = 13400 |
| AG = 4, LG1 = 2, LG2 = 5, LG3 = 1-99, SPD1 = 1950, CAPI = 19750 | AG = 5, LG1 = 1, LG2 = 5, LG3 = 1-99, SPD1 = 1450, CAPI = 16750 |
| AG = 4, LG1 = 2, LG2 = 6, LG3 = 1-99, SPD1 = 1950, CAPI = 23700 | AG = 5, LG1 = 1, LG2 = 6, LG3 = 1-99, SPD1 = 1450, CAPI = 20100 |
| AG = 4, LG1 = 2, LG2 = 7, LG3 = 1-99, SPD1 = 1950, CAPI = 27650 | AG = 5, LG1 = 1, LG2 = 7, LG3 = 1-99, SPD1 = 1450, CAPI = 23450 |
| AG = 4, LG1 = 2, LG2 = 8, LG3 = 1-99, SPD1 = 1950, CAPI = 31600 | AG = 5, LG1 = 1, LG2 = 8, LG3 = 1-99, SPD1 = 1450, CAPI = 26800 |
| AG = 4, LG1 = 2, LG2 = 9, LG3 = 1-99, SPD1 = 1950, CAPI = 35550 | AG = 5, LG1 = 1, LG2 = 9, LG3 = 1-99, SPD1 = 1450, CAPI = 30150 |
| AG = 4, LG1 = 3, LG2 = 0, LG3 = 1-99, SPD1 = 2220               | AG = 5, LG1 = 2, LG2 = 0, LG3 = 1-99, SPD1 = 1640               |
| AG = 4, LG1 = 3, LG2 = 1, LG3 = 1-99, SPD1 = 2220, CAPI = 4070  | AG = 5, LG1 = 2, LG2 = 1, LG3 = 1-99, SPD1 = 1640, CAPI = 3510  |
| AG = 4, LG1 = 3, LG2 = 2, LG3 = 1-99, SPD1 = 2220, CAPI = 8140  | AG = 5, LG1 = 2, LG2 = 2, LG3 = 1-99, SPD1 = 1640, CAPI = 7020  |
| AG = 4, LG1 = 3, LG2 = 3, LG3 = 1-99, SPD1 = 2220, CAPI = 12690 | AG = 5, LG1 = 2, LG2 = 3, LG3 = 1-99, SPD1 = 1640, CAPI = 10950 |
| AG = 4, LG1 = 3, LG2 = 4, LG3 = 1-99, SPD1 = 2220, CAPI = 17440 | AG = 5, LG1 = 2, LG2 = 4, LG3 = 1-99, SPD1 = 1640, CAPI = 15040 |
| AG = 4, LG1 = 3, LG2 = 5, LG3 = 1-99, SPD1 = 2220, CAPI = 21800 | AG = 5, LG1 = 2, LG2 = 5, LG3 = 1-99, SPD1 = 1640, CAPI = 18800 |
| AG = 4, LG1 = 3, LG2 = 6, LG3 = 1-99, SPD1 = 2220, CAPI = 26160 | AG = 5, LG1 = 2, LG2 = 6, LG3 = 1-99, SPD1 = 1640, CAPI = 22560 |
| AG = 4, LG1 = 3, LG2 = 7, LG3 = 1-99, SPD1 = 2220, CAPI = 30520 | AG = 5, LG1 = 2, LG2 = 7, LG3 = 1-99, SPD1 = 1640, CAPI = 26320 |
| AG = 4, LG1 = 3, LG2 = 8, LG3 = 1-99, SPD1 = 2220, CAPI = 34880 | AG = 5, LG1 = 2, LG2 = 8, LG3 = 1-99, SPD1 = 1640, CAPI = 30080 |
| AG = 4, LG1 = 3, LG2 = 9, LG3 = 1-99, SPD1 = 2220, CAPI = 39240 | AG = 5, LG1 = 2, LG2 = 9, LG3 = 1-99, SPD1 = 1640, CAPI = 33840 |
| AG = 4, LG1 = 4, LG2 = 0, LG3 = 1-99, SPD1 = 2310               | AG = 5, LG1 = 3, LG2 = 0, LG3 = 1-99, SPD1 = 2000               |
| AG = 4, LG1 = 4, LG2 = 1, LG3 = 1-99, SPD1 = 2310, CAPI = 4530  | AG = 5, LG1 = 3, LG2 = 1, LG3 = 1-99, SPD1 = 2000, CAPI = 3410  |
| AG = 4, LG1 = 4, LG2 = 2, LG3 = 1-99, SPD1 = 2310, CAPI = 9060  | AG = 5, LG1 = 3, LG2 = 2, LG3 = 1-99, SPD1 = 2000, CAPI = 6820  |
| AG = 4, LG1 = 4, LG2 = 3, LG3 = 1-99, SPD1 = 2310, CAPI = 14130 | AG = 5, LG1 = 3, LG2 = 3, LG3 = 1-99, SPD1 = 2000, CAPI = 10650 |
| AG = 4, LG1 = 4, LG2 = 4, LG3 = 1-99, SPD1 = 2310, CAPI = 19400 | AG = 5, LG1 = 3, LG2 = 4, LG3 = 1-99, SPD1 = 2000, CAPI = 14640 |
| AG = 4, LG1 = 4, LG2 = 5, LG3 = 1-99, SPD1 = 2310, CAPI = 24250 | AG = 5, LG1 = 3, LG2 = 5, LG3 = 1-99, SPD1 = 2000, CAPI = 18300 |
| AG = 4, LG1 = 4, LG2 = 6, LG3 = 1-99, SPD1 = 2310, CAPI = 29100 | AG = 5, LG1 = 3, LG2 = 6, LG3 = 1-99, SPD1 = 2000, CAPI = 21960 |
| AG = 4, LG1 = 4, LG2 = 7, LG3 = 1-99, SPD1 = 2310, CAPI = 33950 | AG = 5, LG1 = 3, LG2 = 7, LG3 = 1-99, SPD1 = 2000, CAPI = 25620 |
| AG = 4, LG1 = 4, LG2 = 8, LG3 = 1-99, SPD1 = 2310, CAPI = 38800 | AG = 5, LG1 = 3, LG2 = 8, LG3 = 1-99, SPD1 = 2000, CAPI = 29280 |
| AG = 4, LG1 = 4, LG2 = 9, LG3 = 1-99, SPD1 = 2310, CAPI = 43650 | AG = 5, LG1 = 3, LG2 = 9, LG3 = 1-99, SPD1 = 2000, CAPI = 32940 |

## Appendix B-1: Focused Daily Highway Network Speed-Capacity Look-up Table (Continued)

|   |   |
|---|---|
| AG = 5, LG1 = 4, LG2 = 0, LG3 = 1-99, SPD1 = 2200               | AG = 6, LG1 = 3, LG2 = 0, LG3 = 1-99, SPD1 = 2070               |
| AG = 5, LG1 = 4, LG2 = 1, LG3 = 1-99, SPD1 = 2200, CAP1 = 4330  | AG = 6, LG1 = 3, LG2 = 1, LG3 = 1-99, SPD1 = 2070, CAP1 = 3700  |
| AG = 5, LG1 = 4, LG2 = 2, LG3 = 1-99, SPD1 = 2200, CAP1 = 8660  | AG = 6, LG1 = 3, LG2 = 2, LG3 = 1-99, SPD1 = 2070, CAP1 = 7400  |
| AG = 5, LG1 = 4, LG2 = 3, LG3 = 1-99, SPD1 = 2200, CAP1 = 13500 | AG = 6, LG1 = 3, LG2 = 3, LG3 = 1-99, SPD1 = 2070, CAP1 = 11550 |
| AG = 5, LG1 = 4, LG2 = 4, LG3 = 1-99, SPD1 = 2200, CAP1 = 18560 | AG = 6, LG1 = 3, LG2 = 4, LG3 = 1-99, SPD1 = 2070, CAP1 = 15880 |
| AG = 5, LG1 = 4, LG2 = 5, LG3 = 1-99, SPD1 = 2200, CAP1 = 23200 | AG = 6, LG1 = 3, LG2 = 5, LG3 = 1-99, SPD1 = 2070, CAP1 = 19850 |
| AG = 5, LG1 = 4, LG2 = 6, LG3 = 1-99, SPD1 = 2200, CAP1 = 27840 | AG = 6, LG1 = 3, LG2 = 6, LG3 = 1-99, SPD1 = 2070, CAP1 = 23820 |
| AG = 5, LG1 = 4, LG2 = 7, LG3 = 1-99, SPD1 = 2200, CAP1 = 32480 | AG = 6, LG1 = 3, LG2 = 7, LG3 = 1-99, SPD1 = 2070, CAP1 = 27790 |
| AG = 5, LG1 = 4, LG2 = 8, LG3 = 1-99, SPD1 = 2200, CAP1 = 37120 | AG = 6, LG1 = 3, LG2 = 8, LG3 = 1-99, SPD1 = 2070, CAP1 = 31760 |
| AG = 5, LG1 = 4, LG2 = 9, LG3 = 1-99, SPD1 = 2200, CAP1 = 41760 | AG = 6, LG1 = 3, LG2 = 9, LG3 = 1-99, SPD1 = 2070, CAP1 = 35730 |
| AG = 5, LG1 = 5, LG2 = 0, LG3 = 1-99, SPD1 = 2400               | AG = 6, LG1 = 4, LG2 = 0, LG3 = 1-99, SPD1 = 2140               |
| AG = 5, LG1 = 5, LG2 = 1, LG3 = 1-99, SPD1 = 2400, CAP1 = 5030  | AG = 6, LG1 = 4, LG2 = 1, LG3 = 1-99, SPD1 = 2140, CAP1 = 4130  |
| AG = 5, LG1 = 5, LG2 = 2, LG3 = 1-99, SPD1 = 2400, CAP1 = 10060 | AG = 6, LG1 = 4, LG2 = 2, LG3 = 1-99, SPD1 = 2140, CAP1 = 8260  |
| AG = 5, LG1 = 5, LG2 = 3, LG3 = 1-99, SPD1 = 2400, CAP1 = 15690 | AG = 6, LG1 = 4, LG2 = 3, LG3 = 1-99, SPD1 = 2140, CAP1 = 12870 |
| AG = 5, LG1 = 5, LG2 = 4, LG3 = 1-99, SPD1 = 2400, CAP1 = 21560 | AG = 6, LG1 = 4, LG2 = 4, LG3 = 1-99, SPD1 = 2140, CAP1 = 17680 |
| AG = 5, LG1 = 5, LG2 = 5, LG3 = 1-99, SPD1 = 2400, CAP1 = 26950 | AG = 6, LG1 = 4, LG2 = 5, LG3 = 1-99, SPD1 = 2140, CAP1 = 22100 |
| AG = 5, LG1 = 5, LG2 = 6, LG3 = 1-99, SPD1 = 2400, CAP1 = 32340 | AG = 6, LG1 = 4, LG2 = 6, LG3 = 1-99, SPD1 = 2140, CAP1 = 26520 |
| AG = 5, LG1 = 5, LG2 = 7, LG3 = 1-99, SPD1 = 2400, CAP1 = 37730 | AG = 6, LG1 = 4, LG2 = 7, LG3 = 1-99, SPD1 = 2140, CAP1 = 30940 |
| AG = 5, LG1 = 5, LG2 = 8, LG3 = 1-99, SPD1 = 2400, CAP1 = 43120 | AG = 6, LG1 = 4, LG2 = 8, LG3 = 1-99, SPD1 = 2140, CAP1 = 35360 |
| AG = 5, LG1 = 5, LG2 = 9, LG3 = 1-99, SPD1 = 2400, CAP1 = 48510 | AG = 6, LG1 = 4, LG2 = 9, LG3 = 1-99, SPD1 = 2140, CAP1 = 39780 |
| AG = 6, LG1 = 1, LG2 = 0, LG3 = 1-99, SPD1 = 1760               | AG = 6, LG1 = 5, LG2 = 0, LG3 = 1-99, SPD1 = 2220               |
| AG = 6, LG1 = 1, LG2 = 1, LG3 = 1-99, SPD1 = 1760, CAP1 = 2960  | AG = 6, LG1 = 5, LG2 = 1, LG3 = 1-99, SPD1 = 2220, CAP1 = 4810  |
| AG = 6, LG1 = 1, LG2 = 2, LG3 = 1-99, SPD1 = 1760, CAP1 = 5920  | AG = 6, LG1 = 5, LG2 = 2, LG3 = 1-99, SPD1 = 2220, CAP1 = 9620  |
| AG = 6, LG1 = 1, LG2 = 3, LG3 = 1-99, SPD1 = 1760, CAP1 = 9240  | AG = 6, LG1 = 5, LG2 = 3, LG3 = 1-99, SPD1 = 2220, CAP1 = 15000 |
| AG = 6, LG1 = 1, LG2 = 4, LG3 = 1-99, SPD1 = 1760, CAP1 = 12680 | AG = 6, LG1 = 5, LG2 = 4, LG3 = 1-99, SPD1 = 2220, CAP1 = 20600 |
| AG = 6, LG1 = 1, LG2 = 5, LG3 = 1-99, SPD1 = 1760, CAP1 = 15850 | AG = 6, LG1 = 5, LG2 = 5, LG3 = 1-99, SPD1 = 2220, CAP1 = 25750 |
| AG = 6, LG1 = 1, LG2 = 6, LG3 = 1-99, SPD1 = 1760, CAP1 = 19020 | AG = 6, LG1 = 5, LG2 = 6, LG3 = 1-99, SPD1 = 2220, CAP1 = 30900 |
| AG = 6, LG1 = 1, LG2 = 7, LG3 = 1-99, SPD1 = 1760, CAP1 = 22190 | AG = 6, LG1 = 5, LG2 = 7, LG3 = 1-99, SPD1 = 2220, CAP1 = 36050 |
| AG = 6, LG1 = 1, LG2 = 8, LG3 = 1-99, SPD1 = 1760, CAP1 = 25360 | AG = 6, LG1 = 5, LG2 = 8, LG3 = 1-99, SPD1 = 2220, CAP1 = 41200 |
| AG = 6, LG1 = 1, LG2 = 9, LG3 = 1-99, SPD1 = 1760, CAP1 = 28530 | AG = 6, LG1 = 5, LG2 = 9, LG3 = 1-99, SPD1 = 2220, CAP1 = 46350 |
| AG = 6, LG1 = 2, LG2 = 0, LG3 = 1-99, SPD1 = 1820               | AG = 8, LG1 = 1, LG2 = 0, LG3 = 1-99, SPD1 = 1450               |
| AG = 6, LG1 = 2, LG2 = 1, LG3 = 1-99, SPD1 = 1820, CAP1 = 3330  | AG = 8, LG1 = 1, LG2 = 1, LG3 = 1-99, SPD1 = 1450, CAP1 = 3130  |
| AG = 6, LG1 = 2, LG2 = 2, LG3 = 1-99, SPD1 = 1820, CAP1 = 6660  | AG = 8, LG1 = 1, LG2 = 2, LG3 = 1-99, SPD1 = 1450, CAP1 = 6260  |
| AG = 6, LG1 = 2, LG2 = 3, LG3 = 1-99, SPD1 = 1820, CAP1 = 10380 | AG = 8, LG1 = 1, LG2 = 3, LG3 = 1-99, SPD1 = 1450, CAP1 = 9750  |
| AG = 6, LG1 = 2, LG2 = 4, LG3 = 1-99, SPD1 = 1820, CAP1 = 14240 | AG = 8, LG1 = 1, LG2 = 4, LG3 = 1-99, SPD1 = 1450, CAP1 = 13400 |
| AG = 6, LG1 = 2, LG2 = 5, LG3 = 1-99, SPD1 = 1820, CAP1 = 17800 | AG = 8, LG1 = 1, LG2 = 5, LG3 = 1-99, SPD1 = 1450, CAP1 = 16750 |
| AG = 6, LG1 = 2, LG2 = 6, LG3 = 1-99, SPD1 = 1820, CAP1 = 21360 | AG = 8, LG1 = 1, LG2 = 6, LG3 = 1-99, SPD1 = 1450, CAP1 = 20100 |
| AG = 6, LG1 = 2, LG2 = 7, LG3 = 1-99, SPD1 = 1820, CAP1 = 24920 | AG = 8, LG1 = 1, LG2 = 7, LG3 = 1-99, SPD1 = 1450, CAP1 = 23450 |
| AG = 6, LG1 = 2, LG2 = 8, LG3 = 1-99, SPD1 = 1820, CAP1 = 28480 | AG = 8, LG1 = 1, LG2 = 8, LG3 = 1-99, SPD1 = 1450, CAP1 = 26800 |
| AG = 6, LG1 = 2, LG2 = 9, LG3 = 1-99, SPD1 = 1820, CAP1 = 32040 | AG = 8, LG1 = 1, LG2 = 9, LG3 = 1-99, SPD1 = 1450, CAP1 = 30150 |

## Appendix B-1: Focused Daily Highway Network Speed-Capacity Look-up Table (Continued)

AG = 8, LG1 = 2, LG2 = 0, LG3 = 1-99, SPD1 = 1640  
AG = 8, LG1 = 2, LG2 = 1, LG3 = 1-99, SPD1 = 1640, CAP1 = 3510  
AG = 8, LG1 = 2, LG2 = 2, LG3 = 1-99, SPD1 = 1640, CAP1 = 7020  
AG = 8, LG1 = 2, LG2 = 3, LG3 = 1-99, SPD1 = 1640, CAP1 = 10950  
AG = 8, LG1 = 2, LG2 = 4, LG3 = 1-99, SPD1 = 1640, CAP1 = 15040  
AG = 8, LG1 = 2, LG2 = 5, LG3 = 1-99, SPD1 = 1640, CAP1 = 18800  
AG = 8, LG1 = 2, LG2 = 6, LG3 = 1-99, SPD1 = 1640, CAP1 = 22560  
AG = 8, LG1 = 2, LG2 = 7, LG3 = 1-99, SPD1 = 1640, CAP1 = 26320  
AG = 8, LG1 = 2, LG2 = 8, LG3 = 1-99, SPD1 = 1640, CAP1 = 30080  
AG = 8, LG1 = 2, LG2 = 9, LG3 = 1-99, SPD1 = 1640, CAP1 = 33840  
AG = 8, LG1 = 3, LG2 = 0, LG3 = 1-99, SPD1 = 2000  
AG = 8, LG1 = 3, LG2 = 1, LG3 = 1-99, SPD1 = 2000, CAP1 = 3410  
AG = 8, LG1 = 3, LG2 = 2, LG3 = 1-99, SPD1 = 2000, CAP1 = 6820  
AG = 8, LG1 = 3, LG2 = 3, LG3 = 1-99, SPD1 = 2000, CAP1 = 10650  
AG = 8, LG1 = 3, LG2 = 4, LG3 = 1-99, SPD1 = 2000, CAP1 = 14640  
AG = 8, LG1 = 3, LG2 = 5, LG3 = 1-99, SPD1 = 2000, CAP1 = 18300  
AG = 8, LG1 = 3, LG2 = 6, LG3 = 1-99, SPD1 = 2000, CAP1 = 21960  
AG = 8, LG1 = 3, LG2 = 7, LG3 = 1-99, SPD1 = 2000, CAP1 = 25620  
AG = 8, LG1 = 3, LG2 = 8, LG3 = 1-99, SPD1 = 2000, CAP1 = 29280  
AG = 8, LG1 = 3, LG2 = 9, LG3 = 1-99, SPD1 = 2000, CAP1 = 32940  
AG = 8, LG1 = 4, LG2 = 0, LG3 = 1-99, SPD1 = 2200  
AG = 8, LG1 = 4, LG2 = 1, LG3 = 1-99, SPD1 = 2200, CAP1 = 4330  
AG = 8, LG1 = 4, LG2 = 2, LG3 = 1-99, SPD1 = 2200, CAP1 = 8660  
AG = 8, LG1 = 4, LG2 = 3, LG3 = 1-99, SPD1 = 2200, CAP1 = 13500  
AG = 8, LG1 = 4, LG2 = 4, LG3 = 1-99, SPD1 = 2200, CAP1 = 18560  
AG = 8, LG1 = 4, LG2 = 5, LG3 = 1-99, SPD1 = 2200, CAP1 = 23200  
AG = 8, LG1 = 4, LG2 = 6, LG3 = 1-99, SPD1 = 2200, CAP1 = 27840  
AG = 8, LG1 = 4, LG2 = 7, LG3 = 1-99, SPD1 = 2200, CAP1 = 32480  
AG = 8, LG1 = 4, LG2 = 8, LG3 = 1-99, SPD1 = 2200, CAP1 = 37120  
AG = 8, LG1 = 4, LG2 = 9, LG3 = 1-99, SPD1 = 2200, CAP1 = 41760  
AG = 8, LG1 = 5, LG2 = 0, LG3 = 1-99, SPD1 = 2400  
AG = 8, LG1 = 5, LG2 = 1, LG3 = 1-99, SPD1 = 2400, CAP1 = 5030  
AG = 8, LG1 = 5, LG2 = 2, LG3 = 1-99, SPD1 = 2400, CAP1 = 10060  
AG = 8, LG1 = 5, LG2 = 3, LG3 = 1-99, SPD1 = 2400, CAP1 = 15690  
AG = 8, LG1 = 5, LG2 = 4, LG3 = 1-99, SPD1 = 2400, CAP1 = 21560  
AG = 8, LG1 = 5, LG2 = 5, LG3 = 1-99, SPD1 = 2400, CAP1 = 26950  
AG = 8, LG1 = 5, LG2 = 6, LG3 = 1-99, SPD1 = 2400, CAP1 = 32340  
AG = 8, LG1 = 5, LG2 = 7, LG3 = 1-99, SPD1 = 2400, CAP1 = 37730  
AG = 8, LG1 = 5, LG2 = 8, LG3 = 1-99, SPD1 = 2400, CAP1 = 43120  
AG = 8, LG1 = 5, LG2 = 9, LG3 = 1-99, SPD1 = 2400, CAP1 = 48510

## Appendix B-2: Focused Peak-Hour Highway Network Speed-Capacity Lookup Table<sup>2</sup>

|   |   |
|---|---|
| AG = 1, LG1 = 1, LG2 = 0, LG3 = 1-99, SPD1 = 3330               | AG = 1, LG1 = 4, LG2 = 6, LG3 = 1-99, SPD1 = 3330, CAPI = 11238 |
| AG = 1, LG1 = 1, LG2 = 1, LG3 = 1-99, SPD1 = 3330, CAPI = 1875  | AG = 1, LG1 = 4, LG2 = 7, LG3 = 1-99, SPD1 = 3330, CAPI = 13111 |
| AG = 1, LG1 = 1, LG2 = 2, LG3 = 1-99, SPD1 = 3330, CAPI = 3750  | AG = 1, LG1 = 4, LG2 = 8, LG3 = 1-99, SPD1 = 3330, CAPI = 14984 |
| AG = 1, LG1 = 1, LG2 = 3, LG3 = 1-99, SPD1 = 3330, CAPI = 5850  | AG = 1, LG1 = 4, LG2 = 9, LG3 = 1-99, SPD1 = 3330, CAPI = 16857 |
| AG = 1, LG1 = 1, LG2 = 4, LG3 = 1-99, SPD1 = 3330, CAPI = 8036  | AG = 1, LG1 = 5, LG2 = 0, LG3 = 1-99, SPD1 = 3530               |
| AG = 1, LG1 = 1, LG2 = 5, LG3 = 1-99, SPD1 = 3330, CAPI = 10045 | AG = 1, LG1 = 5, LG2 = 1, LG3 = 1-99, SPD1 = 3530, CAPI = 1603  |
| AG = 1, LG1 = 1, LG2 = 6, LG3 = 1-99, SPD1 = 3330, CAPI = 12054 | AG = 1, LG1 = 5, LG2 = 2, LG3 = 1-99, SPD1 = 3530, CAPI = 3206  |
| AG = 1, LG1 = 1, LG2 = 7, LG3 = 1-99, SPD1 = 3330, CAPI = 14063 | AG = 1, LG1 = 5, LG2 = 3, LG3 = 1-99, SPD1 = 3530, CAPI = 5001  |
| AG = 1, LG1 = 1, LG2 = 8, LG3 = 1-99, SPD1 = 3330, CAPI = 16072 | AG = 1, LG1 = 5, LG2 = 4, LG3 = 1-99, SPD1 = 3530, CAPI = 6868  |
| AG = 1, LG1 = 1, LG2 = 9, LG3 = 1-99, SPD1 = 3330, CAPI = 18081 | AG = 1, LG1 = 5, LG2 = 5, LG3 = 1-99, SPD1 = 3530, CAPI = 8585  |
| AG = 1, LG1 = 2, LG2 = 0, LG3 = 1-99, SPD1 = 3330               | AG = 1, LG1 = 5, LG2 = 6, LG3 = 1-99, SPD1 = 3530, CAPI = 10302 |
| AG = 1, LG1 = 2, LG2 = 1, LG3 = 1-99, SPD1 = 3330, CAPI = 1875  | AG = 1, LG1 = 5, LG2 = 7, LG3 = 1-99, SPD1 = 3530, CAPI = 12019 |
| AG = 1, LG1 = 2, LG2 = 2, LG3 = 1-99, SPD1 = 3330, CAPI = 3750  | AG = 1, LG1 = 5, LG2 = 8, LG3 = 1-99, SPD1 = 3530, CAPI = 13736 |
| AG = 1, LG1 = 2, LG2 = 3, LG3 = 1-99, SPD1 = 3330, CAPI = 5850  | AG = 1, LG1 = 5, LG2 = 9, LG3 = 1-99, SPD1 = 3530, CAPI = 15453 |
| AG = 1, LG1 = 2, LG2 = 4, LG3 = 1-99, SPD1 = 3330, CAPI = 8036  | AG = 2, LG1 = 1, LG2 = 0, LG3 = 1-99, SPD1 = 2610               |
| AG = 1, LG1 = 2, LG2 = 5, LG3 = 1-99, SPD1 = 3330, CAPI = 10045 | AG = 2, LG1 = 1, LG2 = 1, LG3 = 1-99, SPD1 = 2610, CAPI = 922   |
| AG = 1, LG1 = 2, LG2 = 6, LG3 = 1-99, SPD1 = 3330, CAPI = 12054 | AG = 2, LG1 = 1, LG2 = 2, LG3 = 1-99, SPD1 = 2610, CAPI = 1844  |
| AG = 1, LG1 = 2, LG2 = 7, LG3 = 1-99, SPD1 = 3330, CAPI = 14063 | AG = 2, LG1 = 1, LG2 = 3, LG3 = 1-99, SPD1 = 2610, CAPI = 2880  |
| AG = 1, LG1 = 2, LG2 = 8, LG3 = 1-99, SPD1 = 3330, CAPI = 16072 | AG = 2, LG1 = 1, LG2 = 4, LG3 = 1-99, SPD1 = 2610, CAPI = 3956  |
| AG = 1, LG1 = 2, LG2 = 9, LG3 = 1-99, SPD1 = 3330, CAPI = 18081 | AG = 2, LG1 = 1, LG2 = 5, LG3 = 1-99, SPD1 = 2610, CAPI = 4945  |
| AG = 1, LG1 = 3, LG2 = 0, LG3 = 1-99, SPD1 = 3330               | AG = 2, LG1 = 1, LG2 = 6, LG3 = 1-99, SPD1 = 2610, CAPI = 5934  |
| AG = 1, LG1 = 3, LG2 = 1, LG3 = 1-99, SPD1 = 3330, CAPI = 1875  | AG = 2, LG1 = 1, LG2 = 7, LG3 = 1-99, SPD1 = 2610, CAPI = 6923  |
| AG = 1, LG1 = 3, LG2 = 2, LG3 = 1-99, SPD1 = 3330, CAPI = 3750  | AG = 2, LG1 = 1, LG2 = 8, LG3 = 1-99, SPD1 = 2610, CAPI = 7912  |
| AG = 1, LG1 = 3, LG2 = 3, LG3 = 1-99, SPD1 = 3330, CAPI = 5850  | AG = 2, LG1 = 1, LG2 = 9, LG3 = 1-99, SPD1 = 2610, CAPI = 8901  |
| AG = 1, LG1 = 3, LG2 = 4, LG3 = 1-99, SPD1 = 3330, CAPI = 8036  | AG = 2, LG1 = 2, LG2 = 0, LG3 = 1-99, SPD1 = 2730               |
| AG = 1, LG1 = 3, LG2 = 5, LG3 = 1-99, SPD1 = 3330, CAPI = 10045 | AG = 2, LG1 = 2, LG2 = 1, LG3 = 1-99, SPD1 = 2730, CAPI = 922   |
| AG = 1, LG1 = 3, LG2 = 6, LG3 = 1-99, SPD1 = 3330, CAPI = 12054 | AG = 2, LG1 = 2, LG2 = 2, LG3 = 1-99, SPD1 = 2730, CAPI = 1844  |
| AG = 1, LG1 = 3, LG2 = 7, LG3 = 1-99, SPD1 = 3330, CAPI = 14063 | AG = 2, LG1 = 2, LG2 = 3, LG3 = 1-99, SPD1 = 2730, CAPI = 2880  |
| AG = 1, LG1 = 3, LG2 = 8, LG3 = 1-99, SPD1 = 3330, CAPI = 16072 | AG = 2, LG1 = 2, LG2 = 4, LG3 = 1-99, SPD1 = 2730, CAPI = 3956  |
| AG = 1, LG1 = 3, LG2 = 9, LG3 = 1-99, SPD1 = 3330, CAPI = 18081 | AG = 2, LG1 = 2, LG2 = 5, LG3 = 1-99, SPD1 = 2730, CAPI = 4945  |
| AG = 1, LG1 = 4, LG2 = 0, LG3 = 1-99, SPD1 = 3330               | AG = 2, LG1 = 2, LG2 = 6, LG3 = 1-99, SPD1 = 2730, CAPI = 5934  |
| AG = 1, LG1 = 4, LG2 = 1, LG3 = 1-99, SPD1 = 3330, CAPI = 1748  | AG = 2, LG1 = 2, LG2 = 7, LG3 = 1-99, SPD1 = 2730, CAPI = 6923  |
| AG = 1, LG1 = 4, LG2 = 2, LG3 = 1-99, SPD1 = 3330, CAPI = 3496  | AG = 2, LG1 = 2, LG2 = 8, LG3 = 1-99, SPD1 = 2730, CAPI = 7912  |
| AG = 1, LG1 = 4, LG2 = 3, LG3 = 1-99, SPD1 = 3330, CAPI = 5454  | AG = 2, LG1 = 2, LG2 = 9, LG3 = 1-99, SPD1 = 2730, CAPI = 8901  |
| AG = 1, LG1 = 4, LG2 = 4, LG3 = 1-99, SPD1 = 3330, CAPI = 7492  | AG = 2, LG1 = 3, LG2 = 0, LG3 = 1-99, SPD1 = 2860               |
| AG = 1, LG1 = 4, LG2 = 5, LG3 = 1-99, SPD1 = 3330, CAPI = 9365  | AG = 2, LG1 = 3, LG2 = 1, LG3 = 1-99, SPD1 = 2860, CAPI = 837   |

<sup>2</sup> See footnote 1 on Page B-1.

## Appendix B-2: Focused Peak-Hour Highway Network Speed-Capacity Look-up Table (Continued)

|  |  |
|--|--|
| AG = 2, LG1 = 3, LG2 = 2, LG3 = 1-99, SPD1 = 2860, CAPI = 1674 | AG = 3, LG1 = 2, LG2 = 2, LG3 = 1-99, SPD1 = 2100, CAPI = 1230 |
| AG = 2, LG1 = 3, LG2 = 3, LG3 = 1-99, SPD1 = 2860, CAPI = 2616 | AG = 3, LG1 = 2, LG2 = 3, LG3 = 1-99, SPD1 = 2100, CAPI = 1920 |
| AG = 2, LG1 = 3, LG2 = 4, LG3 = 1-99, SPD1 = 2860, CAPI = 3592 | AG = 3, LG1 = 2, LG2 = 4, LG3 = 1-99, SPD1 = 2100, CAPI = 2636 |
| AG = 2, LG1 = 3, LG2 = 5, LG3 = 1-99, SPD1 = 2860, CAPI = 4490 | AG = 3, LG1 = 2, LG2 = 5, LG3 = 1-99, SPD1 = 2100, CAPI = 3295 |
| AG = 2, LG1 = 3, LG2 = 6, LG3 = 1-99, SPD1 = 2860, CAPI = 5388 | AG = 3, LG1 = 2, LG2 = 6, LG3 = 1-99, SPD1 = 2100, CAPI = 3954 |
| AG = 2, LG1 = 3, LG2 = 7, LG3 = 1-99, SPD1 = 2860, CAPI = 6286 | AG = 3, LG1 = 2, LG2 = 7, LG3 = 1-99, SPD1 = 2100, CAPI = 4613 |
| AG = 2, LG1 = 3, LG2 = 8, LG3 = 1-99, SPD1 = 2860, CAPI = 7184 | AG = 3, LG1 = 2, LG2 = 8, LG3 = 1-99, SPD1 = 2100, CAPI = 5272 |
| AG = 2, LG1 = 3, LG2 = 9, LG3 = 1-99, SPD1 = 2860, CAPI = 8082 | AG = 3, LG1 = 2, LG2 = 9, LG3 = 1-99, SPD1 = 2100, CAPI = 5931 |
| AG = 2, LG1 = 4, LG2 = 0, LG3 = 1-99, SPD1 = 2860              | AG = 3, LG1 = 3, LG2 = 0, LG3 = 1-99, SPD1 = 2400              |
| AG = 2, LG1 = 4, LG2 = 1, LG3 = 1-99, SPD1 = 2860, CAPI = 769  | AG = 3, LG1 = 3, LG2 = 1, LG3 = 1-99, SPD1 = 2400, CAPI = 656  |
| AG = 2, LG1 = 4, LG2 = 2, LG3 = 1-99, SPD1 = 2860, CAPI = 1538 | AG = 3, LG1 = 3, LG2 = 2, LG3 = 1-99, SPD1 = 2400, CAPI = 1312 |
| AG = 2, LG1 = 4, LG2 = 3, LG3 = 1-99, SPD1 = 2860, CAPI = 2400 | AG = 3, LG1 = 3, LG2 = 3, LG3 = 1-99, SPD1 = 2400, CAPI = 2046 |
| AG = 2, LG1 = 4, LG2 = 4, LG3 = 1-99, SPD1 = 2860, CAPI = 3296 | AG = 3, LG1 = 3, LG2 = 4, LG3 = 1-99, SPD1 = 2400, CAPI = 2808 |
| AG = 2, LG1 = 4, LG2 = 5, LG3 = 1-99, SPD1 = 2860, CAPI = 4120 | AG = 3, LG1 = 3, LG2 = 5, LG3 = 1-99, SPD1 = 2400, CAPI = 3510 |
| AG = 2, LG1 = 4, LG2 = 6, LG3 = 1-99, SPD1 = 2860, CAPI = 4944 | AG = 3, LG1 = 3, LG2 = 6, LG3 = 1-99, SPD1 = 2400, CAPI = 4212 |
| AG = 2, LG1 = 4, LG2 = 7, LG3 = 1-99, SPD1 = 2860, CAPI = 5768 | AG = 3, LG1 = 3, LG2 = 7, LG3 = 1-99, SPD1 = 2400, CAPI = 4914 |
| AG = 2, LG1 = 4, LG2 = 8, LG3 = 1-99, SPD1 = 2860, CAPI = 6592 | AG = 3, LG1 = 3, LG2 = 8, LG3 = 1-99, SPD1 = 2400, CAPI = 5616 |
| AG = 2, LG1 = 4, LG2 = 9, LG3 = 1-99, SPD1 = 2860, CAPI = 7416 | AG = 3, LG1 = 3, LG2 = 9, LG3 = 1-99, SPD1 = 2400, CAPI = 6318 |
| AG = 2, LG1 = 5, LG2 = 0, LG3 = 1-99, SPD1 = 3000              | AG = 3, LG1 = 4, LG2 = 0, LG3 = 1-99, SPD1 = 2500              |
| AG = 2, LG1 = 5, LG2 = 1, LG3 = 1-99, SPD1 = 3000, CAPI = 829  | AG = 3, LG1 = 4, LG2 = 1, LG3 = 1-99, SPD1 = 2500, CAPI = 721  |
| AG = 2, LG1 = 5, LG2 = 2, LG3 = 1-99, SPD1 = 3000, CAPI = 1658 | AG = 3, LG1 = 4, LG2 = 2, LG3 = 1-99, SPD1 = 2500, CAPI = 1442 |
| AG = 2, LG1 = 5, LG2 = 3, LG3 = 1-99, SPD1 = 3000, CAPI = 2586 | AG = 3, LG1 = 4, LG2 = 3, LG3 = 1-99, SPD1 = 2500, CAPI = 2250 |
| AG = 2, LG1 = 5, LG2 = 4, LG3 = 1-99, SPD1 = 3000, CAPI = 3552 | AG = 3, LG1 = 4, LG2 = 4, LG3 = 1-99, SPD1 = 2500, CAPI = 3092 |
| AG = 2, LG1 = 5, LG2 = 5, LG3 = 1-99, SPD1 = 3000, CAPI = 4440 | AG = 3, LG1 = 4, LG2 = 5, LG3 = 1-99, SPD1 = 2500, CAPI = 3865 |
| AG = 2, LG1 = 5, LG2 = 6, LG3 = 1-99, SPD1 = 3000, CAPI = 5328 | AG = 3, LG1 = 4, LG2 = 6, LG3 = 1-99, SPD1 = 2500, CAPI = 4638 |
| AG = 2, LG1 = 5, LG2 = 7, LG3 = 1-99, SPD1 = 3000, CAPI = 6216 | AG = 3, LG1 = 4, LG2 = 7, LG3 = 1-99, SPD1 = 2500, CAPI = 5411 |
| AG = 2, LG1 = 5, LG2 = 8, LG3 = 1-99, SPD1 = 3000, CAPI = 7104 | AG = 3, LG1 = 4, LG2 = 8, LG3 = 1-99, SPD1 = 2500, CAPI = 6184 |
| AG = 2, LG1 = 5, LG2 = 9, LG3 = 1-99, SPD1 = 3000, CAPI = 7992 | AG = 3, LG1 = 4, LG2 = 9, LG3 = 1-99, SPD1 = 2500, CAPI = 6957 |
| AG = 3, LG1 = 1, LG2 = 0, LG3 = 1-99, SPD1 = 2020              | AG = 3, LG1 = 5, LG2 = 0, LG3 = 1-99, SPD1 = 2610              |
| AG = 3, LG1 = 1, LG2 = 1, LG3 = 1-99, SPD1 = 2020, CAPI = 577  | AG = 3, LG1 = 5, LG2 = 1, LG3 = 1-99, SPD1 = 2610, CAPI = 777  |
| AG = 3, LG1 = 1, LG2 = 2, LG3 = 1-99, SPD1 = 2020, CAPI = 1154 | AG = 3, LG1 = 5, LG2 = 2, LG3 = 1-99, SPD1 = 2610, CAPI = 1554 |
| AG = 3, LG1 = 1, LG2 = 3, LG3 = 1-99, SPD1 = 2020, CAPI = 1800 | AG = 3, LG1 = 5, LG2 = 3, LG3 = 1-99, SPD1 = 2610, CAPI = 2424 |
| AG = 3, LG1 = 1, LG2 = 4, LG3 = 1-99, SPD1 = 2020, CAPI = 2472 | AG = 3, LG1 = 5, LG2 = 4, LG3 = 1-99, SPD1 = 2610, CAPI = 3328 |
| AG = 3, LG1 = 1, LG2 = 5, LG3 = 1-99, SPD1 = 2020, CAPI = 3090 | AG = 3, LG1 = 5, LG2 = 5, LG3 = 1-99, SPD1 = 2610, CAPI = 4160 |
| AG = 3, LG1 = 1, LG2 = 6, LG3 = 1-99, SPD1 = 2020, CAPI = 3708 | AG = 3, LG1 = 5, LG2 = 6, LG3 = 1-99, SPD1 = 2610, CAPI = 4992 |
| AG = 3, LG1 = 1, LG2 = 7, LG3 = 1-99, SPD1 = 2020, CAPI = 4326 | AG = 3, LG1 = 5, LG2 = 7, LG3 = 1-99, SPD1 = 2610, CAPI = 5824 |
| AG = 3, LG1 = 1, LG2 = 8, LG3 = 1-99, SPD1 = 2020, CAPI = 4944 | AG = 3, LG1 = 5, LG2 = 8, LG3 = 1-99, SPD1 = 2610, CAPI = 6656 |
| AG = 3, LG1 = 1, LG2 = 9, LG3 = 1-99, SPD1 = 2020, CAPI = 5562 | AG = 3, LG1 = 5, LG2 = 9, LG3 = 1-99, SPD1 = 2610, CAPI = 7488 |
| AG = 3, LG1 = 2, LG2 = 0, LG3 = 1-99, SPD1 = 2100              | AG = 4, LG1 = 1, LG2 = 0, LG3 = 1-99, SPD1 = 1880              |
| AG = 3, LG1 = 2, LG2 = 1, LG3 = 1-99, SPD1 = 2100, CAPI = 615  | AG = 4, LG1 = 1, LG2 = 1, LG3 = 1-99, SPD1 = 1880, CAPI = 329  |

## Appendix B-2: Focused Peak-Hour Highway Network Speed-Capacity Look-up Table (Continued)

|  |  |
|--|--|
| AG = 4, LG1 = 1, LG2 = 1, LG3 = 2, LG3 = 1-99, SPD1 = 1880, CAPI = 658 | AG = 4, LG1 = 5, LG2 = 2, LG3 = 1-99, SPD1 = 2400, CAPI = 1058 |
| AG = 4, LG1 = 1, LG2 = 3, LG3 = 1-99, SPD1 = 1880, CAPI = 1026         | AG = 4, LG1 = 5, LG2 = 3, LG3 = 1-99, SPD1 = 2400, CAPI = 1650 |
| AG = 4, LG1 = 1, LG2 = 4, LG3 = 1-99, SPD1 = 1880, CAPI = 1408         | AG = 4, LG1 = 5, LG2 = 4, LG3 = 1-99, SPD1 = 2400, CAPI = 2268 |
| AG = 4, LG1 = 1, LG2 = 5, LG3 = 1-99, SPD1 = 1880, CAPI = 1760         | AG = 4, LG1 = 5, LG2 = 5, LG3 = 1-99, SPD1 = 2400, CAPI = 2835 |
| AG = 4, LG1 = 1, LG2 = 6, LG3 = 1-99, SPD1 = 1880, CAPI = 2112         | AG = 4, LG1 = 5, LG2 = 6, LG3 = 1-99, SPD1 = 2400, CAPI = 3402 |
| AG = 4, LG1 = 1, LG2 = 7, LG3 = 1-99, SPD1 = 1880, CAPI = 2464         | AG = 4, LG1 = 5, LG2 = 7, LG3 = 1-99, SPD1 = 2400, CAPI = 3969 |
| AG = 4, LG1 = 1, LG2 = 8, LG3 = 1-99, SPD1 = 1880, CAPI = 2816         | AG = 4, LG1 = 5, LG2 = 8, LG3 = 1-99, SPD1 = 2400, CAPI = 4536 |
| AG = 4, LG1 = 1, LG2 = 9, LG3 = 1-99, SPD1 = 1880, CAPI = 3168         | AG = 4, LG1 = 5, LG2 = 9, LG3 = 1-99, SPD1 = 2400, CAPI = 5103 |
| AG = 4, LG1 = 2, LG2 = 0, LG3 = 1-99, SPD1 = 1950                      | AG = 5, LG1 = 1, LG2 = 0, LG3 = 1-99, SPD1 = 1450              |
| AG = 4, LG1 = 2, LG2 = 1, LG3 = 1-99, SPD1 = 1950, CAPI = 368          | AG = 5, LG1 = 1, LG2 = 1, LG3 = 1-99, SPD1 = 1450, CAPI = 313  |
| AG = 4, LG1 = 2, LG2 = 2, LG3 = 1-99, SPD1 = 1950, CAPI = 736          | AG = 5, LG1 = 1, LG2 = 2, LG3 = 1-99, SPD1 = 1450, CAPI = 626  |
| AG = 4, LG1 = 2, LG2 = 3, LG3 = 1-99, SPD1 = 1950, CAPI = 1149         | AG = 5, LG1 = 1, LG2 = 3, LG3 = 1-99, SPD1 = 1450, CAPI = 975  |
| AG = 4, LG1 = 2, LG2 = 4, LG3 = 1-99, SPD1 = 1950, CAPI = 1580         | AG = 5, LG1 = 1, LG2 = 4, LG3 = 1-99, SPD1 = 1450, CAPI = 1340 |
| AG = 4, LG1 = 2, LG2 = 5, LG3 = 1-99, SPD1 = 1950, CAPI = 1975         | AG = 5, LG1 = 1, LG2 = 5, LG3 = 1-99, SPD1 = 1450, CAPI = 1675 |
| AG = 4, LG1 = 2, LG2 = 6, LG3 = 1-99, SPD1 = 1950, CAPI = 2370         | AG = 5, LG1 = 1, LG2 = 6, LG3 = 1-99, SPD1 = 1450, CAPI = 2010 |
| AG = 4, LG1 = 2, LG2 = 7, LG3 = 1-99, SPD1 = 1950, CAPI = 2765         | AG = 5, LG1 = 1, LG2 = 7, LG3 = 1-99, SPD1 = 1450, CAPI = 2345 |
| AG = 4, LG1 = 2, LG2 = 8, LG3 = 1-99, SPD1 = 1950, CAPI = 3160         | AG = 5, LG1 = 1, LG2 = 8, LG3 = 1-99, SPD1 = 1450, CAPI = 2680 |
| AG = 4, LG1 = 2, LG2 = 9, LG3 = 1-99, SPD1 = 1950, CAPI = 3555         | AG = 5, LG1 = 1, LG2 = 9, LG3 = 1-99, SPD1 = 1450, CAPI = 3015 |
| AG = 4, LG1 = 3, LG2 = 0, LG3 = 1-99, SPD1 = 2220                      | AG = 5, LG1 = 2, LG2 = 0, LG3 = 1-99, SPD1 = 1640              |
| AG = 4, LG1 = 3, LG2 = 1, LG3 = 1-99, SPD1 = 2220, CAPI = 407          | AG = 5, LG1 = 2, LG2 = 1, LG3 = 1-99, SPD1 = 1640, CAPI = 351  |
| AG = 4, LG1 = 3, LG2 = 2, LG3 = 1-99, SPD1 = 2220, CAPI = 814          | AG = 5, LG1 = 2, LG2 = 2, LG3 = 1-99, SPD1 = 1640, CAPI = 702  |
| AG = 4, LG1 = 3, LG2 = 3, LG3 = 1-99, SPD1 = 2220, CAPI = 1269         | AG = 5, LG1 = 2, LG2 = 3, LG3 = 1-99, SPD1 = 1640, CAPI = 1095 |
| AG = 4, LG1 = 3, LG2 = 4, LG3 = 1-99, SPD1 = 2220, CAPI = 1744         | AG = 5, LG1 = 2, LG2 = 4, LG3 = 1-99, SPD1 = 1640, CAPI = 1504 |
| AG = 4, LG1 = 3, LG2 = 5, LG3 = 1-99, SPD1 = 2220, CAPI = 2180         | AG = 5, LG1 = 2, LG2 = 5, LG3 = 1-99, SPD1 = 1640, CAPI = 1880 |
| AG = 4, LG1 = 3, LG2 = 6, LG3 = 1-99, SPD1 = 2220, CAPI = 2616         | AG = 5, LG1 = 2, LG2 = 6, LG3 = 1-99, SPD1 = 1640, CAPI = 2256 |
| AG = 4, LG1 = 3, LG2 = 7, LG3 = 1-99, SPD1 = 2220, CAPI = 3052         | AG = 5, LG1 = 2, LG2 = 7, LG3 = 1-99, SPD1 = 1640, CAPI = 2632 |
| AG = 4, LG1 = 3, LG2 = 8, LG3 = 1-99, SPD1 = 2220, CAPI = 3488         | AG = 5, LG1 = 2, LG2 = 8, LG3 = 1-99, SPD1 = 1640, CAPI = 3008 |
| AG = 4, LG1 = 3, LG2 = 9, LG3 = 1-99, SPD1 = 2220, CAPI = 3924         | AG = 5, LG1 = 2, LG2 = 9, LG3 = 1-99, SPD1 = 1640, CAPI = 3384 |
| AG = 4, LG1 = 4, LG2 = 0, LG3 = 1-99, SPD1 = 2310                      | AG = 5, LG1 = 3, LG2 = 0, LG3 = 1-99, SPD1 = 2000              |
| AG = 4, LG1 = 4, LG2 = 1, LG3 = 1-99, SPD1 = 2310, CAPI = 453          | AG = 5, LG1 = 3, LG2 = 1, LG3 = 1-99, SPD1 = 2000, CAPI = 341  |
| AG = 4, LG1 = 4, LG2 = 2, LG3 = 1-99, SPD1 = 2310, CAPI = 906          | AG = 5, LG1 = 3, LG2 = 2, LG3 = 1-99, SPD1 = 2000, CAPI = 682  |
| AG = 4, LG1 = 4, LG2 = 3, LG3 = 1-99, SPD1 = 2310, CAPI = 1413         | AG = 5, LG1 = 3, LG2 = 3, LG3 = 1-99, SPD1 = 2000, CAPI = 1065 |
| AG = 4, LG1 = 4, LG2 = 4, LG3 = 1-99, SPD1 = 2310, CAPI = 1940         | AG = 5, LG1 = 3, LG2 = 4, LG3 = 1-99, SPD1 = 2000, CAPI = 1464 |
| AG = 4, LG1 = 4, LG2 = 5, LG3 = 1-99, SPD1 = 2310, CAPI = 2425         | AG = 5, LG1 = 3, LG2 = 5, LG3 = 1-99, SPD1 = 2000, CAPI = 1830 |
| AG = 4, LG1 = 4, LG2 = 6, LG3 = 1-99, SPD1 = 2310, CAPI = 2910         | AG = 5, LG1 = 3, LG2 = 6, LG3 = 1-99, SPD1 = 2000, CAPI = 2196 |
| AG = 4, LG1 = 4, LG2 = 7, LG3 = 1-99, SPD1 = 2310, CAPI = 3395         | AG = 5, LG1 = 3, LG2 = 7, LG3 = 1-99, SPD1 = 2000, CAPI = 2562 |
| AG = 4, LG1 = 4, LG2 = 8, LG3 = 1-99, SPD1 = 2310, CAPI = 3880         | AG = 5, LG1 = 3, LG2 = 8, LG3 = 1-99, SPD1 = 2000, CAPI = 2928 |
| AG = 4, LG1 = 4, LG2 = 9, LG3 = 1-99, SPD1 = 2310, CAPI = 4365         | AG = 5, LG1 = 3, LG2 = 9, LG3 = 1-99, SPD1 = 2000, CAPI = 3294 |
| AG = 4, LG1 = 5, LG2 = 0, LG3 = 1-99, SPD1 = 2400                      | AG = 5, LG1 = 4, LG2 = 0, LG3 = 1-99, SPD1 = 2200              |
| AG = 4, LG1 = 5, LG2 = 1, LG3 = 1-99, SPD1 = 2400, CAPI = 529          | AG = 5, LG1 = 4, LG2 = 1, LG3 = 1-99, SPD1 = 2200, CAPI = 433  |

## Appendix B-2: Focused Peak-Hour Highway Network Speed-Capacity Look-up Table (Continued)

|  |  |
|--|--|
| AG = 5, LG1 = 4, LG2 = 2, LG3 = 1-99, SPD1 = 2200, CAPI = 866  | AG = 6, LG1 = 3, LG2 = 2, LG3 = 1-99, SPD1 = 2070, CAPI = 740  |
| AG = 5, LG1 = 4, LG2 = 3, LG3 = 1-99, SPD1 = 2200, CAPI = 1350 | AG = 6, LG1 = 3, LG2 = 3, LG3 = 1-99, SPD1 = 2070, CAPI = 1155 |
| AG = 5, LG1 = 4, LG2 = 4, LG3 = 1-99, SPD1 = 2200, CAPI = 1856 | AG = 6, LG1 = 3, LG2 = 4, LG3 = 1-99, SPD1 = 2070, CAPI = 1588 |
| AG = 5, LG1 = 4, LG2 = 5, LG3 = 1-99, SPD1 = 2200, CAPI = 2320 | AG = 6, LG1 = 3, LG2 = 5, LG3 = 1-99, SPD1 = 2070, CAPI = 1985 |
| AG = 5, LG1 = 4, LG2 = 6, LG3 = 1-99, SPD1 = 2200, CAPI = 2784 | AG = 6, LG1 = 3, LG2 = 6, LG3 = 1-99, SPD1 = 2070, CAPI = 2382 |
| AG = 5, LG1 = 4, LG2 = 7, LG3 = 1-99, SPD1 = 2200, CAPI = 3248 | AG = 6, LG1 = 3, LG2 = 7, LG3 = 1-99, SPD1 = 2070, CAPI = 2779 |
| AG = 5, LG1 = 4, LG2 = 8, LG3 = 1-99, SPD1 = 2200, CAPI = 3712 | AG = 6, LG1 = 3, LG2 = 8, LG3 = 1-99, SPD1 = 2070, CAPI = 3176 |
| AG = 5, LG1 = 4, LG2 = 9, LG3 = 1-99, SPD1 = 2200, CAPI = 4176 | AG = 6, LG1 = 3, LG2 = 9, LG3 = 1-99, SPD1 = 2070, CAPI = 3573 |
| AG = 5, LG1 = 5, LG2 = 1, LG3 = 1-99, SPD1 = 2400, CAPI = 503  | AG = 6, LG1 = 4, LG2 = 0, LG3 = 1-99, SPD1 = 2140              |
| AG = 5, LG1 = 5, LG2 = 0, LG3 = 1-99, SPD1 = 2400              | AG = 6, LG1 = 4, LG2 = 1, LG3 = 1-99, SPD1 = 2140, CAPI = 413  |
| AG = 5, LG1 = 5, LG2 = 2, LG3 = 1-99, SPD1 = 2400, CAPI = 1006 | AG = 6, LG1 = 4, LG2 = 2, LG3 = 1-99, SPD1 = 2140, CAPI = 826  |
| AG = 5, LG1 = 5, LG2 = 3, LG3 = 1-99, SPD1 = 2400, CAPI = 1569 | AG = 6, LG1 = 4, LG2 = 3, LG3 = 1-99, SPD1 = 2140, CAPI = 1287 |
| AG = 5, LG1 = 5, LG2 = 4, LG3 = 1-99, SPD1 = 2400, CAPI = 2156 | AG = 6, LG1 = 4, LG2 = 4, LG3 = 1-99, SPD1 = 2140, CAPI = 1768 |
| AG = 5, LG1 = 5, LG2 = 5, LG3 = 1-99, SPD1 = 2400, CAPI = 2695 | AG = 6, LG1 = 4, LG2 = 5, LG3 = 1-99, SPD1 = 2140, CAPI = 2210 |
| AG = 5, LG1 = 5, LG2 = 6, LG3 = 1-99, SPD1 = 2400, CAPI = 3234 | AG = 6, LG1 = 4, LG2 = 6, LG3 = 1-99, SPD1 = 2140, CAPI = 2652 |
| AG = 5, LG1 = 5, LG2 = 7, LG3 = 1-99, SPD1 = 2400, CAPI = 3773 | AG = 6, LG1 = 4, LG2 = 7, LG3 = 1-99, SPD1 = 2140, CAPI = 3094 |
| AG = 5, LG1 = 5, LG2 = 8, LG3 = 1-99, SPD1 = 2400, CAPI = 4312 | AG = 6, LG1 = 4, LG2 = 8, LG3 = 1-99, SPD1 = 2140, CAPI = 3536 |
| AG = 5, LG1 = 5, LG2 = 9, LG3 = 1-99, SPD1 = 2400, CAPI = 4851 | AG = 6, LG1 = 4, LG2 = 9, LG3 = 1-99, SPD1 = 2140, CAPI = 3978 |
| AG = 6, LG1 = 1, LG2 = 0, LG3 = 1-99, SPD1 = 1760              | AG = 6, LG1 = 5, LG2 = 0, LG3 = 1-99, SPD1 = 2220              |
| AG = 6, LG1 = 1, LG2 = 1, LG3 = 1-99, SPD1 = 1760, CAPI = 296  | AG = 6, LG1 = 5, LG2 = 1, LG3 = 1-99, SPD1 = 2220, CAPI = 481  |
| AG = 6, LG1 = 1, LG2 = 2, LG3 = 1-99, SPD1 = 1760, CAPI = 592  | AG = 6, LG1 = 5, LG2 = 2, LG3 = 1-99, SPD1 = 2220, CAPI = 962  |
| AG = 6, LG1 = 1, LG2 = 3, LG3 = 1-99, SPD1 = 1760, CAPI = 924  | AG = 6, LG1 = 5, LG2 = 3, LG3 = 1-99, SPD1 = 2220, CAPI = 1500 |
| AG = 6, LG1 = 1, LG2 = 4, LG3 = 1-99, SPD1 = 1760, CAPI = 1268 | AG = 6, LG1 = 5, LG2 = 4, LG3 = 1-99, SPD1 = 2220, CAPI = 2060 |
| AG = 6, LG1 = 1, LG2 = 5, LG3 = 1-99, SPD1 = 1760, CAPI = 1585 | AG = 6, LG1 = 5, LG2 = 5, LG3 = 1-99, SPD1 = 2220, CAPI = 2575 |
| AG = 6, LG1 = 1, LG2 = 6, LG3 = 1-99, SPD1 = 1760, CAPI = 1902 | AG = 6, LG1 = 5, LG2 = 6, LG3 = 1-99, SPD1 = 2220, CAPI = 3090 |
| AG = 6, LG1 = 1, LG2 = 7, LG3 = 1-99, SPD1 = 1760, CAPI = 2219 | AG = 6, LG1 = 5, LG2 = 7, LG3 = 1-99, SPD1 = 2220, CAPI = 3605 |
| AG = 6, LG1 = 1, LG2 = 8, LG3 = 1-99, SPD1 = 1760, CAPI = 2536 | AG = 6, LG1 = 5, LG2 = 8, LG3 = 1-99, SPD1 = 2220, CAPI = 4120 |
| AG = 6, LG1 = 1, LG2 = 9, LG3 = 1-99, SPD1 = 1760, CAPI = 2833 | AG = 6, LG1 = 5, LG2 = 9, LG3 = 1-99, SPD1 = 2220, CAPI = 4635 |
| AG = 6, LG1 = 2, LG2 = 0, LG3 = 1-99, SPD1 = 1820              | AG = 8, LG1 = 1, LG2 = 0, LG3 = 1-99, SPD1 = 1450              |
| AG = 6, LG1 = 2, LG2 = 1, LG3 = 1-99, SPD1 = 1820, CAPI = 333  | AG = 8, LG1 = 1, LG2 = 1, LG3 = 1-99, SPD1 = 1450, CAPI = 313  |
| AG = 6, LG1 = 2, LG2 = 2, LG3 = 1-99, SPD1 = 1820, CAPI = 666  | AG = 8, LG1 = 1, LG2 = 2, LG3 = 1-99, SPD1 = 1450, CAPI = 626  |
| AG = 6, LG1 = 2, LG2 = 3, LG3 = 1-99, SPD1 = 1820, CAPI = 1038 | AG = 8, LG1 = 1, LG2 = 3, LG3 = 1-99, SPD1 = 1450, CAPI = 975  |
| AG = 6, LG1 = 2, LG2 = 4, LG3 = 1-99, SPD1 = 1820, CAPI = 1424 | AG = 8, LG1 = 1, LG2 = 4, LG3 = 1-99, SPD1 = 1450, CAPI = 1340 |
| AG = 6, LG1 = 2, LG2 = 5, LG3 = 1-99, SPD1 = 1820, CAPI = 1780 | AG = 8, LG1 = 1, LG2 = 5, LG3 = 1-99, SPD1 = 1450, CAPI = 1675 |
| AG = 6, LG1 = 2, LG2 = 6, LG3 = 1-99, SPD1 = 1820, CAPI = 2136 | AG = 8, LG1 = 1, LG2 = 6, LG3 = 1-99, SPD1 = 1450, CAPI = 2010 |
| AG = 6, LG1 = 2, LG2 = 7, LG3 = 1-99, SPD1 = 1820, CAPI = 2492 | AG = 8, LG1 = 1, LG2 = 7, LG3 = 1-99, SPD1 = 1450, CAPI = 2345 |
| AG = 6, LG1 = 2, LG2 = 8, LG3 = 1-99, SPD1 = 1820, CAPI = 2848 | AG = 8, LG1 = 1, LG2 = 8, LG3 = 1-99, SPD1 = 1450, CAPI = 2680 |
| AG = 6, LG1 = 2, LG2 = 9, LG3 = 1-99, SPD1 = 1820, CAPI = 3204 | AG = 8, LG1 = 1, LG2 = 9, LG3 = 1-99, SPD1 = 1450, CAPI = 3015 |
| AG = 6, LG1 = 3, LG2 = 0, LG3 = 1-99, SPD1 = 2070              | AG = 8, LG1 = 2, LG2 = 0, LG3 = 1-99, SPD1 = 1640              |
| AG = 6, LG1 = 3, LG2 = 1, LG3 = 1-99, SPD1 = 2070, CAPI = 370  | AG = 8, LG1 = 2, LG2 = 1, LG3 = 1-99, SPD1 = 1640, CAPI = 351  |

## Appendix B-2: Focused Peak-Hour Highway Network Speed-Capacity Look-up Table (Continued)

|  |
|--|
| AG = 8, LG1 = 2, LG2 = 2, LG3 = 1-99, SPD1 = 1640, CAP1 = 702  |
| AG = 8, LG1 = 2, LG2 = 3, LG3 = 1-99, SPD1 = 1640, CAP1 = 1095 |
| AG = 8, LG1 = 2, LG2 = 4, LG3 = 1-99, SPD1 = 1640, CAP1 = 1504 |
| AG = 8, LG1 = 2, LG2 = 5, LG3 = 1-99, SPD1 = 1640, CAP1 = 1880 |
| AG = 8, LG1 = 2, LG2 = 6, LG3 = 1-99, SPD1 = 1640, CAP1 = 2256 |
| AG = 8, LG1 = 2, LG2 = 7, LG3 = 1-99, SPD1 = 1640, CAP1 = 2632 |
| AG = 8, LG1 = 2, LG2 = 8, LG3 = 1-99, SPD1 = 1640, CAP1 = 3008 |
| AG = 8, LG1 = 2, LG2 = 9, LG3 = 1-99, SPD1 = 1640, CAP1 = 3384 |
| AG = 8, LG1 = 3, LG2 = 0, LG3 = 1-99, SPD1 = 2000              |
| AG = 8, LG1 = 3, LG2 = 1, LG3 = 1-99, SPD1 = 2000, CAP1 = 341  |
| AG = 8, LG1 = 3, LG2 = 2, LG3 = 1-99, SPD1 = 2000, CAP1 = 682  |
| AG = 8, LG1 = 3, LG2 = 3, LG3 = 1-99, SPD1 = 2000, CAP1 = 1065 |
| AG = 8, LG1 = 3, LG2 = 4, LG3 = 1-99, SPD1 = 2000, CAP1 = 1464 |
| AG = 8, LG1 = 3, LG2 = 5, LG3 = 1-99, SPD1 = 2000, CAP1 = 1830 |
| AG = 8, LG1 = 3, LG2 = 6, LG3 = 1-99, SPD1 = 2000, CAP1 = 2196 |
| AG = 8, LG1 = 3, LG2 = 7, LG3 = 1-99, SPD1 = 2000, CAP1 = 2562 |
| AG = 8, LG1 = 3, LG2 = 8, LG3 = 1-99, SPD1 = 2000, CAP1 = 2928 |
| AG = 8, LG1 = 3, LG2 = 9, LG3 = 1-99, SPD1 = 2000, CAP1 = 3294 |
| AG = 8, LG1 = 4, LG2 = 0, LG3 = 1-99, SPD1 = 2200              |
| AG = 8, LG1 = 4, LG2 = 1, LG3 = 1-99, SPD1 = 2200, CAP1 = 433  |
| AG = 8, LG1 = 4, LG2 = 2, LG3 = 1-99, SPD1 = 2200, CAP1 = 866  |
| AG = 8, LG1 = 4, LG2 = 3, LG3 = 1-99, SPD1 = 2200, CAP1 = 1350 |
| AG = 8, LG1 = 4, LG2 = 4, LG3 = 1-99, SPD1 = 2200, CAP1 = 1856 |
| AG = 8, LG1 = 4, LG2 = 5, LG3 = 1-99, SPD1 = 2200, CAP1 = 2320 |
| AG = 8, LG1 = 4, LG2 = 6, LG3 = 1-99, SPD1 = 2200, CAP1 = 2784 |
| AG = 8, LG1 = 4, LG2 = 7, LG3 = 1-99, SPD1 = 2200, CAP1 = 3248 |
| AG = 8, LG1 = 4, LG2 = 8, LG3 = 1-99, SPD1 = 2200, CAP1 = 3712 |
| AG = 8, LG1 = 4, LG2 = 9, LG3 = 1-99, SPD1 = 2200, CAP1 = 4176 |
| AG = 8, LG1 = 5, LG2 = 0, LG3 = 1-99, SPD1 = 2400              |
| AG = 8, LG1 = 5, LG2 = 1, LG3 = 1-99, SPD1 = 2400, CAP1 = 503  |
| AG = 8, LG1 = 5, LG2 = 2, LG3 = 1-99, SPD1 = 2400, CAP1 = 1006 |
| AG = 8, LG1 = 5, LG2 = 3, LG3 = 1-99, SPD1 = 2400, CAP1 = 1569 |
| AG = 8, LG1 = 5, LG2 = 4, LG3 = 1-99, SPD1 = 2400, CAP1 = 2156 |
| AG = 8, LG1 = 5, LG2 = 5, LG3 = 1-99, SPD1 = 2400, CAP1 = 2695 |
| AG = 8, LG1 = 5, LG2 = 6, LG3 = 1-99, SPD1 = 2400, CAP1 = 3234 |
| AG = 8, LG1 = 5, LG2 = 7, LG3 = 1-99, SPD1 = 2400, CAP1 = 3773 |
| AG = 8, LG1 = 5, LG2 = 8, LG3 = 1-99, SPD1 = 2400, CAP1 = 4312 |
| AG = 8, LG1 = 5, LG2 = 9, LG3 = 1-99, SPD1 = 2400, CAP1 = 4851 |



## **APPENDIX C**

### **FACILITIES INCLUDED IN THE 1996 TRANSIT NETWORK**



## Appendix C: Facilities Included in the 1996 Transit Network

| <u>Route</u>                | <u>Mode</u> | <u>Line Card</u> | <u>Route</u> | <u>Mode</u> | <u>Line Card</u> |
|-----------------------------|-------------|------------------|--------------|-------------|------------------|
| SEPTA City Transit Division |             |                  | 12           | 4           | 46               |
|                             |             |                  | 13           | 4           | 47               |
| C                           | 4           | 1                | 13           | 4           | 48               |
| C                           | 4           | 2                | 14           | 4           | 49               |
| C                           | 4           | 3                | 14           | 4           | 50               |
| C                           | 4           | 4                | 14           | 4           | 51               |
| G                           | 4           | 5                | 14           | 4           | 52               |
| G                           | 4           | 6                | 15           | 4           | 53               |
| G                           | 4           | 7                | 16           | 4           | 54               |
| G                           | 4           | 8                | 16           | 4           | 55               |
| H                           | 4           | 9                | 17           | 4           | 56               |
| XH                          | 4           | 10               | 17           | 4           | 57               |
| J                           | 4           | 11               | 18           | 4           | 58               |
| J                           | 4           | 12               | 18           | 4           | 59               |
| K                           | 4           | 13               | 18           | 4           | 60               |
| K                           | 4           | 14               | 18           | 4           | 61               |
| K                           | 4           | 15               | 18           | 4           | 62               |
| L                           | 4           | 16               | 18           | 4           | 63               |
| L                           | 4           | 17               | 18           | 4           | 64               |
| L                           | 4           | 18               | 18           | 4           | 65               |
| L                           | 4           | 19               | 19           | 4           | 66               |
| L                           | 4           | 20               | 19           | 4           | 67               |
| P                           | 4           | 21               | 20           | 4           | 68               |
| P                           | 4           | 22               | 20           | 4           | 69               |
| R                           | 4           | 23               | 20           | 4           | 70               |
| R                           | 4           | 24               | 20           | 4           | 71               |
| R                           | 4           | 25               | 21           | 4           | 72               |
| U                           | 4           | 26               | 21           | 4           | 73               |
| X                           | 4           | 27               | 21           | 4           | 74               |
| FCNS                        | 4           | 28               | 21           | 4           | 75               |
| 1                           | 4           | 29               | 22           | 4           | 76               |
| 1                           | 4           | 30               | 22           | 4           | 77               |
| 1                           | 4           | 31               | 23           | 4           | 78               |
| 1                           | 4           | 32               | 23           | 4           | 79               |
| 2                           | 4           | 33               | 24           | 4           | 80               |
| 3                           | 4           | 34               | 24           | 4           | 81               |
| 4                           | 4           | 35               | 25           | 4           | 82               |
| 5                           | 4           | 36               | 25           | 4           | 83               |
| 5                           | 4           | 37               | 25           | 4           | 84               |
| 6                           | 4           | 38               | 26           | 4           | 85               |
| 7                           | 4           | 39               | 26           | 4           | 86               |
| 7                           | 4           | 40               | 26           | 4           | 87               |
| 8                           | 4           | 41               | 27           | 4           | 88               |
| 9                           | 4           | 42               | 27           | 4           | 89               |
| 9                           | 4           | 43               | 27           | 4           | 90               |
| 10                          | 4           | 44               | 27           | 4           | 91               |
| 11                          | 4           | 45               | 27           | 4           | 92               |

(Continued)

| <u>Route</u> | <u>Mode</u> | <u>Line Card</u> | <u>Route</u> | <u>Mode</u> | <u>Line Card</u> |
|--------------|-------------|------------------|--------------|-------------|------------------|
| 28           | 4           | 93               | 61           | 4           | 141              |
| 29           | 4           | 94               | 61           | 4           | 142              |
| 30           | 4           | 95               | 61           | 4           | 143              |
| 31           | 4           | 96               | 61           | 4           | 144              |
| 31           | 4           | 97               | 61           | 4           | 145              |
| 32           | 4           | 98               | 63           | 4           | 146              |
| 32           | 4           | 99               | 64           | 4           | 147              |
| 32           | 4           | 100              | 65           | 4           | 148              |
| 33           | 4           | 101              | 65           | 4           | 149              |
| 34           | 4           | 102              | 66           | 4           | 150              |
| 35           | 4           | 103              | 66           | 4           | 151              |
| 36           | 4           | 104              | 66           | 4           | 152              |
| 37           | 4           | 105              | 66           | 4           | 153              |
| 37           | 4           | 106              | 66           | 4           | 154              |
| 37           | 4           | 107              | 66           | 4           | 155              |
| 38           | 4           | 108              | 66           | 4           | 156              |
| 38           | 4           | 109              | 67           | 4           | 157              |
| 38           | 4           | 110              | 67           | 4           | 158              |
| 38           | 4           | 111              | 68           | 4           | 159              |
| 39           | 4           | 112              | 69           | 4           | 160              |
| 41           | 4           | 113              | 70           | 4           | 161              |
| 42           | 4           | 114              | 70           | 4           | 162              |
| 43           | 4           | 115              | 70           | 4           | 163              |
| 44           | 4           | 116              | 70           | 4           | 164              |
| 44           | 4           | 117              | 73           | 4           | 165              |
| 46           | 4           | 118              | 75           | 4           | 166              |
| 46           | 4           | 119              | 79           | 4           | 167              |
| 47           | 4           | 120              | 81           | 4           | 168              |
| 47           | 4           | 121              | 84           | 4           | 169              |
| 48           | 4           | 122              | 84           | 4           | 170              |
| 50           | 4           | 123              | 84           | 4           | 171              |
| 52           | 4           | 124              | 84           | 4           | 172              |
| 53           | 4           | 125              | 85           | 4           | 173              |
| 54           | 4           | 126              | 88           | 4           | 174              |
| 55           | 4           | 127              | 88           | 4           | 175              |
| 55           | 4           | 128              | 88           | 4           | 176              |
| 55           | 4           | 129              | 88           | 4           | 177              |
| 55           | 4           | 130              | 89           | 4           | 178              |
| 56           | 4           | 131              | 90           | 4           | 179              |
| 58           | 4           | 132              | 121          | 4           | 226              |
| 58           | 4           | 133              | 121          | 4           | 227              |
| 58           | 4           | 134              | 121          | 4           | 228              |
| 58           | 4           | 135              | BSS          | 6           | 239              |
| 58           | 4           | 136              | BSS          | 6           | 240              |
| 58           | 4           | 137              | BSS          | 6           | 241              |
| 58           | 4           | 138              | MFSE         | 6           | 242              |
| 59           | 4           | 139              | MFSE         | 6           | 243              |
| 60           | 4           | 140              |              |             |                  |

(Continued)

| <u>Route</u>                    | <u>Mode</u> | <u>Line Card</u> | <u>Route</u>                        | <u>Mode</u> | <u>Line Card</u> |
|---------------------------------|-------------|------------------|-------------------------------------|-------------|------------------|
| SEPTA Suburban Transit Division |             |                  | 95                                  | 4           | 188              |
|                                 |             |                  | 96                                  | 4           | 189              |
| 101                             | 4           | 193              | 97                                  | 4           | 190              |
| 101                             | 4           | 194              | 99                                  | 4           | 191              |
| 102                             | 4           | 195              | 99                                  | 4           | 192              |
| 102                             | 4           | 196              | 124                                 | 4           | 230              |
| 103                             | 4           | 197              | 125                                 | 4           | 231              |
| 104                             | 4           | 198              | 127                                 | 4           | 232              |
| 104                             | 4           | 199              | 127                                 | 4           | 233              |
| 104                             | 4           | 200              | 127                                 | 4           | 234              |
| 104                             | 4           | 201              | 128                                 | 4           | 235              |
| 105                             | 4           | 202              | 129                                 | 4           | 236              |
| 105                             | 4           | 203              | 130                                 | 4           | 237              |
| 106                             | 4           | 204              |                                     |             |                  |
| 106                             | 4           | 205              |                                     |             |                  |
| 107                             | 4           | 206              | NJ Transit Mercer Division          |             |                  |
| 107                             | 4           | 207              | 601                                 | 5           | 70               |
| 108                             | 4           | 208              | 601                                 | 5           | 71               |
| 109                             | 4           | 209              | 601                                 | 5           | 72               |
| 110                             | 4           | 210              | 604                                 | 5           | 73               |
| 110                             | 4           | 211              | 604                                 | 5           | 74               |
| 110                             | 4           | 212              | 604                                 | 5           | 75               |
| 111                             | 4           | 213              | 604                                 | 5           | 76               |
| 111                             | 4           | 214              | 605                                 | 5           | 77               |
| 111                             | 4           | 215              | 606                                 | 5           | 78               |
| 112                             | 4           | 216              | 606                                 | 5           | 79               |
| 112                             | 4           | 217              | 606                                 | 5           | 80               |
| 112                             | 4           | 218              | 606                                 | 5           | 81               |
| 113                             | 4           | 219              | 606                                 | 5           | 82               |
| 113                             | 4           | 220              | 607                                 | 5           | 83               |
| 114                             | 4           | 221              | 607                                 | 5           | 84               |
| 115                             | 4           | 222              | 608                                 | 5           | 85               |
| 118                             | 4           | 223              | 608                                 | 5           | 86               |
| 118                             | 4           | 224              | 608                                 | 5           | 87               |
| 120                             | 4           | 225              | 609                                 | 5           | 88               |
| NHSL                            | 6           | 238              | 609                                 | 5           | 89               |
|                                 |             |                  | 609                                 | 5           | 90               |
|                                 |             |                  | 609                                 | 5           | 91               |
| SEPTA Frontier Transit          |             |                  |                                     |             |                  |
| 91                              | 4           | 180              | NJ Transit (Except Mercer Division) |             |                  |
| 92                              | 4           | 181              | 313/315                             | 5           | 1                |
| 93                              | 4           | 182              | 313/315                             | 5           | 2                |
| 94                              | 4           | 183              | 317                                 | 5           | 3                |
| 94                              | 4           | 184              | 400                                 | 5           | 4                |
| 94                              | 4           | 185              | 400                                 | 5           | 5                |
| 95                              | 4           | 186              |                                     |             |                  |
| 95                              | 4           | 187              |                                     |             |                  |

| <u>Route</u> | <u>Mode</u> | <u>Line Card</u> | <u>Route</u>                 | <u>Mode</u> | <u>Line Card</u> |
|--------------|-------------|------------------|------------------------------|-------------|------------------|
| 400          | 5           | 6                | 457                          | 5           | 55               |
| 400          | 5           | 7                | 458                          | 5           | 56               |
| 400          | 5           | 8                | 459                          | 5           | 57               |
| 400          | 5           | 9                | 551/555                      | 5           | 58               |
| 401          | 5           | 10               | 554                          | 5           | 59               |
| 401          | 5           | 11               |                              |             |                  |
| 401          | 5           | 12               |                              |             |                  |
| 402          | 5           | 13               |                              |             |                  |
| 402          | 5           | 14               | Delaware Port Authority      |             |                  |
| 402          | 5           | 15               |                              |             |                  |
| 403          | 5           | 16               | Lindenwold                   | 8           | 141              |
| 403          | 5           | 17               | Woodcrest                    | 8           | 142              |
| 403          | 5           | 18               |                              |             |                  |
| 403          | 5           | 19               |                              |             |                  |
| 404          | 5           | 20               | AMTRAK                       |             |                  |
| 404          | 5           | 21               |                              |             |                  |
| 406          | 5           | 22               | AMTRAK                       | 7           | 55               |
| 406          | 5           | 23               |                              |             |                  |
| 406          | 5           | 24               |                              |             |                  |
| 406          | 5           | 25               | SEPTA Regional Rail Division |             |                  |
| 407          | 5           | 26               |                              |             |                  |
| 407          | 5           | 27               | R3                           | 7           | 1                |
| 407          | 5           | 28               | R3                           | 7           | 2                |
| 408          | 5           | 29               | R3                           | 7           | 3                |
| 408          | 5           | 30               | R3                           | 7           | 4                |
| 408          | 5           | 31               | R3                           | 7           | 5                |
| 409          | 5           | 32               | R3                           | 7           | 6                |
| 409          | 5           | 33               | R6                           | 7           | 12               |
| 409          | 5           | 34               | R6                           | 7           | 13               |
| 409          | 5           | 35               | R6                           | 7           | 14               |
| 410          | 5           | 36               | R6                           | 7           | 15               |
| 410          | 5           | 37               | R6                           | 7           | 16               |
| 412          | 5           | 38               | R6                           | 7           | 17               |
| 412          | 5           | 39               | R2                           | 7           | 18               |
| 413          | 5           | 40               | R2                           | 7           | 19               |
| 419          | 5           | 42               | R2                           | 7           | 20               |
| 419          | 5           | 43               | R2                           | 7           | 21               |
| 450          | 5           | 44               | R2                           | 7           | 22               |
| 450          | 5           | 45               | R7                           | 7           | 23               |
| 451          | 5           | 46               | R7                           | 7           | 24               |
| 452          | 5           | 47               | R7                           | 7           | 26               |
| 453          | 5           | 48               | R7                           | 7           | 27               |
| 454          | 5           | 49               | R8                           | 7           | 29               |
| 454          | 5           | 50               | R8                           | 7           | 30               |
| 455          | 5           | 51               | R8                           | 7           | 31               |
| 456          | 5           | 52               | R8                           | 7           | 32               |
| 456          | 5           | 53               | R8                           | 7           | 33               |
| 457          | 5           | 54               | R8                           | 7           | 34               |

*(Continued)*

| <u>Route</u> | <u>Mode</u> | <u>Line Card</u> | <u>Route</u> | <u>Mode</u> | <u>Line Card</u> |
|--------------|-------------|------------------|--------------|-------------|------------------|
| R1           | 7           | 35               |              |             |                  |
| R5           | 7           | 36               |              |             |                  |
| R5           | 7           | 37               |              |             |                  |
| R5           | 7           | 40               |              |             |                  |
| R5           | 7           | 42               |              |             |                  |
| R5           | 7           | 43               |              |             |                  |
| R5           | 7           | 44               |              |             |                  |





## **APPENDIX D**

### **YEAR 1996 DAILY TRAFFIC AT CORDON LINE STATIONS**



## Appendix D: Year 1996 Daily Traffic at Cordon Line Stations

| Station No.     | TAZ  | Description  | 1990 ADT | 1996 Forecast |           |           |               |  |
|-----------------|------|--|----------|---------------|-----------|-----------|---------------|--|
|                 |      |  |          | ADT           | Thru Trip | % of Thru | External Trip |  |
| PENNSYLVANIA    |      |  |          |               |           |           |               |  |
| Delaware County |      |  |          |               |           |           |               |  |
| 1               | 1336 | Post Rd (US 13) at Delaware State Line, Marcus Hook Borough                                      | 6,877    | 8,083         | 162       | 2%        | 7,921         |  |
| 2               | 1337 | Ridge Rd at Delaware State Line, Chichester Township   | 6,933    | 7,911         | 79        | 1%        | 7,832         |  |
| 3               | 1338 | Naamans Creek Rd (PA 491) at Delaware Line, Lower Chichester Township                            | 5,417    | 5,999         | 60        | 1%        | 5,939         |  |
| 4               | 1339 | Interstate 95 between PA 491 and Delaware State Line, Lower Chichester Township                  | 74,365   | 83,334        | 5,889     | 7%        | 77,445        |  |
| 5               | 1340 | Carpenter Rd between Naamanwood Dr and Delaware State Line, Upper Chichester Township            | 4,922    | 5,263         | 53        | 1%        | 5,210         |  |
| 6               | 1341 | Foulk Rd (PA 261) between Zebley Rd and Delaware State Line, Bethel Township                     | 8,043    | 9,765         | 195       | 2%        | 9,570         |  |
| 7               | 1342 | Wilmington-West Chester Pike (US 202) between Pyle Rd and Delaware State Line, Bethel Township   | 37,635   | 43,332        | 4,998     | 12%       | 38,335        |  |
| 8               | 1343 | Beaver Valley Rd north of Delaware State Line, Birmingham Township                               | 4,240    | 4,763         | 48        | 1%        | 4,715         |  |
| 9               | 1344 | Smith Bridge Rd between Ridge Rd and Delaware State Line, Birmingham Township                    | 1,184    | 1,375         | 14        | 1%        | 1,361         |  |
| Chester County  |      |  |          |               |           |           |               |  |
| 10              | 1345 | Ridge Rd between Rocky Hill Rd and Smith Bridge Rd, Birmingham Township                          | 1,140    | 1,556         | 16        | 1%        | 1,540         |  |
| 11              | 1346 | Chadds Ford Rd (PA 100 [Brookfield-Cossart Rd]) north of Delaware State Line, Pennsbury Township | 2,188    | 2,618         | 26        | 1%        | 2,592         |  |
| 12              | 1347 | Kennett Pike (PA 52) between Rain Tree Rd and Delaware State Line, Pennsbury Township            | 11,237   | 13,040        | 1,339     | 10%       | 11,702        |  |
| 13              | 1348 | Old Kennett Rd between Ashland Dr and Delaware State Line, Kennett Township                      | 1,462    | 1,739         | 17        | 1%        | 1,721         |  |
| 14              | 1349 | Creek Rd (PA 82) north of Delaware State Line, Kennett Township                                  | 758      | 983           | 10        | 1%        | 973           |  |

(Continued)

| Station No. | TAZ  | Description  | 1990 ADT | 1996 Forecast |           |           |               |
|-------------|------|--|----------|---------------|-----------|-----------|---------------|
|             |      |  |          | ADT           | Thru Trip | % of Thru | External Trip |
| 15          | 1350 | Newport-Lancaster Pike (PA 41) between Kaolin Rd and Delaware State Line, Kennett Township                                       | 16,340   | 18,783        | 5,735     | 31 %      | 13,048        |
| 16          | 1351 | Limestone Rd between Southwood Rd and Chester Co Line, New Garden Township   | 9,128    | 10,561        | 2,640     | 25 %      | 7,920         |
| 17          | 1352 | New London Rd (PA 896) between Morgan Hollow Way and Elbow Lane, London-Britain Township   | 7,973    | 9,100         | 1,365     | 15 %      | 7,735         |
| 18          | 1353 | Lewisville-Chesterville Rd (PA 841 [Westgrove-Lewisville Rd]) between Oxford-Lewisville Rd and Maryland State Line, Elk Township | 2,551    | 2,937         | 587       | 20 %      | 2,350         |
| 19          | 1354 | Chrome-Calvert Rd (PA 272) between Greenhouse Rd and Maryland State Line, East Nottingham Township                               | 4,677    | 5,190         | 1,297     | 25 %      | 3,892         |
| 20          | 1355 | Baltimore Pike (US 1) between West Ridge Rd and Maryland State Line, West Nottingham Township                                    | 7,555    | 10,074        | 1,263     | 13 %      | 8,811         |
| 21          | 1356 | Christine Rd (PA 272) between Glenroy Rd and Chester Co Line, West Nottingham Township   | 2,930    | 3,855         | 964       | 25 %      | 2,892         |
| 22          | 1357 | Forge Rd between Street Rd and Chester Co Line, Lower Oxford Township  | 642      | 737           | 7         | 1 %       | 730           |
| 23          | 1358 | Lancaster Pike (PA 472) between Street Rd and Chester Co Line, Lower Oxford Township   | 4,120    | 4,835         | 1,450     | 30 %      | 3,384         |
| 24          | 1359 | Newark Rd (PA 896) between Homeville Rd and Chester Co Line, Upper Oxford Township   | 1,658    | 2,043         | 613       | 30 %      | 1,430         |
| 25          | 1360 | Valley Ave (PA 372) west of railroad overpass and Chester Co Line, West Sadsbury Township  | 2,037    | 2,507         | 50        | 2 %       | 2,457         |
| 26          | 1361 | Newport-Lancaster Pike (PA 41) between Zook Rd and Chester Co Line, West Sadsbury Township                                       | 11,738   | 13,941        | 4,257     | 31 %      | 9,684         |
| 27          | 1362 | Lincoln Hwy (US 30) between Newlin Lane and Chester Co Line, West Sadsbury Township  | 13,300   | 15,087        | 945       | 6 %       | 14,141        |
| 28          | 1363 | Philadelphia Pike (PA 340) between Compass Rd (PA 10) and Chester Co Line, West Cain Township                                    | 3,135    | 3,739         | 299       | 8 %       | 3,440         |

(Continued)

| Station No.              | TAZ  | Description   | 1990 ADT | 1996 Forecast |           |           |               |
|--------------------------|------|---|----------|---------------|-----------|-----------|---------------|
|                          |      |   |          | ADT           | Thru Trip | % of Thru | External Trip |
| 29                       | 1364 | Beaver Dam Rd between Cambridge Rd and Chester Co Line, Honey Brook Township                    | 970      | 1,058         | 11        | 1%        | 1,047         |
| 30                       | 1365 | White Horse Pike (US 322) between Mill Rd and Chester Co Line, Honey Brook Township             | 6,439    | 7,762         | 466       | 6%        | 7,296         |
| 31                       | 1366 | Conestoga Ave (PA 10) between Reservoir Rd and Chester Co Line, Honey Brook Township            | 6,555    | 7,687         | 769       | 10%       | 6,918         |
| 32                       | 1367 | Morgantown Rd between Taborville Rd and Chester Co Line, Honey Brook Township                   | 1,197    | 1,251         | 25        | 2%        | 1,226         |
| 33                       | 1368 | Pennsylvania Turnpike (I-76) between Downingtown, Interchange 23 and Morgantown, Interchange 22 | 30,059   | 34,043        | 7,331     | 22%       | 26,713        |
| 34                       | 1369 | Main St/Conestoga Rd (PA 23/PA 401) west of intersection in Berks Co                            | 10,070   | 11,918        | 953       | 8%        | 10,965        |
| 35                       | 1370 | Pine Swamp Rd (PA 345) between Laurel Rd and Chester Co Line, Warwick Township                  | 7,373    | 7,727         | 155       | 2%        | 7,572         |
| 36                       | 1371 | Water St (PA 82) west of intersection with Park Ave in Berks Co                                 | 756      | 954           | 57        | 6%        | 897           |
| 37                       | 1372 | Unionville Rd between Temple Rd and Chester Co Line, North Coventry Township                    | 1,132    | 1,310         | 13        | 1%        | 1,297         |
| 38                       | 1373 | Schuylkill Rd (PA 724) east of Berks Co Line, North Coventry Township                           | 4,502    | 5,275         | 172       | 3%        | 5,102         |
| <i>Montgomery County</i> |      |   |          |               |           |           |               |
| 39                       | 1374 | Pottstown Bypass (US 422) east of Berks Co Line, West Pottsgrove Township                       | 23,127   | 26,560        | 1,399     | 5%        | 25,161        |
| 40                       | 1375 | High St (Benjamin Franklin Hwy) east of Berks Co Line, West Pottsgrove Township                 | 10,880   | 11,392        | 456       | 4%        | 10,936        |
| 41                       | 1376 | Manatawny St between Grosstown Rd and Montgomery Co Line, West Pottsgrove Township              | 2,439    | 2,589         | 26        | 1%        | 2,563         |
| 42                       | 1377 | Farmington Rd between Gross Rd and Montgomery Co Line, Upper Pottsgrove Township                | 3,608    | 3,819         | 191       | 5%        | 3,628         |
| 43                       | 1378 | East Philadelphia Ave (PA 73) between PA 100 and Bartmen Ave, Douglass Township                 | 13,213   | 14,010        | 981       | 7%        | 13,029        |

(Continued)

| Station No.         | TAZ  | Description  | 1990 ADT | 1996 Forecast |           |           |               |
|---------------------|------|--|----------|---------------|-----------|-----------|---------------|
|                     |      |  |          | ADT           | Thru Trip | % of Thru | External Trip |
| 44                  | 1379 | PA 100 between PA 73 and Montgomery Co. Line, Douglass Township  | 20,300   | 22,620        | 2,262     | 10%       | 20,358        |
| 45                  | 1380 | Hoffmansville Rd between Miller Rd and Montgomery Co Line, Douglass Township   | 1,826    | 2,032         | 20        | 1%        | 2,012         |
| 46                  | 1381 | Niantic Rd between Miller Rd and Montgomery Co Line, Douglass Township   | 1,418    | 1,787         | 18        | 1%        | 1,769         |
| 47                  | 1382 | Philadelphia and Kutztown Rd between Bethesda Church Rd and Montgomery Co. Line, Upper Hanover Township  | 895      | 1,003         | 10        | 1%        | 993           |
| 48                  | 1383 | Gravel Pike (PA 29) between Stauffer Rd and Montgomery Co Line, Upper Hanover Township   | 11,289   | 13,079        | 392       | 3%        | 12,686        |
| <i>Bucks County</i> |      |  |          |               |           |           |               |
| 49                  | 1384 | PA Turnpike Northeast Ext (PA 9) between Quakertown, Interchange 32 and Lehigh Valley, Interchange 33, just north of Bucks Co Line, Milford Township | 24,443   | 26,992        | 4,463     | 17%       | 22,529        |
| 50                  | 1385 | Allentown Rd between Grant Rd and Bucks Co Line, Milford Township  | 1,652    | 1,958         | 20        | 1%        | 1,939         |
| 51                  | 1386 | Old Bethlehem Pike between Blue Church Rd and Bucks Co Line, Springfield Township  | 3,472    | 3,853         | 39        | 1%        | 3,814         |
| 52                  | 1387 | Bethlehem Pike (PA 309) between Springfield St and Bucks Co Line, Springfield Township   | 29,025   | 30,885        | 927       | 3%        | 29,958        |
| 53                  | 1388 | State Rd between Tumblebrook Rd and Bucks Co Line, Springfield Township  | 1,398    | 1,639         | 82        | 5%        | 1,557         |
| 54                  | 1389 | Richardstown Pike between Highpoint Rd and Bucks Co Line, Springfield Township   | 2,834    | 3,172         | 190       | 6%        | 2,981         |
| 55                  | 1390 | Hellertown Rd (PA 412) between Highpoint Rd and Bucks Co Line, Springfield Township  | 4,351    | 5,004         | 514       | 10%       | 4,490         |
| 56                  | 1391 | Easton Rd (PA 611) between Spring Hill and Bucks Co Line, Riegelsville Borough   | 5,648    | 6,435         | 1,562     | 24%       | 4,874         |
| 57                  | 1392 | Riegelsville Bridge across Delaware River, Riegelsville Borough  | 2,867    | 3,436         | 344       | 10%       | 3,092         |
| 58                  | 1393 | Milford-Upper Black Eddy Bridge across Delaware River, Bridgeton Township  | 4,175    | 4,368         | 874       | 20%       | 3,495         |

(Continued)

| Station No.         | TAZ  | Description   | 1990 ADT | 1996 Forecast |           |           |               |
|---------------------|------|---|----------|---------------|-----------|-----------|---------------|
|                     |      |   |          | ADT           | Thru Trip | % of Thru | External Trip |
| 59                  | 1394 | Frenchtown-Uhlerstown Bridge across Delaware River, Tinicum Township              | 4,231    | 4,489         | 673       | 15 %      | 3,816         |
| 60                  | 1395 | Stockton-Centre Bridge across Delaware River, Solebury Township                   | 4,138    | 4,581         | 458       | 10 %      | 4,123         |
| 61                  | 1396 | New Hope-Lambertville Toll Bridge (US-202) over Delaware River, Solebury Township | 8,293    | 10,215        | 334       | 3 %       | 9,881         |
| 62                  | 1397 | Bridge St Bridge (PA 179) across Delaware River, New Hope Borough                 | 14,276   | 15,136        | 494       | 3 %       | 14,641        |
| PENNSYLVANIA TOTAL: |      |   | 523,036  | 593,186       | 61,056    | 10 %      | 532,131       |

## NEW JERSEY

## Mercer County

|    |      |  |        |        |       |      |        |
|----|------|--|--------|--------|-------|------|--------|
| 63 | 1398 | River Rd (NJ 29) between Valley Rd and Mercer Co Line, Hopewell Township                         | 8,486  | 9,556  | 956   | 10 % | 8,601  |
| 64 | 1399 | Brunswick Pine (CR 518) west of Mercer Co Line, Hunterdon Co                                     | 5,149  | 6,043  | 1,209 | 20 % | 4,834  |
| 65 | 1400 | Harbourton-Rocktown Rd (CR 579) between Lambertville-Hopewell Rd (CR 518), Hopewell Township     | 3,865  | 4,381  | 219   | 5 %  | 4,162  |
| 66 | 1401 | NJ 31 just north of intersection with Lambertville-Hopewell Rd (CR 518), Hopewell Township       | 15,789 | 17,445 | 2,663 | 15 % | 14,782 |
| 67 | 1402 | Hopewell-Wertsville Rd (CR 607) between Minnietown Lane and Mercer Co Line, Hopewell Township    | 1,947  | 2,281  | 228   | 10 % | 2,053  |
| 68 | 1403 | Hopewell-Rocky Hill Rd (CR 518) between Hopewell-Amwell Rd and Mercer Co Line, Hopewell Township | 11,105 | 13,210 | 2,642 | 20 % | 10,568 |
| 69 | 1404 | Great Rd (CR 601) between Ridge View Rd and Cherry Valley Rd, Princeton Township                 | 5,602  | 6,508  | 130   | 2 %  | 6,378  |
| 70 | 1405 | US 206, just north of Cherry Valley Rd, Somerset Co  | 21,507 | 24,038 | 1,202 | 5 %  | 22,837 |
| 71 | 1406 | Lincoln Hwy (NJ 27) just east of Mercer Co Line  | 11,365 | 12,334 | 247   | 2 %  | 12,088 |
| 72 | 1407 | Brunswick Pike (US 1) between Cranbury-Kingston Rd and Mercer/Middlesex Co Line, Middlesex Co.   | 60,625 | 67,125 | 2,864 | 4 %  | 64,261 |

(Continued)

| Station No.              | TAZ  | Description   | 1990 ADT | 1996 Forecast |           |           |               |
|--------------------------|------|---|----------|---------------|-----------|-----------|---------------|
|                          |      |   |          | ADT           | Thru Trip | % of Thru | External Trip |
| 73                       | 1408 | Cranbury Rd (CR 615) between Rabbit Hill Rd and Mercer Co Line, West Windsor Township   | 5,293    | 5,748         | 57        | 1%        | 5,691         |
| 74                       | 1409 | Old Trenton Rd (CR 535 [Cranbury-Edinburg]) between One Mile Rd and Ansil Davison Rd at Mercer/Middlesex Co Line, East Windsor Township | 7,485    | 8,982         | 180       | 2%        | 8,803         |
| 75                       | 1410 | US 130, just north of Old Cranbury Rd, East Windsor Township  | 22,148   | 25,842        | 1,878     | 7%        | 23,964        |
| 76                       | 1411 | North Main Street (CR 539), just north of Garden View Terrace, East Windsor Township  | 7,394    | 8,222         | 822       | 10%       | 7,400         |
| 77                       | 1412 | NJ Turnpike between Interchanges 8 and 8A, East Windsor Township  | 94,975   | 105,915       | 46,108    | 44%       | 59,807        |
| 78                       | 1413 | Freehold Rd, (NJ 33) between Mercer/Middlesex Co Line and Applegarth Rd Middlesex Co  | 17,915   | 19,004        | 1,900     | 10%       | 17,104        |
| 79                       | 1414 | Etra Rd (CR 571) between Fieldsher Rd and Mercer/Monmouth Co Line, East Windsor Township  | 3,498    | 3,872         | 39        | 1%        | 3,833         |
| 80                       | 1415 | Old York Rd (CR 539) between Windsor-Perrineville Rd and Mercer Co Line, East Windsor Township  | 5,799    | 6,893         | 1,379     | 20%       | 5,514         |
| 81                       | 1416 | Interstate 195 west of Interchange 8, Washington Township   | 28,548   | 32,135        | 6,598     | 21%       | 25,537        |
| 82                       | 1417 | Robbinsville-Allentown Rd (CR 526) between Circle Dr and Mercer Co Line, Washington Township  | 8,754    | 10,660        | 533       | 5%        | 10,127        |
| 83                       | 1418 | Yardsville-Allentown Rd (CR 524) between Doctors Creek Rd and Mercer/Monmouth Co Line, Hamilton Township                                | 4,406    | 5,098         | 153       | 3%        | 4,945         |
| <i>Burlington County</i> |      |   |          |               |           |           |               |
| 84                       | 1419 | Chesterfield-Arneytown Rd (CR 664) between Jacobtown-Arneytown Rd and Burlington Co Line, North Hanover Township                        | 979      | 1,118         | 11        | 1%        | 1,107         |
| 85                       | 1420 | Monmouth Rd (CR 537) between Henry Rd and Burlington Co Line, North Hanover Township  | 7,429    | 8,221         | 164       | 2%        | 8,057         |



(Continued)

| Station No.              | TAZ  | Description   | 1990 ADT | 1996 Forecast |           |           |               |
|--------------------------|------|---|----------|---------------|-----------|-----------|---------------|
|                          |      |   |          | ADT           | Thru Trip | % of Thru | External Trip |
| 86                       | 1421 | Jacobstown-New Egypt Rd (CR 528) between Meany Rd and Province Line at Burlington Co Line, North Hanover Township | 4,892    | 5,427         | 54        | 1%        | 5,373         |
| 87                       | 1422 | Cookstown-New Egypt Rd (CR 528 Spur) between Mary St and Burlington Co Line, North Hanover Township               | 4,689    | 5,172         | 52        | 1%        | 5,120         |
| 88                       | 1423 | NJ 70 between Lakehurst Rd (CR 530) and Burlington Co Line, Pemberton Township                                    | 9,820    | 10,668        | 775       | 7%        | 9,893         |
| 89                       | 1424 | Barnegat Rd (NJ 72) between Stephensons Rd and Burlington Co Line, Woodland Township                              | 6,364    | 7,787         | 488       | 6%        | 7,299         |
| 90                       | 1425 | Stage Rd west of Ishmael Rd, Bass River State Forest, Bass River Township   | 1,142    | 1,344         | 13        | 1%        | 1,331         |
| 91                       | 1426 | Hammonton Rd (CR 542) north of Lovelands Lane, Bass River Township  | 1,944    | 2,199         | 220       | 10%       | 1,979         |
| 92                       | 1427 | CR 563 between CR 542 and Burlington Co Line, Washington Township   | 1,607    | 2,085         | 21        | 1%        | 2,064         |
| 93                       | 1428 | Batsto-Bridgeport Rd (CR 542) between Elmwood-Batsto Rd and Burlington Co Line, Washington Township               | 2,606    | 2,871         | 29        | 1%        | 2,842         |
| 94                       | 1429 | US 206 north of Burlington Co Line, Shamong Township  | 10,537   | 12,527        | 2,539     | 20%       | 9,988         |
| <i>Camden County</i>     |      |   |          |               |           |           |               |
| 95                       | 1430 | Chew Rd (CR 536) west of Camden Co Line, Waterford Township   | 1,453    | 1,759         | 18        | 1%        | 1,741         |
| 96                       | 1431 | White Horse Pike (US 30) between Walker Rd and Camden Co Line, Winslow Township                                   | 12,574   | 13,754        | 1,275     | 9%        | 12,480        |
| 97                       | 1432 | Cedarbrook Rd (CR 561) between Laurel Ave and Camden Co Line, Winslow Township                                    | 4,964    | 5,240         | 52        | 1%        | 5,188         |
| 98                       | 1433 | Atlantic City Expressway at Mile Post 42, Winslow Township  | 49,216   | 54,758        | 5,768     | 11%       | 48,991        |
| 99                       | 1434 | Mays Landing Rd (CR 561 Spur) between Cains Mill Rd and Camden Co Line, Winslow Township                          | 5,526    | 6,292         | 63        | 1%        | 6,229         |
| <i>Gloucester County</i> |      |   |          |               |           |           |               |
| 100                      | 1435 | Black Horse Pike (US 322) west of Gloucester Co Line, Monroe Township   | 11,758   | 12,889        | 644       | 5%        | 12,245        |

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| Station No.      | TAZ  | Description   | 1990 ADT  | 1996 Forecast |           |           |               |
|------------------|------|---|-----------|---------------|-----------|-----------|---------------|
|                  |      |   |           | ADT           | Thru Trip | % of Thru | External Trip |
| 101              | 1436 | Harding Hwy (US 40) just east of CR 557, Atlantic Co  | 12,416    | 13,905        | 4,172     | 30%       | 9,734         |
| 102              | 1437 | Main Rd (CR 555) between Garden Rd and Mainlake Rd, Franklin Township                                       | 7,331     | 8,576         | 429       | 5%        | 8,147         |
| 103              | 1438 | Old Delsea Dr (NJ 47) between Malaga Terr and Gloucester Co Line, Franklin Township                         | 10,656    | 11,014        | 551       | 5%        | 10,464        |
| 104              | 1439 | NJ 55 Freeway south of Interchange with US 40, Franklin Township  | 15,747    | 20,881        | 3,132     | 15%       | 17,749        |
| 105              | 1440 | Harding Hwy (US 40) west of Porchtown Rd at Gloucester Co Line, Franklin Township                           | 15,880    | 18,579        | 5,574     | 30%       | 13,005        |
| 106              | 1441 | Centerton-Glassboro Rd (CR 553) between Garrison Rd and Franklinville-Monroeville Rd, Franklin Township     | 5,052     | 6,691         | 67        | 1%        | 6,625         |
| 107              | 1442 | Franklinville-Monroeville (CR 604) between Row Rd and Pinard Rd, Elk Township                               | 1,612     | 2,222         | 22        | 1%        | 2,200         |
| 108              | 1443 | Bridgeton Pike (NJ 77) between Oldmans Creek and Springtown-Pine Tavern Rd, Elk Township                    | 4,349     | 5,216         | 261       | 5%        | 4,955         |
| 109              | 1444 | Commissioners Rd (CR 581) between Springtown-Pine Tavern Rd and Gloucester Co Line, South Harrison Township | 1,491     | 2,000         | 20        | 1%        | 1,980         |
| 110              | 1445 | Woodstown-Mullica Hill Rd (NJ 45) between Oldmans Creek and Marl Rd, South Harrison Township                | 3,053     | 3,972         | 40        | 1%        | 3,932         |
| 111              | 1446 | NJ Turnpike between Interchanges 2 and 1, Woolwich Township   | 33,934    | 36,085        | 29,421    | 82%       | 6,664         |
| 112              | 1447 | Auburn Rd (CR 551) between Oldmans Creek and Moravian Church Rd, Woolwich Township                          | 1,472     | 1,746         | 17        | 1%        | 1,729         |
| 113              | 1448 | Interstate 295 between Old Ferry Rd Interchange and Straughs Mill Rd Interchange, Logan Township            | 28,904    | 30,796        | 4,702     | 15%       | 26,095        |
| 114              | 1449 | US 1130 between Oldmans Creek and Center Square Rd, Logan Township  | 5,223     | 6,097         | 61        | 1%        | 6,036         |
| NEW JERSEY TOTAL |      |   | 636,275   | 717,188       | 132,661   | 18%       | 584,527       |
| REGIONAL TOTAL   |      |   | 1,159,311 | 1,310,375     | 193,717   | 15%       | 1,116,658     |

