

HOUSEHOLD-BASED TRIP SURVEY PROCEDURE

- Random Selection of a Household
 - Initial Recruitment and Qualification Phone Interview
 - Survey Document Mailing
 - Travel Day Reminders
 - Travel Day Diary Completion
 - Mailback of Diaries and Callback if Necessary
 - Editing and Data Entry
 - Geocoding of Trip Origins and Destinations
 - Analysis of Survey Data
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HOUSEHOLD SELECTION AND RECRUITMENT

- Sampling frame: Households with telephones
 - Directory-based Random Digit Dialing
 - Calls placed on weekday evenings from 5:00 to 9:00 PM
 - Recruitment period from March **19** through May 17, 1991
 - Qualification: private residence, zip code, number of vehicles, number of household members, home address, income.
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RECRUITMENT STATISTICS

| | | |
|-------------------------------------|--------|-----|
| Calls Placed: | 87,000 | |
| Phone Numbers Used: | 41,100 | |
| Contacts: | 24,800 | |
| Eligible Households Contacted: | 18,300 | |
| Households Agreeing to Participate: | 8900 | 48% |
| Valid Complete Households: | 3850 | 43% |

SURVEY PACKAGE DOCUMENTS

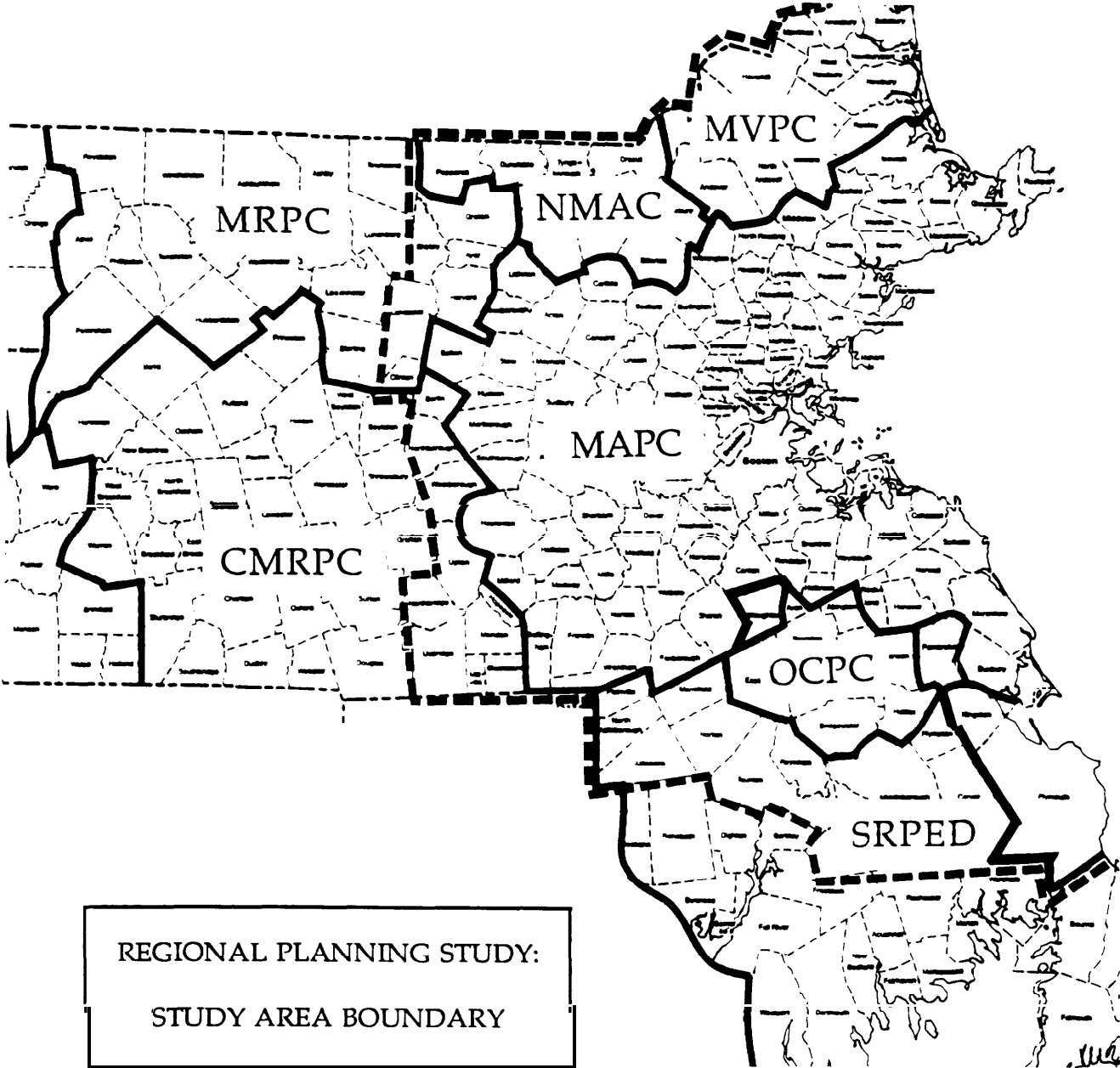
- Cover letter from Secretary of Transportation
 - Household Summary Form
 - Refrigerator reminder
 - Mailback envelope
 - Activity Diary for each household member
 - Coupon to redeem for Lottery ticket attached to diary
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ACTIVITY VS. TRIP DIARY: COMPARISON OF TRIP RATES

| <u>Great Britain (1981)</u> | <u>Trip Diary</u> | <u>Activity Diary</u> |
|-----------------------------|-----------------------|---------------------------|
| HB Work | 0.79 | 0.88 |
| HB School | 0.55 | 0.54 |
| HB Shop | 0.80 | 0.67 |
| HB Serve passenger | 0.33 | 0.39 |
| HB Other | 0.80 | 1.10 |
| NHB | 0.60 | 0.80 |
| <i>Total Trips/Person:</i> | 3.86 | 4.37 |

| <u>Australia (1980)</u> | <u>Trip Diary</u> | <u>Activity Diary</u> |
|----------------------------|-----------------------|---------------------------|
| HB Work/School | 1.03 | 1.04 |
| HB Shop/Personal business | 0.81 | 0.86 |
| HB Social/Recreation | 0.51 | 0.74 |
| HB Serve passenger | 0.23 | 0.41 |
| NHB Work/School | 0.04 | 0.24 |
| NHB Shop/Personal business | 0.21 | 0.40 |
| NHB Social/Recreation | 0.12 | 0.25 |
| NHB Serve passenger | 0.02 | 0.12 |
| <i>Total Trips/Person</i> | 2.97 | 4.07 |

Regional Planning Study



MEMORANDUM

To: Regional Planning Study **February 22, 1993**
Trip Generation Model Development Files

FROM: Julie McClennen and Ken Miller

RE: Development of Interim Home-Based Trip Production
Cross-Classification Models

This memorandum describes the development of interim trip production cross-classification models for four home-based trip purposes: home-based work (HBW), home-based shopping and personal business (HBPB), home-based social and recreational (HBSR), and home-based school (HBSc). The models will be used to estimate home-based trip productions for the 164-Community Regional Planning Study Area (RPSA).

In essence, cross-classification is a technique in which the rate of trip making is dependent upon the change in two independent variables. The independent variables are stratified into appropriate groups creating a two-dimensional matrix; observations are then allocated to appropriate cells of the matrix, and the mean value of the dependent variable for each cell is computed.

Data from the expanded 1991 Boston Region Household-based Survey **was** used as the basis for this analysis. CTPS memorandum "Development of 1991 Household-based Survey Data Files," (Ian E. Harrington and Julie McClennen, February 19, 1993) describes the development of the household file, which contains household-level survey data on household-member demographics, residence characteristics and location, and trip-making. CTPS memorandum "Preliminary 1991 Household-Based Survey Expansion" (Ken Miller and Julie McClennen, November 19, 1992) describes the process used to develop the expanded household data file, which expands the household file to match the actual distribution of households in the RPSA.

A preliminary statistical analysis of the expanded household file data, as summarized in CTPS memorandum "Significance Order of Variables Effecting Trip Rates" (Julie McClennen, October 28, 1992) showed that the two independent variables that were most explanatory in the generation of HBW trips were household size and number of workers per household, and that the two most explanatory variables for the three other home-based purposes (HBPB, HBSR, HBSc) were household size and number of vehicles available.

The work described in this memorandum resulted in development of four purpose-specific cross-classification trip production matrices for each of five CTPS subregions, which are comprised of CTPS subregions 1 through 4, as well as subregion 0, (the Central Artery Study Area). This results in a total of 20 (five subregions by four purposes) separate cross-classification matrices. It should be noted that the trip rates included in these matrices do not include walk only, bike only, taxi only, or schoolbus only trips, nor do they include trips that have one-or-more trip end outside of the RPSA. In other words, only internal-internal (I-I) highway and transit trips are represented. The procedures utilized to develop the models are summarized in the following sections.

Extraction of Data from the Expanded Household File

Data extracted for each household from the expanded household file included CTPS sub-region, household size, number of workers, number of vehicles, number of people over age five, number of diaries returned, and number of trips by purpose made by household members. Households were then stratified into five household size categories (1,2,3,4,5+), four workers per household categories (0,1,2,3+) and four vehicles per household categories (0,1,2,3+).

Table 1 shows the subregional distributions of survey households cross-tabulated by household size and vehicle availability. Table 2 shows the subregional distributions of survey households cross-tabulated by household size and number of workers.

Aggregation of Trip Purposes

The household file contained the number of trips made by each household for the following 12 trip purposes:

1. home-based work
2. home-based work-related
3. home-based personal business
4. home-based shopping
5. home-based eating-out
6. home-based other
7. home-based social
8. home-based recreational
9. home-based school
10. home-based drop-off / pick-up
11. non-home-based other
12. non-home-based work

In order to more closely match the trip purposes used in the existing model set, the twelve trip purposes were aggregated to seven analysis purposes:

- | | |
|--|--|
| 1. Home-Based Work (HBW) | = work + work-related |
| 2. Home-Based Personal Business (HBPB) | = personal business + shopping + eating out + other |
| 3. Home-Based Social/Recreational (HBSR) | = social + recreational |
| 4. Home-Based School (HBSc) | = school |
| 5. Home-Based Dropoff/Pickup (HBDO) | = dropoff/pickup |
| 6. Non-Home-Based Other (NHBO) | = non-home-based other |
| 7. Non-Home-Based Work (NHBW) | = non-home-based work |

Accounting for Missing Diaries

Only complete household records, defined as having no more than one missing diary, were used for this analysis. Therefore, 51 incomplete household records were removed from the database. Then, so that trip rates would not be underestimated because of missing diaries, the following adjustment by trip purpose was made to each household record with one missing diary:

$$\text{adjusted trips} = \text{number of trips by purpose} + (\text{regional mean trips by purpose} \cdot \text{number of missing diaries})$$

If there were no workers in the household, the HBW and NHBW trips were not adjusted, so that household work trips remained zero.

Development of Unadjusted Trip Rates

Cross-tabulations of mean trips per household for each purpose were then generated. The resulting unadjusted cross-classification matrices are shown in Tables A-1 through A-8. As shown in Tables A-1 and A-7, mean household HBW and NHBW trip rates are cross-classified by household size and workers per household. As shown in Tables A-2 through A-6, mean household HBPB, HBSR, HBSc, HBDO, and NHBO trip rate are cross-classified by household size and vehicles per household. Table A-8 shows cross-classification matrices for total trips made by households.

Examination of the unadjusted trip rates revealed two problems. First, some cells did not have trip rates because there no household survey observations with those characteristics. Secondly, some cells did not have sufficient observations to estimate a reliable trip rate; trip rates for these cells were either too low or too high compared to the surrounding rates. For

example, in Table A-1, the rate for cell subregion 0, household size 4, and workers per household 3+ is based on two observations, and appears to be too low in comparison with the surrounding rates.

Application of Multiple Classification Analysis

Because of the problems described above, an attempt was made to modify the trip rates by using Multiple Classification Analysis (MCA). MCA is a statistical process that corrects cross-classified data with uneven sampling distributions. Peter Stopher's paper "Trip Generation by Cross-Classification: An Alternative Methodology" (in Transportation Research Record 944) describes an application of MCA in detail. In summary, MCA adjusts cell values by giving more weight to cells which are based on more observations, while leaving the mean constant. If the cell value is based on only a few observations, and is dissimilar to surrounding trip rates, it may change significantly.

MCA **was** applied to each of the 20 unadjusted matrices; the results are shown in Tables B-1 through B-8. Examination of the MCA results revealed three problems. First, a few cells were given negative values because the original trip rates in these cells had been zero or blank. Secondly, trip rates were inserted in cells that should not have rates, e.g., cells with more workers than household members. Finally, HBW trip rates were inserted in cells which should not have trips, e.g., cells with zero workers.

Manual Adjustment of Trip Rates

Because both the unadjusted and MCA results were problematical, it was decided to manually adjust cells that were inconsistent. Adjusted cell values **were** estimated by examining the number of households in each cell, the original trip rates, and the results of the MCA analysis. Trip rates in cells were adjusted if the cell contained less than thirty households and the trip rate was inconsistent with the other cells. Cells that contained more than thirty observations were left unchanged. The adjusted cross-classification matrices are shown in Tables C-1 through C-8; cells with revised values are shown in bold.

Adjustment to Account for Trip Linking and Dropoff/Pickup, Trips

Because drop-off and pickup trips are not modeled as separate purpose at CTPS at this time, the adjusted cross-classification matrices were factored to account for the allocation of home-based dropoff/pickup to other purposes.

This was accomplished by factoring all HBW trip rates by 1.10, all HBSR trip rates by 1.05, and all HBSc trip rates by 1.10; HBPB rates were unchanged. A separate memorandum describing this allocation process in detail is forthcoming.

Final Home-based Cross-Classification Matrices

The resulting factored cross-classification matrices for HBW, HBPB, HBSR, and HBSc are shown in Tables D-1 through D-4. These matrices will be used to generate home-based trip productions for the "interim" CTPS model-set. It should be noted that the two non-home based cross-classification matrices (NHBO and NHBW) were dropped at this point because they will not be used for trip generation: separate non-home-based linear regression trip production models will be developed, because the causal variables in the generation of non-home-based trips are generally not related to household characteristics.

**TABLE 1: Distribution of 1991 Survey Household Records
by Sub-Region, Household Size, and Vehicle Availability**

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|------------|------------|------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+ | |
| 0 | 0 | 101 | 47 | 4 | 1 | 3 | 156 |
| | 1 | 91 | 99 | 24 | 13 | 4 | 231 |
| | 2 | 8 | 46 | 13 | 11 | 8 | 86 |
| | 3+ | 2 | 5 | 6 | 3 | 1 | 17 |
| | <i>SUBTOTAL:</i> | <i>202</i> | <i>197</i> | <i>47</i> | <i>28</i> | <i>16</i> | <i>490</i> |
| 1 | 0 | 68 | 63 | 10 | 5 | 1 | 147 |
| | 1 | 87 | 98 | 28 | 14 | 12 | 239 |
| | 2 | 11 | 71 | 35 | 27 | 10 | 154 |
| | 3+ | 2 | 6 | 10 | 15 | 11 | 44 |
| | <i>SUBTOTAL:</i> | <i>168</i> | <i>238</i> | <i>83</i> | <i>61</i> | <i>34</i> | <i>584</i> |
| 2 | 0 | 28 | 10 | 2 | 3 | 0 | 43 |
| | 1 | 144 | 116 | 28 | 18 | 16 | 322 |
| | 2 | 18 | 155 | 75 | 82 | 41 | 371 |
| | 3+ | 3 | 12 | 31 | 27 | 25 | 98 |
| | <i>SUBTOTAL:</i> | <i>193</i> | <i>293</i> | <i>136</i> | <i>130</i> | <i>82</i> | <i>834</i> |
| 3 | 0 | 11 | 7 | 0 | 0 | 0 | 18 |
| | 1 | 137 | 87 | 24 | 11 | 15 | 274 |
| | 2 | 15 | 214 | 113 | 105 | 51 | 498 |
| | 3+ | 6 | 30 | 64 | 65 | 36 | 201 |
| | <i>SUBTOTAL:</i> | <i>169</i> | <i>338</i> | <i>201</i> | <i>181</i> | <i>102</i> | <i>991</i> |
| 4 | 0 | 8 | 2 | 0 | 4 | 1 | 15 |
| | 1 | 104 | 77 | 24 | 11 | 12 | 228 |
| | 2 | 19 | 183 | 85 | 106 | 62 | 455 |
| | 3+ | 2 | 22 | 54 | 50 | 28 | 156 |
| | <i>SUBTOTAL:</i> | <i>133</i> | <i>284</i> | <i>163</i> | <i>171</i> | <i>103</i> | <i>854</i> |
| ALL | 0 | 216 | 129 | 16 | 13 | 5 | 379 |
| | 1 | 563 | 477 | 128 | 67 | 59 | 1294 |
| | 2 | 71 | 669 | 321 | 331 | 172 | 1564 |
| | 3+ | 15 | 75 | 165 | 160 | 101 | 516 |
| | <i>TOTAL:</i> | <i>865</i> | <i>1350</i> | <i>630</i> | <i>571</i> | <i>337</i> | <i>3753</i> |

TABLE 2: Distribution of 1991 Survey Household Records by Sub-Region, Household Size, and Number of Workers

| CTPS SUB-REGION | WORKERS PER HOUSEHOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|-----------------|-----------------------|----------------|-------------|------------|------------|------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+ | |
| 0 | 0 | 41 | 30 | 5 | 1 | 0 | 77 |
| | 1 | 161 | 55 | 17 | 12 | 5 | 250 |
| | 2 | 0 | 112 | 23 | 13 | 3 | 151 |
| | 3+ | 0 | 0 | 2 | 2 | 8 | 12 |
| | SUBTOTAL: | 202 | 197 | 47 | 28 | 16 | 490 |
| 1 | 0 | 48 | 34 | 4 | 2 | 1 | 89 |
| | 1 | 120 | 82 | 21 | 12 | 10 | 245 |
| | 2 | 0 | 121 | 42 | 30 | 12 | 205 |
| | 3+ | 0 | 0 | 15 | 17 | 11 | 43 |
| | SUBTOTAL: | 168 | 237 | 82 | 61 | 34 | 582 |
| 2 | 0 | 59 | 49 | 8 | 2 | 3 | 121 |
| | 1 | 134 | 92 | 44 | 33 | 25 | 328 |
| | 2 | 0 | 152 | 53 | 70 | 31 | 306 |
| | 3+ | 0 | 0 | 31 | 24 | 23 | 78 |
| | SUBTOTAL: | 193 | 293 | 136 | 129 | 82 | 833 |
| 3 | 0 | 47 | 59 | 5 | 2 | 1 | 114 |
| | 1 | 122 | 103 | 62 | 46 | 34 | 367 |
| | 2 | 0 | 176 | 100 | 86 | 33 | 395 |
| | 3+ | 0 | 0 | 34 | 45 | 34 | 113 |
| | SUBTOTAL: | 169 | 338 | 201 | 179 | 102 | 989 |
| 4 | 0 | 43 | 58 | 8 | 6 | 4 | 119 |
| | 1 | 90 | 87 | 54 | 45 | 31 | 307 |
| | 2 | 0 | 138 | 68 | 80 | 43 | 329 |
| | 3+ | 0 | 0 | 33 | 40 | 25 | 98 |
| | SUBTOTAL: | 133 | 283 | 163 | 171 | 103 | 853 |
| ALL | 0 | 238 | 230 | 30 | 13 | 9 | 520 |
| | 1 | 627 | 419 | 198 | 148 | 105 | 1497 |
| | 2 | 0 | 699 | 286 | 279 | 122 | 1386 |
| | 3+ | 0 | 0 | 115 | 128 | 101 | 344 |
| | TOTAL: | 865 | 1348 | 629 | 568 | 337 | 3747 |

Table A-1 : Unadjusted Home-Based Work Trip Cross-Classification Matrices
Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | WORKERS PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 |
| | 1 | 0.76 | 1.24 | 1.33 | 1.54 | 1.61 | 0.96 |
| | 2 | N/A | 2.10 | 1.81 | 3.13 | 3.52 | 2.26 |
| | 3+* | N/A | N/A | 3.93 | 1.50 | 4.81 | 4.16 |
| | <i>SUBTOTAL:</i> | <i>0.59</i> | <i>1.50</i> | <i>1.39</i> | <i>2.28</i> | <i>3.36</i> | <i>1.24</i> |
| 1 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 0.98 | 1.46 | 1.53 | 2.06 | 2.18 | 1.29 |
| | 2 | N/A | 2.05 | 1.60 | 2.40 | 2.73 | 2.09 |
| | 3+ | N/A | N/A | 2.56 | 4.41 | 3.48 | 3.44 |
| | <i>SUBTOTAL:</i> | <i>0.67</i> | <i>1.55</i> | <i>1.65</i> | <i>2.65</i> | <i>2.69</i> | <i>1.50</i> |
| 2 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 1.01 | 1.55 | 1.51 | 1.25 | 1.59 | 1.29 |
| | 2 | N/A | 2.21 | 2.40 | 2.24 | 3.07 | 2.35 |
| | 3+ | N/A | N/A | 3.77 | 4.69 | 4.84 | 4.40 |
| | <i>SUBTOTAL:</i> | <i>0.63</i> | <i>1.58</i> | <i>2.23</i> | <i>2.43</i> | <i>3.08</i> | <i>1.71</i> |
| 3 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 1.14 | 1.51 | 1.78 | 1.74 | 1.81 | 1.47 |
| | 2 | N/A | 2.57 | 2.36 | 2.70 | 1.89 | 2.48 |
| | 3+ | N/A | N/A | 3.90 | 4.59 | 4.64 | 4.44 |
| | <i>SUBTOTAL:</i> | <i>0.79</i> | <i>1.75</i> | <i>2.32</i> | <i>2.88</i> | <i>2.88</i> | <i>1.99</i> |
| 4 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 1.10 | 1.51 | 1.46 | 1.78 | 1.42 | 1.40 |
| | 2 | N/A | 2.36 | 1.94 | 2.65 | 2.50 | 2.36 |
| | 3+ | N/A | N/A | 3.66 | 3.59 | 3.94 | 3.73 |
| | <i>SUBTOTAL:</i> | <i>0.58</i> | <i>1.56</i> | <i>1.93</i> | <i>2.53</i> | <i>2.50</i> | <i>1.71</i> |
| ALL | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 1.02 | 1.49 | 1.57 | 1.70 | 1.71 | 1.34 |
| | 2 | N/A | 2.32 | 2.08 | 2.56 | 2.52 | 2.34 |
| | 3+ | N/A | N/A | 3.57 | 4.21 | 4.33 | 4.07 |
| | <i>TOTAL:</i> | <i>0.66</i> | <i>1.61</i> | <i>2.04</i> | <i>2.63</i> | <i>2.78</i> | <i>1.72</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table A-2: Unadjusted Home-Based Personal Business Cross-Classification Matrices
Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.35 | 1.08 | 1.25 | 0.00 | 0.66 | 0.57 |
| | 1 | 0.86 | 1.62 | 1.33 | 2.23 | 4.50 | 1.52 |
| | 2 | 1.25 | 1.54 | 1.77 | 2.63 | 1.87 | 1.83 |
| | 3+ | 0.50 | 1.00 | 3.83 | 4.33 | 1.00 | 2.61 |
| | <i>SUBTOTAL:</i> | <i>0.54</i> | <i>1.43</i> | <i>1.54</i> | <i>2.27</i> | <i>2.67</i> | <i>1.16</i> |
| 1 | 0 | 0.50 | 1.11 | 0.90 | 0.60 | 1.98 | 0.74 |
| | 1 | 0.97 | 1.74 | 1.18 | 3.21 | 2.50 | 1.58 |
| | 2 | 0.82 | 1.97 | 2.23 | 2.63 | 1.90 | 2.12 |
| | 3+ | 1.00 | 1.50 | 3.00 | 3.06 | 2.55 | 2.63 |
| | <i>SUBTOTAL:</i> | <i>0.71</i> | <i>1.65</i> | <i>1.63</i> | <i>2.67</i> | <i>2.23</i> | <i>1.50</i> |
| 2 | 0 | 1.18 | 2.40 | 0.50 | 2.33 | N/A | 1.42 |
| | 1 | 1.34 | 2.14 | 1.61 | 1.50 | 3.69 | 1.77 |
| | 2 | 0.94 | 2.40 | 2.57 | 2.78 | 3.68 | 2.62 |
| | 3+ | 0.00 | 1.91 | 3.13 | 3.41 | 3.76 | 3.11 |
| | <i>SUBTOTAL:</i> | <i>1.24</i> | <i>2.27</i> | <i>2.32</i> | <i>2.64</i> | <i>3.71</i> | <i>2.20</i> |
| 3 | 0 | 0.45 | 1.71 | N/A | N/A | N/A | 0.73 |
| | 1 | 1.59 | 2.64 | 2.83 | 4.00 | 2.53 | 2.33 |
| | 2 | 1.80 | 2.73 | 2.46 | 2.77 | 3.21 | 2.69 |
| | 3+ | 1.50 | 2.23 | 3.33 | 4.06 | 4.78 | 3.70 |
| | <i>SUBTOTAL:</i> | <i>1.33</i> | <i>2.61</i> | <i>2.76</i> | <i>3.36</i> | <i>3.79</i> | <i>2.64</i> |
| 4 | 0 | 1.13 | 2.99 | N/A | 1.00 | 0.00 | 1.49 |
| | 1 | 1.17 | 2.49 | 2.12 | 2.54 | 2.50 | 1.93 |
| | 2 | 1.16 | 2.41 | 2.15 | 2.59 | 2.79 | 2.40 |
| | 3+ | 0.50 | 2.54 | 2.63 | 3.78 | 4.28 | 3.36 |
| | <i>SUBTOTAL:</i> | <i>1.14</i> | <i>2.48</i> | <i>2.26</i> | <i>2.88</i> | <i>3.23</i> | <i>2.32</i> |
| ALL | 0 | 0.70 | 1.68 | 0.87 | 0.93 | 1.33 | 0.95 |
| | 1 | 1.26 | 2.21 | 1.86 | 2.84 | 2.87 | 1.88 |
| | 2 | 1.33 | 2.46 | 2.34 | 2.69 | 2.95 | 2.50 |
| | 3+ | 0.86 | 2.21 | 3.04 | 3.78 | 4.18 | 3.38 |
| | <i>TOTAL:</i> | <i>1.04</i> | <i>2.26</i> | <i>2.28</i> | <i>2.95</i> | <i>3.30</i> | <i>2.16</i> |

N-B: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table A-3: Unadjusted Home-Based Social/Recreational Cross-Classification Matrices

Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.18 | 0.32 | 0.97 | 0.00 | 0.96 | 0.27 |
| | 1 | 0.35 | 0.69 | 0.69 | 0.83 | 0.50 | 0.57 |
| | 2 | 0.63 | 0.50 | 0.52 | 1.25 | 2.22 | 0.90 |
| | 3+* | 0.00 | 1.58 | 1.31 | 1.00 | 1.00 | 1.14 |
| | <i>SUBTOTAL:</i> | <i>0.24</i> | <i>0.55</i> | <i>0.74</i> | <i>0.88</i> | <i>1.09</i> | <i>0.49</i> |
| 1 | 0 | 0.32 | 0.63 | 0.50 | 0.78 | 0.89 | 0.45 |
| | 1 | 0.40 | 0.66 | 0.46 | 1.92 | 2.91 | 0.82 |
| | 2 | 0.36 | 0.70 | 0.87 | 1.26 | 0.89 | 0.88 |
| | 3+ | 0.00 | 0.65 | 1.99 | 1.36 | 2.09 | 1.64 |
| | <i>SUBTOTAL:</i> | <i>0.36</i> | <i>0.66</i> | <i>0.73</i> | <i>1.46</i> | <i>1.81</i> | <i>0.77</i> |
| 2 | 0 | 0.11 | 0.49 | 1.50 | 0.96 | N/A | 0.31 |
| | 1 | 0.41 | 0.65 | 1.10 | 1.66 | 1.74 | 0.74 |
| | 2 | 0.17 | 0.96 | 0.87 | 1.31 | 2.51 | 1.17 |
| | 3+ | 0.67 | 0.73 | 1.24 | 1.54 | 2.22 | 1.51 |
| | <i>SUBTOTAL:</i> | <i>0.30</i> | <i>0.78</i> | <i>1.03</i> | <i>1.43</i> | <i>2.25</i> | <i>0.94</i> |
| 3 | 0 | 0.27 | 0.67 | N/A | N/A | N/A | 0.36 |
| | 1 | 0.26 | 0.77 | 1.48 | 1.26 | 1.59 | 0.71 |
| | 2 | 0.47 | 0.76 | 1.22 | 1.40 | 3.70 | 1.35 |
| | 3+ | 0.00 | 1.02 | 1.52 | 1.98 | 2.82 | 1.88 |
| | <i>SUBTOTAL:</i> | <i>0.27</i> | <i>0.78</i> | <i>1.35</i> | <i>1.56</i> | <i>3.08</i> | <i>1.19</i> |
| 4 | 0 | 0.75 | 0.44 | N/A | 0.97 | 8.00 | 0.89 |
| | 1 | 0.43 | 0.67 | 0.90 | 0.35 | 2.67 | 0.69 |
| | 2 | 0.26 | 0.71 | 1.04 | 1.93 | 2.09 | 1.24 |
| | 3+ | 0.00 | 0.22 | 1.31 | 2.31 | 1.58 | 1.51 |
| | <i>SUBTOTAL:</i> | <i>0.51</i> | <i>0.65</i> | <i>1.07</i> | <i>1.76</i> | <i>2.11</i> | <i>1.07</i> |
| ALL | 0 | 0.33 | 0.53 | 0.78 | 0.78 | 2.28 | 0.46 |
| | 1 | 0.37 | 0.69 | 0.92 | 1.23 | 2.21 | 0.73 |
| | 2 | 0.33 | 0.78 | 1.04 | 1.55 | 2.52 | 1.22 |
| | 3+ | 0.13 | 0.69 | 1.43 | 1.97 | 2.21 | 1.66 |
| | <i>TOTAL:</i> | <i>0.35</i> | <i>0.71</i> | <i>1.07</i> | <i>1.57</i> | <i>2.35</i> | <i>0.99</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table A-4: Unadjusted Home-Based School Cross-Classification Matrices

Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.00 | 0.32 | 1.09 | 0.00 | 3.79 | 0.24 |
| | 1 | 0.05 | 0.23 | 0.46 | 1.98 | 1.25 | 0.40 |
| | 2 | 0.00 | 0.20 | 0.21 | 1.07 | 1.84 | 0.59 |
| | 3+* | 0.00 | 0.08 | 0.06 | 0.67 | 5.00 | 1.73 |
| | <i>SUBTOTAL:</i> | <i>0.02</i> | <i>0.25</i> | <i>0.52</i> | <i>1.41</i> | <i>2.30</i> | <i>0.38</i> |
| 1 | 0 | 0.13 | 0.39 | 0.70 | 0.68 | 1.38 | 0.31 |
| | 1 | 0.10 | 0.41 | 0.49 | 0.74 | 1.20 | 0.41 |
| | 2 | 0.00 | 0.31 | 0.30 | 1.30 | 1.44 | 0.69 |
| | 3+ | 0.00 | 0.06 | 0.44 | 0.86 | 2.36 | 1.12 |
| | <i>SUBTOTAL:</i> | <i>0.12</i> | <i>0.37</i> | <i>0.46</i> | <i>0.97</i> | <i>1.52</i> | <i>0.48</i> |
| 2 | 0 | 0.06 | 0.24 | 1.00 | 0.79 | N/A | 0.18 |
| | 1 | 0.02 | 0.30 | 0.36 | 0.35 | 1.27 | 0.24 |
| | 2 | 0.00 | 0.17 | 0.39 | 1.07 | 1.82 | 0.61 |
| | 3+ | 0.33 | 0.23 | 0.32 | 1.00 | 1.32 | 0.78 |
| | <i>SUBTOTAL:</i> | <i>0.03</i> | <i>0.23</i> | <i>0.40</i> | <i>0.89</i> | <i>1.53</i> | <i>0.43</i> |
| 3 | 0 | 0.00 | 0.16 | N/A | N/A | N/A | 0.03 |
| | 1 | 0.04 | 0.18 | 0.35 | 0.22 | 1.12 | 0.18 |
| | 2 | 0.20 | 0.07 | 0.42 | 0.79 | 1.09 | 0.43 |
| | 3+ | 0.00 | 0.15 | 0.63 | 0.93 | 2.22 | 1.05 |
| | <i>SUBTOTAL:</i> | <i>0.04</i> | <i>0.11</i> | <i>0.46</i> | <i>0.74</i> | <i>1.57</i> | <i>0.44</i> |
| 4 | 0 | 0.25 | 0.19 | N/A | 0.34 | 0.00 | 0.23 |
| | 1 | 0.01 | 0.11 | 0.40 | 1.22 | 0.83 | 0.25 |
| | 2 | 0.00 | 0.12 | 0.35 | 0.77 | 1.02 | 0.44 |
| | 3+ | 0.00 | 0.03 | 0.35 | 0.54 | 1.47 | 0.66 |
| | <i>SUBTOTAL:</i> | <i>0.08</i> | <i>0.11</i> | <i>0.36</i> | <i>0.77</i> | <i>1.14</i> | <i>0.39</i> |
| ALL | 0 | 0.10 | 0.30 | 0.82 | 0.56 | 1.59 | 0.23 |
| | 1 | 0.04 | 0.25 | 0.41 | 0.74 | 1.11 | 0.28 |
| | 2 | 0.08 | 0.13 | 0.37 | 0.89 | 1.27 | 0.50 |
| | 3+ | 0.07 | 0.12 | 0.46 | 0.80 | 1.84 | 0.88 |
| | <i>TOTAL:</i> | <i>0.07</i> | <i>0.20</i> | <i>0.42</i> | <i>0.83</i> | <i>1.44</i> | <i>0.43</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-I, or X-X trips

Table A-5: Unadjusted Home-Based Drop-off Cross-Classification Matrices
Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.02 | 0.20 | 0.17 | 0.00 | 0.23 | 0.08 |
| | 1 | 0.09 | 0.29 | 0.75 | 1.03 | 0.00 | 0.31 |
| | 2 | 0.00 | 0.27 | 0.72 | 2.76 | 1.67 | 1.02 |
| | 3+ | 0.00 | 1.74 | 0.78 | 0.00 | 2.00 | 1.07 |
| | <i>SUBTOTAL:</i> | <i>0.04</i> | <i>0.27</i> | <i>0.62</i> | <i>1.34</i> | <i>0.68</i> | <i>0.30</i> |
| 1 | 0 | 0.01 | 0.17 | 0.30 | 0.14 | 0.68 | 0.11 |
| | 1 | 0.14 | 0.57 | 1.05 | 0.76 | 1.72 | 0.60 |
| | 2 | 0.18 | 0.48 | 0.79 | 1.30 | 1.67 | 0.91 |
| | 3+ | 0.00 | 0.78 | 0.37 | 1.03 | 1.27 | 0.88 |
| | <i>SUBTOTAL:</i> | <i>0.07</i> | <i>0.46</i> | <i>0.78</i> | <i>0.94</i> | <i>1.50</i> | <i>0.53</i> |
| 2 | 0 | 0.00 | 0.37 | 0.00 | 0.23 | N/A | 0.07 |
| | 1 | 0.04 | 0.77 | 1.29 | 1.59 | 2.61 | 0.68 |
| | 2 | 0.28 | 0.33 | 0.87 | 2.13 | 2.62 | 1.11 |
| | 3+ | 0.00 | 0.61 | 0.72 | 1.00 | 2.30 | 1.21 |
| | <i>SUBTOTAL:</i> | <i>0.03</i> | <i>0.53</i> | <i>0.91</i> | <i>1.69</i> | <i>2.50</i> | <i>0.82</i> |
| 3 | 0 | 0.00 | 1.01 | N/A | N/A | N/A | 0.22 |
| | 1 | 0.11 | 0.51 | 1.45 | 0.24 | 1.96 | 0.49 |
| | 2 | 0.13 | 0.36 | 1.02 | 2.08 | 2.72 | 1.16 |
| | 3+ | 0.33 | 0.26 | 0.84 | 1.00 | 2.62 | 1.26 |
| | <i>SUBTOTAL:</i> | <i>0.09</i> | <i>0.43</i> | <i>1.05</i> | <i>1.46</i> | <i>2.59</i> | <i>0.91</i> |
| 4 | 0 | 0.38 | 0.34 | N/A | 0.17 | 0.00 | 0.35 |
| | 1 | 0.22 | 0.78 | 1.24 | 1.70 | 2.00 | 0.77 |
| | 2 | 0.05 | 0.34 | 0.85 | 1.45 | 2.01 | 0.93 |
| | 3+ | 0.00 | 0.06 | 0.54 | 1.05 | 1.86 | 0.97 |
| | <i>SUBTOTAL:</i> | <i>0.25</i> | <i>0.47</i> | <i>0.87</i> | <i>1.36</i> | <i>1.91</i> | <i>0.83</i> |
| ALL | 0 | 0.07 | 0.33 | 0.22 | 0.15 | 0.46 | 0.15 |
| | 1 | 0.13 | 0.63 | 1.21 | 1.06 | 1.88 | 0.61 |
| | 2 | 0.14 | 0.36 | 0.90 | 1.79 | 2.30 | 1.04 |
| | 3+ | 0.14 | 0.31 | 0.68 | 1.01 | 2.18 | 1.12 |
| | <i>TOTAL:</i> | <i>0.11</i> | <i>0.46</i> | <i>0.91</i> | <i>1.39</i> | <i>2.12</i> | <i>0.76</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table A-6: Unadjusted Non-Home-Based Other Cross-Classification Matrices
 Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.22 | 0.62 | 1.31 | 1.00 | 0.42 | 0.39 |
| | 1 | 0.40 | 0.89 | 1.24 | 1.65 | 0.25 | 0.77 |
| | 2 | 0.50 | 1.18 | 1.27 | 1.77 | 1.19 | 1.28 |
| | 3+* | 0.00 | 1.65 | 3.21 | 1.67 | 2.00 | 2.13 |
| | <i>SUBTOTAL:</i> | <i>0.28</i> | <i>0.85</i> | <i>1.36</i> | <i>1.62</i> | <i>0.70</i> | <i>0.69</i> |
| 1 | 0 | 0.47 | 0.63 | 1.00 | 0.65 | 3.26 | 0.67 |
| | 1 | 0.47 | 1.00 | 1.16 | 1.88 | 1.69 | 0.98 |
| | 2 | 0.36 | 1.02 | 1.57 | 2.63 | 2.13 | 1.65 |
| | 3+ | 0.50 | 0.88 | 2.03 | 1.82 | 1.45 | 1.60 |
| | <i>SUBTOTAL:</i> | <i>0.47</i> | <i>0.92</i> | <i>1.34</i> | <i>2.03</i> | <i>1.98</i> | <i>1.06</i> |
| 2 | 0 | 0.28 | 1.33 | 0.00 | 1.09 | N/A | 0.50 |
| | 1 | 0.64 | 1.35 | 1.63 | 2.96 | 2.70 | 1.28 |
| | 2 | 0.56 | 1.19 | 1.51 | 2.42 | 2.16 | 1.61 |
| | 3+ | 0.00 | 1.54 | 1.82 | 2.14 | 2.21 | 1.92 |
| | <i>SUBTOTAL:</i> | <i>0.51</i> | <i>1.28</i> | <i>1.53</i> | <i>2.43</i> | <i>2.28</i> | <i>1.38</i> |
| 3 | 0 | 0.18 | 2.11 | N/A | N/A | N/A | 0.60 |
| | 1 | 0.75 | 1.50 | 2.00 | 1.21 | 2.50 | 1.26 |
| | 2 | 1.27 | 1.52 | 1.56 | 2.18 | 3.06 | 1.85 |
| | 3+ | 0.00 | 1.27 | 2.06 | 2.51 | 2.67 | 2.17 |
| | <i>SUBTOTAL:</i> | <i>0.64</i> | <i>1.52</i> | <i>1.78</i> | <i>2.13</i> | <i>2.83</i> | <i>1.65</i> |
| 4 | 0 | 0.88 | 1.13 | N/A | 0.31 | 0.00 | 0.88 |
| | 1 | 0.87 | 1.10 | 2.25 | 1.93 | 2.33 | 1.30 |
| | 2 | 0.74 | 1.17 | 1.58 | 1.76 | 2.40 | 1.55 |
| | 3+ | 0.00 | 0.84 | 1.64 | 2.49 | 3.31 | 2.20 |
| | <i>SUBTOTAL:</i> | <i>0.84</i> | <i>1.12</i> | <i>1.75</i> | <i>1.96</i> | <i>2.67</i> | <i>1.51</i> |
| ALL | 0 | 0.43 | 0.99 | 0.84 | 0.68 | 2.06 | 0.62 |
| | 1 | 0.68 | 1.20 | 1.71 | 1.92 | 2.08 | 1.17 |
| | 2 | 0.87 | 1.28 | 1.55 | 2.12 | 2.51 | 1.67 |
| | 3+ | 0.03 | 1.16 | 1.88 | 2.38 | 2.67 | 2.09 |
| | <i>TOTAL:</i> | <i>0.58</i> | <i>1.21</i> | <i>1.63</i> | <i>2.10</i> | <i>2.47</i> | <i>1.39</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table A-7: Unadjusted Non-Home-Based Work Trip Cross-Classification Matrices
Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | WORKERS PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.08 | 0.00 | 0.00 | 0.00 | N/A | 0.05 |
| | 1 | 0.57 | 0.71 | 0.77 | 1.18 | 0.00 | 0.62 |
| | 2 | N/A | 1.47 | 1.74 | 1.47 | 0.29 | 1.45 |
| | 3+ | N/A | N/A | 2.15 | 2.00 | 1.71 | 1.81 |
| | <i>SUBTOTAL:</i> | <i>0.46</i> | <i>1.00</i> | <i>1.10</i> | <i>1.36</i> | <i>0.76</i> | <i>0.77</i> |
| 1 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 0.88 | 0.80 | 0.83 | 1.19 | 0.85 | 0.87 |
| | 2 | N/A | 1.43 | 1.74 | 1.49 | 1.55 | 1.53 |
| | 3+ | N/A | N/A | 2.17 | 1.31 | 0.78 | 1.42 |
| | <i>SUBTOTAL:</i> | <i>0.61</i> | <i>1.00</i> | <i>1.48</i> | <i>1.35</i> | <i>1.11</i> | <i>0.99</i> |
| 2 | 0 | 0.06 | 0.02 | 0.00 | 0.00 | 0.00 | 0.04 |
| | 1 | 0.91 | 1.24 | 1.20 | 1.01 | 1.22 | 1.07 |
| | 2 | N/A | 1.78 | 1.97 | 2.20 | 1.67 | 1.89 |
| | 3+ | N/A | N/A | 2.70 | 3.14 | 2.94 | 2.91 |
| | <i>SUBTOTAL:</i> | <i>0.59</i> | <i>1.28</i> | <i>1.73</i> | <i>2.04</i> | <i>1.87</i> | <i>1.34</i> |
| 3 | 0 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 |
| | 1 | 0.94 | 1.46 | 0.78 | 1.16 | 1.61 | 1.14 |
| | 2 | N/A | 2.17 | 2.00 | 1.66 | 1.80 | 1.98 |
| | 3+ | N/A | N/A | 3.81 | 2.15 | 2.76 | 2.78 |
| | <i>SUBTOTAL:</i> | <i>0.65</i> | <i>1.54</i> | <i>1.81</i> | <i>1.63</i> | <i>2.09</i> | <i>1.48</i> |
| 4 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 0.95 | 1.09 | 1.15 | 0.91 | 1.42 | 1.06 |
| | 2 | N/A | 1.71 | 2.27 | 1.90 | 1.76 | 1.89 |
| | 3+ | N/A | N/A | 3.50 | 2.54 | 2.36 | 2.76 |
| | <i>SUBTOTAL:</i> | <i>0.50</i> | <i>1.13</i> | <i>1.93</i> | <i>1.70</i> | <i>1.77</i> | <i>1.32</i> |
| ALL | 0 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 |
| | 1 | 0.88 | 1.14 | 0.99 | 1.05 | 1.30 | 1.01 |
| | 2 | N/A | 1.79 | 2.00 | 1.81 | 1.68 | 1.83 |
| | 3+ | N/A | N/A | 3.16 | 2.34 | 2.36 | 2.58 |
| | <i>TOTAL:</i> | <i>0.58</i> | <i>1.24</i> | <i>1.74</i> | <i>1.68</i> | <i>1.74</i> | <i>1.27</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table A-8: Unadjusted Total Trip Cross-Classification Matrices

Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|--------------|--------------|--------------|--------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 1.66 | 4.48 | 5.77 | 6.00 | 9.02 | 2.81 |
| | 1 | 3.05 | 6.31 | 7.22 | 11.24 | 9.25 | 5.78 |
| | 2 | 4.50 | 7.69 | 7.93 | 12.92 | 13.89 | 9.48 |
| | 3+ | 1.00 | 9.81 | 14.68 | 11.00 | 21.00 | 14.61 |
| | <i>SUBTOTAL:</i> | <i>2.19</i> | <i>5.94</i> | <i>7.44</i> | <i>11.16</i> | <i>11.57</i> | <i>5.07</i> |
| 1 | 0 | 2.21 | 4.27 | 4.60 | 6.41 | 12.07 | 3.43 |
| | 1 | 3.97 | 6.96 | 7.11 | 11.79 | 13.26 | 6.88 |
| | 2 | 3.64 | 8.32 | 9.84 | 13.30 | 11.71 | 10.13 |
| | 3+ | 2.50 | 7.18 | 12.71 | 13.82 | 14.73 | 12.72 |
| | <i>SUBTOTAL:</i> | <i>3.01</i> | <i>6.69</i> | <i>8.04</i> | <i>12.07</i> | <i>12.84</i> | <i>6.85</i> |
| 2 | 0 | 1.82 | 5.41 | 5.00 | 9.69 | N/A | 3.01 |
| | 1 | 4.12 | 7.83 | 8.90 | 11.23 | 15.13 | 7.05 |
| | 2 | 3.33 | 8.71 | 10.05 | 13.74 | 16.34 | 10.77 |
| | 3+ | 3.33 | 8.01 | 13.37 | 15.64 | 19.49 | 14.67 |
| | <i>SUBTOTAL:</i> | <i>3.31</i> | <i>8.04</i> | <i>10.15</i> | <i>13.53</i> | <i>17.23</i> | <i>8.83</i> |
| 3 | 0 | 1.55 | 8.17 | N/A | N/A | N/A | 2.98 |
| | 1 | 4.27 | 8.03 | 11.43 | 10.55 | 12.94 | 7.26 |
| | 2 | 6.53 | 9.26 | 10.50 | 13.11 | 17.44 | 11.26 |
| | 3+ | 4.00 | 9.44 | 13.82 | 16.36 | 21.98 | 15.76 |
| | <i>SUBTOTAL:</i> | <i>3.82</i> | <i>8.83</i> | <i>11.56</i> | <i>13.73</i> | <i>18.82</i> | <i>10.33</i> |
| 4 | 0 | 3.63 | 6.54 | N/A | 3.52 | 12.00 | 4.48 |
| | 1 | 4.17 | 6.97 | 9.89 | 10.73 | 12.92 | 6.93 |
| | 2 | 3.68 | 8.30 | 9.67 | 12.25 | 14.26 | 10.15 |
| | 3+ | 1.50 | 7.05 | 11.58 | 16.33 | 17.91 | 13.86 |
| | <i>SUBTOTAL:</i> | <i>3.91</i> | <i>7.63</i> | <i>10.16</i> | <i>12.96</i> | <i>15.33</i> | <i>9.20</i> |
| ALL | 0 | 2.21 | 5.30 | 4.86 | 6.28 | 11.45 | 3.38 |
| | 1 | 4.07 | 7.35 | 9.08 | 11.07 | 13.18 | 6.94 |
| | 2 | 4.70 | 8.72 | 10.02 | 12.94 | 15.31 | 10.64 |
| | 3+ | 2.99 | 8.25 | 12.91 | 16.01 | 19.48 | 14.67 |
| | <i>TOTAL:</i> | <i>3.37</i> | <i>7.78</i> | <i>10.10</i> | <i>13.15</i> | <i>16.19</i> | <i>8.76</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table B-I: MCA Home-Based Work Trip Cross Classification Matrices
Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | WORKERS PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | -0.85 | 0.04 | 0.09 | 0.55 | 0.78 | 0.00 |
| | 1 | 0.23 | 1.12 | 1.17 | 1.63 | 1.86 | 1.08 |
| | 2 | 0.46 | 1.35 | 1.40 | 1.86 | 2.10 | 1.31 |
| | 3+* | -0.23 | 0.66 | 0.71 | 1.17 | 1.40 | 0.62 |
| | SUBTOTAL: | <i>0.39</i> | <i>1.28</i> | <i>1.33</i> | <i>1.79</i> | <i>2.02</i> | <i>1.24</i> |
| 1 | 0 | -1.09 | -0.16 | -0.10 | 0.54 | 0.64 | 0.00 |
| | 1 | 0.35 | 1.27 | 1.33 | 1.97 | 2.07 | 1.44 |
| | 2 | 0.38 | 1.31 | 1.37 | 2.01 | 2.11 | 1.47 |
| | 3+ | -0.06 | 0.86 | 0.92 | 1.56 | 1.66 | 1.03 |
| | SUBTOTAL: | <i>0.41</i> | <i>1.34</i> | <i>1.40</i> | <i>2.04</i> | <i>2.14</i> | <i>1.50</i> |
| 2 | 0 | -1.31 | -0.29 | 0.12 | 0.04 | 0.50 | 0.00 |
| | 1 | 0.06 | 1.09 | 1.50 | 1.42 | 1.87 | 1.38 |
| | 2 | 0.51 | 1.53 | 1.94 | 1.86 | 2.32 | 1.82 |
| | 3+ | 0.51 | 1.53 | 1.94 | 1.86 | 2.32 | 1.82 |
| | SUBTOTAL: | <i>0.40</i> | <i>1.42</i> | <i>1.83</i> | <i>1.75</i> | <i>2.21</i> | <i>1.71</i> |
| 3 | 0 | -1.57 | -0.40 | 0.06 | 0.26 | -0.03 | 0.00 |
| | 1 | 0.01 | 1.17 | 1.63 | 1.83 | 1.54 | 1.57 |
| | 2 | 0.47 | 1.64 | 2.10 | 2.30 | 2.01 | 2.04 |
| | 3+ | 0.53 | 1.70 | 2.16 | 2.36 | 2.07 | 2.10 |
| | SUBTOTAL: | <i>0.42</i> | <i>1.59</i> | <i>2.05</i> | <i>2.25</i> | <i>1.96</i> | <i>1.99</i> |
| 4 | 0 | -1.31 | -0.26 | -0.02 | 0.37 | 0.22 | 0.00 |
| | 1 | 0.17 | 1.22 | 1.46 | 1.84 | 1.70 | 1.48 |
| | 2 | 0.67 | 1.73 | 1.97 | 2.35 | 2.20 | 1.99 |
| | 3+ | 0.58 | 1.64 | 1.88 | 2.26 | 2.11 | 1.89 |
| | SUBTOTAL: | <i>0.40</i> | <i>1.45</i> | <i>1.69</i> | <i>2.08</i> | <i>1.93</i> | <i>1.71</i> |
| ALL | 0 | -1.31 | -0.27 | 0.00 | 0.29 | 0.29 | 0.00 |
| | 1 | 0.13 | 1.18 | 1.45 | 1.74 | 1.74 | 1.45 |
| | 2 | 0.49 | 1.53 | 1.80 | 2.09 | 2.09 | 1.80 |
| | 3+ | 0.31 | 1.36 | 1.63 | 1.92 | 1.92 | 1.63 |
| | TOTAL: | <i>0.41</i> | <i>1.45</i> | <i>1.72</i> | <i>2.01</i> | <i>2.01</i> | <i>1.72</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-I, or X-X trips

Table B-2: MCA Home-Based Personal Business Trip Cross Classification Matrices

Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.31 | 0.97 | 1.03 | 1.22 | 2.25 | 0.72 |
| | 1 | 1.00 | 1.66 | 1.72 | 1.91 | 2.94 | 1.41 |
| | 2 | 1.11 | 1.77 | 1.82 | 2.02 | 3.05 | 1.52 |
| | 3+* | 0.85 | 1.51 | 1.56 | 1.76 | 2.79 | 1.26 |
| | <i>SUBTOTAL:</i> | <i>0.75</i> | <i>1.41</i> | <i>1.47</i> | <i>1.66</i> | <i>2.69</i> | <i>1.16</i> |
| 1 | 0 | 0.22 | 1.03 | 0.93 | 1.79 | 1.62 | 0.90 |
| | 1 | 0.95 | 1.76 | 1.66 | 2.53 | 2.35 | 1.64 |
| | 2 | 1.06 | 1.86 | 1.76 | 2.63 | 2.46 | 1.74 |
| | 3+ | 1.11 | 1.92 | 1.82 | 2.68 | 2.51 | 1.79 |
| | <i>SUBTOTAL:</i> | <i>0.81</i> | <i>1.62</i> | <i>1.52</i> | <i>2.39</i> | <i>2.21</i> | <i>1.50</i> |
| 2 | 0 | 0.36 | 1.60 | 1.52 | 1.70 | 2.86 | 1.56 |
| | 1 | 0.72 | 1.96 | 1.88 | 2.06 | 3.22 | 1.92 |
| | 2 | 1.07 | 2.32 | 2.23 | 2.41 | 3.58 | 2.27 |
| | 3+ | 0.88 | 2.12 | 2.04 | 2.22 | 3.39 | 2.08 |
| | <i>SUBTOTAL:</i> | <i>1.00</i> | <i>2.24</i> | <i>2.16</i> | <i>2.34</i> | <i>3.50</i> | <i>2.20</i> |
| 3 | 0 | -0.32 | 0.61 | 0.71 | 1.34 | 1.30 | 0.66 |
| | 1 | 1.75 | 2.68 | 2.79 | 3.42 | 3.38 | 2.74 |
| | 2 | 1.59 | 2.52 | 2.63 | 3.25 | 3.22 | 2.57 |
| | 3+ | 1.94 | 2.87 | 2.98 | 3.61 | 3.57 | 2.93 |
| | <i>SUBTOTAL:</i> | <i>1.66</i> | <i>2.59</i> | <i>2.69</i> | <i>3.32</i> | <i>3.28</i> | <i>2.64</i> |
| 4 | 0 | 0.09 | 1.52 | 1.24 | 1.82 | 1.99 | 1.37 |
| | 1 | 0.95 | 2.37 | 2.10 | 2.67 | 2.84 | 2.23 |
| | 2 | 0.97 | 2.39 | 2.12 | 2.69 | 2.86 | 2.25 |
| | 3+ | 1.42 | 2.84 | 2.57 | 3.14 | 3.31 | 2.70 |
| | <i>SUBTOTAL:</i> | <i>1.04</i> | <i>2.47</i> | <i>2.19</i> | <i>2.77</i> | <i>2.94</i> | <i>2.32</i> |
| ALL | 0 | 0.19 | 1.27 | 1.13 | 1.73 | 1.94 | 1.17 |
| | 1 | 1.11 | 2.19 | 2.05 | 2.64 | 2.86 | 2.09 |
| | 2 | 1.28 | 2.36 | 2.22 | 2.81 | 3.03 | 2.26 |
| | 3+ | 1.47 | 2.55 | 2.42 | 3.01 | 3.22 | 2.45 |
| | <i>TOTAL:</i> | <i>1.18</i> | <i>2.26</i> | <i>2.12</i> | <i>2.71</i> | <i>2.93</i> | <i>2.16</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table B-3: MCA Home-Based Social/Recreational Trip Cross Classification Matrices

Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.17 | 0.35 | 0.56 | 0.45 | 0.77 | 0.33 |
| | 1 | 0.39 | 0.58 | 0.79 | 0.67 | 0.99 | 0.55 |
| | 2 | 0.50 | 0.68 | 0.89 | 0.78 | 1.10 | 0.65 |
| | 3+* | -0.16 | 0.02 | 0.24 | 0.12 | 0.44 | 0.00 |
| | SUBTOTAL: | 0.33 | 0.51 | 0.73 | 0.61 | 0.93 | 0.49 |
| 1 | 0 | 0.12 | 0.45 | 0.48 | 1.20 | 1.59 | 0.55 |
| | 1 | 0.39 | 0.71 | 0.74 | 1.47 | 1.86 | 0.82 |
| | 2 | 0.27 | 0.59 | 0.62 | 1.34 | 1.73 | 0.70 |
| | 3+ | 0.38 | 0.70 | 0.73 | 1.46 | 1.85 | 0.81 |
| | SUBTOTAL: | 0.34 | 0.66 | 0.69 | 1.42 | 1.81 | 0.77 |
| 2 | 0 | -0.03 | 0.44 | 0.69 | 1.11 | 1.70 | 0.59 |
| | 1 | 0.31 | 0.78 | 1.03 | 1.45 | 2.04 | 0.93 |
| | 2 | 0.35 | 0.82 | 1.06 | 1.48 | 2.08 | 0.97 |
| | 3+ | 0.45 | 0.92 | 1.17 | 1.59 | 2.18 | 1.07 |
| | SUBTOTAL: | 0.32 | 0.79 | 1.03 | 1.45 | 2.05 | 0.94 |
| 3 | 0 | -0.60 | -0.10 | 0.42 | 0.54 | 1.96 | 0.27 |
| | 1 | 0.12 | 0.62 | 1.14 | 1.26 | 2.68 | 1.00 |
| | 2 | 0.35 | 0.85 | 1.36 | 1.49 | 2.90 | 1.22 |
| | 3+ | 0.43 | 0.93 | 1.45 | 1.57 | 2.99 | 1.31 |
| | SUBTOTAL: | 0.31 | 0.81 | 1.33 | 1.45 | 2.87 | 1.19 |
| 4 | 0 | 0.62 | 0.96 | 1.39 | 1.91 | 2.61 | 1.42 |
| | 1 | 0.05 | 0.39 | 0.82 | 1.34 | 2.04 | 0.85 |
| | 2 | 0.31 | 0.65 | 1.08 | 1.60 | 2.30 | 1.11 |
| | 3+ | 0.17 | 0.51 | 0.94 | 1.47 | 2.16 | 0.98 |
| | SUBTOTAL: | 0.27 | 0.61 | 1.03 | 1.56 | 2.26 | 1.07 |
| ALL | 0 | 0.05 | 0.44 | 0.76 | 1.15 | 2.08 | 0.72 |
| | 1 | 0.20 | 0.59 | 0.91 | 1.30 | 2.23 | 0.87 |
| | 2 | 0.32 | 0.71 | 1.03 | 1.42 | 2.35 | 0.99 |
| | 3+ | 0.34 | 0.74 | 1.05 | 1.45 | 2.37 | 1.02 |
| | TOTAL: | 0.32 | 0.71 | 1.03 | 1.42 | 2.35 | 0.99 |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-I, or X-X trips

Table B-4: MCA Home-Based School Trip Cross Classification Matrices

Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.00 | 0.23 | 0.58 | 1.12 | 2.27 | 0.36 |
| | 1 | -0.05 | 0.18 | 0.53 | 1.08 | 2.22 | 0.31 |
| | 2 | -0.13 | 0.09 | 0.44 | 0.99 | 2.13 | 0.22 |
| | 3+* | -0.12 | 0.11 | 0.46 | 1.00 | 2.15 | 0.24 |
| | <i>SUBTOTAL:</i> | <i>0.02</i> | <i>0.25</i> | <i>0.60</i> | <i>1.14</i> | <i>2.29</i> | <i>0.38</i> |
| 1 | 0 | 0.04 | 0.32 | 0.46 | 0.85 | 1.36 | 0.45 |
| | 1 | 0.01 | 0.28 | 0.42 | 0.81 | 1.33 | 0.41 |
| | 2 | -0.02 | 0.26 | 0.40 | 0.79 | 1.30 | 0.39 |
| | 3+ | -0.09 | 0.19 | 0.32 | 0.72 | 1.23 | 0.31 |
| | <i>SUBTOTAL:</i> | <i>0.07</i> | <i>0.35</i> | <i>0.49</i> | <i>0.88</i> | <i>1.40</i> | <i>0.48</i> |
| 2 | 0 | 0.00 | 0.19 | 0.36 | 0.72 | 1.41 | 0.38 |
| | 1 | -0.03 | 0.15 | 0.32 | 0.69 | 1.37 | 0.35 |
| | 2 | 0.09 | 0.27 | 0.44 | 0.81 | 1.49 | 0.47 |
| | 3+ | 0.11 | 0.30 | 0.47 | 0.83 | 1.52 | 0.50 |
| | <i>SUBTOTAL:</i> | <i>0.05</i> | <i>0.23</i> | <i>0.40</i> | <i>0.77</i> | <i>1.46</i> | <i>0.43</i> |
| 3 | 0 | -0.27 | -0.27 | 0.05 | 0.26 | 0.92 | 0.05 |
| | 1 | -0.03 | -0.03 | 0.29 | 0.50 | 1.16 | 0.29 |
| | 2 | 0.07 | 0.08 | 0.40 | 0.61 | 1.27 | 0.40 |
| | 3+ | 0.25 | 0.26 | 0.57 | 0.78 | 1.44 | 0.58 |
| | <i>SUBTOTAL:</i> | <i>0.11</i> | <i>0.12</i> | <i>0.44</i> | <i>0.65</i> | <i>1.31</i> | <i>0.44</i> |
| 4 | 0 | -0.21 | -0.12 | 0.14 | 0.62 | 0.81 | 0.17 |
| | 1 | 0.08 | 0.17 | 0.43 | 0.91 | 1.10 | 0.46 |
| | 2 | 0.00 | 0.10 | 0.35 | 0.83 | 1.03 | 0.38 |
| | 3+ | -0.02 | 0.07 | 0.33 | 0.81 | 1.01 | 0.36 |
| | <i>SUBTOTAL:</i> | <i>0.01</i> | <i>0.10</i> | <i>0.36</i> | <i>0.84</i> | <i>1.03</i> | <i>0.39</i> |
| ALL | 0 | 0.13 | 0.25 | 0.51 | 0.86 | 1.39 | 0.50 |
| | 1 | 0.02 | 0.14 | 0.39 | 0.74 | 1.28 | 0.38 |
| | 2 | 0.01 | 0.13 | 0.39 | 0.74 | 1.27 | 0.38 |
| | 3+ | 0.06 | 0.18 | 0.44 | 0.79 | 1.32 | 0.42 |
| | <i>TOTAL:</i> | <i>0.07</i> | <i>0.19</i> | <i>0.44</i> | <i>0.79</i> | <i>1.33</i> | <i>0.43</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-I, or X-X trips

Table B-5: MCA Home-Based Drop-off Trip Cross Classification Matrices
 Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | -0.14 | 0.12 | 0.37 | 0.78 | 0.25 | 0.11 |
| | 1 | 0.03 | 0.29 | 0.55 | 0.95 | 0.42 | 0.28 |
| | 2 | 0.14 | 0.40 | 0.65 | 1.06 | 0.53 | 0.39 |
| | 3+* | 0.59 | 0.85 | 1.10 | 1.51 | 0.98 | 0.84 |
| | <i>SUBTOTAL:</i> | <i>0.05</i> | <i>0.31</i> | <i>0.56</i> | <i>0.97</i> | <i>0.44</i> | <i>0.30</i> |
| 1 | 0 | -0.25 | 0.10 | 0.38 | 0.41 | 1.05 | 0.17 |
| | 1 | 0.18 | 0.53 | 0.81 | 0.84 | 1.48 | 0.60 |
| | 2 | 0.17 | 0.52 | 0.80 | 0.83 | 1.47 | 0.59 |
| | 3+ | 0.13 | 0.48 | 0.76 | 0.79 | 1.43 | 0.55 |
| | <i>SUBTOTAL:</i> | <i>0.11</i> | <i>0.46</i> | <i>0.74</i> | <i>0.77</i> | <i>1.41</i> | <i>0.53</i> |
| 2 | 0 | -0.51 | -0.12 | 0.32 | 1.04 | 1.79 | 0.17 |
| | 1 | 0.31 | 0.71 | 1.14 | 1.87 | 2.62 | 0.99 |
| | 2 | 0.23 | 0.63 | 1.06 | 1.78 | 2.54 | 0.91 |
| | 3+ | 0.03 | 0.43 | 0.86 | 1.58 | 2.34 | 0.71 |
| | <i>SUBTOTAL:</i> | <i>0.14</i> | <i>0.53</i> | <i>0.97</i> | <i>1.69</i> | <i>2.44</i> | <i>0.82</i> |
| 3 | 0 | -0.40 | -0.17 | 0.52 | 0.75 | 1.87 | 0.34 |
| | 1 | -0.01 | 0.22 | 0.91 | 1.14 | 2.26 | 0.73 |
| | 2 | 0.26 | 0.49 | 1.19 | 1.42 | 2.54 | 1.01 |
| | 3+ | 0.02 | 0.25 | 0.94 | 1.17 | 2.30 | 0.77 |
| | <i>SUBTOTAL:</i> | <i>0.16</i> | <i>0.39</i> | <i>1.08</i> | <i>1.31</i> | <i>2.44</i> | <i>0.91</i> |
| 4 | 0 | -0.53 | -0.20 | 0.26 | 0.80 | 1.32 | 0.21 |
| | 1 | 0.37 | 0.71 | 1.16 | 1.70 | 2.23 | 1.11 |
| | 2 | 0.08 | 0.41 | 0.87 | 1.41 | 1.93 | 0.82 |
| | 3+ | -0.18 | 0.15 | 0.61 | 1.15 | 1.67 | 0.56 |
| | <i>SUBTOTAL:</i> | <i>0.09</i> | <i>0.43</i> | <i>0.88</i> | <i>1.42</i> | <i>1.94</i> | <i>0.83</i> |
| ALL | 0 | -0.39 | -0.08 | 0.38 | 0.74 | 1.43 | 0.24 |
| | 1 | 0.16 | 0.47 | 0.94 | 1.30 | 1.98 | 0.79 |
| | 2 | 0.16 | 0.47 | 0.94 | 1.30 | 1.98 | 0.79 |
| | 3+ | -0.02 | 0.29 | 0.76 | 1.11 | 1.80 | 0.61 |
| | <i>TOTAL:</i> | <i>0.13</i> | <i>0.44</i> | <i>0.91</i> | <i>1.27</i> | <i>1.95</i> | <i>0.76</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table B-6: MCA Non-Home-Based Other Trip Cross Classification Matrices

Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.19 | 0.73 | 1.18 | 1.31 | 0.38 | 0.54 |
| | 1 | 0.40 | 0.94 | 1.39 | 1.52 | 0.58 | 0.74 |
| | 2 | 0.60 | 1.13 | 1.59 | 1.72 | 0.78 | 0.94 |
| | 3+* | 0.79 | 1.32 | 1.78 | 1.91 | 0.97 | 1.13 |
| | <i>SUBTOTAL:</i> | <i>0.35</i> | <i>0.88</i> | <i>1.34</i> | <i>1.46</i> | <i>0.53</i> | <i>0.69</i> |
| 1 | 0 | 0.18 | 0.63 | 1.03 | 1.50 | 1.91 | 0.79 |
| | 1 | 0.39 | 0.85 | 1.24 | 1.71 | 2.13 | 1.00 |
| | 2 | 0.52 | 0.98 | 1.37 | 1.84 | 2.26 | 1.14 |
| | 3+ | 0.45 | 0.91 | 1.30 | 1.77 | 2.19 | 1.07 |
| | <i>SUBTOTAL:</i> | <i>0.44</i> | <i>0.90</i> | <i>1.29</i> | <i>1.76</i> | <i>2.18</i> | <i>1.06</i> |
| 2 | 0 | -0.17 | 0.62 | 0.84 | 1.85 | 1.58 | 0.70 |
| | 1 | 0.75 | 1.54 | 1.75 | 2.76 | 2.50 | 1.62 |
| | 2 | 0.51 | 1.30 | 1.52 | 2.53 | 2.27 | 1.38 |
| | 3+ | 0.52 | 1.31 | 1.52 | 2.54 | 2.27 | 1.39 |
| | <i>SUBTOTAL:</i> | <i>0.51</i> | <i>1.30</i> | <i>1.51</i> | <i>2.53</i> | <i>2.26</i> | <i>1.38</i> |
| 3 | 0 | -0.05 | 0.57 | 0.86 | 1.04 | 1.87 | 0.75 |
| | 1 | 0.72 | 1.35 | 1.63 | 1.81 | 2.64 | 1.52 |
| | 2 | 0.96 | 1.59 | 1.87 | 2.05 | 2.89 | 1.76 |
| | 3+ | 0.78 | 1.41 | 1.69 | 1.87 | 2.70 | 1.58 |
| | <i>SUBTOTAL:</i> | <i>0.85</i> | <i>1.47</i> | <i>1.75</i> | <i>1.94</i> | <i>2.77</i> | <i>1.65</i> |
| 4 | 0 | -0.29 | 0.16 | 0.81 | 0.98 | 1.57 | 0.57 |
| | 1 | 0.73 | 1.18 | 1.83 | 2.00 | 2.59 | 1.60 |
| | 2 | 0.58 | 1.03 | 1.68 | 1.85 | 2.44 | 1.45 |
| | 3+ | 0.62 | 1.07 | 1.72 | 1.89 | 2.49 | 1.49 |
| | <i>SUBTOTAL:</i> | <i>0.64</i> | <i>1.09</i> | <i>1.74</i> | <i>1.91</i> | <i>2.51</i> | <i>1.51</i> |
| ALL | 0 | 0.14 | 0.70 | 1.07 | 1.44 | 1.83 | 0.88 |
| | 1 | 0.61 | 1.17 | 1.54 | 1.91 | 2.30 | 1.35 |
| | 2 | 0.72 | 1.29 | 1.66 | 2.02 | 2.42 | 1.47 |
| | 3+ | 0.60 | 1.16 | 1.53 | 1.89 | 2.29 | 1.34 |
| | <i>TOTAL:</i> | <i>0.64</i> | <i>1.21</i> | <i>1.58</i> | <i>1.94</i> | <i>2.34</i> | <i>1.39</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table B-7: MCA Non-Home-Based Work Trip Cross Classification Matrices

Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | WORKERS PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | -0.43 | 0.08 | 0.00 | 0.37 | -0.61 | 0.03 |
| | 1 | 0.20 | 0.71 | 0.62 | 1.00 | 0.02 | 0.66 |
| | 2 | 0.38 | 0.90 | 0.81 | 1.19 | 0.21 | 0.85 |
| | 3+* | -0.09 | 0.42 | 0.34 | 0.71 | -0.26 | 0.38 |
| | <i>SUBTOTAL:</i> | <i>0.30</i> | <i>0.82</i> | <i>0.73</i> | <i>1.10</i> | <i>0.13</i> | <i>0.77</i> |
| 1 | 0 | -0.62 | -0.15 | -0.27 | 0.13 | -0.03 | 0.00 |
| | 1 | 0.25 | 0.72 | 0.61 | 1.00 | 0.84 | 0.87 |
| | 2 | 0.45 | 0.92 | 0.81 | 1.21 | 1.05 | 1.07 |
| | 3+ | -0.13 | 0.34 | 0.22 | 0.62 | 0.46 | 0.49 |
| | <i>SUBTOTAL:</i> | <i>0.37</i> | <i>0.84</i> | <i>0.72</i> | <i>1.12</i> | <i>0.96</i> | <i>0.99</i> |
| 2 | 0 | -0.95 | -0.17 | -0.47 | 0.18 | 0.05 | 0.02 |
| | 1 | 0.15 | 0.92 | 0.63 | 1.28 | 1.15 | 1.12 |
| | 2 | 0.48 | 1.26 | 0.97 | 1.61 | 1.48 | 1.45 |
| | 3+ | 0.24 | 1.02 | 0.73 | 1.38 | 1.25 | 1.22 |
| | <i>SUBTOTAL:</i> | <i>0.37</i> | <i>1.15</i> | <i>0.85</i> | <i>1.50</i> | <i>1.37</i> | <i>1.34</i> |
| 3 | 0 | -1.13 | -0.07 | -0.72 | -0.14 | 0.16 | 0.00 |
| | 1 | 0.06 | 1.12 | 0.47 | 1.05 | 1.35 | 1.19 |
| | 2 | 0.50 | 1.56 | 0.91 | 1.49 | 1.79 | 1.63 |
| | 3+ | 0.32 | 1.38 | 0.73 | 1.31 | 1.60 | 1.45 |
| | <i>SUBTOTAL:</i> | <i>0.35</i> | <i>1.41</i> | <i>0.76</i> | <i>1.34</i> | <i>1.63</i> | <i>1.48</i> |
| 4 | 0 | -0.98 | -0.27 | -0.35 | 0.03 | 0.14 | 0.00 |
| | 1 | 0.11 | 0.82 | 0.73 | 1.12 | 1.22 | 1.08 |
| | 2 | 0.62 | 1.33 | 1.24 | 1.63 | 1.74 | 1.59 |
| | 3+ | 0.48 | 1.19 | 1.11 | 1.50 | 1.60 | 1.46 |
| | <i>SUBTOTAL:</i> | <i>0.34</i> | <i>1.05</i> | <i>0.97</i> | <i>1.35</i> | <i>1.46</i> | <i>1.32</i> |
| ALL | 0 | -0.91 | -0.14 | -0.41 | 0.04 | 0.10 | 0.01 |
| | 1 | 0.14 | 0.90 | 0.64 | 1.09 | 1.14 | 1.06 |
| | 2 | 0.49 | 1.25 | 0.99 | 1.44 | 1.49 | 1.41 |
| | 3+ | 0.18 | 0.95 | 0.68 | 1.13 | 1.18 | 1.10 |
| | <i>TOTAL:</i> | <i>0.35</i> | <i>1.12</i> | <i>0.85</i> | <i>1.30</i> | <i>1.36</i> | <i>1.27</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table B-8: MCA Total Trip Cross Classification Matrices
 Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|--------------|--------------|--------------|--------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 1.40 | 4.70 | 5.75 | 8.46 | 9.01 | 3.68 |
| | 1 | 3.15 | 6.45 | 7.50 | 10.22 | 10.76 | 5.43 |
| | 2 | 4.62 | 7.92 | 8.97 | 11.69 | 12.23 | 6.90 |
| | 3+* | 4.80 | 8.10 | 9.15 | 11.87 | 12.41 | 7.08 |
| | <i>SUBTOTAL:</i> | <i>2.79</i> | <i>6.09</i> | <i>7.14</i> | <i>9.86</i> | <i>10.40</i> | <i>5.07</i> |
| 1 | 0 | 0.88 | 4.21 | 5.17 | 8.54 | 10.21 | 4.40 |
| | 1 | 3.47 | 6.80 | 7.76 | 11.13 | 12.80 | 6.99 |
| | 2 | 4.39 | 7.72 | 8.68 | 12.04 | 13.72 | 7.91 |
| | 3+ | 4.23 | 7.56 | 8.52 | 11.89 | 13.57 | 7.75 |
| | <i>SUBTOTAL:</i> | <i>3.33</i> | <i>6.66</i> | <i>7.62</i> | <i>10.99</i> | <i>12.66</i> | <i>6.85</i> |
| 2 | 0 | -0.63 | 3.94 | 5.55 | 8.60 | 11.22 | 4.65 |
| | 1 | 3.12 | 7.68 | 9.30 | 12.35 | 14.96 | 8.39 |
| | 2 | 3.94 | 8.51 | 10.12 | 13.17 | 15.79 | 9.22 |
| | 3+ | 4.85 | 9.41 | 11.02 | 14.07 | 16.69 | 10.12 |
| | <i>SUBTOTAL:</i> | <i>3.56</i> | <i>8.12</i> | <i>9.74</i> | <i>12.79</i> | <i>15.40</i> | <i>8.83</i> |
| 3 | 0 | -1.98 | 1.66 | 3.96 | 5.54 | 9.52 | 3.05 |
| | 1 | 4.02 | 7.65 | 9.95 | 11.54 | 15.51 | 9.04 |
| | 2 | 5.56 | 9.20 | 11.50 | 13.08 | 17.06 | 10.59 |
| | 3+ | 6.93 | 10.56 | 12.87 | 14.45 | 18.43 | 11.96 |
| | <i>SUBTOTAL:</i> | <i>5.30</i> | <i>8.94</i> | <i>11.24</i> | <i>12.82</i> | <i>16.80</i> | <i>10.33</i> |
| 4 | 0 | -0.90 | 3.38 | 5.60 | 8.13 | 10.22 | 4.89 |
| | 1 | 2.77 | 7.05 | 9.27 | 11.80 | 13.89 | 8.56 |
| | 2 | 3.56 | 7.84 | 10.06 | 12.59 | 14.68 | 9.35 |
| | 3+ | 4.43 | 8.70 | 10.93 | 13.45 | 15.55 | 10.22 |
| | <i>SUBTOTAL:</i> | <i>3.41</i> | <i>7.69</i> | <i>9.91</i> | <i>12.44</i> | <i>14.53</i> | <i>9.20</i> |
| ALL | 0 | -0.50 | 3.34 | 5.07 | 7.54 | 10.26 | 4.26 |
| | 1 | 3.21 | 7.05 | 8.79 | 11.26 | 13.97 | 7.97 |
| | 2 | 4.48 | 8.32 | 10.06 | 12.53 | 15.24 | 9.25 |
| | 3+ | 5.25 | 9.09 | 10.82 | 13.29 | 16.01 | 10.01 |
| | <i>TOTAL:</i> | <i>4.00</i> | <i>7.84</i> | <i>9.57</i> | <i>12.04</i> | <i>14.76</i> | <i>8.76</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table C-1 : Adjusted Home-Based Work Trip Cross Classification Matrices

Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | WORKERS PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 0.76 | 1.24 | 1.33 | 1.54 | 1.61 | 0.96 |
| | 2 | N/A | 2.10 | 2.18 | 2.20 | 2.70 | 2.26 |
| | 3+* | N/A | N/A | 2.55 | 3.69 | 3.73 | 3.58 |
| | <i>SUBTOTAL:</i> | <i>0.59</i> | <i>1.50</i> | <i>1.50</i> | <i>2.00</i> | <i>2.73</i> | <i>1.24</i> |
| 1 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 0.98 | 1.46 | 1.53 | 1.64 | 2.18 | 1.29 |
| | 2 | N/A | 2.05 | 2.21 | 2.22 | 2.73 | 2.09 |
| | 3+ | N/A | N/A | 2.56 | 3.76 | 4.12 | 3.44 |
| | <i>SUBTOTAL:</i> | <i>0.67</i> | <i>1.55</i> | <i>1.65</i> | <i>2.65</i> | <i>2.69</i> | <i>1.50</i> |
| 2 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 1.01 | 1.55 | 1.56 | 1.72 | 2.20 | 1.29 |
| | 2 | N/A | 2.21 | 2.40 | 2.24 | 3.07 | 2.35 |
| | 3+ | N/A | N/A | 3.77 | 4.69 | 4.84 | 4.40 |
| | <i>SUBTOTAL:</i> | <i>0.63</i> | <i>1.58</i> | <i>2.23</i> | <i>2.43</i> | <i>3.08</i> | <i>1.71</i> |
| 3 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 1.14 | 1.51 | 1.78 | 1.74 | 2.23 | 1.47 |
| | 2 | N/A | 2.57 | 2.36 | 2.70 | 3.12 | 2.48 |
| | 3+ | N/A | N/A | 3.90 | 4.59 | 4.86 | 4.44 |
| | <i>SUBTOTAL:</i> | <i>0.79</i> | <i>1.75</i> | <i>2.32</i> | <i>2.88</i> | <i>2.88</i> | <i>1.99</i> |
| 4 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 1.10 | 1.51 | 1.46 | 1.78 | 1.83 | 1.40 |
| | 2 | N/A | 2.36 | 1.94 | 2.65 | 2.67 | 2.36 |
| | 3+ | N/A | N/A | 3.66 | 3.59 | 3.94 | 3.73 |
| | <i>SUBTOTAL:</i> | <i>0.58</i> | <i>1.56</i> | <i>1.93</i> | <i>2.53</i> | <i>2.50</i> | <i>1.71</i> |
| ALL | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 1.02 | 1.49 | 1.57 | 1.70 | 1.71 | 1.34 |
| | 2 | N/A | 2.32 | 2.08 | 2.56 | 2.52 | 2.34 |
| | 3+ | N/A | N/A | 3.56 | 4.15 | 4.45 | 4.06 |
| | <i>TOTAL:</i> | <i>0.66</i> | <i>1.61</i> | <i>2.04</i> | <i>2.63</i> | <i>2.76</i> | <i>1.72</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table C-2: Adjusted Home-Based Personal Business Trip Cross Classification Matrices

Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.35 | 1.08 | 1.25 | 2.05 | 2.08 | 0.68 |
| | 1 | 0.86 | 1.62 | 1.69 | 2.23 | 2.24 | 1.43 |
| | 2 | 0.98 | 1.54 | 1.77 | 2.63 | 2.65 | 1.94 |
| | 3+* | 0.92 | 1.08 | 1.57 | 2.24 | 2.32 | 1.89 |
| | SUBTOTAL: | 0.54 | 1.43 | 1.58 | 2.31 | 2.32 | 1.16 |
| 1 | 0 | 0.50 | 1.11 | 1.23 | 2.01 | 2.11 | 0.83 |
| | 1 | 0.97 | 1.74 | 1.75 | 2.24 | 2.28 | 1.58 |
| | 2 | 0.82 | 1.97 | 2.23 | 2.63 | 2.65 | 2.25 |
| | 3+ | 1.00 | 1.50 | 1.57 | 2.33 | 2.55 | 2.07 |
| | SUBTOTAL: | 0.71 | 1.65 | 1.79 | 2.38 | 2.44 | 1.50 |
| 2 | 0 | 1.18 | 1.98 | 2.12 | 2.33 | 2.37 | 1.46 |
| | 1 | 1.34 | 2.14 | 2.21 | 2.39 | 2.99 | 1.88 |
| | 2 | 0.94 | 2.40 | 2.57 | 2.78 | 3.68 | 2.62 |
| | 3+ | 0.95 | 1.91 | 2.49 | 2.62 | 3.58 | 2.70 |
| | SUBTOTAL: | 1.26 | 2.23 | 2.43 | 2.64 | 3.48 | 2.20 |
| 3 | 0 | 1.23 | 1.98 | 2.11 | 2.35 | 2.42 | 1.49 |
| | 1 | 1.59 | 2.64 | 2.83 | 2.99 | 3.18 | 2.28 |
| | 2 | 1.80 | 2.73 | 2.46 | 2.77 | 3.21 | 2.70 |
| | 3+ | 1.50 | 2.23 | 3.33 | 4.06 | 4.78 | 3.71 |
| | SUBTOTAL: | 1.52 | 2.62 | 2.75 | 3.20 | 3.85 | 2.64 |
| 4 | 0 | 1.13 | 1.74 | 1.92 | 1.99 | 2.05 | 1.36 |
| | 1 | 1.17 | 2.49 | 2.54 | 2.62 | 2.69 | 2.01 |
| | 2 | 1.16 | 2.41 | 2.15 | 2.59 | 2.79 | 2.40 |
| | 3+ | 1.13 | 2.42 | 2.63 | 3.78 | 4.10 | 3.32 |
| | SUBTOTAL: | 1.16 | 2.40 | 2.34 | 2.91 | 3.25 | 2.32 |
| ALL | 0 | 0.81 | 1.44 | 1.56 | 2.10 | 2.16 | 1.09 |
| | 1 | 1.26 | 2.20 | 2.26 | 2.54 | 2.68 | 1.91 |
| | 2 | 1.33 | 2.46 | 2.34 | 2.69 | 3.07 | 2.52 |
| | 3+ | 1.25 | 2.17 | 2.78 | 3.57 | 4.09 | 3.25 |
| | TOTAL: | 1.09 | 2.23 | 2.36 | 2.87 | 3.31 | 2.16 |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table C-3: Adjusted Home-Based Social/Recreational Trip Cross Classification Matrices

Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.18 | 0.32 | 0.55 | 0.61 | 0.75 | 0.27 |
| | 1 | 0.35 | 0.69 | 0.69 | 0.83 | 0.86 | 0.59 |
| | 2 | 0.37 | 0.50 | 0.70 | 1.25 | 1.99 | 0.90 |
| | 3+* | 0.37 | 0.52 | 1.31 | 1.33 | 2.05 | 1.41 |
| | SUBTOTAL: | 0.24 | 0.54 | 0.68 | 0.94 | 1.25 | 0.49 |
| 1 | 0 | 0.32 | 0.63 | 0.66 | 0.68 | 0.89 | 0.46 |
| | 1 | 0.40 | 0.66 | 0.72 | 1.30 | 1.53 | 0.71 |
| | 2 | 0.41 | 0.70 | 0.87 | 1.32 | 1.71 | 1.03 |
| | 3+ | 0.42 | 0.71 | 1.99 | 2.02 | 2.09 | 1.85 |
| | SUBTOTAL: | 0.36 | 0.66 | 0.88 | 1.34 | 1.63 | 0.77 |
| 2 | 0 | 0.33 | 0.65 | 0.68 | 0.96 | 0.97 | 0.45 |
| | 1 | 0.42 | 0.65 | 1.10 | 1.31 | 1.74 | 0.72 |
| | 2 | 0.48 | 0.96 | 1.11 | 1.31 | 2.01 | 1.18 |
| | 3+ | 0.67 | 0.96 | 1.23 | 1.33 | 2.18 | 1.46 |
| | SUBTOTAL: | 0.40 | 0.81 | 1.11 | 1.31 | 1.99 | 0.94 |
| 3 | 0 | 0.27 | 0.67 | 0.90 | 0.99 | 1.00 | 0.43 |
| | 1 | 0.26 | 0.77 | 1.14 | 1.32 | 1.75 | 0.69 |
| | 2 | 0.47 | 0.76 | 1.22 | 1.40 | 3.70 | 1.35 |
| | 3+ | 0.50 | 1.02 | 1.52 | 1.98 | 2.82 | 1.89 |
| | SUBTOTAL: | 0.29 | 0.78 | 1.28 | 1.56 | 3.06 | 1.19 |
| 4 | 0 | 0.40 | 0.44 | 0.80 | 1.02 | 1.78 | 0.50 |
| | 1 | 0.43 | 0.67 | 0.90 | 1.30 | 2.01 | 0.74 |
| | 2 | 0.50 | 0.71 | 1.04 | 1.93 | 2.09 | 1.25 |
| | 3+ | 0.53 | 0.72 | 1.31 | 2.31 | 2.41 | 1.82 |
| | SUBTOTAL: | 0.43 | 0.68 | 1.06 | 1.91 | 2.19 | 1.07 |
| ALL | 0 | 0.31 | 0.55 | 0.69 | 0.81 | 1.02 | 0.43 |
| | 1 | 0.37 | 0.69 | 0.93 | 1.28 | 1.68 | 0.71 |
| | 2 | 0.48 | 0.77 | 1.09 | 1.56 | 2.53 | 1.24 |
| | 3+ | 0.54 | 0.89 | 1.43 | 1.98 | 2.49 | 1.78 |
| | TOTAL: | 0.36 | 0.72 | 1.09 | 1.58 | 2.30 | 0.99 |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-I, or X-X trips

Table C-4: Adjusted Home-Based School Trip Cross Classification Matrices

Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.00 | 0.32 | 1.09 | 1.88 | 2.79 | 0.29 |
| | 1 | 0.05 | 0.23 | 0.46 | 1.44 | 1.90 | 0.39 |
| | 2 | 0.00 | 0.20 | 0.21 | 1.07 | 1.84 | 0.60 |
| | 3+* | 0.00 | 0.08 | 0.12 | 0.67 | 1.82 | 0.77 |
| | <i>SUBTOTAL:</i> | <i>0.02</i> | <i>0.25</i> | <i>0.57</i> | <i>1.37</i> | <i>2.06</i> | <i>0.38</i> |
| 1 | 0 | 0.11 | 0.39 | 0.92 | 1.27 | 1.57 | 0.35 |
| | 1 | 0.10 | 0.41 | 0.49 | 1.20 | 1.28 | 0.46 |
| | 2 | 0.00 | 0.31 | 0.30 | 1.15 | 1.20 | 0.62 |
| | 3+ | 0.00 | 0.06 | 0.28 | 0.86 | 1.17 | 0.69 |
| | <i>SUBTOTAL:</i> | <i>0.10</i> | <i>0.37</i> | <i>0.48</i> | <i>1.14</i> | <i>1.26</i> | <i>0.48</i> |
| 2 | 0 | 0.06 | 0.30 | 0.77 | 0.96 | 1.09 | 0.21 |
| | 1 | 0.02 | 0.30 | 0.36 | 0.89 | 1.06 | 0.28 |
| | 2 | 0.00 | 0.17 | 0.39 | 1.07 | 1.52 | 0.57 |
| | 3+ | 0.03 | 0.06 | 0.32 | 1.00 | 1.38 | 0.76 |
| | <i>SUBTOTAL:</i> | <i>0.03</i> | <i>0.23</i> | <i>0.39</i> | <i>1.01</i> | <i>1.37</i> | <i>0.43</i> |
| 3 | 0 | 0.00 | 0.16 | 0.40 | 0.55 | 0.95 | 0.09 |
| | 1 | 0.04 | 0.18 | 0.41 | 0.68 | 1.05 | 0.23 |
| | 2 | 0.06 | 0.07 | 0.42 | 0.79 | 1.09 | 0.43 |
| | 3+ | 0.00 | 0.15 | 0.63 | 0.93 | 1.65 | 0.90 |
| | <i>SUBTOTAL:</i> | <i>0.03</i> | <i>0.12</i> | <i>0.47</i> | <i>0.81</i> | <i>1.32</i> | <i>0.44</i> |
| 4 | 0 | 0.09 | 0.10 | 0.69 | 0.74 | 0.99 | 0.18 |
| | 1 | 0.01 | 0.11 | 0.40 | 0.75 | 1.00 | 0.22 |
| | 2 | 0.00 | 0.12 | 0.35 | 0.77 | 1.02 | 0.44 |
| | 3+ | 0.00 | 0.15 | 0.35 | 0.54 | 1.47 | 0.68 |
| | <i>SUBTOTAL:</i> | <i>0.03</i> | <i>0.12</i> | <i>0.37</i> | <i>0.77</i> | <i>1.19</i> | <i>0.39</i> |
| ALL | 0 | 0.06 | 0.29 | 0.83 | 1.13 | 1.55 | 0.25 |
| | 1 | 0.04 | 0.25 | 0.42 | 0.92 | 1.17 | 0.31 |
| | 2 | 0.02 | 0.13 | 0.37 | 0.88 | 1.18 | 0.49 |
| | 3+ | 0.01 | 0.13 | 0.45 | 0.80 | 1.49 | 0.78 |
| | <i>TOTAL:</i> | <i>0.05</i> | <i>0.20</i> | <i>0.43</i> | <i>0.90</i> | <i>1.30</i> | <i>0.43</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-I, or X-X trips

Table C-5: Adjusted Home-Based Drop-off Trip Cross Classification Matrices
Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.02 | 0.19 | 0.28 | 0.36 | 0.54 | 0.10 |
| | 1 | 0.07 | 0.27 | 0.75 | 1.03 | 1.15 | 0.37 |
| | 2 | 0.00 | 0.27 | 0.75 | 1.29 | 1.49 | 0.74 |
| | 3+* | 0.00 | 0.55 | 0.78 | 0.80 | 0.96 | 0.79 |
| | SUBTOTAL: | 0.04 | 0.25 | 0.62 | 0.96 | 1.09 | 0.30 |
| 1 | 0 | 0.01 | 0.17 | 0.30 | 0.38 | 0.68 | 0.11 |
| | 1 | 0.14 | 0.57 | 0.80 | 1.30 | 1.32 | 0.59 |
| | 2 | 0.18 | 0.43 | 0.79 | 1.30 | 1.67 | 0.90 |
| | 3+ | 0.00 | 0.42 | 0.45 | 1.03 | 1.27 | 0.86 |
| | SUBTOTAL: | 0.07 | 0.44 | 0.68 | 1.17 | 1.36 | 0.53 |
| 2 | 0 | 0.00 | 0.17 | 0.31 | 0.65 | 0.80 | 0.09 |
| | 1 | 0.04 | 0.77 | 0.90 | 2.14 | 2.61 | 0.69 |
| | 2 | 0.28 | 0.33 | 0.87 | 2.13 | 2.62 | 1.12 |
| | 3+ | 0.00 | 0.27 | 0.72 | 1.00 | 2.30 | 1.15 |
| | SUBTOTAL: | 0.04 | 0.50 | 0.82 | 1.81 | 2.46 | 0.82 |
| 3 | 0 | 0.00 | 0.42 | 0.53 | 0.88 | 0.97 | 0.16 |
| | 1 | 0.11 | 0.51 | 1.21 | 1.95 | 1.96 | 0.62 |
| | 2 | 0.13 | 0.36 | 1.02 | 1.88 | 2.54 | 1.10 |
| | 3+ | 0.33 | 0.26 | 0.84 | 0.98 | 2.50 | 1.22 |
| | SUBTOTAL: | 0.09 | 0.40 | 1.00 | 1.60 | 2.43 | 0.91 |
| 4 | 0 | 0.20 | 0.34 | 0.40 | 0.63 | 0.75 | 0.27 |
| | 1 | 0.22 | 0.78 | 1.24 | 1.70 | 2.00 | 0.78 |
| | 2 | 0.05 | 0.34 | 0.85 | 1.45 | 2.01 | 0.93 |
| | 3+ | 0.00 | 0.06 | 0.54 | 1.05 | 1.86 | 0.99 |
| | SUBTOTAL: | 0.20 | 0.47 | 0.85 | 1.37 | 1.93 | 0.83 |
| ALL | 0 | 0.04 | 0.23 | 0.34 | 0.52 | 0.71 | 0.14 |
| | 1 | 0.13 | 0.63 | 1.01 | 1.70 | 1.83 | 0.65 |
| | 2 | 0.14 | 0.35 | 0.90 | 1.70 | 2.24 | 1.02 |
| | 3+ | 0.14 | 0.21 | 0.69 | 1.01 | 2.11 | 1.10 |
| | TOTAL: | 0.09 | 0.44 | 0.85 | 1.49 | 2.06 | 0.76 |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-I, or X-X trips

Table C-6: Adjusted Non-Home-Based Other Trip Cross Classification Matrices
Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.22 | 0.62 | 0.98 | 1.12 | 1.06 | 0.42 |
| | 1 | 0.40 | 0.89 | 1.24 | 1.34 | 1.21 | 0.81 |
| | 2 | 0.50 | 1.18 | 1.27 | 1.44 | 1.26 | 1.24 |
| | 3+* | 0.53 | 1.23 | 1.43 | 1.67 | 1.42 | 1.44 |
| | <i>SUBTOTAL:</i> | <i>0.29</i> | <i>0.85</i> | <i>1.18</i> | <i>1.35</i> | <i>1.21</i> | <i>0.69</i> |
| 1 | 0 | 0.47 | 0.63 | 1.00 | 1.21 | 1.56 | 0.63 |
| | 1 | 0.47 | 1.00 | 1.16 | 1.82 | 1.79 | 0.99 |
| | 2 | 0.52 | 1.02 | 1.61 | 2.41 | 2.40 | 1.67 |
| | 3+ | 0.50 | 1.01 | 1.57 | 1.82 | 1.98 | 1.68 |
| | <i>SUBTOTAL:</i> | <i>0.47</i> | <i>0.92</i> | <i>1.31</i> | <i>1.98</i> | <i>2.02</i> | <i>1.06</i> |
| 2 | 0 | 0.28 | 0.88 | 1.01 | 1.22 | 1.18 | 0.50 |
| | 1 | 0.64 | 1.35 | 1.63 | 2.63 | 2.51 | 1.26 |
| | 2 | 0.56 | 1.19 | 1.51 | 2.42 | 2.16 | 1.61 |
| | 3+ | 0.57 | 1.54 | 1.82 | 2.43 | 2.21 | 2.02 |
| | <i>SUBTOTAL:</i> | <i>0.52</i> | <i>1.25</i> | <i>1.58</i> | <i>2.44</i> | <i>2.22</i> | <i>1.38</i> |
| 3 | 0 | 0.18 | 0.87 | 1.02 | 1.15 | 1.32 | 0.42 |
| | 1 | 0.75 | 1.50 | 1.55 | 2.12 | 2.50 | 1.29 |
| | 2 | 1.17 | 1.52 | 1.56 | 2.18 | 3.06 | 1.85 |
| | 3+ | 1.02 | 1.27 | 2.06 | 2.51 | 2.67 | 2.21 |
| | <i>SUBTOTAL:</i> | <i>0.66</i> | <i>1.46</i> | <i>1.68</i> | <i>2.26</i> | <i>2.81</i> | <i>1.65</i> |
| 4 | 0 | 0.36 | 1.08 | 1.10 | 1.14 | 1.27 | 0.61 |
| | 1 | 0.87 | 1.10 | 1.87 | 2.48 | 2.58 | 1.33 |
| | 2 | 1.01 | 1.17 | 1.58 | 1.76 | 2.40 | 1.56 |
| | 3+ | 0.76 | 0.84 | 1.64 | 2.49 | 3.31 | 2.24 |
| | <i>SUBTOTAL:</i> | <i>0.72</i> | <i>1.12</i> | <i>1.64</i> | <i>2.07</i> | <i>2.75</i> | <i>1.51</i> |
| ALL | 0 | 0.34 | 0.77 | 1.02 | 1.18 | 1.37 | 0.54 |
| | 1 | 0.68 | 1.21 | 1.52 | 2.19 | 2.21 | 1.19 |
| | 2 | 0.93 | 1.28 | 1.56 | 2.09 | 2.54 | 1.68 |
| | 3+ | 0.82 | 1.17 | 1.83 | 2.43 | 2.72 | 2.13 |
| | <i>TOTAL:</i> | <i>0.56</i> | <i>1.19</i> | <i>1.57</i> | <i>2.17</i> | <i>2.49</i> | <i>1.39</i> |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-I, or X-X trips

Table C-7: Adjusted Non-Home-Based Work Trip Cross Classification Matrices
Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | WORKERS PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 0.57 | 0.71 | 0.77 | 0.90 | 0.93 | 0.64 |
| | 2 | N/A | 1.47 | 1.52 | 1.58 | 1.61 | 1.50 |
| | 3+* | N/A | N/A | 1.53 | 1.62 | 1.71 | 1.67 |
| | SUBTOTAL: | 0.44 | 1.00 | 1.10 | 1.36 | 1.41 | 0.77 |
| 1 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 0.88 | 0.80 | 0.83 | 0.99 | 1.03 | 0.87 |
| | 2 | N/A | 1.43 | 1.74 | 1.76 | 1.86 | 1.53 |
| | 3+ | N/A | N/A | 2.17 | 2.25 | 2.36 | 1.42 |
| | SUBTOTAL: | 0.61 | 1.00 | 1.48 | 1.35 | 1.11 | 0.99 |
| 2 | 0 | 0.06 | 0.02 | 0.00 | 0.00 | 0.00 | 0.04 |
| | 1 | 0.91 | 1.24 | 1.20 | 1.21 | 1.22 | 1.07 |
| | 2 | N/A | 1.78 | 1.97 | 2.20 | 2.24 | 1.89 |
| | 3+ | N/A | N/A | 2.70 | 2.82 | 2.94 | 2.91 |
| | SUBTOTAL: | 0.59 | 1.28 | 1.73 | 2.04 | 1.87 | 1.34 |
| 3 | 0 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 |
| | 1 | 0.94 | 1.46 | 1.49 | 1.52 | 1.61 | 1.14 |
| | 2 | N/A | 2.17 | 2.00 | 1.66 | 1.80 | 1.98 |
| | 3+ | N/A | N/A | 3.81 | 2.15 | 2.76 | 2.78 |
| | SUBTOTAL: | 0.65 | 1.54 | 1.81 | 1.63 | 2.09 | 1.48 |
| 4 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 0.95 | 1.09 | 1.15 | 1.18 | 1.42 | 1.06 |
| | 2 | N/A | 1.71 | 2.27 | 1.90 | 1.76 | 1.89 |
| | 3+ | N/A | N/A | 3.50 | 2.54 | 2.36 | 2.76 |
| | SUBTOTAL: | 0.50 | 1.13 | 1.93 | 1.70 | 1.77 | 1.32 |
| ALL | 0 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 |
| | 1 | 0.88 | 1.14 | 0.99 | 1.05 | 1.36 | 1.01 |
| | 2 | N/A | 1.79 | 2.00 | 1.81 | 1.88 | 1.83 |
| | 3+ | N/A | N/A | 3.16 | 2.34 | 2.36 | 2.58 |
| | TOTAL: | 0.57 | 1.24 | 1.74 | 1.68 | 1.76 | 1.27 |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table C-8: Adjusted Total Trip Cross Classification Matrices

Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|--------------|--------------|--------------|--------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 1.66 | 4.48 | 5.77 | 6.00 | 9.02 | 2.81 |
| | 1 | 3.05 | 6.31 | 7.22 | 11.24 | 9.25 | 5.78 |
| | 2 | 4.50 | 7.69 | 7.93 | 12.92 | 13.89 | 9.48 |
| | 3+* | 1.00 | 9.81 | 14.68 | 11.00 | 21.00 | 14.61 |
| | SUBTOTAL: | 2.19 | 5.94 | 7.44 | 11.16 | 11.57 | 5.07 |
| 1 | 0 | 2.21 | 4.27 | 4.60 | 6.41 | 12.07 | 3.43 |
| | 1 | 3.97 | 6.96 | 7.11 | 11.79 | 13.26 | 6.88 |
| | 2 | 3.64 | 8.32 | 9.84 | 13.30 | 11.71 | 10.13 |
| | 3+ | 2.50 | 7.18 | 12.71 | 13.82 | 14.73 | 12.72 |
| | SUBTOTAL: | 3.01 | 6.69 | 8.04 | 12.07 | 12.84 | 6.85 |
| 2 | 0 | 1.82 | 5.41 | 5.00 | 9.69 | N/A | 3.01 |
| | 1 | 4.12 | 7.83 | 8.90 | 11.23 | 15.13 | 7.05 |
| | 2 | 3.33 | 8.71 | 10.05 | 13.74 | 16.34 | 10.77 |
| | 3+ | 3.33 | 8.01 | 13.37 | 15.64 | 19.49 | 14.67 |
| | SUBTOTAL: | 3.31 | 8.04 | 10.15 | 13.53 | 17.23 | 8.83 |
| 3 | 0 | 1.55 | 8.17 | N/A | N/A | N/A | 2.98 |
| | 1 | 4.27 | 8.03 | 11.43 | 10.55 | 12.94 | 7.26 |
| | 2 | 6.53 | 9.26 | 10.50 | 13.11 | 17.44 | 11.26 |
| | 3+ | 4.00 | 9.44 | 13.82 | 16.36 | 21.98 | 15.76 |
| | SUBTOTAL: | 3.82 | 8.83 | 11.56 | 13.73 | 18.82 | 10.33 |
| 4 | 0 | 3.63 | 6.54 | N/A | 3.52 | 12.00 | 4.48 |
| | 1 | 4.17 | 6.97 | 9.89 | 10.73 | 12.92 | 6.93 |
| | 2 | 3.68 | 8.30 | 9.67 | 12.25 | 14.26 | 10.15 |
| | 3+ | 1.50 | 7.05 | 11.58 | 16.33 | 17.91 | 13.86 |
| | SUBTOTAL: | 3.91 | 7.63 | 10.16 | 12.96 | 15.33 | 9.20 |
| ALL | 0 | 2.21 | 5.30 | 4.86 | 6.28 | 11.45 | 3.38 |
| | 1 | 4.07 | 7.35 | 9.08 | 11.07 | 13.18 | 6.94 |
| | 2 | 4.70 | 8.72 | 10.02 | 12.94 | 15.31 | 10.64 |
| | 3+ | 2.99 | 8.25 | 12.91 | 16.01 | 19.48 | 14.67 |
| | TOTAL: | 3.37 | 7.78 | 10.10 | 13.15 | 16.19 | 8.76 |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table D-I : Factored Home-Based Work Trip Cross Classification Matrices

Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | WORKERS PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|----------------------------------|----------------|------|-------------|-------------|-------------|-------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 0.84 | 1.36 | 1.46 | 1.69 | 1.77 | 1.06 |
| | 2 | N/A | 2.31 | 2.40 | 2.42 | 2.97 | 2.49 |
| | 3+* | N/A | N/A | 2.81 | 4.06 | 4.10 | 3.94 |
| | SUBTOTAL: | 0.65 | 1.65 | 1.65 | 2.20 | 3.00 | 1.36 |
| 1 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 1.08 | 1.61 | 1.68 | 1.80 | 2.40 | 1.42 |
| | 2 | N/A | 2.26 | 2.43 | 2.44 | 3.00 | 2.30 |
| | 3+ | N/A | N/A | 2.82 | 4.14 | 4.53 | 3.78 |
| | SUBTOTAL: | 0.74 | 1.71 | 1.82 | 2.92 | 2.96 | 1.65 |
| 2 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 1.11 | 1.71 | 1.72 | 1.89 | 2.42 | 1.42 |
| | 2 | N/A | 2.43 | 2.64 | 2.46 | 3.38 | 2.59 |
| | 3+ | N/A | N/A | 4.15 | 5.16 | 5.32 | 4.84 |
| | SUBTOTAL: | 0.69 | 1.74 | 2.45 | 2.67 | 3.39 | 1.88 |
| 3 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 1.25 | 1.66 | 1.96 | 1.91 | 2.45 | 1.62 |
| | 2 | N/A | 2.83 | 2.60 | 2.97 | 3.43 | 2.73 |
| | 3+ | N/A | N/A | 4.29 | 5.05 | 5.35 | 4.88 |
| | SUBTOTAL: | 0.87 | 1.93 | 2.55 | 3.17 | 3.17 | 2.19 |
| 4 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 1.21 | 1.66 | 1.61 | 1.96 | 2.01 | 1.54 |
| | 2 | N/A | 2.60 | 2.13 | 2.92 | 2.94 | 2.60 |
| | 3+ | N/A | N/A | 4.03 | 3.95 | 4.33 | 4.10 |
| | SUBTOTAL: | 0.64 | 1.72 | 2.12 | 2.78 | 2.75 | 1.88 |
| ALL | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 1 | 1.12 | 1.64 | 1.73 | 1.87 | 1.88 | 1.47 |
| | 2 | N/A | 2.55 | 2.29 | 2.82 | 2.77 | 2.57 |
| | 3+ | N/A | N/A | 3.92 | 4.57 | 4.90 | 4.46 |
| | TOTAL: | 0.73 | 1.77 | 2.24 | 2.89 | 3.04 | 1.89 |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-I, or X-X trips

Table D-2: Factored Home-Based Personal Business Trip Cross Classification Matrices

Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.35 | 1.08 | 1.25 | 2.05 | 2.08 | 0.68 |
| | 1 | 0.86 | 1.62 | 1.69 | 2.23 | 2.24 | 1.43 |
| | 2 | 0.98 | 1.54 | 1.77 | 2.63 | 2.65 | 1.94 |
| | 3+ | 0.92 | 1.08 | 1.57 | 2.24 | 2.32 | 1.89 |
| | SUBTOTAL: | 0.54 | 1.43 | 1.58 | 2.31 | 2.32 | 1.16 |
| 1 | 0 | 0.50 | 1.11 | 1.23 | 2.01 | 2.11 | 0.83 |
| | 1 | 0.97 | 1.74 | 1.75 | 2.24 | 2.28 | 1.58 |
| | 2 | 0.82 | 1.97 | 2.23 | 2.63 | 2.65 | 2.25 |
| | 3+ | 1.00 | 1.50 | 1.57 | 2.33 | 2.55 | 2.07 |
| | SUBTOTAL: | 0.71 | 1.65 | 1.79 | 2.38 | 2.44 | 1.50 |
| 2 | 0 | 1.18 | 1.98 | 2.12 | 2.33 | 2.37 | 1.46 |
| | 1 | 1.34 | 2.14 | 2.21 | 2.39 | 2.99 | 1.88 |
| | 2 | 0.94 | 2.40 | 2.57 | 2.78 | 3.68 | 2.62 |
| | 3+ | 0.95 | 1.91 | 2.49 | 2.62 | 3.58 | 2.70 |
| | SUBTOTAL: | 1.26 | 2.23 | 2.43 | 2.64 | 3.48 | 2.20 |
| 3 | 0 | 1.23 | 1.98 | 2.11 | 2.35 | 2.42 | 1.49 |
| | 1 | 1.59 | 2.64 | 2.83 | 2.99 | 3.18 | 2.28 |
| | 2 | 1.80 | 2.73 | 2.46 | 2.77 | 3.21 | 2.70 |
| | 3+ | 1.50 | 2.23 | 3.33 | 4.06 | 4.78 | 3.71 |
| | SUBTOTAL: | 1.52 | 2.62 | 2.75 | 3.20 | 3.85 | 2.64 |
| 4 | 0 | 1.13 | 1.74 | 1.92 | 1.99 | 2.05 | 1.36 |
| | 1 | 1.17 | 2.49 | 2.54 | 2.62 | 2.69 | 2.01 |
| | 2 | 1.16 | 2.41 | 2.15 | 2.59 | 2.79 | 2.40 |
| | 3+ | 1.13 | 2.42 | 2.63 | 3.78 | 4.10 | 3.32 |
| | SUBTOTAL: | 1.16 | 2.40 | 2.34 | 2.91 | 3.25 | 2.32 |
| ALL | 0 | 0.81 | 1.44 | 1.56 | 2.10 | 2.16 | 1.09 |
| | 1 | 1.26 | 2.20 | 2.26 | 2.54 | 2.68 | 1.91 |
| | 2 | 1.33 | 2.46 | 2.34 | 2.69 | 3.07 | 2.52 |
| | 3+ | 1.25 | 2.17 | 2.78 | 3.57 | 4.09 | 3.25 |
| | TOTAL: | 1.09 | 2.23 | 2.36 | 2.87 | 3.31 | 2.16 |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table D-3: Factored Home-Based Social/Recreational Trip Cross Classification Matrices
Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.19 | 0.34 | 0.58 | 0.64 | 0.79 | 0.28 |
| | 1 | 0.37 | 0.72 | 0.72 | 0.87 | 0.90 | 0.61 |
| | 2 | 0.39 | 0.53 | 0.74 | 1.31 | 2.09 | 0.95 |
| | 3+* | 0.39 | 0.55 | 1.38 | 1.40 | 2.15 | 1.48 |
| | SUBTOTAL: | 0.25 | 0.57 | 0.71 | 0.99 | 1.31 | 0.52 |
| 1 | 0 | 0.34 | 0.66 | 0.69 | 0.71 | 0.93 | 0.48 |
| | 1 | 0.42 | 0.69 | 0.76 | 1.37 | 1.61 | 0.75 |
| | 2 | 0.43 | 0.74 | 0.91 | 1.39 | 1.80 | 1.08 |
| | 3+ | 0.44 | 0.75 | 2.09 | 2.12 | 2.19 | 1.94 |
| | SUBTOTAL: | 0.38 | 0.70 | 0.92 | 1.41 | 1.71 | 0.81 |
| 2 | 0 | 0.35 | 0.68 | 0.71 | 1.01 | 1.02 | 0.47 |
| | 1 | 0.44 | 0.68 | 1.16 | 1.38 | 1.83 | 0.76 |
| | 2 | 0.50 | 1.01 | 1.17 | 1.38 | 2.11 | 1.24 |
| | 3+ | 0.70 | 1.01 | 1.29 | 1.40 | 2.29 | 1.54 |
| | SUBTOTAL: | 0.42 | 0.85 | 1.17 | 1.37 | 2.09 | 0.99 |
| 3 | 0 | 0.28 | 0.70 | 0.95 | 1.04 | 1.05 | 0.45 |
| | 1 | 0.27 | 0.81 | 1.20 | 1.39 | 1.84 | 0.73 |
| | 2 | 0.49 | 0.80 | 1.28 | 1.47 | 3.89 | 1.42 |
| | 3+ | 0.53 | 1.07 | 1.60 | 2.08 | 2.96 | 1.99 |
| | SUBTOTAL: | 0.30 | 0.82 | 1.34 | 1.64 | 3.22 | 1.25 |
| 4 | 0 | 0.42 | 0.46 | 0.84 | 1.07 | 1.87 | 0.52 |
| | 1 | 0.45 | 0.70 | 0.95 | 1.37 | 2.11 | 0.78 |
| | 2 | 0.53 | 0.75 | 1.09 | 2.03 | 2.19 | 1.31 |
| | 3+ | 0.56 | 0.76 | 1.38 | 2.43 | 2.53 | 1.91 |
| | SUBTOTAL: | 0.45 | 0.71 | 1.11 | 2.00 | 2.30 | 1.12 |
| ALL | 0 | 0.32 | 0.58 | 0.73 | 0.85 | 1.07 | 0.45 |
| | 1 | 0.39 | 0.72 | 0.97 | 1.34 | 1.76 | 0.74 |
| | 2 | 0.50 | 0.81 | 1.14 | 1.64 | 2.66 | 1.30 |
| | 3+ | 0.56 | 0.93 | 1.50 | 2.08 | 2.61 | 1.87 |
| | TOTAL: | 0.37 | 0.76 | 1.14 | 1.66 | 2.41 | 1.04 |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips

Table D-4: Factored Home-Based School Trip Cross Classification Matrices
Based on Expanded 1991 Boston Household Travel Survey

| CTPS SUB- REGION | VEHICLES PER HOUSE- HOLD | HOUSEHOLD SIZE | | | | | TOTAL |
|------------------------|-----------------------------------|----------------|-------------|-------------|-------------|-------------|-------|
| | | 1 | 2 | 3 | 4 | 5+* | |
| 0 | 0 | 0.00 | 0.35 | 1.20 | 2.07 | 3.07 | 0.32 |
| | 1 | 0.06 | 0.25 | 0.51 | 1.58 | 2.09 | 0.43 |
| | 2 | 0.00 | 0.22 | 0.23 | 1.18 | 2.02 | 0.66 |
| | 3+* | 0.00 | 0.09 | 0.13 | 0.74 | 2.00 | 0.85 |
| | SUBTOTAL: | 0.02 | 0.28 | 0.62 | 1.50 | 2.27 | 0.41 |
| 1 | 0 | 0.12 | 0.43 | 1.01 | 1.40 | 1.73 | 0.38 |
| | 1 | 0.11 | 0.45 | 0.54 | 1.32 | 1.41 | 0.51 |
| | 2 | 0.00 | 0.34 | 0.33 | 1.27 | 1.32 | 0.68 |
| | 3+ | 0.00 | 0.07 | 0.31 | 0.95 | 1.29 | 0.76 |
| | SUBTOTAL: | 0.11 | 0.41 | 0.53 | 1.26 | 1.39 | 0.52 |
| 2 | 0 | 0.07 | 0.33 | 0.85 | 1.06 | 1.20 | 0.23 |
| | 1 | 0.02 | 0.33 | 0.40 | 0.98 | 1.17 | 0.31 |
| | 2 | 0.00 | 0.19 | 0.43 | 1.18 | 1.67 | 0.63 |
| | 3+ | 0.03 | 0.07 | 0.35 | 1.10 | 1.52 | 0.83 |
| | SUBTOTAL: | 0.04 | 0.25 | 0.42 | 1.11 | 1.51 | 0.48 |
| 3 | 0 | 0.00 | 0.18 | 0.44 | 0.61 | 1.05 | 0.10 |
| | 1 | 0.04 | 0.20 | 0.45 | 0.75 | 1.16 | 0.26 |
| | 2 | 0.07 | 0.08 | 0.46 | 0.87 | 1.20 | 0.48 |
| | 3+ | 0.00 | 0.17 | 0.69 | 1.02 | 1.82 | 0.99 |
| | SUBTOTAL: | 0.03 | 0.13 | 0.52 | 0.90 | 1.45 | 0.48 |
| 4 | 0 | 0.10 | 0.11 | 0.76 | 0.81 | 1.09 | 0.20 |
| | 1 | 0.01 | 0.12 | 0.44 | 0.83 | 1.10 | 0.24 |
| | 2 | 0.00 | 0.13 | 0.39 | 0.85 | 1.12 | 0.48 |
| | 3+ | 0.00 | 0.17 | 0.39 | 0.59 | 1.62 | 0.75 |
| | SUBTOTAL: | 0.04 | 0.13 | 0.41 | 0.85 | 1.30 | 0.42 |
| ALL | 0 | 0.07 | 0.32 | 0.92 | 1.25 | 1.71 | 0.28 |
| | 1 | 0.04 | 0.27 | 0.47 | 1.01 | 1.29 | 0.34 |
| | 2 | 0.03 | 0.15 | 0.41 | 0.96 | 1.30 | 0.53 |
| | 3+ | 0.01 | 0.14 | 0.49 | 0.88 | 1.64 | 0.86 |
| | TOTAL: | 0.05 | 0.22 | 0.48 | 0.99 | 1.43 | 0.47 |

N.B.: Does not include walk, bike, taxi, schoolbus, I-X, X-1, or X-X trips