## *Standard Rates and Values for Modeling*

### Trip Generation

*Trip Purpose*

| Purpose | Triangle Survey* | Triad Survey* | Charlotte Region* | National |
|---|---|---|---|---|
| HBW | 22% | 20% | 19% | 18 - 25% |
| HBO | 46% | 49% | | 47 - 58% |
| NHB | 32% | 31% | | 18 - 28% |
| Non-HBW | | | 81% | |

*Incorporates urban and non-urban households

*Vehicle Trip Production Rates*

| Housing Classification | 1995 Triangle Household Survey | Triad Survey | National Data *[FHWA]* |
|---|---|---|---|
| Excellent | 9.4* | 9.3 | 11.2 |
| Above Average | 9.4* | 9.1 | 11.2 |
| Average | 8.3 | 7.7 | 8.3 |
| Below Average | 6.2* | 6.3 | 5.4 |
| Poor | 6.2* | 5.7 | 5.4 |
| All Dwelling Units | 7.8 | 7.4 – 8.0 | 7.8 |

*Categories had to be combined to achieve a statistically significant sample

*Validation of Production Rates*

- Calculate total trips by purpose and compare to values in table.
- Calculate total vehicle trips per household or per capita and compare to values in table.
- Calculate trip rate per capita (total trips/population). This value should be over 3.0 and generally in the range of 3.5 – 4.0. *[Source: FHWA, Model Validation and Reasonableness Checking Manual, June 2001]*

*Vehicle Trip Attraction Rates**

| Employment Type | HBW | HBO | NHB | IX |
|---|---|---|---|---|
| Industry | 1.2 | 0.63 | 1.1 | 0.34 |
| Retail | 1.2 | 3.4 | 1.0 | 0.49 |
| Highway Retail | 1.2 | 4.2 | 4.0 | 0.28 |
| Office | 1.2 | 1.2 | 1.1 | 0.28 |
| Service | 1.2 | 2.0 | 1.9 | 0.28 |
| Dwelling Units | 0 | 0.9 | 0.13 | 0.33 |

*Rates obtained from 1995 Triangle Household Survey

*Validation of Attraction Rates*

- Evaluate for reasonable relationships.
- Compare to other areas with observed travel data.
- Review home-based work trip attractions per total employment.
- Review home-based school trips per school enrollment (if used.)
- Review home-based shopping trips per retail employment (if used.)

*Validation of NHB Trips Made by Non-Residents (NHB secondary trips)*

- The assumption is made that non-residents behave similarly to residents of the region and therefore make non-home based trips at a rate similar to that of residents.

*Balancing Productions and Attractions*

- The ratio of regionwide productions to attractions for each trip purpose should be between 0.9 and 1.1.
- The ratio of region wide total productions to attractions should be between 0.9 and 1.1.