

Appendix C: TCRP Methodology



TABLE 1

**Recommended Methodology for Estimating Annual Program-Related
Rural Passenger Transportation Demand
(From TCRP Report 3)**

D= Annual One-Way Person-Trips

Program Type

Developmental Services: Adult

Participants < 25; $D = 358 \times \text{Number of Participants}$

Participants ≥ 25 ; $D = 430 \times \text{Number of Participants} - 1,686$

Developmental Services: Case Management

$D = 39.2 \times \text{Number of Participants}$

Developmental Services: Pre-School

$D = 224 \times \text{Number of Participants}$

Group Home

Participants < 10; $D = 2.05 \times \text{Number of Participants} \times \text{Days of Operation}$
or, if the number of days of operation is not known,
 $D = 615 \times \text{Number of Participants}$

Participants ≥ 10 ; $D = (1.42 \times \text{number of Participants} + 5.94) \times \text{Days of Operation}$
or, if the number of days of operation is not known,
 $D = 291 \times \text{Number of Participants} + 3,760$

Headstart

$D = 263 \times \text{Number of Participants}$

Headstart: Home Base

$D = 0.16 \times \text{Number of Participants} \times \text{Days of Operation}$
or, if the number of days of operation is not known,
 $D = 30.5 \times \text{Number of Participants}$

TABLE 1

**Recommended Methodology for Estimating Annual Program-Related
Rural Passenger Transportation Demand
(from TRCP Report 3)**

D = Annual One-Way Person-Trips

Program Type

Headstart: Other

D = 1.86 x Number of Participants

Job Training

D = 137 x Number of Participants

Mental Health Services

D = 347 x Number of Participants

Mental Health Services: Case Management

D = 6.35 x Number of Participants

Nursing Home

Participants < 50; D = 9.10 x Number of Participants

Participants > = 50; D = 12.5 x Number of Participants - 173

Senior Nutrition

D = 248 x Number of Participants

Shelter Workshop

D = 1.58 x Number of Participants x Days of Operation
or, if the number of days of operation is not known,
D = 384 x Number of Participants

TABLE 2

**Recommended Methodology for Estimating Annual Non-Program-Related
Rural Passenger Transportation Demand**
(from TRCP Report 3)

$$D = R_e E \left(\frac{1}{1 + k_e e^{-U_e}} \right) + R_m M \left(\frac{1}{1 + k_m e^{-U_m}} \right) + R_p P \left(\frac{1}{1 + k_p e^{-U_p}} \right)$$

where:

D = annual demand for Non-Program-Related passenger transportation.
(One-Way Trips Per Year)

$$R_e = 1,200$$

$$R_m = 1,200$$

$$R_p = 1,200$$

E = number of persons age sixty or over.

M = number of mobility-limited persons age sixteen to sixty-four.

P = number of persons, age sixty-four or less, in families with incomes below the poverty level.
The definition of the poverty level is that used for the 1990 U.S. Census.

$$k_e = e^{6.38}$$

$$k_m = e^{6.41}$$

$$k_p = e^{6.63}$$

$$U_e = 0.000510 \times \frac{\text{Annual Vehicle-Miles Available to Elderly Market}}{\text{Area of the County}}$$

$$U_m = 0.000400 \times \frac{\text{Annual Vehicle-Miles Available to Mobility-Limited Market}}{\text{Area of the County}}$$

$$U_p = 0.000490 \times \frac{\text{Annual Vehicle-Miles Available to Low-Income Market}}{\text{Area of the County}}$$
