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Re: Trip Generation calculations – Rt 9, Barrington, NH

The proposed development consists of multi-family dwellings (3-4 units per building). A total of 80 2-BR units are proposed. ITE code 221 (Multifamily Housing (Mid-Rise) was used for calculations. Mid-Rise is used for multifamily dwellings with 3-10 units per building.

Weekday Vehicle Trip Ends:

Code 221: Where T = Avg. Trip Ends & X = Number of Dwelling Units

Fitted curve equation; T = 5.45(x)-1.75

T = 5.45(80)- 1.75
T = 434 trip ends/day (50% entering, 50% exiting)

Total avg TE/D = **434**

Weekday Trip Ends (Peak hour of adjacent traffic, one hour between 7 and 9 a.m.):

Fitted curve equation; Ln(T) = 0.98Ln(X)-0.98;
Ln(T) = 0.98(80) – 0.98
Ln(T) = 3.31
T = $e^{3.31}$ = 27.505 Trip ends (26% entering, 74% exiting)

Total avg TE = **28**

Weekday Trip Ends (Peak hour of adjacent traffic, one hour between 4 and 6 p.m.):

Fitted curve equation; Ln(T) = 0.96Ln(X)-0.63

Ln(T) = 0.96Ln(80) - 0.63
Ln(T) = 3.57
T = $e^{3.57}$ = 35.75
T = 35.75 trip ends (61% entering, 39% exiting)

Total avg TE = **36**

Please see ITE select pages attached for fitted curves used in calculations.

Multifamily Housing (Mid-Rise)
(221)

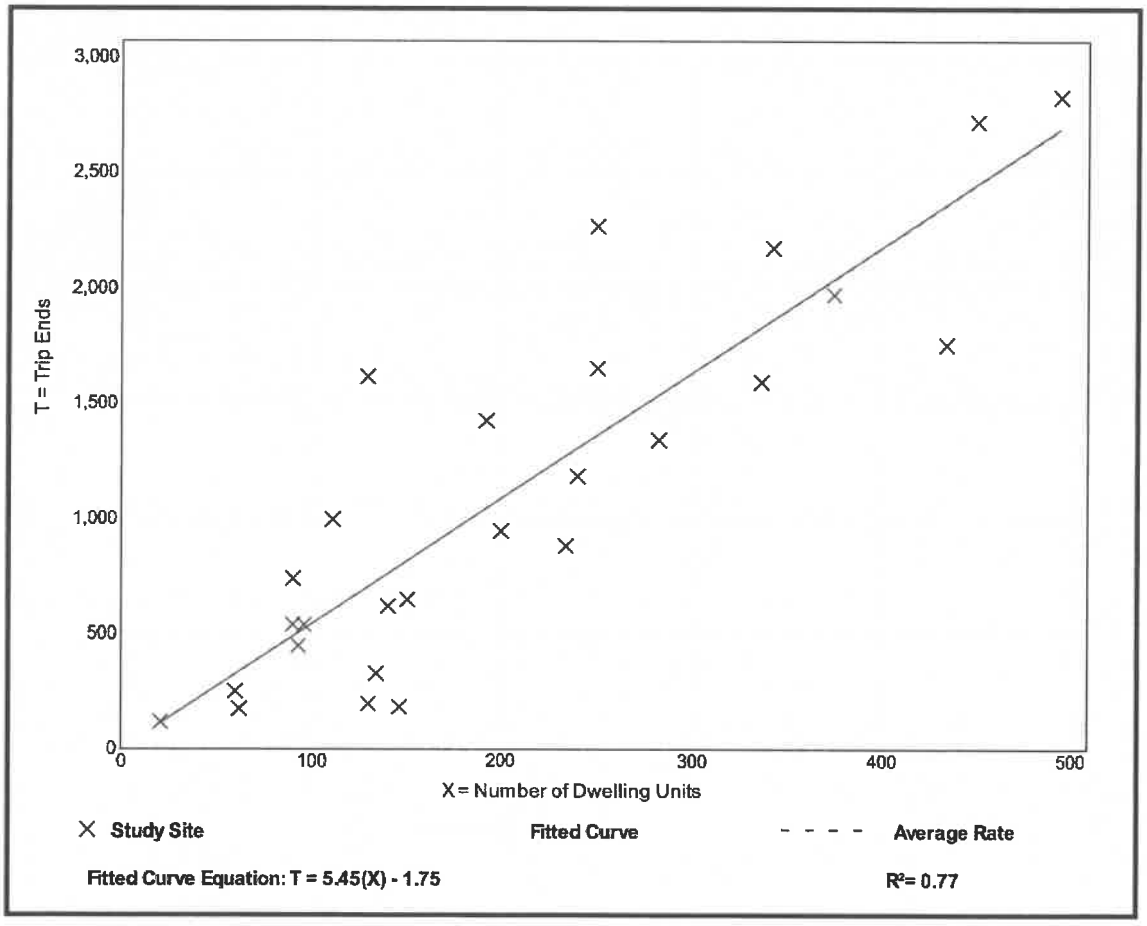
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 27
Avg. Num. of Dwelling Units: 205
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5.44	1.27 - 12.50	2.03

Data Plot and Equation



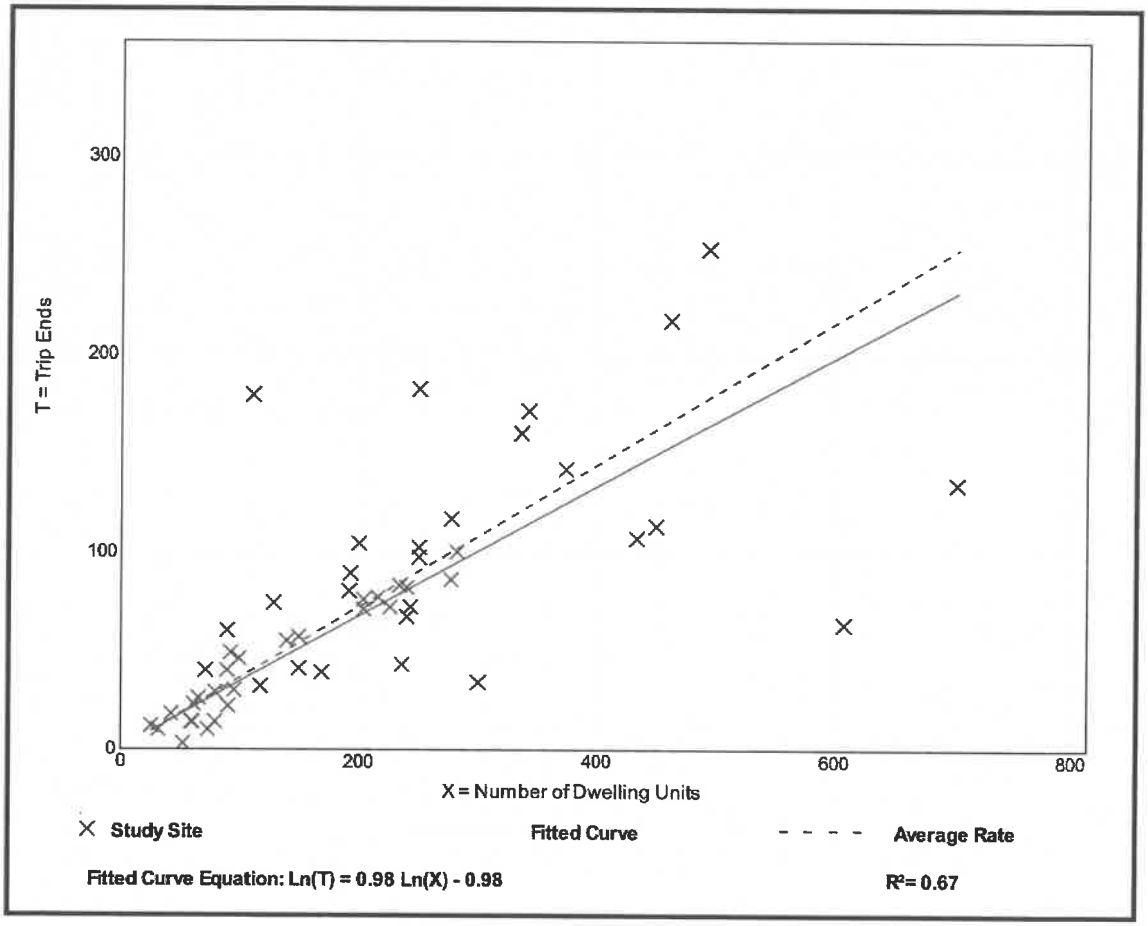
Multifamily Housing (Mid-Rise)
(221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 53
Avg. Num. of Dwelling Units: 207
Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.06 - 1.61	0.19

Data Plot and Equation



Multifamily Housing (Mid-Rise)
(221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 60
Avg. Num. of Dwelling Units: 208
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 1.11	0.19

Data Plot and Equation