

Book: Institute of Transportation Engineers (ITE) in Trip Generation, 7<sup>th</sup> Edition.  
Publication date: February 10, 2004

**SUBJECT: Comparison of Vehicle Trip Forecasts for Big Box Stores**

At your request, I have prepared a series of comparisons of the amount of weekly traffic typically generated by discount superstores (e.g. Super Wal-Mart), discount clubs (e.g. Costco), and home improvement superstores (e.g. Home Depot). The traffic volume estimates in this letter are based on studies compiled by the Institute of Transportation Engineers (ITE) in Trip Generation, 7<sup>th</sup> Edition. This publication is the definitive source for estimating trips generated from different land use types. This edition was recently updated in late 2003 to include recent traffic studies conducted over the last six years. The information provided in this letter includes total daily trips by the day of the week and total weekly trips.

ITE's complete descriptions of these three land uses together with the various traffic data plots from Trip Generation, 7<sup>th</sup> Edition are enclosed for your information. My summaries and examples of these definitions are as follows:

- ❖ ❖ Discount Superstore (ITE Land Use Code 813) – free standing discount stores offering a variety of customer services with a wide range of products that also contain a full service grocery department under the same roof; (e.g. Super Wal-Mart)

Table 1 below provides the trip rates per 1,000 square feet for a free standing discount superstore with an assumed store size of 200,000 square feet using the data provided in Trip Generation, 7<sup>th</sup> Edition. The fitted curve equations have been used for weekdays and Saturdays as the points in the data plot near the store size of 200,000 square feet are closer to the fitted curve line than they are to the weighted average line. In fact as shown in the data plots, nearly all of the data points are above the fitted curve line for stores in the upper end of the data range, indicating even these fitted curves may understate the number of trips for the larger stores. In addition, the following table also provides both the low and the high ends of the range of trip rates for weekdays, Saturdays, and Sundays.

**Table 1**  
**Trip Rates from Land Use 813 (Free Standing Discount Superstore)**  
**For An Assumed Store Size of 200,000 Square Feet**

	Number of Studies	Average Trip Rate	Low End of Range of Rates	High End of Range of Rates
Weekday Rate	10	74.12(X) – 3,977*	29.65	64.03
Saturday Rate	10	84.74(X) - 4,347*	35.32	73.61
Sunday Rate	10	46.98	27.61	70.21

Source: Institute of Traffic Engineers, Trip Generation, 7<sup>th</sup> Edition.

\* indicates fitted curve equation was used instead of average trip rate

X indicates store size in 1,000 square feet

Table 2 below provides a comparison of trips associated with a discount superstore of 200,000 square feet for weekdays, Saturdays, and Sundays using the average trip rates described above as well as for the low and high ends of the range of trip rates published by ITE in Trip Generation, 7<sup>th</sup> Edition.

**Table 2**  
**Daily/Weekly Trips from Land Use 813 (Free Standing Discount Superstore)**  
**For An Assumed Store Size of 200,000 Square Feet**

	Number of Studies	Average Trip Rate	Low End of Range of Rates	High End of Range of Rates
Weekday Trips	10	10,847*	5,930	12,806
Saturday Trips	10	12,601*	7,064	14,722
Sunday Trips	10	9,396	5,522	14,054
<b>Weekly Trips</b>		<b>76,232</b>	<b>42,236</b>	<b>92,806</b>

Source: Institute of Traffic Engineers, Trip Generation, 7<sup>th</sup> Edition.

\* indicates fitted curve equation was used instead of average trip rate

Respectfully submitted,

**Tom Brohard and Associates**

Tom Brohard, PE

Principal