

# Comparing Roads to Rail

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Light rail advocates often compare a freeway to a rail track, claiming that a rail track can carry more traffic at less cost in less space than a freeway. This is wrong in general, and true only if one compares the most heavily patronized heavy rail system (New York City) with a least utilized freeway.

The best way to avoid such selectively biased statistics is to utilize the most broadly based available national averages. For rail and roads these are the seminal annuals: *Transit Profiles* and *Highway Statistics*. The comparison is best made in terms of AVERAGE DAILY TRAFFIC, the number of persons passing a given point on a track or freeway lane per average weekday.

## Freeways 1. National Average (US DOT "Highway Statistics", 1996, Table HM-72)

US Avg. Daily Vehicle Traffic on Fwys	14,179 veh/lane/day
US Avg Veh Occ. (US Census, 1995NPTS)	1.59 persons/veh

Together these give

<b>US Avg. Avg Daily Traffic (ADT),</b>	<b>22,544 persons/day/lane</b>
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## Freeways 2, Orange County (Ref: "1995 California State Highway Log, District 12)

Orange County Freeway Lane Miles	1480.3 ln-mi
Orange County Freeway DVMT	28,892,000 veh-mi/day
Orange County Freeway ADT	19,518 veh/day/ln
Orange County Freeway AVO	1.17 ps/veh *(Source

CALTRANS)

<b>Orange County Freeways ADT</b>	<b>22,836 persons/day/ln</b>
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## Light Rail (US DOT "Transit Profiles", 1996 )

Annual person-miles	858.4 mill. pers.-mi/yr
Annual "unlinked" trips	249.2 mill. trips/yr
Avg weekday unlinked trips	0.8 mill. trips/day
Directional route-mi of track	562.7 track-miles

Together, these give:

<b>US Avg Light Rail ADT,</b>	<b>4897 persons/day/track.</b>
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In other words, the average freeway lane carries a traffic equivalent to 4.6 average rail tracks. So a valid comparison of average person carrying capacity based on these broadest possible averages is:

One-US avg one-directional freeway lane	=	4.6	one-directional rail tracks
One 8 lane US Avg freeway	=	37	rail tracks.

A light rail track is about the same width as a freeway lane, 12 ft. The average rail system is not only far more expensive, but also requires about 5 times more total right-of-way than freeways for the same effective person moving capacity.

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