

Introduction

Residents and policymakers are rightly interested in light rail's potential impacts on road congestion, where idling engines represent a major sink of time and fuel with consequences to people's finances, environmental integrity, and general welfare. Anything that can reduce automobile traffic thus represents a victory for working people and their environment.

Traffic is a multivariate issue that is often tackled in multiple ways simultaneously, making causality difficult to isolate with regards to any one policy or infrastructure. For example, new rail construction often coincides with the introduction of congestion pricing, new road construction, general economic growth, and other developments impacting traffic conditions¹.

Furthermore, as in any case of infrastructure projects, light rail has been implemented with varying degrees of attention, skill, and financing that all affect its success (or failure) in ameliorating traffic. Such human factors are important to consider when considering new passenger rail in our communities.

Despite the multifactorial nature of traffic and numerous complex factors at play in passenger rail, a wide analysis of multiple examples reveals a reliable pattern to passenger rail's positive effects on traffic. **Light rail in America has, in aggregate, proven to be a reliably productive means of reducing road traffic, and a genuine victory for our people and their environment.**

Case Study 1 - Denver, Colorado

In the 1990s, Denver was among the most congested cities in America, ranking 14th overall in 1994 while continuing to grow quickly (roughly doubling in population since 1990). Looking to ease the environmental and economic burden of their congestion without compromising economic activity, planners looked to light rail. Passenger service began in 1994, with short term and long term implications.

In the short term, drivers saw reductions in travel time that eventually rebounded to the pre-rail trendline within a few years. In the long term, though, **Denver saw a long-term slowdown in the rate of growth of congestion, despite no slowdown in local economic activity within the zone of the rail.** Outside the zone of influence, congestion increased by nearly 41% by 2004, while in the zone of influence that growth was only 31% in the same period.¹ The disparity persists into the modern day.

The results in Denver have been repeated in other cities and their suburbs as well, a few of which are described in the table below:

1. Bhattacharjee, Sutapa, and Andrew R. Goetz. "Impact of Light Rail on Traffic Congestion in Denver." *Journal of Transport Geography* 22 (May 2012): 262–70. <https://doi.org/10.1016/j.jtrangeo.2012.01.008>.



City	Traffic growth before light rail	Traffic growth after light rail
Baltimore	2.8%/year	1.5%/year
Sacramento	4.5%/year	2.2%/year
St. Louis	0.89%/year	0.86%/year

Table 1. Traffic Growth in Denver before and after the addition of light rail.²

The pattern, as demonstrated in cities as disparate as Sacramento, St. Louis, and Baltimore, is clear. Light rail reliably reduced the rate of increase in traffic, without compromising the local economy, across demographic and geographic lines. **While many places with light rail often continued to see congestion worsen, those places were spared the far worse traffic in places without light rail.**

Case Study 2 - Los Angeles, California

Los Angeles, California is considered one of the most car-dependent major cities in the United States and is infamous for its traffic despite ambitious road construction. The overwhelming majority of people travel alone by car, with only about 4% travelling by any kind of rail. The average LA commute is nearly 25% longer than the national average, despite a population density comparable to Glassboro county, New Jersey.

It would seem then that LA is an example of the failure of light rail to attract car commuters and reduce overall commute times and congestion, but this is not the case. As demonstrated by a sudden strike in 2003, rail is crucial to managing LA traffic at a scale not appreciated in the raw ridership data.

In 2003, workers, including mechanics and rail operators for the LACMTA, went on strike. Immediately, average car speeds across LA decreased by 20%, with the greatest reductions occurring on roads that paralleled the rails.³ These values returned to baseline when the strike ended later that year. It is intuitive that the loss of one mode of transportation overloads the remaining, but the scale of the disruption was outsized given rail's prior ridership share. **In short, even when rail fails to become a primary means of transportation in an area, it is nevertheless crucial to the wellbeing of all commuters, their fuel economy, and their environment.**

2. Garrett, T.A., 2004. *Light-Rail Transit in America: Policy Issues and Prospects for Economic Development*. Federal Reserve Bank of St. Louis.

3. Lo, Shih-Che, and Randolph W. Hall. "Effects of the Los Angeles Transit Strike on Highway Congestion." *Transportation Research Part A: Policy and Practice* 40, no. 10 (December 2006): 903–17.
<https://doi.org/10.1016/j.tra.2006.03.001>.



Conclusion

Road traffic is a chronic condition for cities and communities across America. Management requires dynamic, long-term policies and assets that can adapt as a locale changes and grows. To that end, light rail has suited a diverse array of American communities.

Many places reap the rewards in slowed traffic growth, like Denver and Baltimore, after embracing commuter rail in their cities and suburbs. Even in those places that never seem to embrace it entirely (like Los Angeles), light rail proves surprisingly essential to their operation and connection with the outside world, as well as the wellbeing of car commuters.

As measured repeatedly across the nation, passenger rail (though its effects on automobile traffic) represents a major victory for working people's wallets, environment, and general welfare. **Light rail is worthy of serious consideration in our communities, so that we too can reap the myriad rewards of its operation without compromising our economic potential.**



Bibliography

- Bhattacharjee, Sutapa, and Andrew R. Goetz. "Impact of Light Rail on Traffic Congestion in Denver." *Journal of Transport Geography* 22 (May 2012): 262–70. <https://doi.org/10.1016/j.jtrangeo.2012.01.008>.
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