

The Antiplanner

Dedicated to the sunset of government planning

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Los Angeles Metro's New Climate Strategy

Los Angeles is “hemorrhaging bus riders,” worries the *Los Angeles Times*. This is supposedly “worsening traffic and hurting climate goals.”

L.A. Metro buses “have lost nearly 95 million trips over a decade.” This “25% drop is the steepest among the busiest transit systems in the United States.” Actually, Sacramento’s Regional Transit District has lost 43 percent of its bus riders in the last decade, but the *Times* probably doesn’t count it “among the busiest transit systems.”

“The bus exodus poses a serious threat to California’s ambitious climate and transportation goals,” warns the paper. “Reducing traffic congestion and greenhouse gas emissions will be next to impossible, experts say, unless more people start taking public transit.”

First, I have to wonder who those “experts” are. I may not be an expert, but I can calculate greenhouse gas emissions as well as anyone. In 2017, L.A. Metro buses used 4,223 BTUs and emitted 349 grams of greenhouse gases per passenger mile. By comparison, the average light truck used only 3,900 and the average car just 2,900, with light trucks emitting 253 grams and cars 209 grams per passenger mile.

Thus, one good way for Los Angeles to meet its climate goals is to get people out of buses and into cars or even SUVs. Of course, that presumes that it stops running those buses, which brings me to my next point.

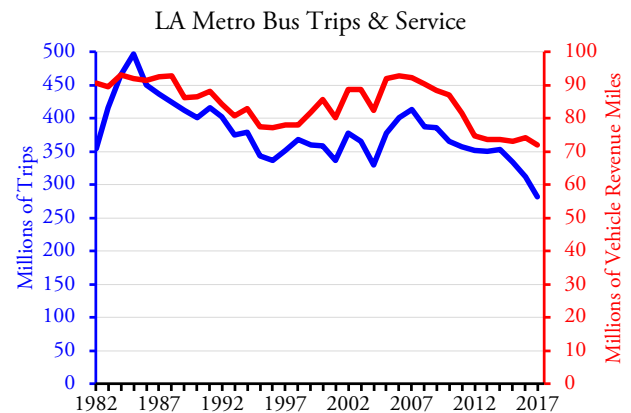
Why L.A. Bus Ridership Is Declining

The reason for Los Angeles’ decline is clear: too many trains. That is, Los Angeles spent billions building new rail transit lines as it neglected, cut, and raised fares for bus service.

The chart below shows that the recent history of Los Angeles bus transit falls into four periods. First, during the early 1980s, ridership rose rapidly. Then ridership dropped from 1985 to about 1996. From 1996 through 2007, ridership rose in fits and starts. Finally, since 2007 it has again dropped.

According to Tom Rubin, who served as the controller-treasurer of the Southern California Regional Transit

District (L.A. Metro’s predecessor), the rapid growth in the early 1980s happened because the agency reduced fares and kept them low. The average fare collected in that period was about 25 cents per trip (keep in mind that someone getting on a bus then transferring to another bus is counted as two trips even though they pay only one fare).

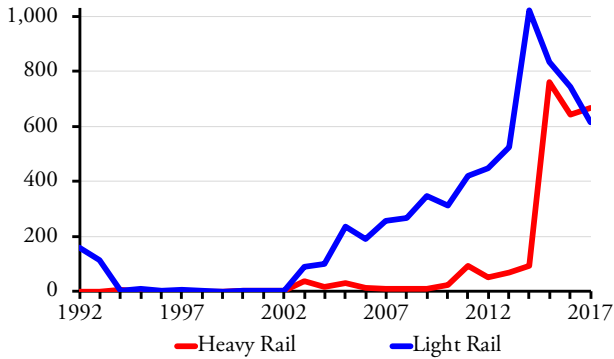


L.A. Metro bus ridership peaked in 1985, then declined as the agency started to build rail, then recovered when a 1996 court decree mandated restoration of bus service, then declined again after the decree expired. Source: National Transit Database historic time series.

After 1985, the transit district adopted an ambitious plan to bring rail transit back to Los Angeles, a plan fueled by dim memories of the Pacific Electric line. Cost overruns were huge and to pay for them the agency raised fares and cut bus service. Between 1985 and 1995, vehicle-revenue miles of bus service declined by 16 percent while average bus fares more than doubled to 60 cents.

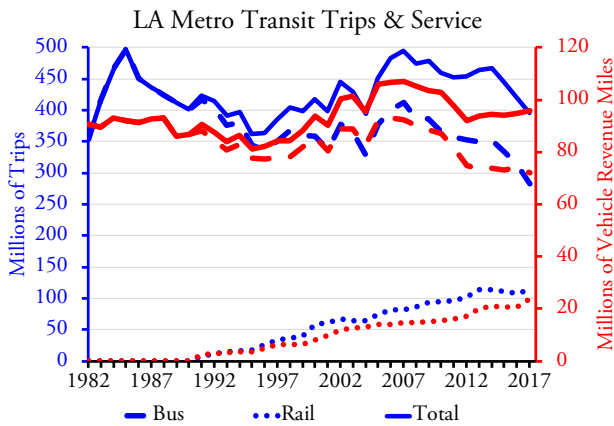
The NAACP sued, charging the agency (renamed Metro in 1993) with cutting bus service to minority neighborhoods in order to pay for rail service to white neighborhoods. In 1996, the court ordered Metro to restore bus service for at least ten years. During that decade, bus ridership grew, but never reached its 1985 peak, partly because fares remained high and partly because it is harder to recapture lost customers than to keep them in the first place.

LA Rail Capital Expenditures



Spending on rail collapsed after the court decree, then rose rapidly after the decree expired. Capital costs are not available before 1992, which is when most of the initial spending on Los Angeles light- and heavy-rail took place.

The decree expired in 2007. In the intervening years, Metro had spent little on new rail transit, but as soon as it expired, expenditures shot up. Meanwhile, Metro cut bus service 22 percent and raised fares by another 32 percent.



This chart is complicated, but the point is that rail ridership did not make up for the declines in bus ridership. Dashed lines represent bus; dotted rail; solid totals.

Although Metro's rail lines gained new riders, they weren't enough to offset the decline in bus ridership. Between 1985 and 1996, the agency lost six bus riders for every new rail rider. Between 1996 and 2007, both rail and bus ridership grew. In the decade since 2007, Metro lost more than four bus riders for every new rail rider.

A New Climate Strategy

The good news is that L.A. Metro has discovered a successful formula for meeting climate goals: Cut bus service and raise fares, getting people off the dirty buses and into relatively clean automobiles. The bad news is that opinion leaders such as the *Los Angeles Times* haven't figured this out and are pushing for increases in bus service at the expense of increased congestion and greenhouse gas emissions.

Specifically, the article advocates dedicating traffic lanes to bus-rapid transit even though it admits that such

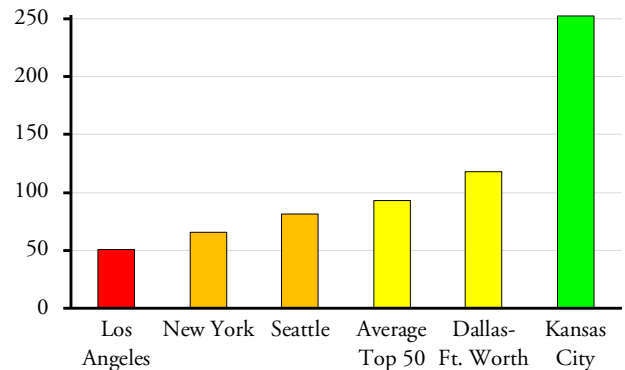
“lanes come at a cost for drivers: a loss of parking, a loss of driving space, or both.” Increase congestion means cars will waste fuel and spew more greenhouse gases into the atmosphere sitting in traffic. Instead, the paper should be arguing for measures that will relieve congestion, not make it worse.

Los Angeles already has one dedicated bus-rapid transit line, the **Orange Line**, which currently runs at less than 6 percent of capacity -- a maximum of 15 buses an hour when it could handle more than 250. In a typical boneheaded move, Metro is addressing this issue by preparing to spend up to **\$1.7 billion replacing buses with light rail**, which will significantly reduce the capacity of the line.

Dedicated bus-rapid transit lines can move up to **30,000 people an hour** in the same amount of space taken up by a light-rail line that can move, at most, 12,000 people an hour. But there are almost certainly no corridors in Los Angeles that generate enough transit riders to justify taking lanes away from general traffic and dedicating them to buses.

Transit buses often run nearly empty, and when in general traffic they frequently stop and then reenter traffic, often adding more to congestion than the few cars they take off the road. L.A. Metro buses carry an average of fewer than 16 passengers (that is, passenger miles divided by vehicle miles is less than 16). This is more than most, but since only some of those 16 passengers would otherwise be driving a car, those buses are probably adding too congestion. In any case, there are almost certainly no corridors in Los Angeles that generate enough transit riders to justify taking lanes away from general traffic and dedicating them to buses.

Urban Area Freeway Miles/Million People



Of major urban areas, Los Angeles has the fewest freeway miles per capita while Kansas City has the most. Not coincidentally, Kansas City has some of the least congestion and **fastest average driving speeds of any major city in the country**. Freeway miles are from 2017 *Highway Statistics table HM72*, but that table shows 2010 population data, so I used 2017 population data from the *American Community Survey, table B01003*.

Beyond transit, Los Angeles could do much to relieve congestion. For one thing, it has the fewest miles of freeways per capita of any major urban area in the United

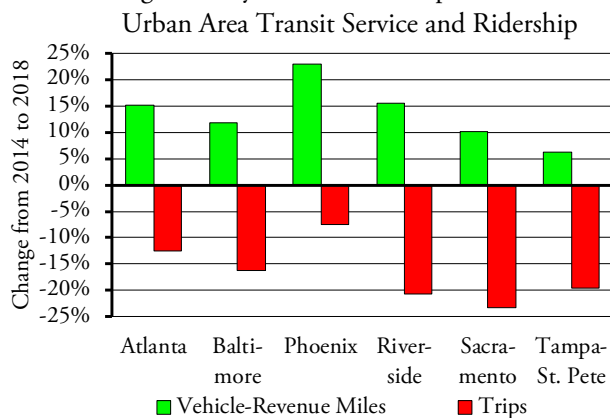
States. In 2017, the Los Angeles urban area had less than 51 miles of freeway per million residents. Even New York had 66, and some urban areas had well over 100. The average for the nation's 60 largest urban areas was 94.

Even without adding new freeways, the state could significantly relieve congestion by improving existing freeways. Many of the existing highways have no auxiliary lanes for vehicles getting on and off the highways, thus adding to congestion as people are forced to slow down prior to exiting when still in a freeway lane and to immediately merge with traffic when entering a freeway. By cutting down on fuel wasted when sitting in traffic, congestion relieve could do far more to reduce greenhouse gas emissions than putting more buses on the road.

Is Increased Service the Answer?

A [recent APTA review](#) of transit trends indicated that some transit agencies are trying to respond to ridership declines. One way is by changing from a hub-and-spoke system to a grid route model. Another is to increase bus frequencies in high-use corridors. Others are attempting to incorporate "micro transit" into their systems, perhaps by contracting with Uber or Lyft, to get people the "first and last mile" to and from transit stops.

Such actions may result in short-term recoveries, but I doubt they will successfully reverse the long-run decline in transit ridership. For one thing, although declines in transit service clearly contributed to the decline in Los Angeles bus ridership, this doesn't mean that increasing service can significantly increase ridership.



These urban areas saw some of the largest differences between changes in transit service and changes in ridership. Increased service is obviously not the silver bullet for transit recovery.

The [latest monthly update](#) to the National Transit Database reveals that transit service has significantly grown in many urban areas, yet ridership nonetheless declined (for annual totals, see my [enhanced spreadsheet](#)). Between 2014 and 2018, transit service grew yet ridership fell in two-thirds of the nation's fifty largest urban areas, while service fell and ridership fell even more in all but five of the other urban areas. Some of the few in which ridership grew required massive increases in service to obtain that growth: for example, an 8.5 percent in-

crease in service produced just 0.4 percent more riders in Denver. Everywhere, transit is seeing diminishing returns.

Bus vs. Rail

The *Los Angeles Times* article focused on bus ridership because Los Angeles bus ridership is declining while rail ridership is growing. But the main reason rail ridership is growing is because Metro has added two new light-rail lines in the past decade. This led to an increase in riders, but ridership per mile of track has declined, indicating that Metro gets diminishing returns for each new mile it builds. Heavy-rail ridership, meanwhile, has fallen nearly 15 percent in the past five years.

Some people still seem to think that building more rail is the solution to ridership declines. The American Public Transportation Association recently released [first quarter 2019](#) ridership data showing that heavy rail and light rail are both losing as well when the first quarter of 2018 is compared with 2019.

Of the fifteen heavy-rail systems tracked by APTA, ridership declined in ten and grew in five, with an overall decline of 3.33 percent. Of 29 light-rail systems (including streetcars) tracked by APTA, ridership declined in 19 and grew in 10, with an overall decline of 2.37 percent.

Commuter rail did a little better, declining in 18 systems and growing in 12 with an overall gain of 2.07 percent. However, all of this gain can be attributed to 2.5-million ridership growth on New York's Long Island Railroad.

Of the 36 bus systems that APTA considers to be the nation's largest, 28 lost riders while 8 gained, for an overall decline of 0.96 percent. In all, rail lost 2.7 percent while bus (including trolley buses) only lost about 1.0 percent, indicating that rail is hurting at least as much if not more than buses.

A couple of years ago, transit consultant Jarrett Walker [asked](#) whether bus. vs. rail was even the right comparison to make. "It's easy to analyse this 'bus vs rail,'" he said, "because that's how the National Transit Database is structured, but nobody knows if that's the real distinction that matters." Walker's article posed some useful questions for further research.

However, I suspect that the real distinction that matters for transit is not the mode of travel but the purpose of travel. According to the latest [National Household Travel Survey](#), the share of transit riders who are commuting to work grew from under 30 percent in 2009 to more than 37 percent in 2017. Due to a smaller sample size, these numbers are less reliable than, say, the American Community Survey, but other anecdotal evidence indicates that ride hailing is eating into transit's non-commuting customer base but not so much into commuters. One reason commuter rail seems to be doing better than other forms of transit is that it operates mainly during rush hours and therefore doesn't feel the loss of non-commuter riders as much.

Transit's Future

Transit agencies believe they are taking bold steps by following Jarrett Walker's advice and converting hub-and-spoke to grid systems and emphasizing service in the corridors that generate the most riders. But it is going to take much more to keep transit viable in the next decade.

The first question to ask is why are we subsidizing transit? As I've previously shown in [policy brief 6](#), low-income people are buying cars and abandoning transit while transit's major growth market is among people who earn more than \$75,000 a year. This argues against more transit subsidies.

Meanwhile, Los Angeles Metro is not alone in using more energy and emitting more greenhouse gases than the average car. Transit is more environmentally friendly than driving a car in just four major urban areas: New York, San Francisco, Portland, and Honolulu. We can do more to reduce emissions for less money by encouraging people to buy more fuel-efficient cars than by subsidizing transit.

The second policy to question is transit agencies' love for big-box transit. Why do they need rail transit when buses can move more people per hour through a given corridor? Why do they need 100-passenger buses when

they fill an average of just 25 seats? There may be a few corridors that can justify big buses (though none can justify low-capacity, high-cost light rail), but for the most part smaller, more nimble vehicles would make more sense.

These are existential questions that most transit agencies aren't willing to face. Most of them already have taxes dedicated to their use, and they are just trying to justify keeping them despite declining ridership. These subsidies have led to cushy jobs: the CEOs or general managers of most of the nation's largest transit agencies typically earn between \$200,000 and \$300,000 a year, which is significantly more than the [governors](#) of the states in which they operate. It is unlikely that these people are willing to consider the kinds of major changes that will be needed in transit's future.

Thus, major changes will be up to elected officials, and the public in general will need to put pressure on those officials. Otherwise, transit's future will be one of zombie agencies running nearly empty vehicles at huge taxpayer expense.

*The Antiplanner, Randal O'Toole, is a transportation policy analyst and author of [Gridlock: Why We're Stuck in Traffic and What to Do About It](#). [Masthead photo](#) of the *Los Angeles Expo light-rail line* is by [JulieAndSteve](#).*