

TWELVE ANTI-TRANSIT MYTHS: A CONSERVATIVE CRITIQUE

A Study Prepared by the Free Congress Research and Education Foundation

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July 2001

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Twelve Anti-Transit Myths: A Conservative Critique

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A wand'ring minstrel I,
A thing of shreds and patches,
Of ballads, songs and snatches,
And dreamy lullaby!
My catalogue is long,
Thro' ev'ry passion ranging
And to your humours changing
I tune my supple song!
I tune my supple song!

--Gilbert and Sullivan, The Mikado

Today, any town or city that proposes to build a Light Rail line becomes a magnet for a new variety of wand'ring minstrel--the anti-transit troubadours. Travelling widely and always singing the same songs, they tend to appear just before referenda on new rail transit proposals. They find a stage, join hands with local transit opponents and put on quite a show. With songs such as "Light Rail Has Been a Failure Everywhere" and "Transit Does Not Relieve Congestion," they have frequently confused the general public, sown doubt about meritorious transit projects and delayed if not defeated efforts to provide high quality transit.

Besides their peripatetic nature, the anti-transit troubadours share two additional qualities with minstrels of old. First, while the names change place-to-place, the songs are really the same everywhere. The transit critics offer identical criticisms of every new rail transit line, regardless of where it is to be built, whom it is to serve or what it is to cost. They sound less like a live act than a broken record.

The transit critics' second similarity to the old wand'ring minstrels is that their lyrics are highly inventive. What they present as facts--"No Light Rail Line Has Ever Achieved Its Projected Ridership"-- are simply not true. They are myths, clever myths, sometimes entertaining myths, but myths nonetheless. Basing public policy on myths can have regrettable results, as more than one expedition in search of the Golden Fleece or the Fountain of Youth discovered.

In this study, the third in Free Congress Foundation's series on conservatives and public transportation, we do something conservatives really enjoy. We summon the anti-transit minstrels and their myths before the Lord High Executioner. We put on trial twelve anti-transit myths and face each with the facts. The accused are:

- Light Rail has been a failure everywhere. The estimated costs always prove too low and the ridership projections are always too high.
- Transit is a declining industry. Despite massive increases in transit funding since 1980, transit ridership has declined. Rail transit has a very high subsidy per passenger, and transit use has declined as much in cities that have built Light Rail as in those that haven't.
- Commuting by rail is slower than commuting by car or express bus.
- Transit does not relieve congestion. Congestion has actually increased in cities that have built Light Rail, and building more highways will relieve congestion better than building rail systems. A rail line has less capacity than a single lane of freeway or even a major arterial.
- Where transit is needed, buses are better than rail. Buses cost less and provide the same or better service.
- Most new jobs are in the suburbs, but rail transit can only serve urban cores.
- Rail transit does not spur economic development.
- Transit brings crime into a community.
- Most Light Rail riders are former bus riders.
- Transit is a blight on the economy, while highways are a net public benefit.
- On average, most of the seats on a bus or train are empty.
- It would be cheaper to buy or lease a new car for every rider than to build a new Light Rail system.

These twelve are the favorite lieder of the anti-transit troubadours, and they sing them from California to the New York island -- again, with remarkably little local variation. Beyond the "big twelve," they offer a wide variety of minor chansons, to which this High Court of Facts will also give some attention. Delightfully, our minstrel friends occasionally make the mistake of offering some solutions or predictions of their own, instead of sticking to the safer act of criticizing other people's. Where we have found these, we will most assuredly make the punishment fit the crime.

A warning to liberals and others with faint hearts: as conservatives, we share the Lord High Executioner's fondness for capital punishment, preferably inflicted in ingenious and highly entertaining ways. After all, what better enlivens an otherwise dull afternoon than the public beheading of a myth that had the temerity to disguise itself as a fact?

Let us then call our court into session and the first anti-transit myth before the bar.

The Dirty Dozen: Twelve Anti-Transit Myths

Myth Number One: Light Rail has been a failure everywhere. The estimated costs always prove too low, and the ridership projections are always too high.

Do the anti-transit troubadours really sing this song? Let's hear it in their own words:

- "Experience has shown, however, that rail ridership tends to be grossly overestimated at the planning stage, especially by rail advocates, while capital and operating costs tend to be significantly underestimated." -- Clifford Winston and Chad Shirley, Alternate Route: Toward Efficient Urban Transportation, Brookings Institution, 1998, p. 11
- "Ridership forecasts for proposed rail plans are notorious for being overly optimistic. Indeed, the actions of rail backers in some cities have been criticized in scathing terms as being deliberately deceptive on this point." -- Robert J. Franciosi, Light Rail in the Valley: What Awaits Voters at the End of the Line, Goldwater Institute, February, 2000, p. 2
- "The forecasts that led local officials in eight U.S. cities to advocate rail transit projects over competing, less capital-intensive options grossly overestimated rail transit ridership and underestimated rail construction costs and operating expenses." -- Don H. Pickrell, "A Desire Named Streetcar: Fantasy and Fact in Rail Transit Planning," APA Journal, Spring, 1992, p. 158

When the Light Rail revival began in America in the 1980s, some early ridership and construction cost estimates were badly off. This is not surprising, because there was no experience on which to base them. Light Rail (streetcar and interurban) construction had ceased in this country before World War II.

A report written by transit critic Don H. Pickrell, Urban Rail Transit Projects: Forecast Versus Actual Ridership and Cost, Final Report, published in October 1990 by the U.S. Department of Transportation, made much of these early errors -- despite the fact that some of the systems criticized had improved their estimates before the report was written. A case in point is Portland, Oregon. Portland, in 1978, had forecast Light Rail ridership of 42,500, to be attained in the seventh year of service. That forecast was amended in 1985 to 19,270 after the first year of service; the actual count after one year of service, in 1987, was 19,990. So while the first estimate was way high (actual ridership in the seventh year of service was 23,400), it was corrected. Similarly, the original cost estimate, in 1978, was \$161 million for a combination of the Light Rail line and a package of highway improvements. The actual cost in 1986 was \$321 million, but the estimate had been altered in 1981 to \$328.5 million. The Pickrell report ignored the later estimates for both ridership and cost.

The Pickrell report is still cited by transit critics as the basis for their claims that "Light Rail has failed everywhere." But in addition to that report's weaknesses, time has added some new facts. With experience, estimates for Light Rail ridership and costs have grown much more accurate. In fact, if we look at new Light Rail lines, we find ridership has generally been underestimated, and costs and sometimes construction time overestimated. Examples include:

- Salt Lake City's TRAX Light Rail system is one of the country's newest; service began December 4, 1999. It opened a year ahead of schedule and construction cost was under budget. Projected weekday ridership was 14,000 people. Actual weekday ridership for the first four months of the year 2000 was 19,039, 18,956, 19,742 and 19,210 respectively. Saturday ridership was even higher, reaching 25,621 in April.

A few other facts about TRAX may be useful. A February survey of riders found that 45% were new to public transit; many of these represent cars removed from traffic. According to Mel Pearson, chairman of the Downtown Retail Merchants Association, "Since TRAX light rail began operation, both of the major malls in downtown Salt Lake City have experienced double-digit traffic count increases, especially during nights and weekends. Downtown Salt Lake has a totally different feel to it. You can tell by just looking at the increased number of people walking down the sidewalks." A public that previously was skeptical about Light Rail now wants more lines, soon.¹

- In July, 2000, Denver extended its original 5.3-mile Light Rail line another 8.7 miles. According to the Rocky Mountain News, "Ridership on the new southwest light-rail line exceeded expectation by almost 30 percent in its first week. . . A total of 11,264 boardings were made Thursday on the new line. . . That was well above the expected 8,400. Altogether, the 14-mile light-rail system. . . posted 28,472 boardings on that day, well above the 22,000 projected. [RTD spokesman Scott] Reed said he wasn't surprised by the numbers. 'When we opened the central corridor in 1994, we were above projections,' he said. 'We just wanted to be conservative in our estimates.'²

Speaking of the success of the new line, RTD General Manager Cal Marsella said in Passenger Transport, "These ridership numbers confirm that people have readily embraced light rail for their daily transportation needs. Coupled with the fact that it costs RTD substantially less to carry a passenger aboard light rail than aboard a bus in revenue service, light rail is a huge success now and will be an even bigger hit in the future. . . The demand for light rail parking is virtually insatiable. The same day we open additional spaces, they fill up completely. This is further evidence that people will choose to take light rail as opposed to having to drive."³

- Portland, Oregon's Westside MAX Light Rail line opened in September, 1998. In a report on its two-year anniversary, The Oregonian noted that "Those two years have seen 16 million riders, with daily averages now above 71,000, a level not expected

until 2005. 'When we opened Westside MAX, our critics thought the forecasts for 2005 were overly optimistic,' said Fred Hansen, Tri-Met general manager. . . "4

- Concerning MetroLink, St. Louis's Light Rail line, Professor William D. Warren of the University of Illinois at Springfield wrote,

Bi-State (the agency that runs MetroLink) projected 13,000 MetroLink riders for initial service, increasing to 17,000 at the end of the first year. By July 1994 c the twelfth month of service c weekday ridership was 44,414. Average Saturday and Sunday ridership for July 1994 was 50,725 and 50,623. Projected ridership values were clearly exceeded. The projected patronage values may have been too conservative. Before the system was completed, however, many public officials and media commentators suggested that the projection of 17,000 patrons for weekdays after one year was ludicrously high.⁵

- The first 11 miles of Dallas's 20-mile DART Light Rail system opened on June 14, 1996, on time and within budget. Initial ridership was projected at 15,000; actual ridership in July, 1996, averaged more than 18,000. Current DART weekday ridership, with all 20 miles in service, is 42,000.

These examples show Light Rail done right. However, problems can still occur. One would, at first blush, appear to be a recently opened Light Rail system, the Hudson-Bergen line in northern New Jersey. Opened on April 15, 2000, Hudson-Bergen exceeded its estimated construction cost by 5% to 10%, although New Jersey Transit attributes the additional costs to design changes. Estimated initial ridership was 8,700; actual ridership in mid-December, 2000, was 7,600.

However, the main reason for the disappointing ridership seems to lie in the fact that the initial line wasn't really a line at all. It was only the center portion of the actual first line, going from Jersey City to nowhere. When the two ends are opened, Hudson-Bergen will connect real destinations. Ridership may then come to equal the original estimations.

The trend, however, is the other way: most new Light Rail systems are built on or under budget and carry more riders than projected. Why do the anti-transit troubadours keep repeating charges from a flawed 1989 report and ignoring more recent evidence? Perhaps because, as entertainers, they are more interested in Dichtung than in Wahrheit. . .

Myth Number Two: Transit is a declining industry.

Despite massive increases in transit funding since 1980, transit ridership has declined. Rail transit has a very high subsidy per passenger, and transit use has declined as much in cities that have built Light Rail as in those that haven't.

In the critics' own words:

- "Public transit is clearly a declining industry. Ridership peaked during the World War II period at 23 billion or so trips per year. . . ." -- John Semmens, Public Transit: A Worthwhile Investment?, Goldwater Institute, December, 1999, p. 1
- "Rail seldom increases and often reduces total transit ridership." -- Thomas A. Rubin and James E. Moore II, Ten Transit Myths: Misperceptions About Rail Transit in Los Angeles and the Nation, Reason Foundation, November, 1996, Executive Summary
- "From 1983 to 1997, public transit's market share has [dropped] an average of 17 percent in new rail urbanized areas. Transit market share dropped in all urban areas that built new rail systems except San Diego. . . ." -- Wendell Cox, Why Light Rail Won't Work for San Antonio, Texas Public Policy Foundation, January, 2000, p. 4
- ". . . new US rail transit systems have generally performed poorly. Total transit ridership has generally shown only minimal improvements and, at times, declined. Financial performance has been disappointing in most cases. . . ." -- Jonathan E. D. Richmond, A Whole-System Approach to Evaluating Urban Transit Investments, A. Alfred Taubman Center for State and Local Government, Harvard University, November 1, 1999, Abstract
- "Taken together, the ten U.S. transit systems that added light rail served fewer riders in 1995 than in 1980. St. Louis's system is one of the six individual systems with new light rail that lost ridership over that 15-year period. . . ." Peter Gordon, Does Transit Really Work?: Thoughts on the Weyrich/Lind "Conservative Reappraisal", Reason Public Policy Institute, September, 1999, p. 3

What's wrong with these assertions? Almost everything. In some cases, the numbers are correct but the conclusions drawn from them are not. In other instances, the numbers themselves appear to have been invented. One quick example: according to the Federal Transit Administration's National Transit Database, ridership on the ten transit systems Peter Gordon cited rose by 0.7% (weighted average) between 1980 and 1995. After the new Light Rail lines opened ridership rose by 8.2%. In St. Louis, ridership rose 30.7% between the opening of the Light Rail line and FY 1997. So in his first assertion, Mr. Gordon is wrong in his facts, and in his second, while St. Louis's

overall ridership did decline between 1980 and 1995, he is wrong in his implication because ridership has risen since Light Rail was added. And Mr. Gordon tries to play a little trick: by using 1980 as a baseline and cutting off in 1995, he carefully ignores most of the benefits of Light Rail because the average opening date for the Light Rail systems was nearly ten years into the measured time period!

In general, the facts are these. From the advent of the Model T until quite recently, transit was a declining industry. This is not surprising, because government offered massive subsidies to cars and highways. Most transit systems, in contrast, were privately owned and operated and, far from receiving subsidies, had to pay taxes. As is usually the case, government intervention caused massive market distortions, to the point of almost wiping out public transit. Post-World War II building codes, which forced a separation of housing, shopping, and work places, also hit transit hard. Trips such as going to the grocery store, that people previously made on foot, now required a car. Not surprisingly, the percentage of total trips made by transit fell dramatically as automobile trips soared.

But recent years have seen a change. Beginning in 1996, transit's total ridership has risen every year. In 1999 and 2000, the growth in trips on transit actually increased more than the growth in trips by automobile travel. The year 2000 saw more than 9.4 billion trips made on transit, the highest figure since 1959. That number doesn't look bad even when compared to John Semmens carefully chosen 23 billion trip peak in World War II, when we had gas rationing (note again the artful baseline).

So if transit was a declining industry for decades, it isn't any more. One of the most important reasons for the turnaround is the spread of high quality rail transit to more and more cities, usually as Light Rail and commuter rail. Rail transit appeals to riders from choice: people who have a car available and can drive, but choose to take transit instead. Why do the anti-transit troubadours focus their ire on rail transit? Precisely because it leads to rising transit ridership, something they don't want to see.

In fact, a new pattern is emerging, in one city after another. Once the first Light Rail line opens and people experience the high quality service it offers, they want more. Referenda to expand the Light Rail system or speed up construction usually pass, often by large margins. And the anti-transit myth peddlers find themselves in trouble. Dallas offers a good example. There, the people faced a ballot referendum on speeding up the construction of Light Rail. They had already seen and in many cases ridden DART's initial Light Rail line. Despite the usual descent on the city by the anti-transit troubadours, the referendum passed by 77%. Give people a little Light Rail and they want more.

Just as the transit critics are wrong in general about transit being a declining industry, they are also wrong in most of their specifics. Let's look at a few:

- As to massive subsidies to mass transit, in 2001, transit will receive \$6.3 billion federal dollars, compared to \$31.4 billion for highways and \$12 billion for the airlines. Federal transit operating subsidies have actually declined, from a peak of \$1,130 million in 1981 to \$246 million in 1999.
- Transit ridership in 2000, at more than 9.4 billion trips, is higher than it was in 1980, when Americans took 8.6 billion trips on transit. 1999's transit ridership was the highest since 1959. Transit ridership has increased each year since 1995.
- According to the 1999 Federal Transit Administration National Transit Database, the average cost per passenger mile for Light Rail in the U.S. is \$0.45, compared to \$0.55 for buses.²
- Naturally, it costs more to build a new rail transit line than to run buses on existing highways. But the highways too were built with tax dollars. The money comes from different pockets but the same pants.
- Of ten cities that added Light Rail to their transit systems since 1980, seven saw increases in total transit ridership after the Light Rail system opened. Increases ranged from 14.5% in Dallas to 30.7% in St. Louis, 40.6% in Portland, Oregon, 49.5% in San Diego and a whopping 75.8% in Sacramento.

So the myth is wrong on every point. Since 1995, transit has become a growing industry. Total transit ridership is higher today than in 1980, higher, in fact, than since 1959. The operating cost of Light Rail is lower than that of buses, and transit use has grown in most cities that have built Light Rail.

Overall, the effect of rail transit is summarized best in one study's look at San Francisco:

When the San Francisco Bay Area Rapid Transit heavy rail system opened in 1972, total transit ridership and bus ridership had been in decline since 1946 when World War II rationing ended. Since 1972, overall transit ridership, bus ridership, heavy rail ridership, and light rail ridership have all increased. These increases have occurred despite investments in alternative travel by private vehicles, population dispersion that makes it more difficult for transit to serve many communities, public policy such as tax-free parking that supports private travel, and the creation of a freeway system to speed travel to central cities and between suburbs. This increase must be attributed, at least in part, to investment in new, modern, and convenient rail transit systems.³

No wonder our wandering minstrels' anti-rail transit tunes have a note of desperation to them. Once people are given a chance to ride rail transit, they no longer want to listen to the same sad songs.

Myth Number Three: Commuting by rail is slower than commuting by car or bus.

In the anti-transit troubadours' own words:

- "Once out-of-vehicle, station access and transfer delay time is accounted for, rail travel times tend to be longer than the time required to complete the same trip by bus." --Thomas A. Rubin and James E. Moore II, Ten Transit Myths: Misperceptions About Rail Transit in Los Angeles and the Nation, Reason Foundation, November, 1996, Executive Summary
- "Even in the few corridors served by new light rail systems, it provides no speed advantage compared to highway alternatives. . . New light rail systems average 17.2 miles per hour, and the fastest at-grade system operates at 18.2 miles per hour. This is faster than the bus average of 12.8 [miles] per hour. By comparison, the average automobile commuting speed is more than 30 miles per hour (nearly double the new light rail operating speed)." -- Wendell Cox, Why Light Rail Doesn't Work, Texas Public Policy Foundation, January, 2000, p. 14
- "Using public transit is a time-intensive mode of travel. An American's average commute to work driving alone in his car is about 21 minutes. The average commute to work by public transit bus is about 38 minutes. The average commute to work by light rail or subway transit is about 45 minutes. Time has value. The subsidies poured into public transit have been unable to bring transit travel times into a range competitive with driving one's own car." -- John Semmens, Public Transit: A Worthwhile Investment?, Goldwater Institute, December, 1999, p. 7

Common sense tells us something is fishy here. If rail transit is slower than driving, why do so many people drive their cars to rail transit parking lots and take the train into town?

As usual, the facts are rather different from what the transit critics say they are. Let's look first at the question of train speed vs. bus speed.

Here, the critics cannot even agree among themselves: Rubin and Moore, along with Semmens, say train is slower than bus, while Cox says light rail is faster than bus. Table 1, calculated from the 1998 National Transit Database, compares bus and rail speeds in thirteen different American cities; in only one, Denver, is the bus faster than rail.

What about car speed vs. rail speed? Are all those people using rail park-and-ride lots just wasting their time?

Both speed and commuting time comparisons used by transit critics tend to be misleading, because they compare apples and oranges. Cars are faster if they are on freeways away from city centers at rush hours, where traffic congestion is relatively low. Once the cars are in or near city centers during rush hours, highway speed drops drastically. That is the logic behind park-and-ride: the train bypasses the clogged highways in or around the Central Business District.

Table 1: Average Speed in Revenue Service FY 1998

Transit System	Average Speed in Revenue Service		
	Bus	Light Rail	Heavy Rail
Metropolitan Atlanta Rapid Transit Authority	12.4	---	27.0
Baltimore Mass Transit Administration of Maryland	10.9	16.6	25.0
Buffalo Niagara Frontier Transportation Authority	10.7	12.0	---
Dallas Area Rapid Transit	14.0	15.4	---
Denver Regional Transportation District	17.8	10.7	---
Los Angeles County Metropolitan Transportation Authority	11.9	23.6	20.9
Miami-Dade Transit Agency	12.9	---	25.7
Portland Tri-County Metropolitan Transportation District of Oregon	12.6	14.3	---
Sacramento Regional Transit District	13.3	18.3	---
St. Louis Bi-State Development Agency	15.2	25.1	---
San Diego Trolley and San Diego Transit Corp.	13.4	22.4	---
San Jose Santa Clara Valley Transportation Authority	13.4	15.8	---
Washington (DC) Metropolitan Area Transit Authority	11.2	---	21.2

In comparing car vs. rail commuting times, the critics introduce another spurious factor. Many of the commuting journeys represented in their "average commuting time by car" figures are short, suburb-to-suburb trips, not trips from the suburb into the city. The latter usually take more time because they run into the congested traffic in the city center, and because the journey itself is usually longer.

So it turns out that the people using those park-and-ride lots by the rail station aren't so dumb. Some surveys of rail transit users make the point directly:

- A Virginia Railway Express (VRE) study surveyed commuting time before and after riders started using VRE's commuter trains. On the Manassas Line, 35.9% of trips were less than one hour before the train was used and 44.4% after. On the

Fredricksburg Line, 18.2% of trips were less than one hour before VRE and 25.3% after.⁸

- Looking at Heavy Rail systems, in a 1982 MARTA (Atlanta) study, riders were asked to pick three from a list of eight factors for riding the train as most important. For all riders, "Total door-to-door travel time" received 63.2%, the second highest rating after "total cost."⁹
- In a 1995 Denver RTD study, 13% of new weekday riders chose "Time saved using light rail" as their primary reason for using the train, third among seven options.¹⁰
- On a nationwide basis, the 1995 Nationwide Personal Transportation Survey found that, in answer to "I use public transit because," 43% agreed or strongly agreed that "It is faster than using a private vehicle."¹¹

This data confirms what those of us with the good fortune to live in cities with rail transit already know: in or near the city center, in rush hours, taking the train gives a faster ride and takes less total time than does driving a car through the congested (and sometimes gridlocked) urban streets and freeways.

But that's not all. There is icing on this cake. On the train, your time is not wasted. You can read, think, perhaps even write on your laptop. Behind the wheel, the most you can hope to do in the way of useful work is talk on your cell phone, usually to tell someone you are caught in traffic and will be late. And if you walk to and from the train station, on either or both ends of your journey, you get to add some exercise to an otherwise sedentary day without taking time to go to a gym or health club.

The train is fast. But it is also civilized, far more so than a traffic jam. There is a reason so many people who have cars and could drive are taking trains to work instead. And it's not because they can't read a watch.

Myth Number Four: Transit does not relieve congestion.

Congestion has actually increased in cities that have built Light Rail, and building more highways will relieve congestion better than building rail systems. A rail line has less capacity than a single lane of freeway or even a major arterial.

As always, let's start by hearing this criticism in the critics' own words:

- "Transit's effect on highway congestion is insignificant in most American cities. -- Randal O'Toole, Urban Transit Myths: Misperceptions About Transit and American Mobility, Reason Public Policy Institute, September, 1998, p. 13
- "Rail is not a decongestant. New facilities cannot decongest existing facilities. The impact of transit on highway level of service is small." -- Thomas A. Rubin and James E. Moore II, Ten Transit Myths: Misperceptions About Rail Transit in Los Angeles and the Nation, Reason Foundation, November, 1996, Executive Summary
- "But more important than the source of light rail ridership is that it carries such modest volumes in relation to traffic on adjacent roadways. In no case has light rail attracted enough drivers out of their cars to materially reduce traffic congestion. . . . On average new U.S. light rail lines carry less than 20 percent of the volume of a single freeway lane couplet (2 lanes of freeway, one operating in each direction). . . ." -- Wendell Cox, Why Light Rail Doesn't Work, Texas Public Policy Foundation, January, 2000, p. 6
- "Most riders on new rail systems have not come from private autos. At best, 35-40 percent of new-rail users came from private autos. . . . As a result, there have been no discernable impacts on auto traffic." -- Peter Gordon, A Transit Plan for Hillsborough County: A Reality Check, Reason Public Policy Institute, June, 1998, p. 5
- "Because of light rail's shortcomings, it cannot lure enough people out of their cars to decrease traffic congestion and corresponding air pollution." -- Daniel R. Simmons, Randy T. Simmons and Samuel R. Staley, Growth Issues in Utah: The Facts, Fallacies, and Recommendations for Quality Growth, Sutherland Institute, October, 1999, p. 33

Common sense quickly tells us that, contrary to the laments of the anti-transit troubadours, transit can and often does relieve congestion. St. Louis's MetroLink Light Rail line provides a good example. MetroLink's single 18-mile carried 14.2 million passengers in 1999. According to a 1997 riders' survey, 69% were commuting to work. Most were doing so in rush hours, when highway congestion is at its worst. And only 27% of MetroLink's riders either did not drive or had no car available. Allowing a few percentage points for people commuting to work but not in rush hours, we can say that

about 60% of MetroLink's customers were taken off the highways, minus about 25% who had no car available or did not drive. Since most Americans drive to work alone, MetroLink is removing about 12,500 cars from St. Louis's rush hour traffic every day.

Is that a significant number? We asked the City of St. Louis Chief of Police, Colonel Ronald Henderson, what effect MetroLink has on St. Louis traffic. He said:

The MetroLink light rail system has proven its extreme importance to us not only during rush hour traffic, but it has significantly helped us during special events such as Rams' football, Cardinals' baseball, and Blues' hockey games. The number of riders on the system positively impacts our traffic patterns on a daily basis.¹²

So how do our wandering minstrels get away with denying something that is obvious? As usual, they tune their supple songs in some rather artful ways.

The fact of the matter is that some kinds of transit have a strong effect on highway congestion, but other kinds do not. In general, buses running on city streets have little effect on congestion, because they do not provide a better level of service than the autos that impede their flow. Hence, most of the people on them are transit dependent. That means they have no car, or at least no car available for the trip they want to make, or they do not drive. Take away the bus and they stay home. They cannot get on the road and add to the traffic.

Rail transit, and sometimes buses running express services from the suburbs straight downtown, are quite different. They appeal strongly to riders from choice, people who can and would drive if the train or the bus were not there. As we just saw, up to 60% of the people on St. Louis's Light Rail system would be on the road in their cars if the trains stopped running.

So how can the transit critics claim that transit has little effect on congestion? Because in most cities, there is little or no rail transit. Often there aren't even express buses. If quality transit isn't there, people can't ride it. They have to drive instead.

Two ironies hit us right in the face here like cold, dead flounders. First, since it is rail transit that best reduces highway congestion, the transit critics by their own logic should favor rail rather than damning it. Unless, of course, they really aren't interested in reducing highway congestion. That leads to our second irony. The highway lobby, the same people who provide a number of the anti-transit troubadours with their funding, are the people who destroyed the rail transit systems most cities used to have! Imagine how much less traffic Los Angeles would have today if that city still had its Red Cars and the more than 1,000 miles of track they rode on. Who framed Roger Rabbit? The same people who now tell your city, "Don't build Light Rail!"

Of course, the transit critics have their own solution to traffic congestion: build more highways. But in one of the paradoxes of transportation planning, it turns out that doesn't work. As a recent article in Scientific American put it:

Like Alice at the Mad Hatter's tea party, highway planners are caught in a vicious cycle, says Martin Wachs of the University of California Transportation Center. "You can never build enough roads to keep up with congestion. Traffic always rises to exceed capacity."¹³

The problem here is what planners call "suppressed demand." What "suppressed demand" means is that new or expanded roadways draw more cars, to the point where they quickly become congested themselves. Study after study has documented this effect:

- "Our study. . . found that adding lane-miles does induce substantial new traffic. . . A 1.0 percent increase in lane miles induces a 0.9 percent increase in VMT [Vehicle Miles Traveled] within five years. With so much induced traffic, adding road capacity does little to reduce congestion. . . " Mark Hansen, "Do New Highways Generate Traffic?", Access, No. 7, Fall, 1995, pp. 20, 22
- "Transportation planners are well aware of cases where highway improvements projected to accommodate fifteen years of traffic growth are choked with congestion in far less time." David Lewis and Fred Laurence Williams, Policy and Planning as Public Choice: Mass Transit in the United States, Burlington, VT, Ashgate, 1999, pp. 206-207
- "In fact, an expansion of 1 percent to an existing capacity of 1,000 lane miles. . . would reduce (congestion) by one-eleventh of a percent on freeways, one-sixth of a percent on principal arterials, one-fourth of a percent on minor arterials, and one-third of a percent on collectors." Xuehao Chu, "Highway Capacity and Areawide Congestion," paper presented at the Transportation Research Board 79th Annual Meeting, January, 2000, Washington, DC, p. 10

Similarly, one study after another shows that high quality transit, especially rail transit, can reduce congestion.

- After the September, 1998 opening of the Westside line of MAX, Portland, Oregon's Light Rail System, "Transit's share of westbound trips leaving downtown on major roads during the afternoon rush hour increased by 5 percentage points. . . from 11 percent in May 1993 to 16 percent in May 1999. This increase represents nearly all of the 5.5 percent increase in afternoon rush hour trips (emphasis added). On Sunset Highway, transit's share of westbound trips leaving downtown Portland during the afternoon rush hour increased from 13 to 20 percent while drive alone trips

declined from 60 to 55 percent." Westside Corridor Travel Study Executive Summary -- May 1999, Tri-County Metropolitan Transportation District of Oregon

- The Texas Transportation Institute's 1999 Annual Urban Mobility Study shows that the greatest increases in congestion have been in areas that do not have rail transit. "Table 3, Travel Rate Index" ranks 68 urban areas by percent increase in "Peak Period Travel Time Penalty," in the short term from 1992 to 1997 and in the long term from 1982 to 1997. Only 2 of the 10 areas with the greatest "Peak Period Time Penalty" short term increase had rail transit service at that time, the other 8 did not. For long-term congestion increases rail cities fared even better. Only 1 of the 13 areas experiencing the greatest increase had rail transit service, the other 12 did not. David Schrank and Tim Lomax, 1999 Annual Urban Mobility Study, Texas Transportation Institute, 1999, Table 3
- "The results of this study suggest a relationship in which 1 mile of transit travel . . . substitutes for 5.4 to 7.5 miles of travel in automobiles. Newman and Kenworthy have suggested a relationship of 3.5 kilometers of automobile travel for 1 kilometer of transit travel and Holtzclaw found relationships in which 1 mile of transit travel replaced from 4 to 8 miles of automobile travel." John W. Neff, "Travel Distance Substitution Rates Between Automobile Users and Transit Passengers," Papers and Proceedings of the Applied Geography Conferences, Vol. 19, 1996, pp. 117-124

Of course, cities that continue to grow while still mandating the separation of housing, employment and shopping may generate so many new trips that total congestion increases despite the addition of rail transit. But rail transit still reduces the rate at which congestion increases, because most trips on rail represent a car removed from traffic. If the rail line were not built, highway congestion would be even worse.

And what about the myth that a rail transit line has less capacity than a single lane of freeway or even a major arterial road? The facts are clear enough:

The basic problem with urban/suburban freeways is that they take up so much space for the capacity they deliver. At 1500 cars per lane per hour, a six lane freeway's maximum capacity is about 11,000 people per hour. . . within a 300 foot right of way. Urban rail systems can deliver as much or more capacity in 100 foot or less of [right of way]. The Dallas light rail line when completed to Garland and Richardson will be able to deliver at least 20% more hourly capacity than a six lane freeway (13760 people per hour) at 14% less capital cost per mile. Heavy rail systems like the Washington Metrorail have five times the capacity of a six lane freeway in about one third the space and cost about the same per mile as the Century Freeway in Los Angeles.¹⁴

So how do the anti-transit troubadours say that Light Rail carries fewer people than even a modest two-lane road? Why, they just compare what Light Rail lines do actually carry with what a highway could carry, if it were jammed to its maximum capacity 24 hours a day! Many of their tunes, it seems, sing of apples and oranges, artfully but not honestly compared.

Myth Number Five: Where transit is needed, buses are better than rail. Buses cost less and provide the same or better service.

Again, let's hear it from the horse's, er, mouth:

- "Another problem with light rail is that, unlike bus service, it is inflexible. Bus routes can be changed overnight, if needed, to respond to changes in demand and development. A change in a light rail route takes months and hundreds of millions of dollars to remove the tracks and re-lay them on a new route." -- Daniel Simmons, Randy T. Simmons and Samuel R. Staley, Growth Issues in Utah: The Facts, Fallacies, and Recommendations for Quality Growth, Sutherland Institute, October, 1999, p. 33
- "Studies in Los Angeles have shown that overall travel times on rail transit are longer than the same trips on the old bus routes, by factors of up to 100 percent. . . Bus trips also had significantly lower fares, required fewer transfers, and had shorter headways. Buses operated for longer periods of the day and on weekends and holidays, and offered more convenient access. . . Given the choice, most of these riders would prefer to continue to take the bus." -- James V. DeLong, Myths of Light Rail Transit, Reason Public Policy Institute, September, 1998, p. 5-6
- "Bus corridors consist of parallel bus lines collectively providing higher capacity than rail lines. . . Light rail lines cannot deliver more than a small fraction of the carrying capacity provided by dedicated bus rights-of-way." -- Thomas A. Rubin and James E. Moore II, Ten Transit Myths: Misperceptions About Rail Transit in Los Angeles and the Nation, Reason Foundation, November, 1996, Executive Summary

Imagine a fruit wholesalers convention where a speaker, three sheets to the wind on hard cider, holds up an apple and an orange and exclaims, "Everybody should buy oranges, not apples. Why, this orange produces twenty times as much juice as this apple!" To which a sober farmer replies, "It makes no sense to compare completely different fruits. Comparing apples and oranges is as dumb as comparing buses and rail transit."

Buses and rail transit are at least as different as apples and oranges. With a few exceptions, they serve different purposes and different people -- so different that it may be more of a hindrance than a help to lump them together as "public transit."

In general, buses serve the purpose of providing mobility to people who have no car or cannot drive -- the transit dependent. Rail transit serves the purpose of reducing traffic by drawing to transit riders from choice, people who have cars and can drive if they choose to do so.

There are, of course, some exceptions. The New York City Subway serves everyone. Ridership on Los Angeles's Light Rail Blue Line is 89% minority, which generally means transit dependent. Houston and Ottawa have had some success in drawing riders from choice onto express buses, and in St. Louis, when Light Rail opened, bus ridership also rose as former auto commuters took local buses to the train stations.

But these remain exceptions. More typical is Seattle. When buses were temporarily substituted for the 1930s-built streetcars on that city's Waterfront line, ridership dropped to one-fifteenth of what it had been on the trolleys.¹⁵ PATCO, a 14-mile rail transit line serving Philadelphia's middle class New Jersey suburbs, carries 40,000 daily riders; in the same area, seventeen bus lines with 28 branches, totaling 563 route miles, draw only 30,000.¹⁶ One study showed that when Light Rail replaced buses on the same route or in the same transit corridor, ridership usually increased by over 100%. Another study demonstrated that when buses replaced rail transit, ridership declined by between 34% and 43%.¹⁷

The differences between bus riders and rail transit riders were dramatically demonstrated in a comparative survey of both done in St. Louis in 1993, shortly after Light Rail opened in that city.

- Among bus riders, 70% said they used the bus because they did not drive or had no car available. For train riders, the figure was 17%.
- 11% of train riders took the train because it was faster than driving, and 13% because it was more relaxing; for bus riders, the figures were 3% and 2%.
- 84% of train riders rated service as excellent or good, compared to 57% of bus riders.
- 40% of bus riders owned no car, and 28% had two or more cars. Only 8% of train riders had no car, and 68% had two or more cars.
- 48% of bus riders live in the inner city, compared to 14% of train riders.
- 57% of bus riders have annual household incomes of less than \$20,000, compared to 21% of train riders. Only 6% of bus riders have incomes of over \$45,000, compared to 38% of train riders.¹⁸

For the 40% of bus passengers who have no car, the bus is their only way to get around. That is true of only 8% of train riders. But the 68% of train riders who have two or more cars would presumably drive if there were no train, so for them, the social

purpose of rail transit is to reduce traffic. In fact, 68% may be too low; the same survey found that before the Light Rail line opened, 79% of rail riders did not use transit at all.

So we see that the differences between bus and rail are if anything greater than those distinguishing apples and oranges; comparing bus and rail as if they were interchangeable is more like comparing, say, aardvarks and kumquats. So why do the anti-transit troubadours always tell us to stick with buses and not build rail? Well, if the objective is to keep people in their cars, that is a pretty good prescription.

Let's look at a few of the transit critics' more specific objections to rail:

- They contend that buses are more "flexible" because bus routes can be moved virtually overnight while train tracks are fixed in place. This is true. But it turns out to be one of the advantages of rail, not a disadvantage. One of the more important purposes of any infrastructure is to spur and channel development. Bus transit has no effect on development, precisely because of its here today and gone tomorrow "flexibility." No developer can count on its being there once his building is completed. Rail transit, on the other hand, is a major spur to development, because once it is there, it is there for the long term. A developer may buy land, erect a building and get tenants, knowing that those tenants will still have rail transit service next week, next month, next year and next decade.
- The critics also claim that buses cost less than rail. This is true of capital costs, but not of operating costs. In St. Louis, Light Rail had an operating cost per passenger mile in FY 1995 of 224 compared to 684 for buses, a cost per passenger trip of \$1.18 compared to \$2.31 for buses, and a farebox recovery ratio (FY 1997) of 41.8% compared to 20.3% for buses.¹⁹ In Portland, Oregon, the operating cost per boarding passenger is \$1.67 for buses, \$1.40 for Light Rail.²⁰ In Dallas, the operating cost per passenger mile of the DART Light Rail system is just 60% of that of buses.²¹ On a nationwide basis, the latest figures, from the Federal Transit Administration 1999 National Transit Database, show the operating cost of Light Rail as 454 per passenger mile, compared to 554 for buses.
- Another assertion by the critics is that buses on dedicated rights-of-way -- busways or HOV lanes -- are better than Light Rail. In actual experience, buses on busways do not compete effectively with rail transit, at least in the minds of potential riders. Former Deputy Secretary of Transportation for Pennsylvania E.L. Tennyson has compared the two modes over the years. He writes:

In 1970, the Shirley Busway was opened on I-95 in Northern Virginia to serve the Pentagon and Washington, D.C. Transit use jumped exponentially when frequent service replaced three slower trips per day. . . but ridership has declined by seventy percent since the Second Energy Crisis. Then rail service was established at a higher fare on a slightly

slower schedule. Ridership jumped 450 percent in a year, at a lower operating cost per passenger-mile. In 1986, when Metrorail replaced express buses on I-66 HOV lanes, transit use increased almost 900 percent over several years. . .

I was Deputy Secretary of Transportation for Pennsylvania and signed over the funding for the South Busway (in Pittsburgh), with a promise of 35,000 weekday passengers. At the height of the Second Energy Crisis, we got 20,000, but it has fallen since then to lower than pre-busway. Ottawa (Canada) has had a similar experience.

In sharp contrast, San Diego eliminated Express Bus Route 100 and converted trunk Route 32 to Light Rail. Over time, ridership has risen from 12,000 with buses to 28,000 or more by rail, at an operating cost of only 17 cents per passenger-mile (1998). Bus cost in San Diego was 38 cents. . . ²²

In one city after another, Light Rail has shown that it can draw a great many riders from choice who would never board a bus. The same is true for commuter rail, as we showed in our look at Chicago's Metra system in our first study.²³ The anti-transit troubadours dislike rail transit not because it doesn't work, but because it does.

Myth Number Six: Rail transit can only serve city centers, but most new jobs are in the suburbs.

Again, let's let the critics speak for themselves:

- "How did things go so wrong for the planners' vision of what rail could do? Rail transit was appropriate to the highly concentrated and dense cities of the 19th and early 20th centuries. As cities spread out and as downtowns became less prominent, rail transit's traditional markets nearly disappeared. . . In the information age, the suburbanization of jobs and housing is ever accelerating, strongly suggesting that there are no prospects for a return to 19th century conditions." -- Peter Gordon, A Transit Plan for Hillsborough County: A Reality Check, Reason Public Policy Institute, June, 1998, p. 6
- "With regards to attracting commuters from automobiles, transit agencies have effectively served only one destination -- downtown. Downtown transit work trip market shares can be very high -- in four downtown areas more than 50 percent of employees use transit to get to work, and nine downtown areas have transit work trip market shares of 30 percent or more. Downtowns, however, are not the dominant employment centers that they once were. On average, downtown areas contain no more than 10 percent of employment in major metropolitan areas -- more than 90

percent of metropolitan employment is now outside downtown." -- Wendell Cox, The 1999 Texas Transit Opportunity Analysis: Metropolitan Transit Authority of Harris County ("Metro") Ill-advised, Texas Public Policy Foundation, 1999, Part 2, p. 2

- "It is also a mistake to assume that there are identifiable 'commuting corridors' that accommodate most of the job-related trips. Increasingly, people live in one suburb and work in another; they do not go from a suburb down a corridor to a central downtown. . . The 'commuting corridors' concept, which assumes a downtown employment core surrounded by suburbs, is hopelessly out of date." -- James V. DeLong, Myths of Light Rail Transit, Reason Public Policy Institute, September, 1998, p.11

This anti-transit myth is a bit different from the others, because the problem itself is not a myth. The myth is that the problem has no solution.

Downtowns remain important centers of employment in most regions, and even Wendell Cox admits (at least in the above quote) that transit serves downtowns well. But it is also true that much job growth is in the suburbs.

An excellent new study sponsored by the Transportation Research Board, Guidelines for Enhancing Suburban Mobility Using Public Transportation, well describes the challenge facing mass transit:

Improving suburban mobility is a difficult national challenge. For transit, the problem is particularly acute. Networks historically have been designed to serve downtowns and concentrated urban centers. Many are ill-suited for serving the lower density and dispersed travel patterns characteristic of suburban patterns of development. . .

Average residential and employment densities today are not only much lower than a decade or more ago, but trip origins and destinations are also far more spread out. Nationwide, the share of work trips both beginning and ending in the suburbs, for instance, increased from 38 percent in 1970 to 52 percent in 1990. Traditional commuting paths are being replaced by a patchwork of radial, crosstown, lateral, and reverse-direction travel. Increasingly, there is a mismatch between the geometry of traditional highway, bus, and rail networks, which mostly follow a hub-and-spoke pattern, and the geography of commuting, which seemingly moves in all directions.²⁴

Unlike the anti-transit troubadours, the Transportation Research Board does not respond to the challenge with lamentations. The very title of the study emphasizes "enhancing suburban mobility using public transportation." There are solutions, and rail transit has an important role to play in them.

One solution stems from the nature of much suburban job development. It is not always spread out evenly across the map. Rather, it often follows certain corridors -- corridors that can be served effectively by rail.

Portland, Oregon, offers an example. There, job growth has been concentrated in a corridor on Portland's west side. The TRB study notes that, "During the 1980s, it accounted for two-thirds of population growth and 96 percent of employment growth in the Portland metropolitan area."²⁵ How did Portland choose to serve this suburban growth? Instead of building a planned west-side freeway, it built Westside MAX, an extension of the Light Rail System.

Did it work? Passenger Transport reported on September 25, 2000, Westside MAX's two-year anniversary,

Daily ridership on Westside MAX exceeded the 25,200 rides estimated for 2005 after only 17 months of operation, and the system's popularity is growing. Daily ridership jumped 18 percent during the last quarter of Fiscal Year 2000 compared to the fourth quarter of FY 1999, reaching 28,200 weekday rides in June.

The success of Westside MAX depended on more than installing train tracks. Tri-Met also reorganized bus routes in the corridor in conjunction with opening the MAX line, and in turn improved their on-time performance. When MAX opened, it and bus service increased 46 percent in the corridor, and the response has been terrific. The number of transit trips rose 145 percent; rush-hour transit trips in the western corridor from downtown Portland increased 5 percent while drive-alone auto trips declined 3 percent; and transit's share of reverse morning commutes more than doubled since 1997.²⁶

Rail transit can do more than serve corridors where job growth is concentrated. It can also help create such corridors. For decades, European urban planners have used rail transit lines to shape growth. By building rail lines into areas where open space exists but growth is wanted, growth -- job and residential -- is drawn in. In fact, that is how Los Angeles developed, along the lines of the Pacific Electric's famous Red Cars.

A major reason why rail transit has difficulty serving suburban growth in many American cities is that there just isn't enough of it. A single Light Rail line can only serve a limited area. But if a rail system is large enough, it serves much more than the downtown. Washington's Metrorail is an example: this five-line, 103-mile system serves not only downtown Washington, DC, but also such major employment centers as Crystal City, the Pentagon and Rosslyn, Virginia and Bethesda and Silver Spring, Maryland.

As the TRB study makes clear, rail serves a vital function in providing transit to suburban job growth areas, the function of providing a fast, high quality "spine line" transit trip. The question then becomes, how can public transit provide an effective

"distributor" function, taking people from the suburban rail station to their jobs? This question, too, has answers.

Perhaps the best answer is shuttles. Unlike regular bus services, shuttles run directly from the rail station to the place of employment. Often they are vans provided by the employers. The TRB study notes:

By creating this link in the network, transit becomes a more attractive and viable alternative to the single-occupant automobile for choice riders and provides mobility and increased employment opportunities for transit dependents. . . as such, the travel time and cost characteristics need to be tailored to be competitive with automobile travel times and cost.²⁷

The study goes on to provide a number of examples of successful shuttles. One runs from the Walnut Creek station on San Francisco's BART Heavy Rail system to the Bishop Ranch Business Park, a major employer. The TRB study states:

CalTrans joined with the Sunset Development Corporation (the owner of Bishop Ranch) to sponsor the 960 Express Shuttle. Employees of Bishop Ranch ride free by displaying an identification badge, and the general public pays a \$1.25 fare. The 960 Express Shuttle's fixed-route predecessor carried only 6.7 passengers per hour. In late-1995, the Express Shuttle averaged 15.8 passengers per revenue hour. Its monthly ridership jumped from 2,200 passengers in February 1995 to 6,000 6 months later. On some mornings, the load factor approaches 1.5.²⁸

Guidelines for Enhancing Suburban Mobility Using Public Transportation offers many other solutions to the challenge posed by suburban job dispersion. And that is our point: there are solutions. The solution must be appropriate to the specific situation; this is not a case where one size fits all. But in many situations, rail does have a key role to play, the role of providing a speedy, comfortable, high quality "spine line" trip that makes transit competitive with the private automobile. Serving suburban job destinations requires not fewer rail lines, but more.

Myth Number Seven: Rail Transit does not spur economic development.

In their own words, the anti-transit troubadours have said:

- "Local proponents of light rail suggest that it can be used to drive what they perceive to be desirable development patterns in the area. Light rail's impact on development has been minuscule around the nation." -- Thomas A. Rubin and Wendell Cox,

Trolley Folly: A Critical Analysis of the Austin Light Rail Proposal, Texas Public Policy Foundation, September, 2000, p. 11

- "If new urban rail were able to reshape city development, it would be expected that downtowns in new rail cities would have lower office vacancy rates than in other cities. . . Yet the average downtown vacancy rate in new rail cities is more than half again higher than the average of other cities." -- Wendell Cox, Why Light Rail Doesn't Work, Texas Public Policy Foundation, January, 2000, p. 33
- "It is likely that Dallas development induced by light rail will, as in other areas before it, be of a very localized rather than regional significance." -- Wendell Cox, Why Light Rail Doesn't Work, Texas Public Policy Foundation, January, 2000, p. 36

This myth is an ironic one, because the wandering minstrels' favorite tune is "Buses not trains," but it is rail transit, not bus service, that spurs economic development. The reason is simple. Bus service can change overnight. A bus route can be discontinued or re-routed easily. No developer can invest on the basis of something so ephemeral. A rail line, in contrast, is a fixed, high-value asset. It cannot get up and move, and the amount of capital invested in it makes service discontinuance highly unlikely. A developer can invest in, say, a new office building near a rail transit line in confidence that twenty years from now, the rail line will still be there providing transit service. The asset that service represents to the developer will not vanish overnight.

And the asset of rail transit service is very real. In one city after another, rail transit -- Heavy Rail, Light Rail or commuter rail -- has brought increased investment, higher property values, higher rents and more customers.

In our first study, Conservatives and Mass Transit: Is It Time for a New Look?, we offered Washington, D.C.'s Metrorail system as an example of rail transit spurring development -- specifically, development in northern Virginia. Two different studies clearly showed Metrorail's substantial impact:

Average office rents near stations rose with systemwide ridership; joint development projects added more than three dollars per gross square foot to annual office rents. Office vacancy rates were lower, average building densities higher, and shares of regional growth larger in station areas with joint development projects. . . -- Robert Cervero, "Rail Transit and Joint Development: Land Market Impacts in Washington, D.C. and Atlanta," Journal of the American Planning Association, Winter 1994, p. 83

Since 1977, when the first Metrorail station opened in Virginia, Metrorail has generated substantial economic benefits for the Commonwealth. By 2010, Metrorail will generate:

- \$2.1 billion in additional Commonwealth revenues

- Development projects totaling:
 - 25 million additional square feet of office space
 - 1.8 million additional square feet of retail space
 - 4,000 additional hotel rooms
 - 31,000 additional residential units
 - Permanent employment in the Commonwealth totaling:
 - 86,000 additional office jobs
 - 1,500 additional retail jobs
 - 3,500 additional hotel jobs
 - Net revenues of \$1.2 billion (revenues in excess of Commonwealth contributions to Metrorail)
 - Annual additional Commonwealth tax revenues amounting to three times the annual Commonwealth contribution
- KPMG Peat Marwick, Fiscal Impact of Metrorail on The Commonwealth of Virginia, November, 1994

The Peat Marwick study goes on to quote several northern Virginia businessmen about Metrorail's effects on their businesses:

- "We simply would not have developed the Montebello community of over 1,000 units on Route 1 had it not been for the adjacent Metrorail station." -- Giuseppe Cecchi, President of IDI Group Companies
- "One of the primary factors in our decision to invest substantial capital in the development of Colonial Place was the commitment of the state and local governments to Metro. The proximity to Metro has enhanced our ability to consistently attract and retain quality tenants and maintain full occupancy in our buildings." -- James C. Cleveland, President of Mobil Land Development Corporation
- "The ability of both daytime travelers and weekend shoppers to use Metrorail to get to the Fashion Centre at Pentagon City has had a dramatic impact on our success." -- James P. Lee, Senior Vice President of Simon Property Group²⁹

Washington's Metrorail is a Heavy Rail system; what of the effect of Light Rail on development? St. Louis and Dallas offer examples, and both point to the same conclusion: Light Rail can have a strong and positive impact on development.

St. Louis's MetroLink Light Rail system opened in 1993. A study by the Bi-State Development Agency states:

Fueled by high ridership and touted for its convenience and accessibility to premier attractions, employment, educational, medical and recreational centers in the area, MetroLink, the St. Louis region's light rail system has been lauded as a catalyst for economic development. . .

Locations within walking distance of MetroLink stations have become hot commodities for potential businesses. Local real estate managers report potential renters and buyers are showing more interest in property within the vicinity of MetroLink. Additional occupancy rates in apartments near MetroLink stations have grown.

Existing businesses are benefiting from the new transportation system too. St. Louis' downtown shopping malls report increased pedestrian traffic since MetroLink opened in July, 1993. Shops and restaurant managers within these malls have also reported an increase in sales.

Economic development planners say solid change near MetroLink stations is imminent. In years to come, abandoned land will sport new shops, convenience stores and office buildings.³⁰

If Light Rail was going to fail anywhere, Dallas would have seemed the place. After all, Texans were wedded to their cars, and only the poorest used public transit. Our vagabond minstrels cheerily predicted that Dallas's DART Light Rail system would run empty trains.

As usual, they were wrong. Since DART opened in 1996 -- on time and within budget -- it has carried more riders than projected: 42,000 per weekday by the latest count. And it has had an immediate and positive effect on development. DART Board Chairman Jesse D. Oliver recently wrote:

Developers are building on the success of DART's \$860-million light rail system with more than \$800 million in ongoing or planned projects near the stations -- those already built, and those opening in the near future.

That's almost a dollar-for-dollar return on this public investment in just four years. I know of no other transit system in America that has generated so much economic activity so quickly.³¹

A study by Drs. Bernard L. Weinstein and Terry L. Clower of the University of North Texas put some numbers to the effects of DART on development and business. Their research found that properties adjoining DART Light Rail stations grew 25 percent more in value than similar properties not served by rail transit. Average occupancies for Class A buildings near the Light Rail line increased from 80% in 1994 to 88.5% in 1998, while average rents rose from \$15.60 per square foot to \$23. Strip mall owners near DART stations had a 49.5% gain in occupancy and a 64.8% rise in rent rates. The study states, "Proximity to DART light rail stations appears to be a plus for most classes of real estate, especially Class A and C office buildings and strip retail."³²

DART's Light Rail line is also drawing middle and upper-middle class people back into Dallas's downtown as residents. Local developer Ken Hughes is the man behind a high-density development of 250 high-end apartments at DART's Mockingbird Station. He says, "I take people over to Mockingbird Station and show them the BMWs and Volvos parked there; these people are using mass transit because they like it."³³

Rail transit benefits individual homeowners, not just developers and businessmen, by raising the value of existing homes. A study of the effect of San Francisco's BART rail system on property values in the suburb of Pleasant Hills found that:

BART station proximity is a key determinant of property values in Pleasant Hill. The research shows that single family homeowners are willing to pay, on average, nearly \$16 in home price for each foot closer to BART within the study area. . . Alternatively, homeowners are willing to pay nearly \$8 in home price for every foot further from the freeway interchange nearest the study area. . . The value of an average single family home in the Pleasant Hill Station Area is \$22,767 greater due to its proximity to BART. For the 939 single family homes within a 1 mile radius of this station, the net property value impact is \$21.4 million.³⁴

Edward A. Reusing, President of Downtown St. Louis, Inc., summed it up best. Having seen for just two years what Light Rail did for that city, he said in January of 1995, "Extending MetroLink and the bus system which feeds it is the smartest economic development step St. Louis can take."³⁵ When the anti-transit troubadours sing that rail transit has no effect on economic development, it's time to start heaving old shoes and dead cats.

Myth Number Eight: Transit brings crime into a community.

Quite rightly, Americans fear crime and want to do everything they can to keep it away from their families, homes and neighborhoods. As conservatives, we know a good, old-fashioned solution to the crime problem: If you hang a thief when he's young, he won't steal when he's old. But until the happy day comes when the old truths are restored, Americans will have to fear crime and do their best to flee it.

Needless to say, the danger of crime is too good a theme for transit critics to ignore. But this myth is a bit different from the others, because it is local people who usually raise the issue. They do so honestly, because they are scared. We understand that fear. Let's hear it in their own words:

- "During the time that light rail was proposed, built, and launched in San Jose, California, my wife and I lived less than a mile from the downtown route. Proponents of the system there used the same arguments and reassurances then as proponents of an Austin system do today. Only the positive aspects were presented. No one seemed to think about the dark side of 'if you build it, they will come.' By the 'dark side' in this case I refer to a criminal class. Most of the passengers will be good

people. . . 'They' will regard it as a hunting ground." -- Woody Edmiston, "The Criminal Side of Light Rail," The Austin Review, December 16, 1999

- "Light Rail has been linked to the increase in CRIME, both at the stations that serve the communities, and in the neighborhoods themselves. In Baltimore and Philadelphia, crime rates rose as a result of mass transit intrusions into neighborhood communities. We have no way of forecasting what impact it may have on our neighborhoods, but experience teaches that what has happened elsewhere will probably happen here as well." -- "Tracks, Lies and Videotape," Orlando, Florida, Ax The Tax, November 3, 1999

As the two statements indicate, we face not one question, but two: crime on transit, and crime brought into a community by transit. What is the evidence?

As soon as we ask that question, we encounter our first problem: the evidence is thin. As a 1997 Transportation Research Board study, Improving Transit Security, states, "The dimensions of transit crime in the United States are not currently subject to reliable assessment. . . Only recently have efforts begun to compile a national database."³⁶ At present, we simply do not have the information to answer either of our two questions definitively on a national basis.

However, the data on crime on transit is better, so let's look at it first. The TRB study, Improving Transit Security, goes on to say that:

Data that are available, using Uniform Crime Report (UCR) classifications, suggest that transit crime is of a less serious nature although serious crime does occur regularly. Disorderly conduct, public drunkenness, fare evasion, theft, and simple assaults appear to be the five most frequently occurring offenses. . . As would be expected, serious and violent crime is more characteristic of larger transit systems, measured both by statistical incidence and crime per passenger trip.³⁷

Both of the basic facts given here are almost certainly relevant to the rail transit line proposed for your community. First, serious and violent crime is less likely than statistical averages might suggest, because most of that kind of crime occurs in the biggest cities.

Second, most of the crime your system may face will be of a "less serious nature." What, exactly, does that mean? Another study, the Transit Security Handbook, dated 1998, gives a detailed answer. That study states, "Quality of life and property crimes account for over 93 percent of all crimes on [rail transit systems]. Violent crime occurs relatively infrequently, accounting for only 6.6 percent of all [rail system] crime."³⁸

In turn, 67.4% of the quality of life crime is disorderly conduct. That is followed by drunkenness with 9.8%, trespassing at 7.5%, vandalism with 6.7%, drug abuse

violations at 4.8% and loitering with 2%.³⁹ Quality of life crimes are serious for a transit system, because they drive patrons away. But they do not result in physical injury to transit riders.

The study makes another important point relevant to your community: "Heavy rail systems have the largest number of disorderly conduct crimes, significantly higher than the rate experienced on other [rail systems]."⁴⁰ The rail transit system proposed for your community is almost certainly Light Rail or commuter rail, not Heavy Rail.

The other component of our 93% of all crime on rail systems is property crime. 81% of that, in turn, is fare evasion.⁴¹ Fare evasion is a problem for the transit authority, but it does not directly threaten transit riders. Of property crimes that do threaten riders, the study notes, "Rates for burglary, arson, and motor vehicle theft are low across all [rail] systems."⁴²

And what of the crime everyone fears, violent crime directed against transit riders? The study concludes:

(Rail transit) violent crime occurrences, when compared to municipal violent crime, are minimal. For example, in 1995, the city of Los Angeles experienced more violent crime in a two month period than all affected [rail transit systems]. . . during the entire year. . . rates of violent crime in the transit environment are considerably lower than rates in the municipal areas served by [rail transit].⁴³

A survey of riders on the San Diego Trolley adds perspective to the data, because it lets rail transit patrons speak for themselves. A 1992 survey found that:

Safety on board the trolley was rated by 89 percent as either good or average. Security at stations and security in station parking lots are rated the lowest, with 78 and 77 percent rating those characteristics either good or average, respectively.⁴⁴

Even the lowest numbers are in the high 70s, which is good for security in urban areas.

In 1993, a similar survey of San Diego Trolley riders found an interesting difference between the perceptions of those who actually use the trolley and those who do not.

Trolley riders' perception of safety on board and at trolley stations is higher than that of the general public. . . Respondents who have used public transit in the last year are much more likely to rate on board the trolley as safe (75 percent of users versus 48.1 percent of non-users).⁴⁵

This suggests that, at least in San Diego, the issue of crime on board Light Rail is a problem of perception rather than a reality.

In summary, serious crime on rail transit systems is uncommon. This is true even on Light Rail systems such as Los Angeles's Blue Line, which goes through Watts. Fare evasion and disorderly conduct can be problems, unless the transit authority has a proactive policy toward crime. But those crimes, while damaging to transit, do not physically threaten ordinary transit riders. To the degree the data allow us to know, there does not appear to be any Light Rail system in North America where a patron need fear for his physical safety.

What about our second question? Does rail transit bring crime into a community? Here, unfortunately, the data situation is worse. We know of no studies done on a nationwide basis. As one of the studies of a specific line (Baltimore's Metro) says at the outset:

A research gap exists in the study of crime specific to neighborhoods adjacent to transit stations. A body of data is available listing crime in those neighborhoods, but. . . the crime occurrences are tallied without concern as to how the offender traveled to his. . . destination.⁴⁶

Not surprisingly, the study is unable to draw much in the way of conclusions. Regarding this Heavy Rail line, the author states:

A review of the crime statistics gathered for 3 years before Metro's opening of Section B and 3 years after indicates that reported crime is on an upward, though erratic, trend in Baltimore County near these transit stations for most of the major categories. But it is also true that similar upward trends are true for the county in general. . . Whether increases in crime in the neighborhoods of this study can be attributed directly to the addition of a transit station cannot be determined with the data available.⁴⁷

Another Baltimore study is more useful. "Crime on Maryland Mass Transit Administration Light Rail Line: Myth or Reality?," reports what was a genuine crisis along Baltimore's then-new Light Rail system:

By early spring 1994, there was evidence to suggest that the criminal element might be riding the rails in search of new markets. Merchants routinely reported that shoplifting was increasing at an alarming rate; in fact, shoplifting reportedly increased by 237 percent in one shopping center in northern Baltimore County, according to county police. Citizens in certain communities began to report the disappearance of personal property such as bicycles and lawn equipment. One citizen proclaimed, "I've had things stolen off my front porch." . . . Emotions were running high. It no longer mattered whether crime along the [Light Rail line] was a myth or reality. People believed that crime was rampant, and various citizens groups were calling for swift corrective action.⁴⁸

The key to the situation here was that citizens did exactly the right thing, whenever crime rears its head: they organized and demanded action to stop it. And they got what they wanted. The MTA, working with local police departments, put together an aggressive and proactive policy to stop crime on and around the Light Rail Line.

Today, incidents of reported crime are down by 93 percent throughout the entire [Light Rail] system. . . reported crime figures before and after the formulation of the community outreach program, security task force, and regularly scheduled community meetings show a sharp contrast. Obviously, increased criminal activity in residential and business communities adjacent to the [Light Rail Line] was a reality.

Historically, there have always been those who are not timid about availing themselves of the fruits of someone else's labor. . . the same type of individuals used the [Light Rail] service to reach locations that had been inaccessible heretofore.

It was inevitable that once all the concerned groups organized and began to work together, the problem of increased criminal activity would be systematically eliminated.⁴⁹

The San Diego study referenced earlier also looked at crime along the trolley line. It noted that:

The violent crime rate increased less in communities surrounding trolley stations than in the study area as a whole. The overall property crime rate decreased more than in the study area. However, Phase 2 (of the study) identified a dramatic increase in crime within a 1/8-mile radius of trolley loading platforms. Property crimes, most notably car theft, increased the most. (Since most stations were built on vacant land, any type of development would be expected to increase the number of crimes occurring there.)⁵⁰

Finally, the transit authority responsible for the Light Rail line in San Jose, California noted in a short study that:

Records compiled by Valley Transportation Authority Security pertaining to light rail accidents and crime statistics support the conclusion that safety and security in neighborhoods are not significantly affected by implementation of a light rail system.⁵¹

What can we conclude from all this? In our view, the conclusion is clear: rail transit can create a crime problem, both on-board and in neighboring communities, but it need not do so.

Unfortunately, in today's America, any new development can bring crime. It should not surprise us that rail transit can do so. But as the study of crime on Baltimore's Light Rail line shows, crime on and around rail transit lines can be stopped -- or better still, prevented before it happens.

The key is a proactive anti-crime program that includes the local transit authority, police, and businesses in and residents of areas the line will serve. A carefully designed program to stop crime before it starts should be part of the planning for the rail line itself. It should be up and running when service begins, so crime cannot gain a foothold. If such a program is not part of the total project, then citizens should withhold their support for the rail line until it is.

Nor is it enough to be proactive just against crime. Disorder is crime's forerunner, and transit policy must include strong measures against disorder on rail cars and in or around stations. A good example is radios with headphones where the user turns the volume up until it fills half the car. Even if that technically meets a "no radios without headphones" rule, it should not be permitted, because it is in fact a defiance of the rule. That individual is forcing his (usually wretched) taste in music on others. He should not be allowed to do so.

Because the crime problem is different from city to city and neighborhood to neighborhood, we cannot say exactly what measures a local proactive anti-crime policy should include. However, because fare evasion is a major component of crime on transit systems, and widespread fare evasion tells criminals that the transit system may be "friendly turf," we must question the now fashionable assumption that Light Rail should have an "honor" fare system and barrier-free entry. In some locales this may work well. In others, it may not. When a Light Rail line is to serve relatively high crime areas and populations, an honor fare system may not be appropriate. The requirement not only to pay a fare but to pass through some sort of gateway while doing so unquestionably increases security -- as well as transit revenues. The honest, fare-paying passenger will welcome the turnstile, for what it keeps out.

We have devoted considerable length to the question of rail transit bringing crime because, as conservatives, we take crime seriously. We would oppose any development in our neighborhoods that would bring more crime, and we would expect you to do the same. Rail transit need not, if planning includes security issues from the outset.

Myth Number Nine: Most Light Rail riders are former bus riders.

Again, let's start with some snatches from the troubadours own songs:

- "Worse still, the addition of a rail line [in Phoenix, Arizona] will likely draw the overwhelming majority of its customers from existing bus routes. It is estimated that 85 percent to 90 percent of the riders on the new 'Blue Line' rail transit corridor in Los Angeles were formerly bus passengers. Drawing the majority of its passengers from previous bus riders is a common outcome when new rail transit is introduced." -- John Semmens, Public Transit: A Worthwhile Investment?, Goldwater Institute, December, 1999, p. 21
- "In summary, no more than a third c usually about 20 percent c of light rail patrons are former occupants of an SOV (single occupant vehicle). Light rail has given at most another 20 percent the chance to make a journey that they would not have made before. The remaining 50 to 60 percent of riders come from other transportation modes, usually the bus." -- Robert J. Franciosi, Light Rail in the Valley: What Awaits Voters at the End of the Line, Goldwater Institute, February, 2000, p. 6
- "Metro's (Washington, DC) new ridership has largely been taken from buses and car pool passengers." -- Wendell Cox, Why Light Rail Doesn't Work, Texas Public Policy Foundation, January, 2000, p. 8

Here we see at work a common little trick the anti-transit minstrels use to tune their supple songs: picking one example and pretending it is typical. Los Angeles's Blue Line, cited by John Semmens, does draw comparatively heavily from former bus patrons, because the area it serves is populated largely by transit-dependent people. But it is an exception, not the rule. Most new light rail lines serve very different populations and draw a far higher percentage of riders from people who used to drive.

Worse, Mr. Semmens also tunes his numbers. According to an on-board riders' survey done in May, 1991, 54.9% of Blue Line passengers were former bus riders -- not 85 to 90 percent.⁵² According to a 1998 survey, if the Blue Line were not available, 29% of its riders would drive, and another 24% would be driven by a family member or friend -- meaning more than half of the light rail line's riders would be adding to traffic congestion.⁵³

And getting those people onto Light Rail benefits the taxpayers. In Los Angeles, the operating cost of buses per passenger mile is \$0.57, compared to \$0.35 for Light Rail. So the critics are misleading on every point.

The fact of the matter is that Light Rail has been highly successful in drawing people out of their cars and onto transit. We already noted St. Louis MetroLink Light Rail as one

example: a 1995 passenger survey found that 85% of rail riders had not previously used the bus. In fact, bus patronage in St. Louis rose rather than fell when the Light Rail line opened. According to a Denver survey of Light Rail passengers, dated December 8, 2000, "For 50% of all Southwest Light Rail passengers surveyed, Light Rail was replacing trips they would have made, at least partially, by driving alone."⁵⁴

Another way to look at this myth is by comparing bus ridership with Light Rail ridership in the same transit corridor. If most Light Rail riders come from buses, then ridership should not increase much when rail is substituted. But in fact, it usually does. San Diego offers two good illustrations. On the corridor now served by the San Diego Trolley Orange Line, bus ridership was just over 3,000 per weekday before rail was introduced. Now, on Light Rail, ridership in the same corridor is 18,000. Similarly, in the Blue Line corridor, bus ridership was 400 peak hour passengers; with rail, it is 1,800.⁵⁵ Those bus riders would have to clone themselves in multiples to make up a majority of the people who now ride the trains!

And what about the accusation that a high percentage of people drawn out of their cars by Light Rail actually came from carpools? A study devoted entirely to that question, "A Comparison of Solo Drivers and Carpooler Modal Shift to New Rail Transit Lines," found that:

The average vehicle occupancies for riders of the rail transit systems are disproportionately lower than would be expected. Using the unweighted average data for all surveys, the average vehicle occupancy for rail transit riders had been 1.22 when they traveled by private vehicle. The expected value, however, is 1.45, the average vehicle occupancy for all private vehicle users with the same mix of trip purposes.⁵⁶

In other words, according to passenger surveys, fewer than average rail transit riders had previously carpooled. Census data leads to the same result. The study concludes:

An analysis of data from rail transit system on-board passenger surveys and regression analyses of U.S. Census journey-to-work data indicate that private vehicle travelers attracted to rail transit are disproportionately drawn from single occupancy vehicles.⁵⁷

So the transit critics not only have their facts wrong, they have turned them upside down!

Light Rail's proven ability to draw riders from choice, people who would otherwise have driven, usually alone, is important because it directly affects traffic congestion. Riders from choice represent cars removed from traffic, usually in rush hours, on almost a one-to-one basis.

But we should remember that offering rail transit to former bus passengers also has its benefits. Because rail transit represents high quality transit, those former bus passengers are less likely to leave transit and start driving if they get a car. Buses also clog up roads in rush hour, so substituting rail for bus helps reduce traffic congestion. And since, on a nationwide basis, Light Rail costs less to operate than buses, getting people off buses and onto rail transit reduces the expense of transit to the taxpayer.

Myth Number Ten: Free market competition and privately operated transit is better.

As the troubadours put it:

- "Competition is one of the best ways to improve transit services." -- Randal O'Toole, Urban Transit Myths: Misperceptions About Transit and American Mobility, Reason Public Policy Institute, September, 1998, p. 18
- "Numerous studies demonstrate that contracting out leads to cost savings and increased productivity in bus transit. Some reports indicate that contracted services can lower costs by 50 to 65 percent when compared with public agencies." -- Anthony M. Rufolo and John A. Charles, Low-Cost Solutions to Portland's Traffic Problems: Congestion Pricing and Free-Market Transit, Policy Summary No. 105S, Cascade Policy Institute, March, 1998, p. 2
- "Competition within the transit market would benefit taxpayers and transit riders. All public bus and rail services should be converted to competitive contracting as quickly as possible. This could allow a combination of service expansions, fare reductions, and tax reductions." -- Wendell Cox, "Competition, Not Monopolies, Can Improve Public Transit," Backgrounder No. 1389, The Heritage Foundation, p. 2 of Executive Summary

We agree. Where the free market and private enterprise can be introduced to public transit, the public -- riders and taxpayers -- are likely to benefit.

The broadest opportunity for private enterprise lies in contracting out the operation of bus systems. According to the 1997 National Transit Database, transit systems that contract out operation of some or all of their buses have a lower cost per passenger mile (40¢ vs. 55¢) and a slightly higher farebox recovery ratio (35.4% vs. 34.1%), although they also have a slightly higher cost per passenger trip (\$2.39 compared to \$2.03). A study, "Does Contracting Transit Service Save Money?," concludes, "So, does contracting save money? It depends. Transit services operated by private contractors are not always less expensive or more efficient than services directly operated by transit

agencies. . . In some cases, contracting for service may be the best way to achieve cost-effective operations; in others the problems causing high costs are best addressed by other strategies."⁵⁸ On balance, we're for it, both on a cost and a service quality basis.

However, as any honest free market economist will tell you, a free market demands a level playing field. If we want fair competition between transit and private automobiles, we would first have to level a playing field that, at present, is all hills and valleys.

Public transit is subsidized. According to the APTA 2000 Public Transportation Fact Book, in 1998, 65.7% of the expense of public transit -- operating and capital costs -- came from the taxpayer. The rest was from fares and other earnings. In dollars, the taxpayers' annual contribution was \$17.12 billion.

But what about highways? In 1994, the Office of Technology Assessment (OTA) estimated that total social costs for motor vehicle users range from \$2,155 billion to \$2,937 billion, with user fees covering \$1,716 billion to \$1,930 billion. That means highways received an annual subsidy of between \$439 billion and \$1,007 billion -- the latter figure being more than a trillion dollars.⁵⁹

If we were to make transit and cars compete fairly, each would have to get the same subsidy or no subsidy. In addition, the price paid directly by the automobile driver and the transit rider would have to be paid the same way, so the payer could compare costs. It is not a level playing field if, for example, the fare every Light Rail rider pays on boarding the train includes the capital cost for the train itself, but the car owner only faces a similar capital cost when he buys a new car. Men's minds working the way they do, the car owner is not likely to remember that capital cost every time he gets the car out of his garage. Driving will seem cheaper than taking transit.

If there were a practical way to create a level playing field between transit and automobiles, we'd be all for doing so and letting the best mode win. But so far no one has found the magical mechanism -- magical because it would have to be retroactive, all the way back to the early 1920s, to make up for all those years when government subsidized highways were destroying privately owned rail transit systems. In the world as it is, with automobiles receiving heavy subsidies in a myriad of ways, transit, to compete, will have to be subsidized as well.

Myth Number Eleven: On average, most of the seats on a bus or train are empty.

The anti-transit troubadours usually sing this line only in passing, as a quick reference to "empty buses" or "empty trains." But one of the wandering minstrels went on about it at some length, allowing us to hear the passage in full:

- "But isn't public transit good for the environment? Given the higher carrying capacity per bus or train, it would certainly seem that transit could provide some environmental benefits. The problem is the gap between theoretical capacity and actual ridership. Public transit is so inconvenient and unattractive that its actual ridership falls far short of its theoretical capacity. Average load factors of 20 percent are typical. As a result, the energy efficiency of public transit doesn't seem to be any better than driving a car." -- John Semmens, Public Transit: A Worthwhile Investment?, Goldwater Institute, December, 1999, p. 16

And how many seats are occupied in the average automobile? Even in rush hour, the answer is usually one, out of four or five. During that same rush hour, if you look at the average bus or rail car, all the seats are taken and some passengers may be standing.

Here we see another little trick beloved by the anti-transit troubadours: taking an average that ignores rush hours, when it is the rush hours that are the problem (they do the same thing when they announce that this or that city has no congestion problem, and base their conclusion on traffic volumes averaged over a twenty-four hour day).

Transit systems must be designed to handle rush hour volumes of people. They can and do adjust to some extent to non-rush hours, by running fewer buses or trains and perhaps shorter trains as well. But their ability to adjust is limited. A bus or rail car has a fixed number of seats. Shortening or lengthening trains several times a day can cost more than is saved by running shorter trains. In most cities, bus drivers and train operators are paid for an eight-hour shift, whether they are working or not. And off-peak service must be provided, for commuters who have to get home early, people who work non-standard hours and the wide variety of non-commuting transit trips.

Table 2: Percent of Seats Filled by Mode

Vehicle Type	Passenger Miles per Vehicle Mile (Miles in Revenue Service for Transit) (a)	Average Seating Capacity (b)	Percent of Seats Filled on Average
Bus	10.3	42.2	24.3 %
Commuter Rail	36.0	127.6	28.2 %
Heavy Rail	22.4	55.6	40.2 %
Light Rail	26.3	60.1	43.8 %
All Private Vehicle Commuters	1.09	Assumed to be 5	21.8 %

- (a) Transit modes data for 1998 calculated from National Transit Database, Federal Transit Administration; private vehicle commuters from 1999 United States Census of Population.
- (b) Transit modes data from 1999 Transit Vehicle Data Book, American Public Transit Association.

If total ridership is averaged over the number of hours transit is provided, the average may appear low -- even though the trains and buses are full to bursting during the morning and afternoon rushes. But even if we compare averages, transit still comes out ahead -- dramatically so, if we look at passenger miles per vehicle mile. Table 2 tells the real story.

Both Heavy and Light Rail fill double the percentage of seats that automobiles used in commuting fill, and generate twenty times as many passenger miles per vehicle mile. When you add in the fact that those rail cars are powered by electricity, how can the troubadours wail that there is no effect on the environment? Maybe all those exhaust fumes have gotten to their brains. . .

Myth Number Twelve: It would be cheaper to lease or buy a new car for every rider than to build a new light rail system.

This argument is a real eye-catcher, so the anti-transit troubadours use it at every opportunity -- sometimes for commuter rail as well as light rail, and sometimes even for intercity rail. Let's hear it in their own words:

- "Moreover, light rail systems have proven to be excessively costly. The cost per attracted automobile driver averages more than \$18,500 annually -- or nearly \$750,000 over a 40 year career. This is considerably more than would be required to lease each attracted automobile driver a luxury automobile in perpetuity (retail prices of \$30,000 to \$65,000). It is 80 percent more than the average household expenditure on housing." Wendell Cox, The 1999 Texas Transit Opportunity Analysis: Metropolitan Transit Authority of Harris County ("Metro") Ill-advised, Texas Public Policy Foundation, 1999, Part 4, pp. 24-25
- "Rail transit is expensive. In fact, it would be cheaper to purchase new cars for rail passengers in Columbus, Cleveland and Cincinnati than to build expensive rail systems. . . New cars cost about 10.9 cents per mile to operate annually. Operating costs for mass transit, in contrast, are nearly six times as expensive in Cleveland (63.7 cents) and Columbus (66.5 cents) and four times as expensive in Cincinnati (39.9 cents)." -- If You Build It, Will They Ride?, Buckeye Institute for Public Policy Solutions, October, 1999, pp. 1-2
- "Finally, light rail is very expensive. With respect to virtually all new systems, it would have been less expensive to lease each new commuter a car in perpetuity C in some

cases, a luxury car, such as a Jaguar XJ8 or a BMW 740i." -- Wendell Cox, "Coping with Traffic Congestion," in A Guide to Smart Growth: Shattering Myths, Providing Solutions, The Heritage Foundation, 2000, p. 46

This one is a real howler. To put it into perspective, a new BMW 740I goes for \$62,900. APTA estimates that approximately 13,000,000 people use transit on a typical weekday. 13,000,000 times \$62,900 would be \$817.7 billion -- almost half of the annual federal budget.

To look at just Light Rail, let's turn again to one of our favorite examples, St. Louis. St. Louis's 18-mile MetroLink Light Rail line cost \$450 million to construct. It carries about 42,500 riders on an average weekday. On-board rider surveys indicate that about 80% of riders are new to transit -- they are "new commuters," in Mr. Cox's example. To buy each of them a new BMW 740I would cost \$1.1 billion -- about two and one-half times as much as it cost to build MetroLink.

And that is only the beginning of what is wrong with this transit myth. Light Rail equipment -- cars, tracks and wires -- is often in service for decades. In around five years, all those BMWs are going to need replacing. You could easily need to spend that \$1.1 billion four or five times before you need to spend \$450 million to re-equip MetroLink (which in fact would cost less than the initial construction.) So now all those BMWs cost 10 to 13 times the capital cost of Light Rail.

Plus, the cost of MetroLink includes the cost of the road, or in its case the track. Very few BMWs come with their own road attached. So to the cost of the car must be added the cost of the roads to carry them, the parking spaces to hold them, the police to ticket them when they are driven as BMWs are meant to be driven and the fire and rescue crews to pry them open when they run into each other.

And there's the rub: one of Light Rail's benefits is that by getting people out of cars and onto transit, it reduces congestion. Obviously, if we all buy all the train riders new cars and shut down the railway, congestion will increase. So will accidents, time lost in traffic, frayed tempers and all the other joys that come with clogged rush hour roadways. And these too are costs.

We could go on. According to AAA, the total ownership and operating cost of a new car is 47.0 cents per mile, not the 10.9 cents given in the Buckeye Institute study.⁶⁰ Since the people riding transit each day are not all the same, there would have to be a steady flow of new BMWs, not just a one-time buy. Do the people who cannot drive also get a chauffeur with their BMW? And so forth.

This myth is perhaps the most obviously and blatantly false of the bunch. In that lies its importance. It reveals the technique of the anti-transit troubadours more clearly: tell a big fib fast, then get out of town before the truth can catch up to it. Maybe that's why they seem so fond of BMWs. . .



A Few More Myths. . .

While the twelve myths we have addressed are the "dirty dozen" most beloved by the transit critics, they are not the only anti-transit myths floating around. You will occasionally hear that "monorail is better than Light Rail," or "Light Rail is promoted by overly low fares," or "trains are noisy." In this section, we take shorter looks at some of these myths, showing why they, too, are fictions.

A few more myths. . .

1. Transit subsidies exceed automobile subsidies.

- "Cars are subsidized at lower rates than public transit, especially rail. While subsidies for rail and other forms of public transit routinely exceed two-thirds of operating costs, automobiles pay for two-thirds to 90% of their costs." -- [If You Build It, Will They Ride?](#), Buckeye Institute for Public Policy Solutions, October, 1999, p. 2

This is one of the more ironic arguments against transit, since what destroyed America's once-extensive electric railways -- streetcar systems and interurbans -- was government subsidies to cars! The highway advocates, having driven privately-owned, tax paying rail transit out of business with massive subsidies to highway construction, now complain that transit needs subsidies to compete. Well, duh, as a Generation Xer might say.

The argument also misstates the amount of subsidy to both transit and cars. Far from covering 90% of their costs, automobiles cover only 66% to 80%, based on the OTA study cited earlier.

Rail transit systems vary in the percentage of operating costs recovered from the farebox. The San Diego Trolley covers about 70% of its expenses from the farebox, and Chicago's excellent Metra rail commuter system covers 49%, plus devoting 5% of passenger revenues to capital financing. In contrast, some rail systems barely cover 10% of costs from the farebox. When that happens, someone should be taking a close look at how the system is managed.

Interestingly, a recent book on public transit in America found that on a per capita basis, tax support for transit declined from 1980 to 1992 by a full one-third.⁶¹ So not only are more people using transit, from the taxpayer's standpoint transit is also getting cheaper.

A few more myths. . .

2. Increasing transit funding does not increase ridership.

- "There has been no relationship between transit funding and transit ridership. Despite huge increases in transit funding over the past two decades, ridership is stagnant or falling." -- Randal O'Toole, Urban Transit Myths: Misperceptions About Transit and American Mobility, Reason Public Policy Institute, September, 1998, p. 8

Transit ridership has not been stagnant or falling. It has been rising steadily, year by year, since 1995. Transit ridership is now higher than in any year since 1959, and in 1999, transit use actually grew faster than highway use. At the same time, the transit operating cost burden on the taxpayer has declined: since 1981, federal operating subsidies have fallen by \$884 million, or 78%.

But the most important answer to this myth is local. In city after city, when funding has been made available to create or expand rail transit, ridership has increased, often hugely. In the year after St. Louis opened its MetroLink Light Rail line, transit ridership grew 21 percent. Between 1986 and 1996, San Diego almost doubled the length of its Light Rail system; transit ridership grew from about 35 million to around 62 million. The relationship between transit funding and transit ridership is clear, strong and positive. If you build it, they will ride.

A few more myths. . .

3. Transit is not cost effective.

- "Overall productivity of the transit industry has been substantially poorer than that of other passenger-transport industries. U.S. transit costs per passenger mile are significantly higher than any other mode. . . four to six times that of automobiles. . . " -- Wendell Cox, The 1999 Texas Transit Opportunity Analysis: Metropolitan Transit Authority of Harris County ("Metro") Ill-advised, Texas Public Policy Foundation, 1999, Part 2, p. 3

In cities, cars are astonishingly cost-ineffective, especially when they are carrying just one person, during rush hours. Consider just one factor, the space required for all the roads and parking spaces they require. In most cities, urban real estate is highly productive. It is in demand for office buildings, factories, and high-rise residences, all of which generate a great deal of income and tax revenue per square foot of ground. Yet how many square feet -- indeed, square miles -- of that valuable real estate must be

given over to moving and parking cars? Roads generate no revenue; instead, they cost the taxpayers money for construction and maintenance. Of course, when people like Mr. Cox make their calculations, they don't take any of this into account.

One recent study did look at such factors in calculating the costs and benefits of transit. It found that on an annualized basis, the annual cost savings generated by transit were between \$61.9 and \$78.1 billion. Using the 1995 figure for public expenditures on transit of \$15.4 billion, it found transit's ratio of public benefits to public cost to range from 4.0 to 5.1.⁶² That's a rate of return most investors would die for.

A few more myths. . .

4. Most people do not want rail transit.

- "Once we get past local government officials' enthusiasm for rail transit we find that the majority of citizens voting on whether to authorize rail starts or expansions are voting against them. Only two out of the 18 transit initiatives placed before voters in the last five years have been approved. It's not as if well-financed special interests are funding campaigns against these transit initiatives. Proponents of increased transit spending in Phoenix, Denver, and other cities have typically outspent opponents by huge margins on transit tax ballot propositions." -- John Semmens, Rethinking Transit 'Dollars and Sense': Unearthing the True Cost of Public Transit, Policy Study No. 243, Reason Public Policy Institute, August, 1998, p. 21

Mr. Semmens' remarks of 1998 were followed by referenda on Light Rail in the two cities he mentions by name. In 1999, Denver voted on a proposal to borrow \$457 million to build the Southeast corridor Light Rail line; it passed with 66% of the vote. In March, 2000, Phoenix approved a sales tax increase to fund Light Rail by 65%.

And guess what the anti-transit minstrels never mentioned in calculating which "special interests" are working for or against such rail referenda? Themselves! They live on air, or so it is implied; their own visits to cities with pending transit referenda, and the work they do there to defeat rail projects, are as free as the wind and the rain. Or at least they are charged to other accounts. . . the highway interests, perhaps?

In fact, the question of why some rail transit referenda pass and others fail is worthy of a study in itself. Our observations lead to four tentative conclusions:

- It is difficult to sell something voters cannot picture. The term "Light Rail" means little to most citizens. In the typical American city, streetcars and interurbans disappeared

half a century ago or more. Only the oldest voters are likely to remember them. Rail transit proponents need to do a better job of conveying what it is they are asking people to approve.

- Voters are more likely to approve a simple, inexpensive "starter line" than a massive, multi-billion dollar system. Once a starter line is up and running, enthusiasm for more often grows quickly. Dallas is one good example; having seen DART, citizens there recently voted to speed up construction of more lines by an overwhelming 77% margin.
- People want to know exactly what they are voting for. They generally turn down vague proposals where the route is not specified precisely.
- Transit proponents often have little understanding of referendum politics. They do not know even such basics as voter ID and turnout. They fail to understand that, in a referendum, it is enough to create doubt; voters with questions in their minds vote no. The anti-transit troubadours understand this very well, and the myths they spread are well calculated to create doubts. By failing to answer their charges quickly and factually, transit proponents act as if they can simply coast to victory. And then they lose.

Rail transit ridership is rising nationwide, as people "vote with their feet" by taking rail transit. That is the best measure of whether people want rail transit. But translating that support into votes to build more rail transit lines takes political sophistication. Transit opponents have repeatedly shown such sophistication, and too often transit advocates have not.

A few more myths. . .

5. Monorail is better than Light Rail.

- "So if monorails are so great, why aren't there more of them? A multitude of reasons can explain why you don't see monorail selected for rail transit needs that often. . . The conventional rail industry has established a stronghold and monorail is discouraged by consultants. We have many news clippings where falsehoods were openly given to help defeat monorail." -- [The Monorail Society Website](http://www.monorails.org/tMspages/why.html) at www.monorails.org/tMspages/why.html

Compared to conventional Light Rail, monorails are visually intrusive, technically complex and much, much more expensive. In most cases, Light Rail should not cost more than \$20 million per mile. In contrast, the new two-mile Newark Airport monorail

cost \$175 million per mile, and the four-mile monorail to be built in Las Vegas is to cost \$354 million, almost \$90 million per mile.⁶³

Monorail represents a common failing in considering rail transit, namely, fascination with a technology for its own sake. Whether the proposal is for monorail, automated Light Rail, Skybus or whatever, the problem is the same. It all costs more for something that, to the transit rider, is no better than Light Rail and may well be worse. The average rider could care less whether the train is propelled by linear induction motors or chipmunks running in cages. What he wants is a comfortable seat on a clean train that runs on time. Light Rail can provide that as well as or better than more complex alternatives, and do so at a lower price. Remember, the lower the price per mile, the more miles you can afford to build.

A few more myths. . .

6. Light Rail is not safe.

- "U.S. transit is also popularly believed to be considerably safer than the automobile. Transit bus services are safer than automobiles. However, urban rail (light rail, heavy rail and commuter rail) is generally less safe than automobiles." -- Wendell Cox, Why Light Rail Doesn't Work, Texas Public Policy Foundation, January, 2000, p. 13

Mr. Cox supports his assertion with data on his website (The Public Purpose, "Urban Transport Fact Book") that shows an urban transport fatality rate per 100 million passenger miles of 0.745 for urban cars and trucks and 1.017 for urban rail, averaging the years 1990-1997. But this is another apples to oranges comparison.

Urban car and truck accident fatality rates are lower because urban speeds are usually low. According to Transportation Research Record No. 1623, "Rail Transit Safety Analysis," the urban automobile accident fatality rate from 1993-1995 was 1.0 fatalities per 100 million passenger miles, compared to an overall national highway fatality rate of 1.44.⁶⁴

However, most commuting journeys by car are not purely urban journeys. They include a long segment of suburb to city travel, which is usually made at much higher speeds -- and with higher fatality rates. Those segments have fatality rates approaching the national norm, which are higher than the rates Mr. Cox's own tables give for urban rail.

Those urban rail journeys also usually include a suburban segment. But with rail, there is essentially no difference between fatalities in suburban and urban segments. Urban

rail speeds for Heavy and commuter rail are about the same as suburban speeds for those modes. Light Rail's urban speed may or may not be less, depending on the specific rail line's mode of access to the center city.

Not only are the anti-transit troubadours deceptive in their arguments, they are wrong in their numbers as well. According to the Transportation Research Board paper cited above -- a peer-reviewed publication -- the fatality rate for commuter rail from 1993-95 was 0.37 per 100 million passenger miles, for rail rapid transit (Heavy Rail) 0.72 and for Light Rail 0.27.⁶⁵ Mr. Cox's table on his website gives figures between 1.347 and 1.520 for commuter rail, between 0.748 and 0.811 for Heavy Rail and between 1.564 and 2.131 for Light Rail for the same years. The difference for Light Rail -- Mr. Cox's favorite subject for 15-minute hates -- is striking.

One possible explanation -- Mr. Cox's website does not give sufficient information to say for certain -- is that Mr. Cox is including not only fatalities of Light Rail patrons, but also people killed while walking on the tracks or driving in front of trains. If so, that too is mixing apples and oranges. But as you have probably gathered by now, mixed fruit is one of the anti-transit troubadours' favorite dishes.

A few more myths. . .

7. Transit infrastructure is only constructed to get federal money.

- "Perhaps the principal driving force in public transit infrastructure improvements such as light rail is the availability of federal discretionary funding. Local areas have the potential to obtain up to 80 percent federal funding match rates." -- Wendell Cox, Why Light Rail Doesn't Work, Texas Public Policy Foundation, January, 2000, p. 18

And, presumably, highway construction does not get federal funds? The fact is that both transit and highways get federal money, and transit gets less. The average request for federal funding for new transit projects now in the FTA pipeline is 51.8%, while the average federal share of highway new starts in FY 1999 was 81.7%.

Not only do local folks have to pony up more money for new transit projects, most new rail transit projects must pass a local referendum. So the people, not just the politicians, get to decide.

We'd like to make a little offer to the transit critics: let's have all new rail transit lines and all new road construction projects be subject to local referenda. Think they'll go for that one?

A few more myths. . .

8. Rail transit does not help revitalize downtowns.

- "Light rail is often claimed by proponents to have significant development and land use impacts. While there is little evidence of this, it is to be expected that the sector of the community most likely to benefit from light rail would be downtown. . . The latest available data (9/1999) shows downtown Dallas to be among only four downtown areas with vacancy rates above 20 percent, at 32.0 percent, and second worst only to Oklahoma City. This situation has not improved since light rail was opened (June 1997)." -- Wendell Cox, "Dallas: High Downtown Vacancies Despite Light Rail," The Public Purpose Urban Transport Fact Book

This is a classic example of the way the anti-transit troubadours give facts, but not all the facts. Let's add a few more:

- As of the second quarter, 2000, the average downtown vacancy rate for cities without rail was 12.8%, for cities with Light Rail 11.4% and for all cities with rail 8%.⁶⁶
- Wendell Cox talks about Dallas, but not other cities with new Light Rail systems. What do we see if we look at Denver, Portland, Sacramento and San Jose? Downtown vacancy rates in those cities in the second quarter, 2000, were 5.8%, 5.4%, 5.8% and 1.5% respectively.
- Between the second quarter, 1999, and the second quarter, 2000, Dallas's downtown vacancy rate dropped from 32.1% to 27.7%, one of the most rapid declines in the country.

Dallas, and a few other cities such as Los Angeles and St. Louis, continue to have high downtown vacancy rates despite rail transit. This makes what should be an obvious point: rail transit alone cannot save a downtown that leaves other massive problems unaddressed. In fact, it is difficult to speak of a "downtown" in Los Angeles, a city that epitomizes sprawl. But rail transit is working in a wide variety of cities as a central part of the effort to revitalize downtowns. One of the places where it is doing so successfully is Dallas, where the falling vacancy rate leaves Mr. Cox hoist with his own petard.

A few more myths. . .

9. Transit is an 'inferior' good; as incomes rise, demand declines.

- "Public transit is what economists refer to as an 'inferior' good. For a 'normal' good, the quantity consumed rises as people's income rises. For an 'inferior' good, the quantity consumed falls as people's income rises." -- John Semmens, Public Transit: A Worthwhile Investment?, Goldwater Institute, December, 1999, p. 3

As we have pointed out again and again, all transit is not created equal. Consumption of bus transit sometimes does decline as incomes rise. But that is not true of rail transit. A major study, Commuting in America II, found that "transit does not appear to be oriented toward the low-income population, as is commonly thought. Although bus use does decline with income, the use of other transit modes, particularly commuter railroads, increases with rising income."⁶⁷

We gave a concrete example of this phenomenon in our first study, Conservatives and Mass Transit: Is It Time for a New Look? Studying Chicago's excellent Metra commuter rail system, we found that in DuPage county, more than 15% of commuters with incomes over \$75,000 took the train. In Lake county, the figure was 13%. In the same counties, less than one-tenth of one percent of people with incomes over \$75,000 rode the bus. In Lake county, the mean earnings of rail commuters were more than \$76,000; the figure for bus riders was less than \$14,000. The mean earnings of rail commuters were more than double those of people driving to work alone.

Over and over, rail transit proves the transit critics wrong. Yet those same critics always favor bus over rail. Could there be a connection here?

A few more myths. . .

10. Transit inefficiencies and failures are the result of politics.

- "The central theme of our findings is that economic variables fall short of explaining bus pricing and service policy. . . that politics, in general, has influenced policy on bus transportation and thus emerged as the likely source of the inefficient policies that we have identified." -- Clifford Winston and Chad Shirley, Alternate Route: Toward Efficient Urban Transportation, Brookings Institution, 1998, p. 78

Here we plead guilty as charged. Politics have led to inefficiencies and failures in public transit. Politics have created situations where rail transit lines cross local beltways without a station and park-and-ride lots (Baltimore), where routes have more time-

consuming turns than a drunken snake (Hudson-Bergen line) and where unnecessary tunneling has wasted millions of dollars (Massachusetts commuter rail).

But politics has exactly the same effects on highway construction and on every other aspect of building and maintaining infrastructure. It's all part of living in a democracy. Democracies reconcile competing interests most often by compromise, and compromises seldom offer ideal solutions. In theory at least, dictatorships can make decisions of this sort more efficiently (in practice, they don't). On balance, we'll take democracy, inefficiencies included.

The answer to this problem is more democracy. As we've noted before, most transit projects require approval by the people in a referendum. When a proposed project has made too many bad compromises and come up with a poor route, overbuilt line (unnecessary tunneling is often the culprit here) or just too high a price tag, people should vote it down. The planners get that message in a hurry, and when they improve the proposal, people can then vote yes.

Let us repeat our little challenge: why not make all highway projects subject to the same referendum process? For some strange reason, the anti-transit troubadours never seem to sing this song. Perhaps they don't want to bite the hand that feeds them. . .

A few more myths. . .

11. Rail transit is a federal conspiracy.

- "Beginning in 1991, the federal government began using transportation policy to further two overarching transportation goals: 1) discourage the use of the automobile and 2) reinforce Clean Air Acts objectives. The first goal would be accomplished by discouraging the creation and expansion of highways and roadways by funding and further subsidizing alternative travel modes such as walking, bicycling, buses and rail transit." -- Samuel R. Staley and James Damask, [If You Build It, Will They Ride? The Potential of Rail Transit in Ohio's Major Cities](#), Buckeye Institute for Public Policy Solutions, October, 1999, p. 8

There has indeed been a federal -- also a state and local -- government conspiracy in the area of transportation policy for most of the 20th century. But the purpose of the conspiracy has been exactly the opposite of what the transit critics claim. Government has conspired not to favor rail transit, but to destroy it.

It is useful to remember that early in the 20th century, most people traveled by rail. Between cities, they took passenger trains on the "steam roads" or the interurban. In the city, they rode the streetcar. All those trains and almost all the streetcars were

operated by private companies that received no government subsidy, built and maintained their own tracks and bought their own trains, and paid taxes. Why, then, did we end up where we now are, dependent on automobiles for most of our travel? Because government provided massive subsidies to highways. Understandably, unsubsidized and taxed rail transportation could not compete with untaxed and heavily subsidized roads.

But that's all just history, right? Wrong. Having all but wiped out passenger rail travel within the city and between cities, government now provides modest subsidies to what little is left, and occasionally attempts to bring some back in the form of new Light Rail lines. But the most recent figures, those for 1999, show the federal government providing \$3 billion for urban rail transit capital costs and nothing for rail transit operating costs, plus \$609 million for Amtrak. In contrast, in the same year the Feds subsidized highways with \$26 billion. And, as we noted earlier, the Feds now fund only about half of the cost of new transit projects, but more than 80% of new highway projects.

A federal conspiracy? You bet. One that has favored highways all the way.

A few more myths. . .

12. Transit is not important because its market share is so small.

- "Public transit is clearly a declining industry. Ridership peaked during the World War II period at 23 billion or so trips per year. . . As World War II came to an end and life returned to a more normal peacetime mode, public transit lost most of its market advantages. Ridership declined by about two-thirds, from 23 billion annual trips to between eight and nine billion in recent years. Public transit's share of urban passenger-miles fell from 50 percent in 1945 to barely 2 percent by 1995." -- by John Semmens, Public Transit: A Worthwhile Investment?, Goldwater Institute, December 1999, p. 1

As noted elsewhere in this paper, transit ridership has in fact been rising in recent years. In 2000, transit carried 9.4 billion trips.

But the problem here is not the answer but the question. Asking what percentage of total trips transit carries is misleading. As we pointed out in our previous study, Does Transit Work? A Conservative Reappraisal,⁶⁸ only about half of American households have transit available, and only about one-quarter have transit available that they consider "satisfactory." People cannot ride what isn't there.

Moreover, transit has never carried a large share of certain types of trips, such as shopping trips -- which today are the single largest category of "total trips."

A better measure of transit's effectiveness is transit competitive trips. That is to say, what percentage does transit carry of trips for which it can compete? For transit to be competitive, three criteria must be met. First, transit must be available. Second, the available transit must be high quality -- which usually means rail transit. And third, the trip purpose must be one for which transit can compete, which usually means trips to or from work or to or from entertainment.

Statistics are not currently collected in such a way that we can measure transit's success precisely in terms of the percentage of transit competitive trips carried. But as Does Transit Work? A Conservative Reappraisal demonstrates, the figure is clearly far higher than the 1% or 2% usually given by the transit critics. For example, Chicago's Metra commuter rail system in 1990 carried 21% of commuting trips to the Central Business District.

For those who want a more detailed answer to this myth, we recommend our earlier study, Does Transit Work? A Conservative Reappraisal.

A few more myths. . .

13. Transit systems are poor stewards of public funds.

- "Over the past 30 years, considerable sums have been used to subsidize transit -- total public subsidies have exceeded \$360 billion, more than the cost of the interstate highway system. As public funding has become available, transit agencies have spent considerable sums lobbying Congress, state legislatures and local governments for higher levels of tax support. Nationally, transit has focused primarily on revenue enhancement. Transit has been considerably less aggressive in its efforts to minimize unit operating costs." -- Wendell Cox, The 1999 Texas Transit Opportunity Analysis: Metropolitan Transit Authority of Harris County ("Metro") Ill-advised, Texas Public Policy Foundation, 1999, Part 2, p. 1

The problem here is generalization. Some transit authorities are poor stewards of public money, while others give the public excellent return on investment. Chicago's superb Metra commuter rail system in 1999 covered 49% of its expenses from fares, while devoting another 5% of passenger revenues to capital expenses. In FY 1989, 1990 and 1991, the South Line of the San Diego Trolley actually made a profit.

We must again note the irony here: Mr. Cox, like most of the anti-transit troubadours, consistently favors buses over rail. But in most cases the operating cost of rail transit is less than that for buses, and the farebox recovery rate is higher. When we add in the far greater attractiveness of rail transit to riders from choice, it is clear that rail transit makes the best use of public money.

A few more myths. . .

14. Rail transit does not increase property values.

- "Low rail transit ridership explains the absence of land-use impacts. That, in turn, undermines any plan to 'capture' land value appreciations. There simply are no value increments to tax." -- Peter Gordon, A Transit Plan for Hillsborough County: A Reality Check, Reason Public Policy Institute, June, 1998, p.6

Numerous studies show increased property values around rail transit stations. A few examples:

- "Section III looks at changes in taxable values between 1994 and 1998 for properties located near DART (Dallas Area Rapid Transit light rail) stations as well as a sample of commercial, industrial and residential properties in comparable neighborhoods not served by DART rail. The jump in valuations around DART stations was about 25 percent greater than in the control neighborhoods. . . ." -- Bernard L. Weinstein and Terry L. Clower, The Initial Economic Impacts of the DART LRT System, University of North Texas, Center for Economic Development and Research, July, 1999, p. 1
- "The impact of twelve rail projects (including both heavy rail and light rail) throughout North America is compared to develop general conclusions about the impact of rail on property values. In general, proximity to rail is shown to have positive impacts on property values. . . ." Roderick B. Diaz, "Impacts of Rail Transit on Property Values," Booz Allen and Hamilton, Inc., 1999
- "It appears that there are indeed property value impacts on single family residential properties resulting from commuter rail service. At the regional level access to the CBD provided by commuter rail service has an appreciative impact on property values. Even more notable is the finding that single-family residences located in communities that have a commuter rail station have a market share value that is approximately 6.7 percent greater than that of residences in other communities." -- Robert J. Armstrong, Jr., "Impacts of Commuter Rail Service as Reflected in Single-Family Residential Property Values," Transportation Research Record 1466, TRB, 1995

Enough said.

A few more myths. . .

15. Before federal involvement, transit paid for itself.

- "Starting in the mid-1960s, federal policy encouraged public takeover of the privately owned, self-supporting transit industry." -- Charles Lave, "It Wasn't Supposed to Turn Out Like This: Federal Subsidies and Declining Transit Productivity," PTI Journal, Vol. 9, No. 1, February, 1995, p. 8

In fact, most transit companies were in serious financial trouble long before the mid-1960s. And government, far from taking over prosperous transit operations, was a principal reason so many private transit companies were in dire financial straits.

Permit us to indulge, for a moment, in one of our favorite pursuits: looking at the history of electric railways, which were almost synonymous with transit in the first half of the 20th century. Government caused three great financial crises for electric railways -- interurbans and streetcar systems -- that drove most of them out of business. The first came around World War I. The years between 1915 and 1920 saw rapid inflation, which electric railways were not allowed to balance with increased fares. Why? Because local governments controlled fares as part of the railways' franchise agreements, and they would not approve increases that would anger the voters. By 1919, one-third of all transit companies were bankrupt. A report prepared for the Federal Electric Railways Commission in 1920, based on testimony to the Commission in 1919, stated:

The character of the electric railway industry, the impossibility of leaving it to be carried on as a private business, the failure of public regulation to solve the problem advantageously either for the electric railway companies or for the public, the inherent limitations of the service-at-cost plans, the impracticability of dealing effectively with the labor problem under private management, and the fact that the cost of capital without the support of public credit has become prohibitive, all point to the conclusion that, with respect to local transportation, public ownership and operation are an ultimate necessity.⁶⁹

The prosperity of the 1920s saw a recovery in the transit industry, but it also brought a new government assault, one that would eventually do the industry in. By 1921, the first year for which data are available, government -- federal, state and local -- was pouring

\$1.4 billion into highways (equal to an annual investment of \$13.5 billion in today's dollars).

By 1940, that number had risen to \$2.7 billion. That is after a decade of severe deflation, and it represents serious money. By way of comparison, in that same year the total operating costs, including taxes paid, of all transit systems (except commuter rail) were \$661 million.

As if facing massive subsidized competition and the Depression were not enough, in 1935 Congress passed the Public Utility Holding Company Act, which the Securities and Exchange Commission interpreted as requiring electric power companies to divest themselves of their transit operations. In many cases electric railways were surviving only because they were part of the power business, which had grown out of the railway decades earlier and had come to surpass it. The divestment order was a death sentence to electric railways across the country.

Between 1909 and 1940, 489 transit companies operating 30,302 miles of electric railways went bankrupt. To put those numbers in perspective, by 1937 there were only 478 transit companies left in the U.S., operating 23,770 miles of track.⁷⁰ Not surprisingly, a study of government investment in transit before 1940 states in its abstract,

The advent of federal assistance was the culmination of a movement of transit from the private to the public sector that began nearly 70 years earlier. Enormous public investments in subway and elevated railway infrastructure were made in Boston and New York around 1900. After the turn of the twentieth century, state and local governments began acquiring and operating transit services. During the 1910s, 1920s, and 1930s, hundreds of transit systems passed into trusteeship or were abandoned. This survey of public investment in transit and the financial difficulties of transit agencies before 1940 demonstrates that a vision of transit as a profitable private enterprise in the years before federal financial assistance is not accurate.⁷¹

A few more myths. . .

16. Light Rail is promoted by overly low fares.

- "We must also take into account that rail is often promoted with lower, or even free fares. St. Louis and Buffalo have free fare zones. Sacramento's central area fare is only 50 cents. Portland lowered the fares for some trips. Los Angeles keeps the fares for rail less than for comparable bus journeys. St. Louis lowered its fares, making long journeys (more likely to be taken by rail) relatively cheaper. Indeed, it is worthwhile to ask if the costly rail investments were necessary to raise ridership, or if the same results could have been achieved by using the money spent on rail to lower fares and improve bus service." -- Robert J. Franciosi, Light Rail in the Valley: What Awaits Voters at the End of the Line, Goldwater Institute, February, 2000, p. 5

Beyond pointing out once again that buses cannot substitute for rail transit because they carry different types of riders, let us just note two facts:

- 1) In 1999, 13 Light Rail systems offered reduced or free fares, compared to 139 bus systems; and
- 2) Of 19 American cities with both bus and Light Rail transit, 15 have the same base fare for both bus and rail. In two of the four exceptions, Boston and Cleveland, the bus fare is lower.⁷²

A few more myths. . .

17. Cutting spending on transit would allow tax cuts.

- "Tri-Met will receive more than \$120 million in employment-based taxes this year alone, and this revenue source is growing rapidly. A cut of \$100 million per year in taxes would still leave over \$20 million per year to provide subsidies for low-income, transit-dependent users." -- Anthony M. Rufolo, Low-Cost Solutions to Portland's Traffic Problems: Congestion Pricing and Free-Market Transit, Cascade Policy Institute, May, 1998, p. 20

As the title of Mr. Rufolo's paper suggests, money is spent on transit because we have a traffic problem. As conservatives, we are all for cutting taxes. But there is still that traffic problem, and it has to be solved. If it is not solved by spending tax money on transit, then it will have to be solved by spending at least as much tax money and maybe more on building highways. People rightly hate paying taxes, but they also hate being stuck in traffic.

A few more myths. . .

18. Transit subsidies should be directed to users, not providers.

- "Public subsidies for transit should be directed to the users of the transportation system rather than the service providers. If the subsidies were provided to users, who could use them to purchase transit service or alternative transportation services, then they would promote the most efficient provision of service rather than simply allowing costs to increase." -- Anthony M. Rufolo, Low-Cost Solutions to Portland's Traffic Problems: Congestion Pricing and Free-Market Transit, Cascade Policy Institute, May, 1998, p. 4

In theory, this proposal has merit. In a situation where someone could choose between two competing transit services, subsidizing users could allow the money to flow to whichever service was best.

The problem, of course, is that there are very few situations where people have a choice between two competing transit services. Transit is capital-intensive, rail transit especially so. Where is the capital to come from to construct two competing rail transit lines where one could serve the market? One could of course compete buses against rail transit, but our guess, given the superior attractiveness and lower operating cost of rail, is that the bus line would not be in business very long.

Like many of the proposals advanced by libertarians, this one has very little real-world application. Most libertarians like Robert Heinlein's novel, The Moon Is A Harsh Mistress. Could it be lunar transit systems they are writing about?

A few more myths. . .

19. Light Rail is social engineering.

- "Apparently, besides costing taxpayers billions of dollars, light rail is not about improving transportation efficiency, it is social engineering that attempts to change transportation and housing preferences." -- Daniel R. Simmons, Randy T. Simmons and Samuel R. Staley, Growth Issues in Utah: Facts, Fallacies, and Recommendations for Quality Growth, Sutherland Institute, October, 1999, p. 35

One of the more creative unstated assumptions behind the transit critics' work is the assumption that the way we live now is "natural." Almost complete dependence on automobiles to go anywhere or do anything, traffic-choked roads and suburban sprawl -- it all just "happened." A quip by Oscar Wilde comes to mind: "The problem with being 'natural' is that it is such a difficult pose to maintain."

In fact, we got to where we are through social engineering, massive amounts of it. In no other society in history have places to live, places to work and places to shop been separated from one another, separated so widely that you need a car to get from one to another. Why did it happen here? Because after World War II, social engineers re-wrote the building codes to mandate it. In most places, if a developer now wants to build a traditional town, a place where you can walk from home to work or shopping, he can't. The codes won't let him.

Light Rail is far too modest a tool to reverse this, even if it were used for that purpose. No transportation system can reverse what is mandated in building codes, namely sprawl. But as conservatives, let us offer a modest proposal. Why not let the free market determine whether people want traditional towns or suburban sprawl? Instead of one building code, let there be two, one for traditional neighborhood development and one for sprawl. It would be up to the developer to choose which one he prefers, a choice that obviously would be driven by what people want to buy. Let the people who want to live in sprawl do so, but also let those who prefer old-fashioned towns have that choice.

The anti-transit troubadours sing endless love songs to the free market. This is a free market proposal. How about it, boys?

A few more myths. . .

20. Transit costs more than it should.

- "Evidence presented in this paper strongly indicates that although the entire loss in transit ridership might not have been prevented, much higher levels of transit ridership could have been achieved with the same level of subsidy or the same ridership could have been achieved with much less subsidy." -- John F. Kain, "The Urban Transportation Problem: A Reexamination and Update," in Essays in Transportation Economics and Policy: A Handbook in Honor of John R. Meyer, Brookings Institution, 1999, p. 396

As noted previously, the problem with statements such as this is that they generalize what cannot be generalized. The size of public subsidy varies greatly from one transit system to another. Some cover more than fifty percent of their costs from the farebox; others cover only about ten percent. Nor can costs be considered without reference to what is purchased. A high quality, well-run rail transit system offers a more useful product than a down-at-the-heels bus line, because the rail system can draw riders from choice and thus relieve traffic congestion. If its farebox recovery rate is lower, that may be justified (in reality, it will almost certainly be higher).

The point is, sometimes transit costs too much and sometimes it doesn't. How can we determine when it is costing more than it should? Let us offer a few suggestions of our own here, based on many years of observing public transit:

- While federal subsidies are often necessary for capital expenditures, operating costs should be borne locally. Let's face it, too many local politicians regard federal dollars as "free money." If they can pass inflated operating costs on to the Feds, they have little reason to control them (especially when doing so can mean a nasty fight with a union). If they have to pay the full operating cost subsidy out of local taxes, they have an incentive to keep that subsidy down by operating efficiently. And frankly, if a locality does not care enough about transit to ante up the operating subsidy, it probably shouldn't have transit.
- If the farebox recovery ratio is less than 40%, the transit authority's political masters should want to know why. There may be valid reasons. Many bus systems recover less than 40% of their costs from fares, but that is part of serving the transit-dependent. Los Angeles's Blue Line, the most heavily used Light Rail line in North America (with the Green Line), covers only 17.3% of costs from fares.⁷² Part of the reason is that it runs through Watts, which is a high-crime area. To keep crime off the trains, each train carries a cop. Cops are expensive. Nonetheless, in our view, 40% is a reasonable target. Certainly most rail systems should be able to attain that (remember, rail costs more to build than bus, but less to operate). If a system isn't recovering that much of its operating costs from fares, it is appropriate to find out the causes.
- Commuter rail should be the least expensive type of rail transit to get up and running, because in most cases the tracks are already there. Unfortunately, some railroads

have decided to play robber baron with regard to proposed commuter services, demanding tens of millions of dollars in track upgrades before they will allow commuter trains to run. Their own freight trains will benefit from those upgrades, and they are happy to hold commuter services hostage to get the freebies.

Of course, in some cases the expensive upgrades are necessary. But where they are not, the local transit authority or government might try a new tactic to break the robber baron's chain: condemning train paths -- not tracks -- by eminent domain.

A train path is the right to run a train on a specific track at a specific time. That is all a commuter train needs. It does not need the track all the time. The transit authority does not need to own the track, it just needs to have occasional use of it. Taking a train path by eminent domain would provide exactly that.

We do not know of any attempts to use eminent domain to take train paths, nor can we forecast how courts might rule. But a transit authority that were willing to find out would give itself a useful tool if the local railroad plays the robber baron game. It would no longer be forced to choose between leaving the public without commuter rail service or paying millions of tax dollars to the benefit of the railroad's stockholders. We're all in favor of the railroads making profits. But those profits should be earned, not extorted.

A few more myths. . .

21. Trains are noisy.

- "Fears about light rail ruining businesses and bringing noise and disruption to the close-in South Austin neighborhoods drew about 40 people to an anti-light-rail rally on South Congress on Monday morning. Led by Max Nofziger, a paid consultant for the anti-rail group ROAD. . ." -- Kelly Daniel, "Light Rail: Austin's Best Option? Cap Metro Previews Routes for Light Rail", in the Austin American-Statesman, August 8, 2000, p. A1

In the old days, the sound of a streetcar squealing and screeching around a curve was common. But we have learned a few things since then (like rail lubrication). Rail transit can easily be made very quiet. A readily-available study, TCRP Report 23, Wheel/Rail Noise Control Manual, tells how. A memo introducing the study notes:

[TCRP Report 23, Wheel/Rail Noise Control Manual], provides practical step-by-step procedures for mitigating wheel/rail noise by using technologies with demonstrated effectiveness. . . The manual covers noise generated on tangent track, curved track, and special trackwork. Mitigation measures include onboard, track, and wayside treatments. . .

In today's climate of environmental consciousness, transit systems are being called upon to reduce noise, which previously was considered an intrinsic part of their operations. Wheel/rail noise generated at either sharp radius curves or on tangent track is considered objectionable. . . ⁷⁴

Now, what about highway noise? A Light Rail line may have a car going by every five or ten minutes. Highways make noise all the time. And while we know how to control noise made by rail transit, how do we control the noise from mufflerless motorcycles, emergency vehicles with screaming sirens, the ubiquitous eighteen-wheelers, and -- our least favorite -- those cars where the whole vehicle has become one big radio speaker? As conservatives, we would like to see the personal, holster-carried, home-on-radio missile as an antidote to the latter, with tax credits for making ace.

In every respect -- noise, air pollution, land use and visual intrusion -- Light Rail, done right, has far less environmental impact than a highway. Conservatives appreciate that as much as liberals. To borrow a phrase from J.R.R. Tolkien, we too would like a world with less noise and more green.

A few more myths. . .

22. The overhead wires for Light Rail are ugly.

- "Proponents of Light Rail. . . don't mention that Light Rail requires a spiderweb of overhead wires with support posts." "Monorail vs. Other," [The Monorail Society Website](http://www.monorails.org), www.monorails.org

The overhead wires for Light Rail can be ugly, but they don't have to be. When they are, it is because of the curse of too many Light Rail systems: overbuilding. Not only does overbuilding waste money, it often creates an intrusive right-of-way with too many wires, massive poles and too many of them, track with a heavy "industrial" look -- in short, an eyesore. Examples are, sadly, all too numerous; perhaps Pittsburgh comes most readily to mind.

It doesn't have to be this way. Older, simpler approaches are both cheaper and better. If you want to see Light Rail done right, take a look at the St. Charles Avenue line in New Orleans (yes, old-fashioned streetcars are also Light Rail if they have their own right-of-way). The St. Charles Avenue line goes right through what may be the most beautiful urban district in America. It does not detract from that beauty; if anything, it adds to it. The poles are graceful, the overhead wire is barely visible, and by grassing in the track they have made it almost disappear. The cars, built in the 1920s and still in service, are ornaments, beloved by local residents.

Your community can do it right or do it wrong. If you want to do it right, the Transportation Research Board has published two studies we recommend highly. The first is TCRP Report 7, Reducing the Visual Impact of Overhead Contact Systems.⁷⁵ The second is TCRP Report 17, Integration of Light Rail Transit into City Streets.⁷⁶ Both are profusely illustrated, so you can see just how doing it right should look.

Speaking of ugly, we have yet to find a study on how to make a twelve-lane urban freeway beautiful. Perhaps Wendell Cox can bring one to our attention. . .

Critiquing the Transit Critics

The anti-transit troubadours have a great deal of fun criticizing proposals for new transit services. It's easy enough to do, so long as you don't let the facts get in your way. But what about their proposals? Mostly, the critics are careful not to make any. But where they have, we can have some fun too -- usually just by pointing out what they have actually said.

The anti-transit troubadours have set themselves up for the music critics in two ways. First, they have tried to disguise themselves as prophets, gazing deep into their crystal balls to predict the success or failure of new rail transit lines (can you guess which one they always predict?) Second, in a few cases, they have laid out their own solutions to a city's transit needs, offering some real high comedy in place of their usual low farce.

Let's first see them in their prophets' robes.

In March of 1994 the Independence Institute published a paper opposing Light Rail for Denver, Colorado. The title was "Stop that Train: RTD's Light Rail Boondoggle is on a Fast Track for Disaster." In fact, Denver's expanding Light Rail system has been a great success, carrying more people than projected -- almost 30,000 per weekday on just fourteen miles of line. The farebox recovery ratio in 1999 was 43.2%, compared to 24.1% for the Denver bus system.⁷⁷ The most recent referendum in Denver on expanding Light Rail passed with 66% of the vote.

Similarly, the Sutherland Institute put out a paper in 1999 opposing Light Rail for Salt Lake City. Author Peter Samuel said:

Salt Lake City is plunging ahead with a second light rail project, even before the first is up and running. The promise of \$480 million dollars (sic) in federal funds for the east-west line apparently proved too tempting for state legislators to resist. It may provide a superficial benefit for the Olympic city, but this short-term gain will be at the expense of future local taxpayers who will be lumped with the huge year-by-year costs of subsidizing the losses incurred by urban rail. In every city where passenger rail has been built in the past decades, rail systems fail to recover via the farebox more than half of their operating costs, let alone any return on the capital investment. And when, as usual, ridership falls far short of expectations, the rail enthusiasts will say it is because the system isn't comprehensive enough. . . Will Salt Lake City have \$480 million available to repay the feds when no one is riding the rail line? Light-rail proponents tell us not to worry.⁷⁸

Not to worry, Peter; almost 20,000 people are riding Light Rail in Salt Lake City every weekday, with Saturday ridership sometimes hitting 25,000 (projected weekday ridership was 14,000). The feds won't be wanting their money back anytime soon. Salt Lake's

most recent referendum on starting commuter rail, on November 7, 2000, passed with 53%, 54%, and 58% of the vote in each of three counties.

If the anti-transit troubadours aren't very good prophets, they do seem to have another talent. They would make great creative writers for horror flicks. Instead of "Nightmare on Elm Street," their specialty is "Nightmare on Your Street." And no one does it better than our old friend Wendell Cox.

Not long ago, Wendell descended on Atlanta. This time, instead of just criticizing, Mr. Cox laid out his own proposal for solving Atlanta's traffic congestion problem. The town's main paper, The Atlanta Constitution, reported on the "Cox Plan" in some detail, noting that:

"In ways that he never intended, Wendell Cox has done metro Atlanta an enormous service. . . It is the first time anyone has tried to spell out just what it would take to accommodate 1.5 million more residents, all driving as much as or more than today's residents. Cox calls it a "New Vision," but it's more like a regressive hallucination.⁷⁹

The essence of the "Cox Plan" for Atlanta is quite simple: pave the city. Again, we quote from the Atlanta Constitution:

Cox believes it would be realistic to create a grid of arterial roads six to eight lanes wide, no more than one mile apart, throughout metro Atlanta. He also says there should be another grid of freeways crisscrossing the region. . . He calls for building freeways underground in double-decked tunnels and double-decking other above-ground freeways. He advocates adding another deck exclusively for trucks. . . In essence, Cox is suggesting that between now and 2025, we should raze Atlanta as we know it and replace it with Los Angeles --- on steroids.⁸⁰

While Mr. Cox and the other anti-transit troubadours talk endlessly about the costs of rail transit, they have little to say about the costs of their alternative highway expansion plans. The Atlanta paper notes the omission:

Cox doesn't try to guess how much his vision would cost, but he acknowledges that it is likely to be more than the \$36 billion in the 25-year plan prepared by the Atlanta Regional Commission, a figure that already represents every known source of transportation revenue and then some. . . Even if we had the money, would we really want to pay the aesthetic, environmental, social and other costs? Will quality of life be improved when we are all within earshot of a roaring freeway? Will we still love a metro Atlanta carved into so many rat mazes, living in neighborhoods cowering beneath behemoth, multidecked freeways?

Cox's assumption that free-flowing traffic is the only characteristic of a city worth caring about is pathological.⁸¹

Poor Wendell; he really should have stuck to criticizing other people's more thoughtful transportation plans instead of venturing his own. Perhaps he had been reading Peter Samuel's paper from the Reason Public Policy Institute, How to "Build Our Way Out of Congestion",⁸² which advocates building 24-lane double-deck freeways in southern California's earthquake zone.

Sadly, this is one of the few instances where the transit critics have put forward their own solution. But combined with their failed prophecies, it allows us to say in big bold letters what most of our readers will by now have understood for themselves, viz.,

THESE PEOPLE DON'T KNOW WHAT THEY'RE TALKING ABOUT!

They haven't a clue! They don't understand that bus and Light Rail serve different people and different purposes. They can't comprehend the disastrous effects too many cars have on cities. They can't even see what everyone else sees, probably including their own grandmothers, namely, that driving a car in rush hour in the city is a pain in the you-know-what! All of which leads us to the modest conclusion of this study.

Conclusion

Beyond all the specific facts we have recounted here to confute the transit critics, one broad fact stands out. It is the best answer to all the anti-transit myths. It may also be the best reason why more cities should build rail transit. What is it?

Wherever people get to see and ride rail transit, they want more of it.

A pattern is beginning to emerge. Someone -- a mayor, a transit authority, it doesn't matter who -- announces a plan to add rail transit to a city that has none. The plan faces a referendum. The anti-transit troubadours descend on the city, and the referendum fails. Maybe it fails several times. But eventually, one line gets built -- usually Light Rail, sometimes commuter rail or even a heritage streetcar line.

People see it, ride it, love it and want more.

It happened in Dallas. Ken Hoffman of the Houston Chronicle, writing about Dallas's DART Light Rail system, told the usual story:

Light rail didn't always get a "way to go" in Dallas. In 1988, voters turned a resounding thumbs-down, and a few other fingers, on light rail. But Dallas Area Rapid Transit built a 20-mile rail "starter kit" with borrowed money, anyway. The trains began rolling through downtown in June 1996. Light rail was an overnight sensation, standing room only (literally), that keeps getting more popular.⁸³

In Dallas's most recent transit referendum, a proposal to speed up Light Rail construction passed with 77% of the vote.

This pattern, seen also in Denver and Salt Lake City, points to both the greatest strength of the anti-transit troubadours and to their eventual extinction: the only people who listen to them are people who have not experienced rail transit.

Most American cities lost rail transit 50 years ago or more. Few people in those cities now remember what it was like. When someone proposes that they build "Light Rail," nobody understands what it is. So it is easy for the transit critics to come in, spread their myths around and confuse the voters. In referenda, confused voters vote "no."

But once a "starter line" is up and running, the whole picture changes. People can see Light Rail, and ride it. Once they do, they find it is something they like. Even if they have a car, they think, "hey, this would be a great way to get to work or to the ball game." Now, when they go into the voting booth, they are not confused. They understand the question they are voting on. Unless the specific proposal is badly designed, they usually vote "yes."

And they have no further interest in the myths spread by the transit critics. They have seen the thing itself, and that is always the best answer to myth-makers.

Thus, our conclusion: if you want rail transit in your city, start small. Don't ask the voters to approve some massive, multi-billion dollar system when they don't even understand what they are voting on. Build a starter line. Keep it simple. Keep it cheap. Build it where people want to go. If you design it right, you can probably get it up and running without federal dollars, which makes the whole process much simpler and faster.

Then let it sell itself.

Soon enough, you won't have to be asking the public to approve more rail transit. They will be asking you.

At that point, if the troubadours come around singing their laments, they will find the public taste has changed. The new hit song will be, "Clang, Clang, Clang Goes the Trolley," and the troubadours will find their time has come, and gone.

Until that happy day, we hope our answers to the anti-transit myths and myth-makers will help you hold the field.

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