

Testimony of Randal O'Toole  
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The New Starts program has done far more harm than good to American cities. Instead of helping to provide more efficient transportation, New Starts gives transit agencies and cities incentives to choose the more costly alternatives in transit corridors. The results have been higher taxes and/or a lower level of urban services for local residents, increased congestion and energy consumption, and lower quality transit service as many regions have cannibalized bus lines in order to pay the high costs of rail transit.

As you know, most federal transit dollars are distributed using formulas. Well-designed formulas can give transit agencies incentives to improve service. One formula, for example, rewards transit agencies for having low operating costs per passenger mile.

New Starts, however, is a competitive grant program. The rules of the competition can be boiled down to this: regions and transit agencies that propose the most expensive projects get the most money. To see what this perverse incentive has done to transit, consider the cost of light-rail construction over time.

In 1981, San Diego opened the nation's first modern light-rail line. Built entirely without federal funds, the 15.9-mile line cost \$86 million, or \$5.4 million per mile. Adjusted for inflation to present-day dollars, this is less than \$12 million per mile.

Later in the 1980s, Portland, Sacramento, and several other cities used federal funds from cancelled interstate freeway projects to build light-rail lines. A 1973 law allowed cities that cancelled interstate freeways to use the funds on transit capital improvements. It is important to understand that these cities decided to build light rail because light rail was expensive. If they spent the money buying buses, their transit agencies wouldn't have had the funds to operate those buses. Light rail was the way for the cities to spend lots of federal dollars without imposing high operating costs on transit agencies, and city officials could say they hadn't "lost" the federal dollars to some other city.

After adjusting for inflation, the cost of most of the light-rail lines built with federal funds in the 1980s was around \$25 million to \$35 million per mile. These lines cost two to three times as much as San Diego's line partly because of various federal requirements, but mainly because cities found ways to spend more in order to absorb the federal funds from the cancelled interstate freeways.

In 1991, Congress created the New Starts program. By 2000, the average cost of light-rail lines planned or under construction was \$50 million per mile. In the most recent New Starts report, the least-costly line was more than \$50 million per mile, and the average cost of light-rail lines is \$110 million per mile, or nearly ten times as much as San Diego's first line. That's without counting three light-rail subways planned or under construction in Los Angeles, San Francisco, and Seattle, each of which are more than \$600 million per mile.

Cities seem to be competing with one another to see who can build the most expensive light-rail line. In 2009, Seattle completed a line that cost \$175 million per mile. Portland is now building a line that costs \$204 million per mile. Not to be outdone, Seattle wants to build a 3.1-mile light-rail subway costing \$628 million per mile.

This explosion in costs is directly due to the perverse incentives in the New Starts program. This is especially disheartening because buses could be more effective at moving people than light rail in virtually every city that has built light rail.

The "light" in light rail refers not to weight but to capacity: the rails and railcars weigh the same as heavy rail, but because trains are shorter the capacity for moving people is much lower. To be accurate, light rail should be called "low-capacity rail" while heavy rail should be called "high-capacity rail."

Because light rail often operates in city streets, the size of city blocks limits train lengths. A single light-rail car is about 100 feet long, so Portland, whose blocks are 200 feet long, can only run two-car trains. Most other cities can run three-car trains and a few can run four-car trains.

For safety reasons, trains can operate no closer than two minutes apart, and most light-rail lines are designed to allow safe operation of no more than 20 trains per hour. By comparison, a single bus stop can serve 40 buses per hour, and Portland's downtown bus mall has staggered bus stops and can serve more than 160 buses per hour in each direction. The capacity of each bus may be lower than a light-rail train, but the higher frequencies mean that buses can move more people than rail.

A light-rail car has about 70 seats and standing room for perhaps 80 more people. A 40-foot bus has 40 seats and standing room for about 20 more people. Do the arithmetic, and two-car light-rail trains can move just 6,000 people per hour, while three-car trains can move 9,000 people per hour. Buses, however, can move 9,600 people per hour, and a higher share of those people will be comfortably seated. If that isn't enough, double-decker buses nearly double this to more than 16,000 people per hour.

If you need really high capacities, double-decker buses on freeway lanes can move well over 100,000 people per hour, most of them comfortably seated. That's more than twice the highest-capacity subway or elevated lines. The only places where buses can't compete with rail is on city streets where subways or elevateds can move around 30,000 to 40,000 people per hour but buses can move only about 16,000 people per hour.

Other than Manhattan, America has very few areas where transit demand exceeds 16,000 people per hour. This means that light rail makes no sense at all anywhere: buses can outperform it under any level of service that low-capacity rail lines can offer. Buses also have the advantage of flexibility: they can branch off to serve many different neighborhoods, and service to a new area can be started almost overnight, while rail lines take years to plan and build. While buses require more drivers, this is more than made up for by the lower costs of maintenance.

As administrator Rogoff pointed out in a speech in May, 2010, bus-rapid transit may not work everywhere, but it "is a fine fit for a lot more communities than are seriously considering it." And the reason they aren't considering it is simple: thanks to New Starts, they get more federal dollars building rail than running buses.

The Bush administration tried to cap on rail transit cost inflation by limiting how much rail lines could cost per hour of transportation user benefits (the time a new transit line would save both transit riders and other travelers). The Obama administration eliminated that cap and through the rulemaking process effectively eliminated cost-effectiveness as a criterion for judging transit capital grants. But, even with the cap, most rail transit projects recommended for New Starts funding were wastes of money.

As if light rail isn't obsolete enough, we now have cities building streetcar lines. At about 2,000 people per hour, streetcar capacities are far lower than buses, and they are so slow that an *Oregonian* reporter was able to walk 1.7 miles faster than the Portland streetcar.

Again, Bush administration rules limited the use of Small Starts funds to streetcar projects that were more cost-effective than buses. Since streetcars are never more cost-effective than buses, no streetcars were funded by small starts under Bush. But again the Obama administration has eliminated that rule so it can fund streetcars regardless of how much money they waste.

In public, city and transit officials say they want to build rail transit to relieve congestion, save energy, and reduce pollution and greenhouse gas emissions. But the environmental impact statements for many rail projects prove otherwise. The EIS for Maryland's Purple Line, for example, admits that there will be significantly more congestion if it is built than if it is not. The same is true for Baltimore's red line and Charlotte's proposed Red commuter-rail line, among many others.

Anaheim wants to build a streetcar line that it says will get up to 287 cars off the road per hour. But the streetcars will take up as much space as more than 1,100 cars, so congestion will get worse.

Rail advocates say rail transit gives people an alternative to congestion. But instead of spending hundreds of millions of dollars relieving congestion for a tiny number of people and making it worse for everyone else, why not do things that will relieve congestion for everyone? Low-cost techniques, such as traffic signal coordination, can benefit auto drivers and transit riders, but these are overlooked by most cities competing for New Starts funds.

The EISs for many of these lines, including Maryland's Purple and Red lines, also predict rail transit will use more energy than all the cars they take off the road. Even when some EISs predict energy savings in rail operations, the savings are usually swamped by the energy costs of construction. The EISs for light-rail lines in Portland, Seattle, and other cities reveal that repaying the energy costs of construction with the annual energy savings would take many decades, which means it will never be repaid because rail systems must be substantially rebuilt, at huge energy cost, about every 30 years.

A study from the University of California at Berkeley found that the lifecycle costs of rail transit are about 2.5 times the operational costs, while the lifecycle costs of highways and autos are only about 1.6 times the operational costs and buses are just 1.4 times operation costs. Except on the West Coast, where much energy comes from hydropower, the energy required to power most rail transit lines emits more greenhouse gases per passenger mile than driving.

Nor are new rail transit lines a significant improvement for transit riders, especially in the many cities that have had to cannibalize their bus systems in order to fund the high costs of rail construction, operations, and maintenance. Despite population growth, transit systems in Atlanta, San Francisco-Oakland, and a number of other urban areas actually carry fewer riders today than they did 30 years ago because the increase in rail riders has been more than matched by a decline in bus riders.

Fare increases and cuts in bus service by the Los Angeles Metropolitan Transportation Authority led to a 17 percent decline in bus ridership between 1985 and 1995 and caused the NAACP to file suit for discrimination as the service cuts affected minority neighborhoods while the rail lines were mainly to white neighborhoods. Under a ten-year consent decree, service was restored and ridership rebounded, but when the ten years expired, the agency began cutting bus service again.

Even where ridership has grown, it has rarely matched the growth in driving. Before Portland started building light rail, transit carried 9.8 percent of the region's commuters to work. As of 2012, after opening five light-rail lines, a commuter-rail line, and a streetcar line, it was only 7.4 percent.

A 2001 census of downtown employers conducted by the Portland Business Alliance found that nearly 40,000 commuters took transit to work downtown. Since then, Portland has opened a streetcar line, three light-rail lines, and a commuter rail line. The group's 2012 census found that the number of downtown workers commuting by transit dropped nearly 20 percent, while the number commuting by car grew.

In 1990, the share of commuters taking transit to work was much higher in Denver and Salt Lake City than in Las Vegas. Since then, Denver and Salt Lake have both opened light rail lines and seen transit's share of commuters drop. Meanwhile, Las Vegas focused on improving bus service and doubled the share of commuters riding transit. Today, transit carries a larger share of commuters in Las Vegas than in Denver or Salt Lake City.

Rail advocates often claim that new rail lines stimulate economic development. The reality is that almost all of the economic development they claim along light-rail and streetcar lines has resulted from tax-increment financing and other subsidies to developers. Experience in many places has shown that almost no new development takes place along a rail line without subsidies to developers. On the other hand, those same subsidies will generate the new development without the rail line. The only thing that can be said is the rail provides cities an excuse to subsidize new development.

Even where construction of heavy-rail lines, such as BART and the Washington Metro, has led to new development, all the rail line might have done is shuffle the development around. As a study commissioned by the Federal Transit Administration found, "Urban rail transit investments rarely 'create' new growth, but more typically redistribute growth that would have taken place without the investment."

Based on this, I recommend that Congress abolish New Starts and put New Starts money into a formula fund that rewards transit agencies for increasing transit ridership and fares. Under this formula, agencies could still use the money for rail transit if they wanted, but if the rail line failed to generate a net increase in fares, they would get less money in the future relative to agencies that increased ridership and fares by improving bus service.