



MORE - MORE - JOBS



The Impact of Increasing Funding for Public Transit



By **Todd Swanstrom, Will Winter, and Laura Wiedlocher**

Public Policy Research Center
University of Missouri–St. Louis

Transportation Equity Network

www.transportationequity.org

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More Transit = More Jobs was sponsored by the Transportation Equity Network (TEN), a coalition of more than 350 grassroots organizations in 41 states that has worked since 1997 to build a more just, prosperous, and connected America. TEN has affiliates in metropolitan areas across the country working to increase transportation equity. The 24 metropolitan areas chosen for this study all have active TEN affiliates.

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We dedicate this study to the grassroots leaders of TEN, who make research like this possible and meaningful. Thank you for your vision of a more just world, where everyone has transportation choices that enable them to access jobs, education, culture, medical care, loved ones—everything necessary for a healthy and fulfilling life.



Table of Contents

Executive Summary	3
Introduction	4
Findings	7
Percentage of Transit in Present Spending	7
Job Impacts of Present Spending	8
Job Impacts of Shifting Funding from Highways to Transit	9
Impacts of Increased Federal Funding for Transit	10
TIP Transparency	11
TIP Transparency Policy Recommendations	14
Case Studies	15
St. Louis, MO	15
Minneapolis-St. Paul, MN	16
Honolulu, HI	17
Detroit, MI	18
Denver, CO	19
Portland, OR	20
Conclusion: The Case for Additional Transit Investments	21
Appendix A: Data and Methodology	23
Appendix B: Data Tables	27
Endnotes	29
Photo and Design Credits	30

Executive Summary

Spending on transit generates more jobs than spending on highways.

Based on data from Transportation Improvement Programs (TIPs) in 20 metropolitan areas, this study shows that the proportion of total transportation dollars spent on transit varies **from 15 percent to 75 percent.**

Metropolitan areas that give a higher priority to transit generate **more jobs per dollar** spent on transportation.

If our 20 metropolitan areas shifted 50 percent of their highway funds to transit, they would generate **1,123,674 new transit jobs** over a five-year period — for a **net gain of 180,150 jobs** over five years — without a single dollar of new spending.

If federal spending on transit increased as proposed by Transportation for America and TEN,

we estimate it would create **1.3 million jobs** over the life of the law, and almost **800,000 more jobs** than under present federal transportation law (SAFETEA-LU).

In gathering data from the TIPs around the nation, we found that their transparency—the degree to which the information in the TIP is clear and understandable—varied tremendously. To examine this issue we constructed a TIP Transparency Index and used it to rank all 24 metropolitan areas in the study. Scores ranged from a low of two to a high of ten.

TIPs are crucial tools for citizens who want to get involved in regional transportation decision making. According to our research, most TIPs are not user-friendly and do not give citizens what they need. Our report includes three recommended policy changes to promote better TIP transparency.



Introduction

On September 30, 2009, SAFETEA-LU, the five-year federal transportation law, expired. Congress extended SAFETEA-LU for 18 months and will try to pass a comprehensive reauthorization of federal transportation policy in 2011. With over 14 million Americans out of work, lawmakers need to carefully take into account the effects of different kinds of transportation spending on jobs.

Research has consistently shown that spending on transit creates more jobs than spending on highways.¹ Estimates of job generation include the workers who construct the infrastructure and operate transit, as well as the jobs created by suppliers to the construction industry and by the increased spending of workers in the local economy. Transportation spending also has indirect effects on job creation by increasing the efficiency of the transportation system and improving business productivity. We discuss these longer-term effects in the conclusion.

In two past reports, the Transportation Equity Network (TEN) examined who gets the jobs from transportation spending and the quality of those jobs.² In this report we examine the *quantity* of jobs created. In particular, TEN wanted to know the effect of increased public transit spending on jobs in different metropolitan areas around the country. TEN selected 24 metropolitan areas for the study. Table I shows the metropolitan areas and their corresponding metropolitan planning organization (MPO). MPOs are authorized

by the federal government to conduct transportation planning within each metropolitan area. Figure I shows the locations of these Metropolitan Statistical Areas (MSAs).³

This study asks two key questions:

1. What would be the effect on jobs in each metropolitan area of shifting 50 percent of the money spent on highways to public transit?
2. How many jobs would be created in each metro area if we increased funding on public transit at the rate indicated by the Transportation for America proposal for the next transportation authorization act?⁴

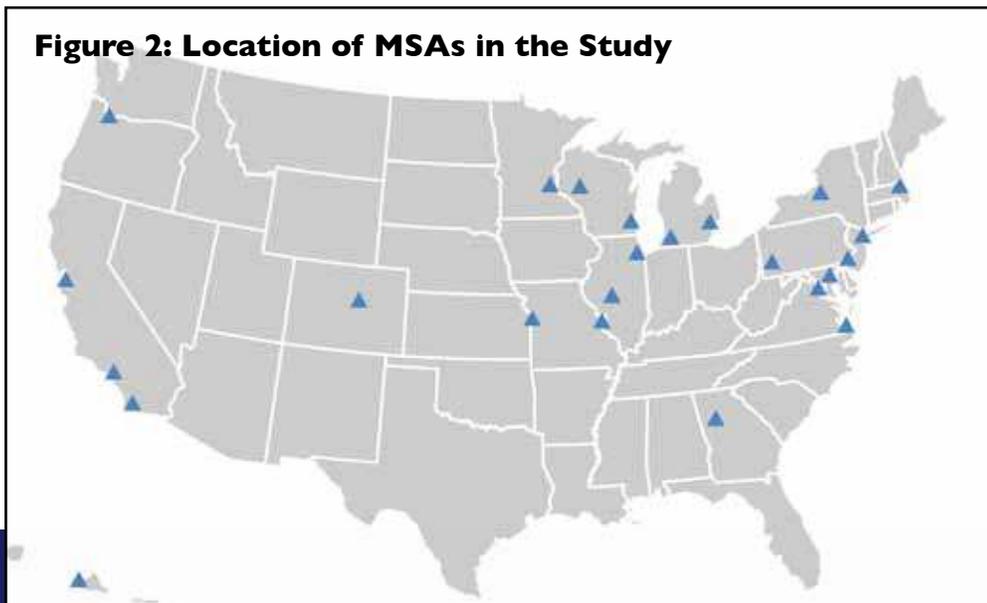
The first question addresses the implications of changing local priorities; the second addresses what would happen if federal priorities changed.

In order to answer these questions, we needed to know how metropolitan areas presently spend their transportation dollars. The best way to determine this, we concluded, was to examine the Transportation Improvement Programs (TIPs) in each of our 24 metros. TIPs are federally mandated planning documents produced by MPOs which list all significant transportation projects in the region for which funding has been obtained. TIPs are not wish lists but reflect the actual transportation spending priorities of metropolitan areas.

Table 1: Metropolitan Statistical Areas and Planning Organizations Included in Study

MSA Name	Name of MPO
Atlanta, GA	Atlanta Regional Commission
Baltimore, MD	Baltimore Regional Transportation Board
Boston, MA	Boston Metropolitan Planning Organization
Chicago, IL	Chicago Metropolitan Agency for Planning
Denver, CO	Denver Regional Council of Governments
Detroit, MI	Southeast Michigan Council of Government
Eau Claire, WI	West Central Wisconsin Regional Planning Commission
Honolulu, HI	Oahu Metropolitan Planning Organization
Kalamazoo, MI	Kalamazoo Area Transportation Study
Kansas City, MO	Mid-America Regional Council
Los Angeles, CA	South California Council of Governments
Milwaukee, WI	Southeastern Wisconsin Regional Planning Council
Minneapolis-St. Paul, MN	Metropolitan Council of the Twin Cities
New York, NY	New York Metropolitan Transportation Council
Norfolk/Hampton Roads, VA	Hampton Roads Planning District Commission
Philadelphia, PA	Delaware Valley Regional Planning Commission
Pittsburgh, PA	Southwestern PA Commission
Portland, OR	Metro
San Diego, CA	San Diego Council of Government
San Francisco, CA	Metropolitan Transportation Commission
Springfield, IL	Springfield-Sangamon County Regional Planning Commission
St. Louis, MO	East-West Gateway Council of Governments
Syracuse, NY	Syracuse Metropolitan Transportation Council
Washington, DC	Metropolitan Washington Council of Government

Figure 2: Location of MSAs in the Study



For each MPO, we identified the current active TIP and then looked at the TIP documents to identify data on approved projects. Within those TIP documents, the researchers looked for the following data:

- the total TIP amount, including all projects across all categories;
- the total amount spent on roads, highways and bridges, including the amount spent for maintenance and repairs and the amount spent for new infrastructure; and
- the total amount of spending on transit, including capital expenditures for new infrastructure or to repair existing infrastructure and the amount spent on transit operations.

Optimally, the research team looked for tables that summarized the TIP data into our categories; where that was not available, the research team looked for project listings with codes that allowed us to sum up the projects according to our categories.

In principle, because TIPs are supposed to be comprehensive and understandable to the public, we should have been able to find how much each metropolitan area spends on highways and on transit. In fact, we found that TIPs vary tremen-

dously in their usefulness. In four cases the information we wanted was not available in any usable form. In many other cases, we had to spend hours compiling projects in order to come up with an estimate of the breakdown of highway and transit spending. Because understanding the TIP is crucial for meaningful citizen participation in regional transportation policy, we have extended this report to include a section on “TIP Transparency,” where we recommend national reporting standards for TIPs.

In total, the research team was able to collect the data we needed for 20 of the 24 metropolitan areas. For 13 of the MSAs, the data included summary data breaking out the total TIP amount into categories such as transit projects and road/highway projects. Eight other summaries could be computed using a variety of other TIP documents, including project listings. The MSAs for which data was available but not suitable for this study were Detroit, MI, Norfolk/Hampton Roads, VA, and Springfield, IL. Accordingly, those MSAs are not included in our analysis. Additionally, the analysis excludes Los Angeles, CA, where the TIP summary data includes transportation investments over a long time period that skew the data. (A detailed description of our data and methodology is provided in Appendix A.)

Findings

Percentage of Transit in Present Spending

Although MPOs are required to complete TIPs to access federal funds, the TIPs that we studied for this analysis varied greatly in the number of years they covered and in size of their budgets. The average number of years covered by the TIPs was 4.5 with the shortest TIP being one year and the longest six. While the average TIP amount was \$14.7 billion, there was great variability among MPOs. For example, the Los Angeles TIP totaled \$186 billion, while Eau Claire's TIP was only \$172 million.

On average, MPOs spent about 37 percent of their TIP funds on transit projects but this varied significantly across our metropolitan areas. Table 2 sorts the MSAs by the percent of their TIP dedicated to transit.

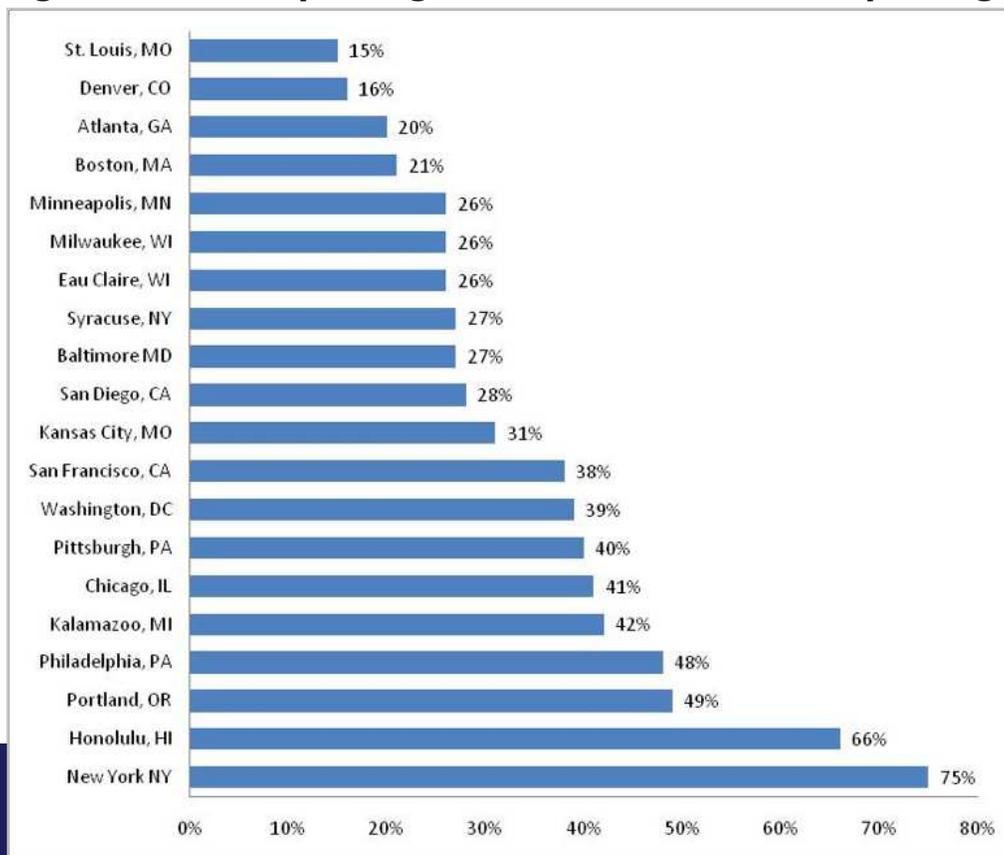
The **top five metro areas** by percentage of spending on transit were:

1. New York, NY
2. Honolulu, HI
3. Portland, OR
4. Philadelphia, PA
5. Kalamazoo, MI

By contrast, the **bottom five** transit spenders were:

16. Minneapolis, MN
17. Boston, MA
18. Atlanta, GA
19. Denver, CO
20. St. Louis, MO

Figure 1: Transit Spending as a Percent of Total TIP Spending



Job Impacts of Present Spending

Using our job-generation formulas, Figure 2 shows the current job generation capacity based on the existing TIP spending. Job generation is defined as the total number of jobs produced per \$1 billion of transit and highway spending. Because investment in transit produces more jobs than investment in highways, the ranking of metropolitan areas by the efficiency of job generation (Fig. 2) will generally track, but not perfectly match, the rankings of metro areas by transit percentage investment in transit (Fig. 1).

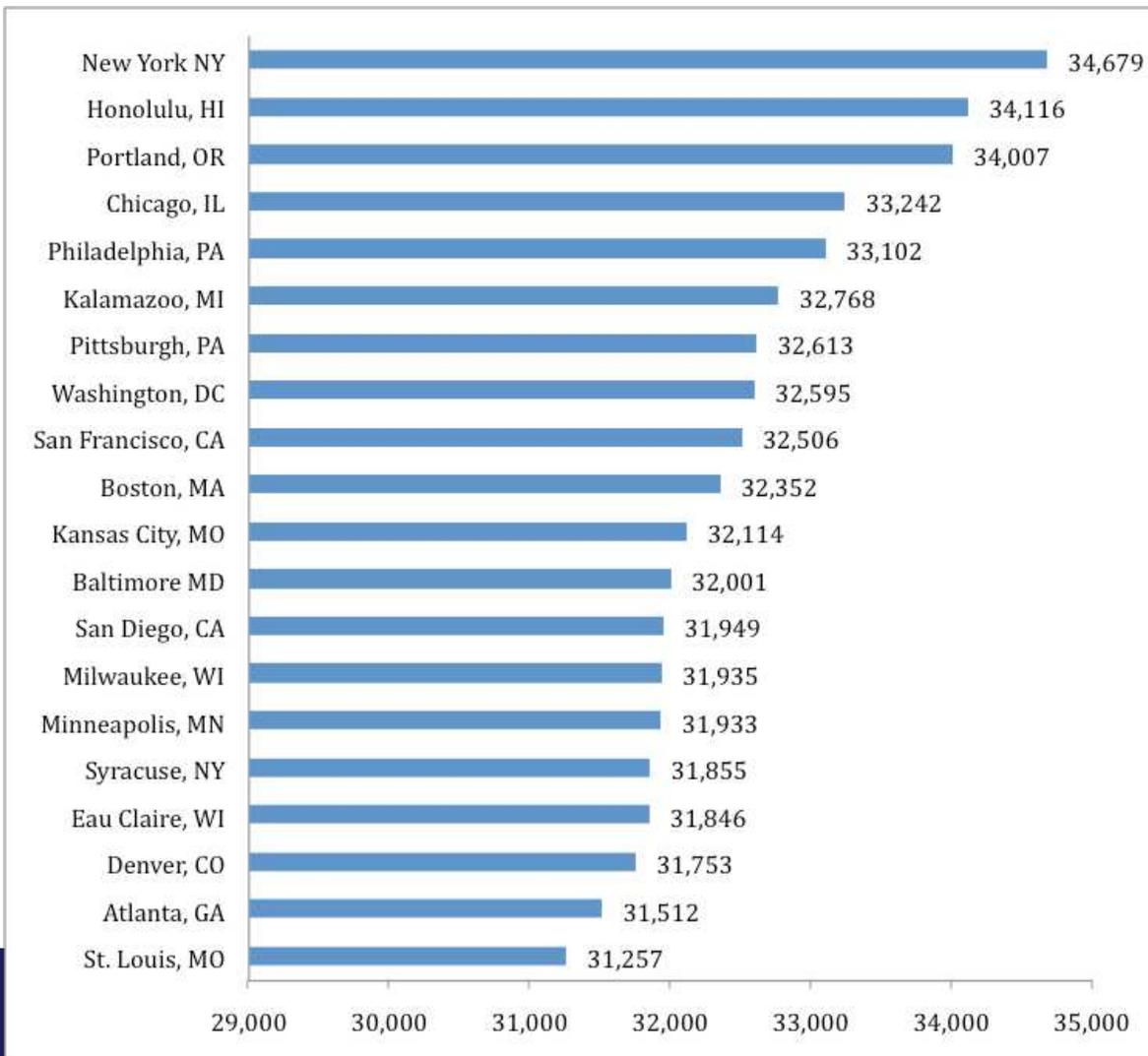
The **top five metro areas** in terms of job generation through transportation spending were:

1. New York, NY
2. Honolulu, HI
3. Portland, OR
4. Chicago, IL
5. Philadelphia, PA

By contrast, the **bottom five** job-generating metro areas were:

16. Syracuse, NY
17. Eau Claire, WI
18. Denver, CO
19. Atlanta, GA
20. St. Louis, MO

Figure 2: Job Generation per \$1 Billion in Transit and Highway Spending (All job counts represent one full-time job for one year)



Job Impacts of Shifting Funding from Highways to Transit

One implication of the job-impact estimates is that metropolitan regions can increase job creation by shifting spending from highways and roads to public transportation. Table 3 shows the potential jobs benefits for our metropolitan areas under the assumption that 50 percent of their current highway and road funds were shifted to public transportation. The first column shows the gross number of new jobs that would be created by the new public transit spending. The second column shows the net increase in jobs after subtracting the jobs lost due to decreased highway spending.

In total, the shift would create **1.1 million new transit-related jobs** for the 20 metropolitan regions over five years (230,522 on an annual basis), a 50 percent increase in these jobs. Metropolitan areas that spend the least on public transportation would have the largest proportional job increases. St. Louis, which only spends 15 percent of its TIP funds on public transportation, would enjoy a 259 percent increase in the number of transit jobs—over 43,000 new jobs over the four-year period of its TIP.

Controlling for the loss of jobs from reduced highway expenditures, our 20 metropolitan areas would still enjoy a **net increase of 180,150 jobs** over the life of their TIPs, or over 36,000 jobs on an annual basis. The average increase in job-creating efficiency from transportation spending after the shift would be 5.4 percent with a range from 1.55 percent on the low end (Pittsburgh) to 7.76 percent on the high end (St. Louis). What is striking about this analysis is that metropolitan areas can create thousands of new jobs *without any additional funding*.

Table 2: Job Increase of a 50 Percent Shift of TIP Funds from Highways to Transit (Over Five Years)

MSA Name	Gross Increase	Net Increase
New York, NY	155,824	24,983
San Francisco, CA	145,107	23,264
Atlanta, GA	144,450	23,159
Washington, DC	144,356	23,144
San Diego, CA	113,398	18,180
Chicago, IL	101,823	16,325
Philadelphia, PA	53,445	8,568
Pittsburgh, PA	48,465	7,770
St. Louis, MO	43,832	7,027
Minneapolis, MN	39,415	6,319
Honolulu, HI	38,871	6,232
Boston, MA	34,953	5,604
Kansas City, MO	23,884	3,829
Milwaukee, WI	10,529	1,688
Baltimore, MD	7,648	1,226
Portland, OR	7,596	1,218
Syracuse, NY	4,532	727
Eau Claire, WI	2,291	367
Kalamazoo, MI	1,637	262
Denver, CO	1,618	259
TOTALS:	1,123,674	180,150

Job Impacts of Increased Federal Funding for Transit

We also examined the job effects in our metropolitan areas of increasing spending on public transit as recommended by Transportation for America (T4A), a national coalition of which TEN is a part. The T4A proposal for the next national transportation authorization act, which TEN endorses, allocates \$158 billion for transit over a five-year period, a 240 percent increase over current levels under SAFETEA-LU. We allocated those expenditures to our 20 metropolitan areas based on their metropolitan area populations. Because much of the funding for public transit, such as New Starts grants, is distributed by competitive grants rather than formula grants, this method of allocating the funds is far from perfect. However, it does give a reasonable estimate of what metropolitan areas could expect to receive, on average, in additional federal funding.

The T4A proposal also shifts funding priorities within public transit. As a percentage of total transit funding, funding on transit operations increases from 4.5 percent under SAFETEA-LU to 17.7 percent under T4A's proposal. Transit operations generate more jobs per dollar spent than transit capital spending because transit

operations are more labor-intensive and do not involve significant non-labor inputs, such as land acquisition or materials.⁵

We estimate that T4A's proposal would create **1,291,431 jobs** in the transit sector over a five-year period, an increase of almost 800,000 jobs over SAFETEA-LU. Most of this increase is due to increased funding for transit but part of the increase is due to the greater emphasis in T4A's proposal on transit operations. In our analysis, the largest metropolitan areas enjoy the largest increases in jobs, but every metropolitan area with a public transit system could expect more jobs under the T4A proposal.

Table 3: Job Impact of the Transportation for America/TEN Proposal compared to SAFETEA-LU

MSA Name	SAFETEA-LU	T4A	Increase
New York, NY	119,826	314,626	194,800
Chicago, IL	60,161	157,964	97,803
Philadelphia, PA	36,863	96,792	59,928
Washington, DC	33,599	88,220	54,621
Atlanta, GA	33,251	87,308	54,057
Boston, MA	28,454	74,711	46,257
San Francisco, CA	26,736	70,200	43,464
Minneapolis, MN	20,243	53,151	32,908
San Diego, CA	18,778	49,306	30,528
St. Louis, MO	17,752	46,612	28,859
Baltimore, MD	16,860	44,270	27,410
Denver, CO	15,539	40,802	25,262
Pittsburgh, PA	14,913	39,156	24,243
Portland, OR	13,719	36,021	22,303
Kansas City, MO	12,540	32,926	20,386
Milwaukee, WI	9,774	25,664	15,890
Honolulu, HI	5,719	15,015	9,297
Syracuse, NY	4,079	10,709	6,631
Kalamazoo, MI	2,042	5,361	3,319
Eau Claire, WI	997	2,617	1,620
TOTALS:	491,845	1,291,431	799,586

TIP Transparency

The Transportation Improvement Program, or TIP, is the source of the data for this report on transportation spending in metropolitan areas. The TIP in its present form began in 1991 with the passage of the Intermodal Surface Transportation and Efficiency Act (ISTEA). Prior to ISTEA TIPs had been wish lists of projects from which state departments of transportation could choose projects to fund. ISTEA required that TIPs only list projects for which funding was available and which therefore were going to be built. TIPs must now cover at least a four-year period and include all “regionally significant projects” (23 CFR 450.324 (d)). TIPs therefore are important documents because they describe the actual spending priorities of metropolitan areas and states. (Metropolitan area TIPs are incorporated into a statewide TIP.)

In subsequent reauthorizations of federal transportation law TIPs were strengthened as key elements in the citizen participation plans that every MPO must devise and follow. A draft TIP must be published and interested parties must be given ample time to comment on it. In particular, SAFETEA-LU (2005) strengthened the requirement that the public be provided with “reasonable access to information about transportation issues and processes” (23 CFR 450.316). Administrative rules implementing SAFETEA-LU require that TIPs employ “visualization techniques,” such as graphs and maps, to make the information understandable to the public. The law also requires that information be “electronically accessible,” such as on the Internet.

We examined 24 TIPs published by MPOs across the country and found that their transparency and usefulness varied tremendously. Each

MPO published at least some of their current TIP online and in some cases the presentation of information was clear and straightforward with the amount of spending on roads and transit plainly stated. Too often, however, MPOs produced TIPs that would befuddle the typical citizen. Many of the TIP reports were loaded with pages of detailed information on individual projects but summary information on spending priorities was buried deep within the report or not given at all. As experienced researchers, we often had to struggle to find basic information, such as what percentage of transportation funding was spent on public transit.

While all of the MPOs published their TIP in some form online, the difficulty of locating it varied as well. Some MPOs such as Kalamazoo’s had a direct link to the TIP from the front page, while for others, such as METRO in Portland, Oregon, a tedious web search was necessary to locate its TIP document. Once the TIP was located, making sense of the information presented was anything but straightforward. MPOs publish different levels of detail and explanation of jargon. This ranges from a TIP document that is principally a laundry list of approved projects to a TIP that clearly explains how to read the report and make sense of project listings. While there are several standout examples of TIPs that have clear presentation, all of the TIP documents could benefit from standardization of information.

The lack of clear information stymies public participation in transportation planning. Standardization would not only make it easier for the average interested party to read and understand their local TIP but would enable them to follow changing priorities over time and compare their

TIP to other TIPs. If the public cannot grasp current transportation spending priorities, it is in no position to advocate for alternative priorities. As Supreme Court Justice Louis Brandeis once said defending transparency in government, “sunshine is ... the best of disinfectants.”⁶ The light provided by enhanced transparency in TIPs would help citizens to identify skewed priorities and insider deal making.

For the purposes of this report, the primary data of interest is the total TIP amount, the total designated for highways and transit, and then a breakdown within the highway and transit categories of funds for maintenance and new construction (highways) and construction and operations (transit). Given the mandates of SAFETEA-LU

and the legislative intent that TIP information be clearly presented these summary numbers were incredibly difficult to find. For many of the 24 MPOs included, the total amounts had to be calculated by carefully inspecting project listings and totaling each category, by deriving the summary statistics from graphics within the document, or by scouring page after page of summary tables.

In order to address the problems in TIPs, criteria were developed to rate the transparency of the TIP produced by each of our 24 MPOs. These standards range from online access, to presentation of funding by categories (highways, transit, total TIP allocation), to the inclusion of contact information for interested parties to ask questions. Each of the 11 criteria is a yes/no question

Table 4: Criteria of TIP Transparency. Each of the 24 MPOs is scored on questions below; the total percentage for each criterion is presented. (Source: MPO’s TIPs and websites.)

Criteria:	% of TIPs
Is the TIP document published on the website?	96%
How easy is it to find the TIP on the MPO website?	63%
Is there contact information for questions about the TIP on the website?	58%
Is there contact information for questions about the TIP within the TIP document?	38%
Is there an executive summary (or similar document) for the TIP that includes spending categories and data summaries?	29%
In the TIP is there a line-by-line project listing?	96%
Are there categories for the project listings?	83%
Is the data summarized for the categories (highway, transit, total TIP)?	54%
Does highway spending distinguish between new roads and maintenance?	42%
Does transit spending distinguish between capital investments and operating costs?	17%
Does TIP have breakdown by categories of funding sources (Federal, State, Local, Other)?	50%

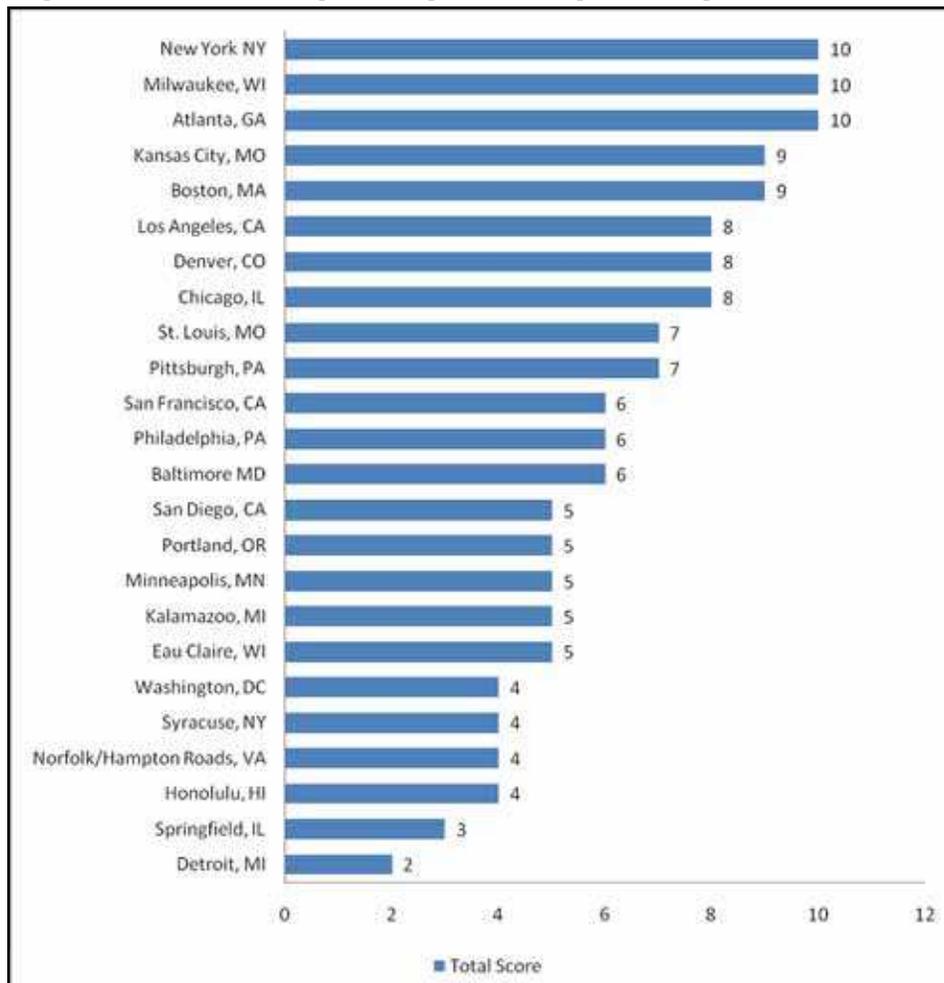
and for each “yes” the MPO receives a point. In this ranking scheme, each criterion receives equal weight. Table 5 lists each question and the percentage of the TIPs in our sample that met the criteria. (More information about each criterion is available in Appendix A.)

Taken together these measures enable us to construct an Index of TIP Transparency that could vary from zero to 11. Table 6 shows that most MPOs do well at providing online access to the TIP but many are not consistent in providing relevant contact information and few TIPs breakdown transit spending between capital investment and operating costs. The maximum score an

MPO could receive under our index was eleven. As presented in Figure 2, TIP transparency scores ranged from two points (Detroit) to 10 (New York, Milwaukee, Atlanta). Most metropolitan areas scored below seven points.

We recognize that our index is far from perfect. Applying the 11 criteria to each TIP, for example, is not a completely objective process. Despite its flaws, we believe the index gives a good approximation of the usefulness and transparency of the 24 TIPs we studied. The results of our analysis suggest that TIP transparency could be significantly improved by implementing a few simple recommendations.

Figure 3: TIP Transparency Index by Metropolitan Area



TIP Transparency Policy Recommendations

The standards for TIPs are stated in federal administrative law (23 CFR 450.324). At present the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) must determine that each metropolitan area's TIP is "based on a continuing, comprehensive transportation process carried out cooperatively by the States, MPOs and transit operators" in accordance with federal law. If the FHWA and the FTA do not certify the TIP, up to 20 percent of the funds can be withheld.



Clearly, the process for insuring that TIPs are valuable tools for citizen engagement in regional transportation planning is not working. The goal of the recommendations below is to standardize TIP reporting and add clarity to the information within TIPs so that the interested parties do not need to be industry insiders to make sense of MPO spending plans. These recommendations should be incorporated into federal transportation law and codified in the *Code of Federal Regulations*. MPOs should be required to certify that each draft TIP and update of the TIP meets these minimal standards.

1. TIPs shall contain a clearly labeled section on summary data which shall include, at a minimum, the following data:
 - An annual breakdown of highway spending (new capacity versus repair and maintenance of existing highways), and transit spending (capital investment versus operations);
 - Sources of funding (federal, state, local) for each project and for each category of projects as stated above.
2. TIPs shall map projects so that citizens in each region can identify those that directly impact their neighborhood or place of work.
3. TIPs shall include detailed contact information for questions and comments about the TIP both within the TIP document and online. Information shall be available for non-English speakers if they are more than 5 percent of the population of the region or if they are particularly impacted by a project.

Case Studies

What follows is a series of case studies of transit projects that are being implemented, as well as some that have been proposed but that are not yet fully funded. Each of the metropolitan areas included has a TEN affiliate that has been advocating for public transit and jobs.

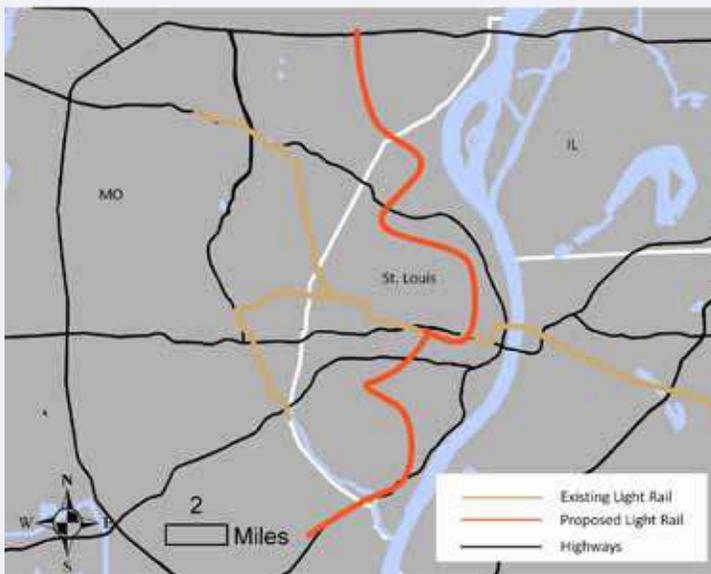
Case Study – St. Louis, MO: The Northside-Southside MetroLink Extension

Cost: \$971 million

Direct Job Impact: 23,098

In 2007, the Board of Directors of East-West Gateway Council of Governments, St. Louis' metropolitan planning agency, approved the extension of the City's light rail system MetroLink. The expansion would provide new service lines creating a corridor to connect the North and South portions of St. Louis City. Currently the MetroLink lines run predominately East-West from Illinois into St. Louis City before turning north and south in St. Louis County. This extension was approved after a 2-year study which included input from elected officials, business groups, neighborhood organizations and the general public. The public input helped to inform the chosen route, as well as the design and features of the proposed stations. The Northside-Southside extension will encourage economic activity and development, provide access to jobs as well as encourage job growth in neighborhoods with high poverty and unemployment rates.

The locally preferred alternative for MetroLink expansion would cost approximately \$971 million and create almost 17 miles of new light rail within the City. In April 2010, after an eight-month campaign by TEN member Metropolitan Congregations United (MCU), the voters of St. Louis County gave a resounding show of support for public transportation by giving a 63 percent YES vote to a ½ cent sales tax increase that will raise \$75 million a year for transit operations and expansion of MetroLink. The vote also triggered a ¼ cent sales tax in the City of St. Louis for transit. The new line will carry over 12,700 people daily. This number includes those who would probably utilize the light rail lines to travel and from work but it does not include increased volume for events such as the Cardinals' and Rams' games.



Case Study – Minneapolis-St. Paul, MN: Central Corridor Light Rail Transit

Cost: \$957 million

Direct Job Impact: 22,765

The Central Corridor Light Rail Transit (CCLRT) in St. Paul, Minnesota, is a \$957 million light rail that will connect downtown Minneapolis and downtown St. Paul along University and Washington avenues through the State Capitol complex, Midway area, and University of Minnesota. A project of this size has no choice but to reshape the city. The project will include 11 miles of new rail, as well as connections to two existing rail lines, 18 new stations, and a projected weekly ridership of over 40,000 by 2030.

The Central Corridor has been the case study for making changes in the Federal Transportation Administration (FTA) policies that define decision-making around New Starts projects. At first, these policies were so narrowly interpreted that it created the possibility that new transit investments could actually lead to a decrease in transit service for local residents. Advocacy by TEN-affiliate ISIAAH, along with three lawsuits, succeeded in reinstating three stops in low-income, underserved communities. Local transit advocates from TEN member organization ISIAAH successfully backed a 2008 funding proposition that ensured continued local support, not just for the Central Corridor line but for future light rail expansion.

Ultimately, ISIAAH and other advocates hope CCLRT will be the backbone of a transit system with seven new corridors that will serve as basis for doubling transit service in the seven-county metropolitan area.



Case Study – Honolulu, HI: Oahu Transit Project

Cost: : \$5.29 billion

Direct Job Impact: 125,838

Rail is very important to the future of Honolulu. Steeply rising land value has moved most of the workforce out of the old working class neighborhoods of Kaimaki and Kalihi and across the Ewa plain. Where pineapple and sugar cane once grew is a massive sprawl of Arizona style tract homes. This dynamic has gone on unchallenged since the 1970's – the last time Honolulu's leaders tried to build a rail system. The result of the failure of that generation to carry through on their promise to build has been enormous traffic jams in rush hour in Honolulu. It can take up to two hours to travel 12 miles, and the geography of the island, the sharp mountains make building more roads impossible.

One response to the problems of congestion and sprawl is the Oahu Transit Project. The project will construct a 20 mile elevated transit line connecting Honolulu with outlying residential districts, running through 21 new stations. The current cost of the project is \$5.29 billion, with the first phases of the line projected to open in 2012.

TEN member organization FACE Hawaii (Faith Action for Community Equity) hopes that the rail will solve several problems. First, they hope that it will cut commute times for the huge Waikiki and downtown workforce. Second, they believe that it will serve to channel real estate development into the urban core – and away from the pristine north shore. Third, advocates think that, with careful planning, rail will help to mitigate the affordable housing crisis that Honolulu has been suffering from for many years.

“People in Hawaii today are fond of thinking back in time, wishing that the people in charge back then had been more thoughtful about what we built and the where we put it,” said FACE President Rev. Bob Nakata. “If we don't complete this rail, the next generation will say this about us.”



Sources: KITV. “Study Projects System to Cost \$100 Million More.” Available at www.kitv.com/money/20162086/detail.html.

Honolulu Rail Transit. “Overview.” Available at <http://www.honolulutrainsit.org/overview/>.

Case Study – Detroit, MI: M-1 Rail

Cost: \$125 million

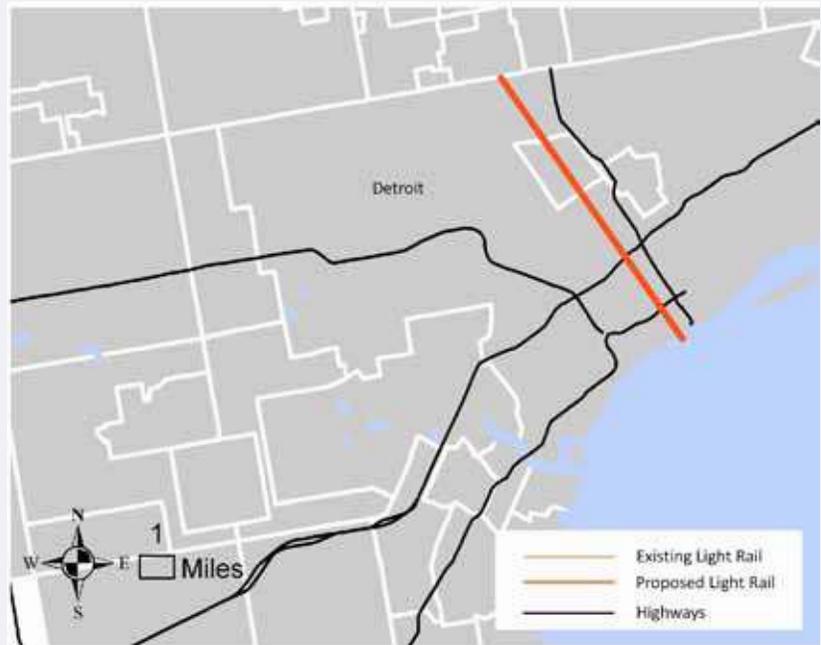
Direct Job Impact: 2,973

Looking at cities around the world that are thriving, sustainable and desirable, it's clear that transit is an integral part of their success. That's why the planned light rail line along Detroit's Woodward Avenue is a top transit priority for the city, southeast Michigan and the rest of the state.

The M-1 RAIL, a 3.4-mile line that will connect Downtown Detroit to the New Center District, is one of the city's top development projects. The total cost of the project is \$125 million, most of which comes from private and philanthropic sources from institutions that will be served by the line.

Local advocates at TEN member Metropolitan Organizing Strategy Enabling Strength (MOSES) believe that the M-1 should be the first step in a comprehensive regional light rail system. In a region that is suffering from one of the highest unemployment rates in the country—and has a skilled work force ready and willing to rebuild the community's infrastructure—it is unacceptable to deny access to the jobs and opportunities that will be created by mass transit investments.

MOSES' Clergy Caucus said in a statement: "Because transportation is so vital to one's personal well-being and to the well-being of our community, we contend that the development and maintenance of a rapid transit system in Southeastern Michigan is not only necessary, it is the right thing to do."



Sources: Nathan Nurst. "Woodward Rail Clears Hurdle." The Detroit News. August 2, 2010.

Transportation Riders United. "What's Going On: Rapid Transit Projects in Greater Detroit." Available at <http://www.detroittransit.org/cms.php?pageid=28>.

Case Study – Denver, CO: FasTracks (Phase II)

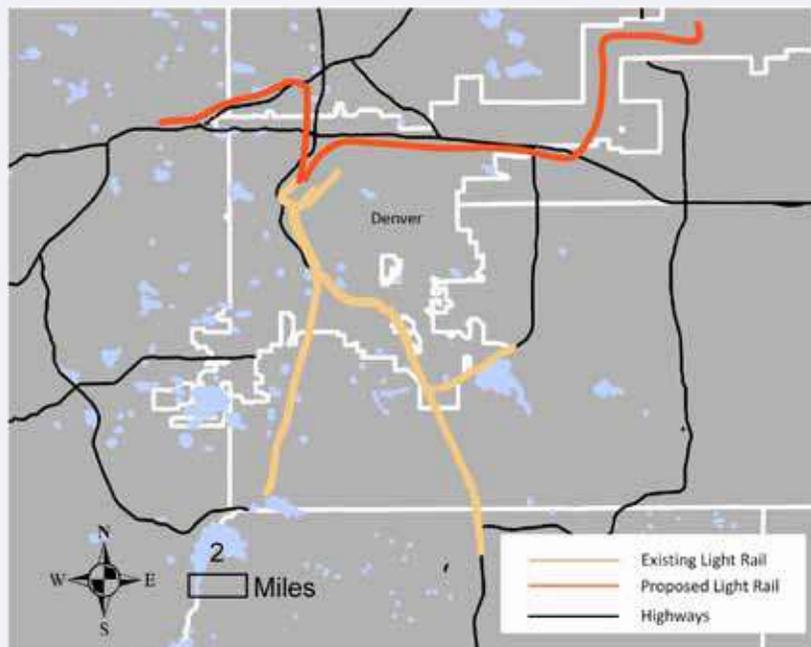
Cost: \$2.385 billion

Direct Job Impact: 56,734 *

In Denver, the Regional Transportation District's (RTD) premiere transit project is FasTracks, an estimated \$6.9 billion rail and bus rapid transit project. FasTrack's 12-year program proposes to build 122 miles of new commuter rail and light rail, 18 miles of bus rapid transit service, 21,000 new parking spaces at rail and bus stations, and enhanced bus service for easy, convenient bus/rail connections across the eight-county district.

This year construction will begin on the Eagle P3 Project, a public-private partnership that includes a new airport rail line and another line to the west (the East Corridor and Gold Line). This project will bring transit within one mile of nearly 40,000 residents of color and 4,500 low-income individuals, in addition to creating the potential for expanding affordable housing for more families to live near the new transit stops.

Beyond the transportation, environmental and economic benefits of increased public transit, the project's team is exploring new workforce systems to connect residents to jobs on the project. Local advocates, including FRESC: Good Jobs, Strong Communities, are working to highlight apprenticeship utilization to ensure that local workers have career path opportunities during and beyond the construction of the project.



* Assumes that all the funding is spent on transit capital project

Sources: Denver Regional Transportation District. "RTD Board selects Denver Transit Partners for Eagle P3, FasTracks' single largest contract." Available at http://www.rtd-fastracks.com/media/uploads/main/MEDIA_RELEASE20100615RTD_Board_Selects_Denver_Transit_Partners_as_Eagle_P3_Concessionaire.pdf. Denver Regional Transportation District. "Eagle P3 Project." Available at http://www.rtd-fastracks.com/ep3_2.

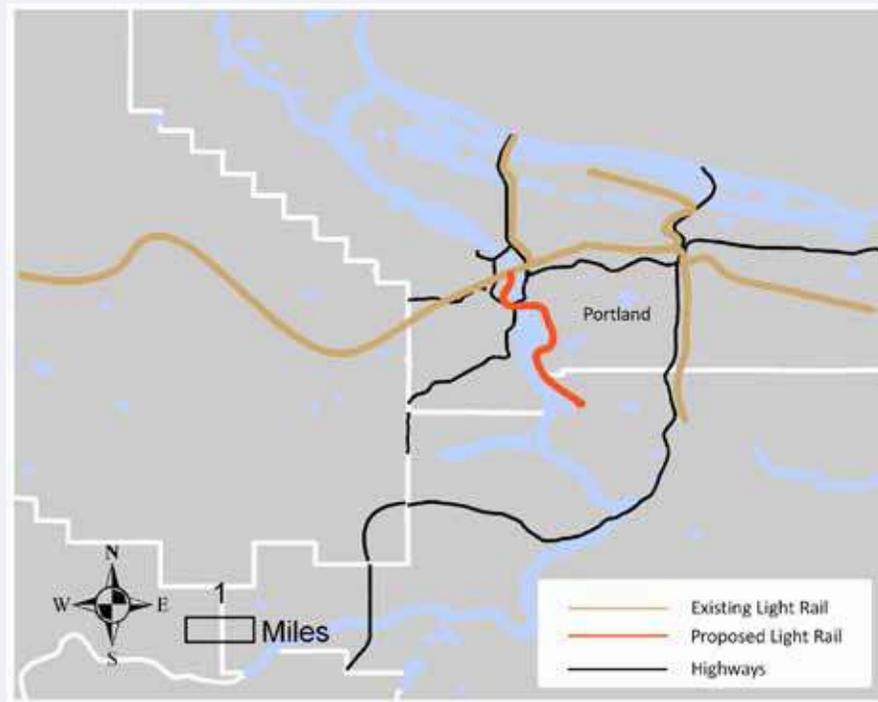
Case Study – Portland, Oregon: Portland-Milwaukie MAX Line

Cost: \$1.5 billion

Direct Job Impact: 35,682

For the past two decades, the Portland, Oregon metropolitan region has invested heavily in fixed-rail transit. The vision and values behind this commitment include creating livable and sustainability communities with a high quality of life. Long-term investments in public transit will also boost economic development in the entire Portland region.

A good example is the Portland-Milwaukie Light Rail Project, a 7.3 mile light rail system that will travel from Southeast Portland to Milwaukie and Oak Grove in North Clackamas County. The project will include eight new stations—six in Portland and two near the terminus of the line. The project's scheduled completion date is 2015; by 2030, the line is projected to an average weekly ridership of 27,400. The total cost of the project is \$1.5 billion, including the cost for a new multi-modal transit bridge.



Sources: Joseph Rose. "Feds say Portland-Milwaukie MAX line must settle for 50-50 funding." July 26, 2010. Tri-MAX. "Portland-Milwaukie Light Rail Project: Overview." Available at <http://trimet.org/pm/abouttheproject/index.htm>.

Conclusion: The Case for Additional Transit Investments

There are many reasons to support additional investments in public transit:

1. Public transit reduces traffic congestion and therefore saves time and money for those who drive.
2. By reducing air pollution, public transit improves the air we breathe and the reduction in greenhouse gas emissions addresses the threat of global warming.
3. Public transit has additional health effects. Compared to automobiles, public transit increases physical activity, reduces obesity, and has many other health benefits.⁷
4. Households save money on transportation by substituting less expensive public transportation for more expensive cars. After housing, transportation is the largest household expense. The average American household devotes about 18 percent of its after-tax income to transportation, but households earning between \$20,000 and \$35,000 and living far from employment centers spend 37 percent of their income on transportation.⁸ Research in Minneapolis-St. Paul found that moving from a transit-poor to a transit-rich neighborhood would save the average household \$5,940 a year.⁹
5. Especially important for TEN is that public transit serves those who cannot afford to own a car or who, for one reason or another, such as old age or a disability, cannot drive. Public transit increases opportunities for these groups to participate more fully in our society. As our society ages, we will need more public transit.¹⁰

In this report, we examine only one reason for investing in public transit: *the job-generating effects of public transit*. We showed that if metropolitan areas shifted transportation funds from highways to transit, they would increase jobs and we showed how this shift in priorities would play out in 20 metropolitan areas. Our analysis demonstrates that metropolitan areas could generate more jobs without spending another dime on transportation by simply changing priorities within transportation spending.

Second, we examined the effect of significantly increasing federal funding for public transit as recommended by Transportation for America and TEN. Increasing funding for public transit would create almost 800,000 new jobs. This would be an effective way to put unemployed Americans back to work.

Our analysis of the job-generating effects of transportation spending examines only the short-term effects of transportation spending – the jobs paid directly by public funds and the jobs created in supplier industries and in the retail sector (boosted by additional worker spending).

What our analysis does not take into account is the longer term effects of investing in a more efficient and productive transportation system. If businesses can save time and money in transporting people and goods, they will improve productivity and will increase investment – creating more jobs.

Here are three additional ways that transportation investments create jobs:

I. Import Substitution: A region that invests in public transit can reduce automobile use, thereby sending less money out of the region for imported gasoline and cars, leaving more money

to circulate in the local economy. Partly because of investments in public transit, residents of Portland, Oregon, travel about 20 percent fewer miles by car than the average metropolitan area. The \$1.1 billion that Portlanders do not spend on car travel translates into approximately \$800 million that is not leaving the region each year. Much of that \$800 million circulates in the local economy, creating more jobs for Portland residents.¹¹

II. Wage Premium: In congested metropolitan areas, employers absorb some of the excess cost of worker commutes in the form of higher wages. They must offer a higher wage to attract qualified employees. Improved systems of public transit reduce the need to pay this wage premium, making businesses more profitable and able to hire more workers.¹² Public transit also improves worker reliability because it is not as vulnerable to interruptions due to bad weather or accidents.

III. Clustering: Public transit enables businesses to achieve higher levels of density and clustering, which can increase business productivity and jobs. Clustering enables businesses to 1) access a larger labor market with more specialized skills, 2) sell to a broader customer base, and 3) share specialized knowledge through networks to achieve higher levels of creativity and innovation.¹³

Of course, the ability of investments in public transit to reduce regional imports, lower wage costs for businesses, and improve performance through clustering will depend on local conditions and good planning. In many cases it will make sense to invest in highways. However, as energy prices rise, the benefits of public transit will only increase. In short, when discussing the job effects of transportation spending, we cannot overlook the longer-term dynamic effects of transit investments.

Finally, a few words are in order about what kinds of jobs are created by public transit investments and who will get them. In general, jobs in the transportation sector benefit those who have been most hurt by economic trends and the recent recession. More jobs in transportation (both highways and transit) go to workers without a college degree and those jobs tend to pay better than average.¹⁴ The average hourly wage for transit and intercity bus drivers, for example, was \$17.30 in 2009, well above minimum wage.¹⁵ In past TEN reports we showed that jobs in construction tend to pay well and have good benefits but pay and benefits vary across the country depending largely on union density.¹⁶

Who gets the jobs from transit spending cannot be left to chance. Many minorities are employed in public transit systems and Hispanics have penetrated the construction industry in impressive numbers. But to insure that minorities and women are able to compete fairly for jobs in public transit we need effective policies that promote job inclusion.

TEN helped develop the Missouri Model (also known as the Green Construction Careers Model), a workforce development approach that creates buy-in from all major stakeholders on major federal transportation projects to increase employment of low-income persons, minorities and women to 30 percent of total workforce hours and commit between 0.5 and 1 percent of project budgets to job training. The Federal Transit Administration and U.S. Department of Transportation have joined together to fund a 12-city orientation to the Missouri Model.¹⁷

Appendix A: Data and Methodology

Transportation Improvement Plan (TIP) Data

While other datasets on transportation spending exist (eg., FWHA transportation data), the researchers concluded that the most appropriate source for metropolitan level transportation spending was in the TIP documents periodically produced by MPOs. In contrast to regional Long Range Transportation Plans, which are often wish-lists, TIP documents contain the transportation projects that have passed local scrutiny and are almost certain to be built.

The first step in identifying planned TIP expenditures for the chosen regions was identifying the MPO responsible each of the regions. Then, the researchers identified web sites for the MPOs, and, where possible, the location of the current related TIP documents. Documents included summaries of the TIP, the actual TIP plan, and supplemental documents, such as TIP project listings. As the TIP documents were identified, the research team examined them to find the following data:

- the total TIP amount, including all projects across all categories;
- the total amount spent on roads, highways and bridges, including the amount spent for maintenance and repairs and the amount spent for new capacity; and
- the total amount on transit, including capital expenditures for new infrastructure or to repair existing infrastructure, as well as the amount spent on transit operations.

Three of the regions—Detroit, MI, Norfolk/Hampton Roads, VA and Springfield, IL—had data that was publicly accessible, but was not aggregated in a form suitable for this study. Accordingly, these three regions were dropped from the study. Los Angeles was dropped because its TIP covered a long time period making its data impossible to compare to the others.

While most of the regions had publicly accessible TIP data, there were some anomalies in the data. First, the TIPs ranged in the number of years that they covered—from one year to six. For this reason, where appropriate, the TIP data reported in this report is standardized to a common period, such as the five-years covered by SAFETEA-LU. Secondly, many of the metropolitan regions lacked access to spending data in either of the two major categories—transit versus highways/roads—or more commonly by the subcategories under the two—for highway/roads, new construction versus repair, and for transit, capital expenditures versus operations. In the case of nine metropolitan regions (Honolulu, HI, Kalamazoo, MI, Kansas City, MO, Los Angeles, CA, Minneapolis, MN, New York NY, San Diego, CA, San Francisco, CA, and Washington, DC), TIP data did not include specific highway/road totals; in these cases, the total highway and road funds in the TIP were calculated by subtracting the total transit funding from the total TIP amount.

Anomalies within the TIP that potentially impaired the comparability of the data are shown below in Table 6.

Table 6. Anomalies in TIP Data

MSA Name	Discussion
Atlanta, GA	Transit and road totals do not include studies, which could be either transit studies or road studies
Baltimore MD	Data is for fiscal year 2008 only.
Chicago, IL	Data comes from summary tables for dollars going to specific entities, from which the use can be inferred. Approximately \$2.6 billion of the funds is going to other entities for which a specific use (either transit or roads) cannot be inferred.
Denver, CO	Data is for fiscal year 2008 only.
Detroit, MI	Data is not in a form suitable for this study.
Honolulu, HI	Data includes investments beyond TIP years.
Los Angeles, CA	Data includes investments beyond TIP years.
Milwaukee, WI	Data is for fiscal year 2009 only.
Norfolk/Hampton Roads, VA	Data is not in a form suitable for this study.
Portland, OR	Transit does not include portion of METRO funds for transit.
Springfield, IL	Data is not in a form suitable for this study.
St. Louis, MO	Transit and road data don't include projects categorized as other or safety and improvements, which could be either transit or road projects.
Syracuse, NY	Total amount is not available. Data does not include flexed funds.

Job-Generation Estimates

To calculate the number of jobs generated by different types of transportation spending, we examined the literature on job multipliers in the transportation sector. Transportation spending generates jobs in three ways (direct, indirect, and induced effects):

1. Direct spending on transportation produces short-term construction jobs and longer term operations jobs, such as bus drivers.
2. Transportation spending produces jobs indirectly through capital purchases, such as vehicles and equipment.

3. Transportation spending also has induced effects through increased consumer spending by construction workers and transit operators, which leads to further employment in the retail sector.

Using the best available estimates of the job generating effects of highway and transit spending, we employed the following formulas in our study:

- Each \$1 billion spent on public transportation creates 36,108 jobs;¹⁸
- Each \$1 billion spent on highways and roads creates 30,319 jobs.¹⁹

On average, then, spending on public transportation creates about 20 percent more jobs than spending on highways and roads.

To estimate the job generating effects of existing TIP spending we multiplied the highway spending by its job multiplier and the transit spending by its multiplier and summed the two (Figure 2).

In order to calculate the job impact of shifting 50 percent of highway spending to transit, we multiplied 50 percent of highway spending times the multiplier for transit spending. In order to take into account the loss of jobs due to decreased highway spending, we took that same amount and multiplied it by the highway job multiplier and subtracted that number from the total (gross) number of jobs to calculate the net increase (Table 2).

To estimate the effect of increasing transit spending according to the Transportation for America/TEN proposal (Table 3), we allocated total funding for transit in SAFETEA-LU and in Transportation for America/TEN's proposal relative to the population of the metropolitan area as a percentage of the population in all metropolitan areas (U.S. Bureau of the Census, American Community Survey). Because the shift in funding is not just in total transit funding but in the allocation of transit funding from capital investment to operations, we applied different job multipliers to these two spending categories based on the following job multipliers:

- Each \$1 billion dollars invested in transit capital projects generates 23,788 jobs.
- Each \$1 billion dollars invested in transit operations produces 41,140 jobs.²⁰

We then applied these multipliers to these categories of spending in SAFETEA-LU and in Transportation for America/TEN's proposal and summed them up.

TIP Transparency Index

To construct our index of TIP Transparency we devised 11 factors, which are listed in Table 5. Further explanation of these factors is given below.

1. Is the TIP document published on the website? Federal rules require that MPOs publish the TIP in "electronically accessible formats, such as the World Wide Web" (23 CFR 450.316).

2. How easy is it to find the TIP on the MPO website? This question is designed to get at difficulty of finding the TIP document within the MPO's website. A MPO received a score of "0" if it took more than three or four links through the main page to find the TIP.

3. Is there contact information for questions about the TIP on the website? Several MPOs had a designated contact for TIP related questions for interested parties to ask question and offer suggestions.

4. Is there contact information for questions about the TIP within the TIP document? In the same vein as the previous question, having a specific person to contact if an interested party has questions or comments is an indication of openness to community input.

5. Is there an executive summary (or similar document) for the TIP? Most TIP documents are

hundreds of pages in length and this can deter interested parties who may only desire basic information about spending priorities. Having a section that summarizes data from the TIP is useful.

6. Is there a line-by-line project listing in the TIP? A comprehensive list of projects enables interested parties to identify project or groups of projects they are interested in.

7. Are there categories for the project listings? Listing projects by geographical location or by categories such as “highways” and “transit” makes the TIP easier to navigate and understand.

8. Is the data summarized for the categories (highway, transit, total TIP)? Summary measures are a straightforward way to make the TIP more understandable.

9. Does highway spending distinguish between new road capacity and repair of existing

roads? For the purposes of calculating accurate estimates for job creation, it is helpful to distinguish between new highway construction and repair or maintenance of existing highways.

10. Does transit spending distinguish between capital investments and operating costs? To accurately estimate job effects, it is necessary to know the breakdown capital investments and funding for operating costs.

11. Does the TIP identify the funding sources (federal, state, local, or other) for each project? The menu of funding sources and distribution of funds across projects is complex, but there is no reason why MPOs cannot clearly identify the funding sources for each project.

We then scored each metropolitan yes or no with regard to each factor, resulting in an Index of Transparency that could vary for zero to 11.

Appendix B: Data Tables

The following tables represent the data files on which the summary figures and tables in the main body of the report were drawn.

Table 1: TIP Funding by Category

MSA Name	Year of TIP Data	TIP Years	Total TIP	Transit	Total Road	% Transit
Atlanta, GA	FY 2008-2013	6	\$10,575,665,175	\$2,076,073,141	\$8,000,974,846	19.63%
Baltimore MD	FY 2008-2012	5	\$640,989,000	\$173,447,000	\$423,634,000	27.06%
Boston, MA	FY 2010-2013	4	\$5,065,696,912	\$1,047,802,918	\$1,936,008,354	20.68%
Chicago, IL	FY 2007-2012	6	\$14,029,590,000	\$5,752,131,900	\$5,639,895,180	41.00%
Denver, CO	FY 2008-2013	5	\$4,500,000,000	\$29,500,000	\$89,600,000	16.21%
Eau Claire, WI	FY 2010-2014	5	\$172,339,000	\$45,463,000	\$126,876,000	26.38%
Honolulu, HI	FY 2008-2011	4	\$6,257,879,000	\$4,104,833,000	\$2,153,046,000	65.59%
Kalamazoo, MI	FY 2008-2011	4	\$157,115,000	\$66,454,000	\$90,661,000	42.30%
Kansas City, MO	FY 2008-2012	5	\$1,917,260,510	\$594,350,758	\$1,322,909,752	31.00%
Milwaukee, WI	FY 2009-2012	4	\$863,723,700	\$225,935,100	\$583,211,000	26.16%
Minneapolis, MN	FY 2010-2013	4	\$2,951,000,000	\$843,716,972	\$2,183,149,800	26.02%
New York NY	FY 2008-2012	5	\$35,000,000,000	\$26,332,836,000	\$8,631,000,000	75.34%
Philadelphia, PA	FY 2009-2012	4	\$5,700,490,000	\$2,740,269,000	\$2,960,264,457	48.07%
Pittsburgh, PA	FY 2009-2012	4	\$4,446,013,683	\$1,761,552,261	\$2,684,461,422	39.62%
Portland, OR	FY 2008-2011	4	\$1,507,180,883	\$738,552,177	\$420,741,000	49.00%
San Diego, CA	FY 2009-2013	5	\$8,743,070,000	\$2,462,377,000	\$6,281,021,488	28.16%
San Francisco, CA	FY 2008-2012	5	\$12,917,676,000	\$4,880,472,253	\$8,037,378,007	37.78%
St. Louis, MO	FY 2010-2013	4	\$3,114,096,235	\$469,362,829	\$2,427,832,216	15.07%
Syracuse, NY	FY 2007-2012	6	\$341,721,799	\$90,678,999	\$251,042,800	26.54%
Washington, DC	FY 2010-2015	6	\$13,174,800,000	\$5,178,970,000	\$7,995,786,120	39.31%
Los Angeles, CA			\$186,700,000,000	\$73,100,000,000	\$113,600,000,000	39.15%

Table 2: Current Job Generation

MSA Name	Transit			Highway/Roads			Transit and Highway/Roads		Job Generation Per \$1 billion
	TIP Amount	Jobs	Per Year	Amount	Jobs	Per Year	Amount	Total Jobs	
Atlanta, GA	\$2,076,073,141	74,963	12,494	\$8,000,974,846	242,582	40,430	\$10,077,047,987	317,544	31,512
Baltimore MD	\$173,447,000	6,263	6,263	\$423,634,000	12,844	12,844	\$597,081,000	19,107	32,001
Boston, MA	\$1,047,802,918	37,834	9,459	\$1,936,008,354	58,698	14,674	\$2,983,811,272	96,532	32,352
Chicago, IL	\$5,752,131,900	207,698	34,616	\$5,639,895,180	170,996	28,499	\$11,392,027,080	378,694	33,242
Denver, CO	\$29,500,000	1,065	1,065	\$89,600,000	2,717	2,717	\$119,100,000	3,782	31,753
Eau Claire, WI	\$45,463,000	1,642	328	\$126,876,000	3,847	769	\$172,339,000	5,488	31,846
Honolulu, HI	\$4,104,833,000	148,217	37,054	\$2,153,046,000	65,278	16,320	\$6,257,879,000	213,496	34,116
Kalamazoo, MI	\$66,454,000	2,400	600	\$90,661,000	2,749	687	\$157,115,000	5,148	32,768
Kansas City, MO	\$594,350,758	21,461	4,292	\$1,322,909,752	40,109	8,022	\$1,917,260,510	61,570	32,114
Milwaukee, WI	\$225,935,100	8,158	8,158	\$583,211,000	17,682	17,682	\$809,146,100	25,840	31,935
Minneapolis, MN	\$843,716,972	30,465	7,616	\$2,183,149,800	66,191	16,548	\$3,026,866,772	96,656	31,933
New York NY	\$26,332,836,000	950,826	190,165	\$8,631,000,000	261,683	52,337	\$34,963,836,000	1,212,509	34,679
Philadelphia, PA	\$2,740,269,000	98,946	24,736	\$2,960,264,457	89,752	22,438	\$5,700,533,457	188,698	33,102
Pittsburgh, PA	\$1,761,552,261	63,606	15,902	\$2,684,461,422	81,390	20,348	\$4,446,013,683	144,996	32,613
Portland, OR	\$738,552,177	26,668	6,667	\$420,741,000	12,756	3,189	\$1,159,293,177	39,424	34,007
San Diego, CA	\$2,462,377,000	88,912	17,782	\$6,281,021,488	190,434	38,087	\$8,743,398,488	279,346	31,949
San Francisco, CA	\$4,880,472,253	176,224	35,245	\$8,037,378,007	243,685	48,737	\$12,917,850,260	419,909	32,506
St. Louis, MO	\$469,362,829	16,948	4,237	\$2,427,832,216	73,609	18,402	\$2,897,195,045	90,557	31,257
Syracuse, NY	\$90,678,999	3,274	546	\$251,042,800	7,611	1,269	\$341,721,799	10,886	31,855
Washington, DC	\$5,178,970,000	187,002	31,167	\$7,995,786,120	242,424	40,404	\$13,174,756,120	429,426	32,595

Table 3: Job Generation Based on 50% Shift of Highway/Road Spending to Transit

MSA Name	Current Transit Spending		Transit Based on Shift		Gross Job Gain	Road Job Loss	Net Jobs
	Amount	Jobs	Amount	Jobs			
Atlanta, GA	\$2,076,073,141	74,963	\$6,076,560,564	219,412	144,450	121,291	23,159
Baltimore MD	\$173,447,000	6,263	\$385,264,000	13,911	7,648	6,422	1,226
Boston, MA	\$1,047,802,918	37,834	\$2,015,807,095	72,787	34,953	29,349	5,604
Chicago, IL	\$5,752,131,900	207,698	\$8,572,079,490	309,521	101,823	85,498	16,325
Denver, CO	\$29,500,000	1,065	\$74,300,000	2,683	1,618	1,358	259
Eau Claire, WI	\$45,463,000	1,642	\$108,901,000	3,932	2,291	1,923	367
Honolulu, HI	\$4,104,833,000	148,217	\$5,181,356,000	187,088	38,871	32,639	6,232
Kalamazoo, MI	\$66,454,000	2,400	\$111,784,500	4,036	1,637	1,374	262
Kansas City, MO	\$594,350,758	21,461	\$1,255,805,634	45,345	23,884	20,055	3,829
Milwaukee, WI	\$225,935,100	8,158	\$517,540,600	18,687	10,529	8,841	1,688
Minneapolis, MN	\$843,716,972	30,465	\$1,935,291,872	69,880	39,415	33,095	6,319
New York NY	\$26,332,836,000	950,826	\$30,648,336,000	1,106,650	155,824	130,842	24,982
Philadelphia, PA	\$2,740,269,000	98,946	\$4,220,401,229	152,390	53,445	44,876	8,568
Pittsburgh, PA	\$1,761,552,261	63,606	\$3,103,782,972	112,071	48,465	40,695	7,770
Portland, OR	\$738,552,177	26,668	\$948,922,677	34,264	7,596	6,378	1,218
San Diego, CA	\$2,462,377,000	88,912	\$5,602,887,744	202,309	113,398	95,217	18,180
San Francisco, CA	\$4,880,472,253	176,224	\$8,899,161,257	321,331	145,107	121,843	23,264
St. Louis, MO	\$469,362,829	16,948	\$1,683,278,937	60,780	43,832	36,805	7,027
Syracuse, NY	\$90,678,999	3,274	\$216,200,399	7,807	4,532	3,806	727
Washington, DC	\$5,178,970,000	187,002	\$9,176,863,060	331,358	144,356	121,212	23,144

Table 4: Comparison of Job Generation between SAFETEA-LU and T4A Proposal

MSA Name	Population in 2008	% Pop in MSA	Share SAFETEA-LU Jobs	Share T4A Jobs	Increase	% Increase
New York NY	18925869	7.41%	178,636	314,214	135,579	76%
Chicago, IL	9502094	3.72%	89,687	157,757	68,070	76%
Philadelphia, PA	5822368	2.28%	54,956	96,665	41,709	76%
Washington, DC	5306742	2.08%	50,089	88,104	38,016	76%
Atlanta, GA	5251899	2.06%	49,571	87,194	37,623	76%
Boston, MA	4494144	1.76%	42,419	74,613	32,195	76%
San Francisco, CA	4222756	1.65%	39,857	70,108	30,250	76%
Minneapolis, MN	3197225	1.25%	30,178	53,081	22,904	76%
San Diego, CA	2965943	1.16%	27,995	49,242	21,247	76%
St. Louis, MO	2803854	1.10%	26,465	46,551	20,086	76%
Baltimore MD	2662980	1.04%	25,135	44,212	19,077	76%
Denver, CO	2454378	0.96%	23,166	40,748	17,582	76%
Pittsburgh, PA	2355367	0.92%	22,232	39,105	16,873	76%
Portland, OR	2166809	0.85%	20,452	35,974	15,522	76%
Kansas City, MO	1980619	0.78%	18,694	32,883	14,188	76%
Milwaukee, WI	1543802	0.60%	14,571	25,631	11,059	76%
Honolulu, HI	903231	0.35%	8,525	14,996	6,470	76%
Syracuse, NY	644214	0.25%	6,081	10,695	4,615	76%
Kalamazoo, MI	322497	0.13%	3,044	5,354	2,310	76%
Eau Claire, WI	157434	0.06%	1,486	2,614	1,128	76%

Endnotes

1. See John Bivens and Ethan Pollack, "The Labor Market Impact of Targeted Investments in Transportation Infrastructure: An Analysis of Transportation for America's Jobs Proposal," Economic Policy Institute, Issue Brief #271 (February 4, 2010); "What We Learned from the Stimulus," Center for Neighborhood Technology, Smart Growth America, and US PIRG (January 5, 2010); Surface Transportation Policy Project, *Setting the Record Straight: Transit, Fixing Roads and Bridges Offer Greatest Job Gains* (January 28, 2004); JOBMOD2.1: A Comprehensive Model for Estimating Employment Generation from Federal-Aid Highway Projects, Boston University Center for Transportation Studies under subcontract to Battelle Memorial Institute for the U.S. Department of Transportation, Federal Highway Administration, Office of Transportation Policy Studies (July 2006); available at: <http://www.fhwa.dot.gov/policy/otps/pubs/jobmod/index.htm>.
2. See Todd Swanstrom, *The Road to Jobs: Patterns of Employment in the Construction Industry in Eighteen Metropolitan Areas*, St. Louis: RegionWise, Saint Louis University (August 30, 2007) and Swanstrom, *The Road to Good Jobs: Patterns of Employment in the Construction Industry*, St. Louis: Public Policy Research Center, University of Missouri, St. Louis (September 30, 2008); available at: <http://www.transportationequity.org>.
3. These areas were not chosen because they are representative of the 364 metros with regional transportation plans but because they have grassroots organizations affiliated with TEN working on transportation issues.
4. Transportation for America is a broad national coalition of organizations dedicated to creating a 21st Century transportation system that better serves economic growth, the environment, health, and equity. TEN is a national partner of Transportation for America. To find out more about Transportation for America's proposal for reforming national transportation policy go to: <http://t4america.org/about/>.
5. For an analysis of how Transportation for America's proposal generates more jobs per dollar spent than SAFETEA-LU, see Ethan Pollack, "The Job Impact of Transportation Reauthorization," Economic Policy Institute Issue Brief #280 (June 24, 2010).
6. As quoted in Archon Fung, Mary Graham, and David Weil, *Full Disclosure: The Perils and Promise of Transparency* (New York: Cambridge University Press, 2007), p. 7. This book is an excellent introduction to how transparency can promote meaningful citizen participation.
7. For the latest research on the connection between transportation and health, see Shireen Malekafzali, ed., *Healthy, Equitable Transportation Policy: Recommendations and Research* (PolicyLink, Prevention Institute, and Convergence Partnership, 2009).
8. Barbara Lipman, *A Heavy Load: The Combined Housing and Transportation Burdens of Working Families* (Washington, DC: Center for Housing Policy, October 2006), http://www.nhc.org/pdf/pub_heavy_load_10_06.pdf.
9. Center for Transit-Oriented Development and Center for Neighborhood Technology, *The Affordability Index: A New Tool for Measuring the True Affordability of Housing Choice*, Brookings Institution Urban Markets Initiative, Innovation Brief (January 2006), p. 10.
10. For a synthesis of research on transportation equity, see Thomas W. Sanchez and Marc Brennan, *The Right to Transportation: Moving to Equity* (Chicago, IL: Planners Press, 2007).
11. Joe Cortright, *Portland's Green Dividend, A White Paper from CEOs for Cities* (June 28, 2007); available at: <http://www.globalurban.org/CEOs%20for%20Cities%20Report%20on%20Portland's%20Green%20Dividend.pdf>.

12. Weisbrod and Reno, op. cit., p. 52.

13. Weisbrod and Reno, pp. 53-54.

14. Pollack, op. cit., p. 9.

15. As reported by the Bureau of Labor Statistics: <http://www.bls.gov/oes/current/oes533021.htm#ind>.

16. Swanstrom, 2008, op. cit.

17. For more background on the Missouri Model, see Todd Swanstrom and Laura Barrett, "The Road to Jobs: The Fight for Transportation Equity and Local Hiring," *Social Policy*, Summer 2007; and Swanstrom & Brian Banks, "Going Regional: Community-Based Regionalism, Transportation, and Local Hiring Agreements," *Journal of Planning Education and Research*, Vol. 28 (2009), pp. 355-367.

18. The job generation estimate for transit spending is taken from Glen Weisbrod and Arlee Reno, *Economic Impact of Public Transportation Investment*, Prepared for the American Public Transportation Association (October 2009). This multiplier is based on a "blended" mix of transit spending – 71 percent going to operations and 29 percent to capital investments.

19. The multiplier for highway spending is based on JOBMOD2.1 (see endnote #1), which estimates that each \$1 billion of highway spending generates 31,582 jobs. However, this is not adjusted for land acquisition costs. We estimate that approximately 40 percent of all highway expenditures are spent on new capacity projects and about 10 percent of all spending on new capacity goes for land acquisition that does not generate any new jobs. Therefore, the job multiplier for highways was deflated by 4 percent to 30,319. The estimate for land acquisition costs is from Phillip Mattera, with Greg LeRoy, *The Jobs are Back in Town: Urban Smart Growth and Construction Employment* (Washington, D.C.: Good Jobs First, 2003), p. 32.

20. Weisbrod and Reno.

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