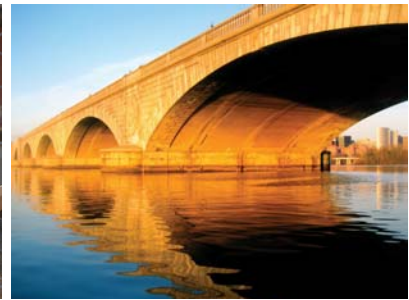


JUNE 2009

Massachusetts and the Stimulus: An Appraisal of Transportation Spending



 **MASSPIRG**

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Acknowledgments

The review of Section 1511 certifications that are at the heart of this report was performed by a team from Charlier Associates, Inc. led by Terri Musser, and by Mark Stout. Numerous SGA state partners assisted.

Allen Rosenfeld at M+R Strategic Services made substantial and crucial contributions.

Helpful review was provided by members of the transportation research group convened by the Brookings Institution, including Rob Puentes, Phineas Baxandall, David Burwell, and Joshua Schank.

Any errors and all interpretations are the responsibility of MASSPIRG Education Fund and Smart Growth America. Please direct questions about this report to Elizabeth Weyant, Staff Attorney for MASSPIRG: eweyant@masspirg.org, and William Schroeer, State Policy Director, Smart Growth America: wschroeer@smartgrowthamerica.org.

This report is a product of *Smart Growth America* (SGA), a coalition of national, state and local organizations working to improve the ways we plan and build our towns, cities, and metropolitan areas, together with MASSPIRG Education Fund, a nonprofit, nonpartisan, public interest organization with 50,000 members across the Commonwealth of Massachusetts. MASSPIRG Education Fund coalition partners include Massachusetts Smart Growth Alliance, and the On the Move Coalition.

SGA and its partners worked with states and cities to help shape how they spend their stimulus funds. In March 2009, SGA and MASSPIRG Education Fund issued *Spending the Stimulus*, a report describing the wide range of projects for which the bulk of the states' ARRA transportation spending could be used.

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1 Executive Summary

120 day stimulus deadline: time to ask “how is the money being spent?”

June 29th marks the 120-day deadline for states to commit at least 50% of the American Recovery and Reinvestment Act’s (ARRA) \$26.6 billion in transportation funds. It provides a vantage point to examine how states are using the money, with a particular focus on the \$438 million apportioned to Massachusetts.

Massachusetts’s choices about which projects to support with its largest and most flexible source of transportation funding shows that the commonwealth is generally doing a good job at using those funds to make progress on the objectives of the economic recovery act.

While there is clearly room for improvement, the commonwealth has done a relatively better job than most other states at spending flexible stimulus funds in ways that will generate jobs and advance the commonwealth’s needs for the future. The commonwealth should also be commended for taking advantage of the ARRA high-speed rail program to prepare proposals for high-speed rail funding.

“Fix-It-First” Priorities

In Massachusetts, 75 percent of the money committed to roads and bridges will go to repair and restoration projects instead of new highways. Nationally, the average among all of the states was 67 percent.

Massachusetts is smart to prioritize fixing existing roads and bridges before building new ones for a number of reasons:

- In general, road and bridge repairs produce 16 percent more jobs respectively than construction of new roads and bridges;
- On average, repair and maintenance projects spend money and create jobs faster than projects that add new capacity;

- Roads and bridges in the commonwealth are in serious need of repair. Best estimates show that 53 percent of roads are not in “good” condition and 52 percent of bridges are structurally deficient.

Investing in public transportation, pedestrians and bicycles

In Massachusetts, 19 percent of the funds will be spent on projects that provide residents choices to get around without driving, by supporting public transportation and projects for walking and biking. This total is far better than the average among other states, where non-road spending totaled only 3.7 percent.

These are smart investments:

- Public transportation projects produce 31 percent more jobs than construction of new roads or bridges;
- Public transportation ridership continues to reach record highs while Americans are driving less;
- Pedestrian and bicycle projects encourage activities that make people healthier and, along with public transportation, encourage more efficient compact development patterns;
- Alternatives to car and truck travel reduce dependence on oil, relieve traffic congestion, and avoid emission of global warming pollution.

Likely job creation

Massachusetts ARRA spending in the first 120 days can be predicted to generate 4,676 jobs. If all flexible funds had been spent on public transportation projects, and additional 950 jobs would likely be generated.

The commonwealth could have made even more progress in each of these areas. The next spending period will show whether performance improves further or slips backward.

2 Introduction: Accountability, Jobs, and Our Transportation Future

2.1 *Transportation, the Recovery Act, and the 120-day milestone*

Through the American Recovery and Reinvestment Act (ARRA), Congress provided states and urban areas (officially, Metropolitan Planning Organizations: MPOs)¹ with a large, one-time-only surge in federal funding for transportation projects – above the annual federal funding. Of the nearly \$50 billion provided for transportation, \$26.6 billion was delivered through the Surface Transportation Program (STP). Under this program, states and MPOs have substantial flexibility in deciding how to spend most of the federal stimulus funding for transportation.

Are they making the best use of this money?

¹ A metropolitan planning organization (MPO) is a policy-making organization for urban areas made up of representatives from local governments and transportation agencies. Among other functions, MPOs are the congressionally mandated recipients, via state departments of transportation, of 30% of federal STP funds. As of 2005, there are 385 MPOs. http://en.wikipedia.org/wiki/Metropolitan_planning_organization.

“We will create millions of jobs by making the single largest new investment in our national infrastructure since the creation of the federal highway system in the 1950s... We won't just throw money at the problem. We'll measure progress by the reforms we make and the results we achieve.”

President-Elect Obama on his goals for federal stimulus legislation in a December 6th, 2008 radio address to the nation

2.2 *The purpose of the report*

The ARRA requires states to commit at least the first fifty percent of their funding to transportation projects by June 29th. The remainder must be committed within a year—by March 1, 2010. MPOs have the full year to commit all of their portion. This report looks at the decisions made by both states and MPOs.

The June 29 deadline for states to commit 50% of their ARRA STP funds is a good time to check on progress and examine how flexible STP ARRA funds are being spent, specifically:

1. *What are they buying with the money?*
What is the likely impact of these investments? What could states and MPOs be buying instead?

2. *How did they decide?* Are state and MPO spending choices transparent and accountable, as intended in the ARRA?

The ARRA funding arrives not only during a recession, but also at a time of embarrassingly large backlogs of road and bridge repairs, inadequate and underfunded public transportation systems, and too-few convenient, affordable transportation options.

These questions have particular resonance now for two reasons. First, many states and MPOs have not yet committed all of their flexible ARRA transportation funds and still have time to learn from others. Second, because the stimulus had to proceed quickly, it is channeled through existing federal programs and guidelines for funding transportation projects. As a result, extra emphasis was placed on “shovel-ready” projects—those already in the pipeline or those quickly made ready. Thus, the projects funded are likely representative or typical of the types of projects/investments normally produced by the current federal transportation program. As such, this examination also provides insights relevant for

the next transportation bill (the current program expires in September of this year).

2.3 Evaluating State and MPO Spending

To answer the first of this report’s questions—are the states and MPOs making the best use of flexible transportation money?—requires that we know the goals these investments are meant to achieve. Accordingly, Chapter 3 gives an overview of the ARRA stimulus goals, breadth of investment opportunities, and the Act’s constraints.

Chapter 4 provides the context for each state’s and MPO’s decisions by providing a data-rich view of the current state of transportation networks.

Chapter 5 examines how much flexible ARRA money states and MPOs are choosing to invest in roads, bridges, highways, public transportation, and non-motorized transportation infrastructure, such as bicycle and pedestrian routes. These investments are then evaluated against the goals of the investments as identified in Chapter 3.

The sixth and seventh chapters shine a light on state and MPO decision-making; is the decision-making process such that an informed public can understand and participate in selecting projects before decisions are made?

3 The ARRA: An opportunity for recipients to create jobs and invest in a 21st century transportation system

3.1 Recovery Act funding for transportation

Rules and Timeline

President Obama signed the American Recovery and Reinvestment Act into law on February 17th, 2009.

On March 2nd, the Administration notified each state of the amounts of stimulus funding that would be provided for spending on transportation projects.² \$26.6 billion was delivered through the Surface Transportation Program (STP). Of that, states must “sub-allocate” 30% to Metropolitan Planning Organizations. (See Appendix 1 for a useful chart of the money flow.) The legislation imposes a “use it or lose it” requirement: *states have 120 days from March 2nd (June 29) to commit to specific transportation projects at least 50% of the transportation funding they*

² FHWA, “Apportionment of Highway Infrastructure Investment Funds Pursuant to the American Recovery and Reinvestment Act of 2009.” www.fhwa.dot.gov/legsregs/directives/notices/n4510705.htm.

received through the Surface Transportation Program. States have one year, until March 1, 2010, to commit their entire allocation of STP funding under ARRA. (See Appendix 2 for a table containing the state-by-state ARRA transportation funding levels that were announced on March 2nd). These deadlines have pushed states towards projects that are “shovel-ready,” meaning they have all permits and reviews completed, or that the projects can be initiated without going through lengthy permitting processes.

Goals

The ARRA gives its purposes as, among other things,

to preserve and create jobs and promote economic recovery; and to invest in transportation, environmental protection, and other infrastructure that will provide long-term economic benefits.

Since the legislation began moving through Congress, both the President and U.S. Secretary of Transportation Ray LaHood have underlined these goals, making strong statements about the importance of using the Recovery Act funds not only to create jobs, but also to help address the nation’s critical, long-term infrastructure challenges. A sample of these highlights their goals.

On February 17th, in a statement marking the signing of the ARRA, Secretary LaHood emphasized,

“We will use the transportation funding in the Act to deliver jobs and restore our nation's economy. We will emphasize sustainable investment and focus our policies on the people, businesses and

communities who use the transportation systems. And, we will focus on the quality of our environment. We will build and restore our transportation foundations until the American dream is returned.”

At a March 12th session of the U.S. Senate Banking, Housing and Urban Development Committee, Secretary LaHood added,

“To me, it is clear that our transportation system and the development it enables must be sustainable. Climate change must be acknowledged as a reality. Funding for public transportation must increase to help out here. Sustainability must permeate all we do, from highways and transit to aviation and ports.”

On April 16th, in discussing the Recovery Act and the nation’s transportation needs, President Obama stated,

“But if we want to move from recovery to prosperity, then we have to do a little bit more. We also have to build a new foundation for our future growth. Today, our aging system of highways and byways, air routes and rail lines is hindering that growth. Our highways are clogged with traffic, costing us \$80 billion a year in lost productivity and wasted fuel. Our airports are choked with increased loads.... We’re at the mercy of fluctuating gas prices all too often; we pump too many greenhouse gases into the air. What we need, then, is a smart transportation system equal to the needs of the 21st century.”

Finally, the legislation requires recipients to give priority to projects that are in “economically distressed areas,” for reasons of both equity and effective recovery.

The most important word in “American Recovery and Reinvestment Act” is “and”. The “Recovery” emphasizes the need for immediate action, *and* the “Reinvestment” emphasizes that the immediate action must have long-term benefits.

In sum, the most important word in “American Recovery and Reinvestment Act” is “and”. The “Recovery” emphasizes the need for immediate action, *and* the “Reinvestment” emphasizes that the immediate action must have long-term benefits. Taken together then, the legislation, the President, and the Transportation Secretary’s statements establish a set of *outcome performance standards* for states and regions as the states and regions spend \$26.6 billion.

Immediately:

1. create and save jobs;
2. Immediately and long-term:
3. fix our crumbling infrastructure;
4. provide a balanced transportation system;
5. improve public transportation;
6. reduce the nation’s energy dependence;
7. promote long-term economic growth;
8. reduce greenhouse gas emissions;
9. not contribute to additional sprawl; and
10. reduce commute times and congestion.

Taken together, the legislation, the President, and the Transportation Secretary also set *process performance standards*: these nine goals are to be pursued through a process that is

1. Equitable
2. Accountable
3. Transparent

3.2 The ARRA gives states and regions the flexibility to fulfill these goals

The ARRA sent the majority of its transportation funding through the Surface Transportation Program (STP), which gives wide latitude in what kinds of transportation projects states and regions may fund. Although the STP is sometimes referred to as “the Highway Program,” that label is a misnomer. Under federal rules, recipients can use STP funding on a wide variety of roadway and non-roadway projects, including:

- fixing deteriorating roads, highways and bridges;
- repairing public transportation infrastructure;
- investing in greater public transportation capacity;
- expanding bicycle and pedestrian routes;
- making safety improvements; and/or
- building new roadways.³

3.3 States and MPOs have the opportunity to fund economically valuable projects

Not all types of projects eligible for STP funding are of equal value to taxpayers. While

³ For a cataloging and description of “flexible” transportation spending opportunities under the STP, see Smart Growth America, *Spending the Stimulus*, May 2009.
<http://stimulus.smartgrowthamerica.org/20ways>.

even during a recession we do not necessarily invest in transportation solely for maximum economic return, as we saw, the ARRA is unmistakably about producing short- and long-run economic returns. Which projects tend to produce the best returns?

The University of Utah’s Metropolitan Research Center reviewed the current state of research and reported six findings relevant to choosing stimulus projects.⁴ While these rules will not necessarily hold for all individual projects, a wide variety of literature finds that:

1. *Public transportation and road and bridge repairs produce more jobs.* Public transportation investments generate 31 percent more jobs than new construction of roads and bridges, and repair work on roads and bridges generates 16 percent more jobs than new bridge and road construction.
2. *Repair and maintenance projects spend money faster and create jobs more quickly than do projects that add capacity.* Repair and maintenance projects are open to more kinds of workers, spend less money on equipment and more on wages, and spend less time on plans and permits. New capacity projects also require more funding for right-of-way (property) acquisition, which has little or no stimulative or reinvestment value.

⁴ Arthur C. Nelson *et al.*, *The Best Stimulus for the Money: Briefing Papers on the Economics of Transportation Spending*, University of Utah’s Metropolitan Research Center and Smart Growth America, April 2009.
<http://stimulus.smartgrowthamerica.org/484>.

3. *Economic returns on roads are falling.* Roadway spending had high rates of economic return in the 1950s and 1960s when that spending created our national highway network, but subsequent investments have steeply declining rates of return. Investments in public transportation now have generally high and less steeply declining rates of return.⁵
4. *Returns can vary by a factor of 100.* The best transportation investments in metropolitan areas improve multi-modal accessibility to regional cores. Economic returns from these investments exceed returns from other investments by a multiple of more than 100.
5. *Fixing existing transportation infrastructure maintenance backlogs produces a higher return on investment than new construction because it:*
 - prevents the need for reconstruction later, which costs 2-14 times as much as repair;
 - saves users money by reducing damage from potholes and vibrations; and
 - produces more jobs and more economic activity than building new roads.

⁵ Transportation Secretary Ray LaHood gives this example: "In one study done in San Antonio, each 1% of regional travel shifted from auto-mobile to public transit increased regional income about \$2.9 million, resulting in 226 additional regional jobs. Other economic benefits include increased productivity, employment, business activity, investment and redevelopment."

<http://fastlane.dot.gov/2009/06/public-transportation-delivers-public-benefits.html>, June 02, 2009.

6. *Investing in areas with high job needs improves employment faster than investing elsewhere.* Putting or keeping transit in communities with high unemployment produces up to 2.5 times more jobs than putting transit in communities with low unemployment.

The last ten years of transportation research has found high rates of return from two other classes of investment:

7. *Coordinating transportation with land use produces higher returns for each.* Building destinations closer to each other reduces the burden on the transportation system. Housing closer to daily needs is in higher demand, and has held its value better during the current downturn. Departments of Transportation can strengthen that coordination by supporting public participation in planning, by prioritizing funding where transportation and land use are coordinated, and by investing in complete streets that add value to adjacent neighborhoods.
8. *Getting more out of the existing system produces higher returns than adding capacity to it.* Studies around the country find that it is far cheaper to meet demand by supporting employer-based transportation demand management, for example, than by adding lanes.⁶ Similarly, better managing the demand on the

⁶ Per public dollar, a Transportation Management Organization (TMO) can accommodate seven times as many commuters as new highway investment, through ridesharing and public transportation. Minnesota Department of Transportation, Modal Options Identity Project, "Measurement and Evaluation", 2006.

existing lanes, whether through transit, Intelligent Transportation Systems, and/or pricing, has been proven across the country to help get more out of the system we have at lower cost.

These results give a clear picture of what kinds of projects are likely to do most to fulfill the goals of the ARRA. Spending on repairs and on investments in public transportation are both very likely to advance the goals of the ARRA. On the other hand, although adding more lane miles to the nation's roadway system creates jobs, new capacity does not add as many jobs, or add them as quickly, nor does it help to address the large national backlog of repairs and maintenance.

Citizens and policymakers often think the economics results described here apply mostly to large urban areas. Certainly more study has been given to urban areas, so most of the examples come from those studies. Yet although rural areas justifiably ask that more study be given to their challenges, almost all of the same principles apply—often with more force. Because they travel farther, rural citizens may be hit harder by rising gas prices and roads in poor condition.

In the context of project selection in the stimulus, it is also important to note that smaller-scale repair projects can be spread more widely around a state, benefitting rural areas.

3.4 States and MPOs have the opportunity to fund projects that meet multiple challenges

Economic goals are foremost in the stimulus, but Congress and the President also

recognized that we live in a changing world where transportation intersects with a range of issues including low income communities' access to the economic opportunity, an aging population, energy security, climate change, and changes in the housing market. Thirty-four official state climate-change action planning processes recognize the need to, and call for reducing, Vehicle Miles Traveled.⁷ These realities are producing real community needs, both economic and non-economic, and will help determine what we need from a 21st century transportation system.

All of those changes will require a transportation system that offers more choice than it does in most places today.

This is not to suggest that any project adding lane miles is contrary to the intent of the ARRA. There are enormous needs for improved connectivity in most metropolitan areas, and new roads are often crucial to returning economic activity to brownfields, for example. New miles of "complete streets" that serve all users, whether they drive or not, will add choice, value, and flexibility for future conditions.⁸

Nonetheless, the data are clear: an ARRA portfolio that spends most of its STP funding on increasing conventional roadway lane miles and relatively little on public transportation, repairs to crumbling infrastructure, or bike and pedestrian routes, would not get the biggest short- and long-term economic stimulus bang for the ARRA buck,

⁷ www.pewclimate.org/what_s_being_done/in_the_states/action_plan_map.cfm

⁸ www.completestreets.org/complete-streets-fundamentals/complete-streets-faq/

nor would that portfolio fulfill the other ARRA goals.

Most of the lessons summarized here are not generally controversial; others, though well supported by experience, are slower to find broad acceptance. No one argues that it is more cost-effective to delay repairing a road than to do it today. Nor are these arguments the province of advocacy groups; global consultant McKinsey & Co. found and reported to the Georgia Governor and Legislature that a portfolio of transportation investments projects in greater Atlanta containing no new lane miles would produce more than 100 times the economic return of a lane-mile expansion portfolio.⁹

This chapter identified the goals in the ARRA, and described what we know about the types of investments that are most likely to accomplish these goals. Of course, individual projects can go against the general finding—the particular circumstances in any state, metro area, or small town are important. The next crucial input to states' decision-making is the state of their transportation systems. The next chapter provides that.

⁹ McKinsey and Company, "IT3 Scenario Results and Implications," Briefing to the General Assembly, State of Georgia, Discussion Document, December 3, 2008.

4 The state of the states' transportation systems: the need

The President's call to rebuild our transportation infrastructure is strongly supported by studies done by federal agencies, civil engineers, and transportation stakeholders. There is little disagreement that our transportation system is urgently in need of repair, restoration, and increased investment in transportation choices.

4.1 Dangerous bridges

The American Society of Civil Engineers (ASCE), using U.S. Department of Transportation (U.S. DOT) data, gave the nation's bridges a grade of "C" in its 2009 *Report Card for America's Infrastructure*. ASCE described the thousands of U.S. bridges rated "structurally deficient" by U.S. DOT as "unsafe." The latest state-based data from U.S. DOT show a deep backlog of bridge repairs in all parts of the country. (See Table 1, below.)

Data from the American Association of State Highway and Transportation Organizations (AASHTO) leaves little doubt about the state of our crumbling transportation infrastructure. AASHTO's *Bridging the Gap: Restoring and Rebuilding the Nation's Bridges* puts the price

tag for repairing the nation's structurally deficient bridges at \$48 billion.¹⁰

4.2 Crumbling Roads

An equally compelling report from AASHTO paints a vivid picture of a massive repair backlog for our nation's roadways. The sobering findings of *Rough Roads Ahead: Fix Them Now or Pay for Them Later*, include:¹¹

- One-third of the nation's highways – interstates, freeways and major roads – are in poor or mediocre condition;
- More than one-quarter of major urban roads, which carry the brunt of national traffic, are in poor condition;
- Major urban areas have the roughest roads. 60 percent of the roads in the greater Los Angeles, San Jose, San Francisco, Honolulu, and Washington, DC, areas are in poor condition;
- Rough roads are not a matter of inconvenience, but add an average of \$335 to the annual cost of owning a car – in some cities an additional \$740 more – due to damaged tires, suspensions and reduced fuel efficiency (see Table 1); and
- Every \$1 spent in keeping a good road in good repair saves \$6-\$14 necessary to rebuild it after it has deteriorated.

¹⁰ July 28, 2008, www.transportation1.org/BridgeReport/front-page.html

¹¹ May 8, 2009, <http://roughroads.transportation.org/>

In sum: states and MPOs face enormous road and bridge repair needs; fixing them saves drivers money today; and saves the departments of transportation—thus taxpayers—6 to 14 times as much money tomorrow.

4.3 Unmet public transportation needs

Our roads and bridges are not the only parts of our transportation infrastructure in need of major repair and improvements. According to the ASCE, the condition of the country's public transportation systems also warrants major increases in federal and state investments. ASCE gave the condition of the U.S. public transportation network a 'D' grade in its *2009 Report Card*. The Federal Transit Administration says that the nation's seven largest systems alone (Chicago's CTA, Boston's MBTA, New York's MTA, New Jersey Transit, San Francisco's BART, Philadelphia's SEPTA, and Washington's WMATA) have a \$50 billion backlog of repairs necessary to reach a state of good repair.¹²

¹² US DOT/Federal Transit Administration, "Rail Modernization Study: REPORT TO CONGRESS," April, 2009. "More than one-third of agencies' assets are either in marginal or poor condition, indicating that these assets are near or have already exceeded their expected useful life. [T]here is an estimated State of Good Repair backlog of roughly \$50 billion (2008 dollars) for the agencies under consideration."

The FTA estimate addresses existing repair needs. Measures of additional needs include:

- *Lack of access.* Roughly 50% of U.S. households lack reliable access to public transportation.¹³
- *Rising use.* In 2008, nearly 10.7 billion trips were taken on U.S. public transportation, a four percent increase over 2007 and the highest level since 1956. Public transportation use has increased 38 percent since 1995, nearly triple the US population growth rate.¹⁴
- *Public demand.* According to a January 2009 National Association of Realtors national opinion survey, a very strong majority of the public (80%) prefer that stimulus transportation funding be used for repairing roadways and bridges and for public transportation.¹⁵

¹³ "According to a 2005 Bureau of the Census survey, only 54 percent of American households have access to public transportation of any kind as they plan their daily travel. These statistics are much worse in rural areas and other areas where the transit services that are provided lack the level of service and amenities that can attract choice riders." William W. Millar, President, American Public Transportation Association, Testimony Before The National Surface Transportation Policy And Revenue Study Commission, July 25, 2007.

¹⁴

www.apta.com/media/releases/090309_ridership.cfm

¹⁵

www.realtor.org/press_room/news_releases/2009/01/smarter_transportation

4.4 Unmet needs for capacity of all kinds

The previous three sections focused on the *repair-only* needs of bridges, roads, and public transportation. The public transportation section then moved into a brief discussion of how trends suggest the need for additional public transportation. The nation also needs additional roads. There is no doubt that the current road system is overtaxed in many places.

We do not offer estimated price tags here for projected needs in additional bridge, road, or transit capacity. Finally, every city in the country has substantial needs for expanded bicycle and pedestrian mobility. We do not offer an estimated price tag for this needed expansion.

States and MPOs choosing how to spend ARRA funds—and taxpayers providing the funds—need to think about how to resolve competing needs for expansion, especially in a context where repair needs for all systems are so substantial. What kinds of investments actually help to solve the multiple challenges of generating the most jobs, the greatest economic return, positioning us to be competitive over the long run, and helping to address the other goals of energy security, climate mitigation, etc.? And how do those investments compare with the investments being made? We turn next to those investment choices.

Table 1: Indicators of road and bridge conditions

	Roads not in “good” condition, 2007, percent¹⁶	Additional costs per driver due to roads in “poor” condition, 2007¹⁷	Structurally deficient bridges, Interstate and state, 2008¹⁸
Alabama	27%	\$162	199
Alaska	72	\$324	77
Arizona	32	\$207	65
Arkansas	62	\$302	285
California	82	\$590	793
Colorado	56	\$292	242
Connecticut	66	\$313	165
Delaware	56	\$282	20
Florida	24	\$126	60
Georgia	8	\$ 44	125
Hawaii	90	\$503	51
Idaho	43	\$318	76
Illinois	54	\$297	822
Indiana	44	\$242	294
Iowa	59	\$383	241
Kansas	25	\$318	71
Kentucky	45	\$187	573
Louisiana	62	\$388	675
Maine	46	\$250	256
Maryland	58	\$425	134
Massachusetts	53	\$301	345
Michigan	49	\$370	441
Minnesota	53	\$347	127
Mississippi	58	\$394	356
Missouri	61	\$410	1,665
Montana	24	\$195	61
Nebraska	38	\$278	116
Nevada	19	\$227	20

¹⁶ Source: AASHTO, *Rough Roads Ahead: Fix Them Now or Pay for Them Later*, <http://roughroads.transportation.org/>. AASHTO reports road conditions in Poor, Mediocre, Fair, and Good condition.

¹⁷ AASHTO, *Rough Roads Ahead*.

¹⁸ “How Deficient and Obsolete Bridges Break Out in 2008”, *Better Roads*, November 30, 2008, using US DOT data to show structurally deficient interstate and state bridges. Many city, county, and township bridges would be eligible for STP funds under ARRA, but not all, so we do not report them here. Pennsylvania did not provide enough detail to break these out.

New Hampshire	40	\$250	133
New Jersey	90	\$596	254
New Mexico	36	\$279	243
New York	65	\$405	698
North Carolina	51	\$251	2,537
North Dakota	43	\$238	26
Ohio	41	\$209	578
Oklahoma	60	\$457	924
Oregon	38	\$166	179
Pennsylvania	67	\$346	**
Rhode Island	82	\$473	150
South Carolina	49	\$262	1,025
South Dakota	49	\$319	86
Tennessee	29	\$180	300
Texas	59	\$336	421
Utah	49	\$176	80
Vermont	55	\$308	190
Virginia	54	\$249	1,054
Washington	47	\$266	152
West Virginia	58	\$280	1,024
Wisconsin	47	\$281	217
Wyoming	45	\$230	76
U.S. Total	49%	\$335	18,722

5 Are states and regions using stimulus money to create jobs quickly, maximize economic returns, and make progress toward a 21st century transportation system?

The previous chapters reviewed the goals of the ARRA legislation, the economics of different transportation investments, and the current state of transportation systems across the country. This chapter examines how states and MPOs are committing ARRA's flexible transportation funds and how those decisions stack up as job creators and economic investments, and how they position the country for the 21st century.

5.1 Determining what projects are being funded

Section 1511 of the ARRA, one of the accountability sections of the law, requires state officials to certify that they reviewed and vetted each infrastructure investment to be funded under the ARRA and that each

investment "is an appropriate use of taxpayer dollars." This section of the law also requires these officials to describe each project, its estimated total cost, and the amount of ARRA dollars used to fund it. As described earlier, the Surface Transportation Program (STP) requires states to sub-allocate 30% of their funding to Metropolitan Planning Organizations (MPOs), and Section 1511 reports also cover the spending commitments made by MPOs.

Information about the transportation projects selected by the states, the District of Columbia, and the MPOs to receive stimulus funding is available from U.S. DOT at <http://testimony.ost.dot.gov/ARRAcerts/>.

SGA reviewed all Section 1511 certifications, from states and MPOs, posted through June 15, 2009. Projects in these filings account for 80 percent of the available \$26.6 billion in STP ARRA funding.¹⁹ States and MPOs have until March 2, 2010 to commit the remaining 20%.

¹⁹ On June 23, 2009, the Transportation and Infrastructure Committee of the US House of Representatives held a hearing on "Recovery Act: 120-Day Progress Report for Transportation Programs." The summary material for that hearing states "Of the \$27.5 billion provided for highways and bridges, 50 States, three Territories, and the District of Columbia have submitted to and received approval from the Federal Highway Administration (FHWA) for 4,366 projects totaling \$14.4 billion, approximately 54 percent of the Recovery Act highway formula funds." <http://transportation.house.gov/hearings/hearingDetail.aspx?NewsID=940>

The SGA analysis uses project lists that states have certified to USDOT. Under Section 1511 of ARRA, states must submit these project lists to

Because the goal of this report is to ask how states and MPOs are using the freedom they have under ARRA, SGA included in this review and analysis only projects funded through the flexible STP funding. The law already determines that a separate \$8.4 billion will be public transportation projects. This study reviews state decisions with flexible STP funds to learn what projects are being funded, and as a window into state decision making and priority setting.

Methodology

SGA and our consultants started with the project lists included in the Section 1511 certification materials submitted by state and regional officials and posted by U.S. DOT on its web site. When those materials were incomplete or insufficient to understand the nature of the project, SGA did additional research. We analyzed line items contained on lists attached to the 1511 Certification letters, and referenced to state DOT websites. In a few cases we had to work hard to get official ARRA-certified project lists that were incorporated directly into State Transportation Improvement Programs.

USDOT, certifying that the projects have been selected in accordance with the procedures required by the act. A project on a certified list can then be obligated, essentially receiving a commitment by USDOT to fund the project. Since there is normally a lag of a few weeks between when a project gets certified and when it gets obligated, the number of certified projects is always greater than the number of obligated projects. USDOT provided the Committee with information on obligations, but has not made any detailed data available to the public. At writing, the Section 1511 lists of certified projects are the only comprehensive project-level data available.

STP projects funded by the ARRA were classified by SGA into five categories:

1. Roadway system preservation;
2. Roadway new capacity;
3. Non-motorized transportation and related;
4. Public transportation and related; and
5. Other types of STP projects that do not fall within the other four categories.

1. *“Roadway system preservation”* projects include all roadway and bridge projects not classified as *“roadway new capacity.”* They correspond to the following Federal Highway Administration (FHWA) categories: safety/traffic management; pavement improvement; bridge replacement; and bridge improvement. In general, this category is composed of projects that do not add lane miles to the roadway system. Types of projects in this category include:

- Highway resurfacing, rehabilitation, and reconstruction
- Bridge rehabilitation and replacement
- Highway and bridge maintenance
- Safety projects
- Intelligent Transportation Systems, signing, traffic signals
- Intersection improvements
- Transportation demand management (e.g., park-and-ride and ridesharing)

2. *“Roadway new capacity”* projects refer to projects that add lane miles to states’ highways, roads, and bridges. Types of projects classified in this category include:

- Construction of new roadways

- Roadway widening projects, including construction of passing lanes and weaving lanes
 - New bridge construction where the project is clearly being built for the purpose of adding capacity in a corridor through construction of a new facility
 - Most turning lanes at intersections counted as preservation, but continuous turning lanes counted as new capacity.
3. *“Non-motorized and related”* projects include all projects designed to facilitate “active” or human-powered transportation that does not rely on cars, buses, trains or trucks. Examples of the types of projects classified in this category include:
- Bicycle projects
 - Pedestrian projects
 - Trails
 - Streetscapes
4. *“Transit and related”* projects include all projects, funded under the STP, that are designed to add capacity to, improve the safety of, preserve, facilitate, and are otherwise related to public transportation.
5. “Other” transportation projects under the STP umbrella that do not fall within the other four classifications include the following:
- Freight rail
 - Maritime
 - Aviation
 - ‘Transportation enhancements’ other than those classified within the “Non-

motorized Transportation” category, including, for example, historic preservation, outdoor advertising control, and landscaping that is not part of a streetscaping project.

- Administrative computer systems
- Planning studies
- Contingency budgets

The title “Other” for this category should in no way be interpreted as a judgment on the importance of the projects within it; all of these are important types of spending. For instance, “coordinating with land use” and “system management” would fall into this category. A more thorough analysis of spending decisions would break out not only the project types in “Other,” but also subdivide the other main categories as well.

Challenges in understanding states’ reporting

Not all states provided information about STP-funded projects with their Section 1511 certification letters that could be used to assign projects accurately to one of the five types of project categories used in this analysis.

Some states, for example, did not provide lists of projects with their Section 1511 certification letters as required by the ARRA. Other states that provided project lists failed to provide detailed-enough descriptions for analysts to classify specific projects according to the categories used in this report. Still other states labeled projects that added new roadway capacity as retrofit or improvement projects that would, without close examination, be

mischaracterized as “roadway system preservation” projects. In each case, SGA had to gain access to other sources of information, including supplemental web resources and through special requests to state DOTs.

We regard the overall patterns established by the data to be sound. Given the thousands of projects, the risk that enough were mischaracterized to change the findings is small.

5.2 *Where states are spending ARRA’s flexible transportation money*

Nationally

Table 2 presents the data available as of June 15 about the types and estimated cost of projects for each state to be funded under the STP of the ARRA based on Section 1511 certification data and other sources. Data are presented in both dollar amounts and percentage terms. States are listed alphabetically for easy reference.

Table 2: ARRA Surface Transportation Program commitments per Section 1511 Certifications through 6/15/09, by state

	Total (all \$ in M)	Highway System Preservation	Percent- age	Highway New Capacity	Percent- age	Non- Motorized + Related	Percent- age	Transit + Related	Percent- age	Other	
1	Alabama	482.7	324.8	67%	154.1	32%	2.8	1%	0.8	0.2%	0.2
2	Alaska	158.7	147.2	93%	0.0	0%	3.8	2%	0.0	0%	7.7
3	Arizona	526.6	274.1	52%	205.1	39%	27.2	5%	0.0	0%	3.8
4	Arkansas	335.8	51.1	15.2%	273.2	81.4%	0.0	0.0%	0.0	0%	11.5
5	California	2,169.5	1175.7	54%	902.5	42%	41.4	2%	12.8	1%	36.0
6	Colorado	411.7	306.2	74%	56.7	14%	16.6	4%	31.1	8%	1.1
7	Connecticut	181.7	181.7	100%	0.0	0%	0.0	0%	0.0	0%	0.0
8	Delaware	143.0	102.3	72%	0.0	0%	17.4	12%	22.5	16%	0.8
9	D. of Columbia	123.5	71.2	58%	0.0	0%	51.2	41%	0.0	0%	1.1
10	Florida	1,354.0	293.2	22%	991.3	73%	54.5	4%	4.6	0.3%	6.2
11	Georgia	541.1	329.1	61%	156.5	29%	25.4	5%	25.0	5%	5.1
12	Hawaii	92.3	55.0	60%	26.8	29%	10.1	11%	0.0	0%	0.4
13	Idaho	173.1	133.6	77%	29.1	17%	8.1	5%	0.0	0%	2.4
14	Illinois	510.9	487.8	95%	22.8	4%	0.0	0%	0.0	0%	0.3
15	Indiana	274.4	154.9	56%	113.0	41%	0.0	0%	0.0	0%	6.5
16	Iowa	231.4	178.8	77%	14.4	6%	12.3	5%	25.9	11%	0.0
17	Kansas	484.1	65.8	14%	409.5	85%	4.7	1%	0.0	0%	4.1
18	Kentucky	310.8	36.0	12%	266.8	86%	3.5	1%	0.0	0%	4.5
19	Louisiana	338.6	215.5	64%	110.3	33%	12.8	4%	0.0	0%	0.0
20	Maine	131.4	127.5	97%	0.0	0%	1.9	1%	0.0	0%	2.0
21	Maryland	224.6	210.1	94%	0.0	0%	13.6	6%	0.0	0%	0.9
22	Massachusetts	336.2	202.5	60%	66.9	20%	47.0	14%	16.8	5%	0.0
23	Michigan	797.9	663.3	83%	96.1	12%	30.5	4%	0.9	0.1%	7.1
24	Minnesota	407.2	339.1	83%	66.2	16%	0.0	0%	0.0	0%	1.9
25	Mississippi	309.8	269.2	87%	39.2	13%	1.4	0%	0.0	0%	0.0
26	Missouri	135.7	115.8	85%	20.0	15%	0.0	0%	0.0	0%	0.0
27	Montana	173.5	112.8	65%	48.0	28%	6.8	4%	0.0	0%	5.9

28	Nebraska	188.5	151.5	80%	34.7	18%	2.1	1%	0.0	0%	0.2
29	Nevada	204.8	185.8	91%	5.0	2%	0.0	0%	0.4	0.2%	13.6
30	N. Hampshire	120.0	63.5	53%	54.5	45%	2.0	2%	0.0	0%	0.0
31	New Jersey	461.5	441.9	96%	0.0	0%	19.6	4%	0.0	0%	0.0
32	New Mexico	107.9	85.9	80%	22.0	20%	0.0	0%	0.0	0%	0.0
33	New York	600.9	557.3	93%	27.0	4%	10.1	2%	4.8	1%	1.7
34	North Carolina	694.3	336.9	49%	317.8	46%	24.6	4%	4.3	1%	10.6
35	North Dakota	95.1	95.1	100%	0.0	0%	0.0	0%	0.0	0%	0.0
36	Ohio	1,054.2	414.3	39%	445.3	42%	11.7	1%	18.2	2%	164.7
37	Oklahoma	481.3	435.4	90%	45.9	10%	0.0	0%	0.0	0%	0.0
38	Oregon	248.1	133.9	54%	41.9	17%	20.2	8%	21.3	9%	30.8
39	Pennsylvania	1,026.8	929.4	91%	58.9	6%	38.4	4%	0.0	0%	0.1
40	Rhode Island	138.5	127.1	92%	0.0	0%	10.4	8%	0.0	0%	1.0
41	South Carolina	433.5	354.0	82%	67.5	16%	12.0	3%	0.0	0%	0.0
42	South Dakota	106.2	106.2	100%	0.0	0%	0.0	0%	0.0	0%	0.0
43	Tennessee	468.4	278.8	60%	186.8	40%	0.0	0%	0.0	0%	2.8
44	Texas	1,529.4	781.7	51%	697.4	46%	7.7	0.5%	0.0	0%	42.6
45	Utah	232.5	154.5	66%	69.6	30%	8.1	3%	0.0	0%	0.4
46	Vermont	59.5	59.6	100%	0.0	0%	0.0	0%	0.0	0%	0.0
47	Virginia	472.1	302.3	64.0%	139.9	30%	20.9	4%	0.0	0%	9.0
48	Washington	493.9	303.3	61%	143.9	29%	20.5	4%	0.0	0%	26.3
49	West Virginia	208.3	112.3	54%	96.0	46%	0.0	0%	0.0	0%	0.0
50	Wisconsin	393.6	251.7	64%	137.8	35%	4.1	1%	0.0	0%	0.0
51	Wyoming	158.4	128.5	81%	25.4	16%	0.0	0%	0.0	0%	4.5
Totals		\$21,337.9	\$13,415.1		\$6,685.8		\$605.4		\$189.4		\$417.7
% Total			62.9%		31.3%		2.8%		0.9%		2.0%

Source: Analysis of state Section 1511 certifications by Charlier Associates, Inc. and Mark Stout. With rare exceptions, category totals are rounded.

* Arkansas' 103 projects total \$421.2M, which is greater than the \$335.8M in ARRA funds available. The \$85.4M balance will be funded from other Federal-aid, State and/or local funds as appropriate, but no break-outs of ARRA funds were provided per line item. The figures in the table are pro-rated to total \$335.8M.

From a national perspective, the commitments in Table 2 as of June 15, add up to 80% of the total STP funding available to the states under the ARRA.

With those funds, the states committed the following amounts.

Amount	Allocated to:
\$ 6.6 billion (31%)	Roadway new capacity projects
\$ 21.3 billion (63%)	Roadway preservation projects
\$605.4 million (2.8%)	Non-motorized projects
\$189.4 million (0.9%)	Public transportation projects
\$417.7 million (2.0%)	Other types of projects

On a national level, does this set of spending decisions by states and regions fulfill the goals of the ARRA? Table 3, on the next page, answers this question for each of the nine ARRA goals, drawing on the goals and the state of the knowledge reviewed in Chapter 2.

Note that the spending summary covers many thousands of projects, and it is not possible to evaluate each of them in terms of the nine goals for the stimulus in Chapter 3. This report evaluates the spending decisions in the aggregate against those goals. The logical objection to this method of analysis is that it does not capture the specifics of a project. This is true, and from an individual project perspective this is a weakness. The aggregate nature of this analysis is also this study's biggest strength. The study is a "big picture" assessment of how federal dollars are being spent, and this seems an appropriate way to evaluate a federal program. Unlike planning for specific projects (by far the dominant mode of planning in transportation), this study looks at the overall goals of the federal program—what are we trying to buy with our \$26.6 billion of taxpayer money?—and examines the flow of resources to see how much is going to accomplish which goals. In much the same way, a business might look at its overall expenditures to see if they are in line with its business objectives.

Table 3: Will state and regional stimulus spending decisions fulfill the goals of the stimulus?

Stimulus performance measure	Will the selected projects do that?
1. Create and save jobs	Yes , but they will not create as many or as quickly as they could have. For instance, studies suggest spending another \$2 billion on repair would have created 4,300 new jobs, more quickly.
2. Fix our crumbling infrastructure	Yes , but not as much as it could have. The 60% share for repair and preservation is a vital investment in catching up. But states and regions will now have \$6 billion more miles of roads to maintain...when they could not afford to maintain the ones they already have.
3. Provide a balanced transportation system	No . Less than 7% of spending is going to projects that will increase transportation choices for people and freight.
4. Improve public transportation	No . The ARRA's \$8.4 billion in capital grants for public transportation elsewhere in the ARRA will certainly help. The states sending 0.9% of flexible funds for transit will have little overall effect.
5. Reduce the nation's energy dependence	No . Repaired roads are marginally more efficient. But the spending going to roads, accounting for 93% of the total, will not reduce oil consumption in any meaningful way. And the 30% going to new roads will generally increase consumption.
6. Promote long-term economic growth	Mixed . Repairing roads and bridges saves drivers and society money. That money can now be invested in other productive uses. But the 30% for new roads will, for the most part, go to a category of investments whose economic returns have been falling, while missing high-return investments in system management and public transportation, coordinated with growth.
7. Reduce greenhouse gas emissions	No , for the same reasons as #5.
8. Not contribute to additional sprawl	No . New capacity need not add to sprawl, but the number, type, and location of many of the of new and widened roads planned will almost certainly contribute to sprawl.
9. Reduce commute times and congestion	Mixed . In the short run, additional lanes may ease congestion. In the long run, the congestion-reducing benefits of additional public transportation generally outweigh those of additional lane miles, which fill up again.

The performance of the states' chosen projects on each of these performance measures could be discussed at length. Three conclusions about state and regional decision-making, as a whole, seem particularly strong.

1. ***Despite a multi-trillion dollar backlog of roadway and bridge repairs throughout the country, almost a third of the money — more than \$6.6 billion — was committed to new capacity roads and bridges rather than to repair and other preservation projects.***

The nation is growing, and many areas need substantial improvements in connectivity. Many places will need additional roadway capacity. However, given the enormous roadway and bridge repair backlog, its costs in terms of vehicle repairs, its threat to human safety, and the job-creation advantages of roadway preservation projects, this magnitude of new construction cannot said to be fulfilling the goals of the ARRA.

2. ***States generally failed to take advantage of a golden opportunity offered by the flexibility in the STP to make progress on the huge public transportation backlog, and move towards a more balanced transportation system.***

In view of the growing demand, the need for upgrading identified in the ASCE report, and the multiple benefits of public transportation, the \$189 million in STP funding allocated by the states so far is grossly inadequate. Even when the mandatory, non-STP funding for public transportation is taken into consideration, the total commitment to transportation choice falls far short of the need.

The \$600 million in STP funding commitments to non-motorized transportation is better, but also fails to meaningfully respond to the public's need for more affordable and healthy transportation options. This level of spending for bicycling and walking will have minimal impact on the nation's stock of bicycle and pedestrian routes, or on individual mobility.

3. ***We could get much more from our transportation spending, but the federal program isn't set up to ensure that we get the most from the money spent. With scarce resources, large backlogs and increasing challenges, it's an opportunity we can't afford to waste.***

The data make clear that with different funding choices, greater progress could have been made combating climate change, increasing energy security, increasing mobility for elderly and low income populations, and reducing the repair backlog. More jobs could have been created more quickly. However, the federal transportation program does not clearly articulate what goals should be achieved with each tax dollar spent, nor how to compare different spending options against those goals, nor how to ensure progress towards meeting them. The result is wasted opportunity and money.

Taken together, the data shows the need for future policy reforms that will better encourage states to make greater progress on pressing needs.

Table 4: State rankings

	% of total road spending allocated to: ²⁰			Percent of roads not in "good" condition	Percent of funding on public transportation + non-motorized projects ²¹	
	System Preservation	New Capacity				
1	Alaska	100%	0%	72%	District of Columbia	41.5%
2	Connecticut	100%	0%	66%	Delaware	27.9%
3	Delaware	100%	0%	56%	Massachusetts	19.0%
4	District of Columbia	100%	0%		Oregon	16.7%
5	Maine	100%	0%	46%	Iowa	16.5%
6	Maryland	100%	0%	58%	Colorado	11.3%
7	New Jersey	100%	0%	90%	Hawaii	10.9%
8	North Dakota	100%	0%	43%	Georgia	9.3%
9	Rhode Island	100%	0%	83%	Rhode Island	7.5%
10	South Dakota	100%	0%	49%	Maryland	6.1%
11	Vermont	100%	0%	55%	Arizona	5.2%
12	Nevada	97%	3%	19%	Virginia	5.2%
13	Illinois	96%	4%	54%	Idaho	4.7%
14	New York	95%	5%	65%	Florida	4.4%
15	Pennsylvania	94%	6%	67%	New Jersey	4.2%
16	Iowa	93%	7%	59%	North Carolina	4.2%
17	Oklahoma	90%	10%	60%	Washington	4.2%
18	Michigan	87%	13%	49%	Michigan	3.9%
19	Mississippi	87%	13%	58%	Montana	3.9%
20	Missouri	85%	15%	61%	Louisiana	3.8%
21	Colorado	84%	16%	56%	Pennsylvania	3.7%
22	Minnesota	84%	16%	53%	Utah	3.5%
23	South Carolina	84%	16%	49%	Ohio	2.8%
24	Wyoming	83%	17%	45%	South Carolina	2.8%
25	Idaho	82%	18%	43%	California	2.5%
26	Nebraska	81%	19%	38%	New York	2.5%
27	New Mexico	80%	20%	36%	Alaska	2.4%
28	Oregon	76%	24%	38%	New Hampshire	1.7%
29	Massachusetts	75%	25%	49%	Maine	1.4%
30	Georgia	73%	27%	8%	Kentucky	1.2%
31	Montana	70%	30%	24%	Nebraska	1.1%
32	Utah	69%	31%	49%	Kansas	1.0%

²⁰ Starting with the figures in Table 2: Percent of road money each state is allocating to:

$$\text{System Preservation} = \frac{\$ \text{ for System Preservation}}{(\$ \text{ for System Preservation} + \$ \text{ for New Capacity})}$$

$$\text{New Capacity} = \frac{\$ \text{ for New Capacity}}{(\$ \text{ for System Preservation} + \$ \text{ for New Capacity})}$$

²¹ From Table 1.

33	Alabama	68%	32%	27%	Wisconsin	1.0%
34	Washington	68%	32%	47%	Alabama	0.7%
35	Hawaii	67%	33%	90%	Mississippi	0.5%
36	Louisiana	66%	34%	62%	Texas	0.5%
37	Wisconsin	65%	35%	47%	Nevada	0.2%
38	Tennessee	60%	40%	29%	Arkansas	0.0%
39	Virginia	60%	40%	54%	Connecticut	0.0%
40	Indiana	58%	42%	44%	Illinois	0.0%
41	Arizona	57%	43%	32%	Indiana	0.0%
42	California	57%	43%	82%	Minnesota	0.0%
43	New Hampshire	54%	46%	40%	Missouri	0.0%
44	West Virginia	54%	46%	58%	New Mexico	0.0%
45	Texas	53%	47%	59%	North Dakota	0.0%
46	North Carolina	51%	49%	51%	Oklahoma	0.0%
47	Ohio	48%	52%	41%	South Dakota	0.0%
48	Florida	23%	77%	24%	Tennessee	0.0%
49	Arkansas	15%	85%	62%	Vermont	0.0%
50	Kansas	14%	86%	25%	West Virginia	0.0%
51	Kentucky	12%	88%	45%	Wyoming	0.0%

6 Massachusetts and the Stimulus

6.1 Overview

When compared to other states, Massachusetts did an excellent job of spending its discretionary STP funds on projects for repairing and preserving existing highways, investing in public transportation, and advancing bike and pedestrian projects. By doing so, the commonwealth both embraced 21st century priorities and increased the likely number of jobs that will be created with the ARRA funds. As this report details, the Executive Office of Transportation should be commended.

There is, however, room for improvement. The state could use a larger portion of STP funds for public transit and non-motorized transportation, particularly in a state where new and wider highways are not really an option. With so little population growth and no unincorporated land, it is arguable that all of the commonwealth's discretionary spending should have been used on system preservation, transit, and non-motorized transportation projects. We hope that the second tranche of spending will show even better performance.

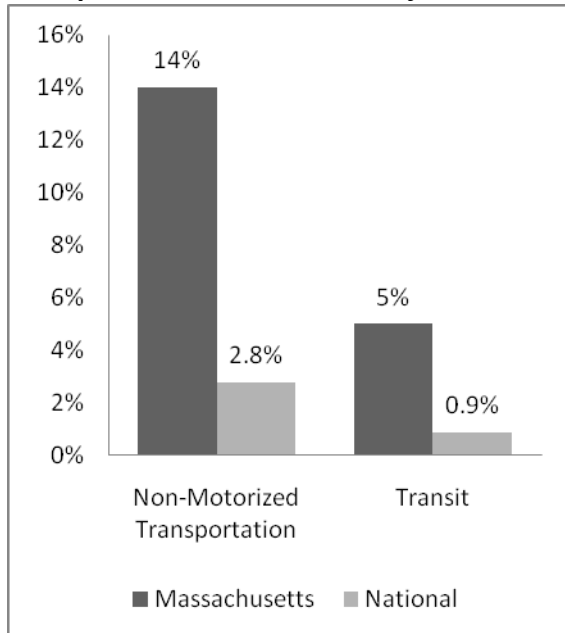
What follows below highlights the Massachusetts projects that received discretionary STP funds under ARRA, and gives a side-by-side comparison between Massachusetts's spending categories compared to the national average.

6.2 How Massachusetts stacks up to the nation

Compared to the national average, Massachusetts spent a greater proportion of stimulus funds on public transportation and bike/pedestrian projects, and a smaller proportion on road projects. Of the funds spent on roads, Massachusetts spent a significantly larger proportion than the national average on preservation or repair of existing roads and bridges, rather than building new highways. In both respects, Massachusetts stands out in advancing 21st century goals for transportation and for spending in ways that are likely to have significant job-creation or job-saving outcomes.

Table 4 illustrates that Massachusetts is a leader in public transportation and bicycle and pedestrian projects, coming in 3rd in the state rankings, with only the District of Columbia and Delaware spending a higher proportion of funds in these two categories. Massachusetts spent \$63,800,000 on these two categories of projects. Figure 1 reveals that Massachusetts invested 5 percent of its funds in public transportation, compared to a national average of 0.9 percent. Massachusetts spent 14 percent of its funds on non-motorized transportation projects, which include bike and pedestrian projects, compared to a national average of 2.8 percent.

Figure 1: Massachusetts vs. National STP Spending* on Non-Motorized Transportation and Transit Projects**



* The figures above represent discretionary Surface Transportation Program projects certified by June 15 and do not represent Federal Transit Administration funds that can only be used for public transportation or other sources of transportation funds.

** This calculation does not include the proposed Mattapan Bus 28X improvement project, which has not yet been approved or certified.

Massachusetts spent a significantly higher percentage of its stimulus funds on public transportation projects, than did almost any other state. Spending stimulus dollars on buses, rail, and commuter ferry makes sense. Not only do public transit projects tends to create more jobs, they also create a number of other public benefits because they are more energy efficient than cars, reduce traffic congestion of cars and trucks, reduce the number of traffic fatalities, and make possible more efficient forms of compact development. In 2006, for example, public transportation in Massachusetts saved 153 million gallons of oil and avoided almost 1.2 million metric tons of

global warming pollution.²² Investment in public transportation makes sense.

One of the commonwealth’s more innovative transit projects is the reconstruction of the Blossom Street Ferry Terminal in Lynn. The \$4 million project promotes recreational use of the boat ramp at the Blossom Street Waterfront Facility, while maintaining its current use by commercial vessels. It provides a removable vessel docking facility that is accessible for people with disabilities and will be used to link a Harborwalk that will extend along the water from Blossom Street northward to Lynn Heritage State Park. The Harborwalk will create easy access to an important cultural, heritage and nature center, while avoiding auto trips around the lake and preserving the natural habitat. Money for this project will be flexed to the MBTA, as they will operate the ferry facilities and allow for commuter capacity.

A second public transportation project involves the construction of the Franklin Intermodal Transportation Center, a bus hub in Greenfield, Massachusetts. The \$12.8 million project will simplify bus-to-bus transfers and improve the overall operations of the Franklin Regional Transit Authority. The building will undergo “green design” and will be constructed to provide for the possibility of providing a direct connection to future high speed rail service along the Knowledge Corridor/Connecticut River Line, discussed below.

²² A Better Way to Go: Meeting America’s 21st Century Transportation Challenges with Modern Public Transit (MASSPIRG Education Fund, March 2008).

An additional significant project that hasn't yet undergone 1511 Certification, but is currently "in the works," involves improvements to the Bus 28 route. The proposed 28X involves a proposal for Bus Rapid Transit that would operate via Blue Hill Avenue and Warren Street, and would serve Dudley Station. The new service would include dedicated bus lanes, new stations with heaters and CharlieCard machines, improved boarding with off-bus fare-payment and direct-level boarding, clean-running busses, and traffic features that would speed up service. The project would more quickly connect residents in Roxbury and Mattapan to the Orange and Red lines at Dudley and Ruggles stations, as well as many bus routes.

The proposed Bus 28X improvement project is a \$114 million project, which includes a plan to flex \$53 million of Surface Transportation Project money. The current bus route sees 12,000 boarders a day, making it one of the busiest routes to downtown.

If the proposed Bus 28X improvement project undergoes 1511 certification, it will be the largest commitment of STP funds for a public transportation project in the commonwealth, and one of the largest in the country. In fact, if the project had completed certification and were included in our calculations, transit spending would amount to nearly 30 percent of stimulus spending in Massachusetts. Community meetings about the Bus 28X improvement project are ongoing.

As with public transportation, Massachusetts spent more than almost every other state on non-motorized transportation projects. The most significant project involves the construction of the North Bank Bridge, a \$36

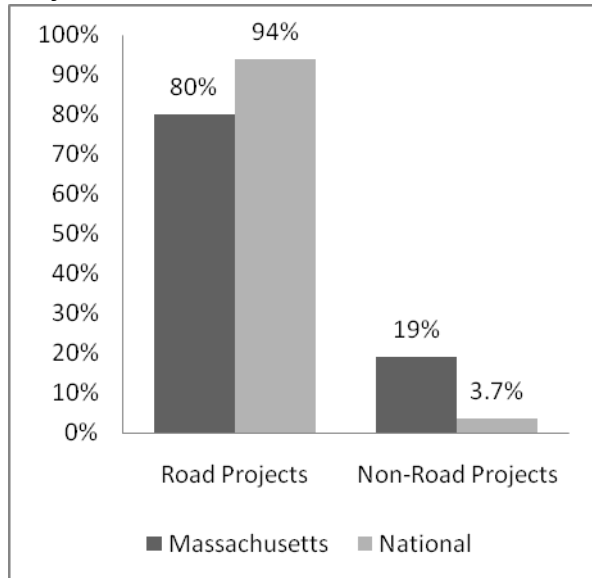
million pedestrian structure that will link North Point Park in Cambridge with Paul Revere Park in Charlestown. Interestingly, the pedestrian walkway will be constructed over MBTA Commuter Rail tracks and will meet the Americans with Disabilities Act standards for handicap accessibility. The project also includes multi-use paths at the parks on both sides of the bridge.

Another highly significant project is the construction of a multi-use path connecting the Minuteman and Mystic River pedestrian and bike path corridors. The \$3 million project will also provide a direct off-road link to the Alewife T station, which is the most highly accessed T-station via bicycle in the Boston area. The project includes ecological restoration of sections of the Alewife Brook and safety improvements at Massachusetts Avenue and Broadway.

A third noteworthy non-motorized transportation project is a multi-use recreational rail-trail project that starts at Ferry Street in Easthampton and ends at Earle Street in Northampton. It will link the Manhan Bike train in Easthampton to the Manhan/Norwottuck Link in Northampton.

Massachusetts is a leader in extending Surface Transportation Project funds to non-highway uses, including public transit and bicycle/pedestrian projects that make sense for 21st century transportation. As Figure 2 shows, Massachusetts focused nearly 20 percent of its spending on non-road projects, compared with a national average of less than 4 percent.

Figure 2: Massachusetts vs. National STP* Spending on Road and Non-Road Projects**



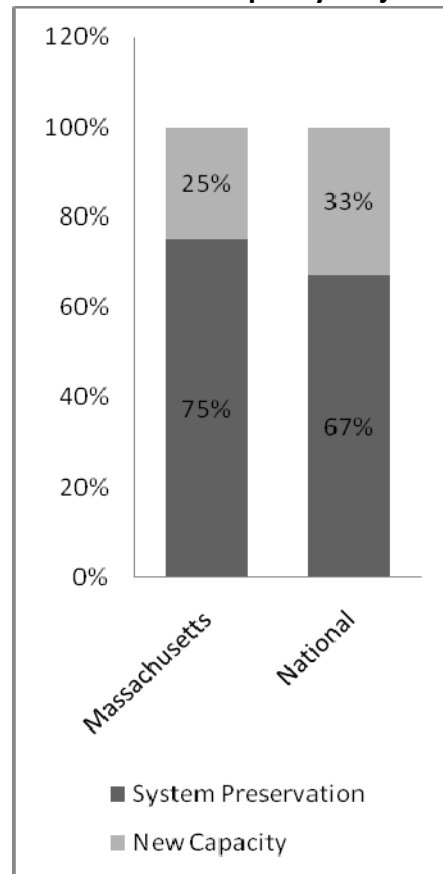
* The figures represent discretionary Surface Transportation Program projects certified by June 15 and do not represent Federal Transit Administration funds that can only be used for public transportation or other sources of transportation funds.

** This calculation does not include the proposed Mattapan Bus 28X improvement project, which has not yet been approved or certified.

Moreover, the commonwealth wisely spent the vast majority of its highway allocations on preserving existing roads and bridges rather than creating additional highway lanes or roads. This “fix-it-first” approach is likely to create more jobs and saves in future infrastructure costs. As Table 1 earlier in this report indicates, 53 percent of roads in the commonwealth are not in “good” condition. In fact, it is estimated that the per-driver cost of driving on roads in “poor” condition is \$301. By last count, 345 bridges across Massachusetts were deemed by engineers to be “structurally deficient.” It is no understatement that preservation and repair work on the commonwealth’s roads and bridges is badly needed.

The commonwealth’s priority in using its road spending to address these critical needs is clear in Figure 3. Of the total of \$264,300,000,000 that was spent on road projects in Massachusetts, Figure 3 illustrates that 75 percent was spent on projects that preserve the existing roads and bridges, and 25 percent was spent on new capacity projects. On average, states spent 67 percent of road spending on preservation, and 33 percent on new capacity projects.

Figure 3: Massachusetts vs. National Flexible STP Spending* on System Preservation and New Capacity Projects



* The figures above represent discretionary Surface Transportation Program projects certified by June 15 and do not represent Federal Transit Administration funds that can only be used for public transportation or other sources of transportation funds.

The money allocated to new capacity projects in the commonwealth will be used entirely for just one project, known as the Fall River Interchange. The interchange will cost \$66.9 million, and involves the construction of a new interchange on Route 24 in Freetown and access roadways to the Fall River Executive Park, which is located in a federally-designated economically disadvantaged area of the commonwealth. Construction of the executive park leads directly to job creation opportunities, and the interchange is the way to get people directly to those opportunities. The state reasons that the project creates an opportunity to put people to work on a major infrastructure project that will have a lasting job-creation component. Thus, while this project is a poor choice from the point of view of “fix-it-first” principles of highway preservation, its economic development merits are consistent with the goals of the ARRA.

As in most states, many of the highway preservation projects in Massachusetts involved repaving projects aimed at repairing and resurfacing our aging and overused roads. However, there are several unique projects that are classified as “system preservation” that are worth highlighting.

The first is a \$6 million reconstruction project on Nonantum Road in the Boston area. The project includes narrowing a current four-lane parkway to two lanes, and increasing the width of multi-use trail and parkland along the Charles River.

A second noteworthy project will use \$8.1 million in stimulus funds to improve existing ferry terminals, used for passenger pick-up and drop-off in Barnstable, Falmouth, and Oak

Bluffs. The ferry projects are an investment in the commonwealth’s “Blue Highways.”

6.3 Job creation in Massachusetts

The American Recovery and Reinvestment Act is “an . . . effort to jumpstart our economy, save and create millions of jobs, and put a down payment on addressing long-neglected challenges so our country can thrive in the 21st century.”²³

Research indicates that states who choose to invest their stimulus transportation funds into immediate repair and maintenance projects and public transit projects, as Massachusetts has done, stand the best chance of creating more jobs. To calculate the likely job benefits of the commonwealth’s commendable practices, we draw on two papers which note that “highway repair and maintenance expenditures generate more jobs per \$1 billion expended than new construction . . .”²⁴ Specifically, data analyzed by researchers James Heintz, Robert Pollin, and Heidi Garrett-Peltier at the University of Massachusetts at Amherst, showed that transit projects generate 31 percent more jobs than new construction of roads and bridges, per \$1 billion spent. System preservation projects generate 16 percent more jobs than building new roads and lanes.

²³ <http://www.recovery.gov/?q=content/our-mission>

²⁴ May 2009, Smart Growth America and the University of Utah released “The Best Stimulus for the Money: Briefing Papers on the Economics of Transportation Spending,” <http://stimulus.smartgrowthamerica.org/wp-content/uploads/2009/05/thebeststimulus.pdf>.

Using their data to analyze stimulus spending in Massachusetts yields the following predictions about the likely number of jobs that will be generated by spending during the first 120 days:

	Funds Allocated	Jobs Created
System Preservation Projects	\$202,500,000	2,995
New Capacity Projects	\$66,900,000	845
Transit Projects	\$47,000,000	836
TOTAL	\$316,400,000	4,676

**For a detailed explanation of their data and methodology, visit <http://stimulus.smartgrowthamerica.org/wp-content/uploads/2009/05/thebeststimulus.pdf>*

In Massachusetts, the money spent in the first 120 days of stimulus funding can be predicted to create or save a total of 4,676 jobs. If Massachusetts had elected to spend all of its stimulus funds on transit projects, an additional 950 jobs would likely be generated. Because a major purpose of the stimulus package is to put as many people back to work as quickly as possible, by prioritizing those projects that preserve existing roads and increase public transportation, Massachusetts has made great strides towards job creation.

6.4 The future of Massachusetts and the stimulus: high speed rail

In April 2009, The President outlined his vision to build high-speed rail corridors across America. The American Recovery and Reinvestment Act includes \$8 billion for competitive grants for high-speed rail, including upgrading of current routes for high speed. According to the Executive Office of Transportation, the commonwealth plans to

apply for grant funding for at least two and as many as five promising projects before the August 2009 application deadline.

The first project, known as the Knowledge Corridor project, will rehabilitate the existing Connecticut River rail line, and thereby connect Springfield, Massachusetts to Vermont and cities north. Once rehabilitation is complete, the Amtrak Vermonter service will be rerouted to this line, which will provide faster service and restored access to the cities of Chicopee, Holyoke, Northampton, and Greenfield. Massachusetts is working collaboratively with Vermont on this project.

The Downeaster Line provides intercity passenger rail service between Boston's North Station, and Portland, Maine. The project is designed to reduce travel time and create a convenient and quick connection between Boston and Portland. Massachusetts is working collaboratively with Northern New England Passenger Rail Authority. An additional reason for this project is that future expansion is planned North of Portland on the Maine side of the Downeaster line.

In addition to these two projects, the Executive Office of Transportation is working on three additional high-speed rail and passenger rail projects, for which they hope to apply for future ARRA funding. The first would benefit existing Amtrak service and support new commuter rail service on the Springfield Line, between Springfield, Massachusetts, and New Haven, Connecticut. The second project would support South Coast Rail. The final project would support Boston-Worcester-Springfield high-speed rail service to New Haven, Connecticut, and Montreal, Canada.

The future of these projects is ultimately the future of stimulus spending in Massachusetts. We look forward to seeing what projects receive funding under the next phase of ARRA.

7 Public accountability and transparency in the Recovery Act

Accountability has been a central tenet of the ARRA. The Administration has made a commitment that public officials will be held accountable to the American people for the way they allocate and spend stimulus funds. Numerous statements by the President underline the focus on transparency and accountability.

In the initial recovery implementation memorandum to heads of departments and agencies on February 9th, the President said,

“Following through on our commitments for accountability and openness will create a foundation upon which we can build as we continue to tackle the economic crisis and the many other challenges facing our nation.”²⁵

On February 17th, the day he signed the recovery package, the President added:

“[W]e expect you, the American people, to hold us accountable for the results.”²⁶

At the March 4th signing of a presidential memorandum instructing federal agency heads to strengthen oversight and

management of taxpayer dollars, the President stated:

“[T]he American people have every right to expect and to demand a government that is more efficient, more accountable, and more responsible in keeping the public’s trust.”²⁷

The Administration’s commitment to an accountable stimulus process is consistent with public opinion. In a February poll conducted by Lake Research Partners and the Topos Partnership, voters expressed strong support for reforms to make the economic recovery package transparent and accountable to the public.²⁸ According to the poll results:

- Voters want full and open reporting on how the recovery money is spent, with voters of all political stripes strongly supporting the creation of web-based tracking and reporting requirements — at both the federal and the state level — to ensure that federal money is effectively spent and has a positive impact on the economy.
- Roughly eight in ten say that making the U.S. government more accountable (83%) and more open (79%) to average citizens are important priorities, with close to 4 in 10 regarding these reforms as “one of the most important priorities.”
- 76% believe it is important to create state websites that provide information

²⁵ www.recovery.gov/?q=content/accountability-and-transparency

²⁶ www.whitehouse.gov/blog/09/02/17/signed-sealed-delivered-arra/

²⁷

www.whitehouse.gov/the_press_office/Remarks-by-the-President-on-Procurement-3/4/09/

²⁸ <http://static.uspirg.org/consumer/archives/2-4-09LRPMemoonTransparentRecovery.pdf>

on which companies and government agencies are getting the funds, for what purposes, and the number and quality of jobs being created or saved.

According to the Administration, the federal government's top five accountability goals are to ensure that:

1. "Recovery funds are awarded and distributed in a prompt, fair, and reasonable manner;
2. The recipients and uses of all recovery funds are transparent to the public, and that the public benefits of these funds are reported clearly, accurately, and in a timely manner;
3. Recovery funds are used for authorized purposes and every step is taken to prevent instances of fraud, waste, error, and abuse;
4. Projects funded under the recovery legislation avoid unnecessary delays and cost overruns; and,
5. Programs meet specific goals and targets, and contribute to improved performance on broad economic indicators."²⁹

²⁹ www.recovery.gov

8 Is the process transparent and accountable?

8.1 Across the country, a mixed record

It is beyond the scope of this report to evaluate the decision-making process in the fifty states and the District of Columbia, and the many Metropolitan Planning Organizations spending ARRA funds. Brief case studies from around the country illustrate the range of transparency in the processes.

Case: Washington State

State process: The Transportation Committee chairs in the legislature created their project list largely behind closed doors and with little evidence of criteria, pushed through legislative approval with little or no stakeholder involvement, and obligated the full amount of transportation money in one fell swoop.

The Result: The allocated funding is heavy on highway projects, especially in outlying areas. No money is being spent on local roads (only on state or interstate projects); and the highly populated Seattle area was left without any of the \$75 million in federal aid it was counting on for street improvement projects.

MPO process: In contrast with the state process, the largest MPO, Puget Sound Regional Council, had an open and collaborative process and sought public comment for prioritizing projects and creating its list. The Regional Project Evaluation Committee consisting of local government planners and members of the community met

six times between December and March to develop recommendations. Criteria for project selection included a sense of geographic balance, rural as well as urban projects, and the incorporation of a broad array of project types.

The Result: A draft project list was shared with the PSRC's Transportation Policy Board, a group of elected officials and stakeholders. A final project list was adopted unanimously in March, and includes 20% non-motorized projects, 3% transit, 25% safety and maintenance, 24% complete streets projects, and 28% capacity (freight, general purpose, and other).

It was not the case that the state process was driven by extra urgency; both processes finished at essentially the same time.

Case: Minnesota

MPO process: The MPO for the Minneapolis-Saint Paul region is The Metropolitan Council. The Metropolitan Council's relevant committee, the Transportation Advisory Board, repeatedly denied requests for public comment as it allocated its portion of STP funds. After pressure from the Minnesota division of the Federal Highway Administration, the Board took public comment on allocating transportation funds for the first time that participants could remember.

The Result: The stimulus funding led to an opening for public participation. The subsequent spending choices do not appear to have been influenced by the input. One group, frustrated both by what it perceived as a unresponsive process and by the Metropolitan Council's perceived unwillingness to spend

funds on mandated Americans with Disabilities Act requirements, has begun legal action.

Case: California

State process: Caltrans released a project list for public disclosure in late 2008. In response, several citizen groups called for more public transit and repair projects. This resulted in an improved Caltrans list; and it also led to three statewide stakeholder phone calls to discuss the formation of state legislation on the spending of expected transportation stimulus funds. Caltrans asked for comment on draft legislation and provided detailed charts on the spending and decision-making processes. Once the process reached the legislature, 30 organizations sent a letter urging legislators to prioritize fix-it-first and also provided mark-ups to the draft legislation originated by Caltrans.

The Result: The legislature was largely responsive to the groups' arguments and coalition proposals set the tone for debate. The resulting legislation incorporated the arguments put forth by the coalition, and Caltrans accepted those much-improved provisions as well. Furthermore, the public comment and organizational feedback opportunities allowed interested parties to organize offensively and shape discussions throughout the process. In the end, openness led to substantial improvements.

This small set of cases is in no way representative. Rather, it illustrates that there have been state and MPO processes that have fulfilled the goal of transparency, and processes that have not. Although many argue that the ARRA's speed means that it is a special case, in many ways that speed was

simply a test that highlighted the strength of processes that were already strong (Puget Sound Regional Council), pushed others to improve (Caltrans), and highlighted a need for improvement (Washington State and the Metropolitan Council).

8.2 Accountability and transparency in Massachusetts

In Massachusetts, the Executive Office of Transportation (EOT) did a good job of ensuring that stimulus spending was and continues to be transparent. EOT recently unveiled a new recovery website, where readers can easily find information about ARRA funding for highway and transit, the status of ARRA-funded projects, and a list of those projects that underwent Federal 1511 Certification. That website, found at <http://www.eot.state.ma.us/recovery/>, is updated weekly by EOT. There are ways that this reporting should be improved, particularly for reporting of state contracts, but the site is strong in many other aspects.³⁰

In addition, EOT was very helpful during the writing of this report, and was quick to answer questions about why certain projects were chosen over other projects. They were also honest about whether they felt that projects contributed towards the national goals of ARRA.

8.3 At the national level

At the national level, "transparency" is about being able to find out:

1. On what kinds of projects was money

³⁰ Visit:

<http://www.accountablerecovery.org/states/massachusetts>

- spent?
2. Did those projects contribute to progress on one or more national goals?

Neither question is easy or straightforward to answer using currently available data. Several challenges to using the available data were described in “Challenges understanding states’ reporting” in Chapter 5. Smart Growth America retained several respected consultants to review the Section 1511 reports and categorize projects: Mark Stout, the former Assistant Commissioner for Planning and Development at the New Jersey Department of Transportation; and a team from Charlier Associates, Inc. in Boulder, CO, a firm that does transportation planning and consulting for DOTs and MPOs across the country. This team of transportation professionals required several person-weeks of time to develop the data in this report. They also encountered substantial difficulty in some cases in 1) finding the list of certified projects at all, and 2) understanding the project descriptions. And there is at present no way to tell whether projects are located in “economically distressed areas.”

If transportation planning professionals cannot easily answer the two transparency questions, then the process is not transparent.

Transparency is clearly one key to accountability. But it is only half of the picture. Accountability requires that we know both what states did with the money and what was supposed to be accomplished with the money. In transportation, this is sometimes interpreted narrowly: the money was meant for transit, and it was spent on transit. This however, is a poor version of accountability because transit money, flexible STP money and

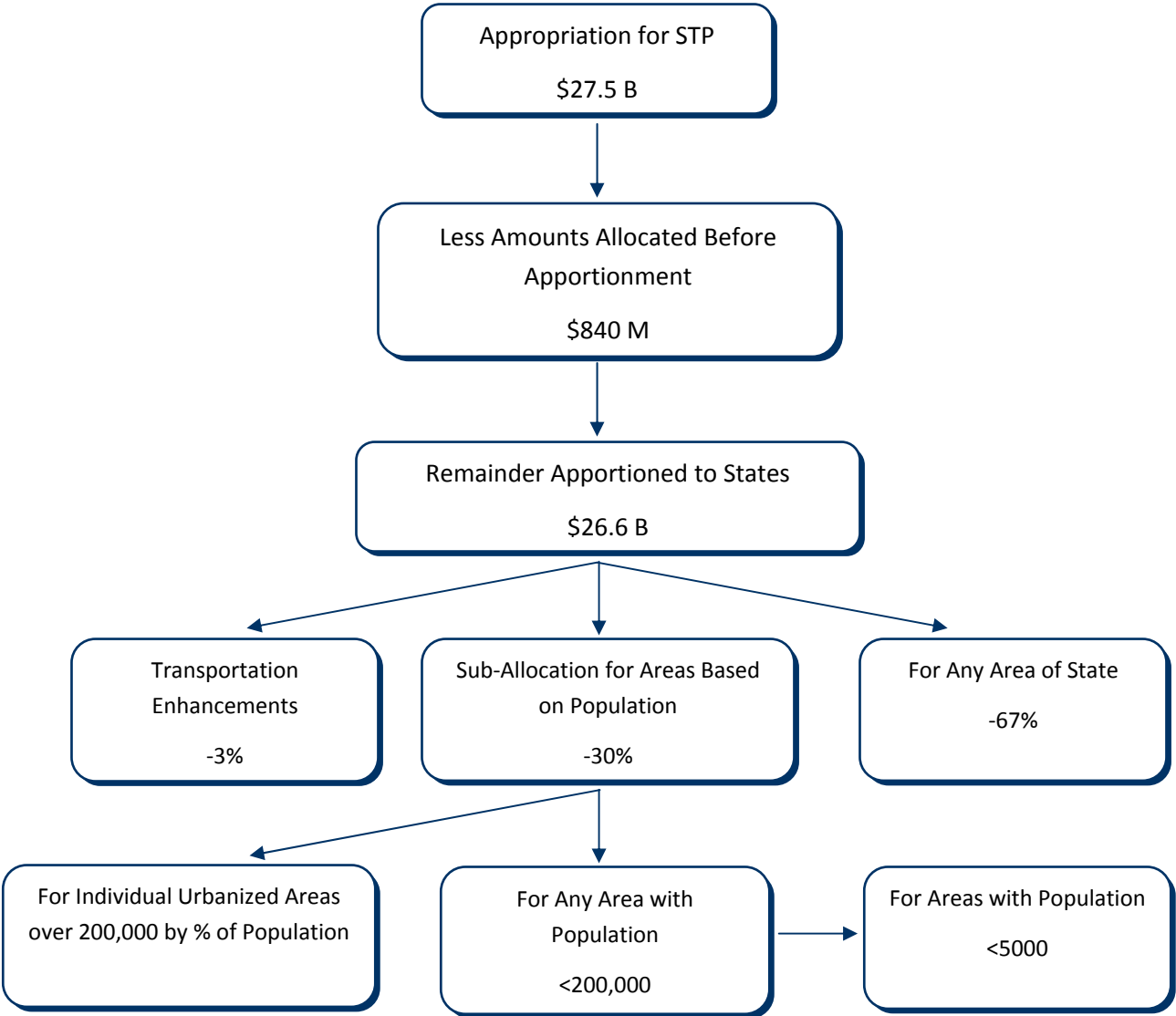
other monies are provided to accomplish outcomes. For example: did the transit improve access for low-income communities, improve energy security, and provide employers with access to a broader labor pool?

In the case of ARRA’s flexible transportation funds, goals included rapid job creation, long-term economic outcomes, and progress toward a 21st century transportation system. It is worth noting that neither the ARRA nor the normal federal transportation program through which ARRA operates dictates that states and regions spend on projects that produce higher economic returns. US DOT’s “Implementing Guidance” said that “Maximizing job creation and economic benefit” is a “project priority criteria” and “shall be considered during project selection.” But there is no guidance on “maximizing economic benefit”, or any penalty for failing to do so. Neither ARRA nor the normal federal transportation program requires states to address their repair backlogs or fill the gaps in public transportation and bike and pedestrian routes. In fact, while both articulate broad goals, neither has any real requirements to evaluate proposed projects against these stated goals in a systematic, comparative or competitive way, nor do they provide any consequence for missing or achieving these goals.

For these reasons, the ARRA and the federal transportation program on which it rests cannot be said to be accountable. No system can be said to be accountable when the goals are not specific, the measures of progress are not clear, and little consequence exists for progressing toward or moving away from these goals.

9 Appendix 1: How ARRA Surface Transportation Program funds are distributed

Adapted from US Department of Transportation, "American Recovery and Reinvestment Act of 2009: Implementing Guidance (Updated April 1, 2009)".



10 Appendix 2: Apportionments to states

U.S. Department of Transportation, Federal Highway Administration
 Apportionment of Funds for Highway Infrastructure Investment Pursuant to the American Recovery and Reinvestment Act of 2009. The totals include the amounts subsequently sub-allocated to MPOs.
 At www.fhwa.dot.gov/legregs/directives/notices/n4510705.htm.

State	Total Distribution	State	Total Distribution
Alabama	\$ 513,692,083	North Carolina	735,526,684
Alaska	175,461,487	North Dakota	170,126,497
Arizona	521,958,401	Ohio	935,677,030
Arkansas	351,544,468	Oklahoma	464,655,225
California	2,569,568,320	Oregon	333,902,389
Colorado	403,924,130	Pennsylvania	1,026,429,012
Connecticut	302,053,956	Rhode Island	137,095,725
Delaware	121,828,650	South Carolina	463,081,483
Dist. Of Col.	123,507,842	South Dakota	183,027,359
Florida	1,346,735,003	Tennessee	572,701,043
Georgia	931,585,680	Texas	2,250,015,146
Hawaii	125,746,380	Utah	213,545,653
Idaho	181,934,631	Vermont	125,791,291
Illinois	935,592,704	Virginia	694,460,823
Indiana	657,967,707	Washington	492,242,337
Iowa	358,162,431	West Virginia	210,852,204
Kansas	347,817,167	Wisconsin	529,111,915
Kentucky	421,094,991	Wyoming	157,616,058
Louisiana	429,859,427	Total	\$26,660,000,000
Maine	130,752,032		
Maryland	431,034,777		
Massachusetts	437,865,255		
Michigan	847,204,834		
Minnesota	502,284,177		
Mississippi	354,564,343		
Missouri	637,121,984		
Montana	211,793,391		
Nebraska	235,589,279		
Nevada	201,352,460		
New Hampshire	129,440,556		
New Jersey	651,774,480		
New Mexico	252,644,377		
New York	1,120,684,723		