

Assessing the Implementation of the Federal-aid Highway Section of the American Recovery and Reinvestment Act: Lessons from a Network Perspective

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Overview of Program

On February 17, 2009, President Obama signed the *American Recovery and Reinvestment Act of 2009* into law. Commonly referred to as the “Recovery Act,” the law had the direct purpose of minimizing damage from the economic recession. Due to the unique severity of the economic crisis, the Recovery Act was designed to create and save jobs, stimulate the sluggish economy, and invest in the long-term growth of the country. The legislation, with a total price tag of \$787 billion¹ (increased to \$840 billion in 2011), utilized a number of tools to achieve its goals. These tools included: tax cuts, funding for entitlement programs, tax incentives, contracts, grants, and loans.

The Recovery Act placed a strong emphasis on the physical improvement of infrastructure, including roads, highways, and bridges throughout the country. To accomplish its share of the infrastructure improvements, the Federal Highway Administration was authorized and appropriated \$27.5 billion. Of this amount, \$26.6 billion was added to the existing Federal-aid Highway Program. To date, funding has been committed to the completion of more than 12,000 projects scattered throughout all fifty states, the District of Columbia, Puerto Rico and the Pacific Trust Territories.² Approximately \$1 billion was dedicated to projects on Indian Reservations and Federal property, construction of ferryboats and terminals, and administrative costs.

Research Methodology

The research for this paper is based on participant observation and interviews conducted during the summer and fall of 2011 with US DOT, FHWA and State DOT personnel. Sheldon Edner was Associate Director for Financial Management in the Office of the US DOT Chief Financial Officer from September 2002 until May 2010. From February 2009 until May 2010 he provided staff support to the DOT Deputy Assistant Secretary for Budget and Programs³ in the implementation of the Recovery Act. His assignment included participating in the internal US DOT “TIGER TEAM” that coordinated the internal DOT implementation strategy for ARRA, participating in twice weekly calls with the White House ARRA Coordinator, Ed DeSeve, for the implementation of the Act, supporting weekly briefings for the DOT Secretary Ray LaHood and Deputy Secretary John Porcari, coordinating modal (FHWA, FRA, FTA, FAA, and MARAD) participation in the reporting of ARRA progress and Section 1512 quarterly reporting,

¹ www.recovery.gov/About/Pages/The_Act.aspx

² <http://www.fhwa.dot.gov/economicrecovery/>

³ The US DOT had two Senior Accountable Officials (SAOs), the Deputy Assistant Secretary for Budget and Programs and the Deputy Assistant Secretary for Policy. Both were career staff. They reported to the US DOT Deputy Secretary and Secretary for ARRA purposes.

monitoring IG investigations and preparing weekly status reports for the White House and submitting them to Recovery.gov.

Effective August 2010, Dr. Edner became a Term Professor of Public Administration at George Mason University. Matthew Critchfield assisted on this project as a graduate research assistant for the 2011-12 academic year. He conducted basic bibliographic, Internet and documentary research and helped draft the initial version of this paper.

Interviews were conducted with key FHWA personnel at the headquarters and field level to explore and more fully understand the agency strategy for program implementation. In addition, fieldwork was conducted in the States of Washington, West Virginia and Virginia to understand some of the responses to and implementation of the Act. It was not possible to work with more states due to funding constraints. Hence, these states were chosen after consultation with FHWA personnel to provide a broad perspective on the range of State responses. There is no intent to capture a representative sample of the range of State experiences. FHWA Division Administrators and State DOT officials charged with the implementation of ARRA at the executive and middle management levels provided responses to questions focusing on their experiences with ARRA implementation (over 40 respondents were interviewed in the conduct of the research).

The Federal-aid Highway Program and ARRA

The Federal-aid Highway Program pre-dated the Recovery Act by more than 50 years. Under *Title 23 of the US Code*⁴ the Federal Highway Administration (FHWA) has the responsibility of administering the Federal-aid Highway Program (FAHP) jointly with its principal partners the States.⁵ The Surface Transportation Program (which includes highway, transit, Safety, motor carrier, rail and ferry funding) is periodically reauthorized for 5-6 years. The most recent reauthorizations were the *Intermodal Surface Transportation Act of 1991 (ISTEA)*, *Transportation Equity Act for the 21st Century of 1998 (TEA-21)*, and *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users of 2005 (SAFETE-LU)* and P.L. 112-141 *Moving Ahead for Progress in the 21st Century Act (MAP-21)* signed into law on July 6, 2012. In the past 20 years, as current authorizations have expired, Congress has found the timely reauthorization of the legislation challenging and has extended the program through temporary reauthorizations and continuing resolutions until a legislative consensus on reauthorization can be achieved. These temporary extensions have persisted for multiple years in some cases. At the time of ARRA's enactment the FHAP was in such a state. A new (two year) reauthorization for the program was signed on July 6, 2012 approximately three years after SAFETE-LU lapsed in 2009.

Managing Federal Highway Dollars

Recovery Act funding was added to the Federal-aid Highway Program appropriations⁶ of over \$40 billion⁷ per year for FY 2009 and 2010, growing the program to a total over \$106 billion

⁴ *Title 23 – Chapter 1*, United States Code

⁵ 23 USC Sec. 145

⁶ *The American Recovery and Reinvestment Act of 2009*, Title XVI-Sec 1601

across those two fiscal years. In comparison, the FHWA was appropriated nearly \$42 billion in FY 2011 and requested \$69 billion for FY 2012 (MAP-21 apportionments are estimated at \$37.477 billion for FY 2012).⁸ Further, the Recovery Act legislation specified that funds should be used for projects that can be “started and completed expeditiously,”⁹ with a priority placed on projects that have a projected completion date within three years of enactment or projects that are located in “economically distressed areas.”¹⁰

Funding for the regular FHWA program is made available on an annual basis. Statutory authority directs the FHWA to annually apportion funds to the States for projects chosen by the States. The States receive an apportionment of funds on October 1st each year, based on statutory formulae. The apportionment notices identify total funding to a State and allocations to program categories specified in statute and regulations, e.g., Interstate Maintenance and Reconstruction, Surface Transportation Program, Congestion Mitigation and Air Quality Program, etc. Projects to be funded with FHWA monies are chosen by the State and funding for projects are front-ended by State expenditures and then later reimbursed by the FHWA, upon request of the State, for eligible project costs.

The apportionment notice constitutes an annual deposit of funds to what could be characterized as the State “federal checkbook for highway infrastructure.” The apportionment notice allows a State to obligate funding for projects it has chosen (see below). An individual state may have hundreds, if not thousands, of projects that it is managing (initiating, constructing, and completing) in a given year. Hence, ensuring the flow of federal funds to eligible projects is an annual management challenge. As projects grow or shrink in cost due to unanticipated expenses or project savings, the checkbook balance is impacted. The annual apportionments remain available for use until completely obligated and lapse at the end of the fiscal year. Other funds are available for a period of three years after the last day of the fiscal year for which the funds are authorized.”¹¹ From a financial perspective, States manage their overall Federal funding carefully to avoid over drawing their balances or allowing funds to lapse.

ARRA added new monies to State checkbook balances based on individual shares of the additional \$26.6 billion. These new funds had to be obligated by March 1, 2010. Hence, the first ARRA challenge for most states was to utilize this funding by increasing the number and flow of projects in their programs. The identification of these additional projects had actually begun late in 2008, before the passage of ARRA. The principal State advocate for federal highway funding, the American Association of State Highway and Transportation Officials (AASHTO), had asked its members to identify lists of projects that could be funded as part of an overall economic stimulus package. These lists were provided to Congress as examples of infrastructure work that could help stimulate economic growth should Congress enact a program. Thus, when ARRA was signed, the States were poised with additional funding opportunities and could begin obligating funds immediately. Each State, however, chose a mix of projects that reflected its unique needs and the ability to comply with the fast tracking expectations of ARRA.

⁷ *Financing Federal-aid Highways* – Federal Highway Administration, March 2007

⁸ *Budget Estimates* – Federal Highway Administration, Fiscal Year 2012. Pg. II-3

⁹ *The American Recovery and Reinvestment Act of 2009*, Title XVI-Sec 1602

¹⁰ *Summary of ARRA Provisions for FHWA (Public Law 111-5)*, Federal Highway Administration

¹¹ 23 United States Code. 118(b)(2).

For some States this meant an emphasis on maintenance and rehabilitation projects that required relatively less pre-construction work. In other cases, State needs might mean supplementing already funded projects that required additional monies to accelerate later project phases or reduce funding shortfalls produced by cost increases. For other States, a mix of maintenance and new, ready to go projects worked. For any given State, its ARRA strategy might mean a combination of all of these options.

The collaboration between State Departments of Transportation and the Federal Highway Administration can potentially involve a variety of sub-recipient agencies at the local level of government. The States are responsible for program stewardship and oversight for projects implemented by themselves and local public agencies (LPAs). Unfortunately, the large infusion of Recovery Act funds placed an increased risk and burden on the capabilities of state and local agencies. This had been worrisome to the FHWA pre-ARRA because of specific oversight concerns and failures within LPA administered projects.¹² Hence, LPA projects had been under scrutiny on a national scale since 2006. The State Departments of Transportation routinely and annually deal with the federal conditions of aid and are well schooled in satisfying them. Local entities may not receive FHWA funding very often, or in some cases, have no prior experience with Federal requirements. This presented a steep compliance learning curve and often added to the time needed to implement an FHWA funded project.

Where State DOTs managed projects directly, accommodating the financial management challenges was directly within State control. However, where projects were funded through sub-awards to LPAs, the SDOTs and LPAs also had a shared responsibility to track state funding balances. All LPAs receiving funding were required to email customized financial reports to their respective SDOTs on a monthly basis.¹³ This ensured that all states were able to follow their balances closely and recognize any discrepancies that needed correction quickly. Cost increases or decreases on LPA administered projects could impact the State's ability to meet its March 1, 2010 obligation deadline.

With over 12,000 projects nationally chosen by the 50 States, Puerto Rico and the District of Columbia, the financial challenge of obligating ARRA highway funding was significant. Working aggressively with the States, the Federal Highway Administration was able to successfully meet the obligation deadline on February 27, 2010.¹⁴ At the point of ARRA's enactment the recession was in full effect and infrastructure companies were "hungry" for work. The common experience of the States was a significant reduction in estimated project costs as bids were received, reflecting the then economic status of the construction industry and the intense competition for new work. The good news for the Federal and State governments was project savings that meant more projects could be funded, at least until February 27, 2010. After that date there was an additional financial management challenge from ARRA Section 1603. *Section 1603* of the Recovery Act constrained the obligation process a step further. Typically, States will draw down their checkbooks on a "first in first out" basis, using funds from earlier fiscal years to fund current projects to prevent apportioned funds from lapsing. Hence, as projects are completed if there are cost savings, which could occur 3-4 years into a project, the

¹² *Memorandum: ARRA Guidance on Federal-aid Program Stewardship and Oversight* – U.S.D.O.T., April 6, 2009

¹³ www.fhwa.dot.gov/economicrecovery/lapsedqandas.htm

¹⁴ www.fhwa.dot.gov/economicrecovery/

funds could be freed up for use on other projects (until February 27, 2010 for ARRA funds). Similarly, some projects experience changes in the scope of work, increasing or decreasing it in magnitude of effort. These scope changes could lead to a need for more funds. Unfortunately ARRA monies were different in that they were only available for upward obligation adjustments until September 30, 2010. This meant "...any de-obligated funding could be used only to reimburse costs associated with timely obligations related to legitimate cost overruns within the original scope of work and purpose associated with the existing obligation."¹⁵ Therefore, de-obligated funds could be used to address increased costs for materials and labor but not expansions or alterations to existing projects. However, de-obligated funds made available to states for the purpose of addressing cost increases will remain available until September 30, 2015. After that time, the remaining balance will be returned to the federal government.¹⁶

Choosing Projects

Within the FHWA, the highway program is typically characterized as a "federally assisted state and local program." The States are the principal recipients and managers of federal funds. In choosing projects to support with FHWA funds, the States must comply with Federal conditions-of-aid established legislatively, in regulations and through program guidance. Hence, non-federal agencies, such as State Departments of Transportation (SDOTs) and other recipients, are the principal implementers of the Federal program under Federal oversight.¹⁷ Within the regular program structure, states "select" or designate specific federal-aid projects and are reimbursed by the federal government for 90% of eligible costs.¹⁸ Projects that are selected for implementation are identified in federally required State and Metropolitan long range transportation plans (20 year horizon) and shorter-term transportation improvement programs (5 year horizon). Within metropolitan areas (areas holding an urbanized area of 50,000 population as designated by the US Bureau of the Census and the surrounding area forecast to become urbanized over a 20 year period) plans and programs are developed by metropolitan planning organizations (MPOs) the principal job of which is to develop plans and programs consistent with federal requirements. The MPO plans and programs identify projects to be funded and the anticipated years for their implementation. The MPO plans and programs are incorporated into the State plans and program. Annually the State makes the final choice as to which projects to implement (with the exception of projects funded under the Surface Transportation Program (STP) which are selected for implementation by the MPOs containing an urbanized area of over 200,000 people within them). For non-metropolitan areas, the State develops plans and programs and combines projects within them with the MPO metropolitan plans and programs. The project level compliance of improvements with federal requirements is the responsibility of the implementing agency, which is the State DOT in most cases or local governments or Indian tribes in others.

In some states, ARRA projects were already in plans and programs. In others, these plans and programs had to be amended to include additional projects for ARRA funding. The plan and program amendment process can take weeks of additional time. Hence, States anticipating plan and program amendments started the process before or right after the enactment of ARRA in an

¹⁵ www.fhwa.dot.gov/economicrecovery/lapsedqandas.htm

¹⁶ *Memorandum: Availability of ARRA Appropriations* – Federal Highway Administration, August 26, 2010

¹⁷ *Stewardship/Oversight Agreement Guidance* – Federal-aid Highway Program, April 14, 2006.

¹⁸ *Federal-Aid Highway Program: Donor-Donee State Issues* – CRS Report for Congress, December 1, 2004

effort to reduce delays. Where plan and program amendments were required, the final funding available (higher or lower than expected) under ARRA drove the addition or deletion of projects to plans and programs and slowed the State's ability to authorize projects.

For the purposes of timeliness and impact, ARRA generally required federal funding recipients to move quickly to implement projects, typically within two years of ARRA's enactment. On a practical level the term "shovel ready" was utilized to operationalize that concept. To a layperson, this might mean that construction could begin immediately. From a politician's perspective this might mean the immediate scheduling of the ceremonial turning of the first shovel-full of dirt. In point of fact, and for the FHWA infrastructure program, the term lacks practical meaning. Infrastructure projects take years to construct in many cases and are often authorized in phases for truly large-scale projects. In some cases only the first phase of a project may be close to immediate shovel readiness and could include completion of final design, environmental analyses, construction contract bidding, etc. Subsequent project phases proceed to final design and completion of all required pre-construction work as the initial phase is constructed.

Indeed the concept of a self-standing project is often difficult to define. As an example, the State of Washington had passed a significant state gas tax increase several years prior to ARRA.¹⁹ It chose to use ARRA funds primarily to accelerate projects already under way by completing phases of projects earlier than planned (100% federal funding meant the State did not have to wait on the flow of future State revenues and funding to construct later phases).

Another example of ambiguity in shovel readiness is the point of "project initiation". In the traditional FHWA program, and reflecting statutory language allowing States to choose projects, there is no federal authorization to proceed on individual projects. The only exception is so called "major projects". The Federal Highway Administration (FHWA) defines major projects as significant infrastructure projects that cost more than \$500 Million, or projects of a significant cost that attract a high level of public attention or political interest because of substantial direct and indirect impacts on the community, environment, and State budgets, exceeding a total project value of \$ 1billion, which are subject to federal review and authorization.²⁰

Otherwise the State DOT manages an overall program of projects, best conceptualized as managing an overall work flow of activity, with FHWA oversight of program management. This program oversight is operationalized in annual individual state "stewardship agreements" which reflect the agreed upon strategy and priorities for federal review of State activity to ensure compliance with federal statutes and regulations. Oversight of individual project compliance with Federal requirements depends on the project. Some projects are minor and require little or no special attention or compliance review, e.g., repaving of existing federal-aid highways. Other projects require significant oversight and continuous federal and State monitoring, e.g., construction of a new highway on a new alignment or right of way. Determining when minor projects begin typically is not usually a matter of day-to-day concern for the FHWA since it relies on comprehensive program management oversight to determine compliance. Further,

¹⁹ The interviews with Washington State DOT staff indicated that the state program had been ramped up several years earlier to utilize these additional gas tax dollars.

²⁰ *Public Roads*, "Megaprojects – They are a different Breed", by J. Richard Capka, July/August 2004 edition.

FHWA typically sees minor project implementation in the form of reimbursement requests in which the State is recovering funds it has spent several months before, in some cases. For ARRA, project initiation did matter! And FHWA chose, for purposes of ARRA reporting, to use the point of the implementing agency issuing a “Notice to Proceed” to its contractors as the point at which the first shovel of earth was turned.²¹

In summary, project funding and initiation under the ARRA timeline caused the States and FHWA to substitute some new management strategies for the purpose of demonstrating utilization of ARRA funding and compliance and meeting the reporting expectations of the Act. Projects had to be in plans and programs, pre-ARRA, to be funded. This might mean early non-construction work in many cases. Federally funded construction phases might be years down the road. States might choose to do early phases with their own funds and “federalize” the project later for the construction phase. For shovel ready purposes the States chose, in many cases, to implement minor projects that could issue a notice to proceed quickly, e.g., repaving, maintenance work. These projects were operationally ready to initiate work. Some major projects were chosen for ARRA funding where a future phase of an existing project could be implemented immediately with ARRA monies. In some cases, projects would have to be added to plans and programs (plan and program revisions could take weeks if not longer) and this was done to accelerate overall project implementation in a few cases.

Congress did not fundamentally alter this structure with the passage of the Recovery Act. Rather, it maintained the basic relationships and processes as a key element of continuity. Specific requirements under the Recovery Act were grafted onto the existing highway program, most notably the need for “shovel ready” projects, spending timelines, reporting requirements, and economic development area targeting of ARRA funding. The matching requirement (90-10 for regular federal-aid projects) was eliminated for ARRA funded projects and all projects were funded at up to 100% federal dollars.

US DOT Oversight of the FAHP Under ARRA

Typically, the FHWA administers the FAHP on a day-to-day basis without direct operational oversight from the Office of the Secretary (OST). While individual projects might provoke attention for a number of different reasons (environmental impacts, financial impacts, political controversy, etc.) the FHWA has independent authorizing legislation (Title 23 USC) that gives it primary responsibility for the program. The OST has oversight of the FHWA budget proposals to Congress and reauthorization of its program but operational responsibility for grant making activity is the responsibility of the FHWA Administrator.

Under ARRA, however, the political stakes and visibility of the program and the responsibility for weekly reporting were in the hands of the OST and SAOs. Consequently OST formed a “TIGER (Transportation Improvements Generating Economic Recovery) Team” composed of representatives of the ARRA affected agencies (FHWA, FTA, FRA, MARAD, and FAA and key

²¹ For many states managing their program is a matter of managing available federal funding. Hence, they will treat ALL projects as potentially eligible for federal funding. They may make the determination to use federal funds on a project at the last minute before a project proceeds to construction, substituting federal money for state only funding. The point at which this happens “federalizes” the project.

OST offices such as policy, public affairs, budget, etc.). This Team met weekly or more often as needed to provide OST with status updates of ARRA program implementation and to troubleshoot implementation issues such as generating grant reports, targeting projects to EDA areas, obligation and expenditure of grant dollars, etc. Co-chaired by the two SAOs, the team typically met Monday afternoons after the Monday morning ARRA briefing for the Secretary and his team of modal administrators and senior political appointees. Implementation issues and progress were briefed to the Secretary so that he was up to date on program status and able to respond to calls from the White House and its ARRA Team headed by Vice-President Biden.

A typical issue handled by the TIGER Team and/or the Secretary's Team might be identified project issues (politically controversial), rates of grant obligations and expenditures, definition of key terminology that would impact program administration, e.g., definition of a job generated, targeting funds to EDA areas, new OMB guidance, etc. As issues were identified, the affected modes of transportation and their senior political and executive team would be asked to respond as appropriate. From time to time some congressional offices would issue reports on funded projects critiquing selections made, dollars involved, or other project attributes. Additionally, during the period February 2009 to January 2011, the Democratic Party controlled both houses of Congress. Republicans took opportunities to offer criticisms of the program and its implementation. However, just as telling was the interest of Congressman Oberstar who was Chair of the House Committee on Transportation and Infrastructure. He had personally added to ARRA specific requirements for reporting and program implementation independent of the general requirements of the Act.²² These requirements, contained in Section 1200 of ARRA, directed the modal agencies to provide an independent reports and schedule of reporting on projects funded. Congressman Oberstar's provisions reflected not only the power of the Chairman but also the Committee's oversight and authorization of the Surface Transportation program. The Chairman wanted to make sure that the contribution of ARRA funds to the ongoing authorization of the program was positive and recognized. The DOT TIGER Team and Secretary's team were called upon to provide testimony to Chairman Oberstar's Committee and other congressional committees as needed. The TIGER Team also reconciled the sometimes competing implementation oversight issues produced under the general ARRA legislative provisions and Section 1200, e.g., reporting under Sections 1201 and 1512.²³

From an operational perspective the DOT-wide TIGER TEAM and the Secretary's Team did not have direct oversight of the FHWA highway program. That responsibility was vested in the FHWA Administrator and the States. As a "federally assisted State program" the FHWA's approach to program implementation generally focused on ensuring that the federal legislative and regulatory requirements were met by the States and their sub-grantees. The States chose the projects funded under the program but federal conditions of aid, such as compliance with the National Environmental Policy Act, Civil Rights Act, and specific Title 23 USC conditions, were

²² See the South Carolina DOT listing of all ARRA Recovery Reporting requirements at www.scdot.org/inside/pdfs/reporting_requirements.pdf. Another summary of reports, produced by the State of Iowa, is at [www.iowadot.gov/recovery/.../ARRA%20Report%20Titles%20\(3\).pdf](http://www.iowadot.gov/recovery/.../ARRA%20Report%20Titles%20(3).pdf). For the legislative wording see <http://www.gpo.gov/fdsys/pkg/BILLS-111hr1enr/pdf/BILLS-111hr1enr.pdf>.

²³ Section 1201 required reporting of highway and transit project sponsors to the US DOT which provided it to Representative Oberstar's Committee. Section 1512 required reporting to an independent reporting by grantees to a reporting solution created by the Recovery Act Transparency Board (RATBoard).

met. In this context, US DOT oversight of the program was through the FHWA processes. The Secretary was not the project selection authority, even under the provisions of ARRA.

Clearly, the political and legislative expectations of ARRA were of concern to the Administration, the Secretary of DOT and various Congressional committees and members. The FHWA Administrator, Deputy Administrator and Executive Director were thus careful to work collaboratively with the Secretary, Deputy Secretary and TIGER Team. Issues over specific projects, where they arose, were coordinated with the TIGER Team and OST as were weekly reporting issues, briefings for the White House, selection of projects to highlight, etc. Highway program implementation was strictly the legal responsibility of the FHWA and its Administrator. This was made even further challenging for the Secretary and OST level program monitoring by the fact that projects were chosen by the States and their sub-grantees. Compliance with the ARRA provisions took place within the context of Title 23 USC and specific ARRA requirements that directly affected it, e.g., 100% federal funding, emphasis on projects within EDA areas, maintenance of effort for State level funding of the transportation program, Section 1512 reporting, etc. These ARRA provisions affected the highway program around the fringes but not at its core.

FHWA Oversight of ARRA Highway Program Funds

Under ARRA, in an effort to improve the process, the FHWA deemed it necessary to enhance its oversight activities. The substantial infusion of additional federal funding, the legislative and Executive insistence that the ARRA spending be highly transparent, and the concern with potential fraud waste and abuse drove this. Additional incentives were provided by the extra ARRA funding provided to agency Inspectors General (IGs) (\$20 million for the US DOT alone) and the specialized audit charge to the US Government Accountability Office (GAO). In an effort to reduce the risk of error, FHWA asked its State partners to adjust their annual stewardship agreements with FHWA field offices to include enhanced federal oversight generally and in depth federal engagement for large and expensive projects that might strain State and local administrative resources. In addition, the FHWA Executive Director charged the FHWA Division Administrators (state-level field offices of FHWA) with directing their staffs to closely monitor State utilization of ARRA funding. This monitoring was aimed at facilitating State utilization of the funds, expeditious implementation of projects and federal requirement compliance. The FHWA Administrator and Executive Director would meet and/or hold video conferences periodically with the Division Administrators to encourage State diligence in the obligation and expenditure of funds and the effective oversight of federal requirements.

In addition, the FHWA established a national level review team that visited individual states (in some cases 5 or more times) on a rotating and continuous basis to monitor the FHWA implementation of ARRA.²⁴ This team, composed of field and headquarters managers, reviewed program implementation by the FHWA field offices and the States to ensure compliance, anticipate issues, and identify best practices for adoption by FHWA and other States.

²⁴ FHWA developed an overall Risk Assessment which was made available at <http://www.fhwa.dot.gov/economicrecovery/riskmgmtsumm.htm>. See the US DOT Inspector General Report on the National Review Team process at <http://www.oig.dot.gov/sites/dot/files/FHWA'S%20National%20Review%20Teams%20-%20Final%20Report.pdf>

SDOTs and LPAs also were encouraged by the FHWA to take a stronger approach to project monitoring. Tracking programs were implemented to follow the status of individual projects within a state, regardless of which agency was responsible for implementation. In anticipation of the ARRA grantee reporting requirements, FHWA created a Recovery Act Data System (RADS) that allowed the States to collect and report information on ARRA funded projects. FHWA maintained the system and the States entered project data into it. At the point of required quarterly reporting under Section 1512 of ARRA, the States were able to use RADS to produce their 1512 report, which they uploaded into FederalReporting.gov, the national level reporting system required by ARRA. For the purposes of Section 1512 reporting, the States were assumed to be the primary recipient of ARRA funding and sub-grantees the secondary recipient. “Programmatic performance measures”²⁵ were used to ensure that projects were on time and following budget restraints. This system allowed SDOTs and LPAs to increase oversight for projects that were not meeting goals, sometimes resulting in drastic administrative alterations to the projects. The ARRA implementation also provided the federal government with an opportunity to put the corrections made to the LPA oversight structure in 2006 to the test. However, it should be clear that although program guidance and reporting requirements were a concern, they were not altered by the legislation within the Recovery Act.

The Cases of Washington, West Virginia and Virginia

All three states were able to obligate their ARRA funding to projects within their respective metropolitan, suburban, and rural areas. The State of Washington was able to award grants to 225 projects, totaling over \$491 million. The State of West Virginia awarded grants to 155 projects (\$212 million) and the Commonwealth of Virginia awarded 141 projects (\$635 million).²⁶ To date, each state has been able to complete the majority of the projects, improving Federal-aid roads, bridges, and highways within their respective state borders. All unfinished projects are scheduled for completion in the very near future. However, each of the states took different approaches to the decision-making on project funding, oversight of project implementation and reflected the unique operating circumstances in each case. The federal highway program affords each state wide discretionary latitude to the implementation and prioritization of projects, which ARRA did not change.

Project Choice and Priorities

As noted above, the States, in conjunction with MPOs in some cases, choose projects. The ARRA program imposed some broad conditions for funding projects: 1) ready to proceed to construction, 2) largely within EDA areas generally, and 3) finished relatively quickly. In many states the first and third of these conditions was satisfied by selecting relatively minor projects that could be implemented quickly such as repaving, reconstruction, safety improvements, etc. Projects of this character not only could be implemented quickly but also reflected the character of many state road programs where maintenance and rehabilitation constituted the bulk of state needs. An additional advantage grows out of the fact that lower costs for these kinds of programs allows the distribution of funding to be relatively even across the state (a so called

²⁵ Memorandum: ARRA Guidance on Federal-aid Program Stewardship and Oversight – U.S.D.O.T., April 6, 2009

²⁶ www.recovery.org

“peanut butter” approach). Each of the states considered here found a way to distribute funding to meet its basic needs.

It was less difficult for WV to satisfy the EDA requirements than its peers because almost the whole state is economically disadvantaged. In addition, West Virginia made a conscious policy choice to distribute funding largely to maintenance and rehabilitation of facilities. As a matter of policy it also made sure at least one new construction project was undertaken in each of three congressional districts. The maintenance and reconstruction funding was distributed in the same fashion.²⁷

Washington State, however, had benefitted from a major state gas tax increase approximately 4 years before ARRA was enacted. It chose to use funding to support a mix of maintenance and rehabilitation projects and construction projects that were already underway. The 100% federal funding allowed it to supplement projects, which were already underway, but for which insufficient state or federal funds were available including advancing planned later stages of a project much earlier. The 100% funding also allowed the state to manage its funding flows more smoothly since it could apply for reimbursement quickly thus allowing the flow of state funds to be managed more efficiently.

Prior to the passage of ARRA, Virginia faced a major downturn in projected state revenues for transportation and had to down size its overall program (a program reduction of \$1 billion from 2008 to 2009 and \$3.5 billion from 2009 to 2010).²⁸ The ARRA funds made this process play out more smoothly and with less political consequence and intensity. However, Virginia had to reduce the overall size of its program in such a way that it could meet the maintenance of spending requirement built into ARRA.

Washington had an established list of projects for ARRA funding which had been coordinated with the State legislature. Washington State had passed gas tax increases in 2003 (5 cents per gallon) and 2005 (9 ½ cents per gallon), which were phased in over several years. The state routinely divides its overall state funding between statewide needs (about two-thirds of the State total) and local needs (about one-third of the State total). The availability of ARRA funds allowed the state to move more projects from this established list to construction, supplement already funded projects where costs had escalated and move future project phases earlier.

Expending ARRA Funds

As noted earlier, FHWA met the deadline to obligate ARRA on February 27, 2011. This success was a product of all states meeting the deadline to obligate their share of the funding. The irony here is that the apportionment of funds to the states in early 2009 did not constitute a “grant” to them. Grants were not considered made until the states identified a project to which they would commit federal funds. In circumstances where a local government project was chosen and that government sought to implement the project, rather than having the state do it for them, the local government would have to expend its own funds and then seek reimbursement from the state, which would then seek reimbursement from FHWA. ARRA funds were considered obligated at

²⁷ See reference to reporting requirements cited above.

²⁸ Interview with Virginia DOT staff October, 2011.

the point the state identified a project agreement had been executed by the State and FHWA, and the funds had been committed to the project in the FHWA Fiscal Management Information System (FMIS). However, funds were not booked as “expended” by the FHWA until the state sought reimbursement at which point the obligation was liquidated and treated as an expenditure.

An issue surfaced for reporting and fiscal purposes in terms of when funds were expended. States and their local partners had to expend their own funds first (which they reported as expended in the RATBoard reporting solution) but in reality the federal fund expenditures did not book as expended until the reimbursement request from the state was honored by FHWA. If a state was timely with the request, the difference in reporting could be minimal. However, if a state was not pressed because it was blessed with good cash flow, the reimbursement request could lag by months creating what appeared as a very slow federal expenditure of ARRA funds. The significance here is in the economic purpose of ARRA as opposed to the regular highway program. The federal government needed the money expended quickly to obtain an economic benefit for the overall economy. The states varied in terms of how quickly they processed reimbursement requests. All three states in this sample were timely in processing requests but faced issues if the Governor’s office was involved in block reporting for ARRA grantees in the state. The state DOTs understood reimbursement but state comptrollers understood the flow of “state” funds out the door. There were some issues as a result in determining when funds were expended for the US DOT’s reporting of ARRA fund expenditures.

The hard deadlines established in the ARRA Act not only influenced the selection of projects from a “shovel ready” perspective, they also influenced the selection of local versus statewide projects. Many local governments own and maintain roads but the total share of road ownership varies from state to state. West Virginia owns roughly 92% of the road miles in the state while Virginia owns about 68%.²⁹ In Washington, the state owns closer to 30% of the road miles but the road mileage it owns accounts for a significant percentage of total traffic volume. Overall, each of these states has a completely different experience with local government involvement in federal funding. West Virginia has almost none. Virginia has traditionally dominated project implementation with some local governments receiving federal funds (a share that has been increasing slowly over the past few years). Washington has a very different experience where it shares responsibility with local governments. This sharing of responsibility is recognized by WSDOT in its Office of Highways and Local Programs, which administers and oversees the funds it passes through to local governments. State funding is split roughly two-thirds to the State and one-third to local governments and an existing state “certification acceptance” program pre-approves individual local governments to receive federal funding and meet all federal funding requirements.³⁰

In Washington over 100 local governments have certification acceptance. The remainder can either have the state implement a federal-aid project or a neighboring local government with certification. The key for the fund expenditures is not only the reimbursement process mentioned above but also the timeliness with which projects are constructed. Local governments with minimal or no experience with federal-aid funded projects are slower in project implementation.

²⁹ Interviews with state DOTs.

³⁰ Interview with Washington DOT staff.

Internal State and FHWA Division Relationships

All three states and their respective FHWA division offices expressed a common sentiment that ARRA had improved and fostered the working relationship between them. The pressure of hard deadlines, the incentive of additional funding and the novelty of new requirements served as spurs to make things work. From another perspective, the gravity of the economic recession and the priority given ARRA by the new Administration and Congress clearly created a circumstance where no agency wanted to be identified as the “impediment” to success. More importantly, every state has a backlog of projects that could be built. No state DOT was to forgo money for needed projects that would make positive improvements in its transportation system.

Three additional factors further enhanced the working relationship between the state and federal partners: increased oversight, transparency, and novelty. In terms of oversight, the additional funding given the US DOT Inspector General’s Office (\$20 million) and the congressional tasking of the US GAO to report multiple times on the implementation of the ARRA Act clearly signaled that mistakes, if any, would not be hidden. Further, the addition of new reporting requirements and deadlines clearly constituted changes to status quo processes and introduced new “risks” in program implementation. In creating its audit plan, GAO went so far as to identify a list of 15 states where special attention would be paid to ensure smooth program implementation. Overall this increased “audit” environment spurred a mutual dependency between state and federal agencies: they were in it together and would succeed or fail jointly.

FHWA HQ directed FHWA field offices to pay increased attention to risk management concerns and work with the states to reduce chances of fraud, waste and abuse and bureaucratic inefficiency. The division offices reviewed annual work plans and stewardship agreements with an eye to reducing the risk of project and ARRA failure. Some division offices moved to 100% review of plans and specifications (PS&E). Others moved from selective project inspections (focusing on high risk projects only) to 100% inspection rates. Each division office negotiated a state specific change that would reduce risk and ensure effective oversight of ARRA projects. What might have been more contentious in prior years was expedited and smoothed by the mutually recognized co-dependency of the federal and state partners.

State and Federal Management Strategies

The high expectations and deadlines for ARRA project implementation drove both the Federal and state agencies to get the work done with existing staff. The acknowledged lag in hiring additional government workers, the hard implementation deadlines of the Act and the novelty of the ARRA program mutually supported getting the work done with existing rather than new staff. Indeed, each of the states interviewed here was experiencing its own version of a “graying workforce” and the need to modify business processes and staffing patterns to change with the times. West Virginia used the ARRA experience to empower many of its existing mid-level managers and make them key players in the new work activity. The novelty of the new programmatic activity was a motivating force for these managers and added a significant positive new experience to the routine activity. Virginia and Washington (as did West Virginia) created internal programmatic meetings, which brought key office directors and senior executives

together on a weekly or bi-weekly basis to trouble shoot program and project implementation. Washington State found that its already existing expedited design process could be further accelerated given the ARRA deadlines. The novelty and transparency of the ARRA highway program was an absolute spur to change in internal management processes, particular where change initiatives were already underway.

Political Process Impacts on ARRA and State Programs

Each state had a different experience depending on the status of its existing state program. Universally, new money brought new attention from federal and state legislators. As indicated above, Representative Oberstar's insertion of special, independent monitoring and reporting processes gave the House Transportation and Infrastructure Committee and the US Congress a front row seat to program implementation even though it added to the reporting burden overall as a separate process with independent data items and time frames. Additionally, the role of "loyal opposition" assumed by Congressional republicans lead to intense legislative scrutiny and reporting. There were multiple hearings to which federal and state political and career officials were invited to testify, some members of Congress took the initiative to do their own investigation of where the money was going. Indeed, three separate reports³¹ were issued by Republican legislators to critically review funding decisions.

At the state level the new ARRA funding doubled state programs over normal levels in many cases. The likelihood of intense legislative engagement was recognized and dealt with early in each of the cases reported here. The Secretary of the West Virginia Department of highways worked closely with the Governor's Office and the state legislature to ensure that ARRA investments were distributed across the state in a balanced way (similar dollars, similar types of work, and one major new project per Congressional District. In Washington State, the context of two major gas tax increases in prior years had already energized legislative engagement and the ARRA funding went to existing lists of projects already planned or underway in the State. The Virginia case of reduced program funding, invited a leveling process that spread the money throughout the state to meet already existing needs and reduce the sting of funding cuts.

In general, the context of a recession and new money meant that politics would be a clear factor. Executive and administrative entities chose a proactive process to reduce unpredictable political oversight and intervention and allow for the smooth implementation of projects in compliance with ARRA deadlines. Protracted political wrangling would add delays and hamper compliance with program requirements. Also, post ARRA, the political process would still be there and have to be dealt with in the routine process of highway funding and project implementation. It would not be prudent to leave a negative legacy for the future.

Public Involvement and Transparency

The perception of those interviewed regarding transparency and reporting was typically positive. The additional "sunlight" shone on the ARRA effort through reporting supported the overall sense that the work being done was for a legitimate public purpose. Further, while the additional reporting was burdensome it was perceived as giving the highway program additional credibility

³¹ See citation earlier.

for the ability to get things done quickly while at the same time managing the existing “regular” program.

Some of this positive perception was potentially associated with the process of public involvement begun in the 1990’s under ISTEA, which opened the backrooms of highway planning and project selection to more participants and the public generally. Additionally, the continuing struggle to get congressional attention for reauthorizing the highway program may have received a positive boost by the ARRA success story. An additional benefit, and irony, to the ARRA reporting expectations was translating highway project descriptions into layperson English. For example, a “five mile chip sealing and roto-milling/bituminous overlay between mileposts 51 and 56 on State Route 21” had to be translated into every day English as “repaving State Route 21 between the intersections of Route 5 and Route 10”. The irony in this stems from the fact that, within a state, traditional engineering descriptions had had to survive multiple urban and statewide public involvement processes.

IMPLICATIONS FOR FEDERAL AND NON-FEDERAL MANAGERS

Adaptability of the Highway Management Network

The most cogent and obvious ARRA story from the highway program is the existing management network that pre-existed ARRA adjusted, adapted and made ARRA work. There were no start-up delays, huge process revisions, or new major program risk issues that emerged. The network created around the “grant tool” at the core of the highway program absorbed the challenge and used the money to meet existing needs. The regular program went on, managed in parallel with the ARRA effort. Existing staff, not new staff and organizations, got the job done. Some of this may have been a reflection of the institutionalized relationship that had evolved over the preceding 50+ years for transportation. The existence of substantial, unmet needs and a system eager for additional funding may have contributed also.

The insistence of the Obama Administration that the Governors should play a central role in the reporting and oversight of ARRA programs did offer a slight challenge to most states. The functional transportation “picket” of highway program administration typically did not have day-to-day involvement of the Governor and/or the Governor’s staff. Centralized reporting encouraged by OMB for Section 1512 reports raised some technical definition issues (when was federal money expended in a reimbursable program) and forced some new working relationships between DOTs and State central administrations. Yet, the highway folks appeared to adjust and adapt without creating new working tensions with the Governors or legislatures. Some of that adaptability may reflect the reality of needing more political support for future program reauthorizations and appropriations.

DOT/FHWA Learning and Relations at the Headquarters Level

The DOT SAOs saw ARRA as the benchmark of a new Administration. It was not that the legislation was an effectively designed solution to the economic issues as much as the Obama Administration wanted to make whatever Congress produced work as effectively as it could.

The Administration was not looking for a quick fix so much as it was seeking a lasting impact and did not want to rely on simply sending out checks.

The Act's passage early in 2009 came when few political appointees for the new Administration were in place and it fell to the career staff to take the lead. As a result the appointees who were in place and those that came after had a unique opportunity to "bond" with the career staff around the ARRA effort. The bonding proceeded faster than it might in a more typical transition and pushed careerists and new political appointees to step up to the task assertively. In the eyes of one of DOT's SAOs, the ARRA effort confirmed the Administration's reliance on technology as being able to "do things." Yet, technology is not "free" and not all transparency may be publicly desired or low cost. Further, technology does not accomplish as much where data sets and business processes are not modified to achieve the expected outcomes. Advocates and institutional stakeholders did seem to care about transparency and the relationships with political leaders and administrative agencies were impacted.

Some Federal and state officials perceived the focus on "jobs created" as the biggest flaw in the ARRA effort. The meaning of a job, its nature, longevity and geographic location were all confounded in the simple counting exercise expected in ARRA reporting. Construction jobs are not inherently long lasting in a given geographic location but the continued availability of work may make it possible for a firm to move from one geographic location to another in pursuit of new contracts. Further, the locational proximity of project place and jobs may not be the same. The FHWA undertook a couple of pilot efforts to track jobs associated with projects and found that in some cases jobs were created nationally and regionally in terms of where successful bidders were located and not always in the immediate proximity of construction work. At least one DOT manager observed that not all the key stakeholders were included in the ARRA process. For example, MPOs were not involved in reporting because they do not implement projects. They made key decisions on some projects but were not central players in the ARRA process.

Another observation was raised as to whether ARRA presaged reauthorization in giving the federal authorities more of a role in project choice and performance expectations. A quick review of MAP-21 confirms the clear addition of a performance based justification process for project choices but no greater federal role in project selection.

Both DOT SAOs observed that the DOT Secretary's support and personal commitment were a clear factor in DOT's success. Further, one can infer that since ARRA went into effect so early in the process of recruiting new political policy leaders that the Secretary could count on modal administrators to follow his lead. Experience suggests that as an Administration's tenure drags on, individual political appointees gain more independence in their decision-making and performance, especially since the Secretary does not have a direct decision role in many modal affairs.

This last point underscores one of the key points about the utilization of an existing network to do new things. Where a program is utilized substantially "as is" to do new things it will likely be done timely and expeditiously. Where there is no administrative infrastructure or program, the start-up and building processes needed to create them will take substantial upfront time and resource commitment. Results, consequently, may be far less predictable or clear.

The highway program did not experience a substantial retreading of its content to serve ARRA's policy goals. It was essentially adopted as is with some minor addition of rules and oversight. It responded by making necessary adaptations for new requirements and absorbing the new funding directly into ongoing activity. Existing collaborative relationships between network players made it possible to convene problem solving solution teams and to work through things cooperatively and quickly. There was minimal "getting to know you" courtship dances typically experienced in new organizations and processes.

The DOT Office of the Secretary found FHWA positioned to play a constructive role in implementing ARRA successfully. The career staff anticipated the new law and started working key players early on to prepare for what was coming. It also appeared that FHWA was very willing to cooperate with DOT OST. Given OST's lead role in working with Congress and the Executive on reauthorization of the surface transportation program, it is not surprising that FHWA would work positively with OST.

Managing ARRA Through Networks

FHWA adapted its management strategy and network to the context of ARRA. Relying on an intensified risk assessment process in terms of its activities and its network partners, FHWA pursued a risk management strategy more aggressively. FHWA stewardship agreements, which traditionally have emphasized state responsibilities for overseeing program implementation, increased the intensity of the FHWA role and partnership with the states. The bi-weekly calls from the White House ARRA office were used by OST to assert greater Secretarial influence over modal programs. FHWA appeared to accept this change in relationship because it implicitly created an obligation on the part of OST to protect FHWA from critics. The network did not change institutionally or behaviorally but rather adapted to the added expectations of ARRA. The new policy leaders were drawn in to the ARRA process and became key spokespersons for the ARRA effort and defenders of the DOT and FHWA administrative processes.

At the state/federal level, the states realized that there was a positive outcome to be key players in the ARRA program. They were clearly benefitting from the additional money and were in the driver's seat regarding how to use the funds. Transparency, while an additional burden, was not perceived as a major irritant. Indeed, some state administrators saw it as a precursor of other new initiatives and working conditions. Being early adapters to in the context of ARRA might bode well for future reauthorization and public support for surface transportation investments. Being able to absorb the additional work with existing staff and bending that adaptation to their current management needs was a net positive for network players. An additional benefit was the widespread recognition that the co-dependency of all partners meant that they must focus on a supportive rather than contentious approach.

In sum, the lesson of ARRA as a rapid, innovative broad gauged collaborative strategy for dealing with wicked problems is that playing from strength and avoiding major new institutionalization efforts is more conducive to success. However, networks do not appear to adapt to evolving circumstances in large leaps and changes in outcomes and processes are likely

to echo already existing tendencies toward change and be embraced by current participants where it is conducive to their ongoing objectives and goals.