

**Before the Committee on Appropriations
Subcommittee on Transportation, Treasury and Independent Agencies
United States House of Representatives**

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Management of Cost Drivers on Federal-aid Highway Projects

**Statement of
The Honorable Kenneth M. Mead
Inspector General
U.S. Department of Transportation**



Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to testify today about cost drivers on highway projects and the Federal Highway Administration's (FHWA) oversight of Federal-aid Highway funds. FHWA and the States must ensure that taxpayer funds are spent cost-effectively, whether the money is for new construction or the maintenance of existing bridges and roads. Projects must be delivered approximately on time, within budget, and free from fraud. Whether funds are lost to cost overruns, schedule delays, or fraud, the result is the same—fewer resources are available for important transportation projects. To illustrate, if the efficiency with which the \$500 billion invested by the Federal Government and States over the last 6 years had been improved by only 1 percent, an additional \$5 billion would be made available—enough to fund 4 of the 17 active major highway projects.

Although proposals have been made to increase funding for Federal-aid Highways, and these proposals may have merit, we believe considerably more can and should be done to stretch Federal dollars by ensuring that funds are spent cost effectively. Secretary Mineta has emphasized improving oversight and has fully supported our work to identify ways to get better value for the Federal investment. Based on our audit and investigative work, we see a need for further actions in eight key areas.

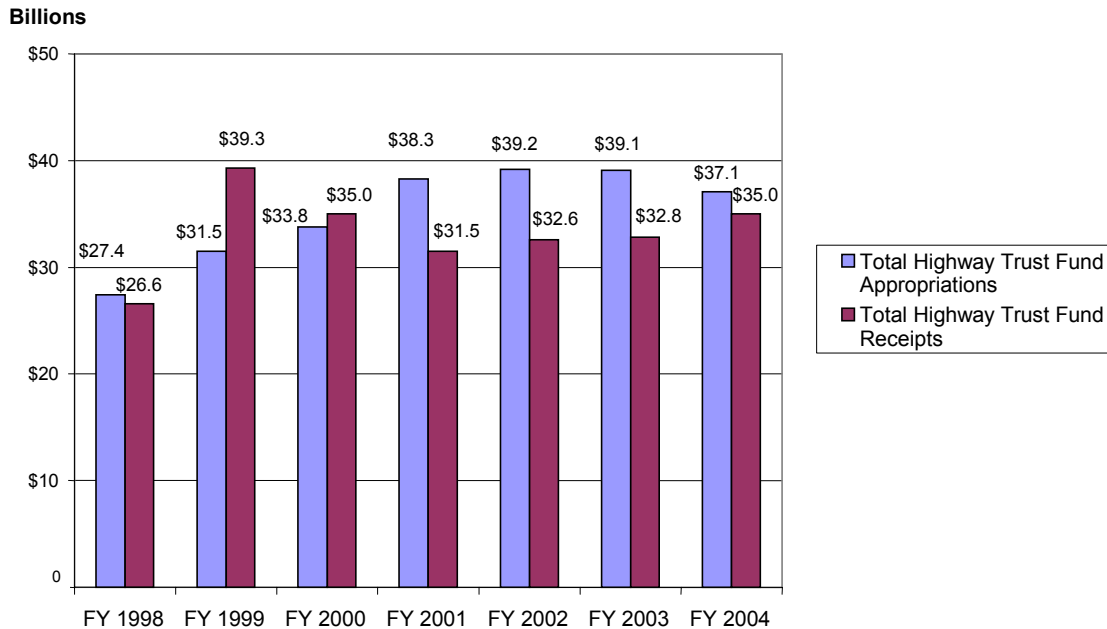
1. *Preparing Reliable Cost Estimates*
2. *Implementing More Cost-Effective Engineering Alternatives*
3. *Managing Project Schedules to Minimize Costly Delays*
4. *Recovering Overpayments from Contractors and Promptly Resolving Construction Claims to Control Project Costs*
5. *Preparing Finance Plans to Identify Cost, Schedule, Funding, and Risks to the Project*
6. *Ensuring that Statewide Plans Properly Represent to the Taxpayer How Funds Will be Spent*
7. *Strengthening Efforts to Prevent and Detect Fraud to Minimize Losses*
8. *Refocusing FHWA Efforts on Project Management and Financial Oversight*

Getting the most from our transportation investments has taken on added importance because declining revenue into the Highway Trust Fund (HTF) will limit the amounts available for investment at a time when transportation infrastructure needs are increasing (see Exhibit 1). Tax receipts, which fell 20 percent from \$39.3 billion in Fiscal Year (FY) 1999 to \$31.5 billion in FY 2001, are not expected to return to the FY 1999 level until FY 2008. In fact, HTF

revenue projections for FYs 2003 through 2006 are \$18 billion less than that projected in April 2001.

Figure 1

Comparison of Highway Trust Fund Appropriations and Receipts for Highway and Transit Programs (Actual and Forecasted Amounts) Fiscal Years 1998-2004

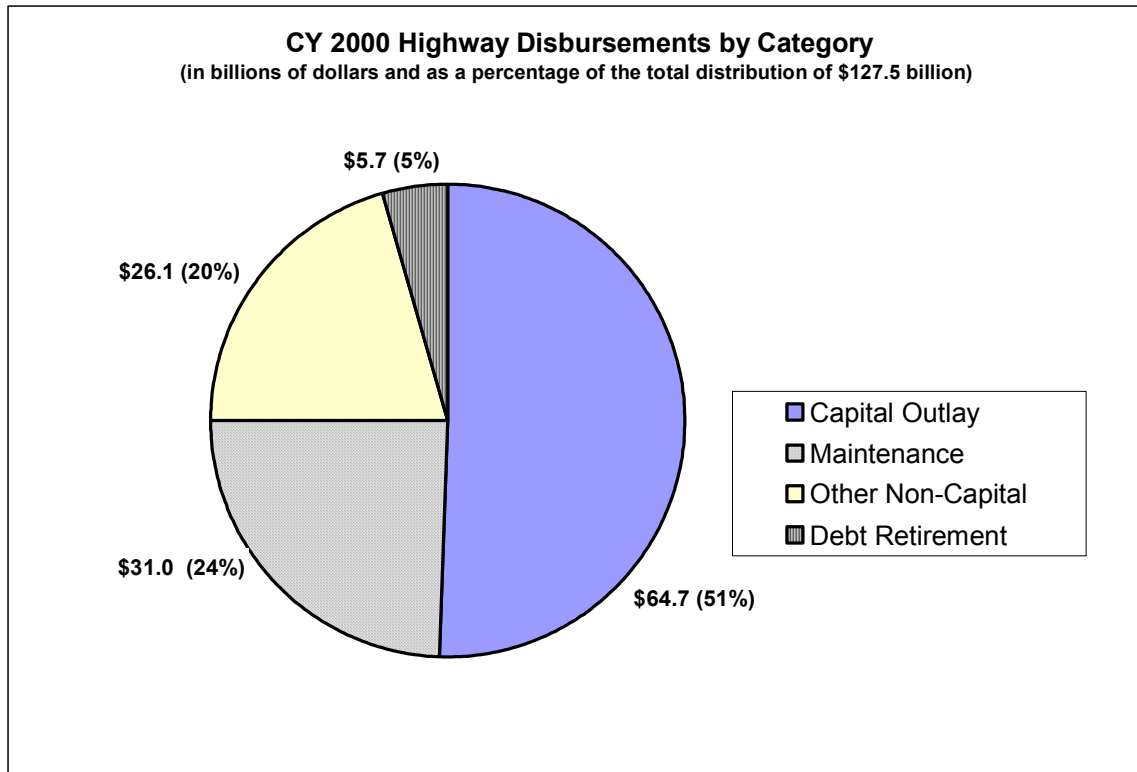


Although revenues have fallen significantly from the FY 1999 level, the demand for highway infrastructure projects remains great. Under the Transportation Equity Act for the 21st Century (TEA-21), Federal and State investments averaged more than \$225 million a day. The number of active major highway projects—those projects costing more than \$1 billion or projects estimated to cost less than \$1 billion that are of high interest to the public, Congress, or the Administration—has increased from 9 in 2000 to 17 today. As of April 2003, these 17 projects are estimated to cost \$42.5 billion (see Exhibit 2). In addition, there are 25 planned major highway projects estimated to cost \$43 billion.

Significant investments are not only needed for new highway projects, but also for the maintenance of existing roads. According to FHWA’s January 2003 Conditions and Performance Report to Congress, the percentage of highway mileage with an “acceptable” ride quality rose from 82.5 percent in 1993 to 86.0 percent in 2000. The percentage of bridge deck area considered deficient dropped from 30.9 percent in 1996 to 27.9 percent in 2000. However, despite the historic

investment in highway infrastructure under TEA-21, the traveling public still faces significant congestion and delays on a daily basis. Federal, State, and local investments in maintenance and capital improvements were made in Calendar Year (CY) 2000 as shown in Figure 2 below:

Figure 2



Before we discuss what needs to be done to control project costs, it is important to acknowledge that Administrator Peters is taking steps to improve FHWA's stewardship of Federal-aid funds—and we are beginning to see a change. For example, as a result of recommendations made by the ONE DOT Task Force on Oversight of Large Transportation Infrastructure Projects in December 2000, FHWA is working to require all major projects to have Project Management Plans. These plans would include baseline cost estimates and schedules, a finance plan, change order procedures, a risk management plan, and other important components for effective oversight. However, we believe that much more needs to be done to ensure that Federal funds are used effectively and are protected from fraud, waste, and abuse.

We have reviewed a number of major projects that stand as examples of good project management—projects such as Utah's I-15 and the Alameda Corridor in

California. In contrast, we have reviewed projects, such as the Central Artery in Massachusetts, and the Springfield Interchange in Virginia in which management and oversight were ineffective, leading to significant cost increases, financing problems, schedule delays, and technical or construction difficulties. A key to successful transition to more effective oversight will be a substantial focus by FHWA and the States on eight actions needed to control project costs and prevent fraud. These actions are:

- ✓ ***Preparing Reliable Cost Estimates.*** Project cost estimates are important because decision-makers and the public rely on them to make multi-million dollar and multi-billion dollar investments. Our work found that cost estimates on Utah’s I-15 and the Alameda Corridor Project in California were reasonable projections of the costs needed to complete the projects. On the Springfield Interchange Project, however, we found that cost increases occurred because State officials excluded known or easily identifiable costs, including basic items such as construction management, inflation, preliminary engineering, and even design. In addition, the baseline estimate was prepared far too early and was based on plans that were only 15 to 20 percent complete. When initial costs are understated, subsequent cost increases erode the public’s trust in Federal, State, and project officials’ ability to act as good stewards of public funds.

The Table below shows how costs have increased significantly over the initial cost estimates on three projects we reviewed.

**Cost Increases on Three Major Projects
(\$ In Billions)**

Project	Initial Cost (Year)	Current Cost	Cost Increase	Percent Increase
Central Artery/Tunnel	\$2.564 (1985)	\$14.625	\$12.061	470
Springfield Interchange	\$.241 (1994)	\$.677	\$.436	181
Wilson Bridge	\$1.890 (1996)	\$ 2.564	\$.674	36

On the Springfield Interchange Project, we found that the Virginia Department of Transportation (VDOT) understated project cost estimates by \$236.5 million by not including estimates for known and planned costs, such as \$43 million for preliminary engineering and design and \$44 million for

inflation. VDOT agreed with our findings and has incorporated these costs in the Project's \$676.5 million budget.

As a result of finance plan requirements, FHWA has issued minimum cost estimating standards for projects costing \$1 billion or more. Yet for the vast majority of projects, those costing less than \$1 billion, it did not have minimum cost estimating standards. In response to our recommendation, FHWA plans to issue draft cost estimating guidance for projects below \$1 billion by August 2003.

- ✓ ***Implementing More Cost-Effective Engineering Alternatives.*** To get the best value for any investment requires an analysis of various alternatives. Since 1970, many industries and Government agencies have successfully employed Value Engineering (VE) programs to control costs on major projects. The purpose of these programs is to objectively review all reasonable alternatives during the design phase to find more cost-effective alternatives. FHWA's VE program, established in 1997, requires that a study be performed on all Federal-aid National Highway System projects with an estimated cost of \$25 million or more and on other projects where using VE has a high potential for cost savings. FHWA Division office personnel serve as members of the VE teams, who perform the studies and make recommendations to the Project's management.

According to FHWA's FY 2001 Annual Federal-aid Value Engineering Summary Report, the latest report available, the States conducted 378 VE studies that included 2,013 VE recommendations estimated to save \$2.4 billion. FHWA Division Offices approved about 50 percent of the recommendations made in FY 2001, saving approximately \$865 million, or 36 percent of the total value of VE recommendations. While FHWA and the States have realized some savings, we identified other VE opportunities which were not implemented.

For example, in 2002 Maryland officials, who manage the Wilson Bridge Project, rejected a VE proposal to change from one type of girder to another, which would have saved up to \$66 million. Maryland officials claimed that the VE proposal would cause significant delays that could result in additional costs. However, we conducted a review and found that the rejected proposal was technically feasible and would not result in a cost increase. After FHWA advised the State to more objectively reexamine the rejected VE proposal, project officials accepted it as a design change and saved \$66 million.

- ✓ ***Managing Project Schedules to Minimize Costly Delays.*** Managing project schedules is a critical function in efforts to minimize cost growth. The key is

to maintain a master schedule that ties together the work of all the contractors and identifies and tracks the costs of labor, material, and equipment resources required to complete each task. Master schedules are referred to as integrated, resource-loaded schedules, and software tools are available off-the-shelf to provide this capability. These schedules can identify and prevent schedule conflicts before they occur and can track progress on individual tasks, allowing early action to prevent or mitigate delays; thereby reducing or preventing cost increases. This is especially critical given that projects have become larger and more technically complex in the last decade and require coordination of the activities of multiple contractors working in a confined construction area.

Failure to maintain integrated resource-loaded schedules has led to unanticipated project delays and increased costs. For example, during our audit of the Springfield Interchange Project, we found that construction problems placed the project at substantial risk of not meeting its spring 2007 completion date and delays had already added \$49 million to project costs. VDOT recognized the project slippage and is currently working on developing an integrated resource-loaded master schedule for the project.

- ✓ ***Recovering Overpayments from Contractors and Promptly Resolving Construction Claims to Control Project Costs.*** Change orders to contracts are initiated by the project or contractors in response to changes in the project's scope or differing site conditions. However, some change orders are a result of design errors or omissions caused by consultant engineers. Recovery of funds paid on these change orders offers an opportunity to reduce project costs, which benefits the Federal and State Governments. Maintaining tight control over change orders and promptly resolving outstanding construction claims are key in controlling project costs. For example, the Central Artery/Tunnel Project (the Project) in Boston might be able to reduce Project costs by *aggressively* pursuing opportunities to recover costs of design errors or omissions caused by engineering consultants.

To date, the Project's cost recovery efforts have been anemic. First, 8 years of cost recovery efforts have led to only \$30,000 in recoveries from a single consultant, even though 76 cost recovery items, involving \$53.7 million in change orders, have been reviewed and resolved to date. The \$30,000 represents less than one-tenth of 1 percent (.056 percent) of the amount in question.

Second, the Project's cost recovery efforts have not resulted in the timely resolution of many change orders that have been referred to the Cost Recovery

Program because of potential liability for design errors or omissions caused by engineering consultants. Currently, the Project has approximately 295 unresolved change orders, valued at \$188 million, of which 76 have been outstanding for 2 to 7 years. Timely resolution of change orders in the Cost Recovery Program is important, because the longer the issues remain unresolved, the more difficult it becomes for the Project to determine whether the change orders were caused by design errors.

FHWA and the Project have begun taking steps to strengthen their efforts to ensure that the Cost Recovery Program successfully recovers costs paid for changes that were due to design errors. FHWA's efforts are aimed at ensuring that the Project properly resolves the backlog of existing cost recovery items, as well as new cost recovery items, in a timely manner. The Project recently revised its evaluation process by creating a task force, headed by a retired Probate Court Judge, to review all questionable change orders. However, the backlog of existing change orders in the Cost Recovery Program includes change orders involving Bechtel/Parsons-Brinkerhoff, the design engineer and construction manager. The Project and Bechtel/Parsons-Brinkerhoff are legally partners in the Central Artery/Tunnel Project and, therefore, the Project may not be able to act independently and objectively. We will watch the cost recovery effort carefully to ensure that it is sufficiently independent and results in a credible cost recovery process.

Also, a great deal of uncertainty exists about the ultimate settlement cost of claims on the Central Artery/Tunnel Project which could increase project costs. A claim represents a dispute between the project and the contractor about whether additional work is included in the scope of the contract. The Project has 3,200 unresolved claims totaling about \$1 billion and has reserved \$633 million or 63 percent of the total exposure to cover the cost of settlements. Many of the claims have been outstanding for long periods of time, making it more difficult to obtain documentation and recollect events. Further, additional claims can be expected because about \$1.6 billion in construction costs remain.

- ✓ ***Preparing Finance Plans to Identify Cost, Schedule, Funding and Risks to the Project.*** A finance plan is a management tool that is vital in providing project managers and the public with information on how much a project is expected to cost, when it will be completed, whether adequate funding is committed to the project, and whether there are risks to completing the project on time and within budget. Our work has shown that requiring finance plans for projects costing more than \$1 billion in TEA-21 was a wise decision on the part of Congress. FHWA reviews and approves those plans, which will

eventually be included in project management plans, and should continue to do so.

Finance plans, however, are not usually required for projects under \$1 billion, although such projects can also burden a State's management resources. In fact, Virginia's Governor now requires finance plans for all highway projects costing \$100 million or more. In our opinion, finance plans should be prepared for Projects costing \$100 million or more, and responsibility for approving those plans should be delegated to the States, with the Secretary reserving the right to review any plan. If the States are going to spend \$100 million of taxpayer money, it is reasonable to require them to develop an approved finance plan that identifies project costs, milestones, and funding sources.

- ✓ ***Ensuring that Statewide Plans Properly Represent to the Taxpayer How Funds Will be Spent.*** Under Code of Federal Regulations, Title 23, Highways, States are required to prepare financially constrained 3-year transportation plans and submit these plans concurrently to the FHWA and the Federal Transit Administration (FTA) for joint approval. These plans are representations to the taxpayers of how the States intend to use the taxpayers' money to meet their transportation needs. These plans identify which projects will be funded, their costs, schedules, and funding sources. This is particularly important in States that have large projects ongoing, because cost increases on one large project can put pressure on the State's ability to fund its other transportation needs.

We reviewed one State's plans covering the years 1994 to 2000 and found that, in large part, the plans were unrealistic. For example, of 152 interstate, primary and urban construction projects included in the plans, 30 percent were started on time, 57 percent were delayed, and 13 percent were eliminated. As noted before, one of the reasons this occurred was the cost estimates included in the plan understated the actual cost of the projects, making the funding identified for the overall highway construction program insufficient. We also found that FHWA had approved the plans. FHWA must ensure that Statewide plans are realistic and achievable and include reliable cost estimates and funding commitments to complete the projects identified. Without reliable cost estimates and funding commitments, the Statewide plans have little value.

- ✓ ***Strengthening Efforts to Prevent and Detect Fraud to Minimize Losses.*** To minimize losses at the Federal and State levels, FHWA and the States should continue to strengthen efforts to prevent and detect fraud. Although our work

does not suggest abuse on a scale such as was experienced in the 1950s and 1960s, in the past 3½ years, we have experienced significant increases in our fraud cases and judicial actions involving highway and transit projects. When we receive allegations of fraud, we conduct criminal investigations and refer our findings to the U.S. Attorney Offices for prosecution. We often conduct these investigations in conjunction with the Federal Bureau of Investigation and State law enforcement agencies.

Increase in Fraud Cases

We have seen indictments for fraud triple, convictions double, and monetary recoveries of \$73 million during this period. At present, we have 98 pending investigations of contract and grant fraud in 35 States. Beyond our investigative efforts, State awareness of and actions to combat fraud are critical to providing effective oversight of the Federal-aid Highway Program. For several years, we have been reaching out with FHWA to the States and Government/industry associations to promote enhanced prevention and detection of fraud. We are beginning to see positive results in the form of case referrals, joint Federal-State investigations, and requests for training of State auditors/investigators. Continued progress in this area is key to promoting responsible stewardship. The types of fraud we are commonly seeing today include false claims, product substitution, Davis-Bacon Act violations, bid-rigging, Disadvantaged Business Enterprise (DBE) fraud, and corruption of public officials.

Our current caseload includes 23 DBE investigations nationwide. This type of fraud often involves prime contractors who conspire with sham “false front” DBE firms to fraudulently meet required DBE participation criteria in order to obtain contracts. In such cases, DBEs either do not perform the work or yield total control of personnel and operations to the prime contractors. This crime defrauds the integrity of the DBE program and harms legitimate DBEs who abide by the law. In one recent case we investigated, a U.S. District Court judge ordered the contractor to forfeit \$5 million for a kickback scheme involving two “false front” DBE subcontractors.

Strengthening Debarment Authority

In our opinion, when contractors are convicted of fraud, they should be debarred from participating on future Federally-funded projects for an appropriate period of time depending on the severity of the case and culpability of the company and/or its corporate principals. Contractors who are debarred are excluded from receiving prime contracts or serving as subcontractors. However, under current regulations, FHWA has wide

discretion in determining whether or not to debar convicted contractors, and contractors are allowed to appeal debarments to FHWA at any time, even though they have been convicted of fraud against the Federal-aid Highway Program.

For example, in 2001 three major construction companies in the New York City area, co-owned by the Scalandre brothers, pled guilty to felony fraud charges involving payoffs to organized crime to influence labor unions on FHWA-funded road projects. Because debarment is not mandatory under the current Federal-aid rules, it took over 6 months after the company was convicted to obtain a 3-year debarment. Now, 1 year after debarment, the firms are appealing to FHWA to lift their debarment. Should FHWA turn down this appeal, the firms can file subsequent appeals with FHWA continuing to put the Federal Government on the defensive and burdening the agency by requiring its expenditure of further time and legal resources to defend its action.

Making debarment mandatory and final, when a contractor is convicted of fraud, will increase the protection of taxpayers' money and the deterrent effect of debarment actions. At our recommendation, FHWA is examining a potential regulation change mandating debarment. Such a common-sense revision would make debarment under the Federal-aid Highway Program consistent with the debarment provisions of Federal procurement law, which apply to direct Federal acquisitions of materials and services.

Enhancements to State Oversight Needed

Congress, the Federal Government, and State governments are all concerned with preventing fraud and abuse in transportation projects. For example, we co-sponsored two National Fraud Conferences on Highway Construction and Related Programs with the AASHTO, American Public Transportation Association, FHWA and FTA, and the Missouri and Georgia Departments of Transportation to enhance contract oversight at the State level. Outreach initiatives like these conferences provide opportunities to increase State awareness of critical issues and to share investigative techniques with State auditors and investigators. In recent years we have joined forces with State investigative agencies to conduct highway construction fraud cases, achieving significant results.

However, because the States are the first line of defense in preventing and detecting fraud in transportation projects, more needs to be done to help strengthen State oversight. Specifically, the States should be encouraged to expand their internal audit and investigative capabilities in order to increase

the number and frequency of project audits, and ensure the timely referral of suspected fraud to FHWA and our office. Additionally, States normally do not receive a portion of fines and monies recovered in successful fraud prosecutions. Generally, fines and recoveries from such Federal case judgments must be returned to the Federal Treasury. Since the States' programs are damaged by the fraud, sharing in the recoveries would help them restore their programs and provide support for further fraud deterrence and detection efforts.

An example of monetary recovery sharing occurred in a civil settlement with Contech Construction Products, Inc., and Ispat-Inland, Inc., involving product substitution in Louisiana. The companies substituted sub-standard polymer-coated steel culvert pipe used in highway and road construction projects from 1992 through 1997. Under the settlement agreement, the United States and Louisiana shared in a \$30 million recovery, with Louisiana directly receiving \$5.2 million to compensate for the cost of the investigation and losses due to the product substitution. In addition, Louisiana received another \$5.4 million as a credit to their unobligated FHWA balance for use on future projects. A mechanism in the law is needed to easily allow the States to share in Federal fines and recoveries, particularly those stemming from Federal criminal prosecutions.

Combating Fuel Tax Evasion

In addition to contract fraud, which unnecessarily increases costs, fuel tax fraud represents a drain on the Highway Trust Fund (HTF) finances. FHWA estimates that roughly 88 percent of HTF revenues will be derived from fuel taxes over the next 10 years.¹ FHWA also estimates losses to the HTF from motor fuel tax evasion to be at least \$1 billion annually.

The HTF revenue losses to motor fuel tax evasion were much worse at the Federal level in the late 1980s and early 1990s before steps were taken to prevent evasion schemes, many of which were perpetrated by organized crime. During the 1990s, we conducted numerous cases with the Internal Revenue Service involving "daisy chain" schemes. Typically in those cases, perpetrators would create a convoluted paper trail making it difficult for auditors to track the sale and taxation of the fuel. The paper trail would show that the motor fuel was taxed at some point in a long chain of wholesalers and sold to the retailer as tax-paid, but the tax was never remitted to the Government. The entity in the chain with liability for the tax often existed only on paper or disappeared. The statutory shift in the point of taxation from

¹ Other HTF revenues are generated from truck-related taxes on tires, truck and trailer sales, and heavy vehicle use.

the wholesale level to the terminal rack,² expanded enforcement, and other improvements to detect tax evasion schemes (for example, dyeing untaxed fuel for ready identification by law enforcement authorities) have reduced the opportunity for daisy chain schemes.

However, more can be done, especially at the State level, to curb profitable tax evasion schemes, such as cross-border bootlegging of fuel. This type of scam typically occurs when bordering States have a significant difference in their motor fuel tax rates. Essentially, the bootleggers steal the difference between taxes charged in low-tax and high-tax jurisdictions by purchasing fuel—and paying the associated tax—in a low-tax jurisdiction, and then smuggling the fuel into a high-tax jurisdiction where they sell it and pocket the higher tax. This type of fraud costs the States tax revenues and their share of the HTF. This fraud may also occur when motor fuels enter the country over the border or with fuel sold on Native American reservations.

For example, as a result of a joint investigation we conducted with Texas State officials and the Federal Bureau of Investigation, two owners of several trucking companies and convenience stores located in the Lubbock, Texas area, were convicted and recently sentenced for their involvement in a scheme to avoid paying State motor fuel excise taxes on several million gallons of fuel that they purchased and resold. The scheme involved the purchase of motor fuel falsely represented as being for resale to the Navajo Reservation, which is exempt from State motor fuel taxes. The trucking company owners then created false drivers' logs and transport manifests to make it appear as though the fuel was being transported for resale to the Navajo Reservation. Instead, the fuel was being used by their trucking companies and sold in their convenience stores without payment of the required State motor fuel taxes. In August 2002, the defendants were sentenced to 42 and 18 months in prison, respectively, followed by 36 months of supervised release, after they pleaded guilty to felony mail and wire fraud charges. In addition, the defendants' associated companies also pleaded guilty to wire and mail fraud and were ordered to pay \$5.5 million in restitution.

Possible actions to prevent tax evasion at the State level include the States changing the point of collection for State fuel taxes similar to the change made by the Federal Government in the early 1990s; better documentation of fuel sold for tax exempt purposes, for example, non-highway use such as agriculture; and strengthening State enforcement efforts to catch and deter bootleggers and other tax evaders.

² The Tax Reform Act of 1986, effective January 1, 1988, changed the point of taxation for motor fuels from the wholesaler/distributor to the fuel terminal (or "rack"), which is the last "bulk storage" point in the distribution chain.

At the Federal level, an area requiring further examination is aviation “jet” fuel tax evasion. It is the only major category of transportation fuel not currently subject to Federal excise tax at the rack. Instead, this fuel is sold tax-free to wholesalers and is not taxed until sold to an end user such as an airline. Jet fuel, taxed at a considerably lower rate than diesel fuel, is in effect chemically the same as kerosene, which can readily be used in on-road diesel trucks. Tax evasion opportunities exist when jet fuel is diverted to diesel truck use. Taxing jet fuel at the rack would bring it into conformity with Federal gasoline and diesel fuel taxes and help reduce tax evasion opportunities.

For example, in one reported case, the State of Florida began taxing jet, diesel and gasoline fuels at the rack in 1996. According to a recent KPMG Consulting analysis, one year after implementing its new system, Florida’s Department of Revenue analyzed excise tax collection data and found that the State experienced the largest gain in collections for aviation fuel—a 21.4 percent increase in aviation fuel tax collections. While Florida’s analysis is not conclusive, it does illustrate the potential to increase tax collections by moving the point of taxation to the rack and reducing tax evasion opportunities.

The overall impact of fuel tax evasion losses to the HTF is amplified because HTF revenues are down while demands on highway capacity have reached unprecedented levels, and replacement and rehabilitation costs for existing infrastructure have greatly increased. This is an especially important issue today as Congress considers TEA-21 reauthorization and is searching for ways to increase HTF revenues and transportation spending without raising taxes. When fuel taxes are not paid, those dollars are not available for the construction and upkeep of our Nation’s roads and bridges.

An ongoing commitment to fuel tax fraud enforcement is needed to continue progress made in combating fuel tax evasion—increased tax compliance means increased revenues. FHWA needs to continue its commitment to the Joint Fuel Tax Compliance Project; promoting enforcement activities and developing new strategies to encourage compliance to help ensure all taxes are collected and remitted to the HTF for funding of highway projects.

- ✓ ***Refocusing FHWA Efforts on Project Management and Financial Oversight.*** The failure to properly oversee States’ project management practices can also lead to increased project costs. Until recently, FHWA managers rarely focused on program and major project management and financial oversight. FHWA took a partnership approach in exercising its

oversight role of Federal-aid Highway projects, with FHWA channeling money for highways to the States and working with State highway personnel to administer highway contracts. This partnership is important, but it is equally important that FHWA be willing to step back and make the hard calls when necessary.

Recognizing that the interstate system was largely completed, and that the States and localities know better what is needed for their citizens, Congress delegated project selection and execution to the States in the 1980s and 1990's. These changes did not alter the fact that the FHWA is the Federal agency responsible for ensuring compliance with Federal requirements in the delivery of the Federal Highway Program. These changes did affect how FHWA implements this responsibility. The flexibility afforded in the Intermodal Surface Transportation Efficiency Act (ISTEA) and TEA-21 allowed State Transportation Agencies to assume the Secretary's responsibilities for design, plans, specifications, estimates, contract awards, and inspection of many Federal-aid projects.

Consequently, the States have generally improved their capability to manage their transportation projects, including the development of in-house engineering expertise. However, FHWA remains focused on detailed engineering activities. FHWA managers performed contract-level administration and engineering activities such as approving contract change orders and deciding on the location and wording of highway signs. As a result, it has sometimes missed larger management issues. For example, at the time the Central Artery announced a \$1.4 billion cost increase in 2000, FHWA had approved thousands of engineering design changes. Nonetheless, they were caught unaware when a cost increase was announced, even though they had just approved the Project's finance plan.

Until we identified the significant cost increases on the Central Artery in 2000, FHWA had placed little emphasis on managing major projects. However, the high profile of the Central Artery cost increase, as well as subsequent cost increases identified on other projects, provided a catalyst for action by the Department and the FHWA Administrator.

Today's highway projects require skills in emerging technologies and professional expertise in financing, cost-estimating, program analysis, environmental streamlining, and schedule management. Yet, FHWA has limited staff devoted to these areas because its workforce is structured almost exclusively around engineering skills that were needed more during construction of the interstate system.

Of FHWA's workforce of 2,860 employees, 1,130, or approximately 40 percent, are highway engineers. Yet in the remaining 60 percent, or 1,750 employees, specialist skills, needed to oversee State management processes, are in short supply. For example, there are 88 financial specialists, but these specialists primarily perform financial management tasks internal to FHWA, rather than analyzing project finance plans and evaluating State financial management processes. Accordingly, FHWA should restructure its staffing mix to bring the right set of skills to bear on oversight activities. This is not to suggest FHWA needs more staff. A strategy for achieving a more multi-disciplinary approach to oversight activities within current staffing levels could include a mix of actions such as:

- hiring staff with private sector project management skills, that is, financing, program analysis, and cost estimating; and
- streamlining and delegating project-level approvals to the States so that staff time can be refocused on overseeing program-level management and financial issues.

We noted the inclusion of language in the FY 2003 Omnibus Appropriations Conference report requesting that FHWA develop a strategy for establishing a multidisciplinary workforce for its oversight activities. According to FHWA officials, a document outlining their plan of action has been prepared and they anticipate meeting the May 2003 deadline set by the conferees. We plan to review this document when it is issued.

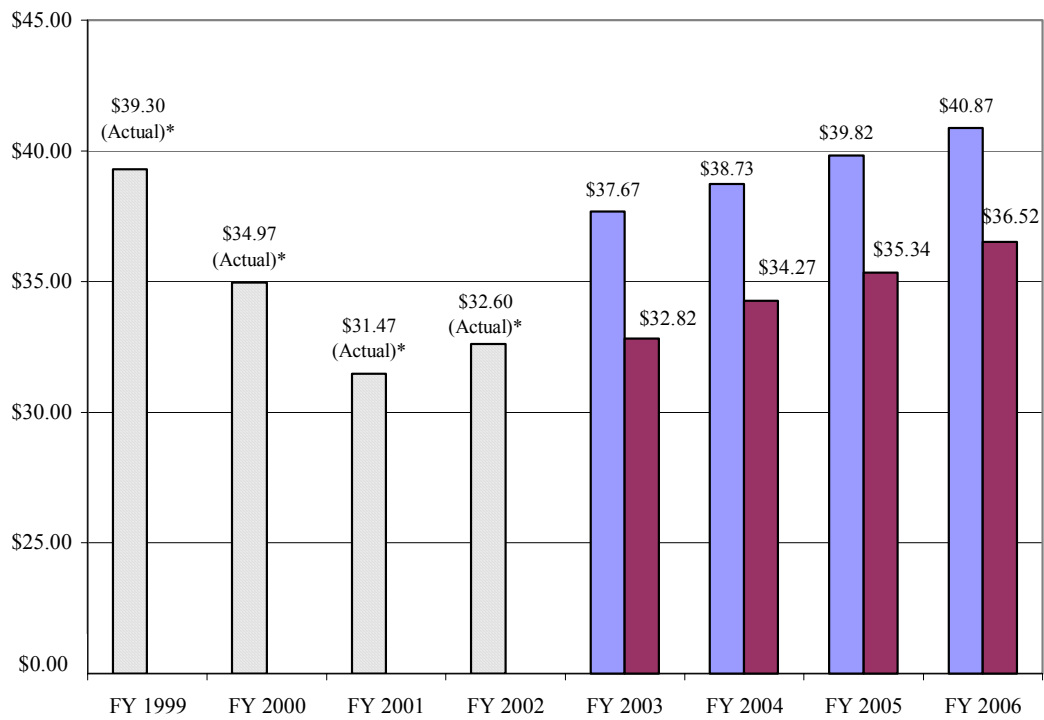
Also, FHWA will need better data to successfully refocus its oversight efforts. Over the years we have found that the reasons for cost increases beyond the initial cost estimates on large-dollar highway projects cannot be readily determined. This is because FHWA's information system tracks only those costs associated with individual project contracts. Essentially, FHWA tracks contracts, not projects.

For example, last year we were asked by the Chairman of a Senate Committee to determine the funding status of earmarked projects, including identifying project costs. We were not able to readily obtain this information from FHWA's database as it is decentralized throughout various State transportation agencies and FHWA division offices.

That concludes my statement, Mr. Chairman. I would be pleased to address any questions you or members of the Subcommittee might have.

**Actual and Projected Highway Trust Fund Tax Revenue
Includes Highway and Transit Accounts
(FY 1999 - FY 2006)**

Billions



* Actual Taken From President's Budget (FY 01 - FY 04)

■ Projected in April 2001 President's Budget Est.
■ Projected in February 2003 President's Budget Est.

Top Highway Projects by Dollar Value

<i>Project Name</i>	Project Cost As of April 2003 (Billions)
Central Artery/Ted Williams Tunnel – Boston, MA	\$14.6
Interstate 64/Hampton Roads Third Crossing – Hampton, VA	4.4
Central Texas Turnpike – Austin, TX	3.6
Interstate 95/Woodrow Wilson Bridge – DC, MD, VA	2.6
Interstate 80/San Francisco Oakland Bay Bridge (East Span) – Oakland, CA	2.6
New Ohio River Bridges (Kentucky/Indiana) – Louisville, KY	2.5
Interstate 10/Katy Freeway – Houston, TX	1.8
Southeast Corridor– Denver, CO	1.7
New Mississippi River Bridge – St. Louis, MO/IL	1.4
Miami Intermodal Center – Miami, FL	1.3
State Road 210/Foothill Freeway – Los Angeles, CA	1.1
Marquette Interchange, Interstates 94/43/794 – Milwaukee, WI	1.1
Interstate 95/New Haven Harbor Crossing – New Haven, CT	1.0
Interstates 4/275 – Tampa, FL	1.0
Springfield Interchange Interstates 95/395/495 – Springfield, VA	0.7
Cooper River Bridges – Charleston, SC	0.7
State Road 125 South Toll Road – San Diego, CA	0.4
Total	\$42.5