

TOP MANAGEMENT CHALLENGES

Department of Transportation

Report Number: PT-2009-005

Date Issued: November 17, 2008



Memorandum

**U.S. Department of
Transportation**

Office of the Secretary
of Transportation
Office of Inspector General

Subject: **INFORMATION:** DOT's Fiscal Year 2009
Top Management Challenges
Report Number PT-2009-005

Date: November 17, 2008

From: Calvin L. Scovel III 
Inspector General

Reply to
Attn. of: JA-1

To: The Secretary
Deputy Secretary

The U.S. transportation system is vital to the Nation's economy and the quality of life for all Americans. Each year, the Department of Transportation (DOT) spends about \$70 billion on a wide range of efforts to enhance mobility and safety. As required by law, we have identified nine top management challenges for the Department for fiscal year (FY) 2009.

The next Administration and the 111th Congress will face an array of challenges and difficult decisions with respect to transportation programs. This is particularly the case with relieving congestion, reaching agreement on long-term financing mechanisms for aviation and surface transportation programs, and addressing surface infrastructure, including aging bridges.

The Department faces these challenges in an environment of uncertain financial markets, volatile fuel prices, rising deficits, and a softening economy. These factors will impact all modes of transportation and require a careful reassessment of how Federal agencies do business and manage investment portfolios. Notwithstanding the unprecedented level of uncertainty, there are important opportunities to strategically position the Department, set priorities, and adjust strategies to maximize investments in transportation.

Improving transportation safety is—and must remain—the Department's overarching goal. Strong leadership will be a prerequisite for meeting the challenges facing the Department. The Department's top management challenges for FY 2009 are summarized below. An exhibit to this report compares this year's management challenges with those published in FY 2008.

- Enhancing Aviation Safety and Maintaining Confidence in FAA’s Ability To Provide Effective Oversight of a Rapidly Changing Industry
- Enhancing Mobility and Reducing Congestion in America’s Transportation System
- Developing a Plan To Address Projected Highway and Transit Funding Shortfalls
- Maximizing the Return on Current Highway and Transit Infrastructure Investments
- Operating the National Airspace System While Developing and Transitioning to the Next Generation Air Transportation System
- Protecting Against Increasing Cyber Security Risks and Enhancing the Protection of Personally Identifiable Information
- Preventing Catastrophic Failures and Obsolescence in the Nation’s Aging Surface Transportation Infrastructure
- Improving Contract Operations and Maintaining Procurement Integrity
- Enhancing and Deploying Programs for Reducing the Serious Consequences of Surface Transportation Crashes

Key Focus Areas for the New Administration and the 111th Congress

Over the next several years, Congress, the Department, and stakeholders will face unique challenges. Our report highlights key, near-term areas of emphasis for each top management challenge. These areas include bolstering the integrity of the oversight of a rapidly changing airline industry; addressing congestion in the air and on the ground; and advancing a data-driven, risk-based approach to addressing nationwide bridge safety risks. We recognize that solution sets involve policy decisions for the current and future Administration as well as the next Congress. Our comments are aimed at enhancing safety, reducing risk with multibillion-dollar investments, and improving Federal oversight of transportation investments regardless of the chosen policy approach.

We remain committed to a proactive audit and investigative approach to prevent fraud, waste, and abuse in transportation programs and to our efforts to keep decision makers informed so that timely corrective actions can be taken. This report and the Department’s response will be incorporated into the DOT Performance and Accountability Report as required by law (see appendix).

If you have any questions concerning this report, please contact me at (202) 366-1959. You may also contact David A. Dobbs, Principal Assistant Inspector General for Auditing and Evaluation, at (202) 366-1427.

#

Table of Contents

1. Enhancing Aviation Safety and Maintaining Confidence in FAA’s Ability To Provide Effective Oversight of a Rapidly Changing Industry	1
2. Enhancing Mobility and Reducing Congestion in America’s Transportation System	8
3. Developing a Plan To Address Projected Highway and Transit Funding Shortfalls	14
4. Maximizing the Return on Current Highway and Transit Infrastructure Investments	17
5. Operating the National Airspace System While Developing and Transitioning to the Next Generation Air Transportation System	21
6. Protecting Against Increasing Cyber Security Risks and Enhancing the Protection of Personally Identifiable Information.....	26
7. Preventing Catastrophic Failures and Obsolescence in the Nation’s Aging Surface Transportation Infrastructure	30
8. Improving Contract Operations and Maintaining Procurement Integrity	34
9. Enhancing and Deploying Programs for Reducing the Serious Consequences of Surface Transportation Crashes.....	38
Exhibit. Comparison of FY 2009 and FY 2008 Top Management Challenges ...	44
Appendix. Department Response	45

1. Enhancing Aviation Safety and Maintaining Confidence in FAA's Ability To Provide Effective Oversight of a Rapidly Changing Industry

Over the last several years, the aviation industry has experienced the safest period in history. This is due in part to the Federal Aviation Administration's (FAA) oversight and the industry's efforts to advance aviation safety. However, airline consolidation and downsizing continue to dramatically change the industry, and widely publicized lapses in FAA oversight in 2008 emphasize the need for FAA to continually adapt its oversight to further enhance safety. Key challenges for FAA include:

- maintaining confidence in FAA's oversight of air carriers and certification and production of new segments of the aircraft industry;
- following through on longstanding commitments to improve oversight of external repair facilities; and
- improving runway safety by implementing new technologies, making airport-specific changes, and reinvigorating FAA initiatives.

Maintaining Confidence in FAA's Oversight of Air Carriers and Certification and Production of New Segments of the Aircraft Industry

A significant challenge for FAA will be to maintain confidence in its oversight of air carrier operations and aircraft certification and production. Our congressional testimonies in April before the House of Representatives and the Senate disclosed serious lapses in FAA's oversight at Southwest Airlines (SWA). We also testified before the House Subcommittee on Aviation in September on FAA's certification of the Eclipse Aviation EA-500 very light jet (VLJ). FAA actions in both of these instances appeared to focus primarily on promoting aviation over safety, which diminishes the public perception of FAA's ability to provide objective oversight.

The importance of these issues was underscored by the Department's recent actions to review FAA's safety oversight. In response to the safety lapses at SWA, on May 1, 2008, the Secretary of Transportation commissioned a panel to examine FAA's safety culture and its approach to safety management. In its final report, issued in September, the panel disclosed that it found FAA's safety staff was "unambiguously committed" to its safety mission but acknowledged that a remarkable degree of variation in regulatory philosophies exists among inspectors, which could create widespread inconsistencies in regulatory decision making.

Enhancing Oversight of Air Carrier Operations: In April and June, we reported that an FAA safety inspector had an overly collaborative relationship with SWA and violated FAA safety directives by permitting the air carrier to operate 46 planes without required inspections for fuselage cracks. Although FAA

identified the situation as early as April 2007, it did not attempt to determine the root cause of the safety issue nor initiate enforcement action against the carrier until November 2007. This review also identified concerns regarding FAA's failure to protect whistleblowers from retaliation. For example, after a whistleblower voiced concerns about SWA to FAA, an anonymous hotline complaint—which was never substantiated—was lodged against him, and FAA removed the whistleblower from duty for 5 months while he was under investigation. In 2007, we raised similar concerns regarding maintenance practices at Northwest Airlines, where FAA reviews of an inspector's safety concerns overlooked key findings identified by other inspectors.

Our work at SWA and other carriers has also found weaknesses in FAA's national program for risk-based oversight, the Air Transportation Oversight System (ATOS). At SWA, multiple missed ATOS inspections allowed safety directive compliance issues in SWA's maintenance program to go undetected for several years. At the time of the SWA disclosure, FAA inspectors had not completed 21 key inspections in at least 5 years.

Over the past 6 years, we have identified system-wide problems with ATOS, such as inconsistent inspection methods across FAA field offices and incomplete inspections. We recommended, among other things, that FAA strengthen its national oversight and accountability to ensure consistent and timely ATOS inspections. However, FAA still has not fully addressed this concern. We have recommended other actions to help maintain public confidence in FAA's oversight of air carriers. FAA has agreed to some of these, such as creating a national review team to conduct quality assurance reviews of FAA's air carrier oversight and implementing a process to monitor field office ATOS inspections. However, FAA has disagreed with other key recommendations, including the following:

- *Periodically rotating supervisory inspectors to ensure reliable and objective air carrier oversight.* FAA has stated that it is not financially feasible to rotate inspectors annually. Given budget constraints, FAA should consider other alternatives to ensure objective oversight. Possible alternatives include (1) incorporating assessments into its air carrier evaluation program to determine if an overly collaborative relationship exists between inspectors and the air carriers they oversee and (2) modifying its inspector training program to include additional sensitivity and integrity training for air carrier relations.
- *Establishing an independent organization to investigate safety issues identified by FAA employees.* FAA states that it has already deployed a new internal hotline for employees to resolve safety issues without fear of repercussion. However, we question the effectiveness of the hotline, which remains under the control of the Aviation Safety line of business. The serious weaknesses we identified underscore the need for an independent organization. In fact, FAA has

an independent organization to investigate employee complaints about its Air Traffic Organization. This group is staffed with former controllers and other technical experts. It recently worked with our office to conduct a high-profile investigation at the Dallas/Fort-Worth Terminal Radar Approach Control facility. The investigation substantiated serious whistleblower allegations that facility management underreported controller operational errors (when a controller fails to maintain separation between two aircraft), which created, at a minimum, the appearance of complicity.

Improving Certification and Production Oversight of New Segments of the Aircraft Industry: Another challenge for FAA will be improving its oversight of new segments of the aircraft industry. Introduction of VLJs into the National Airspace System is a key change occurring in the industry and is expected to continue over the next 2 decades. VLJs are small aircraft with advanced technologies that cost less than other business jets. In 2006, FAA certified the first VLJs, including the Eclipse EA-500. While the industry was generally excited about the introduction of this jet, some FAA employees were also concerned that it was pushed through the certification process too quickly.

A significant issue overshadowing FAA's certification of the EA-500 was the inherent risks associated with a new aircraft utilizing new technology, produced by a new manufacturer, and marketed with a new business model for its use. Because of these factors, FAA should have exercised heightened scrutiny in certifying the aircraft. Instead, our investigation found a combination of FAA actions or inactions indicating that the Agency expedited the certification processes for the EA-500 to meet a September 2006 deadline.

More importantly, because the EA-500 has advanced avionics and turbine engine technology typical of large transport aircraft combined with the light weight of smaller, private aircraft, it did not easily fit into FAA's existing certification framework. FAA chose to certify the EA-500 and other VLJs using certification requirements for general aviation aircraft rather than the more stringent certification requirements for larger transport aircraft.

A September 2008 Special Certification Review conducted by an independent FAA team concluded that the aircraft met applicable certification requirements for the four areas reviewed. However, FAA managers acknowledged that the general aviation certification requirements were inadequate to address the advanced concepts introduced on the aircraft. We understand that FAA is developing a Notice of Proposed Rulemaking (NPRM) to clarify certification requirements for VLJs. Given the issues surrounding the EA-500 certification, FAA should expedite the NPRM to allay future concerns with this expanding industry segment.

Following Through on Longstanding Commitments To Improve Oversight of External Repair Facilities

FAA continues to face challenges in identifying where critical aircraft maintenance is performed. A key issue is that FAA's risk-based oversight system does not include critical repairs performed by non-certificated repair facilities. FAA set up a system in fiscal year (FY) 2007 for air carriers and repair stations to report the volume of outsourced repairs. However, in our September 2008 report, we found that FAA's system was inadequate because it did not require mandatory air carrier reporting, an inclusive air carrier listing of *all* repair stations performing repairs to critical components, or FAA inspector validation.

We also raised concerns with FAA's guidance planned for issuance by the end of calendar year 2008. We found that the guidance, as currently drafted, does not require air carriers to report volume data for *all* repairs of critical components and inspectors to validate the data. Without this information, FAA cannot be assured that it has the precise and timely information needed to determine where it should focus its inspections. FAA is revising the guidance to address these issues.

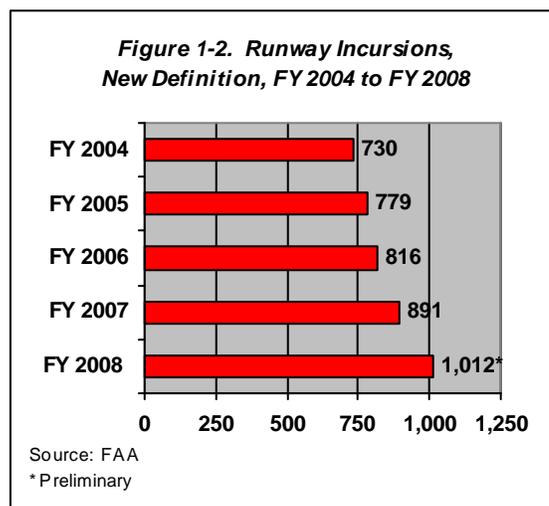
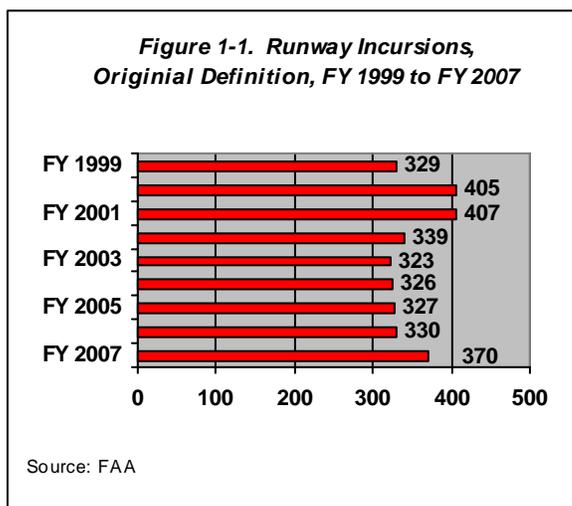
Gathering adequate data to target inspections is important since FAA does not have a specific policy governing when inspectors should initially visit repair stations performing substantial maintenance for air carriers. Instead, FAA allows inspectors to rely on the air carriers' initial audits as a basis for approving those facilities for air carrier use. As a result, we found significant delays between FAA's initial approval of repair stations and its first inspections at those locations. For example, during a 3-year period, FAA inspectors inspected only 4 of its 15 substantial maintenance providers used by 1 air carrier. Among those uninspected was a major foreign engine repair facility that FAA inspectors did not visit until 5 years after it had received approval for carrier use—even though it had worked on 39 of the 53 engines repaired for the air carrier.

FAA needs to require its inspectors to conduct initial and follow-up on-site inspections of substantial maintenance providers to assess whether the maintenance providers comply with air carriers' procedures. In addition to their own inspections, FAA inspectors must ensure that air carriers and repair stations have strong audit systems to correct identified deficiencies, as FAA relies heavily on air carriers' oversight. In response to our report, FAA is reviewing its procedures and processes for opportunities to strengthen its guidance. However, it does not expect to complete these reviews until mid-2009.

Improving Runway Safety by Implementing New Technologies, Making Airport-Specific Changes, and Reinvigorating FAA Initiatives

Runway incidents continue to be a substantial threat to safety. The last fatal commercial aircraft accident in the United States (in 2006) occurred because the pilots of Comair flight 5191 attempted to take off from the wrong runway. A

specific concern is runway incursions (any incident involving an unauthorized aircraft, vehicle, or person on a runway).¹ Since 2003, the number of runway incursions has increased again, reaching a high of 370 in FY 2007—a 13-percent increase over FY 2004 (see figure 1-1). Under FAA’s new definition for categorizing runway incursions, runway incursions continue to rise even more dramatically—a 39-percent increase since FY 2004 (see figure 1-2).



Many see new technology as a key runway safety solution. However, our reviews of three major FAA acquisitions² for improving runway safety disclosed serious concerns about what can be effectively deployed within the next several years. For example, for the Airport Surface Detection Equipment-Model X—a ground surveillance system intended to alert controllers to potential ground collisions—FAA may not meet its goal to commission all 35 systems by 2011 or achieve all planned safety benefits.

The uncertain timeline and emerging risks of FAA’s runway safety technologies underscore the need for other near-term solutions. In May 2007, we reported on runway safety efforts at four airports that had experienced a surge in runway incursions: Boston, Chicago, Philadelphia, and Los Angeles. All four airports had made relatively low-cost, simple changes to their infrastructure and procedures that helped reduce the risk of runway incursions at their locations. These included improving airport lighting, signage, and runway and taxiway markings (before FAA’s June 2008 deadline). In addition, the airport operators and FAA managers began tightly controlling the testing and certification of airfield drivers.

¹ Effective October 1, 2007, FAA began categorizing runway incursions using the International Civil Aviation Organization (ICAO) definition. The new definition of runway incursions includes incidents that were previously defined by FAA as “surface incidents” (where a potential conflict did not exist).

² Airport Surface Detection Equipment-Model X (ASDE-X), Automatic Dependent Surveillance-Broadcast (ADS-B), and Runway Status Lights.

FAA convened a task force in August 2007 to address runway safety issues. The group agreed on a short-term plan to improve runway safety, which includes conducting safety reviews at airports based on runway incursion and wrong runway departure data, improving airport signage and markings at the 75 busiest, medium- to large-sized airports, and reviewing cockpit and air traffic clearance procedures. These are the type of “airport-specific” actions that are needed; the key now will be maintaining commitment and follow through on the part of all users.

FAA must also remain focused on reinvigorating national runway safety initiatives. In response to the surge in runway incursions between FY 1999 and FY 2001, FAA took national actions to prioritize runway safety, which significantly decreased incidents between 2001 and 2003 (from 407 to 323). However, some national initiatives for promoting runway safety have subsequently waned as FAA met its overall goals for reducing runway incursions.

For example, FAA established the Runway Safety Office in 2001 to provide central oversight and accountability for runway safety initiatives throughout the Agency. However, at the time of our review, that office had not had a permanent director for almost 3 years and had undergone significant reorganization and staff reductions. FAA has since hired a director for this office and plans to reinstate its National Plan for Runway Safety to reduce runway incursions. Sustained commitment and executive-level attention will be key to the success of these initiatives.

Near-Term Focus Areas for the Transition to a New Administration

Aviation safety is and must remain FAA’s top priority. Key focus areas for the short term include the following actions.

- Bolster the integrity of FAA’s airline oversight by protecting whistleblowers, improving risk-based systems for targeting inspector resources, and establishing mechanisms at the national level to provide quality assurance and independent assessments of regional inspection efforts.
- Strengthen the certification process for new VLJs by clarifying certification requirements.
- Advance risk-based oversight of outsourced maintenance providers (both foreign and domestic) by developing and implementing a system for determining how much and where aircraft maintenance is performed.
- Reinvigorate efforts with strong national leadership to enhance runway safety through revised procedures and airport-specific changes at high-risk locations while waiting for new technologies to be deployed.

For further information regarding the issues identified in this chapter, please contact Lou Dixon, Assistant Inspector General for Aviation and Special Programs, at (202)-366-0500. The following related reports and testimonies can also be found on the OIG website at <http://www.oig.dot.gov>.

- *Review of FAA's Oversight of Airlines and Use of Regulatory Partnership Programs*
- *Testimony before the House Subcommittee on Aviation: FAA's Certification of the Eclipse EA-500 Very Light Jet*
- *FAA's Actions Taken To Address Allegations of Unsafe Maintenance Practices at Northwest Airlines*
- *Assessment of FAA's Risk-Based System for Overseeing Aircraft Manufacturers' Suppliers*
- *Review of Air Carriers' Use of Non-Certificated Repair Stations*
- *Progress Has Been Made in Reducing Runway Incursions, but Recent Incidents Underscore the Need for Further Proactive Efforts*
- *Air Carriers Outsourcing of Aircraft Maintenance*

2. Enhancing Mobility and Reducing Congestion in America's Transportation System

Congestion-related problems have impacted all modes of transportation; the Department estimates that congestion costs America almost \$200 billion per year. Flight delays and cancellations have continued to be a concern in 2008, and the Nation's highways continue to experience record levels of congestion. The Department has made progress in implementing several congestion-related initiatives this past year, and it is imperative that these remain a key Federal priority across all modes. For example, the Secretary recently released a reform plan that proposes a renewed Federal focus on maintaining and improving performance on the Interstate Highway System, addressing urban congestion, giving state and local leaders greater flexibility to invest in their transit and highway priorities, and creating accountability measures to ensure investments in transportation will actually deliver results.

The Department has also taken steps to ease aviation congestion by reducing flights in the New York City area and establishing new routes through airspace redesign and air traffic control procedures. The Department is also building new runways nationwide. However, while the Department decides where to invest Federal funds to operate and expand the air traffic control system, state and local authorities select most highway and transit projects for funding. Therefore, the Department will need to work with these stakeholders to target Federal infrastructure funding to congestion relief. Specific challenges in reducing congestion include:

- reducing delays and improving airline customer service as the airlines struggle with higher fuel costs,
- keeping airport infrastructure and airspace projects on track, and
- improving intercity passenger rail's efficiency and viability as a transportation alternative.

Reducing Delays and Improving Airline Customer Service as the Airlines Struggle With Higher Fuel Costs

Reducing delays, particularly at already congested airports, and improving airline customer service are important issues facing the Nation. Peak-year 2007 trends continued into the first 6 months of 2008, with more than 1 in 4 flights (29 percent) delayed or cancelled. Not until July and August did on-time performance show a substantial improvement compared to the same months last year. On the basis of the summer improvements, year-to-date delays (through August of 2008) at the 55 airports tracked by the Federal Aviation Administration (FAA) declined 7.3 percent from the same period in 2008. During the summer of 2008, double-digit reductions in delays were experienced at 45 of the 55 airports.

Notable exceptions were Newark, where delays were up slightly; LaGuardia; John F. Kennedy (JFK); and Chicago O’Hare, where delays were down only 5.3 percent, 4.9 percent and 4.5 percent, respectively.

The decline in delays primarily stems from higher fuel costs and is expected to continue through the remainder of the year. Specifically, to offset rising fuel costs, airlines have reduced flight schedules and taken aircraft out of service, and this has provided some relief from delays. In our view, however, reducing capacity and increasing load factors can also result in more passenger inconvenience and dissatisfaction with customer service. With more seats filled, air carriers have fewer options to accommodate passengers from cancelled flights or missed connections caused by flight delays.

To explore solutions to congestion and delays in the New York City area, the Secretary formed the New York Aviation Rulemaking Committee last September. The Secretary also directed FAA to negotiate with the airlines and established temporary flight caps at JFK and Newark airports and proposed auctioning a limited number of take-off and landing opportunities (known as “slots”) at JFK, LaGuardia, and Newark airports. While limiting the number of flights may reduce congestion in the short term, it is not an ideal long-term solution.

The current situation provides the Department with an important opportunity to revise its demand management policies, which are very controversial issues. Slot auctions in particular are strongly opposed by stakeholders, including the airlines and the operator of the New York area airports. Moreover, the Government Accountability Office recently concluded that FAA does not have the authority to auction arrival and departure slots.³ The Government Accountability Office also stated that if FAA auctions slots without obtaining the necessary authority and retains and uses the proceeds, it would be in violation of the Anti-Deficiency Act. The Justice Department disagreed and found no potential for violation of the Anti-Deficiency Act. FAA issued its final rules to auction slots at the three New York airports, which will go into effect in January 2009. We believe the Department needs to further study the pros and cons of each demand management option, including who benefits and who bears the cost of implementing each option.

To improve airline customer service, the Department should continue moving forward with initiatives to improve the accountability, enforcement, and protection afforded air travelers. These initiatives include developing rulemakings to enhance passenger protection and implementing the necessary changes in the airlines’ on-time performance reporting to capture all long, on-board delays and

³ See GAO letter to Congressional Requestors, *Federal Aviation Administration—Authority to Auction Airport Arrival and Departure Slots and to Retain and Use Auction Proceeds* (September 30, 2008, B-316796).

plans to develop model contingency plans for minimizing the impact of long, on-board delays.

Keeping Airport Infrastructure and Airspace Projects On Track

The long-term solution to increasing capacity and reducing delays depends largely on expanding capacity through the Next Generation Air Transportation System (NextGen). However, NextGen is not targeted until the 2025 timeframe. While there is no “silver bullet” for addressing delays, several near-term initiatives can help relieve congestion. According to FAA, building new runways provides the largest increases in capacity. Currently, there are eight runway projects underway at seven major airports, which are expected to be complete by 2012. FAA estimates that runway projects at Washington-Dulles, Chicago O’Hare, and Seattle have the potential to accommodate an additional 300,000 operations annually. Table 2-1 provides details on the eight runway projects.

Table 2-1. Current Airfield Construction Projects

Airports	Airfield Construction Projects	Est. Completion	Cost Estimate
Philadelphia	Runway Extension	March 2009	\$65 million
Seattle-Tacoma	Runway	November 2008	\$1.1 billion
Washington-Dulles	Runway	November 2008	\$356 million
Chicago O’Hare	Runway (9L/27R) Runway (10C/28C)	November 2008 2012	\$1.7 billion
Charlotte	Runway	February 2010	\$300 million
Dallas Ft. Worth	End Around Taxiway	December 2008	\$79 million
Boston	Centerfield Taxiway	November 2009	\$55 million

Airspace redesign efforts are critical to realizing the full benefits of runways and can also enhance capacity without new infrastructure. Currently, FAA is pursuing seven airspace redesign projects nationwide, including a major but controversial effort to revamp airspace in the New York/New Jersey/Philadelphia area. However, FAA’s airspace redesign efforts still do not function as a “national” program since FAA facilities are now using their own resources to redesign airspace without coordinating with Headquarters. FAA needs to complete guidelines for managing airspace projects across the Agency’s lines of business and establish realistic funding profiles for airspace projects.

Another important near-term initiative is establishing new routes that rely on equipment onboard aircraft. These new routes rely on procedures (called Area Navigation/Required Navigation Performance) that allow aircraft to fly more precise routes, which reduces fuel burn. At this stage, the challenge facing FAA is shifting from localized operations to networking city pairs, like Washington, DC,

and Chicago, IL, which will require considerable simulation modeling as well as close coordination with airspace redesign efforts and stakeholders.

Improving Intercity Passenger Rail's Efficiency and Viability as a Transportation Alternative

Intercity passenger rail is an integral part of America's transportation system, particularly in light of growing highway and aviation congestion and rising fuel prices. Amtrak, the Nation's intercity passenger rail service provider, is experiencing record revenue and ridership. However, given the constrained Federal funding environment and Amtrak's poor on-time performance, Amtrak's ability to continue to grow and reduce congestion remains uncertain.

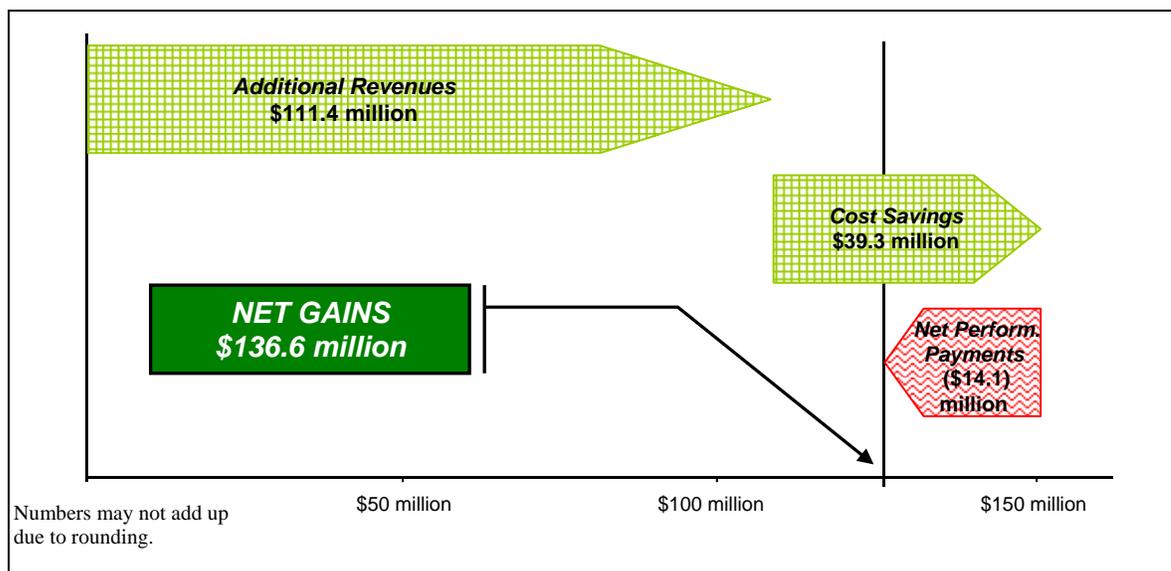
While Amtrak has recently made moderate improvement in its financial performance, its operational reform efforts have waned. Amtrak achieved \$61 million in reform savings in fiscal year (FY) 2006 and \$53 million in FY 2007, but it only budgeted \$32 million in savings for FY 2008. As limited Federal funds are allocated to operating subsidies, it becomes more difficult to provide sufficient capital funds to improve Amtrak's performance and prepare for its long-term expansion plans. The Department needs to ensure that Amtrak continues its efforts to implement strategic reform initiatives that reduce its reliance on Federal subsidies.

Amtrak's poor on-time performance undermines the viability of intercity passenger rail as an option for travelers and weakens Amtrak's financial position by reducing its revenues and increasing its operating costs. Between FY 2003 and FY 2007, Amtrak's on-time performance off the Northeast Corridor (NEC) for long-distance routes fell from an average of only 51 percent to 42 percent; for non-NEC corridor routes, on-time performance fell from an average of 76 percent to 66 percent.

We recently reported that there are several root causes of Amtrak train delays that, if addressed, would improve Amtrak's on-time performance and financial viability. Specifically, Amtrak trains are delayed by (1) freight railroad dispatching practices, some of which deny Amtrak trains their statutory right to preference in the use of freight rail tracks and infrastructure; (2) track maintenance practices by the freight railroads and the resulting track speed restrictions; (3) insufficient track capacity; and (4) external factors beyond the freight railroad's control, such as weather.

Achieving reliable on-time performance would substantially improve Amtrak's finances. For example, an 85-percent on-time performance off the NEC in FY 2006 would have reduced Amtrak's operating loss by 30 percent, or by \$136.6 million (see figure 2-1 below).

Figure 2-1. Calculation of Net Effects at 85 Percent On-Time Performance



Source: OIG analysis

The Department needs to work with the freight railroads (over whose track Amtrak travels) and Amtrak to develop and implement comprehensive route management plans to improve service reliability on poor-performing Amtrak routes and seek additional funding for rail capacity expansion. The Department must also work with states that are making their own capital investments in freight rail capacity to improve the linkage between those investments and freight railroads' commitment to enhancing Amtrak train on-time performance.

Near-Term Focus Areas for the Transition to a New Administration

Given the importance of transportation to the Nation's economy and the impact of congestion, several efforts will be needed to:

- keep short-term FAA capacity initiatives on track, including new runways and airspace redesign efforts, and
- move forward with initiatives to improve the accountability, enforcement, and protection afforded air travelers.

For further information regarding the issues identified in this chapter, please contact David Tornquist, Assistant Inspector General for Rail and Maritime Program Audits and Economic Analysis, at (202)-366-9970. The following related reports and testimonies can also be found on the OIG website at <http://www.oig.dot.gov>.

- *FAA Short-Term Capacity Initiatives*
- *Use of the National Airspace System*
- *Aviation Industry Performance*
- *Quarterly Reports on Amtrak's FY 2008 Operational Reforms Savings and Financial Performance*
- *Analysis of the Benefits of High-Speed Rail on the Northeast Corridor*
- *Amtrak's Future Outlook and Budgetary Needs*
- *Root Causes of Amtrak Train Delays*
- *Effects of Amtrak's Poor On-Time Performance*
- *Follow-Up Review: Performance of U.S. Airlines in Implementing Selected Provisions of the Airline Customer Service Commitment*
- *Actions Needed To Improve Airline Customer Service and Minimize Long, On-Board Delays*
- *Status Report on Actions Underway To Address Flight Delays and Improve Airline Customer Service*

3. Developing a Plan To Address Projected Highway and Transit Funding Shortfalls

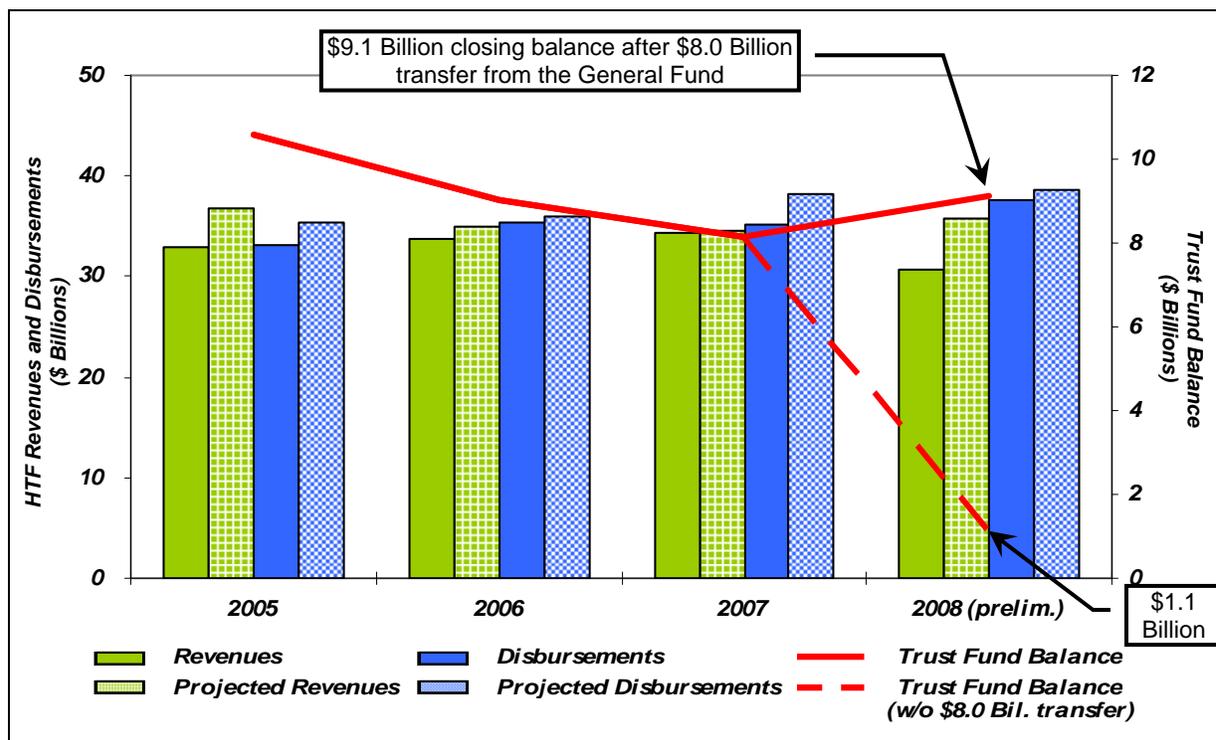
The Department faces significant challenges regarding funding for Federal highway and transit programs. In the near term, the Department must take steps to prevent recurrence of this summer's Highway Trust Fund (HTF) cash flow crisis. In the long term, it must work with Congress to enact a comprehensive funding framework that addresses revenue shortfalls in the HTF that may reduce future Federal highway spending. In addition, the Department needs to continue developing and encouraging innovative funding solutions for surface transportation infrastructure. The current surface reauthorization expires at the end of fiscal year (FY) 2009. The specific challenges the Department faces regarding highway and transit funding include:

- ensuring the highway trust fund remains solvent and
- developing a comprehensive highway funding framework for the future.

Ensuring the Highway Trust Fund Remains Solvent

To its credit, the Department recognized the urgency of a cash flow crisis in the HTF in August and requested Congress to approve legislation that would transfer \$8 billion from the General Fund to the HTF. While the Department successfully managed HTF cash flow to minimize negative impacts on state departments of transportation, pending transfer of the \$8 billion from the General Fund, it is uncertain how long this infusion of funds will last. The Department's ability to pay bills submitted by states for authorized costs incurred depends on the amount of funds in the HTF. That balance largely depends on Federal motor fuel excise tax receipts, which have been declining steadily in response to the unprecedented increases in fuel prices. Essentially, as fuel prices increase, motorists are cutting back on their driving, purchasing more fuel-efficient vehicles, and buying less gasoline, thereby generating fewer receipts for the HTF (see figure 3-1 below).

Figure 3-1. Highway Trust Fund – Highway Account Balance (FY 2005 – FY 2008)



Source: FHWA for actual Trust Fund revenues and disbursements and the President's Budget for projected revenues and disbursements.

Compounding the Department's near-term challenge is the fact that it does not directly control the rate at which funds are drawn from the HTF. Instead, the pace of state highway construction drives when states submit bills to the Department to be paid from the HTF. While the Department has taken steps to better manage the cash in the HTF, the potential exists for a recurrence of this summer's HTF insolvency crisis before a long-term solution can be reached. Therefore, the Department needs to maintain its focus on the HTF cash flow.

Developing a Comprehensive Highway Funding Framework for the Future

The current highway authorization expires at the end of FY 2009. The Department has issued a proposal to reform how surface transportation decisions and investments are made. However, it has yet to propose a level of highway funding for the reauthorization or a means for supporting that level of funding.

Historically, surface transportation funding has increased in successive reauthorizations:

- \$155 billion authorized in the Intermodal Surface Transportation Efficiency Act⁴ (ISTEA).
- \$218 billion authorized in the Transportation Equity Act for the 21st Century⁵ (TEA-21)—a 41 percent increase.
- \$286 billion authorized in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users⁶ (SAFETEA-LU)—a 31 percent increase.

Surface transportation funding levels are generally determined by projected receipts into the HTF. The projections of HTF receipts for the upcoming surface reauthorization time period are unlikely to support current funding levels, let alone increased funding levels. The growth in highway construction and maintenance costs, which we reported on last year, and the growing demand for higher levels of surface infrastructure investment raise significant questions regarding the adequacy of a funding structure that heavily relies on the 18.4 cents per gallon Federal gasoline tax. The Department must help develop a consensus among the various stakeholders and Congress on what an appropriate level of Federal surface infrastructure investment should be and how that investment should be financed.

Alternative or supplemental funding mechanisms that might be considered include increasing the current fuel tax or imposing fees on vehicle miles traveled, vehicle registration or sales, new tolls, or customs duties. Each revenue source would have a significant impact on highway users and the economy, which the Department would need to consider carefully.

Near-Term Focus Area for the Transition to a New Administration

There is a sense of urgency facing the Department because the current surface transportation reauthorization expires at the end of this fiscal year. The Department needs to monitor the solvency of the Highway Trust Fund until a long-term financing solution can be implemented.

For further information regarding the issues identified in this chapter, please contact David Tornquist, Assistant Inspector General for Rail and Maritime Program Audits and Economic Analysis, at (202)-366-9970. The following related report can also be found on the OIG website at <http://www.oig.dot.gov>.

Growth in Highway Construction and Maintenance Costs

⁴ The Intermodal Surface Transportation Efficiency Act (ISTEA), Pub. L. No. 102-240 (1991). This law expired in 1997 and was followed by TEA-21 and SAFETEA-LU.

⁵ The Transportation Equity Act for the 21st Century (TEA-21), Pub. L. No. 105-178 (1998).

⁶ Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Pub. L. No. 109-59 (2005). This law expires September 30, 2009.

4. Maximizing the Return on Current Highway and Transit Infrastructure Investments

As infrastructure needs are increasing faster than funding resources, the Department must maximize the return on its current Federal surface transportation investments. This is a critical priority because the Highway Trust Fund (HTF), which provides most of the funding for highway and transit projects, is facing insolvency earlier than expected. At the same time, the Nation's roadways are already heavily congested and demand for public transportation is growing. The Federal Highway Administration's (FHWA) and the Federal Transit Administration's (FTA) early and continuous oversight of states' project and financial management practices are key to controlling costs and schedules; avoiding construction quality problems; and preventing and detecting fraud, waste, and abuse. Considering the current tight fiscal environment at all levels of government, the Department needs to focus on:

- strengthening stewardship over the Federal Government's highway investment,
- providing strong oversight of major transit projects to maximize limited funding, and
- ensuring continued vigilance in protecting federally funded surface transportation projects from fraud.

Strengthening Stewardship Over the Federal Government's Highway Investment

To maximize the return on Federal highway funding provided to states (over \$41 billion in fiscal year [FY] 2008), FHWA must continue to provide strong stewardship of major highway projects. To its credit, FHWA has enhanced its oversight of major projects and states' management practices in recent years, but sustained focus is needed to ensure that these efforts attain their goals. This task is even more imperative since HTF revenues are falling short of meeting an overwhelming demand for highway infrastructure funding.

In the past, we have reported on major oversight deficiencies on highway projects, such as Boston's Central Artery/Tunnel Project. For example, over the years, the finance plans for this project did not comply with FHWA guidance and significantly understated project costs. Moreover, our work on the Central Artery/Tunnel Project's Stem to Stern Safety Review, which was prompted by a tunnel ceiling collapse that killed a motorist, showed that major problems in construction quality may have been prevented with greater oversight at the Federal and state levels. We have learned lessons from this troubled, high-profile project.

To strengthen oversight of highway funds, Congress made several important changes in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users.⁷

- One major change involved lowering the definition of *major projects* from \$1 billion to \$500 million. As a result, FHWA must provide enhanced oversight to projects now defined as major projects, including a review of the required finance plan. A finance plan is an important oversight tool that provides 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, and whether there are risks to completing the project on time and within budget.
- Another major change involved adding a requirement for major highway projects to have project management plans as well as finance plans. Project management plans serve as a “roadmap” to help the project team deliver a project in an efficient and effective manner by clearly defining roles, responsibilities, processes, and activities.

FHWA needs to strengthen the use of these tools and remain vigilant in its oversight of major highway projects.

Providing Strong Oversight of Major Projects To Maximize Limited Transit Funding

FTA has 15 New Starts projects with approved full funding grant agreements totaling \$9.2 billion⁸ in various stages of design or construction across the country that are seeking Federal funding in the FY 2009 New Starts report. FTA selects relatively few projects for New Starts each year. However, demand for New Starts funding is high and will likely continue to grow if the recent surge in transit ridership continues. FTA must ensure that its New Starts evaluation process selects the most promising projects. Accordingly, FTA must maintain a rigorous evaluation process, with particular emphasis in two key areas:

- First, FTA must ensure that the capital cost estimate for each proposed project is credible and complete; this is a key element in determining whether a project is cost effective. For example, after assessing cost estimates for the Dulles Corridor Metrorail Project, which had been in the New Start pipeline for years, two independent consultants for FTA determined that the project sponsor

⁷ Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Pub. L. No. 109-59 (2005). This law expires September 30, 2009.

⁸ FTA, “Annual Report on Funding Recommendations: Proposed Allocations of Funds for Fiscal Year 2009,” February 2008. FTA also had 16 New Starts projects that are in the preliminary engineering or final design stages (with total requested Federal funding of \$9 billion).

underestimated schedule delays; these delays increased the overall cost estimate to almost \$3 billion—doubling an earlier estimate. Earlier scrutiny of cost estimates might have helped FTA avoid this situation.

To its credit, FTA is now requiring its project management oversight contractors to review cost estimates earlier in the New Starts process. FTA has also implemented a program establishing a consistent format for estimating, reporting, and managing capital costs on New Starts projects. The key to success is ensuring effective implementation across the country.

- Second, FTA must carefully evaluate whether each New Starts grantee has demonstrated stable and dependable financing sources to construct, maintain, and operate a proposed transit system or extension as well as the existing transit system.⁹ This is important since the New Starts program generally provides only a maximum of 50 percent of a project's funding. In light of tight economic conditions at all levels of government, FTA must be vigilant in scrutinizing the financial plans of local project sponsors.

FTA must also provide strong oversight to keep major transit projects on schedule and within budget during construction by exercising sound project and financial management. In particular, FTA must focus on the Lower Manhattan Recovery Projects in the coming year. These high priority projects (which are separate from the New Starts program) constitute a \$4.55 billion Federal investment to reconstruct and enhance New York City's transportation infrastructure after the September 11, 2001, terrorist attacks.

The Lower Manhattan Recovery Projects have experienced significant challenges, including cost estimate increases of as much as \$800 million on the Permanent Port Authority-Trans Hudson Terminal Project. These projects are also being constructed in a difficult environment with large escalations in material and fuel costs and contractor shortages. The initial goal was to keep the projects as close to 100 percent Federal funding as possible and within an overall cap, which now appears unlikely.

Consequently, local grantees will need to provide the remaining funding or reduce the scope of one or more of the projects, thereby potentially diminishing the benefits that the projects would provide to travelers in New York City. In the coming year, FTA must fully exercise its oversight authority and continue to work with grantees to minimize further estimated cost increases and schedule delays and address project management problems.

⁹ Local financial commitment is a major criterion that FTA uses to determine which New Starts projects are ultimately approved for a full funding grant agreement and therefore able to begin construction.

Ensuring Continued Vigilance in Protecting Federally Funded Surface Transportation Projects From Fraud

To their credit, many senior Department leaders have taken seriously their responsibility to aggressively combat fraud, waste, abuse, and other irregularities. Specifically, during the past year, the FHWA and FTA Administrators have demonstrated support for our increased fraud awareness and education outreach efforts. Despite these efforts, continued vigilance at all levels of the Department will be needed to ensure that limited transportation funding is protected from fraud. During FY 2008, our highway- and transit-related contract and grant fraud investigations yielded 75 indictments, 45 convictions, nearly \$500 million in monetary recoveries, and 28 suspensions or debarments. These investigations involved schemes such as bid rigging, price fixing, product substitution, bribery and kickbacks, conflicts of interest, false statements and false claims, labor and materials overbilling, and disadvantaged business enterprise fraud.

Near-Term Focus Area for the Transition to a New Administration

To help maximize Federal infrastructure investments, we believe the Department will need to provide vigilant oversight of the \$4.55 billion Lower Manhattan Recovery Projects to minimize further estimated cost increases and schedule delays.

For further information regarding the issues identified in this chapter, please contact Joseph Com , Assistant Inspector General for Highway and Transit Audits at (202)-366-5630. The following related reports and testimonies can also be found on the OIG website at <http://www.oig.dot.gov>.

- *Baseline Report on Major Project Monitoring of the Dulles Corridor Metrorail Project*
- *Report on the Central Artery/Tunnel Project May 2007 Finance Plan Update*
- *Initial Assessment of the Central Artery/Tunnel Project Stem to Stern Safety Review*
- *Audit of FTA's Oversight of Pioneer Valley Transit Authority Electric Bus Cooperative Agreement*
- *Lower Manhattan Reconstruction: Lessons Learned from Large Transportation Projects*
- *Baseline Report on the Lower Manhattan Recovery Projects*

5. Operating the National Airspace System While Developing and Transitioning to the Next Generation Air Transportation System

The Federal Aviation Administration (FAA) will face challenges in balancing the needs of the current National Airspace System, which is showing signs of strain, with future training, technological, and facility requirements. However, FAA does not have a long-term financing mechanism in place, and Congress has established stop-gap measures until agreement on funding aviation programs can be reached. How FAA is funded is clearly a policy call for Congress. The specific management challenges for the Department and FAA in the coming years include:

- hiring and training 17,000 new controllers through 2017,
- keeping existing projects on track and reducing risk with the Next Generation Air Transportation System (NextGen), and
- sustaining FAA's aging facilities.

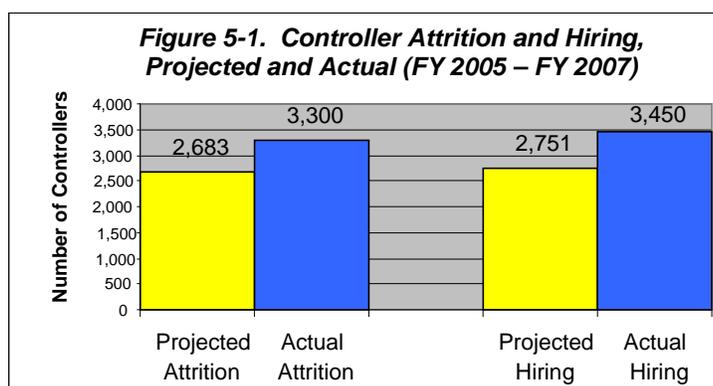
Hiring and Training 17,000 New Controllers Through 2017

Over the next decade, FAA plans to hire and train nearly 17,000 controllers to replace those who were hired after the 1981 strike and are now retiring. Ensuring there are enough certified controllers at FAA's more than 300 air traffic control facilities will remain a significant watch item for the Department and Congress.

Since 2005, 3,300 controllers have left the workforce—23 percent more than FAA had projected. To keep pace, FAA accelerated its hiring efforts and has hired 3,450 new controllers—25 percent more than projected (see figure 5-1).

With the surge in new hires over the last 4 years, FAA is facing a fundamental transformation in the composition of its controller workforce. While the overall

size of the controller workforce remained relatively constant from April 2004¹⁰ to June 2008, the number of controllers in training increased by nearly 68 percent and the number of fully certified professional controllers (CPC) decreased by nearly 12 percent. New controllers now represent 25 percent of the workforce (up from 15 percent in 2004). However, that percentage can vary extensively by



¹⁰ We chose 2004 as a benchmark for comparison purposes since 2004 was the last year we audited this program and because 2004 was the year FAA first published its Controller Workforce Plan.

location—from as little as zero percent (e.g., Pittsburgh, PA, air traffic control tower) to as much as 67 percent (e.g., Rochester, MN, air traffic control tower).

A major challenge in addressing controller attrition will be training new controllers to the CPC level at their assigned locations. In June, we issued our second report on FAA's controller facility training program. FAA is taking actions at the national level to get this important program on track. For example, FAA is adding more training simulators at towers and increasing use of contractor training support—from 53 facilities in 2004 to 190 facilities in 2007. Many of FAA's efforts, however, are still in the early stages. We identified problems that we also reported in 2004—that the facility training program continues to be extremely decentralized and the efficiency and quality of the training varies from one location to another. FAA has agreed to take the following actions we recommended to improve this program:

- Establish realistic standards for how many developmental controllers facilities can accommodate.
- Continue to encourage veteran controllers to transfer to busier, higher-level facilities.
- Implement key initiatives it first proposed in 2004 to improve facility training.

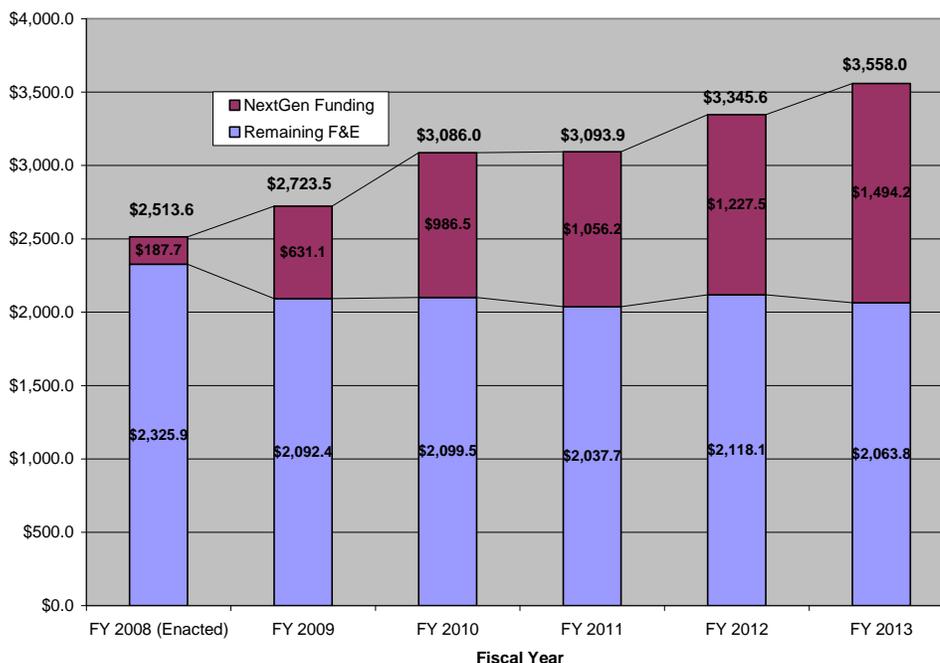
As attrition increases, FAA must also continue addressing controller human factor issues. Congress has expressed concerns regarding these issues since the influx of new controllers will need both technical and human factors (fatigue and attention) training. For example, at the request of Senator Durbin of Illinois, we are reviewing factors that could affect controller fatigue at the Chicago O'Hare Tower, Chicago Terminal Radar Approach Control, and Chicago Center.

At the request of Chairman Costello of the House Aviation Subcommittee, we are reviewing the rate and possible root causes of controller training failures (developmental controllers who fail training either at the FAA Academy or at their assigned facility). Our work on these requests is ongoing, and we plan to issue our final results early next year.

Keeping Existing Projects on Track and Reducing Risks With NextGen

FAA's capital account is now being shaped by NextGen—an enormously complex effort that will cost billions of dollars (see figure 5-2 below). FAA budget estimates show that the Agency will require \$18 billion for capital efforts between fiscal year (FY) 2008 and FY 2013. This includes \$5.6 billion specifically for NextGen initiatives, including demonstration projects and a satellite-based surveillance system called Automatic Dependent Surveillance-Broadcast (ADS-B).

Figure 5-2. FAA Capital Funding for FY 2008-FY 2013
(Totals in Millions)



Overall, we are not seeing the significant cost growth and schedule slips that occurred in the past with FAA’s major modernization projects. This is because FAA has taken a more incremental approach to major acquisitions and has “re-baselined” a number of efforts. We recently examined progress with 18 programs valued at \$17.5 billion. When comparing revised baselines, only 2 of the 18 projects we reviewed have experienced additional cost growth (\$53 million) and delays (5 years). However, since inception, six of these programs have experienced cost growth close to \$4.7 billion and delays of up to 12 years.

It will be important to keep existing projects on track because about 30 projects serve as platforms for NextGen initiatives. For example, core NextGen capabilities such as data link rely on enhancements to the \$2.1 billion En Route Automation Modernization (ERAM) program, which provides new hardware and software for facilities that manage high-altitude traffic. Currently, the ERAM effort is on schedule; its software requirements related to NextGen are uncertain but are expected to be in the billions of dollars.

A key challenge for the Department and FAA is reducing risk with the implementation of ADS-B—a centerpiece of the NextGen portfolio. In August 2007, FAA awarded a service-based contract worth \$1.8 billion for ADS-B ground infrastructure. FAA plans to implement “ADS-B Out” in the 2020 timeframe, which will require aircraft to broadcast their position to ground stations. However, the majority of capacity- and safety-related benefits are associated with

“ADS-B In,” which will display information to pilots in the cockpit. ADS-B implementation faces several risks, including gaining stakeholder acceptance and aircraft equipage, addressing broadcast frequency congestion concerns, integrating with existing systems, and assessing potential security vulnerabilities in managing air traffic. Much work remains to refine cost, requirements, and expected benefits of NextGen initiatives. We have identified areas requiring sustained management attention from FAA and made the following recommendations to help the Agency reduce risk with NextGen:

- Conduct a gap analysis between the existing National Airspace System and the expected NextGen capabilities to determine funding priorities and the full range of adjustments necessary for existing capital programs until the transition to NextGen.
- Develop a mid-point architecture (a technical road map) in the 2015 timeframe that provides a way-point between the current system and NextGen.
- Assess and obtain the necessary skills with respect to contract management and systems engineering needed to manage and execute NextGen.
- Establish metrics for assessing progress with NextGen that focus on enhancing capacity, boosting productivity, and reducing operating costs.

Sustaining FAA’s Extensive Network of Aging Facilities

FAA has full or partial responsibility for 420 staffed air traffic control facilities. Many FAA air traffic control facilities have exceeded their useful lives, and their physical condition continues to deteriorate. While the average facility has an expected useful life of approximately 25 to 30 years, 59 percent of FAA facilities are over 30 years old.

However, FAA still does not have adequate controls in place to ensure that the Agency’s routine facility maintenance needs are sufficiently funded. Although FAA has a structured process for estimating its funding requirements for its capital account (used to fund facility replacements and large improvement projects), the same process does not exist for the Agency’s operations account (used to fund recurring facility maintenance). As result, FAA currently has a backlog of over \$240 million in deferred maintenance.

More importantly, FAA’s newly developed processes for its capital maintenance needs are only short-term solutions that focus on sustaining the existing air traffic control infrastructure. This is because FAA has not made key decisions regarding facility consolidations and infrastructure needs—a key aspect of the transition to NextGen.

FAA requested \$17 million for FY 2009 to examine various alternatives for revamping its facilities. The re-alignment or consolidation of FAA facilities is a controversial issue and a key cost driver for NextGen. Therefore, FAA must ensure that this analysis clearly addresses the technological and security prerequisites, cost drivers, benefits, and logistical concerns associated with consolidation so decision makers in Congress and the Administration will know what can reasonably be accomplished.

Near-Term Focus Areas for the Transition to a New Administration

The Department and FAA are at a crossroads with maintaining and modernizing the National Airspace System, and FAA must focus on the following efforts:

- Implementing improvements to controller training programs, including establishing realistic standards for how many developmental controllers facilities can accommodate and offering incentives to encourage veteran controllers to transfer to busier, higher-level facilities.
- Conducting a gap analysis between the existing National Airspace System and the vastly different Next Generation Air Transportation System and developing a mid-point architecture that provides a way-point between the current and NextGen systems in the 2025 timeframe.

For further information regarding the issues identified in this chapter, please contact Lou Dixon, Assistant Inspector General for Aviation and Special Programs, at (202)-366-0500. The following related reports and testimonies can also be found on the OIG website at <http://www.oig.dot.gov>.

- *Challenges Facing the Implementation of FAA's Automatic Dependent Surveillance - Broadcast Program*
- *Air Traffic Control Modernization: FAA Faces Challenges in Managing Ongoing Projects, Sustaining Existing Facilities, and Introducing New Capabilities*
- *Status of FAA's Efforts To Develop the Next Generation Air Transportation System*
- *Review of the Air Traffic Controller Facility Training Program*
- *Key Issues Facing the Federal Aviation Administration's Controller Workforce*
- *FAA's Fiscal Year 2009 Budget Request: Key Issues Facing the Agency*

6. Protecting Against Increasing Cyber Security Risks and Enhancing the Protection of Personally Identifiable Information

Like most Government agencies, the Department must address increased threats of sophisticated and organized attacks on departmental networks and computers. The Department must also continue to enhance security for critical national infrastructure, such as air traffic control systems. In addition, the Department continues to face challenges in protecting personally identifiable information entrusted to it. To strengthen the protection of information technology (IT) resources in fiscal year (FY) 2009, the Department will need to focus management attention on:

- implementing a robust information security program to protect data and operations,
- enhancing security protection of the air traffic control system as a critical national infrastructure, and
- enhancing the protection of personally identifiable information in its systems.

Implementing a Robust Information Security Program To Protect the Department's Data and Operations

Although the Department established an information security program in FY 2001, it has failed to incorporate information security into its management culture. The Department continues to face significant challenges in FY 2009 as it seeks to protect its data and operations while combating increasing cyber threats:

- **Strengthening Chief Information Officer (CIO) Leadership To Establish and Oversee Implementation of Security Policies:** As required by the Federal Information Security Management Act of 2002,¹¹ the CIO is responsible for managing the Department's information security program, including developing, implementing, and enforcing security policies. However, this office was assigned the additional responsibility of operating and maintaining the consolidated IT infrastructure to support the Operating Administrations, which has diverted management attention and resources away from its policy responsibilities. For example, the Department no longer has a designated senior official responsible for managing the information security program because that senior official position has been reassigned to the operational area.

Further, the Department identified 52 topics that require IT security policy, but the CIO office has issued final policy on only 11 of these (21 percent). The office now has a large backlog of draft security policy related to the remaining

¹¹ FISMA, Pub. L. 107-296 (Nov. 25, 2002), codified at 44 USC § 3541.

41 topics. In addition, the CIO office has made little progress in enforcing the Operating Administrations' implementation of standard software configuration as required by governmental standards. As a result, the Department is behind most Federal agencies in configuring its computers to reduce vulnerabilities.

- **Increasing the Influence of the CIO:** Ineffective implementation of CIO office policies has been a longstanding problem within the Department. Unlike other Federal agencies, the Department's CIO does not have budget or performance evaluation authority over the Operating Administrations. Operating Administrations are likely to continue implementing departmental security policies ineffectively until management or budgetary consequences are clear. The Department needs to develop mechanisms to hold Operating Administration management more accountable for consistently implementing policy and security guidance.
- **Strengthening Cyber Incident Monitoring and Correction:** During FY 2008, the Department established a consolidated Cyber Security Management Center to monitor network activities in the Department and to coordinate incident reporting. The center has established a common framework to help detect cyber incidents and disseminate this information for coordinated action throughout the Department. This improved the visibility of Headquarters networks for security monitoring and better positioned the Department to combat increasing cyber security threats. However, the Department must provide full coverage of its networks for incident monitoring and ensure that incidents are reviewed and corrected in a timely manner. For example, as of June 30, 2008, there were 233 unresolved incidents, 77 of which (33 percent) had been open for more than 3 months.

Enhancing Security Protection of the Air Traffic Control System as a Critical National Infrastructure

Due to the important role of commercial aviation in fostering and sustaining the national economy and ensuring citizens' safety and mobility, the President designated air traffic control systems as part of the Nation's critical infrastructure in Homeland Security Presidential Directive (HSPD)-7. We have reported that the Department must protect air traffic control systems with a two-pronged approach to fulfill HSPD-7 requirements: preventing disruption wherever possible and minimizing disruptions when they do occur.

Implementing a business continuity plan (BCP) for en route services (which control high-altitude traffic and disseminate flight plan information to all other air traffic control facilities) and enhancing security reviews of air traffic control systems are key steps in this approach. In FY 2007 and FY 2008, the Federal Aviation Administration (FAA) made progress toward implementing a BCP for en

route services and expanded security evaluation of air traffic control systems. However, FAA's ability to handle long-term service disruptions according to the mandate of HSPD-7 remains unknown, and the methodology used to identify and test the security of air traffic control systems needs improvement.

- **Making En Route Business Continuity Capability Fully Functional:** FAA has designated a recovery site to take over the responsibilities of inoperable en route centers and has taken good steps toward preparing it, such as installing additional emergency power. FAA plans to have the recovery site ready for activation by March 2009. However, unresolved technical challenges, human integration issues, and funding uncertainty could delay the recovery site's readiness. In addition, FAA needs to assess the potential impact on air travel should it have to activate BCP operations. Mitigating the effects on the Nation's economic interests in the event that critical infrastructure is incapacitated is a key requirement of HSPD-7.
- **Improving the Methodology Used To Identify and Test the Security of Air Traffic Control Systems:** The security of the information systems that air traffic controllers rely upon is in doubt because the methodology used to identify and test system security control is inadequate. FAA's approach to certifying and accrediting these systems is to test system security controls in a laboratory environment and at selected operational sites based on risk.¹² However, there is no evidence that operational sites posing the greatest risk were the ones selected for review. Further, the review was ineffective because the review teams did not conduct independent testing; instead, they primarily relied on interviews with local system operators to determine whether security controls were implemented in operational air traffic control systems. FAA needs to enhance its reviews of operational sites and start with those that pose the greatest risk.

Enhancing the Protection of Personally Identifiable Information in DOT Systems

In recent years, the Department has made significant progress in addressing its statutory responsibility to protect personally identifiable information (PII). It has designated the CIO as Chief Privacy Officer; issued a privacy benchmark report to Congress; and established procedures for assessing the need for PII collection, use, and security. However, our tests of sampled PII systems identified the following deficiencies in how the Department implements prescribed procedures, placing these personal data at risk:

¹² FAA relies on more than 100 automated systems to direct and manage air traffic. These systems are deployed for use to hundreds of operational sites. For example, the Host Computer System is used to direct high-altitude traffic at all 20 en route centers.

- Although the departmental privacy office had evaluation documents for the 109 systems contained in its PII inventory, it could not provide completed evaluations to support that no PII is stored in the Department's other 320 systems.
- The privacy officers were unable to produce evidence that a System of Records Notice was issued for 9 of 20 sampled systems. As a result, there was no assurance that the public was properly notified of the intended use of the collected information.
- Some systems containing PII did not meet minimum security requirements, such as encrypting data during network transmission and using proper password controls to authenticate users.
- The Department has not issued policy to notify those affected by breaches of sensitive information, implemented its plan to reduce utilization of Social Security numbers, or developed policy to establish rules for handling PII, including the consequences of not following those rules.

In our opinion, the reporting structure for the Chief Privacy Officer is contributing to these deficiencies. Specifically, the Chief Privacy Officer does not report directly to the CIO but to the Chief Information Security Officer. Experts in the field note that the placement of privacy officials can greatly affect their roles—which, they say, require direct access to top management. Departmental management has agreed to reevaluate the reporting structure in FY 2009.

Near-Term Focus Areas for the Transition to a New Administration

Overall, the Department must strive to implement a mature and effective information security program and make it an integral part of the way it conducts business. In the near term, the Department needs to focus on the following issues:

- Addressing the role and authority of the Department's CIO to ensure timely issuance of information security policy and its enforcement across all Operating Administrations.
- Increasing privacy protection of PII stored on Departmental systems.

For further information regarding the issues identified in this chapter, please contact Rebecca Leng, Assistant Inspector General for Financial and Information Technology Audits at (202)-366-1496. The following related reports can also be found on the OIG website at <http://www.oig.dot.gov>.

- *DOT Information Security Program*
- *DOT Delphi Financial System Controls*
- *Review of DOT Privacy Policies and Procedures*
- *Audit of Security and Controls Over the National Driver Register*

7. Preventing Catastrophic Failures and Obsolescence in the Nation's Aging Surface Transportation Infrastructure

Fatal infrastructure failures in 2006 and 2007 have focused attention on obsolescence in the Nation's aging surface transportation infrastructure and the need to strengthen oversight. The Department must work with states and localities to ensure the safety of our bridges and restore or replace those that present the highest risk of catastrophic failure. This task will be challenging because, according to the American Association of State Highway and Transportation Officials, the average bridge in the United States is 43 years old, and almost one in four bridges is either structurally deficient and in need of repair or functionally obsolete and too narrow for today's traffic volumes.¹³ To its credit, the Department has taken action. For example, the Federal Highway Administration (FHWA) has agreed to transition to data-driven, risk-based bridge oversight to target those bridges most in need of increased attention. This year, the Department must focus management attention on two key challenges:

- FHWA must strengthen its efforts to ensure safety for bridges and tunnels and hold states accountable for Federal funds.
- The Federal Transit Administration (FTA) must work with state and local transit agencies to identify ways to repair, rehabilitate, or replace aging transit systems.

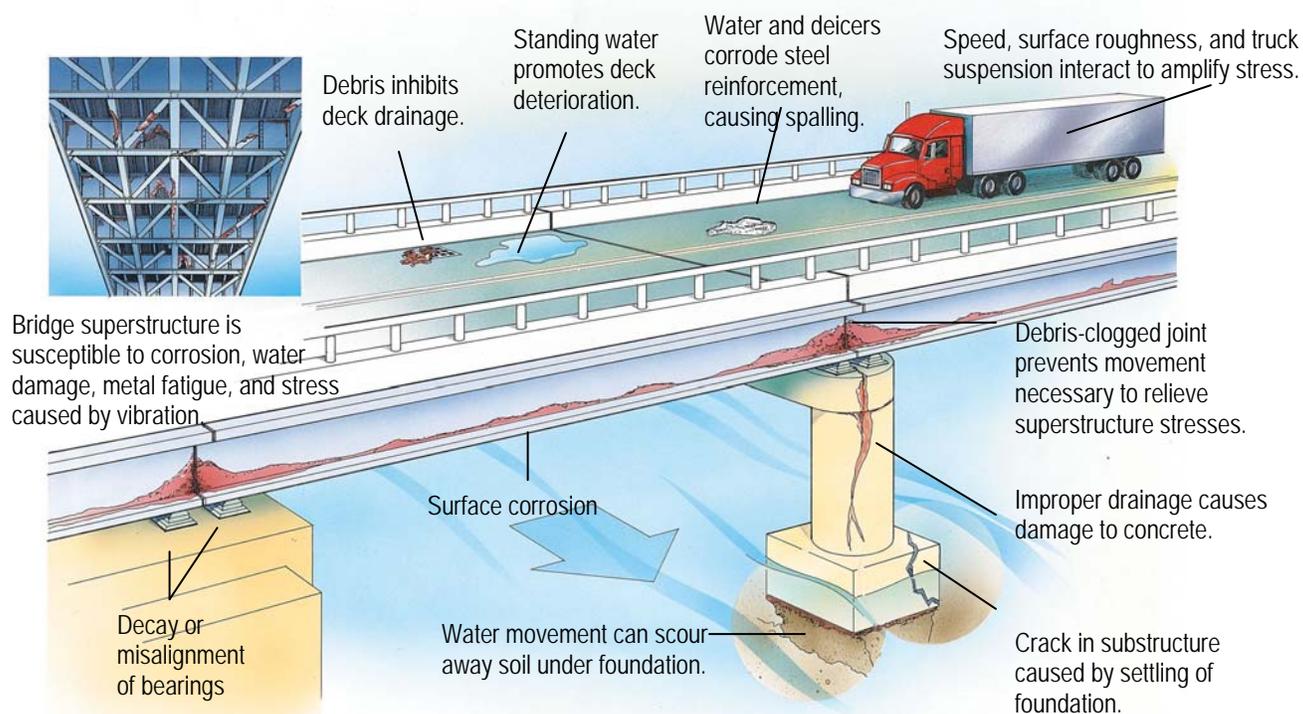
Strengthening Efforts To Ensure Safety for Bridges and Tunnels and Hold States Accountable for Federal Funds

Recent fatal infrastructure failures underscore the significance of bridge and tunnel safety as major challenges. In 2006, ceiling panels collapsed in a tunnel in Boston's Central Artery/Tunnel Project, killing a motorist. In 2007, the catastrophic failure of the I-35W Bridge in Minneapolis killed 13 people. These tragic incidents brought renewed national attention to the safety of our bridges and tunnels. Shortly after each of these tragedies, we initiated audits to assess whether FHWA is exercising adequate oversight to help ensure public safety. FHWA must strengthen its oversight approach so that it proactively identifies safety risks, which presents an enormous oversight challenge. Specifically, of the nearly 600,000 bridges across the country, approximately 72,500 are structurally deficient.¹⁴ Further, bridges that are classified as structurally deficient can have an array of significant problems (see figure 7-1 below).

¹³ American Association of State Highway and Transportation Officials, "Bridging the Gap: Restoring and Rebuilding the Nation's Bridges," July 28, 2008.

¹⁴ The term "structurally deficient" refers to bridges with major deterioration, cracks, or other deficiencies in their structural components, including decks, girders, or foundations. In some cases, structurally deficient bridges require repair or even closure. However, most bridges classified as structurally deficient can serve traffic safely if they are properly inspected; if maximum load ratings are properly calculated; and, when necessary, the proper maximum weight limits are posted.

Figure 7-1. How Bridges Become Structurally Deficient



Source: Illustration by Jana Brenning. Copyright Jana Brenning. Reprinted with permission. Illustration first appeared in *Scientific American*, March 1993.

To strengthen bridge safety oversight, FHWA needs to take action in three key areas:

FHWA must implement a data-driven, risk-based approach to overseeing the safety of the Nation's bridges. A major challenge for FHWA is to make sustained progress toward implementing a data-driven, risk-based approach to overseeing the Nation's bridges. Based on our past and ongoing work on bridge issues, FHWA must pursue the following efforts in this area:

- *Assess bridge safety risks systematically across the country.* FHWA's oversight does not include systematic, data-driven oversight to comprehensively address nationwide bridge safety risks.¹⁵ FHWA Division Offices in each state conduct annual compliance reviews of bridges, but FHWA Headquarters does not routinely analyze results to identify nationwide bridge safety risks, prioritize them, and address higher priority risks.

¹⁵ The National Bridge Inventory, maintained by FHWA, comprises data on bridges on the National Highway System, as well as bridges maintained and operated by various state and local entities.

- *Encourage greater use of bridge management systems.* FHWA agreed to support states' use of computerized bridge management systems by conducting studies and providing technical assistance and training. However, FHWA must be more proactive in encouraging states to use these systems and helping those states most in need of technical assistance so they can implement effective bridge management systems.

FHWA must improve accountability for Federal bridge funds. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users¹⁶ authorized \$21.6 billion for the Highway Bridge Program through 2009 to fund bridge replacement, rehabilitation, and systematic preventive maintenance. FHWA must ensure that this significant investment in addressing bridge needs is put to the best possible use by enhancing its ability to track states' use of these funds. We have reported that FHWA is unable to determine how much of the funding provided to states is actually spent on structurally deficient bridges because its financial management system does not differentiate between spending on structurally deficient bridges and other bridge-related expenditures. It is imperative that FHWA better measure how states are spending Federal bridge funds so it can assess the impact of Federal dollars on bridge conditions and help Congress consider what changes, if any, it wants to make to the Highway Bridge Program.

FHWA needs to establish a national tunnel inspection program. While the National Bridge Inspection Program has existed for decades, FHWA currently lacks a highway tunnel inspection program. In recent years, serious failures in construction quality on the troubled Central Artery/Tunnel Project highlighted the need for FHWA to enhance the safety of the Nation's tunnels. Accordingly, FHWA should implement a system to hold states accountable for inspecting and reporting on tunnel conditions. To its credit, FHWA has taken initial steps to do this. FHWA officials recently informed us that they plan to issue an advance notice of proposed rulemaking this fall to seek input on the development of national tunnel inspection standards. As we reported in our last two top management challenges reports to the Department, it is critical that FHWA implement this initiative as soon as possible.

Repairing, Rehabilitating, or Modernizing Aging Transit Systems

The Nation's largest transit systems are becoming increasingly obsolete as demand for public transportation is increasing.¹⁷ Many of our transit systems are concentrated in large urban areas and are very old and in need of substantial

¹⁶ Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Pub. L. No. 109-59 (2005). This law expires September 30, 2009.

¹⁷ According to the American Public Transportation Association, Americans took almost 88 million more trips on public transportation during the first 3 months of 2008 over the same period in 2007.

upgrades or repairs.¹⁸ FTA must work with state and local transit agencies to identify ways to repair, rehabilitate, or replace their infrastructure to meet current demand, keep up with projected ridership, and prevent any catastrophic failures caused by aging or obsolete infrastructure.

Problems with maintaining the Nation's major mass transit systems will force tough decisions during the next surface transportation authorization. These include deciding the overall level of transit funding in relation to highways and determining whether to emphasize new transit expansions in growing cities or focus more resources on supporting the rehabilitation of older, existing transit systems.

Near-Term Focus Areas for the Transition to a New Administration

Addressing the Nation's aging surface transportation will require sustained attention in both the short and long term. While long-term strategies are being developed, the Department needs to focus on the following areas in the near term:

- Advance a data-driven, risk-based approach to overseeing state bridge programs and measuring the impact of Federal funding on improving the safety of the Nation's bridges.
- Follow through on plans to establish a national tunnel inspection program.

For further information regarding the issues identified in this chapter, please contact Joseph Com , Assistant Inspector General for Highway and Transit Audits at (202)-366-5630. The following related reports and testimonies can also be found on the OIG website at <http://www.oig.dot.gov>.

- *Federal Highway Administration's Oversight of Structurally Deficient Bridges*
- *FHWA Can Do More in the Short Term To Improve Oversight of Structurally Deficient Bridges*
- *Report on the Central Artery/Tunnel Project May 2007 Finance Plan Update*
- *Initial Assessment of the Central Artery/Tunnel Project Stem to Stern Safety Review*
- *Audit of Oversight of Load Ratings and Postings on Structurally Deficient Bridges on the National Highway System*
- *DOT's FY 2008 Top Management Challenges*
- *DOT's FY 2007 Top Management Challenges*

¹⁸ Approximately 70 percent of all transit trips in the United States are concentrated in 10 cities: Baltimore; Boston; Chicago; Houston; Los Angeles; New York; Philadelphia; San Francisco; Seattle; and Washington, D.C.

8. Improving Contract Operations and Maintaining Procurement Integrity

The Department spends approximately \$6.8 billion annually, or about 40 percent of its discretionary budget, on contracts to obtain goods and services. Our audits and investigations continue to find oversight and control weaknesses, fraud and abuse, and other ethics issues involving Department officials and contractors. The Department has made progress this year in managing its acquisition workforce by enhancing an annual ethics training program for acquisition and grants management personnel. However, to further enhance its acquisition and contract management oversight, the Department must focus on the following areas:

- Developing and maintaining a competent acquisition workforce to support the Department's mission.
- Improving award-fee contracting processes to better achieve acquisition objectives.
- Ensuring that suspended or debarred contractors do not obtain Government contracts or assistance agreements.
- Ensuring the acquisition workforce maintains high ethical standards.

Developing and Maintaining a Competent Acquisition Workforce To Support the Department's Mission

The Office of Management and Budget required Federal agencies to develop a human capital strategic plan for its acquisition workforce. In September 2007, the Department completed a strategic plan that addressed only part of its acquisition workforce—contract officers and contract specialists. Although the strategic plan included a skills assessment of these positions and a general discussion on retention and hiring strategies, it did not include essential workforce statistics such as retirement and attrition information, accession planning, and identification of long- and short-term needs.

Additionally, the Department continues to face challenges in developing a strategic plan for the rest of its acquisition workforce. Department officials stated they are having difficulty determining the total number of other key acquisition workforce positions, such as contracting officer technical representatives and program managers. This is because the Department lacks key information on these positions, including workforce size, knowledge and skills, attrition rates, and retirement rates. Without these critical data, the Department is unable to identify employment trends and assess the current condition of the workforce to determine the ideal composition, skill mix, and talent for its future.

Improving Award-Fee Contracting Processes To Better Achieve Acquisition Objectives

Award-fee contracts are used to motivate contractors to place emphasis on certain areas within the contract—such as cost, schedule, and performance. As of June 30, 2008, the Department had 47 ongoing cost-plus-award-fee contracts with a potential value of approximately \$5.5 billion, including about \$271.4 million in award fees. The Department faces significant challenges in designing and justifying the use of such contracts and must provide guidance and training to its acquisition workforce to improve the use of these contracts. As part of our ongoing, Department-wide audit of cost-plus-award-fee contracts, we issued four interim reports that addressed problems in designing and justifying these contracts.

To illustrate, the National Airspace System Implementation Support II contract is valued at approximately \$234 million with approximately \$18.2 million in award fees. Yet, the Federal Aviation Administration's (FAA) performance evaluation plan¹⁹ did not include clear and measurable award-fee criteria needed to adequately evaluate contractor performance.

In another example, Volpe awarded a contract for information systems and information technology support services for approximately \$178 million and established an award-fee pool of approximately \$8.9 million. We found that the descriptions defining adjectival ratings (used to compute the amount of award fee), such as excellent or satisfactory performance, were vague and inconsistent and did not clearly define the basis for assigning such a rating. Evaluation criteria that do not include clearly defined metrics or specific adjectival ratings could result in inflated contractor performance evaluations and, consequently, inappropriately approved award fees. In response to these reports, the Department has agreed to take action to improve these contracts.

We also found that Department procurement offices did not justify the cost effectiveness of selecting cost-plus-award-fee-type contracts, which may not always be the appropriate choice. Through an evaluation of the administrative costs versus the expected benefits, the contracting officer should be able to assess whether the benefits the Government gains through a cost-plus-award-fee contract will outweigh the additional costs of overseeing and administering the contract.

For example, in response to our report on the National Airway Systems support services contract, valued at approximately \$316 million, FAA agreed to modify the contract to a cost-plus-fixed-fee type because the cost and time required to oversee, monitor, and document the award-fee process outweighed the benefits to administer the contract.

¹⁹ The performance evaluation plan is the basis for determining the amount of award fee and includes the award-fee criteria to be considered under each area evaluated; the percentage of award fee, if any, available for each area; and the frequency of evaluation periods.

Ensuring That Suspended or Debarred Contractors Do Not Obtain Government Contracts or Assistance Agreements

Federal regulations prohibit firms and individuals without satisfactory records of integrity and business ethics from receiving contracts and assistance agreements. The Department revised its policy in June 2005, in part, to improve timely decision making of suspension and debarment actions. However, our ongoing audit work shows that the Department needs to improve the policy—and its implementation—to ensure timelier processing and reporting of suspension and debarment actions.

For example, Operating Administrations do not consistently take suspension and debarment actions in a timely manner, even though the new order requires such actions be taken within 45 days. Twenty-five of the 45 (56 percent) actions we reviewed were not processed within 45 days. For 19 of these actions, the Operating Administrations took from 10 days to more than 2 ½ years over the 45-day standard to render final decisions. The remaining six debarment actions are still awaiting a decision from the debarring officials, which currently takes from 165 to 945 days.

Federal and Departmental regulations require the Department to enter suspension and debarment actions into the Excluded Parties Listing System²⁰ within 5 working days of the decision. We sampled 132 actions and found that the Department did not adhere to its policy for 63 (48 percent) of those actions—13 of which took more than 100 days to be entered.

Ensuring the Greater Acquisition Workforce Maintains High Ethical Standards

Last year, we reported that the Department needed to develop and maintain a robust ethics program to promote integrity across the myriad of transportation programs. To its credit, the Department instituted an enhanced annual ethics training program earlier this year for all acquisition and grants management personnel across the Department.

This year presents a two-fold ethics challenge for the Department and its Operating Administrations. First, they must follow through to fully implement this important annual training requirement. Secondly, the Department and Operating Administrations need to increase outreach to recipients of Department funding to ensure that they and their contractors have meaningful ethics programs and sound internal controls to prevent and detect fraud involving Department funding.

²⁰ A web-based system maintained by the General Services Administration contains firms or individuals excluded from Federal contracts or other Federal funding such as grants.

Overall, our investigations have consistently demonstrated the need for continual reinforcement of ethical standards—with Department employees and funding recipients and their contractors—to prevent integrity breaches in the Department’s extensive contract, grant, and cooperative agreement programs. This is illustrated in the following examples:

- Two FAA acquisition officials in a regional office released confidential bid information to a foreign-owned firm, enabling the company to win a \$4.3 million airport construction contract. Both officials pled guilty to felony Procurement Integrity Act violations and are no longer employed by FAA. The firm was fined \$1 million and also paid \$750,000 in restitution to a company victimized by the scheme.
- An Ohio Department of Transportation bridge inspector accepted bribes from a painting contractor to overlook false certifications regarding the quality and quantity of work the company performed on bridge contracts valued at nearly \$8 million. The inspector resigned from state employment and pled guilty to violating the Federal highway projects fraud statute (a felony). The inspector was later fined and sentenced to probation.

Near-Term Focus Area for the Transition to a New Administration

Safeguarding Federal contract dollars for transportation is critical in the uncertain financial environment. At this juncture, the Department needs to complete the strategic plan for the acquisition workforce to ensure it has the right skill mix to oversee multimillion-dollar contracts.

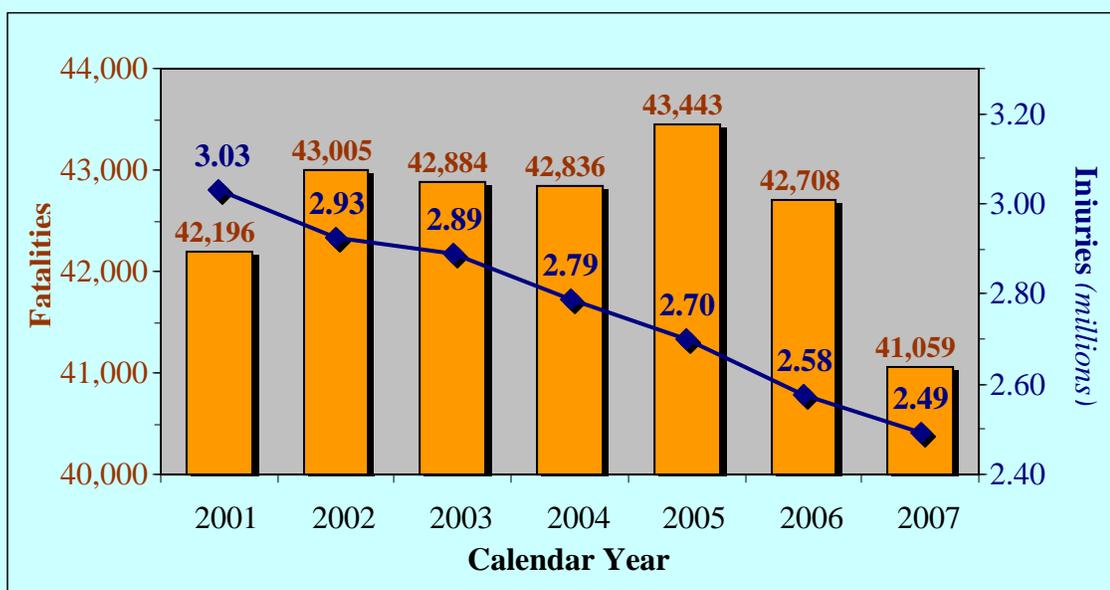
For further information regarding the issues identified in this chapter, please contact Mark Zabarsky, Assistant Inspector General for Acquisition and Procurement Audits at (202)-366-5225. The following related reports and testimonies can also be found on the OIG website at <http://www.oig.dot.gov>.

- *Interim Report on Award-Fee Criteria for the National Airspace System Implementation Support II Contract and Bridge Contract*
- *Interim Report on Award-Fee Criteria for the National Airway Systems Contract*
- *Interim Report on Award-Fee Criteria for the Transportation Information Project Support Contract*
- *Interim Report on Award-Fee Criteria for the System Engineering and Technical Assistance II Contract*

9. Enhancing and Deploying Programs for Reducing the Serious Consequences of Surface Transportation Crashes

Surface transportation fatalities and injuries²¹ create significant public health and economic consequences. Motor vehicle traffic crashes cause more than 40,000 deaths and 2 million injuries annually in the United States (see figure 9-1) and are among the 10 leading causes of deaths in the United States. Total economic costs, including medical care, property damage, and lost productivity surpassed \$230 billion in 2000—equal to more than 2 percent of the United States gross domestic product that year.²²

Figure 9-1. U.S. Highway Fatalities and Injuries, 2001 through 2007



Source: Data from the National Highway Traffic Safety Administration

Department safety improvement programs, such as Federal motor vehicle safety standards for new cars, have contributed to major improvements in surface safety. The fatality rate in 2007 reached a historic low of 1.37 deaths per 100 million vehicle miles traveled, and the injury rate also fell. The preliminary estimate of injuries in 2007 was, for the first time, below 2.5 million, representing a decline for the eighth consecutive year and a 3.3-percent decline compared to 2006. However, the fatality rate will need to drop to 1.0 by 2011 to meet the Department's stated goal. For fiscal year 2009, the Department requested nearly \$11 billion for surface safety improvement programs, 16 percent of its total budget request.

²¹ Fatalities and injuries associated with passenger cars and trucks, motorcycles, school buses, commercial vehicles (i.e., trucks, trailers, buses, and motor coaches), highway-railroad crossings, and trains.

²² Latest calculation available, NHTSA, *The Economic Impact of Motor Vehicle Crashes, 2000*, DOT HS 809 446, May 2002.

A substantial challenge for the Department is further reducing the number and rate of surface transportation fatalities. Accomplishing this is especially difficult since the Department does not directly control some of the most effective tools. States and localities have jurisdiction for critical safety activities, such as enacting and enforcing laws for seat belt and helmet usage, alcohol-impaired driving, vehicle inspection, and speed limits.

To successfully meet this challenge, the Department must establish clear Federal standards, provide analytical and empirical evidence about safety program performance, and disseminate information effectively. The Department must also demonstrate strong leadership by coordinating state and local efforts across the country and working with private sector partners, such as motor carriers, rail carriers, and motor vehicle manufacturers. Our recent work demonstrates that the Department can better meet this challenge by enhancing and deploying the following proven safety improvements:

- Promoting consistent state highway safety performance indicators to measure progress.
- Targeting unsafe motor carriers and commercial motor vehicle drivers for enforcement.
- Enhancing the Commercial Driver's License program by enforcing existing standards and adopting new standards.
- Identifying high-risk highway-rail grade crossings for safety improvements to further reduce collisions and fatalities.

Promoting Consistent State Highway Safety Performance Indicators To Measure Progress

The National Highway Traffic Safety Administration (NHTSA) is the lead Federal agency for establishing motor vehicle safety standards and reducing highway fatalities and injuries caused by driver and passenger behaviors. Each year, NHTSA distributes about \$600 million in Federal formula and incentive grants for state and local programs, such as those promoting seat belt usage and reducing alcohol-impaired driving. In 2007, more than half of all vehicle fatalities were associated with not using a seatbelt, and about one-third of all crash fatalities were alcohol-related. NHTSA must balance its safety law promotion and Federal oversight responsibilities with the need for Federal, state, local, and private sector partnerships to implement safety programs.

Our audit work has shown that NHTSA can improve its ability to measure the effectiveness of Federal resources and state strategies by requiring states to use more meaningful performance indicators linked to proven strategies such as year-round sustained enforcement of alcohol-impaired driving laws. Performance

indicators would also provide states with better tools to judge their progress, allow NHTSA to compare success among states, and enhance public accountability.

Responding to our audit work, NHTSA and the Governors Highway Safety Association agreed on a minimum set of 14 performance measures for states to use for measuring their performance in priority program areas. NHTSA committed to work with the states to develop uniform definitions, protocols, and reporting requirements for each measure, especially those measures for which states do not presently collect data. NHTSA must ensure that states establish measurable goals and report progress for the measures, beginning with their fiscal year 2010 highway safety plans and annual reports.

Targeting Unsafe Motor Carriers and Commercial Motor Vehicle Drivers for Enforcement

The Federal Motor Carrier Safety Administration (FMCSA) is the lead agency for establishing and enforcing motor carrier and commercial motor vehicle driver safety requirements and standards. An ongoing challenge for FMCSA is to ensure that motor carriers and drivers operate safely on the Nation's highways. In 2007, large truck crashes killed about 4,800 people—a 4-percent reduction compared to 2006—and the fatality rate was 2.12 per 100 million vehicle miles traveled, down from 4.12 in 1988.²³ However, the most recent rate is almost 50 percent higher than the overall traffic fatality rate. Like NHTSA, however, FMCSA does not directly implement some critical safety activities but relies on state, local, and private sector partners.

FMCSA can reduce the number of large truck crash fatalities by taking stringent enforcement actions against carriers that repeatedly violate safety regulations. Our audit work found that hundreds of motor carriers repeatedly violated the safety regulations without incurring the maximum fines required by statute. Motor carriers are less likely to improve their safety performances and more likely to view fines as a cost of doing business if repeat violators are not assessed maximum fines.

In response to our audit recommendations, FMCSA agreed to enhance its controls to assess maximum fines for patterns of dangerous violations and began developing procedures to identify and notify such carriers. FMCSA initially told us it would revise its policy by May 2007, but it then delayed it to incorporate the Government Accountability Office's similar recommendations made in August 2007. FMCSA now plans to issue the revised policy by December 31, 2008. FMCSA must take action to follow through on this important commitment.

²³ Based on 2006 data, the latest available.

However, enforcement actions alone will not ensure compliance with Federal safety regulations because some individuals avoid sanctions by creating new motor carrier identities. A recent fatal crash illustrates how a carrier can circumvent an enforcement action. On June 23, 2008, FMCSA ordered a tour bus company out of service for several safety violations. On June 26, 2008, a new company with the same owners and address as the out-of-service company applied to the Department for operating authority.

On August 8, 2008—before the Department authorized the company to operate—a bus operating under the new company name crashed in Sherman, Texas, killing 17 passengers and injuring 36 others. FMCSA must improve its processes for identifying individuals who create new carrier identities after enforcement actions and prevent these “chameleon carriers” from operating on the Nation’s highways.

Finally, as more foreign-owned commercial vehicles operate in the United States, FMCSA needs to ensure that Mexico-domiciled carriers, their trucks, and their drivers comply with all U.S. safety regulations. FMCSA is conducting a highly scrutinized demonstration project to evaluate the safety performance of Mexico-domiciled motor carriers that are granted long-haul authority to operate throughout the United States.

On August 4, 2008, the Department announced a 2-year extension of the demonstration project. FMCSA must work with U.S. Customs and Border Protection to implement effective quality controls to check every participating Mexico-domiciled truck and driver. FMCSA must also ensure that participation levels in the project are sufficient to provide meaningful results and take effective enforcement action against participants that violate safety laws and regulations.

Enhancing the Commercial Driver’s License Program by Enforcing Existing Standards and Adopting New Standards

FMCSA must enhance the Commercial Driver’s License (CDL) program by rigorously enforcing existing standards in cooperation with state and local law enforcement agencies and an industry facing record-high fuel prices and decreasing demand. Enacted in 1986 and required since 1992, the CDL program’s purpose is to improve highway safety by ensuring that drivers of large trucks and buses are qualified to operate those vehicles and to remove unsafe and unqualified drivers from the highways.

Although FMCSA has improved the CDL program, it must continue rigorous enforcement of existing CDL standards. In the past 5 years, our investigations, conducted with other law enforcement agencies and FMCSA, led to the prosecution of CDL fraud schemes in 15 states. These investigations exposed schemes involving the fraudulent issuance of CDLs to individuals who obtained them through corrupt means, such as bribery of state examiners and state-

sponsored, third-party testers. As of August 2008, these investigations had generated 137 indictments and 106 convictions.

In addition to enforcing existing standards, FMCSA must strengthen the CDL program by adopting and implementing new standards. After years of discussion, FMCSA has proposed new, stronger CDL standards that will reduce the possibility that unqualified individuals can obtain CDLs. FMCSA will have to work with states to ensure sustained cooperation in implementing these new standards, because some changes may need additional state resources.

FMCSA must also work to modernize the Commercial Driver's License Information System (CDLIS), which holds records for more than 13 million drivers.²⁴ CDLIS is the key system for ensuring that CDL drivers cannot escape a poor driving record by moving to another state. We recommended improvements for using the income derived from the system, but FMCSA will need to require new financial reports and review the results to ensure successful implementation.

Identifying High-Risk Highway-Rail Grade Crossings for Safety Improvements To Further Reduce Collisions and Fatalities

Over the last 5 years, collisions and fatalities at highway-rail grade crossings (grade crossings) have declined. From 2003 through 2007, grade crossing collisions decreased from 3,077 to 2,749 (11 percent) and fatalities decreased from 357 to 338 (5 percent). During this period, the Federal Railroad Administration (FRA) took several actions to strengthen its Highway-Rail Grade Crossing Safety Program. For example, FRA worked with several states to develop state-specific safety action plans with initiatives for reducing collisions and fatalities. FRA also implemented procedures to improve the completeness of its grade crossing collision reporting system by conducting periodic reviews of railroads' grade crossing collision reports.

FRA can do more to further reduce grade crossing collisions and fatalities by effectively implementing the safety mandates in the Rail Safety Improvement Act of 2008,²⁵ which was signed by the President on October 16, 2008. This law gives FRA the authority to establish mandatory state and railroad reporting of national grade crossing inventory data that would better assist the Department in identifying high-risk dangerous grade crossings and developing risk mitigation strategies. The law also directs FRA to develop and make available to states model legislation to address sight obstructions at grade crossings with passive warning signs to improve motorists' ability to see approaching trains.

²⁴ As of February 2008.

²⁵ H.R. 2095 (2008).

Near-Term Focus Area for the Transition to a New Administration

The safety of travelers is the Department's overarching goal and number one priority. There has been progress, but additional efforts are needed to complete long-overdue revisions of policies governing repeat violators of the motor carrier safety regulations and adopt new CDL standards.

For further information regarding the issues identified in this chapter, please contact Joseph Com , Assistant Inspector General for Highway and Transit Audits at (202)-366-5630. The following related reports and testimonies can also be found on the OIG website at <http://www.oig.dot.gov>.

- *Best Practices for Improving Oversight of State Highway Safety Programs*
- *Effectiveness of Federal Drunk Driving Programs*
- *Audit of the National Highway Traffic Safety Administration's Alcohol-Impaired Driving Traffic Safety Program*
- *Cross-Border Trucking Demonstration Project*
- *Interim Report on NAFTA Cross-Border Trucking Demonstration Project*
- *Issues Pertaining to the Proposed NAFTA Cross-Border Trucking Demonstration Project*
- *Follow-Up Audit of the Implementation of the North American Free Trade Agreement's (NAFTA) Cross-Border Trucking Provisions*
- *Motor Carrier Safety: Oversight of High Risk Trucking Companies*
- *Status of Safety Requirements for Cross-Border Trucking with Mexico Under NAFTA*
- *Significant Improvements in Motor Carrier Safety Program Since 1999 Act, But Loopholes for Repeat Violators Needs Closing*
- *Oversight of the Commercial Driver's License Program*
- *The Federal Railroad Administration Can Improve Highway-Railroad Grade Crossing Safety by Ensuring Compliance with Accident Reporting Requirements and Addressing Sight Obstructions*

EXHIBIT. COMPARISON OF FY 2009 AND FY 2008 TOP MANAGEMENT CHALLENGES

Items in FY 2009 Report	Items in FY 2008 Report
<ul style="list-style-type: none"> Enhancing Aviation Safety and Maintaining Confidence in FAA's Ability To Provide Effective Oversight of a Rapidly Changing Industry 	<ul style="list-style-type: none"> Continuing To Make a Safe Aviation System Safer
<ul style="list-style-type: none"> Enhancing Mobility and Reducing Congestion in America's Transportation System 	<ul style="list-style-type: none"> Reducing Congestion in America's Transportation System Reforming Intercity Passenger Rail
<ul style="list-style-type: none"> Developing a Plan to Address Projected Highway and Transit Funding Shortfalls 	<ul style="list-style-type: none"> Developing a Plan To Address the Highway and Transit Funding Issues in the Next Reauthorization
<ul style="list-style-type: none"> Maximizing the Return on Current Highway and Transit Infrastructure Investments 	<ul style="list-style-type: none"> Continuing To Enhance Oversight To Ensure the Safety of an Aging Surface Transportation Infrastructure and To Maximize the Return on Investments in Highway and Transit Infrastructure Projects
<ul style="list-style-type: none"> Operating the National Airspace System While Developing and Transitioning to the Next Generation Air Transportation System 	<ul style="list-style-type: none"> Addressing Long- and Short-Term Challenges for Operating, Maintaining, and Modernizing the National Airspace System
<ul style="list-style-type: none"> Protecting Against Increasing Cyber Security Risks and Enhancing the Protection of Personally Identifiable Information 	<ul style="list-style-type: none"> Strengthening the Protection of Information Technology Resources, Including the Critical Air Traffic Control System
<ul style="list-style-type: none"> Preventing Catastrophic Failures and Obsolescence in the Nation's Aging Surface Transportation Infrastructure 	<ul style="list-style-type: none"> Continuing To Enhance Oversight to Ensure the Safety of an Aging Surface Transportation Infrastructure and To Maximize the Return on Investments in Highway and Transit Infrastructure Projects
<ul style="list-style-type: none"> Improving Contract Operations and Maintaining Procurement Integrity 	<ul style="list-style-type: none"> Managing Acquisition and Contract Operations More Effectively To Obtain Quality Goods and Services at Reasonable Prices
<ul style="list-style-type: none"> Enhancing and Deploying Programs for Reducing the Serious Consequences of Surface Transportation Crashes 	<ul style="list-style-type: none"> Improving Oversight and Strengthening Enforcement of Surface Safety Programs

APPENDIX. DEPARTMENT RESPONSE

**U.S. Department of
Transportation**

Office of the Secretary
of Transportation

Memorandum

Subject: **ACTION**: Departmental Comments on the OIG Draft Report – Top Management Challenges, Department of Transportation

Date: November 6, 2008

From: Phyllis F. Scheinberg
Assistant Secretary for Budget and
Programs/Chief Financial Officer

To: Calvin L. Scovel III
Inspector General

The Office of Inspector General's Top Management Challenges identifies many of the key challenges facing the Nation's transportation systems. The United States is privileged to have a first-class transportation system in terms of both connectivity and safety. However, the Department of Transportation (DOT) now faces enormous challenges that require new and effective solutions. Many of the challenges facing the DOT, such as aging infrastructure, resource availability and funding sustainability, and increasing cyber security risks, are not unique to the DOT. We would like to offer additional perspectives on the challenges we face in the following areas: 1) safety; 2) aviation congestion; 3) market-based, data-driven, performance-oriented solutions; 4) reform of surface transportation programs; 5) financial management; 6) cash shortfall management; and 7) procurement.

Progress Achieved Improving Safety

Safety is the Department's number one priority and our progress in this area is evidence of our sustained focus on using a data-driven, risk-based approach to Federal programs and regulations. Highway safety has continued to improve as the fatality rate in 2007, the most recent year for which data are available, fell to 1.37 per 100 million vehicle miles traveled, which is the lowest rate ever recorded and the largest drop in crash-related fatalities in more than 15 years. Preliminary data show promising signs of further reductions in 2008. Continued improvements in this area are due to many factors, including the increased use of safety belts, more effective child restraint systems, increased enforcement of laws targeting alcohol-impaired driving, and continued

investment in safety oriented highway infrastructure improvements. With further progress in these areas, along with increased market penetration of crash-avoidance technologies such as electronic stability control, we can expect further improvement in the future.

The Department is also focusing its efforts on challenges in particular need of improvement, such as motorcycle safety, older drivers, and safety on rural roads. For example, motorcycle fatalities continued their nine-year upward trend, increasing another five percent in 2006. During 2008, we initiated a new Action Plan to Reduce Motorcycle Fatalities, which includes a comprehensive range of initiatives such as increasing rider and law enforcement education, better road designs, and tougher standards for labeling helmets. DOT also submitted legislation to the Congress that would enable us to better promote motorcycle helmet use. In addition, the Department recognized the demographic trend of an increasing number of older drivers and has proactively launched initiatives to address their special needs. Under the Department's rural safety initiative, we are helping States and communities develop ways to eliminate the risks drivers face on rural roads.

Strong progress also continues with aviation safety. Commercial airlines in the U.S. carry more than 750 million passengers a year and yet commercial airline crashes are rare events. The last passenger fatality to result from scheduled operations of a major U.S. carrier occurred in August 2006. Since then the U.S. air carrier system has moved 1.5 billion people with no on-board fatalities. Even with the accident rate at historic lows, the Department continued to take aggressive actions to reduce system risks. In 2008, the Federal Aviation Administration (FAA) published a major rule requiring inerting of aircraft center fuel tanks to reduce ignition risk from combustible vapors. In response to violations of airworthiness directives by a major carrier, the Secretary convened an independent review team (IRT) of safety experts to review the FAA's approach to managing risks in civil aviation, including its safety culture and implementation of safety management. Although the IRT concluded the FAA was unambiguously committed to its safety mission, the team made major recommendations to improve agency programs and safety management systems. The IRT's recommendations are now being implemented by the FAA.

Reducing the risk of runway incursions is one of the FAA's top priorities. Each year, FAA handles a massive number of air traffic operations, including over 61 million takeoffs and landings last year at airports with air traffic control towers. These operations took place at more than 500 airports and involved over 600,000 pilots and 14,000 air traffic controllers. There is no single way to reduce runway incursions given the sheer number of flights, people, and vehicles moving across airport runways and taxiways. Runway safety is a shared responsibility among pilots, controllers, and vehicle drivers. An aggressive runway safety program continues to reduce the number of serious runway incursions, and we are implementing new technologies that should bring about further improvement, particularly as we begin implementing runway status lights. Automated warning systems enhance runway safety, but education and situational awareness are the keys to preventing incursions. As a result of these combined efforts, the number of serious runway incursions dropped by more than 55 percent from fiscal

year 2001 through fiscal year 2007. The 24 serious incursions in fiscal year 2007 made it the safest year on record.

Action Initiated to Reduce Aviation Congestion

The Next Generation Air Transportation System (NextGen) is the FAA's plan to modernize the National Airspace System (NAS) through 2025. NextGen technologies will give pilots and air traffic controllers more detailed information and enable more direct flight routes, all while providing the highest levels of safety. Through NextGen, the FAA is planning to accommodate air traffic growth by increasing NAS capacity and efficiency while simultaneously improving safety and reducing environmental impacts. The FAA is implementing new routes and procedures that leverage emerging aircraft navigation technologies, including Performance-Based Navigation, which is helping FAA to achieve its NextGen goals.

Technology is only part of the solution for the FAA. The FAA has also taken extensive action to ensure that a sufficient number of fully trained and qualified air traffic controllers are available to accommodate expected retirements and industry growth. The FAA is on schedule in its plan to hire and train nearly 17,000 air traffic controllers over the next decade. Most recently, the FAA hired over 1,800 controllers in 2007 and over 2,100 in 2008.

The Department is also working to offer market-based solutions to reduce airport congestion, increase competition, and ultimately reduce fares to consumers. DOT recently finalized a rulemaking that would auction a small percentage of slots at New York's three most crowded airports. Given, the disproportionate impact that New York has on the rest of the nation's airspace, a successful implementation of this proposal will yield nationwide benefits. In addition, the Department continues to implement a redesign of New York's airspace to improve efficiency, as well as completing a range of other operational improvements in the New York region.

Focus on Market-Based, Data-Driven, Performance-Oriented Solutions

This Administration has changed the transportation financing debate to include market-based, data-driven, performance-oriented solutions. We have called attention to and proposed policy and programmatic reforms to address the fundamental mispricing of highways, airports and the air traffic control system. Central to those reforms is a call to use market-based pricing mechanisms to allocate existing transportation resources more efficiently, generate revenues for re-capitalization and capacity expansion, reduce wasteful spending, and mitigate adverse environmental impacts.

In addition to using market-based pricing mechanisms, utilizing private sector infrastructure markets more robustly should also play a major role in modernizing America's transportation infrastructure – from our roads and bridges, to our subways and seaports, and to our air traffic control system. Public Private Partnerships are an essential part of modern transportation financing. These partnerships can reduce project costs, accelerate project delivery, and allow States and municipalities to greatly leverage

Appendix. Department Response

available public resources. Among the Administration's most important transportation legacies will be the unprecedented innovation we have sparked in the very way transportation in America is financed, built, maintained and operated. The challenge we face moving forward is translating these initial innovations into a coherent national policy that will deliver fewer traffic bottlenecks in the air and on the ground, better transit services, a stronger economy, and a cleaner environment.

There is a clear role for the Federal government in helping to gain widespread acceptance of innovative and effective financing solutions across the country. This Administration believes that the Federal government should prioritize its investment resources on nationally significant projects that generate high returns for the taxpayer and focus less on process micromanagement. In addition, Federal policy should provide incentives to non-Federal officials exploring different procurement approaches that transfer more risks to non-governmental entities. Properly crafted public-private agreements can substantially reduce taxpayer exposure to cost overruns, project delays, deteriorating infrastructure quality and accountability to system users, among other protections.

The Department has led the way with innovative data-driven, performance-oriented solutions to congestion on our Nation's roads. During the last year, DOT launched major congestion reduction initiatives across all modes of transportation, for the first time seeking to coordinate discretionary grant awards on a multimodal basis within the context of a performance-based approach to reducing congestion. Federal grants awarded to innovative State and local leaders willing to pursue new congestion relief strategies hold enormous promise to reverse the precipitous decline in surface transportation performance in our major metropolitan areas.

DOT Proposes A Programmatic and Regulatory Overhaul to Federal Surface Transportation Spending

The Administration's proposal to refocus, reform, and renew our fundamental approach to the Nation's highways and transit systems will create a more effective and sustainable way to finance, operate, and maintain highways and transit systems. It also will make our highways safer and give Americans new confidence that the money they invest in transportation will actually deliver economic results instead of providing a reward for special interest constituencies. The proposal seeks to replace 102 stove-piped programs with eight consolidated, multimodal infrastructure and safety programs. This new approach to working with our State and local partners would empower those closest to the transportation issues to identify and address priorities of greatest local and regional importance. This flexible, mode-neutral approach to transportation problem solving offers new tools to address urban congestion, redoubles the Department's emphasis on safety, and focuses on making the best possible use of taxpayers' money. In addition, the proposal seeks to introduce cost-benefit analysis and a performance focus for the first time into most Federal transportation programs. We offer this visionary approach to making transportation infrastructure investments with the hope that the next Administration and the 111th Congress will give serious consideration to these ideas and approaches for congestion relief to keep America moving.

Financial Management

The Department continues to be a leader in budget, performance and financial management. DOT's emphasis on financial management has resulted in a renewed clean audit opinion this year with no material weaknesses, our seventh clean audit in the last eight years. The clean audit opinion is the result of countless hours of hard work by our financial managers. We are proud of the Department's exemplary efforts in this area to demonstrate the financial and program results the American people expect and deserve.

Effective Action Taken to Address Anticipated Funding Shortfall

Transportation funding is an area desperately in need of reform. The success of any programmatic reforms depends on having a coherent, effective and sustainable funding approach. This was driven home clearly by this past summer's severe cash shortage in the Highway Trust Fund (HTF). The Department had been very public with its warnings for over two years about the potential cash shortage in the HTF. The cash shortage became a reality at the end of fiscal year 2008 when increases in gasoline prices resulted in motorists driving fewer miles and consuming less fuel. Less fuel consumed resulted in lower receipts going into the HTF during the summer months when States are engaged in a majority of the year's highway construction program. As the States submitted requests for reimbursement, the cash balances in the HTF dropped precipitously.

In preparation for a potential shortfall, DOT had prepared a legal, policy, and programmatic framework for action. As a result, the Department swiftly implemented its action plan to ensure that States and other involved parties were informed and continued to receive reimbursement. In response to the crisis, Congress passed legislation, which the President subsequently signed, providing the HTF with a one-time payment of \$8 billion from the General Fund.

While the recent crisis has been resolved for the time being, DOT remains concerned that we could experience another shortfall in the near future. To ensure that the Department is able to respond proactively in the event of a reoccurrence, a multimodal working group was established to create an implementation plan. The working group is: documenting lessons learned, evaluating cash management strategies, coordinating with OMB and Treasury to prepare for the next cash shortfall, conducting an in-depth analysis of outlays and earmarks to better estimate cash flow, and working to establish meaningful indicators that will help the Department determine when to implement these cash management procedures.

DOT Launches Strategic Procurement Initiatives

The Department also is working to strengthen its procurement systems. For example, the Senior Procurement Executive (SPE) initiated a three-pronged approach to make acquisition more strategic throughout DOT. First, the SPE is clarifying and formalizing procurement authority throughout DOT to effect the changes necessary to more fully

Appendix. Department Response

manage acquisition risk. We are also detailing the approval process for major acquisitions and strengthening organizational outreach. The SPE led the implementation of One DOT PRISM, a contract-writing system that will enhance business process reengineering, standardization and efficiencies throughout DOT. Federal Acquisition Certifications for contract specialists, contracting officers, technical representatives, and program/project managers have been implemented throughout DOT. These certifications will ensure appropriate training for key acquisition workforce members. Annual ethics training has been instituted for employees involved in procurement and grant management. Finally, DOT's Procurement Management Council has been reformed into the Strategic Acquisition Council, with the goal of making acquisition more strategic through the Department.

Thank you for the opportunity to provide additional insight on the Department's Top Management Challenges. We value the constructive comments of the Office of the Inspector General to improve the performance of the Department and its many programs.

The following pages contain textual versions of the graphs and charts found in this document. These pages were not in the original document but have been added here to assist screenreaders.

Figure 1-1: Runway Incursions FY 1999 to FY 2007 – Original Definition

Fiscal Year	Runway Incursions
FY 1999	329
FY 2000	405
FY 2001	407
FY 2002	339
FY 2003	323
FY 2004	326
FY 2005	327
FY 2006	330
FY 2007	370

Source FAA

Figure 1-2: Runway Incursions FY 2004 to FY 2008 – New Definition

Fiscal Year	Runway Incursions
FY 2004	730
FY 2005	779
FY 2006	816
FY 2007	891
FY 2008	1012*

Source FAA

*Preliminary Data

Figure 2-1. Calculation of Net Effects at 85 Percent On-Time Performance

Additional Revenues	\$111.4 Million
Add: Cost Savings	39.3 Million
Less: Net Performance Payments	(14.1) Million
Net Gains	\$136.6 Million

Source: OIG Analysis

Figure 3-1. Highway Trust Fund – Highway Account Balance
(FY 2005 – FY 2008)

(\$ Billions)	2005	2006	2007	2008 (prelim.)
Opening Balance	10.8	10.6	9.0	8.1
Add: Revenues	32.9	33.7	34.3	30.7
Less: Disbursements	33.1	35.3	35.2	37.7
Trust Fund Balance	10.6	9.0	8.1	1.1
Add: General Fund Transfers	n/a	n/a	n/a	8.0
Trust Fund Balance with General Fund Transfer	n/a	n/a	n/a	9.1
Projected Revenues and Disbursement per Presidents Budget				
Projected Revenues	36.7	35.0	34.6	35.8
Projected Disbursements	35.3	36.0	38.2	38.7

Source: FHWA for actual Trust Fund revenues and disbursements and the President's Budget for projected revenues and disbursements.

Figure 5-1. Controller Attrition and Hiring, Projected and Actual
(FY 2005 – FY 2007)

FAA's Attrition vs. Hiring for Air Traffic Controllers (FY 2005 – FY 2007)	
Projected Attrition	2,683
Actual Attrition	3,300
Projected Hiring	2,751
Actual Hiring	3,450

Figure 5-2. FAA Capital Funding For FY 2008 – FY 2013

	FY 2008 (Enacted)	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	
Remaining F&E	\$2,325.9	\$2,092.4	\$2,099.5	\$2,037.7	\$2,118.1	\$2,063.8	\$12,737.4
NextGen Funding	\$187.7	\$631.1	\$986.5	\$1,056.2	\$1,227.5	\$1,494.2	\$5,583.2
Total CIP	\$2,513.6	\$2,723.5	\$3,086.0	\$3,093.9	\$3,345.6	\$3,558.0	\$18,320.6

Figure 9-1. U.S. Highway Fatalities and Injuries, 2001 through 2007

Year	Fatalities	Injuries
2001	42,196	3.03 million
2002	43,005	2.93 million
2003	42,884	2.89 million
2004	42,836	2.79 million
2005	43,443	2.70 million
2006	42,708	2.58 million
2007	41,059	2.49 million

Source: Data from the National Highway Traffic Safety Administration