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THE PRESIDENT'S FISCAL YEAR 2009 FEDERAL AVIATION ADMINISTRATION BUDGET

(110–94)

HEARING

BEFORE THE

SUBCOMMITTEE ON AVIATION

OF THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

SECOND SESSION

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February 6, 2008

SUMMARY OF SUBJECT MATTER

TO: Members of the Subcommittee on Aviation

FROM: Subcommittee on Aviation Staff

SUBJECT: The President's Fiscal Year 2009 Federal Aviation Administration Budget

PURPOSE OF HEARING

At 10:00 a.m., on Thursday, February 7, 2008, in Room 2167 Rayburn House Office Building, the Subcommittee on Aviation will hold a hearing to consider the Administration's fiscal year (FY) 2009 budget request for the Federal Aviation Administration (FAA).

FY 2009 FAA Budget Request

Background

The Administration's request for the FAA provides $14.64 billion in FY 2009, $272 million less than the FY 2008 enacted funding level. Under current law, the FAA's budget is broken down into four programs: Operations; Facilities & Equipment (F&E); the Airport Improvement Program (AIP); and Research, Engineering & Development (RE&D). (The Science Committee has jurisdiction over the RE&D program). The authorizations for these programs expired on October 1, 2007.[1]

For FY 2009, the Administration proposes a new account structure that eliminates the Operations and F&E programs and creates the "Air Traffic Organization" account and "Safety and Operations" account. The Administration put forward a similar proposal last year, but it was not adopted by Congress. The FAA believes that its new account structure will better align funding with function. More specifically, the FAA asserts that the new structure is aligned with the FAA's lines of

[1] On September 20, 2007, the House passed H.R. 2881, the FAA Reauthorization Act of 2007, but the Senate has yet to act on its reauthorization proposal.

business and the FAA's reauthorization proposal wherein the FAA's financing system is transformed into a hybrid user-fee financing system.

This memo analyzes the FY 2009 request under the existing law, as authorized by this Committee, to provide a basis of comparison to prior years. The chart below compares the Administration's FY 2009 request for FAA with the FY 2009 authorized funding levels proposed in H.R. 2881 (the FAA Reauthorization Act of 2007) as passed by the House, and the FY 2008 enacted funding levels.

($ in millions)

PROGRAM	FY 2008	FY 2009 AUTHORIZED, PROPOSED PER H.R. 2881	FY 2009 PRESIDENT'S BUDGET	DIFF. OF FY2009 PRES. BUDGET AND FY 2008 ENACTED
Operations	$8,740.0	$9,126.5	$8,998.5	$258.5 (3.0%)
Facilities & Equipment	2,513.6	3,246.0	2,723.5	209.9 (8.4%)
Airport Improvement Program	3,514.5	3,900.0	2,750.0	-764.5 (-21.8%)
Research, Engineering & Development	146.8	488.3	171.0	24.2 (16.5%)
Total	**$14,914.9**	**$16,760.8**	**$14,643.0**	**-271.9 (-1.8%)**

Aviation Trust Fund and General Fund

Most of the FAA's funding is derived from the Airport and Airway Trust Fund (commonly known as the "Aviation Trust Fund"). The Aviation Trust Fund holds the revenues from the various aviation excise taxes that are paid by aviation system users. The Aviation Trust Fund receipts totaled $11.47 billion ($11.94 billion including interest) in FY 2007, with approximately $6.0 billion of this total derived from the 7.5 percent passenger ticket tax. The FAA estimates that, under the current tax structure, FY 2009 receipts will equal approximately $12.57 billion ($13.04 billion including interest).

The Administration's FY 2009 budget request again proposes to transform the FAA's current excise tax financing system to a hybrid cost-based user fee system that would take effect in FY 2010. Under this proposal, which is similar to the FAA's reauthorization proposal from last year, the FAA's financing sources shift from a mix of fuel taxes, other excise taxes, and a general fund contribution to user fees, fuel taxes and a general fund contribution.

The Administration's hybrid cost-based user fee proposal was not included in either the House or the Senate versions of FAA reauthorization legislation developed last year, although the Senate Commerce Committee did propose a $25 per flight surcharge on commercial and general aviation (GA) jet and turboprop flights that access airspace controlled by the FAA.

When it was created in 1970, the Aviation Trust Fund was viewed as a fund to pay for improvements to the aviation infrastructure. For many years, this Committee and the aviation community have sought to ensure that the funds paid into the Aviation Trust Fund are actually used for aviation infrastructure improvements. The Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (Public Law 106-181, commonly known as "AIR 21"), enacted in April 2000, included procedural points of order designed to guarantee that every dollar aviation users pay into the Aviation Trust Fund is actually spent on aviation programs, with aviation capital programs having first claim on these dollars. Under these points of order, aviation capital programs must be fully funded at the authorized levels before the remaining Aviation Trust Fund revenues are used to support FAA's operating costs. The Vision 100 - Century of Aviation Reauthorization Act (Public Law 108-176, commonly called "Vision 100") extended these points of order through fiscal year 2007. H.R. 2881 would further extend these funding guarantees through FY 2011.

Although most of the FAA's budget is derived from the Aviation Trust Fund, it also receives funding from the General Fund. The size of the General Fund contribution has varied significantly over time. During the past 20 years (1989-2008), the General Fund contribution has averaged 24 percent of FAA's total budget. During the past 5 years (2004-2008), it has averaged 19 percent. Based on the current formula and the assumptions in the Administration's budget, the General Fund will contribute approximately $1.6 billion, or 11 percent of the FAA's budget for FY 2009.

The Administration's FY 2009 proposed new account structure divides Aviation Trust Fund and General Fund expenditures differently:

Programs	Aviation Trust Fund	General Fund
Air Traffic Organization	85%	15%
Safety & Operations	37%	63%
Research, Engineering & Development	91%	9%
Airport Improvement Program	100%	0%

According to the FAA, this new breakdown is based on a cost allocation study that determined the costs of FAA's various activities, and assigned those costs to the user groups that benefit from, or drive the cost of, those activities. In general, the costs of FAA activities that benefit public aircraft or the general public are proposed to be funded by the General Fund. Under the Administration's proposal, the General Fund would contribute $2.7 billion, or 18.7 percent of the FAA's budget for FY 2009.

Airport Improvement Program

Programs providing federal aid to airports began in 1946 and have been modified several times. The current AIP program began in 1982 and provides federal grants to airports for airport development and planning. AIP funding is usually limited to construction or improvements related

to aircraft operations, such as construction or rehabilitation of runways, taxiways, and aprons; noise mitigation; land acquisition; and the acquisition of safety, emergency or snow removal equipment.

There are approximately 19,847 airports in the U.S. Of those, 14,586 are private use, and 5,261 are public use. Approximately 3,431 of the public use airports are identified as critical to the National Airspace System (NAS) and are included in the National Plan of Integrated Airport Systems (NPIAS) 2007-2011. Listing in the NPIAS makes airports eligible for AIP grants.

Unlike some of the Committee's other programs, AIP reauthorization legislation does not include special earmarks. Instead, AIP money is divided into two broad categories: entitlement funds (also called apportionment funds), which are distributed by formulas that are set forth in the law; and discretionary funds, which are distributed by the FAA based on a national priority system that has been in use for many years.

Passenger and cargo entitlement funds are distributed to primary commercial service airports (airports that board at least 10,000 passengers per year) and cargo service airports in accordance with a formula that takes into account the number of passengers and amount of cargo that go through each airport. AIR 21 ensured that, beginning in FY 2001, each primary airport received a minimum passenger entitlement of at least $650,000 (or $1 million if AIP funding totals at least $3.2 billion) per year. The maximum passenger entitlement for primary airports is capped at $22 million per year ($26 million if AIP is at least $3.2 billion). There are 384 primary airports and 114 cargo airports that qualify for these entitlements.

States are entitled to 20 percent of AIP funds (if AIP is at least $3.2 billion) for their general aviation airports and commercial service non-primary airports. The formula for the distribution of this money is based on the area and population of the state. In most states, the FAA, working with the state aviation authority, decides which general aviation airports receive AIP funding. Eight states (out of a total of 10 authorized slots) have authority to allocate the money themselves through the State Block Grant program. Alaskan airports receive their own separate entitlement, in addition to the amount apportioned to Alaska as a state.

Pursuant to AIR 21, smaller airports also began to receive entitlement funds in FY 2001. General aviation airports; commercial service airports that boarded between 2,500 and 10,000 passengers annually; non-primary airports; and reliever airports received entitlements (if AIP is at least $3.2 billion) based on one-fifth of their expected infrastructure requirements as published in the latest NPIAS, capped at $150,000 annually. In FY 2007, there were 2,774 non-primary airports that qualified for this entitlement.

The FAA must also reserve an amount equal to the entitlements that airports were entitled to, but chose not to use, in prior years. In FY 2007, these restored entitlements (also known as "carried-over entitlements") totaled $447.8 million. The FAA has discretion over the allocation of any AIP money remaining after all new and carried-over entitlements have been funded. However, provisions requiring that a certain percentage of the remaining funds go to designated set-asides limit this discretion. For example, the law requires that 35 percent be allocated to noise mitigation projects and 4 percent to current or former military airports designated by the FAA. An additional set-aside for reliever airports equal to 0.66 percent of the discretionary fund is distributed when AIP is at least $3.2 billion.

The Administration's FY 2009 budget request provides $2.75 billion for the AIP program - $764.5 million less than the FY 2008 enacted funding level of $3.5 billion, and $1.15 billion less than the authorized level proposed by H.R. 2881 for FY 2009.

($ in millions)

AIP Funding Category	FY 2008 Enacted*	FY 2009 Authorized, Proposed per H.R. 2881	FY 2009 Request**
Apportionments			
Primary Airports	857.7	752	620.1
Cargo Airports	118.8	132	79.6
Alaska Supplemental	21.3	21	18.5
Non-primary (General Aviation) Airports	409.6	409.0	300.5
State Apportionment	269.4	378	300
Carried Over Entitlements (FY09 is estimate)	447.8	447.8	447.8
Small Airport Fund			
Small Hubs	66.7	81	172.3
Non-Hub Commercial Service	266.8	323	
Non-primary	133.4	161	
Discretionary Fund			
Capacity/Safety/Security/Nois	363.6	542	359.3
Pure Discretionary	121.2	181	119.8
Set Asides			
Noise	281.2	300	210.3
Military Airport Program	32.1	43	0
Reliever	5.3	7	0

*Assumes passage of legislation to authorize AIP for FY 2008.
** The effect of FAA's reauthorization proposal to change the distribution of AIP funds is shown in this column.

Because the Administration's FY 2009 AIP request falls below $3.2 billion, several significant changes in the AIP entitlement formula funding would be triggered under the current statutory formula:

- Primary airports would receive 50 percent of their normal apportionment, and the minimum primary airport entitlement would be reduced from $1 million to $650,000.

- The state apportionment would be calculated at 18.5 percent of AIP, rather than 20 percent.

- The entitlements for approximately 2,774 general aviation airports – which are as much as $150,000 per airport – would be eliminated.

- The Alaska Supplemental would be cut by one-half.

It is worth noting that AIP meets only a portion of airport infrastructure needs. To provide additional resources for airport improvements, the Omnibus Budget Reconciliation Act of 1990 (P.L. 101-508) permitted an airport to assess a fee on passengers. This airport fee is known as the Passenger Facility Charge (PFC). PFC funds can be used for a broader range of projects than AIP grants and are more likely to be used for "ground side" projects, such as passenger terminal and ground access improvements. The PFC is added to the ticket price, collected by the airlines, and then turned over to the airport imposing the fee. PFC funds are not deposited in the U.S. Treasury and are not part of the Federal budget.

AIR 21 increased the cap on the PFC from $3 to $4.50 per passenger per flight segment. The FAA must approve the implementation of PFCs by airports. As of February 1, 2008, there are 333 airports collecting PFCs, including 94 of the busiest 100 airports. Of these 333 airports, 265 airports are approved to collect the maximum $4.50 PFC, including 48 large and medium hub airports.

If a medium or large hub airport charges a PFC of $3 or less, it must forego up to one-half of its AIP entitlement. If one of these airports charges a fee greater than $3, it must forego 75 percent of its AIP entitlement. The foregone entitlements are turned back into the AIP program and divided between discretionary AIP (12.5 percent) and the Small Airport Fund (87.5 percent) that is distributed primarily to non-hub and general aviation airports. For FY 2008, the FAA estimates approximately $2.7 billion in PFC collections.

In addition to AIP and PFCs, airports issue bonds to finance capital projects. According to Thomson Financial, a firm that tracks all municipal bond issues, over the last five years (from 2003-2007), airports issued an average of $4.9 billion per year in new airport bonds.

The total funding available from all sources -- AIP, PFCs, and airport bonds -- can be compared to estimated airport capital development needs to calculate the "investment gap". The FAA estimates that, from FY 2007-2011, there will be $41.2 billion[2] of AIP-eligible infrastructure development (an annual average of $8.2 billion). The Airports Council International - North America (ACI-NA) issued its own Capital Needs Survey in May 2007. The ACI-NA survey, which includes both AIP-eligible and ineligible projects, and adjusts for inflation, estimates that airport capital development needs will total $87.4 billion for 2007-2011 (an annual average of $17.5 billion).

Based on a combination of the FAA NPIAS and the ACI-NA needs survey, the Government Accountability Office (GAO) testified before this Subcommittee in March 2007 that it estimates an investment gap of $1 billion per year, assuming an average annual funding level of $13 billion (from all sources) and an average annual need of $14 billion.[3] However, this GAO estimate

[2] In 2006 constant dollars.
[3] Both the $13 billion funding level and the $14 billion needs estimate are in constant 2006 dollars. GAO is expected to estimate the same $1 billion investment gap in its 2/7/08 testimony before the Subcommittee.

does not include any adjustment for rising construction costs. According to GAO, construction costs jumped 26 percent in 30 major U.S. cities over the past three years.

Airport groups contend that there is a significantly greater gap between airport capital needs and available funding than that estimated by GAO. In addition to the fact that GAO's estimate did not consider construction cost increases, according to airport groups, the PFC estimate GAO used to calculate the $13 billion in average annual funding may be overstated by as much as $660 million, because some airports use PFC revenue to finance bonds. Moreover, the FAA acknowledges that its prior NPIAS report, issued in September 2006, which showed $41.2 billion in AIP-eligible capital needs for 2007-2011, is "understated."[4] The GAO used this report to calculate its estimate of $14 billion in average annual airport capital needs.

For FY 2008, assuming approximately $11.7 billion in available funding ($3.5 billion for AIP grants, $500 million in local matching funds, $2.7 billion from PFC collections, and $4.9 billion in bonds), the investment gap could be as large as $5.8 billion, based on the inflation-adjusted ACI-NA needs survey.

The FAA's reauthorization proposal, submitted early last year, included changes to the AIP formula and the PFC program, including an increase in the PFC cap that would free up additional AIP funds for small and medium airports. As a result, the FAA maintains that an AIP funding level of $2.75 billion will provide enough funds to allow the agency to meet high priority airport capacity, environmental, safety and security needs, as well as meet other important commitments such as phased and scheduled projects.

Facilities & Equipment

The FAA's F&E program[5] includes development, installation, and transitional maintenance of navigational and communication equipment to aid aircraft travel. This program supplies equipment for more than 3,500 facilities, including air traffic control (ATC) towers, flight service stations in Alaska, and radar facilities. The F&E program is funded completely by the Aviation Trust Fund. Unlike AIP, there are no F&E grants. Rather, the FAA uses the money in this program to purchase and install radars, computers, navigation aids, and other equipment according to scheduled priorities.

The F&E program is also the FAA's primary vehicle for modernizing the National Airspace System (NAS). Broadly defined, the term "NAS modernization" refers to the FAA's ongoing effort to obtain new surveillance, automation, and communications systems. Since NAS modernization began in the early 1980s, several programs have been fraught with significant cost overruns and delays. However, most of this cost growth occurred before the FAA's Air Traffic Organization (ATO) began operations in 2004, which has been widely credited with making progress in controlling the costs of FAA's capital programs. The FAA states that the ATO has met its

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[4] See page 4 of the February 14, 2007, letter from FAA to Congress, transmitting the FAA's reauthorization proposal, the "Next Generation Air Transportation System Financing Reform Act of 2007".

[5] Under the new account structure proposed in the Administration's FY 2009 request, the $2.724 billion F&E program would be divided between the new "Safety and Operations" account - $132 million, and new "Air Traffic Organization" account - $2.591 billion.

acquisition performance goal for the fourth consecutive year -- that is, 80 percent of its system acquisitions are on schedule and within 10 percent of budget.

While the FAA has developed some new technological capabilities over the last 25 years, the U.S. air traffic management system is still fundamentally based on radar tracking, analog radios, and ground-based infrastructure. At the same time, the proliferation of regional jets, the emergence of low cost and new entrant carriers, more point-to-point service, and the anticipated influx of Very Light Jets (VLJs), not to mention other new users like unmanned aerial systems (UAVs) and commercial space vehicles, are placing new and different types of stresses on the system. The FAA forecasts that airlines are expected to carry more than 1 billion passengers by 2015, increasing from approximately 740 million in 2006. The DOT predicts up to a tripling of passengers, operations, and cargo by 2025.

The existing system is not capable of meeting this projected increased level of demand. According to the FAA, FY 2007 saw a six percent increase in NAS-related flight delays over the previous year. Chronic delays at chokepoints in the system are early indicators that the system is rapidly reaching critical mass.

Congress foresaw this issue and, in AIR 21, created the Joint Planning and Development Office (JPDO) within FAA to leverage the expertise and resources of the Departments of Transportation, Defense, Commerce, and Homeland Security, as well as National Aeronautics and Space Administration (NASA) and the White House Office of Science and Technology Policy, for the purpose of completely transforming the NAS by the year 2025 and developing a Next Generation Air Transportation System (NextGen).

In 2007, the JPDO issued both an Enterprise Architecture (EA) and a Concept of Operations, which will serve as a high-level blueprint for NextGen. Based on these documents, NextGen will include: satellite-based surveillance and procedures; enhanced automation capabilities; digital datalink communications; networked communications, and an integrated weather system. In concert, the FAA expects these enhanced capabilities will significantly increase system capacity.

While the Administration plans to embark on a major new modernization program, in recent years it has requested F&E funding well below Congressionally authorized levels for the program. In 2003, the FAA requested and received from Congress an authorization of approximately $3 billion per year for its F&E program. Yet, for fiscal years 2005-2008, the Administration requested and received roughly $2.5 billion per year for F&E. As a result, the FAA cancelled or deferred three major modernization programs: the Next Generation Communication (NEXCOM), designed to transition analog air-to-ground transmissions to digital; Controller Pilot Datalink Communications (CPDLC), which would allow digital email-type capability between controllers and pilots (some form of the CPDLC/datalink program will likely need to be revived as part of the NGATS effort); and Local Area Augmentation System (LAAS), a satellite-based precision-landing system. The ATO has also broken down its acquisition phases for the Standard Terminal Automation Replacement System (STARS) and has deferred its decision on whether to fully deploy the system.

For FY 2009, the Administration has requested a slight increase in F&E funding, to $2.72 billion. Of this amount, the Administration identifies $631 million (approximately 23 percent) as

part of NextGen.[6] For example, the Administration's FY 2009 request provides $300 million for the Automatic Dependant Surveillance – Broadcast (ADS-B) program, which is FAA's flagship program to transition to satellite-based surveillance.

Nevertheless, the Administration's FY 2009 F&E request appears to be at odds with its own preliminary NextGen F&E cost estimates, raising the question of whether the FAA is requesting enough funds to achieve its goal of technologically transforming the system while at the same time sustaining the existing system. Both the GAO and the Department of Transportation Inspector General reported that, in 2006, the FAA's ATO developed preliminary F&E cost estimates for the NextGen. As shown in the table below, those preliminary F&E cost estimates, which include both the cost of sustaining the system and transitioning to NextGen, are significantly higher than the funding levels being requested by the Administration:

F&E Preliminary Cost Estimates (Including NextGen)

Fiscal Year 2008	$3.120 billion
Fiscal Year 2009	$3.246 billion
Fiscal Year 2010	$3.259 billion
Fiscal Year 2011	$3.301 billion
Fiscal Year 2012	$3.411 billion

Operations

The FAA's ATC system operates 24 hours a day, 365 days a year, providing aircraft separation and guidance services to commercial, military, and general aviation users. The U.S. operates the largest and one of the safest ATC systems in the world, handling almost one-half the world's air traffic. The Operations account[7] funds the FAA's daily activities and programs. Operations represents about 60 percent of the FAA's annual budget, and mostly funds personnel costs. In FY 2007, the Operations account funded 39,743 full-time equivalent employees.

The ATO and the Office of Aviation Safety (AVS) are the two major activities funded by the Operations account, representing over 90 percent of the Operations budget.

($ in millions)

	FY 2008	FY 2009
ATO	6,966	7,079
AVS	1,082	1,131
Commercial Space (AST)	13	14
Staff Offices	680	775

The ATO accounts for about 80 percent of the Operations budget. The ATO's budget supports: air traffic controller training, compensation, and operating expenses of ATC facilities; air

[6] An additional $56.5 million in the Research account is also identified as part of NextGen.
[7] Under the new account structure proposed in the Administration's FY 2009 request, the $9.0 billion Operations program would be divided between the new "Safety and Operations" account - $1.92 billion, and the new "Air Traffic Organization" account - $7.08 billion.

traffic management and routing; the provision of aeronautical and weather information to pilots and controllers; and safety planning and runway incursion reduction programs.

AVS accounts for more than 10 percent of the Operations budget. The AVS budget supports: safety regulation enforcement; the development of standards to ensure aircraft are safe and in compliance with noise and environmental regulations; the investigation of accidents to identify unsafe conditions and practices; safety oversight of air traffic operations; and the certification of new aircraft to ensure that they are safe and airworthy.

The Administration attributes 67 percent of its FY 2009 request to safety. Yet, while commercial aviation safety trends have been positive over the last several years, the GAO notes that recent safety trends may warrant attention, including the commercial air carrier fatal accident rate, the number of fatal GA accidents, and the number of runway incursions. As a result of four fatal commercial air carrier accidents in 2006, FAA did not meet its FY 2006 performance target of .018 accidents per 100,000 flights. In addition, FAA did not meet its FY 2007 performance of 0.010 fatal accidents per 100,000 flights. Regarding GA, the number of fatal accidents has fluctuated between 300 and 366 annually since 2000.

Regarding runway incursions, while the number of severe runway incursions generally decreased from 53 in FY 2001 to 24 in FY 2007, the total number and rate of runway incursions is increasing. Data for FY 2007 indicate that the overall runway incursion rate of 6.05 incursions per 1 million air traffic control operations is 12 percent higher than in 2006, and is nearly as high as the FY 2001 peak of 6.1 incursions per 1 million operations. In addition, during the first quarter of FY 2007, there were ten severe runway incursions.

The FAA also faces staffing challenges, particularly with its air traffic controller and safety inspector workforce. The FAA employs nearly 15,000 air traffic controllers at approximately 316 federally-operated facilities. The FAA developed its first comprehensive Controller Workforce Plan in 2004 and now updates it annually to adjust hiring and attrition projections to actual experience. In anticipation that more than 60 percent of the controller workforce will become eligible to retire over the next 10 years, the FAA plans to hire more than 16,000 controllers over that period. In FY 2007, the FAA hired 1,815 controllers and ended the year with 14,874 controllers on board. In FY 2008, the FAA plans to hire approximately 1,877 controllers, which after estimated losses due to retirements and other attrition translates into a net increase of about 256 controllers, to meet a year-end target of 15,130. The FY 2009 budget request includes funds to increase the controller workforce further, to 15,436 by the end of FY 2009. The FAA is currently updating its 2008 Controller Workforce Plan (to be issued in March 2008).

While replacing retiring controllers is a critical issue for the FAA, it is also important for the FAA to maintain a safety inspector workforce sufficient to achieve its mission of safety oversight. The FAA employs approximately 3,780 inspectors in its Flight Standards Service (AFS) and about 221 inspectors its Aircraft Certification Service (AIR).[8] Attrition and a 2005 hiring freeze have led to concerns that FAA may be understaffed in its safety office, although the FAA was able to increase staffing in these areas during FY 2007, and further increases are planned for FY 2008. By the end of FY 2008, the FAA plans to increase the AFS inspector workforce to 3,880, and the AIR inspector workforce to 230. However, no further increases in these workforces are requested for FY 2009.

[8]Full-time permanent positions on-board as of September 30, 2007.

At the same time, new classes of airspace users, such as commercial space launch vehicles, UAVs, and VLJs, may place additional workload demands on the FAA. For example, the FAA predicts 400-500 new VLJs per year starting in 2007, reaching 4,950 by 2017. In addition, the FAA's oversight workload could greatly expand with expected increases in commercial space launches due to the emergence of a space tourism industry and spaceports.

FY 2008 FAA Budget Situation

In addition to the FY 2009 budget request, the FAA's current FY 2008 budget situation will likely be discussed at the hearing. The FAA is potentially facing significant FY 2008 budget problems due to the lapse in funding for the AIP program, and the upcoming expiration of both the aviation excise taxes and the authority to make expenditures from the Aviation Trust Fund. The AIP program is currently not authorized and, without further Congressional action, the FAA will be unable to pay the salaries of approximately 4,000 of its employees beginning on March 1, 2008.

These current and upcoming lapses in FAA's authorities are the result of a stalemate that has developed in the Senate over FAA reauthorization legislation. The House has acted on three separate occasions to extend the authorization for FAA programs. On September 20, 2007, the House passed H.R. 2881, the "FAA Reauthorization Act of 2007", to reauthorize FAA programs for FYs 2008-2011. On September 24, 2007, the House passed H.R. 3540, the "Federal Aviation Administration Extension Act of 2007" to provide a short-term extension of FAA programs. On November 6, 2007, the House amended and passed S. 2265, in a subsequent attempt to provide a short-term extension of FAA programs. The Senate has not yet acted on any of these bills, or on any other FAA reauthorization legislation, either short-term or long-term.

On January 29, 2008, the FAA wrote to Congress regarding the impacts of the current lapse in AIP funding, and the upcoming expiration of both the aviation taxes and the FAA's authority to make expenditures from the Aviation Trust Fund. These impacts are discussed below.

Current Authorities and Impacts

The government currently has authority to collect taxes from aviation system users for deposit into the Trust Fund. However, these taxes are scheduled to expire on February 29, 2008. In addition, the FAA currently has authority to expend money from the Trust Fund. This authority is also scheduled to expire on February 29, 2008.

As of December 31, 2007, the FAA no longer has any funding available for the AIP program. The AIP is funded by contract authority, which is typically provided by authorization acts, rather than appropriations acts. The previous FAA authorization act, Vision 100, expired on September 30, 2007, and Congress has yet to enact either a short-term or long-term reauthorization of aviation programs. Therefore, there is currently no contract authority in place for the AIP in FY 2008, and no new AIP grants can be made. The FAA continues to have the ability to provide funds for previously obligated grants to the extent funds are available.

If FAA's authorities are not extended prior to March 1st, the FAA will be unable to issue new AIP grants, with increasingly negative impacts. The FAA estimates that its inability to issue

grants on and after March 1 will mean many airports, especially those in northern climates, cannot take advantage of the full 2008 construction season.

According to the FAA, a continued lapse in AIP funding will affect important safety and capacity projects, including runway safety area projects, letters of intent (LOI) disbursements, runway safety action team projects, enhanced taxiway and centerline making projects, and aircraft rescue, firefighting and snow removal equipment.

March 1 Impacts Without Extension of Any Authority

Without an extension of FAA's authorities prior to February 29, 2008, the government will no longer be able to collect taxes for deposit into the Trust Fund and will lose its ability to expend funds from the Trust Fund for new obligations. In other words, absent further action by Congress, the Trust Fund will be effectively "locked" as of March 1, 2008.

Most of the FAA's funding is derived from the Trust Fund. In particular, the FAA's capital accounts (AIP, F&E, and RE&D) are funded 100 percent from the Trust Fund. (This is in contrast to the FAA's Operations account, which is funded partly from the Trust Fund, and partly from the General Fund.)

According to the FAA, the F&E program impacts if there is no access to the Trust Fund after February 29th are as follows:

- The salaries of approximately 4,000 FAA employees who are paid from the AIP, F&E, and R&D accounts will not be paid after February 29th.
- Important F&E-funded contracts to improve the safety and efficiency of the NAS, such as contracts for systems to reduce runway incursions, will not be awarded.
- Funding will not be available to continue major existing contracts such as ADS-B, STARS, ERAM and WAAS, which are the foundational programs for both FAA's existing air traffic control system and NextGen.
- FAA will be unable to move forward with vital testing and implementation of NextGen.
- There will likely be an increase in delays due to the FAA's inability to pay to replace obsolescent and failing parts in its air traffic facilities.

The FAA's Operations account would be in a slightly better position, since it is not 100 percent funded from the Trust Fund. A total of $8.7 billion has been appropriated for FAA Operations in FY 2008, of which $2.3 billion is derived from the General Fund, and $6.4 billion is derived from the Trust Fund. Therefore, even if the Trust Fund expenditure authority expires on February 29th, a small amount of General Fund monies would still be available to cover the FAA's Operations expenses for a few more months. The FAA anticipates that the General Fund allocation

will fund the salaries of those employees who are paid out of the Operations account until early June 2008.[9]

March 1 Impacts If Trust Fund Expenditure Authority Only Is Extended

Should FAA the receive an extension of its authority to make expenditures from the Trust Fund, but no extension of the authority to collect taxes, the FAA would have access to the uncommitted balance of the Trust Fund. However, the uncommitted balance in the Trust Fund is not sufficient to fund the FAA for the remainder of FY 2008. As of the end of FY 2007, the uncommitted balance of the Trust Fund was $1.5 billion. The FAA estimates that this, in combination with the General Fund allocation, will fund FAA employee salaries (including those employees who are paid from the AIP, F&E and RE&D accounts) until approximately August 2008.

While an extension of the Trust Fund expenditure authority would be helpful, the FAA states that it will still adopt strict spending restrictions. For example, plans to hire additional controllers and safety inspectors would likely be suspended. Training of essential employees would be at risk, and the award of new contracts to improve safety and efficiency would also be suspended.

March 1 Impacts If Expenditure Authority and AIP Contract Authority Are Extended

According to the FAA, even if AIP contract authority is provided without an extension of the taxes, the FAA would refrain from using that contract authority to issue new grants. This is because, until the taxes are extended, the FAA would have to be judicious in managing the use of the remaining Trust Fund balance. The FAA has stated that it would preserve the Trust Fund balance to maintain critical agency operations, such as safety programs and air traffic control, not AIP grants. In other words, for new AIP grants to be made in FY 2008, all three authorities must be in place: (1) contract authority to provide funding for AIP; (2) the authority to make expenditures from the Trust Fund; and (3) the authority to collect aviation excise taxes for deposit into the Trust Fund.

[9] Should this situation not be rectified, the FAA will notify affected employees one pay period in advance of the potential shut down. For employees funded by the FAA's AIP, F&E, and RE&D accounts, which face a February 29th cut-off of funds, this notification would occur in early February 2008. For all other FAA employees (i.e., those funded by the FAA Operations account), this notification would occur in early May.

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HEARING ON THE PRESIDENT'S FISCAL YEAR 2009 FEDERAL AVIATION ADMINISTRATION BUDGET

Thursday, February 7, 2008

HOUSE OF REPRESENTATIVES
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
SUBCOMMITTEE ON AVIATION,
Washington, DC.

The Subcommittee met, pursuant to call, at 10:00 a.m., in Room 2167, Rayburn House Office Building, the Honorable Jerry F. Costello [Chairman of the Subcommittee] presiding.

Mr. COSTELLO. The Subcommittee will come to order. The Chair would ask all Members, staff, and everyone to turn their electronic devices off or on vibrate.

The Subcommittee is meeting today to hear testimony on the President's fiscal year 2009 FAA budget. The Chair will give an opening statement, recognize the Ranking Member for his opening statement or comments, and then we will get to our witnesses.

The Chair would note that Mr. Petri, the Ranking Member of the Subcommittee, was snowed in and, unfortunately, can't be here today, but we are fortunate to have, in his place as the Ranking Member today, the former Chair of this Subcommittee, Mr. Duncan from Tennessee, and after my opening statement I will recognize him for his comments.

I welcome all of our witnesses here today. This Subcommittee is, of course, having our first Subcommittee hearing of this year on the President's fiscal year 2009 FAA budget. I am pleased to welcome the Chief Financial Officer for the FAA, Ramesh Punwani, who is accompanied by Gene Juba, the Senior Vice President for Finance of the FAA's Air Traffic Organization; the Department of Transportation's Inspector General, Mr. Scovel; and Dr. Gerald Dillingham of the Government Accountability Office.

The Administration's fiscal year 2009 budget again proposes to transform the FAA's current excise tax financing system to a user fee system. Under the fiscal year 2009 budget request, as detailed in the FAA's reauthorization proposal submitted last year, the FAA's financing sources would shift from a mix of fuel taxes, other excise taxes, and a general fund contribution to user fees, fuel taxes, and a general fund contribution. This proposal would take effect in 2010.

Last year, however, this Subcommittee, the Full Committee, and the House soundly rejected the Administration's user fee proposal during consideration of H.R. 2881, the FAA Reauthorization Act of

2007, which passed the House of Representatives on September 20th, 2007. We, of course, are still awaiting the Senate to act on the reauthorization proposal.

As everyone knows, this past year we experienced record delays. It is very difficult for me to understand why the Administration wants to cut the FAA's total funding request by 1.8 percent at the same time it predicts that by 2014, without any change to the current air traffic system, delays will be 62 percent higher than today. The Administration's fiscal year 2009 FAA budget request is simply inadequate to meet the growing demand in air travel and to keep pace with infrastructure needs of our aviation system.

Let's begin with looking at the F&E account, facilities and equipment, capital programs. In 2003, the FAA requested and received from the Congress an authorization of approximately $3 billion per year for its capital program. Yet, through fiscal year 2005, 2006, 2007, and 2008, the Administration requested roughly $2.5 billion per year for its capital program. For fiscal year 2009, the Administration is requesting an 8.4 percent increase in the F&E account over the fiscal year 2008 enacted level.

While I am pleased to see the Administration has asked for increased funding, I do not believe that it is enough to modernize the current air traffic control system. Moreover, the Administration's fiscal year 2009 capital spending request appears to be at odds with its own preliminary Next Generation transportation system F&E cost estimate of $3.246 billion, which is also the funding level authorized in H.R. 2881.

While it is important that funding is provided to make NextGen happen, NextGen is not just about financing. I am concerned with reports the FAA has yet to set near-term expectations for the NextGen system and establish funding priorities. We have learned from the past that the NextGen system must evolve incrementally through sound contract management by the FAA coupled with aggressive oversight by the Congress. To move forward with NextGen, the FAA must provide a clear road map detailing both short-and long-term goals and investment priorities. Moreover, the Administration must develop a plan on long-term NextGen costs.

Last year, the Department of Transportation Inspector General reported that there are still unknowns regarding NextGen costs which will depend on, among other things, performance requirements for new automation, weather initiatives, and the extent to which the FAA intends to consolidate facilities.

I am also concerned about the condition of our air traffic control facilities. In our hearing last year regarding ATC facility conditions, the Subcommittee found that the facilities were poorly maintained and had unsafe working conditions, jeopardizing the health of its employees. I have asked the FAA for a list of facilities that it will remediate in fiscal year 2008, as well as under the fiscal year 2009 budget, and FAA has not yet given the list to the Subcommittee. I expect the FAA to provide this information to the Subcommittee within seven days from today. The facilities that will be remediated in fiscal year 2008, as well as under the fiscal year 2009 budget, this Subcommittee wants a list of those facilities within seven days from the agency.

I have said before that we can't put the cart before the horse when it comes to modernization. While the FAA continues to lay the groundwork for modernization, it must also make certain that the current system can continue to operate in a safe, reliable way to properly invest in maintaining and upkeeping the existing structure. The FAA must also provide safe and healthy working conditions for its employees.

In the AIP program, the Airport Improvement Program, the fiscal year 2009 budget request provides $2.75 billion for the Airport Improvement Program, $1.15 billion less than the level authorized under H.R. 2881 and $765 million less than the fiscal year 2008 enacted level.

Increasing investment in aviation infrastructure is necessary to enhance capacity and reduce delays, and one way of achieving that goal is through the new runway and runway extensions in this Country. The AIP levels set forth in the Administration's fiscal year 2009 proposal will not provide the investment needed to reduce congestion and delays. Under the current formula for distributing AIP entitlement funding, virtually every airport that currently receives AIP entitlement funding will have its entitlement reduced.

Let me repeat that. Under the current formula for distributing AIP funding, virtually every airport in the Country that currently receives AIP entitlement funding will have its entitlement reduced.

Additionally, small airports may be particularly hard hit by the Administration's proposed AIP cut because AIP grants are a larger source of funding for smaller airports.

Staffing. I am concerned about future staffing levels for the FAA's controller and safety inspector workforces. In particular, the FAA estimates that, by 2016, approximately 60 percent of the FAA's roughly 15,000 air traffic controllers will be eligible for retirement. The FAA plans to hire approximately 16,000 controllers over the next 10 years to have enough recruits in the pipeline to backfill the positions lost and to accommodate the increase in air traffic.

The Inspector General will testify today that since 2005, 3,300 controllers have left the agency and that the total rate of attrition was 23 percent higher than the FAA had projected. I will repeat that again. The rate of attrition is 23 percent higher than the FAA projected. If anyone doubts that we have a problem in the system, all they have to do is to take a look at the current staffing level and the projections that the FAA had made in the past.

The National Air Traffic Controllers Association states that three veteran controllers have retired per day since the end of fiscal year 2007. The acceleration of retirement is no doubt directly attributable to the imposition of the FAA work rules on its controller workforce. We are more than a bit strained in our system. We are headed toward a crisis if the FAA does not acknowledge that it has a serious controller staffing problem. Hiring new controllers is a complex process, and there is a significant difference between a trainee and a certified controller.

Replacing a controller who retires must begin several years in advance, and I am concerned that the FAA does not have an effective program to ensure both efficiency and quality of the trainee.

Moreover, I have concerns about reports that some ATC facilities have more controllers in training than they can realistically handle. I think we will hear about that today from both the IG and the GAO as well.

The FAA extension. Finally, this Subcommittee is well aware that the FAA is potentially facing significant fiscal year 2008 budget problems due to the lapse in funding for the AIP program, and the upcoming expiration of both the aviation excise taxes and the authority to make expenditures from the aviation trust fund. The House acted on three separate occasions to extend the FAA's authorities, including passage of H.R. 2881, the four-year FAA reauthorization legislation. We are working with the Ways and Means Committee in the House to develop legislation that extends not only the aviation taxes and expenditure authority, but also AIP contract authority. We will work with the Senate to pass this extension as soon as possible.

We must make the investments in our aviation infrastructure and workforce now so that they can maintain the highest level of safety and efficiency in our aviation system.

With that, I will recognize, again, the Ranking Member who is sitting in for Mr. Petri today, but before I recognize Mr. Duncan, I would ask unanimous consent to allow two weeks for all Members to revise and extend their remarks and to permit the submission of additional statements and materials by Members and witnesses. Without objection, so ordered.

The Chair now recognizes the Ranking Member from Tennessee, Mr. Duncan.

Mr. DUNCAN. Well, thank you very much, Mr. Chairman. I thought you would make a great Chairman of this Subcommittee and you certainly have, and I am privileged to sit in on behalf of Mr. Petri and make a few remarks both on his behalf and mine.

The fiscal year 2009 FAA budget request is a stark reminder of the need to get the FAA reauthorization bill signed into law. I anticipate that the witnesses will share with the Subcommittee the ramifications of further delay in passing the FAA reauthorization bill and the impact of repeated short-term extensions of the FAA's authorities. I would encourage all Members to pay particular attention to the concerns raised in this regard and keep in mind that the House passed its reauthorization bill back on September 20th of last year.

We will also explore the issues raised by the President's budget request for fiscal 2009. Despite the fact that both the House of Representatives and most of the aviation community did not accept it, the proposal assumes a shift in the FAA's revenue sources from the current assortment of excise taxes to a combination of general aviation fuel taxes and cost-based user fees for commercial users. While it seems to be a foregone conclusion that the FAA's proposal will not be adopted at the end of the day, I admire the agency's commitment to their cause.

Like last year, I am particularly interested in how the FAA budget proposal addresses the much needed modernization of our national air space system. As we all know, air traffic control modernization will be a critical importance over the next 10 to 20 years, as demand on the system is projected and certainly will

grow dramatically. The budget request includes $631 million for the transformation to NextGen. However, for modernization to be successful, development and deployment of cutting-edge technologies and performance standards must not be delayed. Congress must be assured that NextGen planning and investment decisions are being coordinated.

Additionally, the Federal Government must work closely with aviation stakeholders, including industry and labor, to ensure that new technologies and operational changes are thoroughly vetted and that critical investment decisions are fully addressed and supported. This is a difficult thing for this Subcommittee, particularly with some of these very expensive, high-tech projects, and in that regard, so that we won't be embarrassed by huge cost overruns and not do our duty to the taxpayers, we need much help in this regard from the witnesses who are here today, System Administrator Punwani and especially Inspector General Scovel and Director Gerald Dillingham, on whom we have relied so much in the past.

I am interested in hearing what specific modernization initiatives the Administration proposes for fiscal years 2009 through 2015, as well as beyond. To keep pace with the rising demand, the FAA must also continue to support airport capacity capital projects with the continuation of a robust air improvement program. The President's budget requests $2.75 billion for AIP.

This request is some $765 million less than was enacted for fiscal year 2008 and almost $400 million less than what was authorized for fiscal year 2008 in our House-passed reauthorization bill. I am concerned about the impact that reduced funding would have on our airports' ability to keep up with capital project needs, particularly at small and medium sized airports, as the Chairman has mentioned, that are unable to rely on sizable passenger facility charge receipts to complete the needed projects.

In the aviation industry, safety and efficiency is not only achieved by technology and funding, but also by the dedicated and highly trained employees of the FAA. As we move forward with the budget, we must be sure to provide adequate funding for recruiting, hiring, and training FAA's future safety professionals and air traffic controllers, and the Chairman, once again, went into this. Ensuring the right investment now is essential to maintaining the FAA's critical safety mission and impressive safety record.

I want to thank all of the witnesses for joining us here today, and I look forward to hearing your testimony, and I yield back the balance of my time.

Mr. COSTELLO. The Chair thanks the Ranking Member and recognizes the gentleman from Colorado, Mr. Salazar.

Mr. SALAZAR. I want to thank you, Mr. Chairman, for having this very, very important hearing. Today, I want to say that I associate myself with your remarks and the Ranking Member's remarks, and I am very concerned about the dramatic $765 million cut to the Airport Improvement Program. I find that very, very troubling. Despite the increasing delays and congestion, you want to take funding out of these current infrastructure projects that many of them are underway right now, and we all know that for every billion dollars that we spend on our transportation and infrastructure projects in this Country, it creates 47,000 jobs. At this time, while

we are having to deal with an economic stimulus package, this is one way to make sure that we keep America's workforce in play.

The regional and smaller rural airports in Colorado actually provide the communities with the ability to enhance economic development, something that we could use quite a bit of these days. The FAA states that the cuts in the AIP program will be offset with the funding outlined in the FAA reauthorization bill. Well, I know that I have a brother in the upper house, but he is also very frustrated in how the Senate moves, and there is no telling when they will reach an agreement and bring that to the floor.

We, as a Committee, have determined that the appropriate level of AIP funding to meet the needs of this entire airport system is $3.8 billion. I think that any proposal short of that will be met with opposition from me and hopefully others in this Committee. I know that the Colorado Department of Transportation does not support this level of funding. The communities who own and operate these airports do not support this level of funding. I do not support this level of funding. So I would like to hear today your justification for these cuts.

And with that, Mr. Chairman, I yield back.

Mr. COSTELLO. The Chair thanks the gentleman.

Do any other Members wish to be recognized for an opening statement or comments? Mr. Lampson from Texas.

Mr. LAMPSON. Thank you, Mr. Chairman. Just a quick statement. First, thank you for holding the hearing. I am anxious to hear what the witnesses have to bring to us.

It is troubling indeed to consider having to face the problems that we are facing in some of our areas. Houston, Texas, as an example, with the congestion that Houston Intercontinental Airport and Hobby Airport and that whole system faces down there right now, when the area is expected to have, within the next 15 to 25 years, an additional 3.5 million people, we are going to shut ourselves down. So this is extremely shortsighted. I look forward to finding solutions to it and working with this Committee to do so.

Thank you, Mr. Chairman. I yield back.

Mr. COSTELLO. The Chair thanks the gentleman and at this time will recognize our witnesses. First, as I said earlier, I am pleased to recognize Mr. Ramesh Punwani, who is the Chief Financial Officer for the Federal Aviation Administration. He is accompanied by—but I understand will not be presenting testimony, but will be here to answer questions—Mr. Gene Juba, who is the Senior Vice President for Finance at the FAA's Air Traffic Control Organization. Also, we will hear testimony from the Honorable Calvin Scovel, III, who is the Inspector General for the Department of Transportation, and Dr. Gerald Dillingham, who, of course, has testified here many times, with the GAO.

At this time, the Chair, under the five minute rule, would recognize Mr. Punwani.

TESTIMONY OF RAMESH K. PUNWANI, ASSISTANT ADMINISTRATOR FOR FINANCIAL SERVICES, CHIEF FINANCIAL OFFICER, FEDERAL AVIATION ADMINISTRATION, ACCOMPANIED BY GENE JUBA, SENIOR VICE PRESIDENT FOR FINANCE, AIR TRAFFIC ORGANIZATION, FEDERAL AVIATION ADMINISTRATION; THE HONORABLE CALVIN L. SCOVEL, III, INSPECTOR GENERAL, U.S. DEPARTMENT OF TRANSPORTATION; GERALD DILLINGHAM, DIRECTOR, PHYSICAL INFRASTRUCTURE ISSUES, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Mr. PUNWANI. Good morning, Chairman Costello, Congressman Duncan, and Members of this Subcommittee. It is a pleasure to appear before you this morning to provide an overview of the President's budget request for the FAA for fiscal year 2009. With me today is my colleague, Gene Juba, Senior Vice President of Finance in our Air Traffic Organization.

I would like to use my time to first briefly address some budget concerns for the current fiscal year and then provide a few highlights of our 2009 budget request. We need Congress's immediate attention to an upcoming lapse in authorities that could significantly disrupt our normal day-to-day operations.

First, the Consolidated Appropriations Act for this year permits us to make expenditures from the Airport and Airways Trust Fund only until the end of this month. Second, the authority to collect aviation-related excise taxes also expires on February the 29th. Third, the contract authority for the Airport Grants Program expired on December the 31st of last year, and for all practical purposes the Airport Grant Program is shut down.

The consequences for FAA are that no new obligations can be made out of any capital account after February the 29th. This covers airport grants, F&E, and the RE&D accounts, including employees' salaries. Without action, 4,000 employees will be sent home and the remaining 43,000 operational staff would follow when the General Fund is fully obligated, by about mid-June.

Mr. Chairman, it is in the best interest of aviation safety and efficiency for these lapses to not take place, and the consequent disruption to our programs and personnel need to be avoided. We appreciate the efforts of this Committee to correct this problem as soon as possible.

Turning now to the next fiscal year. Our 2009 budget request of $14.6 billion provides funding to support all the critical priorities of the FAA. As always, safety is our primary concern. As you know, we are fortunate to be living in the safest period in aviation history, and the FAA remains committed to making it safer still. This remarkable record is due to the combined efforts of the Administration, the aviation community, and, as always, the support of Congress.

Sixty-seven percent of our budget request is dedicated to our safety mission. This includes meeting our NextGen transformation milestones, as well as hiring goals for our air traffic controller and safety workforces. The budget will allow us to hire and train safety personnel to enhance FAA's oversight, surveillance, and certification activities.

With regard to controller staffing, FAA is aggressively hiring and training controllers to ensure the right number of controllers are

in the right place at the right time. Our budget includes funding to provide a net increase of 306 new controllers, a level consistent with the targets being developed in our updated staffing plan. We are staying ahead of the attrition curve.

As we look into the future, we see an aviation system that will need to grow to accommodate the demands of our stakeholders and the flying public. Our 2009 budget triples the investment in NextGen technology, proposing $688 million for the transformation from radar-based to satellite-based air traffic systems. That is $500 million more in investment than in 2008. We will also invest $3.7 billion in operating and capital funds to improve system capacity and address congestion and delays.

With regard to AIP, which is a major concern, I realize, for the Subcommittee, with our proposed programmatic changes, including the proposed increase in the maximum PFC allowed, the $2.75 billion proposed in our budget will be sufficient to fund capital needs and meet the safety capacity and noise abatement objectives we have identified. As CFO, I am particularly proud, over the last five years, to say that we have improved our financial management performance in ways that enable us to better use the funding that Congress provides.

We are continuing to make every effort to control our operating costs. We have improved the discipline with which agency programs and contracts are first approved; we have improved the tracking and monitoring of our programs; and, most important of all, we have reduced our overhead costs so that more of the taxpayer dollars are spent on a safe, efficient, and accessible aviation system.

In conclusion, Mr. Chairman, with Congress' help, we can avoid disruption to our programs this fiscal year with an extension of critical authorities and taxes. Time is of the essence. We stand ready to work with this Committee and others in Congress to enact a full-fledged reauthorization bill that is consistent with the key goals of the Administration and will enable us to move to the NextGen transportation system.

That concludes my testimony, and my colleague and I would be happy to answer any questions that you and Members of the Subcommittee may have.

Mr. COSTELLO. Thank you, Mr. Punwani. Let me say, before we recognize Mr. Scovel, that the Administration's statement or position that the AIP program, as you are proposing, the level of funding, coupled with the PFC that you believe will be adequate funding, I doubt that there is an airport operator or airport executive in the Country that would agree with that. But we will get into that in just a few minutes.

The Chair now recognizes Mr. Scovel.

Mr. SCOVEL. Good morning, Mr. Chairman, Ranking Member Duncan, Members of the Subcommittee. We appreciate the opportunity to testify today regarding FAA's $14.6 billion fiscal year 2009 budget request.

As this Subcommittee is well aware, meeting the current and forecasted demand for air travel is an important issue facing the Nation. The airlines transported over 700 million passengers in 2007, and this number is expected to grow to over 1 billion by

2015. Escalating numbers of severe flight disruptions and delays are all signs of an increasingly strained system.

Mr. Chairman, several key issues demand FAA's attention. First, keeping existing modernization projects on track and setting realistic expectations for NextGen. FAA's capital account is now being shaped by NextGen, an enormously complex effort that will cost tens of billions of dollars. We are not seeing the massive cost growth and schedule slips of the past.

It will be important to keep existing efforts on track because 30 projects will serve as platforms for NextGen. However, several programs do require attention, including a key technology to improve runway safety called ASDE-X. Thus far, 11 of 35 systems have been deployed for operational use. However, we are concerned about FAA's ability to complete ASDE-X deployment with all planned capabilities at the more complex airports with less than half of the planned funds available.

FAA is exploring ways to accelerate NextGen; however, it remains uncertain how much NextGen will cost or what can be delivered in terms of capacity and delay reduction. Therefore, we think a number of actions are needed. First, FAA must conduct a gap analysis of the current NAS and NextGen. FAA's NextGen plans for the 2025 timeframe remain at a high level and do not detail how FAA will complete the transition to NextGen. Until this gap is understood, it will be difficult to set requirements and reliable cost estimates.

Second, FAA must establish NextGen funding priorities. At this point, it is difficult for decision makers to determine what to invest in first or what can be accelerated. FAA needs to identify the highest priority improvements and reflect them in budget requests.

In addition, FAA must develop an interim architecture for what can be accomplished in the 2015 time frame. This would help FAA determine reasonable goals, establish priorities and make adjustments to existing systems.

Finally, the Agency needs to obtain the expertise required to execute and manage NextGen. We believe that strong contract management, systems integration, and system engineering skills with an understanding of human factors will be needed.

Another key issue is addressing attrition in FAA's critical workforces. The long-expected surge in controller attrition has begun. Since 2005, 3,300 controllers have left the agency, which was 23 percent higher than FAA had projected. However, since 2005, FAA has hired 3,450 new controllers, which was 25 percent higher than it had projected. New controllers now represent 23 percent of the workforce, up from 15 percent in 2004, and this varies by location, from 2 percent at the Boston TRACON to 50 percent at the Las Vegas TRACON.

FAA is facing a fundamental transformation in the composition of its controller workforce. A major challenge will be to train new controllers to the certified level at their assigned locations. Facility training can take up to three years and is the most expensive part of new controller training. Training new controllers to the fully certified level is important for two reasons: one, only certified controllers can control traffic on all positions of their assigned area and, two, controllers must be fully certified for at least six months be-

fore they can train other new controllers on the job, a critical component of FAA's plans to hire and train 15,000 new controllers through 2016.

We recently completed an audit of FAA's controller facility training program. Overall, we found that the program continues to be extremely decentralized and the efficiency and quality of the training vary from one location to another. We found similar problems in 2004. FAA is taking steps at the national level, but many efforts are still in the early stages.

Key actions needed include: first, establishing realistic standards for the number of new controllers facilities can accommodate; second, clarifying responsibilities for oversight and direction at the national level; and, finally, following through on key initiatives included in its 2004 workforce plan, such as holding managers accountable for achieving timeframes for certifying new controllers.

FAA faces similar issues in its inspector workforce. A key issue here will be to develop a reliable staffing model for ensuring its limited inspector resources are placed where they are most needed.

Mr. Chairman, that concludes my statement. I would be happy to answer any questions you or other Members may have.

Mr. COSTELLO. The Chair thanks you, Mr. Scovel, and recognizes now Dr. Dillingham.

Mr. DILLINGHAM. Thank you, Mr. Chairman, Mr. Duncan, Members of the Subcommittee. My written statement includes our preliminary analysis of the President's 2009 budget for FAA and identifies some of the key challenges for FAA and the Congress associated with maintaining the current ATC system and the transformation to NextGen.

Regarding the budget, although the Administration's budget proposes major changes in the way that FAA is funded, we believe that the current funding mechanism of the trust fund and the general fund can provide sufficient resources to support FAA activities, including NextGen. However, the proposed changes to FAA's funding mechanism could better align its operational costs with revenues, that is, if FAA's cost allocation system reliably allocates cost to the users.

The budget also proposes an overall reduction of $765 million for AIP and would allow airports to increase PFCs to $6. However, for smaller airports, the PFC increase would not compensate for the reduction in AIP dollars. In addition, it is not entirely clear how such a reduction in AIP funds will affect the efforts to increase system capacity through AIP-funded projects.

With regard to the challenges associated with the current ATC system, FAA has determined that it can best achieve its safety mission by using risk-based, data-driven safety programs. GAO agrees that this is a rational approach for monitoring safety. However, for this approach to be effective, FAA must obtain accurate and complete safety related data.

Another challenge for FAA is its ability to continue to hire, train, and deploy a sufficient number of air traffic controllers. Although FAA has been able to hire several thousand controllers in recent years, controllers have been retiring faster than FAA anticipated, thereby making this challenge more difficult. In some cases, FAA will have to plan for the time and funds that will be needed for

dual training for the controllers to operate within the current ATC system as well as in the NextGen environment.

Another immediate challenge for FAA is repairing and maintaining the safety and physical condition of over 400 terminal facilities. Some of these facilities will need to be operational for years to come, including being a part of the NextGen infrastructure. The one-time cost to repair and bring existing facilities up to standards is estimated to be about $300 million.

With regard to the challenges associated with the transformation to NextGen, transitioning to NextGen will mean an increasing number of acquisitions and increasing complexity within those acquisitions. The challenge for FAA is to continue the organizational cultural changes that were started about four years ago with the startup of the ATO and to maintain its key acquisitions on schedule and within budget. This challenge will be especially difficult because of the need to attract managers and other staff with the technical skills to apply a systems approach to managing the acquisitions and the integration of NextGen systems.

FAA has already taken steps to identify the required workforce competencies and define strategies for obtaining the necessary expertise. The challenge that remains is the analysis of FAA's existing staff resources, a determination of what gaps exist, and filling those gaps in a timely manner. Another NextGen challenge for FAA is developing a new configuration of facilities and airspace that will support the transformed system. Unless a plan for facility consolidation or realignment is developed and airspace design projects are implemented, the cost of NextGen could increase significantly and the potential system efficiency gains will be delayed or not realized.

Finally, FAA faces the challenge of improving communications with stakeholders with the goal of obtaining their buy-in and support for NextGen implementation. The stakeholders that we have talked to have expressed frustration over not being able to obtain satisfactory responses to some of their basic questions, such as who is in charge of NextGen, how is NextGen going to be implemented, and what kind of capacity or efficiency gains can be expected from various components of NextGen. Some of the stakeholders are concerned that FAA is not adequately focusing on NextGen initiatives that could have a more immediate effect on the efficiency and capacity problems of the ATC system but, instead, is pursuing a path with benefits targeted too far in the future.

Mr. Chairman and Members of the Subcommittee, as my final point, I would like to identify with the remarks of the Chairman and the two previous witnesses. It is vitally important that the FAA reauthorization legislation be completed in a timely fashion. Progress on critical projects such as runway safety, the hiring of safety personnel, and capacity projects depends on timely action on the reauthorization legislation. Thank you.

Mr. COSTELLO. Thank you, Dr. Dillingham.

Mr. Punwani, let me begin with you and ask just a few questions. One, in the Administration's proposed budget you are proposing $688 million for NextGen for fiscal year 2009. That is an increase, as you stated in your testimony and we acknowledge, of $476 million from fiscal year 2008. However, when you look at the

capital and research budget only rising $234 million for fiscal year 2009, something has to give here, and my question is what other capital and research programs within the base will have to be cut to pay the $476 million increase for NextGen?

Mr. PUNWANI. Let me start by saying there are many programs within the capital program that are winding down, and I am going to ask my associate to give you further detail on those programs.

Mr. COSTELLO. Mr. Juba?

Mr. JUBA. Mr. Chairman, the additional money is coming from, as Mr. Punwani said, the wind-down of some of the programs that we are putting in place right now, the biggest of which is our En Route Automation Program, which would be the platform for a number of the NextGen applications. We are also winding down the ATOP program. This is a base automation system for the oceanic area.

Our capital portfolio is actively managed. We look at what we are investing in, and some of the things for which we have reduced investments are being replaced by NextGen technologies. For example, the biggest component of our 2009 NextGen budget is ADS-B, or our satellite-based surveillance system. With more surveillance being provided by satellite, we can reduce our investment in some of the ground-based surveillance, some of the radar programs.

Mr. COSTELLO. So that would make up the entire $234 million difference?

Mr. JUBA. We can get you a complete detail of exactly the programs that it comes out to, but I can tell you the ERAM, for one, or the En Route Automation, is $165 million of that difference.

Mr. COSTELLO. We are pleased that you recognize the need to increase money for NextGen. My only question is where is it coming from to bump the number up.

Mr. JUBA. Right.

Mr. COSTELLO. And if it comes from areas that do not jeopardize other important areas of either NextGen or other operations, then that is fine. If you could get us that information, I would appreciate it.

[Information follows:]

Insert for page 35, line 692:

The table below shows the ATO Capital programs (formerly in Facilities & Equipment) whose funding decreases from FY 2008 to FY 2009. These decreases are in alignment with approved program baselines.

ATO Capital Program Major Cost Reductions (FY 2008 - FY 2009)

Dollars in Thousands

	FY 2008 Enacted	FY 2009 Request	Delta
En Route Automation Modernization (eRAM)	$368,750	$203,050	($165,700)
Oceanic Automation System	$53,100	$20,700	($32,400)
Terminal Air Traffic Control Facilities - Replace	$162,630	$134,295	($28,335)
Air/Ground Communications Infrastructure	$26,200	$7,500	($18,700)
Traffic Management Advisor (TMA)	$15,400	$3,700	($11,700)
Approach Lighting System Improvement Program (ALSIP)	$19,312	$10,000	($9,312)
ATCT/Terminal Radar Approach Control (TRACON) Facilities - Improve	$47,000	$37,900	($9,100)
Integrated Terminal Weather System (ITWS)	$13,200	$4,500	($8,700)
Federal Telecommunications Infrastructure	$8,500	$0	($8,500)
Precision Runway Monitors	$9,000	$1,000	($8,000)
Total	**$723,092**	**$422,645**	**($300,447)**

Mr. COSTELLO. Mr. Scovel, let me ask you. As you know, for the past few years we have been expecting the Enterprise Architecture to define NextGen's cost, and now that we have the Enterprise Architecture, you state in your testimony that the MITRE Corporation says that it is too theoretical. I wonder if you might elaborate on what you have seen and what MITRE is saying, that it is too theoretical. Elaborate on that and tell me when you might think that we might get a more reliable cost schedule or estimate for NextGen.

Mr. SCOVEL. Thank you, Mr. Chairman. I would like to give credit to the FAA because they have made some progress on the Enterprise Architecture—the JPDO has. The Enterprise Architecture is their technical road map for NextGen, and it is aimed at the 2025 timeframe, and that is an important date to keep in mind. However, this Enterprise Architecture is very much a work in progress, and it is difficult to develop an accurate architecture when we are shooting out as far as 2025.

My office, on its own review, and after we have assessed the MITRE review, which was completed last October, found some significant shortcomings in the JPDO's first attempt at its Enterprise Architecture. The information in the Enterprise Architecture doesn't adequately align with NextGen's own concept of operations; it ranges from partial alignment to examples of no connection at all.

The difference is this, Mr. Chairman: the concept of operations lays out how NextGen will actually operate; the Enterprise Architecture lays out the systems that will support those operations. Sometimes there is a mismatch. In other cases, the information remains at much too high a level to be effective. Some activities are insufficiently described, and occasionally only a single sentence is dedicated to describe those activities.

We think—and as we have elaborated in our testimony—that there is a gap between today's system and the NextGen concept. We think that what we are calling a gap analysis would assist FAA and this Committee in determining what systems and what priorities need attention between now and the out-years. We also think that the 2025 target date is difficult for all of us to get our arms around, and so we recommended in our testimony today that an interim architecture targeted at 2015—perhaps 2016, 2017, that mid-decade timeframe—would be helpful. In other words, we would like to put an island out there midstream and find out where we need to go to get there. Once there, we can assess, re-adjust, and shoot for the far bank.

We don't know what timing FAA will need in order to accomplish all of this, but our discussions with them have informed us that perhaps a year, maybe two, would be required for them to refine the Enterprise Architecture. If they were to adopt our recommendation for an interim enterprise architecture, we would hope that they would be able to accomplish that in the same time frame.

Mr. COSTELLO. Two more quick questions, Mr. Scovel. You cite in your testimony there is an industry analysis that you recently have seen that suggested that the FAA could face possibly as high as a $50 billion software development effort with NextGen. In your view, is that estimate within the realm of possibility?

Mr. SCOVEL. Mr. Chairman, we do think it is certainly within the realm of possibility. We think it is credible. NextGen presents FAA with the need for a very large and complex software development, and this is certainly a major risk to the entire NextGen effort, as it is to any particular program. The analysis that we refer to in our statement, that you referred to just a moment ago, was provided to us by a major industry stakeholder. It was done under contract to them.

We have no reason at this point to doubt it. Their methodology was based on a review of both past FAA major programs and DOD systems that involved large software acquisitions, and it was done with at least a broad acquisition of what NextGen is envisioning currently. The study—and you referred to it—pegged a figure of $50 billion, and, of course, when we add that on top of the $15 billion to $22 billion that FAA currently estimates for global costs for NextGen, then we are speaking of total costs now on an order of magnitude greater than what we have currently seen for NextGen estimates.

Mr. COSTELLO. I wonder if you would comment, either one of you, Mr. Juba. Have you seen this, the estimate that the software could cost as high as $50 billion? I would like your response.

Mr. JUBA. At this point, we have not changed our long-term projection of $15 billion to $22 billion on NextGen.

Mr. COSTELLO. I understand that, but my question is have you seen this industry analysis that says that it could cost up to $50 billion, as the IG has?

Mr. JUBA. No, I have not.

Mr. COSTELLO. Okay. Is it something that you think you should take a look at?

Mr. JUBA. Yes, it is.

Mr. COSTELLO. Well, I would ask that you take a look at it immediately, because it is alarming to me that you have an industry analysis out there that is saying that it could be as high as $50 billion, which, of course, would take the cost of the NextGen system as much as four, five, or six times higher than the agency is estimating right now. So I would ask that you go back and take a look at that and give us your opinion as to if you think it is realistic and your response to it.

[Information follows:]

Insert for page 39, line 793

FAA comment: The "NGATS National Business Case" prepared by Applied Management Solutions, Inc. uses basic, sound modeling techniques, however it uses dated cost and productivity information. Therefore we believe that the assumptions used are inconsistent with the FAA's current NextGen Plans. The results are therefore unreliable as an independent cost estimate of NextGen.

More specifically:

- The analysis uses the COCOMO model, an industry standard parametric model for software engineering. The COCOMO output is only as good as the information and assumptions used as input.
- The FAA cost and productivity information appears older and oversimplified in comparison to the information used in the NextGen cost estimates.
- The study's assumptions about the NextGen capabilities and development strategy are also inconsistent with the NAS enterprise architecture roadmaps.
- The approach appears to replicate the now very dated Advanced Automation System segments rather than an evolutionary spiral. The differing assumptions and old information caused the large difference between the NextGen cost estimates and this analysis.

In sum, this analysis would be a poor basis for an independent assessment of the NextGen cost estimates. It is an estimate of a plan, but not the NextGen plans to date. The analysis would need to be redone with current information and the correct assumptions to be used for an independent assessment.

Mr. COSTELLO. Final question, and then I will turn it over to the Ranking Member for his questions.

Mr. Scovel, there is no question—you know, there was an article in The Wall Street Journal and USA Today and The Washington Post about controller staffing issues, and I said then, and I will say now, that the FAA does not want to acknowledge that there is a staffing problem. We all know there is. Everyone involved in the system knows there is. Everyone involved in the system knows that fatigue is a factor and an issue. Dr. Dillingham has touched on that previously.

The fact is there is a problem, and my question to you is while the FAA has underestimated the number of retirements over at the agency, while you correctly noted in your testimony they have increased the number of trainees that they have hired and put into the program, there is a problem here.

I mean, when we have one-fourth of the air traffic controllers today coming into the workforce and we have three controllers retiring, the most senior controllers retiring at a rate of three a day, when the agency is now saying that we are willing to offer up to a $24,000 bonus to keep the most senior controllers, there is a problem.

So my question to you is, one, I would like you to comment. Is there a problem, in your opinion? Number two, the issue of the facilities, does the FAA have the facilities to handle the number of trainees that they are trying to get into the program and get them out to facilities? I can tell you I was at their training facility in Oklahoma in November with Mr. Duncan and other Members of the Subcommittee, and I can tell you they are doing their best to get people in and out of the program as quickly as possible.

But I have major concerns with what is going on. I just want you to comment. One, are you concerned? Do we have a problem in the system? Two, do they have enough personnel to train the people coming in to the academy and into the training program in order to get them out into facilities and to supervise them properly?

Mr. SCOVEL. Mr. Chairman, we are concerned with the overall state of controller staffing. However, we think it is important to really refine the question. Everybody has known that this surge in attrition was coming ever since the mid-1980s, when the baby boom, if you will, of controllers was hired in the aftermath of the PATCO strike. We knew that the day would come when that baby boom would have fully matured, and they have served admirably on behalf of the Nation. But now it is time for them to take their well-earned rewards and to transition into retirement.

There is much talk given of the overall numbers of controllers in the workforce—14,800, 15,300—and we wish to give FAA credit for stepping up to the problem in terms of making the adjustment and hiring at least rookie controllers to fill the vacancies that are coming. As you have noted, they haven't been able to anticipate the rate at which the attrition would materialize. They have consistently underestimated that. However, they have adjusted on-the-fly by hiring many more new controllers than even they projected would be needed in the first place, and they deserve credit, great credit on the hiring side.

As you have correctly noted, however, the problem then shifts. We may have enough controllers overall, but what is the composition of that workforce, veteran controllers versus new controllers in training? And that is where we have the problem. The focus now needs to shift to training of the new controllers, and part of that process begins at the FAA training academy in Oklahoma City, as you have noted. We have a project underway, at your request, to study training attrition and try to determine root causes for that.

It is too early in that effort for me to say at this point whether the academy is properly staffed in order to turn out the number of new controllers that it needs; however, we will certainly have that information for you. Based on what we have completed to date, I can say that when new controllers leave the academy and go to their first air traffic control facility, the efficiency and the quality of that training varies greatly.

New controllers in 2004 amounted to 15 percent of the total controller workforce. Today, it stands at 23 percent. FAA itself estimates that within four years 30 percent of the total workforce will be new controllers. Assuming the academy can push those students out to the field, then it becomes the responsibility of each facility to train them according to local rules and requirements.

What we have seen there is really a gap in training. We have seen some facilities that are able to handle that quite well. They have used their classrooms and simulators, which FAA has aggressively pushed out to them—and, again, we will give credit to the agency for that because the simulators have been a great force multiplier in completing training quicker than might otherwise be required.

What has happened, however, is that the agency has neglected to follow through on a couple of its key promises in its 2004 controller workforce. One of those had to do with emphasizing controller training at the facility level as a true priority, second only to critical operational requirements.

What sometimes happens at facilities, we have noted, is that facility managers will use a controller in training who is accredited on a particular position over and over again on that position to the detriment of training that new controller on other positions and pushing that new controller up to the most desirable level of certified professional controller, CPC. That ultimately is the goal both for the facility—which gives the facility greater flexibility in assigning that new controller throughout the facility—and also, frankly, for the controller himself or herself, who would like to see the larger paycheck that comes with being a CPC.

We have also seen confusion on the part of controllers in the field and, honestly, some people at FAA headquarters regarding oversight and responsibility for facility training within FAA headquarters. As our testimony notes today, four different vice presidents within FAA headquarters have important roles to play in facility training.

Confusion exists, however, on the user side as to what some of those authorities and responsibilities are. We won't presume to tell FAA how to organize itself, but we can certainly offer the suggestion that far greater clarification is needed on the part of head-

quarters in informing all of its staff who has what responsibilities when it comes to facility level training.

Mr. COSTELLO. Thank you very much.

The Chair now recognizes the Ranking Member, Mr. Duncan.

Mr. DUNCAN. Thank you, Mr. Chairman.

Administrator Punwani, you heard me say in my opening statement that I think it is very important that we move on the FAA reauthorization bill as soon as possible, but I am wondering. You know, a couple of years ago we did a series of short-term extensions in regard to the highway bill. What adverse impacts would there be if we had to do that in regard to the FAA, a series of short-term extensions? You mentioned the 4,000 you would have to furlough or send home if we don't meet the February 29th deadline, but are there other adverse impacts or problems that a series of short-term extensions would cause?

Mr. PUNWANI. There is no doubt that an extension, short-or long-term, would alleviate the immediate problem that we are faced with on February the 29th. But some of the problems with short-term extensions include, in the case of airport grants, if you have a short-term extension of contract authority; it leads to sub-optimal allocations of airport grants, the entitlements are sub-optimal. The formulas that are used to come up with airport grant allocations are very complex; they have minimums and maximums and entitlement recoveries, and the formulas just don't work unless you have a full year entitlement. So it is sub-optimal.

If you extend the expenditure authority for the short-term when we already have a full year appropriation and have less than a full year's expenditure authority, that limits our ability to manage effectively.

Mr. DUNCAN. Let me ask you another thing. We have heard a lot over the last couple of years about the contract negotiations with the controllers and so forth. Have there been any benefits or savings to date from the contract that you have with the controllers? And what would be the situation if the FAA was forced into binding arbitration?

Mr. PUNWANI. Let me begin to answer that by telling you our fiscal year 2009 budget does recognize some cost reductions through various actions we have taken, including cost savings related to the controller contract. But I believe Gene Juba would be able to give you more information on that detail.

Mr. DUNCAN. All right. Mr. Juba?

Mr. JUBA. Mr. Duncan, I can find that number. In the 2009 budget, we have taken a reduction in the operating account due to the new contract that is in place with our controllers.

[Information follows:]

Insert for page 45, line 961:

The new NATCA contract includes work rule changes allowing management to vary controller staffing according to the level of traffic. To date, the FAA's Operations budget has been reduced by $108.6 million through cost savings from the new contract. This reflects savings of $40.6 million in FY 2008 and an additional $68 million in the proposed budget for FY 2009. These savings are achieved through the lower cost of newly-hired controllers and the realignment of controller pay bands. Controllers at the maximum of their pay band are now paid lump sums for their annual pay raises. As a result, the salary growth rate has declined. Under the contract, existing controllers have not received any cuts to base pay.

Mr. DUNCAN. All right.

Well, let me move on to something else, then, and this is the thing that is the most important to me, and I think I would like to get comments from all three of you. I am really concerned about this NextGen problem. I know that we need to do this, have this technical progress, but what concerns me is on almost all Federal programs we usually hear low-ball estimates of the cost on the front end.

Yet, we have heard estimates everywhere from $14 billion to $25 billion on this NextGen project, or probably more so in the range of $14 billion to $22 billion, but that is a huge range. I mean, we are talking about billions up here like it is some small amount, but it is not; that is a huge difference.

And then my eyes really popped open when the Chairman said $50 billion a few minutes ago. I mean, it is getting kind of scary, really. If we don't really stay on top of this, these costs could just explode, and I am wondering are we sure that we are doing everything possible to make sure that we don't have huge cost overruns in the years ahead?

I am wondering, too, Chairman Costello and I, several months ago, got a presentation on the—is it SESAR, the European—I am not if I pronounced that right—the SESAR system in Europe. Are we ahead of them, behind them? Have we learned anything from some of their preliminary experiences? I am just wondering about where we stand on all that.

And then I notice that Administrator Scovel complimented the FAA on the technical road map, but he also expressed several concerns; number one, that 2025 was too far out to really have realistic planning. I would like to know what you say about that.

Then, Administrator Scovel, I didn't really understand what you meant by the things not aligning with the concept of operations. I would like to hear you comment more specifically, in a more down-to-earth, less bureaucratic way about what you mean by that.

And then, Dr. Dillingham, you wrap it up with what you are saying on this NextGen progress so far.

Go ahead, Mr. Juba.

Mr. JUBA. Mr. Duncan, I think the NextGen endeavor that we are on is a complex program. It is software-intensive; it requires careful integration with other programs across not only the FAA, but other partner agencies. But one thing that gives me confidence that we will manage these programs is—I can go through a couple of reasons why I am confident. I am the one that is tracking our progress along on our programs.

First off, we have done a better job of managing capital programs. My colleagues at the IG and GAO have even admitted that though there is still work to be done, that we are doing a better job there. But there are three things there that you might not be aware of that we are undertaking right now, activities that I think will help us tremendously in executing the programs.

First off, two years ago, we set out a goal to get off the GAO's high risk list. This is the list of agencies that have programs that are complex and there is risk of cost overruns. We actually provided the GAO a written plan of action in April of last year, and

we are meeting with the GAO every quarter to go over status on that.

Mr. DUNCAN. That is good.

Mr. JUBA. And this planning includes things like best practices in terms of program management and putting those inside of all our programs. Talking about software, it includes IT development best practices, which is key to managing these software-intensive programs. Other things, it is using the right metrics, including EVM, or earned value management, which is another way of tracking our cost and schedule performance.

It also includes improvements in our cost estimating and cost accounting. So that is one activity that is out there, one that is not just an activity led by a small work group, but it is an activity that is chaired and overseen by senior people at the FAA, including Mr. Punwani, myself, our CIO and our chief acquisition executive. So that is one thing.

The second thing is that—and I think it was brought up—there is a need for the right human capital, the right Federal employees at the agency to manage these programs. We see that. We know that. We have actually hired, in the past two years, 40 contracting officers or specialists. Just in the last year we hired over 40 system engineers, computer science people, and program management people. We also are working with the National Academy of Public Administration. They are helping us look at what other needs that we have out there to manage a program such as this. So we have that activity that is underway.

Lastly, and probably most important, is we are using the OEP, the new OEP, our Operational Evolution Partnership, to manage NextGen throughout the agency. And let me tell you just a little bit about OEP. OEP is composed of the lines of business heads of all the lines of business with the FAA. It includes the JPDO. It also includes the heads of two of our larger unions that are affected by NextGen, NATCA and PASS. Why this is a key activity out there? This is a group that is going to oversee the progress and ensure that activities are coordinated among the different lines of businesses, and this is absolutely key with such a complex endeavor that we are on.

That is what gives me comfort, anyway.

Mr. DUNCAN. That is a good report and I appreciate all those things. You know, this is my twentieth year on this Subcommittee, and I have just seen so many of these things just explode and, boy, when you are talking about these kind of figures, you are talking about a really big deal.

Let me go to Mr. Scovel and Dr. Dillingham. I know, in fairness to other Members, I will have to ask you to be fairly short. I know I asked a lot of questions at one time, but go ahead, Administrator Scovel.

Mr. SCOVEL. Thank you, Mr. Duncan. You have expressed frustration with the imprecision in the cost estimates and, of course, we share your great concern over that. Let me take just a couple of examples, and perhaps this will also assist you in understanding what I meant when I said there was a mismatch between concept of operations and the Enterprise Architecture.

A big question mark when it comes to the cost estimates is what will happen between NextGen, its primary system, ADS-B, and what must be accomplished by way of terminal modernization at air traffic control facilities. As you know from your years on the Subcommittee, what has happened, for instance, with the STARS program was tremendous cost growth and a reduction in the number of air traffic control facilities that would be modernized through that system. There is now a gap of some 100-plus facilities, the modernization status for which is very much up in the air. That contributes, of course, to the imprecision in the cost estimate and it also illustrates the question of what will happen between how NextGen is actually supposed to operate, along with the concept of operations, and the Enterprise Architecture, what systems or platforms will be needed to pull that off.

One further example, sir, by way of communications, I know too from your years on the Subcommittee you know that the controller-pilot data link communication program ended up being terminated a few years back, or at least suspended. Data link communications will be a very expensive component of NextGen. FAA intends to embark, in the next year or two, to restart the data link communication effort, scope it out, and resume some sort of data link communication program so that NextGen can be fully realized. Cost estimates? Uncertain. Again, how will that work between other NextGen programs remains to be seen.

Mr. DUNCAN. All right. Let Dr. Dillingham explain where he thinks we are.

Mr. DILLINGHAM. Mr. Duncan, I think what Mr. Juba said about FAA being on our high-risk list for ATC modernization is very important, because we have had them on the list for almost 15 years. But, most recently, we concluded that the changes that FAA has made in managing its acquisitions, the outcome of those changes, we have labeled them as making significant progress.

We are guardedly optimistic, but still watching to make sure that the culture that was put in place, that put those business practices in place and those cost-saving mechanisms, will go through with the next administrator as well as the new chief operating officer. Progress has been made, but clearly we have to watch it.

Also, with regard to the cost of NextGen, clearly it is something that everybody is wondering about and, as you say, we had estimates that run the gamut. I think, you know, the way we look at it is that, yes, we need to be focused on what the total cost is, but I think after you get out beyond a certain number of reasonable years it becomes a real guess.

We look at the capital program over the next five years that contains the NextGen technologies and we see they are asking for $5.4 billion. We look at that and say that is a more reasonable focus, but keep trying to project out so that Congress can know where we are going and you can monitor it to that extent. But, you know, as the IG has said, let's move back a little bit and let's sort of look at what is reasonable to make that kind of estimate about it.

We have seen, from the 15, 20 years we have been looking at this, that—you were here, Mr. Duncan, when we had the AAS sort of thing, and we told FAA at that point in time to go from the big bang theory to the build-a-little/test-a-little theory, and that is in

fact what we are seeing in many cases, and we think that is a positive development.

With regard to the Concept of Operations and the Enterprise Architecture, those are also necessary documents, but it is also the case that the more understandable—at least from my perspective—document that is in the works right now is the Integrated Work Plan, which talks about which systems when, what steps along the way; and that is still being vetted by the stakeholders.

So although part of what we are hearing out there is let's start to talk about what we can do with NextGen that is going to have a more immediate effect on system capability and efficiency—and, by example, they talk about instead of trying to figure out and deploy ADS-B across the Nation, maybe we should look at some existing procedures and technologies and deal with where we have problems that are facing us everyday—New York, Miami, Los Angeles—and use those as both immediate kinds of things to address as well as test beds for the larger national layout kind of thing.

With regard to SESAR, the question that comes to us about the European effort is the very question that you asked, Mr. Duncan. Who is on first—who is ahead? Basically, you know, if I had to answer that straight out, we would say the U.S., of course. But the deal is that they are probably in the same place. The Europeans are just finishing what they call the definition stage, which is sort of their overall planning and sort of what is it going to be, and they are getting ready to move forward into some early implementation.

The major difference that we need to sort of keep in mind, that I think is going to keep the U.S., you know, moving ahead—because that is in important in terms of who is going to set the standards and how is that going to play into our economy—we in the United States have to deal with lots of agencies to make all of this work, but over in Europe they have to deal with 10 or 11 sovereign nations in their air traffic control system.

So I think that idea, in conjunction with one of the things—based on what we were asked to do by this Committee, in fact, we talked to FAA about international harmonization, and FAA went forward under the last administrator to establish an MOU with the Europeans so that there could be some sharing and lessons learned kind of thing. This is, no doubt, complicated—the analogy has been that trying to do NextGen is sort of like trying to go to the moon. It is that complicated, it is that much of an issue, and it is something that we have to watch.

But I think, under the circumstances, progress is being made. More needs to be done.

Mr. COSTELLO. The Chair thanks the Ranking Member and now recognizes the gentleman from New York, Mr. Hall.

Mr. HALL. Thank you, Mr. Chairman, and thanks to all of our witnesses for being here and giving us your testimony today.

Mr. Punwani, I wanted to start by asking you if the budget contains funds to implement the airspace redesign for the New York-New Jersey-Philadelphia area.

Mr. PUNWANI. The budget does contain that allowance.

Mr. HALL. Okay. And as a result of the redesign, a number of communities in my district, including Pound Ridge and Bedford in Westchester County, and parts of Rockland and Orange County,

have seen or will seen an increase in air traffic. Is there any funding in the budget for noise mitigation or other means directed by the damage caused by the increased number of airplanes flying over communities that previously had little or no aircraft noise?

Mr. PUNWANI. We do have a provision of as much as $276 million in our airport grants program to address issues of noise mitigation.

Mr. HALL. Thank you. And you spoke in your testimony about offering controllers a variety of retention incentives. Could you explain some of those incentives and how effective they have been in attracting or retaining controllers? Mr. Juba?

Mr. JUBA. Mr. Hall, we introduced a number of different incentives or tools that we could use both to recruit new controllers, as well as retain the seasoned controllers that we have. One of those is the retention incentive. In areas where we needed—this is not an across-the-board incentive, but it is at those airports, those terminals, and those en route facilities where we believe there is a need to keep a controller on for training or watch-standing.

We also are actively pursuing reassignment provisions, using a reassignment bonus to incentivize controllers to move out of places that may be well staffed or overstaffed into places like Atlanta. There are other things we have. We introduced child care benefits; and also have a recruitment bonus available that we have used to attract military controllers.

Mr. HALL. Excuse me, I just wanted to ask since it used to be a pattern for military controllers to come into the FAA system, why is it necessary now to have a bonus offered to get them to do that?

Mr. JUBA. We found that to get people to go to the places we want, sometimes a bonus actually works to incentivize somebody to do that. There are incentives being offered at DOD for these same employees. It is a competitive environment out there.

Mr. HALL. Since we are speaking, Mr. Juba, I wanted to ask you about the cost savings you referred to a few minutes ago due to the new contract. My understanding of a contract is that it is an agreement negotiated between two parties willingly and signed by those two parties. Are you referring in fact to the work rule that FAA instituted?

Mr. JUBA. We are talking about the contract that was put in place I believe a year and a half ago.

Mr. HALL. Put in place by who?

Mr. JUBA. I can't answer you from the legal perspective, but we went by the rules established by Congress in negotiation with our controllers and have a contract in place.

Mr. HALL. So you would call it a contract.

Mr. JUBA. Yes, sir.

Mr. HALL. Okay. I have yet to see a document that most people would regard as a contract. In fact, that is why this Subcommittee, and I believe the Full Committee, voted to require, as our last FAA reauthorization bill that we passed, require binding arbitration, because of the fact that there was not in fact a contract agreed upon and that the FAA was, many of us think, the intransigent party. I am just curious how much the cost savings you are telling us about are offset by the retention bonuses and by the other incentives that you have to provide, and also by the loss of efficiency and

the loss of experience from people retiring who might not otherwise retire. Any thoughts about that?

Mr. JUBA. Just on retirements, we did project for retirements and, as reported by a number of people, we have under-projected. But just to give you a perspective on that, in 2007 we projected 700 retirements. Actual requirements were 828. We missed by a little over 100. To put that in perspective, that is less than 1 percent——

Mr. HALL. Thank you, Mr. Juba. I have just a few seconds left. I wanted to ask Dr. Dillingham for a comment on—well, you said in your testimony that the FAA "faces a challenge in establishing credibility with stakeholders that the agency is fully committed to NextGen." And referring back to a comment, if I got it correctly, Mr. Scovel, you said that the cost for NextGen is uncertain. It is also difficult to predict how much NextGen will enhance capacity and reduce delays. Did I hear you more or less correctly?

Mr. SCOVEL. Yes, sir.

Mr. HALL. Okay. So you can answer this too, but I wanted to ask Dr. Dillingham if this perhaps has some relationship to the difficulty in establishing credibility with stakeholders, that the agency is fully committed to NextGen.

Mr. DILLINGHAM. Yes, sir, that is exactly the issue. What the stakeholders are telling us is that they need to know, in terms of return on investment, what is it that is going to come out of NextGen so they know how to—be it an avionics manufacturer or an airline—how to plan their operations. And they are saying we, as stakeholders, need to have that kind of capacity or efficiency explanation. So, that gives us more of an incentive to, in fact, come on board with NextGen technologies.

Mr. HALL. Lastly, I just wanted to ask, if I may, starting with Mr. Punwani, which corporation is the biggest corporation for NextGen?

Mr. PUNWANI. I don't have that information readily available. Do you?

Mr. JUBA. In the 2009 budget, we have a line item in there for ADS-B, which is our satellite-based surveillance system. ITT is the lead contractor on that, and I would have to believe that they are the largest. Of course, there are subcontractors below them; they are not doing all the work by themselves.

Mr. HALL. Perhaps if you could reply in writing to the question, in order of total dollars, who are the biggest contractors, you know, maybe the top half dozen or so. I would be curious to know who is receiving how much money for a program that is difficult to predict the expense of and is also difficult to predict how much it is actually going to enhance the capacity or reduce delays.

[Information follows:]

Insert at page 59, line 1309:

The largest contract the FAA has awarded to date for the NextGen transformational programs was to ITT Corp for the ADS-B contract, which was awarded August 30, 2007. The overall value of the contract is approximately $1.6 billion (with potential options), and includes a partnership with other subcontractors including: AT&T; Thales, WSI, SAIC, PriceWaterhouseCoopers, Aerospace Engineering, Sunhillo, Comsearch, MCS of Tampa, Pragmatics, Washington Consulting Group, Aviation Communications and Surveillance Systems (ACSS) and NCR Corporation. In addition, ITT has partnered with L-3 Avionics Systems and Sandia Aerospace.

The other Next Gen transformational programs are in the investment analysis and planning phases, so prime contracts for those activities have not yet been awarded.

Mr. HALL. And I yield back. Thank you.

Mr. COSTELLO. The Chair thanks the gentleman and recognizes Mr. Boozman from Arkansas.

Mr. BOOZMAN. Thank you, Mr. Chairman, very much.

We have really been blessed. You know, when you look at our safety record, it has been tremendous, and that reflects on you all and your predecessors. It really reflects on our controllers, the tremendous job they are doing and have done in the past. I would like for the Committee to claim some credit for that, but it is probably in spite of us that you all have been able to do all that.

But I think we have some concerns about, you know, with so many new people coming into the system, the quality of the people that you are getting. So I would like you to tell us a little bit about where those people came from in 2007 and just kind of tell us are they former controllers from the military, are they coming out of the schools, are they coming off the street? If you give us some numbers as to what is going on in that regard, I would appreciate it.

Mr. JUBA. Let me talk about where we hired controllers last year. The biggest source of new hire controllers has been through our college training initiative, or CTI, schools. These are two-and four-year programs. They go through a variety of aviation subjects. Nearly, 60 percent of the over 1800 people we hired last year came from those schools.

As a side note, we actually have expanded that program—it has been very successful; we get very high-quality candidates—from the 14 current schools out to 23 schools.

The second biggest source is the military. We have about a third of our new hires last year came from the military. A lot of those from military controllers.

And lastly, about 7 percent come from local hires. These are people who had applied through our Web site and have been screened and have gone to the Academy straight from there. A lot of those have aviation experience of some sort and all are required to meet the medical, security and cognitive testing that we put them through.

Mr. BOOZMAN. Thank you. On a similar note, in looking at the budget, the $2.75 billion for the AIP funding level, which is significantly reduced, do you think that you will be able to meet the critical safety needs that we have in our airports with that level of funding? And I will just throw that out to whoever wants to——

Mr. PUNWANI. I will answer that. We recognize, first of all, that this Committee is a big supporter of a robust airport grants program. The $2.75 billion request may seem low, but we believe it is affordable when it is coupled with some of the formula changes that we proposed in our reauthorization proposal, coupled with an increase in the passenger facility charge at large airports, where we are proposing that the maximum go from $4.50 to $6.00. That increase by itself would generate an additional $1.5 billion of funding.

But it doesn't just end there. More importantly, the formula changes that we are proposing will allow us to direct airport grants and entitlements to the smaller airports that have greater difficulty in raising funding. Taken together, this budget will allow us

to meet our major capacity, safety, noise abatement, and environmental issues.

Mr. BOOZMAN. So are you saying that the funding that we have used for airport improvement in the past, that if we did adopt the fees and those things, are you saying, then, that that goes up to $4.25 billion for the same—are we talking apples and apples or apples and oranges?

Mr. PUNWANI. Apples and apples.

Mr. BOOZMAN. Very good. Thank you all.

Thank you, Mr. Chairman.

Mr. COSTELLO. I thank the gentleman from Arkansas, and the Chair now recognizes the gentlelady from California, Ms. Richardson.

Ms. RICHARDSON. Thank you, Mr. Chairman.

Two brief questions that I want to follow up on Mr. Boozman's comments. One, of the categories where you are doing your hiring, what is the average work experience, though, for those different categories? Because I would think that if someone is being hired from the military who is currently doing the job, maybe they have done it for a couple years or five years or ten years; whereas, maybe someone coming out of the school may have the academic experience, but that may not translate to actual work experience. So do you have some sort of averages?

Mr. JUBA. I don't have those numbers right now, but I would believe that your assessment is probably right; the people coming out of the school probably do not have a lot of work experience.

Ms. RICHARDSON. Okay. Could you supply this to the Committee? Because I think that gets to the heart of Mr. Boozman's question. Although the school might be great and wonderful and, you know, we are getting a lot of good people, the limited real-life experience might not be as strong, and that is, I think, a concern in some of the issues that we might be hearing about.

[Information follows:]

Ms. RICHARDSON. My follow-up question to that would be how do you determine who goes to what location? So what I mean by that is an average person with limited experience, would they typically get a Chicago assignment or a Los Angeles assignment, or do they have to first do kind of a smaller tier location and then work their way up, or is it just people go wherever there is an opening?

[Information follows:]

Insert at page 63, line 1403:

The FAA does not keep data on the years of work experience for CTI graduates. However, the general hiring qualification standards for air traffic controllers do not require prior air traffic control training or experience. Different hiring sources qualify through different criteria. In general, controllers need three years of progressively responsible, general work experience, OR a full 4-year course of study leading to a bachelor's degree, OR equivalent combination of work experience and college credits to qualify for hiring.

Special hiring sources such as CTI graduates, retired military, and DOD civilian controllers have their own criteria to qualify. For CTI graduates, work experience is not a qualification requirement because being referred by their respective school substitutes for general education and work experience criteria.

The FAA follows the appropriate qualification criteria for each respective hiring pool. Whether a controller is hired on the basis of education, experience, AT-CTI referral, or other criteria, the agency considers them qualified for hire and has them undergo the appropriate Academy and Facility training, once onboard.

Insert page 63, line 14103:

In general, when assigning new controllers, the FAA considers agency needs and employee preferences. Although the agency strives to meet both factors, in cases where it cannot, the needs of the agency generally prevail. In some cases, vacancies are announced for a specific city or geographical area. Those applicants are applying for positions specifically related to the announced location.

Mr. JUBA. Well, there are two parts to that, where people go. One is their desires. I mean, do they bid for a job location? We put it out by State sometimes. So it is where they want to go. The second part is, from our operational side, where do we put people. We put people in every level of the facility, from the smaller towers up to the larger towers. This is actually consistent with what some of our global partners do.

In the case where we put somebody at a high level facility and they can't perform up to that level, but are good employees nonetheless, we have actually taken those people and moved them down to lower level facilities and sometimes from en route to terminal.

Ms. RICHARDSON. So, Mr. Chairman, that would be a second thing I would like to suggest we might like to pull that further, because it is my understanding—since I do represent a fairly active area, Long Beach Airport; we also have LAX, which is my neighboring airport—I have heard that maybe it really shouldn't be to the discretion of someone who wants to go to LAX. If they don't have an extensive amount of experience, maybe there could be some additional requirements that could be instituted before they are able to go to some of the more higher capacity tower facilities.

Mr. JUBA. One thing I might add, Ms. Richardson, is that in some of the larger, more complex facilities, what we have done, as I mentioned earlier, is actually reassigned some of our veteran controllers from other facilities into those facilities to help out with training and standing watch there.

Ms. RICHARDSON. Right. Because I spoke with an air traffic controller in my district, in the Long Beach Airport, who said he has only been on board maybe about a year and a half, and he is already training other people, and, you know, that is kind of a concern of mine. Someone who has only been doing the job a year or so is training someone else, I mean, they haven't even walked through the breadth of all potential examples that might occur.

So I think building upon what Mr. Boozman said, this really is at the heart of what I know a lot of my concerns are.

Thank you very much, Mr. Chairman.

Mr. COSTELLO. The Chair thanks the gentlelady. As you might have heard, we have been called for a vote. We have a series of four votes.

That concludes our hearing today. I would like to remind our friends from the FAA to—we understand the acting administrator is on the Senate side today in a confirmation hearing, but please remind him that we expect a report seven days from today concerning the facilities that we spoke about earlier, and we would expect to get that report. We have been waiting for some time and our patience is running thin. [Note provided by FAA: this information was provided to the Committee at a briefing held on February 14, 2008.]

Again, on behalf of the Members of the Subcommittee, we thank you for testifying here today, and that concludes the hearing.

[Whereupon, at 11:33 a.m., the Subcommittee was adjourned.]

OPENING STATEMENT OF
THE HONORABLE RUSS CARNAHAN (MO-3)
AVIATION SUBCOMMITTEE
TRANSPORTATION AND INFRSTRUCTRE COMMITTEE

Hearing on
The President's FY09 Federal Aviation Administration Budget
February 7, 2008

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Chairman Costello and Ranking Member Petri, thank you for holding this important hearing on the President's FY09 budget request for the Federal Aviation Administration (FAA). I applaud your dedication to examining the President's FY09 request as we begin to work on the FY09 budget resolution.

As air travel continues to increase, the FAA's role in our nation's air transportation network is essential. The growth in commercial, cargo, and business aviation is placing a greater a stress on the country's airspace resulting in a growing number of delays and cancellations. In 2007 more than twenty-six percent of flights were delayed or cancelled. Additionally, the FAA must address the high rate of air traffic controllers retiring and work to develop the Next Generation Air Transportation System.

In order for the FAA to effectively address these challenges decreased investment in the FAA is not prudent at this time. For this reason I am dismayed the President's FY09 budget request includes $14.64 billion in funding for the FAA, which is $272 million less than Congress appropriated for FY2008. Specifically, I am concerned the FAA's proposal to transform their current excise tax financing system to a user-fee system would not generate as much revenue for the Aviation Trust Fund as the various excise taxes currently paid by aviation system users. Additionally, the FAA has again called for a twenty-two percent decrease in the Airport Improvement Program (AIP). This is deeply troubling to me as Lambert-St. Louis International Airport has greatly benefited form the AIP.

In closing I would like to thank all the witnesses for joining us today. However, I would like to reiterate my concern that the cuts proposed in the President's budget will severely impact the FAA's ability to ensure the safety and productivity of our nation's aviation industry.

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STATEMENT OF
THE HONORABLE JERRY F. COSTELLO

THE PRESIDENT'S FY 2009 FEDERAL AVIATION ADMINISTRATION BUDGET
FEBRUARY 7, 2008

- I want to welcome everyone to our Subcommittee hearing on the President's fiscal year (FY) 2009 Federal Aviation Administration Budget.

- I am pleased to welcome the Chief Financial Officer of the Federal Aviation Administration (FAA), Ramesh Punwani who is accompanied by Gene Juba, Senior Vice President for Finance at the FAA's Air Traffic Organization; the Department of Transportation Inspector General (DOT IG), Calvin Scovel; and Dr. Gerald Dillingham of the Government Accountability Office (GAO).

- The Administration's FY 2009 FAA budget request has again proposed to transform the FAA's current excise tax financing system to a cost-based user fee system.

- Under the FY 2009 budget request, and as detailed in the FAA's reauthorization proposal submitted last year, FAA's financing sources would shift from a mix of fuel taxes, other excise taxes, and a general fund contribution to user fees, fuel taxes and a general fund contribution. This proposal would take effect in 2010.

- Last year, however, this Subcommittee and the House of Representatives soundly rejected the Administration's user fee system proposal during consideration of H.R. 2881, the FAA Reauthorization Act of 2007, which passed the House

on September 20, 2007. We are still waiting for Senate action on its reauthorization proposal.

- This past year we experienced record delays. I am therefore disappointed that the Administration has chosen to cut FAA's total funding request by 1.8 percent at the same time it predicts that by 2014, without any change to the current air traffic system, delays will be 62 percent higher than today.

- The Administration's FY 2009 FAA budget request is simply inadequate to meet the growing demand in air travel and to keep pace with infrastructure needs of our aviation system.

- **Facilities and Equipment (F&E) Capital Programs**: In 2003, the FAA requested and received from Congress an authorization of approximately $3 billion per year for its

capital program. Yet for FY 2005-2008, the Administration has requested roughly $2.5 billion per year for its capital program. For FY 2009, the Administration is requesting an 8.4 percent increase in the F&E account over the FY 2008 enacted level. While I am pleased that the Administration has asked for increased funding, I do not believe that it is enough to modernize the air traffic control system. Moreover, the Administration's FY 2009 capital spending request appears to be at odds with its own preliminary Next Generation Air Transportation System (NextGen) F&E cost estimate of a $3.246 billion, which is also the funding level authorized by H.R. 2881.

- While it is imperative that funding is provided to make NextGen happen, NextGen is not just about financing. I am concerned with reports that FAA has yet to set near-term

expectations for the NextGen system and establish funding priorities. We have learned from the past that the NextGen system must evolve incrementally through sound contract management by the FAA, coupled with Congressional oversight.

- To move forward with NextGen, the FAA must provide a clear roadmap detailing both short-and long-term goals and investment priorities. Moreover, the Administration must develop a better grasp on long-term NextGen costs.

- Last year, the DOT IG reported that there are still unknowns regarding NextGen costs, which will depend on, among other things, performance requirements for new automation, weather initiatives, and the extent to which FAA intends to consolidate facilities.

- I am also concerned about the condition of our air traffic control (ATC) facilities. In our hearing last year regarding ATC facility conditions, the Subcommittee found that many were poorly maintained and had unsafe working conditions, jeopardizing the health of employees. I have asked the FAA for a list of facilities that will be remediated in FY 2008 as well as under the FY 2009 budget, and FAA has not yet given it to me. I expect the FAA to provide the information to the Subcommittee within seven days of this hearing.

- As I have said previously, we cannot put the cart before the horse when it comes to modernization – while the FAA continues to lay the groundwork for modernization, it must also ensure that the current system can continue to operate in a safe and reliable way by properly investing in the

maintenance and upkeep of existing infrastructure. The FAA must also provide safe and healthy working conditions for its employees.

- **Airport Improvement Program**: The FY 2009 budget request provides $2.75 billion for the Airport Improvement Program (AIP) - $1.15 billion less than the level authorized under H.R. 2881 and $765 million less than the FY 2008 enacted level. Robust investment in aviation infrastructure is necessary to enhance capacity and combat delays and one way of achieving that goal is through new runways and runway extensions. The AIP levels set forth in the Administration's FY 2009 proposal will not provide the investment needed to combat delays and congestion.

- Under the current formula for distributing AIP entitlement funding, virtually every airport that currently receives AIP entitlement funding will have its entitlement reduced. Additionally, small airports might be particularly hard hit by the Administration's proposed AIP cut because AIP grants are a larger source of funding for smaller airports.

- **Staffing**: I am very concerned about future staffing levels for the FAA's controller and safety inspector workforces. In particular, the FAA estimates that by 2016 approximately 60 percent of FAA's nearly 15,000 air traffic controllers will be eligible to retire. The FAA plans to hire approximately 16,000 controllers over the next 10 years to have enough recruits in the pipeline to backfill the positions lost and to accommodate the increases in air traffic.

- The DOT IG will testify today that since 2005, 3,300 controllers have left the Agency and that the total rate of attrition was 23 percent higher than FAA had projected. The National Air Traffic Controllers Association states that 3 veteran controllers have retired per day since the end of FY 2007. The acceleration of retirements could be directly attributable to the imposition of FAA work rules on its controller workforce.

- We are more than "a bit strained" in our system. We are headed toward a crisis if the FAA does not acknowledge that it has a serious controller staffing problem.

- Hiring new controllers is a complex process and there is a significant difference between a trainee and a certified controller. Replacing a controller who retires must begin

several years in advance, and I am concerned that FAA does not have a robust program to ensure both the efficiency and quality of the training.

- Moreover, I am concerned about reports that some ATC facilities have more controllers in training than they can realistically handle. I specifically want to know how the FAA plans to address controller staffing and training in the near and long term, as well as the DOT IG and GAO's reaction to the FAA's plan.

- **FAA Extension**. Finally, this Subcommittee is well aware that the FAA is potentially facing significant FY 2008 budget problems due to the lapse in funding for the AIP program, and the upcoming expiration of both the aviation excise taxes and the authority to make expenditures from the Aviation

Trust Fund. The House acted on three separate occasions to extend FAA's authorities, including passage of H.R. 2881, the four-year FAA reauthorization legislation. We are working with the Ways and Means Committee to develop legislation that extends not only the aviation taxes and expenditure authority but also AIP contract authority. We will work hard with the Senate to ensure that this extension passes without further delay.

- We must make the investments in our aviation infrastructure and workforce now so that they can maintain the highest level of safety and efficiency in our aviation system.

- With that, I want to again welcome the witnesses today and I look forward to the testimony.

- Before I recognize Mr. Duncan for his opening statement, I ask unanimous consent to allow 2 weeks for all Members to revise and extend their remarks and to permit the submission of additional statements and materials by Members and witnesses. Without objection, so ordered.

1 Harry E. Mitchell

Statement of Rep. Harry Mitchell
House Transportation and Infrastructure Committee
Subcommittee on Aviation
2/7/08

--Thank you Mr. Chairman.

--As we examine the President's FAA budget proposal, I want to share my concerns on a very particular issue.

-- I am concerned about the proposed $272 million cut in FAA funding levels and the $765 million cut in the hugely important Airport Improvement Program.

2

-- Demand for air travel around the country is growing rapidly. According to the FAA, our system will need to carry one billion passengers by 2015.

-- In my home state of Arizona, demand in the Phoenix metropolitan area is growing at more than *twice* the national rate.

-- Sky Harbor is already the nation's eighth busiest airport. However, with Arizona's population projected to double by 2030, the

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Valley is clearly going to need significantly more capacity.

-- The FAA has already warned that Phoenix is one of 8 metropolitan areas that will need more capacity by 2025, beyond all improvements that are already planned.

-- A failure to meet this future demand would pose a serious threat to the smooth and continued operation of our national system.

4

-- Our system is already struggling to deal with chronic delay ripple effects caused by delays at just a handful of busy airports that lack adequate capacity.

-- According to the Department of Transportation's Inspector General, just seven airports now account for 72 percent of all air travel delays.

-- And these delays, as you well know, are very significant.

5

-- 2007 was the second worst year in history for airline delays since they started keeping comprehensive statistics. More than a quarter of all flights were delayed.

-- If we fail to plan for the Valley's future aviation needs, our region is destined to become the nation's next big bottleneck.

-- Sky Harbor is already hard at work on improvements, such as a new light rail system, which will ease traffic congestion around the

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terminals and offer more efficient access for passengers.

--But we know we will need more.

-- We know our best long-term solution is to develop Phoenix-Mesa Gateway Airport as a compliment to Sky Harbor.

--And we also know it will take a federal investment to make that happen.

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--I look forward to hearing from today's witnesses.

-- At this time, I yield back.

OPENING STATEMENT OF
THE HONORABLE JAMES L. OBERSTAR
SUBCOMMITTEE ON AVIATION
HEARING ON THE PRESIDENT'S FY 2009 FEDERAL AVIATION ADMINISTRATION BUDGET
FEBRUARY 7, 2008

I want to thank Chairman Costello and Ranking Member Petri for calling today's hearing on *The President's Fiscal Year 2009 Federal Aviation Administration Budget.*

Unfortunately, most of this budget request is a rehash of last year's proposals, which have already been considered and resoundingly rejected by both the House and the Senate.

My opposition to the Administration's aviation user fee proposal is well known, and there is no need to spend time on it today, other than to say it is dead on arrival.

Similarly, the Administration repeats its proposal to cut funding for the Airport Improvement Program (AIP). This proposal was also rejected by Congress last year. For fiscal year (FY) 2009, the Administration again requests just $2.75 billion for AIP, $1.15 billion below the $3.9 billion level authorized by both the House and the Senate FAA reauthorization bills, and $765 million below the 2008 enacted funding level of $3.5 billion. Under the current formula for distributing AIP entitlement funding, a $2.75 billion funding level means that virtually every airport that currently receives

AIP entitlement funding will have its entitlement reduced. Additionally, small airports might be particularly hard hit by the Administration's proposed AIP cut because AIP grants are a larger source of funding for smaller airports.

There is, however, one positive change from last year's request. I am pleased that the Administration is requesting a slight increase in funding for the FAA's Facilities and Equipment program, to $2.72 billion. This is an increase of $210 million, or 8.4 percent, above the FY 2008 enacted level of $2.51 billion. Of the $2.72 billion requested for 2009, the Administration identifies $631 million --approximately 23 percent -- as part of the Next Generation Air Transportation System, also known as "NextGen." For example, this request includes $300 million for the Automatic Dependant Surveillance – Broadcast (ADS-B) program, which is FAA's flagship program to transition to satellite-based surveillance.

Nevertheless, the $2.72 billion requested for the Facilities and Equipment program appears to be at odds with the FAA's own preliminary NextGen cost estimates. In 2006, the FAA's Air Traffic Organization developed preliminary Facilities and Equipment cost estimates for NextGen, which this Committee then used as a basis for the funding levels authorized by H.R. 2881, the FAA Reauthorization Act of 2007. These preliminary cost estimates, which include both the cost of sustaining the system and transitioning to NextGen, are significantly

higher than the funding levels now being requested by the Administration. This raises the question of whether the FAA is requesting enough funds to achieve its goal of technologically transforming the system while at the same time sustaining the existing system. I am concerned that NextGen may not be possible under the funding levels requested by the Administration

I also have concerns about the FAA's safety inspector and air traffic controller workforces. Regarding FAA safety inspectors, it has been estimated that well over one-third will be eligible to retire by 2010. Attrition and a 2005 hiring freeze have led to concerns that FAA may be understaffed in its safety office, although the FAA was able to increase staffing in these areas during FY 2007, and further increases are planned for FY 2008. By the end of FY 2008, the FAA plans to increase the Flight Standards inspector workforce to 3,880, and the Aircraft Certification inspector workforce to 230. However, no further increases in these workforces are requested for FY 2009.

The FAA says it is requesting no additional safety inspectors in FY 2009 because it is awaiting the development of an aviation safety inspector staffing model that will tell it how many safety inspectors are needed. According to FAA, this model, which was recommended by the National Research Council last year, will not be complete until 2009. Unfortunately, by that time, Congress will already be acting on

the FY 2010 budget, and the opportunity to request more funding for inspectors will have passed until FY 2011.

Safety cannot afford to wait. I can tell you right now that increases in the inspector workforce are needed to address safety-critical workload demands in a variety of areas, including outsourcing maintenance; aging aircraft reviews; oversight of designees; the shift to the Air Transportation Oversight System; general aviation safety; safety of cargo operations and on-demand ambulances; and the emergence of Very Light Jets and Unmanned Aerial Vehicles.

We are also facing a potential safety issue due to the surge in retirements in the air traffic controller workforce. In anticipation that more than 60 percent of the controller workforce will become eligible to retire over the next 10 years, the FAA has begun to accelerate its controller hiring. As a result, according to the Department of Transportation Inspector General (DOT IG), developmental controllers now represent 23 percent of the workforce, up from 15 percent in 2004. I am concerned about the FAA's ability to train developmental controllers to the full competency level, which can take up to three years, while at the same time handling increasing workload demands. I look forward to hearing the DOT IG and the Government Accountability Office elaborate on this important issue.

Finally, I would like to address the FY 2008 budget problems facing the FAA due to the lapse in funding for the AIP program, and the upcoming expiration of both the aviation excise taxes and the authority to make expenditures from the Aviation Trust Fund.

These current and upcoming lapses in FAA's authorities are the result of a stalemate that has developed in the Senate over FAA reauthorization legislation. The House has acted on three separate occasions to extend the authorization for FAA programs. On September 20, 2007, the House passed H.R. 2881, the "FAA Reauthorization Act of 2007", to reauthorize FAA programs for FYs 2008-2011. On September 24, 2007, the House passed H.R. 3540, the "Federal Aviation Administration Extension Act of 2007" to provide a short-term extension of FAA programs. On November 6, 2007, the House amended and passed S. 2265, in a subsequent attempt to provide a short-term extension of FAA programs. The Senate has not yet acted on any of these bills, or on any other FAA reauthorization legislation, either short-term or long-term.

Let me assure you that I will do everything in my power to resolve this situation before March 1st.

Thank you once again, Mr. Chairman, for holding this hearing. I look forward to hearing from our witnesses.

Congresswoman Laura Richardson
Statement at Subcommittee on Aviation
Hearing on
The President's FY09 Federal Aviation
Administration Budget
Thursday, February 7, 2008
2167 Rayburn House Office Building
10:00 a.m. – 12:00 p.m.

Mr. Chairman, I want to thank you and Ranking Member Petri for holding this important hearing today for a discussion on the President's 2009 Federal Aviation Administration Budget.

Speaking from a Southern California perspective, both the Long Beach International Airport and the Compton/Woodley Airport are in my district.

I would like to discuss a serious safety issue regarding Air Traffic Controller's. The Air Traffic Controller's fatigue was added to the National Transportation Safety Board's 2007 List of Most Wanted Transportation Safety Improvements and the Government Accountability Office just released a report on runway safety where it cited controller fatigue as a major issue of concern. The report also stated that "at least 20 percent of the controllers at 25 air traffic control facilities, including towers at

several major airports, were working 6 day weeks."

Additionally, the Federal Aviation Administration's own Chief Operating Officer recently stated that "fatigue is endemic in aviation." Mandatory overtime for controllers has risen exponentially with falling controller staffing levels, which exacerbates the problem of controller fatigue.

I am very interested in hearing today's testimonies. It is my hope that the information provide will give me an explanation of the report and how we can come upon a resolution in solving this serious safety issue.

Thank you Mr. Chairman.

Opening Statement
Congressman John T. Salazar
T&I Aviation Subcommittee Hearing
The President's FY09 Federal Aviation Administration Budget
February 7, 2008

Thank you, Mr. Chairman, for calling this hearing to examine the Administration's budget request for the FAA.

I am very concerned with the dramatic $765 million cut in the Airport Improvement Program (AIP).

It is very troubling that despite increasing delays and congestion, you want to take funding out of infrastructure projects.

Under this proposal, the majority of airports in my district and throughout Colorado will have their funding cut, directly affecting critical airport improvements.

Specifically, this cut would result in a loss of construction projects totaling over $20 Million at regional and general aviation airports.

These regional and smaller rural airports provide communities the ability to enhance economic development, something we all could use a bit of these days.

The FAA states that the cuts in AIP will be offset by the funding outlined in the FAA Reauthorization bill.

But as we all know, the bill has been held up in the Senate, and there's no telling when they'll reach an agreement and bring it to the floor.

We, as a committee, have determined the appropriate level of AIP funding to meet the needs of the entire airport system at $3.8 Billion.

Any proposal short of that will be met with opposition from me and hopefully others on this committee.

The Colorado Department of Transportation does not support this level of funding.

The communities who own and operate airports do not support this level of funding.

And I do not support this level of funding.

I look forward to hearing your justification for these cuts, and with that, I yield back.

Thank you, Mr. Chairman.

United States Government Accountability Office

GAO

Testimony

Before the Subcommittee on Aviation, Committee on Transportation and Infrastructure, House of Representatives

For Release on Delivery
Expected at 10:00 a.m. EST
Thursday, February 7, 2008

FEDERAL AVIATION ADMINISTRATION

Challenges Facing the Agency in Fiscal Year 2009 and Beyond

Statement of Gerald L. Dillingham, Ph.D.
Director, Physical Infrastructure Issues

GAO-08-460T

February 7, 2008

GAO
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Highlights

Highlights of GAO-08-460T, a testimony before the Subcommittee on Aviation, Committee on Transportation and Infrastructure, House of Representatives

FEDERAL AVIATION ADMINISTRATION

Challenges Facing the Agency in Fiscal Year 2009 and Beyond

Why GAO Did This Study

Fiscal year 2009 will be a critical year for the Federal Aviation Administration (FAA), with the pending selection of a new Administrator, the beginning of the 5-year term of the new Chief Operating Officer, and the continuing process of transforming the nation's current air traffic control system to the Next Generation Air Transportation System (NextGen)—a complicated effort to modernize the air traffic control system. In addition, FAA is currently operating under a temporary reauthorization. Without legislative action, both the excise taxes that fund the Airport and Airway Trust Fund (Trust Fund) and FAA's authority to spend from the Trust Fund will expire at the end of this month.

This statement is based on recent reports and discussions with selected senior FAA officials and representatives of aviation industry and stakeholder groups. This statement provides GAO's preliminary observations on some key aspects of the President's proposed budget for FAA for fiscal year 2009, and identifies some of the current and future challenges facing FAA and the Congress.

What GAO Recommends

In prior reports, GAO has made recommendations to address a number of the management challenges presented in this statement. FAA has begun to address GAO's recommendations, although many have not yet been fully implemented.

To view the full product, including the scope and methodology, click on GAO-08-460T. For more information, contact Gerald L. Dillingham, Ph.D., at (202) 512-2834 or dillinghamg@gao.gov.

What GAO Found

Although the President's budget for FAA proposes major changes in the agency's funding, the current funding mechanisms—the Trust Fund and the General Fund of the U.S. Treasury—can potentially support FAA activities, including NextGen; however, timely reauthorization of the authorities to collect Trust Fund revenues and to spend from the Trust Fund is critical. The expiration of either or both of these authorities could have significant negative effects on FAA's ability to carry out its mission unless other revenue sources and spending authority are provided. FAA also has expressed concern that revenues from the current funding mechanisms depend heavily on factors, such as ticket prices, that are not connected to FAA's workload and costs. We believe that a better alignment of FAA's revenues and costs can address concerns about long-term revenue adequacy, equity, and efficiency as intended, but the ability of the proposed funding mechanisms to link revenues and costs depends critically on the soundness of FAA's cost allocation system in allocating costs to users.

FAA faces a number of challenges in ensuring the continued safe and efficient operation of the current National Airspace System. According to the Department of Transportation (DOT), delays and cancellations during the summer of 2007 exceeded those in the summer of 2006. In the near term, DOT and FAA are exploring various initiatives to relieve the stress on the system. But FAA also must continue to address safety issues, particularly in the area of runway safety. FAA is currently deploying a new radar-based ground surveillance system and has encouraged airport improvements, such as changes to runway layout, markings, signage, and lighting. Nonetheless, we recently recommended that FAA prepare a new national runway safety plan and address air traffic controller overtime and fatigue issues that may affect runway safety. We also have made recommendations concerning FAA's collection and analysis of data, which are key to the agency's implementation of a risk-based, system safety approach. Another challenge facing FAA will be its need to continue hiring and training thousands of air traffic controllers over the next decade to replace those who will retire and leave for other reasons, particularly given that controllers are retiring at a faster rate than FAA anticipated.

FAA also faces a number of management challenges associated with the early implementation of NextGen—an enormously complicated undertaking due to the technological complexities, numerous stakeholders, and broad scope of the effort. As FAA moves closer to undertaking a number of major NextGen system acquisitions, a critical component for keeping such acquisitions on track will be having the right skill set within the agency to successfully manage NextGen programs. Another challenge for FAA is developing a new plan for configuring facilities and airspace that will support NextGen. In addition, FAA continues to face challenges in meeting the research and development requirements of NextGen and in establishing credibility with stakeholders that the agency is fully committed to and capable of implementing NextGen.

Mr. Chairman and Members of the Subcommittee:

I appreciate the opportunity to participate in this hearing today to discuss the President's fiscal year 2009 budget proposal for the Federal Aviation Administration (FAA), which resubmits the administration's 2007 proposal to reauthorize FAA and change its financing structure. Fiscal year 2009 will be a critical year for FAA, with the pending selection of a new Administrator, the beginning of the 5-year term of the new Chief Operating Officer for the Air Traffic Organization (ATO), and the continuing process of transforming the nation's current air traffic control system to the Next Generation Air Transportation System (NextGen). My testimony today provides GAO's observations on some key aspects of FAA's proposed budget and identifies some of the current and future challenges facing FAA and Congress.

My statement is based on work that we conducted between January 2008 and February 2008, including our preliminary review of the President's proposed FAA budget for fiscal year 2009, reviews of other key FAA documents, discussions with selected senior FAA officials and representatives of aviation industry groups, updates of the results of prior GAO studies, and preliminary results of our ongoing work. All of our studies were conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. A list of related GAO products is included at the end of this statement.

Summary

Although the President's budget for FAA proposes major changes in the agency's funding, the current funding mechanisms—the Airport and Airway Trust Fund (Trust Fund) and the General Fund of the U.S. Treasury (General Fund)—can potentially provide sufficient resources to support FAA activities, including NextGen; however, timely reauthorization is critical. According to recent projections prepared by the Congressional Budget Office (CBO), revenues obtained from the existing funding mechanisms are projected to increase substantially and could support additional spending. However, without legislative action, both the excise taxes that fund the Trust Fund and FAA's authority to spend from the Trust Fund will expire at the end of this month. The expiration of either or both of these authorities could have significant negative effects on FAA's ability to carry out its mission unless other revenue sources and

spending authority are provided. The President's budget also proposes changes to FAA's funding mechanisms that may be justified by factors other than the need for more revenues. For example, FAA has expressed concern that revenues from the current funding mechanisms depend heavily on factors, such as ticket prices, that are not connected to FAA's workload and costs to maintain, operate, and modernize the nation's air traffic control system. We believe that a better alignment of FAA's costs and revenues can address concerns, as suggested in the administration's reauthorization proposal, about long-term revenue adequacy, equity, and efficiency as intended. However, the ability of the proposed funding mechanisms to link costs and revenues depends critically on the soundness of FAA's cost allocation system in allocating costs to users. We found that the support for some of FAA's cost allocation methodology's underlying assumptions and methods is insufficient, leaving FAA unable to conclusively demonstrate the reasonableness of the resulting cost assignments. Another proposed change to FAA's budget would align the agency's budget accounts with its lines of business. We agree that such a restructuring is consistent with FAA's emphasis on aligning costs and revenues and could allow FAA to more specifically distinguish those funding options that better link costs and revenues; however, some FAA activities, such as safety, may not be clearly divisible into discrete categories. There could be some ambiguity in how safety activities are defined and in how their costs should be allocated between aviation users who benefit directly from a safe air traffic control system and the public that receives general safety benefits. The President's budget also proposes reductions in funding for the Airport Improvement Program (AIP) and changes in AIP allocations among airports. The proposed funding level of $2.75 billion would reduce AIP grants, especially for smaller airports. Moreover, according to FAA, the agency's authority to extend grants to airports lapsed at the end of calendar year 2007. FAA states that while the Consolidated Appropriations Act, 2008,[1] extended the collection of airline ticket taxes to February 29, 2008, FAA cannot obligate funds for AIP after December 31, 2007. As a result, FAA has not made any grants this year. For airports, uncertainty over whether they will receive their AIP grant this year may delay or increase financing costs for projects intended to increase safety, ease congestion, or modernize their infrastructure or systems.

[1]Pub. L. 110-161.

FAA faces a number of challenges in ensuring the continued safe and efficient operation of the current National Airspace System (NAS). According to the Department of Transportation (DOT), delays and cancellations during the summer of 2007 exceeded those in the summer of 2006. In the near term, DOT and FAA are exploring various initiatives to relieve stress on the system. For example, in an effort to reduce congestion and delays at New York area airports, DOT and FAA formed an Aviation Rulemaking Committee which, among other things, identified 77 operational initiatives to identify strategies that could ease congestion and reduce delays in the New York region. FAA must also continue to address safety issues, particularly in the area of runway safety. FAA is currently deploying a new radar-based ground surveillance system and has encouraged airport improvements, such as changes to runway layout, markings, signage, and lighting. Nonetheless, we recently recommended that FAA prepare a new national runway safety plan and address air traffic controller overtime and fatigue issues that may affect runway safety. We have also made recommendations concerning FAA's collection and analysis of data, which are key to the agency's implementation of a risk-based, system safety approach. Another challenge facing FAA will be its need to continue hiring and training thousands of air traffic controllers over the next decade to replace those who will retire and leave for other reasons, particularly since controllers are retiring at a faster rate than FAA anticipated. Other immediate challenges FAA faces include maintaining existing infrastructure so that the current system continues to operate safely and reliably and keeping current system acquisitions on budget and on schedule.

FAA faces a number of management challenges associated with the early implementation of NextGen—an enormously complicated undertaking due to the technological complexities, numerous stakeholders, and broad scope of the effort. As FAA moves closer to undertaking a number of major NextGen system acquisitions, a critical component for keeping such acquisitions on track will be having the right skill set within the agency to successfully manage NextGen programs. NextGen means an increasing number of acquisitions and increasing complexity within those acquisitions. FAA faces a significant challenge in hiring and retaining an adequate acquisition workforce to handle the transition, particularly in attracting managers who understand how to apply a systems approach to managing acquisitions. A second challenge for FAA is developing a new configuration of facilities and airspace that will support NextGen. Until a plan for facilities consolidation or realignment has been developed, the configurations needed for NextGen may not be implemented and potential savings that could help offset the cost of NextGen may not be realized. A

third challenge that continues to face FAA is the need to meet the research and development requirements of NextGen. Although a 2006 assessment of NextGen research and development requirements led to increased budget requests for research and development funding for FAA, there continue to be challenges in meeting identified research and development needs. For example, if not adequately addressed, the environmental impacts of aviation, particularly the noise that affects local communities and the emissions that contribute to global warming, will constrain efforts to build or expand the runways and airports needed to handle the added capacity envisioned for NextGen. Finally, FAA faces a challenge in establishing credibility with stakeholders that the agency is fully committed to and capable of implementing NextGen. Stakeholders are particularly concerned about the lack of a clearly defined and transparent governance structure in the FAA organizations that share responsibility for implementing NextGen. Stakeholders have expressed a belief that one organization or person should be responsible, and thus accountable, for NextGen.

The President's Budget Proposes a Number of Changes in Funding FAA Activities, FAA Accounts, and Airports

The President's budget proposes major changes in FAA's funding and budget accounts. According to FAA, these proposed changes[2] are intended to provide more stable and reliable mechanisms to pay for NextGen. FAA also says that the proposed changes would improve the long-term revenue adequacy, equity, and efficiency of its funding and over time better link revenues with the costs that users of the NAS impose on the system. If implemented, the changes would alter the basis for funding FAA, in part by recovering the costs of services provided by ATO in accordance with the cost assignments in a cost allocation study that FAA issued last year. These changes would redistribute the funding burden among user groups, increasing general aviation's proportion in accordance with the findings of FAA's cost allocation study.

[2]These funding changes include (1) introducing user charges for commercial aircraft based on the cost of the air traffic control services they receive, (2) eliminating many current taxes, (3) substantially increasing the fuel taxes general aviation operators pay, (4) charging both commercial and general aviation a fuel tax to pay for airport capital improvements, the Essential Air Service program, and air traffic system research and development, (5) modifying FAA's budget accounts to align with FAA's activities or lines of business, and (6) linking the contribution to FAA's budget from the General Fund of the U.S. Treasury to the public benefits that FAA provides. These changes are proposed to begin in fiscal year 2010.

The Current FAA Funding Mechanisms Can Potentially Provide Sufficient Resources to Support FAA Activities, Including NextGen, but Timely Reauthorization Is Needed

FAA's current funding mechanisms—an appropriation from Trust Fund revenues, which come from various excise taxes, combined with a General Fund appropriation—have been used to fund the agency's activities for many years. Trust Fund revenues fell during the early years of this decade as the demand for air travel fell. However, as the number of passengers has grown, revenues have also grown, starting in fiscal year 2004. FAA estimates that revenues will continue to increase if the current taxes remain in effect at their current rates. While retaining the basic structure for funding FAA, Congress has at times changed the mix of excise taxes and some of the tax rates. For example, when the taxes were reauthorized in 1997, Congress reduced the passenger ticket tax rate from 10 percent to 7.5 percent, but added the passenger segment tax.[3] Congress has also appropriated varying amounts of General Fund revenues for FAA during the past 25 years, ranging from 0 percent to 59 percent of FAA's budget and averaging around 20 percent since fiscal year 1997 (but less than 16 percent for fiscal year 2008).

As FAA embarks on air traffic control (ATC) modernization through NextGen, FAA plans to spend roughly $5.4 billion over the next 5 years for NextGen, including both capital costs and development costs. But there is considerable uncertainty about how much NextGen will cost in the longer term. FAA estimates that the total federal cost for NextGen infrastructure through 2025 will range from $15 billion to $22 billion. Even if the cost should come in at the high end of the estimate, funding NextGen does not require that the current funding mechanisms be changed. According to recent CBO projections, revenues obtained from the existing funding mechanisms will increase substantially. Assuming that the General Fund provides about 16 percent of FAA's budget, CBO estimates that through 2018 the Trust Fund can support about $20 billion in additional spending over the baseline spending levels CBO has calculated for FAA (the 2008 funding level, growing with inflation) provided that most of that spending occurs after 2010.[4] How far this money will go to fund modernization is

[3]At that time, Congress also increased the international departure tax from $6 to $12 per person, applied this tax to international arrivals, and added the frequent flyer tax and the Hawaii/Alaska passenger taxes.

[4]With a larger General Fund contribution toward FAA's budget, the Trust Fund would be able to support a higher level of additional spending beyond the baseline level. For example, in testimony last year, using a fiscal year 2007 baseline in which General Fund revenues provided about 19 percent of FAA's budget, CBO estimated that the Trust Fund would be able to support about $22 billion in additional spending over the fiscal year 2007 baseline level, provided most of the spending occurs after 2010.

subject to a number of uncertainties—including the future cost of NextGen investments, the volume of air traffic, the future costs of operating the NAS, and the levels of future appropriations for the AIP, all of which may influence the funding that would be necessary to support FAA's activities.[5]

An additional uncertainty results from the status of FAA's reauthorization. Without legislative action, both the excise taxes that fund the Trust Fund and FAA's authority to spend from the Trust Fund will expire on February 29, 2008. The expiration of either or both of these authorities could have significant negative effects on FAA's ability to carry out its mission unless other revenue sources and spending authority are provided. FAA estimates that two previous lapses in taxing authority in 1996 and 1997 resulted in the Trust Fund not receiving about $5 billion in revenue. If both authorities expire and no additional revenue sources are provided for which FAA would have authority to spend, the only funds available to FAA would be General Fund revenues appropriated for fiscal year 2008 for FAA's Operations account that have not yet been spent. FAA estimates that it could maintain a scaled-down version of operations through early June using those funds. However, no expenditures could be made for other FAA programs because FAA's other accounts—AIP; Facilities and Equipment (F&E); and Research, Engineering and Development (RE&D)—can be funded only by Trust Fund revenues. As a result, not only would these programs have to be shut down, but also no funds would be available to pay the salaries of about 4,000 FAA staff who administer these programs, unless legislation is passed allowing them to be paid with General Fund revenues. Extending FAA's authority to spend from the Trust Fund would allow FAA to use the Trust Fund's uncommitted balance, and interest earned on that balance, for both operations and other programs. However, because the uncommitted balance is relatively low by historical standards—about $1.5 billion at the end of fiscal year 2007, down from over $7 billion at the end of fiscal year 2001—even spending all of the uncommitted balance would have only a limited effect. FAA estimates that if it spends the uncommitted balance, it could maintain scaled-down

[5]If the desired level of spending exceeded what was likely to be available from the Trust Fund at current tax rates, Congress could make further changes within the current funding structure that would provide FAA with additional revenue. For example, Congress could raise the rates on one or more of the current excise taxes or could provide more General Fund revenues for FAA, although the nation's fiscal imbalance may make a larger contribution from this source difficult.

operations and pay staff until August. In this situation, FAA has indicated it would give operations priority and seriously curtail other FAA programs.

Funding Changes in the President's Budget Are Intended to Address Concerns about Long-term Revenue Adequacy and the Equity and Efficiency of the Current Funding Mechanisms

Although the current funding mechanisms can continue to support FAA activities, factors other than the need for more revenues may justify a major change in FAA's funding structure.[6] FAA has expressed concern that revenues from the current funding structure depend heavily on factors, such as ticket prices, that are not connected to FAA's workload and costs to maintain, operate, and modernize the system. According to FAA, with the existing funding mechanisms, increases in the agency's workload may not over time be accompanied by revenue increases because users are not directly charged for the costs that they impose on FAA for their use of the NAS. Revenues collected from excise taxes are primarily dependent on the price of tickets and the number of passengers on planes, while workload is driven by flight control and safety activities. This disconnect raises three key concerns about the current funding structure—its long-term revenue adequacy, equity, and efficiency. Moreover, these three concerns are supported by long-term industry trends and FAA forecasts of long-term declines in inflation-adjusted air fares (despite recent increases in fares due to higher fuel prices), the growing use of smaller aircraft, and FAA's 2007 cost allocation study. Many of the changes proposed in the President's budget are intended to address these concerns by linking FAA's revenues more closely with its costs.

We believe that a better alignment of FAA's costs and revenues can address long-term revenue adequacy, equity, and efficiency concerns as intended, but the ability of the proposed funding structure to link revenues and costs depends critically on the soundness of FAA's cost allocation system in allocating costs to users. We have reported that the design of FAA's methodology is generally consistent with the principles and methods set forth in federal cost accounting standards.[7] However, as we also reported, the support for some of the methodology's underlying assumptions and methods is insufficient, leaving open the possibility that the study might assign costs to commercial, general aviation, and exempt

[6]For a more complete discussion of options for funding FAA, see GAO, *Aviation Finance: Observations on Potential FAA Funding Options*, GAO-06-973 (Washington, D.C.: Sept. 29, 2006).

[7]GAO, *Assigning Air Traffic Control Costs to Users: Elements of FAA's Methodology Are Generally Consistent with Standards but Certain Assumptions and Methods Need Additional Support*, GAO-08-76 (Washington, D.C.: Oct. 19, 2007).

users differently. Without better support, FAA is not able to conclusively demonstrate the reasonableness of the resulting cost assignments. We recommended several actions to FAA to provide additional support for the reasonableness of its methodology.[8]

Proposed Changes to Budget Accounts Would Have Advantages and Disadvantages while Proposed Approach to Determining General Fund Contribution Would Better Link that Amount to Public Benefits

The proposal to align FAA's budget accounts with FAA's lines of business would have advantages and disadvantages. Such a restructuring is consistent with FAA's emphasis on aligning costs and revenues and could allow FAA to more specifically distinguish those funding options that better link costs and revenues. For example, an ATO account dedicated to the operation, maintenance, and upgrade of the NAS could better enable the agency to charge for direct usage of the NAS. In addition, such an account structure could show the costs attributable to each line of business, thereby supporting the agency's internal financial management. However, some FAA activities may not be clearly divisible into discrete categories. For example, FAA proposes a new Safety and Operations account to include safety-related activities. However, there could be some ambiguity in how safety activities are defined and in how their costs should be allocated between aviation users who benefit directly from a safe ATC system and the public that receives general safety benefits.

Linking the General Fund contribution to FAA's budget with the public benefits that FAA provides, as is proposed, would explicitly recognize that users of the system are not the only beneficiaries of the system. Such an approach allows for a "bottom up" calculation of the General Fund contribution that is based on the different public benefits that FAA provides, such as safety and use of the NAS by federal agencies. Under the current approach, the General Fund contribution is based on how much money is anticipated to be left from Trust Fund revenues to fund the Operations account after Trust Fund revenues for that particular year have been allocated to fund the AIP, F&E, and RE&D accounts. An approach that links a General Fund contribution to public benefits is consistent with the principle of public finance that public benefits should come from the General Fund and not from user contributions. This estimate of public benefits should not, however, be viewed as a precise determination. Some aviation activities, such as safety, benefit both users and nonusers. Others, such as a national airport system that includes small airports receiving federal grants, could be seen as a benefit not only to the users of those

[8]GAO-08-76.

airports, but also to the broader community or the broader public. Such a change in the method of determining the General Fund contribution could result in an increase or decrease in that contribution, which would then have implications for how aviation activities are funded.

Proposed Changes Would Reduce Grant Funding for Airport Development, but Would Allow Airports to Raise Charges

The President's budget proposal would reduce AIP funding and would change AIP allocations among airports. From 2001 through 2005, funding for the nation's 3,400 airports averaged about $13 billion from all sources (in 2006 dollars), including about $6.5 billion from bonds (issued by airport authorities and state or local governments), about $3.6 billion from AIP grants, and (for commercial airports) about $2.2 billion from passenger facility charges (PFC).[9] This level of funding is about $1 billion short of airports' planned development costs, which total at least $14 billion annually (in 2006 dollars) over the next 5 years. Of this $1 billion annual difference between historic funding and planned development costs, larger airports account for about $600 million annually, while smaller airports foresee a difference of about $400 million annually.[10] The budget proposal would reduce AIP grant funding for fiscal year 2009 by $765 million from current funding levels (about $3.5 billion in fiscal years 2006, 2007, and 2008), to about $2.75 billion. In addition, the administration's reauthorization proposal for FAA would allow commercial airports to increase their PFC charge from a maximum of $4.50 to $6 if they gave up certain AIP grant funds. According to our calculations, a $6 PFC would have allowed larger airports to increase their PFC collections by about $1.1 billion in 2007, while they would forgo about $247 million in AIP funds under the proposal.[11] Conversely, smaller airports, which collect less in PFCs and are more reliant on AIP for funding, could have increased their PFC collections by about $171 million in 2007, but would have to forgo about $436 million in AIP funding under the proposal.

In addition, according to FAA, the agency currently is unable to obligate any AIP funds because its authority to extend grants to airports lapsed at

[9]Airports also received funding from state and local grants and other sources.

[10]We follow conventions established in GAO's prior reports on airport finance in differentiating between larger airports (67 large- and medium-hub airports) and smaller airports (all other categories of commercial and general aviation airports).

[11]GAO, *Airport Finance: Observations on Planned Airport Development Costs and Funding Levels and the Administration's Proposed Changes in the Airport Improvement Program*, GAO-07-885 (Washington, D.C.: June 29, 2007).

the end of calendar year 2007. FAA states that while the Consolidated Appropriations Act, 2008, extended the collection of airline ticket taxes to February 29, 2008, it did not address contracting authority for AIP funds. As a result, FAA has not made any grants this year. For airports, uncertainty over whether they will receive their AIP grant this year may delay or increase the financing costs for projects intended to increase safety, ease congestion, or modernize their infrastructure or systems. In addition, according to FAA, 28 airport sponsors expect to receive $324 million in letter of intent (LOI) disbursements in fiscal year 2008.[12] Several airports have financed capital projects with bonds tied to their LOI disbursements and might need to obtain bridge loans to meet payment dates or could face heavy financial penalties for late payments if AIP grants are not made under the LOI. See appendix I for additional information about the effect of the President's proposed budget and reauthorization proposal on airports.

FAA Faces Challenges in Ensuring the Continued Safe and Efficient Operation of the Current National Airspace System

FAA faces significant challenges in keeping the nation's current airspace system running as efficiently as possible given increasing demand for air travel. System congestion, and the resulting flight delays and cancellations, are serious problems that have worsened in recent years. Some of FAA's current safety challenges include addressing runway safety; improving aviation safety data to provide an early warning of hazards that can lead to accidents; and hiring, training, and retaining thousands of air traffic controllers. FAA also faces challenges in maintaining its current facilities and in managing the costs and schedules of current system acquisitions.

FAA Faces Challenges in Addressing Increasing System Congestion, Delays, and Flight Cancellations

According to DOT, delays and cancellations during the summer of 2007 exceeded those in the summer of 2006. Delays of more than 15 minutes in on-time arrivals increased at 51 of the 55 airports tracked by DOT. Flight cancellations also rose at the 55 major airports during the first 9 months of 2007, increasing 38 percent over the same period in 2006.

[12]The LOI program helps fund large-scale capacity projects at primary or reliever airports. LOIs state that FAA intends to obligate AIP discretionary and entitlement funds from future budgetary authority in an amount not greater than the federal government's share of allowable costs for that project. FAA issues an LOI to state that reimbursement will be made according to a given schedule as funds become available from Congress each year over the term of the LOI.

The causes of increased delays and cancellations in the U.S. aviation system are many, but the system is clearly under stress. For example, of the 30 percent of flights delayed in the summer of 2007, approximately 28 percent were attributed to national aviation system delays, 32 percent were attributed to late aircraft arrivals, and 26 percent were attributed to air carrier delays. In the near term, DOT and FAA are exploring various initiatives to relieve stress on the system.[13] For example, in an effort to reduce congestion and delays at New York area airports, DOT and FAA formed an Aviation Rulemaking Committee that, among other things, identified 77 operational initiatives to identify strategies that could ease congestion and reduce delays. Some of these initiatives are underway and expected to be completed by the summer of 2008. Additionally, in an effort to reduce congestion in the New York region by the summer of 2008, FAA has announced measures to cap hourly operations at John F. Kennedy International Airport in New York. In January 2008, FAA proposed to amend its policy on airport rates and charges to allow airports to vary what airport users are charged based on the time of day, the volume of traffic, and airports' future investment needs.

While these initiatives may help to reduce some congestion before summer 2008, in the longer term, the aviation community agrees that major investment is required in the ATC system and in airport infrastructure to accommodate current and expected future demand for air travel. The key challenges in this area are managing a timely acquisition and implementation of NextGen and dealing effectively with the environmental concerns of communities that are adjacent to airports or under the flight paths of arriving and departing aircraft. These issues are discussed in greater detail later in this testimony.

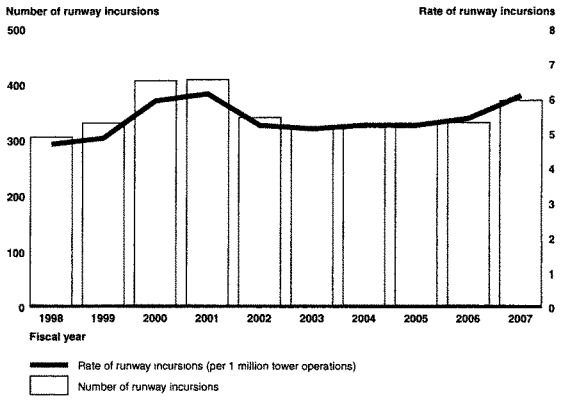
FAA Must Address Increasing Runway Incursions

Runway incursions can be considered a precursor to aviation accidents and their number and rate have been increasing recently. Incursions occur when aircraft enter the runway without authorization; in the most serious instances, collisions between aircraft are narrowly avoided. On August 16, 2007, for example, at Los Angeles International Airport—one of the nation's busiest airports—two commercial aircraft carrying a total of 296 people came within 37 feet of colliding during a runway incursion. While

[13]We are currently conducting a study examining FAA's efforts to reduce congestion through airspace redesign in the New York, New Jersey, and Philadelphia, Pennsylvania region.

the number and rate of incursions declined after reaching a peak in fiscal year 2001 and remained relatively constant for the next 5 years, the overall incursion rate increased during fiscal year 2007 and was nearly as high as the fiscal year 2001 peak. (See fig. 1.) In addition, serious incursions continue to occur—about 30 per year since fiscal year 2002—each involving the risk of a catastrophic runway collision occurring in the United States. Moreover, 10 serious incursions occurred in the first quarter of fiscal year 2008, significantly exceeding the 2 serious incursions that occurred during the same time period the previous year. This situation suggests that managing the occurrence of runway incursions and minimizing the risk of a catastrophic runway collision in the United States remains a significant safety challenge for FAA.

Figure 1: Number and Rate of Runway Incursions from Fiscal Year 1998 through Fiscal Year 2007



Source: FAA

To its credit, FAA has taken a range of actions to address runway safety and reduce the risk of collisions, including researching, testing, and deploying new technology such as the Airport Surface Detection Equipment, Model X (ASDE-X), which is a radar-based ground surveillance system. In addition, FAA has encouraged airport improvements, such as

changes to runway layout, markings, signage, and lighting, and has provided training for pilots and air traffic controllers. Many of these actions were taken since the number and rate of incursions peaked in fiscal year 2001. However, as runway safety incidents declined, FAA's runway safety efforts waned, leading us to make several recommendations in November 2007.[14] We recommended that FAA prepare a new national runway safety plan, improve its runway incident data collection and analysis capabilities, and address air traffic controller overtime and fatigue issues that may affect runway safety.

FAA's Data Limitations Impede Safety Oversight

FAA's ability to identify and respond to trends and early warnings of safety problems and to manage risk is limited by incomplete and inaccurate data. Accurate, comprehensive data are particularly important for FAA as it moves away from an oversight approach that focuses on labor-intensive inspections to a system safety approach that is based on analyzing data to assess and prioritize risks. This change in oversight approach is a positive step; however, its effectiveness depends on having complete and accurate data and user-friendly databases. We have identified data limitations that affect FAA's ability to manage risk. For example, we identified problems with the completeness of FAA's safety inspection data; information on the performance of "designees," who include over 13,000 individuals and organizations that have been delegated to act on the agency's behalf; and data on air ambulance operations. We also identified problems with the completeness and usefulness of FAA's enforcement database. To address these issues, we have previously recommended that FAA improve the accuracy and completeness of its safety data and its analysis of those data.[15] To its credit, FAA has made progress in this area, but more work remains. For example, our recent review of runway safety identified additional problems with the completeness of information on runway incursions.

[14]GAO, *Aviation Runway and Ramp Safety: Sustained Efforts to Address Leadership, Technology, and Other Challenges Needed to Reduce Accidents and Incidents*, GAO-08-29 (Washington, D.C.: Nov. 20, 2007).

[15]See GAO, *Aviation Safety: Improved Data Collection Needed for Effective Oversight of Air Ambulance Industry*, GAO-07-353 (Washington, D.C.: Feb. 21, 2007); *Aviation Safety: System Safety Approach Needs Further Integration into FAA's Oversight of Airlines*, GAO-05-726 (Washington, D.C.: Sept. 28, 2005); *Aviation Safety: FAA Needs to Strengthen the Management of Its Designees Programs*, GAO-05-40 (Washington, D.C.: Oct. 8, 2004); and *Aviation Safety: Better Management Controls are Needed to Improve FAA's Safety Enforcement and Compliance Efforts*, GAO-04-646 (Washington, D.C.: July 6, 2004).

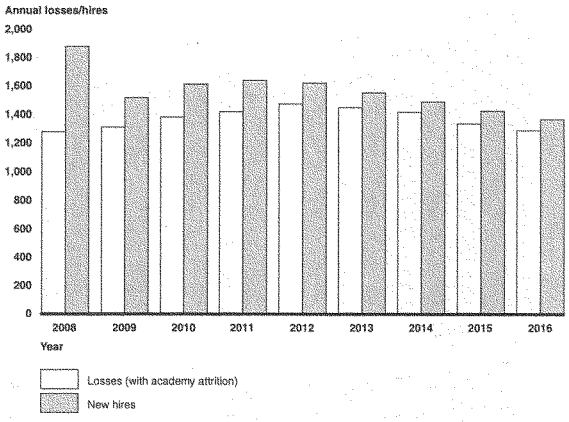
FAA considers the integration and sharing of high-quality, relevant, and timely aviation safety information critical to its system safety approach, particularly if the air transportation system grows significantly and increases in complexity, as anticipated. To improve its access to data, FAA is in the early stages of developing the Aviation Safety Information Analysis and Sharing (ASIAS)—a capability to integrate aviation safety data that is distributed across the aviation industry into information on the operational performance and safety of the aviation system. During fiscal year 2007, FAA established memorandums of understanding with seven commercial airlines to obtain access to certain safety data. According to FAA, ASIAS currently can access about 20 government and industry systems including de-identified reports provided by several airlines. An enterprise architecture, or blueprint for the initiative, is expected in September 2008. However, it will be important for FAA to address the quality issues that we have identified with its various databases as it moves forward with linking them through ASIAS.

FAA Will Be Challenged to Continue Hiring and Training Thousands of Air Traffic Controllers

During the coming decade, FAA will be challenged to continue hiring and training thousands of air traffic controllers to replace those who will retire and leave for other reasons. FAA projects that about 72 percent of its controller workforce will become eligible for retirement by 2016 and that between 2007 and 2016 it will lose a total of 13,527 controllers through retirement and other reasons. To replace these controllers, FAA plans to hire about 15,900 new controllers from fiscal years 2007 through 2016.[16] In fiscal year 2007, FAA hired 1,815 controllers, bringing its total controller workforce to 14,874, or slightly more than its planned target of 14,807. FAA anticipates hiring 1,877 controllers in fiscal year 2008, which would bring the total number of air traffic controllers to 15,130. Figure 2 shows the estimated numbers of losses and planned hires for fiscal years 2008 through 2016.

[16]Although air traffic is expected to increase significantly over the next decade, FAA expects that NextGen technologies and procedures will allow air traffic controllers to be more productive. Thus, FAA does not currently plan for any dramatic increases in overall controller staffing through 2016.

Figure 2: FAA's Projected Air Traffic Controller Losses and Hiring, Fiscal Years 2008 - 2016



Source: FAA.

Recent events may exacerbate the hiring situation. Data indicate that controllers are retiring at a faster rate than FAA anticipated. For fiscal year 2006, FAA estimated that 467 controllers would retire, but 583 actually retired—about 25 percent more than planned. For fiscal year 2007, FAA anticipated 700 controller retirements, while 828 controllers actually retired—an 18 percent increase over anticipated retirements. FAA incorporates each year's retirement numbers into its plans for future years, and has increased its hiring to compensate for greater than expected retirements. For example, in fiscal year 2008, FAA plans to hire 1,877 controllers, a significant increase over the planned 1,420 hires reflected previously in the Controller Workforce Plan, published in March 2007.[17] FAA recognizes that some of these increases in retirements may be attributed to recent labor disputes and disagreements over the contract

[17]According to the President's budget for fiscal year 2009, FAA plans to further increase its hiring of controllers in fiscal year 2009.

that went into effect in 2006. In the fall of 2007, FAA began interviewing departing controllers to learn their reasons for leaving the workforce.

In addition to the hiring situation, FAA will be challenged to retain sufficient numbers of experienced controllers to handle a growing volume of traffic while also addressing the on-the-job training needs of a large number of inexperienced controllers. According to FAA, about one quarter of the controller workforce, including Academy students, had less than 5 years of experience at the end of fiscal year 2007. Because it can take up to 3 to 5 years for a controller to become certified, within a few years, trainees could constitute a larger portion of the controller workforce. Our analysis of FAA's hiring and retirement projections indicates that by 2010, up to 40 percent of the controller workforce will have less than 5 years of experience. This high percentage of newly hired controllers will continue for a number of years, making it important for FAA to carefully balance the ratio of trainees to certified controllers at each air traffic control facility. Additionally, more controllers are failing their developmental training, increasing from about 6 percent to about 9 percent of total hires from 2006 to 2007. Another training challenge, as the transition to NextGen moves forward, will be to train controllers on the current system and on new air traffic management procedures envisioned for the future, such as precise navigation procedures that minimize pilot-controller communication.

FAA Will Be Challenged to Maintain Current Facilities

FAA faces an immediate challenge in maintaining and repairing existing infrastructure so that the current system continues to operate safely and reliably. FAA is currently responsible for maintaining over 400 terminal facilities. While FAA has not assessed the physical condition of all of these facilities, the agency rated the average condition of 89 of them as "fair," with some rated "good" and others "very poor." Based on the assessment of these 89 facilities, FAA estimated that a one-time cost of repair to all of its terminal facilities would range between $250 million and $350 million. Two FAA employee unions, the National Air Traffic Controllers Association and the Professional Aviation Safety Specialists, contend that these facilities are deteriorating because of lack of maintenance and that working conditions are unsafe due to leaking roofs, deteriorating walls and ceilings, and obsolete air-conditioning systems. According to FAA officials, while some of these facilities can accommodate the new technologies and systems of NextGen, many of them are not consistent with the configurations that will be needed under NextGen. To the extent that NextGen technologies and systems have greater capabilities than the legacy systems now in use, fewer facilities will be needed to control

airspace. As a result, the costs of repairing and maintaining the current number of facilities may be reduced. In the meantime, FAA will have to manage its given budgetary resources so that it can maintain legacy systems and legacy infrastructure while configuring the NAS to accommodate NextGen technologies and operations. The potential impact on the cost of NextGen in this circumstance is discussed later in this testimony.

FAA Must Be Able to Successfully Control Costs and Schedules for Current ATC Systems Acquisitions

A cost-effective and timely transition to NextGen depends in large part on FAA's ability to keep the current portfolio of ATC systems acquisitions within budget and on schedule. In 1995, we designated FAA's ATC modernization program a high-risk initiative because of its cost, complexity, and systemic management and acquisition problems. We have reported that, during the last few years, FAA has made significant progress in acquiring ATC systems within budget and schedule goals. These achievements came in part through implementing businesslike operations and procedures for acquiring and managing ATC systems. For example, FAA has introduced earned value management for all new major acquisitions as a way to prevent, detect, report, and correct problems in acquiring major systems.[18]

In 2003, as part of its efforts to operate in a more businesslike fashion, FAA established annual acquisition performance goals that called for a high percentage of its major acquisition programs to be within 10 percent of budget and on schedule. For fiscal years 2004 through 2006, FAA reported exceeding these annual goals. We recently examined how FAA was measuring its performance and reporting on its goals related to systems acquisitions. We found that because FAA measures progress related only to current program baselines and annual milestones, FAA's performance reporting could mask budget increases and schedule delays, possibly misleading stakeholders, including Congress, as to the agency's actual performance in acquiring ATC systems. In December 2007, we recommended that FAA identify or establish a vehicle for regularly reporting to Congress and the public on the agency's overall, long-term performance in acquiring ATC systems by providing original budget and schedule baselines for each rebaselined program and the reasons for the rebaselining. We also recommended that FAA report information on the

[18]We are currently conducting an examination of FAA's implementation of earned value management.

potential effects that any budget increases or schedule slippages could have on the overall transition to NextGen.[19]

FAA Faces a Number of Management Challenges as It Begins to Implement NextGen

The transformation of the NAS is one of the federal government's most complex undertakings. Although NextGen is a collaborative effort, the bulk of the responsibility for successful implementation and transition belongs to FAA. The agency therefore faces a number of management challenges as it begins implementing NextGen systems and procedures. These challenges include hiring and retaining the right skill set within FAA, developing a facility plan for NextGen, meeting the research and development needs of NextGen, and establishing credibility with stakeholders regarding the agency's NextGen efforts.

FAA Faces a Challenge in Hiring and Retaining Staff with the Right Skills to Manage the Implementation of NextGen

As FAA moves closer to undertaking a number of major NextGen system acquisitions, a critical component for keeping such acquisitions on track will be having the right skill set within the agency to successfully manage NextGen programs. In November 2006, we recommended that FAA examine its strengths and weaknesses with regard to the technical expertise and contract management expertise that will be required to define, implement, and integrate the numerous complex programs involved in the transition to NextGen.[20] In response to our recommendation, FAA contracted with the National Academy of Public Administration (NAPA) to conduct a workforce needs analysis. In December 2007, NAPA reported its findings and observations to FAA from the first phase of its study,[21] which focused on identifying the required workforce competencies and defining strategies for obtaining the necessary expertise. We consider this a necessary but not yet sufficient response to our recommendation. The challenge remains to compare FAA's existing and needed staff resources, determine what gaps exist, and fill those gaps with internal or external resources in a timely manner.

[19]GAO, *Air Traffic Control: FAA Reports Progress in System Acquisitions, but Changes in Performance Measurement Could Improve Usefulness on Information*, GAO-08-42 (Washington, D.C.: Dec. 18, 2007).

[20]GAO, *Next Generation Air Transportation System: Progress and Challenges Associated with the Transformation of the National Airspace System*, GAO-07-25 (Washington, D.C.: Nov. 13, 2006).

[21]Phase II of the project began in January 2008 and involves additional data gathering, competency validation, and in-depth benchmarking. NAPA plans to issue a final report on September 30, 2008.

More recently, FAA's Chief Acquisitions Officer, in discussing the challenges that the agency must manage in the transition to Next Gen, concurred with our assessment of FAA's hiring challenges. He stated that transitioning to NextGen means an increasing number of acquisitions and increasing complexity within those acquisitions, and that the agency faces a significant challenge in having an adequate acquisition workforce to handle the transition. The agency faces a particular challenge in attracting acquisitions managers who understand how to apply a systems approach to managing acquisitions.[22]

A number of FAA's acquisition staff have retired or left the agency to take positions in other organizations. In response, according to FAA, the agency has increased its recruiting efforts and is working to establish internships and university programs as means of developing qualified staff. Nonetheless, according to the Chief Acquisitions Officer, FAA was able to hire only enough acquisition staff in 2007 to replace those that had left. The challenge for FAA is to increase its hiring beyond one-for-one replacement to meet its growing human capital needs in this area, as well as to find ways to further streamline and automate its procurement process to increase staff productivity.

FAA Will Be Challenged to Develop a Facility Plan That Takes Maximum Advantage of NextGen Technologies

To fully realize all of NextGen's capabilities, a new configuration of facilities and airspace will be required that is consistent with NextGen. A provision in the administration's reauthorization proposal directs the Secretary of Transportation to establish a working group on facilities consolidation to develop and report its recommendations to Congress before any facilities or services are realigned or consolidated. However, FAA has not yet developed or presented a comprehensive facilities consolidation plan. According to an FAA official, the agency plans to report on the cost implications of reconfiguring its facilities in 2009. Until a plan for facilities consolidation or realignment has been developed, the configurations needed for NextGen cannot be implemented and potential savings that could help offset the cost of NextGen will not be realized. Some FAA officials have said that planned facility maintenance and construction based on the current ATC system are significant cost drivers that could, without reconfiguration, increase the cost of NextGen.

[22]Many of the NextGen systems will not be stand-alone systems, but rather interdependent systems that will require skills in managing systems integration.

FAA Faces Challenges in Meeting the Research and Development Needs of NextGen

Applied research and development is critical for the transition to NextGen because it will help to reduce risk by better defining and demonstrating new capabilities, setting parameters for the certification of new systems, and informing decisions about the later transfer of systems to industry for deployment into the NAS. In my testimony before this Subcommittee last February, I noted that there was some uncertainty over which entities would fund and conduct the research and development needed to transition to NextGen. Although FAA and the Joint Planning and Development Office (JPDO) have taken steps to address these issues, some uncertainty still remains. In the past, a significant portion of aeronautics research and development, including intermediate technology development, was performed by NASA. FAA has determined that research gaps now exist as a result of both the administration's cuts to aeronautical research funding and the expanded requirements for NextGen. While NASA still plans to focus some of its research on NextGen needs, the agency is moving toward a focus on fundamental research and away from developmental work and demonstration projects. According to an FAA official, FAA and JPDO are currently developing a written agreement that will address NextGen's most pressing needs in fundamental research.

In 2006, officials from FAA and JPDO initiated an assessment of NextGen research and development requirements. Although this initial assessment led to increased budget requests for FAA to help lessen the research and development gaps, there continue to be challenges in filling identified research and development needs. For example, if not adequately addressed, the environmental impacts of aviation, particularly the noise that affects local communities and the emissions that contribute to global warming, will constrain efforts to build or expand the runways and airports needed to handle the added capacity envisioned for NextGen.[23] In an effort to move noise and emissions reduction technologies beyond NASA's research stage, the administration's proposal contains a provision that would create the Continuous Lower Energy, Emissions and Noise (CLEEN) program. The CLEEN initiative would create a program for the development, maturation, and certification of airframe technologies for

[23]GAO recently testified on aviation and the environment. See GAO, *Aviation and the Environment: Impact of Aviation Noise on Communities Presents Challenges for Airport Operations and Future Growth of the National Airspace System*, GAO-08-216T (Washington, D.C.: Oct. 24, 2007). We will soon issue a report examining FAA's and NASA's research and development plans for aviation noise reduction.

aircraft over the next 10 years to reduce aviation noise and emissions.[24] According to FAA, the program is intended to accelerate near-term technology maturation and to provide an incentive for manufacturers to equip aircraft with noise reduction technologies. FAA's budget request for fiscal year 2009 includes provisions requesting an increase in research and development funding to support the integration and implementation of NextGen programs and the CLEEN initiative.

In spite of these developments, it is still unclear how NextGen's developmental research needs will be addressed. Some observers believe that FAA has neither the research and development infrastructure nor the funding to address the developmental research needs for NextGen. According to a draft report by an advisory committee to FAA—the Research, Engineering and Development Advisory Committee—FAA would need at least $100 million annually in increased funding to perform this research and development work. Moreover, establishing the infrastructure within FAA could delay the implementation of NextGen by 5 years. Unless NextGen's developmental research needs are met, technology transfers to industry for further development will also delay the implementation of NextGen, including capabilities aimed at increasing the safety, efficiency, and capacity of the system.

FAA Faces a Challenge in Assuring Stakeholders That It Is Fully Committed to NextGen

Some industry stakeholders believe that FAA may not be fully committed to NextGen, in part because FAA has stopped some past modernization efforts. An example that is often cited is a partnership between FAA and a major airline to develop a datalink communications system that transmitted e-mail-like messages between controllers and pilots. The airline invested in this technology by equipping some of its aircraft, but, according to FAA, the agency and the airline subsequently agreed to cancel the program.

In addition, some stakeholders have expressed a number of concerns about how NextGen is currently being implemented. First, some stakeholders are concerned about whether there is a clearly defined and transparent governance structure in the FAA organizations that share responsibility for implementing NextGen. These stakeholders have expressed a belief that one organization or person should be responsible

[24]A similar provision is in the Senate bill for FAA reauthorization. As of the date of this publication, the House and Senate are discussing the reauthorization bills.

and, thus, accountable for NextGen. Second, some stakeholders are concerned that NextGen efforts are not proceeding as quickly as needed. These stakeholders note that existing technologies could be implemented more quickly and more strategically than FAA's current plans allow. For example, the technologies for more precise navigation are available and in use by some airlines at some airports. However, because FAA has not developed all of the necessary implementation procedures for some critical city-pairs, some airlines cannot take full strategic advantage of these technologies. Third, some stakeholders have noted that some FAA implementation priorities will reduce costs immediately for FAA, but require airlines to make costly investments that will not begin to yield a return for them until 2020. Some stakeholders have suggested that returns on investment to industry can be accelerated if a regional implementation approach is used. To gain credibility and buy-in with stakeholders, FAA will have to address stakeholders' concerns about NextGen governance, implementing technologies more quickly, and structuring the required industry investments so as to yield returns on investment more quickly.

Concluding Observations

FAA faces numerous challenges in 2009 and beyond to maintain the safety and efficiency of the current system and to successfully manage the implementation of NextGen—one of the federal government's most complex undertakings. Maintaining one of the safest systems in the world is complicated by the steadily increasing demands placed on the system while FAA's facilities and current technologies continue to age. As you consider the President's budget for fiscal year 2009, it is important to remember that a timely reauthorization is critical to ensuring the continuity of FAA's current programs and the agency's continuing progress toward NextGen.

Mr. Chairman, this concludes my prepared statement. I would be pleased to respond to any questions from you or other Members of the Subcommittee.

GAO Contact and Staff Acknowledgments

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Appendix I: Additional Information on How Proposed Budget Changes Might Affect FAA's Ability to Fund Airports and Other Capital Projects

The President's budget and reauthorization proposal contain reductions in funding for the Airport Improvement Program (AIP), changes in AIP allocations among airports, and an increase in the cap on the Passenger Facility Charge (PFC) program for commercial airport development projects.[1] Airports are an integral part of the nation's transportation system, and maintaining their safety and efficiency is an important Federal Aviation Administration (FAA) responsibility. To this end, FAA administers the AIP, which in fiscal year 2007 provided $3.5 billion in federal grants for development projects at the entire range of the nation's 3,400 airports—from small general aviation airports to the very largest that handle several million passengers per year. In addition, FAA administers the PFC program, which provided an estimated $2.7 billion during 2007.

Last year, we reported that the funding level for airports is about $1 billion less annually than planned development costs. Over the next 5 years, planned airport development costs total at least $14 billion annually (in 2006 dollars).[2] From 2001 through 2005, airports' historical funding averaged about $13 billion per year (also in 2006 dollars) from all sources. This amount covers all types of projects, including those not eligible for federal grants. The primary source of this funding was bonds, which averaged almost $6.5 billion per year, followed by federal grants, PFCs, and state and local grants (which averaged $3.6 billion, $2.2 billion, and $700 million per year, respectively). Of this $1 billion annual difference between historic funding and planned development costs, larger airports account for about $600 million annually, while smaller airports foresee a difference of about $400 million annually[3]

[1]PFCs are fees airports can charge passengers to fund FAA-approved projects. These are generally capped at $4.50 per passenger.

[2]This estimate is a combination of FAA's estimate of $8.2 billion in AIP grant-eligible projects and $5.8 billion from the Airport Council International's estimate of projects not eligible for AIP. FAA's estimate is based on airport master plans that FAA planners have reviewed and entered into a database of all national system airports. The Airport Council International also estimates airports' planned development, based on a survey of the 100 largest airports and includes all projects regardless of grant eligibility. Conversely, airports received an average of about $13 billion a year for planned capital development. See GAO, *Airport Finance: Observations on Planned Airport Development Costs and Funding Levels and the Administration's Proposed Changes in the Airport Improvement Program*, GAO-07-885 (Washington, D.C.: June 29, 2007).

[3]We follow conventions established in GAO's prior reports on airport finance in differentiating between the 67 larger airports (large- and medium-hub airports) and smaller airports (all other categories of commercial and general aviation airports).

The President's budget and reauthorization proposal for AIP would decrease potential funding for all airports and shift more funding from airport entitlements to funds under FAA's discretion. The President's budget reduces AIP funding to $2.75 billion from its past level of $3.5 billion in fiscal years 2006, 2007, and 2008. Table 1 compares AIP funding allocations at $2.75 billion to the current funding level of $3.5 billion. To make more discretionary grants available, the administration's reauthorization proposal would also remove the funding trigger in current law that doubles the amount of entitlement funds airports receive if the overall AIP funding level is above $3.2 billion. According to FAA officials, their objective is to increase the amount of discretionary grants for airports so that higher-priority projects can be funded.

Table 1: Estimated AIP Distribution under Alternative Funding Levels and Allocations

(in millions)

	$2,750 (proposed FY 2009) Administration's reauthorization proposal[a]	$3,500 (actual FY 2006) Current funding allocations
Primary airport entitlements[a]	$629	$864
Other entitlements	709	816
Carryover entitlements[b]	432	432
Small airport fund	0	428
Discretionary and set aside grants[c]	866	845
TOTAL AIP funds available for grants[d]	**$2,636**	**$3,386**

Source: FAA

[a]Assumes that fiscal year 2009 funding is allocated according to the same reauthorization formulas as proposed in 2007.

[a]Includes entitlements for nonprimary, cargo, and Alaskan airports.

[b]Funds that some airports can claim to use in the fiscal year in which the amount was apportioned and 2 fiscal years immediately after that year.

[c]Funds that are available for use on AIP-eligible projects at FAA's discretion. This includes funds set aside for such things as noise planning and programming, reliever airports and capacity, safety, security, and noise projects. It also includes discretionary grants that can be used for any AIP eligible project at any airport.

[d]The funding available for grants after the 2006 rescission and deductions for airport research, other programs, and administrative costs.

For smaller airports, the effect of the administration's proposal is greater because they are more dependent on AIP than other funding sources. At a funding level of $2.75 billion, the proposal would reduce entitlements and

other funding dedicated to small airports by $436 million (see table 2). At a funding level of $3.5 billion in AIP funding, smaller airports would lose $75 million in entitlements and other dedicated funds under FAA's proposal, but discretionary funds would increase by $282 million, making it less certain how smaller airports would fare overall.

Table 2: Effect of Proposed AIP Reauthorization Formula on Smaller Airports Assuming New Budget Level

(dollars in millions)

Funding categories	Current law at $3.5 billion	Proposed law at $2.75 billion	Difference from current	Proposed law at $3.5 billion	Difference from current
Entitlements	$1,680	$1,244	-436	$1,605	-75
Discretionary	510	519	+9	792	+282

Source: GAO analysis of FAA data.

The administration's reauthorization proposal would also allow airports to increase their PFC to a maximum of $6 and allow airports to use their PFC collections for any airport projects while forgoing their entitlement funds. Based on calculations we did last year, a $6 PFC could have generated an additional $1.1 billion for larger airports in 2007, exceeding the $247 million in entitlements that FAA estimates they would forgo under their reauthorization proposal (see table 3).[4] However, smaller airports (small and non-hub) would not benefit as much from this ability to increase PFCs because they collect less in PFCs and are more reliant on AIP for funding. A change to a $6 PFC could yield as much as an additional $171 million for smaller airports if they all imposed a $6 PFC. On a net basis, this relatively small increase in PFCs would not compensate smaller airports for the $436 million reduction in AIP funding at a $2.75 billion funding level.

[4]This calculation assumes that the increased PFC would not affect passenger demand for air travel. GAO has previously calculated that a PFC increase could reduce passenger demand, which would reduce the PFC revenue collected at the higher rate. Our previous work suggests the revenue reduction due to demand effects would likely be small. See GAO, *Passenger Facility Charges: Program Implementation and the Potential Effects of Proposed Changes*, GAO/RCED-99-138 (Washington, D.C.: May 19, 1999).

Table 3: Projected PFC Collections with a $6 PFC (dollars in millions)

Airport size	2007 PFC collections (estimated)	If all primary airports had a $6 PFC*	Increase over 2007 collections
Large hub	$1,869	$2,696	$827
Medium hub	486	782	295
Subtotal	**2,356**	**3,479**	**1,123**
Small hub	184	303	119
Non hub	71	123	52
Subtotal	**255**	**426**	**171**
Total	**$2,611**	**$3,905**	**$1,294**

Source GAO analysis of FAA data.

*There are currently 382 primary airports eligible to apply for a PFC.

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Federal Aviation Administration: Observations on Selected Changes to FAA's Funding and Budget Structure in the Administration's Reauthorization Proposal. GAO-07-625T. Washington, D.C.: March 21, 2007.

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STATEMENT OF RAMESH K. PUNWANI, CHIEF FINANCIAL OFFICER, FEDERAL AVIATION ADMINISTRATION, BEFORE THE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE, SUBCOMMITTEE ON AVIATION ON THE FAA'S FY 2009 BUDGET, FEBRUARY 7, 2008.

Good morning, Chairman Costello, Congressman Petri and Members of the Subcommittee.

As this is my first appearance before the Subcommittee, I would like to take this opportunity to introduce myself. After working in the private sector in the aviation and travel fields for several decades, I joined the Federal Aviation Administration (FAA) four years ago as the agency's Chief Financial Officer (CFO). My job is to manage the agency's budget, accounting, cost control and reduction efforts, as well as our financial programs and policies. On behalf of our Acting Administrator, Bobby Sturgell, and the other members of our senior management team, I would like to emphasize our commitment to you, and ultimately to the American public, to deliver a safe, efficient, and accessible aviation system. We have pushed hard to manage more effectively, rein in costs, and better respond to our customers. The FY 2009 budget request moves FAA further along that road, toward a more streamlined and efficient organization that the taxpayers deserve.

With me today is my colleague, Gene Juba, Senior Vice President for Finance, from our Air Traffic Organization (ATO). Gene is also from the aviation industry and is here to assist me in addressing some of your programmatic questions.

Today I would like to first briefly address a pressing budget issue for the current fiscal year and then provide an overview of our FY 2009 budget request and how it meets FAA's strategic goals.

FY 2008 Agency Funding

As you are aware, the recently enacted Continuing Appropriations Act extended the authority to make expenditures from the Airport and Airway Trust Fund (AATF) only

until February 29, 2008. Of the $14.9 billion appropriated for FAA this fiscal year, approximately $12.6 billion (or 84%) of our FY 2008 budget is funded from the AATF, while the remaining $2.3 billion (or 16%) is supported from the General Fund. All of FAA's Airport Improvement Program (AIP), Facilities and Equipment (F&E), and Research, Engineering and Development (R,E&D) accounts are funded by law solely from the Trust Fund. Without an extension of the Trust Fund expenditure authorities, FAA will be unable to obligate funds after February 29th from the Trust Fund, including the uncommitted balance. This will have immediate consequences. Most notably, our airports, facilities and equipment and research personnel (approximately 4,000 employees) will be sent home because they can only be paid from the Trust Fund. FAA will not be able to provide funding on our major contracts, including ADS-B, STARS, ERAM and WAAS*, which are the foundational programs for both our existing air traffic control system and the Next Generation Air Transportation System (NextGen).

Essential functions will be maintained as long as possible but certain safety and capacity enhancing projects and programs will be deferred and our remaining personnel, who are funded by the General Fund portion of the Operations account, would also be sent home after funding provided by the General Fund has been fully obligated—most likely in early June.

Secondly, the Consolidated Appropriations Act only provided a temporary extension until February 29th of the authority to collect of most of the aviation related excise taxes that provide approximately 95% of the Trust Fund's revenue. The uncommitted balance in the Trust Fund (approximately $1.5 billion, as of the end of FY 2007), which could only be tapped if Trust Fund expenditure authority is extended, is insufficient to sustain FAA operations beyond a few months and a lapse in the collection of excise taxes could very quickly begin to impact FAA's operations, forcing a shut down of our remaining 43,000 employees funded through the Operations appropriations account.

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* Automatic Dependent Surveillance Broadcast, Standard Terminal Automation Replacement System, En Route Automation Modernization, and Wide Area Augmentation System

Third, as you know, contract authority for AIP expired on September 30, 2007, however Congress, in a series of continuing resolutions, provided temporary and limited AIP contract authority through December 31, 2007. Without contract authority, we are not able to make any new AIP grants. We do have authority to honor payment requests for existing grants provided in prior years, and we will continue to pay those to the extent possible. However, as a result of the lack of new contract authority, we cannot distribute funds to 62 airport sponsors that have requested approximately $265 million in FY 2008 to upgrade their runway safety areas, or make almost $250 million in discretionary letter of intent (LOI) payments. Based on a quick survey, we have learned that eleven airports with pending LOIs are facing immediate impacts, some as soon as February and March, with several taking out short-term loans to bridge financial requirements, and others at risk for incurring heavy financial penalties on financing. Unfortunately, with the gap in AIP contract authority for FY 2008, we are near the point of losing a portion of this construction season and airport sponsors will have to defer critical safety and capacity projects.

Mr. Chairman, it is in the best interest of aviation safety and efficiency that these current year fiscal concerns be addressed and we are hopeful that Congress will resolve this before the end of the month. We remain ready to work with you and other Members to enact a full-fledged reauthorization proposal that is consistent with the goals of the Administration.

FY 2009 Budget

Turning now to the next fiscal year, our FY 2009 Budget request of $14.643 billion provides funding to support all critical priorities of the FAA. As always, safety is FAA's primary concern and our budget request, sixty-seven percent of which is dedicated to our safety mission, reflects that commitment. (*See* attached chart showing our budget request in terms of agency goals). This request includes $688 million for key research and technologies to enable the transition to NextGen, as well as funding to meet our hiring goals for our air traffic controller and safety inspection workforces--areas we know that this Committee is most interested in. I want to point out to the Committee that over the

past five years, we have improved our financial management performance in ways that enable us to better use the funding Congress provides for execution of our vital safety and infrastructure programs. Financial management accomplishments include improving the discipline with which programs and contracts are first approved, improving the tracking and monitoring of approved programs, and reducing our overhead costs so that more of the taxpayer dollars are spent on a safe, efficient and accessible aviation system.

The 2009 budget request assumes congressional passage of the President's reauthorization proposal for FAA programs and revenue streams starting in 2010. We firmly believe that comprehensive reform is necessary. The FY 2009 budget once again provides the framework for the Administration's *Next Generation Air Transportation System Financing Reform Act* (H.R. 1356), a proposal that will make flying more convenient for millions of travelers. As air traffic is expected to nearly triple by 2025, our aviation system requires a more reliable and dynamic source of revenue to fund the modern technology required to manage this expanded capacity. Our proposal replaces the decades-old system of collecting ticket taxes with a stable, cost-based funding program. Based on a combination of user-fees, taxes and general funds, it creates a stronger correlation between what users pay to what it costs the FAA to provide them with air traffic control and other services. The incentives our plan puts in place will make the system more efficient and more responsive to the needs of the aviation community. FAA will continue to work with this Committee and others in Congress as well as our aviation stakeholders toward a successful reauthorization that is consistent with our key principles for a comprehensive cost-based funding structure that ensures that costs and revenues are better aligned, that all stakeholders are treated fairly and that our aviation system is ready for the congestion and environmental challenges of the future. We continue to believe that these principles will provide us with the clearest path toward implementation of NextGen and with it, the avoidance of mounting congestion delays.

For FY 2009, we have proposed a new account structure that aligns FAA's budget accounts with its lines of business. We believe an account structure based upon agency functions makes sense both in terms of how we operate now as well as under our

proposed new financing reforms. For ease of understanding this approach, we have attached a "crosswalk" chart showing a comparison of our request with the current account structure.

Safety and Operations

The FY 2009 request is $2.052 billion for Safety and Operations, including $1.2 billion for Aviation Safety, $14 million for Commercial Space Transportation, and $851 million for Staff Offices. Most of the funds requested support the agency's activities to maintain and increase aviation safety and efficiency. Our Aviation Safety (AVS) organization accounts for $1.187 billion of the request, to meet its mission of promoting aviation safety in the interest of the American public by regulating and overseeing the civil aviation industry. AVS consists of eight distinct organizational elements employing approximately 7,000 personnel. These employees are responsible for the oversight of the ATO, certification, production approval and continued airworthiness of aircraft, as well as certification of pilots, mechanics and other safety related positions. The agency recognizes that this Subcommittee is particularly interested in our efforts regarding aviation safety inspector staffing. Funding for AVS in FY 2009 maintains recent staffing gains to our aviation safety workforce, providing for 4,110 safety inspectors and requests an additional 30 safety staff positions for Air Traffic oversight. In anticipation of future staff retirements, FAA is aggressively hiring and training safety personnel to enhance oversight, surveillance and certification activities.

I should also note that the $14 million Commercial Space Transportation request includes $270 thousand for 4 additional safety personnel needed to assess the human space flight aspects of the safety evaluations of commercial space license and permit applications. In addition, $851 million is requested for FAA staff offices, including the CFO and finance, human resources, information systems, international policy, civil rights, and legal offices.

Air Traffic Organization

The FY 2009 Budget Request for the FAA's Air Traffic Organization (ATO) is $9.670 billion, of which approximately $7 billion is for ATO operating expenses. We recognize

that this Subcommittee is also very interested in our efforts regarding controller staffing. As with the safety inspector workforce, the FAA is aggressively hiring and training controllers to ensure the right number of controllers are in place at the right time to address the now well-documented retirement "bubble". As you know, the FAA began anticipating today's air traffic controller retirement wave several years ago, issuing a comprehensive plan that we update annually.

In anticipation that more than 60 percent of the controller workforce will become eligible to retire over the next 10 years, the FAA plans to hire more than 16,000 controllers over that period. In fiscal year 2007, the FAA hired 1,815 controllers and ended the year with 14,874 controllers on board – 67 more controllers than our workforce plan target of 14,807. This year, we have robust hiring goals with a year-end target of more than 15,000 controllers on board. Our FY 2009 budget includes funding to hire a net increase of 306 new controllers, a level consistent with the targets being developed for our updated staffing plan to be published next month. The agency is also offering a variety of incentives to recruit and retain controllers, including recruitment and relocation bonuses and repayment of student loans.

The ATO continues to see cost savings from Flight Service Station (FSS) contract, which was initiated two years ago. We anticipate savings of over $1.7 billion over the ten years of the contract. Our network of automated flight service stations, which provide weather guidance and other assistance to the pilots of small airplanes, was reduced from 58 to 18 in the fourth quarter of FY 2007. The current set of flight service stations comprises 15 previously existing facilities and 3 new ones built by Lockheed Martin. The contract not only saves money, it also commits the vendor to modernize and improve the flight services we provide to general aviation pilots. These savings result directly in a reduction of the budget request.

NextGen and Capital Needs

Our FY 2009 budget request will provide $688 million--a nearly $500 million increase from 2008--in support for the comprehensive transformation of our air traffic control

system known as NextGen that is already underway. This Committee has held numerous hearings on our transformation and modernization efforts and is well acquainted with the ongoing management efforts to coordinate this tremendous undertaking. As you know, in the past year, key NextGen defining documents have matured. Last summer, the Joint Planning and Development Office (JPDO) released public versions of the Enterprise Architecture and Concept of Operations. In July, the initial baseline of the NextGen Integrated Work Plan was completed. The work plan lays out the progression from the present to the future, with activities and responsible agencies identified. As envisioned, the work plan would guide the formulation of future budgets within partner agencies.

The FY 2009 NextGen budget represents strong collaboration between JPDO and the new OEP—formerly the Operational Evolution Plan, and now the Operational Evolution Partnership-- to define and estimate the budgetary requirements for FY 2009. That collaboration will provide oversight and track progress to ensure that NextGen objectives are achieved. This NextGen investment portfolio includes programs and activities deemed "transformational," i.e., those that will truly move toward the next generation system. The FY 2009 portfolio consists of $631 million in ATO Capital Programs, $57 million in Research, Engineering & Development, and $704 thousand in Safety & Operations, for a total of $688 million. This funding level includes $19.5 million to directly support the JPDO: $5 million from ATO Capital and $14.5 million from R,E&D. This represents a significant investment in NextGen programs and reflects the Administration's commitment to comprehensively address capacity constraints in the aviation system.

Grants in Aid for Airports (AIP)

The FAA's reforms for the AIP program contained in our reauthorization proposal are designed to strategically target federal dollars to the airports where they will have the most impact. While large and medium hub airports have a greater ability to finance their own capital requirements with revenue from passenger facility charges and their own rates and charges, small primary and general aviation airports rely more heavily on AIP funding to help meet their capital needs and complete critical projects. We have

proposed changes to the Federal funding program which will stabilize and enhance these funding sources for airports. With our proposed programmatic changes, including the increase in the passenger facility charges, the $2.75 billion proposed in our budget will be sufficient to finance airports' capital needs and meet national system safety and capacity objectives. Our request also includes $15 million for the Airport Cooperative Research program and $19 million for airport technology research.

Research, Engineering, and Development (R,E&D)

The FY 2009 request for R,E&D is $171 million. The request includes $91 million for continued research on aviation safety issues. The remaining research funding is to address congestion and environmental issues, including $42 million for new NextGen Projects such as Self Separation, Weather in the Cockpit, Air-Ground Integration, and the Continuous Low Energy, Emissions, and Noise (CLEEN) Technologies program. $14.5 million is provided for the Joint Planning and Development Office to continue defining and facilitating the transition to NextGen. An additional $5 million in support for JPDO is contained in the ATO capital request, related specifically to the work on demonstration projects.

Increased Safety

Due to the combined efforts of government and the aviation community, we are fortunate to be living in the safest period in aviation history and the FAA is committed to making it safer still. In the past 10 years, the commercial fatal accident rate has dropped 57%, to a rolling three-year average of 0.022 fatal accidents per 100,000 departures as of the end of FY 2007. In the past three years, the United States averaged approximately two fatal accidents per year and 28 deaths per year; while any loss of life is tragic, this statistic is remarkable, given that there are roughly 12 million commercial aircraft flights per year. General aviation accidents are down. Air traffic control errors are occurring at a rate lower than in the previous two years.

Approximately 67% of our budget request, or $9.855 billion, supports the FAA's safety mission. Our safety goals for FY 2009 are to reduce U.S. commercial airline fatalities

per 100 million people (including crew) on board to fewer than 8.31 (an improvement of over 6% from our FY 2008 goal) and to reduce the rate of general aviation fatal accidents. To achieve these goals, FAA's FY 2009 budget request includes $9.9 billion to operate and maintain the air traffic control system, inspect aircraft, certify new equipment, ensure the safety of flight procedures, oversee the safety of commercial space transportation, and develop a replacement air traffic data and telecommunications system.

The request includes an increase of $11.3 million to hire and train sufficient air traffic controllers to achieve our hiring targets noted earlier in my statement. It also includes $800,000 for 30 new positions to support continued development of the Air Traffic Oversight office, which was formed in FY 2004 to improve the delivery of air traffic services, and maintains the staffing gains to our aviation safety workforce during FY 2007-2008. Total aviation safety staffing will reach 7,069 by the end of FY 2009.

The FAA will continue working to reduce the precursors of aircraft accidents, runway incursions and operational errors. This Subcommittee will be examining our efforts in this latter area at a hearing scheduled for next week so we will be brief here. Suffice it to say that the FAA will continue to concentrate on outreach, awareness, technology, and improved procedures and infrastructure.

International Leadership

Our FY 2009 request includes $63.1 million to expand the FAA's international leadership role and to help improve safety. FAA will expand training and technical assistance programs that help civil aviation authorities meet international standards, as well as promoting seamless global operations. The FAA will continue to promote increased external funding for training and technical assistance programs that help civil aviation authorities around the world meet international safety standards. FAA will also continue to work with its international partners and the International Civil Aviation Authority (ICAO) to harmonize global technological standards, and to expand the use of global satellite navigation systems.

Environmental Stewardship

Our FY 2009 budget request includes $276.8 million, of which $227 million is requested from the AIP program, to ensure that the number of people in the United States who are exposed to significant aircraft noise levels—a Day/Night Average Sound Level of 65 decibels or more—continues to decline. FAA will continue to address the environmental impacts of airport projects, primarily aircraft noise. FAA will also provide expertise and funding to assist in abating the impacts of aircraft noise in neighborhoods surrounding airports by purchasing land, relocating persons and businesses, soundproofing residential homes or buildings used for educational and medical purposes, purchasing noise barriers and monitors, and researching new noise prediction and abatement models and new technologies. We estimate that 20,000 people will see a reduction in aircraft noise from these efforts. The FY 2009 request includes $10 million in new RE&D funding for the Continuous Low Emissions, Energy and Noise Technologies program to accelerate the introduction of quieter and cleaner technology in commercial fleets, and to initiate a NextGen Environmental Management System.

Security

As you know, responsibility for the security of the aviation system now rests with the Department of Homeland Security. Therefore most of the $218.6 million requested in our budget for next year focuses on enhancing the security of the FAA's own personnel, facilities, and communications. FAA ensures the operability of the national airspace through the facilities, equipment and personnel of the air traffic control system, which is essential to the rapid recovery of transportation services in the event of a national crisis. Additionally, the budget request includes funding to continue upgrading and accrediting facilities, procure and implement additional security systems, and upgrade our command and control communications equipment.

Performance and Accountability

Finally, as Chief Financial Officer of the FAA, I would like to highlight some of the ways we are better executing and managing the budget resources that Congress provides. At

FAA, "acting more like a business" isn't just a slogan. We are actively engaging in a comprehensive pay-for-performance program, consolidating operations, improving internal financial management, and increasing benefits to our customers. Our beacon will always be our mission – to provide the safest, most efficient aerospace system in the world. Our bottom line is results for our stakeholders, including the taxpayer and traveling public.

As I noted at the outset of my testimony, the transformation over the past five years has been steady and sure, as we have embraced the vision of the President's Management Agenda (PMA) and its aggressive strategy to improve management throughout the federal government. The evolution of the PMA complements the strategic vision of our *Flight Plan.* It contains a number of management performance measures, including a cost control performance measure requiring each organization to contribute cost efficiencies that save money or avoid costs for the agency. Through the *Flight Plan* and PMA, we have made dramatic gains in human capital, competitive sourcing and consolidations, financial performance, and, ultimately, accountability to the bottom line of our customers.

We are continuing to make every effort to control our operating costs. Personnel reform for the agency, granted in 1998, is starting to bear fruit, with conversion from the traditional GS-Schedule pay system to pay for performance. Accountability for results is systemic throughout our organization, with 90 percent of our employees on the pay-for-performance system, including our executives. *Flight Plan* performance targets must be achieved before annual pay raises are calculated. Executives and managers have a good deal of discretion in rewarding high-performing employees, and incentives are present to ensure quality work and innovation are rewarded. Executives are also eligible for short-term incentive increases when specific performance thresholds are met or exceeded. This conversion is allowing the agency to flatten pay bands and tie performance incentives to pay increases.

We know that labor costs drive a significant share of our budget, and we have been working to slow the rate of growth in labor costs, as evidenced by the FAA's recent contract with our controller workforce, and such steps as back-filling positions with new employees at lower pay grades when possible. We are also increasing workforce productivity through cutting multiple levels of management and better management and oversight of our worker's compensation caseload.

I have already mentioned our ATO's success with competitively sourcing its flight service station function. They have also successfully consolidated administrative and staff support functions from nine service areas to three, allowing for better service while saving an estimated $360 to $460 million over the next 10 years. FAA has also taken steps to consolidate and improve our real property management and information technology (IT) investments.

In a concerted effort to control costs and make smarter capital investment choices, several years ago the FAA created a capital investment team to review financial and performance data. The team provides an early warning for potential problems as well as help to develop corrective actions. So far, these business case reviews have identified $460 million in lifecycle savings by restructuring/terminating 10 programs, 6 of them major. To date, over 165 projects were reviewed in various stages of acquisition, capital formulation, and business case development.

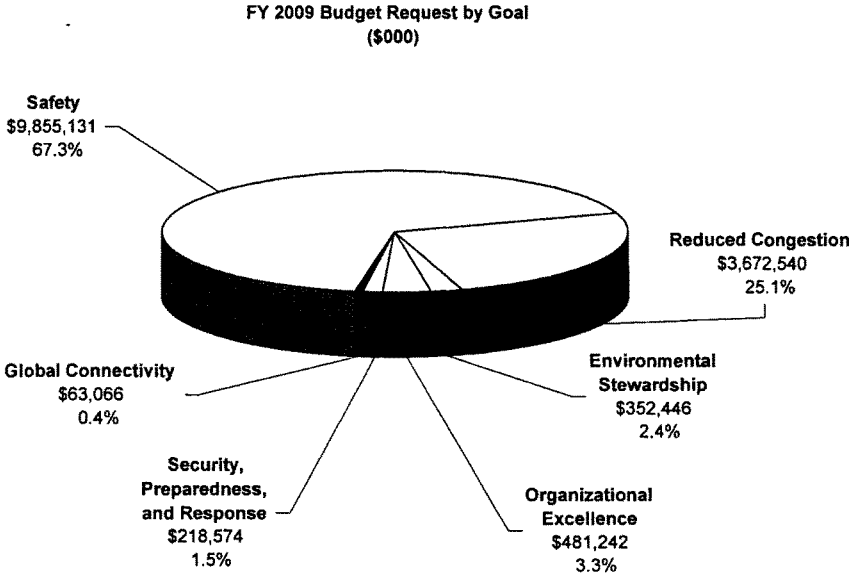
Finally, the Strategic Sourcing for the Acquisition of Various Equipment and Supplies (SAVES) initiative is an ambitious effort begun in FY 2006 to implement best practices from the private sector in the procurement of administrative supplies, equipment, and IT hardware. It is expected to achieve $9 million in savings annually.

Conclusion

Mr. Chairman, with Congress' help we can avoid disruptions to our programs this fiscal year with an extension beyond March 1st of critical authorities and taxes that support our programs. Time is of the essence. We also stand ready to work with this Committee and

others in Congress to enact an aviation authorization bill this year that will provide the necessary cost-based financing and programmatic reforms that will enable us to move to the NextGen transportation system. Our FY 2009 request provides strong support for our staff hiring goals, safety and capital programs and NextGen activities. Given the vital role aviation plays in the Nation's economy and the need to prepare for the future, our funding request for FY 2009 is designed to support America's growing demand for aviation-related services.

That concludes my testimony. My colleague and I would be happy to answer any questions you and Members of the Subcommittee may have.


FY 2009 Budget Request by Goal
($000)
Safety
$9,855,131
67.3%
Reduced Congestion
$3,672,540
25.1%
Environmental
Stewardship
$352,446
2.4%
Organizational
Excellence
$481,242
3.3%
Security,
Preparedness,
and Response
$218,574
1.5%
Global Connectivity
$63,066
0.4%

Comparison of Budgets - FYs 2007-2009 - Old Versus New Accounts
($ in millions)

Accounts	FY 2007 Enacted	FY 2008 Enacted	FY 2009 Request	2008-2009 Change
Operations	8,374	8,740	8,998	3.0%
Facilities and Equipment	2,518	2,514	2,724	8.4%
Research, Engineering & Development	130	147	171	16.3%
Airport Improvement Program (Ob Lim)	3,515	3,515	2,750	-21.8%
FAA Total	**14,537**	**14,915**	**14,643**	**-1.8%**

Accounts	FY 2007 Enacted	FY 2008 Enacted	FY 2009 Request	2008-2009 Change
Safety & Operations	1,769	1,893	2,052	8.4%
[Salaries & Expenses]	1,634	1,774	1,920	8.2%
[Capital Programs]	135	119	132	10.9%
ATO	9,123	9,361	9,670	3.3%
[Salaries & Expenses]	6,740	6,966	7,079	1.6%
[Capital Programs]	2,383	2,395	2,591	8.2%
Research, Engineering & Development	130	147	171	16.3%
Airport Improvement Program (Ob Lim)	3,515	3,515	2,750	-21.8%
FAA Total	**14,537**	**14,915**	**14,643**	**-1.8%**

Before the Transportation and Infrastructure Committee
Subcommittee on Aviation
United States House of Representatives

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FAA's Fiscal Year 2009 Budget Request: Key Issues Facing the Agency

Statement of
The Honorable Calvin L. Scovel III
Inspector General
U.S. Department of Transportation

Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to testify today on the Federal Aviation Administration's (FAA) fiscal year (FY) 2009 budget request. Our testimony will focus on the key issues that will frame FAA's financial requirements over the next several years.

Meeting the current and forecasted demand for air travel is important to the flying public and the Nation's economic health and will remain a top priority for the Department. FAA is facing the formidable challenge of operating and maintaining an increasingly strained system while transitioning to the next generation of air traffic control. In addition, FAA must concurrently address attrition in two of its most critical workforces—air traffic controllers and aviation safety inspectors.

Escalating numbers of severe flight disruptions and delays as well as a sharp rise in consumer dissatisfaction are all signs of an increasingly strained system. The average delay length rose from 56 minutes in the summer of 2006 to 60 minutes in the summer of 2007. In addition, airlines cancelled nearly 48,000 flights at 55 large airport tracked by FAA—a 28 percent increase above the summer of 2006. Problems are likely to get worse in the near term as FAA forecasts that commercial airlines will transport over 1 billion passengers by 2015. At the request of this Subcommittee, we are preparing an "after-action" report on last summer's delays and assessing current efforts to improve airline customer service.

Within this context, FAA recognizes that it must also remain vigilant of its primary mission—ensuring the safety of the National Airspace System (NAS). While FAA oversees the safest air transportation system in the world, the recent close calls on the ground in Chicago and New York serve as reminders that all stakeholders must work to make our system even safer. Aviation stakeholders have expressed growing concerns regarding the rise in severe runway incidents—a serious risk to aviation safety. In FY 2007, there were 370 runway incursions; this is a 12-percent increase over FY 2006.

FAA has created a task force of stakeholders that includes pilots, airport managers, and controllers to address runway safety issues. Although this is a good step, the severity of recent incidents underscores the need for heightened attention. As we have noted in a series of reports and testimonies since 1997, a range of actions—including technological, procedural, and airport infrastructure improvements—are needed to enhance the margin of safety on the Nation's runways. We note that runway safety will be the subject of a hearing before this Subcommittee next week.

As the Subcommittee is aware, FAA does not have a long-term reauthorization or financing mechanism in place. Since September 30, 2007, FAA has been funded through short-term extensions of the existing laws and taxes. The most recent

extension expires in 3 weeks on February 29, 2008. Reaching agreement on a financing mechanism is an urgent matter because taxing and spending authority for FAA programs will expire at that time. Further, FAA has little to fall back on as the Trust Fund's uncommitted balance has been depleted to $1.5 billion.

Mr. Chairman, regardless of the funding mechanism ultimately decided upon by Congress, several key issues demand FAA's attention. These include (1) keeping existing modernization projects on track and moving forward with the Next Generation Air Traffic Management System (NextGen), (2) addressing key issues within two of FAA's most critical workforces, and (3) establishing realistic funding levels for airports. It is against this backdrop that we would like to discuss the Agency's FY 2009 budget request of $14.6 billion.

Keeping Existing Modernization Projects on Track, Reducing Risk With NextGen, and Setting Realistic Expectations

FAA's capital account is now being shaped by NextGen—an enormously complex effort that will cost tens of billions of dollars. FAA is requesting $2.7 billion for its capital account in FY 2009, an increase of over $200 million from the FY 2008 enacted level of $2.5 billion. Over $600 million in the FY 2009 request is dedicated to NextGen efforts, such as the Automatic Dependent Surveillance-Broadcast (ADS-B)—a new satellite-based surveillance system that has the potential to enhance safety and capacity.

It will be important to keep existing modernization efforts on track because 30 projects are expected to serve as platforms for NextGen initiatives. At the request of this Subcommittee, we examined progress with 18 of those major acquisitions with a combined value of $17.5 billion. We will be issuing our report next month.

While we are not seeing the massive cost growth or schedule slips that occurred in the past, we are concerned about several projects that continue to experience cost and schedule risks or reduced benefits. For example, FAA has spent about $314 million (57 percent) of planned funding for the Airport Surface Detection Equipment-Model X (ASDE-X) program (a technology to prevent accidents on runways). However, FAA has only deployed 11 of 35 systems for operational use and must now deploy the remaining systems at the more complex airports with less than half of the planned funds remaining.

FAA is making progress toward developing the NextGen Enterprise Architecture (a technical blueprint), which is planned to be implemented by 2025. The Agency is also exploring ways to accelerate NextGen. However, costs for NextGen remain uncertain, and FAA needs to establish reasonable expectations for NextGen investments and realistic timeframes for improvements to enhance capacity and reduce delays. At this juncture, FAA needs to pursue the following actions:

- *Conduct a gap analysis of the current NAS and future NextGen capabilities.* FAA's NextGen architecture does not detail how FAA will transition from the present NAS and the future NextGen architectures, which will have considerably different capabilities and performance parameters. Until FAA completes a gap analysis, it will not be able to determine technical requirements that translate into reliable cost and schedule estimates for major acquisitions.
- *Set expectations and establish NextGen funding priorities.* At this point, it is difficult for decision makers and FAA to determine what to invest in first or what can be accelerated. FAA needs to better understand costs and benefits and then identify the high priority improvements and reflect those priorities in budget requests.
- *Develop an interim architecture for what can be accomplished by 2015.* Because of the significant differences between the present system and the NextGen architecture and concept of operations, FAA should develop an interim architecture for the 2015 timeframe. This would help FAA to determine reasonable goals, establish priorities, fully identify adjustments to existing projects, refine requirements for new systems, and understand complex transition issues.
- *Develop a strategy for acquiring the necessary skill mix to effectively manage and execute NextGen.* In response to our February 2007 report,[1] FAA contracted with the National Academy of Public Administration to assess the skill sets needed for NextGen. A preliminary report[2] highlighted the need for proficiency in systems integration and systems engineering, particularly with an understanding of the human factors discipline. FAA must anticipate needed skill sets for NextGen to avoid the problems that have plagued its modernization efforts.

Addressing Key Issues Within Two of FAA's Critical Workforces

In FY 2009, FAA must continue to address air traffic controller and safety inspector attrition. Ensuring that it has the right number of fully certified controllers and inspectors at the right locations remains a key challenge for FAA.

Addressing Controller Attrition and Training: The long-expected surge in controller attrition has begun. Since 2005, 3,300 controllers have left the Agency. The total rate of attrition was 23 percent higher than FAA had projected. However, FAA has accelerated its hiring efforts to fill vacancies. Since 2005, FAA has hired 3,450 new controllers—25 percent more than projected. Still, FAA faces a major challenge as it must hire and train 15,000 new controllers through 2016.

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[1] OIG Report Number AV-2007-031, "Joint Planning and Development Office: Actions Needed To Reduce Risks With the Next Generation Air Transportation System," February 12, 2007. OIG reports and testimonies are available on our website: www.oig.dot.gov.

[2] Report by a panel of the National Academy of Public Administration, "Workforce Needs Analysis for the Next Generation Air Transportation System (NextGen), Preliminary Findings and Observations," December 2007.

As a result of the high level of controller attrition, FAA is facing a fundamental transformation in the composition of its controller workforce. The overall percentage of controllers in training has grown substantially over the past 3 years. From April 2004 to September 2007, the overall size of the controller workforce remained constant. However, during the same period, the number of controllers in training increased by 1,177, or 53 percent, while the total number of fully certified, or Certified Professional Controllers (CPC), decreased by the same amount. New controllers now represent 23 percent of the workforce (up from 15 percent in 2004). However, that percentage can vary extensively by location—from as little as 2 percent (e.g., Boston TRACON) to as much as 50 percent (e.g., Las Vegas TRACON).

A major challenge in addressing the attrition surge will be to train new controllers to the CPC level at their assigned locations. Facility training can take up to 3 years and is the most expensive part of new controller training. Training new controllers to the CPC level is important for two reasons: (1) only CPCs are qualified to control traffic at *all* positions of their assigned area and (2) only CPCs certified for at least 6 months (at their assigned location) can become on-the-job training (OJT) instructors for other new controllers. FAA must have enough OJT instructors at all locations if it is to achieve its ambitious hiring and training plans for the next 8 years and beyond.

It is important to note that new controllers who have completed portions of training and have been certified on a position can independently staff that position. However, controllers are not qualified CPCs until they have certified on all positions within their assigned area. In addition, using position-qualified controllers extensively to staff positions can lengthen the time required for them to become CPCs since they are not training on other new positions.

We recently completed an audit of FAA's controller facility training program—our second review of this program since 2004. Overall, we found that the program continues to be extremely decentralized and the efficiency and quality of the training varies from one location to another. We found similar problems in 2004. FAA is taking actions at the national level to get this important program on track, but many of FAA's efforts are still in the early stages. To achieve its goals for the controller workforce, FAA will need to take the following actions:

- *Clarify responsibility for oversight and direction of the facility training program at the national level.* Facility training is primarily the responsibility of the Air Traffic Organization's Vice President for Terminal Services and Vice President for En Route and Oceanic Services. However, the Vice President for Acquisition and Business Services oversees new controller hiring and the FAA Academy training program, and the Senior Vice President for Finance oversees the development of the Controller Workforce Plan. Both have key roles in the controller training process as well. As a result of these overlapping responsibilities, we found there is significant confusion at the facility level.

During our review, facility managers, training managers, and even Headquarters officials were unable to tell us who or what office was responsible for facility training. FAA needs to clarify responsibility for oversight and direction of the facility training program at the national level and communicate those roles to facility managers.

- *Establish realistic standards for the level of developmental controllers that facilities can accommodate.* Given the various sizes and complexities of FAA's more than 300 facilities, FAA needs to identify (by facility) how many developmental controllers facilities can realistically accommodate. FAA must consider several factors, such as: (1) the number of available OJT instructors, (2) available classroom space, (3) the number of available simulators, (4) all training requirements, and (5) the number of recently placed new personnel already in training.
- *Implement key initiatives proposed in its 2004 Controller Workforce Plan.* FAA has not implemented key initiatives to improve facility training that it proposed in the 2004 Controller Workforce Plan. These include, "developing, implementing, and enforcing a policy that assigns facility training as a priority second only to operations." This was to be accomplished by (1) placing developmental controllers only at facilities that had available training capacity, (2) requiring facility managers to suspend training *only* for critical operational necessities, and (3) establishing nominal "time-to-certify" metrics and holding managers accountable for achieving those targets. However, FAA never issued this policy.

In addition, FAA has not comprehensively evaluated its facility training program. In its 2004 Controller Workforce Plan, FAA stated it would "conduct a thorough review of facility training to ensure it begins where the Academy ends. This review will take into consideration other efficiency gains identified in this plan and will result in facility training programs tailored to meet the needs of developmental controllers of the future." FAA intended for this effort to help reduce the time it takes new controllers to become CPCs. However, FAA never conducted the evaluation. FAA must follow through with this evaluation and its Controller Workforce Plan initiatives.

To its credit, FAA has successfully implemented an important initiative—increasing the use of training simulators at towers. Simulators were recently installed at four towers: Chicago O'Hare, Miami, Ontario, and Phoenix. Results thus far indicate that simulators are a valuable training tool. FAA plans to install 12 additional simulators this year (6 at large airports and 6 at the FAA Academy) and 12 next year (at other airports). FAA needs to ensure that this initiative remains on track to capitalize on the success this training has demonstrated.

Addressing Inspector Attrition: FAA is also facing substantial safety oversight challenges due to potential attrition in its inspector workforce. FAA has about 4,100 inspectors to oversee a dynamic and rapidly changing industry, which includes 118 commercial air carriers, almost 5,000 foreign and domestic repair stations, over 700,000 active pilots, and over 1,600 approved manufacturers.

Last year, FAA's hiring efforts kept pace with retirements, and the Agency ended the year with 133 additional inspectors over FY 2006 levels. However, FAA must continue to closely oversee this effort since nearly half of the inspector workforce will be eligible to retire in the next 5 years.

FAA will never have an inspector workforce that is large enough to oversee all aspects of the industry, so it is important for the Agency to place inspectors where they are most needed. To maximize its limited inspector resources, FAA has been working toward risk-based safety oversight systems for air carriers, repair stations, and manufacturers. These systems target inspector resources to areas of greatest risk. However, unless FAA develops a reliable staffing model, it will not be able to effectively use its inspectors. At the direction of Congress, the National Research Council completed a study[3] of FAA's current methods for allocating inspector resources in September 2006 and recommended that FAA develop a new staffing model.

It has been over a year since the Council study, and FAA is still in the early stages of developing a new staffing method. FAA has established an interim target date to assess current staffing methods and begin identifying the elements of the next generation staffing tool by September 2008. FAA recently finalized milestones to develop and implement the new model and plans to begin using it by October 2009. Making measurable progress toward a new staffing model is a key watch item, and we will continue to monitor this important initiative.

Establishing Funding Levels for the Airport Improvement Program

FAA is requesting $2.75 billion for the Airport Improvement Program (AIP) in FY 2009. The AIP supports the airport system by providing funds to primarily enhance safety and security, maintain the infrastructure, increase capacity, and mitigate airport noise in surrounding communities. Because Vision 100[4] expired at the end of FY 2007, and a long term reauthorization is not yet in place, there are no funding targets for FY 2008 and beyond. The FY 2009 request is again a substantial reduction from the FY 2007 authorized level in Vision 100. Congress is now faced with the challenge of determining AIP funding levels for FY 2009.

Aviation congestion continues to be a top priority for the Secretary. However, it is increasingly difficult for airports and FAA to meet this challenge with no AIP

[3] "Staffing Standards for Aviation Safety Inspectors," September 20, 2006.
[4] Vision 100 - Century of Aviation Reauthorization Act, Pub. L. No. 108-176 (2003).

authorization. The Omnibus Appropriations Bill,[5] which funded FAA in FY 2008, provided an appropriation for the AIP account but did not extend the AIP contract or obligation authority beyond December 31, 2007. As a result, FAA no longer has the contract authority to issue new AIP grants, although it can fund previously issued grants.

According to FAA, it is using excess funds on existing grants to cover its operating costs until a temporary or final reauthorization is passed. However, the current authority to spend money from the Trust Fund expires at the end of this month.

The uncertainty of future AIP grant authority makes it difficult for the Nation's airports to determine when, or if, they will receive their AIP grants. Smaller airports are more vulnerable because they have fewer revenue sources than large airports. Many smaller airports must suspend projects until they are assured of AIP grant funds. Lengthy delays in the release of AIP grants could prevent airports from taking full advantage of the construction season and delay important safety and capacity projects that could reduce congestion in the busy travel season ahead.

I would now like to discuss these matters in greater detail.

[5] H. Rep. No. 2764 (2008).

FAA'S FY 2009 BUDGET

FAA is requesting $14.6 billion for FY 2009, a decrease of $272 million from its FY 2008 enacted budget. As with last year's submission, FAA is presenting its budget request in a format and structure that mirror its plans to shift from the current excise taxes to a structure that relies on, among other things, cost-based user fees beginning in FY 2010. FAA's budget request funds four accounts as follows:

- **For the Safety and Operations account,** FAA is requesting $2.05 billion (14 percent of FAA's total budget)—an increase of $159 million over the FY 2008 budget for comparable functions. For safety-related functions, such as safety inspectors and certification activities, FAA is requesting $1.19 billion, an increase of $52 million from this year's levels.
- **For the Air Traffic Organization (ATO) account,** FAA is requesting $9.67 billion (66 percent of FAA's total budget)—an increase of $309 million over comparable functions in the FY 2008 enacted budget. For the salaries and expenses of operating the ATO, FAA is requesting $7.079 billion—an increase of $113 million over this year's levels. FAA is also requesting $2.59 billion in capital program funds for the ATO—an increase of $196 million from this year's budget. Capital projects associated with other functions, such as safety, are now included in the Safety and Operations account.
- **For the AIP account,** FAA is requesting $2.75 billion (19 percent of FAA's total budget)—a decrease of $765 million from the FY 2008 enacted levels. We note that since FY 2001, the AIP account has been funded at about $3.2 billion or higher each year.
- **For the Research, Engineering, and Development (RE&D) account,** FAA is requesting $171 million (1 percent of FAA's total budget)—an increase of $24 million from the FY 2008 request.

To demonstrate in terms of the old and new budget presentation, table 1 summarizes the FY 2009 budget request in the FY 2007 four-account format.

Table 1. FAA Budget FY 2007 Through FY 2009
($ in Millions)

Account	FY 2007 Enacted	FY 2008 Enacted*	FY 2009 Request
Operations	$8,374	$8,740	$8,998
Facilities & Equipment	$2,518	$2,514	$2,724
Airport Improvement Program	$3,515	$3,515	$2,750
Research, Engineering, and Development	$130	$147	$171
Total	**$14,537**	**$14,915**	**$14,643**

Source: FAA's FY 2009 budget request
*Figures may not add up due to rounding.

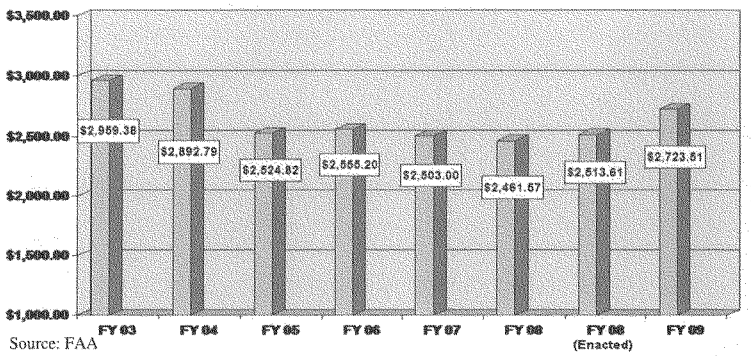
The FY 2009 budget would be financed by the two mechanisms currently used to fund FAA: excise taxes deposited into the Airport and Airway Trust Fund and a General Fund contribution. FAA estimates that the Trust Fund will contribute $11.9 billion, or 81 percent, toward its total budget and the General Fund will contribute $2.7 billion, or 19 percent. These amounts are similar to budget levels in previous years. The exhibit to this statement shows the past and projected revenues and uncommitted balances for the Trust Fund.

PERSPECTIVES ON FAA'S CAPITAL ACCOUNT

FAA is at a crossroads with its efforts to modernize the National Airspace System. The Agency will be challenged to keep ongoing projects on track, maintain aging facilities, and develop and implement NextGen initiatives. For FY 2009, FAA is requesting $2.7 billion for capital funding, an increase of 11 percent over last year's level. At the request of this Subcommittee, we are (1) updating our work on progress and problems with 18 major acquisitions valued at $17.5 billion and (2) reviewing how existing projects will be impacted by FAA's efforts to implement NextGen. We will issue our report later this month.

Between FY 2005 and FY 2008, FAA's capital account has remained steady at $2.5 billion annually (see figure 1 below) and has mainly focused on sustaining the existing system. As we have previously reported, increasing operations costs (mostly salary-driven) have crowded out capital investments. As the capital account stayed relatively flat, FAA deferred, cancelled, or postponed decisions on projects such as Controller-Pilot Data Link Communications (a way for controllers and pilots to share information that is analogous to wireless e-mail) and the Local Area Augmentation System (a satellite-based precision navigation system).

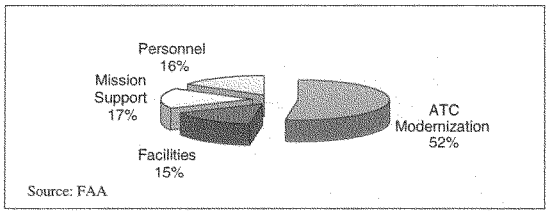
Figure 1. F&E Funding, FY 2003 to FY 2009
(Totals in Millions)



Source: FAA

From FY 2003 to FY 2007, FAA invested slightly over half of its capital budget in modernizing air traffic control equipment; the remainder was used for personnel, mission support, and facilities (see figure 2).

Figure 2. Breakout of FAA's Capital Budget, FY 2003 to FY 2007



Source: FAA

FAA is starting a new chapter in NAS modernization with NextGen, and the Agency's capital account is now being shaped by NextGen initiatives. Over $630 million in FY 2009 will be dedicated to NextGen-related programs, which include ADS-B and SWIM. Of this amount, $203 million is dedicated to eight new developmental initiatives, such as NextGen system development, trajectory-based operations, and flexible terminals and airports.

Progress and Problems With FAA Acquisitions

Overall, we are not seeing the significant cost growth and schedule slips with FAA major acquisitions that occurred in the past. This is because FAA has taken a more incremental approach to managing major acquisitions. When comparing revised baselines, only 2 of the 18 projects we reviewed have experienced additional cost growth ($53 million) and delays (5 years) since our last report in 2005.[6] However, from program inception, six programs have experienced cost growth of close to $4.7 billion and schedule delays of 1 to 12 years.

While FAA's incremental approach may reduce risk in the near term, it has left several programs with no clear end-state and less visibility into how much they will ultimately cost. A case in point involves modernizing facilities that manage traffic in the vicinity of airports, commonly referred to as "terminal modernization."

In 2004, faced with cost growth of over $2 billion for the Standard Terminal Automation Replacement (STARS) program, FAA rethought its terminal modernization approach and shifted to a phased process, committing STARS to just 47 sites at an estimated cost of $1.46 billion. FAA's original plan was to deploy the system to 172 sites for $940 million. FAA renamed this modernization effort the Terminal Automation Modernization-Replacement (TAMR) initiative.

In 2005, FAA approved modernizing displays through the TAMR program (referred to as TAMR Phase 2) by replacing legacy equipment at five additional small sites and replacing the aging displays at four large, complex facilities. However, this leaves over 100 sites still in need of modernization. Although FAA has not decided how it will modernize these sites, its FY 2008 budget submission indicates that this effort could cost over $1 billion. FAA is requesting $31.2 million for terminal modernization efforts for FY 2009.

There is no defined end-state for terminal modernization, and past problems with developing and deploying STARS leave FAA in a difficult position to begin introducing NextGen capabilities. Future terminal modernization costs will be shaped by (1) NextGen requirements, (2) the extent of FAA's terminal facilities consolidation, and (3) the need to replace or sustain existing (legacy) systems that have not been modernized.

[6] OIG Report Number AV-2005-061, "Status of FAA's Major Acquisitions: Cost Growth and Schedule Delays Continue To Stall Air Traffic Modernization," May 26, 2005.

Several Ongoing Projects Require Management Attention and Oversight

There are several ongoing acquisition programs that warrant attention because of their importance to NextGen and potential cost increases, schedule slips, or diminishing benefits.

En Route Automation Modernization (ERAM): This program replaces the hardware and software at facilities that manage high-altitude traffic and is a key platform for NextGen. With an estimated cost of $2.1 billion, ERAM is one of the largest, most complex acquisitions in FAA's modernization portfolio. FAA is requesting $203 million for ERAM for FY 2009, a reduction from the FY 2008 level of $369 million. ERAM is currently on schedule for deployment at the Salt Lake center in 2008, but considerable testing and integration work lies ahead. ERAM cost increases and schedule slips would have a cascading impact on other capital programs and could directly impact the overall transition to NextGen.

ASDE-X: ASDE-X is an important safety initiative to reduce the risks of accidents on runways. In FY 2008, FAA requested $37.9 million for the ASDE-X program. For FY 2009, it is requesting $32.7 million.

In October 2007, we reported[7] that the ASDE-X program is at risk of not meeting its goal to commission all 35 ASDE-X systems for $549.8 million by 2011 and may not achieve all planned safety benefits. As of FY 2007, FAA had expended about $314 million (57 percent) and obligated about $378 million (69 percent) of the planned funding. However, FAA had only deployed 11 of 35 systems for operational use. FAA must now deploy the 24 remaining systems at the more complex airports with less than half of the planned funds remaining.

In July 2007, FAA commissioned its ninth ASDE-X system for operational use at Louisville International Airport after addressing several longstanding technical problems. The Louisville system was the first to be deployed with the capability to alert controllers of potential collisions on intersecting runways and converging taxiways. However, under certain circumstances, when aircraft are operating on intersecting runways, the system still does not provide timely alerts to controllers. Moreover, FAA did not test the converging taxiway capability before operations began, and the system is susceptible to dropping targets during heavy precipitation.

FAA also faces challenges in meeting the unique needs of airports scheduled to receive ASDE-X. For example, in August 2007, FAA accelerated ASDE-X deployment at Chicago O'Hare International Airport. However, in January 2008, air traffic controllers expressed concern about the system's ability to accurately detect aircraft and vehicles during snow storms. FAA must focus on resolving operational performance issues before implementing key ADSE-X safety capabilities.

[7] OIG Report Number AV-2008-004, "FAA Needs To Improve ASDE-X Management Controls To Address Cost Growth, Schedule Delays, and Safety Risks," October 31, 2007.

FAA concurred with our recommendations to help the Agency achieve ASDE-X program goals and improve program management. These include: (1) improving ASDE-X management controls to reduce the risks of further cost growth and schedule delays; (2) resolving operational performance issues with key ASDE-X safety capabilities to reduce the risk of ground collisions on intersecting runways and taxiways, including during inclement weather; and (3) working with airlines and airports to provide safety enhancements that were excluded from the program re-baseline but are vital to reducing the risk of ground collisions caused by pilot and vehicle operator errors. We intend to follow up on these important issues next year.

FAA's Telecommunications Infrastructure (FTI) Program: The FTI program is a major air traffic control program intended to integrate seven FAA-owned and -leased telecommunications networks into a single network to reduce operating costs. FTI is a mission-critical program because its network carries, among other things, voice, radar, and flight data communications for air traffic control. In FY 2008, FAA requested $8.5 million to complete the FTI transition. For FY 2009 and beyond, FTI will be funded out of the Operations Account. For FY 2009, the Agency is planning to spend $186 million to support FTI operations and an additional $19 million for legacy telecommunications systems.

In April 2006, we reported[8] that FTI was unlikely to meet its December 2007 completion date and recommended that FAA improve FTI management controls and develop a realistic master schedule. FAA agreed and tasked the MITRE Corporation to conduct an independent assessment of the FTI master schedule. The assessment identified several risks associated with FAA meeting its transition deadline. Consequently, in August 2006, FAA's Joint Resource Council approved a second re-baseline of FTI's cost and schedule goals, which extended the completion date to December 2008 and increased the overall cost by over $100 million. FAA also reduced the total number of NAS services to be transitioned to FTI from 25,294 to 20,033.

Since we last reported, FAA has made progress transitioning to FTI. To its credit, FAA has delivered 18,025 of 20,033 planned services (as of December 31, 2007). However, we remain concerned about shifting requirements, eroding cost benefits, and risks to air traffic operations during the FTI transition.

Our work shows that the FTI schedule continues to fluctuate. Even though the last baseline significantly reduced the number of services planned for transition, this number has now climbed to 22,049. FAA attributes the increase to "emerging requirements."[9] Because FAA did not include these requirements in the last baseline, it is unclear what can be accommodated within current FTI cost and schedule

[8] OIG Report Number AV-2006-0147 "FAA's Telecommunications Infrastructure Program: FAA Needs To Take Steps To Improve Management Controls and Reduce Schedule Risks," April 27, 2006.

[9] These are requirements for new services that did not exist when the FTI program began, such as FS-21.

parameters. Further, the master schedule does not yet include requirements for moving forward with NextGen efforts. We recognize that these requirements will have to be addressed through adjustments to the FTI program or another effort.

FAA's main goal for FTI was to reduce Agency operating costs. Yet, we found that costs for FTI remain uncertain since FAA still has not validated cost and benefit estimates as agreed after our 2006 report. Although FAA reduced the number of services planned, the overall program cost estimate grew by over $100 million through FY 2017 and will continue to rise with emerging requirements. As costs escalate, cost savings continue to erode. In 2006, when FAA last re-baselined FTI, we estimated that cost savings decreased from $672 million to $442 million, when including sunk costs (previous investments in FTI). FAA also extended its contract for the most expensive legacy system (Leased Interfacility NAS Communications System) for 1 year with three 6-month options—this will further impact cost savings.

FTI continues to experience unscheduled outages that disrupt air traffic control operations. FTI-related outages at Chicago, Memphis, and Jacksonville caused simultaneous loss of primary and back-up FTI services, which led to flight delays. An internal FAA review found that primary and back-up FTI services were installed with inadequate separation (diversity). This problem exists at other locations, including several facilities that manage traffic in New York airspace. FAA must ensure it meets FTI diversity requirements to prevent outages. We will report on FTI later this year.

Air Traffic Management (ATM): This program provides FAA with the ability to manage air traffic and reduce the impacts of severe weather. FAA is requesting $90.2 million for ATM for FY 2009. ATM includes the Traffic Flow Management–Modernization program and the Collaborative Air Traffic Management Technologies program. There is a sense of urgency to complete this effort because the existing TFM hardware and software expires in 2009 and the age of the system prevents further upgrades.

To date, the ATM effort has not experienced cost increases or schedule delays. However, we are concerned about risks and what will ultimately be delivered since FAA and the contractor significantly underestimated the size and complexity of software development for TFM—concerns that have led to significant problems with other FAA modernization projects. FAA baselined the program in 2005 (and scheduled deployment for FY 2011) and has since modified the contract and adjusted the scope of the work. The challenges FAA faces with ATM include: (1) developing complex software and integrating ATM with other NAS systems and (2) determining cost and schedule decisions on the additional segments, which are unknown at this time.

Challenges With NextGen Programs

FAA has established initial cost and schedule baselines for the first segments of two key NextGen initiatives: ADS-B and SWIM. Both programs will require enhanced oversight as FAA begins integrating them with existing systems.

ADS-B: This program provides satellite-based technology that allows aircraft to broadcast their position to other aircraft and ground systems. For FY 2009, FAA is requesting $300 million for ADS-B. In August 2007, FAA awarded a service-based contract for the ADS-B ground infrastructure worth $1.8 billion. FAA estimates that ADS-B will cost about $1.6 billion in capital costs for initial segments of its implementation through 2014, which include the completion of a nationwide ground system for receiving and broadcasting ADS-B signals.

FAA must address several challenges to realize the benefits of ADS-B. These include: (1) gaining stakeholder acceptance and aircraft equipage, (2) addressing broadcast frequency congestion concerns, (3) integrating with existing systems, (4) implementing procedures for separating aircraft, and (5) assessing potential security vulnerabilities in managing air traffic.

As we noted in a hearing before this Subcommittee in October 2007,[10] the implementation of ADS-B is a long-term effort that will require significant investment from Government and industry. Given FAA's history with developing new technologies and its approach to ADS-B, in which the Government will not own the ground infrastructure, we believe this program will require a significant level of oversight. We will report on ADS-B later this year.

SWIM: This program provides FAA with a web-based architecture that allows information sharing among airspace users. For FY 2009, FAA is requesting $41 million for SWIM. In June 2007, FAA baselined the first 2 years of segment 1 (planned to occur between FY 2009 and 2010) for $96.6 million. FAA's latest Capital Investment Plan cost estimate for SWIM is $285 million. Current challenges include the work to determine requirements and interfaces with other FAA systems, including ERAM and ATM. Moreover, SWIM will require integration with other Federal agencies' operations to realize NextGen benefits and develop a robust cyber security strategy and design. While FAA has begun initial efforts, it still needs to establish the architecture, strategy, and design. Additional SWIM segments have yet to be determined, and the cost to fully implement SWIM is unknown.

[10] OIG Testimony Number CC-2007-100, "Challenges Facing the Implementation of FAA's Automatic Dependent Surveillance-Broadcast Program," October 17, 2007.

FAA Must Enhance Its Limited Cost and Schedule Metrics To Monitor NextGen Programs

FAA reports in the FY 2007 Flight Plan and its most recent Performance and Accountability Report that 100 percent of its critical acquisitions were within 10 percent of budget estimates and 97 percent were on schedule. In FY 2006, FAA tracked about 29 projects, including acquisition of new radars. While FAA cost and schedule performance metrics are worthwhile tools, they have limitations that decision makers must understand to properly assess the health of FAA's major acquisitions.

- First, FAA's cost and schedule metrics are "snapshots" in time. They are not designed to address changes in requirements, reductions in procured units, or shortfalls in performance that occur over time.
- Second, FAA's budget metrics compare cost estimates taken during the fiscal year using updated, "re-baselined" cost figures—not estimates from the original baseline. This is why the Wide Area Augmentation System (a satellite-based navigation system) is considered "on budget" even though costs have grown from $892 million to over $3 billion since 1998. Although re-baselining a project is important to obtain reliable cost and schedule parameters, comparisons of revised baselines—absent additional information—do not accurately depict a program's true cost parameters.
- Finally, FAA's schedule metrics used for assessing progress with several programs in 2006 and 2007 were generally reasonable but focused on interim steps or the completion of tasks instead of whether systems met operational performance goals. For example, ASDE-X metrics focused on the delivery of two systems instead of whether the systems entered service or operated as planned. We also found that there are no written criteria for selecting or reporting the milestones, and FAA needs to develop written criteria for offices to improve milestone reporting.

To sufficiently measure progress with NextGen initiatives, FAA will need to explore a wider range of metrics that focuses on promised capabilities and benefits from bundled procedures and multiple systems. In our upcoming report, we will recommend that FAA develop new metrics to assess progress with NextGen with respect to enhancing capacity, boosting productivity, and reducing Agency operating costs.

Much Work Remains To Determine How To Transition Existing Projects to NextGen

In February 2007, we recommended that FAA examine existing projects to determine if they were still needed and, if so, what adjustments would be required. FAA concurred with our recommendation and stated that it has begun this assessment. To

date, however, FAA has not made major adjustments to modernization projects to accelerate NextGen.

According to FAA, approximately 30 existing capital programs will serve as "platforms" for NextGen. Over the next 2 years, FAA must make over 25 critical decisions about ongoing programs. These decisions have significant budget implications and affect all major lines of the modernization effort with respect to automation, communications, navigation, and surveillance.

- **Automation:** FAA will approve a limited number of "candidate capabilities" and enhancements for the second major ERAM software release. In FY 2008, FAA will identify the requirements and cost parameters for new capabilities based on ERAM targeted for the 2012 to 2018 timeframe. FAA will also have to address what changes are needed to modernize its terminal facilities and whether or not it will pursue a "common automation platform" for terminal and en route environments in the future.
- **Communications:** Between FY 2008 and FY 2009, FAA plans to decide how to move forward with data communications and when to restart a data link communications program for controllers and pilots. Costs remain uncertain, and FAA faces a myriad of complex questions about its overall technical approach, implementation plans, and rulemaking initiative timeline.
- **Navigation:** FAA intends to decide how much of the existing ground-based navigation system will be retained. Specifically, in FY 2008, FAA will consider how best to move forward with the next generation precision and approach landing system and whether to pursue the Local Area Augmentation System—which has been in research and development status since FY 2004.
- **Surveillance:** As part of the effort to move forward with ADS-B, FAA must decide how to best incorporate "fusion" into existing air traffic control automation systems. Fusion in this context is defined as taking all surveillance data available for an aircraft and using the best data or combination of data to determine aircraft position and intent. Industry groups have asked FAA to accelerate its work on fusion.

FAA Needs To Refine Its Plans To Move Forward With NextGen, Reduce Risks, and Focus Investment Decisions

FAA has made progress in developing the NextGen Enterprise Architecture[11] (a technical blueprint), which is planned to be implemented by 2025. FAA has also progressed towards technical roadmaps for the automation, communications, navigation, and surveillance lines of effort. In addition, FAA has decided to rely on

[11] The NextGen Enterprise Architecture is a blueprint that links FAA's core programs and systems to the Agency's mission. This includes the transition from the "as-is" to the "to-be" environment.

the Operational Evolution Partnership (OEP), the Agency's blueprint for enhancing capacity, to help manage and implement NextGen initiatives.

However, planning documents we reviewed, including the NextGen Enterprise Architecture, lack detail with respect to requirements, particularly for automation, that could be used to develop reliable cost estimates and schedule. These documents describe a general path for almost 60 decisions that have to be made through 2025. An October 2007 MITRE Corporation assessment[12] of the Enterprise Architecture highlighted several areas that need improvement, including unresolved technical issues and gaps between the Enterprise Architecture and the NextGen concept of operations. MITRE noted that, in most cases, information in the NextGen Enterprise Architecture remained at too high of a level to be effective.

Costs for NextGen remain uncertain, and FAA needs to establish reasonable expectations for NextGen investments and realistic timeframes for improvements to enhance capacity and reduce delays. At this juncture, FAA needs to pursue the following actions:

- **Conduct a gap analysis of the current NAS and NextGen:** FAA's NextGen architecture does not detail how FAA will transition from the present NAS and the future NextGen architectures, which are considerably different. Understanding this gap is important because one industry analysis we have seen suggests that FAA could face a $50 billion software development effort with NextGen. Until FAA completes a gap analysis, it will not be possible to determine technical requirements that translate into reliable cost and schedule estimates for major acquisitions.
- **Set expectations and establish NextGen funding priorities:** At this point, it is difficult for FAA to determine what to invest in first to move forward with NextGen. FAA needs to identify the highest priority operational improvements (high-density airports; high-altitude, trajectory-based operations; or networked facilities) and systems for NextGen from the large number of possibilities in various planning documents. These priorities should then be reflected in NextGen planning documents and budget requests.
- **Develop an interim architecture for what can be accomplished by 2015:** Because of the significant differences between the current system and the NextGen architecture and concept of operations, some FAA and industry officials believe FAA should develop an interim architecture or "way-point" for the 2015 timeframe that is consistent with plans in the OEP. This would help to bridge the gap between current systems and plans for the future. It would also help FAA to determine reasonable goals, establish priorities, fully identify adjustments to

[12] "Observations, Results, and Recommendations, NextGen v2.0 Assessment," Center for Advanced Aviation Systems Development, MITRE Corporation, October 15, 2007.

existing projects, refine requirements for new systems, and understand complex transition issues.

- **Develop a strategy for acquiring the necessary skill mix to effectively manage and execute NextGen:** In our February 2007 report, we recommended that FAA determine what skill sets and expertise would be required and obtained to manage and execute NextGen initiatives. This includes a robust in-house capability for managing contracts. In response, FAA contracted with the National Academy of Public Administration to assess the skill sets needed. A preliminary report highlighted the need for proficiency in systems integration, managing large-scale programs, and systems engineering, particularly with an understanding of the human factors discipline. A final report is planned for September 2008. FAA must anticipate needed skill sets for NextGen to avoid the problems that have plagued its modernization efforts.

PERSPECTIVES ON FAA'S OPERATIONS ACCOUNT

FAA's operating costs, which primarily consist of salaries and benefits, are the largest portion of FAA's budget, representing about 61 percent of FAA's total budget request. For FY 2009, FAA is requesting $8.998 billion, an increase of $258 million over FY 2008. FAA has a long history of persistent growth in its operating costs, and this will continue to be a significant challenge for the Agency.

In FY 2009, FAA must continue to address air traffic controller and safety inspector attrition. Ensuring that it has the right number of fully certified controllers and inspectors at the right locations remains a key challenge for FAA.

The Expected Surge in Controller Attrition Is Occurring

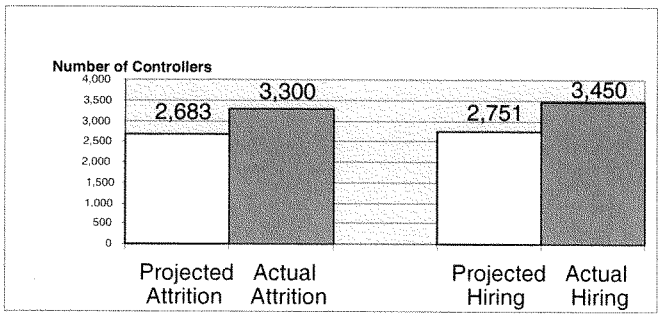
In 1981, following a period of labor unrest, an overwhelming majority of the air traffic control workforce went on strike. When 10,438 striking controllers did not return to work, then-President Reagan fired them. Between 1982 and 1983, FAA hired over 8,700 new controllers. Between 1983 and 1991, FAA hired an average of 2,655 controllers each year. By the end of FY 1992, the controller strike recovery period had ended and controller hiring stabilized to the level of "one retirement—one hire." However, the hiring wave between 1982 and 1991 created a large pool of controllers who have reached or will reach retirement eligibility at roughly the same time.

The long expected surge in controller attrition has begun. Since 2005, 3,300 controllers have left the workforce[13]—only 37 of these left because they had reached the mandatory retirement age of 56. The total rate of attrition was 23 percent higher than FAA had projected. However, FAA has accelerated its hiring efforts to

[13] Attrition includes retirements, resignations, promotions to supervisory or non-controller positions, training failures, and deaths.

fill vacancies. Since 2005, FAA has hired 3,450 new controllers—25 percent more than projected. Still, FAA faces a major challenge as it must hire and train 15,000 new controllers through 2016. Figure 3 shows FAA's estimates and actual numbers for controller attrition and new controller hiring from FY 2005 through FY 2007.

Figure 3. Controller Attrition and Hiring Projected Versus Actual (FY 2005 to FY 2007)



Source: FAA

As a result of increasing controller attrition, FAA is facing a fundamental transformation in the composition of its controller workforce. The overall percentage of controllers in training has grown substantially over the past 3 years. From April 2004 to September 2007, the overall size of the controller workforce remained constant. However, during the same period, the number of controllers in training increased by 1,177, or 53 percent, while the total number of fully certified or CPCs decreased by 1,177 (see table 2). FAA expects the percentage of controllers in training to increase to as much as 30 percent of the workforce over the next 4 years.

Table 2. Total Controller Workforce Composition

Date	CPCs	Controllers In Training*	Total
April 2004	12,328	2,209	14,537
September 2007	11,151	3,386	14,537**
Difference	(-1,177)	+1,177	--

* Includes newly hired or developmental controllers and transferred CPCs in training at new locations.
** This number does not include new hires in training at the FAA Academy.
Source: FAA

While the number of controllers in training has increased significantly since 2004, FAA's reports to its stakeholders do not reflect this change. This is because FAA

does not differentiate between CPCs and controllers in training in its Controller Workforce Plan. FAA only reports the total number of controllers at each location. In our opinion, FAA should report the number of CPCs *and* the number of controllers in training separately for each location. Differentiating those figures by location could provide Congress and the Secretary with a "snapshot" of the controller workforce and provide a benchmark for year-to-year comparisons.

Training New Controllers to the Certified Professional Level Is a Critical Component for Addressing the Surge in Attrition

A major challenge in addressing the surge in controller attrition will be to train transferring and new (or developmental) controllers to the CPC level at their assigned locations. Facility training can take up to 3 years and is the most expensive part of new controller training. Developmental controllers and transferring veteran controllers face a demanding training process at their assigned locations. The training is conducted in stages and consists of a combination of classroom, simulation, and OJT. After controllers complete classroom and simulation training they begin OJT, which is conducted by a CPC who observes and instructs trainee controllers individually as they work the control position.

Controllers in training achieve certification on each position as they move through the various stages. After they have certified on all positions within their assigned area, they are commissioned as a CPC at that facility.

Training new controllers to the CPC level is important for two reasons: (1) only CPCs are qualified to control traffic at *all* positions of their assigned area and (2) only CPCs certified for at least 6 months (at their assigned location) can become OJT instructors for other new controllers. FAA must have enough OJT instructors at all locations if it is to achieve its ambitious hiring and training plans for the next 8 years and beyond.

It is important to note that new controllers who have completed portions of training and have been certified on a position can independently staff that position. However, controllers are not qualified CPCs until they have certified on all positions within their assigned area. In addition, using position-qualified controllers extensively to staff positions can lengthen the time required for them to become CPCs since they are not training on other new positions.

We recently completed an audit of FAA's controller facility training program—our second review of this program since 2004. Overall, we found that the program continues to be extremely decentralized and the efficiency and quality of the training varies from one location to another. We found similar problems in 2004. FAA is taking actions at the national level to get this important program on track. For example, FAA increased the use of contractor training support from 53 facilities in 2004 to 192 facilities in 2007. However, many of FAA's other efforts are still in the

early stages of implementation. To achieve its goals for the controller workforce, FAA will need to take the following actions:

Clarify responsibilities for oversight and direction of the facility training program at the national level. Since the creation of the Air Traffic Organization, FAA has assigned national oversight responsibility for facility training to the Air Traffic Organization's Vice President for Terminal Services and the Vice President for En Route Services. However, the Vice President for Acquisition and Business Services oversees new controller hiring and the FAA Academy training program, and the Senior Vice President for Finance oversees the development of the Controller Workforce Plan. Both play key roles in the controller training process as well.

As a result of these overlapping responsibilities, we found that there is significant confusion at the facility level. During our review, facility managers, training managers, and even Headquarters officials were unable to tell us who or what office was responsible for facility training. In our opinion, FAA needs to clarify responsibility for oversight and direction of the facility training program at the national level and communicate those roles to facility managers.

Establish realistic standards for the level of developmental controllers that facilities can accommodate. FAA plans to increase the number of developmental controllers to over 30 percent of the total controller workforce. This would be the highest percentage of developmental controllers in the past 15 years. In its Controller Workforce Plan, FAA estimates that the controller workforce at each facility can comprise up to 35 percent in developmental controllers and still maintain operations and training.

FAA also estimates that if facilities exceed that amount, training times would significantly increase because the number of developmental controllers would surpass available training capacity. However, we found that many facilities already meet or exceed the 35-percent level. As of September 2007, 61 facilities nationwide (nearly 20 percent of all FAA air traffic control facilities) exceeded that level, compared to just 22 in April 2004. This represents a 177-percent increase in just 3 years. For example, as of September 2007:

- Miami Center had 195 CPCs and 108 developmental controllers (36 percent developmental).
- Oakland Center had 164 CPCs and 100 developmental controllers (38 percent developmental).
- Las Vegas TRACON had 23 CPCs and 23 developmental controllers (50 percent developmental).

Most facility managers, training officers, and union officials we spoke with disagreed with FAA's estimate of an acceptable level of developmental controllers. They stated that, in order to achieve effective controller training while maintaining daily operations, the *maximum* percentage of developmental controllers should be limited to between 20 percent and 25 percent of a facility's total controller workforce.

The difference between these estimates and FAA's maximum percentage is disconcerting, particularly since 61 facilities already exceed the FAA limit. A significant issue is that FAA's 35-percent estimate was originally intended to determine how many developmental controllers could be processed through the FAA Academy—not how many new controllers that could be trained at individual facilities. However, it appears FAA is now using that percentage as a benchmark for all facilities.

FAA Headquarters officials we spoke with agreed that "no one size fits all" when determining how many trainees a facility can accommodate. We agree, given the various sizes and complexities of FAA's more than 300 facilities. In our opinion, FAA needs to re-examine its estimate and identify (by facility) how many developmental controllers facilities can realistically accommodate.

In determining this amount, FAA needs to consider several factors at each location, such as the number of available OJT instructors, available classroom space, the number of available simulators, and the number of recently placed new personnel already in training.

Implement key initiatives proposed in its 2004 Controller Workforce Plan. FAA has not implemented several key initiatives relating to facility training that it first proposed in its December 2004 Controller Workforce Plan. Those included "developing, implementing and enforcing a policy that assigns facility training as a priority second only to operations." This was to be accomplished by (1) placing developmental controllers only at facilities that had available training capacity, (2) requiring facility managers to suspend training *only* for critical operational necessities, and (3) establishing nominal "time-to-certify" metrics and holding managers accountable for achieving those targets. However, FAA never issued this policy.

In addition, FAA has not comprehensively evaluated its facility training program. In its 2004 Controller Workforce Plan, FAA stated it would "conduct a thorough review of facility training to ensure it begins where the Academy ends. This review will take into consideration other efficiency gains identified in this plan and will result in facility training programs tailored to meet the needs of developmental controllers of the future." FAA intended for this effort to help reduce the time it takes new controllers to become CPCs. However, FAA never conducted the evaluation.

To its credit, FAA has successfully implemented an important initiative—increasing the use of training simulators at towers. Tower simulators were recently installed at four towers: Chicago O'Hare, Miami, Ontario, and Phoenix. The simulators are programmed with scenarios and occurrences exclusive to those airports, using actual aircraft with their respective call signs. By using simulators, controllers gain inherent knowledge of a particular airport, its airspace, and application of air traffic procedures for that specific location. The simulators also have a function that writes software for additional airports; this allows controllers from surrounding facilities to utilize the simulators as well.

Results thus far indicate that simulators at towers are a valuable training tool, and managers of the facilities with simulators are pleased with the results. NASA Ames Research Center conducted an evaluation and found that at the Miami tower, it took 60 percent fewer days for developmental controllers to complete ground control training. Further, at Chicago O'Hare, NASA reported that it took developmental controllers 42 percent fewer days to complete ground control training.

FAA plans to install 12 additional simulators this year (6 at large airports and 6 at the FAA Academy) and 12 next year (at other airports). FAA must ensure that this effort remains on track to capitalize on the significant success that this training has demonstrated.

We are conducting other congressionally requested reviews of related controller issues. At the request of Chairman Costello, we are reviewing controller training failures (developmental and transferring controllers who fail training either at the FAA Academy or at their assigned facility). At the request of Senator Durbin of Illinois, we are reviewing factors that could affect controller fatigue. This issue was identified by the National Transportation Safety Board after the crash of Comair 5191 in 2006. We are focusing our current efforts at Chicago O'Hare Tower, Chicago TRACON, and Chicago Center but may review other locations and FAA's national efforts based on the results of our work at Chicago.

Oversight of a Dynamic Aviation Environment Requires Strategic Inspector Placement and a Reliable Staffing Model

Safety is FAA's highest priority. FAA and the U.S. aviation industry have experienced one of the safest periods in aviation history. While much of the credit for this impressive safety record is due to safety systems that air carriers have built into their operations, FAA regulations and inspectors play an important role in providing an added layer of safety oversight. This oversight covers a vast network of operators and functions, which make up the largest, most complex aviation system in the world (see table 3 below).

Table 3. FAA Inspectors' Workload

Commercial Air Carriers	118	Flight Instructors	89,396
Repair Stations	4,978	FAA Designee Representatives	11,292
Active Pilots	749,834	Aircraft	319,549
Approved Manufacturers	1,647	FAA-Licensed Mechanics and Repairmen	361,273

Source: FAA

FAA's approximately 4,100 inspectors must oversee both domestic and foreign aspects of these operations. This task is made more difficult by the rapidly changing aviation environment. We see two issues that warrant attention this year: FAA must (1) maximize risk-based oversight programs and (2) develop and implement a reliable staffing model to ensure it has a sufficient number of inspectors where they are most needed.

FAA Needs Effective Oversight Systems To Maximize Inspector Resources

To maximize its limited inspector resources, FAA has been working toward risk-based safety oversight systems for air carriers, repair stations, and manufacturers. These systems target inspector resources to areas of greatest risk.

FAA has worked to move its safety oversight for aircraft repair stations to a risk-based system over the past 2 years. However, FAA's new system does not include a process for overseeing critical repairs performed by non-certificated repair facilities. In December 2005, we reported[14] that FAA must understand the full extent and type of work that is being performed by non-certificated repair facilities. These facilities are not licensed or routinely visited by FAA inspectors but perform critical maintenance, such as engine replacements. FAA's efforts to identify which non-certificated repair facilities perform this type of maintenance for air carriers are still underway.

FAA will also need to modify its risk-based system for manufacturers so that inspectors can more effectively oversee manufacturing operations in today's complex aviation environment. FAA's current oversight system does not take into account the increasingly prominent role that aircraft parts and component suppliers now play in aviation manufacturing. In the past, manufacturers built the majority of their aircraft within their own manufacturing facilities using their own staff. Now, manufacturers use domestic and foreign part suppliers to build large sections of their aircraft. Given

[14] OIG Report Number AV-2006-031, "Review of Air Carriers' Use of Non-Certificated Repair Facilities," December 15, 2005.

these changes, FAA needs to strengthen its system for overseeing aircraft and aircraft part suppliers so that its oversight is effective and relevant.

FAA Needs a Reliable Staffing Model To Strategically Place Inspectors

In addition to targeting inspector resources through risk-based oversight, FAA must have a reliable staffing model on which to base its inspector assignments. FAA has made at least two attempts to develop a staffing model to determine the number of inspectors needed and the best locations for placement. Neither model, however, provided FAA with an effective approach for allocating inspector resources.

Last year, FAA's hiring efforts kept pace with retirements, and the Agency ended the year with 133 additional inspectors over FY 2006 levels. Because of staffing gains in FY 2007 to 2008, FAA's budget request for FY 2009 does not include funding for any additional inspectors over the FY 2008 levels. However, FAA must continue to closely oversee this hiring effort since nearly half of the workforce will be eligible to retire within the next 5 years. FAA will never have an inspection workforce that is large enough to oversee every aspect of aviation operations, but it must develop a reliable staffing model in order to effectively use its inspector resources.

At the direction of Congress, the National Research Council evaluated FAA's current methods for allocating inspector resources in September 2006. This study reported similar concerns that we identified in past reports—that FAA's current method of allocating inspectors is antiquated and must be redesigned to effectively target inspectors to those areas of higher risk. The Council also reported that the changing U.S. and global aviation environments will be key drivers of future inspector staffing needs. For example, airlines' outsourcing of aircraft maintenance, FAA's shift to a system safety oversight approach, and safety inspectors' attrition and retirement are all important factors that must be considered in determining staffing needs.

It has been over a year since the Council study, and FAA is still in the early stages of developing a new staffing method. FAA has established an interim target date to assess current staffing methods and begin identifying the elements of the next generation staffing tool by September 2008. FAA recently finalized milestones to develop and implement the new model and plans to begin using it by October 2009. Making measurable progress toward a new staffing model is a key watch item, and we will continue to monitor this important initiative.

ESTABLISHING FUNDING LEVELS FOR AIRPORTS

Airport Improvement Program

FAA is requesting $2.75 billion for the AIP in FY 2009. Because Vision 100 expired at the end of FY 2007, and a long term reauthorization is not yet in place, funding targets do not exist for FY 2008 and beyond. The FY 2009 request is again a substantial reduction from the FY 2007 authorized level in Vision 100. Congress is now faced with the challenge of determining AIP funding levels for FY 2009.

The AIP supports the airport system by providing funds to primarily enhance safety and security, maintain the infrastructure, increase capacity, and mitigate airport noise in surrounding communities. AIP authorized funding has steadily increased over the last 9 years. Since 2001, the AIP has been authorized at $3.2 billion or higher each year. The House passed the FAA Reauthorization Act of 2007,[15] which would have provided from $3.8 billion to $4.1 billion per year for FY 2008 through FY 2011. The FY 2007 and 2008 budget request for AIP funding were also $2.75 billion—nearly $1 billion less than authorized under Vision 100 for FY 2007. However, Congress has provided FAA with $3.5 billion in AIP funding each year since FY 2005.

Aviation congestion continues to be a top priority for the Secretary. However, it is increasingly difficult for airports and FAA to meet this challenge with no AIP authorization. The Omnibus Appropriations Bill, which funded the FAA in FY 2008, provided an appropriation for the AIP account but did not extend the AIP contract or obligation authority beyond December 31, 2007. As a result, FAA no longer has the contract authority to issue new AIP grants, although it can fund previously issued grants. According to FAA, it is using excess funds on existing grants to cover its operating costs until a temporary or final reauthorization is passed. However, the current authority to expend money from the Trust Fund expires at the end of this month.

The uncertainty of future AIP grant authority makes it difficult for the Nation's airports to determine when, or if, they will receive their AIP grants. Smaller airports are more vulnerable because they have fewer revenue sources than large airports. Many smaller airports must suspend projects until they are assured of AIP grant funds. Lengthy delays in the release of AIP grants could prevent airports from taking full advantage of the construction season and delay important safety and capacity projects that could reduce congestion in the busy travel season ahead.

With growing demands for airport improvement projects and potentially less AIP funding available, AIP funds must be directed to the Nation's highest priority projects

[15] H. Rep. No. 2881 (2007).

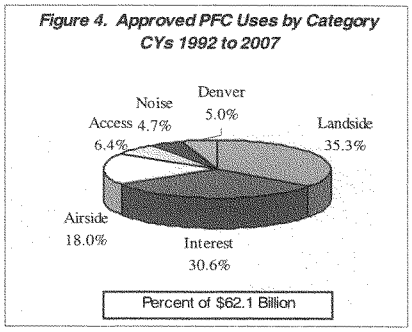
while meeting the unique needs of small airports. Our recent audit on the AIP[16] found that FAA policies and procedures, for the most part, ensure that high priority projects are funded with AIP funds. We also found, however, that AIP Military Airport Program set-asides (MAP) can provide funds for low priority projects at an airport that meets set-aside program requirements while higher priority projects at other airports could go unfunded.

We recommend that FAA monitor and track MAP projects to ensure that the MAP is achieving its intended goal to enhance capacity and reduce congestion in metropolitan areas. When MAP projects do not meet this goal, FAA should re-direct the funding toward other projects at MAP airports that could potentially enhance capacity and reduce congestion in metropolitan areas or projects that enhance the overall National Airspace System. These include runway extensions, runway rehabilitations, or other safety or capacity projects.

Passenger Facility Charges

In addition to AIP funds, passenger facility charges (PFC) have become an important funding mechanism for airports. Between 1992 and 2007, FAA approved the collection of $62.1 billion in PFCs. Of this amount, airports have collected approximately $24.7 billion, with another $2.7 billion anticipated for 2008. In comparison, airports received about $38.7 billion in AIP grants between 1992 and 2007, with FAA requesting another $2.75 billion for 2009.

Overall, airports anticipate using 35.3 percent of PFC collections to finance landside projects (e.g., terminals, security, and land), another 30.6 percent for bond interest payments, 18 percent for airside projects (e.g., runways, taxiways, and equipment), 6.4 percent for access roadways, 4.7 percent for noise abatement, and 5.0 percent for the Denver International Airport (see figure 4).[17]



Currently, PFCs are capped at $4.50 per segment of flight (a maximum of $18.00 on a round trip). The current cap on PFCs is an important matter for this Subcommittee and has significant implications for major airports' capital expenditure plans. Over 77 percent (285 of 370) of the airports are approved to collect the maximum PFC charge. The current cap has led some airports to collect

[16] OIG Report Number AV-2008-002, "Prioritization of Airport Improvement Program Funding," October 26, 2007.
[17] FAA tracks Denver's PFC separately due to its large size and because it was used to fund the new airport, not specific projects.

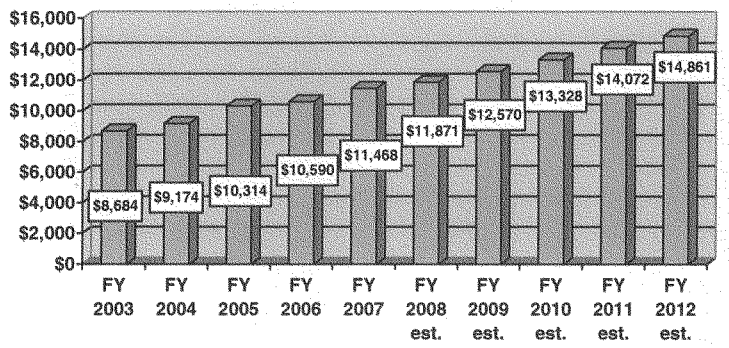
PFCs for extremely long periods of time to cover the cost of their projects. These include: Bentonville, Arkansas (41 years); Miami, Florida (35 years); Denver, Colorado (34 years); and Raleigh, North Carolina (29 years). Moreover, based on 2007 data, 48 percent of airports collecting PFCs have set collection periods of longer than 10 years. Other airports, such as Chicago O'Hare International Airport, anticipate future increases in the cap as part of their financing plans.

The FAA Reauthorization Act of 2007, as passed by the House, increases the PFC ceiling to $7.00 from the current limit of $4.50 per trip segment. Airport associations support this increase in the PFC ceiling. However, one airline association has stated its concern that approval for airport improvement projects, especially those funded through the PFC program, does not provide airlines with a meaningful role in those critical decisions. Determining how future airport projects are funded and what the levels of AIP funding and PFC charges should be are important issues as the Congress decides how best to finance FAA.

That concludes my statement, Mr. Chairman. I would be happy to address any questions you or other Members of the Subcommittee may have.

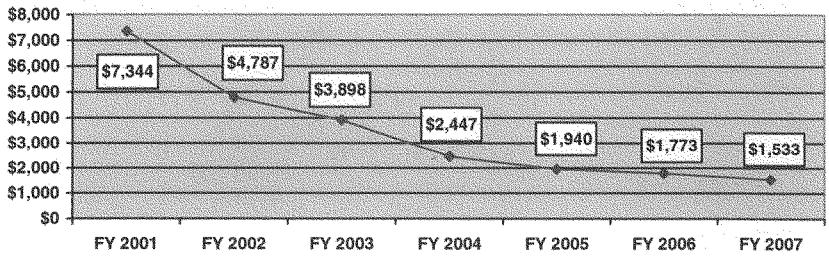
EXHIBIT.

Figure 5. Airport and Airway Trust Fund Tax Revenues FY 2003 to FY 2012
($ in Millions)



Source: FAA

Figure 6. Airport and Airway Trust Fund Uncommitted Balance, FY 2001 to FY 2007
($ in Millions)



Source: FAA

U.S. House of Representatives
Committee on Transportation and Infrastructure

James L. Oberstar
Chairman

David Heymsfeld, Chief of Staff
Ward W. McCarragher, Chief Counsel

Washington, DC 20515

February 11, 2008

John L. Mica
Ranking Republican Member

James W. Coon II, Republican Chief of Staff

The Honorable Robert Sturgell, Acting Administrator
Federal Aviation Administration
800 Independence Ave., S.W., #1010
Washington, DC 20591

Dear Administrator:

On February 7, 2008 the Committee on Transportation and Infrastructure held a hearing entitled "The President's FY09 Federal Aviation Administration Budget". I would ask the Federal Aviation Administration respond to the following questions-for-the-record:

- As you know, Unmanned Aircraft Systems are an increasingly valuable tool in our national security and homeland defense arsenal, and are potentially useful for civil applications such as during the recent California fires. I understand Global Hawk operations at Beale AFB are restricted to 2 flights a week, while a minimum of 5-6 are required to meet military requirements. The FAA cites lack of manpower for processing and tracking Global Hawk flights as one of principal reasons for current restrictions. What are your plans to solve the flight restrictions at Beale and acquire sufficient manpower resources?

- I also understand FAA lacks sufficient manpower and resources to set safety standards before FY14 for integrating growing UAV force into the national airspace. What is your plan for setting standards soon to more quickly integrate the growing fleet of UAVs into the national airspace? What resources do you need to establish standards for UAV operations sooner than FY14?

Thank you for your kind attention to this letter and please let me know if you have any further questions.

Sincerely,

John L. Mica
Ranking Republican Member

3/06/08

RESPONSE BY ACTING ADMINISTRATOR ROBERT A. STURGELL, FEDERAL AVIATION ADMINISTRATION (FAA), TO QUESTIONS FOR THE RECORD FROM RANKING MEMBER JOHN L. MICA

QUESTION 1: As you know, Unmanned Aircraft Systems are an increasingly valuable tool in our national security and homeland defense arsenal, and are potentially useful for civil applications such as during the recent California fires. I understand Global Hawk operations at Beale AFB are restricted to 2 flights per week, while a minimum of 5-6 are required to meet military requirements. The FAA cites the lack of manpower for processing and tracking Global Hawk flights as one of the principal reasons for current restrictions. What are your plans to solve the flight restrictions at Beale and acquire sufficient manpower resources?

RESPONSE: The FAA is working closely with the U.S. Air Force to solve the operational concerns at Beale AFB (located approximately 45 miles north of Sacramento, California). Global Hawk, while undoubtedly a critical military asset, was not designed to fly and be integrated into the U.S. National Airspace System (NAS). The system was designed to fly in and over a theater of war where airspace is tightly controlled by the military and no civil traffic is allowed. The FAA worked closely with the U.S. Air Force to find adequate methods to safely protect the flying public and people and property on the ground. The restriction to limit flying to 2 days per week was instituted in January, 2007, due to a technical flaw in the Global Hawk system at that time that required the implementation of extra separation precautions by FAA air traffic control to ensure an appropriate level of safety is maintained.

That and other technical flaws have been corrected, and the FAA is now participating with the U.S. Air Force in test flights to insure that all known technical issues have been resolved. Once satisfactorily completed, the FAA will collaborate with Beale AFB to address their need for increased operational missions.

QUESTION: I also understand FAA lacks sufficient manpower and resources to set safety standards before FY14 for integrating growing UAV force into the national airspace. What is your plan for setting standards soon to more quickly integrate the growing fleet of UAVs into the national airspace? What resources do you need to establish standards for UAV operations sooner than FY14?

RESPONSE: The FAA applies resources first to meet our primary mission of supporting the continued operational safety of the civilian fleet in our national airspace. To address the potential that Unmanned Aircraft Systems (UAS) have on our nation, the FAA's Aviation Safety Organization established the Unmanned Aircraft Program Office in FY2006. For the past 2 years, the Program Office has focused its resources on meeting the most urgent needs: military access, standards development, civil access and international leadership. The following summarizes highlights of each of the 4 areas:

- **Military Access.** The FAA continues to work with the Department of Defense to find ways of safely approving military access of UAS into the national airspace. For example, on September 24, 2007, we finalized a Memorandum of Agreement with DOD that provides unprecedented access for a large segment of their arsenal.
- **Standards Development.** For UAS to be completely integrated into the NAS, avionics standards, as well as certification standards, need to be developed.
    - The FAA is focusing first on the immediate need for regulations for small UAS. We are establishing an Aviation Rulemaking Committee made up of a broad representation of industry, government, and academia to draft potential regulations for small UAS. This activity is projected to be completed in approximately 2 years. These UAS will be operated in daylight hours, with visual line of sight from the pilot, and at a relatively low weight and speed. The FAA Program Office will then focus on developing safety and certification standards for larger, more complex UAS.
    - Avionics standards are being developed by the RTCA, an industry forum recognized as a Federal Advisory Committee. Minimum aviation system performance standards necessary for complete airspace access are scheduled for delivery around calendar year 2019.

In both of these cases, complex technical work needs to be accomplished. Additional resources will not shorten these schedules.

- **Civil Access.** The FAA has granted 17 experimental airworthiness certificates over the past two years, and we continue to look for better ways to grant civil access for UAS. FAA has developed an agreement with the New Mexico State University (NMSU) in Las Cruces, New Mexico that creates the first UAS Flight Test Center. The Flight Test Center will allow research and development activity to be conducted by companies that are not ready for the experimental application process. This agreement provides access for companies by allowing NMSU to establish individual agreements with them. The FAA will be provided with critical data that will enable the development of future standards.
- **International Leadership.** The FAA continues to lead the world in access to airspace for UAS, and plans to play a leadership role as the international community looks towards standards development. Recently, the Manager of the FAA Program Office was named as the U.S. Delegate to the newly formed International Civil Aviation Organization UAS Study Group. In addition, the FAA was specifically asked to be the Deputy Chairman of the European Standards body, EUROCAE WG-73. We plan to utilize these opportunities to harmonize UAS standards and airspace access with the global community. Harmonized standards are vital to the success of U.S. manufacturers.

The advent of UAS has challenged the entire aviation community. It is critical that the record-setting safety levels experienced in the U.S. today continues. UAS need time to mature as any other new technology. The FAA is committed to working as diligently as possible to allow for the safe, progressive integration of UAS into the national airspace.

Consolidated Listing of FAA Facilities Requiring Repairs
En Route Facilities

Facility	Project Description
Ongoing Projects	
Atlanta ARTCC (ZTL) Los Angeles ARTCC (ZLA) Fort Worth ARTCC (ZFW) Jacksonville ARTCC (ZJX) Boston ARTCC (ZBW) Washington ARTCC (ZDC) Minneapolis ARTCC (ZME) New York ARTCC (ZNY) Albuquerque ARTCC (ZAB) Chicago ARTCC (ZAU)	Administration Wing Mini Mod: Improve fire/life safety levels and mitigate risks to operations through the installation of automatic fire sprinkler systems; improve employee safety through asbestos abatement; mitigate operational risks associated with roof leaks, obsolete piping systems and general infrastructure failure modes; and reduce operational risks and outyear capital liabilities associated with existing infrastructure backlog ($4 liability for each $1 of backlog).
Ongoing Projects	
Los Angeles ARTCC (ZLA) Oakland ARTCC (ZOA) Anchorage ARTCC (ZAN) Miami ARTCC (ZMA)	Control Wing Mod 4 (old M1 room/Automation Wing 2nd Floor: Improve fire/life safety levels and mitigate risks to operations through the installation of automatic fire sprinkler systems; improve employee safety through asbestos abatement; mitigate operational risks associated with roof leaks, obsolete piping systems and general infrastructure failure modes; and reduce operational risks and outyear capital liabilities associated with existing infrastructure backlog ($4 liability for each $1 of backlog).
OnGoing Projects	
Atlanta ARTCC (ZTL) Los Angeles ARTCC (ZLA) Fort Worth ARTCC (ZFW) Jacksonville ARTCC (ZJX) Boston ARTCC (ZBW) Washington ARTCC (ZDC) Minneapolis ARTCC (ZME) New York ARTCC (ZNY) Albuquerque ARTCC (ZAB) Chicago ARTCC (ZAU) Cleveland ARTCC (ZOB) Anchorage ARTCC (ZAN) Miami ARTCC (ZMA) Seattle ARTCC (ZSE) Oakland ARTCC (ZOA) Salt Lake City ARTCC (ZLC) Denver ARTCC (ZDV) Houston ARTCC (ZHU) Kansas City ARTCC (ZKC)	Miscellaneous Sustain Projects: mitigate operational risks associated with roof leaks, obsolete piping systems and general infrastructure failure modes; and reduce operational risks and outyear capital liabilities associated with existing infrastructure backlog ($4 liability for each $1 of backlog).

Indianapolis ARTCC (ZID) Memphis ARTCC (ZME)	
New Projects	
Atlanta ARTCC (ZTL) Seattle ARTCC (ZSE) Fort Worth ARTCC (ZFW) Boston ARTCC (ZBW) Jacksonville ARTCC (ZJX) Denver ARTCC (ZDV) Albuquerque ARTCC (ZAB) Minneapolis ARTCC (ZME) Salt Lake City ARTCC (ZLC)	Control Wing Mod 4 (old M1 room/Automation Wing 2nd Floor: Improve fire/life safety levels and mitigate risks to operations through the installation of automatic fire sprinkler systems; improve employee safety through asbestos abatement; mitigate operational risks associated with roof leaks, obsolete piping systems and general infrastructure failure modes; and reduce operational risks and outyear capital liabilities associated with existing infrastructure backlog ($4 liability for each $1 of backlog).
New Projects	
Atlanta ARTCC (ZTL) Los Angeles ARTCC (ZLA) Fort Worth ARTCC (ZFW) Jacksonville ARTCC (ZJX) Boston ARTCC (ZBW) Washington ARTCC (ZDC) Minneapolis ARTCC (ZME) New York ARTCC (ZNY) Albuquerque ARTCC (ZAB) Chicago ARTCC (ZAU) Cleveland ARTCC (ZOB) Anchorage ARTCC (ZAN) Miami ARTCC (ZMA) Seattle ARTCC (ZSE) Oakland ARTCC (ZOA) Salt Lake City ARTCC (ZLC) Denver ARTCC (ZDV) Houston ARTCC (ZHU) Kansas City ARTCC (ZKC) Indianapolis ARTCC (ZID) Memphis ARTCC (ZME)	Infrastructure Failure Mode mitigation projects: mitigate operational risks associated with roof leaks, obsolete piping systems and general infrastructure failure modes; and reduce operational risks and outyear capital liabilities associated with existing infrastructure backlog ($4 liability for each $1 of backlog).
New Projects	
Atlanta ARTCC (ZTL) Los Angeles ARTCC (ZLA) Fort Worth ARTCC (ZFW) Jacksonville ARTCC (ZJX) Boston ARTCC (ZBW) Washington ARTCC (ZDC) Minneapolis ARTCC (ZME) New York ARTCC (ZNY) Albuquerque ARTCC (ZAB) Chicago ARTCC (ZAU)	Miscellaneous Sustain Projects: mitigate operational risks associated with roof leaks, obsolete piping systems and general infrastructure failure modes; and reduce operational risks and outyear capital liabilities associated with existing infrastructure backlog ($4 liability for each $1 of backlog).

Cleveland ARTCC (ZOB) Anchorage ARTCC (ZAN) Miami ARTCC (ZMA) Seattle ARTCC (ZSE) Oakland ARTCC (ZOA) Salt Lake City ARTCC (ZLC) Denver ARTCC (ZDV) Houston ARTCC (ZHU) Kansas City ARTCC (ZKC) Indianapolis ARTCC (ZID) Memphis ARTCC (ZME)	

Planned FY2008 ATCT/TRACON Modernization-Sustainment Projects

Location	Project Description
ANDREWS AIR FORCE BASE	Exterior repairs
AUGUSTA RGNL AT BUSH FIELD ARPT	Repaint E/G room & load bank, AGS TOWB.
AUSTIN STRAUBEL INTERNATIONAL ARPT	Refurbish cab & TRACON
BANGOR INTL ARPT	Repair parking lot and replace HVAC
BARNES MUNI ARPT	HVAC replacement
BETHEL ARPT	Upgrade Bethel ATCT Parking Lot and Lighting.
BEVERLY MUNI ARPT	General ATCT refurbishment
BIRMINGHAM INTL ARPT	Replace ceramic tile
BISMARCK MUNI ARPT	Waterproof ATCT
BOB HOPE ARPT	Repair and seal ATCT asphalt parking lot
BOB HOPE ARPT	soundproofed catwalk door
BOB HOPE ARPT	Replace carpeting in entire ATCT.
BOB HOPE ARPT	HVAC replacement
BOISE AIR TERMINAL/GOWEN FLD ARPT	Modernize Equipment
BRADLEY INTL ARPT	General Int/Ext refurbish
BRADLEY INTL ARPT	BDL TRACON floor covering
BRADLEY INTL ARPT	BDL ATCT Curb Repair
BROWN FIELD MUNI ARPT	Seismic Modifications
BUCHANAN FIELD ARPT	Repair Bathroom
BUFFALO NIAGARA INTL ARPT	Modernize ATCT breakroom facilities and purchase new appliances.
BUFFALO NIAGARA INTL ARPT	ATCT: Paint and Wall Paper the Administration Area
BURLINGTON INTL ARPT	Replace flooring
CHARLES B. WHEELER DOWNTOWN ARPT	insulate chilled & hot water lines
CHARLES M. SCHULZ SONOMA	Replace plumbing

COUNTY ARPT	
CHARLOTTE/DOUGLAS INTL ARPT	Refurbish consoles
CHARLOTTE/DOUGLAS INTL ARPT	Refurbish consoles
CHICAGO TRACON	Carpet facility Admin and Stairs
CHINO ARPT	Reseal and restripe parking lot
CHINO ARPT	Administrative Offices (first floor) paint, floor tile, ceiling tile, and window coverings
CITY OF COLORADO SPRINGS MUNI ARPT	Seal and Restripe asphalt parking lot
CITY OF COLORADO SPRINGS MUNI ARPT	Replace carpet. Carpet is worn and frayed throughout facility.
CITY OF COLORADO SPRINGS MUNI ARPT	Replace base building (10) rooms window shades.
CITY OF COLORADO SPRINGS MUNI ARPT	Paint office
CLEVELAND-HOPKINS INTL ARPT	Replace Air Conditioner at Base of ATCT
COLEMAN A. YOUNG MUNICIPAL ARPT	General refurbishment
CUYAHOGA COUNTY ARPT	Repair parking lot
DANBURY MUNI ARPT	HVAC & roof replacement
DENVER TRACON	Restroom fixtures placement
DENVER TRACON	Replace carpet
DENVER TRACON	Paint kitchen
DENVER TRACON	Repair drywall & paint room (base of twr)
DENVER TRACON	Replace humidifiers
DES MOINES INTL ARPT	Re-roof Cab
DES MOINES INTL ARPT	Repair ATCT equipment driveway and parking lot.
DETROIT METROPOLITAN WAYNE COUNTY ARPT	Replace cab humidifier
DULUTH INTL ARPT	Install ground plates
EAST TEXAS RGNL ARPT	PURCHASE SOFTWARE FOR NEW HVAC CONTROL
EL MONTE ARPT	Seismic Modifications
EPPLEY AIRFIELD ARPT	Replace cab consoles & carpet
ERNEST A. LOVE FIELD ARPT	Paint interior & exterior
EVANSVILLE REGIONAL ARPT	Refurbish cab exterior
EVANSVILLE REGIONAL ARPT	Roof on tower cab and catwalk need to be replaced or repaired.
FAIRBANKS INTL ARPT	Seismic Modifications
FALCON FLD ARPT	Replace ceiling tiles throughout the tower and base building.
FAYETTEVILLE REGIONAL/GRANNIS FIELD ARPT	Install humidifier & facility sign
FLAGSTAFF PULLIAM ARPT	Replace Carpet and tile in the admin area

FORBES FIELD ARPT	Replace Boiler(s)
FOUR CORNERS REGIONAL ARPT	Refurbish cab Int/Ext
FRESNO YOSEMITE INTERNATIONAL ARPT	Patio Cover for outside smokers' area, Project had been approved earlier, but city required full permitting, fire sprinkler system etc. Exceeding allotted funds.
FRESNO YOSEMITE INTERNATIONAL ARPT	Paint first floor
Fullerton Municipal Airport	Replace the power cable to the FUL ATCT.
GENERAL MITCHELL INTERNATIONAL ARPT	Repair parking lot
GENERAL WM J FOX AIRFIELD ARPT	Seismic Modifications
GERALD R. FORD INTERNATIONAL ARPT	Repair interior walls/ceiling
GILLESPIE FIELD ARPT	patch & touch-up interior surfaces
GILLESPIE FIELD ARPT	window coverings
GILLESPIE FIELD ARPT	Replace elevator & tower cab windows
GRAND CANYON NATIONAL PARK ARPT	Paint interior offices
GRANT COUNTY INTL ARPT	Repair asphalt parking lot
GREATER ROCHESTER INTERNATIONAL ARPT	ATCT: IFBE: Access Roads Seal parking lot
GRIFFISS AIRPARK ARPT	Modernize Equipment
GUAM INTERNATIONAL (AGANA) ARPT	Replace tower ceiling panels.
GUAM INTERNATIONAL (AGANA) ARPT	Structural upgrades and window seal
HAGERSTOWN REGIONAL-RICHARD A HENSON FLD ARPT	Waterproof ATCT
HARTFORD-BRAINARD ARPT	Roof replacement
HAYWARD EXECUTIVE ARPT	Replace Floor Coverings
HAYWARD EXECUTIVE ARPT	Repair Bathroom
HAYWARD EXECUTIVE ARPT	Repaint Interior
HECTOR INTL ARPT	Waterproof ATCT
HILO INTERNATIONAL ARPT	Rust Treat and Paint Hilo Hawaii air Traffic Control Tower (ITO
HILO INTERNATIONAL ARPT	Repair Asphalt Pavement at ITO ATCT compound and paint Lampposts
HILO INTERNATIONAL ARPT	Install/Replace CAB stair entry door
HILO INTERNATIONAL ARPT	HVAC replacement
Honolulu International Airport	Facility refurbishment
Honolulu International Airport	Provide rust control and corrosion protection on exposed metal s
Honolulu International Airport	Paint handrails in the ATCT stairwells, including the

	tower CAB.
Honolulu International Airport	Replace seals on the ATCT cab roof exterior.
Honolulu International Airport	Install additional electrical outlets in the tower breakrooms.
Honolulu International Airport	Replace the existing exhausts fan.
Honolulu International Airport	Replace corroded and rainwater leaking E/G room exhaust fans.
Honolulu International Airport	Provide tower E/G daytank piping repairs
Honolulu International Airport	Replace and upgrade tower access and exterior lights and fixture
Honolulu International Airport	Replace the catwalk hatch and seal gaps on the cable chase panel
Honolulu International Airport	Replace and upgrade the ATCT flagpole floodlights and fixtures.
HUNTSVILLE INTL-CARL T JONES FIELD ARPT	Repair seal glass in tower link area
HUNTSVILLE INTL-CARL T JONES FIELD ARPT	Replace carpet in tower cab
JAMES M COX DAYTON INTL ARPT	Modernize Equipment
JEFFCO ARPT	Replace light fixtures and batchroom fixtures
JEFFCO ARPT	Painting of stairwells, office, breakroom, conference room, clokers
JOE FOSS FIELD ARPT	Repair drive & parking lot
JOHN F KENNEDY INTL ARPT	Interior refurbishment
JOHN WAYNE AIRPORT-ORANGE COUNTY ARPT	HVAC Replacement
Kenai Airport	Seismic Modifications
KONA INTL AT KEAHOLE ARPT	Rust Treat and Paint Kona Hawaii air Traffic Control Tower
LA GUARDIA ARPT	ATCT: Electronic card reader for ATCT building main entrance.
LAMBERT-ST LOUIS INTL ARPT	Re-caulk the joints of the precast panels at the STL ATCT.
LAMBERT-ST LOUIS INTL ARPT	Upgrade Interior Walls
LANCASTER ARPT	Replace air handler
LAREDO INTL ARPT	REGIONAL TERMINAL SUSTAINMENT Funds Being Used. Need a contract FOR SUSTAINMENT
LAS VEGAS TRACON	Resurface the parking lot at the Las Vegas ATCT/TRACON
LAWRENCE MUNI ARPT	HVAC replacement
LAWTON-FORT SILL REGIONAL ARPT	REPLACE CAB SHADES @ LC, PAINT OUTSIDE CAB & ENTRANCE, REPLACE SHADES
LEHIGH VALLEY INTERNATIONAL ARPT	Replace HVAC
LEWISTON-NEZ PERCE COUNTY	Repair facility exterior coating (repaint)

ARPT	
Lihue Airport	Modernize ATCT
LINCOLN MUNI ARPT	Modernize Equipment
LIVERMORE MUNI ARPT	HVAC replacement
LIVERMORE MUNI ARPT	Livermore, CA (LVK) ATCT - Resurface Parking Lot
LOS ANGELES INTL ARPT	Exterior painting
LOS ANGELES INTL ARPT	Repair parking lot lights
LOS ANGELES INTL ARPT	Interior painting - admin side
LOS ANGELES INTL ARPT	Replace fire alarm system
MAHLON SWEET FIELD ARPT	Repair parking lot (fill holes, reseal, and restripe)
MAHLON SWEET FIELD ARPT	Repair security fence and stop erosion.
MANASSAS REGIONAL/HARRY P. DAVIS FIELD ARPT	Replacement of Manassas Tower Cab carpeting and repainting the f
MARTHAS VINEYARD ARPT	2008: Cat Walk Roof Repair MVY ATCT
MBS INTL ARPT	Provide municipal water
MC CLELLAN-PALOMAR ARPT	HVAC replacement
MEADOWS FIELD ARPT	Parking Lot Repair/Paint Lot requires reseal of asphalt and repainting of parking spots.
MEADOWS FIELD ARPT	Replace Controller Lockers. Current lockers are old, dented, too small and were hand me downs from other facilities.
MEADOWS FIELD ARPT	Replace carpet ADMIN/SSC area
MERIDIAN NAS /MC CAIN FIELD/ ARPT	Replace carpet
MERRILL FIELD ARPT	Clean and repaint the Merrill ATCT exterior
MERRILL FIELD ARPT	Upgrade MRI HVAC DDC.
MERRILL FIELD ARPT	Upgrade Merrill ATCT boiler Meets Life Cycle standard. Category
METROPOLITAN OAKLAND INTL ARPT	Provide Two (2) Portable A-C Units
METROPOLITAN OAKLAND INTL ARPT	Repair Interior Electrical Power Cabling (Install Lighting Energy Conservation Devices)
METROPOLITAN OAKLAND INTL ARPT	Repair Console Counter Tops
METROPOLITAN OAKLAND INTL ARPT	Paint Exterior of Building
METROPOLITAN OAKLAND INTL ARPT	Install Carpet in Hallway
METROPOLITAN OAKLAND INTL ARPT	Repair Console Counter Tops
MIDLAND INTERNATIONAL ARPT	Repair/replace 5,000' of weather seal for base building.
MIDLAND INTERNATIONAL ARPT	Provide two (2) lift pumps for ATCT.
MIDLAND INTERNATIONAL ARPT	Replace ATCT sign.
MIDLAND INTERNATIONAL ARPT	Replace tower cab catwalk door.

MIDLAND INTERNATIONAL ARPT	Repair/replace cab floor pad.
MIDLAND INTERNATIONAL ARPT	Repair/replace broken side wall.
MIDLAND INTERNATIONAL ARPT	Replace carpet in equipment room.
MIDLAND INTERNATIONAL ARPT	Refinish & repaint atct walls.
Mobile ATCT	General repair
MOBILE DOWNTOWN ARPT	replace hot water heaters in base building
MOBILE DOWNTOWN ARPT	Repair roof
MODESTO CITY-CO-HARRY SHAM FLD ARPT	Replace carpet on third floor of the ATCT
MOLOKAI ARPT	Replace cab windows
MOLOKAI ARPT	Resurface, seal, and paint tower parking lot.
MONTEREY PENINSULA ARPT	Monterey, CA (MRY) ATCT - Caulk, Seal, & Paint Exterior of Facility
MONTEREY PENINSULA ARPT	Replace AC unit
MORRISTOWN MUNI ARPT	Modernize ATCT
NAPA COUNTY ARPT	Facility refurbishment
NEW YORK TRACON	ATCT: Renovate Lawn Sprinkler Irrigation System
NEW YORK TRACON	ATCT: Replace Monolithic-Type Ceiling Tile and Concealed Suspense
NEW YORK TRACON	ATCT: REPLACE CARPETING AT THE NEW YORK TRACON.
NEW YORK TRACON	Replace PA system
NEW YORK TRACON	OPS Room replace ceiling tiles
NEW YORK TRACON	ATCT: Refurbish lobby of the NY TRACON.
NEW YORK TRACON	Replace light fixtures
NEWARK LIBERTY INTL ARPT	BASE BUILDING & 23 fl OVERHANG: REPLACE DRYWALL, EWR,TOWB
NEWARK LIBERTY INTL ARPT	GAS WATER HEATER: RAISE CHIMMNEY TO OBTAIN BETTER DRAFT
NEWARK LIBERTY INTL ARPT	PAINT ATCT TOWER SHAFT
NEWARK LIBERTY INTL ARPT	CEILING TILES: REPLACE WATER DAMAGED CEILING TILES
NEWARK LIBERTY INTL ARPT	BASE BLDG.: REPLACE VAV CEILING TILES W/METAL GRILLS
NEWARK LIBERTY INTL ARPT	REHAB RM 2303 "AT BREAKROOM": EWR TOWER
NEWARK LIBERTY INTL ARPT	PAINT, INTERIOR, BASE BUILDING OFFICES, RM 102, 23 FL. ROOMS
NORFOLK INTL ARPT	Replacement of rubber flooring in TRACON.
NORFOLK INTL ARPT	General Int/Ext Refurbish
NORFOLK INTL ARPT	ATCT: Patio Tables & Benches.
NORFOLK INTL ARPT	ATCT: ORF Tower Cab Windows.
NORFOLK INTL ARPT	ATCT: Wellness Center @ ORF ATCT
NORMAN Y. MINETA SAN JOSE INTERNATIONAL ARPT	Repair Roof on Base Building

NORMAN Y. MINETA SAN JOSE INTERNATIONAL ARPT	Paint Interior of Facility
NORMAN Y. MINETA SAN JOSE INTERNATIONAL ARPT	Refurbish building Int & Ext
NORMAN Y. MINETA SAN JOSE INTERNATIONAL ARPT	San Jose, CA (SJC) ATCT - Refurbish Water System
NORTH LAS VEGAS ARPT	Paint interior offices
NORTHERN CALIFORNIA TRACON	Replace patio heaters
NORTHERN CALIFORNIA TRACON	Replace small appliances in the NCT break area
NORTHERN CALIFORNIA TRACON	Paint and letter the fire lanes
NORTHERN CALIFORNIA TRACON	General ext & int refurbish
NORTHERN CALIFORNIA TRACON	Paint NCT's ESU and Penthouse floors with resilient coating mate
NORWOOD MEMORIAL ARPT	HVAC Replacement
OGDEN-HINCKLEY ARPT	Seismic Modifications
OLYMPIA ARPT	Replace window shades
OMAHA TRACON	Reconfigure room 136 in the TRACON from an AF storage room to an
OMAHA TRACON	Replace the lighting with new, modern equipment room lighting in
ONTARIO INTL ARPT	Repaint/repair exterior of building.
ONTARIO INTL ARPT	Parking Lot repair/replacement.
ONTARIO INTL ARPT	Clean/polish all diesel tanks at manned facilities(TWR,TRACON)
ONTARIO INTL ARPT	Administrative offices (entire 1st floor) carpet replacement, window coverings, paint, and ceiling tile. Clean/restore outside windows
ONTARIO INTL ARPT	Conference Room equipment.
ONTARIO INTL ARPT	Paint interior of DDH
ONTARIO INTL ARPT	HVAC replacement
PAGE FIELD ARPT	Maintenance of parking lot and Walkways
PALM SPRINGS INTERNATIONAL ARPT	Paint interior of twr
PALM SPRINGS INTERNATIONAL ARPT	New Carpet/paint/interior
PALO ALTO ARPT OF SANTA CLARA CO ARPT	Replace AC units
PHILIP BILLARD MUNI ARPT	Replace cooktop
PHOENIX GOODYEAR ARPT	HVAC replacement
PITTSBURGH INTERNATIONAL ARPT	Paint Offices
PITTSBURGH INTERNATIONAL ARPT	Replace exterior doors
PITTSBURGH INTERNATIONAL ARPT	ATCT: There are two (2) projects listed below. 1.Painting nee

PORTLAND INTL ARPT	Repair vehicle security gate
PORTLAND INTL ARPT	Repair broken furnishings in break room and damaged carpeting
PORTLAND INTL ARPT	Repair flooring in the electronic equipment rooms
PORTLAND INTL JETPORT ARPT	Replacement of the existing LAN rack with a Hergo computer tab
PORTLAND INTL JETPORT ARPT	General Int/Ext refurbish
PORTLAND TRACON	Modernize Equipment
PORTLAND-HILLSBORO ARPT	Windows in the conference room
POTOMAC TRACON	ATCT: Relocate Audio visual Equipment
PUEBLO MEMORIAL ARPT	Air handler equipment, 3rd floor
PUEBLO MEMORIAL ARPT	Modernize Equipment
PUEBLO MEMORIAL ARPT	Refurbish cab & restrooms
QUAD CITY INTL ARPT	Waterproof ATCT
RALEIGH-DURHAM INTL ARPT	Replace three parking lot light fixtures
READING REGIONAL/CARL A SPAATZ FIELD ARPT	Repair parking lot & paint stairwell
REDDING MUNI ARPT	HVAC replace & facility refurbish
REDDING MUNI ARPT	Extend (raise) the mounting height of lightning air terminals at
REID-HILLVIEW OF SANTA CLARA COUNTY ARPT	Replace AC units & security gate
RENO/TAHOE INTERNATIONAL ARPT	Modernize Equipment
REPUBLIC ARPT	Replace floor Tile, carpet and paint
RICHARD LLOYD JONES JR ARPT	Refurbish exterior
RICK HUSBAND AMARILLO INTL ARPT	REPLACE ELEVATOR
RIVERSIDE MUNI ARPT	Paint interior of twr
RONALD REAGAN WASHINGTON NATIONAL ARPT	Replace carpet in conference room
RONALD REAGAN WASHINGTON NATIONAL ARPT	Modify tower consoles
ROSWELL INTERNATIONAL AIR CENTER ARPT	Refurbish fire suppression system.
SACRAMENTO INTERNATIONAL ARPT	Seismic Modifications
SALINAS MUNI ARPT	HVAC replacement
SALT LAKE CITY INTL ARPT	Replace Carpet in NavCom SSC Area - Estimated cost is $10K
SAN CARLOS ARPT	HVAC replacement
SAN LUIS COUNTY REGIONAL ARPT	Reseal & Paint Exterior of ATCT
SAN LUIS COUNTY REGIONAL ARPT	Replace consoles & wiring

SANTA BARBARA MUNI ARPT	Paint the exterior Tower and TRACON buildings at Santa Barbara T
SANTA BARBARA MUNI ARPT	Slurry and Repaint parking lot
SANTA BARBARA MUNI ARPT	Replace Deteriorated Admin Carpeting; carpeting is worn and creates several trip hazards
SANTA BARBARA MUNI ARPT	Replace Conference Room Chairs
SANTA BARBARA MUNI ARPT	Restore & repair exterior
SANTA MARIA PUB/CAPT G ALLAN HANCOCK FLD ARPT	Reseal & Paint Exterior of ATCT
SANTA MONICA MUNI ARPT	Exterior painting
SANTA MONICA MUNI ARPT	Repair parking lot lights
SEATTLE-TACOMA INTL ARPT	Replace 16th floor breakroom carpet
SEATTLE-TACOMA INTL ARPT	Repair walls and paint 2d floor breakroom and OM's office
SIOUX GATEWAY/COL. BUD DAY FIELD ARPT	Replace Carpet.
SIOUX GATEWAY/COL. BUD DAY FIELD ARPT	Re-grout five restrooms.
SNOHOMISH COUNTY (PAINE FLD) ARPT	Relocate key card reader at entry gate
SNOHOMISH COUNTY (PAINE FLD) ARPT	Replace window shades
SOUTH BEND REGIONAL ARPT	Replace existing standby engine generator & related equipment.
SPIRIT OF ST LOUIS ARPT	Replace Carpet.
STOCKTON METROPOLITAN ARPT	Paint ATCT Cab/ADMIN offices
STOCKTON METROPOLITAN ARPT	HVAC Replacement
SYRACUSE HANCOCK INTL ARPT	ATCT: Flooring Replacement and Painting
TACOMA NARROWS ARPT	Replace tower shades
TAMPA INTL ARPT	TS ALBERTO: Replace Guardhouse Awning
TED STEVENS ANCHORAGE INTL ARPT	Upgrade Anchorage ATCT parking lot and lighting
TETERBORO ARPT	Replace Air Conditioners
TETERBORO ARPT	ATCT: TEB ATCT REPLACE TWO LIGHT FIXTURES IN THE ADMINISTRATIVE
TETERBORO ARPT	ATCT: TEB ATCT MODIFY CONSOLE IN TOWER CAB.
THE WILLIAM B HARTSFIELD ATLANTA INTL ARPT	Seal Patio and entrance Walkway
THEODORE FRANCIS GREEN STATE ARPT	2005: Carpet and Paint for the Tower and TRACON
TRI-CITIES ARPT	Paint exterior of facility and landscaping
TRI-CITIES ARPT	Chairs and table for meeting room
TRI-CITIES ARPT	NAVCOM WC meeting table, chairs, breakroom table and chairs, 6 office chairs, refrigerator, and

	office shades
TUCSON INTL ARPT	ATCT refurbish windows and sound proofing.
TUCSON INTL ARPT	Repair walls from asbestos abatement and replace sound absorbent material removed and paint at ATCT SSU.
TUSCON TRACON	Paint exterior of Tracon building
TUSCON TRACON	Repair lighting/electrical power/intercom in TRACON SSC lobby
TUSCON TRACON	Repair watering system and replace dead trees and plants
TUSCON TRACON	Repair door into Lincs room
TUSCON TRACON	Repair A/C duct to men's rest room
TUSCON TRACON	Repair door into Air Traffic administration building
TUSCON TRACON	Tucson TRACON requires new carpet and paint to refurbish operations areas.
VALLEY INTL ARPT	Replaces shades, siding & paint
VAN NUYS ARPT	Carpet on the 2nd floor (staining and wear at all desks)
VAN NUYS ARPT	Seismic Modifications
VAN NUYS ARPT	Refurbish building Int & Ext
VERO BEACH MUNI ARPT	Relocate tower position
VERO BEACH MUNI ARPT	Relocate tower position
WATERLOO MUNI ARPT	Replace carpet
Wheeling Airport	ATCT: HLG ATCT House Cable Replacement
WILKES-BARRE/SCRANTON INTL ARPT	ATCT: To replace ceiling tiles and carpet.
WILMINGTON INTL ARPT	Ceiling replacement interior-Designated Smoking Area.
WOOD COUNTY AIRPORT GILL ROBB WILSON FLD ARPT	ATCT: IFBE: Siding Repair Siding
WOOD COUNTY AIRPORT GILL ROBB WILSON FLD ARPT	ATCT: Interior Painting
YAKIMA AIR TERMINAL/MCALLISTER FIELD ARPT	Carpet in AT/AF offices
YEAGER ARPT	Install anti-static carpet & grid
Location	Proj. Description
ANDREWS AIR FORCE BASE	Exterior repairs
AUGUSTA RGNL AT BUSH FIELD ARPT	Repaint E/G room & load bank, AGS TOWB.
AUSTIN STRAUBEL INTERNATIONAL ARPT	Refurbish cab & TRACON
BANGOR INTL ARPT	Repair parking lot and replace HVAC
BARNES MUNI ARPT	HVAC replacement

BETHEL ARPT	Upgrade Bethel ATCT Parking Lot and Lighting.
BEVERLY MUNI ARPT	General ATCT refurbishment
BIRMINGHAM INTL ARPT	Replace ceramic tile
BISMARCK MUNI ARPT	Waterproof ATCT
BOB HOPE ARPT	Repair and seal ATCT asphalt parking lot
BOB HOPE ARPT	soundproofed catwalk door
BOB HOPE ARPT	Replace carpeting in entire ATCT.
BOB HOPE ARPT	HVAC replacement
BOISE AIR TERMINAL/GOWEN FLD ARPT	Modernize Equipment
BRADLEY INTL ARPT	General Int/Ext refurbish
BRADLEY INTL ARPT	BDL TRACON floor covering
BRADLEY INTL ARPT	BDL ATCT Curb Repair
BROWN FIELD MUNI ARPT	Seismic Modifications
BUCHANAN FIELD ARPT	Repair Bathroom
BUFFALO NIAGARA INTL ARPT	Modernize ATCT breakroom facilities and purchase new appliances.
BUFFALO NIAGARA INTL ARPT	ATCT: Paint and Wall Paper the Administration Area
BURLINGTON INTL ARPT	Replace flooring
CHARLES B. WHEELER DOWNTOWN ARPT	insulate chilled & hot water lines
CHARLES M. SCHULZ SONOMA COUNTY ARPT	Replace plumbing
CHARLOTTE/DOUGLAS INTL ARPT	Refurbish consoles
CHARLOTTE/DOUGLAS INTL ARPT	Refurbish consoles
CHICAGO TRACON	Carpet facility Admin and Stairs
CHINO ARPT	Reseal and restripe parking lot
CHINO ARPT	Administrative Offices (first floor) paint, floor tile, ceiling tile, and window coverings
CITY OF COLORADO SPRINGS MUNI ARPT	Seal and Restripe asphalt parking lot
CITY OF COLORADO SPRINGS MUNI ARPT	Replace carpet. Carpet is worn and frayed throughout facility.
CITY OF COLORADO SPRINGS MUNI ARPT	Replace base building (10) rooms window shades.
CITY OF COLORADO SPRINGS MUNI ARPT	Paint office
CLEVELAND-HOPKINS INTL ARPT	Replace Air Conditioner at Base of ATCT
COLEMAN A. YOUNG MUNICIPAL ARPT	General refurbishment
CUYAHOGA COUNTY ARPT	Repair parking lot
DANBURY MUNI ARPT	HVAC & roof replacement
DENVER TRACON	Restroom fixtures placement
DENVER TRACON	Replace carpet
DENVER TRACON	Paint kitchen

DENVER TRACON	Repair drywall & paint room (base of twr)
DENVER TRACON	Replace humidifiers
DES MOINES INTL ARPT	Re-roof Cab
DES MOINES INTL ARPT	Repair ATCT equipment driveway and parking lot.
DETROIT METROPOLITAN WAYNE COUNTY ARPT	Replace cab humidifier
DULUTH INTL ARPT	Install ground plates
EAST TEXAS RGNL ARPT	PURCHASE SOFTWARE FOR NEW HVAC CONTROL
EL MONTE ARPT	Seismic Modifications
EPPLEY AIRFIELD ARPT	Replace cab consoles & carpet
ERNEST A. LOVE FIELD ARPT	Paint interior & exterior
EVANSVILLE REGIONAL ARPT	Refurbish cab exterior
EVANSVILLE REGIONAL ARPT	Roof on tower cab and catwalk need to be replaced or repaired.
FAIRBANKS INTL ARPT	Seismic Modifications
FALCON FLD ARPT	Replace ceiling tiles throughout the tower and base building.
FAYETTEVILLE REGIONAL/GRANNIS FIELD ARPT	Install humidifier & facility sign
FLAGSTAFF PULLIAM ARPT	Replace Carpet and tile in the admin area
FORBES FIELD ARPT	Replace Boiler(s)
FOUR CORNERS REGIONAL ARPT	Refurbish cab Int/Ext
FRESNO YOSEMITE INTERNATIONAL ARPT	Patio Cover for outside smokers' area, Project had been approved earlier, but city required full permitting, fire sprinkler system etc. Exceeding allotted funds.
FRESNO YOSEMITE INTERNATIONAL ARPT	Paint first floor
Fullerton Municipal Airport	Replace the power cable to the FUL ATCT.
GENERAL MITCHELL INTERNATIONAL ARPT	Repair parking lot
GENERAL WM J FOX AIRFIELD ARPT	Seismic Modifications
GERALD R. FORD INTERNATIONAL ARPT	Repair interior walls/ceiling
GILLESPIE FIELD ARPT	patch & touch-up interior surfaces
GILLESPIE FIELD ARPT	window coverings
GILLESPIE FIELD ARPT	Replace elevator & tower cab windows
GRAND CANYON NATIONAL PARK ARPT	Paint interior offices
GRANT COUNTY INTL ARPT	Repair asphalt parking lot
GREATER ROCHESTER INTERNATIONAL ARPT	ATCT: IFBE: Access Roads Seal parking lot
GRIFFISS AIRPARK ARPT	Modernize Equipment

GUAM INTERNATIONAL (AGANA) ARPT	Replace tower ceiling panels.
GUAM INTERNATIONAL (AGANA) ARPT	Structural upgrades and window seal
HAGERSTOWN REGIONAL-RICHARD A HENSON FLD ARPT	Waterproof ATCT
HARTFORD-BRAINARD ARPT	Roof replacement
HAYWARD EXECUTIVE ARPT	Replace Floor Coverings
HAYWARD EXECUTIVE ARPT	Repair Bathroom
HAYWARD EXECUTIVE ARPT	Repaint Interior
HECTOR INTL ARPT	Waterproof ATCT
HILO INTERNATIONAL ARPT	Rust Treat and Paint Hilo Hawaii air Traffic Control Tower (ITO
HILO INTERNATIONAL ARPT	Repair Asphalt Pavement at ITO ATCT compound and paint Lampposts
HILO INTERNATIONAL ARPT	Install/Replace CAB stair entry door
HILO INTERNATIONAL ARPT	HVAC replacement
Honolulu International Airport	Facility refurbishment
Honolulu International Airport	Provide rust control and corrosion protection on exposed metal s
Honolulu International Airport	Paint handrails in the ATCT stairwells, including the tower CAB.
Honolulu International Airport	Replace seals on the ATCT cab roof exterior.
Honolulu International Airport	Install additional electrical outlets in the tower breakrooms.
Honolulu International Airport	Replace the existing exhausts fan in the toilet
Honolulu International Airport	Replace corroded and rainwater leaking E/G room exhaust fans.
Honolulu International Airport	Provide tower E/G daytank piping repairs
Honolulu International Airport	Replace and upgrade tower access and exterior lights and fixture
Honolulu International Airport	Replace the catwalk hatch and seal gaps on the cable chase panel
Honolulu International Airport	Replace and upgrade the ATCT flagpole floodlights and fixtures.
HUNTSVILLE INTL-CARL T JONES FIELD ARPT	Repair seal glass in tower link area
HUNTSVILLE INTL-CARL T JONES FIELD ARPT	Replace carpet in tower cab
JAMES M COX DAYTON INTL ARPT	Modernize Equipment
JEFFCO ARPT	Replace light fixtures and batchroom fixtures
JEFFCO ARPT	Painting of stairwells, office, breakroom, conference room, clokers
JOE FOSS FIELD ARPT	Repair drive & parking lot
JOHN F KENNEDY INTL ARPT	Interior refurbishment

JOHN WAYNE AIRPORT-ORANGE COUNTY ARPT	HVAC Replacement
Kenai Airport	Seismic Modifications
KONA INTL AT KEAHOLE ARPT	Rust Treat and Paint Kona Hawaii air Traffic Control Tower
LA GUARDIA ARPT	ATCT: Electronic card reader for ATCT building main entrance.
LAMBERT-ST LOUIS INTL ARPT	Re-caulk the joints of the precast panels at the STL ATCT.
LAMBERT-ST LOUIS INTL ARPT	Upgrade Interior Walls
LANCASTER ARPT	Replace air handler
LAREDO INTL ARPT	REGIONAL TERMINAL SUSTAINMENT Funds Being Used. Need a contract FOR SUSTAINMENT
LAS VEGAS TRACON	Resurface the parking lot at the Las Vegas ATCT/TRACON
LAWRENCE MUNI ARPT	HVAC replacement
LAWTON-FORT SILL REGIONAL ARPT	REPLACE CAB SHADES @ LC, PAINT OUTSIDE CAB & ENTRANCE, REPLACE SHADES
LEHIGH VALLEY INTERNATIONAL ARPT	Replace HVAC
LEWISTON-NEZ PERCE COUNTY ARPT	Repair facility exterior coating (repaint)
Lihue Airport	Modernize ATCT
LINCOLN MUNI ARPT	Modernize Equipment
LIVERMORE MUNI ARPT	HVAC replacement
LIVERMORE MUNI ARPT	Livermore, CA (LVK) ATCT - Resurface Parking Lot
LOS ANGELES INTL ARPT	Exterior painting
LOS ANGELES INTL ARPT	Repair parking lot lights
LOS ANGELES INTL ARPT	Interior painting - admin side
LOS ANGELES INTL ARPT	Replace fire alarm system
MAHLON SWEET FIELD ARPT	Repair parking lot (fill holes, reseal, and restripe)
MAHLON SWEET FIELD ARPT	Repair security fence and stop erosion.
MANASSAS REGIONAL/HARRY P. DAVIS FIELD ARPT	Replacement of Manassas Tower Cab carpeting and repainting the f
MARTHAS VINEYARD ARPT	2008: Cat Walk Roof Repair MVY ATCT
MBS INTL ARPT	Provide municipal water
MC CLELLAN-PALOMAR ARPT	HVAC replacement
MEADOWS FIELD ARPT	Parking Lot Repair/Paint Lot requires reseal of asphalt and repainting of parking spots.
MEADOWS FIELD ARPT	Replace Controller Lockers. Current lockers are old, dented, too small and were hand me downs from other facilities.
MEADOWS FIELD ARPT	Replace carpet ADMIN/SSC area
MERIDIAN NAS /MC CAIN FIELD/ ARPT	Replace carpet

MERRILL FIELD ARPT	Clean and repaint the Merrill ATCT exterior
MERRILL FIELD ARPT	Upgrade MRI HVAC DDC.
MERRILL FIELD ARPT	Upgrade Merrill ATCT boiler Meets Life Cycle standard. Category
METROPOLITAN OAKLAND INTL ARPT	Provide Two (2) Portable A-C Units
METROPOLITAN OAKLAND INTL ARPT	Repair Interior Electrical Power Cabling (Install Lighting Energy Conservation Devices)
METROPOLITAN OAKLAND INTL ARPT	Repair Console Counter Tops
METROPOLITAN OAKLAND INTL ARPT	Paint Exterior of Building
METROPOLITAN OAKLAND INTL ARPT	Install Carpet in Hallway
METROPOLITAN OAKLAND INTL ARPT	Repair Console Counter Tops
MIDLAND INTERNATIONAL ARPT	Repair/replace 5,000' of weather seal for base building.
MIDLAND INTERNATIONAL ARPT	Provide two (2) lift pumps for ATCT.
MIDLAND INTERNATIONAL ARPT	Replace ATCT sign.
MIDLAND INTERNATIONAL ARPT	Replace tower cab catwalk door.
MIDLAND INTERNATIONAL ARPT	Repair/replace cab floor pad.
MIDLAND INTERNATIONAL ARPT	Repair/replace broken side wall.
MIDLAND INTERNATIONAL ARPT	Replace carpet in equipment room.
MIDLAND INTERNATIONAL ARPT	Refinish & repaint atct walls.
Mobile ATCT	General repair
MOBILE DOWNTOWN ARPT	replace hot water heaters in base building
MOBILE DOWNTOWN ARPT	Repair roof
MODESTO CITY-CO-HARRY SHAM FLD ARPT	Replace carpet on third floor of the ATCT
MOLOKAI ARPT	Replace cab windows
MOLOKAI ARPT	Resurface, seal, and paint tower parking lot.
MONTEREY PENINSULA ARPT	Monterey, CA (MRY) ATCT - Caulk, Seal, & Paint Exterior of Facility
MONTEREY PENINSULA ARPT	Replace AC unit
MORRISTOWN MUNI ARPT	Modernize ATCT
NAPA COUNTY ARPT	Facility refurbishment
NEW YORK TRACON	ATCT: Renovate Lawn Sprinkler Irrigation System
NEW YORK TRACON	ATCT: Replace Monolithic-Type Ceiling Tile and Concealed Suspense
NEW YORK TRACON	ATCT: REPLACE CARPETING AT THE NEW YORK TRACON.
NEW YORK TRACON	Replace PA system
NEW YORK TRACON	OPS Room replace ceiling tiles
NEW YORK TRACON	ATCT: Refurbish lobby of the NY TRACON.

NEW YORK TRACON	Replace light fixtures
NEWARK LIBERTY INTL ARPT	BASE BUILDING & 23 fl OVERHANG: REPLACE DRYWALL, EWR,TOWB
NEWARK LIBERTY INTL ARPT	GAS WATER HEATER: RAISE CHIMMNEY TO OBTAIN BETTER DRAFT
NEWARK LIBERTY INTL ARPT	PAINT ATCT TOWER SHAFT
NEWARK LIBERTY INTL ARPT	CEILING TILES: REPLACE WATER DAMAGED CEILING TILES
NEWARK LIBERTY INTL ARPT	BASE BLDG.: REPLACE VAV CEILING TILES W/METAL GRILLS
NEWARK LIBERTY INTL ARPT	REHAB RM 2303 "AT BREAKROOM": EWR TOWER
NEWARK LIBERTY INTL ARPT	PAINT, INTERIOR, BASE BUILDING OFFICES, RM 102, 23 FL. ROOMS
NORFOLK INTL ARPT	Replacement of rubber flooring in TRACON.
NORFOLK INTL ARPT	General Int/Ext Refurbish
NORFOLK INTL ARPT	ATCT: Patio Tables & Benches.
NORFOLK INTL ARPT	ATCT: ORF Tower Cab Windows.
NORFOLK INTL ARPT	ATCT: Wellness Center @ ORF ATCT
NORMAN Y. MINETA SAN JOSE INTERNATIONAL ARPT	Repair Roof on Base Building
NORMAN Y. MINETA SAN JOSE INTERNATIONAL ARPT	Paint Interior of Facility
NORMAN Y. MINETA SAN JOSE INTERNATIONAL ARPT	Refurbish building Int & Ext
NORMAN Y. MINETA SAN JOSE INTERNATIONAL ARPT	San Jose, CA (SJC) ATCT - Refurbish Water System
NORTH LAS VEGAS ARPT	Paint interior offices
NORTHERN CALIFORNIA TRACON	Replace patio heaters
NORTHERN CALIFORNIA TRACON	Replace small appliances in the NCT break area
NORTHERN CALIFORNIA TRACON	Paint and letter the fire lanes
NORTHERN CALIFORNIA TRACON	General ext & int refurbish
NORTHERN CALIFORNIA TRACON	Paint NCT's ESU and Penthouse floors with resilient coating mate
NORWOOD MEMORIAL ARPT	HVAC Replacement
OGDEN-HINCKLEY ARPT	Seismic Modifications
OLYMPIA ARPT	Replace window shades
OMAHA TRACON	Reconfigure room 136 in the TRACON from an AF storage room to an
OMAHA TRACON	Replace the lighting with new, modern equipment room lighting in
ONTARIO INTL ARPT	Repaint/repair exterior of building.
ONTARIO INTL ARPT	Parking Lot repair/replacement.
ONTARIO INTL ARPT	Clean/polish all diesel tanks at manned facilities(TWR,TRACON)

ONTARIO INTL ARPT	Administrative offices (entire 1st floor) carpet replacement, window coverings, paint, and ceiling tile. Clean/restore outside windows
ONTARIO INTL ARPT	Conference Room equipment.
ONTARIO INTL ARPT	Paint interior of DDH
ONTARIO INTL ARPT	HVAC replacement
PAGE FIELD ARPT	Maintenance of parking lot and Walkways
PALM SPRINGS INTERNATIONAL ARPT	Paint interior of twr
PALM SPRINGS INTERNATIONAL ARPT	New Carpet/paint/interior
PALO ALTO ARPT OF SANTA CLARA CO ARPT	Replace AC units
PHILIP BILLARD MUNI ARPT	Replace cooktop
PHOENIX GOODYEAR ARPT	HVAC replacement
PITTSBURGH INTERNATIONAL ARPT	Paint Offices
PITTSBURGH INTERNATIONAL ARPT	Replace exterior doors
PITTSBURGH INTERNATIONAL ARPT	ATCT: There are two (2) projects listed below. 1.Painting nee
PORTLAND INTL ARPT	Repair vehicle security gate
PORTLAND INTL ARPT	Repair broken furnishings in break room and damaged carpeting
PORTLAND INTL ARPT	Repair flooring in the electronic equipment rooms
PORTLAND INTL JETPORT ARPT	Replacement of the existing LAN rack with a Hergo computer tab
PORTLAND INTL JETPORT ARPT	General Int/Ext refurbish
PORTLAND TRACON	Modernize Equipment
PORTLAND-HILLSBORO ARPT	Windows in the conference room
POTOMAC TRACON	ATCT: Relocate Audio visual Equipment
PUEBLO MEMORIAL ARPT	Air handler equipment, 3rd floor
PUEBLO MEMORIAL ARPT	Modernize Equipment
PUEBLO MEMORIAL ARPT	Refurbish cab & restrooms
QUAD CITY INTL ARPT	Waterproof ATCT
RALEIGH-DURHAM INTL ARPT	Replace three parking lot light fixtures
READING REGIONAL/CARL A SPAATZ FIELD ARPT	Repair parking lot & paint stairwell
REDDING MUNI ARPT	HVAC replace & facility refurbish
REDDING MUNI ARPT	Extend (raise) the mounting height of lightning air terminals at
REID-HILLVIEW OF SANTA CLARA COUNTY ARPT	Replace AC units & security gate
RENO/TAHOE INTERNATIONAL ARPT	Modernize Equipment

REPUBLIC ARPT	Replace floor Tile, carpet and paint
RICHARD LLOYD JONES JR ARPT	Refurbish exterior
RICK HUSBAND AMARILLO INTL ARPT	REPLACE ELEVATOR
RIVERSIDE MUNI ARPT	Paint interior of twr
RONALD REAGAN WASHINGTON NATIONAL ARPT	Replace carpet in conference room
RONALD REAGAN WASHINGTON NATIONAL ARPT	Modify tower consoles
ROSWELL INTERNATIONAL AIR CENTER ARPT	Refurbish fire suppression system.
SACRAMENTO INTERNATIONAL ARPT	Seismic Modifications
SALINAS MUNI ARPT	HVAC replacement
SALT LAKE CITY INTL ARPT	Replace Carpet in NavCom SSC Area - Estimated cost is $10K
SAN CARLOS ARPT	HVAC replacement
SAN LUIS COUNTY REGIONAL ARPT	Reseal & Paint Exterior of ATCT
SAN LUIS COUNTY REGIONAL ARPT	Replace consoles & wiring
SANTA BARBARA MUNI ARPT	Paint the exterior Tower and TRACON buildings at Santa Barbara T
SANTA BARBARA MUNI ARPT	Slurry and Repaint parking lot
SANTA BARBARA MUNI ARPT	Replace Deteriorated Admin Carpeting; carpeting is worn and creates several trip hazards
SANTA BARBARA MUNI ARPT	Replace Conference Room Chairs
SANTA BARBARA MUNI ARPT	Restore & repair exterior
SANTA MARIA PUB/CAPT G ALLAN HANCOCK FLD ARPT	Reseal & Paint Exterior of ATCT
SANTA MONICA MUNI ARPT	Exterior painting
SANTA MONICA MUNI ARPT	Repair parking lot lights
SEATTLE-TACOMA INTL ARPT	Replace 16th floor breakroom carpet
SEATTLE-TACOMA INTL ARPT	Repair walls and paint 2d floor breakroom and OM's office
SIOUX GATEWAY/COL. BUD DAY FIELD ARPT	Replace Carpet.
SIOUX GATEWAY/COL. BUD DAY FIELD ARPT	Re-grout five restrooms.
SNOHOMISH COUNTY (PAINE FLD) ARPT	Relocate key card reader at entry gate
SNOHOMISH COUNTY (PAINE FLD) ARPT	Replace window shades
SOUTH BEND REGIONAL ARPT	Replace existing standby engine generator & related equipment.

SPIRIT OF ST LOUIS ARPT	Replace Carpet.
STOCKTON METROPOLITAN ARPT	Paint ATCT Cab/ADMIN offices
STOCKTON METROPOLITAN ARPT	HVAC Replacement
SYRACUSE HANCOCK INTL ARPT	ATCT: Flooring Replacement and Painting
TACOMA NARROWS ARPT	Replace tower shades
TAMPA INTL ARPT	TS ALBERTO: Replace Guardhouse Awning
TED STEVENS ANCHORAGE INTL ARPT	Upgrade Anchorage ATCT parking lot and lighting
TETERBORO ARPT	Replace Air Conditioners
TETERBORO ARPT	ATCT: TEB ATCT REPLACE TWO LIGHT FIXTURES IN THE ADMINISTRATIVE
TETERBORO ARPT	ATCT: TEB ATCT MODIFY CONSOLE IN TOWER CAB.
THE WILLIAM B HARTSFIELD ATLANTA INTL ARPT	Seal Patio and entrance Walkway
THEODORE FRANCIS GREEN STATE ARPT	2005: Carpet and Paint for the Tower and TRACON
TRI-CITIES ARPT	Paint exterior of facility and landscaping
TRI-CITIES ARPT	Chairs and table for meeting room
TRI-CITIES ARPT	NAVCOM WC meeting table, chairs, breakroom table and chairs, 6 office chairs, refrigerator, and office shades
TUCSON INTL ARPT	ATCT refurb windows and sound proofing.
TUCSON INTL ARPT	Repair walls from asbestos abatement and replace sound absorbent material removed and paint at ATCT SSU.
TUSCON TRACON	Paint exterior of Tracon building
TUSCON TRACON	Repair lighting/electrical power/intercom in TRACON SSC lobby
TUSCON TRACON	Repair watering system and replace dead trees and plants
TUSCON TRACON	Repair door into Lines room
TUSCON TRACON	Repair A/C duct to men's rest room
TUSCON TRACON	Repair door into Air Traffic administration building
TUSCON TRACON	Tucson TRACON requires new carpet and paint to refurbish operations areas.
VALLEY INTL ARPT	Replaces shades, siding & paint
VAN NUYS ARPT	Carpet on the 2nd floor (staining and wear at all desks)
VAN NUYS ARPT	Seismic Modifications
VAN NUYS ARPT	Refurbish building Int & Ext
VERO BEACH MUNI ARPT	Relocate tower position
VERO BEACH MUNI ARPT	Relocate tower position
WATERLOO MUNI ARPT	Replace carpet
Wheeling Airport	ATCT: HLG ATCT House Cable Replacement

WILKES-BARRE/SCRANTON INTL ARPT	ATCT: To replace ceiling tiles and carpet.
WILMINGTON INTL ARPT	Ceiling replacement interior-Designated Smoking Area.
WOOD COUNTY AIRPORT GILL ROBB WILSON FLD ARPT	ATCT: IFBE: Siding Repair Siding
WOOD COUNTY AIRPORT GILL ROBB WILSON FLD ARPT	ATCT: Interior Painting
YAKIMA AIR TERMINAL/MCALLISTER FIELD ARPT	Carpet in AT/AF offices
YEAGER ARPT	Install anti-static carpet & grid
Location	Proj. Description
ANDREWS AIR FORCE BASE	Exterior repairs
AUGUSTA RGNL AT BUSH FIELD ARPT	Repaint E/G room & load bank, AGS TOWB.
AUSTIN STRAUBEL INTERNATIONAL ARPT	Refurbish cab & TRACON
BANGOR INTL ARPT	Repair parking lot and replace HVAC
BARNES MUNI ARPT	HVAC replacement
BETHEL ARPT	Upgrade Bethel ATCT Parking Lot and Lighting.
BEVERLY MUNI ARPT	General ATCT refurbishment
BIRMINGHAM INTL ARPT	Replace ceramic tile
BISMARCK MUNI ARPT	Waterproof ATCT
BOB HOPE ARPT	Repair and seal ATCT asphalt parking lot
BOB HOPE ARPT	soundproofed catwalk door
BOB HOPE ARPT	Replace carpeting in entire ATCT.
BOB HOPE ARPT	HVAC replacement
BOISE AIR TERMINAL/GOWEN FLD ARPT	Modernize Equipment
BRADLEY INTL ARPT	General Int/Ext refurbish
BRADLEY INTL ARPT	BDL TRACON floor covering
BRADLEY INTL ARPT	BDL ATCT Curb Repair
BROWN FIELD MUNI ARPT	Seismic Modifications
BUCHANAN FIELD ARPT	Repair Bathroom
BUFFALO NIAGARA INTL ARPT	Modernize ATCT breakroom facilities and purchase new appliances.
BUFFALO NIAGARA INTL ARPT	ATCT: Paint and Wall Paper the Administration Area
BURLINGTON INTL ARPT	Replace flooring
CHARLES B. WHEELER DOWNTOWN ARPT	insulate chilled & hot water lines
CHARLES M. SCHULZ SONOMA COUNTY ARPT	Replace plumbing
CHARLOTTE/DOUGLAS INTL ARPT	Refurbish consoles
CHARLOTTE/DOUGLAS INTL ARPT	Refurbish consoles

CHICAGO TRACON	Carpet facility Admin and Stairs
CHINO ARPT	Reseal and restripe parking lot
CHINO ARPT	Administrative Offices (first floor) paint, floor tile, ceiling tile, and window coverings
CITY OF COLORADO SPRINGS MUNI ARPT	Seal and Restripe asphalt parking lot
CITY OF COLORADO SPRINGS MUNI ARPT	Replace carpet. Carpet is worn and frayed throughout facility.
CITY OF COLORADO SPRINGS MUNI ARPT	Replace base building (10) rooms window shades.
CITY OF COLORADO SPRINGS MUNI ARPT	Paint office
CLEVELAND-HOPKINS INTL ARPT	Replace Air Conditioner at Base of ATCT
COLEMAN A. YOUNG MUNICIPAL ARPT	General refurbishment
CUYAHOGA COUNTY ARPT	Repair parking lot
DANBURY MUNI ARPT	HVAC & roof replacement
DENVER TRACON	Restroom fixtures placement
DENVER TRACON	Replace carpet
DENVER TRACON	Paint kitchen
DENVER TRACON	Repair drywall & paint room (base of twr)
DENVER TRACON	Replace humidifiers
DES MOINES INTL ARPT	Re-roof Cab
DES MOINES INTL ARPT	Repair ATCT equipment driveway and parking lot.
DETROIT METROPOLITAN WAYNE COUNTY ARPT	Replace cab humidifier
DULUTH INTL ARPT	Install ground plates
EAST TEXAS RGNL ARPT	PURCHASE SOFTWARE FOR NEW HVAC CONTROL
EL MONTE ARPT	Seismic Modifications
EPPLEY AIRFIELD ARPT	Replace cab consoles & carpet
ERNEST A. LOVE FIELD ARPT	Paint interior & exterior
EVANSVILLE REGIONAL ARPT	Refurbish cab exterior
EVANSVILLE REGIONAL ARPT	Roof on tower cab and catwalk need to be replaced or repaired.
FAIRBANKS INTL ARPT	Seismic Modifications
FALCON FLD ARPT	Replace ceiling tiles throughout the tower and base building.
FAYETTEVILLE REGIONAL/GRANNIS FIELD ARPT	Install humidifier & facility sign
FLAGSTAFF PULLIAM ARPT	Replace Carpet and tile in the admin area
FORBES FIELD ARPT	Replace Boiler(s)
FOUR CORNERS REGIONAL ARPT	Refurbish cab Int/Ext
FRESNO YOSEMITE INTERNATIONAL ARPT	Patio Cover for outside smokers' area, Project had been approved earlier, but city required full

	permitting, fire sprinkler system etc. Exceeding allotted funds.
FRESNO YOSEMITE INTERNATIONAL ARPT	Paint first floor
Fullerton Municipal Airport	Replace the power cable to the FUL ATCT.
GENERAL MITCHELL INTERNATIONAL ARPT	Repair parking lot
GENERAL WM J FOX AIRFIELD ARPT	Seismic Modifications
GERALD R. FORD INTERNATIONAL ARPT	Repair interior walls/ceiling
GILLESPIE FIELD ARPT	patch & touch-up interior surfaces
GILLESPIE FIELD ARPT	window coverings
GILLESPIE FIELD ARPT	Replace elevator & tower cab windows
GRAND CANYON NATIONAL PARK ARPT	Paint interior offices
GRANT COUNTY INTL ARPT	Repair asphalt parking lot
GREATER ROCHESTER INTERNATIONAL ARPT	ATCT: IFBE: Access Roads Seal parking lot
GRIFFISS AIRPARK ARPT	Modernize Equipment
GUAM INTERNATIONAL (AGANA) ARPT	Replace tower ceiling panels.
GUAM INTERNATIONAL (AGANA) ARPT	Structural upgrades and window seal
HAGERSTOWN REGIONAL-RICHARD A HENSON FLD ARPT	Waterproof ATCT
HARTFORD-BRAINARD ARPT	Roof replacement
HAYWARD EXECUTIVE ARPT	Replace Floor Coverings
HAYWARD EXECUTIVE ARPT	Repair Bathroom
HAYWARD EXECUTIVE ARPT	Repaint Interior
HECTOR INTL ARPT	Waterproof ATCT
HILO INTERNATIONAL ARPT	Rust Treat and Paint Hilo Hawaii air Traffic Control Tower (ITO
HILO INTERNATIONAL ARPT	Repair Asphalt Pavement at ITO ATCT compound and paint Lampposts
HILO INTERNATIONAL ARPT	Install/Replace CAB stair entry door
HILO INTERNATIONAL ARPT	HVAC replacement
Honolulu International Airport	Facility refurbishment
Honolulu International Airport	Provide rust control and corrosion protection on exposed metal s
Honolulu International Airport	Paint handrails in the ATCT stairwells, including the tower CAB.
Honolulu International Airport	Replace seals on the ATCT cab roof exterior.
Honolulu International Airport	Install additional electrical outlets in the tower breakrooms.

Honolulu International Airport	Replace the existing exhausts fan
Honolulu International Airport	Replace corroded and rainwater leaking E/G room exhaust fans.
Honolulu International Airport	Provide tower E/G daytank piping repairs
Honolulu International Airport	Replace and upgrade tower access and exterior lights and fixture
Honolulu International Airport	Replace the catwalk hatch and seal gaps on the cable chase panel
Honolulu International Airport	Replace and upgrade the ATCT flagpole floodlights and fixtures.
HUNTSVILLE INTL-CARL T JONES FIELD ARPT	Repair seal glass in tower link area
HUNTSVILLE INTL-CARL T JONES FIELD ARPT	Replace carpet in tower cab
JAMES M COX DAYTON INTL ARPT	Modernize Equipment
JEFFCO ARPT	Replace light fixtures and batchroom fixtures
JEFFCO ARPT	Painting of stairwells, office, breakroom, conference room, clokers
JOE FOSS FIELD ARPT	Repair drive & parking lot
JOHN F KENNEDY INTL ARPT	Interior refurbishment
JOHN WAYNE AIRPORT-ORANGE COUNTY ARPT	HVAC Replacement
Kenai Airport	Seismic Modifications
KONA INTL AT KEAHOLE ARPT	Rust Treat and Paint Kona Hawaii air Traffic Control Tower
LA GUARDIA ARPT	ATCT: Electronic card reader for ATCT building main entrance.
LAMBERT-ST LOUIS INTL ARPT	Re-caulk the joints of the precast panels at the STL ATCT.
LAMBERT-ST LOUIS INTL ARPT	Upgrade Interior Walls
LANCASTER ARPT	Replace air handler
LAREDO INTL ARPT	REGIONAL TERMINAL SUSTAINMENT Funds Being Used. Need a contract FOR SUSTAINMENT
LAS VEGAS TRACON	Resurface the parking lot at the Las Vegas ATCT/TRACON
LAWRENCE MUNI ARPT	HVAC replacement
LAWTON-FORT SILL REGIONAL ARPT	REPLACE CAB SHADES @ LC, PAINT OUTSIDE CAB & ENTRANCE, REPLACE SHADES
LEHIGH VALLEY INTERNATIONAL ARPT	Replace HVAC
LEWISTON-NEZ PERCE COUNTY ARPT	Repair facility exterior coating (repaint)
Lihue Airport	Modernize ATCT
LINCOLN MUNI ARPT	Modernize Equipment
LIVERMORE MUNI ARPT	HVAC replacement

LIVERMORE MUNI ARPT	Livermore, CA (LVK) ATCT - Resurface Parking Lot
LOS ANGELES INTL ARPT	Exterior painting
LOS ANGELES INTL ARPT	Repair parking lot lights
LOS ANGELES INTL ARPT	Interior painting - admin side
LOS ANGELES INTL ARPT	Replace fire alarm system
MAHLON SWEET FIELD ARPT	Repair parking lot (fill holes, reseal, and restripe)
MAHLON SWEET FIELD ARPT	Repair security fence and stop erosion.
MANASSAS REGIONAL/HARRY P. DAVIS FIELD ARPT	Replacement of Manassas Tower Cab carpeting and repainting the f
MARTHAS VINEYARD ARPT	2008: Cat Walk Roof Repair MVY ATCT
MBS INTL ARPT	Provide municipal water
MC CLELLAN-PALOMAR ARPT	HVAC replacement
MEADOWS FIELD ARPT	Parking Lot Repair/Paint Lot requires reseal of asphalt and repainting of parking spots.
MEADOWS FIELD ARPT	Replace Controller Lockers. Current lockers are old, dented, too small and were hand me downs from other facilities.
MEADOWS FIELD ARPT	Replace carpet ADMIN/SSC area
MERIDIAN NAS /MC CAIN FIELD/ ARPT	Replace carpet
MERRILL FIELD ARPT	Clean and repaint the Merrill ATCT exterior
MERRILL FIELD ARPT	Upgrade MRI HVAC DDC.
MERRILL FIELD ARPT	Upgrade Merrill ATCT boiler Meets Life Cycle standard. Category
METROPOLITAN OAKLAND INTL ARPT	Provide Two (2) Portable A-C Units
METROPOLITAN OAKLAND INTL ARPT	Repair Interior Electrical Power Cabling (Install Lighting Energy Conservation Devices)
METROPOLITAN OAKLAND INTL ARPT	Repair Console Counter Tops
METROPOLITAN OAKLAND INTL ARPT	Paint Exterior of Building
METROPOLITAN OAKLAND INTL ARPT	Install Carpet in Hallway
METROPOLITAN OAKLAND INTL ARPT	Repair Console Counter Tops
MIDLAND INTERNATIONAL ARPT	Repair/replace 5,000' of weather seal for base building.
MIDLAND INTERNATIONAL ARPT	Provide two (2) lift pumps for ATCT.
MIDLAND INTERNATIONAL ARPT	Replace ATCT sign.
MIDLAND INTERNATIONAL ARPT	Replace tower cab catwalk door.
MIDLAND INTERNATIONAL ARPT	Repair/replace cab floor pad.
MIDLAND INTERNATIONAL ARPT	Repair/replace broken side wall.
MIDLAND INTERNATIONAL ARPT	Replace carpet in equipment room.
MIDLAND INTERNATIONAL ARPT	Refinish & repaint atct walls.

Mobile ATCT	General repair
MOBILE DOWNTOWN ARPT	replace hot water heaters in base building
MOBILE DOWNTOWN ARPT	Repair roof
MODESTO CITY-CO-HARRY SHAM FLD ARPT	Replace carpet on third floor of the ATCT
MOLOKAI ARPT	Replace cab windows
MOLOKAI ARPT	Resurface, seal, and paint tower parking lot.
MONTEREY PENINSULA ARPT	Monterey, CA (MRY) ATCT - Caulk, Seal, & Paint Exterior of Facility
MONTEREY PENINSULA ARPT	Replace AC unit
MORRISTOWN MUNI ARPT	Modernize ATCT
NAPA COUNTY ARPT	Facility refurbishment
NEW YORK TRACON	ATCT: Renovate Lawn Sprinkler Irrigation System
NEW YORK TRACON	ATCT: Replace Monolithic-Type Ceiling Tile and Concealed Suspense
NEW YORK TRACON	ATCT: REPLACE CARPETING AT THE NEW YORK TRACON.
NEW YORK TRACON	Replace PA system
NEW YORK TRACON	OPS Room replace ceiling tiles
NEW YORK TRACON	ATCT: Refurbish lobby of the NY TRACON.
NEW YORK TRACON	Replace light fixtures
NEWARK LIBERTY INTL ARPT	BASE BUILDING & 23 fl OVERHANG: REPLACE DRYWALL, EWR,TOWB
NEWARK LIBERTY INTL ARPT	GAS WATER HEATER: RAISE CHIMMNEY TO OBTAIN BETTER DRAFT
NEWARK LIBERTY INTL ARPT	PAINT ATCT TOWER SHAFT
NEWARK LIBERTY INTL ARPT	CEILING TILES: REPLACE WATER DAMAGED CEILING TILES
NEWARK LIBERTY INTL ARPT	BASE BLDG.: REPLACE VAV CEILING TILES W/METAL GRILLS
NEWARK LIBERTY INTL ARPT	REHAB RM 2303 "AT BREAKROOM": EWR TOWER
NEWARK LIBERTY INTL ARPT	PAINT, INTERIOR, BASE BUILDING OFFICES, RM 102, 23 FL. ROOMS
NORFOLK INTL ARPT	Replacement of rubber flooring in TRACON.
NORFOLK INTL ARPT	General Int/Ext Refurbish
NORFOLK INTL ARPT	ATCT: Patio Tables & Benches.
NORFOLK INTL ARPT	ATCT: ORF Tower Cab Windows.
NORFOLK INTL ARPT	ATCT: Wellness Center @ ORF ATCT
NORMAN Y. MINETA SAN JOSE INTERNATIONAL ARPT	Repair Roof on Base Building
NORMAN Y. MINETA SAN JOSE INTERNATIONAL ARPT	Paint Interior of Facility
NORMAN Y. MINETA SAN JOSE INTERNATIONAL ARPT	Refurbish building Int & Ext

NORMAN Y. MINETA SAN JOSE INTERNATIONAL ARPT	San Jose, CA (SJC) ATCT - Refurbish Water System
NORTH LAS VEGAS ARPT	Paint interior offices
NORTHERN CALIFORNIA TRACON	Replace patio heaters
NORTHERN CALIFORNIA TRACON	Replace small appliances in the NCT break area
NORTHERN CALIFORNIA TRACON	Paint and letter the fire lanes
NORTHERN CALIFORNIA TRACON	General ext & int refurbish
NORTHERN CALIFORNIA TRACON	Paint NCT's ESU and Penthouse floors with resilient coating mate
NORWOOD MEMORIAL ARPT	HVAC Replacement
OGDEN-HINCKLEY ARPT	Seismic Modifications
OLYMPIA ARPT	Replace window shades
OMAHA TRACON	Reconfigure room 136 in the TRACON from an AF storage room to an
OMAHA TRACON	Replace the lighting with new, modern equipment room lighting in
ONTARIO INTL ARPT	Repaint/repair exterior of building.
ONTARIO INTL ARPT	Parking Lot repair/replacement.
ONTARIO INTL ARPT	Clean/polish all diesel tanks at manned facilities(TWR,TRACON)
ONTARIO INTL ARPT	Administrative offices (entire 1st floor) carpet replacement, window coverings, paint, and ceiling tile. Clean/restore outside windows
ONTARIO INTL ARPT	Conference Room equipment.
ONTARIO INTL ARPT	Paint interior of DDH
ONTARIO INTL ARPT	HVAC replacement
PAGE FIELD ARPT	Maintenance of parking lot and Walkways
PALM SPRINGS INTERNATIONAL ARPT	Paint interior of twr
PALM SPRINGS INTERNATIONAL ARPT	New Carpet/paint/interior
PALO ALTO ARPT OF SANTA CLARA CO ARPT	Replace AC units
PHILIP BILLARD MUNI ARPT	Replace cooktop
PHOENIX GOODYEAR ARPT	HVAC replacement
PITTSBURGH INTERNATIONAL ARPT	Paint Offices
PITTSBURGH INTERNATIONAL ARPT	Replace exterior doors
PITTSBURGH INTERNATIONAL ARPT	ATCT: There are two (2) projects listed below. 1.Painting nee
PORTLAND INTL ARPT	Repair vehicle security gate
PORTLAND INTL ARPT	Repair broken furnishings in break room and damaged carpeting
PORTLAND INTL ARPT	Repair flooring in the electronic equipment rooms

PORTLAND INTL JETPORT ARPT	Replacement of the existing LAN rack with a Hergo computer tab
PORTLAND INTL JETPORT ARPT	General Int/Ext refurbish
PORTLAND TRACON	Modernize Equipment
PORTLAND-HILLSBORO ARPT	Windows in the conference room
POTOMAC TRACON	ATCT: Relocate Audio visual Equipment
PUEBLO MEMORIAL ARPT	Air handler equipment, 3rd floor
PUEBLO MEMORIAL ARPT	Modernize Equipment
PUEBLO MEMORIAL ARPT	Refurbish cab & restrooms
QUAD CITY INTL ARPT	Waterproof ATCT
RALEIGH-DURHAM INTL ARPT	Replace three parking lot light fixtures
READING REGIONAL/CARL A SPAATZ FIELD ARPT	Repair parking lot & paint stairwell
REDDING MUNI ARPT	HVAC replace & facility refurbish
REDDING MUNI ARPT	Extend (raise) the mounting height of lightning air terminals at
REID-HILLVIEW OF SANTA CLARA COUNTY ARPT	Replace AC units & security gate
RENO/TAHOE INTERNATIONAL ARPT	Modernize Equipment
REPUBLIC ARPT	Replace floor Tile, carpet and paint
RICHARD LLOYD JONES JR ARPT	Refurbish exterior
RICK HUSBAND AMARILLO INTL ARPT	REPLACE ELEVATOR
RIVERSIDE MUNI ARPT	Paint interior of twr
RONALD REAGAN WASHINGTON NATIONAL ARPT	Replace carpet in conference room
RONALD REAGAN WASHINGTON NATIONAL ARPT	Modify tower consoles
ROSWELL INTERNATIONAL AIR CENTER ARPT	Refurbish fire suppression system.
SACRAMENTO INTERNATIONAL ARPT	Seismic Modifications
SALINAS MUNI ARPT	HVAC replacement
SALT LAKE CITY INTL ARPT	Replace Carpet in NavCom SSC Area - Estimated cost is $10K
SAN CARLOS ARPT	HVAC replacement
SAN LUIS COUNTY REGIONAL ARPT	Reseal & Paint Exterior of ATCT
SAN LUIS COUNTY REGIONAL ARPT	Replace consoles & wiring
SANTA BARBARA MUNI ARPT	Paint the exterior Tower and TRACON buildings at Santa Barbara T
SANTA BARBARA MUNI ARPT	Slurry and Repaint parking lot
SANTA BARBARA MUNI ARPT	Replace Deteriorated Admin Carpeting; carpeting is

	worn and creates several trip hazards
SANTA BARBARA MUNI ARPT	Replace Conference Room Chairs
SANTA BARBARA MUNI ARPT	Restore & repair exterior
SANTA MARIA PUB/CAPT G ALLAN HANCOCK FLD ARPT	Reseal & Paint Exterior of ATCT
SANTA MONICA MUNI ARPT	Exterior painting
SANTA MONICA MUNI ARPT	Repair parking lot lights
SEATTLE-TACOMA INTL ARPT	Replace 16th floor breakroom carpet
SEATTLE-TACOMA INTL ARPT	Repair walls and paint 2d floor breakroom and OM's office
SIOUX GATEWAY/COL. BUD DAY FIELD ARPT	Replace Carpet.
SIOUX GATEWAY/COL. BUD DAY FIELD ARPT	Re-grout five restrooms.
SNOHOMISH COUNTY (PAINE FLD) ARPT	Relocate key card reader at entry gate
SNOHOMISH COUNTY (PAINE FLD) ARPT	Replace window shades
SOUTH BEND REGIONAL ARPT	Replace existing standby engine generator & related equipment.
SPIRIT OF ST LOUIS ARPT	Replace Carpet.
STOCKTON METROPOLITAN ARPT	Paint ATCT Cab/ADMIN offices
STOCKTON METROPOLITAN ARPT	HVAC Replacement
SYRACUSE HANCOCK INTL ARPT	ATCT: Flooring Replacement and Painting
TACOMA NARROWS ARPT	Replace tower shades
TAMPA INTL ARPT	TS ALBERTO: Replace Guardhouse Awning
TED STEVENS ANCHORAGE INTL ARPT	Upgrade Anchorage ATCT parking lot and lighting
TETERBORO ARPT	Replace Air Conditioners
TETERBORO ARPT	ATCT: TEB ATCT REPLACE TWO LIGHT FIXTURES IN THE ADMINISTRATIVE
TETERBORO ARPT	ATCT: TEB ATCT MODIFY CONSOLE IN TOWER CAB.
THE WILLIAM B HARTSFIELD ATLANTA INTL ARPT	Seal Patio and entrance Walkway
THEODORE FRANCIS GREEN STATE ARPT	2005: Carpet and Paint for the Tower and TRACON
TRI-CITIES ARPT	Paint exterior of facility and landscaping
TRI-CITIES ARPT	Chairs and table for meeting room
TRI-CITIES ARPT	NAVCOM WC meeting table, chairs, breakroom table and chairs, 6 office chairs, refrigerator, and office shades
TUCSON INTL ARPT	ATCT refurbish windows and sound proofing.
TUCSON INTL ARPT	Repair walls from asbestos abatement and replace sound absorbent material removed and paint at ATCT

	SSU.
TUSCON TRACON	Paint exterior of Tracon building
TUSCON TRACON	Repair lighting/electrical power/intercom in TRACON SSC lobby
TUSCON TRACON	Repair watering system and replace dead trees and plants
TUSCON TRACON	Repair door into Lincs room
TUSCON TRACON	Repair A/C duct to men's rest room
TUSCON TRACON	Repair door into Air Traffic administration building
TUSCON TRACON	Tucson TRACON requires new carpet and paint to refurbish operations areas.
VALLEY INTL ARPT	Replaces shades, siding & paint
VAN NUYS ARPT	Carpet on the 2nd floor (staining and wear at all desks)
VAN NUYS ARPT	Seismic Modifications
VAN NUYS ARPT	Refurbish building Int & Ext
VERO BEACH MUNI ARPT	Relocate tower position
VERO BEACH MUNI ARPT	Relocate tower position
WATERLOO MUNI ARPT	Replace carpet
Wheeling Airport	ATCT: HLG ATCT House Cable Replacement
WILKES-BARRE/SCRANTON INTL ARPT	ATCT: To replace ceiling tiles and carpet.
WILMINGTON INTL ARPT	Ceiling replacement interior-Designated Smoking Area.
WOOD COUNTY AIRPORT GILL ROBB WILSON FLD ARPT	ATCT: IFBE: Siding Repair Siding
WOOD COUNTY AIRPORT GILL ROBB WILSON FLD ARPT	ATCT: Interior Painting
YAKIMA AIR TERMINAL/MCALLISTER FIELD ARPT	Carpet in AT/AF offices
YEAGER ARPT	Install anti-static carpet & grid

Notes:

- **ATCT/TRACON Improvement Projects include Modernization, Sustainment, Seismic Upgrades, and Facility Condition/Lifecycle Assessments**
  - Sustainment projects are prioritized based on impact of the problem on the facility, importance of the facility to the NAS, and urgency of the sustainment need
  - The prioritization hierarchy from highest to lowest is 1) Personnel Safety, 2) Roofs/Waterproofing, 3) HVAC/Electrical/Elevators, 4) Plumbing, 5) Exterior/Parking/Fencing, 6) Ops Rooms Floor/Wall Finishes, and 7) Administrative Floor/Wall Finishes
- **In FY2008, there are currently 293 projects planned (~$43M)**
  - 79 F&E funded projects

- 214 Operations funded projects
  - Additional projects will be identified based on prioritized requirements and the availability of funding
- Additionally, 23 Facility Condition/Lifecycle Assessments are planned

- **In FY2009, there are currently 153 projects planned (~$32M)**
  - 71 F&E funded projects
  - 82 Operations funded projects
    - Additional projects will be identified based on prioritized requirements and the availability of funding
  - Additionally, ~20 Facility Condition/Lifecycle Assessments are planned

Unstaffed Infrastructure System (UIS) Program Repair/Mold Remediation Projects

Location	Project Description
Bartlesville, OK	Replace Shelters
Bartlesville, OK	Replace Shelters
Bartlesville, OK	Replace Shelters
Tulsa, OK	Replace Shelters
Tulsa, OK	Replace Shelters
Tulsa, OK	Replace Shelters
Wichita, KA	Rotting floor / locking door
Garden City, KA	Asbestos tiles
Kansas City Downtown	Rodents
Chicago, Midway	Leaking Roof / General Repairs
Kansas City	Leaking roof
Columbia , Missouri	Rodents
Ft. Stockton, NM	Rodents
Hallsville, MO	Roof
Galveston, TX	Rotting Floor
Houston, Hobby	Mold
Litchfield, MI	General Disrepair
Pecos, NM	Rodents
Little Rock, AR	Shelter Replacement
FT. Leavenworth, KS	Shelter Replacement-Installation Funding Only, Shelter is available.
Lansing, MI	Clear Zone Vegetation Removal
Salina, KS	Facility Access Road Repair
Liberal, KS	VASI Foundation Repair/Replacement

Mold Remediation Projects

Planned FY08

Chicago, Illinois ATCT	Mold was identified. Facility repairs have been completed. Additional investigation identified minor area of mold growth. Pre-construction for HEPA vacuuming and prime repainting of the elevator shaft has been scheduled.
Waukegan, Illinois ATCT	Pipe burst due to cold weather and poor building envelope. Mold was discovered when walls were removed during the cleaning.
Waterford, Michigan (Pontiac) ATCT	Less than 10 square feet of mold found around a hatch.

Planned FY09

Denver, Colorado ATCT	Mold suspected in air handling units.
Seattle ARTCC (ZSE)	Mold suspected in air handling units.
Kansas City, Missouri ATCT Base Building	Mold was identified August 23, 2007. Mold and water intrusion issues identified throughout the facility. Remediation and facility modifications required.
Salina, Kansas ATCT	Mold was identified in various rooms throughout the facility. Part of the issue is water intrusion in the ATCT roof; the other concern is water drainage during heavy rains, which appears to be city-wide problem.
Corpus Christi, Texas ATCT	Mold and water intrusion issues identified throughout the facility. Remediation and facility modifications required.
Tulsa, Oklahoma ATCT	Mold was identified in Rooms 126 and 130.
Omaha, Nebraska TRACON (R90)	Mold and water intrusion issues identified throughout facility.
New Orleans, Louisiana ATCT	Mold was found in pipe chases on 1st floor and 2nd floor, 5th floor Mechanical Room and Cab Attic. Water intrusion issues under review.
New Orleans, Louisiana ATCT Environmental Control Unit (ECU)	Mold was found on some drywall.
Tucson, Arizona ATCT	Potential mold issue.

Accomplished FY08

Atlanta ARTCC (ZTL)	Mold identified in ductwork.
Grand Rapids, Michigan ATCT	Mold was discovered on drywall near floor level in the 3rd and 4th floor offices.
Bethany, Oklahoma Remote Transmitter/Receiver	Mold was identified.
Fort Worth, Texas TRACON (D10)	Mold was identified.
Grand Rapids, Michigan TRACON	Mold was discovered behind wall panels during building remodeling.
Orlando, Florida (Executive) ATCT	Mold was identified.
New York ATRCC (ZNY)	Mold found in two air handling units.
Indianapolis ARTCC	Mold was located on some pipe insulation in the basement.
Kalamazoo, Michigan TRACON	Minor mold issue identified on exterior wall of storage room adjacent to TRACON. Facility is county-owned; operated by FAA controllers.
Wichita, Kansas ATCT	Mold was identified.
St. Louis, Missouri ATCT	Mold was identified in G6, 3TS5, and SJ7; also found in Rooms 220 and 233 of the Base Building.
Kansas City, Missouri ATCT	Mold was identified June 1, 2006. Mold remediation completed Nov 2007. Corrective actions to prevent water intrusion still under discussion. Funding request under review. Mold removed 11/1/2007; additional work to be completed by the 3rd/4th quarter of FY 2008.
Eugene, Oregon ATCT	Mold was identified.
Cleveland, Ohio ATCT	Mold was identified in 4th floor office wall.

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