

May 2003

NATIONAL AIRSPACE SYSTEM

Current Efforts and Proposed Changes to Improve Performance of FAA's Air Traffic Control System



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Highlights of [GAO-03-542](#), a report to congressional committees

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Why GAO Did This Study

To accelerate the modernization and improve the performance of the air traffic control system, the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (AIR-21) created the Air Traffic Services Subcommittee (subcommittee) to oversee the air traffic control system and help the Federal Aviation Administration (FAA) address long-standing weaknesses in its modernization program. The subcommittee is part of an aviation advisory council and consists of five private sector members with business expertise. AIR-21 gave the subcommittee the authority to approve strategic plans, budgets, and procurements over \$100 million. In addition, AIR-21 required FAA to hire a chief operating officer to manage the system's day-to-day operations.

AIR-21 mandated that GAO report on the success of the subcommittee in improving the performance of the air traffic control system. Accordingly, as agreed with the congressional committees' offices, GAO reviewed the (1) actions taken by the subcommittee to carry out its oversight responsibilities and the obstacles that it encountered in doing so and (2) changes to the subcommittee's organization and oversight responsibilities that have been proposed to improve the performance of the air traffic control system.

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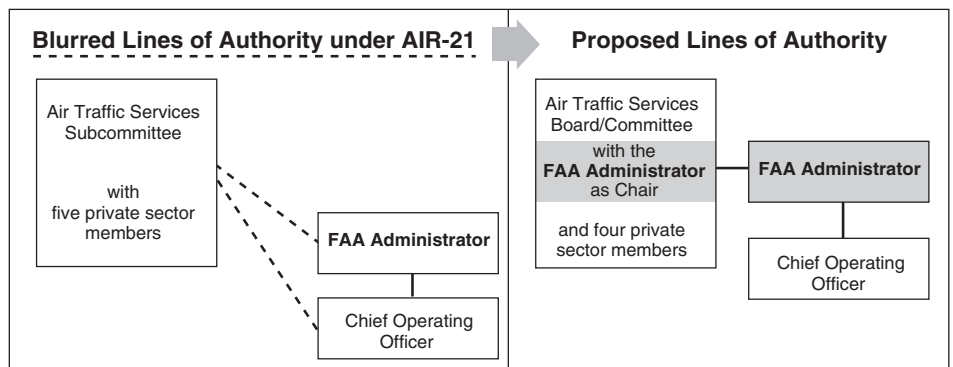
To view the full report, including the scope and methodology, click on the link above. For more information, contact Gerald L. Dillingham at (202) 512-2834 or dillinghamg@gao.gov.

What GAO Found

To carry out its oversight responsibilities, the subcommittee has focused on bringing performance management, accountability, and a more businesslike structure to the air traffic control system. It is working with FAA managers to refine and implement performance measures that will track safety indicators, such as operational errors and runway incursions, as well as the cost to provide air traffic control services. The subcommittee also has taken some specific actions, as provided in AIR-21, including reviewing and approving a budget request and five large procurements that FAA had initiated for the air traffic control system. However, the subcommittee has encountered obstacles in carrying out its responsibilities, the greatest of which has been FAA's inability to hire a chief operating officer. Without a chief operating officer to initiate actions that the subcommittee is responsible for reviewing and approving, the subcommittee's influence has been limited. According to the subcommittee, a major difficulty in hiring a chief operating officer has been uncertainty about the position's responsibilities, reporting relationships, and performance measures.

The Congress, the administration, the subcommittee, and other stakeholders have proposed changes to the subcommittee's organization and oversight responsibilities that they believe would improve the performance of the air traffic control system. These changes could clarify uncertainties in the law or would modify the subcommittee's approval authority. For example, three legislative proposals would designate the FAA Administrator as the chair of the subcommittee. While this change could eliminate any uncertainty about the chief operating officer's reporting relationships and could make it easier to hire a chief operating officer, it also would reduce the number of private sector members and give the greatest authority to the FAA member (see figure). Two of these proposals also would alter the subcommittee's approval authority. For example, one would make the subcommittee an advisory rather than an oversight body. The merits of these proposals depend on the extent to which approval authority is considered necessary or desirable to bring about improvements in the air traffic control system.

Current and Proposed Oversight and Management Structure



Source: GAO.

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Abbreviations

AIR-21	Wendell H. Ford Aviation Investment and Reform Act for the 21st Century
FAA	Federal Aviation Administration
IRS	Internal Revenue Service

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United States General Accounting Office
Washington, DC 20548

May 30, 2003

Congressional Committees

The Federal Aviation Administration (FAA) manages the busiest, most complex air traffic control system in the world. But the agency has had difficulty modernizing this system to improve its safety and efficiency and expand its capacity to accommodate projected increases in air traffic. Over the past two decades, FAA's air traffic control modernization program has had a history of cost overruns and schedule delays. For over a decade, bipartisan commissions, oversight organizations, and others have documented problems with the air traffic control modernization program and have made numerous recommendations, yet the problems continue.

In 2000, the Congress enacted legislation and the administration issued an executive order that, together, established a new, three-component structure to accelerate the modernization and improve the performance of the air traffic control system. The legislation—the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (AIR-21)—defines the air traffic control system as the equipment, policies, procedures, and personnel required to deliver air traffic services.¹ AIR-21 established two of the new components: (1) a board of five private sector members, called the Air Traffic Services Subcommittee (subcommittee), to oversee the air traffic control system and (2) a chief operating officer to manage the air traffic control system. Executive Order 13180, issued December 7, 2000, created the third component, a new performance-based organization within FAA, to be known as the Air Traffic Organization, to operate the air traffic control system. The subcommittee is part of the Aviation Management Advisory Council (council), which is responsible for advising FAA on the perspectives of its aviation industry customers.² Under the act, the subcommittee oversees “the administration, management, conduct, direction, and supervision of the air traffic control system” and has the authority to, among other things, “review and approve” strategic plans, large contracts, and budget requests for the air

¹Public Law 106-181, April 5, 2000.

²The Congress authorized the council in 1996 and amended its appointment process and composition through AIR-21.

traffic control system. Under both the act and the executive order, the chief operating officer reports to the FAA Administrator and, under the executive order, heads the new performance-based organization.

The subcommittee members were sworn in on January 31, 2001, and the subcommittee, which is required to meet at least quarterly, has since held eight working meetings. The FAA Administrator, who is responsible for hiring the chief operating officer, has retained two recruiting firms, but the chief operating officer position has not been filled. Because FAA has decided to involve the chief operating officer in establishing and implementing the new performance-based organization, FAA is waiting for an appointment to be approved before putting the new organization in place.

Since the enactment of AIR-21, the Congress, the administration, FAA, and other stakeholders have raised questions about the implementation of the legislation and have proposed changes to the subcommittee's organization and oversight responsibilities that they believe would address these questions. In the spring of 2003, the administration, the Senate, and the House proposed legislation to amend AIR-21 that would, among other things, change the organization and responsibilities of the subcommittee.

AIR-21 requires us to report on the success of the subcommittee in improving the performance of the air traffic control system. However, because the success of the subcommittee is linked to its interactions with the chief operating officer and the new air traffic organization, neither of which is yet in place, our analysis was limited to the actions of the subcommittee, and we could not assess the performance of the new structure as a whole. Accordingly, as agreed with your offices, this report addresses the following questions:

- What has the subcommittee done to carry out its oversight responsibilities, and what obstacles has it encountered in attempting to do so?
- What changes to the subcommittee's organization and oversight responsibilities have been proposed to improve the performance of the air traffic control system?

To address both of these questions, we analyzed AIR-21 and its legislative history, the executive order, and the three legislative proposals that would

amend provisions of AIR-21 relating to the subcommittee. We also analyzed the subcommittee's August 2002 report³ and interviewed stakeholders, including the past and present FAA Administrators; other FAA officials; past and present members of the Air Traffic Services Subcommittee; and representatives of several aviation industry organizations, public policy research organizations, and the two firms hired to recruit the chief operating officer. We did not address changes to FAA's—as opposed to the subcommittee's—organization that some stakeholders maintain are essential to improve the performance of the air traffic control system. See appendix I for a more detailed discussion of our scope and methodology.

Results in Brief

To carry out its oversight responsibilities, the subcommittee has focused on bringing performance-based management to the air traffic control system and has taken some of the actions specified in AIR-21, but several obstacles have hampered its progress. Defining its role as bringing measurements, accountability, and a more businesslike structure to air traffic services, the subcommittee has worked with FAA managers to refine and implement performance measures that will track safety indicators, such as operational errors and runway incursions, as well as track the cost to provide air traffic control services so that FAA can better monitor, improve, and hold its managers accountable for the performance of the air traffic control system. The subcommittee also has accomplished some of the specific responsibilities set forth in the act, such as reviewing and approving budget requests and five large procurements that FAA initiated for the air traffic control system. However, the subcommittee has encountered several obstacles that have impeded its progress, the greatest of which, according to our analysis and discussions with stakeholders, has been FAA's inability to hire a chief operating officer. Without a chief operating officer to initiate actions that the subcommittee is responsible for reviewing and approving, the subcommittee's influence has been limited. According to the subcommittee, a major difficulty in hiring a chief operating officer has been uncertainty about how the chief operating officer would interact with the FAA Administrator and the subcommittee and how the incumbent's performance would be measured. Other obstacles that the subcommittee has encountered include its members' limited experience with aviation and with FAA's acquisition and budget

³Air Traffic Services Subcommittee, *Report of the Air Traffic Services Subcommittee* (Aug. 28, 2000).

processes; turnover on the subcommittee; and, according to the subcommittee, FAA's lack of flexibility to move funds between and within accounts.

The Congress, the administration, the subcommittee, and other stakeholders have proposed changes to the subcommittee's organization and oversight responsibilities that they believe would improve the performance of the air traffic control system. These changes could clarify uncertainties in the law or would modify the subcommittee's approval authority. For example, the administration, the Senate, and the House have proposed legislation to separate the subcommittee from and make it independent of its parent organization, the Aviation Management Advisory Council. These three legislative proposals also would designate the FAA Administrator as the chair of the subcommittee. While this change could make it easier to hire a chief operating officer by eliminating any uncertainty about how the incumbent would interact with the Administrator and the subcommittee, it also would reduce the number of private sector members from five to four and give the greatest authority to the FAA member. Two of the three proposals also would alter the subcommittee's approval authority: the administration's proposal would eliminate the subcommittee's approval authority entirely and make the subcommittee an advisory body, while the House proposal would eliminate the subcommittee's authority to approve the budget request for the air traffic control system but would retain the subcommittee's other approval authorities. The Senate proposal would make no changes in the subcommittee's approval authority. Our analysis indicates that the merits of the proposed changes depend, in large part, on the extent to which approval authority is viewed as necessary or desirable to bring about improvements in the performance of the air traffic control system. The upcoming reauthorization of FAA creates opportunities to consider the merits of these and other proposed changes and to determine whether or how changes should be made.

Department of Transportation officials generally agreed with the facts presented in this report and made technical and clarifying comments, which we incorporated as appropriate. The Air Traffic Services Subcommittee did not provide comments beyond those provided by department officials.

Background

More than 20 years ago, FAA began a modernization program to replace and upgrade the nation's air traffic control equipment and facilities to meet expected increases in air traffic, enhance aviation safety, and

increase efficiency. We and others have identified shortcomings in FAA's management of the air traffic control modernization program, primarily problems in meeting cost, schedule, and performance goals. For example, the centerpiece of FAA's modernization program—the Advanced Automation System—was restructured in 1994 after (1) the costs of developing the system, estimated in 1983 to be \$2.5 billion, tripled to \$7.6 billion and (2) the implementation of significantly less-than-promised capabilities was projected to take 8 years or longer than originally estimated. FAA attributed many of these problems to federal procurement and personnel constraints. In 1995, the Congress exempted FAA from many federal procurement and personnel statutes and allowed the agency to develop its own systems, which FAA implemented in 1996. However, problems with the management of the air traffic control modernization program continue.⁴ Recently, for example, we reported that the Standard Terminal Automation Replacement System, which was estimated in 1996 to cost \$940 million, was expected in March 2002 to cost \$1.33 billion, take 4 years longer than originally scheduled to be implemented, and be deployed at 74 rather than 172 facilities.⁵

To better understand and resolve these problems, the Congress created a number of bipartisan commissions to review aspects of FAA's operations, including the provision of air traffic services. These commissions made recommendations to the Congress to help FAA accelerate the modernization and improve the performance of the air traffic control system. For example, in 1997, the National Civil Aviation Review Commission, also known as the Mineta Commission, reported that FAA must become a performance-based organization to make the best possible use of the personnel and procurement flexibilities that the Congress had granted to it.⁶ The Commission said that air traffic services should be overseen by a board of directors and managed by a chief operating officer.

⁴U.S. General Accounting Office, *Air Traffic Control: FAA's Modernization Investment Management Approach Could Be Strengthened*, [GAO-99-88](#) (Washington, D.C.: Apr. 30, 1999).

⁵U.S. General Accounting Office, *National Airspace System: Better Cost Data Could Improve FAA's Management of the Standard Terminal Automation Replacement System*, [GAO-03-343](#) (Washington, D.C.: Jan. 31, 2003).

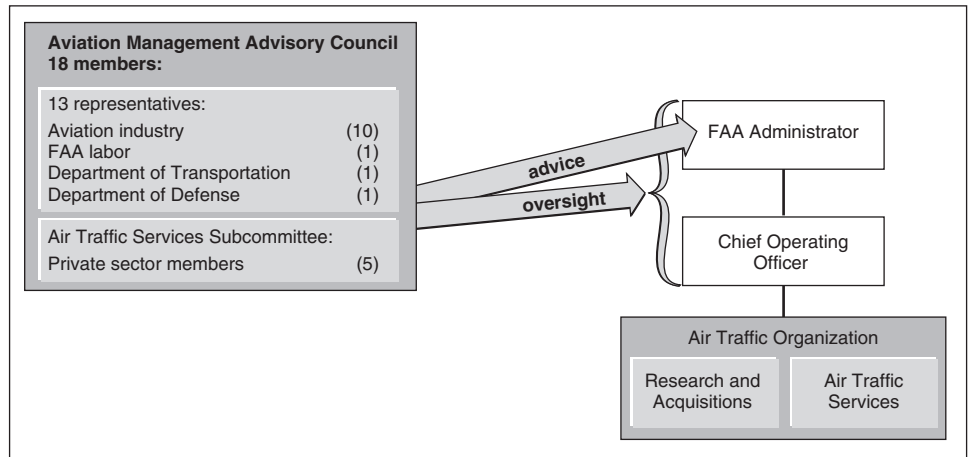
⁶National Civil Aviation Review Commission, *A Consensus for Change: Avoiding Aviation Gridlock and Reducing the Accident Rate* (Washington, D.C.: December 1997).

AIR-21 incorporated key suggestions from the Mineta Commission, including creating both the subcommittee to oversee the air traffic control system and the position of chief operating officer within FAA to manage the system. The subcommittee is generally responsible for overseeing the administration and management of the air traffic control system and is specifically responsible for reviewing and approving (1) strategic and major organizational plans, (2) methods of accelerating the modernization of the air traffic control system and improvements in aviation safety related to air traffic control, (3) contracts of more than \$100 million, (4) the FAA Administrator's appointment of a chief operating officer, (5) cost accounting and financial management systems, and (6) budget requests.⁷ The chief operating officer is responsible for implementing the tasks delegated by the Administrator.

Executive Order 13180, issued on December 7, 2000, directed FAA to merge two of its organizations—Research and Acquisitions, which develops and acquires air traffic modernization equipment, and Air Traffic Services, which uses the equipment to provide air traffic services—to form the new performance-based Air Traffic Organization and designated the chief operating officer as the head of that organization. Under the executive order as well as the act, the chief operating officer reports to the FAA Administrator. According to the executive order, the new organization would improve FAA's ability to make use of its procurement and personnel flexibilities and would focus on achieving results through consultation with its customers (the traveling public), direct users (e.g., airlines and airports), and federal and local agencies (see fig. 1).

⁷The subcommittee also has meeting and reporting requirements and is compensated at the rate of \$40,000 a year for the chairperson and \$25,000 a year for the other members.

Figure 1: Organizational Structure Created by AIR-21 and Executive Order 13180



Source: GAO.

The provisions of AIR-21 that apply to the subcommittee are modeled on 1998 legislation that created the Internal Revenue Service Oversight Board to oversee the Internal Revenue Service’s (IRS) administration, management, conduct, direction, supervision, execution, and application of tax laws. The Congress established the board to help IRS overcome long-standing difficulties in modernizing its information systems and improving customer service—difficulties that were viewed as broadly analogous to those affecting the air traffic control system. However, the board differs from the subcommittee in that it includes the Secretary of the Treasury and the IRS Commissioner, whereas the subcommittee, as provided in AIR-21, consists entirely of private sector representatives.

In July 2002, the Subcommittee on Aviation, House Committee on Transportation and Infrastructure, held a hearing on FAA’s progress in hiring a chief operating officer and the role of the subcommittee. During this hearing, the former FAA Administrator and the former subcommittee chairman testified that a lack of clarity in the act on the relationship of the chief operating officer to the subcommittee and the FAA Administrator had made it difficult to hire a chief operating officer. This spring, the administration, the Senate, and the House have proposed legislation to reauthorize FAA’s programs that would amend AIR-21 to, among other things, clarify this relationship.⁸

⁸The administration submitted its reauthorization proposal to the Congress on March 25, 2003; S. 824 was introduced in April 2003; and H.R. 2115 was introduced in May 2003.

Subcommittee Has Emphasized Performance-based Management and Carried Out Some Responsibilities, but Obstacles Have Hampered Its Progress

Under AIR-21, the Air Traffic Services Subcommittee has multiple responsibilities, but it thus far has focused on assisting FAA in moving toward performance-based management. Specifically, the subcommittee has defined its role as bringing measurements, accountability, and a more businesslike structure to air traffic services. It also has accomplished some of the specific responsibilities set out in the act, such as approving budgets and large procurements, but it has encountered obstacles that have limited its progress. The greatest obstacle has been the lack of a chief operating officer to provide senior leadership for implementing change. Other obstacles include the subcommittee members' general inexperience with aviation and with FAA's acquisition and budget processes; turnover on the subcommittee; and, according to the subcommittee, FAA's lack of flexibility to move funds between and within accounts.

Subcommittee Is Moving FAA toward Performance-based Management

In its first annual report, issued in August 2002, the subcommittee expressed the view that "setting the proper performance measures and then accurately and relentlessly using them to improve the quality and safety of the air traffic system will form the foundation of the new organization." Even without a chief operating officer to develop a strategic plan for the air traffic control system, including measures of safety, efficiency, and productivity, as provided in the act, the subcommittee has been working with FAA to identify appropriate measures in each area. Specifically, in March 2002, the subcommittee tentatively approved draft performance measures outlined by the FAA Administrator in 10 areas, including operational errors, runway incursions, delays, and financial performance.⁹ The subcommittee's report noted that FAA has developed more detailed and useful performance measures in some areas, such as runway incursions, and therefore can collect better data for measuring its performance. For example, FAA now measures the severity as well as the number of runway incursions, and it is better able to target and take action to prevent the serious incursions that could cause accidents. The subcommittee is continuing to emphasize performance measures, making sure that they measure outcomes that are within FAA's control and can be used to hold FAA managers accountable. The subcommittee's goal is to help FAA refine and link its performance measures to FAA's and the Department of Transportation's strategic plans.

⁹Operational errors can occur when a controller does not maintain the required separation between two aircraft or between an aircraft and terrain and/or obstacles. A runway incursion is an incident on the runway, involving an aircraft, vehicle, or object, which creates a collision hazard.

Subcommittee Has Carried Out Other Specific Responsibilities, but Its Input Has Been Limited

In addition to focusing on performance management, the subcommittee has carried out several of the specific responsibilities assigned to it under AIR-21. For example, to date, the subcommittee reviewed and approved

- five air traffic procurement projects of more than \$100 million,¹⁰
- the FAA Administrator's implementation of a cost accounting system, and
- the Administrator's plans to reorganize major parts of the air traffic control system.

In each of these areas, the subcommittee's input was limited because the work was largely completed before the subcommittee became involved. For example, all of the key acquisition milestones had been completed for two of the five procurements, and for the other three, the subcommittee did not make any substantive changes. Similarly, the subcommittee noted with approval in its report that the cost accounting system implemented by the Administrator was tracking 70 percent of FAA's personnel, overhead, and other costs for the air traffic control system, but the subcommittee did not address problems with tracking the remaining 30 percent of these costs, most of which are for labor. As Transportation's Office of Inspector General has reported, problems with FAA's labor distribution system, which is part of the cost accounting system, limit FAA's ability to monitor air traffic controllers' productivity.¹¹ Because of the problems with this system, FAA cannot track the hours worked by individual controllers or assign the hours worked to specific functions or facilities. According to the Inspector General, the Administrator has directed that appropriate internal controls be incorporated into the labor distribution system to track the hours worked by all employees. While noting that most of the important decisions on reorganizing the air traffic control functions will not be made until a chief operating officer is hired, the subcommittee approved FAA's preliminary plans for merging the acquisition and operating functions of the agency.

¹⁰Next-Generation Air/Ground Communication, Oceanic Air Traffic Control Services, En Route Communications Gateway, En Route Automation Modernization, and User Request Evaluation Tool.

¹¹Department of Transportation, Office of Inspector General, *Reauthorization of the Federal Aviation Administration*, CC-2003-058 (Washington, D.C.: Feb. 12, 2003).

AIR-21 gives the subcommittee broad authority to influence the budget for the air traffic control system, but the subcommittee has not fully exercised that authority. Specifically, the act makes the subcommittee responsible for reviewing and approving the annual air traffic control budget request, submitting this budget request to the Secretary of Transportation, and ensuring that it supports the annual and long-range strategic plans for the air traffic control system. Additionally, the act requires the Secretary to transmit the budget request approved by the subcommittee to the President, who is then directed to transmit that request to the House and Senate authorizing and appropriations committees “without revision,” together with the President’s annual budget request for the rest of FAA. It is not clear what role this process allows for Transportation and the Office of Management and Budget in developing the budget request for the air traffic control system. The IRS Oversight Board has similar authority over the IRS budget. The fiscal year 2003 budget for the air traffic control system was already under development when the subcommittee was established. The subcommittee’s first annual report makes no mention of actions taken on that budget; however, discussions with FAA officials indicated that the subcommittee reviewed and approved the budget requests prepared by the FAA Administrator for fiscal years 2003 and 2004. Nevertheless, to our knowledge, the subcommittee did not recommend any changes to these budget requests or determine whether the budget requests supported the long-range plans for the air traffic control system.

In a few other areas, the subcommittee did not need to carry out its specific responsibilities because FAA did not initiate an action. For example, the subcommittee could not review and approve the Administrator’s appointment of a chief operating officer because no candidate was appointed, and it could not review and approve bonus payments for the Administrator and senior FAA executives because no bonus payments were made for fiscal year 2001.¹² Appendix II summarizes our analysis of the subcommittee’s progress in carrying out its specific responsibilities.

Now that the subcommittee has been in place for more than 2 years, it is beginning to exercise more influence. For example, according to FAA officials, the subcommittee raised questions about the funding, timing, and

¹²According to the FAA officials, the subcommittee has reviewed bonuses for fiscal year 2002.

intellectual property rights for one recent procurement it approved.¹³ Applying its private sector knowledge of intellectual property rights, the subcommittee asked FAA staff about the potential for the government to earn money from equipment or materials it has furnished to developers of the system. According to an FAA official, these questions led to informal discussions about the feasibility of exploring this option.

Not Having a Chief Operating Officer Has Been the Greatest Obstacle to the Subcommittee's Progress

Not having a chief operating officer has hindered the subcommittee in carrying out its responsibilities. For example, without a chief operating officer, FAA has not moved forward with the new air traffic organization that is supposed to bring together the air traffic control system's acquisition and operating functions. To date, the subcommittee has spent a portion of each of its working meetings discussing the effort to hire a chief operating officer. In addition, it recently worked with FAA and the current recruiting firm to revise and streamline the position description, but until the position is filled, the new three-component structure will not be fully functional. For the subcommittee, the chief operating officer is the "lynchpin" of the new performance-based air traffic organization—the "change agent" responsible for improving the performance and delivery of air traffic services. The subcommittee believes that not having a chief operating officer has seriously impeded its progress.

The subcommittee and FAA agreed that uncertainties about the position's responsibilities, reporting relationships, and measurement criteria for performance are major factors that have hampered the hiring of a chief operating officer. Under AIR-21, the FAA Administrator "may" delegate responsibility to the chief operating officer for developing a strategic plan and a budget request for the air traffic control system and for "reviewing" operational functions, including the modernization of the air traffic control system, measures for increasing productivity or controlling costs, and training and education. Candidates were unsure what specific duties the Administrator would delegate to the chief operating officer or what the chief operating officer should do to implement the delegated duties. Additionally, it was unclear how the chief operating officer would interact with the Administrator and the subcommittee, especially if there were differences of opinion between them. Although the chief operating officer

¹³FAA is implementing the En Route Automation Modernization program, which replaces the HOST computer system software and hardware and the backup system hardware and software.

reports to the Administrator under the act, the subcommittee also “has broad powers to oversee the work and budget of the air traffic organization.” This, according to the subcommittee’s first annual report, “creates organizational confusion that has been a factor in dissuading some candidates from accepting the position.” Furthermore, candidates expressed concern about a lack of criteria for measuring and evaluating the chief operating officer’s performance. Without specific criteria, some stakeholders suggested, the chief operating officer could be working at odds with the Administrator and the subcommittee. Candidates also wanted to know what criteria would be used to determine their eligibility for a bonus of up to 30 percent of their salary. While the act spells out the specific duties of the chief operating officer, and the criteria for evaluating his or her performance would be spelled out in the annual performance agreement between the Administrator and the chief operating officer, candidates wanted a better idea, in advance, of what they would be doing and how their performance would be judged.

Other factors have also made it difficult to hire a chief operating officer, some of which have now been resolved or are no longer relevant. One ongoing factor is the reservation that candidates and stakeholders have expressed about the likelihood of cultural change in FAA’s air traffic services organization. According to one of the recruiting firms retained by FAA, candidates have questioned whether a regulatory agency with an entrenched bureaucracy will embrace the cultural change necessary to transform air traffic services into a performance-based organization in which individuals will be held accountable for specific goals, such as implementing timely technological improvements.

In response to the revised, streamlined position description that it developed with the subcommittee and the second recruiting firm, FAA received several applications for the chief operating officer position. In March 2003, the recruiting firm gave the Administrator a slate of candidates for the position. However, the administration’s proposal narrows the scope of the chief operating officer’s responsibilities, so that the position would now be responsible for “implementing” the Administrator’s direction and for managing the day-to-day operations of the air traffic control system, but not for “developing” policy tools, such as strategic plans and budget proposals. FAA considers such policy-making functions appropriate for a chief executive officer—that is, for the Administrator—but not for a chief operating officer. Other stakeholders have agreed with FAA, maintaining that AIR-21 created confusion by bestowing policy-making functions on the chief operating officer position. While these changes, if implemented, may eliminate this confusion in the

future, it is unclear how the candidates who applied for the position as described in the act and the executive order will respond to FAA's proposed changes to the position's responsibilities. According to FAA officials, proposed changes were discussed with prospective candidates.

Other Obstacles Have Slowed the Subcommittee's Progress

Inexperience with FAA's acquisition and budget processes has further hampered the subcommittee's progress. AIR-21 requires the subcommittee members, collectively, to have experience and expertise in the management of large service organizations, customer service, the management of large procurements, information and communications technology, organizational development, and labor relations so that the subcommittee can help FAA address long-standing weaknesses in its air traffic modernization program. Additionally, the act prohibits the subcommittee members from having any financial ties to any aviation or aeronautics business or lobbying firm. As a result, the subcommittee members have faced a steep and time-consuming learning curve to understand FAA's acquisition and budget processes as they relate to the air traffic control system. To acquire the basic understanding they needed to carry out their review and approval functions, for example, they initially spent portions of their quarterly or bimonthly meetings on briefings from FAA staff and others on these processes.

Turnover on the subcommittee also has slowed its progress. Since the original five subcommittee members were sworn in, in January 2001, three have resigned and two of the three have been replaced, leaving four current members. The new members have had to go through a time-consuming learning process, just as the original members did. The Secretary of Transportation has not appointed a fifth member to the subcommittee because he is waiting to see whether the administration's reauthorization proposal, which would make the FAA Administrator the chair of the subcommittee, is approved. The congressional proposals would likewise make the Administrator the chair of the subcommittee.

Still another obstacle to the subcommittee's progress, according to the subcommittee, is FAA's lack of flexibility to move funds within and between accounts. The subcommittee told us that project oversight requires the ability to recommend such moves, but congressional budget guidelines restrict FAA's ability to move funds. Therefore, according to the subcommittee, these guidelines hinder FAA's ability to take advantage of the subcommittee's expert business advice and counsel. Both FAA and the subcommittee agree that acquisition project management is an area in which FAA could use flexibility. For example, FAA officials indicated that

they would like the flexibility to adjust to changing circumstances by shifting money within the facilities and equipment account from a project that is delayed to a project that is on track and could be cost-effectively accelerated. The agency is putting together a paper that will expand on the need for this flexibility.

In general, the Congress restricts an agency's ability to move funds within and between accounts to help ensure that funds are spent on the programs and activities for which they were appropriated. Guidelines from FAA's Senate Committee on Appropriations require FAA to seek congressional approval for any reprogramming that would increase or decrease funding for a project within the facilities and equipment account by more than 15 percent.¹⁴ Transfers between appropriations accounts must be specifically authorized by law. If the Appropriations Committee saw a need to provide FAA with more flexibility, it could consider raising the reprogramming threshold or the Congress could enact legislation to allow FAA to transfer money between accounts on a trial basis.

Proposed Changes to the Subcommittee's Organization and Oversight Responsibilities Could Clarify Uncertainties and Would Modify the Subcommittee's Authority

The Congress, the administration, and other stakeholders have proposed changes to the subcommittee's organization and oversight responsibilities that they believe would improve the performance of the air traffic control system. These changes could clarify some uncertainties in AIR- 21 and would modify the subcommittee's approval authority. According to our analysis, the merits of the proposed changes depend, in large part, on the extent to which the subcommittee's current approval authority is viewed as necessary or desirable to improve the performance of the air traffic control system.

Legislative Proposals Agree on Organizational Changes

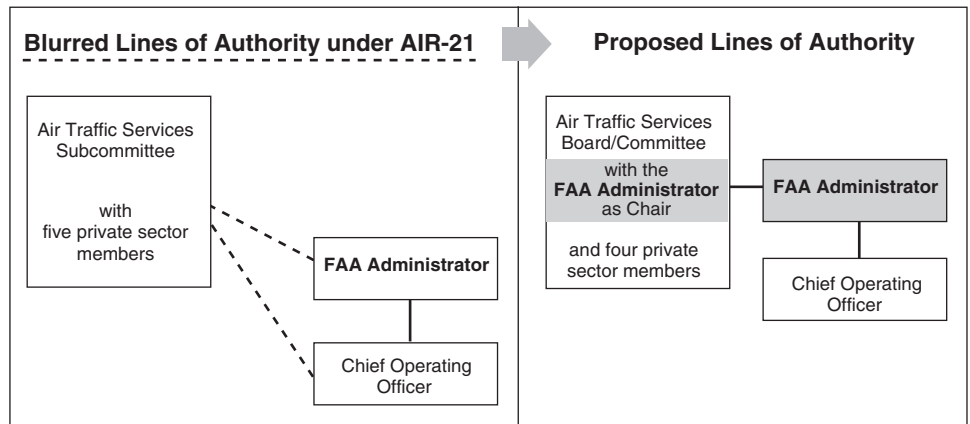
The three legislative proposals that addressed the subcommittee's organization and responsibilities would separate the subcommittee from the Aviation Management Advisory Council and rename the subcommittee. Under the Senate proposal, the new organization would be called the Air

¹⁴Current guidelines for reprogramming are included in Senate Report 101-398, July 27, 1990.

Traffic Services Committee; under the House and the administration proposals, it would be called the Air Traffic Services Board. This change would elevate the subcommittee from a subordinate organization to an organization independent of the council to oversee air traffic services, just as the Mineta Commission envisioned. The new organization also would be structurally similar to the IRS Oversight Board and to a board of directors for a private organization. According to the administration proposal, this change would improve the functioning of both the council and the subcommittee by “simplifying and clarifying their respective missions,” enabling the council to focus on providing “user/customer” input and the subcommittee to “target the safe and efficient operation of the air traffic control system.”

The three legislative proposals also would make the FAA Administrator a member and the chair of the new organization. According to FAA and other proponents, this change would streamline and clarify the lines of authority between the chief operating officer, the Administrator, and the subcommittee, eliminating the “confusion” and “blurring” of the lines of authority that, according to the subcommittee’s first annual report, was a factor in dissuading some candidates from accepting the job of chief operating officer (see fig. 2). Hence, this change could make it easier to hire a chief operating officer. According to the subcommittee, which also recommended in its first annual report that the FAA Administrator chair the subcommittee, the “outside oversight” envisioned under the statute would be preserved by this proposal because the four private sector members would still constitute a majority and the Administrator would need two of their votes for approval of any items. However, this change also would reduce the number and influence of the private sector members and could affect the subcommittee’s potential for accomplishing change.

Figure 2: Current and Proposed Oversight and Management Structure



Source: GAO.

Proposals Would Alter the Subcommittee’s Approval Authority to Varying Degrees

Two of the three legislative proposals and some stakeholders’ proposals would, to varying degrees, curtail the subcommittee’s authority to approve strategic plans, contracts, and budget requests for the air traffic control system. These proposals are designed to address challenges to the administration’s policy-making functions that the administration and some other stakeholders see in the subcommittee’s approval authority—especially in the subcommittee’s authority to approve a budget request for the air traffic control system. Specifically, the administration has proposed to eliminate all of the subcommittee’s approval authority, making the new body strictly advisory, and the House and other stakeholders have proposed to eliminate some of the subcommittee’s approval authority. Neither the Senate nor the subcommittee has recommended any changes in the subcommittee’s approval authority.

Under the administration proposal, the subcommittee would no longer approve strategic plans, contracts, and budget requests for the air traffic control system. Instead, it would “make recommendations” consistent with its expertise in management, customer service, information and communications technology, organizational development, and labor relations. Furthermore, the Secretary of Transportation would no longer be responsible for initiating any process that would transmit a document reflecting the subcommittee’s views on the budget to the congressional authorizing and appropriating committees. These changes would alleviate concerns about the subcommittee’s usurping the executive branch’s policy-making responsibilities, especially the executive branch’s prerogative to submit a budget that reflects its priorities. According to the

administration's reauthorization proposal, the subcommittee's review and recommendations on the budget for the air traffic control system would then be "based on Department of Transportation and Office of Management and Budget budget levels and within the normal procedures for developing the President's Budget." We are not aware of any efforts by the subcommittee to challenge the executive branch's authority. However, the former chairman of the subcommittee noted that AIR-21, as written, could be interpreted as enabling the subcommittee to circumvent major policy decisions of the administration through its authority to approve the air traffic organization's budget, major contracts, and major personnel decisions. According to the former chairman, the possibility of such an interpretation, while probably not intended, pointed to a need for greater clarity in the law.

Under the House proposal, the subcommittee would lose its authority to approve the budget request for the air traffic control system, but it would retain its other approval authorities. The subcommittee could make recommendations on the budget request, which the Secretary of Transportation would be responsible for submitting to the President. The President would then be responsible for transmitting these recommendations to the congressional authorizers and appropriators. While this proposal appears to respond, in part, to the administration's concerns about challenges to the executive branch's policy-making authority, especially the executive branch's prerogative to submit a budget that reflects its priorities, it retains AIR-21's means of communicating views on an executive branch agency's budget directly to the Congress. Even with the Administrator as chair, if at least three members of the subcommittee disagreed with the administration, they could formally communicate their views to the congressional committees. Appendix III summarizes the changes that the three proposals would make to the subcommittee's organization and oversight responsibilities and to the chief operating officer's responsibilities.

Several stakeholders have proposed to eliminate the subcommittee's authority to approve a budget request and large contracts but to preserve its authority to approve strategic plans and performance measures. This proposal reflects the view that the subcommittee's authority should be aligned with its expertise and that the subcommittee cannot realistically be expected to make meaningful contributions to all of the areas under its purview, given that most of its members lack experience with aviation issues. However, eliminating the subcommittee's authority to approve a budget request and large contracts could limit its ability to (1) help ensure that FAA's strategic plan for the air traffic control system is aligned with

the budget and (2) oversee procurement costs and schedules. While acknowledging that the scope of the subcommittee’s responsibilities is very large, others maintain that with a staff to provide technical support, including analyses of budgets and procurements, the subcommittee could be expected to carry out its current responsibilities.

The proposals for eliminating or curtailing the subcommittee’s approval authority could strengthen the accountability of the Administrator and of the chief operating officer by increasing their responsibility for improving the performance of the air traffic control system. These proposals also would remove any ambiguity about the reporting relationship of the chief operating officer and the Administrator. However, eliminating the subcommittee’s approval authority also would limit the subcommittee’s power and fundamentally alter its role. It is unclear how the subcommittee without approval authority could carry out its “general responsibility” for “oversight” under AIR-21—to “oversee the administration, management, conduct, direction, and supervision of the air traffic control system.”

Stakeholders Have Proposed Other Changes That Would Affect the Subcommittee’s Organization and Ability to Carry Out Its Responsibilities

The head of the Aviation Management Advisory Council proposed to eliminate the subcommittee’s approval authority and merge the subcommittee with the council. The rationale for this proposal is that the resulting expanded advisory council could provide the FAA Administrator with both aviation industry and management expertise, as the Mineta Commission recommended, and that this cross pollination could lead to a fertile exchange of ideas and prevent aviation representatives from being too insular and nonindustry representatives from being too naïve. However, like the administration proposal, it would eliminate the subcommittee’s approval authority.

To help the subcommittee better understand aviation issues, some stakeholders have suggested that at least one member should have expertise in aviation. Other stakeholders have disagreed, noting that FAA is expected to serve as a resource for the subcommittee, and that the members of the council have experience in aviation. These stakeholders believe that having a member with expertise in aviation would, therefore, be redundant and could dilute the subcommittee’s potential to bring expertise in performance management to air traffic services.

Other stakeholders have suggested that the subcommittee hire a staff to provide them with expertise in aviation technology, federal budgeting, finance, and contracting. The purpose of such a staff would be to give the subcommittee an independent perspective and to ensure continuity when

turnover in the subcommittee's membership occurs. AIR-21 authorizes the chair of the subcommittee to appoint "any personnel that may be necessary to enable the subcommittee to perform its duties," but the act does not authorize an appropriation for a staff. To date, the subcommittee has relied on FAA staff for information and analysis. The original subcommittee members voted to hire staff, and the fiscal year 2002 budget provided about \$850,000 for that purpose. However, with the resignation of two of the original members and the first chairman's imminent departure, the hiring did not occur. According to FAA's records, the money was divided between the council and the subcommittee, and a portion of the funding that remained with the subcommittee was used to pay part of the salary and benefits of the FAA staff who assisted both the council and the subcommittee.

According to FAA officials, neither the fiscal year 2003 budget nor the fiscal year 2004 budget request provides any funds for a staff or other outside resources for the subcommittee. FAA officials stated that when, and if, it became necessary for the subcommittee to have staff, FAA would seek the necessary funds. Until then, FAA will staff the subcommittee. According to FAA officials and the current subcommittee chairman, hiring a staff would be an unnecessary expense at this time. In addition, the current chairman views the work that FAA staff do for the subcommittee as educational for the staff, improving their ability to understand the subcommittee's approach to performance management.

We agree that FAA is the logical source of much of the information that the subcommittee may need. However, relying exclusively on FAA for information and analysis may not provide the subcommittee with an independent perspective. Moreover, as our work has shown, FAA's information may not always be reliable or complete. For example, our recent work on the Standard Terminal Automation Replacement System, one of FAA's major modernization projects, showed that the reliability of FAA's life-cycle cost estimates is uncertain, in part because FAA was relying on data from the contractor that did not reflect the current status of the project and had not been independently analyzed as FAA's guidance requires.¹⁵ Because the subcommittee members are generally not experts in aviation technology, federal budgeting, finance, and contracting, they may not be ideally qualified to evaluate the independence, reliability, and

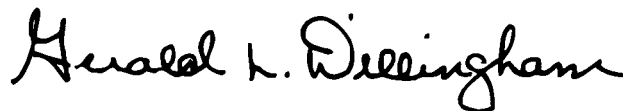
¹⁵[GAO-03-343](#).

completeness of the information they are provided for overseeing the air traffic control system.

Agency Comments

We provided a draft of this report to the Department of Transportation and the Air Traffic Services Subcommittee for review and comment. On May 16, 2003, we received E-mail comments from the department. Department officials generally agreed with the facts presented in the draft report and made technical and clarifying comments, which we incorporated in this report as appropriate. The Air Traffic Services Subcommittee did not provide comments beyond those provided by department officials.

We are sending copies of this report to interested Members of Congress, the Secretary of Transportation, and the FAA Administrator. We will also make copies available to others upon request. In addition, this report will be available at no charge on the GAO Web site at <http://www.gao.gov>. Should you or your staff have any questions about this report, please contact me at (202) 512-2834. I can also be reached by E-mail at dillingham@gao.gov. Key contacts and contributors to this report are listed in appendix IV.



Gerald L. Dillingham
Director, Physical Infrastructure Issues

List of Committees

The Honorable John McCain
Chairman
The Honorable Ernest F. Hollings
Ranking Minority Member
Committee on Commerce, Science, and Transportation
United States Senate

The Honorable Trent Lott
Chairman
The Honorable John D. Rockefeller IV
Ranking Minority Member
Subcommittee on Aviation
Committee on Commerce, Science, and Transportation
United States Senate

The Honorable Don Young
Chairman
The Honorable James Oberstar
Ranking Democratic Member
Committee on Transportation and Infrastructure
House of Representatives

The Honorable John Mica
Chairman
The Honorable Peter A. DeFazio
Ranking Democratic Member
Subcommittee on Aviation
Committee on Transportation and Infrastructure
House of Representatives

Appendix I: Objectives, Scope, and Methodology

The Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (AIR-21) requires us to report on the success of the Air Traffic Services Subcommittee in improving the performance of the air traffic control system. Accordingly, this report addresses the (1) actions the subcommittee has taken to carry out its oversight responsibilities and the obstacles it has encountered in attempting to do so and (2) changes to the subcommittee's organization and oversight responsibilities that have been proposed to improve the performance of the air traffic control system.

To accomplish both of our objectives, we analyzed AIR-21 and its legislative history; Executive Order 13180; and proposals of the administration, the Senate, and the House that would amend provisions of AIR-21 relating to the subcommittee and the chief operating officer. We also reviewed the initial and the revised profiles for the chief operating officer's position and legislation and other documents that created a similar oversight structure at the Internal Revenue Service. We analyzed the Air Traffic Services Subcommittee's annual report and the minutes from the subcommittee's meetings, as well as congressional testimony on the status of the subcommittee and our reports on transforming federal agencies. In addition, we interviewed Federal Aviation Administration (FAA) officials, including the past and present Administrators; past and present members of the subcommittee; the head of the Aviation Management Advisory Council; and representatives of aviation industry organizations, including the American Association of Airport Executives, Airport Council International–North America, National Association of State Aviation Officials, Air Transportation Association, National Air Traffic Controllers Association, Airline Pilots Association, and Cargo Airline Association. We also analyzed documentation from FAA officials, research organizations, and the two firms hired to recruit the chief operating officer. We did not address changes to FAA's—as opposed to the subcommittee's—organization that some stakeholders maintain are essential to improve the performance of the air traffic control system.

We performed our work from October 2002 through May 2003 in accordance with generally accepted government auditing standards.

Appendix II: Subcommittee's Progress in Implementing Specific Responsibilities

Subcommittee's specific responsibilities	Implementation status
Planning	
Strategic plans – Review, approve, and monitor the strategic plan for the air traffic control system, including the establishment of (1) a mission and objectives, (2) related standards of performance, and (3) annual and long-range strategic plans <ul style="list-style-type: none"> Reviewed and approved draft measures in 10 areas (e.g., operational errors, runway incursions, delays, and airport arrival capacity) Evaluating constraints to managing and achieving long-range plans (e.g., budget flexibility issues) 	<p style="text-align: center;">●</p> <p style="text-align: center;">●</p>
Operational plans – Review the operational functions of the air traffic control system <ul style="list-style-type: none"> Evaluating budget flexibility issues 	<p style="text-align: center;">●</p>
Modernization and improvement	
Methods and improvements – Review and approve (1) methods to accelerate air traffic control modernization and (2) improvements in aviation safety related to air traffic control <ul style="list-style-type: none"> Reviewed draft measures for improvements in aviation safety related to air traffic control 	<p style="text-align: center;">●</p>
Procurements – Review and approve procurements of air traffic control equipment in excess of \$100 million <ul style="list-style-type: none"> Approved five procurement projects 	<p style="text-align: center;">●</p>
Management	
Chief operating officer – Review and approve the appointment of a chief operating officer <ul style="list-style-type: none"> Led revision of the position description for the chief operating officer to advance the hiring process 	<p style="text-align: center;">●</p>
Senior executives – Review the selection, evaluation, and compensation of senior executives who have program management responsibility over significant functions of the air traffic control system ^a <ul style="list-style-type: none"> Reviewed short-term incentives packages for the heads of the Air Traffic Services and Research and Acquisitions 	<p style="text-align: center;">●</p>
Reorganization – Review and approve plans for any major reorganization that would have an impact on the management of the air traffic control system <ul style="list-style-type: none"> Reviewed and approved plans to merge the air traffic control system's capital planning (Research and Acquisitions) and operational functions (Air Traffic Services) within the air traffic organization (the new performance-based organization) Reviewed and approved plans to create a terminal business unit that combines terminal services, terminal facilities, automation, and surveillance 	<p style="text-align: center;">●</p> <p style="text-align: center;">●</p>
Financial management – Review and approve a cost accounting and financial management structure and technologies to help ensure efficient and cost-effective air traffic control operation <ul style="list-style-type: none"> Reviewed and approved the cost accounting system that tracks 70 percent of the costs to provide specific services 	<p style="text-align: center;">●</p>
Performance and compensation – Review performance and compensation of managers responsible for major acquisitions <ul style="list-style-type: none"> Reviewed short-term incentives packages for the heads of Air Traffic Services and Research and Acquisitions 	<p style="text-align: center;">●</p>
Budget	
Budget request – Review and approve the budget request for the air traffic control system, making sure that it supports annual and long-range strategic plans <ul style="list-style-type: none"> Approved the fiscal year 2003 budget^b 	<p style="text-align: center;">●</p>
Administrative requirements	
Meetings – Meet at least quarterly <ul style="list-style-type: none"> Held four working meetings in calendar year 2001, two in calendar year 2002, and two as of April 2003; two other meetings were scheduled but canceled following September 11, 2001 	<p style="text-align: center;">●</p>
Reports – Report annually on the results of the Subcommittee's activities <ul style="list-style-type: none"> Issued an annual report in August 2002 	<p style="text-align: center;">●</p>
<p>● Completed ● In progress</p>	

Source: GAO.

^aBecause of the events of September 11, 2001, the FAA Administrator did not give bonuses to executives; therefore, the Air Traffic Services Subcommittee did not review this issue.

^bThe subcommittee was formed after the fiscal year 2003 budget process was under way.

Appendix III: Proposed Legislative Changes Affecting the Subcommittee and the Chief Operating Officer Responsibilities

Legislative proposal	Initiator of proposed change		
	Administration ^a	Senate ^b	House ^c
Modify subcommittee's structure			
• Separate subcommittee from the Aviation Management Advisory Council	X	X	X
• Designate the FAA Administrator as chairperson	X	X	X
• Reduce the number of private sector members from five to four	X	X	X
Modify subcommittee's approval authority			
• Eliminate all approval authority, but allow recommendations	X		
• Eliminate budget approval authority, but allow recommendations on the budget			X
• Eliminate budget transmittal requirement	X	^d	^e
• Eliminate additional reporting requirement		X	
Make other changes to subcommittee			
• Rename subcommittee	X	X	X
• Eliminate compensation for members	X	^f	X
• Authorize an appropriation for activities	X		X
Modify chief operating officer's responsibilities			
• Oversee day-to-day operations rather than review operations	X	X	X
• Implement rather than develop strategic plan	X	X	X
• Report performance to authorizing committees rather than entire Congress	X	X	X
• Review management of cost-reimbursable contracts			X
• Submit budget to subcommittee/board rather than Secretary of Transportation			X

Source: GAO.

^aAs of March 25, 2003.

^bS. 824.

^cH.R. 2115.

^dSpecifies that the budget request for the air traffic control system that is to be transmitted without revision by the President to the congressional authorizing and appropriating committees is the pre-Office of Management and Budget budget request for the air traffic control system.

^eRequires the transmission without revision of budget recommendations related to the air traffic control system, rather than transmission of a budget request for the system, to the congressional authorizing and appropriating committees along with the annual budget request of FAA.

^fEliminates compensation for the chair and vice chair but retains compensation of \$25,000 per year for members.

Appendix IV: GAO Contacts and Staff Acknowledgments

Contacts

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Belva Martin (202) 512-2834

Staff Acknowledgments

In addition to those individuals named above, Geraldine Beard, Elizabeth Eisenstadt, Dave Hooper, Elizabeth Marchak, Kieran McCarthy, and Richard Scott made key contributions to this report.

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