Federal Aviation Administration

Memorandum

Date: **JUN 1 4** 2006

From: David Bowen, Assistant Administrator for Information Services and
Chief Information Officer, AIO-1

To: Management Board

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Subject: Internet Protocol Version 6 (IPv6) Guidance

The purpose of this memorandum is to establish the Internet Protocol Version 6 (IPv6) guidance for the Federal Aviation Administration (FAA). This guidance will promote compliance with the attached documents: Department of Transportation's (DOT) IPv6 guidance memorandum, dated October 4, 2005, entitled DOT's Transition Planning for Internet Protocol Version 6 (IPv6); DOT's guidance memorandum, dated October 1, 2004, Guidelines for Information Technology (IT) Purchases; and the Office of Management and Budget's (OMB) guidance memorandum dated August 2, 2005, Transition Planning for Internet Protocol Version 6 (IPv6).

Internet Protocol (IP) is the "language" and set of rules computers use to talk to each other over the Internet. The most common protocol in use today, Internet Protocol Version 4 (IPv4), provides the world with only four billion IP addresses, inherently limiting the number of devices that can be given a unique, globally routable address on the Internet. The emergence of IPv6 provides the world with an almost unlimited number of available IP addresses and is essential to the continued growth of the Internet and development of new applications leveraging mobile Internet connectivity.

In August 2005, the OMB established the goal of enabling all Federal government agency network backbones to support the next generation of the IPv6 by June 30, 2008. The FAA transition will be performed using a "core out" strategy beginning with the WAN and facility backbones. In order to meet the June 2008 OMB deadline, the backbone's routers, switches, firewalls, intrusion detection systems, and network management systems must be made IPv6 compatible.

However, to completely transition the FAA to IPv6 will require replacement or upgrading of all workstations, host computers, and application software. The full transition will be expensive. However, the cost issue is mitigated by the fact that a full transition to IPv6 is expected to take

many years, and most of today's equipment will have been scrapped long before IPv6 takes over and IPv4 is permanently retired.

To facilitate this transition, it is the responsibility of the staff offices and lines of business to ensure that all future information technology procurements can use both IPv4 and IPv6 or uses native IPv6 protocol for communication with the FAA networks. The procurement of IPv6 compatible IT will allow the FAA to accomplish the transition to IPv6 through technology refresh cycles and spread the overall cost of this transition over a number of years. Requests for waivers to this policy will be reviewed and approved by the FAA CIO and forwarded to the DOT OCIO for final approval.

If you have any questions, please do not hesitate to call me on x34570 or have a member of your staff contact Hal Pierson on x58153.

Attachments
1) DOT's Transition Planning for Internet Protocol Version 6 (IPv6)
2) Guidelines for Information Technology (IT) Purchases
3) Transition Planning for Internet Protocol Version 6 (IPv6)