

*The new FAA opens for business*





## Chapter 2: Birth of FAA

The approaching introduction of jet airliners and a series of midair collisions spurred passage of the Federal Aviation Act on August 23, 1958. Taking a comprehensive approach to the federal role in fostering and regulating civil aeronautics and air commerce, the new law repealed the Air Commerce Act of 1926, the Civil Aeronautics Act of 1938, the Airways Modernization Act of 1957, and those portions of various presidential plans dealing with civil aviation. The legislation assigned the functions exercised under these repealed laws to two independent agencies — a new Federal Aviation Agency (FAA) and a Civil Aeronautics Board (CAB).

Although FAA technically came into existence with the passage of the act, the new agency actually assumed its functions in stages. Under the provisions of the act, FAA would begin operations 60 days after the appointment of the first FAA Administrator. On November 1, 1958, retired Air Force General **ELWOOD “PETE”**

**QUESADA [TERM: 11/01/58 – 01/20/60]**

became the first FAA Administrator. Sixty days later, on December 31, FAA began operations. It inherited the organization and functions of the Civil Aeronautics Authority as well as those of the National Aviation Facilities Experimental Center in Atlantic City, New Jersey, formerly operated

by the Airways Modernization Board. Upon becoming the first administrator of the agency that he had helped to create as Eisenhower’s principal advisor on aeronautics, Quesada worked quickly to organize the new FAA and to mediate the growing conflict between those advocating military control of the airspace and those advocating civil airspace control.

Agency Order 1, issued on January 15, 1959, established FAA’s basic organizational structure. Three staff offices headed by assistant administrators for management services, personnel and training, and plans and requirements

(shortened to “plans” on July 10, 1960) assisted the administrator and his deputy. Other staff officials reporting to the administrator included

the general counsel, the civil air surgeon, and the heads of the offices of public affairs, congressional liaison, and international coordination. Four bureau directors ran the agency’s major programs: research and development (testing and development of new



*President Eisenhower swears in Administrator Elwood Quesada*



*FAA headquarters building, Temporary 4, Washington, DC*



equipment); flight standards (certification of airmen, aircraft, and air carriers); air traffic management (planning and operation of the airspace system); and facilities (acquisition and maintenance of air navigation facilities and related equipment).

FAA's initial field structure retained the Civil Aeronautics Administration's system of six numbered regions headed by regional directors reporting to the agency administrator. Three large field facilities were exempt from



*FAA Aeronautical Center Oklahoma City, Oklahoma*



*Tower at FAA National Aviation Facilities Experimental Center, Atlantic City, New Jersey*

regional control: the National Aviation Facilities Experimental Center; the Aeronautical Center in Oklahoma City, Oklahoma; and Washington National Airport outside of Washington, DC.

With the new agency's organizational structure in place, the administrator mounted a vigorous campaign to

improve aviation safety. The fledgling agency faced an enormous task in updating decades-old safety standards that covered flight operations, maintenance procedures, and physical and proficiency requirements for pilots. In March 1959 Administrator Quesada announced plans for a concentrated aviation safety drive.

The following month, understanding that technology would help to improve safety, Quesada announced a contract award for the development of an air height surveillance radar. This new technology would automatically provide air traffic controllers with information on aircraft altitudes up to a range of 50 nautical miles. Shortly thereafter, FAA commissioned UNIVAC file computers for air traffic control use at the New York and Washington air route traffic control centers (ARTCCs). The agency later installed additional computers at the Pittsburgh, Cleveland, and Boston ARTCCs. Controllers used these computers to prepare flight progress strips, exchange information with one another, and aid them in their routine "bookkeeping chores."

To aid in the control of civil and military air traffic, Quesada also put into operation, in the New York area, a 64-code air traffic control radar beacon system that became known as secondary radar. A descendant of the World War II IFF (identification, friend, or foe), the new equipment reinforced primary radar signals and permitted positive identification of individual aircraft carrying transponders. By May 1960, 20 radar beacons were in operation at 16 ARTCCs.



*1960s, air traffic controller*



In April 1960 FAA announced a contract award totaling nearly \$6 million for advanced experimentation on automated air traffic control. This award went to the MITRE Corporation, a research institution recently created by the Massachusetts Institute of Technology (MIT) Lincoln Laboratories to facilitate work across traditional military, industry, and academia boundaries. Work performed under the contract included research and experimentation on joint use of military equipment and facilities for air traffic control, as well as for air defense purposes. That same month, the agency announced a contract with the General Instrument Corporation for 38 bright display radar consoles for ARTCCs. The equipment used a dual purpose scan converter/storage tube to present a brighter display that would help controllers work more efficiently in lighted rooms. FAA had already installed similar systems in 10 ARTCCs and 4 towers.

FAA commissioned its first airport surface detection equipment (ASDE) at Newark, New Jersey, in 1960. Originally developed for the Air Force, the ASDE radar system provided air traffic controllers



*1962, passengers board a Lockheed Electra*

Kennedy International Airport], Washington — Washington National and later Dulles International — Boston, Seattle, San Francisco, Cleveland, Los Angeles, and Portland.

with information on the position of aircraft and other vehicles on the ground, even during darkness and fog. FAA planned to install the system at nine other airports: New York International [also called Idlewild and later renamed John F.

In addition to his efforts to enhance system safety, and, in part, at the urging of the American Airlines president, Administrator Quesada moved to ensure airline pilot proficiency. On March 15, 1960, FAA's "age-60 rule" went into effect, barring individuals who had reached their 60th birthday from serving as pilots on aircraft engaged in certified route air carrier operations or on large aircraft engaged in supplemental air carrier operations. The rule did not apply to commuter or on-demand air taxi operations that employed smaller aircraft. In adopting the rule, FAA declared that a progressive deterioration of certain physiological functions normally occurred with age and that sudden incapacity due to certain medical defects such as heart attack and strokes became significantly more frequent in any group reaching age 60.

Quesada also appointed 21 of the nation's leading forensic pathologists as consultants to help determine involvement of human factors in aircraft accidents. The nationwide system of consultants supplemented an existing workforce of aeromedical accident investigators employed by FAA's civil air surgeon's office and augmented by pathologists from the Armed Forces Institute of Pathology.

In April 1960 Quesada placed in effect the first of a series of regulations designed to minimize aircraft noise at major airports. He carefully designed these early environmental actions in response



*1966, FAA researchers take noise measurements on top of FAA headquarters building, Washington, DC*



to community concerns, while retaining safety as the agency's primary objective. Special Civil Air Regulation 438 set up rules for both civil and military aircraft operating at Los Angeles International Airport that included minimum altitudes, preferential runways, and approach and departure routes over the least populated areas. The administrator subsequently issued similar special regulations for operations at New York International and at Washington National Airport.



*1960, Brooklyn, New York, accident site*

airspace assigned to it by air traffic control. The DC-8's high speed, coupled with a change of clearance that reduced the distance the aircraft needed to travel by approximately 11 miles, contributed to the crash. CAB concluded that the crew did not take note of the change of time and distance associated with the new clearance. Although the plane's inoperative VHF radio increased the crew's workload, the pilot did not report the malfunction to controllers.

As a result of this accident, FAA quickly moved to require that pilots operating under instrument flight rules (IFRs) report malfunctions of their navigation or communications equipment. The agency also

Nearing the end of his tenure, in December 1960, Administrator Quesada faced a major challenge when a United DC-8 and a TWA Super Constellation collided in midair over Brooklyn, New York. All 128 occupants aboard the planes and eight persons on the ground were killed. Civil Aeronautics Board investigators determined that the United flight had proceeded beyond its clearance limit and the

announced a program to equip all turbine-powered aircraft with distance measuring equipment. A new speed rule prohibited civil aircraft from exceeding 250 knots when they were within 30 nautical miles of a destination airport and flying below 10,000 feet.

When John F. Kennedy became the 35th president of the United States on January 20, 1961, FAA administrator Elwood Quesada resigned his position and Deputy Administrator James Pyle became acting administrator until the new President could select a permanent replacement.

As Administrator Quesada left office, the 40,000 employees of his two-year-old agency were operating and maintaining 9,500 air navigation and traffic control facilities, including 425 flight service stations, 228 airport traffic control towers, 41 long-range and 21 precision approach radars, 53 airport surveillance radars, and 35 air route traffic control centers. By 1961 U.S. scheduled air carriers were transporting 60 million passengers a year. A number of new and larger airports were opened or under construction to accommodate increasing jet traffic. The integration of civil and military airspace needs was well along. And, the space age had begun — ushering in new technologies ready for adoption by the aviation community.



*1960s, United Airline pilots*



1961, aerial view of Washington National Airport

