

## A CENTURY OF GROWTH: THE EVOLUTION OF WRIGHT-PATTERSON AIR FORCE BASE

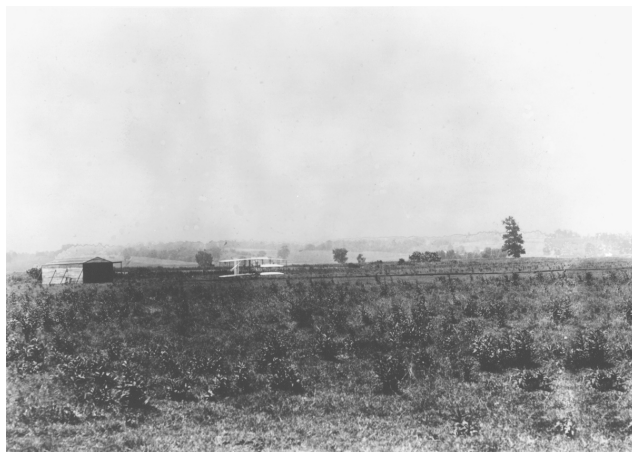
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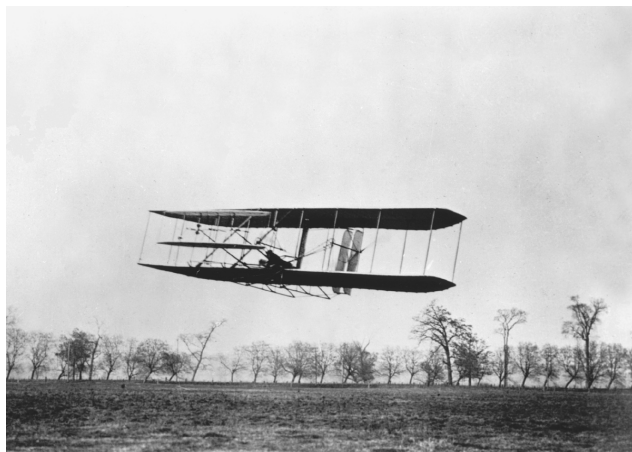
Wright-Patterson Air Force Base is the most organizationally complex base in the U. S. Air Force. This 8,243-acre military reservation located near Dayton, Ohio, has over 500 office, laboratory, and support buildings in addition to 1,000 housing units. It employs over 22,000 people and generates an annual payroll of almost \$1 billion. The base is the largest employer in the state of Ohio at a single location and the largest employer among Air Force bases worldwide. Its occupants include more than 100 tenant organizations. With over 350 structures and historic sites dating from the pre-1946 period, Wright-Patterson may also be the Air Force's most historically significant base.

### Origins

As a military installation, Wright-Patterson traces its history to World War I. As an aviation center, however, its history literally began with the origins of manned, powered, controlled flight. Following their successful proof-of-concept flights at Kitty Hawk, North Carolina, in December 1903, Wilbur and Orville Wright selected an 84-acre plot of land near their home in Dayton, Ohio, to serve as their experimental flying field as they sought to transform their invention into a practical flying machine. Here at the Huffman Prairie Flying Field in 1904 and 1905 they developed the first practical airplane (the 1905 *Flyer*) and, as Orville noted, “really learned to fly.” Over this prairie, now a part of Wright-Patterson AFB, the brothers performed the first turn and circle in an airplane and solved the final mysteries of flight. Here, too, they invented and used the first successful aircraft catapult launcher.



*Huffman Prairie Flying Field, 1904. (Wright State University Archives, Wright Brothers Collection)*

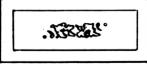

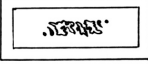


*Soaring over the Huffman Prairie where the Wright Brothers “really learned to fly.”*

The brothers returned to the Huffman Prairie Flying Field in 1910. This time the field served as home to the Wright Company School of Aviation, the Wright's flight exhibition company, and a test range for their aircraft company. Their aviation school trained 119 pilots. For the sum of \$250, they delivered a two-week course of instruction that included “four hours of actual practice in the air and such instruction in the principles of flying machines as is necessary to prepare the pupil to become a competent and expert operator.” The tuition fee also

covered any incidental damage to the equipment. Among the graduates were Army Lieutenant Henry “Hap” Arnold, who was sent to the school in 1911 to earn his wings, and A. Roy Brown, the Canadian Ace who received the aerial credit for downing Baron von Richthofen, the Red Baron. The Wright brothers operations on the Huffman Prairie ended in 1916 when the aviation school closed its doors. During these years, the Wrights had used the Huffman

Prairie as a research and development facility, flight test center, logistics depot, and training field. These functions became precedents for operations around the Huffman Prairie site for the rest of the century. Even more important, the “can-do” spirit that Wilbur and Orville brought to the flying field would inspire their heirs to push aeronautical engineering to its technological limits.

## THE WRIGHT SCHOOL OF AVIATION

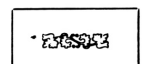

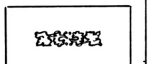
The Wright Company operates a permanent school of aviation on the historic Huffman Prairie at Simms Station near Dayton, where the Wright Brothers carried on their early experiments. The field is admirably adapted to training purposes, the ground being level and free from obstructions.

The course of instruction consists of four hours of actual practice, given in a series of flights ranging in duration from five to fifteen minutes, or perhaps longer, depending on the weather and the desires of the pupil. Every pupil is given individual training, and with the excellent facilities available, not only at the field, but at the factory in Dayton, a course of training given at the Wright school is without question superior to any in this country, if not in the world. The machines that are used for school work and the method of dual control adopted, give consistently good results, and students are often turned out as competent pilots eight or ten days after their first trip in an aeroplane.

The lessons are given in regular rotation, and in all of the training flights the pupil is accompanied by the instructor on a machine equipped with duplicate control levers. As the pupil begins to acquire the feel of the air, the instructor gradually relinquishes the levers to the pupil, but he is ever present and ready to resume control should the pupil make any serious mistake. By this method dangers of unfamiliarity are eliminated, but the presence of the instructor by no means suggests that the pupil himself is not flying, as it is the customary practice for the instructor to make sure that the pupil knows that he is running the machine himself. Pupils usually learn to fly in two to three hours of actual practice in the air, but the work for one day is, on the average, restricted to one-half hour.

The rate of tuition in the Wright School is fixed at \$250.00, payable at the time of enrollment. Contrary to the practice in many aviation schools, the pupil is not held responsible for any breakage to the machine. This fee covers every expense for tuition.

The WRIGHT COMPANY  
Dayton Ohio

*Advertisement for Wright School of Aviation.*



*The 1910 hangar and flying operations, about 1912.*



*Lt. Henry “Hap” Arnold was a student at the Wright brothers’ school on the Huffman Prairie Flying Field.*



## Three Military Installations

When the United States declared war on Germany in 1917, the War Department began a rapid expansion of its military facilities. Aided by Edward A. Deeds, a prominent local industrialist and member of the U. S. Munitions Standard Board and Aircraft Production Board, Dayton was able to garner three new installations: McCook Field, Wilbur Wright Field, and the Fairfield Aviation General Supply Depot. McCook Field opened on December 4, 1917. This 254-acre leased complex was located just north of downtown Dayton between Keowee Street and the Great Miami River. Its name came from the “Fighting McCooks” family of Civil War fame who once owned part of the land. McCook Field was an engineering and research center responsible for the advanced design of all

airplanes and their accessories. It was erected as a temporary home for the Airplane Engineering Division of the U.S. Army Signal Corps until Langley Field in Virginia could be completed. McCook was exempt from control by the Secretary of War and from the Civil Service which enabled it to operate more like a private business than a military post. The field soon emerged as the center of American air power technology as its engineers and technicians researched, developed, manufactured, tested, and evaluated military aircraft and all of the associated components and equipment. By the end of World War I, 2,300 scientists, engineers, technicians, and support officers were working in McCook’s 19 sections and 75 branches. In the postwar period, this force would dwindle to an average of 50 officers and 1,100 to 1,500 civilians. McCook Field’s achievements proved so substantial that in May 1919 all experimental aircraft activities being handled at Langley Field were transferred to McCook.



*McCook Field (U.S. Air Force Museum)*



*Craftsmen made wooden propellers in the McCook Field Propeller Shop.*



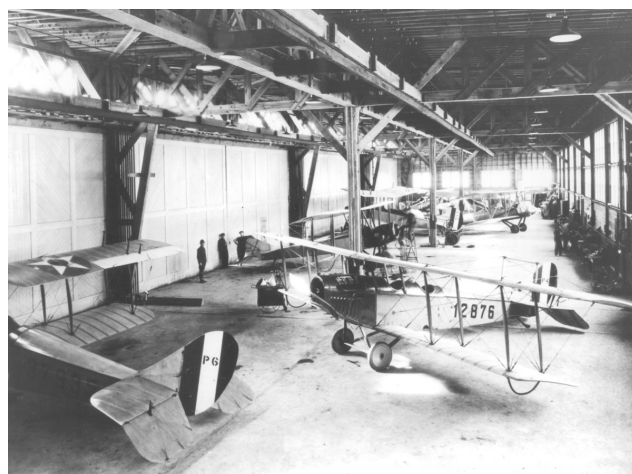
*Interior view of the McCook Field Carburetor and Ignition Department.*

## McCOOK FIELD COMMANDERS

Commander	From		To	
Lieutenant Colonel V. E. Clark	October	1917	January	1918
Major Frederick T. Dickman	January	1918	February	1918
Major J. G. Vincent	February	1918	September	1918
Captain H. E. Blood	September	1918	November	1918
Colonel Thurman H. Bane	November	1918	January	1923
Major L. W. McIntosh	January	1923	July	1924
Major John F. Curry	July	1924	October	1925

The Engineering Division's facilities included a 1,000 foot by 100 foot macadam and cinder primary runway to support test flight operations. A 14-inch walnut wind tunnel patterned after one designed by Orville Wright helped calibrate airspeed instruments and study the aerodynamic properties of shapes. In 1921, the field's technicians built a five-foot wind tunnel which was immediately put to use testing a scale model of the XNBL-1 Barling Bomber. When McCook Field closed, the five-foot tunnel was moved to Wright Field where it remains in use to this day. Work at McCook Field encompassed liquid- and air-cooled engines, superchargers, controllable-pitch propellers, fuels and fuel systems, armament systems for aircraft, flight instrumentation, parachutes, flight clothing, advanced

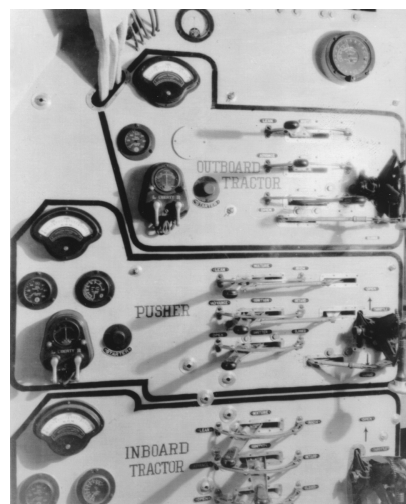
materials, aerial photographic equipment, a large number of experimental aircraft, and specialized equipment to test all of these items. McCook's staff even tested airplanes



*Curtiss JN-4D Jennys in McCook Field main hangar, 1918.*



*Barling Bomber over Wilbur Wright Field.*



*A portion of the Barling Bomber's complex instrument panel.*

virtually all significant engineering developments at the time took place at McCook Field. These achievements included controllable and reversible pitch propellers, aircraft engine superchargers, bullet-proof and leak-proof gasoline tanks, the radio beam, a non-magnetic aircraft clock, an air ambulance, the air-cooled radial engine, mapping and night observation cameras, the Nelson machine gun synchronization control system, and the first practical free-fall parachute. Also developed were night flying techniques and a model airway that became the forerunner of the modern network of continental and intercontinental commercial air routes.

Under the leadership of its commanding officer, Colonel Thurman H. Bane, McCook Field made another lasting contribution to aeronautical engineering. In 1919, Colonel Bane established the Air Service Engineering School at the field to provide “proper technical training”

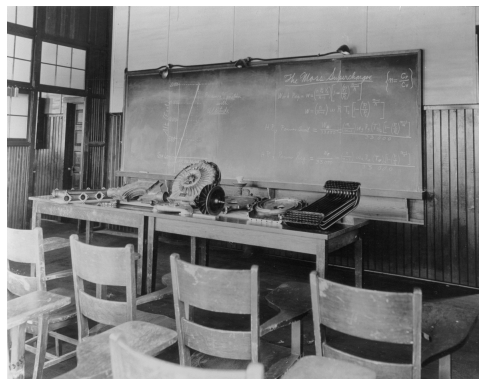
to Air Service officers. The school would eventually evolve into the Air Force Institute of Technology. Among the Engineering School’s first graduates in the Class of 1920 was Lieutenant Edwin E. Aldrin who also served as the school’s operations officer and whose son, Major Edwin “Buzz” Aldrin, would walk on the moon 49 years later.

Dayton’s other two military facilities, Wilbur Wright Field and the Fairfield Aviation General Supply Depot, were located adjacent to each other at what is now Area C of Wright-Patterson AFB. Wilbur Wright Field resided on a 2,075-acre tract of land next to the Mad River that included the historic Huffman Prairie Flying Field. The Army leased the site from the Miami Conservancy District to support the Signal Corps Aviation School which began operations on June 28, 1917. The school’s initial mission was to train pilots (Reserve Military Aviators). Twenty-

four hangars lined the flight line from which cadets flew Curtiss JN-4D and Standard SJ-1 single-engine biplane trainers. During its first six months of operation, the school graduated 82 pilots. Flight training ended in December when the Signal Corps decided to transfer flight training to southern locations for the winter.



*Colonel Thurman H. Bane, first commandant of the Air Service Engineering School.*



*Air Service Engineering School classroom in 1920s.*



*Wilbur Wright Field*

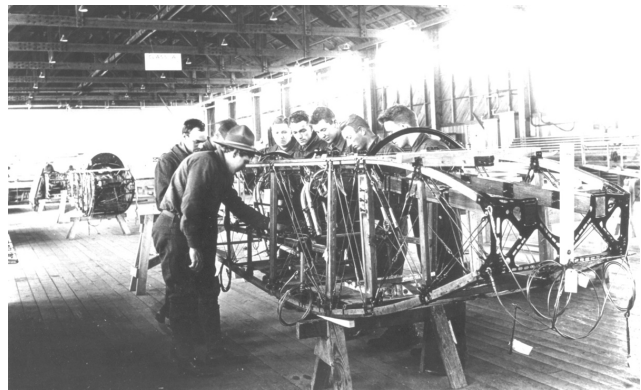


*Fairfield Air Depot and Building 1, 1919 (U.S. Air Force Museum)*

## WILBUR WRIGHT FIELD AND FAIRFIELD AVIATION GENERAL SUPPLY DEPOT COMMANDERS

Commander	From		To	
Captain Arthur R. Christie	July	1917	September	1917
Lieutenant Colonel George N. Bomford	September	1917	December	1917
Major Leo G. Heffernan	December	1917	December	1917
Major Walter R. Weaver	December	1917	December	1917
Major A. E. Wilbourn	December	1917	June	1918
Lieutenant Colonel James A. Mars	June	1918	December	1918
Major Charles T. Waring	December	1918	May	1919
Major Prince A. Oliver	May	1919	August	1919
Lieutenant Colonel George E. A. Reinburg	August	1919	August	1921
Major Augustine Warner Robins	August	1921	July	1928
Major Jenner Y. Chisum	July	1928	March	1929
Captain Edward Laughlin	March	1929	June	1929
Major Henry H. Arnold	June	1929	August	1930
Captain Edward Laughlin	August	1930	August	1930
Major Albert L. Sneed	August	1930	July	1931

As the flight school closed down, Wilbur Wright Field began preparations to support a temporary school for mechanics. The Aviation Mechanics' School, one of five assigned to northern flying installations, opened its doors on December 17, 1917. Twelve of the field's hangars served as classrooms for the 1,181 graduates who were trained in airplane, airplane motor, and motor transport mechanics. A second program administered by the field sent groups of 25 soldier-students to local civilian airplane and engine factories and garages where they received on-the-job training.



*Instructor and students of the Mechanic's School study an airplane fuselage, January 25, 1918. (U.S. Air Force Museum)*



*Signal Corps Aviation School cadets stand roll call behind Wilbur Wright Field hangars, 1918.*

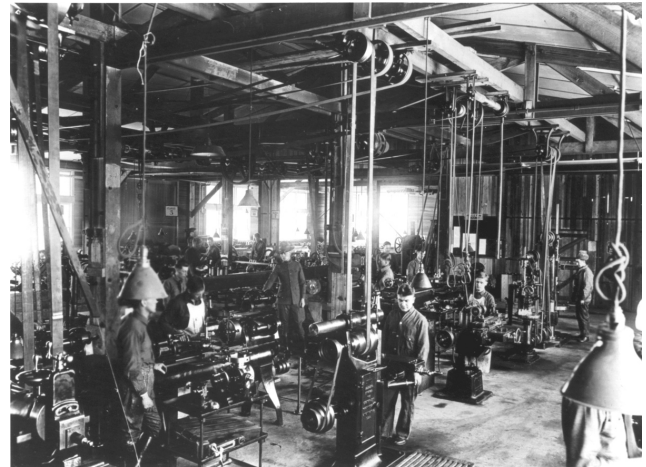
On March 18, 1918, the Aviation Armorers' School (organized under authority of the Signal Corps Air Division Gunnery Section) also began operations at Wilbur Wright Field. Its six week course encompassed a complete study of machine guns, their sights and synchronization mechanisms, and the storage and mounting of bombs for prospective armorers. The school sent 485 enlisted graduates to the Air Service. The Signal Corps also assigned Wilbur Wright Field the mission of testing all machine guns issued to the Aviation Section to ensure that they were properly adjusted and in good firing condition. During one of these tests on June 19, 1918, Lieutenant Frank Stuart Patterson, the son of Frank J. Patterson and nephew of John H. Patterson, co-founders of Dayton's National Cash Register Company, was killed when his DH-4 crashed after successfully completing tests of a Nelson machine gun synchronizer.



*Medical examination room at Wilbur Wright Field, 1919.*

Cooperation between Wilbur Wright Field and McCook Field began on March 1, 1918 when McCook Field requested hangar space and use of the airfield for experimental test flying. Wilbur Wright Field's expansive and relatively isolated open flying field was ideal for testing the Air Service's experimental aircraft and the larger, more powerful models developed during the 1920s. With the arrival of three Italian aircraft eighteen days later, Wilbur Wright Field resumed its historic role as an aviation test

site. Subsequently, it agreed to let McCook Field use hangar and shop space as well as a force of enlisted mechanics to assemble and maintain eight test airplanes. For its part, McCook Field agreed to furnish two Liberty engines and two instructors to assist in training Wilbur Wright Field mechanics. Postwar operations on the airfield centered on test flying and the cooperative arrangement between the fields continued until McCook Field closed in 1927.



*Motor Machine Shop, Wilbur Wright Field, January 29, 1918.*

Pilot training resumed at Wilbur Wright Field in April 1918. Students spent one-half of each training day in the classroom taking courses on military studies, gunnery, radio, photography, airplanes, engines, poison gas defense, and aerial navigation. The other half of the day was spent on flying instruction which progressed from dual control to solo instruction then to cross-country flight. All training at the field ceased in November 1918 with the conclusion of the war to end all wars.

Construction of the Fairfield Aviation General Supply Depot<sup>\*</sup> began in the fall of 1917 on forty acres of land immediately adjacent to Wilbur Wright Field that the Army purchased from the Miami Conservancy District. The depot's mission was to provide logistics support to Wilbur

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<sup>\*</sup> *The Depot would undergo a series of organizational redesignations between 1917 and its inactivation in 1946. To avoid confusion, it will be referred to as the "Fairfield Air Depot" throughout this narrative.*

Wright Field and the three other Signal Corps Aviation Schools located in the Midwest. Building 1, the first military building on the installation, was the depot's headquarters until 1933. Its thousands of square feet stored freight and supplies. The U-shaped brick and concrete structure housed a covered 600-foot double rail spur between its outstretched wings. The spur connected the depot to the Big Four Railroad Company line in the nearby town of Fairfield. Six other buildings, including three steel storage hangars and a garage, enabled the depot to receive, store, and issue equipment and supplies to the Signal Corps' aviation, mechanic, and armorer schools throughout the region. The depot reported directly to the Signal Corps Equipment Division in Washington, D.C., and operated independently from the Army airfields it supported.

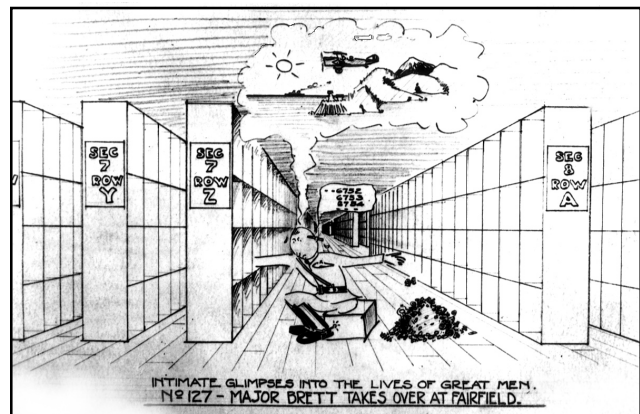


*Building 1, with its covered trainway, is the oldest military building at Wright-Patterson AFB.*



*Interior of Building 1 trainway*

Rapid demobilization and restructuring followed the conclusion of the Great War. On January 10, 1919, Wilbur Wright Field merged administratively with the Air Service Armorer's School and the Fairfield Depot to form the Wilbur Wright Air Service Depot. The depot commander then assumed control of all three organizations. The flying school and armorers' school demobilized the next month and the depot soon transitioned to a civilian workforce. Throughout the years, the depot underwent numerous name and organization changes, but was commonly referred to as the Fairfield Air Depot (FAD). In addition to its role as a supply center, the depot added several new missions, notably equipment repair and engine overhaul, and served as a storage, inventory, and disposal center for surplus war supplies and equipment. In 1921 the depot became the home of the Property, Maintenance and Cost Compilation Section, the earliest antecedent of the logistics component of today's Air Force Materiel Command. The Air Corps moved its weather station to the depot from McCook Field in 1923 and in 1925 transferred administrative control of the model airway system from McCook to the depot. The Fairfield Air Depot also managed logistics support for the Douglas World Cruisers during their 1924 Round-the-World Flight and it hosted the 1924 International Air Races.



*Major George H. Brett, former commander of Crissy Field, reminisces after his assignment to the Fairfield Air Depot in 1924. (Dora Devol Brett Collection, Golden Gate National Recreation Area, NPS)*





*Crowd assembled by Officers' Club to watch 1924 Air Races.*



*Captain Burt E. Skeel, 27th Squadron commander, was killed in the crash of his R-6 racer during the Pulitzer Trophy race on October 4, 1924. Skeel Avenue along the flightline was named in his honor.*

## A New Engineering Center

McCook Field had been built as a temporary experimental wartime testing site and its shortcomings soon became evident. The field's short runways and obstructed approaches challenged pilots. Rapid advances in aeronautical technology were producing larger, more powerful aircraft that overwhelmed the field. "This Field Is Small, Use It All," was emblazoned on hangar roofs. Because the field was surrounded by rivers and housing, it could not be expanded. Furthermore, as McCook's operations expanded, new support facilities began

encroaching upon the flightline. McCook was becoming unsafe for both aircrews and the local population. Its temporary buildings were expensive to maintain and the field was hampered by the absence of a railroad line. Finally, the rent for these inadequate facilities was extremely high and landowners wanted to convert the land to more profitable uses. These factors sent the War Department in search of a new, permanent site for the Engineering Division.



*The McCook Field motto was posted on the field's main hangar. (Dayton and Montgomery County Public Library)*

When Dayton's businessmen and citizens learned that they might lose the engineering center, they seized the initiative. The Engineering Division gave the community a stable and expanding economic base. It was also a great source of pride for the city that considered itself the birthplace of aviation. Furthermore, Dayton's industries directly benefited from the technology developed at McCook and the skilled workforce that the Engineering Division attracted. Under the leadership of the Patterson family (founders of the National Cash Register Company), the city's prominent citizens formed the Dayton Air Service Committee to save the facility. The Committee soon reached an agreement with the War Department to build a permanent engineering facility in Dayton provided the land was donated to the federal government. It then organized a 48-hour fundraising campaign that garnered \$425,000 of private money to buy the land and fund a monument to the Wright brothers.



*Frederick Beck Patterson with his father, John H. Patterson. (Mrs. Howell Jackson)*



In 1924, the Dayton Air Service Committee purchased 4,520.47 acres of land northeast of Dayton and presented the deeds to President Calvin Coolidge. The land donation included the previously leased site of Wilbur Wright Field. The War Department combined this gift with its adjacent site at the Fairfield Air Depot and redesignated the entire acreage as Wright Field to honor both Wilbur and Orville Wright.

Construction of the new engineering facility began on April 16, 1926 on the portion of Wright Field west of Huffman Dam. All work was performed under the jurisdiction of the U. S. Army's Quartermaster General. Particular attention was paid to the architecture of these buildings for both function and style. Soon a modern state-of-the-art industrial facility appeared. Buildings 11 (administration) and 16 (the primary laboratory) shared a common foundation and were the first to be built.

Building 31 (the main aircraft assembly hangar and control tower) and Building 56 (the main warehouse) followed. These two structures established the pre-World War II "Wright Field style" of architecture with their low pitched roofs, brick facades, multi-paned steel sash windows, and decorative brick corner columns containing elements of the Greek Revival style. Other primary facilities built in this style were the Radio Lab (Building 17), the Power Plant Lab (Building 18), the five-foot wind tunnel (Building 19), and Building 32 which housed the wood, machine, and sheet metal shops.

Some buildings (the foundry, garage, and shops) were constructed as temporary structures. Concrete floors were poured and permanent steel frameworks were erected, but the roofs and walls were temporarily covered with corrugated sheet metal and windows salvaged from McCook Field. By 1929, funding had become available



*Old and new technology worked together to construct Wright Field, the future home of aeronautical engineering.*



*Building 31, Wright Field Assembly Hangar, with control tower atop southwest corner.*

and these structures were converted to permanent structures with brick walls and steel sash windows.

The transfer of equipment and operations from McCook Field to Wright Field begun in March 1927 was essentially completed by June, although the last of the equipment was not moved until May 1929. The formal dedication of Wright Field was held on October 12, 1927 with Orville Wright raising the first flag over the new engineering center. The dedication established three precedents. It was the first time that an Army installation was named for two civilians who had never been in military service. It was the first time an installation was named for a living individual. And, in all likelihood, it was the first time that an individual so honored by the military service was present at his own memorialization.

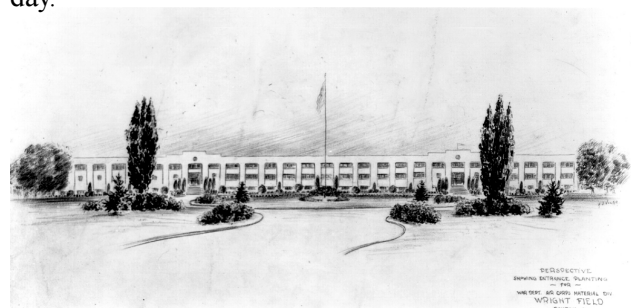


*McCook Field facilities being dismantled for transfer to Wright Field. (U.S. Air Force Museum)*

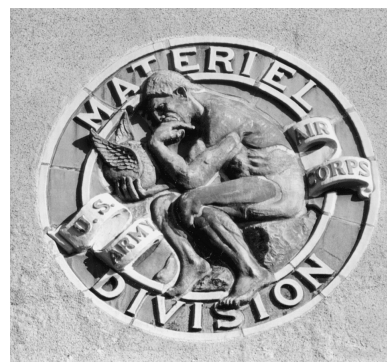


*Orville Wright and other dignitaries at dedication of Wright Field, October 12, 1927.*

Mounted above the entrances to Building 11 were blue and gold circular porcelain shields inscribed “Materiel Division, U. S. Army Air Corps” around a likeness of Rodin’s *The Thinker*. The emblem had been the insignia of McCook Field where “Engineering” stood in the place of “Materiel”. However, Wright Field was now the headquarters of the Materiel Division, the organization created in 1926. The Materiel Division added supply, procurement, and maintenance of aircraft to the engineering functions performed at McCook. The mission of the new organization was to develop and furnish the Army Air Corps with all of its aircraft and aeronautical equipment. The Materiel Division also procured and provided maintenance for all of these systems and was charged with managing the extensive Air Corps depot system. Fairfield Air Depot was one of six depots that came under its jurisdiction. Engineering and research flourished at Wright Field, where the new buildings had been designed and built specifically to house their respective missions. The name “Wright Field” would soon become synonymous with aeronautical engineering, a reputation that Wright-Patterson retains to the present day.



*Artist's conception of Wright Field main entrance and administration building (Building 11).*



*Materiel Division emblem above Building 11 entrance.*

The new engineering center bustled with activity. Flight testing operations were moved from temporary facilities at the Fairfield Air Depot to the new Wright Field flightline. The Air Corps Engineering School took up residence in Building 11. A wealth of sophisticated equipment such as the three altitude chambers, the five-foot and 14-inch wind tunnels, the engine and propeller torque stands, a variety of dynamometers, and the temperature chambers supported the cutting edge research. Wright Field's capabilities were further increased in 1934

by the addition of the static structural test facility (Building 23). The aviation museum that originally resided in a McCook Field hangar also found new quarters at Wright Field. It occupied space in a laboratory building until 1935 when it moved into the newly completed Building 12. This high art deco masterpiece, specially designed to display artifacts and exhibits, became the first permanent home of the Army Aeronautical Museum (now the U. S. Air Force Museum).



*Wright Field main entrance, March 1940.*



*Building 12 in 1940*



*Interior of Building 12 showing museum displays, 1937.*

## WRIGHT FIELD COMMANDERS

Commander	From		To	
Major John F. Curry	July	1927	August	1927
Lieutenant Colonel Harry Graham	August	1927	December	1928
Major Leslie MacDill	December	1928	August	1929
Major John D. Reardan	August	1929	August	1931
Lieutenant Colonel Robert E. M. Goolrick	August	1931	July	1935
Brigadier General Frederick L. Martin	July	1935	March	1937
Colonel Frank M. Kennedy	March	1937	September	1939
Colonel Lester T. Miller	September	1939	December	1941
Colonel George L. Usher	December	1941	September	1942
Colonel Rudolph O. Brownfield	September	1942	May	1943
Colonel Edward L. Robbins	May	1943	November	1943
Colonel Rudolph Fink	November	1943	September	1944
Colonel Frank W. Wright	September	1944	June	1945
Colonel Palmer Boyles	June	1945	July	1945
Colonel Joseph T. Morris	July	1945	December	1945

As the nation's foremost aeronautical engineering center, Wright Field became involved in every aspect of aircraft design and production. During the 1930s, the engineering trend at the field was toward diversification, expansion, and modernization of aircraft design. Engineers and scientists worked to improve aircraft structure and aerodynamics. They developed a wide range of experimental and production aircraft categorized by mission: attack, pursuit, transport, bombardment, observation, photographic, training, and rotary wing.



*Boeing B-9 bomber and Boeing B-26 pursuit aircraft each bearing the Wright Field "spearhead" insignia on their fuselages.*



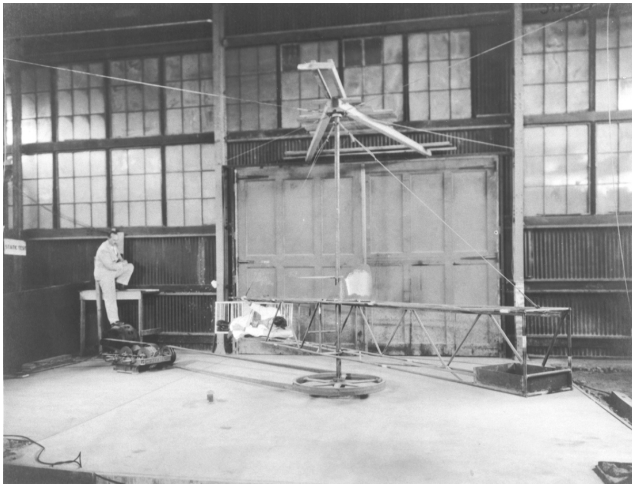
*This Fokker C-14 made the world's first entirely automatic landing at Patterson Field, August 1937.*

Each innovation served as a stepping stone to the next. Thus, the Boeing B-9 and Martin B-10 bombers paved the way for the B-17 and became progenitors of the B-29 as Wright Field engineers tried to develop a true long-range bombardment aircraft. Wright Field was also instrumental in marketing aircraft to foreign nations. The work performed in the 1930s would soon provide America with a decisive edge. The aircraft that won World War II were either in development or production when the conflict began.

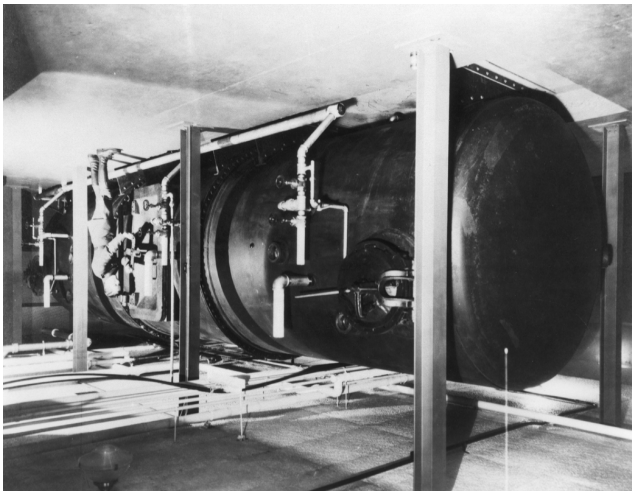


*Orville Wright with helicopter pioneer Igor Sikorsky at Wright Field.*

Wright Field's contributions to aviation in the pre-war period were not confined to aerodynamics and airframes. The field's staff worked on every aspect of aeronautical engineering. Wright Field engineers designed new engines, improved propellers, and worked on a vast array of projects from pressurized cabins to gun sights and non-destructive inspection techniques. They perfected superchargers and the controllable-pitch constant speed propeller that permitted greater speeds and higher altitudes. Its scientists researched better fuels, lubricants, and anti-freeze solutions. They developed plastic impact resistant glass for windshields and invented a myriad of synthetic materials. George Goddard supervised



*The Physiological Research Laboratory's centrifuge. Test subject is positioned "head-in" at the end of the rotating arm.*



*The largest of three altitude test chambers in the Physiological Research Laboratory in 1937.*



*Lt. George W. Goddard developed the techniques that created this night aerial photograph of Wright Field during the 1931 Air Corps Maneuvers.*

significant advances in aerial photography. Captain Harry G. Armstrong commanded the Physiological Research Unit that conducted pioneering aeromedical research on flight stresses and equipment to aid and protect aviators. Wiley Post made major discoveries and innovations in high-altitude flying. While this work was in progress, the Technical Data Library culled its collection of domestic and foreign aeronautical publications for technical data, produced and stored both historical and technical films, and planned the wartime expansion of the nation's aviation industrial base and logistics requirements.

## Patterson Field

Although the entire installation had been named "Wright Field" in 1924, there was considerable community support to formally recognize the Patterson family's leadership in keeping the Engineering Division in Dayton. This recognition occurred on July 1, 1931 when the War Department redesignated that portion of Wright Field east of Huffman Dam as "Patterson Field." The area encompassed the original Wilbur Wright Field, the Fairfield Air Depot, and the Wright brothers' flying field at Huffman Prairie. Patterson Field specifically honored Lieutenant Frank Stuart Patterson, a son and nephew of the founders of the National Cash Register Company. Lieutenant Patterson was a test pilot who lost his life in the crash of his DH-4 aircraft during a test flight at Wilbur Wright Field on June 19, 1918. The two



*Lt. Frank Stuart Patterson (by propeller hub) with fellow test pilots.*

fields remained physically separated until after World War II, but their missions continued to be closely intertwined.

Patterson Field was a logistics center throughout the pre-war period. The Fairfield Air Depot retained its title and operated as the major organization on the installation. The depot had support responsibilities in 28 states and serviced 28 of the Air Corps' 50 stations in the United States. In 1931 it had 15 officers and 550 civilians and generated a monthly payroll of



*Lt. Frank Stuart Patterson was killed during a test flight over Wilbur Wright Field, June 19, 1918.*



*Fairfield Air Depot packing and crating shop.*

\$67,000. Its headquarters moved from Building 1 (the installation's original depot structure) to the newly completed Building 11 in 1933. Several acres of Patterson Field were set aside in 1934 to house a Transient Camp for temporary workers employed under Depression-era programs. During 1934 and 1935, these men labored on a number of projects such as the renovation of buildings and landscaping. Young men residing in the Civilian Conservation Corps camp that was set up on the field helped landscape the installation in 1935 and 1936.

### PATTERSON FIELD COMMANDERS

Commander	From		To	
Captain Arthur R. Christie	July	1917	September	1917
Major Albert L. Sneed	July	1931	March	1933
Major Fred H. Coleman	March	1933	July	1936
Lieutenant Colonel Junius H. Houghton	July	1936	September	1939
Colonel Merrick G. Estabrook, Jr.	September	1939	February	1943
Colonel James A. Woodruff	February	1943	December	1943
Colonel Raymond E. Culbertson	December	1943	February	1944
Brigadier General Clarence P. Kane	February	1944	April	1944
Colonel Clarence H. Welch	April	1944	July	1944
Colonel Elmer H. Jose	July	1944	December	1944
Brigadier General Harold A. Bartron	December	1944	December	1945

Colonel Jose was the last Commander of Patterson Field as a separate facility. From December 9, 1944, until Wright and Patterson Fields were redesignated Wright-Patterson AFB on January 13, 1948, care of the facility shifted increasingly toward a merger.

From December 9, 1944, to November 5, 1945, the Patterson Field commander, *per se*, was Brigadier General H. A. Bartron, Commander of the Fairfield Air Technical Service Command. On November 6, 1945, a combined staff was appointed for the concurrent operations of Wright and Patterson Fields under Colonel Joseph T. Morris, current commander of Wright Field and the 4000th Army Air Forces Base Unit. Colonel Morris continued in command on December 15, 1945, when Wright and Patterson Fields were combined for administrative purposes under an umbrella organization designated the Army Air Forces Technical Base (AAFTB), and on December 9, 1947, when the AAFTB was redesignated the Air Force Technical Base (AFTB).



The workers also contributed to the construction of Wright-Patterson's Brick Quarters. Built in an area described as "an unsightly weed patch," the 92 housing units were erected to house all the officers assigned to Wright and Patterson Fields. Designers arranged the \$1,722,000 complex in the shape of a horseshoe with the Turtle Pond centered along its main axis and the Officers' Open Mess situated at the crown of the curve. Large, private back yards enhanced the neighborhood and created an atmosphere of informal tranquillity in these junior executive style homes. The jewel of the complex was Quarters 1, since memorialized as "The Robins House" for its first occupant, Brigadier General Augustine Warner Robins. It was the residence of the installation's senior officer.



*Landscaping crew at work on Brick Quarters appearance.*

As a depot, Patterson Field supported Air Corps operations throughout the nation. It also played a key role in several operations. In 1933, it hosted the Air Corps Anti-Aircraft Exercises and the next year it modified and supported military aircraft assigned to carry the U. S. Mail. When Lieutenant Colonel Henry "Hap" Arnold (a former depot commander) initiated the long-distance Alaskan flight of 1934, Patterson Field prepared the aircraft and supported the operation. The field was also the scene of the world's first entirely automatic landing which took place in 1937. New additions to the Patterson Field community included the Air Corps Weather School

in 1937 and the first military Autogiro School in the United States. It opened in 1938.



*Kellett YG-1 autogiro*

Another landmark, the Wright Memorial, was dedicated on August 19, 1940. This tribute to the Wright brothers was constructed by the Dayton community on a 27-acre site owned by the Miami Conservancy District. The Olmsted Brothers architectural firm designed the memorial which sits atop a 100-foot bluff adjacent to Wright Field overlooking the Huffman Prairie Flying Field. Funds raised by the Dayton Air Service Committee in 1924 as part of its campaign to keep the Engineering Division helped finance the monument. Six native American burial mounds are also nestled about the memorial.



*Wright Memorial overlooking Wright Field*



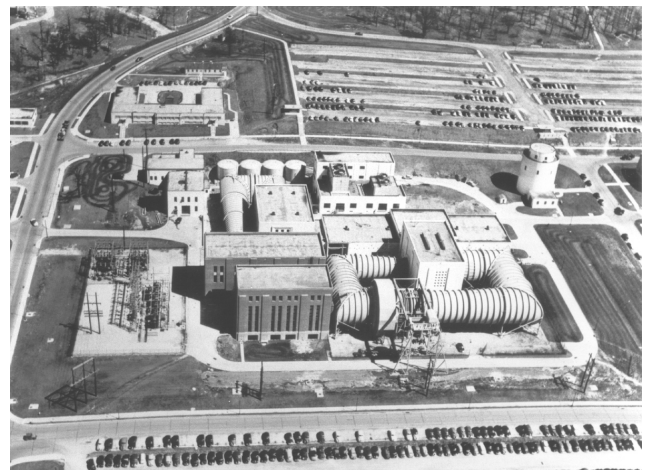
## World War II

World War II profoundly altered both Wright and Patterson Fields. From a combined population of 3,700 in 1939, the workforce at the two fields would eventually peak at over 50,000. The workload shifted from a 40-hour week to round-the-clock operations. The faces of the two installations also changed rapidly as massive construction programs erected new work centers and housing complexes to accommodate wartime operations. Existing facilities were modified and converted to new uses. The museum in Building 12 was closed to free up space and base contractors were forced to lease additional space in Dayton and the surrounding communities. Nonetheless, the chronic shortage of adequate work areas continued throughout the war.

Wright Field exploded from 40 buildings in 1941 to over 300 in 1944. Leading the way was the addition of a third floor or “penthouse” on Building 11 that gave the Materiel Division headquarters much needed administrative space. Buildings 14 and 15 were subsequently constructed to house the expanding headquarters. Wright Field benefited from a modern flightline complex that included a new control tower, hangars, an armament test facility (Building 22), and paved runways. While the runways were under construction, captured enemy intelligence revealed that the Germans were building inclined runways along the

French coast to shorten takeoff and landing distances. The Materiel Division decided to modify the Wright Field runway contract to include a similar structure. The result was the field’s signature “Accelerated Runway” with its 10 percent grade. It was completed in 1942, but extensive testing proved the concept impractical.

Numerous laboratory structures joined the Wright Field complex. Among these were the vertical wind tunnel (Building 27) for parachute testing and the 20-foot wind tunnel (the world’s largest). The huge Static Test Facility (Building 65) was constructed to test the B-36 bomber. Engineers designed and built an acoustical shell around the propeller test rigs (Building 20A) so the constant droning would not disturb the sleep of base personnel and the civilian community. Wright Field



*20-Foot Massey Memorial Wind Tunnel complex*



*A B-50 taxis up the Accelerated Runway.*



*Fuselage and wing of the XB-36 being turned upside down for structural tests in the Static Test Facility, Building 65. (Bob Cavanagh)*

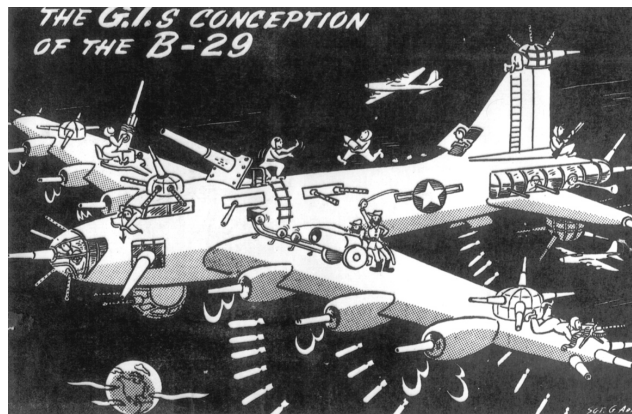
expanded in size as well when the Hilltop area along National Road was acquired. This land area became home to the Wright Field headquarters (Building 125), a parade field, a barracks complex, and quarters for the prisoners of war who were interned at the field.

Wright Field reported to the Materiel Division and operated as the wartime center of aeronautical research, development, and procurement. Its logistics functions along with those of the division were separated in 1941 and assigned to the Air Service Command which was located in the just completed Building 262 at Patterson Field. The division became Materiel Command in 1942. However, the separation of functions proved cumbersome and confusing. The Army Air Forces addressed this problem in August 1944 when it inactivated the two commands and assigned their functions to the newly established Air Technical Service Command. This action, which made Wright Field subordinate to the new headquarters at Patterson Field, soon had a psychologically divisive effect on the installation. To overcome this problem and give the new headquarters a common address, the portion of Patterson Field from Huffman Dam through the Brick Quarters (including the command headquarters in Building 262) was reassigned from Patterson Field to Wright Field. To avoid confusing the two areas of Wright Field, the new acquisition was designated “Area A” of Wright Field and the original field became “Area B”.



*Air Service Command Headquarters, Building 262*

Work at Wright Field centered on research, development, and procurement, with emphasis on the latter. The race to increase propulsion power and efficiency was the field’s most significant R&D effort of the war. These efforts, for example, eventually enabled heavy bombers to exceed 30,000 feet and the B-29 to approach an altitude of 40,000 feet. The field’s engineers and scientists conceived and put into production the airplanes responsible for Allied victories. The aircraft they had under development or in production on Pearl Harbor day were the ones that the Army Air Forces flew to victory. However, ongoing research introduced significant modifications that made the aircraft of 1944 and 1945 far superior to the original production models. Wright Field’s staff worked on a wide range of experimental and production aircraft, dissected most enemy aircraft, and culled mounds of intelligence reports for technological insights. It began working on guided missiles and, as the war ended, was bringing the nation’s first jet-power aircraft into the active inventory.



Managers at Wright Field also supervised the second largest procurement division in the armed forces. They worked with a multitude of government agencies, foreign governments, and thousands of contractors. Each day over 700 contractors and others visited the field. The Army Air Forces employed more than 100 aircraft models and at its peak inventory had 79,908 planes on hand. From an inventory of 2,755 planes in June 1940, the field’s staff supervised the wartime production of

almost 300,000 military aircraft, 802,161 engines, and 807,424 propellers. It abandoned the lengthy linear method of procuring aircraft in favor of quicker “off the shelf” procurement coupled with concurrent development and accelerated flight testing. In the

process, Wright Field oversaw the transition of aircraft production from a handwork business to a mass production industry that condensed the aircraft design-to-delivery time from years down to months.

#### **MILITARY & SPECIAL PURPOSE AIRCRAFT PRODUCTION JULY 1940 – AUGUST 1945**

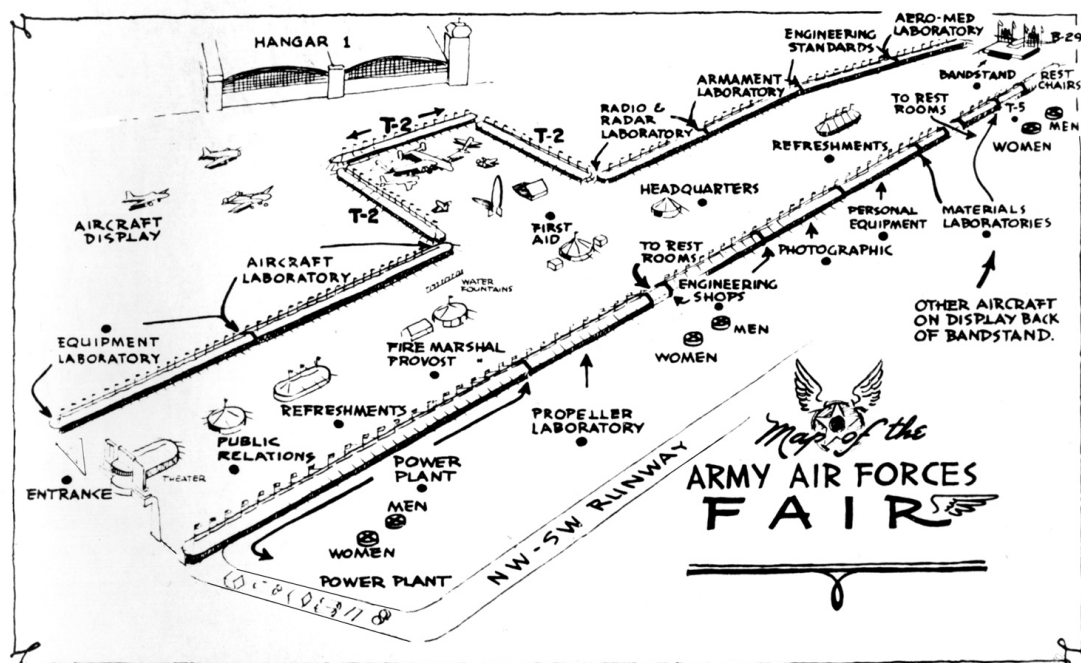
<b>Type</b>	<b>1940</b>	<b>1941</b>	<b>1942</b>	<b>1943</b>	<b>1944</b>	<b>1945</b>	<b>Total</b>
Bomber	623	4,115	12,627	29,355	35,003	16,087	97,810
Fighter	1,162	4,416	10,769	23,988	38,873	20,742	99,950
Reconnaissance	63	727	1,468	734	259	667	3,918
Transport	164	532	1,984	7,012	9,834	4,403	23,929
Trainer	1,794	9,373	17,631	19,939	7,577	1,309	57,623
Communications	1	270	3,174	4,377	3,691	2,130	13,643
Special Purpose	0	0	183	493	1,081	663	2,420
	3,807	19,433	47,836	85,898	96,318	46,001	299,293

#### **AIRCRAFT DESIGN TO FIRST PRODUCTION**

<b>Aircraft</b>	<b>Design Start</b>		<b>First Production</b>		<b>Years</b>
B-17	Aug	1934		1939	5.0
P-39	Jun	1936	Sep	1940	4.25
P-40	May	1937	May	1940	3.0
P-38	Jun	1937	Sep	1940	3.25
B-25	Feb	1938	Feb	1941	3.0
B-24	Sep	1938	Jun	1941	2.75
B-26	June	1939	Feb	1941	2.66
P-51	May	1940	Aug	1941	1.25
B-29	Jun	1940	Jul	1943	2.1
P-47	Jul	1940	Dec	1941	1.5
A-26	Jan	1941	Sep	1943	2.75

Victory brought great celebration. It also gave Wright Field an opportunity to educate the public on its achievements and the revolution in aviation technology that World War II had spawned. Wright Field hosted a two-day Army Air Forces Fair in October 1945 that attracted 500,000 people. The fair was so popular that base officials extended it for a week. More than one million people from 26 foreign countries observed displays of Army Air Forces operational and experimental aircraft. The highlights of the event were exhibits of captured German and Japanese aircraft, rockets, and equipment. In all, over \$150 million worth of equipment, much of it previously classified, was put on display.

Victory also brought demobilization and a return to “normal” operations. Procurement moved to the back seat as the operational emphasis at Wright Field returned to research and development, although the focus of the work shifted from propeller-driven aircraft to jet propulsion. Wright Field also moved away from developing, modifying, and improving individual items in favor of a coordinated approach that emphasized new systems and models. In late 1945 the Air Documents Research Center moved to Wright Field from London. Working under T-2 Intelligence, a team of almost 500 people catalogued, abstracted, indexed, and organized 55,000 captured German documents representing the cream of Germany’s aeronautical research and



Map of the 1945 Army Air Forces Fair



German HE-162 and Junkers 290 “Alles Kaputt” at 1945 AAF Fair.



German ME-262 on display at 1945 AAF Fair.

development. German aircraft and engines were also shipped to Wright Field for analysis. Finally, Projects OVERCAST and PAPERCLIP brought prominent German scientists to the field where they contributed their knowledge to the future of American aeronautical engineering.

World War II turned Patterson Field into a major wartime logistics center and Midwest supply hub. The Fairfield Air Depot, Patterson Field's main occupant, was responsible for a nine-state area (Ohio, Kentucky, Indiana, Michigan, Illinois, Missouri, Iowa, Wisconsin, and Minnesota). It oversaw 21 storage depots, 16 sub-depots, 3 servicing detachments, 4 air depot detachments, 2 air cargo detachments, and 2 overhaul detachments). The field's logistics and other activities mandated a major construction boom. Warehouses, shops, barracks, mess halls, hospitals, and an array of other buildings sprang up about the field, including a major command headquarters complex (Building 262). An additional 851 acres of land (which eventually included the Cox family cemetery) was acquired at the northeast end of the runway. The advent of heavy bombers also led to the paving of the field's runways and taxiways. Wood City, today's Kittyhawk area, was completely developed with barracks, training facilities, and a cantonment hospital. Finally, Skyway Park was erected at the intersection of Kauffman Avenue and Colonel Glenn Highway. It contained 546 family housing units and a



*Temporary barracks being constructed between Arnold and Foulis Houses (Buildings 8 and 88) on Patterson Field.*

dormitory that could accommodate 640 residents. In fact, the installation had so many civilians that in 1944 a Civilian Club (Building 274) was built to serve their recreation needs.



*Cantonment hospital and part of the barracks complex in Wood City.*

The nation's defense buildup brought a huge influx of supplies and equipment plus a massive workload to the Fairfield Air Depot. In 1939 the depot had 500 employees, but it reached a wartime peak of almost 19,500. Ten percent of its 1939 workforce was female and the women were concentrated in office positions because regulations prohibited them from working in storerooms and industrial areas. Shortly after the war began, women were working in warehouses, repair



*FAD employees repaired and maintained intricate aircraft instruments.*

shops, and a host of other areas due to the shortage of manpower. The installation was so short of employees that it sent recruiting teams to Appalachia to find workers. By 1944, women represented 50 percent of the Patterson Field workforce.



*FAD employees making electrical cables*



*FAD employees working on aircraft engine parts.*

Work at the Fairfield Air Depot included supply operations, the maintenance and repair of engines and instruments, training, and providing expertise to plan and establish new depots. The volume of wartime work soon mandated substantial changes in operational procedures. Stock control and other activities were simplified. In the maintenance and repair areas detailed work order records were kept, procedures were standardized and published, and job control replaced cost accounting. The Quartermaster passed control of

base transportation to the Post Commander who organized more efficient motor and rail transport systems. The airfield was extremely active and the tactical organizations assigned to Patterson Field were primarily transport units. Fairfield Air Depot's history and experience led the Army Air Forces to use FAD as a proving ground for new ideas, thereby enabling the depot to pioneer many of the advances in logistics management.



*Cooks prepare chow at Patterson Field mess hall.*

Patterson Field also played a major role in training. The field's supply technicians trained service units and depot repair squadrons. They taught air depot groups to operate mobile remote depots and sub-depots. The field even provided training for newly recruited nurses. Patterson Field operated the Army Materiel Division Supply School and the Engineering Maintenance Officers' Training School. It established a shops training



*Dinner is served at Patterson Field mess hall.*

program for civilian employees and worked with Ohio and Kentucky school districts to establish pre-induction or pre-service training programs.

When the war ended, Patterson Field hosted an Army Air Forces Base Unit Separation Center that processed over 35,000 soldiers from the service. Peace also dramatically reduced the depot's supply and maintenance operations. In January 1946, depot operations formally ended at Patterson Field when the Fairfield Air Depot was officially inactivated and its functions transferred to Air Materiel Areas.

## Wright-Patterson Air Force Base

As World War II was coming to an end, managers at both Wright and Patterson Fields began to jointly plan and administer the two fields. In 1945 they integrated the master plans for Wright and Patterson Fields into a single document and increasingly administrated the functions and services of the two fields as a single installation. This practice was formalized in December 1945 with the establishment of the Army Air Forces

Technical Base, Dayton, Ohio, which consolidated the two fields into an umbrella organization for administrative purposes. Brigadier General Joseph T. Morris, the Commanding General of Wright Field was appointed commander of the new organization and directed to provide base operational support to the combined bases.

General Morris was a master planner with an impressive breadth of vision who would command the base from 1945 to 1952. During those years, he skillfully guided the installation from wartime to peacetime, managed the transfer of its property and facilities from



*Brigadier General Joseph T. Morris, the "Father of Wright-Patterson AFB."*

the Army to the Air Force, supervised the establishment of Wright-Patterson Air Force Base, directed the racial integration of the base, and oversaw base operations support for the Berlin Airlift and the Korean War. His brilliant and sensitive stewardship earned him the nickname of

### CHRONOLOGY OF WRIGHT-PATTERSON AIR FORCE BASE AND ITS ANTECEDENTS

Installation	Date Established
(Huffman Prairie Flying Field)	(1904-1916)
Wilbur Wright Field	June 6, 1917
Fairfield Aviation General Supply Depot	October 13, 1917
Wilbur Wright Air Service Depot	January 4, 1918
Aviation General Supply Depot, Fairfield, Ohio	January 10, 1919
Air Service Supply and Repair Depot	September 20, 1920
Fairfield Air Intermediate Depot	January 14, 1921
Fairfield Air Depot Reservation	June 22, 1927
Wright Field	October 12, 1927
Patterson Field	July 1, 1931
Army Air Forces Technical Base	December 15, 1945
Air Force Technical Base	December 9, 1947
Wright-Patterson Air Force Base	January 13, 1948



“Uncle Joe” and recognition as the “Father of Wright-Patterson Air Force Base.”

The AAF Technical Base was redesignated on December 9, 1947 as the Air Force Technical Base to reflect its status as part of the new, independent United States Air Force. The final evolutionary step came one month later. On January 13, 1948 Wright Field and Patterson Field were officially merged into a single installation and redesignated Wright-Patterson Air Force Base. To facilitate daily management, Patterson Field became “Area C” and Skyway Park (located across Kauffman and encompassing the area that is now Wright State University) became “Area D” of the installation. \*

Wright-Patterson AFB was assigned to Air Materiel Command and received its operations support from the 4000th Air Force Base Unit. This unit was redesignated several times in 1948 and again on October 4, 1949 when it became the 2750th Air Base Wing. (The wing was subsequently redesignated the 645th Air Base Wing in 1992 and the 88th Air Base Wing in 1994.) The wing’s mission was to manage the installation and provide base operations support (civil engineering, airfield operations, transportation, logistics, billeting, personnel management, finance, recreational services, etc.) to all organizations assigned to Wright-Patterson. Its commander was the Base Commander and host for the installation. General Morris served as the air base wing commander from August 28, 1948 to March 28, 1952.

## Into the Cold War

Wright-Patterson Air Force Base became a unified installation just as the Cold War began to heat up. The Berlin Airlift, Korean War, and other Cold War activities directly impacted its operations. The Berlin Blockade and Airlift began in June 1948 and lasted until September

1949. The installation’s manpower soon rose from a postwar low of 21,000 in 1947 to 25,000 in 1949. During this time, the aircraft logistics support that made the airlift possible was directed by Headquarters Air Materiel Command in Building 262. AMC managed the transfer of the larger and faster C-54 transports to Germany and maintained a pipeline of parts and supplies that kept the aircraft flying. It also arranged for contract maintenance to handle the overwhelming workload created by the operation.



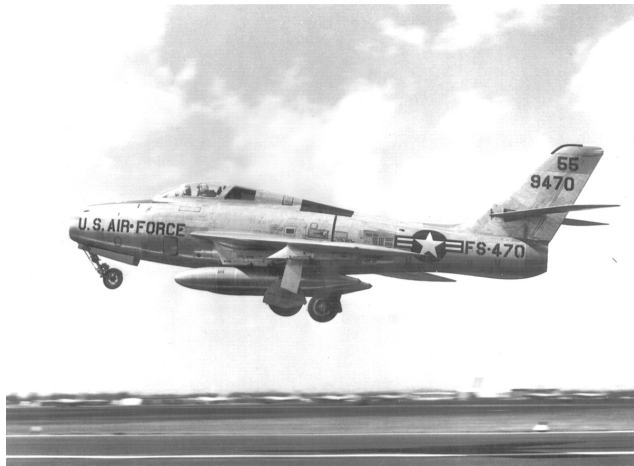
*C-54 transports helped maintain the aerial supply line during the Berlin Airlift.*

When the Korean War broke out, Wright-Patterson’s workload and labor force rapidly expanded to meet wartime demands. The base’s personnel strength surged to 34,000 in 1951 and then gradually declined to about 25,000 by 1959. This expanded workforce quickly produced a family housing shortage and the growing volume of automobile traffic forced the base to institute staggered work shifts to relieve rush hour congestion. The outbreak of the conflict sent Air Materiel Command into high speed supervising the recall and overhaul of stored aircraft, setting acquisition goals, and overseeing an industrial effort that placed new technology like the F-84 Thunderjet and F-86 Sabre into the hands of warfighters. AMC also established and maintained the logistics pipeline that flowed supplies to the theater of

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\* For an explanation of the evolution of Areas A, B, and C, see Appendix A.

war. The base hospital received its first combat casualties in October 1950 and was kept busy treating the wounded throughout the conflict. Furthermore, the American Red Cross designated the hospital as a special blood collection center to meet the increased need for blood products.



*F-84F Thunderstreak*



*F-86F Sabre*

Wright-Patterson remained an acquisition, logistics, and research and development center, but the scope and management of these activities were changing substantially. Automation and decentralization became major trends at Air Materiel Command. Headquarters AMC entered the computer age on September 3, 1954 when General Douglas MacArthur dedicated its first computer—a Remington Rand UNIVAC. The headquarters also began decentralizing functions as it moved away from operations and focused on program

management. Finally, the Air Force's increasing emphasis on research and development resulted in AMC's transfer of this functional area to a new major command in 1951. The Air Research and Development Command (ARDC) was established to supervise all research and development engineering on aircraft and aeronautical equipment. At the same time, the establishment of the Wright Air Development Center (WADC) organized Wright Field's laboratories (included engineering, flight testing, the All-Weather Flying Division, and Office of Air Research) and brought them under ARDC's control. The rapid acceleration and expansion of aerospace technology led to new, specialized research centers throughout the country. Through the course of the 1950s, Wright-Patterson transferred its large engine testing and ballistic missile development to these centers as well as its electronic support systems, armament, and rocket engine work. Air Materiel Command's mission was limited to the acquisition and maintenance of aerial weapon systems and their supporting subsystems. Finally, an overall "systems" approach to acquisition replaced the traditional practice of developing individual components. This new methodology necessitated the creation of Joint Project Offices to facilitate the coordination of planning and production between the various offices and commands. These offices would soon evolve into the System Program Offices used today.



*Wright Air Development (WADC) Headquarters was established in Building 14, Area B, in 1951.*

## WRIGHT-PATTERSON AFB COMMANDERS

Commander	From		To	
Unknown	April	1944	July	1945
Brigadier General Joseph T. Morris	July	1945	March	1952
Brigadier General C. Pratt Brown	March	1952	October	1953
Brigadier General Paul L. Barton	October	1953	August	1957
Brigadier General Donald L. Hardy	August	1957	July	1958
Brigadier General John D. Howe	July	1958	May	1960
Colonel James C. Cochran	May	1960	August	1960
Colonel Elbert Helton	August	1960	August	1962
Colonel Glen McClernon	August	1962	August	1964
Colonel Arthur E. Exon	August	1964	December	1965
Colonel Jowell C. Wise	December	1965	July	1968
Colonel Colman O. Williams	July	1968	September	1970
Colonel Edmund A. Rafalko	September	1970	June	1972
Colonel Irby B. Jarvis, Jr.	June	1972	January	1975
Colonel Robert W. Clement	January	1975	January	1976
Colonel Titus C. Hall	January	1976	January	1977
Colonel Rano E. Lueker	January	1977	April	1981
Colonel James H. Rigney, Jr.	April	1979	June	1981
Colonel Leonard R. Peterson	June	1981	June	1984
Colonel Charles E. Fox, Jr.	June	1984	March	1987
Colonel Stephen F. Kollar	March	1987	July	1989
Colonel Dennis P. Tewell	July	1989	July	1990
Colonel William B. Orellana	July	1990	July	1992
Lieutenant General Thomas R. Ferguson, Jr	July	1992	May	1993
Lieutenant General James A. Fain, Jr	May	1993	October	1994
Lieutenant General Richard M. Scofield	October	1994	May	1996
Lieutenant General Kenneth E. Eickmann	May	1996	May	1998
Lieutenant General Robert F. Raggio	May	1998		

Base support operations grew in the 1950s as the 2750th Air Base Wing briefly maintained an Air Force Records Center and assumed responsibility for distributing Air Force publications and forms worldwide. In 1955, the Air Force chartered the Wright-Patterson Non-Commissioned Officer Academy. Major base support activity, however, centered on the flightlines

where the traffic volume rivaled New York's International Airport at Idlewild. In 1951, aircraft operations on the Area B and C flightlines were consolidated and moved to Building 8 in Area B. WADC's Flight Test Division then relocated to Area C. The Patterson Field runway had been selected over Wright Field in the late 1940s to host an 8,000 foot

VHB runway designed to serve very heavy bombers and jet-powered aircraft. By moving to Area C, the Flight Test Division took advantage of the better runway and its safer approach areas. This point was reinforced in 1958 when the Air Force closed the Wright Field runway to jet aircraft. A further consolidation of flightline operations came in 1959 as the air base wing gained responsibility for WADC's standard aircraft field maintenance.

The 2750th Air Base Wing also operated support and training aircraft. In 1956, for example, the wing had a monthly average of 100 aircraft in its inventory. The wing used T-33 jet trainers and F-80s to conduct a jet aircraft transition program for Wright-Patterson's pilots. Wright-Patterson also became a major hub in the Logistics Aircraft (LOGAIR) air supply network that was created in 1954, and the base maintained a daily aerial mail link to the nation's capitol.

New tenant organizations added to the flightline activity. The F-86Ds and F-104 Starfighters belonging to Air Defense Command's 97th Fighter-Interceptor Squadron (later redesignated the 56th FIS) provided air defense for the industrial areas of the Miami Valley from 1951 to 1960. The 58th Air Division also operated an air defense control center for an eleven state area from



*Building 4010 on the West Ramp housed HQ 4043rd Strategic Wing, a Strategic Air Command B-52 nuclear alert force.*

1955 to 1958. When Strategic Air Command initiated nuclear alert operations in 1957, Wright-Patterson hosted six nuclear armed B-52 bombers. SAC subsequently stationed its 4043rd Strategic Wing (later 17th Bomb Wing) at Wright-Patterson from 1959 to 1975. The base acquired 465 acres on the northeast corner of the installation where it built the West Ramp complex to house the SAC wing and its B-52 bombers and KC-135 tankers.

Several tenant organizations that ceased operations during World War II reactivated after the conflict. The Army Air Force Institute of Technology reopened its doors in December 1945. The Air Force Museum opened for business again in 1954 at a new location, Building 89 in Area C.



*U.S. Air Force Museum resided in Building 89, Area C, from 1954 to 1971.*

Cold War operations changed the physical appearance of Wright-Patterson AFB as temporary World War II structures were removed to make way for new construction. A critical shortage of housing spawned several major construction programs. In 1953, the Page Manor housing complex added 2,000 family units to the base. This private development was constructed under authorization of the Wherry-Spence Amendment to the National Housing Act that permitted the Federal Housing Administration to insure privately financed housing at military installations. The Air Force leased

the housing until 1960 when it purchased the development outright and assigned it to the 2750th Air Base Wing to manage. A new bachelor officer quarters (Building 825) opened in 1954 and in 1959 the completion of Building 826 added 194 visiting officer quarters to the base. Enlisted airmen were able to move in 1957 from their World War II temporary wooden barracks into newly completed Buildings 1212, 1213, 1214, and 1215 in Wood City. A modern 384 bed permanent hospital in Area A replaced the World War II cantonment facility in 1956. A new NCO club in 1956 replaced the one that had burned down three years earlier. Finally, the last of 536 Skyway Park family housing units in Area D was removed in 1959.



*In 1956, a new permanent USAF Hospital opened in Area A.*

In Area B, new laboratory and research facilities reflected the advance of technology. Some technologies required the expansion of existing facilities like the armament and materials laboratories. New technologies, however, mandated new structures like the Rocket Test, Microwave and Gas Dynamic Research Facilities. Perhaps the most unique structure was the Radar Test Facility completed in 1947 along National Road. It was built entirely of wood (even metal nails were avoided) to prevent interference with radar reflection and cross section testing performed there. The pioneering research done in Building 821 paved the way for stealth technology. Another prominent landmark was the

Nuclear Engineering Test Facility completed in 1960. Building 470 housed a 10 megawatt nuclear research reactor designed to assist in the development of a nuclear powered aircraft engine.



*When completed, the all-wooden Radar Test Facility (Building 821) would support pioneering research in stealth technology.*

## The Vietnam Era

The Air Force opened the decade of the 1960's with a major restructuring that would govern operations at Wright-Patterson AFB for the next thirty years. On April 1, 1961, the Air Force transferred Air Materiel Command's procurement and production functions for new systems to the ARDC. It then redesignated AMC as the Air Force Logistics Command (AFLC) and ARDC as the Air Force Systems Command (AFSC). In Area B, the procurement and production duties of AMC's Aeronautical Systems Center were combined with the research and development responsibilities of WADC to create the Aeronautical Systems Division which was assigned to AFSC. The laboratories were separated from engineering development and assigned to HQ AFSC so they could better concentrate on advanced technology research. The newly created Air Force Systems Command became responsible for new weapon systems from the research and development phase through initial

deployment. AFLC assumed responsibility for supporting the systems throughout their operational lifetimes. The 2750th Air Base Wing was assigned to Air Force Logistics Command, whose headquarters remained at Wright-Patterson. Headquarters AFSC moved to Andrews AFB, Maryland.



*Headquarters, Air Force Logistics Command (Building 262, Area A)*

Routine business at Wright-Patterson soon gave way to the growing requirements of the nation's military operations in Vietnam. Headquarters AFLC's requirements for supporting the forces and bases in the theater of war grew rapidly. By September 1964, AFLC was calling upon the 2750th Air Base Wing for assistance. The wing immediately began shipping materiel and providing support personnel to the combat theater. It quickly became a prime procurer of loaders, revetments, and shelters. In November 1965, the wing provided fifteen members for AFLC's first Air Force Prime BEEF (Base Engineering Emergency Force) mobility military civil engineering force. Other base support over the years included flight training, small-arms weapons training, vehicle operator training, and laundry management courses. The Air Force Institute of Technology established extension courses in the combat



*Major William J. Baugh is welcomed home during Operation Homecoming .*

zone and participated in project Corona Harvest to glean lessons learned. Perhaps Wright-Patterson's most public contribution came in 1973 when the USAF Medical Center Wright-Patterson became one of ten USAF medical facilities selected to receive and process former prisoners of war. Operation Homecoming eventually brought thirty Air Force officers to Wright-Patterson for processing and re-orientation.

On the Wright Field side of the installation, the research laboratories and the Aeronautical Systems Division were busy inventing and improving the systems used by warfighters. The laboratories were developing jet fuels and lubricants for all services, working on phased array radar and airborne lasers, exploring the use of composite materials in structures, and pursuing stealth technology and fly-by-wire technology. ASD set up a special division to respond to combat requirements and quickly evaluate new hardware ideas. It conducted hundreds of rapid response programs ranging from the development of tactical electronic warfare systems and guided bombs to the modification of cargo aircraft into side-firing gunships. Its efforts produced a vast array of items from the AC-47 and AC-130 gunships to intrusion alarms, and a mobile tactical air control system. The division deployed the F-4C, F-111, C-141, C-5A, SR-71, F-15, and A-10 during these years and conducted extensive research on the XB-70 and B-1. Total package procurement was adopted and used for the C-5A, but in 1971 this management strategy along with concurrent



*F-4G Wild Weasel with SHRIKE and AGM-78 missiles.*

development and production were dropped in favor of a five phase acquisition cycle that offered the division better control of the overall acquisition process. ASD transferred its Category II all-weather flight testing to Edwards AFB, California, in 1970.

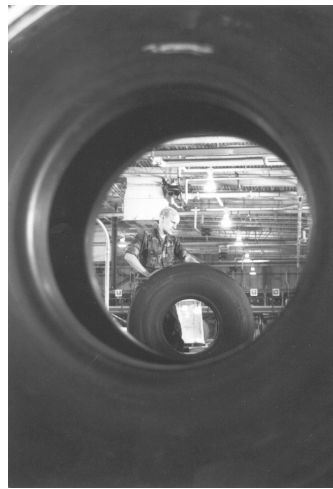


*FB-111*



*SR-71 Blackbird reconnaissance aircraft*

Wright-Patterson AFB in 1960 had 100 tenants representing 150 organizational units and boasted fixed capital assets of over \$208 million on base and \$6 million off base. As in previous conflicts, the base population jumped, this time from 25,000 to over 30,000 by 1964. It then declined before stabilizing between 25,000-26,000 for the duration of the war. Meanwhile, consolidation and automation continued as trends in base support operations. In 1960, Headquarters Air Force directed ten units on base to transfer their aircraft to the 2750th Air Base Wing so the wing could provide



*Wright-Patterson AFB was a major central warehouse and shipping center for tires from the 1950s to the 1990s.*

consolidated mission support airlift to organizations assigned or attached to the installation. The air base wing automated its base supply activities and in 1962 a Consolidated Military Personnel Center was established to take advantage of mechanized payroll and record services. Further consolidation came in

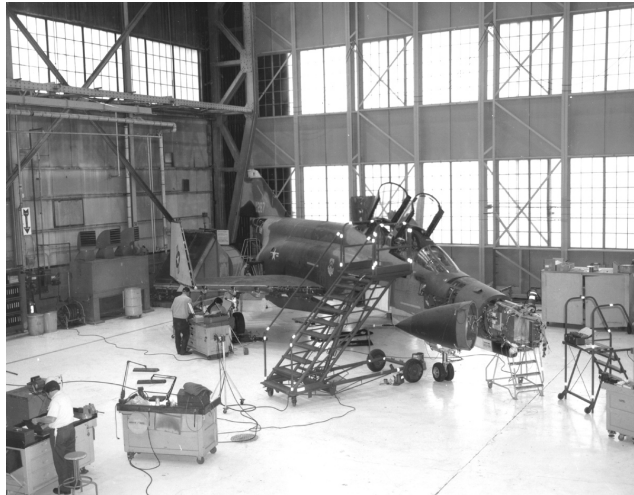
1971 when the Aeronautical Systems Division and the 2750th Air Base Wing merged their Consolidated Base Personnel Offices. The Wright-Patterson Central Command Post was established in 1960 to provide a single controlling point for emergency operations and test exercises on the installation. In 1975, the 2750th assumed day-to-day operation of AFLC's command and control functions as it jointly operated both the Wright-Patterson Operations Center and AFLC Operations Center. The opening of a new control tower on the Patterson Field runway in 1963 facilitated the gradual shift of flight operations away from Wright Field and the initiation of plans to eventually close the Area B runway.



*Airmen at the base air freight terminal load cargo onto a transport.*



The Air Force Packaging Evaluation Agency was among the new tenants joining the Wright-Patterson community. It moved to the base in 1967 from Alabama. Two years later the Air Force Contract Maintenance Center activated. In 1970, Aeronautical Systems Division's Directorate of Flight Testing became the 4950th Test Wing.



*4950th Test Wing technicians modify an F-4 for flight testing*

The Vietnam era witnessed substantial change in Wright-Patterson's appearance. World War II era structures fell in rapid succession to make way for new facilities and open space. A 1961 fire which took the lives of two Wright-Patterson firefighters destroyed the annex to AFLC headquarters. Within three years Building 266 was constructed on the site to resume the



*The tragic fire that destroyed Building 262-A, the HQ AFLC Annex, on November 21, 1961, took the lives of two base firefighters.*

role of supporting the major command's headquarters. AFIT dedicated its new School of Engineering (Building 640) in 1964 and in doing so marked the first step in the institute's transition to a modern space-age campus. Wright-Patterson fostered another academic institution in 1963 when it transferred 190 acres of land in Area D to the State of Ohio and contributed technical support for the establishment and construction of Wright State University. A major historical event took place on September 3, 1973 when President Richard M. Nixon opened the new Air Force Museum. The new facility in Area B was built with \$6 million in private donations and situated on 225 acres of land deeded from the base to the USAF Museum Foundation.

The rapid developments in aerospace technology necessitated new research and testing equipment and facilities to house them. A 1960 addition to the structural test facility was needed to support the X-20 Dyna-Soar and B-70 programs. Wright-Patterson became home to the free world's largest aerospace and missile sonic test chamber. The new Optics Laboratory housed the world's largest optical collimator. In 1965 the Foreign Technology Division gained a new laboratory (Building 829). Two years later, the Electronic Warfare Research Center (Building 620) opened for business with its distinctive twin towers. The Aerospace Medical Research Laboratory completed a six-year program that



*The Electronic Warfare Research Center (Building 620, Area B) with its distinctive twin towers.*

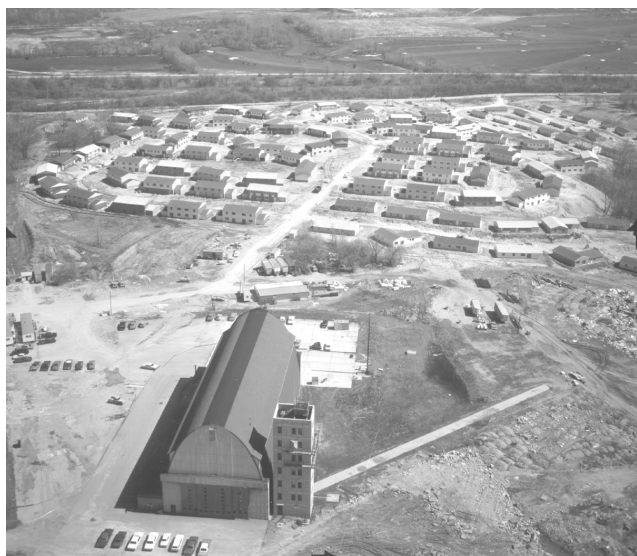
doubled its capacity to conduct research in toxicology. Wright-Patterson also became home to the Air Force's only nuclear research reactor. The Nuclear Research Engineering Facility, completed in 1960, had been constructed to help develop a nuclear powered aircraft engine. When that project was canceled, the building was turned over to AFIT to assist with its nuclear engineering program. The 10-megawatt reactor went on line in 1965 and operated for five years. It was deactivated in 1970 due to its high operational cost and entombed in concrete the following year.

Several new facilities improved the quality of life on Wright-Patterson. The completion of the Twin Base Golf Club in 1963 added another 18-holes to the base and reopened club membership to base civilians for the first time since World War II. A Grand Ballroom was added to the Officers' Club in 1962, while the NCO Club received a major renovation, and a new Airmen Service Club replaced the World War II structure that had been destroyed by fire. The conversion of Wood City from a World War II compound into a modern living and recreation area resulted in its being renamed Kittyhawk Center in 1972. Several housing projects expanded and improved the quality of family housing. Construction in 1971 added 300 family housing units in what became Woodland Hills. Two years later ground

was broken for another 70 units at Woodland Hills plus 430 units that would form the Pine Estates and Green Acres housing complexes.

An aggressive tree planting campaign permanently enhanced Wright-Patterson's esthetic appearance. From 1928 to 1954, 7,500 ornamental trees had been planted on the base. This activity paled when compared to the greening of Wright-Patterson that took place in the 1960s. During 1960, 10,000 multiflora rose trees were planted in conjunction with the State of Ohio's fish and wildlife conservation program. Four years later, another 51,000 trees were planted as part of a base beautification program. Then, in 1966, Wright-Patterson entered into a cooperative timber management program with the Ohio Division of Forestry and Reclamation to reforest 420 acres on the base.

Finally, several 1971 events renewed interest in Wright-Patterson's heritage. In March, a new tombstone marker was placed at the grave of Private Hiram Honaker, a black Civil War veteran of the 5th Regiment, U.S. Colored Cavalry. Private Honaker was buried in the Cox family cemetery which had become part of Wright-Patterson AFB in 1950. That same year, the .52-acre pylon site on the Huffman Prairie Flying Field was listed on the National Register of Historic Places.



*Woodland Hills housing complex under construction.*



*Sgt. James Trinkle and Sgt. Louis Harshaw place new headstone at the gravesite of Pvt Hiram Honaker during March 1971 ceremony.*

## To the End of the Cold War

The end of the Vietnam War brought with it a period of rapid transition and uncertainty within the defense establishment. First came the postwar drawdown and series of A-76 Cost Comparison Studies that saw many activities at Wright-Patterson AFB converted from government to contract operations. The cutbacks caused the base population to drop to around 23,000. Inflation and rapidly rising fuel prices further aggravated competition for declining funds. Postwar austerity gave way in the early 1980s to the nation's largest increases in peacetime defense spending as the nation rearmed itself for a Cold War that was coming to an end. Base manpower rose again, peaking at about 30,000 in 1989. Operations at Wright-Patterson AFB paralleled these trends. Organizational changes occurred as the Air Force moved away from its Vietnam-era structure toward one better suited to the Cold War and the dynamic progress of technology. Another period of cutbacks near the end of the decade heralded the climatic events leading to the tearing down of the Berlin Wall in November 1989. This symbolic act marked the collapse of communism and brought a conclusion to a Cold War that had lasted for almost half a century.

The laboratories at Wright-Patterson continued their work on cutting-edge technologies. Research covered a variety of projects such as "all glass" cockpits, very high speed integrated circuits, variable camber wings, short take off and landing technology, advanced

structural alloys and composite materials, artificial intelligence, and doubling the performance of gas turbine engines. The rapid pace of technological development, however, also contributed to organizational instability for the laboratories. In 1975 the Aerospace Research Laboratories was inactivated and its personnel and resources transferred to the newly activated Air Force Wright Aeronautical Laboratories (AFWAL) which was assigned to AFSC. AFWAL included the materials, avionics, aero propulsion, and flight dynamics laboratories.

In October 1982, Air Force Systems Command again reorganized the laboratories. This time it ordered them to either merge or affiliate with their product divisions in hopes of improving the transition of newly discovered technologies into operational systems. The Air Force Wright Aeronautical Laboratories found itself assigned to the Aeronautical Systems Division. AFWAL evolved into the Wright Research and Development Center in October 1988, adding an electronic technology laboratory and directorates for manufacturing technology, cockpit integration, and signature technology. Two years later it acquired the armament laboratory at Eglin AFB. In December 1990 the organization was redesignated as the Wright Laboratory.

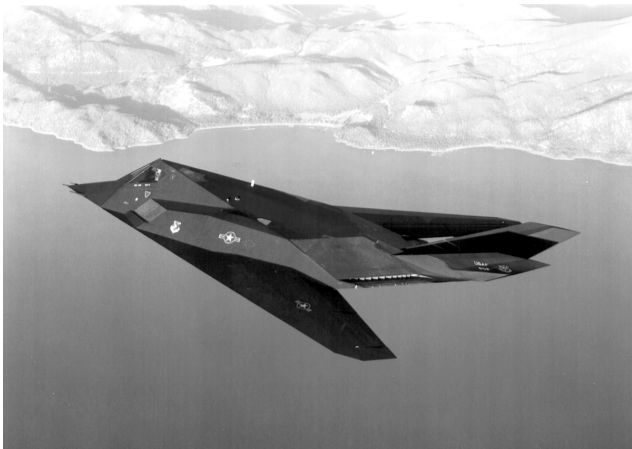
The Aeronautical Systems Division continued its efforts to modernize the tactical and strategic forces. It



*New Fuels and Lubrication Laboratory (Building 490)*



*F-16 Fighting Falcon*



*F-117 Stealth Fighter*

upgraded the F-15 and F-16, improved avionics, fielded the F-117, and B-1B and began work on the Advanced Tactical Fighter, C-17, T-1A, and two new Air Force Presidential aircraft. It also returned to hypersonic research with the X-30A National Aero-Space Plane.

At Air Force Logistics Command the logistics of deterrence sought to support and equip the force despite inflation and stiff competition for government dollars. The command focused on improving its cost effectiveness through computer technology and better management techniques. It remodeled its archaic World War II depot system and physical plants and initiated support for the Rapid Deployment Force. In 1976 AFLC established an Acquisition Logistics Directorate to plan the integration of operational support in the acquisition process. Over the next ten years, automation and microchip technology revolutionized its supply and distribution business while modular electronics challenged aircraft inventory management and support. In 1987, AFLC began emphasizing reliability and maintainability as solutions to its increasingly complex weapons systems. Two years later the command initiated major procurement reforms to counter ethics problems that had arisen with its defense contractors. These reforms focused on price, quality, streamlining the source selection process, and improving acquisition strategy and oversight. AFLC also worked on promoting artificial

intelligence, bolstering the U.S. industrial base for mobilization, and quality management techniques.

At the base level, Wright-Patterson faced several emergencies in the mid-1970s. The first resulted from the 1973 Arab-Israeli war which produced an Arab boycott of oil sales to the United States. Wright-Patterson was forced to develop and institute an energy savings program that substantially reduced consumption across the installation. The second emergency came on April 3, 1974 when a devastating tornado hit Xenia, Ohio, just twelve miles from the base. The tornado left 34 people dead and 500 injured. It damaged or destroyed 1,500 homes and created losses estimated at \$500 million. Wright-Patterson immediately responded to the crisis with medical aid, search and rescue teams, aerial photography, supplies, and cleanup crews.



*Xenia, Ohio, after being struck by tornado on April 3, 1974.*



*Work crews from Wright-Patterson helped Xenia recover from the tornado.*

Base flying operations in the post-Vietnam era underwent dramatic changes. In 1975, the Air Force decided to retire much of its aging fleet of administrative support aircraft and reorganize the rest. The 2750th Air Base Wing transferred most of its aircraft to the Military Aircraft Storage and Disposal Center in Arizona. Five T-39s went to Military Airlift Command, the new single manager for T-39 aircraft in the continental United States. The newly activated Detachment 2, 1401st Military Airlift Squadron managed the T-39's based at Wright-Patterson. This transfer of aircraft ended the active flying mission that the air base wing had performed since 1948. The wing continued to operate the airfield and support tenant flying organizations, but the 4950th Test Wing assumed the 2750th's aircraft maintenance and support functions. The scope of these operations shrank significantly on June 1, 1976 when the Air Force officially closed the Area B (Wright Field) aerodrome, ending fifty years of flight operations.



*Det 2, 1401st Military Airlift Squadron (MAC) took over management of T-39 administrative at Wright-Patterson in 1975.*

Meanwhile, the development of an Air Installation Compatible Use Zone (AICUZ) around Wright-Patterson AFB secured the future of flying operations at the base. The AICUZ prevented on-base and off-base development from adversely impacting flying operations and use of the airfield. In 1975, the base and its four adjoining counties enacted a Wright-Patterson

AFB Airport Zoning Regulation that defined noise and accident zones about the base and suggested compatible land uses in these areas.



*2750 ABW cargo specialists prepare to unload a KC-10.*

Cost comparison studies designed to determine the most efficient way to deliver government services directly affected base operations support. The 2750th Air Base Wing conducted a series of such studies in the late 1970s. As a result, the base ceased performing its own laundry, fuels management, audiovisual services, publications distribution, unclassified mail distribution, commissary shelf-stacking and custodial services and turned them over to civilian contractors.

The nation's bicentennial celebration in 1976 awakened interest in the history and heritage of Wright-Patterson AFB. Over the next fifteen years a wave of memorial dedications swept the base. The dedication of AFLC headquarters (Building 262) in honor of Brigadier General William E. Gillmore in 1976 began the movement. The streets in the Brick Quarters were renamed in 1977 and the Major General Frank G. Barnes Memorial Park was dedicated. This wave of dedications would eventually include the Kittyhawk dorms and dining hall, Building 10 (Morris Hall), Building 640 (Bane Hall), Buildings 248 and 641 (Fitts and Twining Halls), Building 88 (Foulois House), and Quarters 1 (Robins House) among other facilities. (Appendix B lists memorial sites on the installation.)



*Frank G. Barnes Memorial Park was dedicated in 1977.*

In celebration of the 75th Anniversary of Powered Flight in 1978, the Miami Conservancy District transferred a .52 acre plot on the Huffman Prairie Flying Field and the 27-acre park on Wright Brothers Hill to Wright-Patterson AFB and the Air Force. The plot commemorated the start of the oval flight path flown by the Wright Brothers. The park, designed by the Olmsted Brothers architectural firm, was home to the Wright Memorial and several native American burial mounds.

Building 8, the oldest building on the base, was saved from the wrecking ball and put to new use. This base landmark had been home to the installation's commanders until World War II. With the support of the Huffman Prairie League, a private non-profit organization, the 1841 house was completely restored



*The Arnold House, Wright-Patterson AFB's Heritage Center*

and converted into a base heritage center. A ceremony on May 16, 1986 formally dedicated the building as the Arnold House Heritage Center in honor of General Henry "Hap" Arnold, its most distinguished former resident and the Air Force's only five-star commander. In September, the Miami Valley Military Affairs Association dedicated a memorial in honor of former prisoners of war and those still missing in action. The black marble stone was placed next to the new heritage center.



*Wright-Patterson memorial honoring Prisoners of War and those Missing in Action*

The wave of historical interest spawned in the 1970s was joined in the 1980s by an active concern with environmental management. At Wright-Patterson, the environmental protection initiatives included an investment of \$37 million to modify and modernize the base's coal-fired heating plants. The base installed new



*Recycling became a major base activity in the 1980s.*



boilers and electrostatic precipitators to meet federal and state environmental regulations and shut down three of its five heating plants. Environmental managers also started surveying potentially contaminated sites and developing remedial action plans to clean them up.

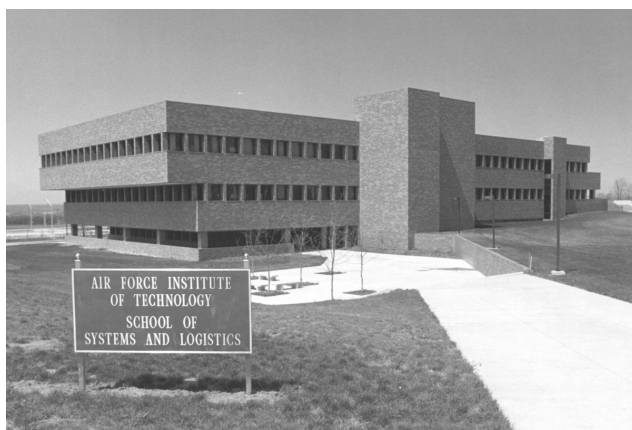
The World War II appearance of Wright-Patterson AFB continued to fade as old facilities were either torn down or modernized and new ones erected. In 1979, Wright Field's original hangars 2, 3, and 10 were razed to make way for a new Fuels and Lubricants Laboratory. The Civilian Club closed its doors and the building was remodeled for other uses. The modernization of the Kittyhawk complex moved into high gear as a new child care center replaced three World War II wood-frame structures. The NCO club and dormitories were renovated and new sports fields and recreational areas along with a gym and an olympic-size swimming pool enlivened the area. A \$7 million community shopping complex became the new home of the base exchange and commissary. Finally, in 1980 a phased upgrade and conversion of Page Manor got underway. It would continue into the next century.

Numerous base organizations took up residence in newly constructed facilities. The Foreign Technology Division moved into Building 856, while AFIT opened its new School of Systems Logistics in Building 641. An Aircraft Survivability Research Facility was opened

in 1982 and the next year Building 248, a biotechnology facility, was ready for the Aero Medical Research Laboratory. In 1987, new research facilities included the High Power Research Laboratory and Building 655, a metals and ceramics center for the Materials Laboratory. The Air Force Museum added the Gallery of Flight in 1988 and the next year the Medical Center completed a \$115 million expansion that more than doubled its capacity. To celebrate the 45th anniversary of the command in 1989, AFLC erected a distinctive flag pole complex and an F-4D display in front of its headquarters. Building 1, the original depot building and oldest military structure on the base received a complete exterior makeover that modernized its appearance at the cost of its historic architecture, save for the trainway entrance. Finally the entire community looked forward to the completion of Interstate 675 and the exchanges that would directly connect it to the base.



*Base civil engineers modernizing the facade of historic Building 1.*



*AFIT's new School of Systems Logistics (Building 641).*



*Flag and F-4 display in front of HQ Air Force Logistics Command (Building 262).*



*U.S. Air Force Museum with Gallery of Flight and IMAX theater.*

Tenant units continued to arrive and depart the installation. The 17th Bombardment Wing transferred to Beale AFB, California, in 1975 thereby ending the strategic nuclear alert mission at Wright-Patterson. Two years later, the Defense Institute of Security Assistance Management and the 3552nd USAF Recruiting Service Squadron took up residence on the base. In 1978 the AFLC International Logistics Center activated to handle grant aid, foreign military sales, and international military education and training. The Air Force Orientation Group moved from Area B to Dayton's Gentile AFS in 1981. Flight line activity received a boost in July 1982 when the 906th Tactical Fighter Wing (AFRES) activated and brought F-4D Phantom II operations to the base. The wing converted to F-16s in 1989.



*Crew members from the 906th Tactical Fighter Wing ready an F-4D for flight.*

## Toward the Second Century of Flight

The end of the Cold War returned Wright-Patterson and the nation to a traditional peacetime status for the first time since World War II. The transition caused dynamic restructuring, consolidations, personnel reductions, budget pressures, and new modes of business. Amid these changes, Wright-Patterson supported combat operations in the Middle East and hosted peace talks.

The defense restructuring that followed the end of the Cold War directly influenced operations at Wright-Patterson. The most comprehensive change was organizational. On July 1, 1992, the Air Force inactivated Air Force Systems Command and Air Force Logistics Command. In their place it activated the Air



*HQ Air Force Material Command activated on July 1, 1992.*

Force Material Command (AFMC) headquartered in Building 262 at Wright-Patterson AFB. AFMC once again unified the research, acquisition, and logistics missions within a single major command. The Aeronautical Systems Division was assigned to the new major command. A second Air Force restructuring focused on establishing standard organizations and structures across Air Force bases. Therefore, on July 1, 1992, the Aeronautical Systems Division was redesignated the Aeronautical Systems Center and replaced the 2750th Air Base Wing as the host organization for Wright-Patterson AFB. The air base



*At Air Base Wing Headquarters, civil engineers change the numerical designation from "2750" to "645." They would change it to "88" one year later.*

wing and 74th Medical Group, in turn, were reassigned to the Aeronautical Systems Center. In October 1993 the 2750th Air Base Wing was redesignated the 645th Air Base Wing and in 1994 it became the 88th Air Base Wing. The next major restructuring came in 1997 when Headquarters Air Force Research Laboratory was activated at Wright-Patterson. It consolidated

the Air Force's laboratories and absorbed the Wright Laboratory from the Aeronautical Systems Center. The new organization was assigned to AFMC.

These restructurings did not change the work traditionally done at Wright-Patterson. Research, development, acquisition, logistics, and training remained major activities. Test flying, however, formally ended when the 4950th Test Wing moved to Edwards AFB, California, in 1994. Base success stories in the 1990s included the fielding of the B-2 stealth bomber, the C-17, and the T-1A. Several C-135 airframes were modified to support the Open Skies Treaty mission and the F-22 Raptor progressed from the drawing board to



*The first B-2 bomber visited Wright-Patterson AFB on June 16, 1995.*

test flight. In 1996, the Aeronautical Systems Center also became host to one of four Department of Defense supercomputers which it housed in the Major Shared Resource Center.



*Technicians installing the supercomputer in ASC's Major Shared Resource Center.*



*YF-22*

Acquisition reform continued as managers sought more reliable systems that could be delivered faster and cheaper. The quality management movement that started in the 1980s evolved into strategic planning while activity based costing gained momentum as a management tool. The Lean Aerospace Initiative found defense managers and industry working together to improve the industrial base and produce affordable quality systems. Another major strategy, Integrated Weapon Systems Management, sought to integrate all functional life cycle requirements into the development of weapon systems.

Two unexpected events—a war and peace talks—briefly disrupted Wright-Patterson's normal routine. In

August 1990, Iraq invaded Kuwait. Operations Desert Shield and Desert Storm protected neighboring Arab nations and liberated Kuwait. Thirty-one Wright-Patterson units received deployment taskings. The 2750th Air Base Wing handled all mobilizations of base personnel. It deployed a total of 606 base personnel in 84 separate deployments. From August 1990 through April 1991, Wright-Patterson AFB performed its wartime mission as an Aerial Port of Embarkation for the first time when the air base wing processed and deployed troops and cargo. The initial foray into this area came on September 22 when the 64th Ordnance Detachment from Fort Benjamin Harrison, Indiana, deployed fourteen soldiers and 34.5 short tons of cargo through the base. A total of 2,309 soldiers from 21 Army units eventually passed through Wright-Patterson.

These deployments represented 33 separate taskings and took place on 19 different dates. Air base wing personnel also handled 2,267 short tons of cargo for the Army, Air Force, and Marines. Appendix C lists the Army



*Cargo bound for Operation Desert Storm.*



*As an aerial port of embarkation, Wright-Patterson deployed troops to Desert Storm.*



*Wright-Patterson cargo specialists load equipment bound for the Middle East.*



*Army soldiers prepare their equipment for shipment to the theater of war.*



*Army vehicles in desert camouflage lined up for loading.*

deployments. At the conclusion of Desert Storm, the wing redeployed 331 Air Force and 1,916 Army personnel and handled an additional 54 short tons of Air Force cargo. In all, 153 aircraft arrived and departed the base as part of the contingency operations. Other wing activity included the processing and shipping of over 10,500 tires by the wing's Aircraft Tire and Storage Distribution Point.

The USAF Medical Center Wright-Patterson supplied the largest contingent of base individuals deployed in support of Operations Desert Shield and Desert Storm. It sent 207 medical staff members to the operational area and the European Theater of Operations while another 17 left to support medical operations at four state-side bases. The Medical Center received 265 replacements, primarily reservists called to active duty, to continue delivering medical services at the base. The 111 Individual Ready Reservists assigned to the Medical Center were part of the nation's first IRR mobilization since the 1961 Berlin Wall crisis. The Air Force also selected the Medical Center as a primary casualty flow location. This required the Center to activate its war plans and prepare an initial casualty flow triage site. Fortunately the conflict produced few U. S. casualties. The war's first casualty, a soldier wounded in a March 13 SCUD missile attack on the American barracks in Dhahran, was sent to the Medical Center. Finally, the Center's blood donor facility collected and processed more than 1,000 units of blood for the area of operations.

Other tenant organizations actively participated in the operations as well. All members of the Army's 71st Ordnance Detachment (EOD) at Wright-Patterson deployed. The 401st Combat Logistics Support Squadron, a reserve unit assigned to the 906th Tactical Fighter Group, sent volunteers to Saudi Arabia on August 20, 1990 where they formed a C-130 battle damage repair team. The 906th Tactical Fighter Group itself did not get the call, but its F-16s stood ready to deploy within 72 hours of notification. Upon initiation

of the air war, the 4950th Test Wing volunteered its fleet of test transport planes and pilots to supply and restock air bases whose own supplies had been sent to the Persian Gulf. From January 17 to May 6, 1991 the wing flew 181 sorties, transported 1,400 tons of cargo, and logged 768 flying hours in this endeavor.

The Aeronautical Systems Division played a major role in Desert Shield/Desert Storm. The advanced technologies developed by ASD's Wright Laboratory and system program offices allowed Air Force pilots to operate day or night, in high threat environments, and to precisely place munitions on target. Not only did Wright-Patterson's laboratories and program offices give birth to the front-line aircraft flown in the war—the F-15E, F-16, A-10, and F-117, they worked to improve and expand the capabilities of those aircraft. Technologies that proved both successful and crucial during Operation Desert Storm included the Low Altitude Navigation and Targeting Infrared System for Night (LANTIRN), the APG-68 and APG-70 attack radar with advanced cockpit displays, digital flight control technologies, improved fuels and engines, and the stealth technology embodied in the F-117 fighter.

The LANTIRN system, developed at ASD in the 1980s, enabled F-15E and F-16 pilots to fly at low altitude, day or night, and mark targets through fog, haze, or smoke. The LANTIRN System Program Office (SPO) sent a team to the Persian Gulf to support the system and keep it operational. Over the course of the war, the team fielded twenty targeting systems. The system's success was best exemplified by the fact that LANTIRN-equipped F-15Es were assigned the task of locating and destroying the elusive and dangerous mobile SCUD launchers. F-16s equipped with the LANTIRN navigational pod flew successful missions against such targets as the Iraqi Republican Guard, military production and support centers, chemical production facilities, and airfields.

The F-15 program office corrected deficiencies with the aircraft's flight control computer, remote map reader, and multipurpose display processor. Its logistics support contributed to a 95.5 percent fully mission capable rate achieved by the F-15E in the combat zone. The F-16 program office was able to provide critical spare parts for its aircraft as well.

Several advanced radar further enhanced fighter performance. Pilots claimed the APG-70 attack radar in the F-15E and the APG-68 in the F-16 offered "phenomenal" range and resolution. In interviews, they proclaimed "if it had metal in it, we could find it," and "with the APG-70, you could tell from 30 miles away whether a MiG-sized target had weapons or fuel tanks on it." These radar systems were an outgrowth of the Forward Looking Advanced Multi-mode Radar program conducted by the Wright Laboratory's Avionics Directorate in the 1970s.

Other innovations developed by ASD gave the U.S. Air Force a stunning technological superiority. The innovations included advanced cockpit displays with digital processing technology. A-10 tank killers were able to take severe punishment and keep on flying thanks to protective materials like titanium armor cockpits. JP-8A, a less explosive and more combat-safe fuel, powered the aircraft of Desert Storm.



*A-10 tank killers*

The advanced aircraft and avionics developed at Wright-Patterson received the most media attention, but other less exotic technologies also played vital supporting roles. For example, ASD procured lightweight camouflage nets large enough to cover an F-15, a variety of concealment and decoy products, and the Protective Integrated Hood/Masks for improved protection against chemical warfare. Advanced technology gave the United States and its allies the decisive edge during Operation Desert Storm, an edge honed over several decades by scientists and engineers working at Wright-Patterson AFB.

Four years after contributing to the success of Desert Storm, Wright-Patterson took center stage as a forum for world peace. On October 18, 1995, Secretary of State Warren Christopher announced that Wright-Patterson Air Force Base would host the peace talks between the combatants in the Balkans conflict. The base had been selected due to its excellent airfield, convenient air connections, privacy, security, and logistical support. Its decisive advantage, however, was its lodging facilities. The close proximity of the Hope Hotel and conference facilities (Building 824, Area A) to the Visiting Officers Quarters in Buildings 832-836 presented the State Department with an excellent diplomatic compound that provided separate but identical facilities for each delegation.



*Peace Walk leading to the Five-Plex.*



General Henry Viccellio, the AFMC commander, assigned operational command of Wright-Patterson's peace talks support to his deputy, Lieutenant General Lawrence P. Farrell, Jr. General Farrell then selected a base management team drawn primarily from the 88th Air Base Wing. The Balkan Peace Talks Support Team took up residence in Headquarters AFMC's Sarris Auditorium (Building 262, Area A) which was converted into a full-fledged operations center.

The Support Team faced a challenging series of tasks, beginning with the State Department's 51-page list of logistics requirements, and only ten days in which to accomplish them. Military and civilian personnel across the base, reservists, and the Dayton community immediately pitched in to make the talks a success. Although Headquarters U. S. Air Force remained the executive agent for Air Force support to the talks, the base handled the job so completely that little action was required from the Air Staff.

Civil engineers constructed a "base within the base" to house the peace talks complex. It ensured the delegates' security and minimized the impact on normal base operations. Engineers prepared the VOQs and converted 24 rooms into 12 presidential suites that met State Department specifications for size, decor, and amenities. They even installed backup heating and electrical systems with remote controls just in case they were needed. To accommodate the delegates, engineers also installed 1,000 feet of sidewalk and curbing. A major part of this effort was the "Peace Walk," a lighted sidewalk that meandered through a grassy and treed area between the VOQs and the Hope Hotel. It allowed delegates to walk from their quarters to the meeting rooms and dining area in the Hope Hotel.

Base operations handled responsibility for expanded airspace control, diplomatic arrivals and departures, and support of presidential aircraft. At the direction of the AFMC commander, the 47th Airlift Flight established

an Alpha Alert commitment with its C-21 aircraft from November 1-26. Alert crews actually launched six sorties during the talks. On the ground, logisticians filled supply requests, moved equipment, handled diplomatic cargo, and operated a dedicated fleet of vehicles with a volunteer force of drivers.



*Communications technicians setup lectern on the east ramp.*

Communications technicians installed telephone and computer networks, set up databases, managed air frequencies, and supplied public address systems for numerous events. The base Multimedia Center generated graphics, publications, printing, and even designed the peace talks logo.

Base officials also dealt with many other tasks. They arranged for food service, attended to the religious needs of the delegates, and provided security. Base finance and contracting specialists worked in unison to acquire and fund the goods and services. Public affairs operated a media center where 571 journalists received accreditation and 470 press representatives from 166 organizations and twenty nations were supported during peak operations. Protocol duties ranged from preparing welcome packages to hosting diplomatic events and setting up bilateral and trilateral meetings. The Wright-Patterson Medical Center handled the medical needs of the delegates. The Dayton community also lent its support. One of its most visible contributions was the "Peace Wall" erected in the Hope Hotel. The wall was filled with letters and drawings from Dayton-area school children encouraging the delegates to bring peace to their troubled lands.

The Balkan Proximity Peace Talks officially began on November 1.

The nine delegations were led by:

Richard C. Holbrooke

Alija Izetbegovic

Slobodan Milosevic

Franjo Tudjman

Carl Bildt

Jacques Blot

Wolfgang Ischinger

Igor S. Ivanov

Pauline Neville Jones

Ambassador, United States of America

President, Republic of Bosnia-Herzegovina

President, Federal Republic of Yugoslavia

President, Republic of Croatia

Ambassador, European Union

Ambassador, Republic of France

Ambassador, Federal Republic of Germany

Ambassador, Russia

Ambassador, United Kingdom



*Base Honor Guard awaits an arriving delegate.*



*Secretary of State Christopher arrives to open the Peace Talks.*

Their goal was a comprehensive regional settlement that preserved Bosnia as a single state containing the Muslim-Croat Federation and a Bosnian Serb entity; resolved boundary issues between the Bosnian-Croat Federation and the Bosnian Serb entity; settled the status of Sarajevo; and set forth steps to separate the forces, end hostilities, and return refugees to their homes.

Progress came on the first day when the Presidents of Croatia and Yugoslavia agreed to work towards full normalization of relations, recognize human rights for citizens of both countries, and honor the rights of refugees to return home. Another ray of optimism surfaced on November 10 with the signing of an agreement that bolstered the Croat-Muslim federation and reunited the city of Mostar. This early optimism soon faded as disputes over slivers of land and boundary lines bogged down the negotiations. The atmosphere in the complex alternated between hope and despair as agreements seemingly at hand dissolved in deadlock. Finally, the talks were suspended. President Tudjman's aircraft was loaded and sitting on the ramp with engines running as the crew awaited his arrival. At the last moment, diplomats salvaged the situation and the delegations assembled in the Hope Hotel. At 3:00 PM on Tuesday, November 21, they signed the Dayton Peace

Agreement, officially designated as the *General Framework Agreement for Peace in Bosnia and Herzegovina*.

The peace talks were a milestone in Wright-Patterson's history. The large base with its organizational complexity and diverse missions delivered a quality product in rapid time without disrupting its normal daily business. High morale, dedication, and cooperation combined with professionalism to forge the teamwork and can do attitude that made the operation an unqualified success. Team Wright-Patt had garnished its greatest achievement. Over 2,000 people received

formal recognition for their contributions and the peace talks were a major factor in the awarding of an Air Force Organizational Excellence Award to the Aeronautical Systems Center and the Air Force Outstanding Unit Award to the 88th Air Base Wing. The highest honor, however, came from Secretary of State Warren Christopher who wrote the 88th Air Base Wing commander:

*The hard work, superior performance and cheerful enthusiasm which you and your colleagues brought to this effort were key elements in the successful conclusion of the Talks.*



*Secretary of State Christopher and his negotiators discuss border issues.*



*President Milosevic and Lt. Gen. Wesley Clark discuss a border line.*

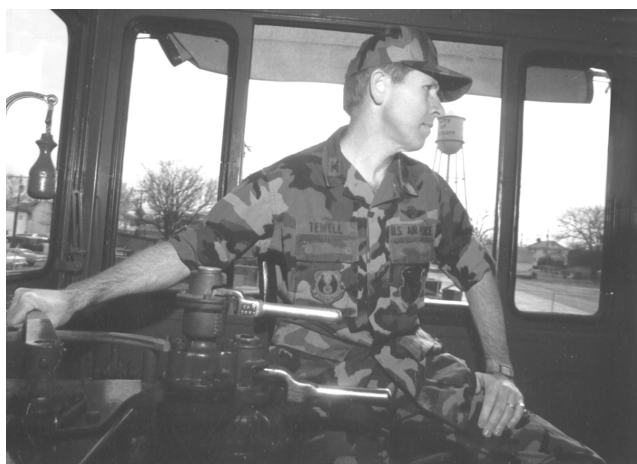


*The Presidents sign the Dayton Peace Agreements.*

Defense reductions and consolidations directly influenced base-level operations throughout the 1990s. The 88th Air Base Wing gained customers and expanded the geographic area it served as installations and defense organizations closed. It lost business as well. The Defense Finance and Accounting Service absorbed the base's payroll and other financial work while the Air Force Personnel Center in Texas took over personnel management. LOGAIR stopped operations in 1992. The base railroad system shut down the next year. In 1996, the air base wing closed its Aircraft Tire Storage and Distribution Point. At the same time the wing began a new round of A-76 cost comparison studies that reduced some activities and converted others, such as base supply, to contract operations.



*LOGAIR operations at Wright-Patterson ended in 1992.*



*Colonel Dennis Tewell, 2750 ABW Commander, operates the base locomotive. Railroad operations ended in 1993.*

Among the air base wing's major new responsibilities was the brief return of an active flying mission. The 47th Airlift Flight, an administrative support flying unit, was assigned to the wing in May 1993. It performed its administrative flight support duties with a fleet of C-12 and C-21 aircraft. The 47th ALF was reassigned to Air Mobility Command in 1997. Wright-Patterson became a forward operating location for the National Airborne Operations Center E-4 aircraft in 1994. The year before, the On Site Inspection Agency began using the base as a staging area for mock certification and trial flights under terms of the Open Skies Treaty. Wright-Patterson was formally designated an Open Skies Treaty Airfield in 1995. The wing also was kept busy processing base personnel who were deployed to support numerous worldwide contingency operations.



*Security forces specialist welcomes a visitor to Wright-Patterson AFB.*

Several public events highlighted the decade. Wright-Patterson hosted Freedom Flight America in the summer of 1995. This event brought a fleet of World War II-era aircraft to the base. The fleet was enroute from California to New York in commemoration of the 50th anniversary of the war's conclusion. In

1997, the base joined in celebrating the United States Air Force's 50th anniversary. The many festive activities included the dedication of a B-2 aircraft as the "Spirit of Ohio" and hosting the first Air Force marathon.



*Andrew Herr wins the first Air Force Marathon. (USAF Photo by Spencer Lane)*



*Marathon runners pass the Huffman Prairie Flying Field. (USAF Photo by Spencer Lane)*

Environmental management and historic preservation emerged as major issues in the 1990s. At Wright-Patterson an aggressive campaign attacked pollution and preserved the base's historic structures and cultural property. The base signed agreements with the City of Dayton to protect the city's wellheads and to treat contaminated groundwater that had migrated from the base. Old landfills were cleaned and recapped. In the process, several Woodland Hills housing units had to be demolished. The cleanup campaign removed polychlorinated biphenyls and asbestos from the installation. Wright-Patterson constructed a low-level radioactive waste storage facility, a hazardous materials warehouse, and a recycling center. From 1995 to 1996 it handled the cleanup of M-114 test simulation bomblets that, for a time, were erroneously believed to contain

live explosives and biological agents. The skills of the base's environmental managers earned them invitations to assist the governments of Belarus, Kazakstan, and Uzbekistan solve their pollution problems.



*Archeologists excavate the site of the Wright brothers' 1910 hangar.*



*Environmental manager preserving the Huffman Prairie, Ohio's largest natural prairie remnant.*

Wright-Patterson's cultural property and historic structures received significant attention. In October 1990, the Wright Brothers' original 84.42-acre flying field was officially designated the Huffman Prairie Flying Field and listed as a National Historic Landmark. The adjacent 109 acres, which formed the largest natural tall grass prairie remnant in Ohio, was named the Huffman Prairie. A replica of the Wright Brothers' 1905 hangar was constructed and the two sites were opened to the general public for the first time since 1917. On October 16, 1992, the Huffman Prairie Flying Field became part of the newly created Dayton

Aviation Heritage National Historical Park. Wright-Patterson worked with the National Park Service to manage the park and with the Nature Conservancy to manage the flora and fauna on the prairie.

Wright-Patterson began the decade by receiving the Air Force's General Thomas D. White Historic Building Preservation Award. Subsequently, environmental managers created a Historical Resources Management Plan, surveyed historic structures, and supervised a major recordation project that documented significant engineering facilities on base. They cleaned and preserved the World War II prisoner of war murals. Several other projects restored the original facades of historic structures while renovating their interiors for new uses. For example, Building 32, an original Wright Field structure, had its exterior restored and its interior completely revamped to house the F-22 System Program Office. Such endeavors culminated in 1996 with a joint proclamation on historic preservation with the State of Ohio.



*One of the surviving World War II POW murals at Wright-Patterson.*

While the base was preserving its historic structures, it also added new facilities. Warrior Hall (Building 271) opened in 1990 as AFLC's logistical system operations center. Two years later, AFLC opened a modernized command post. Across the street, the Hope Hotel and Conference Center began business as the first private commercial hotel in the Air Force. It was built with money from the private sector and operated exclusively for the Air Force under a multi-year lease. Adjacent to the hotel was a newly redesigned Gate 12A and visitor

center. Other construction on old Patterson Field included the Foreign Materiel Exploitation Facility (Building 4023), the Fisher House (Building 831), and the addition of cargo pads to the airfield's taxiway. In Area B, the Air Force Institute of Technology accepted General George C. Kenney Hall (Building 642) and the School for Civil Engineering and Services (Building 643). Wright Laboratory's Optical System Laboratory and Materials Processing Laboratories were ready in 1992. Wright-Patterson's major construction project, however, was the General James H. Doolittle Acquisition Management Complex. When completed, the multi-phased complex would consolidate the acquisition programs in a single state-of-the-art work center. The Doolittle Complex opened in 1994 and it soon included buildings dedicated to Lieutenant General James T.



*General Charles McDonald opens the new AFLC Command Center.*



*The Hope Hotel and Conference Center*





*General James H. Doolittle Acquisition Management Complex under construction.*

Stewart, Lieutenant General Kenneth B. Wolfe, Major General William Mitchell, and Mr. Frederick T. Rall, Jr. Finally, Page Manor School was acquired from the Mad River School District in 1991.

Defense restructuring affected many of Wright-Patterson's tenant organizations. Name changes abounded. The Foreign Technology Division, for example, went through several names before becoming the National Aerospace Intelligence Center. The 661st Air Force Band became the Air Force Band of Flight and the Army's 71st Ordnance Detachment was renamed the 731st Ordnance Detachment (Explosive Ordnance Disposal). Organizations lost to restructuring included the 4950th Test Wing which moved to Edwards AFB, California, and the 906th Fighter Group which inactivated. In their place the base welcomed the 445th Airlift Wing, the National Airborne Operations Center, the 47th Airlift Flight, the Joint Depot Maintenance Supply Group, and the Defense Contract Management Command Dayton. A restructuring of the Air Force laboratories inactivated the Wright Laboratory and



*445 Airlift Wing crewmembers prepare for another C-141 mission.*

created the Air Force Research Laboratory whose headquarters activated April 1, 1997 at Wright-Patterson AFB. The base also welcomed the National Aviation Hall of Fame which was collocated with the U.S. Air Force Museum. Finally, the installation became the mobilization and deployment point for the Miami Valley Urban Search and Rescue Task Force, one of the Federal Emergency Management Agency's 27 national task forces.

## Epilogue

On a September afternoon in 1997, the commander of the Aeronautical Systems Center unveiled a new commemorative marker at the former site of McCook Field. The ceremony commemorated the 80th anniversary of military aeronautical research and engineering in the Miami Valley. In August 1998, Wright-Patterson formally rededicated the Wright Memorial following a major refurbishment of the monument and park. These two events symbolized the historic bonds that Dayton and Wright-Patterson

communities shared with the evolution of flight. Each year on December 17, the two communities gathered at the Wright Memorial to celebrate the courage, perseverance, and achievements that led Wilbur and Orville Wright to conquer the skies. The ceremony also honored the work of Dayton and Wright-Patterson to build upon the legacy of the Wright brothers. As the first century of flight drew to a close, the two communities could look back with pride at the role they had played in the growth of aviation. When the second century of flight dawned, they stood ready to continue their commitment to master the skies.



*A rededication of the Wright Memorial in 1998 marked the completion of extensive renovations.*



*88 ABW security forces specialists symbolically start a new work day at Wright-Patterson.*

## **APPENDIX A**

### **THE STORY BEHIND AREAS A, B, AND C**

The story of how Wright-Patterson AFB came to be divided into Areas A, B, and C begins with an explanation of the organizational headquarters located here through the years.

During the 1920s and 1930s, headquarters for the Materiel Division of the Army Air Corps was located at Wright Field, in what is now Building 11, Area B. This organization was divided into two separate major commands during World War II, Materiel Command and Air Service Command. Both headquarters were originally located in Washington, D.C., but were eventually moved back to Wright and Patterson Fields. Air Service Command set up operations in newly opened Building 262 at Patterson Field in December 1942. Materiel Command relocated to its newly completed headquarters complex, Buildings 14 and 15, at Wright Field in April 1943.

The separation of research, development, and procurement from logistics functions proved unsatisfactory and on August 31, 1944 the functions were consolidated once again with the establishment of the Army Air Forces Air Technical Service Command (redesignated Air Materiel Command in 1946).

The process of merging these two major commands, one located at Wright Field and the other at Patterson Field, had a psychologically divisive effect. To overcome the problem, Major General Clements McMullen, the acting commander of Air Service Command, decided to give the headquarters a common address. He accomplished this by incorporating the portion of Patterson Field occupied by the command headquarters (Building 262), the Brick Quarters, and the Wright-Patterson Medical Center into Wright Field. In practice, it became necessary to designate this new portion of Wright Field as Area A and the original Wright Field as Area B.

When Patterson and Wright Fields merged in January 1948 to create Wright-Patterson AFB, the surviving Patterson Field area was designated Area C. The base also had an Area D. It was home to Skyway Park, a World War II housing complex. Located across Kauffman Avenue from Building 262, it was torn down in 1957 and the land donated for the construction of Wright State University.

## APPENDIX B

### WRIGHT-PATTERSON AFB MEMORIALS

Name	Memorialized For	Structure	Date
Estabrook Drive	Brig Gen Merrick G. Estabrook, Jr.	Street	Unk
Pearson Road	1Lt Alexander Pearson, Jr.	Street	Unk
Skeel Avenue	Capt Burt E. Skeel	Street	Unk
Wright Avenue	Wilbur and Orville Wright	Street	Unk
Firehouse No. 3	Frank A. Smith	Bldg. 76	1932
Patterson Swimming Pool	Lt Frank Stuart Patterson	Pool	1936
Wright Memorial	Wilbur and Orville Wright	Monument	1940
Dodge Gymnasium	Delphine Dodge Godde	Bldg. 849	1947
Aerial Photoreconnaissance Personnel	Capt Eugene Leger, MSgt Paul L. Hayes, PFC Dorothy E. Kimmel, and Mr Joseph H. Britain	Bldg. 17	1952
Hadden Park (original)	Mr William Hadden	Park	1953
Page Manor	Brig Gen Edwin R. Page	Housing	1953
Hadden Park (relocated)	Mr William Hadden	Park	1960
Gillmore Hall	Brig Gen William E. Gillmore	Bldg. 262	1976
Barnes Park	Maj Gen Frank G. Barnes	Park	1977
Breene Drive	Maj Gen Robert G. Breene	Street	1977
Brett Drive	Lt Gen George H. Brett	Street	1977
Chandler Drive	Col Charles deForest Chandler	Street	1977
Chidlaw Road	Gen Benjamin W. Chidlaw	Street	1977
Johnson Drive	Col Gerald R. Johnson	Street	1977
Lahm Circle	Brig Gen Frank P. Lahm	Street	1977
Metzger Drive	2Lt William E. Metzger, Jr.	Street	1977
Schlatter Drive	Lt Gen David M. Schlatter	Street	1977
Talbott Road	Brig Gen Nelson S. Talbott	Street	1977
Yount Drive	Lt Gen Barton K. Yount	Street	1977
Locker Hall	Sgt James D. Locker	Bldg. 1217	1979
Lute Hall	SSgt James R. Lute	Bldg. 1216	1979
Pitsenbarger Hall	A1C William H. Pitsenbarger	Bldg. 1214	1979
Pleiman Hall	A1C James E. Pleiman	Bldg. 1212	1979
Prater Hall	TSgt Roy D. Prater	Bldg. 1213	1979
Wilhelm Hall	SSgt Frederick Wilhelm	Bldg. 1215	1979
Bong Drive	Maj Richard I. Bong	Street	1981
Spaatz Circle	Gen Carl A. Spaatz	Street	1981
Ward Road	1Lt Edward Ward	Street	1981
Morris Hall	Brig Gen Joseph T. Morris	Bldg. 10	1981
Bane Hall	Col Thurman H. Bane	Bldg. 640	1982
Sarris Auditorium	Mr Aristides Sarris	Bldg. 262	1984
Fitts Hall	Paul M. Fitts	Bldg. 248	1985
Twining Hall	Gen Nathan F. Twining	Bldg. 641	1985
Arnold House	Gen Henry H. "Hap" Arnold	Bldg. 8	1986
Jarvis Gymnasium	Brig Gen Irby B. Jarvis	Bldg. 1245	1986
POW/MIA Memorial	Prisoners of War and Missing in Action	Memorial	1986
Hope Hotel	Mr Bob Hope	Bldg. 824	1989
Robins House	Brig Gen Augustine Warner Robins	Bldg. 700	1989
Fire Station No. 1	Dale V. Kelchner and William J. Collins	Bldg. 163	1989
Foulois House	Maj Gen Benjamin D. Foulois	Bldg. 88	1989
Warrior Hall	Civilian Work Force (Warriors)	Bldg. 271	1990
Kenney Hall	Gen George C. Kenney	Bldg. 642	1990
Monahan Hall	Lt Gen George L. Monahan	Bldg. 12	1993
Monahan Way	Lt Gen George L. Monahan	Street	1993
Doolittle Acquisition Management Complex	Gen James H. Doolittle	Complex	1994
Stewart Hall	Lt Gen James T. Stewart	Bldg. 557	1994
Watson Way	Maj Gen Harold E. Watson	Street	1995
Watson Hall	Maj Gen Harold E. Watson	Bldg. 4023	1995
Patterson Parkway	1Lt Frank S. Patterson	Street	1996
Peace Walk	Balkan Proximity Peace Talks	Sidewalk	1997
Wolfe Hall	Lt Gen Kenneth B. Wolfe	Bldg. 558	1997
Mitchell Hall	Maj Gen William Mitchell	Bldg. 556	1997
Rall Hall	Mr Frederick T. Rall, Jr.	Bldg. 560	1997
Cacioppo Annex	Dr Anthony J. Cacioppo	Bldg. 858	1997

## APPENDIX C

### ARMY DEPLOYMENTS FROM WRIGHT-PATTERSON AFB

DATE	UNITS	SOLDIERS	SHORT TONS
22 Sep 90	64th Ordnance Detachment (EOD)	14	34.5
3 Oct 90	1015th Adjutant General Company (Postal)	68	57
4 Oct 90	1015th Adjutant General Company (Postal)	67	63
	316th Quartermaster Company		
	319th Quartermaster Company		
20 Oct 90	79th Quartermaster Company	131	4.9
7 Nov 90	758th Maintenance Company	291	0
	1244th Transportation Company		
2 Dec 90	766th Transportation Battalion	34	21.1
3 Dec 90	766th Transportation Battalion	21	13
	484th Medical Company		
	1244th Transportation Company		
4 Dec 90	766th Transportation Battalion	6	13
13 Dec 90	323rd Military Police Detachment	15	17.3
17 Dec 90	21st Theater Army Area Command	223	29.8
20 Dec 90	387th Quartermaster Battalion	93	79
	350th Evacuation Hospital		
23 Dec 90	425th Adjutant General Company (Postal)	152	81.7
	323rd Military Police Company		
24 Dec 90	425th Adjutant General Company (Postal)	27	11.1
	387th Quartermaster Company		
7 Jan 91	350th Evacuation Hospital	392	64.9
	417th Quartermaster Company		
	21st Theater Army Area Command		
8 Jan 91	192nd Quartermaster Company	395	0
	350th Evacuation Hospital		
	425th Quartermaster Company		
14 Jan 91	380th Quartermaster Company	60	14.1
	1073rd Chemical Support Company		
18 Jan 91	233rd Military Police Company	170	24.8
10 Feb 91	1776th Military Police Company	92	112.5
15 Feb 91	1776th Military Police Company	58	101

## APPENDIX D

### WRIGHT-PATTERSON AFB

#### PERSONNEL STRENGTH, 1918 - 1998

Year	Military	Civilian	Total	Year	Military	Civilian	Total
1918	4,683	1,985	6,668	1967	7,290	19,299	26,589
1920	452	1,565	2,017	1968	7,207	19,163	26,370
1938	212	2,222	2,434	1969	7,557	18,568	26,125
1939	652	3,059	3,711	1970	7,596	17,761	25,357
1940	708	7,455	8,163	1971	7,875	17,744	25,619
1941	2,125	15,398	17,523	1972	8,167	17,520	25,687
1942	9,592	36,908	46,500	1973	8,323	16,920	25,243
1943	14,821	30,926	45,747	1974	8,694	17,037	25,731
1944	16,119	29,356	45,475	1975	7,548	15,975	23,523
1945	11,100	20,180	31,280	1976	7,182	15,812	22,994
1946	8,261	19,358	27,619	1977	7,607	15,523	23,130
1947	3,192	17,588	20,780	1978	7,686	15,879	23,565
1948	5,082	20,108	25,190	1979	7,636	15,832	23,468
1949	4,434	20,443	24,877	1980	7,992	17,031	25,023
1950	4,745	23,781	28,526	1981	7,608	15,662	23,270
1951	8,946	25,738	34,684	1982	8,919	17,549	26,468
1952	8,284	22,144	30,428	1983	9,374	16,754	26,128
1953	6,805	20,478	27,283	1984	9,347	17,973	27,320
1954	7,098	20,264	27,362	1985	9,336	18,766	28,102
1955	7,248	20,627	27,875	1986	9,169	18,561	27,730
1956	6,762	21,701	28,463	1987	10,692	18,493	29,185
1957	6,313	19,557	25,870	1988	10,206	19,144	29,350
1958	6,284	18,893	25,177	1989	10,190	20,353	30,543
1959	6,471	18,331	24,802	1990	10,143	18,994	29,137
1960	6,948	20,966	27,914	1991	10,222	18,264	28,486
1961	7,364	20,714	28,078	1992	9,578	17,316	26,894
1962	7,301	20,301	27,602	1993	9,159	15,782	24,941
1963	12,185	19,273	31,458	1994	7,479	14,023	21,502
1964	11,431	19,112	30,543	1995	9,185	13,929	23,114
1965	7,082	19,170	26,252	1996	8,980	13,757	22,737
1966	7,531	19,234	26,765	1997	10,386	12,654	23,040
				1998	8,337	13,121	21,458



## APPENDIX E

### AIR BASE WING

#### PERSONNEL STRENGTH, 1948 - 1998

Year	Officer	Enlisted	Civilian	Total	Year	Officer	Enlisted	Civilian	Total
1948	228	1,505	4,945	6,678	1974	104	789	3,453	4,346
1950	156	687	4,390	5,233	1975	66	662	2,950	3,678
1951	201	879	5,833	6,913	1976	60	616	2,992	3,668
1952	226	1,070	6,228	7,524	1977	56	585	2,887	3,528
1953	148	724	5,708	6,580	1978	62	610	2,929	3,601
1954	104	560	5,262	5,926	1979	59	664	2,730	3,453
1955	94	574	5,404	6,072	1980	71	689	2,679	3,439
1956	102	474	5,516	6,092	1981	75	738	2,493	3,306
1957	100	290	5,389	5,779	1982	69	725	2,492	3,286
1958	108	332	5,213	5,653	1983	77	900	2,315	3,292
1959	110	283	5,199	5,592	1984	74	901	3,388	4,363
1960	100	344	5,553	5,997	1985	79	825	2,594	3,498
1961	112	512	5,554	6,178	1986	91	857	2,479	3,427
1962	115	724	5,170	6,009	1987	85	938	2,219	3,242
1963	111	640	4,533	5,284	1988	84	909	2,046	3,039
1964	119	657	4,363	5,139	1989	96	935	2,217	3,248
1965	121	661	4,291	5,073	1990	72	851	2,118	3,041
1966	112	648	4,362	5,122	1991	80	1,106	2,227	3,413
1967	105	658	4,349	5,112	1992	78	809	2,279	3,166
1968	93	709	4,086	4,888	1993	102	829	1,764	2,695
1969	84	618	3,954	4,656	1994	136	1,211	2,055	3,402
1970	83	701	4,579	5,363	1995	134	1,300	2,017	3,451
1971	99	725	4,208	5,032	1996	153	1,184	2,093	3,430
1972	111	829	3,996	4,936	1997	153	1,184	2,093	3,430
1973	118	892	3,687	4,697	1998	92	843	1,981	2,916

## APPENDIX F

### AERONAUTICAL SYSTEMS CENTER COMMANDERS

Commander	From		To	
Major General Stanley T. Wray	December	1959	July	1960
Major General Joseph R. Holzapple	July	1960	March	1961
Major General W. Austin Davis	April	1961	July	1962
Major General Robert G. Ruegg	July	1962	July	1964
Major General Charles H. Terhune, Jr.	July	1964	June	1967
Major General Harry E. Goldsworthy	June	1967	July	1969
Major General Lee V. Gossick	August	1969	June	1970
Lieutenant General James T. Stewart	June	1970	August	1976
Lieutenant General George H. Sylvester	September	1976	March	1979
Lieutenant General Lawrence A. Skantze	March	1979	August	1982
Lieutenant General Thomas H. McMullen	August	1982	July	1986
Lieutenant General William E. Thurman	July	1986	July	1988
Lieutenant General J. Michael Loh	July	1988	May	1990
Lieutenant General Thomas R. Ferguson, Jr.	June	1990	May	1993
Lieutenant General James T. Fain, Jr.	May	1993	October	1994
Lieutenant General Richard M. Scofield	October	1994	May	1996
Lieutenant General Kenneth E. Eickmann	May	1996	May	1997
Brigadier General Robert P. Bongiovi	May	1997	May	1997
Lieutenant General Kenneth E. Eickmann	May	1997	May	1998
Brigadier General Robert P. Bongiovi	May	1998	June	1998
Lieutenant General Robert F. Raggio	June	1998	Present	

## APPENDIX G

### AIR BASE WING COMMANDERS

<b>Commander</b>	<b>From</b>		<b>To</b>	
Unknown	April	1944	July	1945
Brigadier General Joseph T. Morris	July	1945	March	1952
Brigadier General C. Pratt Brown	March	1952	October	1953
Brigadier General Paul L. Barton	October	1953	August	1957
Brigadier General Donald L. Hardy	August	1957	July	1958
Brigadier General John D. Howe	July	1958	May	1960
Colonel James C. Cochran	May	1960	August	1960
Colonel Elbert Helton	August	1960	August	1962
Colonel Glen McClernon	August	1962	August	1964
Colonel Arthur E. Exon	August	1964	December	1965
Colonel Jowell C. Wise	December	1965	July	1968
Colonel Colman O. Williams	July	1968	September	1970
Colonel Edmund A. Rafalko	September	1970	June	1972
Colonel Irby B. Jarvis, Jr.	June	1972	January	1975
Colonel Robert W. Clement	January	1975	January	1976
Colonel Titus C. Hall	January	1976	January	1977
Colonel Rano E. Lueker	January	1977	April	1981
Colonel James H. Rigney, Jr.	April	1979	June	1981
Colonel Leonard R. Peterson	June	1981	June	1984
Colonel Charles E. Fox, Jr.	June	1984	March	1987
Colonel Stephen F. Kollar	March	1987	July	1989
Colonel Dennis P. Tewell	July	1989	July	1990
Colonel William B. Orellana	July	1990	January	1995
Colonel Garald K. Robinson	January	1995	June	1996
Colonel William J. Heitzig	June	1996	July	1997
Colonel Bobby L. Glisson	July	1997	December	1997
Colonel Richard C. Hughes (Acting)	December	1997	February	1998
Colonel Michael A. Collings	February	1998	Present	

## APPENDIX H

### ADDITIONAL READING:

Aldridge, James F. *Wright from the Start: The Contributions of Dayton's Science and Engineering Community to American Air Power in the Twentieth Century*. Wright-Patterson AFB, Ohio: History Office, Aeronautical Systems Center, 1997.

Cornelisse, Diana G., *et al.* *Against the Wind: 90 Years of Flight Test in the Miami Valley*. Wright-Patterson AFB, Ohio: History Office, Aeronautical Systems Center, 1994.

Romesburg, Laura N. *Visions of the Past: The Evolution of Aeronautical Development at the Aeronautical Systems Center*. Wright-Patterson AFB, Ohio: History Office, Aeronautical Systems Center, 1996

Walker, Lois E. and Shelby E. Wickam. *From Huffman Prairie to the Moon: The History of Wright-Patterson Air Force Base*. Wright-Patterson AFB, Ohio: Office of History, 2750th Air Base Wing, 1986.

# **A Century Of Growth:**

## *The Evolution of Wright-Patterson Air Force Base*

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**AUGUST 1999**

*88th Air Base Wing  
Aeronautical Systems Center  
Wright-Patterson Air Force Base, Ohio*

# A Century Of Growth:

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**Aeronautical Systems Center  
Wright-Patterson Air Force Base**

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