

LOWRY TECHNICAL TRAINING CENTER



LINEAGE

STATIONS

Lowry AFB, CO

ASSIGNMENTS

COMMANDERS

MG C. H. Anderson, #1961

HONORS

Service Streamers

Campaign Streamers

Armed Forces Expeditionary Streamers

Decorations

EMBLEM

EMBLEM SIGNIFICANCE

MOTTO

NICKNAME

OPERATIONS

1969/1970

MAJ GEN JERRY D. PAGE ASSUMED COMMAND OF SHEPPARD TECHNICAL TRAINING CENTER (STTC) FROM MAJ GEN JOHN M. McNABB ON 19 AUG 1969.

MISSION OF STTC TO PROVIDE INDIVIDUAL MILITARY AND TECHNICAL TRAINING FOR OFFICERS AND AIRMEN OF THE AIR FORCE, AIR FORCE RESERVE, AIR NATIONAL GUARD AND OTHER DEPARTMENT OF DEFENSE (DOD) AGENCIES.

This 1944 design by Cpl. George L. Grimes became the official insignia of Lowry Field. His cartoon character appeared regularly in Lowry's newspaper and represented the average airman. The "Little Fellow's" machine gun, camera, and bomb depicted Lowry's armament and photography schools. Golden orange and ultramarine blue were the official colors of the Army Air Forces. The snow-capped mountain indicated Lowry's location in the Rockies.

As military aircraft became more sophisticated, the importance of technical training increased. For fifty years, Lowry Field and Lowry Air Force Base accomplished the technical training mission, providing first the Army Air Corps, then the Army Air Forces, and now the United States Air Force with people having the knowledge and the skill to perform their jobs with confidence. Progress in science and technology led to modifications in existing weapon systems and the introduction of new designs. While these developments affected Lowry's training mission, the key element remained the individual rather than the machine—the ultimate objective was trained personnel.

In September, the squadron flew missions over enemy lines almost daily in preparation for the Meuse-Argonne offensive, scheduled for September 26. With this action, the French high command hoped to end the four-year war. On the morning of September 26, five planes of the 91st Aero Squadron set off for the front. This was Lowry's thirty-third mission, and by that time he was one of the squadron's most experienced aerial observers. His pilot that day was Lieutenant Asher Kelty. When the formation appeared over enemy lines, a German antiaircraft battery opened fire. The Lowry-Kelty aircraft sustained a direct hit and crashed near Crepion, France, killing both men.

The first installation dedicated to Lieutenant Lowry belonged to the Colorado National Guard. Opened in April 1924, Lowry Field was located in the vicinity of 38th Avenue and Dahlia Street in Denver, east of the present-day Park Hills Golf Course. It remained the home of the 120th Observation Squadron 45th Division, Aviation, until 1938 when the field was deactivated. As Denver expanded eastward, the squadron needed a new site for its flying activities and moved to a newly-completed National Guard hangar at Denver's Municipal Airport.

In February 1921, the Army transferred its Air Service Mechanics School from Kelly Field, Texas, to Chanute Field, Illinois. The following year, the Air Service established a technical school for photography at Chanute. Nine steel hangars had been converted into classrooms by 1923, but further construction funds were not forthcoming. By 1934, Air Corps officials had concluded that Chanute Field no longer met the needs of a modern air force. In addition to old facilities, Chanute lacked adequate space for a bombing range, and the average number of clear

weather days restricted training in aerial photography.

The Army appointed a committee headed by Lieutenant Colonel Barton K. Yount, the Commanding Officer of Boiling Field, Washington, D.C., to recommend a new home for the Air Corps Technical School. Army officials established two major prerequisites for the site: space for a bombing range, and weather conditions to support training requirements. In March 1934, the people of Denver, represented by the Chamber of Commerce and supported by their Congressional delegation and the Governor of Colorado, started a campaign to bring the school to the "Queen City of the Plains." On April 2, they made their formal submission to the War Department.

An Army committee arrived in Denver on May 26, 1934. It was particularly interested in the property of the Agnes Memorial Sanatorium, previously a clinic for treating tuberculosis patients. Lawrence C. Phipps (later a United States Senator) established the sanitarium at the Denver suburb of Montclair in memory of his mother, who died from the disease. The facility remained in operation as a sanitarium from 1904 until 1932.

After having evaluated eighty-six sites across the nation, the military committee recommended Denver because of its favorable flying weather and the availability of land for a bombing range. The Illinois Congressional delegation, however, resolved to maintain the school at Chanute Field, and their votes were crucial for passing any legislation. Despite considerable political maneuvering, politicians from Colorado and Illinois eventually worked out a compromise with the War Department. Chanute was to continue as the headquarters of the Air Corps Technical School and the home of the aircraft mechanics school, while the Army formed the Denver Branch for armament and photography training.

Congress approved the project for the Air Corps Technical School in August 1937, and President Franklin D. Roosevelt signed the legislation authorizing funds for the new installation on August 27. On September 1, Captain Harold D. Stetson, the Army Quartermaster at Fort Logan, near Denver, began working at the sanitarium. He raised the American flag on October 1, making the Denver Branch an active Army post.

Captain Stetson served as the Constructing Quartermaster and supervised the civilian work force. During much of the initial construction phase, he remained as the officer in charge of the post until the arrival of Lieutenant Colonel Junius W. Jones. As Commandant of the school at Chanute Field, Colonel Jones came to Denver several times to check on the work.

The City of Denver donated the sanitarium to the Army on December 8, 1937, and paid Lawrence C. Phipps \$200,000 for the property. Also that month, the War Department announced that it was naming the new field in honor of Lieutenant Francis B. Lowry. This became possible because the Colorado National Guard decided to deactivate its Lowry Field shortly after the first of the year. The Denver Branch of the Air Corps Technical School officially became Lowry Field on March 21, 1938.

Colonel Jones became the first Commanding Officer of the Denver Branch on February 7, 1938. Five days later, a train arrived at Union Station from Chanute Field bringing 300 people and the

equipment for the Armament and Photographic Departments. The contingent included men from Langley Field, Virginia, who had joined the main group in Chicago. On February 26, the activating ceremonies were held in the headquarters building, with the Denver Chamber of Commerce giving a luncheon for the Air Corps officers. Later, civic groups organized tours for all Air Corps personnel to points of interest in Denver and the surrounding area.

Land purchased for the post comprised 880 acres. The Army also received 960 acres a few miles to the east as an auxiliary landing field—named Buckley Field on June 19, 1941—and 64,000 acres about twenty miles to the southeast to be used as a bombing range for the armament school. The City of Denver expected to acquire land for the bombing range by January 15, 1938, but the acquisition was not completed until the end of the year because some owners questioned the valuations placed on their property.

On February 28, 1938, classes began in the old sanitarium buildings. There were 170 students in the Armament Department and sixty in the Photographic Department. During this early period, both students and instructors had to contend with classrooms and laboratories in various stages of construction. The photography class, for example, met in the unheated and poorly-lighted attic of one of the buildings. Pigeons and the cold of winter entered through a broken alcove window. Armament classes were taught at the main facility and in the National Guard hangar at Municipal Airport.

The Armament Department taught the loading and dropping of bombs, and trained master, advanced, and airplane armorers. Ten armament students graduated on March 19, 1938. Ten photography students received diplomas on June 29 after completing an advanced course in aerial photography. Basic photography classes normally lasted six months, consisting of courses in elementary, ground, and aerial photography; mosaics and mapping; camera repair; cinematography; and photographic field equipment.

Later in the year, the Air Corps transferred the Department of Clerical Instruction to Lowry from Chanute Field. The clerical school trained engineering, administrative, and supply clerks. Thirty-eight enlisted men began classes at Lowry on October 10.

The aircraft assigned to the Denver Branch were located at Municipal Airport, where the Air Corps shared a hangar with the National Guard until completion of facilities at the field. The air fleet included the B-6 bomber, the A-17A attack, and the P-35 pursuit aircraft. On March 9, 1938, the post acquired its first twin-engine Douglas B-18A, the Air Corps' new medium bomber. Personnel stationed at the airport were billeted on the second floor of the hangar. Also assigned to duty at the airport were the men of Lowry's weather station.

The first unpaved runway became operational at Lowry on April 4, 1938. When the first of four portable hangars were ready, nine aircraft made the short flight on June 30 from Municipal Airport to the post. The airport, however, continued serving as the center for Lowry flying activity in 1938 and 1939 until the construction of permanent hangars and paved runways.

In June 1938, the Army announced a four-year, \$3.5-million program of new construction for

Lowry Field, beginning on August 13. The Army awarded contracts to private companies for an 850-man bar-racks, ten officers' quarters, twenty noncommissioned officers' quarters, permanent hangars, runways, installation of utility lines, and grounds improvements. The post received its first Army construction funds on August 4; previously, the Works Progress Administration provided all of the money.

Lieutenant Moore remained unaware of the malfunction until his aircraft came down on its belly and slid 700 feet down the runway. Although the aircraft sustained damage to the propellers and the fuselage, the crew was unhurt. Other crewmembers were Privates Robert L. Woody, Chalmer D. Hill, Henry F. Zielin-ski, and R. Van Duke.

Colonel Jacob H. Rudolph became the Commanding Officer of Lowry Field on July 1, 1938. On December 25, he formally conveyed holiday greetings to the personnel of his command. In wishing them happiness in the new year, Colonel Rudolph praised their cooperative spirit and the exemplary manner in which they performed their duties. The mess hall staff prepared Christmas dinner with a main course of roast young turkey.

Construction of Hangar No. 1 and the 8,000-foot north-south runway were completed in August and December 1939, respectively. On December 13, Colonel Rudolph landed the first aircraft, a B-18A, on the new concrete runway and taxied into Hangar No. 1. By the end of the next day crews had ferried

During the early years at Lowry, funds had only been appropriated to renovate existing structures and erect new buildings. Road construction did not begin until December 1940.

all of Lowry's aircraft from Municipal Airport. Two other concrete runways were completed in 1940 and 1941: the east-west runway, 8,084 feet long; and the northeast-southwest runway, 8,300 feet long. In addition, Hangar No. 2 was ready in December 1940.

By the end of the 1930s Lowry Field had become an important element in the American response to increased aggression abroad. Political and military conditions in Asia and Europe had deteriorated throughout the decade. The Axis powers went on the offensive with Japan's seizure of Manchuria from China in 1931. Italy invaded Ethiopia in 1935, and Japan resumed its subjugation of China in the summer of 1937 with an undeclared war. Two years later, the German Army invaded Poland and World War II began in earnest. After France fell to the Germans in June 1940, only Great Britain blocked Hitler's domination of Western Europe.

In January 1940 Lowry Field housed forty-four officers and 1,350 enlisted men, including 600 students, and there were twenty-seven aircraft at the post. The "Brick Barracks," also called "Buckingham Palace" and now Building 349, was completed in September 1940. No longer did troops have to live in tents. Although this building was constructed to accommodate 850 men, as many as 3,600 lived there by 1943. By the end of 1940, Lowry had thirteen school squadrons and two bomber squadrons in addition to its headquarters squadron. Moreover, the Army had already spent \$15 million on Lowry Field, with 103 buildings completed and others underway.

Lowry Field played a key role in the buildup of the nation's defenses when the Air Corps

selected a group of aviation cadets for training as bombardier instructors. Between July 1940 and March 1941, three classes of cadets trained on B-18As from the 36th and 37th Bombardment Squadrons, assigned temporarily to Lowry. The course of study lasted 16 weeks, and 118 graduates received commissions as Second Lieutenants. These men became the core group that trained 15,000 bombardiers during World War II.

On September 16, 1940, Congress approved peacetime conscription for the first time in the nation's history. The Selective Training and Service Act required men between the ages of twenty-one and thirty-five (subsequently changed to twenty and forty-four) to register for military training. The initial registration and draft selections occurred on October 16 and 29, respectively.

As the numbers of personnel at Lowry Field increased during 1940, something had to be done about crowded conditions at the post. The Air Corps decided to move the clerical school to Fort Logan, an Army installation located about twelve miles southwest of Lowry Field. Fort Logan became a subpost of Lowry on February 1, 1941, and arrangements were made to transfer the 9th, 23rd, and 24th School Squadrons and the equipment of the Department of Clerical Instruction. Classes began at Fort Logan on March 3.

The move to Fort Logan gave Lowry Field added space for its armament students. Aircraft armorers training lasted 15 weeks and the students received instruction in operating, repairing, and maintaining aircraft armament. The largest segment of the course covered machine guns. During its first years at Lowry, armament training involved mostly servicing aircraft weapons. Now, men also received training on power-operated gun turrets (the Plexiglas structure housing machine guns), bomb sights, and automated bombing systems.

In addition to its better-known armament and photography schools, Lowry Field also trained cooks and bakers in a four-week course. The school began instruction on May 15, 1941.

In 1941, Lowry officials decided to enhance morale at the post and Fort Logan by publishing a newspaper. Lowry Field ??? appeared on May 9, and a "crisp, new ten-dollar bill" awaited the "bright" individual who came up with a name for the weekly paper. The second issue, dated May 23, bore the name Lowry Field Rev-Meter. Lowry personnel submitted over one thousand entries, and Captain William L. Snowden had the winning title. He observed that just as a revmeter recorded an airplane's engine speed, the newspaper would document the "speed" of events at Lowry Field.

Also in May 1941, post officials reached agreement with the Denver Tramway Corporation to provide scheduled bus service for Lowry's military personnel. No longer would they have to make their way to Quebec Street to catch a bus into town because buses now made five stops on the post.

As the international situation worsened, Lowry Field reflected American military preparations. The Army continued to acquire land for the installation. Over 1,200 trainees arrived during the week of July 13, 1941—more than in any previous week. Activities continued to intensify the following month. The number of officers and enlisted men at Lowry and Fort Logan totaled almost 8,000. On August 18, the post adopted a two-shift schedule and an eighteen-hour school day to meet Air Corps requirements for training more than 15,000 men during the period from

July 1, 1941 to June 30, 1942.

On December 7, 1941, Japanese carrier-based aircraft attacked the United States Pacific Fleet at Pearl Harbor in the Hawaiian Islands. Now that the nation was at war with the Axis powers, all furloughs for Lowry personnel were canceled and additional men were assigned to guard duty as a security measure. Furthermore, airmen had to wear their military uniforms every day, even when off the post, and mail home all civilian clothing.

On December 12, 1941, Colonel Early E. W. Duncan, Commanding Officer of Lowry Field since October 31, 1940, called upon the officers and enlisted men of his command to unite behind the nation's political and military leaders. He asked them to maintain faith in their government and its ability to prosecute the war to a successful conclusion and achieve a just peace. On December 19, Lowry officials conducted a drill to evaluate the ability of the post to repel an aerial attack. This exercise involved five "enemy" airplanes dropping flares and "enemy" agents operating on the ground. Afterwards, Colonel Duncan announced that drills would be held monthly.

When the United States entered the war the Army Air Corps Technical Training Command, formed on March 26, 1941, had responsibility for Lowry Field. The headquarters moved from Chanute Field to Knollwood Field, North Carolina, in February 1942, and the name changed to Army Air Forces Technical Training Command in March 1942. On July 7, 1943, the Army merged the Flying Training and Technical Training Commands to form the Army Air Forces Training Command at Fort Worth Texas. The organization name changed to Air Training Command on July 1, 1946.

The mobilization of American military forces resulted in expansion at Lowry Field. In January 1942, the War Department tasked Lowry with training 55,000 men annually. Needing more facilities Lowry officials decided to construct Lowry Field No. 2 on the northeast side of the post for training aircraft armorers. Because the north-south runway divided both sections, this project required a transportation system between the two areas and construction of a service club, theater, chapel, mess halls, and living quarters. Lowry No. 2 opened in July 1942 with the transfer of the 363rd School Squadron, and the first group of armament students arrived on July 10.

The new area enabled Lowry officials to increase the numbers of students in the photography and bombsight maintenance courses conducted at the main section of the post. The number of photography students, for example, rose during 1942 from 203 to 2,487 by the end of the year. In 1943, over 200 photography students were arriving weekly. They specialized in laboratory work, phototopography, camera repair, or cinematography. The motion picture division produced training and orientation films, and the staff of this division included men who had worked as Hollywood cameramen prior to joining the Army.

Another action during 1942 was the establishment of Armament School No. 2 at Buckley Field. Instructors arrived on July 1, followed by the first group of students on the 7th. At its peak, the armament department trained about 15,000 men annually at Lowry and Buckley. Graduating armorers were assigned to tactical units where they were responsible for the maintenance of

aircraft weapons.

As aerial warfare became specialized, the Army Air Forces Technical Training Command recognized the need for specialization in armament training.* Accordingly, Lowry trained bombardment armorers while Buckley prepared the armorers for fighter aircraft. To better meet the demands of a nation at war, Headquarters Army Air Forces Technical Training Command adopted a seven-day training week with three daily shifts. Lowry officials began the new schedule at the photography and armament schools in October 1942.

Only twenty-six civilians had worked at Lowry Field in December 1938. By 1942, however, civil service employees were being hired in greater numbers for a variety of jobs that included positions formerly filled by military personnel. Employing civilians in the technical schools freed more airmen for military duties.

A typical student day consisted of six hours of classes and two hours of physical exercise. In January 1943, training officials had reduced the number of class hours from eight to six to enhance the students' physical and mental well-being.

By January 1943 there were over 20,000 people at Lowry Field, and the base population continued to rise throughout the year. The Women's Army Auxiliary Corps sent its first group to Lowry on January 28 to study photography. Additionally, marines from the aviation base at Cherry Point, North Carolina, arrived in February 1943 for instruction in the Power Turret School. Lowry Field was the only military installation training in power-operated gun turrets.

Although Hollywood stars and professional athletes visited Lowry periodically to entertain the troops, two special events during 1943 served to promote morale and welfare. On April 24, President Roosevelt visited Lowry while touring the nation's military facilities. Then, on June 1, the Colorado National Bank opened a Lowry branch with full banking services for military and civilian personnel who established accounts.

On June 7, 1943, Lowry opened Camp Bizerte on the northwest corner of the bombing range. On that morning a convoy transported 500 men to a point five miles from the camp. Then these men marched the rest of the way carrying their thirty-six-pound field packs. The students lived in tents for a week and worked at their jobs under field conditions. They also received training in chemical warfare and weapons firing. With the onset of cold weather, the facility closed on October 11 after 20,000 airmen had received field training.

The Women's Army Corps began sending students to photography classes at Lowry in 1943.

Lowry Field had provided technical training for small numbers of foreign servicemen since 1938. In that year, enlisted men and officers from the Colombian and Philippine armies attended armament classes. Beginning in 1943, however, foreign personnel came to Lowry in greater numbers. Although most were from France and China—both countries sent a total of forty-eight men for photography training in December—airmen also came from such countries as Great Britain, Peru, Uruguay, Nicaragua, Brazil, Mexico, Canada, the Philippines, the Netherlands, Australia, and the Union of South Africa.

Facilities, personnel strength, and training at Lowry Field grew as the war continued. In October 1943, the Army transferred the Flight Engineers School to Lowry from Smoky Hill Army Air Field at Salina, Kansas. The following year, Lowry officials introduced courses in radar photography, autopilot maintenance, and training programs for B-29 crews. In April 1945, the Crash Fire Fighting and Rescue School moved to Lowry from Buckley Field. This school offered two eight-week courses: Fire Fighter and Crash Rescuemen, and Fire Fighting Unit Commanders.

The fighting in Europe formally ended on May 8, 1945. On September 2, Japanese envoys signed the terms of surrender aboard the battleship USS Missouri in Tokyo Bay. Now the United States began demobilizing its vast military forces. Between September 1945 and May 1947, the strength of the Army Air Forces decreased from 2,253,000 to 303,000. Demobilization affected the mission at Lowry Field.

With an end to World War II, the men and women of Lowry Field returned to a peacetime schedule. On September 19, 1945, all schools resumed a five-day training week, with one shift per day. Student enrollments in some departments declined by as much as 60 percent. In addition, Lowry Field served as a separation center for the Army Air Forces. By the end of the year, Lowry was processing an average of 300 discharges a day.

The defeat of the Axis nations altered the balance of power and left political vacuums in Eastern Europe and East Asia. The United States and the Soviet Union emerged from the conflict as the predominant nations in the world. Guided by different ideologies, each had plans and policies for the postwar period. But unlike the aftermath of World War I, now the United States became fully involved in international affairs and actively committed itself to maintaining world peace. The new American role influenced the training mission at Lowry.

During the war, the relatively young and inexperienced air force became a major component of the nation's armed services. The leaders of the Army Air Forces demonstrated that airpower was not limited to tactical missions in support of ground forces engaging the enemy. Strategic bombing proved to be an important factor in bringing the war to its successful conclusion. As relations with the Soviet Union deteriorated after 1945, airpower became an even more significant factor in American military plans to contain further Soviet advances in Europe and Asia.

In May 1944, the Joint Chiefs of Staff had established a committee to study organization of the nation's military forces in the postwar period. The committee recommended a Department of the Armed Forces that included separate army, navy, and air branches. While Congress addressed the unification issue and military leaders discussed the matter, the postwar Air Force was already taking shape. On March 21, 1946, the War Department established the Strategic Air Command (formerly the Continental Air Forces), the Tactical Air Command, and the Air Defense Command.

The National Security Act of July 26, 1947 established a Department of Defense that included the Departments of the Army, the Navy, and the Air Force. The service secretaries reported to the Secretary of Defense. On September 18, W. Stuart Symington became the first Secretary of the Air Force. Lowry Field was officially redesignated Lowry Air Force Base on June 13, 1948.

With the reorganization of the armed forces and the "cold war" intensifying between the United States and the Soviet Union, Congress passed a new Selective Service Act that became law on June 24, 1948. The act required men between the ages of eighteen and twenty-six to register for the military draft and serve in the Army for twenty-one months after attaining age nineteen.* While supporting measures to strengthen their nation's military forces, the American people hoped for the continuance of peace. But American military involvement in Korea interrupted the recent period of peace.

Meanwhile, the Air Force entered the aerospace age in the 1950s. Jet-powered aircraft, guided missiles, nuclear ordnance, and electronic and computerized equipment came into the inventory. The Air Force acquired long-range air-breathing missiles such as the SM-62 Snark and SM-64 Navaho; developed ballistic missiles such as the SM-65 Atlas, SM-68 Titan, SM-75 Thor, and SM-80 Minuteman; and introduced an array of missiles and rockets fired from aircraft and launched by ground forces. Also, the Air Force began to take advantage of developments in the technology of simulation training.

At the Potsdam Conference in July and August 1945, the Allies agreed to the joint occupation of Korea, with the 38th parallel serving as the dividing line between Soviet forces in the north and the Americans in the south. The Soviet Union announced that it had removed its army units from Korea by December 1948. In June 1949, the United States completed the withdrawal of its troops, except for a token advisory group of 500 men.

On June 25, 1950, North Korea launched an attack across the 38th parallel, and the United Nations Security Council called upon its members to support South Korea. President Harry S. Truman dispatched American air and naval units and ordered army troops stationed in Japan to enter the battle to restore the territorial integrity of South Korea. After repelling the initial attack, United Nations forces advanced deep into North Korean territory. On October 26 the Chinese army crossed the Yalu River into North Korea and, on November 25, launched an offensive that drove United Nations forces back into South Korea, below the 38th parallel.

Lowry Air Force Base responded to the fighting in Korea by returning to an expanded program. On July 17, 1950, Lowry's 3415th Technical Training Wing adopted a six-day training week with three shifts per day. Moreover, the curriculum reflected advances in aviation technology. In addition to photography and armament instruction, Lowry provided courses in rocket propulsion, missile guidance, armament electronics, radar-operated fire-control systems, computer specialties, gun and rocket sights, and flexible gunnery (electronically-operated turret systems).

Although negotiations for a cease-fire and an armistice began in July 1951, the parties failed to reach agreement and fighting continued. Hostilities finally ceased after an armistice was signed on July 26, 1953. Lowry reverted to a five-day training week on October 7.

A significant part of the mission of Lowry's 3415th Technical Training Wing was developing new programs of instruction for the Air Force. In the 1950s the Air Force acquired rockets, missiles, and nuclear ordnance in greater numbers. The wing formed Technicians from Lowry's

3415th Maintenance and Supply Group check the electronic systems of a T-33 aircraft.

During fifty years, Lowry trained under other des including 3705th Army Air Forces Base Unit (Teduncal School), 3415th Technical School, USAF School Aerospace Sciences, and 3400th Technical Training departments that trained people to operate and maintain these systems.

In January 1951, eleven Air Force specialists assembled at Lowry to start a missile training school. They prepared courses in guidance, controls, and propulsion for the Matador, the nation's only surface-to-surface missile, and for new systems that were being developed. These included the Falcon, Rascal, Snark, and Navaho missiles. The training wing activated a Department of Guided Missiles on June 7, 1951.

In 1959, the Department of Guided Missiles introduced an instrumentation course for airborne telemetry and ground equipment. These systems collected data from space vehicles and then transmitted the information to ground-based receiving stations. By 1962, Lowry's Department of Missiles Training (formerly the Department of Guided Missiles) was providing the Air Force with more than 1,000 trained missile specialists annually. The curriculum consisted of eighteen courses, and the instructional and administrative staff numbered more than 300.

The M-61 Vulcan gun was installed on F-104, F-105, and F-111 aircraft. The M-61 fired up to 6,000 rounds of 20 millimeter ammunition per minute. Lowry began M-61 instruction in the late 1950s.

graduating class on February 21, 1956. The Department of Photographic Training continued its programs in camera repair and ground photography.

On April 13, 1955, the 3415th Technical Training Wing activated the Department of Special Instruments Training. This department prepared people to operate and maintain nuclear instruments and special electronic equipment.

Students in the Department of Flexible Gunnery Training track a drone with a radar range detector.

Significantly, Lowry lost one of its traditional programs in this decade. The Army had introduced aerial photographic training at Langley Field, Virginia, in 1917. The Army transferred the program to Chanute Field, Illinois, in 1922 and moved it to Lowry in 1938. The pace of technology, however, caught up with aerial photography in the 1950s. When the introduction of remote control cameras on reconnaissance aircraft diminished the need for aerial photography specialists, Lowry discontinued this training with the

Lowry Air Force Base became a center of national and world attention during the administration of President Dwight D. Eisenhower. Because Mrs. Eisenhower's family lived in Denver, Lowry was the site of the Summer White House from 1953 to 1955 while the Eisenhowers vacationed in Colorado. The President first arrived at Lowry on August 8, 1953 aboard The Columbine, the Presidential aircraft, and remained until September 19.

The President, his staff, and administration officials had offices in Building 256, the headquarters building and main structure of the former sanitarium. Lowry also provided office space for the

Secret Service and the national press corps. A 180-member Air Police detail provided security for the Summer White House.

In 1954, President Eisenhower stayed at Lowry from August 21 until October 15. On September 12, the National Security Council met outside the nation's capitol for the first time. The group assembled in the Williamsburg Room—later renamed the Eisenhower Room—at the Lowry Air Force Base Officer's Club to hear Secretary of State John Foster Dulles report on his recent trip to the Far East. In attendance were Vice President Richard M. Nixon, Secretary of Defense Charles E. Wilson, Central Intelligence Agency Director Allen Dulles, Federal Bureau of Investigation Director J. Edgar Hoover, and Atomic Energy Commission Chairman Lewis L. Strauss. The following year, the President remained in Colorado from August 14 until November 11. He was at Lowry only through September 23 because of a heart attack suffered the following day. The President was transferred to Fitzsimons Army Hospital for treatment.

After the United States Air Force became a separate entity in 1947, the service began planning an academy to educate its future officers. On April 1, 1954, President Eisenhower signed the authorization bill for an Air Force Academy, and the Secretary of the Air Force appointed a committee to choose the site. On June 22, Secretary Harold E. Talbott announced that the Air Force Academy would be located near Colorado Springs. The following month he stated that Lowry Air Force Base would become the interim home of the academy, with the first class of 306 cadets scheduled to arrive in July 1955.

To make room for the cadets, the Air Force transferred Lowry's Intelligence, Transportation, and Comptroller schools—1,300 students and several hundred staff members—to Sheppard Air Force Base, Texas. The move began in October 1954.

The United States Air Force formally dedicated its Academy at Lowry Air Force Base on July 11, 1955. Lieutenant General Hubert R. Harmon served as the first Superintendent. The Air Force Academy occupied buildings and barracks at Lowry No. 2 until 1958, when construction of the permanent site at Colorado Springs was completed.

At the beginning of 1959, Air Training Command designated its training wings as centers. This change reflected the difference in their mission and size compared to other wings in the Air Force. On January 1, 1959, the 3415th Technical Training Wing became Lowry Technical Training Center.

During the 1960s, Lowry Air Force Base severed some ties with the past and moved into new areas of training. For one thing, the headquarters functions shifted from the sanitarium buildings. More significantly, Lowry's flying operations came to an end. Despite these losses, however, there were additions to the base and the mission of Lowry Technical Training Center. These included the installation of Titan I missiles, the return of intelligence training, and the transfer of the 3320th Retraining Group and supply training to Lowry from Amarillo Air Force Base, Texas. Finally, with American military forces once more fighting on the mainland of Asia, Lowry trained airmen for the Southeast Asian conflict.

Because of structural deterioration, the Air Force had to demolish the sanitarium complex which

had originally opened in 1904. The accumulation of moisture in the sand brick and stucco exteriors produced settling and cracking of the buildings. On July 7, 1961, the headquarters activities for Lowry Technical Training Center began moving to Building 349. Demolition of the former tuberculosis clinic commenced in April 1963.

Lowry's flying heritage also ended in 1966. The first Army aircraft had landed at Lowry Field in 1938. In the years that followed, a variety of military aircraft operated from the base. In March 1945, there were 104 aircraft assigned to Lowry Field, including seventy-two B-24 bombers. The first B-29 was assigned to Lowry on May 18, 1945. Among the training highlights, on March 3, 1952 Lowry B-29s completed a mission over the nearby town of Longmont. Coming in at an altitude of 1,000 feet, the aircraft dropped leaflets instead of bombs, and chemical warfare personnel simulated fire with smoke bombs. In August 1954, the Air Force assigned an H-19B helicopter to Lowry to provide transportation between the base and the future site of the Air Force Academy.

On June 1, 1960, Lowry was closed to all transient jet traffic, and after that date Buckley Air National Guard Base serviced transient aircraft. On November 19, 1964, the Department of Defense announced that it was shifting Lowry's remaining flying activities to Buckley because of operational requirements, safety, and economic considerations. The many hazards of operating the Air Force's newest high-performance jets over the growing residential areas of Denver and Aurora were too great. Moreover, improvements for Lowry to handle these aircraft would be too costly. On June 30, 1966, Lowry's flying activities ceased after Major General Charles H. Anderson, the Center Commander, flew the last aircraft—a T-29—to Buckley.

Although Lowry Field and Lowry Air Force Base had provided technical training for armed forces personnel since 1938, the base now prepared for another contribution to the national defense. As part of a buildup of American strategic forces, Air Force officials wanted to install Titan I missiles on Lowry's former bombing range. These plans called for a network of six complexes, each having three missile silos and the requisite equipment and structures. On September 25, 1958, the Strategic Air Command activated the 703rd Strategic Missile Wing at Lowry. Construction work got underway on April 28, 1959.

In a September 9, 1960 article for the base newspaper, now called the Lowry Airman, Gene E. Forbes described the awe-inspiring feeling of touring the missile construction site. His first thought was that he had glimpsed a "model of some city of a future age," a structure that belonged "on some distant planet." He described the deafening noise of "steel on steel," the movement of "mountains of earth," and concrete domes two stories high with four-foot-thick walls.

The arrangement of the Air Force's first Titan wing constituted a 170-mile triangle east and south of Lowry and Buckley, with command and support facilities established at Lowry. The reinforced concrete missile silo was 160 feet deep and 40 feet in diameter, with walls two feet in thickness. The foundation was eight feet thick, and the silo doors weighed 180 tons.

On July 1, 1961, the 703rd Strategic Missile Wing became the 451st Strategic Missile Wing. This change represented an Air Force policy to continue active service designations for units

with noteworthy combat records. The 451st Bombardment Group had flown B-24 Liberators during World War II and received three Distinguished Unit Citations before being inactivated in September 1945.

In October 1961, workers installed the first Titan I in a silo at Lowry's missile range. The 451st Strategic Missile Wing achieved its initial operational milestone on April 18, 1962, when three missiles were ready for launching. In November 1964, the Air Force announced plans to phase out the Titan I and to replace it with the less vulnerable Minuteman. The Strategic Air Command removed the last Titan from Lowry on April 14, 1965.

In the 1960s, Lowry's mission expanded with American involvement in another overseas conflict. Before World War II, Indochina had been under the control of France. Resistance forces representing nationalist and Communist groups fought the Japanese invaders during World War II, but when the war ended they also challenged the reimposition of French colonial rule. Following the 1949 Communist victory in China and North Korea's aggression in 1950, the United States took steps to prevent a Communist takeover in Indochina.

Both Presidents Truman and Eisenhower provided France with financial and military aid in its war against the Indochina Communists, but French troops were defeated at Dien Bien Phu in May 1954. At an international conference at Geneva during July 1954, Indochina was divided at the 17th parallel pending general elections. Subsequently, the United States extended its support to the new government of South Vietnam and, in February 1955, dispatched military advisors to train its army.

The Administration of President John F. Kennedy strengthened America's conventional military forces to combat "brush-fire" wars and prevent their escalation. The United States became increasingly involved in countering efforts by Communist forces to seize control of South Vietnam. President Kennedy dispatched military advisors and troops for combat support missions. In 1965 President Lyndon B. Johnson authorized American forces to take offensive action, and he greatly increased the number of American personnel sent to South Vietnam.

Throughout the 1960s, the supersonic Century-series fighters were the mainstays of the Aerospace Defense Command and the Tactical Air Command and represented the initial aircraft deployed by the Air Force in Vietnam. The first combat unit to arrive in South Vietnam in October 1961 flew RF-101C Voodoos, but the most widely used in the air war over North and South Vietnam were, respectively, the Republic F-105D Thunderchief fighter-bomber and the North American F-100 Super Sabre. The effectiveness of these aircraft depended not only on their pilots, systems, computers, and weapons but also on the people who maintained them for combat. Lowry's Department of Fighter Systems trained these technicians and the officers managing armament maintenance organizations.

In 1961, the Department of Fighter Systems had two branches, the Weapons Control Systems Branch and the Fire Control Systems Branch. A staff of over 200 people taught thirteen courses relating to the F-100D, F-101B, F-102A, F-104A, F-105D, and F-106, as well as the older F-84, F-86D, and F-89J aircraft. Then the F-4C Phantom II began operating in Vietnam in early 1965, followed in March 1968 by the first use of the General Dynamics swing-winged F-111A as a

tactical bomber in the air war against North Vietnam. Lowry Technical Training Center responded with the appropriate courses for these aircraft.

Students in the Department of Aerospace Munitions Training learn basic maintenance on various missiles, such as this AIM-7.

The Department of Weapons Training prepared officers, airmen, and civilians to maintain Air Force weapons. In 1962 there were sixty courses in conventional munitions, disaster control, staff armament, nuclear weapons, and weapons loading. The department's Nuclear Weapons Branch was the only Air Force organization providing instruction in storing, maintaining, assembling, testing, and handling nuclear components. Its other unique training program was mating nose cones and re-entry vehicles to missile systems.

The Department of Electronic Principles taught the fundamentals of electronics to about 6,000 people annually. The department introduced closed-circuit television instruction in Air Force technical training on August 6, 1958. It was particularly useful for teaching basic knowledge dealing with circuits, tubes, and wiring.

Lowry faced a special problem during the Vietnam War. At times the mission and operations of the Technical Training Center were adversely affected when base personnel and training instructors were dispatched overseas. In 1964 Lowry instructors with specialties in munitions, armament, and ordnance disposal were sent to the war zone on temporary or permanent assignment to fill critical manpower requirements.

The fighting also affected civil engineers. The Air Force needed people to operate heavy equipment at construction and repair sites in Vietnam and Thailand. This project was called RED HORSE, for Rapid Engineer Deployable Heavy Operations Repair Squadron, Engineer. Civil engineering specialists from Lowry and other Air Force bases were organized into squadrons and deployed to the war zone.

By 1964, Lowry's 3415th Technical School was graduating over 10,000 people annually. In addition to the three departments already mentioned, the school consisted of the Armed Forces Air Intelligence Training Center and the Departments of Bomber Training (maintenance of navigation and fire control systems, calibration of radar, and servicing photography equipment for reconnaissance aircraft), Missiles Training, and Special Instruments (special electronic training).

The 3415th Technical School used two and sometimes three shifts to prepare people for the munitions and ordnance disposal career fields. The school also adopted a six-day training week. By 1966, the Center had increased the number of graduating munitions and weapons specialists from 1,600 to 5,600 annually. On June 11, 1969, Lowry also began training South Vietnamese Air Force personnel in these specialties under the Pacer Bravo program.

The Air Force developed hundreds of rapid-response programs in the limited warfare area for use in Southeast Asia. They ranged from modifying cargo aircraft into side-firing gunships to developing tactical electronic warfare systems and guided bombs. This new level of sophistication in military weaponry required a corps of instructors equally well-versed in fields such as solid state electronics, laser-guided bombs, and electro-optically-guided glide bombs. As

in the past, the Lowry Technical Training Center responded with the necessary courses and continued its tradition of excellence in training.

In January 1973, representatives from the United States, North Vietnam, South Vietnam, and the Viet Cong's Provisional Revolutionary Government signed an agreement in Paris. The accord ended the hostilities, secured the release of American prisoners of war, and brought about the withdrawal of American military forces from South Vietnam. American troops were withdrawn by the end of March. Lowry's School of Applied Aerospace Sciences discontinued its training oriented to Air Force operations in Southeast Asia.

Lowry Air Force Base had a long association with the training of intelligence specialists. The Army Air Forces began this training at Keesler Field, Mississippi, in 1946 but moved it to Lowry Field the following year. In 1954, the Air Force shifted the program to Sheppard Air Force Base, Texas, to make room for the Air Force Academy at Lowry. It remained at Sheppard until 1963, when it returned to Lowry as part of the 3415th Technical School.

Aerial warfare required specialized air intelligence. The Air Force Intelligence School at Sheppard and the Navy Air Intelligence School at Washington, D.C., prepared the necessary people for these duties.

In 1962, the Secretary of Defense directed the Air Force and Navy to establish a single air intelligence school under Air Force jurisdiction.

The Armed Forces Air Intelligence Training Center was activated at Lowry on July 1, 1963 and began holding classes on the 17th. The program primarily involved courses in radar analysis and photographic interpretation. Of the 413 students in 1963, sixty-two were Navy personnel and twenty-three were foreign officers. On October 23, 1963, the school conducted the first combined classes for Air Force and Navy students. Later, the Marines joined in the training. During the height of American activities in Southeast Asia, the intelligence center conducted fifty-six courses.

The volume of security information received by agencies of the Department of Defense increased greatly during the 1960s. The equipment and the people to acquire, evaluate, store, and retrieve this data were essential to national defense. By the mid-1970s, Lowry's intelligence school possessed \$2 million worth of computer equipment. The Intelligence Data Handling Systems Branch used mobile training teams to instruct Department of Defense personnel throughout the United States and abroad.

In July 1967, the Air Force moved supply training to Lowry from Amarillo Air Force Base. The shift of 1,100 students began on July 4 and concluded on September 9. Classes at Lowry's Department of Supply and Procurement Training started on August 1. The department taught twenty-one resident courses and had 301 permanent party personnel, providing instruction in automated data processing, supply management and services, and redistribution and marketing.

Lowry's physical appearance changed greatly in the 1970s. Construction workers demolished almost two hundred World War II-era wooden buildings and replaced them with new brick

structures, including five dormitories each housing 1,000 people, a Youth Center, a Child Care Center, a Chapel Center, an Airmen's Open Mess, and the five buildings of the 3320th Correction and Rehabilitation Group. On September 30, 1976, Lowry dedicated the Gilchrist Building (Building 444) as the new home for the Air Force Accounting and Finance Center and the Air Reserve Personnel Center. Also during the 1970s, Lowry reorganized its technical training wing and successfully confronted the closure issue.

To enhance the significance of Lowry's technical training and the Air Force's aerospace mission, the 3415th Technical School became the USAF School of Applied Aerospace Sciences on August 1, 1972. The school had the following Departments: Avionics Training, Aerospace Photography Training, Aerospace Munitions Training, Special Instruments Training, and Logistics Training. Lowry also managed the Armed Forces Air Intelligence Training Center and the Interservice Nuclear Weapons School. The School of Applied Aerospace Sciences gained accreditation from the North Central Association of Colleges and Schools on March 28, 1973. This gave airmen the opportunity to apply their Lowry training toward a Career Educational Certificate from the Community College of the Air Force and, after April 1977, an Associate of Arts degree.

In 1977, Air Training Command realigned its training structure along traditional military lines. Lowry's school became the 3400th Technical Training Wing on April 1, 1977. The training departments were now designated Technical Training Groups: 3420th, intelligence; 3430th, audiovisual; 3440th, logistics; 3450th, avionics; 3460th, munitions. On September 1, 1978, Lowry—and the other schools within Air Training Command—adopted the eight-hour classroom day. This represented a change from the six-hour academic day in effect since World War II. Although there were other organizational changes at the technical school, the basic wing-group arrangement continued into the 1980s.

Audiovisual training included photography, high speed film processing, photojournalism, television production, audio recording, and maintenance of cameras and communications equipment. Air intelligence specialists studied the application of computers and data processing to the acquisition, evaluation, storage, and retrieval of information. In 1979, Lowry introduced instruction in field maintenance and repair of the military's latest tactical intelligence equipment. This portable, computerized van could be transported throughout the world to examine reconnaissance films and prepare intelligence reports.

Avionics instructors taught courses on airborne and ground electronic systems and emphasized maintenance and calibration procedures. Logistics training (formerly the supply career field) still involved moving items where and when needed, but logistics personnel now required expertise in using computers for inventory control. Munitions students learned maintenance procedures for missiles, munitions, nuclear weapons, and conventional weapons; safety procedures; disaster preparedness; loading conventional weapons; and disposing of explosive ordnance. Throughout the decade of the seventies, the number of graduates from Lowry's technical school exceeded 20,000 each fiscal year, with a high of more than 27,000 in fiscal year 1973.

The Air Force investigated the closure of Lowry and Chanute Air Force Bases.

The Colorado Congressional delegation, local officials, and civic groups organized on Lowry's behalf.

State and local legislators formed a task force to assess the potential losses for Colorado and the United States Air Force. The group prepared a fifty-page report that supported the retention of Lowry Air Force Base. This response by civic and political leaders reinforced Colorado's historic ties to the base. In March 1979, the Air Force ended months of speculation on the future of the base by recommending that Lowry, as well as Chanute, be kept open.

The United States Air Force can only be as effective as the quality of its people and their equipment. To respond as professionals, the men and women of a technically-oriented Air Force require the best training. With the base closure matter settled, the Lowry Technical Training Center introduced new and improved programs for the 1980s. Significantly, Lowry became the Air Force's primary training center for the space operations career field and began the Undergraduate Space Training program.

In February 1978, a prototype of the McDonnell-Douglas F-15 arrived at Lowry for use as a ground trainer by munitions loading classes. Because the prototype lacked much of the equipment in its operational counterpart, it was not as effective for channelized training, which prepared students to work on specific types of aircraft.

In 1980, Tactical Air Command headquarters offered the loan of an operational F-15 that could be kept at Buckley Air National Guard Base, along with the test and ground equipment. Two years passed before there was any agreement on the support, funding, and maintenance issues. In May 1982, an air-crew delivered the F-15 to Buckley, and busloads of Lowry students made the round-trip for training. This arrangement ended when Lowry's Eagle was finally modified for training in 1983.

Lowry officials made better progress in obtaining an F-16 trainer. In 1979, the Air Force received its first operational Fighting Falcon from the General Dynamics Corporation, and Lowry was selected for a major role in training avionics maintenance specialists. Avionics training began in 1980. At the same time, Lowry also received a pre-production F-16 for its armament systems course. As was the case with the F-15, however, the F-16 prototype lacked the required operational systems and was suitable only for familiarization training.

Center officials obtained a crash-damaged F-16 for use as a ground trainer. In August 1982, the aircraft arrived from the Ogden Air Logistics Center at Hill Air Force Base, Utah. In a short time, the new F-16 trainer was ready for channelized instruction. A few months earlier, an Army helicopter had transported the F-16 prototype to the Air Force Academy to serve as a static display.

The Air Force procured the Fairchild Industries A-10A Thunderbolt II to provide close air support to ground troops. The aircraft carried up to 16,000 pounds of mixed ordnance on underwing pylons. The GAU-8/A 30-millimeter Gatling gun fired at rates of 2,100 or 4,200

rounds per minute and was effective against heavily-armored vehicles, including tanks. The A-10A became operational in 1977, and Lowry offered instruction in avionics and the weapons control system. In 1982, the Center acquired an A-10A for training in munitions loading and unloading and operation of the GAU-8/A gun.

The AGM-69A Short-Range Attack Missile (SRAM) was a supersonic air-to-surface weapon launched by strategic bombers to neutralize enemy air defenses. The Air Force planned to add this missile with a nuclear warhead to its B-52G/H and FB-111 bombers. SRAM production began in 1971, and delivery of 1,500 missiles was completed four years later.

The AGM-86B Air-Launched Cruise Missile (ALCM) was developed during the late 1970s. A turbofan jet engine powered the missile at sustained subsonic speeds. Inertial and terrain-following techniques guided the missile and its nuclear warhead to a target more than 1,500 miles away. President Jimmy Carter canceled the B-1A program in 1977 in favor of placing cruise missiles aboard existing B-52s. The Stratofortress could carry twelve missiles on two pylons under the wings.

In January 1980, Lowry Technical Training Center acquired a B-52D from the Military Aircraft Storage and Disposition Center at Davis-Monthan Air Force Base, Arizona, for weapons loading and release training. Base civil engineers stabilized the fuselage on Lowry's other bomber trainer, a B-52F from the storage center, by pouring 70,000 pounds of sand into the fuel tanks to prevent the aircraft from tipping over during weapons loading. This aircraft was subsequently configured to a B-52G/H model.

In 1982, a team from the Boeing Military Airplane Company modified Lowry's B-52 for ALCM training. They restructured the bomb bay for SRAM loading and modified the right wing for SRAM mounting and the left wing for ALCM training. Also in 1982, Lowry became the prime training center for the internal common strategic rotary launcher, capable of carrying a variety of weapons that included SRAM and ALCM. The launcher was designed for the B-52H and the B-1B, as well as the Advanced Technology Bomber in the planning and development stages. Lowry's B-52 required further modification to support the launcher's 35,000 pounds and its integration with the aircraft's avionics subsystems.

The modernization program to keep the B-52 fleet an effective force included new offensive avionics. In 1983, Lowry received four training models of the AN/ASQ-176 Offensive Avionics System, a computerized electronics network providing automatic navigation and weapons delivery. Training began in 1984.

The Center's mission was also intertwined with the B-1 bomber. Lowry's initial involvement began in 1970, when the North American Rockwell Corporation received a contract to develop the B-1A for the Air Force. President Carter canceled production of the bomber in 1977 but continued the flight test program. Four years later, President Ronald Reagan resumed the program for a new strategic bomber, and the Air Staff authorized development and production of the B-1B in December 1981. A derivative of the B-1A, the B-1B was a subsonic, low-level penetrator capable of delivering nuclear and conventional weapons.

Lowry prepared courses in weapons loading and avionics for the new bomber, scheduled to be delivered to the Strategic Air Command in 1986. To provide the required training, the Center had to acquire an Avionics/Armament Maintenance Trainer System and weapons load trainers. These weapons load trainers would be twenty feet high, seventy six feet long, thirty-six feet wide, and accommodate loads of 98,000 pounds. Lowry also developed courses for avionics training. B-1B avionics included the offensive system for directing missiles and bombs to their targets; the defensive system, the electronic countermeasures for confusing enemy defenses during penetration missions; and the central integrated test system and electronic multiplexing system for recording data about the status of aircraft equipment. In 1985, Lowry received two simulators for B-1B avionics instruction. Moreover, the base scheduled renovation of Hangar No. 1, Building 401, the arma-ment systems training facility. In July 1985, workers began removing the huge sliding doors on one of Lowry's historic landmarks. The project, including new classrooms and office space, was completed in 1986. The remodeled structure met requirements for training increasing numbers of students and accommodating new equipment.

Lowry's association with intercontinental ballistic missiles dated to the activation of the Air Force's first Titan I missile wing in 1958. Because security experts argued that the Minuteman missile was becoming vulnerable to Soviet countermeasures, in 1971 the Air Force defined requirements for a more advanced weapon called MX, or Missile Experimental. Full-scale development began in 1979, and Lowry became an associate training center with Chanute serving as the prime training center.

Named the "Peacekeeper" by President Reagan, the MX is a four-stage missile capable of delivering ten warheads to separate targets over distances of 5,000 miles. The President wanted to deploy 100 missiles in refurbished Minuteman silos at F.E. Warren Air Force Base, Wyoming. In 1983, Congress approved deployment of only fifty missiles, and the Air Force successfully conducted the first Peacekeeper flight test from Vandenberg Air Force Base, California. The missile traveled 4,190 miles before dropping six unarmed warheads at a test range in the Pacific Ocean.

Headquarters Air Training Command selected Lowry for training on the Peacekeeper reentry vehicle. In July 1984, construction began on a 13,245-square-foot facility. A unique feature of the building was the fifty-five-foot-high training bay that provided the required forty feet of working height for installation and removal of the reentry shroud, or nose cone. The shroud protected the reentry vehicle during the ascent phase of flight.

Center officials accepted the new Peacekeeper facility, Building 1491, on October 21, 1985, and instruction began the following year. The courses emphasized maintenance and repair of equipment, arming and fuzing operations, shroud processing, deployment module processing, and operation and repair of the reentry system. With the new facility, Lowry was ready to support the nation's newest intercontinental ballistic missile.

During the 1970s, a Soviet military buildup challenged the intelligence community. The Air Force had to modernize its training to meet the needs of intelligence specialists. This required not only new equipment but also a new methodology. There had to be more automation and computerized instruction, with intelligence personnel using computer keyboards, cathode ray

tube displays, and digital imagery.

While the Air Force conducted air intelligence training at Lowry, Offutt, Goodfellow, and Keesler Air Force Bases, it had long considered consolidating these activities at one location. In March 1983, Headquarters Air Training Command decided to concentrate air intelligence training at Goodfellow in Texas. In addition to efficiency of operations, this would modernize training in the areas of collection, analysis, and dissemination of information.

The consolidation was scheduled for completion in phases between 1985 and 1988. In the meantime, Lowry Technical Training Center continued to improve its intelligence training. In April 1983, Lowry officials participated in groundbreaking ceremonies for the \$9.85-million Armed Forces Air Intelligence Training Center facility. On December 26, 1984, they accepted the new building and soon began instruction in air operations, targeting and weaponeering, imagery interpretation, and intelligence data handling.

In 1977, Lowry became the prime training center for new career fields associated with space systems command and control equipment. In addition, the Air Force moved all training equipment for the defense meteorological satellite program from Keesler Air Force Base to Lowry in 1978. The Center expanded space training in 1982, following establishment of Headquarters Space Command at Peterson Air Force Base, Colorado. The formation of Lowry's 3430th Technical Training Group on October 1, 1984 emphasized the growing importance of the space training mission in the Air Force. The new unit provided entry-level training for officers and airmen manning satellite and space shuttle control consoles and examining computer printouts.

The Air Force developed a new approach to space training in the fall of 1985. The service needed people trained in all aspects of the space operations career field. Undergraduate Space Training would provide the Air Force with people having broad knowledge of space operations and allow greater flexibility in making personnel assignments.

On October 9, 1986, the first class of twenty-five officers began Undergraduate Space Training at Lowry. They faced ninety-eight academic days in class and a curriculum that included mathematics and physics as well as flight dynamics, orbital mechanics, command and control procedures, and space law. These officers graduated on February 20, 1987. This program gave the Center a greater role in helping the Air Force meet the challenge of operating in space and promised significant growth for the future of Lowry Technical Training Center.

Lowry Technical Training Center is committed to excellence in training and advancing the goals of Air Training Command. These include providing fully trained and highly motivated men and women for the United States Air Force—professional military people. The Center offers instruction in more than 300 courses, and its curriculum combines technical skills with military values.

Lowry training programs prepare almost 33,000 students annually. The individuals who operate and maintain Air Force equipment and weapon systems are the measure of the Center's success. How well they apply the skills acquired while at Lowry determines in part the nation's capability

for responding to foreign military threats.

Major General Larry N. Tibbetts is the Center Commander. In exercising control over both Center and tenant organizations at Lowry Air Force Base, General Tibbetts and his Vice Commander, Colonel Theodore C. Dreyer, are supported by an immediate staff in several functional areas: Inspection, Protocol, Safety, Public Affairs, Social Actions, Staff Judge Advocate, Programs, History, Standardization and Evaluation, Information Systems, and Heritage Museum.

The 3400th Technical Training Wing is Lowry's primary mission element and has responsibility for all technical and military training. Colonel Murle A. Wilson is the Wing Commander, and his Vice Commander and Training Advisor are, respectively, Colonel Willard Grosvenor and Mr. Donald E. Nate. The wing organization includes the wing staff, one student group, five technical training groups, one training squadron, and ten units at eight locations in the continental United States. More than 1,200 officers, enlisted men and women, and civilians teach over 350 resident courses. The students include not only active-duty Air Force people but men and women from the Air Force Reserve, the Air National Guard, the Army, the Navy, the Marine Corps, and the federal civil service. Each year, the wing also trains more than 500 officers and enlisted people from over forty countries.

In addition to sending students to Lowry, the Army, Navy, and Marines provide instructors. Of these three services, the Army accounts for the most graduates, approximately 1,100 each year. The soldiers study still and motion picture photography, television equipment repair, television production, graphics, and metrology.* Navy students learn metrology, television equipment repair, intelligence, meteorology, and graphics. Marines attend intelligence, audiovisual, contracting, metrology, safe-ty, ordnance, and support services courses.

The 3405th Student Group has nine student squadrons and is responsible for the military training and administration of an average daily student population of 4,500. Although technical training is a major facet of Lowry's mission, Center officials are also concerned about instilling the proper military attitude, spirit, and resolution in these young men and women. While at Lowry, they have the opportunity to grow personally as well as professionally in developing the strength of character required of United States military forces in an armed conflict.

The 3420th Technical Training Group is responsible for audiovisual training. This encompasses instruction in avionic sensor systems, still and motion picture photography, film processing and development, camera maintenance, graphics, television equipment repair, and television broadcasting. The squadron administers Air Force training in the Army's postal school and the Defense Information School's public affairs, broadcasting, and journalism programs at Fort Benjamin Harrison, Indiana.

The 3430th Technical Training Group has the space training mission. It provides Undergraduate Space Training and instruction in aerospace control and warning systems and computer programming for the Defense Support and Weather Satellite Programs.

The 3440th Technical Training Group conducts training in supply operations, contracting and

procurement services, logistics planning and programming, food services, billeting management, and mortuary affairs.

The 3450th Technical Training Group handles basic and applied electronics, integrated avionics for fighter and bomber aircraft, and metrology.

The 3460th Technical Training Group trains in assembling, maintaining, repairing, and transporting nuclear weapons and munitions systems. The group offers instruction in disaster preparedness, instrumentation (operating and maintaining data acquisition and monitoring equipment for research and development), aircraft armament systems (loading and unloading bombs, missiles, rockets, and guns), disposing of explosive ordnance, and weapons safety. In addition, the 3460th manages the Interservice Nuclear Weapons School at Kirtland Air Force Base, New Mexico.

The 3496th Technical Training Squadron continues to provide some air intelligence training at Lowry. The squadron sends training teams throughout the United States and overseas. All branches of the armed forces are represented on the instructional staff. Air intelligence training consists of targeting, imagery interpretation, weaponeering, use of sensor data, and intelligence data handling systems. The squadron will move to Goodfellow Air Force Base in October 1988, completing the consolidation of air intelligence training at that center.

The United States Air Force Clinic, the 3320th Correction and Rehabilitation Squadron, and tenant organizations also fall under the jurisdiction of the Center Commander. Additionally, the base hosts two separate operating agencies: the Air Force Accounting and Finance Center, and the Air Reserve Personnel Center.

The capital assets of Lowry Air Force Base encompass 2,019 acres and almost 500 buildings, including 230 residential units. Lowry also has the capacity to house more than 5,000 people in dormitories, visitor's quarters, and temporary lodging facilities. Over 10,000 people, military and civil service, work at Lowry. As one of the state's largest employers, Lowry's total economic impact on Colorado is over \$600 million annually. The base exercises a strong influence on the development of Denver, Aurora, and other surrounding communities. The civilian housing market, commercial areas, schools, and social and community centers are intertwined with the activities of Lowry Air Force Base. Each year, local and state-wide companies receive millions of dollars from Lowry for contracted services, supplies, equipment, construction, and utilities.

In the 1930s, Denver made a concerted effort to secure an Army post. During World War II, the citizens of Denver expressed a very favorable attitude toward the men and women of Lowry Field. Denver had the reputation of being a "good soldiers' town." In 1987, the citizens of Colorado, especially those in the Denver metropolitan area, continue their historic ties to Lowry and support its mission and people.

In years to come, the men and women of Lowry Air Force Base will be called upon to train the skilled personnel needed to accomplish the mission of the United States Air Force. They can meet this challenge with the confidence and knowledge of a proud heritage. For five decades,

they and their predecessors served the nation through excellence in training. Their work exemplified the motto of the Army Air Forces Technical Training Command: Sustineo Alas, "I Sustain the WINGS

Lt Col Junius W. Jones* February 7, 1938-June 30, 1938
Brig Gen Jacob J. Rudolph July 1, 1938-October 12, 1940
Lt Col Warner B. Gates** October 13, 1940-October 30, 1940
Col Early E.W. Duncan October 31, 1940-April 8, 1942
Brig Gen Harvey S. Burwell April 9, 1942-April 14, 1943
Brig Gen Albert L. Sneed April 15, 1943-August 18, 1944
Col Raymond P. Todd August 19, 1944-December 8, 1944
Col John B. Patrick December 9, 1944-November 13, 1945
Brig Gen Thomas M. Lowe*** November 14, 1945-June 1, 1947
Brig Gen Rosenham Beam June 2, 1947-October 14, 1948
Brig Gen Warren R. Carter October 15, 1948-March 25, 1950
Col Stanley M. Umstead** March 26, 1950-April 6, 1950
Brig Gen Charles H. Caldwell April 7, 1950-November 10, 1950
Maj Gen John T. Sprague November 11, 1950-October 31, 1956
Maj Gen Eugene P. Mussett November 11, 1956-May 31, 1960
Col Ladson G. Eskridge** June 1, 1960-August 14, 1960
Maj Gen Charles H. Anderson August 15, 1960-July 31, 1967
Col C.J. Heflin** August 1, 1967
Maj Gen Dwight O. Monteith August 2, 1967-July 31, 1971
Maj Gen John S. Samuel August 1, 1971-July 31, 1972
Col David H. Buss** August 1, 1972-August 31, 1972
Maj Gen Alton D. Slay September 1, 1972-September 5, 1973
Maj Gen Charles C. Pattillo September 6, 1973-August 7, 1975
Brig Gen Warren C. Moore August 8, 1975-December 29, 1976
Brig Gen Andrew Pringle, Jr. December 30, 1976-April 24, 1978
Maj Gen William W. Hoover April 25, 1978-September 7, 1979
Maj Gen William B. Maxon September 8, 1979-May 13, 1981
Maj Gen Titus C. Hall May 14, 1981-April 28, 1982
Col James D. Kellim** April 29, 1982-May 31, 1982
Maj Gen William R. Usher June 1, 1982-August 15, 1985
Maj Gen Joseph D. Moore August 16, 1985-October 16, 1986
Maj Gen Larry N. Tibbetts October 17, 1986-Present

* Before Col Jones' arrival, Capt Harold D. Stetson supervised the renovation and construction work at the Denver Branch of the Air Corps Technical School. In addition, Maj William J. Flood arrived from Air Corps headquarters on January 8, 1938, to negotiate the acquisition of land for a bombing range with Denver officials.

** Interim Commander

*** During the absence of Gen Lowe (February 1-April 19, 1946), the following served as interim Commanders: Col Walter L. Wheeler, Col Jesse Auton, and Col Joseph J. Preston.

CHRONOLOGY

1921

Feb The Army Air Corps transferred its Air Service Mechanics School to Chanute Field from Kelly Field.

1938

Jan 8 Major William J. Flood arrived in Denver from Air Corps headquarters to accelerate the acquisition of land for a bombing range.

Feb 7 Lieutenant Colonel Junius W. Jones became the first Commanding Officer of the Denver Branch of the Air Corps Technical School.

Feb 12 A train brought the men and equipment of the Armament and Photographic Departments to Denver from Chanute Field.

Feb 26 The Army officially activated the Denver Branch of the Air Corps Technical School.

Feb 28 Photography and armament instruction began at the Denver Branch.

Mar 9 The Denver Branch received its first B-18A, the Air Corps' new medium bomber.

Mar 19 The first group of armament students graduated from the Denver Branch.

Mar 21 The Denver Branch became known as Lowry Field.

Apr 4 The first unpaved runway became operational at Lowry Field.

Jun 29 The first photography class graduated from Lowry Field.

Jun 30 Aircrews ferried nine aircraft from Denver's Municipal Airport to Lowry Field.

Aug 13 The Army began a four-year, \$3.5-million program of new construction at Lowry Field.

Oct 10 Lowry Field began instruction in its clerical school.

1939

Aug Construction of Hangar No. 1 was completed.

Dec Construction of Lowry's north-south runway was finished.

Dec 13 Colonel Jacob H. Rudolph, Lowry's Commanding Officer, landed the first aircraft on the north-south runway.

1941

Mar 3 Lowry's Department of Clerical Instruction began classes at Fort Logan.

Mar 26 The Army Air Corps formed the Technical Training Command, with headquarters at Chanute Field, Illinois.

May 15 Lowry Field began instruction in its School for Bakers and Cooks.

1942

Feb The photography school moved into a new three-story brick building.

Jul Lowry Field No. 2 opened on the northwest side of the post with transfer of the 363rd School Squadron.

Jul 1 Lowry Field established Armament School No. 2 at Buckley Field.

1943

Jul 7 The Army merged its Flying Training and Technical Training Commands, forming the Army Air Forces Training Command at Fort Worth, Texas.

Oct The Army transferred the Flight Engineers School to Lowry from Smoky Hill Army Field at Salina, Kansas.

1944

Jul 24 Lowry Field began instructing copilots in the Department of B-29 Crew Training. This was the first Lowry course devoted entirely to the pilot phase of training.

1945

Apr The Crash Fire Fighting and Rescue School moved to Lowry from Buckley Field.

1947

Jul 15 The Air Intelligence School transferred to Lowry from Keesler Field, Mississippi.

1951

Jan Eleven Air Force specialists assembled at Lowry to start a missile training school.

Jan 1 The United States Army Medical Depot facility in Denver became the Air Force Finance Center.

Jun 7 Lowry activated a Department of Guided Missiles.

Jul 31 The Air Force Finance Center at 3800 York Street in Denver became fully operational.

1953

Nov. The Continental Air Command established the Air Reserve Records Center as its Detachment 1 at 3800 York Street in Denver.

1954

Mar 1 The Air Reserve Records Center began operating in Denver.

1955

Apr 13 Lowry activated the Department of Special Instruments Training, concentrating on the operation and maintenance of nuclear instruments and special electronic equipment.

Jul 11 The Air Force Academy was formally dedicated and began operations at Lowry.

1956

Feb 21 Lowry discontinued aerial photography training.

1957

Jan 1 The Air Reserve Records Center in Denver became a subcommand of the Continental Air Command, dropping its Detachment 1 designation.

1958

Sep 25 The Strategic Air Command activated the 703rd Strategic Missile Wing at Lowry.

1959

Jan 1 The 3415th Technical Training Wing became Lowry Technical Training Center.

Apr 28 Construction commenced on Lowry's Titan missile complexes.

1960

Jun 1 Lowry Air Force Base terminated service for all transient jet traffic.

1961

Jul 1 The 703rd Strategic Missile Wing became the 451st Strategic Missile Wing.

Jul 7 The headquarters activities for Lowry Technical Training Center began moving to Building 349.

Oct The first Titan missile was installed in its silo.

1962

Apr 18 Lowry's 451st Strategic Missile Wing achieved its initial operational milestone, with three Titan missiles in place.

1963

Apr >^ Demolition of the old sanitarium buildings began at Lowry.

Jul 1 The Armed Forces Air Intelligence Training Center was activated at Lowry.

Oct 23 Lowry's intelligence school conducted the first joint classes for Air Force and Navy students.

1965

Apr 14 The Strategic Air Command removed the last Titan I, closing Lowry's missile range.

Sep 1 The Air Reserve Records Center became the Air Reserve Personnel Center.

1967

Jul 1 The Air Force transferred the 3320th Retraining Group from Amarillo Air Force Base to Lowry.

Jul 4 The Air Force shifted supply training to Lowry from Amarillo Air Force Base.

1968

Aug 1 The Air Reserve Personnel Center became a separate operating agency, reporting directly to the Chief of Air Force Reserve.

1969

Jun 11 Lowry began training South Vietnamese Air Force personnel under the Pacer Bravo program.

1970

Sep 4 Lowry formally dedicated the first of five dormitories housing 1,000 people.

1984

Oct 1 Lowry established the 3430th Technical Training Group, emphasizing the growing importance of space training for the Air Force.

Dec 26 Lowry officials accepted the new Armed Forces Air Intelligence Training Center facility.

1985

Jul Renovation work began on Hangar No. 1 to meet requirements for B-1B training.

Oct 21 Lowry officials accepted the new Peacekeeper facility, Building 1491.

1986

Oct 9 The first class of twenty-five officers began Undergraduate Space Training at Lowry.

1987

Feb 20 The first Undergraduate Space Training class graduated at Lowry.

Air Force Order of Battle
Created: 29 Nov 2010
Updated:

Sources

BMT School. Known for years simply as BMTS, the Basic Military Training School at Lackland traveled the same path as OTS. On 1 February ATC redesignated BMTS as the 3720th Basic Military Training Group, and on 25 August it became the 394th Military Training Group, which included not only basic military training squadrons, but the officer training squadron among others. 1992

Objective Centers Established. Air Training Command converted its newly renamed training centers to the objective wing structure on 1 February, a step it had already taken at the flying training wings in December 1991. At the flying training wings, that meant the command abandoned the tri-deputy structure (with Deputy Commanders for Operations, Maintenance, and Resource Management and a combat support group commander) in favor of a group-oriented wing with an operations group and a support group. A similar situation existed at the training centers where the technical training wing, Deputy Commander for Resource Management, air base group, and clinic/hospital were replaced by a technical training group, a logistics group, a support group, and a medical group. 1992

Officer Training School Redesignated.

Twice during the year, the Officer Training School (OTS) designation changed. On 1 February, as part of the major reshuffling of units, ATC redesignated OTS as the 3700th Officer Training Group. Then, on 25 August, the 3700th underwent another redesignation, becoming the 301st Officer Training Squadron. At the same time, Air Training Command relieved the 301st from assignment to Lackland Training Center and assigned it to the 394th Military Training Group at Lackland. 1992

Training Command inactivated the USAF School of Applied Aerospace Sciences at each of its technical training centers and activated numbered technical training wings in their place on 1 April 1977. These included the 3250th Technical Training Wing at Lackland, the 3300th at Keesler, the 3330th at Chanute, the 3400th at Lowry, and the 3700th at Sheppard. Several months later Air Training Command published a second order that inactivated the wings effective 1 January 1978, based on realignment actions proposed by the Cadou study. (These wings were again activated in November 1979.) 1977

ATC Schools Redesignated. From its founding in 1959 until 1972, the Air Force commissioning program at Lackland Training Annex (Medina) was known as the Officer Training School (OTS). On 1 August 1972, ATC changed the name to the School of Military Sciences, Officer. This coincided with a similar name change for the Basic Military Training School at Lackland to the School of Military Sciences, Airman and the renaming of the schools at the technical training

centers to School of Applied Aerospace Sciences. The idea behind these changes was to raise the prestige of the schools in the eyes of the civilian academic community. At that time, the Community College of the Air Force was seeking accreditation for a wide variety of courses. However, the name changes proved more confusing than helpful, and ATC reverted to the original designations on 8 April 1974.

Military Training Center Redesignated. Since training officials felt the former designation of Lackland Military Training Center gave an impression that there might be other Air Force centers providing basic training, Headquarters USAF directed Air Training Command to redesignate the unit as the Air Force Military Training Center, effective 1 January 1973.

Technical Training Center Reorganization.

In an effort to standardize organization and save manpower, Air Training Command implemented a reorganization of all technical training centers on 4 January 1971. The command aligned comptroller, civil engineering, personnel, administrative, and band functions under the air base group and designated the air base group commander as base commander. Additionally, the command did away with the commandant of troops position at each of the technical training wings. In place of the wing staff position, on 1 March 1971, Air Training Command activated numbered student groups at each of the centers to manage the troops.

Technical Training Bases Reorganized.

Concerned that the size of each of the technical training bases was more than a single commander could successfully manage, in late 1958 General Smith asked Headquarters USAF for permission to redesignate the technical training wings as training centers. Headquarters USAF approved the request. Effective 1 January 1959, ATC renamed its military training wing and all five of its technical training wings. The 3700th Military Training Wing became the Lackland Military Training Center; while the 3320th Technical Training Wing was redesignated as Amarillo Technical Training Center; the 3345th, Chanute Technical Training Center; the 3380th, Keesler Technical Training Center; the 3415th, Lowry Technical Training Center; and the 3750th, Sheppard Technical Training Center.

Lowry Air Force Base

Construction of this base near Denver began in 1937. During World War II, the base served as a major technical training facility and flying school. In the post-war period, Lowry continued as a technical training facility operated by the 3415th Technical Training Wing. In 1951, the wing introduced a Guided Missiles Department that featured courses in guidance, control, and propulsion for such missile systems as Matador, Falcon, Rascal, Snark, and Navaho.

The Lowry Technical Training Center was established in 1959. The base was unique as it remained under Air Training Command jurisdiction during a period when SAC deployed eighteen Titan I missiles to the base. By 1962, the Guided Missiles Department (now renamed the Department of Missile Training) provided the Air Force 1,000 trained missile specialists per year.

In 1972, the 3415th Technical School became the USAF School of Applied Aerospace Sciences. Missile training continued within the Department of Aerospace Munitions Training. In 1980, Lowry Technical Training Center acquired a B-52D from Davis-Monthan AFB, Arizona, and stabilized another B-52 on base for use in Air-Launched Cruise Missile training. Lowry also supported maintenance and repair training for the Peacekeeper strategic missile. Lowry closed in 1994.