

# The Douglas Aircraft Plant That Became Los Angeles Air Force Base

2012

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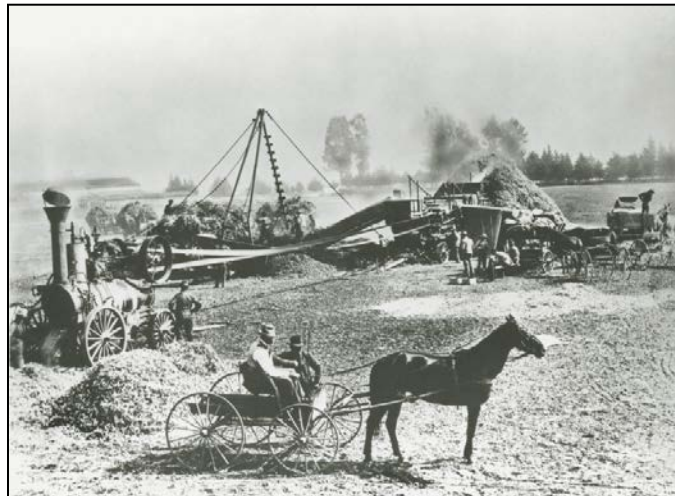
The Douglas Aircraft El Segundo Division in 1954



Los Angeles Air Force Base in 2012

## The Douglas Aircraft Plant That Became Los Angeles AFB

It has been 50 years since the Douglas Aircraft Company manufactured an airplane in El Segundo. From 1932-1962, the Douglas El Segundo Division produced thousands of Navy airplanes that were flown in three different wars. Douglas was the original aviation company that manufactured airplanes at the current Northrop Grumman Corporation facilities on the immediate northern border of Los Angeles Air Force Base (AFB). The Navy owned most of the Douglas manufacturing plant (including the current property of Los Angeles AFB) for the production of naval attack aircraft. Soon after Douglas halted its aircraft production in El Segundo, the Air Force acquired the base property from the Navy in late 1962. For decades most of Los Angeles AFB appeared to be an industrial center because manufacturing airplanes was the original purpose of the base's buildings. In 1997, Los Angeles AFB began evaluating a facility modernization initiative that it designated the Systems Acquisition Management Support (SAMS) Complex project. The innovative SAMS concept was implemented in 2004 when the Air Force signed a contract to trade government property (including the 41-acre Area A of Los Angeles AFB across the street from the 2012 base) to a private real estate developer in exchange for the construction of three seismically-compliant base facilities – Buildings 270, 271 and 281. From 2000-2007, Los Angeles AFB underwent a major reconstruction project and gradually replaced its aging buildings that dated back to the Douglas Aircraft years. In 2012, except for Building 229, all of the original 1962 buildings on Los Angeles AFB have been removed and replaced with modern facilities.

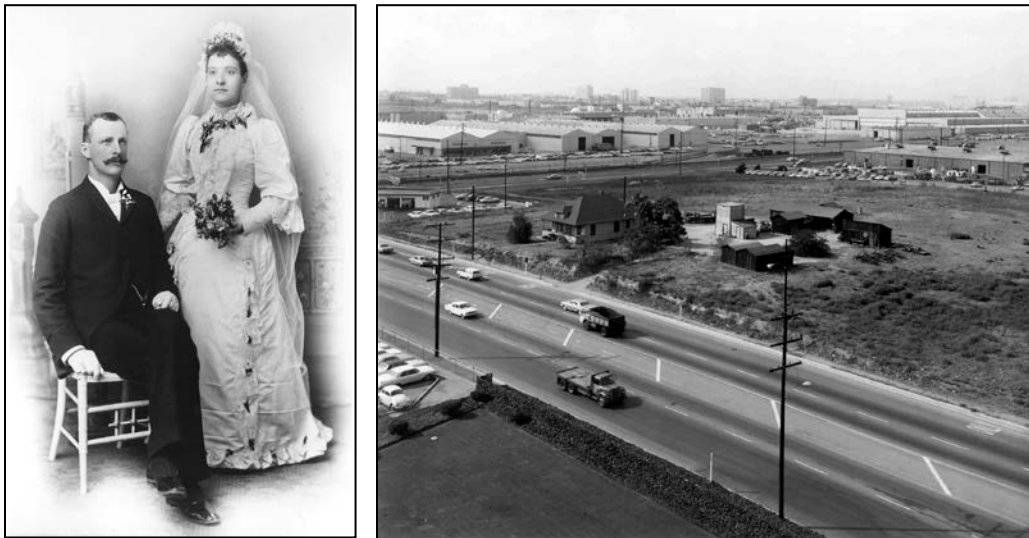


*Threshing grain at El Segundo in 1905  
(Photo courtesy of the Historical Society of Centinela Valley)*

Prior to the construction of the Douglas Aircraft El Segundo factory, the land was used to grow wheat and lima beans. Frank Bennett and his son Edward sharecropped portions of the land from 1900 to the 1930s. Frank's brother Andrew also sharecropped the land where Mines Field (currently Los Angeles International Airport [LAX]) was eventually constructed in the 1920s. In 2001, Edward Bennett recalled, "My father was a poor sharecropper with five

children. No farmer could buy any property in this area [in El Segundo]. The cost was just too great! It was just out of the question... Most of the land out here was so expensive that the big landowners would lease it to the ranchers for one quarter of the crop. Occasionally, some of the landowners would get greedy and ask for a third, but the farmer could not pay a third, because he paid all of the expenses. That included planting, fertilizing, harvesting, selling and handling. Then the sharecropper would send the landowner a check. By the time the threshing and all the expenses were paid, if the farmer paid up a third, he didn't have anything left. He didn't have too much left at a fourth of his crop unless he had a very good crop."

The land in the former Area A (on the southeast corner of El Segundo Boulevard and Aviation Boulevard) of Los Angeles AFB was lived on and farmed by Adolph (1859-1931) and Emma (1869-1966) Leuzinger. From 1906 until the late 1970s, the Leuzinger family had a house near the northeast corner of Aviation Boulevard and El Segundo Boulevard. They had another house on the Area A location until the early 1950s.



*(Left photo) Adolph and Emma Leuzinger on their 1893 wedding day  
(Photo courtesy of the Historical Society of Centinela Valley).*

*(Right photo) The Leuzinger house in the 1960s northeast of the intersection on Aviation Boulevard and El Segundo Boulevard. Los Angeles AFB is in the background.*

In the late 1920s, two small factories were constructed in El Segundo south of Mines Field. The Pickwick Motor Coach factory manufactured buses and was built near the southeast corner of Imperial Highway and Aviation Boulevard. Moreland Aircraft Incorporated had their El Segundo facility on the southeast corner of the Douglas Street and Imperial Highway and built a few trainer airplanes from about 1928-1931.

Donald W. Douglas (1892-1981) started his aircraft company at Santa Monica in 1920. He obtained the Moreland factory in 1932. Douglas had the controlling interest of a subsidiary he negotiated with John K. Northrop (1895-1981) who later became an aviation legend.

Northrop produced aircraft designs at the former Moreland factory that was renamed the Northrop Division of the Douglas Aircraft Company. Fifteen employees started work at the plant when it opened for business. One of the earliest employees was a young designer named Edward H. Heinemann (1908-1991) who previously worked as a draftsman for Moreland Aircraft and the Lockheed Aircraft Company. Northrop mentored Heinemann in the skills of aircraft designing.

The first Douglas airplane John Northrop produced in El Segundo was the high-speed, all-metal Gamma passenger transport in 1932. In 1935, a Gamma 2B named the *Polar Star* became the first airplane to fly cross the Antarctic continent; it is now displayed in the Smithsonian Institution's National Air and Space Museum. The Northrop Division obtained the nearby Pickwick factory in 1934 to gain additional aircraft production space. Along with a few civilian airplanes, the Northrop Division also produced aircraft for the military such as the BT-1 bomber and the A-17. In 1937, John Northrop left Douglas Aircraft to start his own company in nearby Hawthorne that he named Northrop Aircraft Incorporated.

**1934**



**1935**



*The Northrop Division plant of Douglas Aircraft near the corner of Imperial Highway and Aviation Boulevard in El Segundo. (Photos courtesy of the Boeing Company)*

The Northrop Division plant was soon renamed the El Segundo Division of Douglas Aircraft. Ed Heinemann became its chief engineer. In the next few years, aircraft plants across America experienced an aircraft production expansion unlike anything that has ever occurred in American history. World War II erupted in Europe on 1 September 1939 and military airplanes were needed in unprecedented numbers.

The El Segundo Division stopped manufacturing civilian airplanes after the war started. Production of the DC-5 transport plane was soon halted after about a dozen were built. Prior to the Pearl Harbor attack, the El Segundo Division designed and then produced the A-20 Havoc (or DB-7 Boston) for the Lend Lease Program to England and France. During the war, the A-20 was mainly flown as a medium bomber by: England (who received 1,800 A-20s), France (received 80 before their collapse in 1940), the Soviet Union (received about 3,100) and the United States (1,962). The

El Segundo Division manufactured some of the first A-20s, but most were built in Santa Monica after 1940. By the time America entered the war, the SBD Dauntless dive-bomber had become the primary airplane produced by the El Segundo Division.

After the surprise attack at Pearl Harbor on 7 December 1941, the El Segundo Division and the adjacent North American Aviation plant on Imperial Highway prepared themselves for an enemy air attack. Both of the aircraft plants were covered with camouflage nets. Los Angeles had Army anti-aircraft crews along the coast, about 100 aircraft searchlights, around 200 air raid sirens, barrage balloons were deployed, and air raid wardens patrolled the city to ensure the blackouts completely darkened the city at night.



*The Douglas Aircraft El Segundo Division beneath camouflage nets during World War II. The future Los Angeles AFB can be seen in the uncovered area at the bottom left corner of this picture. (Photo from the Historical Society of Centinela Valley)*

Seventy years ago, on the night of 24-25 February 1942, the “Battle” of Los Angeles erupted in and around El Segundo. A few unidentified objects were spotted by radar that night 120 miles west of Los Angeles. The local anti-aircraft crews then went on high alert. The surprise attack at Pearl Harbor occurred less than 100 days earlier, and a Japanese submarine fired about a dozen shells at the Ellwood Oil Field near Santa Barbara just two days earlier on 23 February, so tensions were high. At about 3:00 A.M., the anti-aircraft gun crews around Santa Monica thought they spotted enemy airplanes and opened fire. The other gun crews nearby then joined in and shot into the sky. The shooting spread south for about 40 miles from Santa Monica to Seal Beach. The anti-aircraft crews at Fort MacArthur also fired into the sky. The population of Los Angeles woke up to air raid sirens wailing, anti-aircraft guns firing, shells exploding, and they could see the searchlights looking for targets in the sky. The shooting continued for about an hour. The next morning, no one was sure what happened. Los Angeles was not attacked, no airplanes were

confirmed or shot down, so the Army and Navy concluded that it was a false alarm. People still debate whether there were any airplanes flying near Los Angeles that night.

Edward Bennett was in his home on Imperial Highway a couple of blocks west of the El Segundo Division when the guns started firing around his ranch. “All of the sirens went off, and the anti-aircraft guns out on the sand dunes were shooting. I had a very good pair of binoculars and went out in the yard. I could see three planes way, way high... There were a lot of [search] lights going up. That was probably why a lot of people said there weren’t any airplanes there at all. It was nighttime, but I guess a lot of the lights went up and the anti-aircraft was going off, and they were shooting out on the sand dunes. There were gun emplacements all around down there shooting up at the air.”

In 1942, due to the great demand, the El Segundo Division was building portions of the SBD Dauntless dive-bombers in an uncovered 75,700-square foot area in order to meet the delivery schedules. Out of necessity, the Defense Plant Corporation soon began extending the aircraft production facilities at the Douglas El Segundo Division. The Navy Department’s Bureau of Aeronautics sponsored the southern expansion of the aircraft plant towards El Segundo Boulevard. This included the construction of the 1 million-square foot aircraft assembly building (currently Building 902 of Northrop Grumman that is on the northern border of Los Angeles AFB) that was completed in March 1943. This was when the land that would later become Los Angeles AFB was developed from a wheat field into an aircraft plant. After 1942, most of the aircraft facilities of the El Segundo Division were owned by the government. The current Building 229 was built during the war in 1942 and was used by Douglas for “Special Projects” that may have been classified by the Navy.



*(Left) SBDs, barrage balloons, and building expansion at the El Segundo Division in 1942  
(Right) The Douglas El Segundo Division beneath aircraft camouflage nets during World War II.  
(Photos courtesy of the Boeing Company)*

World War II brought great expansion and production to the El Segundo Division. The Douglas employees at the plant numbered 700 in 1939, but increased to a height of 21,292 in 1943. Most of the working-age men were in the military, so the women of Los Angeles stepped up to the

challenge at the El Segundo assembly lines and helped manufacture thousands of critically needed SBD Dauntless dive bombers for the war effort. Across the nation, an estimated six million women worked for the war industry producing military airplanes, ships, vehicles, equipment, ammunition, and other materials. These vital women were affectionately symbolized by Norman Rockwell's 1943 image of "Rosie the Riveter."



*SBD Dauntless assembly lines at El Segundo in 1943  
(Photos courtesy of the Boeing Company)*

Sylvia (Traver) Zemo was one of the women riveting airplanes at the El Segundo Division. In July 2001, she talked about her employment at the Douglas plant from 1942-1944. "I was patriotic. I wanted to help... I either drove the rivets or I bucked them... It took quite awhile to first drill all those holes for the rivets, mark where you drilled all those holes, and then put the rivets in. It took quite awhile. You did your job and sent the airplane down the assembly line, and then somebody else did the next job on it and it kept moving.

"The riveting was so loud we couldn't talk to each other. You couldn't talk to your boss. They had little soundproof rooms if you needed to talk to him about anything. He would go in there with us and we'd tell him what the problem was, and then we would go back to work. You had to do it that way, because you couldn't hear each other.

"A man at Douglas went crazy from the noise. One day, the noise was so intense that he couldn't take it. He went screaming through the plant, all over. They finally had to subdue him. He really went crazy from the noise. I guess he had a nervous breakdown from it. He never came

back... We were supposed to wear earplugs, and not everybody wanted to do that, but it sure helped a lot. If you couldn't hear anyway, you might as well wear the earplugs.

“When the war picked up, they worked us awfully hard, 12 hours a day, seven days a week. If we got too weary, they would give us an hour off to go into this room where they had these cots. They'd let us lie down. Then they'd come in an hour and wake us and send us back to work. Those long hours lasted maybe a couple of months...”

Even high school boys worked for the El Segundo Division during the war. William Johnson of Torrance, California, was one of them. “I was 17 about the time that I got to El Segundo. When I was going to Inglewood High School at 16, they had what they called the ‘four-four plan.’ You could work four hours and go to school four hours. So I'd go to school in the morning for four hours and then I'd work in the afternoon at the aircraft plant... I worked on parts assembly. We were called “assemblers” as that was our job title... We would put all of these parts together, drill them and start riveting everything. Once one was completed, we'd start assembling the next one. We'd spend the next two or three hours putting together the next bulkhead, then the next shift would come along and finish off what we had started. I still take great pride in the fact that my partner and I could accomplish more in our five or six hours than the others could. We were good! We were very good (laughs)!... Patriotism was at an all-time peak, and we all felt we were doing a fantastic job helping to win the war. Working on the airplanes gave us self-satisfaction. We knew we were producing something that would end the war in a timely manner. There were patriotic flags and posters around the plant.”



*An SBD Dauntless flying over an aircraft carrier in 1942  
(Photo courtesy of the Boeing Company)*

At the height of its production, the El Segundo Division produced 12 SBDs a day. Navy and Marine Corps squadrons flew the great majority of the Dauntlesses, but the Army Air Forces also flew the dive-bomber (designated the A-24 Banshee) in the Pacific and over France. All of



the hard work and sacrifices shared by the employees at the El Segundo Division paid off when SBD pilots literally turned the tide of the war in the Pacific.

The Dauntless proved to be the most successful dive-bomber produced by the United States in World War II. On 4 June 1942, Navy SBD pilots destroyed four Japanese aircraft carriers during the Battle of Midway and turned the momentum of the war against Japan. Dauntless pilots sank two additional Japanese carriers before it was over. In a war based largely on naval power and occupying islands, the loss of the aircraft carriers was a catastrophe that Japan never recovered from. SBD pilots sank many other Japanese ships as the fighting continued. A Douglas brochure stated, "Secretary of the Navy Forrester called it [the SBD], 'probably the most destructive single weapon in the Navy's arsenal.'" The Dauntless sank a greater tonnage of Japanese shipping than any other airplane during the war. Few aircraft in history have contributed as much towards military victory as the SBD Dauntless did in the Pacific during World War II.



*Raising the flag in the morning and constructing SBDs during the night at the Douglas El Segundo Division during World War II (Photos courtesy of the Boeing Company)*

By the conclusion of the war, Ed Heinemann made a prominent name for himself in aircraft design as the chief engineer of the El Segundo Division. He was responsible for the design and development of over 10 airplanes, beginning with the Moreland M-1 trainer. His designs included the SBD Dauntless, A-20 Havoc, and the A-26 Invader (the A-26 flew combat missions in World War II, Korea and Vietnam). From 1 July 1942 to 31 August 1945, the El Segundo Division manufactured 5,414 airplanes. Douglas Aircraft delivered 5,396 SBD Dauntless dive-bombers during World War II, some of which were built in Tulsa, Oklahoma. Douglas Aircraft plants built over 13,000 A-20, A-26, and SBD airplanes during the war, and Heinemann was just getting started.

After World War II, the El Segundo Division was dedicated to fulfilling Navy contracts for the rest of its existence. The Bureau of Aeronautics and Douglas Aircraft agreed on an annual lease [Noy (R)-60090] for the El Segundo Division facilities. The Bureau of Yards and Docks represented the government. The aircraft plant was then contractor-operated for aircraft production by the Douglas El Segundo Division. Douglas Aircraft owned the land and facilities north of the main aircraft assembly facility (Building 902). On 1 May 1948, the Defense Plant Corporation transferred all rights, title, and interest in the government property at the El Segundo Division to the Department of the Navy. The Navy designated the Douglas plant the “Naval Weapons Industrial Reserve Plant (DoD #26).”

The aircraft production at the El Segundo Division was greatly reduced during the years between World War II and the Korean War from September 1945-June 1950. Production of the SBD Dauntless was halted in July 1944, but its replacement, the A-1 (initially designated the AD) Skyraider, had its first flight in 1945 and would be manufactured at El Segundo for the next 12 years. In 1950, employment at the plant was reduced down to about 7,200 employees.

Ed Heinemann designed two notable Navy research airplanes that were built by the Douglas El Segundo Division in the late 1940s. They were the D-558-1 Skystreak and the D-558-2 Skyrocket. Three examples of each airplane were manufactured, and they were flight tested at Muroc Army Airfield (later renamed Edwards AFB), California. The Skystreak program flew 229 flight tests from 1947 to 1953 and provided vital information about flight characteristics at the lower transonic speed range (approximately Mach 0.7 to Mach 1).



*The Skystreak (left photo) and the Skyrocket were designed and built by the El Segundo Division. In 1953, the Skyrocket (right photo) became the first airplane to reach the speed of Mach 2. (Photos courtesy of the Boeing Company)*

The Skyrocket became the first airplane to reach the speed of Mach 2. The National Advisory Committee for Aeronautics (NACA, the predecessor to NASA) pilot Scott Crossfield temporarily became the fastest man on earth when he established the new speed record after reaching 1,291 miles per hour (Mach 2.005) on 20 November 1953. The Skyrocket program flew a total of 313 flights from 1948 to 1956 and set world records for both speed and altitude.

The Skyrocket that first reached Mach 2 is currently on display in the Smithsonian Institution's National Air and Space Museum; another Skyrocket can be seen at the Planes of Fame Museum in Chino, California; and the third D-558-2 is displayed at the Antelope Valley College in Lancaster, California.

Although the Navy owned most of the facilities at the El Segundo Division, the aircraft plant did not have a military appearance and only a few Navy personnel were present. The plant appeared to be a civilian factory owned by Douglas Aircraft. Many of the Douglas employees had no idea that the majority of the plant was Navy property. One former Douglas engineer, who worked at El Segundo for several years, was surprised to learn in 2001 that the Navy owned most of the land and facilities at the El Segundo Division. "I didn't realize that there was Navy-owned property at the El Segundo plant until recently. I never heard that. I've recently talked to several of the people I know who were in the plant during those years who didn't know that either. I never noticed the Navy signs if they were on the fence around the plant. As far as we were concerned, it was a Douglas Aircraft Company plant, and it remained so from the time I got there until the time I left."



*The 2,500<sup>th</sup> Skyraider built in El Segundo was displayed in Building 902 at an open house in 1954. The Skyraider was manufactured by the El Segundo Division for 12 years.  
(Photo courtesy of the Boeing Company)*

During the Korean War (1950-1953), the El Segundo Division produced hundreds of Navy and Marine Corps combat airplanes. The A-1 Skyraider was mass-produced at El Segundo until 1957. The Skyraider excelled as a ground support dive-bomber, and it could carry more ordnance than the B-17 heavy bomber of World War II. The rugged A-1 attacked ground targets such as enemy troops, vehicles, guns and bunkers. The Douglas F3D Skyknight became the world's first carrier-based jet night fighter. On 2 November 1952, a Skyknight became the first jet to shoot down another jet (a Yak-15) in night combat. Employment greatly increased at the plant due to the war, and by the end of 1953 the El Segundo Division had 21,927 employees.



*The Douglas El Segundo Division during an open house on 14 November 1954. These buildings were within the current property of Los Angeles AFB and they include: (from left to right) the aircraft gunnery range, the aircraft paint booth, and the modification building. The El Segundo built airplanes on display include: (from left to right) AD-5 Skyraider, AD-6 Skyraider, A4D Skyhawk, A3D Skywarrior, F4D Skyray, F3D Skynight, and the A2D Skyshark. (Photo courtesy of the Boeing Company)*

In 2002, most of buildings on Los Angeles AFB (not including Area A) were built by the Navy in the early 1950s for aircraft production by the El Segundo Division. Building 219 (the former 61<sup>st</sup> Air Base Group [61 ABG] Headquarters) was built in 1953 and was used by Douglas as an aircraft paint booth that could simultaneously accommodate seven airplanes. Building 220 (former base Thrift Store) was constructed in 1953 as a boiler house. Building 240 (former Base Supply), Building 242 (former Fitness Center) and Building 244 (former Base Exchange) were built in 1954 to assemble the A4D Skyhawk. Building 215 (former Auto Skills Center) was constructed around 1952 as a “modification building” and for equipment storage. Building 208 (former Child Development Center) was built in 1954 and was used as a fuel tank slosh test facility. Building 212 (former Operational Contracting building) was constructed in 1957 as a local headquarters for the Bureau of Aeronautics. Building 200 (former Medical Clinic) was built in 1959 as a Douglas fuel

systems test laboratory. Building 201 (part of the former Medical Clinic) was also constructed in 1959 and used as a compressor building. Building 205 (Fitness Center from 1964-2000) was built in 1959 as a jet engine silencer facility. Several other Navy-built buildings were previously on the base, but they were removed before 2002. To see the locations of the buildings mentioned above, go to the aerial photographs of the base on pages 42 and 43.

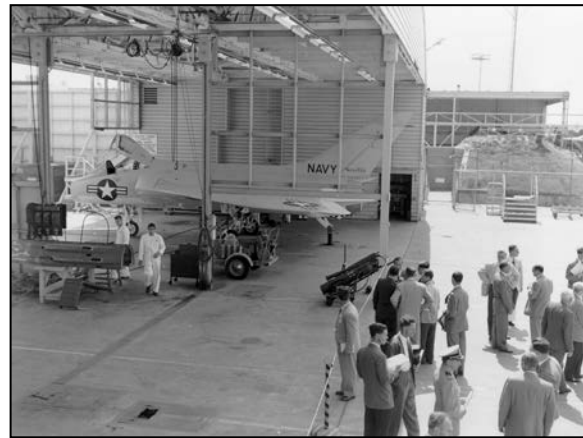
The El Segundo Division used the former parking lots on base to park airplanes in the 1950s. A large parking lot previously existed between the 2012 Fitness Center (Building 286) and Building 229 that Douglas used to park aircraft after they went through the production line but required additional parts or work. By mid-2005, Los Angeles AFB removed this parking area to make way for the construction of Building 272 and the Child Development Center (Building 281). Airplanes were also parked in the area between Building 286 and Douglas Street. The parking lot south of Building 271 was used for Douglas employee car parking.

At the site of the 2012 Child Development Center, the Navy had an aircraft gunnery range (built in 1944) that Douglas used to calibrate aircraft weapons and to test the effects of gun firing to the aircraft structures. Bruce Cunningham was an El Segundo Division liaison engineer from 1953-1961. In 2001, he described how the gunnery range was used when he was there. “It had big sandpits under the roof to bore-sight the guns on the ADs and the A4Ds... Most of the time that facility was used for the new installation of aircraft guns. If they changed a gun, or added a gun, or wanted to do some special testing on some special guns, they used this facility. We didn’t hear a lot of gun firing out there. When they did, you could hear it... As I remember it, they would do only special testing and spot-checks.”

1954



1955



*(Left photo) An A4D at the aircraft gunnery range (Courtesy of the Boeing Company)*  
*(Right photo) An F4D Skyray at the gunnery range (Photo courtesy of the Museum of Flight)*

The Douglas airplanes manufactured by the El Segundo Division generally passed through specific areas of the plant before they were completed. The production of the airplanes began at the north end of Building 902. The assembly lines went from north to south in the enormous building as the airplanes were being manufactured. In the 1950s, several different aircraft were often simultaneously manufactured within Building 902.

Bruce Cunningham described the El Segundo aircraft production process in the 1950s. “Through my tenure there, we were building the A3D, the A4D, and the F4D. The A2D and the experimental stuff also went through there. The plant being the size it was, it got crowded, but that didn’t mean the aircraft quality deteriorated, or the way they treated us... South of the firewall, they would start putting the airplane together in the jigs. They’d bring the pieces in [the] assembly [area]. As they moved them down the line, the pieces would grow into an airplane. All the pieces would go on at certain sections down the production line. Preplanned programs and preplanned positions installed instrument panels and other equipment such as radios, guns, bomb racks, etcetera. All those would go on at certain positions on the line. When you started out back at the firewall, you’d see maybe a fuselage and a whole bunch of pieces lying around it in bins and stockrooms. As I recall, when they came out of the door at the end, they were complete airplanes, including the A3Ds. That’s a large airplane to go down that building.” By 1955, Douglas also began assembling the A4D in the former Buildings 240, 242 and 244. The Skyhawk was the only aircraft assembled within the property of Los Angeles AFB.

**1954**



**2012**



*Building 902 was the main aircraft production facility of the Douglas El Segundo Division.*

*(Left) Building 902 and Building 229 during an open house (Photo courtesy of Boeing)*

*(Right) Northrop Grumman’s Building 902 adjacent to Los Angeles AFB*

*(Photo by Jim Gordon SMC/PAR)*

During the 1950s, once an airplane passed through Building 902, it made a couple of stops prior to its completion. The airplanes were towed around the plant by tugs to get from one location to the next after they left the production facility. Some of the airplanes had their guns tested at the gunnery range. When needed, the airplanes were painted at the paint booth in the former Building 219. Some of the airplanes had panels and parts that were already Navy blue when they were assembled and did not need to be painted. If there was a shortage of parts and the airplane was not complete, it was parked outside just south of Building 902 until it was fully assembled.

The airplanes were transported from the El Segundo Division plant to LAX. Douglas had a few large hangars in their B-3 Area at the southeastern section of LAX near Imperial Highway. A tug would tow the airplane north up Douglas Street to the airport. William Small was a Douglas

design engineer at El Segundo from 1956-1961. In 2001 Small recalled, “Once they [the airplanes] were moved off the production line, the object was to get them out of our way, because we had more coming. I’m not sure how many airplanes came off a day, but we were constantly moving airplanes, primarily at night. I’m sure they towed the airplanes on third shift so we wouldn’t get involved in the traffic on Imperial Highway. They blocked off the street and towed the airplane across to B-3. We might have had as many as 50 airplanes over in B-3 in the process of waiting for a part to be installed that had been in short supply when it passed through its installation point, or getting ready to fly, or getting ready to be delivered. There were all kinds of statuses.”



*Douglas Street was a private road that the El Segundo Division used to move airplanes to LAX. (Left photo) Douglas Street in 1958 where it meets with El Segundo Boulevard (Right photo) An A3D that had a problem as a tug pulled it north on Douglas Street in 1958. The former Building 212 is in the background. (Photos courtesy of the Boeing Company)*

The El Segundo Division conducted their final evaluations on the airplanes it manufactured from the B-3 hangars at LAX. The recently built airplanes would have an engine run-up, and then a Douglas pilot would fly the airplane to test its performance. Any defects that were found during the flight would be corrected. A Navy acceptance pilot would then fly the airplane and approve it for delivery once he was satisfied. The Navy would finally fly the airplane from LAX to a Navy base.

Bruce Cunningham was involved in the A3D production flight tests at LAX and described the process. “The chief pilot assigned the pilots and the aircraft. The first thing the pilot did, of course, was find out what the airplane was like on the ground before it went up. How many squawks did it have? How did it react? Did it have an engine problem? Have they had any problems with this airplane?”

“The pilot would do an engine run-up when he got in the airplane. He’d do his own preflight, check out the engine and taxi the aircraft. Then he would take off and fly a predetermined flight pattern, do stalls, turns, see how that aircraft trimmed out, how the engine ran. The pilot would do all the things that he would expect the Navy to do other than land aboard a carrier; we didn’t do that in production test. He would test the aircraft and approach the

boundaries of the expected envelope: top speed, dives, G-loading, rate of roll, all the things that the Navy would be doing with the airplane.

“I was on the A3D and did the same thing... We’d preflight the airplane, take off, and head out for the designated flight test area. It was out of the way of airliners and private aircraft, usually over Edwards [AFB] or out over the ocean. We would go through all the functions that the airplane would be expected to do in flight, including radio and electronics... When we came back to the hangar, it was my job to review all the flight squawks and determine what was to be done, if it needed engineering... Then we’d go back and fly the airplane again... The Navy would come in and do the same identical thing. They’d go out and do the same flight test within the envelope and write up the flight squawks.

“When the Navy was satisfied the airplane met their requirements, they’d sign it off and say, ‘OK. Navy acceptance is on this date.’ Then the Navy waited until they got ready to deliver the airplane someplace. I don’t think we ever got an A3 out of there in less than two company flights. Sometimes there was one Navy flight, but more a lot of times. The Navy liked to fly the airplane.”



*The three large white Douglas Aircraft B-3 hangars at LAX on 15 July 1954. The B-3 hangars were later removed. The historic Hangar No. 1 can be seen at the lower left, and the two-lane Imperial Highway is behind the hangars.  
(Photo courtesy of the Boeing Company)*

The El Segundo Division produced more Navy attack aircraft during the 1950s than any of its competitors. To keep pace with the Navy contracts, Douglas opened additional California production facilities in Torrance and Palmdale. The El Segundo Division was one of the nation’s



major military aircraft manufacturing plants during the decade. It produced airplanes from concept to finished product, going through each of the manufacturing phases, research, design, development, testing, tooling, fabrication, assembly and customer service.

Ed Heinemann's genius in military aircraft design was recognized throughout the aviation world by the 1950s. He was nicknamed "Mr. Attack Aviation" by the Navy for the many attack airplanes he designed. William Small (Douglas design engineer) spoke about Ed Heinemann, "Ed was a very famous aircraft designer... [who] had the corner on the market for the Department of the Navy because the Navy respected him. I believe that's how we got so many airplane contracts. We were manufacturing five major aircraft for the Navy when I arrived on the scene in October of 1956: the A3D, A4D, F4D, F5D and the AD... He [Heinemann] was a man that everyone had awe for because he designed so many airplanes."



*Ed Heinemann with an A4D in front of the B-3 hangars at LAX in 1956  
(Photo courtesy of the Boeing Company)*

Bruce Cunningham (El Segundo Division liaison engineer) said in 2001, "I probably heard of Ed Heinemann the second day after I was hired. Ed Heinemann was a genius in his own right... Everybody who worked for Heinemann recognized his genius. The Navy recognized it. I interviewed Heinemann one day for the book I wrote [*Douglas A3D Skywarrior*, 1998]. His philosophy was, when you design an airplane, if it looks like it ought to be a good airplane, it's going to be a good airplane if you put everything into it. He also said, 'When I design an airplane I put an additional 'EHS factor' (Ed Heinemann factor of Safety). I add 10% strength to everything.' He stood up for what he wanted... Heinemann was one of the most respected

designers in the aircraft industry, particularly by the Navy. The Navy just about thought that Heinemann walked on water... Heinemann was the most respected man I know of with the Navy, with the people that worked for him, and those who knew him.”

In 1954, Heinemann received the prestigious Collier Trophy from President Eisenhower for his contributions to the advancement of aeronautical science for his design of the delta wing F4D Skyray. It would not be the last time Heinemann was recognized by a president of the United States.



*Ed Heinemann being awarded the Collier Trophy from President Eisenhower in 1954 for designing the delta wing F4D Skyray.  
(Photo courtesy of the Boeing Company)*

In the early 1950s, the El Segundo Division was even involved in the highly classified construction of the TX5 and TX7 nuclear bombs. As described by Ed Heinemann in his autobiography, “...we did proceed and were assigned to construct the inner and outer casings of the bombs as well as the control boxes. Sandia [Corporation] would manufacture the explosive charge and the nuclear elements. We used a warehouse on the El Segundo grounds for the project. It was located near the railroad tracks which passed through the factory complex...”

The Navy and Marine Corps airplanes manufactured by the Douglas El Segundo Division played important roles in the Vietnam War. The A-1 Skyraider the Navy flew for combat missions during the Korean War was also flown for ground attack missions in Vietnam. The Air Force also flew the A-1 during the two wars. The El Segundo Division manufactured a total of 3,180 Skyraiders. The A-1 was the last propeller airplane produced by the division. The F3D Skynight was another El Segundo aircraft that was involved in both wars. The A4D Skyhawk was christened “Heinemann’s Hot Rod.” Skyhawks had extensive service in Vietnam for ground support missions, and were also flown in flight demonstrations by the Blue Angels. Production of the Skyhawk lasted

for 25 years and ended in 1979. The 70,000-pound A3D Skywarrior was the largest and heaviest American airplane to ever operate on an aircraft carrier and was used for bombing, reconnaissance and aerial refueling during the war.



*The A4D final assembly line on 3 March 1955.  
This aircraft assembly building was later converted into the Fitness Center  
(Building 242) at Los Angeles AFB. The A4D was the only aircraft assembled  
within the property of Los Angeles AFB. (Photo courtesy of Boeing)*

The Navy did not continue signing new attack aircraft contracts with Douglas Aircraft by the late 1950s. Ed Heinemann left the El Segundo Division in 1959 when he was promoted to Vice President for Military Aircraft at Douglas, but he resigned in 1960. As the production of attack aircraft declined, so did the necessity to maintain the plant at El Segundo. The Douglas El Segundo Division and the Navy did not renew the annual facility lease. The A4D was the last Douglas airplane assembled by the division and aircraft production ended at El Segundo on 5 January 1962. The A4D assembly was transferred to the Douglas manufacturing plant in Long Beach, California. The El Segundo engineers were gradually transferred to Long Beach, and the assembly line employees were either laid off or transferred as the airplanes stopped being produced.

Bruce Cunningham of Douglas summarized the contributions of the El Segundo Division during the 1950s. “Between [19]53 and [19]60, we were the major supplier of Navy aircraft to

the Navy. We had more different models going to the Navy than any other company in the United States... While we were at El Segundo, we built a good product that the Navy needed, when they needed it... We were the top of the line... El Segundo was a great place to work.”



*The main entrance to the Douglas El Segundo Division on Aviation Boulevard in 1953  
(Photo courtesy of the Boeing Company)*

The Douglas Aircraft Company manufactured airplanes in El Segundo for 40 years. The Northrop Division produced both civilian and military aircraft during the initial years as the factory expanded in the mid-1930s. The El Segundo Division manufactured Navy and Marine Corps attack aircraft through three wars and made significant contributions to American air power. At least three Douglas airplanes manufactured at El Segundo are currently in the Smithsonian Institution’s National Air and Space Museum because of their history-making achievements. Ed Heinemann was one of the greatest aircraft designers in history. He designed and developed over 20 different airplanes and was enshrined in the Aviation Hall of Fame in 1981. President Reagan awarded Heinemann the National Medal of Science at the White House in 1983. Ed Heinemann died in 1991 at the age of 83.

After Douglas Aircraft left El Segundo, the Navy no longer needed its facilities at the aircraft plant. On 6 January 1962, the Navy took the first steps to declare its 111-acre El Segundo facilities as excess effective 30 September 1962. The Air Force contacted the Navy in April 1962 about obtaining approximately 50 acres on the southern end of the site for use as support facilities for the Space Systems Division (organizational predecessor to SMC). Space Systems Division had no interest in acquiring the enormous aircraft assembly building or the other facilities north of the current Los Angeles AFB. After negotiations, the Navy transferred the requested 50 acres of the Naval Weapons Industrial Reserve Plant (DoD #26) to the Air Force in October 1962. The site was soon designated as Area B by Space Systems Division.

The Navy production plant property north of Los Angeles AFB (including Building 902) was acquired by the Air Force on 20 September 1963. North American Aviation occupied the site as a warehouse to store North American F-86 and F-100 production and machine tooling that had previously been stored at Mira Loma Air Station, California. North American Rockwell eventually acquired the entire plant and then sold it to Northrop in December 1978.

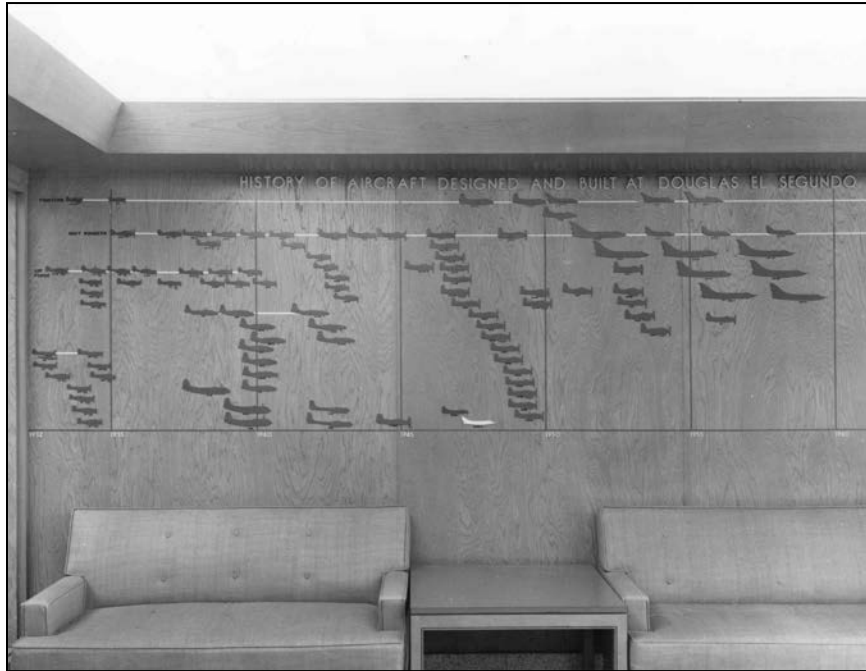
In early 2006, SMC moved its headquarters and space acquisition organizations from Area A and consolidated them at the current location of Los Angeles AFB. In 2012, the only facility within Los Angeles AFB that was previously used by Douglas Aircraft is Building 229. The other original facilities of the base are now a memory and part of the history of Los Angeles AFB.



*Marine Corps pilots from El Toro Marine Corps Air Station, California, visiting the El Segundo Division on 20 March 1958 (Photo courtesy of the Boeing Company)*

## **APPENDICES**

- A. Airplanes Produced By the Douglas El Segundo Division
- B. Converting an Aircraft Plant Into an Air Force Base
- C. Facilities Removed From Los Angeles AFB before 1982
- D. The Douglas Aircraft Buildings at Los Angeles AFB in 2001
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- F. Aerial Photos of the Douglas El Segundo Division and Los Angeles AFB
- G. Los Angeles Air Force Flight Facilities at LAX (Los Angeles International Airport)
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*The lobby of the Douglas El Segundo Division on 26 January 1961 showing the numerous aircraft that were designed and built here. (Photo courtesy of the Boeing Company)*

**Airplanes Produced by the Douglas El Segundo Division:**

Gamma-Skychief  
Gamma-Polar Star (displayed in the Smithsonian Institution)  
BT-1  
A-17  
DC-5  
A-20  
SBD Dauntless (thousands manufactured at El Segundo) (displayed in the Smithsonian Institution)  
A-1 Skyraider (3,180 manufactured at El Segundo)  
D-558-1 Skystreak  
D-558-2 Skyrocket (displayed in the Smithsonian Institution)  
F3D Skynight  
A2D-1 Skyshark  
A3D Skywarrior  
F4D Skyray  
F5D Skylander  
A4D Skyhawk (the only aircraft that had an assembly line within Los Angeles AFB)

## Los Angeles AFB and the Douglas El Segundo Division Converting an Aircraft Plant into an Air Force Base

1963



*The entrance to Los Angeles AFB on El Segundo Boulevard soon after the Air Force acquired it.*

*The Air Force renovated the interiors of these buildings and worked in them for decades. The base eventually removed all of these buildings over a 44-year period. This photo was taken on the 2012 site of the parking lot between the Commissary and Base Exchange buildings. Building 250 is on the left, Building 208 is in the distance at the center, and Buildings 240 through 244 are in the distance at the right.*



1963



1963



*(Left photo) The seven 60,000-gallon water storage tanks and the water pump house (former Building 223) that were all built in 1942 as a fire protection deluge system for Douglas Aircraft. The tanks were located on the 2012 site of Building 272. The Air Force removed the water tanks in September 1964 and Building 223 in 1997.*

*(Right photo) The aircraft gunnery range was constructed in 1944. The Air Force removed the range in 1964. The range was located on the site of the 2012 Child Development Center.*

1963



1963



*(Left photo) Douglas Aircraft used these three buildings as instrument laboratories. In the background to the right is the former Building 208 and to the left is the former Building 200. The three laboratories were located near the 2012 Medical Clinic (Building 210). The buildings were removed by the Air Force about 1964.*

*(Right photo) The aircraft fuel pit located south of the 2012 base Fitness Center adjacent to Douglas Street. The corner of the former Building 205 is at the right. The Air Force removed the fuel facilities and the underground fuel storage tanks in 1964.*

## Building 257

About 1964



1979



*Building 257 was built in 1953 and Douglas Aircraft used it as a scrap segregation facility. The Air Force used Building 257 as a thrift shop and a vehicle maintenance shop. It was located in the southwest corner of Los Angeles AFB, at the site of the 2012 Commissary (Building 251) parking lot. In the 1964 photo, the intersection of El Segundo Boulevard and Douglas Street can be seen in the rear. The Air Force removed Building 257 in 1981.*

## Building 250

About 1964



1968



*Building 250 was built about 1952, and Douglas Aircraft used it as a warehouse. The Air Force used Building 250 as a warehouse, a classroom, and as a motor pool. The Aerospace Corporation headquarters can be seen in the both of the photos. The Air Force removed Building 250 in 1981 so the current Commissary could be constructed in its place.*

# Douglas Aircraft Buildings Remaining at Los Angeles AFB in 2001

## Building 219

1954



2004



*The former Building 219 was constructed in 1953. Douglas used it as an aircraft paint booth. (Top) Building 219 in 1954 when it was an aircraft paint booth (Photo courtesy of Boeing). (Bottom photo) Building 219 after the Air Force renovated it into the 61<sup>st</sup> ABG Headquarters. Building 219 was located slightly east of the 2012 base Fitness Center (Building 286). (Photo by Joseph Juarez, 61 CS/SCSV)*

*Los Angeles AFB removed Building 219 in 2005*

## Building 229

1957



1958



1963



2012



*Building 229 was constructed in 1942 and is still part of Los Angeles AFB in 2012.  
It has been the oldest building on Los Angeles AFB since the early 1960s.*

- (Top left photo) A3Ds parked west of Building 229 (seen at the right). Douglas Aircraft used the building for “special projects.” (Photo courtesy of the Boeing Company)*
- (Top right photo) Building 229 (at the left) with A3Ds parked to the west of it. (Courtesy of Boeing)*
- (Bottom left photo) Building 229 soon after it was acquired by the Air Force.*
- (Bottom right photo) Building 229 in November 2012 when it was used as the base Thrift Store, the Outdoor Recreation Office, and as additional office/storage space.  
(Photo by Jim Gordon, SMC/PAR)*

## Buildings 240-244

24 August 1954



About 1956



*(Left photo) The construction of the former Buildings 240, 242 and 244 that Douglas Aircraft used to assemble the A4D Skyhawk. Aviation Boulevard is just beyond the three buildings that were located on the 2012 sites of Buildings 270 and 271 and the Gas Station (Building 253). (Right photo) Buildings 240-244 around 1956, Aviation Boulevard is at the right of the photo and El Segundo Boulevard is on the bottom. (Photos courtesy of the Boeing Company)*

About 1964



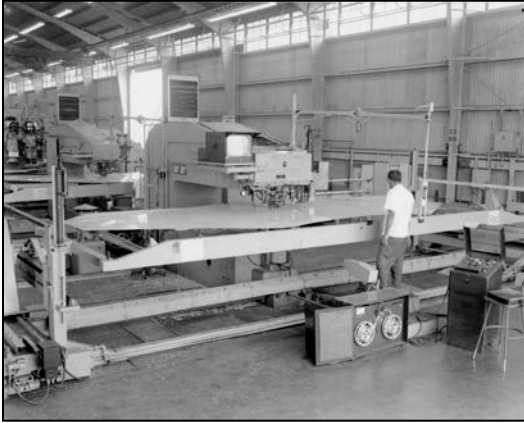
2002



*(Left photo) Buildings 242 (left) and 244 (right). Building 105 at Area A is in the background. (Right photo) The southwest corner of the former Base Exchange (Building 244) at the right, the former Fitness Center (Building 242) is in the center, and the former Base Supply warehouse (Building 240) is at the far left. (Photo by Lou Hernandez 61 CS/SCSV)*

## Building 240

1959



2002



*(Left photo) A Douglas Aircraft riveting machine for A4D assembly  
(Photo courtesy of the Boeing Company)*

*(Right photo) The Air Force converted the building into a warehouse for Base Supply  
(Photo by Lou Hernandez 61 CS/SCSV)*

*Los Angeles AFB removed Building 240 in 2003.*

## Building 242

1959



2002



*(Left photo) A Douglas Aircraft A4D wing assembly line (Photo courtesy of the Boeing Company)  
(Right photo) The Air Force converted the building into a warehouse and then into a fitness center  
(Photo by Lou Hernandez 61 CS/SCSV)*

*Los Angeles AFB removed Building 242 in 2003.*

## Building 244

1959



2002



*(Left photo) A Douglas Aircraft A4D Skyhawk fuselage assembly line  
(Photo courtesy of the Boeing Company)*

*(Right photo) The Air Force converted the building into the former Base Exchange  
(Photo by Lou Hernandez, 61 CS/SCSV)*

2002



2006



*The former Base Exchange (Building 244) at Los Angeles AFB  
(Photos by Lou Hernandez, 61 CS/SCSV)*

*Los Angeles AFB removed Building 244 in late 2006.*

## Douglas Assembling A4Ds in Buildings 240-244



*Aft fuselage assembly line in 1955*



*Riveting machine in Building 240 in 1955*



*Wing assembly at Building 242 in 1955*



*Building 242*



*Fuselage assembly at Building 244 in 1959*



*Building 244 in 1955*

*(Photos courtesy of the Boeing Company)*



## Building 215

1956



1956



*The former Building 215 was constructed around 1952, and was located on the site of the 2012 base Fitness Center and its grounds. Douglas Aircraft used the building as a modification facility and for storing equipment.*

*(Top left photo) An A4D parked in front of Building 215*

*(Top right photo) Visiting Boy Scouts looking at rows of A4Ds parked in between the former Buildings 215 and 219. (Photos courtesy of the Boeing Company)*

About 1964



2003



*(Lower photos) Los Angeles AFB used Building 215 as an Auto Skills Center*

*Los Angeles AFB removed Building 215 in November 2005*

## Buildings 200 and 201

1959



2002



1970



2002



*The former Medical Clinic (Buildings 200 and 201) at Los Angeles AFB*

*(Top left photo) Building 200 was constructed in 1959. Douglas Aircraft used it as an engineering test laboratory that developed and tested fuel systems in aircraft and missiles under various environmental conditions (Photo courtesy of the Boeing Company).*

*(Top and bottom right) The V-shaped former Medical Clinic. The Air Force used Building 200 as a prototype technical lab before it was used as a clinic. Buildings 200 and 210 were located on the same site of the 2012 Medical Clinic (Building 210) that replaced them.*

*(Bottom left photo) Building 201 (just west of Building 200) was also constructed in 1959, and Douglas used it a compressor building. In the 1970 photo, Building 201 was being used by the Air Force as a clothing sales store and it later became part of the Medical Clinic*

*Los Angeles AFB removed Buildings 200 and 201 in 2003.*

## Building 208

About 1964



2004



*Building 208 was built in 1954, and Douglas Aircraft used it as a fuel tank slosh test facility.*

*Building 208 was located on the northwest side of Building 270.*

*(Top right photo) The Air Force used Building 208 as a warehouse, for office space, as an NCO Club, and finally as a Child Development Center. (Photo by Terri Mathis 61 CS/SCSV)*

*Los Angeles AFB removed Building 208 in December 2004.*

## Building 212

1967



2002



*Building 212 was constructed in 1957 and the Bureau of Aeronautics used it as a local headquarters. The Air Force obtained the building on 7 March 1968.*

*Building 212 was located on the site of the base Parking Structure (Building 292).*

*(Bottom left photo) Building 212 when it was the headquarters of the 6592<sup>nd</sup> Support Group.*

*(Bottom right photo) Building 212 in 2002 as the Operational Contracting facility.*

*Los Angeles AFB removed Building 212 in November 2005*

## Building 205

1963



1989



*Building 205 was built in 1959. Douglas Aircraft used it as a sound-absorbing jet engine silencer facility. A completed jet aircraft could be locked inside and have its engine run at all the power settings, including full after-burner, without the noise escaping to disturb anyone. Building 205 was located between the 2012 base Medical Clinic and the Fitness Center. Los Angeles AFB used the building as the base Fitness Center from 1964-2000.*

*Los Angeles AFB removed Building 205 in 2001.*

## Building 220

2002



*Building 220 was constructed in 1953 and Douglas Aircraft used it as a boiler house. Los Angeles AFB used the building as a classified destruction facility and then as the Thrift Shop. Building 220 was located between the 2012 Fitness Center and the Child Care Center.*

*Los Angeles AFB removed Building 220 in November 2005*

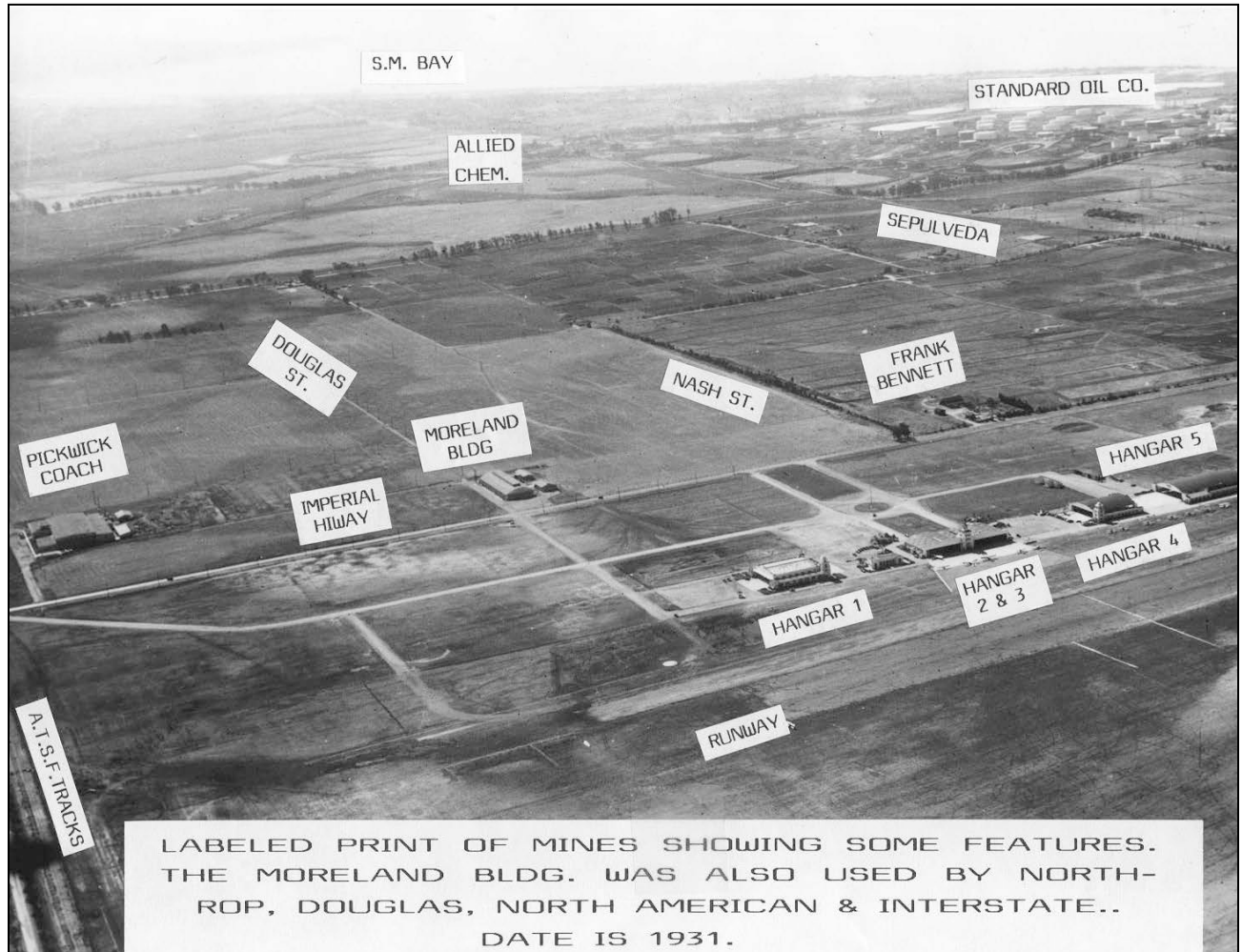
### **The Building Numbers for the Original 1963 Buildings at Los Angeles AFB**

It is unknown how long the Navy building numbers existed while Douglas Aircraft leased the facilities at Los Angeles AFB prior to 1963. The original Air Force building numbers existed from 1963-1966.

<b><u>Final Air Force Numbers</u></b>	<b><u>Original Air Force Numbers</u></b>	<b><u>Navy Building Numbers</u></b>
Bldg 200	Bldg 30	Bldg 41
Bldg 201	Bldg 36	Bldg 32
Bldg 205	Bldg 38	Bldgs 39 and 40
Bldg 208	Bldg 35	Bldg 42
Bldg 212	Bldg 41	Bldg 27
Bldg 215	Bldg 34	Bldg 38
Bldg 219	Bldg 33	Bldg 41
Bldg 220	Bldg 33A	Bldg 31
Bldg 221	Bldg 08420	Bldg 30
Bldg 223	Bldg 33B	Bldg 34
Bldg 229	Bldg 31	Bldg 28
Bldg 240	Bldg 32A	Bldg 43
Bldg 241	Bldg 32B	Bldg 43
Bldg 242	Bldg 32C	Bldg 43
Bldg 243	Bldg 32D	Bldg 43
Bldg 244	Bldg 32E	Bldg 43
Bldg 250	Bldg 29	Bldg 47
Bldg 257	Bldg 37	Bldg 46
Aircraft Gunnery Range		Bldg 29

## Aerial Photos of the Douglas El Segundo Division and Los Angeles AFB

1931



*El Segundo, California and Mines Field (renamed Los Angeles International Airport) in 1931. The Northrop Division of Douglas Aircraft began in the Moreland building in 1932, and it obtained the nearby Pickwick factory in 1934 to gain additional space. Aviation Boulevard is to the left of the Pickwick factory. (Photo courtesy of the Historical Society of Centinela Valley)*

1942



*The Douglas El Segundo Division after it expanded the former Pickwick bus factory. The plant is located between Aviation Boulevard (seen at the left), Imperial Highway (foreground), and Douglas Street (right). The Los Angeles AFB property is the undeveloped, open land south of the plant. (Photo courtesy of the Boeing Company)*

1949



*The Douglas El Segundo Division with Aviation Boulevard at the right. Portions of Los Angeles AFB can be seen: Building 229, the water tanks, and the aircraft gunnery range. (Photo courtesy of the Boeing Company)*



1954



*The Douglas El Segundo Division is in the foreground and Aviation Boulevard is at the right. The future buildings of Los Angeles AFB are in the foreground (left to right): Building 219 as an aircraft paint booth, the water tanks, the aircraft gunnery range, and Building 229.  
(Photo courtesy of the Boeing Company)*

## About 1956



*The Douglas El Segundo Division with Aviation Boulevard at the right and El Segundo Boulevard in the foreground. Many aircraft are parked within the property that would later become Los Angeles AFB. A number of A3Ds are parked east of Building 229, and A4Ds are lined up between the former Buildings 215 and 219. The 2012 Aerospace Corporation land has not been developed yet. (Photo courtesy of the Boeing Company)*

1964



*Los Angeles AFB soon after it was acquired from the Navy*

2001



*Los Angeles AFB soon after Building 205 was removed.  
With a few exceptions (Buildings 202, 207, 209 and 235), all of these buildings  
were originally constructed to support aircraft production for Douglas Aircraft.  
In 2012, the only base building in this photo that still remains is Building 229.*

2011



*Los Angeles AFB in 2011  
(Photo by Lou Hernandez SMC/PAR)*

## Los Angeles Air Force Flight Facilities at LAX

### Building 400



*The 16-acre Air Force B-4 flight facilities at Los Angeles International Airport in 1965. The B-4 hangar was on the south side of LAX, near Sepulveda Boulevard and Imperial Highway.*

The Air Force Western Development Division (WDD, the original organizational predecessor to SMC) began its flight mission at LAX no later than September 1954 when a B-25 was assigned to it. The aircraft were originally needed by the WDD to support the Atlas Program by providing rapid transportation throughout the United States, and to fly to non-airline destinations such as Edwards AFB; Patrick AFB, Florida; Norton AFB, California; and to the Convair plant in San Diego. Maj Gen Bernard Schriever had a C-131 with beds, a kitchen, and airline seats with desks that he flew to various destinations. When traveling to Washington, D.C., the flight took all day or all night and stopped to refuel at Tinker AFB, Oklahoma. The Air Force also contracted two regularly scheduled roundtrip C-54G flights a week between the west coast and Patrick AFB in 1957 with Flying Tiger Line and then with Overseas National Airways in 1958.

The airplanes at LAX were also needed for the Air Force pilots assigned to Los Angeles so they could fulfill their minimum annual flight requirements and maintain their flight pay; this flight time requirement is no longer mandatory for inactive Air Force pilots. In the 1950s, B-25s were assigned to LAX for the annual pilot proficiency requirements. The qualified jet pilots had to go to Edwards AFB or March AFB to fulfill their flight time requirement.

The WDD headquarters location at Arbor Vitae was partially chosen for its close proximity to the airport. In the 1950s, the Air Force Ballistic Missile Division (AFBMD, predecessor organization to SMC) flight operations at LAX were based with a contractor – the AiResearch Aviation Service Company west of Sepulveda Boulevard. The Air Force airplanes assigned to Los Angeles in the 1950s included varying numbers of B-25, C-45, C-131, C-47, L-27, T-29 and U-3 aircraft. The operations at LAX had a maximum of eight B-25s at one time. Prior to 1960, the AFBMD phased out its C-45s in 1957 and its B-25s when the last one left LAX on 12 December 1958.

The Navy leased the B-4 hangar at LAX from the city of Los Angeles so it could be used by the Douglas El Segundo Division for aircraft modification work. When aircraft production at the El Segundo Division declined, the Navy decided the B-4 hangar was no longer needed. The AFBMD then acquired the lease for the hangar in 1960.

From 1960-1972, the predecessors of SMC and the 61 ABG maintained the Air Force flight operations at the B-4 hangar (Building 400) with assigned pilots and aircraft maintenance personnel. The aircraft were flown as transports for the Los Angeles program directors, their staff, and distinguished visitors to various contractor plants, operating locations, and Air Force bases (Vandenberg AFB, Edwards AFB, Norton AFB, etcetera). The airplanes also continued to be flown for aircrew upgrade training, navigator training, annual minimum flying requirements, and to enhance pilot proficiency for the Air Force pilots that were assigned to Los Angeles. Sometimes the aircraft transported crucial parts or other necessities for vital missions in the days before overnight mail existed.



*(Left photo) The day the Air Force arrived at the B-4 hangar in October 1960. The C-131 in the photo was assigned to the commander of the AFBMD, Maj Gen Osmond Ritland.*

*(Photo courtesy of the Boeing Company)*

*(Right photo) Air Force personnel at the B-4 flight line in 1963*

The Mercury, Gemini and Apollo astronauts also used the flight facilities at B-4 when they came to Los Angeles in their T-38s. The astronauts sometimes visited Los Angeles to speak with the Air Force space program offices about their launch vehicles, tracking stations, or other related space matters.



*Six of the seven Mercury astronauts visiting the AFBMD at Los Angeles in 1959 (Left to right): Maj Gen Osmond Ritland (AFBMD commander), Gordon Cooper, Scott Carpenter, John Glenn, Virgil "Gus" Grissom, Alan Shepard, Gen Jimmy Doolittle, and Walter Schirra. In 1959, General Doolittle was the Chairman of the Board for Space Technology Laboratories (STL) at its R&D (Research and Development) Center that later became Area A of Los Angeles AFB.*

The number of airplanes at B-4 and their types varied over the years. In 1961, the Air Force had 33 airplanes at B-4, but the number of assigned airplanes was usually about 20. The assigned aircraft to B-4 during the 1960s included the C-47, C-118, C-131, T-29, T-39, and the U-3. The headquarters commander had a VIP aircraft with a general's placard on the exterior that was usually flown for the commander and/or the program directors and their staffs. The commander also had a T-39A available if he needed a passenger jet to fly to a destination in a hurry. The Air Force B-4 flight operations were terminated in 1972, and the assigned flight personnel and aircraft were relocated to Edwards AFB.



## Area A of Los Angeles AFB



*The Building 105 headquarters building and the Thor Agena display in Area A.  
The Thor Agena stood in front of the building from 1964-1975*

In 1955, the Ramo-Wooldridge Corporation purchased 41 acres on the southeast corner of Aviation Boulevard and El Segundo Boulevard in El Segundo. In 1956, a complex of seven buildings was constructed on the site to provide offices and laboratories for Ramo-Wooldridge. The Research and Development (R&D) Center complex was completed in 1958 for the employees of the Corporation's Space Technology Laboratories (STL). The Air Force purchased the R&D Center in December 1960. The complex was then occupied by The Aerospace Corporation which was created in June 1960. Aerospace remained in the complex until 1964 when it moved into its current location on El Segundo Boulevard across the street from Los Angeles AFB.



*In 1956, this farm was located at the current site of the Aerospace Corporation headquarters in El Segundo. Aerospace moved into its El Segundo headquarters in 1964.  
(Photo courtesy of the Boeing Company)*

Space Systems Division (organizational predecessor of SMC) then moved in 1964 from its headquarters at the nearby Arbor Vitae complex and into the offices recently vacated by the Aerospace Corporation. The Air Force soon designated the complex as Area A of Los Angeles Air Force Station. In 1987, Los Angeles AFS was redesignated to Los Angeles Air Force Base.

Previously, Los Angeles AFB was located on two separate sections of land (Area A and Area B) in the city of El Segundo. Area A had the SMC Headquarters and seven office buildings that were occupied primarily by the system program offices and staff offices. Area B (the current base location) housed the 61 ABG Headquarters and most of the support facilities. On 11 September 2003, the Los Angeles Local Agency Formation Commission completed a boundary change that transferred Area A from El Segundo and annexed it into the city of Hawthorne, California.



*Area A of Los Angeles AFB*

In the 1990s, the buildings in both Area A and Area B were old, deteriorating, seismically unsafe, and needed to be replaced or renovated. In April 1997, Lt Gen Roger DeKok (the SMC commander) assigned Col Dieter Barnes to lead an Integrated Product Team (IPT) to determine the best option for modernizing the buildings on the base. Colonel Barnes arrived at SMC a couple of months prior to his assignment as the 61 ABG commander to lead the IPT. The team believed that funding the new Area B facilities with the standard Military Construction (MILCON) support would be too costly to get approved and it would take over 12 years to complete. Colonel Barnes and the Area A Assessment IPT developed an innovative plan called the Systems Acquisition Management Support (SAMS) Complex project that proposed trading the valuable land at Area A to a real estate developer in exchange for the construction of new base facilities on Area B. Upon the completion of the new facilities, Los Angeles AFB would relocate all of its Area A personnel to Area B and then turn Area A over to the real estate developer. After much work and negotiations that continued for several years, on 23 January 2004, the Air Force signed the SAMS contract with the Kearney Real Estate Corporation.

The SAMS contract was the first time that the US government traded government land in exchange for new facilities. Los Angeles AFB received three modern buildings that complied with the seismic and safety design standards set by Los Angeles County. The new buildings constructed as part of the SAMS contract included two four-story offices (Building 270 and Building 271) and the Child Development Center (Building 281). This innovative contract saved the taxpayer over \$130 million in MILCON costs, and another \$3.5 million annually in operations and maintenance costs.

In April 2006, Los Angeles AFB finished moving out of Area A and transferred the SMC headquarters and its system program offices to Area B. SMC had a “Farewell to Area A” commemoration on 7 April 2006 when the SMC commander, Lieutenant General Michael Hamel, handed a large symbolic property deed of Area A to Hoonie Kang of the Kearney Real Estate Corporation. The base honor guard lowered and removed the US flag at Area A for the final time. On 22 April 2006, the base Honor Guard and Lieutenant General Hamel led a formation of three squadrons (about 300 airmen) from Isis Avenue down El Segundo Boulevard as they escorted the WDD Rock from the former Area A to its new location within the courtyard at Los Angeles AFB. The base property designations of Area A and Area B no longer applied after April 2006, because the base was consolidated within one location on the current property of Los Angeles AFB.



*The dedication ceremony of the Schriever Space Complex at Los Angeles AFB on 24 April 2006. These two office buildings were acquired through the SAMS project.  
(Photo by Joseph Juarez 61 CS/SCSV)*

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