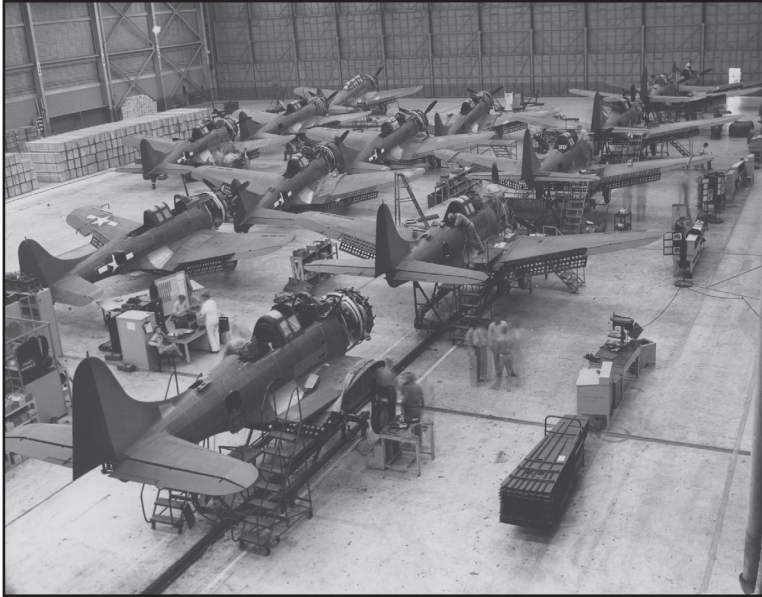


World War II and the Story of Douglas Aircraft Plants in Tulsa and Midwest City



*By Thomas A. Wikle**

The Second World War was a pivotal event in American history. Along with solidifying the United States as a world power, the war brought significant changes to the country's social and economic landscape with millions of men and women joining the armed forces or contributing to the war effort in other ways. American industry met the demand for war material through innovative manufacturing methods and by tapping into new sources of labor. In describing factors that contributed to Allied success, most historians credit miracles of production on the home front as being of equal importance to accomplishments on the battlefield. Along with engaging the country's major industrial centers, the war created opportunities for thousands of Oklahoma men and women to support America and its allies. Inside a windowless building nearly a mile long, workers in Tulsa assembled

DOUGLAS AIRCRAFT PLANTS

four-engine bombers, twin-engine attack planes, and dive bombers. East of Oklahoma City (now part of Midwest City), men and women built cargo aircraft used to transport soldiers, equipment, and supplies throughout Europe and the Pacific. In addition to helping launch Oklahoma's modern aviation industry, aircraft plants in Tulsa and Midwest City brought lasting economic and social change. This article traces the planning and construction of defense plants in Tulsa and Midwest City and describes the accomplishments of Oklahoma men and women who served as aircraft workers during the war years.

With signs of an expanding global conflict in Europe and Asia in the late 1930s, the United States took measures to improve military readiness. During the interwar years Congress had cut defense spending, slowing the procurement of weapons such as tanks and aircraft.¹ By 1939 the US Army was rated eighteenth best in the world.² Recognizing possibilities for being drawn into the conflict, President Franklin D. Roosevelt signed the Selective Training and Service Act in 1940, the first peacetime conscription in US history.³ In a speech on May 16, 1940, Roosevelt challenged US industry to produce fifty thousand planes each year.⁴ The same year, Congress approved a plan to construct several new plants that would produce military aircraft.⁵ As protection against attack, the factories would be located at least two hundred miles from a coastline or national border.⁶ Seeing the potential for hosting a military base or aircraft plant, civic leaders in Tulsa and Oklahoma City closely monitored developments within the War Department.

Following US Army Air Corps policy, only established aircraft companies could be involved in the final assembly of military aircraft. However, subassemblies and other components could be produced by nonaviation companies such as automobile manufacturers.⁷ During the late 1930s most military and civilian aircraft were built by skilled workers and most aircraft orders involved fewer than 150 planes. Before the war, Douglas Aircraft was among the largest aircraft manufactures in the United States, employing about seven thousand US workers, the majority in California.⁸ When the War Department announced that new defense plants would be located in the central United States, industry leaders such as Donald Douglas voiced concern over finding sufficient numbers of workers far away from established sources of labor on the East and West Coasts. Another skeptic was William Knudsen, chairman of the Office of Production Management, who told Army Chief of Staff George C. Marshall, "We can't move Detroit."⁹

The War Department's investigation of potential sites for new aircraft plants brought interest from civic leaders in many Midwest

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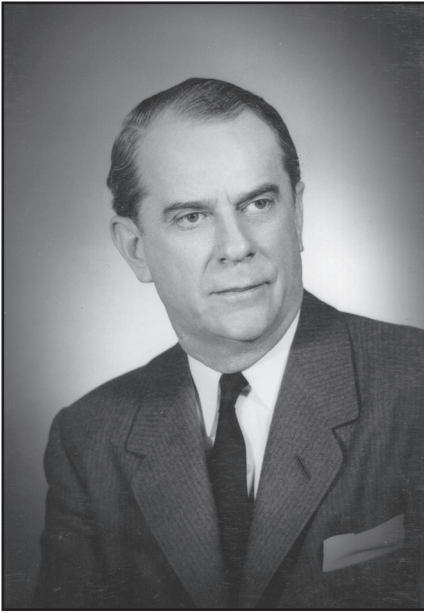
W. G. Skelly, 1942 (2012.201.B1180.0231, Oklahoma Publishing Company Photography Collection, OHS).



cities. Among them was Tulsa oilman William G. Skelly, who operated Spartan Aircraft Company from an office on Sheridan Avenue near the present location of Tulsa International Airport. During the 1930s and '40s Spartan built the 7W Executive, a four-seat luxury aircraft.¹⁰ Notable owners of the 7W included Howard Hughes, J. Paul Getty, and Iraq's King Ghazi. Citing Spartan's success as evidence of a workforce capable of constructing aircraft, Skelly urged Donald Douglas to establish an aircraft plant in Tulsa.¹¹ On August 22, 1940, the Defense Plant Corporation was created to oversee the construction of plants that would be leased by aircraft manufacturers.¹² A few months later the War Department announced plans for aircraft plants in Omaha, Nebraska, and Tulsa, Oklahoma. On December 1, 1940, a plan was unveiled to construct a bomber plant at Tulsa Municipal Airport with a caveat that the city would improve runways needed for large aircraft. In March 1941 a bond issue was approved to purchase 750 acres southeast of the municipal airport for Air Force Plant #3.¹³ The facility would be leased by Douglas Aircraft with Oklahoma-based Manhattan Construction responsible for overseeing construction.¹⁴ On May 2, 1941, Douglas Vice President F. W. Conant, US Army Major H. A. Montgomery, and Tulsa Mayor C. H. Veale presided over a ceremony to celebrate the start of construction.¹⁵

Civic leaders in Oklahoma City also were interested in attracting a US Army Air Corps field or aircraft plant. In an effort to generate

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William P. Atkinson (11549, William [Bill] Finney Collection, OHS).

interest within the War Department, the chamber of commerce prepared a briefing paper about the city's suitability for an aircraft facility.¹⁶ In February 1941 city officials were asked to submit a list of possible sites for an aircraft maintenance facility (air depot). In a front page article the *Daily Oklahoman* published criteria the air corps would use in selecting a location. The site would be within ten miles of Oklahoma City, at least four miles from an oil field, near an existing railroad line and hard surface road, and on relatively level land.¹⁷ After seeing the story, local newspaperman William P. Atkinson began searching for properties that might address the army's needs. Maps revealed an area east of the city and south of Southeast Twenty-Ninth Street that appeared to meet all criteria. Taking a gamble, Atkinson purchased three hundred acres from local landowners, including the Trosper and Chesser families, and subsequently traveled to Washington, DC, with the goal of convincing War Department officials to purchase his land.¹⁸ In making his pitch, Atkinson pledged to build homes that would address an anticipated housing shortage near the depot site. On April 8, 1941, the War Department announced its intention to locate the Midwest Air Depot (renamed Tinker Field in October 1942) on a 960-acre tract to the south of Southeast Twenty-Ninth Street and a few months later Atkinson unveiled plans to construct a \$4 million "model town" near the depot.¹⁹

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As plans moved forward for the depot, the air corps began looking at the possibility of locating an aircraft plant in the Oklahoma City area. In June 1941 representatives from the Office of Production Management requested information about the city's labor supply, housing, and transportation infrastructure.²⁰ The following January, representatives from Douglas joined US Army officials on a one-day tour of Will Rogers Field (now Will Rogers World Airport), Bethany Airport, and a site just east of the recently established air depot. Soon after, the air corps announced plans for a plant that would assemble transport aircraft on 480 acres to the east of the depot site. Construction of the new plant began on March 23, 1942.²¹


To maintain blackout conditions in the event of an aerial attack, the Douglas plants in Tulsa and Oklahoma City were designed without windows. Measuring 4,004 feet long by 200 feet wide, the main assembly building in Tulsa had more than seventeen thousand fluorescent light fixtures that illuminated eight hundred thousand square feet of floor space.²² Nearby, four large hangars were built for aircraft modification (used today by American Airlines). Like the Tulsa plant, the main assembly plant located adjacent to the air depot was equipped with fluorescent lighting and air conditioning. Measuring 3,320 feet in length and ranging in width from 150 to 729 feet, the building featured a steel column and truss framework and brick exterior with its own cafeteria and medical facility. Near the assembly building were several support facilities including a 150,000-square-foot administrative building, an 180,000-square-foot hangar, and a 67,000-square-foot hangar used for painting aircraft.²³

Before the war most military aircraft were produced in batches with skilled workers moving from plane to plane.²⁴ Facing requests for huge numbers of aircraft, Douglas engineers began experimenting with mass production methods pioneered by automobile manufacturers such as the Ford Motor Company. In lieu of handcrafted parts fashioned by skilled workers, Douglas turned to interchangeable parts and automated assembly techniques performed by semiskilled and unskilled workers. With the move to mass production, an issue for Douglas and other aircraft manufacturers was the potential for cost overages. In response, the government made a concession by shifting from fixed price contracts to the manufacturer's cost plus a fixed fee.²⁵

Aircraft production at the two Douglas plants began even before the assembly buildings had been completed. The new plant in Tulsa was designed for the production of B-24 bombers. Referred to as the Liberator in Europe and elsewhere as the Flying Boxcar, the B-24 could deliver eighteen thousand pounds of bomb ordinance. Featuring four

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*LIVE IN MIDWEST CITY... WALKING DISTANCE OF THE AIR DEPOT
YET, IN THE VERY SHADOW OF METROPOLITAN OKLAHOMA CITY*



Retail Center Share Taken By City Men
 22 Stores Planned On Site Here For New Air Depot

Midwest City To Start Soon
 Closure Five May Herald All Sales

Big Business

TYPICAL HOMES in MIDWEST CITY
 which YOU can own for as little as
 \$25⁰⁰ per month or rent for \$35⁰⁰ to \$50⁰⁰ per month


One of the Many Floor Plans in Detail Form

City to Grow At Air Depot
 Local Men Plan \$4,000,000 Job

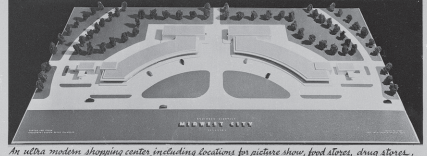
168-Acre Site Selected North Of Air Depot
 Three City Men Plan \$4,000,000 Job

Living Costs in Oklahoma City are 3.4% below the National Average. In a survey of 59 cities, in the U.S., it rated 45th from the top.


For more information write
W.P. & A. ATKINSON
 1919 N.W. 23RD ST.
 OKLAHOMA CITY




Locations have been provided for four churches



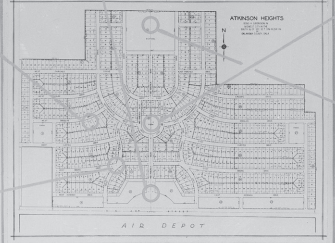
An ultra modern shopping center, including locations for picture show, food stores, drug stores, clothing stores, bank, postoffice, etc.



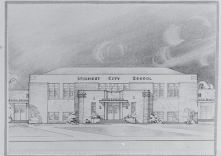
Two parks will serve as playgrounds for the children



Paved streets, deep walk water, natural gas and oil utilities



ATKINSON HEIGHTS
 AIR DEPOT

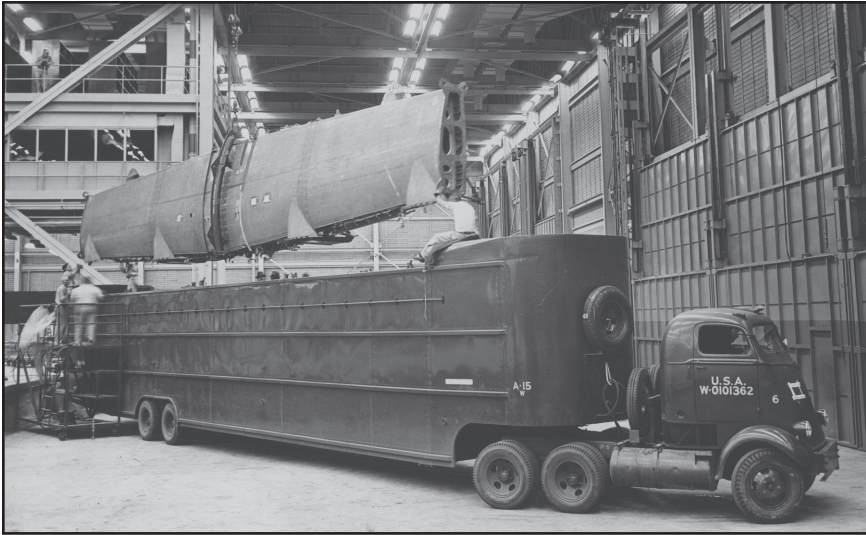


A ten acre track has been provided for a grade and high school

A MODEL COMMUNITY PLANNED BY EXPERTS

An advertisement for new housing near the air depot in Midwest City, photography by Meyers Photo Shop (21412.M169.5, Z. P. Meyers/Barney Hillerman Photographic Collection, OHS).

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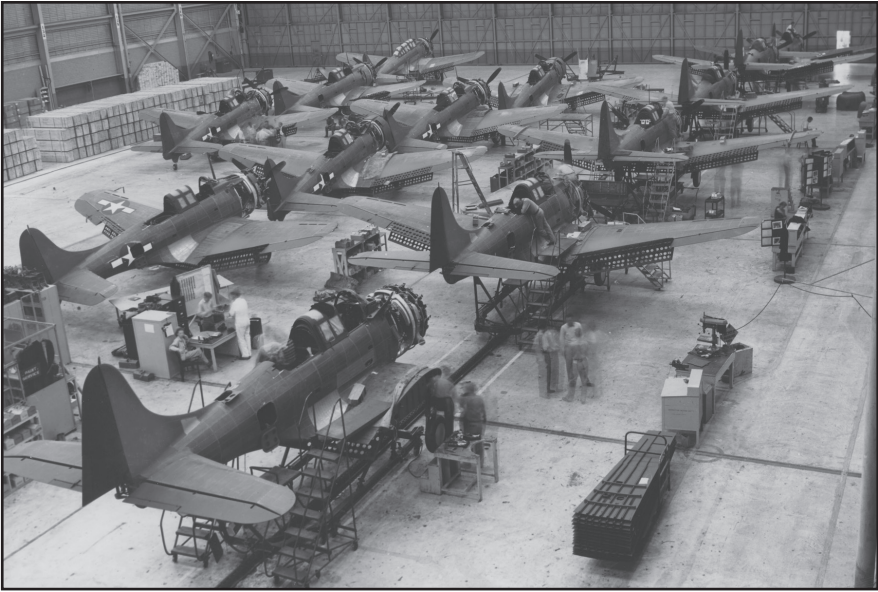


Men lowering an airplane wing into truck trailer at the Tulsa Douglas plant (photograph courtesy of the Tulsa Historical Society and Museum).

1,200-horsepower Pratt and Whitney radial engines and a crew of ten, B-24s were capable of cruising at 350 miles per hour over a range of three thousand miles, which was one thousand miles farther than Boeing's B-17 Flying Fortress.²⁶ Under an agreement with Consolidated Aircraft, the Douglas plant in Tulsa produced two models, the B-24D-DT and later, the B-24E-DT (DT identified an aircraft constructed at the Douglas plant in Tulsa). The plant's chief engineer was David E. Dunlap, a native of Philadelphia who had learned to fly gliders at age fifteen before being hired by aviation pioneer Glenn Curtis. After working for several other aircraft firms, Dunlap left his position as a designer at the Douglas plant in Santa Monica, California, to help direct operations in Tulsa.²⁷

With production underway, raw materials arrived at one end of the gigantic assembly building from a spur of the Burlington Northern Railroad. An enormous volume of materials was needed in the assembly of each aircraft. A single B-24 used the aluminum necessary for making fifty-five-thousand coffee percolators and the steel needed to assemble 160 washing machines.²⁸ Each B-24 had a half million parts and more than three hundred thousand rivets.²⁹ Inside the plant, assembly lines were divided into a series of tasks with large parts traveling on jigs and smaller components being moved into place by elevators, hoists, conveyor belts, or mobile cranes. A "frame and stringer" method

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Tulsa Douglas Aircraft Plant hangar (photograph courtesy of the Tulsa Historical Society and Museum).

was used in the construction of larger pieces. Riveting necessary in the assembly of bulkheads, wings, and fuselage sections was done in two-person teams with one worker operating a compressed-air rivet gun and a second flattening rivets with a hammer. Other parts were attached using electric arc welding. At specific points, subassemblies arriving from factories such as Michigan's Willow Run plant merged with the main assembly line of aircraft that were lined up, nose to tail. The straight-line system used at Douglas factories simplified the handling of materials while reducing back-tracking and the need for large storage areas.³⁰ Administratively, Douglas plants were organized into units responsible for production planning, scheduling, production control, and maintenance. Clocks mounted in several places showed the time when the entire main assembly line was scheduled to move forward.³¹

The Tulsa plant rolled out its first B-24 on August 15, 1942. At peak output, Douglas workers in Tulsa turned out fifty aircraft per month with each costing the government \$250,000.³² In April 1943 Tulsa workers were producing more aircraft than any other B-24 plant in the United States.³³ That same month the plant received a visit from President Roosevelt, whose arrival was not announced publicly

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because of the need for secrecy.³⁴ Although it brought unprecedented increases in efficiency, mass production had drawbacks. For example, design changes could slow or even stop production. As a result, a large number of newly assembled B-24s were obsolete as they rolled off the assembly line. Many were modified in a nearby hangar immediately after being completed. Others were flown to the Midwest Air Depot to be modified or upgraded.³⁵

In addition to B-24s, the Douglas plant in Tulsa produced the A-24 Banshee, a variant of the US Navy's Dauntless Dive Bomber ("A" designated attack). Powered by a single 1,200-horsepower Wright engine, the A-24 was designed to deliver a 2,550-pound load from a near-vertical descent with dive brakes in the aircraft's wings to reduce airframe stress. A-24s were built in Tulsa from March 1943 to December 1943. During the summer of 1944 the supply of B-24s began to exceed the army's ability to use them, prompting a decision to retool the Tulsa plant for the production of A-26 Invaders. With two 2,000-horsepower Wasp engines, the A-26's maneuverability approached that of a fighter, making it ideal for attacking troop concentrations, trains, and other ground-based targets in Axis-occupied Europe.³⁶

More than any other combatant in World War II, the United States needed transport aircraft to move soldiers, equipment, and supplies to distant battlefields.³⁷ Douglas Aircraft had initially planned to utilize the depot plant for the production of the C-54 Skymaster, a four-engine transport aircraft. However, when that assignment went to the Douglas plant in Chicago, the depot plant was given the task of producing the C-47 Skytrain, a twin-engine cargo plane. The twin sister of the popular DC-3 airliner built by Douglas, the C-47 was used by the US Army Air Corps and more than a dozen Allied countries including Great Britain and the Soviet Union. Called the "Dakota" by the British, the C-47 had a bulbous cabin that contributed to unflattering nicknames such as "Old Fatso" and "Gooney Bird." Behind the C-47's success were its toughness and versatility. A C-47 could transport six thousand pounds of cargo, a jeep and 37-millimeter gun, or twenty-eight fully equipped paratroopers. Some were configured to tow gliders during airborne assaults such as the Normandy invasion when it was estimated that a C-47 took off every eleven seconds.³⁸ C-47s also were produced for export to Allied nations as part of the Lend-Lease program. US pilots ferried Lend-Lease C-47s along a route that passed through Great Falls, Montana, and on to Fairbanks, Alaska, where Soviet pilots flew the final leg to Krasnoyarsk, Siberia. Used in both the European and Pacific Theaters, C-47s transported soldiers to remote

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The original caption for this photograph in the Daily Oklahoman read, "During World War II, Tinker workers repaired B-17 bombers" (2012.201.B1289.0369, Oklahoma Publishing Company Photography Collection, OHS).

islands such as Guadalcanal and over a treacherous route across the Himalayas known as "The Hump."³⁹

In their design of the C-47 assembly line, engineers implemented several innovations pioneered at the Douglas plant in Santa Monica, California, including the use of an aluminum press designed by Henry Guerin and the replacement of some hand-riveting with riveting machines. The assembly line system used at the depot plant was similar to the configuration in Tulsa. A continuous stream of aluminum, copper, rubber, magnesium, and other raw materials arrived by rail along with components assembled elsewhere such as engines, radio equipment, and avionics. Using the Guerin process, dies stamped out parts from sheets of aluminum using hydraulic presses and high-speed loading tables.⁴⁰

Military conscription had a significant impact on the supply of potential workers at the two Douglas plants. Before the war, aircraft assembly was performed by skilled workers who spent two to three years in an apprenticeship before becoming aircraft craftsmen.⁴¹ Although Douglas brought some experienced workers to Tulsa and Midwest City, assembly line methods meant that the majority of jobs could be

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filled with semiskilled or unskilled workers. New plant workers had to provide proof of US citizenship and have eyesight correctable to 20/30 in one eye and 20/60 in the other.⁴² Douglas employees were required to be between eighteen and fifty years in age but exceptions were made for workers with special skills, such as eighty-two-year-old toolmaker George A. Bishoff who built dies and jigs.⁴³

Before the Tulsa plant opened, Douglas already had received ten thousand job applications.⁴⁴ Interest in aircraft jobs at the depot plant was also high. On its first day of operation the Douglas employment office in Oklahoma City received more than two thousand applications.⁴⁵ Although there was an immediate need for workers, Douglas could not utilize new employees until they had completed some training. To address this situation, a school was opened in Oklahoma City at 918 North Broadway Avenue.⁴⁶ When this training facility reached capacity, new employees were sent to "Oklahoma Aircraft Schools" in other locations including Stillwater, Ponca City, and Shawnee.⁴⁷

Depending on their work assignment, employees wore a shirt and slacks or overalls and a cap. Eighteen-year-old Jean Riesinger was hired as a timekeeper at the Tulsa plant with responsibility for riding a bicycle along five and a half miles of interconnected pathways inside the main assembly building, collecting cards from 293 time-keeping stations.⁴⁸ As demand for bomber and cargo aircraft increased, Douglas plants in Tulsa and Midwest City moved from a single shift to three shifts with plants running twenty-four hours a day, seven days a week. In June 1943 the depot plant put out a call for 2,100 additional Oklahoma City area workers with a special appeal to women without children and workers employed in less essential activities.⁴⁹ Interest in women was driven, in part, by their performance in positions that required dexterity or speed. Under an accelerated training schedule the depot plant added new employees at a rate of 200 per day. At its peak, the Tulsa plant employed 38,000 workers while 23,000 worked at the depot plant and another 13,500 at the air depot itself. Nearly half (48 percent) of Douglas employees were women.⁵⁰ As the number of female workers with families grew, childcare became an issue, prompting the government to open daycare facilities at schools. Concerned about the potential for sabotage and espionage, Douglas employees were urged not to talk about specific aspects of their jobs.⁵¹ To maintain security and safety Douglas hired its own force of police officers and firemen.⁵²

Douglas employees in Tulsa and Midwest City participated in a wide variety of company-sponsored activities such as men's and women's softball leagues.⁵³ In 1944 the Skytrain Theater opened in Midwest City, showing newsreels and feature-length films. During nonshift

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FORM 605
REV. 5-22

MEMORANDUM

DATE: 9-7-43

TO: G. Babcock, D411

FROM: Industrial Training Department, D143

SUBJECT: Acetylene Welding Class

COPIES TO: VEND; File

Your class in Acetylene Welding which was scheduled to start on September 15 has been approved and will start September 15. It will meet each Wednesday and Friday at Washington School from 4:00 to 7:00 PM.

The following people have been notified to attend:

Russell Newlin, 556-13227
 C. D. McCall, 702-25550
 J. H. Robinson, 425-17209
 Emmett D. Turnage, 521-29750
 W. F. Phillips, 405-28630
 Alex Mitchell, 405-10343
 Thelma Ginn, 405-22875
 Lotus S. Wise, 405-22727
 Jacqueline Marlar, 405-10394
 Ma Aldridge, 646-27462
 Jo Ellen Grace, 405-10287
 Frank C. Fisher, 411-11083
 Charles O. Hodges, 405-26778
 A. W. Goodykoontz, 405-27111
 Bessie Simpkins, 405-10363
 W. B. Clemons, 632-21907
 Dave Ballard, 632-22099
 W. W. Camp, 632-27615
 R. S. Grant, 632-27677
 J. M. Petros, 411-10528
 Dorice Wallen, 377-12980

George!
Jade diamonds - Super

TULSA AIRCRAFT ASSEMBLY PLANT

IDENTIFICATION

Name G. H. Babcock

Race White Sex Male Age 27

Eyes Blue Weight 150 Height 5' 8"

Date 12-29-41

Authorized By L. L. Lester



Memorandum and identification card for George Babcock, who worked as a welder at the Douglas Aircraft Plant in Tulsa. One of Babcock's duties was to teach the women hired to work at the plant how to weld. The memorandum lists his students, including the names of some women. According to family history, he was impressed with their skills, and thought they were better welders than the men he taught (images and information courtesy of Elizabeth M. B. Bass).

personal cars.⁵⁶ Many Tulsa aircraft workers rode buses that stopped at Whittier Square just south of the plant. With the influx of new workers, local entrepreneurs took steps to address the housing shortage. After selling property needed for the air depot, William Atkinson hired Steward Mott, a planner who had worked in the Federal Housing Administration. Spanning former wheat fields, Atkinson and Mott developed a city plan modeled after the Jefferson Classicism of Washington, DC, with curvilinear streets and cul-

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de-sacs to slow traffic passing through neighborhoods designed for families with young children. Boulevards and streets were named after aircraft manufacturers such as Curtis, Lockheed, Boeing, Aeronca, and Douglas.⁵⁷ As one of the first planned communities in the United States, the new neighborhood featured innovations such as water and sewer systems that were put in place before houses had been built. Known as Atkinson Heights, the first subdivision was platted on April 18, 1942. Topped with gabled roofs, houses were eight hundred square feet in size and included two bedrooms plus a living room, kitchen, and bath. As the demand for housing grew, new additions were constructed adjacent to Atkinson Heights, and in 1943 Atkinson platted the Fleetwood subdivision.⁵⁸

To address gasoline rationing, the new community east of Oklahoma City was designed to be relatively compact, enabling workers to walk to the aircraft plant and air depot. In addition, shopping and services were designed to be in close proximity to new homes. In March 1942 plans for Atkinson Plaza were unveiled. Designed by the Kansas City architectural firm Hare and Hare, the shopping center featured thirty-seven stores covering one hundred thousand square feet of floor space.⁵⁹ Anticipating an influx of families with school-aged children, civic leaders requested federal assistance for the construction of a sixteen-room school (now Jarman Middle School) to replace temporary buildings.⁶⁰ New businesses also arrived. For example, American State Bank established a branch office there in 1943 with extended hours to serve workers on swing and graveyard shifts.⁶¹ Other businesses arriving in 1943 included a bakery, drug store, beauty parlor, variety store, and Humpty Dumpty food market. As the population grew, civic leaders took initial steps to incorporate. Named after the Midwest Air Depot, Midwest City was formally incorporated on March 11, 1943, with 366 residents.⁶²

Although the community benefited from an influx of new businesses, other progress was slow. As a result of the wartime rationing of cement, most of the city's streets had dirt surfaces. An exception was the gravel surface used for the heavily traveled Air Depot Boulevard. In May 1943 record rainfall made some roads impassable, contributing to the moniker "Mudwest City." Despite setbacks, Atkinson announced plans in October 1944 for a "county estates" project featuring 1,000 homes ranging in price from \$6,000 to \$12,000.⁶³ With Tulsa aircraft workers also dealing with a housing shortage, plans were implemented in 1942 to construct 7,200 new homes in the city's northeastern quadrant. Many plant workers in Tulsa took advantage of Title VI loans supervised by the Federal Housing Administration that required a down

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payment of just 5 percent of the purchase price. In lieu of constructing homes to meet the requirements of individual buyers, some Tulsa contractors built entire subdivisions on speculation.⁶⁴

Mass production enabled Douglas workers in Tulsa and Midwest City to achieve extraordinary levels of efficiency and productivity. Between 1942 and 1945 Tulsa workers completed 615 A-24 Banshees, 964 B-24 Liberators, and 1,291 A-26 Intruders.⁶⁵ Between March 1943 and August 1945 the depot plant in Midwest City finished 5,354 Skytrains, half of all C-47s built during the war. At peak production workers turned out 13 C-47s each day. In addition to building C-47s, workers at the depot plant manufactured subassemblies used in other aircraft such as the A-26 Intruder and the C-54 Skymaster.⁶⁶ Tulsa and Midwest City workers also performed modifications on the B-17 Flying Fortress, B-25 Mitchell medium bomber, C-54 Skymaster, C-87 Liberator Express (a transport version of the B-24), A-20 Havoc medium bomber, and YB-40 (a gunship version of the B-17). Workers at the air depot also installed Eagle Vane radars on B-17s and engine baffles on B-29 Superfortress bomber aircraft.⁶⁷ Meeting or exceeding production goals, profits soared during the war years with Douglas reporting total revenues that increased from \$28 million in 1939 to \$987 million in 1943.⁶⁸

With the war winding down in Europe, the two Douglas plants began to scale back production, moving from three shifts to a single work shift. Following the Allied victory in Europe on May 8, 1945, Douglas announced that production at the Tulsa plant would end by January 1, 1946, and that work at the air depot plant would be scaled back.⁶⁹ In August 1945 the commanding officer at Tinker Field recommended that the military assume responsibility for the depot plant.⁷⁰ That same month the depot plant closed with the immediate loss of twelve thousand jobs.⁷¹ As reported in the *Daily Oklahoman*, the layoff of workers was not a surprise as most expected the plant to shut down at the end of the war.⁷² Many Douglas workers had arranged postwar employment while others were eligible for unemployment benefits through the Oklahoma Employment Security Commission. In August 1945 the depot plant was transferred to the US Army's Oklahoma City Air Technical Service Command. However, about two thousand employees were retained so that sixty-six unfinished aircraft could be completed.⁷³ In August 1945 seven thousand workers at the Douglas plant in Tulsa were laid off.⁷⁴

Although C-47s continued to be needed after the war, there was less demand for bombers, fighters, and attack aircraft. Shortly after the Tulsa plant closed, 224 recently completed A-26s that had been wait-

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Midwest City Air Depot employees marching in an Independence Day parade, July 4, 1942 (20218.1997, Clayton E. Soule Collection, OHS).

ing for test flights were stripped of their avionics and other equipment and sold to salvage bidders for 2.5 cents per pound.⁷⁵ A federal agency called the Reconstruction Finance Corporation (RFC) took responsibility for aircraft disposal. The rationale for scrapping surplus aircraft was that modification and storage would be more costly than disposing of unneeded planes. Some workers were dismayed by the destruction of aircraft they worked so hard to assemble. On seeing piles of discarded A-26 wings, a former aircraft worker in Tulsa remarked, “I can’t take a look at the mess without wanting to cry . . . it is like killing something I love.”⁷⁶

A handful of aircraft were purchased by individuals such as Dick Strode, who bought an A-26 for \$1,500 to attract customers to his Tulsa gas station.⁷⁷ Many surplus aircraft were flown to scrap yards such as Oklahoma’s Altus Army Airfield, Kingman Army Airfield in Arizona, or Walnut Ridge Field in Arkansas before being sliced into pieces and converted into aluminum ingots by smelters.⁷⁸ Some aircraft located overseas were given to friendly nations. Others were sold for scrap, buried, or dumped at sea. A few A-26s and C-47s that returned from duty overseas were put in storage as part of the US Army Air Force’s Strategic Reserve. Aircraft also were stored temporarily in several

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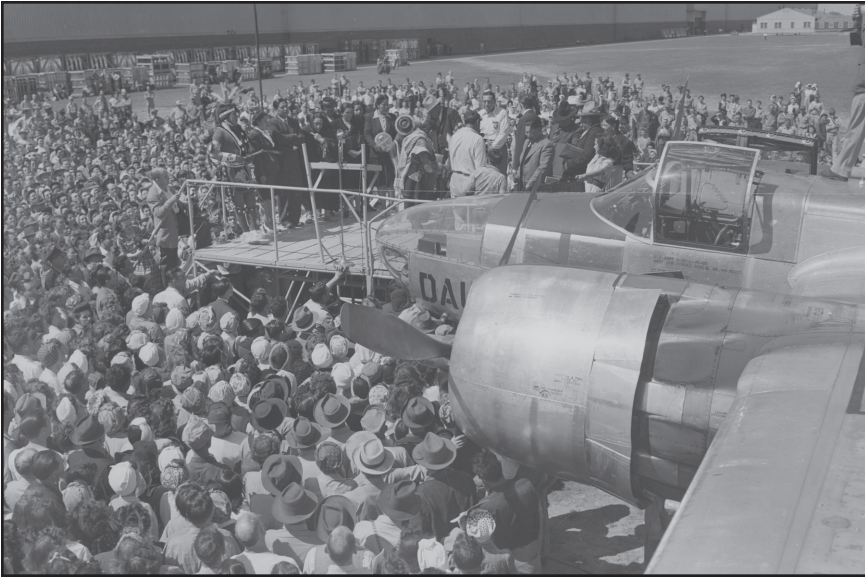


Four unidentified men in front of The Tulsamerican. The plane was signed by many workers at the Tulsa plant, 1945 (photograph courtesy of the Tulsa Historical Society and Museum).

locations until a decision could be made about their disposal. For example, Stillwater's Searcy Field (now Stillwater Regional Airport) was used by the RFC to store B-17 and B-24 bombers, P-51 fighters, and other types of aircraft. In 1946 air racer and stunt pilot Paul Mantz purchased all 475 aircraft being stored in Stillwater for \$55,426 (about \$117 per plane).⁷⁹ For a short time Mantz could boast of owning the sixth largest air force in the world. All of the aircraft were eventually scrapped except eleven that Mantz elected to save.⁸⁰

Few aircraft built at the Douglas plants in Oklahoma survived both the war and subsequent salvage operations. Constructed at the depot plant, C-47 number 42-93096 was delivered to the US Army on April 8, 1944, and subsequently participated in the Normandy invasion, Operation Market Garden, and the Battle of the Bulge. After the war 42-93096 found a permanent home at the National WWII Museum in New Orleans.⁸¹ Only one Tulsa-built Liberator is known to remain (partly) intact. The Tulsamerican, serial number 42-51430, was the 952nd and last B-24 produced in Tulsa, rolling off the assembly line

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Dedication ceremony for the 1,000th A-26 bomber made at Douglas Aircraft in Tulsa, 1945 (photograph courtesy of the Tulsa Historical Society and Museum).

on July 31, 1944. To celebrate, factory workers wrote their names on the plane's aluminum skin. Unfortunately for the aircraft and its crew, The Tulsamerican's contribution to the war was brief. On December 17, 1944, it was shot down by German fighter aircraft on its way back from a bombing mission. Seven of its ten-man crew survived the attack and subsequent crash-landing into the Adriatic Sea. In 2010 the plane's wreckage was discovered by divers off the Croatian coastline in 175 feet of water.⁸²

When its assembly line closed, the Douglas plant in Tulsa was used for storage until it was reactivated in 1951 to produce aircraft needed for the Korean conflict. In December 1993 the McDonnell Douglas Corporation closed the plant and returned the property to the City of Tulsa. Since 2001 the former aircraft assembly building has been used by IC Bus for the assembly of school and commercial buses. In contrast, the air depot plant's main assembly building (now called Building 3001) continues to be used by the military as part of Tinker Air Force Base. Covering 2.4 million square feet, Building 3001 is the third largest building controlled by the US Department of Defense.

At the 1943 Tehran Conference, the Soviet Union's Joseph Stalin noted that "the most important things in this war are machines" and "the United States is a country of machines."⁸³ Aircraft manufactured

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in Oklahoma contributed in significant ways to the war effort in both the European and Pacific Theaters. Bombing and strafing attacks carried out by B-24s and A-26s constructed in Tulsa degraded military capabilities and economic productivity across Axis territory in Europe while C-47s delivered airborne troops or carried equipment and supplies for the United States and its allies. In words attributed to General Dwight Eisenhower, “Four things won the Second World War—the bazooka, the jeep, the atom bomb, and the C-47.”⁸⁴ Although more than seventy years have passed since the last aircraft used in the war rolled off assembly lines in Tulsa and Midwest City, the legacy of Douglas Aircraft and its dedicated workforce lives on. Initially concerned over prospects of locating a labor supply, Donald Douglas found a motivated and dedicated workforce in Tulsa, Oklahoma City, and other communities across the Midwest. An impressive statistic is that only 2 percent of workers at Oklahoma’s two aircraft plants came from other Douglas facilities.⁸⁵

The war also brought longstanding change by helping the Tulsa and Oklahoma City areas become important centers of the US aviation industry. Today, American Airlines utilizes former Douglas hangars at Tulsa International Airport while Tinker Air Force Base (formerly the Midwest Air Depot) has become one of the world’s largest aircraft maintenance facilities. Oklahoma’s World War II aircraft plants introduced social changes too, by bringing thousands of women into the workforce. The legacy of Douglas workers in Oklahoma is part of a larger story about American women who helped win the war. “Rosie the Riveter” worked in Santa Monica, Richmond, and Norfolk but also in Tulsa, Midwest City, Wichita, and Omaha. Finally, the plants influenced urban development by stimulating population growth that brought new housing, roads, shopping centers, and other infrastructure. Midwest City was established as among the first planned communities in the United States and a model for the postwar housing boom. Today, many of the city’s World War II-era homes in Atkinson’s “Original Mile” appear much as they did in 1943.

Endnotes

* Thomas A. Wikle has published previous articles about Oklahoma's aviation history through topics such as a lighted airway used for delivering mail during the 1920s and Waynoka's role in the creation of the nation's first transcontinental passenger air service. Another project explored the state's contributions in training US Army Air Corps pilots during World War II. Wikle has been a professor in the Department of Geography at Oklahoma State University since 1989. In his free time he works as a flight instructor at Stillwater Regional Airport.

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