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On the Aviation Trail in the Wright Brothers' West Side Neighborhood in Dayton, Ohio

**Presented by Mary Ann Johnson
Aviation Trail
Dayton, Ohio**

Introduction

The West Side Dayton neighborhood where Wilbur and Orville Wright lived, worked and invented the airplane includes five historic buildings or building sites, all within a block or two of each other, that represent the five major periods in the brothers' lives. This paper tells the story of the five sites at three different periods in time: 1) when they were occupied by the Wrights during the turn of the last century, 2) when they were discovered by Aviation Trail in 1981 and 3) today, in 2001. The stories of the earliest period show the historical significance of each of the sites. The 1981 stories tell what happened to each site and the surrounding neighborhood between the time of the Wrights' era and the year they were discovered by Aviation Trail. The 2001 stories tell what has happened to the sites and the neighborhood during the 20 years since they were found by Aviation Trail.

The five sites are:

1. Wright Family Home: 7 Hawthorn Street
2. Wright and Wright, Job Printers; Hoover Block, SE corner West Third and South Williams Streets
3. The Wright Cycle Company: 22 South Williams Street
4. Wright Brothers Aeroplanes: 1127 West Third Street
5. Wright Aeronautical Laboratory: 15 North Broadway Street

The Historical Period

Wright Family Home: 7 Hawthorn Street

Orville Wright was born in this house in 1871. Wilbur Wright died here in 1912. And the brothers lived here while they were inventing the airplane.

In addition to Wilbur and Orville, the Wright family consisted of the father, Milton, who rose to Bishop in the Church of the United Brethren in Christ; the mother, Susan; two older brothers, Reuchlin, born in 1861, and Lorin, born in 1862; and a daughter, Katharine, born in 1874. Twins Otis and Ida, born in 1870, between Wilbur, who was born in 1867, and Orville, lived only a few months.

The Wright family moved into the new two-story frame house four months before Orville was born. At that time the West Side was a working class/professional neighborhood just across the Great Miami River from Dayton's downtown. The family occupied the house during two periods, from 1871 to 1878 and from 1885 to 1914. In between, they lived first in Cedar Rapids, Iowa, then in Richmond, Indiana.

One of Wilbur and Orville's interests was photography, including taking the photographs, then developing them from the glass plate negatives of the period in a dark room they built in a shed behind the house. Later, this skill proved invaluable as they documented the flights of their experimental gliders and early airplanes.

The first public flight of a Wright airplane was made by Wilbur at Le Mans, France, on August 8, 1908. This flight and subsequent demonstrations throughout Europe in 1908 and 1909 turned the Wrights into international heroes as the Europeans became aware of the Americans' superiority over their achievements. Upon their return to the United States, Dayton organized an elaborate homecoming celebration on June 16-17, to honor the newly famous brothers.

Four years later, the Great Flood of 1913 inundated the Wrights' neighborhood along with much of the rest of Dayton, causing more than \$100,000,000 in property damage and the loss of over 300 lives. By this time, Susan and Wilbur had died and Reuchlin and Lorin had established their own households, leaving only Milton, Orville and Katharine still living in the Hawthorn Street house. By the time the water started to rise on the first day of the flood,

March 25, Orville and Katharine had left the house, but Milton had to be rescued by a passing boat as the water reached as high as ten feet on Hawthorn Street. One consequence of the flood was the water damage to some of the Wrights' historic glass plate negatives and photographs.

In 1914, Milton, Orville, and Katharine moved into their new mansion, Hawthorn Hill, in the Dayton suburb of Oakwood.

Wright and Wright, Job Printers: Hoover Block, SE corner West Third and South Williams Streets

The Hoover Block represents Wilbur and Orville Wright's first business, printing, which was started by Orville in the family home while he was still in high school. Later he expanded into publishing a newspaper and took in Wilbur as a partner.

Wright and Wright, Job Printers, occupied a second floor corner suite in the three-story brick Hoover Block building from 1890 to 1895. The building was named for Zachary T. Hoover, who had erected it across the street from the drug store he operated on the NE corner of West Third and North Williams Streets.

One of the Wrights' projects after moving into the Hoover Block was printing a newspaper called *The Tatler* for Paul Laurence Dunbar, a classmate of Orville at Central High School. Later, Dunbar became the first internationally known black poet, made famous by his books of poetry and the poetry readings he gave across the United States and in England. Dunbar is reported to have chalked this poem on a wall of the Wrights' printing shop:

Orville Wright is out of sight
In the printing business.
No other mind is half so bright
As his'n is.

The Wright Cycle Company: 22 South Williams Street

This building represents the Wright Brothers' second business, bicycles, first proposed by Wilbur after he and Orville each purchased one of the new Safety bicycles at the beginning of the 1890s bicycle craze.

In 1895, the Wrights moved both of their businesses into the two-story brick building at 22 South Williams Street, the printing business from the Hoover Block and the bicycle business from a store at 1034 West Third Street. By this time, the printing business had become secondary to the bicycle business and was headed by a boyhood friend and neighbor of Orville, Ed Sines.

The move to the South Williams Street building marked the expansion of the brothers' bicycle business from sales and service into the manufacture of their own brands, a move that required the installation of several new pieces of machinery and a gas engine to run them.

This building is important because this is "where it all began." After reading about the death of the well-known German glider experimenter Otto Lilienthal from an accident with one of his gliders on August 10, 1896, Wilbur and Orville decided to continue Lilienthal's work of trying to unlock the secrets of flight.

The fact that the brothers were engaged in the bicycle business at the time they made this decision is important. 1) The business provided enough income to support them and their experiments. 2) It was a seasonal business, allowing them ample time to work on their dream of powered flight in the off-season. 3) They applied the skills they acquired in building their own brands of bicycles to building the first airplane, their Flyer I. 4) The machinery and tools needed to build the Flyer I were already available in their shop.

Wright Brothers Aeroplanes: 1127 West Third Street

This building represents the Wright Brothers' third business, airplanes. This building is important because this is where Wilbur and Orville Wright carried out scientific experiments that led to their invention of the airplane.

In 1897, Wilbur and Orville Wright moved both of their businesses to one side of a brick two-story building that had been converted from a residence into two storefronts.

After the move, first the printing business, then the bicycle business, dwindled until eventually they were phased out entirely as the brothers devoted all of their time and resources to their efforts to unlock the secrets of flight. After they had achieved their goal, they operated their airplane business under the name of Wright Brothers Aeroplanes.

The Wright Brothers followed a scientific approach to inventing the airplane, first reading all they could find about what others had done before them. Their first breakthrough came with the development of their wing-warping technique for lateral control, which grew out of their observations of the flight of birds in 1897 to 1899, at Pinnacle Hill, a recreational park south of Dayton. Glider tests at Kitty Hawk, North Carolina, in 1900 and 1901, proved the worth of the wing-warping technique, but uncovered design problems in the airframe. Back at their shop in Dayton, they discovered errors in the air pressure tables they had been using, which had been developed by Otto Lilienthal. Therefore, they embarked on a series of wind tunnel tests from which they formulated their own tables. After tests of a newly designed glider at Kitty Hawk in 1902 showed the figures to be accurate, all that was needed was to add an engine and propellers to achieve powered flight. Unanticipated circumstances then forced them to design and build these themselves, making them the inventors of the airplane engine and propeller, as well as of the airplane.

The climax to their labors came when Orville made the world's first powered, controllable, man-carrying flight at Kitty Hawk, North Carolina, on December 17, 1903. The flight gave North Carolina the honor of being "First in Flight." However, the fact that the brothers had carried out their developmental work and built all of their experimental machines in their Dayton shop made Dayton the "Birthplace of Aviation."

After the December 17, 1903 flights, the brothers returned to Dayton to continue the development of their invention into a practical machine, conducting experimental flights at Huffman Prairie, east of Dayton, in 1904 and 1905. The result was their Flyer III, which was capable of making flights of up to 24 miles in 40 minutes, compared to the first flight of 120

feet in 12 seconds.

Four years later, the purchase of a Wright airplane by the United States Army Signal Corps attracted the interest of a group of New York financiers, leading to the formation of The Wright Company at the end of 1909 to manufacture the new invention. At first, until the new Wright Company factory building was completed, the engines were built in the Wrights' 1127 West Third Street shop; then were trucked to rented space in the Speedwell Motor Car Company factory for installation in the airplanes. The company's first model, the Wright Model B, became the first mass-produced airplane.

The Wright Company also operated a flying school at Huffman Prairie, the flying field where Wilbur and Orville Wright had test flown their 1904 and 1905 airplanes. And the company sponsored an exhibition flying team in 1910 and 1911, which gave demonstrations across the country.

The Wrights continued to maintain offices in the 1127 West Third Street building even after the completion of the new Wright Company factory buildings in 1910 and 1911, Wilbur until his death in 1912, and Orville until he moved to his new private laboratory building around the corner in 1916.

Wright Aeronautical Laboratory: 15 North Broadway Street

This building represents "Orville alone," or the years Orville was alone after the death of Wilbur in 1912.

When Wilbur and Orville Wright formed The Wright Company with the New York financiers, they received \$100,000, 40 percent of the stock and a 10 percent royalty on every airplane sold. In return, the company received the rights to the brothers' American patents. Wilbur was president of the company and Orville, one of two vice presidents.

After Wilbur's death in 1912, Orville lost interest in managing the company, preferring instead to spend his time on research. Therefore, he gradually bought out the other stockholders, then sold The Wright Company in 1915.

After severing his connection with The Wright Company, Orville built a laboratory for his personal use, a one-story brick-fronted cement block building named the Wright Aeronautical Laboratory. The building contained a small office in the front for Orville and his long-time secretary, Mable Beck, and a large workshop-type laboratory in the rear.

Now alone, Orville continued his interest in aviation, including serving as a consultant to the Dayton Wright Airplane Company, a manufacturer of airplanes during World War I, and as an active member of the National Aeronautic Association. And even though he lived in Oakwood, he managed to visit the laboratory almost every day.

Orville also became involved in a long-running controversy with the Smithsonian Institution in Washington, D.C., over the issue of the Smithsonian's failure to acknowledge him and his brother as the inventors of the airplane. Frustrated by the Institution's attitude, he refused to allow it to exhibit the Flyer I in its museum. Instead, in 1928 he allowed the airplane to be put on display at the Science Museum in London, England. The controversy finally was resolved to Orville's satisfaction in 1942, enabling the airplane to be returned to the United States in 1948 after the end of the World War II. The restored Flyer I is now a major attraction at the Smithsonian's Air and Space Museum. Unfortunately, Orville did not live to see the return of the Flyer I in 1948, for he had died earlier that year at the age of 76, on January 30, just three days after suffering a heart attack at his laboratory.

The Founding of Aviation Trail: 1981

The idea behind Aviation Trail came out of a two-day regional economic development conference held at the University of Dayton in November 1980. The conference had been organized to address the high local unemployment rates of the time, which many felt required a regional approach. One of the proposals endorsed by those at the conference was to use the area's aviation heritage to market the region.

In February 1981, a committee was formed to implement the proposal, with the group agreeing its mission would be to preserve and promote the Dayton/Miami Valley's aviation heritage. The following August, the committee formed a not-for-profit corporation called Aviation Trail.

While researching local aviation-related sites to include in a brochure outlining a self-guided tour, Aviation Trail's first project, the group became aware of several Wright Brothers buildings and building sites in the West Side Dayton neighborhood where Wilbur and Orville Wright lived, worked, and invented the airplane. Among these were the five sites described earlier. At the time they were discovered in 1981, two buildings were still standing on their original sites and three had disappeared.

7 Hawthorn Street

The original Wright family home had disappeared, leaving a vacant lot sandwiched between two original Wright-era houses.

The house was purchased by Henry Ford in 1936, who then had it dismantled and moved to his new outdoor museum called Greenfield Village in Dearborn, Michigan. The restored home is now a major attraction in this popular tourist attraction.

Hoover Block

The Hoover Block, in which the Wrights rented space for their printing shop, was still standing on its original site. Now vacant and deteriorating, the building was for sale by its owners, who had operated a then-closed grocery store on the first floor.

The Wright Cycle Company

The one time Wright bicycle shop still stood on its original site, which coincidentally was almost adjacent to the Hoover Block, separated only by an alley and a vacant lot. The building had been remodeled into two rental units, one on the first floor, then occupied; and one on the second floor, then vacant.

1127 West Third Street

The Wright bicycle shop, where the Wright brothers invented the airplane, had been replaced by a one-story modern building originally constructed as a drugstore in 1951.

Henry Ford purchased the original building in 1936 and had it dismantled and moved to his Greenfield Village complex in Dearborn, Michigan. The restored building now sits next to the Wright family home, which is surrounded by an expansive lawn. The half of the building rented by the Wrights, outfitted as a bicycle shop, is promoted as the place where Wilbur and Orville Wright carried out their scientific research and fabricated their experimental machines, the basic activities that led to their invention of the airplane in 1903.

15 North Broadway Street

The original laboratory building was still standing on its original site in 1971, when purchased by an oil company that planned to build a gas station on the property. The oil company offered to donate the historic building to any community organization that would move it to another location and preserve it. Although several tried to raise the funds needed, none was successful.

Failing to find anyone with the means to move and preserve the building, in 1976 the oil company demolished the laboratory and the apartment building on the corner next to it to clear the land for the gas station. Soon after, circumstances forced the company to change its plans and the gas station was never built. The oil company still owned the cleared property in 1981.

Dayton's West Side

In the years since Wilbur and Orville Wright roamed its streets, the West Side deteriorated into a neglected neighborhood, with vacant lots, unmaintained property, closed businesses and a reputation as a high crime area.

To address the situation, the City of Dayton had developed an urban renewal plan typical of that time and was poised to begin the first phase about the time Aviation Trail became interested in the area's historical significance. In following the example of other cities trying to solve a similar problem, the City envisioned tearing down all the structures in the area from just east of the Hoover Block and The Wright Cycle Company on east to the west bank of the Great Miami River. Once cleared, the land would be redeveloped as a modern multi-family housing project.

Two historic events had contributed to the area's condition in 1981. The first was the 1913 flood, when uncontrollable fires that broke out during the disaster, as well as water damage from the flood itself, damaged or destroyed a number of structures along West Third Street and the nearby residential area. Then, a serious racial disturbance in 1966, typical of the unrest across the country at that time, brought a new wave of destruction as rioters rampaged along West Third Street until met by the Mayor of Dayton in the middle of the West Third Street Bridge. Here, a dialogue between the authorities and the protesters led to a process for solving their differences. The bridge now bears the title "The Peace Bridge" in commemoration of the incident.

As a consequence of the riots, the West Side entered a period of steady decline, acquiring a more and more negative image.

Aviation Trail's Plan

Once the Board of Trustees of Aviation Trail became aware of the two historic Wright Brothers buildings still standing on their original sites on Dayton's West Side - that no one else was doing anything about - they decided to act, and drew up a plan. The plan was to purchase the two properties, restore the buildings as museums and construct a plaza on the vacant lot between them to form the Wright Brothers Museum Complex. And, recognizing the deteriorating condition of the surrounding area, the plan also envisioned the Board's commitment to the project acting as a catalyst to the restoration of the neighborhood to resemble the way it was when the Wrights lived there at the turn of the century. The goal was to accomplish all this by 2003, the centennial of the first flight.

The Wright Brothers Neighborhood Today: 2001

A tour of the Wright Brothers neighborhood today shows what has happened in the twenty

years since the Aviation Trail plan was first proposed.

7 Hawthorn Street

The Wright family home site was acquired by the City of Dayton in 2000, along with the property next to it on the corner. The original house on the corner had been extensively damaged in a fire in 1993. After acquiring the property, the City demolished the ruins of the house, cleared the land and developed it as green space.

Hoover Block

Soon after developing the plan for revitalizing the Wright Brothers neighborhood, Aviation Trail began negotiations to purchase the two still-standing original Wright buildings. As it happened, the Hoover Block had a "For Sale" in the window. Inquiries revealed the property had been for sale ever since the three brothers who owned it had closed the grocery store they had operated on the first floor, which also had been expanded into the first floor of the Setzer building next door.

The Hoover Block, the adjoining Setzer building and the vacant lot behind the Hoover Block comprised the parcel owned by the brothers that was for sale. Aviation Trail acquired the entire parcel in 1982. Aviation Trail's plans for the Hoover block eventually included installing a parachute museum on the third floor to display the Dave Gold parachute collection that was donated to Aviation Trail by the Gold estate in the mid-1980s.

As local awareness of the potential of the region's aviation heritage grew, another group was organized in 1989, with the goal of bringing a National Park to Dayton. Called The 2003 Committee after the year of the centennial of the first airplane flight, the group initiated the process with the National Park Service (NPS). The NPS began the process by first surveying the 45 sites described in the *Aviation Trail guidebook A Field Guide to Flight: On the Aviation Trail in Dayton, Ohio*, (Mary Ann Johnson, Landfall Press: Dayton, Ohio, 1986) to assess the national significance of each. Eventually, the process played out to a successful conclusion with the passage of the legislation creating the Dayton Aviation Heritage National Historical Park at the end of 1992. The scatter-site Park was composed of the 1) Core, Site, 2) Huffman Prairie Flying Field, 3) the original 1903 Wright Flyer III at Carillon Historical Park, and 4) Dunbar House Museum, at 219 North Summit Street, off West Third Street a short distance west of the Wright Brothers neighborhood. The legislation directed the NPS to acquire the Hoover Block, The Wright Cycle Company and the land in between for the Core site, property that was then owned by Aviation Trail. The three other sites would remain under their present ownership and management.

The NPS began the restoration of the Hoover Block this summer and expects to complete it by 2003. The building will become the Dayton Aviation Heritage National Historical Park West Interpretative Center. The exhibits will tell the stories of the Wright Brothers and of Paul Laurence Dunbar, their friend and an associate in their printing business, who spent the last two-and-one-half years of his life in the house he bought for his mother, now the Dunbar House Museum.

The Wright Cycle Company

Because Aviation Trail considered The Wright Cycle Company the more historically important of the two original Wright buildings, the Board of Trustees decided the acquisition and restoration of The Wright Cycle Company would be its first priority. Negotiations with the couple who owned the property ended in its purchase in 1982 by a Board member, who planned to hold it until Aviation Trail could purchase it in its own name, which it did soon after.

A few weeks after the transaction with the Board member was completed, the City of Dayton posted a "Condemned" notice on the building and threatened to demolish it unless several pages of building code violations were corrected. However, once the City was made aware of the Board's intentions, it backed off and boarded up the building until it could be restored.

In 1988, a Grand Opening ceremony signaled the completion of the outside and the first floor and the initiation of regular visiting hours on the weekends. The first floor contained a Wright Brothers museum in the open space in the front and a small office and restroom in the replica wooden add-on at the rear. The brick exterior, the wooden floors and some of the interior trim are original.

After the Dayton National Park was created at the end of 1992, Aviation Trail finished the second floor as offices for the Park staff.

The creation of the National Park, in turn, created a dilemma for Aviation Trail, forcing the group to look for a new "home." Most felt the obvious solution would be to restore the Setzer building next to the Hoover Block, which Aviation Trail still owned. The two-story building appeared to have ample room for Aviation Trail's needs, including the Dave Gold parachute museum, originally planned for the Hoover Block.

Then, in 1993, these plans also fell by the wayside, when all except the façade of the Setzer building simply collapsed, witnessed by several workmen who were eating lunch nearby.

After debating whether to clear the land entirely for a new building or whether to preserve the facade and build a new structure behind it, the Board chose the latter because it would maintain the period look of the streetscape. The outside has now been completed and work on the interior began this summer.

The Aviation Trail building will have an Aviation Trail Visitors Center and a theater on the first floor; and the parachute museum, a meeting room, and offices on the second floor. The building will share a common wall and interconnecting doorways with the Dayton Park's Hoover Building. The Wright-Dunbar Plaza, a joint project of the Dayton Park and Aviation Trail, connects the two buildings with The Wright Cycle Company.

1127 West Third Street

The site of the Wright Brothers last bicycle shop - where they invented the airplane - still is occupied by the building erected in 1951 as a drug store. It is now a furniture store.

15 North Broadway Street

The cleared property was acquired by what is now Bank One, which has developed it as green space, the only structure being a freestanding drive-up Bank One ATM.

The bank plans to retain ownership of the property in order to prevent any inappropriate development of the historic site.

The West Side

Under strong pressure from several groups, including Aviation Trail, the City of Dayton eventually backed off from its "tear down/build new" philosophy for the area surrounding the Hoover Block and The Wright Cycle Company. After finally realizing the value of preserving the turn-of-the-century aura of this historically important neighborhood, the City

turned enthusiastically supportive.

Today, the Wright Brothers West Side neighborhood has been renamed Wright-Dunbar Village in honor of onetime residents Wilbur and Orville Wright and Paul Laurence Dunbar. The new Oak and Ivy Park, the title of one of Dunbar's books of poetry, defines the southern edge of this ambitious redevelopment project. The West Third Street business district, now being revitalized under the Main Street project, defines the northern edge. And the west bank of the Great Miami River forms the eastern boundary. The plan is to expand the redevelopment street by street, starting with those nearest the river, then moving westward. As of now, it has reached as far as Hawthorn Street, where the Wright family lived.

The residential section of the Village is being restored to resemble a typical Victorian neighborhood, with city-size lots, garages opening onto an alley at the rear of the property, and design guideline requirements for the exterior of the houses.

Perhaps the long, drawn-out controversy about the direction to take - tear down and build new or to preserve and recreate - paid off in better timing. For, now, the trend across the country favors Victorian-era design, and many cities are beginning to experience a movement of migration back toward the center of the central city.

As the year 2003 approaches, Aviation Trail is happy to see its dream coming true.

Aviation Trail's Plans for the Future

Aviation Trail's current project is the completion of the Aviation Trail Dave Gold Parachute Museum in the Aviation Trail building. The museum's exhibits will trace the history of the parachute from the early attached-types used by the balloonists through the invention of the freefall parachute for airplanes, and on to the development of other uses, including the three-canopy parachutes used for landing America's spacecraft of today.

Dayton is an appropriate location for a parachute museum because the freefall parachute was invented here at McCook Field in the 1920s.

Sources

A Field Guide to Flight: On the Aviation Trail in Dayton, Ohio, by Mary Ann Johnson (Landfall Press: Dayton, Ohio, second edition, 1996).

Aviation Trail, Inc., original documents and records.

Personal participation as a founding member of Aviation Trail and a member of the Board of Trustees from its founding up to the present.

Personal participation on a number of committees, including those associated with the process of establishing the Dayton Aviation Heritage National Historical Park.