

History and Preservation of Daytona Beach's Unique Coquina Clock Tower

By Randy Jaye (FL)

The Daytona Beach Bandshell and Oceanfront Park Complex property includes the Daytona Beach Coquina Clock Tower and Fountain (Figures 1 and 2). It is located on the peninsula side of the city of Daytona Beach, FL, and borders the beach along the Atlantic Ocean. It was added into the National Register of Historic Places (VO7135)¹ on February 25, 1999, from a multiple property submission under the following areas of significance: entertainment, recreation, community planning and development, and architecture. The clock tower was also listed on the Your Amazing Places website² as one of eight unique clock towers in the world.

The Oceanfront Park Complex was once part of a large beachfront park that was constructed of coquina³ rock between 1936 and 1937 by the Work Progress Administration (WPA).⁴ The original park included several small rectangular pavilions, octagonal kiosks, a bathhouse, coquina rock veneered shops and stores, concessions and game rooms, and two coquina rock veneered pedestrian underpasses. During a 1986–87 redevelopment project that featured the construction of the Marriott Convention Hotel, all these structures were demolished with the exception of the underpasses, which were closed in 1974 and completely filled in with gravel and dirt to prevent vagrancy. The surviving parts of the original park are the Daytona Beach Bandshell and its spectator seating area, the Edward H. Armstrong⁵ Monument, and the Daytona Beach Clock Tower and Fountain.

The clock tower has stood as a landmark for the “World’s Most Famous Beach” since its construction was completed in 1937. Its four, one-of-a-kind, 48-inch diameter clock dials, which were originally made from Vitrolite⁶ glass with a milk white color, featured the 12 letters of the city (D-A-Y-T-O-N-A-B-E-A-C-H) instead of the traditional 1 through 12 Arabic or Roman numerals.



Figure 1. The Daytona Beach Coquina Clock Tower (photographed by Randy Jaye on June 23, 2007) was missing its original weather vane at this time (it was lost along with pieces of the spire in the late 1970s during a strong tropical storm).



Figure 2. The clock tower (photographed by Randy Jaye on August 5, 2015) had a non-original petal base (stainless steel base cap) with decorative petals and a non-original but period-correct, copper-sheathed eagle weather vane.

The original hour and minute hands were made from wood and coated with a smalt⁷ material, which gave them a black color. The structure itself is constructed of reinforced concrete faced with coquina rock and stands 55 feet tall. The base has circular steps and a low masonry railing with arched openings that surround the fountain pool. It is of a late 19th- and 20th- century Revival/late Gothic Revival architectural style. The clock tower's design is so unique and eye-catching that it attracts people of all ages to stop and look at it with admiration.

The original mid-1930s clockworks were a Seth Thomas Clock Co. 8-day timepiece, Model No. 4-1912 tower clock movement with serial number 3180 (Figure 3). This movement had a pendulum that was four feet long and a pendulum ball that weighed 28 lb. It featured a power wind mechanism with a mercury switch that included a power reserve of two to three hours. When the weights dropped to a fixed distance the mercury switch was triggered, which then activated the power wind mechanism to automatically rewind the weights. The movement was eventually converted to a full electric motor-driven mechanism (electrified) in the 1980s.



Figure 3. Original Seth Thomas movement with the electric motor running in the clock room. PHOTO COURTESY OF TOM BRANSFORD AND CHAPTER 154.

Depression-Era Construction Project

In the 1930s, Daytona Beach, like other cities across the United States, was suffering through the Great Depression.⁸ City officials were struggling to find a way to bring tourists to the area amidst the economic woes. In 1934, Daytona Beach Mayor Edward H. Armstrong and other city officials began a two-year lobbying effort to the federal government to build a large outdoor amphitheater complex. In January 1936, the project was approved under the jurisdiction of the Works Progress Administration (WPA) with the stipulation that the city of Daytona Beach add a large amount of money

to the project. A prominent local architect, Alan J. MacDonough, Sr.,⁹ who designed several buildings that are now on the National Register of Historic Places, was hired to design the entire complex.

The project started in 1936 as WPA workers excavated and removed more than 48,000 cubic yards of sand to level the site. Figures 4–6 show how the clock tower construction project progressed from its start in 1936 to its finish in 1937, and Figure 7 shows the beachfront area soon after the project's completion in 1938. These historic photographs are courtesy of the Halifax Historical Museum.¹⁰

In the beginning of the project, beach sand and salt water were used to mix the concrete. It was soon discovered that the base was cracking and crumbling due to this poor construction process. The base had to be broken up and removed, and the concrete had to be poured again using the proper process of using fresh water to mix the concrete and gravel for fill. Questions and concerns were raised regarding the management of the project as it ran into financial problems because of the delays.

The project's financial problems added to Daytona Beach's overall budget deficit that was in excess of \$200,000. A state investigation was launched led by Governor David Sholtz.¹¹ The city charter called for dismissal by the governor of all officials responsible for exceeding the budget. Assuming that they were going to be removed from office, Daytona Beach Mayor Edward Armstrong and two commissioners, George T. Robinson and R.W. Carswell, resigned from their offices on December 10, 1936. Both Armstrong and Robinson appointed their wives to fill their office vacancies.

On December 30, 1936, Governor Sholtz ordered Mayor Irene Armstrong (Edward Armstrong's wife), three city commissioners, the city clerk, and the city manager to resign from their offices, holding them responsible for budget issues and poor judgment related to city affairs. Two hundred National Guardsmen were ordered to Daytona Beach to install new officials who were appointed by Sholtz and to confiscate the city's financial records, including those associated with the clock tower's project. Approximately 100 local police officers and heavily armed city employees barricaded themselves inside the city hall building to protect Mayor Irene Armstrong and other city officials. City employees destroyed many city records during this time.

A crowd of more than 2,000 people gathered outside the building. It seemed an armed confrontation was about to occur. Fortunately, a temporary restraining order was issued by Circuit Court Judge Herbert Frederick that prevented the newly appointed officials from entering the building. On January 4, 1937, the Florida Supreme Court upheld the restraining order and, on a technicality, vacated Governor Sholtz's orders to remove Daytona Beach city officials.



Figure 4. Under construction, circa 1936. The base and French buttresses are complete, with scaffolding in place to build the body of the structure. PHOTO COURTESY OF THE HALIFAX HISTORICAL MUSEUM.



Figure 5. Under construction, circa 1937. The base, body, and cupola are complete. A curious WPA worker sits in a construction vehicle on the beach. PHOTO COURTESY OF THE HALIFAX HISTORICAL MUSEUM.



Figure 6. Construction nearing completion, circa 1937. The scaffolding lumber and tools are in the process of being removed from the construction site. PHOTO COURTESY OF THE HALIFAX HISTORICAL MUSEUM.



Figure 7. The completed tower stands above all beach-area structures and has an impressive presence along the shoreline, circa 1938. PHOTO COURTESY OF THE HALIFAX HISTORICAL MUSEUM.

The National Guardsmen and the crowds left the area after a five-day standoff. The near disastrous incident is now known in local lore as the “Battle of Daytona Beach.” The ruling, in addition to Governor Sholtz’s term ending and new Governor Fred P. Cone¹² taking office and having no interest in challenging the court’s decision, allowed for Edward Armstrong and the other city officials to be reinstated on March 4, 1937.

By the summer of 1937, a majority of the work was completed. The project cost more than \$300,000 (approximately \$84,000 came from the city of Daytona Beach). The park complex was said to be the largest of its kind anywhere in the world. The initial dedication of the park complex was scheduled for July 4, 1937. However, several delays with completing associated facilities in the park caused the official dedication to be held on January 1, 1938. Sadly, the day after the park’s dedication services Mayor Edward Armstrong died. Because he was the person most responsible for the building of the park complex, WPA workers erected a monument in the park in his honor. Due to political issues, no engravings or a dedication plaque were ever applied or attached to the monument.

Continual Maintenance and Service Challenges

Due to the uniqueness of the Clock Tower’s design, its close proximity to the ocean, and its susceptibility to tropical storms, many challenges and struggles related to maintenance and service had to be addressed over the past decades. Proper maintenance and service of the clock movement and structure have proved difficult and lacking in some situations. There have been numerous mechanical and electrical issues with the clock movement as well as numerous structural issues, ranging from coquina rock falling off to concrete deteriorating, which have been a persistent concern and a safety issue as well.

52nd Anniversary Rededication Ceremony (1989)

The clock tower’s 52nd anniversary rededication ceremony was a big success thanks to NAWCC member, the late Jack Smith. Due to a lack of maintenance and routine service, in addition to severe, encrusted bird droppings’ contamination, the clockworks had stopped working and Daytona Beach officials thought

that it might never work again. Smith volunteered his time, and clock repairing skills, and was able to get the clock movement cleaned up, serviced, and back into running order in time for the rededication ceremony. During the July 4, 1989, rededication ceremony, Daytona Beach Mayor Larry Kelly¹³ said to Jack, “You helped us do it. Thanks a billion.”

Clock Tower Renamed in Honor of Sir Malcolm Campbell

The city of Daytona Beach’s Historic Preservation Advisory Board renamed the Daytona Beach Coquina Clock Tower in honor of Sir Malcolm Campbell¹⁴ (the famous automobile speedster who set numerous world land speed records on city beaches). This name change was prompted in 1989 when Campbell Street was renamed in recognition of Dr. Martin Luther King Jr. The city needed a permanent recognition of Campbell’s achievements, and the renaming of the beachside clock tower was an excellent and obvious choice. A commemorative bronze plaque is mounted on a large piece of coquina rock in the east side fountain area and it reads, “Sir Malcolm Campbell, Honoring his land speed record of 276.82 mph achieved on these sands in 1935. Daytona Beach City Commission, Mayor Baron ‘Bud’ Asher¹⁵, Historic Preservation Board, Rededicated Sept. 27, 2002.”

The 2007/2008 Clockworks Replacement Project

Chapter 154 worked with the city of Daytona Beach Parks and Recreation Department to remove the original clock movement and install four new movements. Tom Bransford and Jim Zeisler removed the original clock movement and its electric works in January 2008. The clockworks were old and suffering from wear and tear and excessive corrosion due to bird droppings and exposure to salt air. The main problem was related to the universal joints and dowel rods that were worn to a point that when the wind blew they tended to shift positions, which prevented the hands from moving properly. Zeisler was occasionally climbing up into the tower to set the hands to the proper time, but these efforts were

only a temporary solution because it did not take long for the four clock dials to go out of synchronization and display different times.



Figure 8. Original 1930s Seth Thomas movement (with the electric motor and cords that were added in the 1980s) now on display at the Halifax Historical Museum. PHOTOGRAPHED BY RANDY JAYE ON AUGUST 5, 2015.

To remove the clockworks, the original hour and minute hands had to be sawed off due to corrosion and wear. The original clock movement and its added electrical works were cosmetically refurbished and are currently on display in the Halifax Historical Museum (Figure 8).

New electric motors, kit hubs, hour and minute hands, and other accessories were purchased from the American Time and Signal Co.¹⁶ in Dassel, MN. Daytona Beach city workers fabricated a stainless-steel frame and installed it in the tower's clock room. This frame allowed Chapter 154 members to mount the new clock motors up in the tower using stainless steel and brass hardware. These four new electric manual reset motors were designed to keep all four clocks synchronized. Remote controls for each motor were also purchased so the clocks could be reset from the ground (instead of someone climbing up into the tower to manually reset them). The Daytona Beach City Commission pre-approved \$5,000 in 2007 for the tower's clockworks restoration project. The entire project cost less than that due to the volunteer labor donated by NAWCC Chapter 154 members. Zeisler and Bransford installed the new hour and minute hands on all four dials, and the new motors were started on Friday, March 21, 2008.

Clock Modernization and Restart Project Celebration Ceremony (August 12, 2008)

The City of Daytona Beach organized and presented a Clock Modernization and Restart Project Celebration Ceremony for the Coquina Clock Tower on August 12, 2008. Two NAWCC Chapter 154 members, Zeisler and Bransford, were recognized for their contributions to preserving the clock tower and were presented with plaques of recognition. Many Daytona Beach elected officials and city workers were present. The ceremony coincided with the Coquina Clock Tower's 70th anniversary.

The program included the presentation of colors by the Daytona Beach Color Guard; the singing of the National Anthem by Wilbur Williams; an Invocation by Tim Mann, Senior Pastor of the First Baptist Church of Daytona Beach; welcome, introduction, and comments by Daytona Beach Mayor Glenn Ritchey¹⁷; presentation of the Clock Modernization Project Highlights by Lynn Parfitt, Deputy

Leisure Services Director; details of the Modernization Project by NAWCC Chapter 154 member Jim Zeisler; presentation of plaques to Jim Zeisler and Tom Bransford by Zone 3 Commissioner Sheila K. McKay-Vaughan; and a ribbon-cutting ceremony by the elected officials of Daytona Beach and all the NAWCC Chapter 154 members who were in attendance.

Several Daytona Beach City officials stated that the Coquina Clock Tower is one of three major historical sites in the city and that they want to ensure it is preserved for future generations to enjoy. Daytona Beach's Leisure Services Director Percy Williamson said, "The clock

tower is the place where tourists want to take pictures, and have their picture taken, and is a place where many locals want to have wedding ceremonies and have wedding pictures taken." Daytona Beach officials also said the tower would continue to receive attention and that future preservation projects will be scheduled and budgeted.

Unexpected Maintenance Problems Since 2008

There were several times in 2009 that clock hands were blown off from their arbors by high winds. It was discovered that there were four types of metal connecting the hands to the clock mechanism (titanium, aluminum, steel, and brass). With the exposure to salt air and high winds metallurgical issues were causing premature corrosion. Zeisler replaced the original steel set screws on the brass arbors with stainless steel set screws. The American Time and Signal Co. changed the original aluminum rivets on the ends of

the arbors with titanium screws. These two quick fixes have solved the problems that were allowing the hands to loosen and fall off, and believe it or not, the hands stayed attached through several strong tropical storms for several years.

Another problem with the clock's operation was discovered in 2010 when it was determined that aged (faulty) electrical wiring inside the structure was causing the standard voltage and frequency of the alternating current to fluctuate to a point that it was making one of the clock movements run fast. Daytona Beach city electricians rewired the area, which fixed this particular problem, and in the doing might have prevented a fire within the historic structure.



Figure 9. Stainless steel base cap with decorative petals and weather vane. Photographed by Randy Jaye on August 5, 2015. (Note: This stainless steel cap was removed in March 2016 when a period-correct concrete Spire was constructed.)

New Weather Vane Installed in 2013

In October 2013, city crews built a custom, stainless-steel base cap with decorative petals in preparation for a new weather vane installation. On November 7, 2013, the base cap and the new weather vane (Figure 9) were installed on top of Daytona Beach's Coquina Clock Tower. The new copper-sheathed eagle was period-correct and looks very close to the original, which was lost in the late 1970s during a tropical storm. It weighed 130 lb. and was made by Weathervanes of Maine.¹⁸ This weather vane cost \$1,400 and took city crews two hours to install. Local donations of more than \$1,000 assisted with replacement costs.

2014 Condition Assessment Report

The Renker-Eich-Parks Architects¹⁹ firm was hired by the city of Daytona Beach to inspect the clock tower and write a condition assessment report. This report includes sections on physical condition assessment and preservation/restoration recommendations. A diagram (Figure 10) showing all the features of the clock tower was created by a firm architect, Paul C. Palmer, and provides an excellent reference. A summary of the condition states that the four French-style buttresses had some eroded coquina rock, there were several areas that required new mortar, and the entire structure required new, up-to-code electrical wiring.

Recommended Priority Work

- Repoint deteriorated mortar joints
- Reset grotto coquina stone where missing
- Repair cast concrete sconce base
- Re-mortar joints at clock room roof
- Repair concrete at clock room roof
- Replace damaged/missing wood structure
- Treat algae inside cupola and clock room
- Replace rusting clock bracket fasteners
- Patch coat at clock openings
- Restore spire (discard the stainless-steel base cap with petals as it not historically correct)
- Weather vane: clean bird nests and perform general cleaning
- Structural: concrete repair at hatch floor
- Electrical: remove all existing electrical items from the structure and replace them with new lights, wiring, panels, receptacles, and controls

Recommended Non-Priority Work

- Replace coquina veneer stone on buttress arch tops

- Remove stainless-steel rods and hooks (patch holes)
- Paint stone checker pattern infills (red and yellow)
- Clockworks: replace clock-operating mechanisms and hands
- Provide new master clock controller, new timepieces with new hands (hands shall match historic originals from photographs and with review and approval from architect)
- Replace clock dials and exterior wood trim (ensure weather tight installation)

The single source supplier selected for all clockworks was the Verdin Co., Cincinnati, OH.²⁰

Although there were obviously numerous interior and exterior maintenance issues, the conclusion of the report found the tower to be in overall fair condition. It is also important to note that it is a Risk Category I²¹ structure and is located in a 127-mile-per-hour wind zone. The analysis determined that the structure is stable regarding wind loads and would have a safety factor of 3²² against overturning due to wind.

2015/2016 Daytona Beach Clock Tower Rehabilitation Project

Recognizing that the clock tower had been deteriorating for many years, a Historic Preservation Small Matching Grant Application (FSM16_0026 – 2016)²³ for its rehabilitation was submitted to the state of Florida's Division of Historic Resources, Bureau of Historic Preservation on May 30, 2014, for a Clock Tower Rehabilitation Project. A total of \$231,000 was awarded (\$50,000 from a Florida Bureau of Historic Preservation grant [S1619] and \$181,000 from the city of Daytona Beach) for the project. The project will not modify or change the accessibility to the landmark site. Additionally, it will preserve the historic landmark and enhance public awareness of the clock tower structure.

The project was planned for the following three phases.

1. Preservation restoration (plans/schematics by a consultant): starting July–September 2015 and ending July–September 2015
2. Fountain restoration (by in-house personnel): starting July–September 2015 and ending October–December 2015
3. Restoration construction (by a contractor): starting October–December 2015 and ending April–June 2016

The physical work of the project started in October 2015 and was completed ahead of schedule in May 2016.

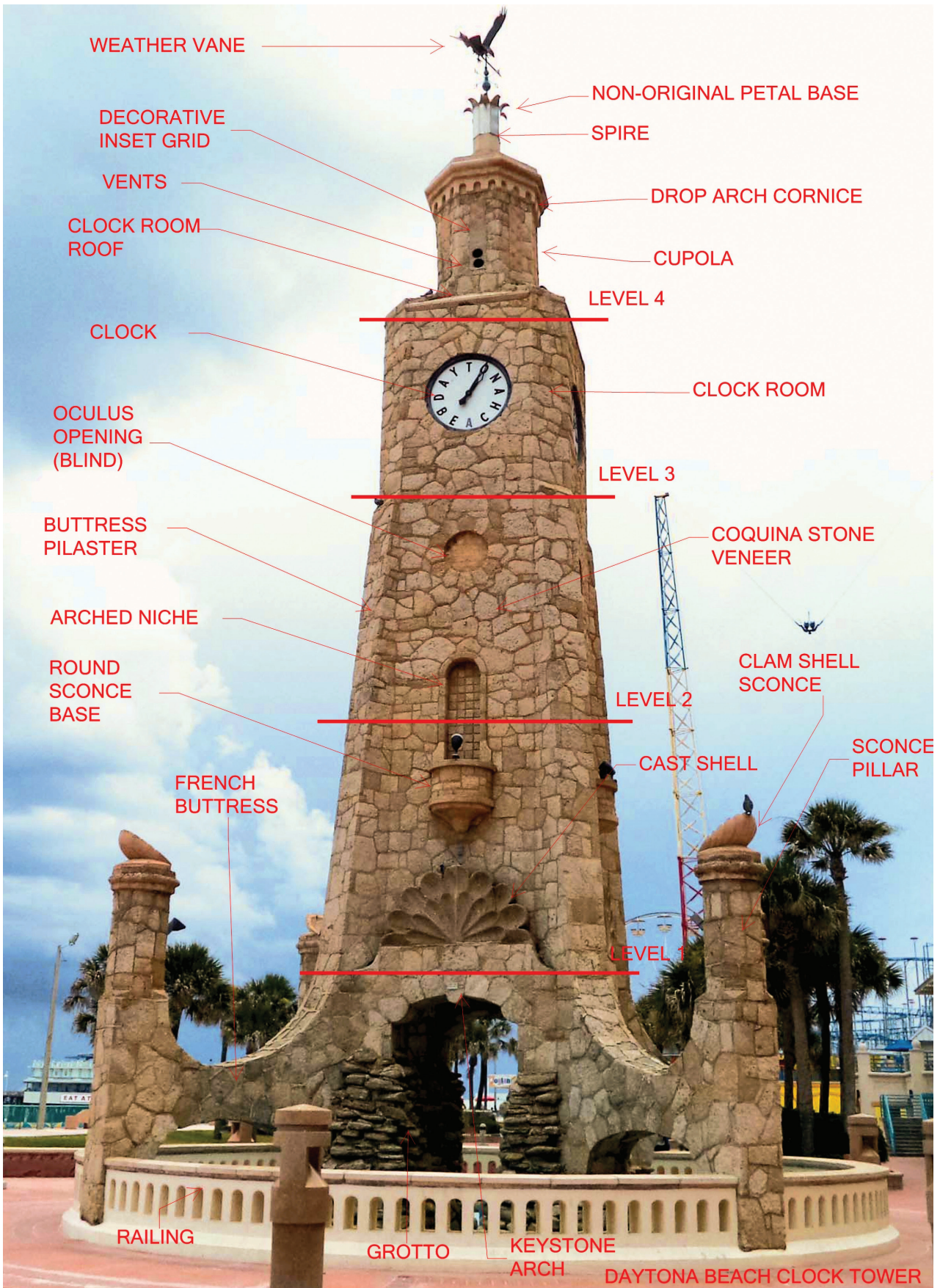


Figure 10. Diagram created in 2014 identifies numerous architectural features. PHOTO COURTESY OF PAUL C. PALMER/RENKER-EICH-PARKS ARCHITECTS.



Figure 11. New dial and hands being installed. PHOTOGRAPHED BY RANDY JAYE ON JUNE 10, 2016.

The Daytona Beach Clock Tower Rehabilitation Project corrected structural deficiencies, repaired both structural and cosmetic coquina masonry issues, replaced the entire electrical and light fixture systems (to as close to original condition as possible), replaced all clockworks²⁴ (movement, dials, hands, and dial framing), and refurbished the fountain equipment system (to as close to original condition as possible).

2016 Restoration Results

Numerous new items have been installed and structural restoration has been completed. New custom dials and hands (Figure 11) were made by the Verdin Co. in their Cincinnati, OH, plant. The dials are made from $\frac{3}{8}$ " thick translucent acrylic sheet and the letters are made from $\frac{1}{8}$ " thick black acrylic. The hands are made from an aluminum composite material and finished with automotive-grade acrylic urethane. The clock movements were replaced, which resulted in accurate time being displayed on all four dials.

The non-original petal base was removed and the spire was reconstructed from concrete, which returned it to its period-correct condition. The weather vane was inserted back on top of the new concrete spire (Figures 12 and 13).

The mortar joints have been repointed throughout the structure and the coquina rock pieces that were missing have been replaced. The blind oculus opening and the decorative inset grids on the cupola have been repainted (Figure 14).

The entire structure has been rewired and new exterior and interior lighting has been installed. Lightning



Figure 12. New concrete spire with the weather vane. PHOTOGRAPHED BY RANDY JAYE ON JUNE 10, 2016.



Figure 13. A new lightning rod was also installed. PHOTOGRAPHED BY RANDY JAYE ON JUNE 27, 2016.



Figure 14. The restoration nearing completion. PHOTOGRAPHED BY RANDY JAYE ON JUNE 10, 2016.

protective rods have been installed on the tower. The fountain has been upgraded with a new motor and pump and it has been resurfaced as well.

A new electrical clock movement has been installed. Additionally, a new remote-controlled master clock controller has been installed in the pump house (Figure 15), which eliminates manual resetting of the time. Former Daytona Beach Mayor Glenn Ritchey coordinated a donation of approximately \$4,500 to fund the master clock controller, its installation, and electrical components.



Figure 15. Clock tower pump house. New model MCCE Master Clock Controller being installed. PHOTOGRAPHED BY RANDY JAYE ON JUNE 10, 2016.

The end result of this project not only repaired the physical deterioration of the structure, but also ensured that it will last for future generations to enjoy as it represents a romantic architectural era of our past (Figure 16).

Hurricane Matthew Damage

On October 7, 2016, less than four months after the completion of the rehabilitation project, Hurricane Matthew passed through the Daytona Beach area leaving a trail of destruction. As a result, the Daytona Beach Clock Tower sustained some damage, including the breaking of the north side dial and the loss of its new weather vane (which was blown off the tower and damaged beyond repair). The Verdin Co. made a new

replacement dial and installed it in November 2016. The electric movements had been exposed to the elements when the dial was pushed in from its frame. Nevertheless, inspections determined that there was no damage to the electric movements or any of the electrical wiring or connections within the structure. The American Bronze Foundry, Inc.²⁵ of Sanford, FL, built a new custom weather vane (Figure 17), which was installed in April 2017.

Luckily, the Daytona Beach Clock Tower survived yet another strong tropical storm, and after its most recent repairs, looks as impressive as ever and is keeping accurate time.

Summary

As a one-of-a-kind structure that is on the National Register of Historic Places, the Daytona Beach Clock Tower is surely worth the money and effort to preserve it. Being a unique landmark that will most likely never be replicated, we cannot afford to lose this architectural treasure to the sands of time.



Figure 16. The clock tower's new look after the completed 2015–2016 rehabilitation project. PHOTOGRAPHED BY RANDY JAYE ON JUNE 27, 2016.

Notes and References

1. There is excellent summarized information related to the history of the Daytona Beach Coquina Clock Tower included in the National Register of Historical Places – Registration Form – Site Number: VO7135. Name of Property: Daytona Beach Bandshell and Oceanfront Park Complex. The property was entered into the National Register (National Park Service Certification) on February 25, 1999.
2. Your Amazing Places. “8 Unique Clock Towers: Clock Tower, Daytona Beach, Florida.” <http://www.youramazingplaces.com/8-unique-clock-towers/>. Accessed July 1, 2015.
3. Coquina means “tiny shell” in Spanish. The coquina rock is native to Florida’s Atlantic shore. It consists of sedimentary mixtures of shell fragments and quartz grains that are held together by calcium carbonate and was formed when higher sea levels covered the present-day coastline. Coquina is soft and easy to cut in the ground, but hardens after being exposed to the open air; thus, it is suitable for building and has been used in Florida for more than 400 years.
4. The Work Progress Administration (WPA) was created on May 6, 1935, by a Presidential order issued by Franklin D. Roosevelt and was funded annually by Congress. It was the largest and most comprehensive New Deal agency, which employed millions of people and affected almost every locality in the United States, especially rural and western mountain populations. The WPA provided jobs and income to the unemployed during the Great Depression. The program built many public buildings, projects, and roads as well as operated large arts, drama, media, and literacy projects. It also fed children, redistributed food, and provided clothing and housing. The WPA was ended in 1943 due to the economic boom caused by World War II.
5. Edward H. Armstrong (July 23, 1880–January 2, 1938) was the mayor of Daytona Beach, FL, from 1927 to 1929 and from 1931 to 1937. Support from African-Americans was a key to his political success. Prior to his career in politics, he was a salesman for the Ralston Purina Co. of St. Louis, MO. He opened his



Figure 17. Custom-made weather vane that was installed in April 2017. PHOTOGRAPHED BY RANDY JAYE ON MAY 22, 2017.

own grocery business, the Armstrong Grocer Co., and by 1927 had several branches in the eastern side of central Florida.

6. Vitrolite is an opaque pigmented glass that was made in the United States by the Libbey-Owens-Ford Co. from 1935 to 1947.
7. Smalt is a deep blue paint and ceramic pigment (coloring agent) that is produced by pulverizing a glass made of silica, potassium, carbonate, and cobalt oxide.
8. The Great Depression started in the United States because of the stock market crash on October 29, 1929 (known as Black Tuesday.) This led to a severe worldwide economic depression in which unemployment in the United States was more than 25%; in some other countries, it was as high as 33%. It was the longest and most widespread economic depression of the 20th century. Many countries had virtually no building projects in process during this period. Some countries experienced economic recoveries in the mid-1930s, but the United States and many others did not recover until the beginning of World War II.
9. Alan J. MacDonough, Sr. (November 1, 1883–May 4, 1973) was a well-known architect who began his career in the early 1900s designing bridges and large construction projects in Ohio. After relocating to Florida, he designed many landmarks (several are now in the National Register of Historic Places) including the Eustis Theater, the Masonic Temple in Leesburg, and the Holly Hill Municipal Building. In 1934, he moved to Daytona Beach and became fascinated with the early settlers’ use of native coquina rock in older building projects, especially the Castillo de San Marco in St. Augustine. He started to use coquina rock in many of his projects including the Holly Hill Municipal Building and the Daytona Beach Bandshell and Oceanfront Park Complex (including the Clock Tower).
10. The Halifax Historical Museum is located at 252 South Beach Street, Daytona Beach, FL, 32114. It was founded in 1949. The mission of the Society is to gather, preserve, educate, and present the history of the Halifax River area to the public. Since 1986, the Halifax Historical Museum has been housed in the over-100-year-old former Merchant’s Bank Building located in the heart of the downtown historic district

of Daytona Beach. The building was built in 1910 and is a destination in itself.

11. David Sholtz (October 6, 1891–March 21, 1953) was the 26th Governor of Florida who took office on January 4, 1933 (during the Great Depression). He is recognized for establishing the Florida Park Service and Florida Citrus Commission, passing a worker’s compensation law (which mandated free textbooks in public schools), and funding public school teacher salaries.
12. Frederick Preston Cone (September 28, 1871–July 28, 1948) served as Florida’s 27th Governor from 1937 to 1941. One of his most noteworthy accomplishments as Governor was the creation of the Florida Highway Patrol. His political career began as the Mayor of Lake City, FL. He also served in the Florida Senate from 1907 to 1913.
13. Larry Kelly (born ca. 1935) was the mayor of Daytona Beach for an unprecedented 12 consecutive terms (from 1974 to 1993.) Before his tenure as mayor he served as a city commissioner from 1971 to when he was elected mayor in 1974. In addition to his political career he was an engineer at General Electric.
14. Sir Malcolm Campbell (March 11, 1885–December 31, 1948) is internationally famous for setting nine world speed records between 1924 and 1935 (five in Daytona Beach, FL). He was the first person in the world to drive an automobile over 300 miles per hour when he achieved a speed of 301.337 mph. He was inducted into the International Motorsports Hall of Fame in 1990, the Motorsports Hall of Fame of America in 1994, and twice (1933 and 1939) was awarded the Segrave Trophy. He died in 1948 following a long illness and was one of the few land speed record holders of his era to die of natural causes.
15. Baron Henry “Bud” Asher (May 27, 1925–July 5, 2013) served as the Mayor of Daytona Beach, FL, for eight years from 1995 to 2003. In addition to a career in politics he was a lawyer, businessman, and football coach at multiple high schools, Bethune-Cookman University, the Jacksonville Sharks of the World Football League, and the semi-pro Daytona Beach Thunderbirds. He was inducted into the Florida Athletic Coaches Association Hall of Fame in 2000.
16. The American Time and Signal Co. is located at 140 3rd Street, Dassel, MN 55325. The company has sold 1.7 million clocks worldwide and has more than 26,000 products and systems.
17. Glenn Ritchey (born ca. 1941) was the mayor of Daytona Beach from 2006 to 2012. He is the owner of Ritchey Cadillac Buick GMC in Daytona Beach. He originally settled in Daytona Beach in the 1960s after playing bass guitar for a band called the Mustangs.
18. Weathervanes of Maine is located at 867 Blackstream Road, Hermon, ME 04401. They are a family business of second-generation coppersmiths and makers of high-quality handcrafted weathervanes and cupolas. They have designed more than 1,000 weathervanes and their customers range from the Baseball Hall of Fame in Cooperstown, NY, to the Governor’s mansion in Augusta, ME.
19. Renker-Eich-Parks Architects are located at 1609 Dr. Martin Luther King Jr. Street N., Saint Petersburg, FL 33704. This firm specializes in historical preservation and provides full-service architecture services. They do historical research, investigative studies, perform conditions/needs assessments inspections and write reports, and do conjectural reconstruction from archaeological evidence. Their specific experience with the treatment of coquina rock in historic structures had led them to the development of treatment guidelines in part by the Division of Historical Resources, Symposium Report titled, “The Coquina and Preservation of Coquina,” which was published in December 2000.
20. The Verdin Co. is located at 444 Reading Road, Cincinnati, OH, 45202. Since 1842, six generations of the Verdin family have been dedicated to creating fine cast bronze bells, carillons, electronic digital bells, tower clocks, street clocks, and streetscape furnishings. Verdin has more than 50,000 installations worldwide, including the Smithsonian Institute, Walt Disney World, and the World Peace Bell.
21. A Risk Category 1 (describing the use or occupancy of buildings and structures) is defined as buildings and other structures that represent a low risk to human life in the event of failure.
22. A safety factor is the ratio of absolute strength (structural capacity) to the actual applied load, which is a measure of the reliability for a particular design. A Safety Factor of 3 for a structure means that it is three times stronger than it theoretically needs to be.
23. The Historic Preservation Small Matching Grant Application (FSM16_0026–2016) was submitted on May 30, 2014, on the behalf of the city of Daytona Beach by the Planning Solutions Corp. of Daytona Beach, FL, in an effort to seek historic preservation grant funds to help rehabilitate the iconic historic landmark and prevent its loss due to increasing deterioration in recent years.
24. Although the clockworks were installed in 2008 and were still running into early 2016, they were in need of replacement due to the harsh conditions (salt air and moisture due to humidity) that they have endured over the years. Two of the four movements were

not keeping correct time and were beyond repair. They were originally supplied by the American Time and Signal Co. under a two-year warranty, so they have really lasted longer than anticipated. The new clockworks, which were installed in April 2016, were supplied by the Verdin Co. under an initial three-year warranty.

25. The American Bronze Foundry, Inc. is located at 1650 East Lake Mary Boulevard, Sanford, FL, 32773. The company specializes in fine art bronze sculpture castings and has the largest state-of-the-art facility in the southeastern United States.

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About the Author

Randy Jaye has been the president of Chapter 154 in Daytona Beach, FL, for many years and was the General Chairman for the 2016 and 2017 Florida Mid-Winter Regionals. He is a watch and clock collector and occasional restorer. He has contributed several articles to the Watch & Clock Bulletin and is planning to complete several more in the near future with a focus on wristwatches and "modern" horology. He recently wrote and published a history book titled *Flagler County, Florida: A Centennial History*.

History of Daytona Beach's Coquina Clock Tower Recorded in Post Cards

These vintage and modern postcards surely record how the Daytona Beach skyline, beachfront area, and society have changed from the late 1930s to the present. The clock tower was once the central landmark along the Daytona Beach coastline, but in recent decades, it has been overshadowed by a modern cityscape (Figures 18–27).



Figure 18. An early image of the clock tower, circa 1938, when it was the most prominent structure on the beachfront.

Figure 19. The clock tower, broadwalk (AKA boardwalk), and the Ocean Front Park Complex dominate the beachfront circa 1939.

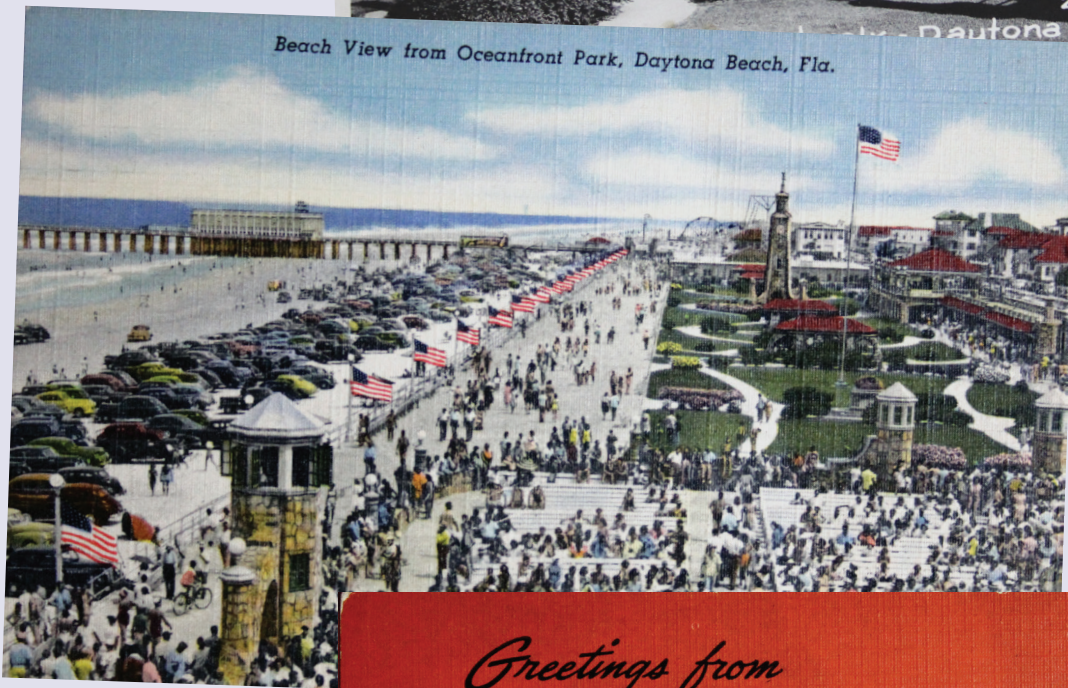


Figure 20. Circa the 1940s. A beach view from Ocean Front Park (Fourth of July Celebration). The clock tower is the central feature among the masses.

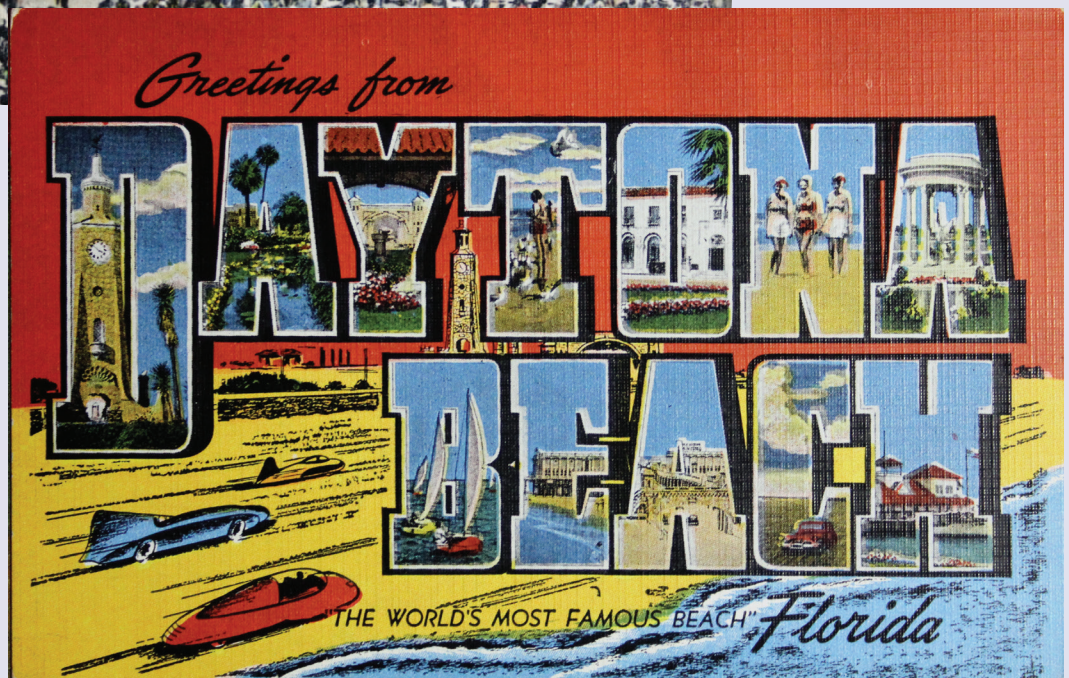


Figure 21. Circa the 1950s. The clock tower is featured twice because it is such a noteworthy local attraction. Note the cool futuristic beach racing cars.

SUNRISE



DAYTONA BEACH, FLORIDA

SUNSET



Figure 22. Circa the 1960s. The clock tower is an eye-catching feature during sunset. Note the larger lookout tower on the right side, which was torn down in the 1970s after being deemed a “public eyesore.”

Figure 23. Circa the 1970s. The clock tower and Ocean Front Park are significant features along the beachfront.



Figure 24. Circa the 1980s. The clock tower is becoming overshadowed by modern buildings.

Figure 25. Circa the 1990s. The clock tower is dwarfed by modern beachfront buildings.



Figure 26. Circa 2006. The clock tower is hard to locate among larger beachfront buildings.



Figure 27. Circa 2015. The clock tower looks miniscule among the modern beachfront cityscape.