

Manhattan Project National Historical Park

Oak Ridge, Tennessee

The Official Visitors Guide

National Park Service
US Department of the Interior

Second Edition 2017



Welcome to Manhattan Project National Historical Park. This guide is designed to help you make the most of your visit, whether it is for an hour, or for a day. Inside you'll find practical information, such as directions, things to do, or help you make plans for what interest you most. And you can always contact a park ranger or volunteer at our information desk to get the latest information about upcoming programs and events.

With the park entering its second year of existence, the range of experiences and things to do in the park has grown considerably. The park now has full-time staff working at the information desk, located at the American Museum for Science and Education (AMSE). In addition, there are park volunteers excited to provide information and details about the park. In our upcoming second year we will be expanding these opportunities even more.

In an effort to reach out to the visiting public, the park has been providing programs at various locations around Oak Ridge. One popular location is the Gatehouse on the Oak Ridge Turnpike. If you would like more information about upcoming ranger-led programs, please call the park for the next scheduled talk.

We also encourage you to visit the other two units of Manhattan Project NHP, located in Los Alamos, New Mexico; and the Hanford unit, in Richland, Washington.

You can also learn more about the park by visiting us online, at www.nps.gov/mapr.



ONE OF MANY BILLBOARDS IN THE SECRET CITY



THE GROVE THEATER IN OAK RIDGE



NURSES AT OAK RIDGE HOSPITAL IN 1940S

Welcome to Manhattan Project National Historical Park

Welcome to one of America's newest National Park Service sites. The Manhattan Project NHP is truly a unique park in that it has units in Oak Ridge TN, Los Alamos, NM and Hanford, WA. This far reaching park covers the history and story of America's research and development of atomic weapons during World War II. The elements of the story of Oak Ridge, TN or "The Secret City" as it was known then is what the park is presenting to park visitors.

The Manhattan Project NHP is unique in another way as the National Park Service is in partnership with the Department of Energy (DOE) to present the story of atomic science. The American Museum of Science and Energy (AMSE) is a great place to start your visit. AMSE along with the staff of Manhattan Project NHP are presenting the story of the people who worked to create the atomic bomb as well as the science that went into that discovery.

As you tour around the area look for information about the people who were instrumental in creating and developing the Manhattan Project. Pick up an Oak Ridge "Visitor Map and Guide" that will help you journey around the area and see the sites and locations that were instrumental during the development of the atomic bomb and the Secret City. It took many people of all races, genders and backgrounds to make this become an integral part of America's history.

During the park's first year many programs have been created to make it more recognizable as a National Park Service unit. With this second edition newspaper and the recognizable park brochure we are just beginning to relate the story of the Manhattan Project. The new Junior Ranger booklet will help kids begin to understand the significance of the park and the history of the Manhattan Project. In addition to the written materials, we now have rangers and volunteers stationed at the NPS desk inside of AMSE working every day to answer questions and provide programs. If you have questions, please contact a Park Ranger, park volunteer or one of the staff at the AMSE. They are there to help you discover the history, significance and importance of this site.

We hope you enjoy your visit to one of the newest Park Service sites and will continue to come back to see the growth and development of the Manhattan Project National Historical Park.

FIND YOUR **PARK**
FINDYOURPARK.COM



National Park Service
U.S. Department of the Interior

Manhattan Project National Historical Park

Mailing Address

300 S. Tulane Avenue
Oak Ridge, TN 37830

E-mail

mapr_information@nps.gov

Park Visitor Desk

(865) 576-6767



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The National Park Service cares for the special places saved by the American people so that all may experience our heritage.

Lost & Found

Report any lost items to rangers at the American Museum of Science and Energy located at 300 S. Tulane, Oak Ridge, Tennessee. Found items should be turned in at this location as well.

The Calutron Girls

Two historic buildings at the Y-12 National Security Complex are features of the Manhattan Project National Historical Park in Oak Ridge. There, the electromagnetic process was used to separate uranium isotopes, leading Y-12 to produce enriched uranium for the first atomic bomb.

The process, developed and refined by scientists, took place in 1,152 calutrons in nine buildings at Y-12. These scientists didn't run the new calutrons, however. Monitoring and adjusting the controls during the fevered rush to build the bomb during World War II were thousands of young women, straight from the farm or just out of high school, most from within just a few hundred miles of the secret city of Oak Ridge.

It is the stories of these young women, now known as the "calutron girls," that bring to life the history of the two Y-12 buildings, Building 9731 and Building 9204-3 (Beta 3).

The calutron girls, called cubicle operators during the war, worked in round-the-clock shifts for the Tennessee Eastman Company, the government contractor at Y-12. Trained with just enough information to do their jobs, the calutron girls could only guess at the purpose of the huge panels with control knobs they adjusted, as they sat for their eight-hour shifts. Cautioned not to talk about what they did or to venture into off-limits areas, they only learned the significance of their work after the first bomb was dropped on Hiroshima, Japan, on August 6, 1945.

The calutron girls' wartime experiences have been highlighted in various books including Denise Kiernan's *The Girls of Atomic City*. The "girls," most now in their late '80s or '90s, have appeared on radio shows and in panel discussions about their historic work.

The calutron was developed by E.O. Lawrence at the University of California, Berkeley, to separate the isotopes of Uranium 235 from naturally occurring uranium. Its name was a shortened version of University of California cyclotron.



U.S. Sen. Lamar Alexander of Tennessee related the story, in honoring nuclear workers on the Senate floor, of a disagreement that Tennessee Eastman had with Manhattan Project commander Gen. Leslie Groves and scientists who developed calutrons. Eastman wanted to train workers just out of high school to adjust knobs to keep needles within a certain range on calutron meters, while Groves and the scientists thought the machines required a scientist's hand. So for a week, scientists with PhD degrees ran five of the machines, and for another week, young women hired by Eastman operated the calutrons.

"After a week the girls had won hands down in terms of productivity," the late city historian and Manhattan Project veteran Bill Wilcox reported, according to Alexander. The scientists were too busy making adjustments and tampering with the machines to be as productive. The value of the calutron girls was proven.

After the war, most of the Y-12 calutrons were shut down. Those that remained helped usher in new applications for medical isotopes in research and treatment.

"When the war was over," Y-12 historian Ray Smith said, "the calutrons continued to make history by creating the stable isotopes used to make radioactive material for medical, industrial, and research applications." Today, the History Center at Y-12's New Hope Center contains a collection of informational materials and historical artifacts that includes information on the calutrons and Y-12's early mission.

Become A Junior Ranger



Manhattan Project NHP has a Junior Ranger book and a patch for you to earn for your jacket or book bag. Kids from age 4-12 are invited to use this book to explore Manhattan Project. Many activities will help you learn about the science behind the project.

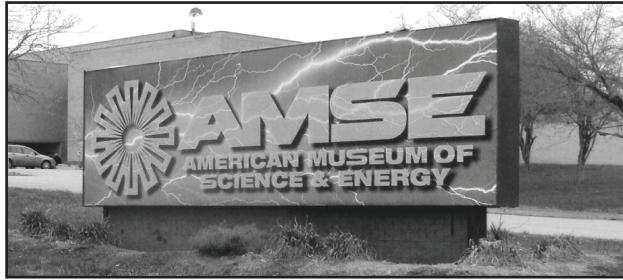
Become A Volunteer

For information on how you can become a National Park Service volunteer, contact Volunteer Coordinator, Effie Houston, at (423) 569-9778, or email us at Effie_Houston@nps.gov. Visit us online at <http://www.nps.gov/mapr/workwithus.htm>.

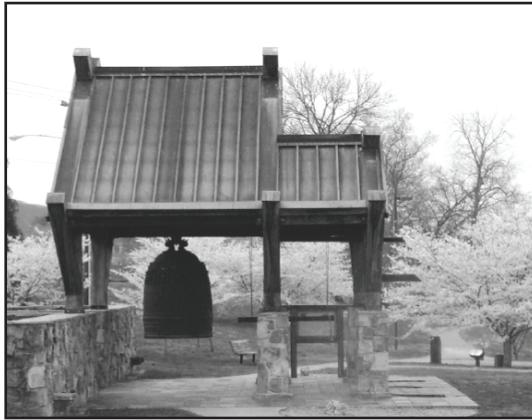


Things to Do

Visitors in Oak Ridge can learn the city's history at the American Museum of Science and Energy, the Manhattan Project National Historical Park, and at the Children's Museum of Oak Ridge. Seasonal bus tours provided



by the Department of Energy run from March through November and highlight local facilities from the 1940's and today. Tickets can be reserved in advance at www.AMSE.org or purchased the day of at the American Museum of Science and Energy.



Alvin K. Bissell Park is home to the Peace Pavilion that houses the International Friendship bell. The 8,000 lb. bell symbolizes the peace and reconciliation between Japan and the U.S. after WWII ended. Just east of the park is the Secret City Commemorative wall, Birth of a City Monuments, and the Public Library. The Library is home to the Oak Ridge Room which preserves the city's history and oral history records of early Oak Ridge residents.

Historic Jackson Square, also known as Townsite, and Grove Center are original dining, shopping and recreation centers of Oak Ridge. Both locations still offer restaurants and recreation. Jackson Square features restaurants, a Playhouse and specialty shops with the Historic Alexander Inn Guest House nearby. The Guest House provided accommodations for many scientists during the secret project in the 1940's. Grove Center features the Oak Ridge Outdoor Swimming Pool. The pool was constructed in 1944 and was considered the largest spring fed pool in the United States at that time with a grass beach, offshore island, diving boards, and depths up to 13 feet.



U.S. DEPARTMENT OF ENERGY'S

OAK RIDGE FACILITIES BUS TOUR

Oak Ridge also offers over eighty miles of public greenways for walking, hiking, running, and biking. Greenways are open during daylight hours; however, some trails are closed during hunting season. Please be sure to read all posted signs prior to hiking on the trails. Oak Ridge is proud of their flat water, with what some call the smoothest rowing water around. Rowers travel from all over just to paddle on Melton Hill Lake.



March - November*

*except federal holidays

March	Mon & Fri
April-May	Mon, Wed, & Fri
June-Aug	Mon-Fri
Sept-Oct	Mon, Wed, & Fri
November	Mon & Fri

11:30 am-2:30 pm

Registration begins at 9:00 am each day at the AMSE admission desk. (first-come, first-served)

Donate

The American Museum of Science and Energy Foundation is pleased to partner with the Manhattan Project National Historical Park – Oak Ridge by creating a fund in which tax-deductible contributions can be received to support the specific and defined needs of one of the nation's newest national parks. As you may know, funding for the new park will be somewhat limited, as is funding for all our nation's national parks.

Make your donation today to the Friends of Manhattan Project National Historical Park Fund by visiting <http://amsefoundation.org/friends-of-manhattan-project-national-historical-park-fund/>. Support can also be provided by check mailed to:

AMSE Foundation
300 S. Tulane Avenue
Oak Ridge, TN 37830

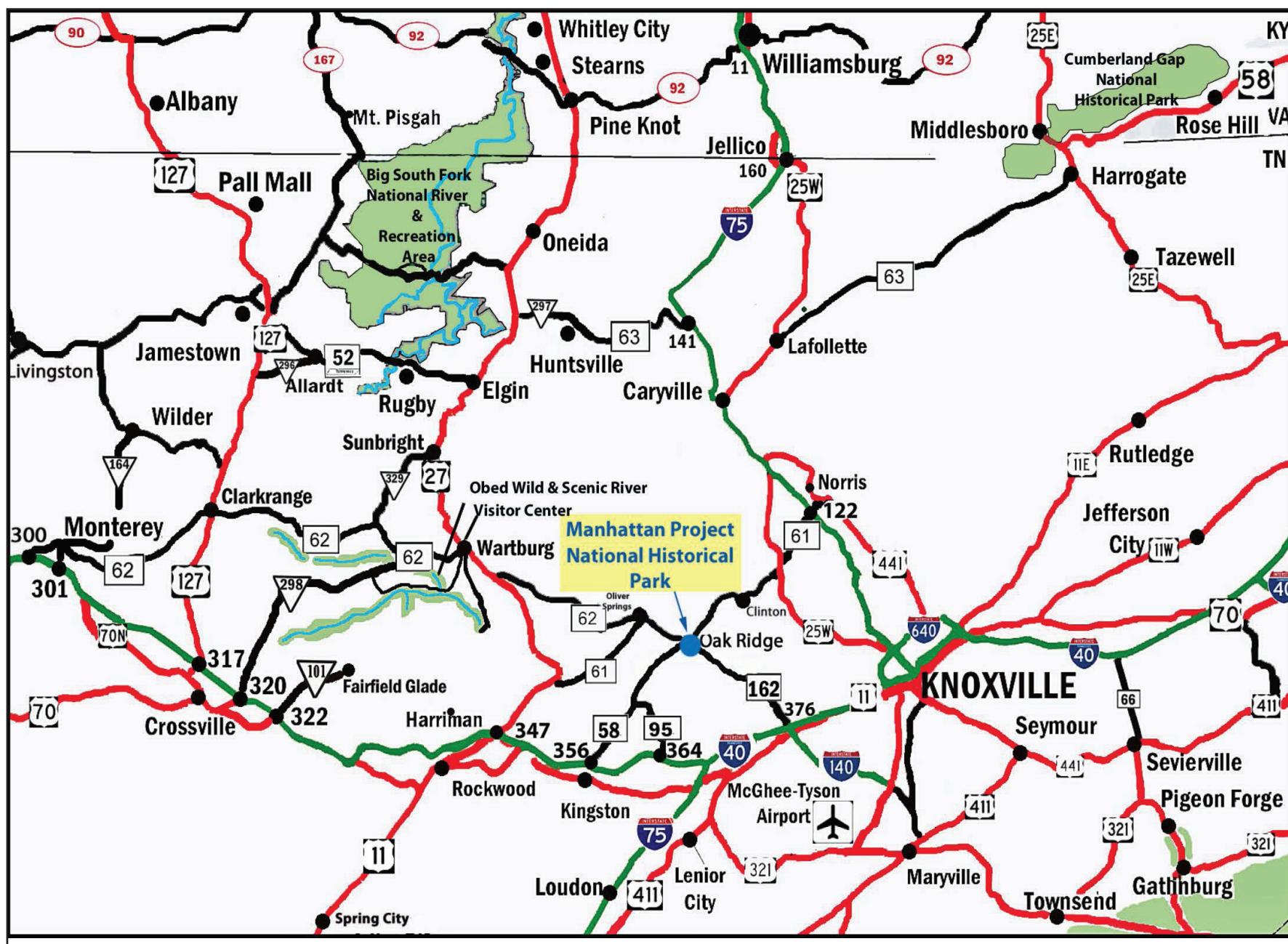


Checks can be made out to: Friends of the Manhattan Project National Historical Park Fund – Oak Ridge



National Park Service
U.S. Department of the Interior

Manhattan Project National Historical Park
Oak Ridge, TN



Manhattan Project NHP

Oak Ridge Site
300 S. Tulane Avenue
Oak Ridge, TN
(865) 576-6767

Hanford Site
1000 Logston Boulevard
Richland, WA
(509) 376-1647

Los Alamos Site
475 20th Street
Los Alamos, NM
(505) 662-8105



SCAN THIS CODE
for directions from website

DIAL **911**
for EMERGENCIES

EMERGENCY NUMBERS

Oak Ridge Police Department
200 S. Tulane Ave.
Oak Ridge, TN
(865) 425-4399

**Anderson County Sheriff's
Department**
101 Main Street
Clinton, TN
(865) 457-2414

Methodist Medical Center
990 Oak Ridge Turnpike
Oak Ridge, TN
(865) 835-1000

Oak Ridge Fire Department
Station 2 (East End)
609 Oak Ridge Turnpike
Oak Ridge, TN
(865) 425-3912