MANHATTAN PROJECT NATIONAL HISTORICAL PARK

FY21 Accomplishments
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Introduction

The Manhattan Project was an unprecedented, top-secret government program during World War II with the goal of constructing a nuclear bomb before Nazi Germany. The project resulted in science and technology that transformed the role of the United States in the world and ushered in the atomic age. Operating from 1942 to 1946, the Manhattan Project employed close to 130,000 workers at its peak.

The 2015 National Defense Authorization Act (Act), signed into law by President Obama on December 19, 2014, instructed the Department of Energy (DOE) and the Department of the Interior (DOI), through the National Park Service (NPS), to work together to establish a new national historical park.

A Memorandum of Agreement (MOA) signed by the NPS and DOE established the Manhattan Project National Historical Park (MAPR) in November of 2015 to include eligible sites in Oak Ridge, Tennessee; Los Alamos, New Mexico; and Hanford, Washington.

The purposes of the Act and MOA are to preserve and protect, for the benefit of present and future generations, the nationally significant historic resources associated with the Manhattan Project; to improve public understanding of the Manhattan Project and its legacy through interpretation of the historic resources associated with the Manhattan Project; to enhance public access to the Park established under the Act consistent with protection of public safety, national security, and other aspects of the DOE’s mission; and to assist the DOE, communities, historical societies, and other interested organizations and individuals in efforts to preserve and protect the historically significant resources associated with the Manhattan Project.

Los Alamos park properties listed in the legislation include historic buildings in downtown Los Alamos and 17 Los Alamos National Laboratory (LANL) properties located at eight technical areas (TAs).

The following pages illustrate the vigorous efforts of LANL’s continued commitment to the MAPR over the course of Fiscal Year 2021.
Slotin Building (18-0001)

Approval received from the State Historic Preservation Office (SHPO) to perform the following preservation activities:

- Roof replacement
- Ramp and exterior regrading as necessary for ramp and drainage
- Restore building interior to period of significance (i.e., restroom and wall partitions to be removed)
- Exterior cement asbestos shingle replacement and building paint color
- Exterior removal of corrugated material (metal/asbestos cement) from historic berm location
- Relocation and consolidation of utilities into cabinet with reconstructed historic doors
- Reconstruction of historic doors (at utility cabinet and at historic east entry)

Sampling and Analysis conducted by Industrial Hygiene and Safety and Radiation Protection

Sampling and Analysis, required for work planning through Maintenance and Site Services (MSS) and Logistics (LOG), to support the overall preservation work of the building, as well as determining waste types to be generated for proper disposition supported by Waste Generator Services and Waste Management Programs (Fig. 1 and 2)

Multiple walk-downs supported by MSS and LOG for cost estimates to be submitted to DOE-Legacy Management (DOE-LM) for funding request

- $608k received in August 2021 for re-roofing and interior decontamination by end of CY2021 (material supply chain and weather dependent) (Fig. 3)

- Will be engaging LANL Engineering on overall historical requirements of the building to integrate requirements under current codes and regulations (i.e., electrical, fire protection, telecommunications, ADA) for phased planning and execution upon additional DOE-LM funding allotment(s)

- Additional funding allotment from DOE-LM to LANL will be reviewed upon DOE-LM’s FY22 enacted budget
Quonset Hut (22-0001)

- SHPO Consultation Package for adaptive re-use was drafted and submitted (Fig. 4 and 5)
- Project Team of MAPR-LA, Historic Buildings, Infrastructure Program Office and Weapons personnel will reconvene in early 2022 for discussion on project planning, based on SHPO comments, and review of a potential funding source
- Possible program uses under adaptive re-use include: conference rooms, event/gathering space, office space; most importantly, is incorporating MAPR-related interpretation in final option chosen

Replacement of degraded cement asbestos shingles

In-progress execution of SHPO-concurred consultation package to replace all cement asbestos shingles with non-asbestos containing replica shingles for buildings associated with the Manhattan Project-era:
- TA14-0006
- TA16-Bldg 0058, plus wing wall replacement and painting of doors and trim (Fig. 6)
- TA16-0516
- TA16-0517
- TA22-0001

Cultural Landscape Report for TA-18 MAPR Property

In support of the NPS’s December 2021 Cultural Landscape Report (CLR) deliverable to the Los Alamos Field Office (NA-LA), the LANL Archaeology team completed a 1,147-page report detailing six archaeological sites (LA 198741, LA 197842, LA 197845, LA 197844, LA 21335, LA 12743) and 183 individual cavates (156 cavates at LA 12743 and 27 cavates at LA 197844) (Fig. 7).

- Artifacts excavated in the 1980s from LA 12743 during security upgrades at TA-18 will be analyzed and documented for submission to the SHPO
- Updated documentation for the six archaeological sites is being submitted to the SHPO to receive eligibility concurrence in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended
Concrete repair efforts

- Close-out reports for the concrete repair work completed at both Battleship Bunkers at TA-18 (PL 2 and PL5), Gun Site (TA-08) and V-Site (TA-16) will be completed by December 2021 (Fig. 8).

  Fig. 8: V-Site concrete repair before (left) and after (right)

- The following picture shows an example of “targets” that the LANL Historic Buildings team uses to obtain scaled photography of completed preservation work. This photography will be placed into an AutoCad program for the concrete repairs to be represented digitally. This process will allow the team to obtain an accurate account of the surface area where work was performed. Gathering this baseline data will further assist the Historic Buildings team to monitor concrete deterioration in the future and allow accurate measurements of concrete loss over a given period of time (Fig. 9).

  Fig. 9: Bunker concrete post analysis (left), detail of target dots (right)

Battleship Bunker (TA-18, PL-5)

- Preservation efforts are currently underway to repair the door to Battleship Bunker 5. Battleship Bunker 5 is currently not located within the MAPR-LA Park boundary, however, efforts are underway to include the Bunker due to its historical significance to the Creutz Test (Fig. 10).

  Fig. 10: Battleship Bunker door before (left) and after (right)

- The exact source of the damage to the Bunker’s door is unknown. Based on the location of the bend on the door and knowledge that dirt once filled in the stairwell and covered nearly half the door, speculation is the door was bent with some sort of heavy machinery during excavation.

Adaptive re-use of 16-0180

- Future adaptive re-use, rather than decommissioning, of 16-0180 (Fire Station #5) is being considered at the direction of NA-LA. One potential re-use option would be as a Manhattan Project National Historical Park Visitor Center.

  • The Manhattan Project National Historical Park Visitor Center idea would see the building outfitted with interpretation related to the WFO MAPR-LA sites and would be primarily utilized for WFO visitors, subcontractors and/or uncleared employees with the potential of opening the building at scheduled times to the general public (possibly paired with TA-18 public tours) for guided talks of operations “behind-the-fence” at WFO during the Manhattan Project-era

  • Continued collaboration is required with the Infrastructure Program Office, Weapons, Institutional Facilities, and NA-LA
FY21 Accomplishments

- Bradbury Science Museum’s Online Collections Catalog:
  - 67 additional MAPR items published in FY21
  - MAPR collection totals 209 records: 72 archives, 67 photos, and 70 objects (Fig. 11)

- Completion of WWII-era Army uniform exhibit at the Bradbury Science Museum (BSM) (Fig. 12)

- Tom and Vivian Martinez of Taos, NM graciously donated a WWII bomb service truck. The truck is currently located at V-Site. Planning will begin for restoration and future use to promote MAPR-Los Alamos (Fig. 13).

- Documentation of approximately 40 Manhattan Project-era artifacts from S-Site; this will remain an on-going effort into FY22 to include the identification of surplus property once the cataloging is complete. This effort will reduce the quantity of artifacts, with minimal to no historical value, being held in outdoor storage at V-Site

On-Going Efforts

Future public outreach, via news releases and social media posts, in correlation with on-going LANL MAPR facility preservation efforts to acquire artifacts (i.e., upcoming Slotin Building preservation and Quonset Hut Adaptive Re-use)

Continued preservation and restoration of artifacts currently in the collection. Collection continues to grow with new accessions, including an unedited copy of the 1945 Smyth Report.

- A Historic Guard Station was discovered in summer 2021 within a Los Alamos real-estate listing; outreach is currently in process to the new owners (Fig. 14)
Tour Offerings &
Interpretative Enhancements

FY21 Accomplishments

• Removed shelter from Battleship Bunker 2 at TA-18, after the FY2020 concrete repairs, for visitor enhancement (Fig. 15 and 16)

*Given the COVID-19 pandemic, public tour offerings were canceled for CY2021. Internal tours were also limited to abide by health guidelines.

On-Going Efforts

• The interpretative tour script for TA-18 is in process of being re-written, in addition to a re-vamp of the public registration process, for a more streamlined and positive visitor experience
  • MAPR-LA is seeking accreditation with the National Association for Interpretation to have multiple, qualified interpretative staff
• Integration with the LANL Trails Program and Los Alamos County
  • Manhattan Project interpretation on local trails to provide visitors and locals more opportunities to connect with the history of the community (i.e., Anniversary Trail)
• Desire to benchmark with Oak Ridge and Hanford MAPR sites, along with the NPS Regional Office
  • Focus on developing interpretation to incorporate all three MAPR sites into one unifying, factually accurate, and fair message that promotes the Manhattan Project national wartime effort

Fig. 15: Riggers removing shelter

Fig. 16: Battleship Bunker 2 with shelter before (left) and without shelter after (right)

Fig. 17: Tour given to the Great Garbage Grab volunteers, TA-18
## FY21 Accomplishments

- Developed a stronger collaboration with the LANL Communications Office and National Security Research Center (NSRC) for Manhattan Project-related events and news releases for both internal and external audiences
- Continued collaboration with Trinity Site personnel for future in-person and virtual tour offerings paired with LANL’s public/virtual offerings (Fig. 18)
- Developed a partnership with Los Alamos Historical Society (LAHS) for afternoon tours of the historic sites in downtown Los Alamos after future offerings of LANL’s public TA-18 tours
- 360-degree imagery was completed for all MAPR properties at LANL for internal use and to support NPS in developing their 360 virtual tours
- GIS information, interpretative text, and photographs of MAPR-LA sites were provided to NPS for their mobile application
- Researched and created content for NPS MAPR social media. Completed 19 original posts in FY21 and assisted the NPS with images, information, and/or references on 14 additional posts
- Six News Releases and Articles related to MAPR-LA
  - 5-year anniversary of the Manhattan Project National Historical Park, November 2020
  - “Preserving Manhattan Project historic sites” – preservation work of Concrete Bowl and Gun Site
  - LANL Badge Restoration Project from NSRC
  - Valentine’s Day-Bradner wedding
  - Secret City app revamp
  - Teacher Appreciation Week articles
  - “Breaking Dawn” video shown at the BSM was translated in Spanish and re-released
- MAPR-LA Artifact Specialist participated in a Relics History Podcast (viewable on YouTube) about Oppenheimer’s office chair (artifact in the MAPR collection) (Fig. 19)

Fig. 18: Monument at Trinity Site

Fig. 19: Thumbnail for Relics YouTube video
The Secret City, Project Y App

- “The Secret City, Project Y” app was revamped via the LANL Visible Team, for mobile download, as well as updated for visitor use and interaction at the BSM. The re-vamp included, but was not limited to:
  - New interpretation of sites along Bathtub Row in collaboration with Los Alamos County
  - Addition of new interpretive elements at the V-Site location
  - Easter Egg additions throughout the app for enhanced user engagement
- Deployment of QR posters, across Los Alamos County-owned kiosks, to market the Secret City app and provide ease of mobile download (Fig. 20)

Fig. 20: Secret City poster in County kiosk (left), mobile app download QR code (right)

On-Going Efforts

- Manhattan Project National Historical Park micro-website in development and the Beta version deployed during LANL’s WESST Fest (Fig. 21)

Fig. 21: Screen shot of micro-website homepage

- Helicopter aerial photographs of downtown Los Alamos via Don Taylor Photography for future use at BSM and across digital platforms in support of MAPR (Fig. 22)

Fig. 22: Aerial photograph of downtown Los Alamos

- Update the entrance to the BSM with new aerial imagery
- QR technology to be used for the Welcome exhibit at BSM
- Integration with the on-boarding/new hire process
- Engage new employees in the institution’s history by relating it to the current mission of Laboratory operations
  - MAPR-LA will be engaging with the Weapons Engineering Study Hall (WESH) and WFO-DO for tailored tours beginning in FY22
- Manhattan Project National Historical Park presence in the upcoming deployment of the LANL Trailer Program, “Challenge Tomorrow”

App Metrics

- Total of 447 app downloads (Fig. 21)
  - 441 in United States, 6 in Canada
- Total of 821 product page views via Android and IOS store

Fig. 21: Project Y app icon
Legacy waste clean-up

Finalization of multi-year, multi-organizational legacy waste clean-up at CASA 1 (18-0023)

In summer 2019, NA-LA requested MAPR-LA to facilitate housekeeping efforts within the TA-18 CASA 1 area. The CASA 1 area is located directly behind Battleship Bunker (PL-2), which is a stop on the public tours. From the Battleship Bunker, the visiting public have a direct line of site into the gated area of CASA 1 (Fig. 23).

- The resulting waste dispositioned included:
  - Two roll-off bins containing miscellaneous construction debris and two B-25s with low-level radiological waste. The waste profile was created to account for 100% of the bins’ contents; upon approval of the waste profile, waste shipment occurred in summer 2020.
  - Two 5-gallon poly buckets were re-identified in February 2020 and assigned to NEN as the waste generator. Both buckets were surveyed by Radiation Protection and the Environmental Stewardship’s Non-Destructive Analysis Team.
  - One poly bucket was consolidated with a similar waste stream in mid-August 2020, removed from TA-18, and proceeded onto final disposition.
  - The remaining bucket was accepted at CMR by C-AAC in October 2020. The drum remains safely and compliantly stored awaiting final waste shipment as of September 2021 via SAFE-NMCA.
  - Two roll-off bins containing twelve (12) steel drums from TA-55, sent to TA-18 in 2008 as part of a NPI de-inventory exercise, were shipped in March 2021 with two B-25s that contained the dunnage contents of the drums.
  - The accumulated liquid from within two steel drums (rain and snowmelt over 12 years) was analyzed, approved for disposition, and shipped in April 2021 (Fig. 24 and 25).

Fig. 23: CASA 1 after the clean-up efforts

Fig. 24: Packaging and transportation
DOE Preservation Officer briefing

The newly appointed DOE Preservation Officer was provided a briefing of MAPR-LA work scope, as well as an overview of the LANL Cultural Resources program in summer 2021.

- Collaboration will continue in relation to MAPR-LA’s 5-year preservation and site planning

On-site improvements

Increased on-site storage options for TA-18 tour-related materials to streamline laborer support and site preparations

- Acquisition of storage shed from 00-0480 to be moved to TA-18
- Asbestos abatement, window and door replacement of current shed (18-0337) (Fig. 26)

Infrastructure Program Office

- The Facilities Information Management System (FIMS) was validated for MAPR-LA properties. This is an effort led by IFPROG due to the annual requirement of NA-LA and DOE-LM.
- Initiated collaboration with IFPROG’s BUILDER Program for potential to increase accuracy on facility cost estimation for MAPR-LA related maintenance and repair

Los Alamos Field Office

Continued support to the Los Alamos Field Office in relation to the Inter-Agency Agreement (IAA) with the Department of the Interior and National Park Service

- Ensure close-out of current IAA by December 31, 2021
  - Corresponding week-long site visit with NPS and University of Oregon was held in August 2020
- Implementation of new IAA on January 1, 2022
  - LANL will be hosting NPS and the Historic Preservation Training Center for MAPR building assessments, leading into 5-year planning required by DOE-LM
  - Ethnographic study via NPS for integration into the TA-18 Cultural Landscape Report
- Updated, more efficient LANL Activity Security Plan in process for public tours at TA-18 via the MAPR Deployed Security Officer
- New MAPR-LA Communication Plan approved through NA-LA Communications Representative
  - Focuses on greater span for public tour announcements and press releases
  - Work scope proposals to include resources, cost, and scheduling
  - Transition through retirement of the Manhattan Project National Historical Park Site Representative, NA-LA
- Bi-weekly MAPR Steering Committee meetings
Los Alamos County

Continued partnership with Los Alamos County

- Kwage Mesa Trail waysides (funded by DOE-LM) were installed summer 2021
  - Kwage Mesa Trail is the first designated trail within the entire MAPR (Fig. 27)

- Assisted in the development of an application packet for Los Alamos County to be designated an American World War II Heritage City
  - The American World War II Heritage City recognition program was established in order to “recognize and ensure the continued preservation and importance of the history of the United States involvement in World War II”
  - The Secretary of the Interior may designate one city per state or territory
  - Congress established two basic criteria:
    - Contributions by a city and its environs to the WWII home-front war effort
    - Achievements to preserve the heritage and legacy of the city’s contributions to the war effort and to preserve WWII history

- The MAPR-LA Public Engagement Specialist is serving on the LAHS’s Oppenheimer House interpretive development team (Fig. 28)
  - Letter of Support for Oppenheimer House for LAHS was written for use in applying for grants for preservation work and interpretation. The letter highlights LAHS’s partnership with local organizations.
  - LANL will collaborate with the County to integrate TA-18 public tour offerings with tours of Oppenheimer House

Fig. 27: Kwage Mesa waysides unveiling

Fig. 28: Oppenheimer House interior

- The MAPR-LA Public Engagement Specialist serves on the County's Historic Preservation Advisory Board to highlight the work LANL is scheduling/performing with regard to preservation and to provide input on the County’s historic preservation efforts with regard to MAPR-LA
- The MAPR-LA Public Engagement Specialist serves on Los Alamos County’s Tourism Implementation Task Force as a LANL representative to help drive historical tourism
Thank You

The staff of the Manhattan Project faced unprecedented scientific and technical challenges, professional pressures, and personal strains during World War II. Yet, they faced it all head-on and changed the world, in the span of 27 months, against innumerable odds.

As the Laboratory faces its own unprecedented moment in history, we can look to the Manhattan Project for lessons, guidance, and inspiration.

Even in the midst of a global pandemic and current day personal strains, the dedication and support shown to the Manhattan Project National Historical Park, Los Alamos by our workforce is second to none. The MAPR-LA team offers our sincerest “Thank You” to all who have helped us flourish this fiscal year.