

Rocky Mountains Cooperative Ecosystem Studies Unit  
Project Summary

**Project Title:** CAVE HABS Documentation of the Mission 66 Six-Plex

**Task Agreement #** P18AC00888 **Modification(s):** 1  
**Discipline:** Cultural  
**Type of Project:** Technical Assistance  
**Funding Agency:** National Park Service  
**Other Partners/Cooperators:** University of Colorado - Denver  
**Student Participation:** Yes  
**Effective Dates:** 9/1/2018 – 12/31/2021  
**Funding Amount:** \$30,654

**Investigators and Agency Representative:**

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**Project Abstract:** The purpose of the project is to document the Carlsbad Cavern's Six-plex building using LiDAR scanning for the purpose of generating Historic American Building Survey (HABS) drawings. The project will create an in-depth inventory of the current building conditions and a valuable resource for education, research, and planning deferred maintenance projects. The project will result in data which can inform local repair and preservation decisions and tie into a larger data set being gathered by others.

The University of Colorado at Denver College of Architecture and Planning Center for Preservation Research (CoPR) proposes using LiDAR (Light Detection and Ranging) scanning to document the building and surrounding landscape for the purpose of completing a set of HABS drawings. List of drawings includes a site plan, main level plan, four elevations and section drawings.

"The "Mission 66" program was initiated by the National Park Service in 1956 and was to be completed by the 50th anniversary of the agency in 1966. Earlier planning and development projects, however, set important precedents for the program and determined much of the character of its planning and architectural development. The "public use buildings" at Carlsbad Caverns (beginning in 1953) and at Grand Canyon (beginning in 1954), for example, were important steps in developing the visitor center building type. The Mission 66 era, in the broadest sense, began in 1945, when the postwar phase of park planning and design began at the Park Service". (from: [https://www.nps.gov/parkhistory/online\\_books/allaback/vcii.htm](https://www.nps.gov/parkhistory/online_books/allaback/vcii.htm)). The CAVE Six-Plex is one of only two of this building type in the NPS (as designed and built under the Mission 66 program) and is eligible for National Register listing. It currently houses NPS staff and is in need of repair and maintenance.

In recent years, the NPS Intermountain Region, Heritage Partnerships Program (HPP) has worked with the University of Colorado Denver. Information is gathered to record and preserve nationally significant sites through collecting, archiving, and providing access to digital data created through laser scanning, digital modeling and other state-of-the-art technologies. The goal of this effort was to develop a long-term digital documentation program whereby parks and partner organizations could digitally record cultural resources. To date, the survey work has involved the use of 3D laser scanning and high resolution digital photography to create a multitude of digital products, including CAD drawings, High Dynamic Range photographs, and 3D Point Clouds. This digital documentation is used to create a variety of interpretive and interactive programs including 3D virtual tours, 3D models, and traditional Historic American Buildings Survey (HABS) ink-on-Mylar drawings.