Pepperdine University Libraries
Developing a Sustainable Preservation Environment for Humanities Collections
NEH Sustaining Cultural Heritage Collections Implementation Grant

Narrative

Introduction

Project Overview

The Pepperdine University Libraries request an implementation grant in the amount of $350,000 from the National Endowment for the Humanities Sustaining Cultural Heritage Collections program to fund development of a sustainable preservation environment for the humanities materials in Pepperdine's Special Collections and University Archives. This preservation environment will include sustainable preservation systems (mechanical systems, lighting, fire suppression, shelving, and structure) that will extend the usable life of our rare and valuable humanities materials while also serving as a demonstration space for feasible, affordable preventive preservation at other institutions.

The implementation project is based on the results of a planning project, also funded by the NEH, which involved an interdisciplinary investigation into innovative and sustainable methods of preserving our humanities holdings. Nationally-recognized consultants advised on three specific aspects of rare materials preservation and display including: 1) temperature and humidity; 2) lighting and energy usage; and 3) sustainable architectural design. With this implementation project, we will carry out the integrated sustainability plan developed during the planning project and implement the recommendations of the expert consultants. Because of the excellent information provided to us by the expert consultants, we are ready to move forward immediately. Schematic plans are in place, and the architects and engineers are prepared to deliver a sustainable preservation environment.

This project will be part of a larger library building upgrade that will feature an expanded Special Collections and University Archives space. Among the changes that will be accomplished by the upgrade are a more publicly accessible Special Collections department, with a defined reading room, an expanded exhibition space, processing, conservation and digitization areas, and a space for hands-on instruction. This grant project is focused particularly on the preservation environment for the permanent storage of the humanities materials in the Special Collections and University Archives.

We are requesting funding to install sustainable preservation systems, including mechanical systems, lighting, fire suppression, shelving, and a structure that facilitates vapor control, for the Special Collections and University Archives. The institution is committed to supporting this project, and will provide any additional funds needed for the preservation systems. The institution will also provide funds to re-engage the consultants from the planning project to serve as advisors and reviewers during the implementation project, to install graphics on the exterior of the space that will communicate our preservation approach, and to host a symposium to disseminate project results to the professional community. Pepperdine staff will contribute their time as an in-kind cost.

We have paid close attention to the changing standards in the area of preventive preservation, particularly with regard to increasing focus on sustainability and preservation. We will address sustainability by using passive systems (floors, ceilings, walls, and insulation) to provide for vapor control; by selecting energy efficient LED lighting; by utilizing an HVAC system that allows for seasonal changes in set points, minimal outside air exchange, and idling down; by choosing products and finishes with low emissions; and by making an effort to procure materials locally whenever possible, in order to reduce consumption of fossil fuels and to avoid excessive delivery costs. The "Method and Standards" section more fully details our commitment to sustainability and the specifications for all of our equipment choices, as well as the standards and resources that have informed our approach.

The results of this project will be a sustainable preservation environment that will extend the usable life of our rare humanities materials and provide for greater access now and in the future; a reduction in energy costs and environmental impact; an educational program for students and faculty on the reasons and methods for cultural heritage preservation; and a demonstration space that we can share with the professional community that will serve as a model for feasible, affordable, and sustainable special collections preservation environments for institutions similar to ours. The Pepperdine Libraries are committed to supporting academic excellence and developing resources, and this project will accomplish these strategic initiatives by preserving valuable humanities collections for research by our community and beyond.

Organizational Profile

Pepperdine University is an independent university enrolling approximately 8,000 students in five colleges and schools. They include the Seaver College of Letters, Arts and Sciences, the School of Law, the Graduate School of Education and Psychology, the Graziadio School of Business and Management, and the School of Public Policy, which are all based at the university's 830-acre campus overlooking the Pacific Ocean in Malibu.

George Pepperdine College was established in 1937 by Pepperdine, a businessman who founded the Western Auto Supply Company. For the first 30 years of its existence, the institution was a small, mostly undergraduate college. University status was achieved in 1970 as the institution added graduate and professional schools. In 1972, the university opened its new campus in Malibu, California.

As a Christian university committed to the highest standards of academic excellence and Christian values, the mission of Pepperdine is to strengthen students for lives of purpose, service, and leadership. Pepperdine University is religiously affiliated with the Churches of Christ; however, it is nonsectarian and independent of ecclesiastical controls. Faculty, administrators, and members of the Board of Regents represent many religious backgrounds, and students of all faiths are welcomed.

The Pepperdine University Libraries support the university's mission by providing a hybrid collection of print and digital resources relevant to the students and degree programs of the institution, and by providing personalized service and information literacy training. The Pepperdine University Libraries include the main Payson Library in Malibu and ten campus libraries located throughout Los Angeles and the world. With an annual budget of $4.1 million, a team of 36 full-time staff members and additional student workers oversees library services at all locations. Payson Library, where the Special Collections

and University Archives are located, is open an average of 339 days per year. The annual gate count is consistently over 300,000.

The Special Collections and University Archives department is located in Payson Library on Pepperdine University's Malibu campus. The department consists of a rare book collection, the University Archives and other archival collections, the Malibu Historical Collection, and the Churches of Christ Heritage Center. While archival materials and rare books have been a part of the library's collection for many years, the department was officially formalized in 2008 with the hiring of the library's first full-time special collections professional. Prior to this time, archival materials had been collected and overseen by a retired university professor. Melissa Nykanen, Associate University Librarian for Special Collections and University Archives at Payson Library, oversees the care and preservation of the university's rare humanities materials.

The mission of the Special Collections and University Archives is to collect, organize, preserve, and make available materials with enduring historic value that can be used to support research, teaching, administrative activities, and community involvement. It accomplishes this mission through the following:

- Identifying and acquiring historic research materials that fit our collection scope and that support the mission of the university;
- Organizing and describing the materials to increase their accessibility to all users;
- Providing a proper environment for preservation;
- Making the materials available to administrative units, students, faculty, alumni, and researchers by providing research assistance and services to all users; and
- Promoting awareness of the significance of the materials through events, exhibits, and programming.

The Special Collections and University Archives Collection Development Policy guides decisions about the development of the collections; this policy is available online at https://wikis.pepperdine.edu/display/LIBPROC/Special+Collections+and+University+Archives+Collection+Development+Policy. The policy outlines our mission, audience, collecting areas, acquisitions methods, transfer guidelines, and other relevant considerations.

The humanities collections in the Special Collections and University Archives directly support the university's mission of academic excellence and purpose, service, and leadership. The collections support academic excellence by providing rich primary sources for students to use to expand their research. Through a robust instruction program, a hands-on internship opportunity, and a series of programs and events, librarians actively highlight collections and provide students with opportunities to engage with collection materials in a meaningful way. Collections related to the history of the Churches of Christ support the religious aspect of the university mission by illuminating the heritage of the university and providing valuable resources for research into the history of the institution's religious affiliation.

Significance of Collections

Pepperdine University's Special Collections and University Archives contain materials with national significance that support undergraduate, graduate, and faculty research in the humanities. The library is frequently referred to as the "Humanities Lab" on campus, and is essential to meeting the research needs of the Pepperdine community and beyond.

Rare Book Collections

The rare book collection consists of approximately 9,000 books, pamphlets, and periodicals dating back to the 16th century and includes items in the areas of religion, literature, music, and history. Particular areas of strength are rare Bibles and religious texts, 19th- and 20th-century literature, and rare children's books. Unique collections include the Mlynarski Collection of Books on 19th-Century Paris, a collection of 1,150 books related to 19th-century Parisian life, and the Metcalf Collection of Books on T. E. Lawrence, 468 titles that feature the literary journey of T. E. Lawrence and themes of travel and exploration in the early 20th century.

Archival Collections

The Pepperdine University Libraries hold approximately 1,400 linear feet of unique archival collections not available elsewhere, which address a variety of humanities topics of international significance. Unique photographs and documents related to the Korean War, taken by a Pepperdine alumnus, are found in the Hanson Williams, Jr. collection, which highlights both the American military experience as well as Korean life and culture during the war. The history of film is documented in the collection of actor and director Micky Moore who had a film career that spanned 83 years - from acting as a young child alongside Mary Pickford to directing the second unit for the Indiana Jones trilogy. The papers of politician, author, commentator, and filmmaker, Bruce Herschensohn, represent the history of the United States Information Agency (USIA), particularly in the 1960s, as well as political themes throughout the latter part of the 20th century. Hired by the USIA to create a film about the legacy of John F. Kennedy, Herschensohn's papers meticulously document the funeral procession in Washington, DC, and the memorial events throughout the world.

The Pepperdine University Archives span countless themes important to American history, including the history of student life, faith-based education, religious movements in America, patriotism, philanthropy, law, and business development in Los Angeles, California, and across the country during the 20th century. From 1937 to 1972, Pepperdine's primary campus was located in South Central Los Angeles, very near the location of the Watts Riots in the tumultuous 1960s. Racial tensions in this area did not leave the campus unaffected, and documents in the archives from this time period reveal the reaction and activities of college students located at the geographic center of the tension. In response to current events related to racial tensions occurring on college campuses across the country, one Pepperdine undergraduate student is now in the process of researching these materials as a foundation for a documentary film.

The personal papers of individuals who were instrumental in the development of the university, such as E.V. Pullias, M. Norvel Young, Howard A. White, William S. Banowsky, Frank and Blanche Seaver, and George Pepperdine, as well as the mid-20th century records for their associated businesses (Western Auto and Hydril), address many of the themes listed above. Many of these individuals and organizations were

involved with societal programs like the Freedom Forum and the American Builders' Program, or were closely connected to religious and political movements throughout Southern California. Consequently, the archives include a substantial amount of material that addresses both pressing issues of the day and the pivotal impact of industrial development in Southern California in the 20th century.

Malibu Historical Collection

The Malibu Historical Collection is an invaluable asset within the library since no other local entity provides access to these scholarly historic resources. The collection includes complete runs of both local newspapers, *The Malibu Surfside News* and *The Malibu Times,* which date back to the 1940s and are otherwise unavailable to the public. These newspapers are in particularly high demand by community members and visiting researchers. Collections on local organizations such as the Malibu Township Council document grassroots political activities that guided city development. Personal and family papers, such as the Rindge and Adamson Family Papers, document ranching life, real estate, coastal water issues, and other issues important to community members. Other books, maps, manuscripts, photographs, documents, and oral histories in the collection describe or portray additional elements of local history, including the earliest communities of Chumash Indians, the distribution of Spanish Land Grants, contested issues about local transportation, and business development. An installation of 30 vintage surfboards dating back to the early 1900s, along with other materials describing the history of surfing, draw many visitors.

Churches of Christ Heritage Center

The Churches of Christ Heritage Center contains 1,300 books, 70 linear feet of periodicals, and a growing collection of archival materials including church bulletins, newsletters, ephemera, photographs, maps, and other materials related to the Churches of Christ and the Stone-Campbell Movement with specific focus on the Western states and the Pacific Rim. During the 19th and 20th centuries, the American-grown social and religious movement known as the Stone-Campbell Movement made an indelible impression on the economic, political, religious, and educational landscape of Western America. Transformative ideas about pacifism, materialism, civil rights, education, service, faith, and reason were sources of ferment and inspiration among those migrating west, forging the American frontier while fleeing the effects of the Civil War and the Dust Bowl.

Usage

The Special Collections support research, scholarship, and lifelong learning among students, faculty, staff, alumni, members of the Malibu community, and scholars from institutions across the country and around the world.

Undergraduate and graduate students at Pepperdine use the humanities collections to expand their research in various fields and to learn how to identify, analyze, and incorporate primary sources into their research. Through a broad and growing instruction program, the Special Collections host classes in English, history, American studies, religion, international studies and languages, and art history to explore Pepperdine's primary sources while conducting hands-on research activities with rare, historic materials. All Special Collections instruction sessions also provide orientation to the field of special collections and archives and the importance of preservation of cultural heritage materials. In our experience, students are always drawn both to the historic content of the materials as well as to their physical, material

characteristics. Evidence of acid migration in historic scrapbooks with newspaper clippings, for example, never fails to capture their attention. Classes regularly request the opportunity to view the stacks areas to better understand our approach to preservation. Students from these classes often go on to use the Special Collections materials to complete course research papers. For example, a student's senior thesis project on the topic of women's organizations in the history of Pepperdine won a Library Research Award. Many other students have conducted biographical studies of individuals represented in our collection.

In addition to research use, the Special Collections department offers an internship opportunity to undergraduate students in the humanities and local library school graduate students from the UCLA School of Education & Information Studies and from the San Jose State University School of Information. This opportunity allows students to engage with the materials through extended hands-on projects that involve humanities research as well as training in archival principles and practices. For undergraduate students, this program gives them the opportunity to explore career options.

Researchers and authors from beyond the institution have also utilized the unique materials in the Special Collections. Research projects have included research on Malibu founder May K. Rindge, prominent American church leader George Benson, the history of transportation systems in Los Angeles, the development of American Studies programs in higher education, and conservatism in Southern California. Publications that have relied on research in the Special Collections include the award-winning *From Bible Belt to Sunbelt: Plain-folk Religion, Grassroots Politics, and the Rise of Evangelical Conservatism,* by Darren Dochuk (W.W. Norton, 2010), *The Malibu Miracle: A Memoir,* by William S. Banowsky (Pepperdine University Press, 2010), and the forthcoming The *King and Queen of Malibu: The True Story of the Battle for Paradise*, by David Randall (W. W. Norton & Company). The development of the Malibu Historical Collection has positioned the Pepperdine Libraries as the primary provider of local historical materials, many of which were endangered before arriving at Pepperdine and cannot be found in any other location. These materials have also been used by community members, media outlets, and other organizations for a wide variety of purposes.

An exhibits program provides increased access to the materials for all library visitors by highlighting materials from the permanent collections. Exhibit cases were recently custom-ordered with the highest levels of preservation materials and security. Recently, the library featured an exhibit of photographs from the Korean War that explored the experience of the American military as well as that of Koreans in rural villages. A past exhibit of manuscript documents from Colonial America examined some of the factors that led to the American Revolution. These exhibits provide a glimpse into the rich holdings of the Special Collections for all visitors to the library, while exploring and interpreting important humanities themes represented in the materials.

Current Conditions and Preservation Challenges

While preservation has been a concern of Payson Library since its construction in the 1970s, more intentional and professional preservation efforts have been undertaken in the past few years, including acquisition of additional storage space, re-housing of high-priority materials, and new temporary shelving. In addition, two grant requests to the NEH enabled us to conduct a preservation assessment and

to complete a sustainable preservation planning project. These efforts are described in more detail below, in "History of the Project."

Despite recent efforts to increase preservation of our collections, several challenges remain. These challenges were outlined in the planning project report, and form the basis for this funding request. The Special Collections has outgrown its current space, which makes preservation control difficult. Collections are stored in nearly a dozen locations, both within the library building and offsite. Only one of these locations has a dedicated HVAC unit with separate controls, and that unit is outdated and in need of continuous repair, which is not only costly but also interrupts the provision of a preservation environment.

Based on analysis of environmental data, the planning team found that temperature and humidity levels in these spaces are consistently outside of recommended ranges and will lead to accelerated deterioration of collection materials unless remedied. The data, which have been gathered with PEM2 dataloggers and analyzed in the eClimate Notebook software, reveal that our risk of natural aging is high in all of the spaces where collection materials are stored. In fact, our Time-Weighted Preservation Index (TWPI) averages 32 in all of our spaces. The TWPI is a quantitative score developed by the Image Permanence Institute. According to their website, "TWPI integrates the T [temperature] and RH [relative humidity] values as they change over time into a single estimate of the cumulative effects of the environment on the rate of chemical decay. TWPI is helpful as a quantitative comparison of the preservation quality of different storage locations or environments." TWPI scores of 45 and under represent a risk of chemical decay, while scores of 45 to 75 are considered "OK" and scores of 75 and higher are "good." Our scores in the low 30s are solidly in the risk zone. However, once our materials have been consolidated into a preservation environment with new HVAC systems, our TWPI is expected to rise to 110, even after accounting for seasonal fluctuation. This indicates a significant and vital increase in the life expectancy for our collection materials.

In addition, we are currently at risk for metal corrosion in ten of our twelve spaces and at risk for mechanical damage in four spaces (and only "OK" in the others). While only one of our spaces registers as at risk for mold, the consultants felt that conditions would only need to be slightly different for the possibility of active mold to be present in the other spaces. We expect this project to reduce our risks for metal corrosion and mechanical decay, and to eliminate our mold risk entirely.

Our limited space also contributes to a compression of the collections, such that they are not properly housed or stored. Much of the shelving is made of inappropriate materials and is not the correct size for the collections. Boxes of archival materials often hang off the side of re-purposed book shelving, which can compromise the boxes and cause damage to their contents. Shelving is also not up to earthquake standards. In addition, because of the location of the rare book collections and issues with the air handling units on the roof, we experience occasional water leaks that must be managed through careful and costly monitoring. We have saved collections from any damage to this point, but a re-location would eliminate this issue entirely. Additionally, like many libraries of our size, our collections contain multiple media formats with varying environmental needs.

Because of these issues, Special Collections have been prioritized in a library building upgrade, which has been endorsed by the university. It is essential that this renovation of Special Collections space address

these preservation concerns and sustainability. This project will enable us to eliminate preservation issues through relocation to a consolidated space, the purchase of sustainable preservation systems (mechanical, lighting, fire suppression), building of a structure that facilitates vapor control, and installation of appropriate shelving.

Based on our interactions with librarians though consortia and professional associations such as the Association of College and Research Libraries (ACRL), we have found that many libraries of similar size and structure share these same preservation issues, and are earnestly seeking solutions to balance preservation and access. These libraries need cost-effective and practical models to properly and sustainably care for their collections. While this project seeks to provide for the preservation needs of our own collections, we are confident that the impact will be even broader, and that our new preservation environment will serve as a demonstration space for other libraries similar to that of Pepperdine, helping them to provide stewardship for their own collections.

While our preservation challenges of environment and space planning are significant and must be addressed, the library has made preservation efforts in other areas to ensure a holistic approach to preservation that will allow maximized results at the completion of this project. The Special Collections follows professional standards in the field for storage of collections wherever possible. Nearly all of the archival collections have been re-housed into appropriate archival boxes and supplies, and the library is in the process of purchasing custom-made boxes for the most fragile rare books. We work closely with our institutional facilities team to manage the set points on our dedicated HVAC unit as much as possible, and we monitor our environmental conditions through the use of PEM2 temperature and humidity monitors and the eClimate Notebook software system. Security is addressed through usage policies and practices, as well as by a secure locking system. A disaster plan is in place to ensure the safety and recovery of collections in the event of an emergency.

Through extensive efforts at rare book cataloging and archival processing over the past few years, the collection is almost completely cataloged and administrative and intellectual control of the collections is strong, preparing us well for the necessary relocation during this implementation project. An 18-month processing project funded by the National Historical Publications and Records Commission (NHPRC) in 2011-2013 was instrumental in allowing us to eliminate our archival processing backlog. Book collections have catalog records in OCLC and in WorldCat Local, and all processed archival collections have online finding aids, OCLC records, and finding aid data in an archival management system. Collections awaiting processing or in progress have accession records.

Philosophically, the mission of Pepperdine's Special Collections is to make our Special Collections materials more accessible to the public. This proposal offers an opportunity to use forward-thinking methods and the best knowledge available to implement critical environmental controls (passive and active), install state-of-the-art lighting systems that could allow us to place rare and special materials on exhibition for viewing by scholars and students, and protect the materials in a sustainable and environmentally progressive manner.

History of the Project

Pepperdine University Libraries has a tradition of providing preservation for its collections that began when the present library structure was constructed. At that time, state-of-the-art shelving was installed for the general collections, and shelving thought to be adequate was installed in Special Collections. The collections were placed in a secured area and a designated HVAC unit was installed to provide localized temperature and humidity controls for the rare books collection. Several reading areas were designated for users that remain in use today. Since that time, additional areas were identified within the library for the processing and storage of archival collections.

Beginning in 2008, with the hiring of a Head of Special Collections and University Archives, more intentional and professional preservation work has been accomplished in the Special Collections. The library has allocated funding towards the re-housing of especially significant and fragile materials. We acquired temporary shelving to re-locate archival materials from the floor, where they had been previously stored, and we installed PEM2 data-loggers to gather temperature and humidity data on our spaces. We prioritized collections and items in need of conservation treatment and repair. In beginning an exhibit program, we addressed preservation issues and care of materials while on display.

Key to development of these recent efforts, we received funding from the NEH through a Preservation Assistance Grant for Smaller Institutions to conduct a preservation assessment of the Special Collections. This assessment was completed in February 2011 by Julie Page, of the California Preservation Program. Ms. Page's recommendations were in the following six areas: 1) disaster prevention and preparedness; 2) environment and HVAC; 3) storage and shelving; 4) collections care and housing; 5) space planning and renovation; and 6) preservation program planning.

Recommendations in the area of disaster prevention and preparedness were prioritized and fully implemented, including a full disaster plan, a compact plan, and training of all library staff. Several recommendations in the areas of storage and shelving and collections care and housing were also implemented. Further, a CALIPR survey was undertaken as a result of the preservation assessment. CALIPR is a powerful instrument for compiling and analyzing data to determine the preservation needs of collections, utilizing a random sample drawn from the collections. This survey revealed areas of need within the rare book collection.

There were several recommendations in the report, however, that were not immediately implemented and that laid the foundation for a second important step, which was a request for funding from NEH through the Sustaining Cultural Heritage Collections program for a planning grant. Specifically, recommendations in the areas of environment and space planning were most urgent and required external assistance and support in order to be completed.

Our request for a planning grant was funded and carried out in 2013-2014. This project involved an interdisciplinary investigation into innovative and sustainable methods of preserving our humanities holdings. Nationally-recognized consultants advised on three specific aspects of rare materials preservation and display including: 1) temperature and humidity; 2) lighting and energy usage; and 3)

sustainable architectural design. The goal of this project was to develop an integrated sustainability plan achieved through a team-based planning process.

The expert consultants made a number of recommendations, a few of which are summarized and highlighted below:

First, the consultants recommended that the **special collections materials be consolidated into a single storage area with its own mechanical systems**. Currently, collections are stored in multiple locations around the library with varying degrees of environmental control. A single location will allow for more efficient control of the storage environment as well as provide better security.

Secondly, the **consultants provided us with set points that we should target with new HVAC equipment.** These set points were specified in three categories: storage areas only, which can be kept cooler than other areas; areas where materials are on display (i.e., exhibit areas, reading room, processing room); and all other areas of the library. Data gathered from the PEM2 monitors showed that our temperature and humidity levels are consistently outside of recommended set points. A new HVAC system will correct these fluctuations. The set points provided by the consultants take into consideration sustainability and our unique situation. Current research in preservation reveals that we no longer need to be tied to a very specific set point throughout the year, and that allowing for some amount of seasonal "slow drift" as well as temporary equipment shut-off time can allow us to increase our efficiency without compromising the preservation of our materials.

Thirdly, we were advised to **minimize outside air exchange**. The consultants recommended that we consider replacing the ceiling above storage areas and provide increased moisture vapor control in the walls, ceilings, and floors.

Fourthly, during the course of the renovation, **high-efficiency, cost-effective illumination should be integrated**. LED lights should be considered for both general lighting, as well as internal lighting in exhibit cases. Specific light levels are provided in the consultant reports.

Further recommendations and more details are included in the planning project white paper, which is included in the appendices.

This proposed implementation project directly addresses the recommendations made by the consultants during the planning grant. The outcome of this implementation project will be a consolidated special collections storage area with vapor control, a new HVAC unit that meets the criteria specified by the consultants, appropriate shelving and lighting, and fire suppression and alarm systems. In selecting these systems, we are adhering to the recommendations of the consultants and the latest standards in the field, while keeping in mind a new, flexible approach to sustainable preventive preservation.

The proposed project aligns with the library's strategic plan, especially in regards to two themes: 1) advancing student learning and superior scholarship, and 2) developing resources. The special collections play a key role in advancing student learning on campus, and their protection will help ensure their

longevity and ability to continue to fulfill this role. In addition, we consider our Special Collections to be one of our most valuable resources and have made developing and maintaining them a key priority.

Pepperdine has a four-decade history of working towards sustainability, and the Center for Sustainability at Pepperdine actively pursues initiatives to make our campus more sustainable. The Center's website outlines sustainable measures that are incorporated into new construction and remodel projects on campus, and this particular project aligns with several of these, including installation of high-efficiency LED lighting, providing more efficient climate control systems, HVAC and light motion sensors and timers, and low VOC paints. The Center will provide support during the course of this project. Furthermore, our department of Design and Construction is well-informed on sustainability issues in construction, and seeks to incorporate both environmentally friendly and cost-effective measures in all of their projects.

Methods and Standards

The methods and standards that form a basis for this implementation project are grounded in extensive research in the field of preservation and in the expert recommendations we received from nationally-recognized consultants during the planning project. We seek to follow current professional standards, and we are particularly committed to the most recent updates to standards allowing for a more flexible approach to environmental controls. In particular, we have paid close attention to standards and resources provided by the American Institute for Conservation of Historic and Artistic Works (AIC), the International Institute for Conservation of Historic and Artistic Works (IIC), and the Australian Institute for the Conservation of Cultural Material (AICCM), all of which have addressed the importance of sustainability and environmental concerns in regards to preservation.

In September 2014, the IIC and the International Council of Museums - Committee for Conservation (ICOM-CC) jointly released a Declaration on Environmental Guidelines, which states, "Museums and collecting institutions should seek to reduce their carbon footprint and environmental impact to mitigate climate change, by reducing their energy use and examining alternative renewable energy sources." The declaration goes on to specify several ways collecting institutions may seek to implement these guidelines (https://www.iiconservation.org/node/5168). In addition, "PAS 198:2012: Specification for Managing Environmental Conditions for Cultural Collections," which was published by the British Standards Institute and sponsored by The National Archives (UK) and several other cultural heritage institutions, emphasizes local circumstances and sustainability, and does not recommend a rigid temperature or relative humidity set point.

With the support of our Center for Sustainability, we intend to incorporate sustainability into each of the components of this project to ensure the best quality product at the lowest possible cost. Not only will we select energy efficient and environmentally sound products whenever possible, as detailed below, but we will also seek to reduce our environmental impact through the construction process. For example, we will make an effort to procure materials locally whenever possible, in order to reduce consumption of fossil fuels and to avoid excessive delivery costs.

Our preservation choices are guided by a strong emphasis on public use and enjoyment of our collections, environmentally sustainable and cost-effective methods, and an interest in supporting the professional community by providing a model for sound yet affordable and feasible methods for implementing preventive preservation for cultural heritage materials.

Methods and standards that relate to specific aspects of the project are outlined in more detail below.

Design and Relocation

We are ready to move forward on this project immediately and have schematic plans that lay out the location for the renovated Special Collections preservation environment (please see floor plans in the appendices). While our team of planning project consultants identified an area within the library that might serve as a location for the Special Collections, further investigation revealed that the costs associated with retrofitting this space were prohibitive. Another space was identified that has many advantages and that will allow us to make the best use of space and funds. There will be one primary preservation environment space on the first floor, with a smaller space on the second floor located adjacent to the processing room for storage of high-use materials. Both spaces are highlighted on the floor plans that are provided in the appendices.

During the project, the collections will be moved offsite to a secure and conditioned environment for their protection. Library staff will be present at this location to oversee collection materials and will continue to use PEM2 temperature and humidity monitors to track any environmental changes in the temporary storage area. A qualified library moving contractor, who has experience with moving fragile, valuable library materials, will be hired for the move to the temporary offsite location, as well as into the renovated space. Re-housing of the collections continues in preparation for this move, and weekly meetings with the design team ensure that clear and ongoing communication is established.

Rehousing and Shelving

While re-housing is not a part of this implementation request (as it will be completed prior to the start of the project), it has been an important step in preparing for this project. Not only does re-housing ensure that materials will be kept safe during the relocation, but it will also maximize the benefits of the new preservation environment by providing additional barriers to temperature and humidity fluctuations. Prior and current re-housing projects utilize archival boxes (acid-free, or buffered as needed) purchased from reputable vendors. Book boxes are custom-fit to each book.

In designing a shelving plan, we relied on a careful assessment of the collections that was conducted by Barclay Ogden, Director for Library Preservation at UC Berkeley, Director of the California Audiovisual Preservation Program, and member of the steering committee for the California Preservation Program, during the planning project. This assessment provided valuable information on the amounts and types of shelving that will be needed to properly store the library's growing collections. Four different sizes of shelving have been identified to meet the needs of our collection materials. Most shelving will be high-density shelving, to maximize the square footage available to us. Shelving of appropriate sizes will enable careful storage of collections, and eliminate the compression that we have experienced thus far. As per current standards, shelving will be composed of steel with a powder-coated finish.

Environmental Conditions

We will install a dedicated mechanical system in the new consolidated space. For the 1st floor preservation environment, a designated air conditioning unit will be supplied with a remote air-cooled condenser. A skid-mounted outdoor packaged dehumidification unit (Munters Desiccant Dehumidification Unit, Model HCD 600) will a be located on the roof, with supply and return air ductwork extended through shafts to the 1st floor. The unit will provide cooling and dehumidification with a skid-mounted condensing unit. The supply and return airshafts will be approximately three square feet each. Electrical connection requirements will be at two locations on the roof, dehumidification unit and condensing unit, and will require a three-phase power connection. For the 2nd floor preservation environment, a split-system cooling unit will be supplied along with an in-line dehumidification unit (Munters Desiccant Dehumidification Unit, Model HC-1501) on the upstream side of the indoor fan-coil unit. A small exhaust duct will be required through the roof from the dehumidification unit, along with a single-phase power connection.

Per recommendations by the team of consultants from the planning project, which were based on our local climate and collection needs, we plan to establish winter set points of 55 degrees Fahrenheit, and 35% relative humidity, and summer set points of 65 degrees Fahrenheit, and 50% relative humidity within our permanent collections preservation environment. These seasonal changes in set points will help us reduce energy usage and costs, without compromising preservation of our materials. We will also strategically idle down the system in order to further reduce energy usage. In areas where collections are only stored temporarily, such as in the archival processing room and the reading room, our set points will be more in line with human comfort while also maintaining desired conditions. This zoning of spaces will increase our energy efficiency. Please note that these other spaces will be served by a separate HVAC unit not included in our funding request.

The system will allow for minimal outdoor air exchange, in order to maximize energy efficiency and to reduce the introduction of air pollutants. Particulate filtration will be conducted using MERV 8 filters. Walls, ceiling, floors, and doors will be an important part of the passive structure that will increase energy efficiency by maintaining appropriate vapor control. All structures, products, and finishes in the preservation space, including flooring, paints, and insulation, amongst others, will be evaluated both for their preservation qualities as well as for environmental sustainability. The handbook, *Archival and Special Collections Facilities: Guidelines for Archivists, Librarians, Architects, and Engineers*, edited by Michele F. Pacifico and Thomas Wilsted and published by the Society of American Archivist, has been particularly helpful in identifying appropriate finishes. Pepperdine's own Center for Sustainability and Department of Design and Construction have provided guidance on finishes that are low-emission and environmentally friendly.

Pepperdine University has an extensive Facilities Services department, with a unit dedicated to mechanical, electrical, and plumbing services. Both the Manager of Mechanical Services, Vincent Ortiz, and the Lead HVAC Mechanic, Brian Meisner, were involved in the planning project and are well aware of the needs of the Special Collections spaces. They have been actively involved in decision-making, and are prepared to manage the new systems. They will also assist with the performance assessment of the new system, and will provide data on costs and energy efficiency.

We will continue to monitor the environmental conditions of Special Collections spaces through use of PEM2 monitors, and will track data through the eClimate Notebook. The Facilities Services department will provide us with energy use and cost data from the current space that we will then compare with data from the renovated space. Combined with the environmental conditions data, these methods will enable us to evaluate the effectiveness of our sustainable preservation strategies. Specifically, we believe that we will see lower energy costs and temperature and humidity that are more consistently within recommended ranges.

Fire Suppression and Lighting
Based on local regulations and standards in the fields, we will install a pre-action fire suppression system and aspirating smoke detection to protect our materials from fire damage. High-efficiency, cost-effective LED lighting with a correlated color temperature of approximately 4000K will be installed within the space. Lux levels will be approximately 150 (or approximately 15 foot-candles). Lights will remain off in the preservation environment when it is unoccupied.

As we intend to create a viewing window into the preservation environment, we will pay attention to any light levels entering through the window, and will use appropriate glass filters as needed.

Although not a part of our funding request, we will also install water detection/alarm systems and security systems to further protect our collections from damage and theft. The security systems will include a high-tech locking mechanism that can track and control access by individuals, as well as a motion sensor. These security systems will complement departmental policies and procedures that regulate access to the collections to ensure security of collection materials.

Work Plan

Pre-Grant Period
Prior to the beginning of the grant period, collections will be re-housed in preparation for relocation, environmental data from the prior collections space will be captured and finalized for comparison with the new space, and consultant Jim Reilly will be engaged to consult on product specifications and final design. Mark Roosa, Project Director and Dean of Libraries, and Melissa Nykanen will be involved in these activities. Professor Jane Ganske will also advise based on her expertise and extensive research on air pollutants and their effect on paper-based cultural heritage materials.

Year One: Review and Installation (October 2016-September 2017)
The team of consultants from the planning grant (Jim Reilly, Jim Druzik, and Michael Henry) will be re-engaged to review and advise on technical specifications and establish performance targets and metrics for measuring the impact of the project. Design plans and specifications will be sent to each consultant for review, and the consultants will confer with the Project Team during an onsite visit with Jim Reilly and Jim Druzik, and with a conference call with Michael Henry. Equipment choices will be finalized, and equipment will be ordered by the general contractor in consultation with the Pepperdine Department of Design and Construction, as well as the Project Team.

All relevant preservation systems will be installed in the proposed space, including the structure and finishes, mechanical systems, lighting, fire suppression, and shelving. The installation will be managed by the general contractor, working in consultation with the Pepperdine Department of Design and Construction and the Project Team. Didactic panels and graphic storyboards will be installed on the exterior of the space to communicate the preservation story to students and visitors. Systems will be tested and approved for use. Following installation, collections will be moved into the space.

Year Two: Testing and Assessment (October 2017-September 2018)
During this phase of the project, we will test the performance of all systems and collect and analyze data on environmental conditions (using PEM2 monitors). These data will be compared to data collected prior to the installation of new systems to assess the impact of the project. Any challenges or issues surrounding the new equipment will be observed through the course of several seasons. Another conference call (or series of conference calls) with the consultants will serve to assess progress and to address any issues with use of the equipment. Mark Roosa, Melissa Nykanen, and Jane Ganske will monitor and analyze the data and conduct a space assessment. Jeanette Woodburn will disseminate information about the project through publications, and will begin making arrangements for the other dissemination activities that will take place in year three. Ed Larson will advise on dissemination activities to ensure that the project reaches a humanities audience.

Year Three: Dissemination (October 2018-September 2019)
During this phase, we will carry out dissemination projects to share our experience, to promote the importance of preservation of cultural heritage materials, and to explain the methodology we have used. Project results will be communicated through publications, including the library website, Pepperdine publications, and local and professional publications. We will integrate tours of the new space into ongoing programs, such as class instruction, preservation workshops, and other special collections programs. Finally, we will host a symposium for the professional community that will include a behind-the-scenes tour of the preservation environment with guest lectures by members of the Project Team. Please see "Project Results and Dissemination" for more details on the programs that will be carried out during this phase. Final reports, including a white paper, will be written and submitted to NEH at the completion of the project. Mark Roosa, Melissa Nykanen, Jeanette Woodburn, Jane Ganske, and Ed Larson will all be involved in these project activities.

Project Team

Pepperdine Staff
Mark Roosa has been the Dean of the Libraries at Pepperdine University since 2004. In this capacity, he directs libraries on the Malibu campus and throughout the Los Angeles area, leading their efforts to provide seamless access to both print and digital resources essential for learning, teaching, and research. Prior to joining Pepperdine, Dr. Roosa served as Director for Preservation at the Library of Congress in Washington, D.C. He will be the Project Director, overseeing all aspects of the creation of the preservation environment.

Melissa Nykanen is the Associate University Librarian for Special Collections and University Archives at Pepperdine Libraries. In this role, she oversees the collection and preservation of rare books,

manuscripts, archives, and other materials. She has been involved in the past two NEH preservation grants received by Pepperdine University Libraries. Nykanen will serve as Assistant Project Director, and will help coordinate project activities and advise on the collections' physical characteristics, preservation profiles, and overall needs.

Jeanette Woodburn oversees programming, marketing, and fundraising at the Pepperdine Libraries, which has a vibrant schedule of lectures, concerts, workshops, and exhibitions throughout the year. She has a strong background in membership-oriented fundraising, with an emphasis on building relationships and community through events. Woodburn will coordinate publicity about the project, arrange for tours of the completed space, and plan the symposium event sharing the lessons learned from the completed space.

Jane Ganske is a tenured full professor and serves as the Program Coordinator for Chemistry at Pepperdine University. Her area of expertise is physical chemistry, and her recent research projects are in the areas of materials decline, indoor air quality, and heterogeneous photochemistry in indoor and outdoor atmospheres. Dr. Ganske will act as a liaison, and guide interested students through research utilizing the preservation space as a hands-on teaching opportunity. She will also confer with the consultants, advise on any air pollution issues, help craft the storyboard message for the exterior of the preservation environment, and participate in a panel discussion at the symposium (as needed).

Ed Larson is the Hugh & Hazel Darling Chair in Law, University Professor of History, and Director of the Glazer Institute for Jewish Studies at Pepperdine University. Dr. Larson has conducted a vast amount of primary source research in the humanities, and is the recipient of the Pulitzer Prize in History for the book *Summer for the Gods: The Scopes Trial and America's Continuing Debate Over Science and Religion.* He is the author of nine books and over 100 articles as well as the recipient of several other prestigious research awards. Dr. Larson has familiarity with the Special Collections at Pepperdine as a user and advocate, and he will serve on this project as a humanities advisor. Dr. Larson will provide recommendations on use of the collections and the new preservation environment in teaching and programming, serve as an advocate for the collections within the humanities field, and participate in the symposium as a voice for the importance of preservation of humanities materials.

Ben Veenendaal joined Pepperdine University in 2004 and serves as the Project Director of the Department of Design and Construction. With more than a decade of experience in architecture and planning, he has overseen the planning and implementation of nearly $50 Million in capital projects for the Malibu Campus, as well as the various International Programs. Partnering with the Center for Sustainability, Veenendaal is the leader of all green initiatives managed within the department.

Marie Chu is an Assistant Project Manager with Pepperdine's Department of Design and Construction. She has a decade of experience in architecture and planning that includes institutional and residential building design, and landscape planning. Chu's role on the Payson Library project is Assistant Project Manager.

Rhiannon Bailard is the Founding Director of Pepperdine's Center for Sustainability and will have an active voice in the project. She conducted the initial audit of the University's sustainability practices,

which led to the implementation of the University's sustainability policy and subsequent creation of the Center for Sustainability. As an Associate Vice President for Governmental & Regulatory Affairs, Bailard is also responsible for land use planning, environmental compliance, and governmental relations.

Consultants

Leslie Gentile is Director of the Special Services Group at AC Martin, the architect firm selected to run the facility upgrade at Payson Library. Gentile has a strong and successful reputation, and in over 25 years, her career path has taken her from large university campus and medical planning work to award-winning architectural design.

James M. Reilly, founder and Director of the Image Permanence Institute, has made important contributions to image preservation, environmental management, and sustainable preservation practices. He received a Technical Achievement Award from the Academy of Motion Picture Arts & Sciences in 1998 and was presented with the Silver Light Award for Lifetime Achievement from the Association of Moving Image Archivists in 2002. Reilly will review the mechanical system specifications and help to establish performance target benchmarks. Reilly will also assess the performance of the system following installation and will recommend any necessary modifications to its usage.

Michael Henry, Architect (Watson & Henry Associates), is a national expert on the modification of historic structures to comply with preservation and conservation standards. Henry's knowledge of how to adapt and build environments to better accommodate the preservation and conservation needs of rare and valuable collections will be especially useful in this project. Henry will review all product specifications to ensure their suitability for usage in a preservation environment.

James Druzik, Senior Scientist, Getty Conservation Institute (GCI), is a leading expert in museum lighting. His contributions in this area focus on the development and application of conservation lighting through the use of light emitting diodes (LEDS), and research into visual acuity in library and museum settings. His expertise will be especially useful as the Pepperdine Libraries seek to develop more conservationally sound lighting schemes for exhibitions, research areas, and storage vaults.

Project Results and Dissemination

We are looking forward to the following outcomes as a result of the implementation project:

- A consolidated special collections preservation environment with vapor control, a dedicated mechanical system, and appropriate fire suppression, lighting, and shelving;
- Humanities collections with slower rates of deterioration and a longer usable life, so that generations of future researchers will have access to these materials;
- A reduction in our energy costs and our environmental impact, as a result of using energy efficient systems;
- Education of our students and faculty on the reasons and methods for cultural heritage preservation; and

- A demonstration space that we can share with the professional community that will serve as a model for feasible, affordable, and sustainable special collections preservation environments for peer institutions.

Project success can be measured broadly, including lower energy usage and costs as well as increased life expectancy for our materials and impact on the field at large. Because of the age of this building and our current mechanical systems, we know that there are energy efficiencies to be gained from installing new systems. Specifically, the HVAC unit currently serving one of our special collections spaces is outdated and continuously in need of costly repair. New units that run more efficiently will reduce energy usage and costs. Our vapor control and air exchange is also in need of improvement. Once the appropriate structure and seals are in place, we believe we will not need to run the system as frequently to maintain even better set points than we do now. While LED lighting is expensive to install, the cost and energy savings are proven to be significant over time. Because LED lights do not emit harmful ultraviolet and infrared rays, we will not need to install filters on the lights, which will further reduce our costs. To better understand this impact and to measure success, we will be comparing the cost of energy usage in our current structure with that in the renovated space.

In addition to lower energy usage and costs, we expect to see the climate within the preservation environment improve. As described in the "Current Conditions and Preservation Challenges" section, our current systems are not capable of providing adequate temperature and humidity conditions, and materials in our dispersed spaces are at high risk for chemical and mechanical decay and metal corrosion, and are close to being at risk for mold. Once the new preservation environment is in place, we expect to see temperature and relative humidity levels in better ranges. Using the Dew Point Calculator provided by the Image Permanence Institute and inputting the set points that we have established for our new equipment, we know that our risk of natural aging and metal corrosion will significantly decrease and we will completely eliminate any risk of mold. Once we have gathered PEM2 data in the renovated space, we will be able to analyze our environment using the eClimate Notebook software, and will be able to determine whether our risk has in fact decreased.

We believe that these results will enable us to provide better access (now and in the future) to humanities collections. Not only will the life expectancy of our materials increase, but donors will have more confidence in our ability to properly care for our collections. A more stable preservation environment will allow us to increase our collection development efforts, more broadly promote our collections, and inspire new scholarly research in the humanities.

Dissemination of the project results is a very important element of this project. We believe that many institutions of our size share our preservation challenges, and we hope to become a model for other institutions. We also believe our academic context provides us with an opportunity (and obligation) to educate our community on preservation of cultural heritage materials. To those ends, we will disseminate the results of the projects in several ways, as outlined below.

We will gather data on conditions, energy use, and costs, based on data provided by our PEM2 temperature and humidity monitors, as well as information provided to us by the Pepperdine Facilities Department. We hope that these data will make a case for sustainable preservation efforts and will

demonstrate the impact of the project. Data and project results will be shared through a white paper submitted to the NEH. We will also communicate the results of our project through various publications, such as our own library website and blog, Pepperdine publications and press outlets, local newspapers, and professional listservs and newsletters.

The space will be designed with exhibition in mind, including a window looking into the collections' preservation environment with graphic storyboards and didactic labels to inform students and visitors of the sustainable preservation methods we have used. In our experience, many of our visitors and students are very engaged with the topic of preservation and are often very eager to see the "back end" of special collections activities. We hope that providing a glimpse into our storage areas with informative text will enable any students or visitors in proximity of the space to experience the space and increase their awareness of Pepperdine's collections and preservation activities.

We will further integrate the new space into ongoing programs, such as class instruction and community programs. As previously described in "Significance of the Collections," our special collections class sessions address preservation issues and often include tours into our collection storage areas. We look forward to sharing the new space with students, and providing them with a better understanding of effective, sustainable preservation than what we are able to offer with our current space. We also plan to expand instruction program to fields outside the humanities, such as chemistry and physics. We believe that students in these academic disciplines will have a strong interest in the material science that we utilized to make many of our preservation decisions. By partnering with Dr. Jane Ganske, Pepperdine Professor of Chemistry, we will be able to expand our impact to these academic areas.

We also offer programs on "Preserving Your Family Treasures" to members of our local community and alumni groups as well as an annual special collections open house. Future iterations of these programs will be able to take advantage of the space by offering behind-the-scenes tours to program participants.

Perhaps most significantly, we plan to host a symposium for the professional community on the topic of sustainable preservation environments. This symposium will offer presentations by members of the project team, guest lectures by others in our professional community, and a detailed tour of the new space. We hope to draw library and archives professionals, as well as operations managers from our regional community and beyond. This event will be provided free of charge to the professional community in hopes of sharing our results in the broadest possible way. As is routine for library-sponsored events, we will record the symposium and make it available online so that those who are unable to attend will also benefit from the informational sessions. In order to assess the impact of the symposium, and to gather data on the current state of preservation knowledge and approaches, we will conduct a pre- and post-survey of symposium attendees. The survey will ask attendees about their knowledge of sustainable preservation environments, any actions their institutions have taken, why they are attending the symposium, and other relevant questions. This survey will be drafted with the assistance of our assessment librarian.

Taken together, these project results will help us accomplish our overarching vision - for a preservation environment that will extend the usable life of our rare and valuable humanities materials while also serving as a demonstration space for feasible, affordable preventive preservation at other institutions.

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NATIONAL ENDOWMENT FOR THE Humanities

Budget Form

OMB No 3136-0134
Expires 6/30/2018

Applicant Institution: *Pepperdine University*
Project Director: *Mark Roosa*
Project Grant Period: *10/01/2016-09/30/2019*

click for Budget Instructions

	Computational Details/Notes	(notes)	Year 1	(notes)	Year 2	(notes	Year 3	Project Total
			10/01/2016-09/30/2017		10/01/2017-09/30/2018		10/01/2018-09/30/2019	
1. Salaries & Wages	Pepperdine personnel will dedicate a portion of their time to this project throughout the three-year project period.							
Dean of Libraries	Dean Roosa will dedicate 5% of his time for all three years of this project.	5%	(b) (6)	5%	(b) (6)	5%	(b) (6)	(b) (6)
Associate University Librarian for Special Collections and University Archives	Melissa Nykanen will dedicate 5% of her time for all three years of this project.	5%	(b) (6)	5%	(b) (6)	5%	(b) (6)	(b) (6)
Director of Library Advancement	Jeannette Woodburn will dedicate 8% of her time for years 2 and 3 of this project.	0%	$0	8%	(b) (6)	8%	(b) (6)	(b) (6)
Professor Jane Ganske	Professor Jane Ganske will dedicate 3% of her time for all three years of this project.	3%	(b) (6)	3%	(b) (6)	3%	(b) (6)	(b) (6)
2. Fringe Benefits								
	Pepperdine University's federally negotiated fringe benefit rate of 30.3% is applied to all eligible salaries and wages.		$5,263		$7,312		$7,532	$20,107

3. Consultant Fees	Consultants will advise on product specifications, establish target performance benchmarks, and assess performance of systems.							
James Reilly	(b) (6)/day of consulting and (b) (6)/travel day; one day of consulting and two days of travel during year one, two days of remote consulting during year two.		(b) (6)		(b) (6)		$0	(b) (6)
Michael Henry	(b) (6)/hr; eight hours of consulting during year one and eight hours during year two (all remote).		(b) (6)		(b) (6)		$0	(b) (6)
4. Travel								
James Reilly	One trip to check systems and advise project team and facilities department on management. Airfare from NY $650, lodging $300, meals $198, and ground transportation $125.		$1,273		$0		$0	$1,273
James Druzik	One trip to check systems and advise project team and facilities department on management. Mileage $50, lodging $250, and meals $60.		$360		$0		$0	$360
5. Supplies & Materials								

HVAC System and Environmental Control Panel	Energy-efficient system will provide for appropriate set points, minimal outside air exchange, and filtration. Includes air handling units and Munters desiccant dehumificiation units.		$162,018		$0		$0	$162,018
LED Lighting	Energy-efficient lighting will illuminate collections at safe levels. LED fixtures: $30,202; Controls: $8,525; Wiring: $47,321; Power: $7,390.		$93,438		$0		$0	$93,438
Shelving	Shelving of appropriate sizes, types, and materials will store collections safely. Compact shelving: 106 linear feet @ $1,950/linear foot = $206,700. Regular shelving (double-sided): 36 linear feet @ $1,040/linear foot = $37,440. Regular shelving (single-sided): 12 linear feet @ $520/linear foot = $6,240.		$250,380		$0		$0	$250,380
Fire Suppression & Fire Alarm	A pre-action fire suppression system will protect materials from damage from fires. Alarm: 2,186 square feet @ $5.525/square foot = $12,078; Suppression: $10,350		$22,428		$0		$0	$22,428

Ceiling	The structure and finishes for the preservation environment are important to maintaining vapor control and preventing pollutants. 1st floor ceiling: 1,755 square feet @ $9.75/square foot = $17,111.25; 2nd floor ceiling: 431 square feet @ $10.40/square foot = $4,482.40		$21,594		$0		$0	$21,594
6. Services								
								$0
7. Other Costs								
Symposium	The symposium will educate the professional community on feasible, afforable, and sustainable methods of preventive preservation as demonstrated through our new preservation environment.		$0		$0		$7,500	$7,500
Graphics	Educational storyboard panels and signage will describe the effects of deterioration on cultural heritage materials and how these are mitigated through a sustainable preservation environment.		$5,000		$0		$0	$5,000
8. Total Direct Costs	**Per Year**		**$583,323**		**$35,645**		**$39,889**	**$658,857**
9. Total Indirect Costs								

The federally negotiated Indirect Cost Rate is calculated at 62% eligible salaries and wages.	**Per Year**		$10,769		$14,962		$15,411	$41,143
10. Total Project Costs					(Direct and Indirect costs for entire project)			**$700,000**
11. Project Funding		**a. Requested from NEH**					Outright:	$350,000
							Federal Matching Funds:	$0
							TOTAL REQUESTED FROM NEH:	**$350,000**
		b. Cost Sharing					Applicant's Contributions:	$350,000
							Third-Party Contributions:	$0
							Project Income:	$0
							Other Federal Agencies:	$0
							TOTAL COST SHARING:	**$350,000**
12. Total Project Funding								**$700,000**

Total Project Costs must be equal to Total Project Funding -----> ($700,000 = $700,000 ?)

Third-Party Contributions must be greater than or equal to Requested Federal Matching Funds -----> ($0 ≥ $0 ?)

Pepperdine University Libraries
Developing a Sustainable Preservation Environment for Humanities Collections
NEH Sustaining Cultural Heritage Collections Implementation Grant

Budget Narrative

1. Salaries and Wages & 2. Fringe Benefits

We are including in-kind salary contributions and fringe benefits for Mark Roosa, Dean of Libraries, Melissa Nykanen, Associate University Librarian for Special Collections and University Archives, Jeanette Woodburn, Director for Library Advancement and Public Relations, and Jane Ganske, Professor of Chemistry. Calculations are included in the budget, and salaries and fringe benefits will be part of our cost-sharing contributions.

3. Consultant Fees & 4. Travel

We will re-engage the consulting team from our planning grant to consult with the project team, architects and engineers. They will review and advise on all product specifications for the preservation environment, help determine performance benchmarks, and review post-renovation data to ensure success of the project. In year one, Jim Reilly from the Image Permanence Institute and Jim Druzik from the Getty Conservation Institute will consult onsite, while Michael Henry of Watson & Henry Associates will consult remotely. In year two, all three will consult remotely (Jim Reilly for two days, and Michael Henry and Jim Druzik for one day each). Their cost estimates and letters of commitment are included as appendices. Please note that Jim Druzik does not require consultant fees, but his travel will be covered. Consultant fees and travel will be part of our cost-sharing contributions.

5. Supplies and Materials

All costs for supplies and materials have been provided by our team of architects and engineers, based on specifications provided to them during the planning grant project, which are summarized in the narrative. We are requesting $350,000 in NEH funding to cover the cost of supplies and materials; Pepperdine will cover additional costs as part of our cost-sharing contributions.

7. Other Costs

We plan to host a symposium for the professional community on the topic of sustainable preservation environments. This symposium will offer presentations by members of the project team, guest lectures by others in our professional community, and a detailed tour of the new space for library and archives professionals, as well as operations managers from our regional community and beyond. This event will be provided free of charge to the professional community in hopes of sharing our results in the broadest possible way. The costs for this symposium are based on other similar symposia that we have hosted at Pepperdine.

In order to promote the project and sustainable preservation environments more broadly, we will include graphics and storyboards on the exterior of the preservation environment to inform students and visitors of the sustainable preservation methods we have used. The cost is based on an internal estimate of the elements we plan to include.

Both of these other costs will be part of our cost-sharing contributions.

9. Indirect Costs

Indirect costs will be part of our cost-sharing contributions.