

Introduction

The Richard F. Brush Art Gallery (Gallery) (<https://www.stlawu.edu/gallery>) at St. Lawrence University (SLU) seeks a National Endowment for the Humanities (NEH) Sustaining Cultural Heritage Collections (SCHC) planning grant in the amount of \$42,182 to conduct an optimization study of its art storage facility and three adjacent exhibition galleries, focusing on environmental, mechanical, and structural systems that have been largely in place for over 40 years.

The optimization study will be conducted by Jeremy Linden, Principal of Linden Preservation Services (LPS, Brockport, NY) and will determine design capabilities and optimal operating conditions in order to identify opportunities for improved performance for preservation and energy, as well as future needs for capital investment, supporting further fundraising and grant applications for any necessary improvements. Improving the art storage facility using sustainable conservation measures is one of the Gallery's highest priorities, as set forth in a 2021 NEH-funded Preservations Needs Assessment (PNA) Report (pp. 15, 29-32) and a 2021-22 Strategic Planning award through Documentary Heritage & Preservation Services of New York (plan forthcoming). A facilities optimization study is also the logical next step in a systematic collection assessment with an external consultant that has been ongoing since the fall of 2013.

SLU's history of collecting art objects and cultural artifacts dates back to the early 1900s, though the Gallery in its current iteration dates to the late 1970s. As set forth in its Mission Statement, the Gallery's purpose is to "acquire, preserve, interpret, exhibit, and otherwise provide access to works of art" and to enhance the University's academic programs and the cultural life of the community at large.

The Gallery's Collection Development Statement also states, "The University views its collection primarily as an educational resource. As such, original art objects and artifacts serve a variety of pedagogical objectives, which include the following: to inspire creative and analytical work across the academic disciplines; to teach, through first-hand study, strategies, and techniques of artistic creation and production; to teach about historical and contemporary cultures; to teach museology through the direct practice of museum display and interpretation; and to make art objects available to scholars, museums, and educational institutions for purposes of exhibition, research, or education." The collection supports inquiry in many humanities subjects: perceptions of the natural world; history and politics; religion and belief systems; identity, diversity and multiculturalism; and creative expression, among others.

The Gallery also oversees an ambitious program of rotating exhibitions of work by regional, national, and international artists; campus displays; visiting artists and curators; and other related educational and cultural activities.

Facilities include an art storage facility (1,815 sq. ft.); three adjacent exhibition galleries (1,300 sq. ft. + 220 running ft.); prep room; two offices, and smaller rooms to store display furniture. Lecture rooms, performance halls, studios, and classrooms are located in two adjacent buildings for the departments of Music, Art & Art History, Performance & Communication Arts, and for the Newell Center for Arts Technology.

Gallery staff includes a Director (FTE), Assistant Director (FTE), Arts Programming Coordinator (.20 FTE), and Secretary (.20 FTE). Both the Director and Assistant Director have worked at the SLU Gallery for the past 25+ years, bringing stability and continuity to all aspects of Gallery operations. A collections assessment consultant and an installations coordinator are hired on a regular basis as independent contractors. The Gallery's current operating budget through SLU is \$289,331, including salaries and benefits. Annual visitors number approximately 5,000, encompassing ~2,300 students, 765 employees, and ~2,000 community members. The visitor count also reflects the fact that SLU is located in rural northern New York (with only 42 people per sq. mile, St. Lawrence County has among the lowest population density in the State, but is also New York's fourth poorest county).

In addition to the Collection Development Statement, other Gallery policies include an Acquisitions Policy, Deaccessioning Policy, Exhibition Policy, and Extended Loan Policy, approved by a tripartite Library and Art Gallery Committee made up of faculty, staff, and students, as well as by SLU's Senior Staff. A comprehensive Collection Management Plan (CMP) will be completed by June 30, 2022, as one of the priorities set forth in the 2021 PNA Report, which states that while "[t]here are clear

procedures in place for managing the collection and new accessions” (p. 8), it also lists completing a Preservation Plan (what the Gallery calls a comprehensive CMP) as a short-term goal (pp. 15, 18).

In order to protect the collection, all planning activities will prioritize the need to maintain sustainable preservation policies and practices and the need to address the projected long-term effects of climate change. All Gallery activities, including grant-funded projects, adhere to national standards related to museum standard art handling, storage, preservation, and access. Resources from the American Alliance of Museums and the Association of Academic Museums & Galleries provide such guidance.

Significance of collection

SLU’s permanent collection of nearly 7,000 art objects and cultural artifacts includes paintings (1,000+), prints (3,000+), photographs (1,100+), portfolios (100+ with 1,500 discreet works of art), artists’ books (265), sculpture and ceramics (400+), and ethnographic objects (400+). Acquisitions are made strategically through purchases using designated endowment funds and through selected gifts.

Twentieth- and 21st-century American and European works on paper (drawings, prints, photographs, and portfolios) represent the strengths of the collection. Ethnographic collections spanning the last 100 years also form a “Global Studio” that includes Tibetan Buddhist scroll paintings and ritual objects, Haitian vodou flags and altarpieces, African and South American textiles, and regional Akwesasne Mohawk traditional baskets, wampum belts, and ceramic vessels. The permanent collection also features Canadian Inuit prints and drawings (further described below).

Works range in date from the Middle Ages to present day and in genres ranging from representational and documentary to Abstract Expressionism, Pop, and beyond. Highlights include paintings by Milton Avery, Frederic Remington, and Albert Bierstadt, as well as a 15th-century Spanish painting of the martyrdom of St. Lawrence; several significant 20th-century photographers (outlined below); and prints by Robert Rauschenberg, David Hockney, Takashi Murakami, and the Guerrilla Girls. In terms of collection development, diversification is a top priority, as BIPOC artists are under-represented. Three subcollections illustrate the humanities focus of the collection.

SLU’s collection of photographs was initiated in the 1960s by then student Michael Hoffman, SLU ’64 and later longtime executive director of Aperture Foundation. Hoffman’s vision resulted in early acquisitions of modernist photographs by Ansel Adams, Robert Frank, Paul Strand, and others. Subsequent purchases and gifts led in 2000 to the publication of *Photographs at St. Lawrence University: A Critical Survey*, a 220-page catalogue raisonné featuring selected plates, curators’ and artists’ essays, and a complete checklist to date. Due in part to their inherent accessibility, photographs are used by many humanities disciplines on a regular basis in exhibitions, class visits, writing assignments, and scholarly research projects.

A second subcollection features over 170 Canadian Inuit prints, drawings and carvings. Inuit art holds a particular attraction for a university teaching collection as it offers many humanities disciplines a starting point for discussions on nature and the environment, traditional stories, spirituality, social and political commentary, aesthetics, and design. Inuit works are among those most frequently requested by art historians and scholars for exhibitions and publications. In 2010, Inuit prints were presented in an exhibition at the Canadian Embassy in Washington, DC, which later traveled to SLU and two other universities in Ohio and West Virginia. A series of Inuit editorial cartoons was also included in an exhibition organized by Carleton University in Ottawa in 2018 that later traveled to SLU and three other institutions across Canada.

The “Global Studio” was the basis of a 2020 exhibition entitled *Belief Systems: Artworks and Cultural Artifacts from SLU’s Permanent Collection*, in which a range of genres interpreted religious subjects; illustrated the relationship between aesthetic expression and devotional practice; and recognized the natural, spiritual, and supernatural worlds through paintings, prints, drawings, and textiles.

The three subcollections described above are also featured as digital image collections on the Gallery’s website at <https://www.stlawu.edu/gallery/digital-image-collections>, as are collections of Vietnam War-era amateur photographs and the Roy Collection of West African textiles.

Most recently, a fall 2021 exhibition entitled *Looking Back, Looking Forward* highlighted some of SLU's most important 20th-century art objects (works on paper by Isabel Bishop, Willem de Kooning, Paul Klee, Reginald Marsh, and others) alongside recent acquisitions of works by women and BIPOC artists intended to diversify the collection. The exhibition included an oversized quilt by contemporary Native American artist Iakonikonriosta illustrating the Haudenosaunee Creation Story, acknowledging the history of Akwesasne Mohawks and other Iroquois groups in our region. Her public gallery talk brought both native and non-native students and community members together to learn indigenous ways of knowledge; a follow-up two-part interview by SLU-affiliated North Country Public Radio reached audiences across northern New York and Vermont.

SLU is one of only a handful of institutions presenting the visual arts in a region spanning a large, rural expanse such that the Gallery has become a destination point for many in northern New York, also extending into southern Ontario 20 miles to the north. Other nearby regional institutional collections are located at SUNY Potsdam (10 miles); the Frederic Remington Museum (20 miles); Adirondack Experience, the Museum at Blue Mountain Lake (85 miles); SUNY Plattsburgh (100 miles), and Syracuse University (130 miles). However, SLU's collection is truly outstanding among them in terms of its strength, breadth, and multiple genres and artists represented. Today, SLU's permanent collection is one of the most significant arts and humanities collections of its kind in the region.

SLU faculty make regular use of exhibitions, lectures, and guided tours as a vital part of the curriculum. However, for K-12 school groups and community members, the SLU Gallery serves as a critical hub for arts and humanities programming. As noted above, St. Lawrence County is characterized by endemic poverty, with one in five children living below the poverty line, and educational attainment (22.7% of the population with bachelor's degree or higher) lagging significantly behind the State average (37.8%). Thus, for local public school groups and residents facing severely limited budgets for travel and cultural enrichment, the Gallery represents one of the very few free and readily accessible resources for the arts and humanities in the region. Further, the artists' talks and exhibition openings offered by the Gallery throughout the academic year expand this access and raise the visibility of the arts and humanities. Additionally, SLU's NPR affiliate, North Country Public Radio, frequently partners with the Gallery as media sponsor and features artists' interviews and news stories broadcasted throughout northern New York and southern Ontario.

As a result, the Gallery typically welcomes 5,000 in-person visitors annually, including K-12 classes when school budgets allow; students and faculty from the three other colleges and universities in a ten-mile radius; and members from the community-at-large, whether attending individually or through church, veteran, and/or differently-abled school groups, among others. Exhibitions and the Gallery's online digital collections and resources are also available free of charge to the SLU and broader communities, as well as to researchers and scholars.

Although the Gallery was forced to close to in-person visitors for 18 months in 2020-21 due to Covid-19, several exhibitions were offered online, and since the summer of 2021, all of its programs and activities are again free and open to the public.

Current conditions and preservation challenges

Located in the Griffiths Arts Center, SLU's permanent collection is housed in an art storage facility that was constructed in 1978 as a wing in the same building. Art objects and artifacts are stored on/in 40 sliding metal racks, 107 wooden shelves, and 98 oversized flat files. The space is climate-controlled, and the original Halon fire suppression system is "grandfathered" in. An external security camera linked to the SLU Security office monitors access to the space, and staff and visitors register in a notebook for every visit. The space is also used to document and catalogue artworks during the acquisition and registration process.

The storage room itself is basically a furnished shell that was never properly equipped with sustainable preservation measures in mind. However, the Gallery Director implemented improvements to the facilities after she began in 1989, including the removal of exterior glass doors in the galleries to

minimize light levels and prevent frost heaves in the floor, and adjusting the HVAC drainage system in the art storage facility to pipe to the basement instead of to a bucket in the same room.

The ceiling in the storage room is the untreated galvanized steel of the roof above that has oxidized in several spots over the racks, causing zinc oxide powder to drop onto the floor and onto frames on the racks. Aside from short stretches of brick, most of the interior walls are bare or painted concrete block with two-inch insulation between it and the exterior brick behind it. Shelves are varnished wood, and a rug was installed everywhere except under the racks. The flat EPDM propylene rubber roof above poses an ongoing risk to the collection due to perennial, random, pinprick water leaks. In addition, roof discharge pipe drains and the original HVAC system were installed *inside over the sliding racks*. A major leak occurred in 1992, and a new roof was installed in 1993, which is now near the end of its 30-year term. A new HVAC wall system was installed in 2013, at which time the older system was rendered obsolete but remains in place along the ceiling of the room.

A 2021 NEH-funded Preservation Needs Assessment (PNA) Report (outlined in the History section below) notes that the art storage facility’s physical environment is sub-adequate; capacity is exceeded; storage furniture is inappropriate or outdated; and most importantly, the flat roof design and subsequent perennial water leaks are an ongoing serious risk to the collection. An updated fire suppression system and new humidity sensor controls also need to be implemented. The PNA Report states, “It should be noted that a vast majority of these [facilities-related] issues are the result of the building’s original construction, rather than a build-up of deferred maintenance (p. 29).”

The Gallery’s Collection Management Policy outlines the proper care and use of the collection, including policies for art handling, loans, acquisitions, and deaccessions. The Gallery is part of SLU’s emergency preparedness plan and integrated pest management plan. Ongoing environmental monitoring includes downloading and analyzing data from loggers to ensure HVAC is working correctly (Gallery-4/year); on-site review of Halon fire suppression system (Davis-Ulmer-2/year); on-site review of fire extinguishers (SLU Facilities-12/year); protecting objects with dust covers or archival boxes; reviewing objects for archival housing or conservation (Gallery and collections consultant-4/year); covering artworks on racks with plastic (Gallery-as needed); replacing light bulbs (Gallery-as needed); “deep” cleaning through dusting and vacuuming (Gallery-1/year). There has never been an issue with rodents or other pests, and the art storage facility is lit only when staff are in the space. Object-related activities are recorded the Gallery’s ContentDM database.

Long-term preservation challenges particular to northern New York and the St. Lawrence River basin reflect the projected effects of climate change, including higher temperatures, higher humidity levels, and higher rates of precipitation, especially with more winter snow now falling as rain. SLU is not located on a coastal shoreline, but the Grasse River that feeds north into the St. Lawrence is less than a mile from campus. According to a statewide DEC report, *Observed and Projected Climate Change in New York State: An Overview* (August 2021), mid-range projected changes for northern NY are as follows:

	2020s	2050s	2080s
Annual temperature (F)	+2.3 to 3.4°	+4.4 to 6.4°	+5.9 to 10.0°
Days over 90°	6-8	12-21	17-44
Days below 32°	119-126	102-113	85-104
Annual precipitation	+2 to +6%	+4 to +10%	+6 to +12%

A more local report, *Village and Town of Potsdam Climate Vulnerability Assessment* (April 2020), also focuses on three climate hazards that are relevant to Canton, ten miles away: flooding, microbursts with accompanying high wind speeds, and severe winter snow and ice storms. All pose a serious risk to the art storage facility and exhibition galleries in terms of maintaining sustainable preservation measures, such as temperature and humidity controls, as well as proper roofing and insulation to withstand weather extremes.

The optimization study will not require the movement or relocation of the collection.

History of the project

Since the 1980s, the Gallery has undertaken a range of facilities and collection assessments, including several conducted by the Williamstown Art Conservation Center (MA), of which the Gallery was an institutional member for many years. These include a General Facilities Assessment (1983); a National Institute for the Conservation of Cultural Property (NICCP) Conservation Assessment Program grant (1992); an IMS Technical Assistance Program grant (1993); a NICCP Save Outdoor Sculpture grant (1997); and an ASIANetwork/Henry Luce Foundation Collections Survey for Asian objects (2006).

In 2013, the Gallery initiated an ongoing systematic collection assessment with Caroline Welsh, art historian and former director and chief curator of the Adirondack Museum in Blue Mountain Lake, NY (now Adirondack Experience). To date, she has made 75 day-long visits to campus (~14/year), during which time over 2,500 art objects have been strategically selected and examined on an item-by-item basis to determine physical condition, significance, relevance for teaching and research, and need for special preservation requirements. In addition, Inuit carvings, West African textiles, Tibetan Buddhist scroll paintings, and oversized prints were re-housed; other works were identified for archival framing and/or conservation. As a result, following the Gallery's Deaccessioning Policy, a total of 492 objects were deaccessioned between 2013-16, though 334 works from four artists' estates represented 68% of that total. A second round of deaccessioning ~275 objects (reviewed during 2016-20) is currently underway. The collections assessment project will continue through 2026, as having an independent consultant in this capacity serves the partial function of a collection manager. Welsh also assists with policy development, exhibitions, and strategic planning.

In 2020-21, the Gallery worked with the Conservation Center for Art & Historic Artifacts (Philadelphia, PA) to conduct a comprehensive preservation needs assessment of the collection. The goals of the assessment were to update previous external assessments from the 1980s and '90s; facilitate compliance with current best practices; and identify strategies for future facilities planning. Funded by a NEH Preservation Assistance Grant for Smaller Institutions, the assessment examined all aspects of collection care, policies, staffing, building and maintenance, environment, security, disaster preparedness, and preservation planning. A 93-page Preservations Needs Assessment (PNA) Final Report was completed in June 2021, which includes a brief history and scope of the collection; an executive summary; short-, medium-, and long-term goals; findings and recommendations; site specifications; general collections care information; and additional resources. The PNA Report also noted that "[t]he Gallery has established excellent intellectual control over the collections, with the collection fully accessioned and inventoried... and staff have invested a great deal of time assessing the collection (p. 19)."

SLU's "Green Pages" (<https://www.stlawu.edu/offices/green-pages>) outline the institution's commitments to sustainability through a Climate Action Plan, the management of campus resources, and community engagement. SLU's *Energy Master Plan* (June 2018) has made "energy planning and investment a priority and is challenged with meeting the current energy needs of the campus while also reducing energy and greenhouse gas (GHG) emissions for sustainability. The University has a goal of net zero emissions by the year 2040." Near-term initiatives include reducing energy consumption through building efficiency such as lighting and HVAC improvements, as well as investing in biomass boilers, geothermal heating, and wind and solar power.

Both the multi-year collection assessment project and the recent NEH-funded Preservation Needs Assessment lay the foundation for the need to conduct an optimization study with the longer-term goal of improving the Gallery's art storage facility, exhibition galleries, and mechanical systems. To do so will not only ensure that the collection is well protected, but—in keeping with SLU's *Energy Master Plan*—will do so in ways that will demonstrate the Gallery's resilience to the projected effects of climate change.

In terms of expected outcomes, the Linden optimization study and final report will lay out two sets of recommendations: a) recommendations to improve existing systems that will require little to no investment and/or the least invasive ways of reaching environmental targets (such as sealing the concrete

walls), and b) recommendations that will require capital investments, utilizing the most efficient and effective ways to apply those investments (such as an improved roof design and better HVAC and lighting controls).

Methods and standards

The optimization study will focus on the HVAC systems and building envelopes for the art storage facility and the three adjacent exhibition galleries. Jeremy Linden of LPS will work with the SLU team on a two-year longitudinal study to allow for analysis, implementation and review of preliminary recommendations, and subsequent system adjustments to be made over two cycles of seasonal changes in exterior conditions

The primary focus of the optimization study is the buildings' mechanical systems and the areas they serve, specifically the two systems that condition the galleries and the art storage facility. Environmental dataloggers will be installed into various locations in the systems' airflow, including outside air, return air from the spaces, and conditioned air in order to determine work performed and estimated energy consumed at each component within the system. This data, along with the space environmental data gathered by SLU, will be uploaded to the eClimateNotebook web analysis platform from the Image Permanence Institute (IPI) to conduct both operational and preservation analysis. The system and zone-specific analysis will allow for targeted suggestions for improving the preservation environment for the storage and display of SLU's collections. Specific assessment factors will include energy consumption patterns, identification of sub-optimal operational characteristics, and evaluation of environmentally-driven decay risks, including chemical and mechanical damage, mold growth, and metal corrosion. The overall goal is to determine the current operation, original design capability, and optimal operating conditions of the existing systems that will provide appropriate and sustainable preservation conditions for the collection and gallery environments.

Additionally, LPS will examine the overall building envelope and wall structures, evaluating the existing thermal insulation and vapor barriers through a combination of review of original construction documents, visual inspection, and infrared imaging in order to identify critical areas of heat and moisture transfer through the building. Specific attention will be paid to the roof and wall structures, flooring, and other common sources such as doors and windows.

Following initial analysis of the operation of the individual air handling units, the SLU team and LPS will seek to identify opportunities for more optimal preservation or energy operation. Potential strategies to be tested during the second stage of the project may include adjusted set points (either year-round or seasonal), experimentation with purposeful system setbacks or shutdowns aimed to establish the building's capacity to passively maintain environmental conditions for periods of time, adjustments in outside air control based on occupancy or other factors, or other identified opportunities based on system design and operation. SLU will seek to incorporate optimization strategies that test successfully into its permanent control strategy for the building.

Decision-making and goals through the optimization process will be heavily informed by new standards and best practices guidelines for preservation environments and sustainable operation in the museum field. Utilizing recent materials research and publications from the Image Permanence Institute, the Getty Conservation Institute, and the Canadian Conservation Institute, as well as redefined standards and guidelines from the International Standards Organization (ISO 11799 and TR 19815) and the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (Applications Chapter 24 – Museums, Galleries, Archives, and Libraries), SLU will reexamine its environmental criteria, and will seek to create environmental conditions that balance needs for long-term preservation with the least energy consumption possible in the changing environment of northern New York.

Overall, the effort will consist of:

- Datalogging of mechanical processes over a 12-month period (minimum);

- Review and analysis of as-built, installed system operation and performance for both preservation and energy;
- Evaluation of building envelope for sources of heat and moisture gain or loss that would impact the achievement of the interior preservation environment goals;
- Providing recommendations for optimization via experimentation and altered control sequences to improve preservation and/or energy performance;
- Providing recommendations for future capital investment in systems, controls, or other factors (envelope/architecture improvements, etc.) based on identified opportunities to improve either preservation quality or system energy performance.

Work throughout the project will consist of:

- Onsite time – team discussion, logger deployment, data-gathering, experimental design, and analysis;
- Offsite time – document and design review, data analysis, writing, and regular discussions/conference calls.

For planning projects

The planning team brings together the two people at SLU with the most knowledge of the art storage facility and exhibition galleries: Catherine Tedford, Gallery Director (1989-present), and Bob Hance, Chief of Facilities Operations (2006-present). Both have worked together for years to manage the spaces on an operational basis and to make improvements over the years through capital investments, including new HVAC systems (2013, 2014), a new LED gallery lighting system (2015), and new gallery flooring (2019). A joint Gallery-Facilities Operations capital request for a newly designed roof over the art storage facility was submitted in October 2021 for the 2023 budget cycle.

The third member of the planning team, Jeremy Linden, Principal, Linden Preservation Services, has conducted multiple optimization studies for cultural heritage collection projects across the country. For the past twelve years, his work in the field has “focused on enhancing preservation environments and sustainability, helping institutions preserve their collections in the safest and most economical and environmentally responsible way possible, finding solutions appropriate to individual buildings and collections in diverse climates and geographic regions.” If the Gallery-Facilities capital request for a new roof mentioned above is approved, Linden will be hired as an independent contractor in 2022 to provide input on design and preservation strategies (funded separately from the SCHC grant).

The project’s methods and work plan will lead directly to a final report analyzing operating conditions in order to support further fundraising and grant applications for any necessary improvements.

The collection will be professionally maintained and protected throughout the project using museum-standard temperature and humidity controls. Gallery staff and Facilities Operations will also continue periodic review of light levels and the fire suppression system. Regular housekeeping will maintain the art storage facility and exhibition galleries.

Work plan

The optimization study will take place over the course of 24 months from October 2022 through September 2024, during which time Jeremy Linden will work with Catherine Tedford, Gallery Director, and Bob Hance, Chief of Facilities Operations, to conduct an optimization study of the air handling systems serving the art storage facility and the three exhibition galleries.

Specific goals are to determine the actual capability of the existing equipment in place, including total dehumidification, humidification, and the performance of any downstream reheats, to identify optimal operating conditions of the existing equipment for both preservation and energy consumption, and to develop a strategic plan for potential capital investment and renovations as the systems and building continue to age.

The first stage of the project (first 9 months of project: October 2022 to June 2023) is intended for data collection and analysis. The second stage (running for 11 months from July 2023 to May 2024)

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comprises the testing and experimentation period. The third, final stage (last 4 months of project from June to September 2024) will be used for implementation of recommendations from the preservation expert and project team, as well as dissemination of project results.

Main activities will be divided as follows:

Date	Activity	Responsible
Oct 2022	1 st assessment visit (3 days) from Linden Preservation Services Systems and building documentation, placement of dataloggers in the HVAC system, galleries, and art storage facility	Linden Preservation Services
Nov 2022	1 st video conference with advisory board	SLU project director
Nov 2022- Jun 2024	Data gathering and analysis Teleconference with Project Director and Linden Preservation Services (every six weeks during this period) to monitor and discuss data gathering and experiments Implementation of experiments as established in Linden 2 nd visit (see below)	SLU team (project director)
June 2023	2 nd visit (3 days) from Linden Preservation Services to verify and analyze HVAC performance, establish experimentation and analysis schedule to assess response; create experimental lists to perform for the next year; project team meeting to decide if additional testing is necessary and the type of testing to perform	Linden Preservation Services/SLU Team
June 2023	2 nd video conference with advisory board	SLU project director
Oct 2023	3 rd video conference with advisory board	SLU project director
Feb 2024	4 th video conference with advisory board	SLU project director
May 2024	3 rd and last visit (3 days) from Linden Preservation Services to perform last run of analysis, final conclusions and recommendations with parameters and guidelines to follow by the museum and by contractors Site meeting with SLU team	Linden Preservation Services
May 2024	5 th video conference with advisory board	SLU project director
July 2024	Write procedures for implementing recommendations from Linden Preservation Services Implement the recommendations that can be done easily and start to plan for the implementation phase of the more complex recommendations	SLU team (project director)
Jun-Aug 2024	Write white paper and presentation to share project findings with other institutions	Linden Preservation Services and SLU project director

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Sept 2024	Final report due from Linden Preservation Services	Linden Preservation Services
Fall 2024	Disseminate results at regional, state, and/or national conferences	SLU project director, advisory board, and/or LPS
Oct-Dec 2024	Final written and financial report	SLU project director

The final deliverable to SLU will be a written report covering the documentation, analysis, and optimization process, as well as any recommendations for both operational and capital improvements.

The advisory board will also meet via Zoom five times during the project period to provide feedback and perspective on Linden’s optimization study, as well to discuss ongoing sustainable preservation measures that can be implemented during the two-year planning grant (and which would be funded separately). In this way, after the 2020-21 NEH Preservations Needs Assessment project, the Gallery plans to continue a strong working relationship with the Conservation Center for Art & Historic Artifacts, which conducted the assessment, for the sake of future collaboration.

Project team

The project team consists of **Catherine Tedford**, SLU Gallery Director; **Bob Hance**, SLU Associate Vice-President & Chief of Facilities Operations; and **Jeremy Linden**, Principal, Linden Preservation Services (Brockport, NY).

Tedford has served as Gallery Director since 1989, during which time she has overseen federal, state, and foundation grants and awards through the Institute of Museum Services (1992, 1994); the New York State Council for the Humanities (1997, 1998); Greater Hudson Heritage Network (2012), the Council of Independent Colleges (2015-19), the National Endowment for the Humanities (2020-21), and Documentary Heritage & Preservation Services for New York (2021-22). She oversees an ambitious program of rotating exhibitions and educational programs featuring regional, national, and international artists and curators, and serves as the primary contact for all matters regarding SLU’s permanent collection. While initial training in preservation measures and practices was conducted by Williamstown Art Conservation Center, in 2021, as part of ongoing professional development, Tedford successfully completed MuseumDev’s online course called Collection Management Policies with instructor Matthew Clouse, Registrar, University of California Riverside. She will serve as the grant’s principal investigator and oversee the work plan, budget, and final report.

Hance has worked in Facilities Operations since 2006 when he started as Facilities Manager; he was promoted to Capital Projects Manager in 2007. In 2017, he was promoted to Associate Director of Capital Projects, Skilled Trades, and Central Heating Plant. In 2021, he was appointed as Associate Vice-President & Chief of Facilities Operations. Hance is the most knowledgeable person on campus with regard to all of the Gallery’s facilities and operating systems.

Jeremy Linden has two decades of experience in the cultural heritage field, focusing on preservation and sustainability. He was formerly the Senior Preservation Environment Specialist at the Image Permanence Institute in Rochester, NY, and the Head of Archives and Special Collections at the State University of New York at Fredonia. Linden Preservation Services, Inc., is an international leader in the application of material science and research to the built cultural heritage sector, with a background in materials preservation, energy-efficient operation of buildings and mechanical systems, preventive conservation practices and strategies, and strategic planning for collections environments.

An advisory group involved in the planning project consists of **Caroline Welsh**, The Welsh Group, Art and Museum Services (Tupper Lake, NY); **Anastasia Matijkiw**, Program Manager & Preservation Specialist, Conservation Center for Art & Historic Artifacts (CCAHA, Philadelphia, PA);

and **Erik Backus**, Professor of Practice/Director of Construction Engineering Management Program at Clarkson University (Potsdam, NY).

As an independent consultant, Welsh has conducted the Gallery's multi-year collection assessment project since 2013 (see History of the Project for more information). Her work in this capacity is expected to continue for another four years. Welsh assisted with the 2020-21 NEH Preservation Needs Assessment and was also involved in the 2021-22 Strategic Planning project through Documentary Heritage and Preservation Services of New York. Outside of the two Gallery staff, Welsh knows more about SLU's permanent collection than anyone else.

Matijkiw was the 2020-21 NEH Preservation Needs Assessment (PNA) primary surveyor (see History of the Project for more information). She wrote the final PNA Report and maintains an ongoing professional relationship with the Gallery. She will help review collection and grant-related goals and activities from a preservation perspective. CCAHA recommended Jeremy Linden for the Sustaining Cultural Heritage Collections planning grant.

Backus teaches courses and conducts research on topics related to the built environment including sustainability, resilience, and life-cycle thinking of infrastructure and buildings. He was one of the authors of the 2020 *Village and Town of Potsdam Climate Vulnerability Assessment Report* and currently serves on NYS Governor Kathy Hochul's newly formed *New York State Climate Impacts Assessment: Understanding and Preparing for Our Changing Climate* in the technical working group focused on Buildings. He brings a local perspective on climate change and its effects on facilities to add to Linden's optimization study.

Project results and dissemination

The final report generated by the optimization study will be used to plan for facilities improvements through internal operational and/or capital funding or through external funding. Depending on the results of the study, SLU can then apply for an NEH Sustaining Cultural Heritage Collections implementation grant in 2025 with the long-term goal of improving Gallery facilities in ways that will increase energy efficiency, lower energy costs, and demonstrate resilience to the short- and long-range effects of climate change. Protecting the collection is one of the Gallery's highest priorities.

Results of the grant project will be shared internally with SLU's President and Senior Staff, and with SLU's tripartite Library & Art Gallery Committee of faculty, staff, and students. SLU will distribute a press release to nine regional media outlets across northern New York and will publicize the project on social media. SLU's News Digest reaches 3,000 people nearly every week, versions of which are also emailed to alumni and parents totaling more than 24,700 recipients.

The Gallery will write a white paper on lessons learned to be shared with the NEH, University officials, and others.

Tedford, Linden, Matijkiw, and Backus will be available to disseminate the results of their work for the St. Lawrence County Arts Council and at professional gatherings for the Museum Association of New York, the Association of Academic Museums & Galleries, the Mid-Atlantic Association of Museum's Building Museums Symposia, and/or the New York State Green Building Conference.