White Paper

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White Paper

Grant Number PF-50365-13
Providing a Cold Storage Unit for Preserving the Pacific Film Archive
Principal Investigator: Lucinda Barnes

Regents of the University of California

December 22, 2016
Project Activities

Generous funding from the National Endowment for the Humanities supported the purchase and installation of a new 540-square foot walk-in cold storage vault in the Pacific Film Archive’s (PFA) off-site collections storage facility in Richmond, California. The cold storage vault houses the film archive’s unique and vulnerable motion picture negatives and original elements—our most important holdings and those in the greatest danger of deterioration.

In late 2013 through 2014 we secured additional funding to supplement the NEH award. In early 2014, the project team—comprised of PFA’s Film Collection staff and Chief Administrative Officer Richard Tellinghuisen, in partnership with the UC Berkeley Capital Projects office—had an initial meeting. Thereafter, Film Collection staff reviewed current mobile shelving products and researched recent advances in cold storage to ensure our requirements for the project would achieve best practices and greatest efficiency. PFA adapted to a revised schedule necessitated by staffing changes at Capital Projects during a period of transition in that University department. In the fall of 2014, the project team met to prepare for project initiation and design and continued to work closely through the following months. The initiation phase included reviewing and confirming design criteria and identifying potential consultants to develop the final design documents.

The project team, with Oakland-based consultants Shah Kawasaki Architects, developed electrical, plumbing, ventilation, and fire safety designs for the cold storage room so that it is integrated with the entire collections facility, which houses collections from a range of key UC Berkeley museums and libraries in secure, compartmentalized, and environmentally-controlled storage vaults designed for their specific needs and requirements. Mr. Tellinghuisen and Film Collection Curator Ms. Nagai reviewed the drawings and met with the consultants and Capital Projects to ensure final construction plans met our needs and were approved by the Fire Marshal and State Architect.

In March 2015, the bidding process for the construction and installation of the unit began, and in May 2015, the University awarded the construction bid to Burlingame-based general contractor Rodan Builders, Inc. Engaging a number of qualified subcontractors, Rodan Builders subsequently developed the construction plan and recommended equipment to meet our requirements for the cold storage unit. In July 2015, Rodan Builders presented their initial submittal, including dimensions and shop drawings. Shah Kawasaki Architects then made revisions to the submittal after careful review, discussion, and approval by the project team.

While waiting for the delivery of the components for the prefabricated enclosure system and climate control equipment purchase, Rodan Builders completed all required upgrades to electrical, plumbing, and security installations, and ordered the shelving units. Rodan contracted with a well-respected local Spacesaver vendor that in the past did excellent work installing compact shelving for the PFA Film Library and Study Center. Based on PFA’s specified shelf dimensions (for 16mm and 35mm film cans), this vendor presented a detailed drawing and proposal which met our needs.
The cold storage unit was fabricated in summer 2015 and Rodan completed installation in fall 2015, with the cooperation of the shelving vendor. PFA staff and Capital Projects held a review meeting with Shah Kawasaki Architects and a consulting engineer to discuss several points about the installed cold storage unit, none of which presented major concerns. Rodan subsequently resolved minor issues, and key project staff moved forward with the remainder of project implementation. In early December 2015, the HVAC system was turned on, beginning the sixty-day conditioning period, during which the monitoring of the interior environment also began.

During fall of 2015 through the first half of 2016, Film Collection staff prepared baseline condition reports on designated films, testing reels for vinegar syndrome if necessary; rehoused films in archival polypropylene cans; supervised the move of film materials into the new cold room; monitored environmental conditions; conducted an inventory; and updated location records. In the lead-up to this phase of the project, Film Collection staff determined the film materials prioritized for cold storage, based on rarity and condition and in consultation with PFA film curators and a group of advisors who have used the film collections for research and teaching. Prior to the move of the collections to the cold storage vault, Film Collection staff calculated the maximum quantity of works that could be stored now while allowing space for future acquisitions, and created detailed maps, organizing film locations by size in order to maximize shelving capacity. (See Appendix A: BAMPFA Cold Room Shelf Map). Our extensive advance planning resulted in a smooth move which confirmed the accuracy of estimates for shelving the designated film materials.

In January 2016, halfway through the HVAC conditioning period, Film Collection staff selected a representative sampling of film originals, preservation elements, and prints to place in the cold room in order to test how the system performed with a partial load of materials. After an additional thirty days monitoring the HVAC performance as it responded to the load, the contractor made adjustments to the equipment as needed to achieve the desired environment. Given the fluctuations of temperature and RH that all archives have encountered with their HVAC systems, Film Collection staff took extra care to monitor environments of both our general vault and the cold storage unit, for successful transition of film elements. As a result of advance planning and following firm requirements set forth by PFA, Capital Projects, and Shah Kawasaki, we are delighted to report that the HVAC system has delivered a stable environment of 45 degrees Fahrenheit (+/− 2ºF) temperature and a 30% (+/−5%) relative humidity, as planned—a crucial upgrade from the vault environment of 60 degrees Fahrenheit and 45% relative humidity. [See Appendix B: Hobo data logs that reflect the stability of the cold room environment over the course of the project, with minor fluctuations occurring only during periods of abnormal activity within the space (e.g., punchwalk on February 9, 2016 and relocation of films into cold room on February 29, 2016). Analog hygrothermograph monitoring confirmed the same results.]

In late February 2016, Film Collection staff supervised the move of our most unique film holdings and continued to monitor conditions in the cold storage unit. Approximately 5,000 film reels of originals, preservation elements, and important prints were organized efficiently on mobile shelving. Almost all of the films in the cold room are unique materials, in that they are the camera originals and preservation negatives which ensure that future reproductions can be
made from the best source elements. Additionally, archival reference prints and exhibition prints serve as primary evidence of the formal and aesthetic qualities intended by the filmmakers.

(See Appendix C: Representative photographs, before and after collections move)

A selection of prioritized works moved to the cold storage vault include:

- originals for films by Bruce Baillie, Scott Bartlett, Nathaniel Dorsky, Lawrence Jordan, George Kuchar, Gunvor Nelson, Trinh T. Minh-ha, Wayne Wang, and others
- preservation negatives for works by Charles Burnett, Bruce Conner, Jim McBride, Chick Strand, and others
- exhibition quality prints by Bay Area avant-garde filmmakers, many of which were featured in the BAMPFA-curated series “Radical Light: Alternative Film and Video in the San Francisco Bay Area, 1945–2000,” including All My Life (Bruce Baillie), Pneuma (Nathaniel Dorsky), Schmeergutz (Gunvor Nelson and Dorothy Wiley), A Movie (Bruce Conner), Waterfall (Chick Strand), Life and Death of a Sphere (Dorsey Alexander), Tribulation 99 (Craig Baldwin), The Bed (James Broughton), Deaf/Punk (Richard Gaikowski), Pastoral d’été (Will Hindle), Father’s Day (Lenny Lipton), A Visit to Indiana (Curt McDowell), Oh Dem Watermelons (Robert Nelson), Horror Dream (Sidney Peterson and Hy Hirsh), Riverbody (Alice Anne Parker Severson), Peggy and Fred in Hell: The Prologue (Leslie Thornton), Sol (Edward Silverstone Taylor), and North Beach (Dion Vigne)
- printing masters and exhibition quality prints of films selected for inclusion in the National Film Registry, including Allures (Jordan Belson), Castro Street (Bruce Baillie), Chan is Missing (Wayne Wang), David Holzman’s Diary (Jim McBride), Fake Fruit Factory (Chick Strand), Hours for Jerome (Nathaniel Dorsky), I, An Actress (George Kuchar), Notes on the Port of St. Francis (Frank Stauffacher), Offon (Scott Bartlett), Our Lady of the Sphere (Lawrence Jordan), and Quasi at the Quackadero (Sally Cruikshank)
- important films unavailable in other American archives such as the early short films of Alexander Black (the so-called Grandfather of the Picture Plays), home movie footage of Orson Welles directing the recently rediscovered Too Much Johnson, Beat-era experiments and home movies of Dion Vigne and Edward Silverstone Taylor, and numerous rare Japanese and Georgian 35mm features, including Magdana’s Donkey / Lurdzha Magdana/Magdanas lurja (Tengiz Abuladze, Revaz Chkheidze), My Grandmother / Maya Babushka/Chemi Bebia (Kote Mikaberidze), Our Courtyard / Nash dvor (Rezo Chkheidze), Saba (Mikhail Chiaureli), The Swimmer / Plovec (Irakli Kvirikadze) and Three Lives, Parts 1 & 2 (Ivan Perestiani), presented in PFA’s extensive Georgian cinema retrospective and tour in 2014-2015
- Theos C. Bernard–G. Eleanore Murray Collection, camera original and preservation elements of 16mm footage shot in Tibet and India in the 1930s
- Vietnamese and Vietnam-themed films, including Mốt vài bang chung về tôi ác chiến tranh hoà học của nước my o miền Nam Việt-nam (film produced in 1964 by the National Liberation Front of South Vietnam), 79 Springtimes of Ho Chi Minh (Santiago Alvarez), Vietnam Day Berkeley (Ernest Callenbach), Time of the Locust (Peter Gessner), and Surname Viet Given Name Nam (Trinh T. Minh-ha)
Film Collection staff inventoried all items located in the new cold room, scanned individual barcodes, ran an inventory report, and reconciled any discrepancies between this report and the list of elements designated for this storage area. Staff also updated records with new location information about the holdings. In addition to successful completion of the cold room project, with funding from other sources Film Collection staff worked with the same team of professional movers to shift 35mm and 16mm prints within the adjacent general film vault, reallocating space made available when films were moved to cold storage—an important gain for managing access.

Film Collection staff will assess remaining storage capacity within the cold storage room and will plan for future acquisitions, in the context of PFA collection policies and in keeping with best practices. They will continue to use the cold room to house the most unique and vulnerable holdings. When accessing materials stored in the cold room for inspection, conservation, restoration, or making new prints, digital masters, or access copies, Film Collection staff will utilize the general vault for staging films between cold storage and the outside environment.

**Changes in project activities**

In June 2015, NEH approved BAMPFA’s request for a twelve-month no-cost extension, changing the project end date from September 30, 2015 to September 30, 2016. The no-cost extension was requested due to a number of factors that contributed to slight delays in implementation. First, delays resulted from the retirement of several senior staff members at the UC Berkeley Capital Projects office and a subsequent restructuring of that department. As a result, Capital Projects was restricted in terms of staff capacity, and a number of major campus construction projects were competing for limited staff time. Also, the expansion of an art storage space at the off-site collections facility went through a minor redesign, and since that construction had been scheduled to precede the cold storage project, our cold room installation was delayed. An extension allowed the project team to keep project activities on track according to the work plan approved by NEH.

In summer 2016, Project Director Lucinda Barnes retired after working at the film archive for fifteen years. At the time of her departure, the project team had successfully completed the construction and installation of the cold storage room, and Film Collection staff had already moved the collection to the cold storage vault. Following Ms. Barnes’ retirement, Mr. Tellinghuisen and Film Collection staff continued to work closely with Capital Projects to ensure all phases of the project and final details were completed.

**Accomplishments**

We are pleased to report that the project team—PFA’s Film Collection staff and Chief Administrative Officer Richard Tellinghuisen, in partnership with the UC Berkeley Capital Projects office—successfully completed the installation of a walk-in cold storage unit at its off-site collection storage facility, according to the activities stated in the work plan and approved by NEH.

The project’s outcomes, as stated in the proposal, are to mitigate natural deterioration and to significantly prolong the life of unique materials in the film archive’s collection, ensuring future,
public access to this important heritage for film scholars and the general public. Proper storage greatly affects the life expectancy and condition of films, guaranteeing their useful life for hundreds of years. The project secures the future of approximately 5,000 of the PFA’s most fragile film elements, including original camera rolls and preservation negatives—the master elements from which prints are made. Representing an urgent improvement that adheres to best practices in the field, the stand-alone cold storage unit marks a major milestone in the care and preservation of the film archive collection.

Summaries on the design and performance specifications for the cold storage room are provided below. (For more details, please see Appendix D: As Built drawings for the Cold Room and compact shelving.)

**Cold Storage Room:** The cold storage room is built adjacent to PFA’s current vault space, to allow for easy access to the entire collection and for effective staging. The final customized, prefabricated, and panelized cold storage room has an area of 540 square feet (27 feet x 20 feet x 10 feet high, nominal clear interior size). Four-inch thick, polyurethane industrial insulated metal wall and ceiling panels, (with seismic anchoring devices to secure panels to existing construction) have 26-gauge galvanized steel skins inside and out with stucco embossed texture and a USDA approved white finish. The room has a 36-inch x 84-inch in-fitting swing door with the same finish as the wall panels. Lighting includes T-5 energy efficient 4-tube fluorescent vapor proof lighting fixtures with motion sensors and a switch outside of the door. Resinous flooring with an epoxy floor finish was applied over the existing concrete slab.

The ultra-energy efficient, Cold Control refrigeration system is designed to maintain an environment of 45 degrees Fahrenheit (+/- 2°F) and a relative humidity of 30 percent (+/- 5%) to limit moisture inside the cold room. A CC100 Dehumidification system was also installed to ensure the 30 percent relative humidity. A 2-inch dial thermometer is mounted on the exterior wall next to the door. A condensing unit is mounted on the roof of the cold storage room. The unit has a complete split refrigeration system—two redundant refrigeration systems with alternating operation. The refrigeration system also includes all piping and electrical hookups and a control panel for all electrical components.

Integration of the cold storage unit into the collections facility system allows remote monitoring of the environment. Alarm notifications regarding significant temperature and humidity fluctuations are automatically sent to PFA Film Collection and Security staff, allowing for quick response.

**Shelving:** In consultation with several archives and museums, the project team considered options for the most effective and suitable mobile compact shelving. After making comparisons with a number of products, the project team selected Spacesaver, a reputable brand recommended and used by many colleagues at peer institutions. Maximizing storage capacity within the room, while achieving the sizes of shelves needed to accommodate the collection, was a major priority. Mobile shelving requires 33-50% less square footage to store the same quantity of materials as conventional static shelving and contributes to energy efficiency by increasing the thermal load. The selected Spacesaver mobile compact shelving represents a significant upgrade.
over the film archive’s fixed shelving system and is essential to maximizing the benefit of the cold storage room.

The film elements, placed inside cans of several sizes, are stored horizontally on heavy-duty metal shelving with an acid-free powder coat finish that does not off-gas. The height of the exterior top surface of the shelving units is approximately 7’6” with the bottom shelves 7” above the surface of the platform (which accommodates the tracks). Vertical spacing between shelves is set at 15 ¾ inches. The aisle between rows of shelving is 45” wide when fully open, and all aisles are ADA compliant. There is enough allowance to enable 1 to 2 inches of air circulation between all rows. We chose to exclude the options of pull-out reference shelves, shelf dividers, and electrical-assist controls from the design.

Four sizes of shelving were created for storage efficiency:
1) All shelves on the stationary row against the rear wall are 18” deep x 36”–42” wide.
2) Four rows of back-to-back shelves are 18” deep x 30”–36” wide; each of the units has a maximum depth of 36.5”
3) Three rows of back-to-back shelves are 13” deep x 30”–36” wide; each of the units has a maximum depth of 26.5”
4) All shelves on the stationary row against the front wall are 18” deep x 36”–48” wide

**Fire Protection:** The collections facility overall is protected by a code-compliant fire sprinkler system. Six sprinkler heads, including quick response sprinklers, inside the cold storage room are connected to the existing sprinkler system and meet local codes and the California Building Code. The sprinkler heads are arranged so that each storage rack and rack elevation has coverage.

**Security:** The cold storage room is integrated with the security system installed at the collections facility, in addition to the following security measures: a single contact point at the entrance to the cold storage unit; high quality doors and mechanical locks; a security card reader; and access restricted to authorized Film Collection staff. An electronic high/low alarm and safety control system is connected to the central Facility Management and Control System. Alarm notifications go immediately to the UC Police Department, on duty 24/7. After dispatching officers, UCPD promptly contacts our Security staff, who coordinate with Film Collection staff.

**Audiences**

This project has been integral in educating a wide range of constituencies about the importance of archiving motion picture film and how it is an essential aspect of the organization. Locally, the Film Collection staff has shared the results of the project with staff, the Board of Trustees, Collections Committee, Film Committee, individual donors that contributed funds to the project, and many others interested in film collection activities and collections care. Early in the project, the film archive staff showed the existing film vault to a number of potential donors, informing them about the NEH-funded cold storage project and the importance of proper archival storage. In August 2016, a select group of visitors were given a tour of the general vault and cold room. This high-touch engagement with long-time supporters and new patrons of the film archive
resulted in greater interest in the cold storage project, giving them a broader understanding of PFA’s ongoing commitment to preservation.

On September 1, 2016, Film Collection Curator Mona Nagai and Head of the Film Library & Study Center Nancy Goldman gave a presentation on film and video conservation and preservation to a Fall 2016 Mellon Graduate Seminar in Objects Analysis, taught by UC Berkeley history of art professors Patricia Berger and Lauren Kroiz. The course, supported in part by The Andrew W. Mellon Foundation, drew on the expertise of senior conservators in the Bay Area to give graduate students in the history of art and other related graduate programs a better understanding concerning the nature of various materials. Ms. Nagai and Ms. Goldman emphasized proper storage as an important strategy for film preservation, sharing information about PFA’s film vault and the new cold room, with specifics about the environments and their relationship for staging films. They also showed film and video materials from the collection to give students a sense of the ways that time-based work also requires archiving and preservation. As results of the project continue to be shared with larger audiences, PFA staff anticipates more interest from the UC Berkeley academic community, researchers worldwide, and peer institutions in learning about best practices in film preservation and proper storage.

In addition, as stated in the original proposal, the environment of the cold room is estimated to achieve a gain of 400% or more in the projected longevity of materials stored there, as compared to PFA’s film vault. The materials prioritized for the new cold storage room will be the basis for future prints and best quality masters for copying to current formats, whether digital or analog, for increased access and viewing by future audiences.

**Evaluation**

In May 2016, Film Collection staff, Richard Tellinghuisen, our Security and Facilities Administrator Maria Cisneros, UC Capital Projects, UC Physical Plant stationary engineers, and Shah Kawasaki’s design architect and engineer met with Rodan Builders to evaluate the project. Following months of monitoring and a number of inspections and walk-throughs, the consensus judgment was that the cold room construction, HVAC equipment, and performance were excellent. Rodan’s subcontractors were also present at the meeting to discuss directly with the veteran UC stationary engineers, who have decades of experience with other UC collections storage areas.

The engineers as well as Shah Kawasaki pointed out the redundancy of our cold room’s HVAC system as an important feature. In our stated requirements for bid proposals, PFA staff had insisted upon this approach, based on our research, consultation with colleagues, and advice from stationary engineers. It was crucial that our budget allowed for a consulting specialist engineer on Shah Kawasaki’s team. Throughout the project, we felt that our Capital Projects manager and consultants Shah Kawasaki worked to support our goals for best practices and maximum benefit for the care of the film collection, even though it can be cumbersome to navigate through complex institutional procedures.

One circumstance that would not necessarily apply to projects elsewhere is that our air conditioning equipment is on the roof of the cold room. This is necessary due to the footprint
space available to us and the adjacency of our general vault and other UC department’s storage areas. Prior to construction, we had confirmed that such a location of HVAC equipment would not present technical issues. We addressed safe access to the equipment by providing a freestanding mobile ladder cart that is kept next to the cold room, always conveniently available.

**Continuation of the Project**

PFA is now well positioned to save our most vulnerable and rare holdings, as well as other special collections of value to the humanities through future acquisitions of film originals. At the same time, the cold room was designed as a part of a modular plan that fulfills the required temperature and relative humidity relationships between environments so as to allow efficiency in acclimatizing films. The offsite collections facility has adequate space for the development of additional dedicated storage spaces, with specialized microclimates for moving-image media; and long range plans include an additional cold room with lower temperature and RH to better protect color films and to allow further growth of the permanent collection. In order to improve the work space for film inspections, repairs, and other conservation activities necessary to provide access and maintain the collection, we will also develop a plan for an offsite Clean Room at the University’s shared collections facility where the film and video vault and our new cold storage room are located. Best practices among film archives include having the equivalent of a laboratory space: a dust-free, stable environment with easily cleanable surfaces for the safe handling of motion picture film. PFA’s new downtown building does not offer this possibility. Currently, there is space available in the University’s facility, contingent upon funding for the UC Capital Projects Office to execute a construction project. A Clean Room will serve ongoing care of the collection and will facilitate inspecting and prepping films so that BAMPFA has the infrastructure to achieve the goal of digitizing and increasing access to more collection holdings. As we were advised in the IMLS-funded 2011 conservation survey by outside experts, we will assess staffing levels relative to responsible stewardship of the collection as well as the film archive’s digitization goals.

While collaborative partnerships with other institutions were not formed as a part of the project, colleagues at other local, national, and international institutions—film archives, museums, peer professional associations such as FIAF, and cinemas committed to preserving the theatrical movie-going experience as well as preserving film materials—will benefit from this project in the future, whether through research requests, loan requests for exhibition and preservation projects, or collaborative film restoration projects with PFA.

**Long Term Impact**

Acknowledging the importance of preserving our film heritage for future generations, the project upholds the film archive’s mission of ensuring and prolonging the useful life of rare and endangered works for future research, study, and exhibition. As an organization dedicated to the critical, cultural, historical, social, and political study of the moving image art form, PFA is committed to presenting and archiving the full spectrum of world cinema, from past to present. The PFA has long served as a valuable educational resource, providing UC Berkeley faculty and students from a range of academic disciplines, communities from the Bay Area and beyond, and researchers from around the world, access to many works that are not generally available to the
public. The unique and vulnerable holdings held in the new cold storage room will benefit these audiences. Timing of this project to coincide with the opening of our new building downtown, expanded Film Library and Study Center, and a major digitization initiative, is fortuitous. We will be able to offer much greater access to the collection going forward.

With regard to attracting non-federal funds for this project, BAMPFA Director Lawrence Rinder, Senior Film Curator Susan Oxtoby, and the Development team embarked on fundraising in late 2013 through 2014. Together, they successfully raised a major grant from UC Berkeley and donations from a number of individuals. Individual donations were raised in a number of ways, including invitations to private tours of the storage space for past and new donors to the film archive. Led by Ms. Nagai and Ms. Oxtoby, the tours provided a rare opportunity for patrons and prospective donors to see where and how our films and videos are stored and cared for, giving them new insight into, and more appreciation of, the workings of the PFA and the importance of proper storage.

**Grant Products**

While the cold storage unit and White Paper serve as the most tangible products of this grant-funded project, public promotion of the project’s successes will ensure that they are shared with other archives, collecting institutions, as well as the general public.

Our *In Focus: The Role of Film Archives* lecture and screening series in February - March 2016 gave context and an opportunity to mention this project to our audiences. The project will also be shared with the broader public via the institutional website bampfa.org; print materials, including the film archive’s quarterly Program Guide; social media; and other online platforms. Under the guidance of our new Director of Marketing and Communications, planned improvements to our website include a page which will spotlight the new cold storage room and its importance for the archival film collection. We will acknowledge NEH funding in all printed and electronic communications related to this project.

In addition to sharing best practices and lessons learned with peer institutions and the general public, the project will serve as a model for securing funding for similar projects and the steps necessary to reach the goal of acquiring proper storage for collections. As a project that will increase awareness of the collections held in trust by the Regents of the University of California, the project team plans to share results, successes, and discoveries widely with the UC Berkeley campus through meetings with other units interested in preservation and collections care. When appropriate, results will also be shared with institutional peers across the UC system as well as at other professional convenings.

**Appendices**

The enclosed documents contribute to an understanding of the project and its accomplishments to date: Appendix A: Cold Room shelf map; Appendix B: Hobo data logs that reflect the stability of the cold room environment over the course of the project; Appendix C: Representative photographs, before and after collections move; and Appendix D: As Built drawings for the Cold Room and compact shelving.
Appendix A: Cold Room shelf map
### BAMPFA cold room at Regatta

#### Shelf map

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- **35mm priority**
- **16mm priority**
- **Originals**
- **Preservation**
- **Oversize origs/pres**
Appendix B: Hobo data logs
Appendix C: Representative photographs, before and after collections move
Appendix C: Representative photographs, before and after collections move

Door, with temperature and RH reader

Honeywell monitor at 45°F / 30% RH (dated 12/20/2016)

Spacesaver shelving, closed

Spacesaver shelving, partially open
Empty shelves prior to move-in

Spacesaver shelving, front door

16mm priority prints, organized by container size

16mm priority prints, with room for expansion
35mm priority prints, bottom row left empty for expansion

35mm priority prints, open row

35mm priority prints, view to back wall
Free-standing mobile ladder, a safe means of accessing the HVAC equipment on top of the cold room

Original film elements (Trinh T. Minh-ha Collection)

Preservation elements (Theos C. Bernard–G. Eleanore Murray Collection)

Original film elements (Allan Francovich Collection)
Appendix D: As Built drawings, Cold Room and compact shelving
AS BUILT
See response below from UCFM. Provide credit for deleted horn strobe relocation. Coordinate with Siemens for decommissioning of (e) strobe.

Brian Leonard, Shah Kawasaki Architects 07/02/15

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Request for Information

To: Valerie Zytle
Project Manager

Subject: Horn Strobe Relocation

Please reference spec section 4.10.3.1.3.4.4.4.2 for "two redundant refrigeration systems with alternating operation." Please clarify if refrigeration system needs to be tied into BMS. Also please clarify length desired between cycles for alternating refrigeration system.

By: Keith Reynolds 12/15/15

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Request for Information

To: Valerie Zytle
Project Manager

Subject: Alternating Refrigeration System

Please clarify if refrigeration system needs to be tied into BMS. Also please clarify length desired between cycles for alternating refrigeration system.

By: Keith Reynolds 12/15/15

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George Arellano 12/15/15

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RFI #2, 5, 7

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THE CE) HORN STROBE ON THE OUTSIDE OF THE (E) COLD ZONE CAN BE REMOVED (RELOCATION NOT FEE)"

Susan Rae FPID 7.2.15

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Confirm RFI per side visit with owner. Test lighting on the interior or the newly constructed coldroom is being reviewed. A lighting switch will be installed to control the lighting as best as possible in the attached representation. Lighting row "A" is controlled by the switch behind door opening; row attached. Lighting row "B" is controlled by the light switch from the door opening. If both switches are in the "on" position all two of lighting will remain on in cold room.

By: Keith Reynolds 01/14/16

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EE's comment/Response:

1. Live switching of returns as indicated in item A above complies with the 04 requirements.

By: Tony Mortera, PE / MPEI

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AS BUILT
REQUEST FOR INFORMATION

To: Valerie Zylla
Project Manager

Job No: 15-704

Subject: Relocation of Outlet To Be Removed

PLEASE RESPOND BY: ASAP

POTENTIAL COST IMPACT: No

POTENTIAL SCHEDULE IMPACT: Yes

RELOCATION OF OUTLET TO BE REMOVED

Please indicate if there is a desired location for outlet/conduit discovered when new doorway was cut. Existing outlet has conduit running through the wall away from existing cold room to another outlet. Please see attached photos.

By: Keith Reynolds
Date: 06/25/15

ARCHITECT'S RESPONSE:

Outlet may be removed, no need to relocate. If conduit to feed from the east, remove conductor, disconnect conduit and abandon per electrical code standards. If outlet is daisy chained and fed from the west and needs to remain, reroute around (n) wall opening.

By: Brian Leonard, Shah Kawasaki Architects
Date: 07/02/15

CC:

HAS BUILDERS, INC.
859 Cowan Rd
Burlingame, CA 94010
Ph  650-508-1700
Fax 650-508-1705
RFI No: 003
Date: 06/25/15
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To: Valerie Zylla
Project Manager

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By: Brian Leonard, Shah Kawasaki Architects
Date: 07/02/15

AS BUILT
REQUEST FOR INFORMATION

By:  Keith Reynolds  Date:  07/17/15

C. ARCHITECT'S RESPONSE:

Per standard industry standard, frame opening as required to support loads of (e) studs above. See standard rule of thumb:
opening header framing detail below. Finish patch jambs & head to match adjacent condition at (e) cold room.

By:  Brian Leonard, Shah Kawasaki Architects  Date:  07/17/15

AS BUILT
RFI #6

REQUEST FOR INFORMATION

To: Valerie Zylka

Subject: Desired Motion Sensor Delay Setting

Date: 12/15/15

POTENTIAL SCHEDULE IMPACT: NO

A. REQUEST FOR CLARIFICATION AND/OR INTERPRETATION:

B. ARCHITECT'S RESPONSE:

C. PROJECT MANAGEMENT RESPONSE:

Set initially at 10 minutes delay. User should determine desired or final delay time.

George Arellano 12/15/15

WARRANTIES AND CAUTIONS:

- All installations must comply with local and National Electrical Codes.
- The manufacturer assumes no responsibility for improper installation or application.
- Turn off electricity at the breaker or fuse box before installation.

Special Note from the field:
Always disable any existing light switch. The motion sensor will not function as intended if the customer can turn the overall off or has the ability to override the motion sensor.

George Arellano 12/15/15

RFI #6

1901 Motion Sensor

Specifications:

- Operating Speed: 0.05" per second (12.7 mm/s)
- Door Opening: 0.01" (0.254 mm)
- Door Closing: 0.01" (0.254 mm)
- Door Stopping: 0.01" (0.254 mm)
- Door Opening Time: 15 minutes
- Door Closing Time: 15 minutes
- Door Stopping Time: 15 minutes
- Power Consumption: 120 VAC, 100-240 VAC, 50/60 Hz
- Weight: 5.0 lbs (2.27 kg)
- Temperature: -20°F (-29°C) to 120°F (49°C)
- Humidity: 0% to 95% RH

AS BUILT