FINAL SUBMISSION

HISTORIC STRUCTURE REPORT

LE CONTE HALL
UNIVERSITY OF CALIFORNIA, BERKELEY

for the
DEPARTMENT OF PHYSICAL & ENVIRONMENTAL PLANNING
UNIVERSITY OF CALIFORNIA, BERKELEY

October 1999
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INTRODUCTION

FORWARD
The LeConte Hall HSR provides the following historic property and building information:

- Architectural history and significance
- Site, building and material descriptions and existing conditions
- Property and building recommendations
- Historic context
- Structural engineering
- Exiting and Life Safety engineering

In addition to the Physics Department and the Office of Physical and Environmental Planning at the University of California, Berkeley, the following professional team has participated in the development of this HSR:

PROJECT AND HISTORICAL ARCHITECTS
Page & Turnbull, Inc.
724 Pine Street
San Francisco, CA 94103
415-362-5154; 415-362-5560 FAX
Principal: J. Gordon Turnbull, FAIA
Project Manager: Frederic Knapp
Architectural Historian: Elizabeth Jandoli

PURPOSE
This study was prepared in conjunction with the seismic upgrade of LeConte Hall. The purpose of the study is to provide a framework of information about the historical value of the LeConte Hall so that preservation criteria can be taken into account as the seismic design evolves. The detail in this study is sufficient to guide planning, management, maintenance and alteration actions.

According to the National Park Service’s Cultural Resources Management Guideline (NPS-28):

A Historic Structure Report (HSR) is prepared whenever there is to be a major intervention into historic structures or where activities are programmed that affect the qualities and characteristics that make the property eligible for the National Register. The report consists of the collection, presentation, and evaluation of anthropological/archaeological, historical and architectural/engineering research findings on a historic or pre-historic structure, and their setting, and makes recommendations for treatment consistent with their significance, integrity, condition and programmed use. It analyzes and records all periods of construction (not just “significant” periods), modifications, source materials, building techniques, other evidence of use, and setting.

The primary purposes for the LeConte HSR are:

- To provide a background document concisely summarizing the history of the building.
- To document and evaluate the historic building, including levels of significance and existing conditions of systems and elements.
- To prepare recommendations for the management and specific treatment and use of the historic building.

The intention of this document is to provide a source of general knowledge about LeConte Hall, so that those responsible for actions impacting the building may proceed with a current and comprehensive set of guidelines specific to the historic property, building elements and systems.
METHODOLOGY

The study is based on comprehensive documentation and evaluation of all spaces in the building, a study of original construction drawings, and an evaluation of existing documentation and research in local archives and repositories. Historical information comes from the 1978 Campus Historic Resources Survey by the Campus Planning Study Group; oral history of the Physics Department from Professor Howard Shugart; written history of the Physics Department by Professor Raymond Birge; and from secondary source material found at the University of California, Berkeley Library, Bancroft Library/University Archives and the Lawrence Hall of Science. Photographic material comes from on-site documentation in January through March 1999; black and white historic photos have been reproduced with permission from the Bancroft Library/University Archives and the Lawrence Berkeley National Laboratory's Digital Photographic Archive which can be accessed at the following URL:

The methodology of the study generally follows the evaluation criteria used by the National Register of Historic Places. LeConte Hall is listed in the Campus Historic Resources Survey prepared in 1978 by the Campus Planning Study Group. It is not listed on the California Register of Historic Resources or the National Register of Historic Places.

The seismic upgrade project will follow the Secretary of the Interior’s Standards for Rehabilitation (Appendix B) to the extent feasible given the programmatic needs of the University. The information in this report is intended to indicate the level of preservation which will be required under the Secretary’s Standards.

This report includes

• a narrative history of the building
• a chronology of construction
• an architectural description of the building
• an evaluation of the exterior condition of the building
• an evaluation of the interior, noting condition of all architectural elements and finishes
• a determination of the historic significance of architectural elements and finishes
• specific recommendations for rehabilitating historically significant features and spaces
• general recommendations for integrating future seismic upgrade and tenant improvements with historically significant features

This report classifies exterior elevations, interior spaces, elements and materials of the building in five categories according to their historical significance. If their treatment resulting from the seismic upgrade is to comply with the Secretary’s Standards, any actions must correspond to these levels of significance.

The five levels are:

**Very Significant** Exemplifies original design, materials and historical associations which are unusual and particular to the building and its period of significance. Highly important to the historical significance of the building. Should not be destroyed or damaged.

**Significant** Includes original design, materials and historical associations which are good examples of the values which distinguish the building and its connection with the period of significance. Important to the significance of the building. Should not be changed unless unavoidable for overriding code or core programmatic reasons; changes should be compatible with the original design.

**Contributing** Includes original or period design, materials and historical associations which contribute to the building and its connection with history. Although not highly unusual, is part of a group which adds to the significance of the building. Should be retained where possible; changes should be compatible with the original design.
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**Non-Contributing** Not original, or changed so much that it no longer conveys its original character. Does not contribute to the historic integrity of the building. May be changed at will. Replacement materials and features should be compatible with the historic character of the building, although they need not match them.

**Contributing** Not original, but designed for compatibility with the original historic character.

**Non-Historic** Contributes to the historic character of the building but not its historic integrity. May be changed at will.

This report classifies exterior elevations, interior spaces, elements and materials of the building in five categories according to their physical condition in order to ascertain the degree of fitness of rooms or components.

The five levels are:

**Excellent** The space or components are in virtually original condition.

**Good** The space or components are intact and sound.

**Fair** The space or components show signs of wear or deterioration.

**Poor** The space or components are missing or not functioning.

**Unknown** The space or components are inaccessible.

While the National Register Criteria and the Secretary of the Interior’s *Standards for Rehabilitation* guide the writing of this report, additional source material was consulted including a report which dealt specifically with the rehabilitation, preservation and stewardship of technical and scientific facilities. This bulletin published by the Advisory Council on Historic Preservation includes information which sheds light on issues encountered in the seismic retrofit of LeConte Hall.


*Foreword*

When future generations reflect upon the most significant historic resources of the late 20th century, the sites associated with man’s first venture into space, with the splitting of the atom, with the development of computers and artificial intelligence, and with the first successful products of genetic engineering, may well be the first examples that come to mind. America’s scientific and technical facilities stand as monuments to the Nation’s supreme ability to invent and exploit new technology and to advance scientific and engineering knowledge. Some facilities and structures significant in the early history of science and technology are now inactive or have been deemed obsolete; they are in danger of being lost to future generations through lack of adequate maintenance or complete neglect.

This analysis responds to concerns on the part of the scientific community that efforts to preserve or protect historic scientific and technological resources through compliance with Federal historic preservation law might impede efforts to stay at the forefront of international research and achievement.

The central issue discussed in this report is how organizations whose primary missions involve active research and highly technical operations can meet their obligations as stewards of the nation’s historic scientific resources, given their continuous need to modify or replace “historic” facilities and equipment. What is the appropriate balance between an agency’s primary scientific and technical mission and historic preservation?
Chapter 1: Introduction
How can a balance be struck between the preservation of physical reminders of the scientific legacy of the United States and the ongoing operation and continual need to upgrade scientific and technical research facilities?

No one would reasonably argue that active facilities should have their research endeavors curtailed, that they should be thwarted in their continuing need to upgrade or that they should be turned into museums.

Chapter 3: Areas of tension between scientific research/technological facility operation and the Federal historic preservation program
Potentially historic resources that could be affected by Federal scientific research operations include sites publicly associated with major scientific advances or technologically significant events, e.g. the Mission Operations Control Center at Johnson Space Center near Houston, TX; the Los Alamos National Laboratory in Los Alamos, NM; Rogers Dry Lake at Edwards Air Force Base, CA.

Chapter 4: The historic significance of scientific and technological facilities
Does a property’s historic value derive from its association with events or persons, making physical historic fabric of secondary importance?

The concept of integrity is critical to the application of [National Register] criteria. All qualified properties must meet one or more of the criteria and, additionally, must be judged to have “integrity.” “Integrity” does not denote absolute purity, but it does demand enough physical presence to retain a “preservable identity” that communicates relevant significance.

While the [50 year] age criterion may work well when considering potential historic significance of many scientific and technological facilities (including buildings and laboratories), its use can be problematical when considering equipment and structures used in the buildings and labs. The primary reason is that equipment is constantly being modified for new kinds of research, or is built for specific purposes and dismantled, cannibalized or discarded after use. Thus, the equipment that played a large part in a scientific breakthrough may long be gone when the time comes to assess its scientific contribution.

There are seven qualities of integrity: location, design, setting, materials, workmanship, feeling and association according to National Register Bulletin 15, How to Apply the National Register Criteria for Evaluation. A property must normally meet at least two of these tests to be eligible for the National Register. In most cases historic scientific equipment or facilities in use today meet at least the design, materials and association components of integrity. Other properties significant for their contributions to scientific advancement (one example is the Edison National Historic Site), exhibit the qualities of location, setting, feeling, and association.

For a property to be historically important for its scientific or technological advances does not mean that it cannot be unchanged, or moved to a new location.

Chapter 7: Conclusions and recommendations
Although the current number of properties recognized as significant for historic scientific and technological achievements is fairly small, it is likely to increase as the era of World War II and its immediate aftermath continues to recede into the past.
HISTORY AND SIGNIFICANCE

HISTORIC CONTEXTS
Completed in 1923, LeConte Hall is an important example of the Beaux-Arts campus architecture of John Galen Howard at the University of California, and a notable built element of Howard's master plan for the central campus resulting from the Phoebe Apperson Hearst Competition of 1897.

The building holds national significance for its association with the history of physics and notable physicists of the 20th century including Ernest O. Lawrence, Emile Segre, Robert Oppenheimer, Edwin McMillan, Glenn Seaborg and Luis Alvarez.

The greatest significance of the building stems from its role as a locus of activity for the development of nuclear and atomic science at the dawn of World War II including the Manhattan Project.

The success of the modern scientific research methods promulgated at the Physics Department and Radiation Laboratory helped bring the University of California to international attention and prominence, thereby forming one of the fundamental early building blocks of the current academic reputation of the Berkeley campus. This led to the founding of Lawrence Livermore, Lawrence Berkeley and Los Alamos National Laboratories.

PERIOD OF SIGNIFICANCE
The period of significance for LeConte Hall is from its completion in 1923 until 1949. The beginning of the period of significance is based on the construction of the building; the remainder of the period of significance is based on developments in the study of physics, LeConte Hall's association with Nobel Laureates at the University of California, and developments in physics which were central to events in World War II. The designation for the end of the period of significance is in accord with the guidelines for the National Register of Historic Places, which limit the period to events at least 50 years ago, except for those which are exceptionally important.

BUILDING DESIGN AND CONSTRUCTION
JOHN GALEN HOWARD
LeConte Hall is an important contributor to the Beaux-Arts campus plan as completed under John Galen Howard, Architect of the University of California. The plan for the University of California was the result of the Phoebe Apperson Hearst Competition of 1897, an architectural competition inspired by the design ideals of the World's Columbian Exposition of 1893. Originally conceived in 1894 by architect and teacher Bernard Maybeck, it was Maybeck's view that the rapidly expanding University required a cohesive master plan aligned with the ideals of the Beaux-Arts movement to “stimulate loyalty, love and reverence for the University…and emphasize a love for the beautiful in all things.” The international competition for the Berkeley campus plan was financed by Phoebe Apperson Hearst in honor of her late husband Senator George Hearst in 1897. The prospectus called for, “at least twenty-eight buildings, all mutually related and, at the same time, entirely cut off from anything that could mar the effect of the picture. It is a city to be created—a City of Learning.”

John Galen Howard was a product of Beaux-Arts education both in America and abroad. His classical design training began in 1882 at the School of Architecture at the Massachusetts Institute of Technology, the oldest department of architecture in the United States. He left school prior to his graduation in 1885 and joined the office of Henry Hobson Richardson in Brookline. By 1889, Howard joined the firm of McKim, Mead & White in New York. With the financial assistance of Charles McKim, Howard travelled to Paris to complete his architectural training at the École des Beaux-Arts in 1891. Although Howard never received a advanced degree from the École, his exposure to the lessons of classicism including large-scale ensemble planning, and principles of axiality, symmetry, hierarchy and unity were fundamental to his later designs, especially in the Berkeley campus plan. Upon his return to New York, Howard went into practice with engineer Samuel M. Cauldwell in 1893. Their design for the Berkeley campus plan placed fourth in the international Hearst Competition.
While the Howard/Cauldwell design was not selected, Howard’s strong submission led to his appointment to the University’s architectural advisory committee overseeing the implementation of the winning design drawn by the French architect Émile Bénard. As conflicts with Bénard over the campus design continued to impede progress, Howard was commissioned by Phoebe Hearst to design and oversee construction of the one of the first buildings on the campus: the Hearst Memorial Mining Building. Howard was named supervising architect of the University in 1901; by 1903 he was the first Professor of Architecture at Berkeley as well as the first head of the School of Architecture.4 Howard’s role in the campus plan at the University was to modify Bénard’s intentions to meet more adequately the functional requirements of the growing institution while respecting the topography of the site.

The design for LeConte Hall was part of the original campus plan although it was intended to be used as a mathematics building. By 1923 when LeConte was built, the building was planned for use as a Physics building. Original drawings by John Galen Howard reflect the exterior decorative program of LeConte which emphasizes formal symmetry and classical composition within the Ionic order. Concept drawings by Howard show a central colonnade of nine bays with a single, central door flanked by pedimented pavilions. (See Historic Illustration 2.) While the main entrance would change, the overall design would stay the same.

John and Joseph LeConte

The building is named for John LeConte, professor of Physics, 1868-91, and third president of the University, 1876-81 and his brother, Joseph LeConte, professor of Geology and Natural Science, 1868-1901. Prof. Frederick Slate, an early member of the Physics faculty, described John LeConte as, “one of the pioneers of physical science in America,” according to an unpublished 1964 History of the Physics Department by Prof. Raymond T. Birge.5 Prof. LeConte was also, “identified with the fortunes and successes of [the] University from the date of its inception.”6 The LeConte brothers came to Berkeley from South Carolina, where they had been associated with the manufacture of munitions for the Confederacy during the Civil War. Unable to find work in the South or East after the Civil War, the brothers were hired by the University and were among its first faculty.

The site of LeConte Hall was previously occupied by East Hall, a wooden building constructed in 1898 and later moved to the site now occupied by Morrison Hall. The Physics Department was originally located in South Hall, the first building on the Berkeley campus. For the first decade of the 20th century, Physics had its lower division facilities in the basement of East Hall. In 1912, the department was consolidated in South Hall, where it occupied the entire building.7

Program

Since the 1890s, the Physics Department had requested additional space for its programs. In 1921 the Regents requested funds from the State Legislature for 13 construction projects, including a new physics building to cost $500,000. Only two facilities from the list were approved, physics and an education building, Haviland Hall.8

LeConte Hall cost $433,000 to construct, and provided two-and-one-half times the space that had been available in South Hall. The remainder of the $500,000 appropriation was spent on furnishings and equipment for the building, including lab benches, cabinetry, scientific apparatus and machinery. Instruction in LeConte Hall started in August, 1923; the building was dedicated March 24, 1924. Since its completion, LeConte Hall has housed the Physics Department.

The programming of LeConte Hall allowed for the division of spaces into floors for Lower Division work, and floors for Upper Division work akin to undergraduate and graduate floors. As designed, the basement level (noted and drawn as the “sub-basement” in the original plans) was conceived as a utilitarian floor which included machine shops, a woodworking shop for the use of staff and graduate students, a room for seismographs, a spectroscopic laboratory, and the building’s heating and ventilation machinery.9

According to the President’s Report for 1922-23, the first floor (noted and drawn as the “basement” in the original plans) contained an electrical room, six rooms devoted to spectroscopic research, laboratories, two small “recitation” rooms similar to today’s section rooms, nine general research rooms, and offices.10
The second floor (noted and drawn as the “first floor” in the original plans) was used by the lower division or undergraduate department and contained six large laboratories, an apparatus room in the center used as a storeroom which connected to third and fourth floors, offices, and a reading room and library for the lower division.

The third floor (noted and drawn as the “second floor” in the original plans) was designed to house the department offices, five professors’ offices, three lecture rooms, “recitation” and seminar rooms and a library and reading room for advanced students, or students in the Upper Division or graduate school. The defining feature of this floor was Room 310 (noted in original plans as Room 201), a large lecture space spanning the third and fourth floors which accommodated 360 students. This lecture space featured tiered auditorium seating, a central demonstration area with long wood counter, and a mezzanine level which connected to the fourth floor. In addition, Room 310 could be accessed via a set of stairs to the apparatus room below located in Room 203. The entire space was illuminated by a central skylight. Historic Illustration 6 taken in the 1940s shows a view from the upper seating tiers on fourth floor, looking west toward blackboards and lecture bench on west side of lecture hall on third floor.

The fourth floor (noted and drawn as the “third floor” in the original plans) accommodated more specialized research and laboratory space, including optical and glass-blowing laboratories, a darkroom, optometry and other instruction classrooms and thirteen small rooms used by professors as offices and research space. The roof decks off the last group of rooms were intended to function as spaces where students and faculty could perform outdoor experiments, such as those involving atmospheric electricity.

Throughout LeConte Hall, building systems provided special electrical, water, gas and compressed air service to the laboratories.

ASSOCIATIONS WITH PERSONS AND EVENTS

**Ernest O. Lawrence**

The greatest significance of LeConte Hall stems from its association with the history of physics and the development of atomic science, nuclear weapons and modern scientific research methods. The success of the Physics Department and Radiation Laboratory also helped bring the University of California to international attention and prominence, and formed one of the fundamental early building blocks of the current academic reputation of the Berkeley campus.

Perhaps the greatest achievement in atomic science at Berkeley originated with the creation of the cyclotron, a tool which enabled researchers to split the atom and study subatomic particles. The original five- and eleven-inch cyclotrons, developed by Prof. Ernest Lawrence in 1929, were built in the machine shops in the basement of LeConte Hall and were first successfully tested in Lawrence’s laboratory located in Room 329. This singular achievement would have a profound impact on Professor Ernest Lawrence’s career, as his discoveries and the work of his students and collaborators vastly increased the reputation of both the University and the Physics Department. Lawrence was the first member of the University’s faculty to receive a Nobel Prize.
Subsequent cyclotron projects required more space than LeConte hall could provide, thus cyclotron research moved to the new Radiation Laboratory (Crocker Lab) northeast of LeConte, roughly on the present site of Tan Hall. While later cyclotron projects were conducted outside of LeConte Hall, the original cyclotron project undertaken in LeConte was seminal to later enterprises such as the Berkeley Radiation Laboratory followed by much more extensive facilities built on the hills above the campus which became the nucleus of the future Lawrence Berkeley Laboratory.

With the construction of the LeConte Annex in the 1950s and Birge Hall in the early 1960s, many research spaces and offices moved out of LeConte. However, through the early stages of the research, LeConte Hall remained the center of the Physics Department, the location of faculty offices and smaller laboratory spaces, and a nexus of both teaching and research in physics at Berkeley. Many of the seminal discoveries in physics associated with the department at Berkeley were made by the researchers based in LeConte during this period.

**Nobel Laureates**

Five other members of the physics faculty at Berkeley later received Nobel prizes (although not all of them were associated with Lawrence’s work), as did other researchers on the Berkeley campus in allied fields such as chemistry. Berkeley became one of the pre-eminent centers of research in the physical sciences, establishing a reputation it still enjoys today. The budget of the University was substantially augmented in the 1930s and 1940s with research funds and grants as a result of the work in the Radiation Laboratory, and after World War II the University and its Berkeley campus were well positioned to be at the forefront of research and discovery in the physical sciences. The close association of Lawrence and other Berkeley researchers with atomic science and the Manhattan Project led directly to the University of California’s continuing management of the National Laboratories at Los Alamos, Livermore and Berkeley.

Thus, the growth of the University of California into a research and teaching institution of international stature was hastened, in part, by the success of Lawrence in LeConte Hall. In the 1920s, when Lawrence arrived, the University of California was an institution accorded growing respect in many fields, but was not indisputably regarded as one of the top universities in the world, as it is today. The efforts of leading University faculty and administrators, particularly Presidents Benjamin Ide Wheeler (1899-1919) and Robert Gordon Sproul (1930-1958), laid the ground work for the creation of the Berkeley campus as a pre-eminent research and teaching institution. The reputation achieved by Lawrence and his work were among the first public confirmations of the University’s success in building its programs and facilities to an international level.
The work of the Radiation Laboratory also contributed to the evolution of modern research science. Through the early 20th century, most scientific work was done in relatively small research establishments focused on one individual of scientific stature. The evolution and success of the Radiation Laboratory at Berkeley helped establish the now common pattern of large and complex research laboratories with teams of talented researchers collaborating on solving similar problems, assisted by large establishments of technicians and support staff. The Radiation Laboratory quickly grew into a significant complex of buildings on the Berkeley campus, likely the result of the successes of several Nobel Laureates in Lawrence's laboratory.

Oppenheimer and the Manhattan Project

In addition to the seminal work of Lawrence and his associates in basic nuclear science, LeConte Hall is also closely associated with the development of basic nuclear weapons. During World War II, many of the researchers and faculty in the Physics Department made substantial contributions to the war effort known as the Manhattan Project that supported the development of the atomic bomb. Prof. Robert Oppenheimer, one of Lawrence's colleagues and a distinguished theoretical physicist, met in LeConte in 1942 with an international team of physicists to plan theoretical research on the atomic bomb. This group included Felix Bloch of Switzerland; Robert Serber, a Berkeley graduate conducting research with Oppenheimer and later one of his colleagues at Los Alamos Laboratory; John van Vleck, a future Nobel laureate; Hans Bethe from Germany; and Hungarian-born Edward Teller, later the leader of atomic weapons development at Lawrence Livermore Laboratory. The group met in a fourth-floor office, which had metal screens fitted over the French doors to its roof deck, metal netting over the roof opening to the deck and a special lock to its door to which only Oppenheimer had the key. Historians speculate that this was Room 425 of LeConte, the adjoining office to Oppenheimer's office in 426, although this has not been confirmed.

Oppenheimer was later appointed to lead the teams of civilian researchers at the Los Alamos site of the Manhattan Project in New Mexico where the first atomic bomb was built and tested.

Oppenheimer had his office in Room 426. Lawrence had his laboratory in Room 329, and operated the first cyclotrons there before the relocation of his expanding laboratory work to the Radiation Laboratory. A display at Lawrence Hall of Science exhibits equipment from this laboratory which was discovered when the room was remodeled.

Birge, McMillan, Seaborg

Other notable facilities in the building include Room 210, Professor Raymond Birge's computing room, where the mechanical calculators he used to research the fundamental constant in physics lined a table down the center of the room. Birge and Professor White, and later Professor Sumner Davis, used a device called a "Rowland Circle" in Room 123 to do high-resolution spectroscopy. Professor Emile Segre, a Nobel prize winner, did most of his work in radio chemistry in Room 119. Professor Carl Helmholz did experiments with a beta ray spectrometer on the southeast corner of the first floor. Room 431 was the office of Professor Edwin McMillan, who, along with Professor Glenn Seaborg of the Chemistry Department, won the Nobel Prize in 1951 for the discovery of plutonium, a milestone closely associated with the work of the Physics Department at Berkeley. Professor Luis Alvarez, also a Nobel winner for Physics, worked in LeConte as a graduate student and faculty member. Much later, he was one of the originators of the theory that the impact of an asteroid or a meteor led to the destruction of the dinosaurs. The Cosmic Ray Group occupied the rooms at the northwest corner of the fourth floor. Much early progress in medical
physics and the use of radiation in the treatment of disease evolved from the work of Dr. John Lawrence, Ernest Lawrence’s brother, and was associated with the department and the Radiation Laboratory.

The School of Optometry, long a division of the Physics Department, was originally housed on the fourth floor of LeConte, in the rooms along the southern end of the building. Professor Ralph Minor (appointed in 1903 and elevated to full Professor of Physics in 1919) evolved the optometry curriculum and conducted teaching and research in LeConte Hall. The optometry program was formalized in 1923. In 1939 Optometry was made into a separate department of the University, and in 1941 it became a school. In 1941 the future Minor Hall was built southwest of LeConte Hall across Strawberry Creek, and by 1953 the School of Optometry was fully relocated to that building. Birge described the School of Optometry as “one of the leading schools of its kind in the nation” due to the founding work of Minor and his colleagues, most of which was conducted in LeConte Hall.12

SIGNIFICANCE

It should be noted that 18 associated buildings designed as part of John Galen Howard’s plan for the University of California, Berkeley were included in a Multiple Resource Area on the National Register of Historic Places in 1982 (National Register Nos. 82004638-82004654). These buildings were designated, “because their location, orientation toward minor and major axes of the campus and Neo-Classical architectural style define the formal turn-of-the-century concept of the University.”13 Given the integrity of its exterior (particularly the east elevation) and the architectural role LeConte Hall plays in the design of the campus, LeConte Hall is eligible for listing on the National Register under Criterion C (Design/Construction). Additionally, its association with the history of physics would qualify it under Criterion A (Events) and the association with Ernest O. Lawrence, Robert Oppenheimer and Nobel laureates at Berkeley may qualify it under Criterion B (Person). It is recommended that the University pursue amending the multiple resource listing for the campus to include LeConte Hall under these criteria.
This chronological listing comes from referenced bibliographic source material, as well the LeConte Hall Building Maintenance File, Division of Physical and Environmental Planning, University of California, Berkeley.

1868  John LeConte named Professor of Physics at the University of California. He teaches until 1891.

1882  John Galen Howard enrolls in the Massachusetts Institute of Technology to study architecture.

1873  The University of California officially opens on the 25th of September.

1876  John LeConte named third President of the University. He holds this title until 1881.

1885  John Galen Howard joins the office of H.H. Richardson prior to completion of his degree at MIT.

1889  John Galen Howard joins the office of McKim, Mead & White in New York.

1890  Howard completes his architectural education at the École des Beaux-Arts in Paris. His studies are completed with the financial assistance of McKim.

1893  John Galen Howard leaves the École just short of graduation upon the death of his mother. He establishes himself in private practice in New York with engineer Samuel M. Cauldwell.

1897  Phoebe Apperson Hearst, as a memorial to her late husband Senator George Hearst, launches worldwide competition in 1897 for a campus plan at Berkeley; Howard & Cauldwell submit entry along with 104 other entrants.

1899  Howard & Cauldwell place fourth in Hearst competition; the award is given to Émile Bénard of Paris. In recognition of his strong submission, Howard is appointed to the Architectural Advisory Council charged with overseeing implementation of Bénard’s design.

1901  Howard is commissioned by Phoebe Apperson Hearst to design and construct the Hearst Mining Building, one of the first buildings of the campus plan. In December of that same year Howard is named supervising architect of the campus due in large part to Bénard’s pressing commitments elsewhere, difficult personality and inability to speak English.¹⁴

1903  Berkeley founds a department of architecture, the thirteenth in the nation, and appoints Howard at age 39 to be its first Professor of Architecture.

1912  The Physics Department, originally located in the basement of East Hall, consolidates in South Hall.

1921  The Regents of the University of California request funds from the State Legislature for thirteen construction projects, including a new physics building to cost $500,000.

1923  LeConte Hall completed at a cost of $433,000. The balance of the funds appropriated is spent on furnishings and equipment. Instruction begins in the building in August.

1924  LeConte Hall is dedicated on March 24th.

1929  Professor Ernest O. Lawrence builds the first cyclotron in the basement machine shop of LeConte Hall. He tests the device in Room 329.

1931  John Galen Howard dies.
Professor Robert Oppenheimer, assisted by graduate student Robert Serber, meets with an international team of physicists including Felix Bloch of Switzerland, future Nobel Laureate John Van Vleck, Hans Bethe of Germany, and Hungarian-born Edward Teller to plan theoretical research on the atomic bomb.

Ventilation to Room 210 is altered.

Library Shelving is added, exact location unspecified.

A temporary building, 20’ x 48’, is proposed for the roof of LeConte Hall to house a “Cosmic Ray Laboratory” for Professor Brode. This is apparently approved, but there is no information on actual installation or removal dates.

LeConte Annex (“New” LeConte) constructed. Thomas Church prepares a “Landscape Plan of LeConte Hall and Annex” [copy not located through this research].

LeConte is converted to 4000 volt electric service.

A project involving library stacks and study carrell tables is undertaken (exact nature unspecified).

Flooring loads are evaluated because “in room 433 of LeConte Hall it is planned to place a pile of lead bricks for shielding of radioactive materials...”

Work is conducted in the Lighting Machine Shop (room unspecified).

Work is conducted in the Graduate Student Shop.

Work is conducted in the “Monorail Machine Shop.”

Work is done to provide a Motor Generator Set in “Room B-4 (and) Light Well Area.”

Elevator doors are altered.

A fume hood is installed in Room B-7.

Exhaust system for “enclosures” is provided (exact location unspecified).

Fume hoods are constructed in Rooms 426 and 427. Note that prior to 1958, Oppenheimer had his office in Room 426.

Room 405 and Room B-6 are air-conditioned.

Floor loading evaluation is requested for room 134, in preparation for the “...possibility of installing on track a magnet of approximately 5000 pounds. This magnet will be similar to the one now in use in room 102 LeConte Hall...” In May, 1961, this is modified to “placement of three 3600 lb. magnets in Rooms 133, 135, and 137 LeConte.”

An “overhead heating unit” is requested (and possibly installed) in Room 416 (attic).

Room 310 is altered, with a design by Warnecke and Warnecke, Architects. This is described as a “major alteration, third and fourth floors”, and encompasses the removal of the large auditorium classroom and its replacement with two levels of offices and laboratories.

“Additions to Building” are designed by Donald Olsen, Architect (these may be the modifications to the Crocker Room and terrace in LeConte Annex).
CHRONOLOGY

1969  Memorial plaque installed in William H. Crocker Room, 376 LeConte Hall.

1970  Physics and Astronomy Departments discuss combining their libraries. Note that Physics Library currently occupies LeConte rooms 351, 351A, 351B, 351C, 361, and 363. Expansion is proposed into rooms 251 and/or 206 and 207 below the existing library.

1971  A study is conducted for a bridge between LeConte and Campbell Hall. Bridges at the 3rd and 4th level of old LeConte are discussed. A 3rd level bridge would use Room 329 LeConte as a terminus.

1973  Funds are budgeted for Fiscal Year 1974-1975 for various plumbing improvements “to install duplicate backflow prevention devices...or, where necessary, a separation of the water piping into “domestic” and “industrialized” systems with appropriate protection of the domestic systems”. LeConte is one of those buildings identified for “complete new systems”.

1974  A “Physical and Environmental Survey of Campus Buildings” is conducted (Report No. 74-38-RE May 1974) by Kaiser Engineers. Old LeConte is described as having Assignable square footage of 52,026 sq ft, Net Useable Area of 68,590 sq ft, and Gross Area of 78,000 sq ft. The ratio of assignable to gross sq ft is 66.7%. The “academic assignment” of the building is described as “Primary: Laboratories”, “Secondary: Classrooms (including class-laboratories); “Tertiary: Offices and Workshop”.

1979  Numerous maintenance and custodial deficiencies are noted by the Physics Department. Many problems are corrected through 1980.

1980  Steam leaks in LeConte and Birge Hall are corrected, and damaged ceiling tiles are replaced (January, 1981). Exact location unspecified.

1982  University of California, Berkeley Multiple Resource Area entered in the National Register of Historic Places.

1982  Chronic flooding in the basement is described, particularly in Room B-4. Plugged drains are identified as the likely cause.

1982  A deferred maintenance survey (copy not located) notes problems in the building, including falling ceiling tiles.

1986  Physics Chair John Reynolds writes to Chancellor Heyman complaining about problems with custodian services and maintenance. Problems are identified to include water intrusion at 4th floor balconies, broken windows, “chronic damage to the locks on the great wooden doors into old LeConte.”

1987  $80,000 project planned to renovate elevator #1.

1987  Roof of LeConte replaced.

1996  Seismic Retrofit project of LeConte Hall begins. Page & Turnbull, Inc. completes an Architectural and Historic Evaluation of LeConte Hall.

EXTERIOR DESCRIPTION

SITE

LeConte Hall lies at the center of the math and physical sciences precinct on the central campus at Berkeley. It is close to the Campanile and most of the earliest campus buildings. Aligned roughly north-south, perpendicular to the early “University Axis” pointed at the Golden Gate, LeConte lies south of Campbell Hall, and east of Gilman Hall. With Gilman, Campbell and Tan Hall (north of Gilman), this grouping of buildings frames an axis aligned toward Hearst Memorial Mining Building and the Mining Circle. This axis terminates in the natural area at Strawberry Creek. To the west, connected to LeConte by a multi-story enclosed glass bridge, is Birge Hall. The addition known as LeConte Annex connects to LeConte through a wing which is attached to the north end of the west elevation of LeConte (see Historic Photograph 1).

On the east side of the building, the paved space which forms the southern end of the Mining Circle axis provides a formal foreground to the main entrances of the building. There are mature trees along this space, with a narrow landscaping strip in front of the building planted with flowers and shrubs. At the two entries to the building, there are exterior stairs with brick paving at the center and concrete on each side. They have painted iron railings. There is an areaway along the building wall just north of the south entry to the building. On the south side of LeConte, there is a narrow landscaped area between the building and the roadway along the Strawberry Creek natural area. To the north of LeConte, a narrow paved space between it and Campbell functions as a service alley. On the west side of LeConte, there is an ell-shaped space between LeConte, “New” LeConte and Birge. The portion of this space which runs west toward the Campanile is landscaped and acts as the forecourt for Birge and the side entry to “New” LeConte. The remainder of this space, which runs south along the west side of LeConte to the road bordering the Strawberry Creek natural area, is utilitarian and serves as the delivery and loading area for LeConte and Birge.

EXTERIOR ELEVATIONS

The exterior of LeConte has strict symmetry, with formal, classical composition. The design shows a restrained used of ornamental detail through the use of the Ionic order. The east elevation is the primary one, and has two doors which have always functioned as the main entries to the building, although an original design sketch by John Galen Howard shows a single, central door in the east facade. (See Historic Illustration 2.) This elevation is composed of a central colonnade of nine bays (see Historic Photographs 3 and 4; and existing conditions in Photograph 1), flanked by pedimented pavilions (see Photograph 2).

The first floor is detailed as a striated plinth for the monumental architectural orders above which occupy the second and third floors. Ornate spandrels and fluted columns with richly decorated Ionic capitals accentuate the portion between the second and third floor levels on all four facades. An ornate cornice runs around the entire building at the fourth floor level. The fourth floor of the building is concealed within the roof, which begins immediately above the top of the third floor. The structural columns, beams, floor, roof slabs, and exterior walls of the building are cast-in-place concrete. Ornamentation on the facades is executed in cement plaster over reinforced concrete. The material evokes the qualities of a Classical stone building while conveying the fact that it is made of concrete. The windows are wood double-hung and the visible portions of the roof are covered in red tile.

The central zone of the east elevation has engaged columns in the Ionic order, resting on a simple stylobate which articulates the top of the first floor podium. The capitals crowning the fluted columns have stylized volutes indicating a departure from a more strict use of the Ionic Order. The fasciated entablature contains a simple architrave and cornice with egg-and-dart molding and dentils. Unlike a traditional Ionic entablature, the one on LeConte Hall does not contain a frieze. There is a decorative spandrel panel between the windows of the second and third floors which is ornamented with cast anthemia or honeysuckle forms. The main entrances to the building span the height of the first and second floor portions of the outer bays of the central zone. Each entrance bay has a projecting frame and pediment with an Ionic entablature just below the third floor windows. Decorative console-shaped brackets rest atop side bands decorated with rosettes, which frame egg-and-dart and bead-and-reel moldings around the door.
opening. At each entry, there is a pair of doors each having an eight-lite transom above. The doors and transoms are wood; the doors have no glazing. The door jambs are fluted pilasters topped by half-palmettes, supporting a panel with “LeConte Hall” incised in it. Each door is divided into square panels at the top and bottom and a rectangular panel in the center.

The pavilions which form the ends of the east elevation are similar to the center zone, except that instead of the engaged Ionic colonnade, each has a larger wall surface with a grouping of three windows at the center. The walls of the flanking pavilions are framed by simple pilasters crowned by acanthus capitals in the zone corresponding to the column capitals of the central bays. The end pavilions project forward in plan about two feet from the face of the center portion of the building; the flanking pavilions share the same fasciated entablature containing a simple architrave and cornice with egg-and-dart molding and dentils. The tympana of the pavilion pediments are unadorned. The original drawings show more detail on the east elevation than is found on the building as executed; it is possible the ornamentation was simplified because of construction or cost limitations.

The north, south and west elevations of the building continue the design of the pavilions of the east elevation. The west elevation is the identical to the east elevation, except that it has pilasters in the center zone where the east elevation has engaged columns. Instead of a single grouping of three windows found on the pavilions of the east and west elevations, the north and south elevations have five bays of paired windows. The north elevation has no doors; the south elevation has a large pair of flush metal doors to the basement which have been added recently. The west elevation originally had a door from the basement near the north end; that door now leads into “New” LeConte and an additional door has been added on the south part of the west elevation below the bridge to Birge Hall.

The roof, which is difficult to see from the ground level anywhere near the building, was easier to see when LeConte Hall was first built and is a typical example of John Galen Howard’s classical designs. There are gables at the north and south ends, corresponding to the pedimented pavilions of the east and west elevations. In between is a larger gable running north and south along the long axis of the building. At the perimeter of the roof are voids where small decks with French doors provide light and air to fourth floor rooms; these are not visible from the ground. A hipped skylight with a gabled clerestory at its center occupies the peak of the main portion of the roof. This skylight is framed in steel and is glazed in wire glass, with copper exterior facing and flashing. The skylight originally lit the entire attic, which was a single space with a large laylight into the two-story lecture hall (lost in a remodeling) and smaller glass block laylights into other fourth floor spaces. Although some of the smaller laylights still exist, they have been painted over and thus none of the original skylight functions remain.

The exterior elevations of LeConte Hall are carefully composed classical facades characteristic of late nineteenth- and early twentieth century design and planning in the United States as practiced by American students of the École des Beaux-Arts. LeConte Hall is an excellent example of John Galen Howard’s work and demonstrates his European training and adherence to the ideals of Beaux-Arts classicism as executed in the Unites States by such master architects as Willis Polk and McKim, Mead & White. The monumental scale and interpretive use of classical elements in the building are characteristic of Beaux-Arts architecture of the period. LeConte Hall is also of interest because it demonstrates Howard’s interest in using readily available and less expensive materials such as poured-in-place concrete to execute designs most often built out of fine materials such as stone masonry used in construction of Berkeley’s Doe Library and Hearst Memorial Mining Building.

The east elevation, which is the primary facade of the building and the approach to the main entrances, is the most ornate. Although the south elevation is simpler, it is more prominent in the campus as it has developed since the building was completed. Although some unsympathetic additions of mechanical equipment have occurred on these elevations, they are substantially unchanged and are thus VERY SIGNIFICANT. The west and north elevations have undergone more change: new equipment and services detract from the original design and new buildings have encroached on LeConte. (The construction of the LeConte Annex and Birge has covered parts of the original west elevation of LeConte). Despite these changes, these elevations still convey their original design and are rated SIGNIFICANT. The roof is also SIGNIFICANT because it illustrates the careful adaptation of Classical architectural language to contemporary programmatic requirements and building materials which characterizes John Galen Howard’s work on the Berkeley campus.
INTERIOR DESCRIPTION

SPATIAL SEQUENCE

The original design of the building provided for large spaces on the north, south and west-center sides of the building, with the remainder generally occupied by smaller spaces. The circulation scheme consisted of a stairway in the center of the building behind each of the main entrances on the east elevation and a double-loaded corridor running north-south between the stairways. The building did not have a hierarchically important lobby or public space; functionally, the large laboratories on the north and south ends of the second floor and the two-story lecture hall on the third and fourth floors in the center-west portion of the building were the largest spaces, but their architectural development does not indicate a strong hierarchy. (The side doors in the lecture hall had simple classical porticos framing them, and there was a small, largely ornamental balcony at the front of the room, but the rest of the space was apparently no more highly articulated than the rest of the building.) The general lack of hierarchy in the building probably corresponds to the needs of the Physics Department: classrooms, laboratories and offices comprise most of the program and are roughly related in importance. The connection to LeConte Annex and Birge has extended corridors west from each stairway and the demolition of the original lecture hall has allowed construction of a second north-south double-loaded corridor on the third and fourth floors, but the basic interior scheme is nearly the same as when the building was completed.

BASEMENT

The basement occupies only the south half of the building footprint; the north half was not excavated. Workshops and electrical and mechanical spaces occupy the basement floor. The workshop has 12-inch-square composition tile flooring, painted plaster (original) and gypsum board walls (remodeling projects), and plaster ceilings with exposed concrete beams and columns. It has a mixture of two-panel wood doors with brass hardware (original) and flush wood and metal doors (remodeling projects). More so than most of the building, this floor has a tremendous number of exposed conduits, pipes, ducts and raceways. It has chain-hung fluorescent light fixtures.

Although the workshop spaces were never formal in their spatial layout or highly finished, it was there that Lawrence and his associates fabricated the first cyclotron. This association is VERY SIGNIFICANT to the building. However, workshop spaces have been changed extensively over the years resulting in a loss of integrity. According to Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities by the Advisory Council of Historic Preservation,

The concept of integrity is critical to the application of [National Register] criteria. All qualified properties must meet one or more of the criteria and, additionally, must be judged to have “integrity.” “Integrity” does not denote absolute purity, but it does demand enough physical presence to retain a “preservable identity” that communicates relevant significance.15

While changes to the workshops over time do constitute a loss of integrity, enough original equipment and building materials remain to retain a “preservable identity.” (See Photographs 9-10). Therefore workshop spaces are rated SIGNIFICANT.

In the workshop area is a men's toilet room which appears to be nearly original (See Photograph 12). It has terrazzo flooring similar to that in the stairways, with a marble cove base; marble wainscoting and stall partitioning; plaster walls above the wainscot; and a wood panel door which appears original. The urinal and lavatory appear to be original; the water closet is a recent replacement. Lighting is an exposed incandescent lamp in a simple lamp holder with wire mold; it appears to be decades old, but probably not original. Because this is the only toilet room in the building which is in nearly-original condition, it is rated SIGNIFICANT. Flanking this room are two small original rooms which are rated CONTRIBUTING because of their relatively intact condition.
The basement also contains electrical and mechanical rooms. These have concrete floors and ceilings, and other than original doors they are devoid of detail or highly finished materials. They do contain much equipment which appears to be original; the mechanical equipment is still in use. Although these spaces were hierarchically the least important in the original building, their high level of integrity and their wealth of original equipment qualify them for the rating of CONTRIBUTING.

The final space in the basement is the stairway, which connects it to the first and second floors. This stair is the same as the one on the north side of the building which connects the first and second floors. It has terrazzo treads and landings, plaster walls and ceilings and chain-hung fluorescent lighting. The center handrail has iron balusters and a wood cap; the wall railings are wood on brass brackets. Because the stairs are essentially unchanged, have good quality finish materials and are on the primary circulation path of the building, they are rated VERY SIGNIFICANT.

FIRST FLOOR

The layout of this floor has not changed significantly since the construction of the building, although the interior of many of the rooms has. It consists of a double-loaded U-shaped corridor connecting the stairways and the exits to LeConte Annex and Birge. Most of the rooms are offices or laboratories, with the graduate students’ workshop occupying the large space in the center-west portion of the floor.

The typical original or period flooring is battleship linoleum, a floor covering common in low-profile spaces in public and institutional buildings between World Wars I and II. Battleship linoleum remains in only a few rooms; 12-inch-square vinyl composition has replaced this material in most spaces. Original walls are plaster; in spaces originally intended for laboratory use, the walls have horizontal metal channels inset in them to allow hanging of apparatus anywhere on the walls. Newer walls are plain flat gypsum board, usually with vinyl base. At original walls, the original flat plaster base (about six inches high and one inch thick) remains. At some rooms (including 101) originally intended as offices or classrooms, there is a wood picture rail. The original ceilings are plaster; in some rooms the structural beams of the second floor are visible. Acoustic tile has been glued to the original ceiling in some rooms, while others have suspended “T-bar” ceilings. The variety of doors is the same as described in the basement; original corridor doors apparently had obscure glass in the upper panel and, where there was no window in the room, a ventilating grille in the lower panel.

There are some original or period cabinets and sinks in the first floor, including Rooms 105, 107, 117, 119. The original radiators, located in shallow niches below the windows, remain in operation in most rooms. The rooms have a variety of exposed pipes, conduits and electrical raceways. Many rooms have special electrical panels, including DC switches and receptacles. Lighting is fluorescent, from chain-hung or pendent fixtures, or in recently-renovated rooms, from fixtures inset in “T-bar” ceilings. Room 111 has a noteworthy assemblage of DC switching boards which appear to be original, therefore qualifying it for a rating of SIGNIFICANT.

Because most of the spaces on the first floor were originally simple research, office and teaching spaces, and most of them have been altered appreciably, they are rated CONTRIBUTING. Rooms 134-136 are NON-CONTRIBUTING because of their greater degree of alteration. As on other floors, the stairways are VERY SIGNIFICANT and the corridor is SIGNIFICANT.

SECOND FLOOR

The second floor has seen the fewest changes in layout of all the floors in the building over the years. It is similar to the first floor, except that there are large laboratory classrooms on the north and south ends of the floor and, in the center, a two-room laboratory suite and a storage room with a mezzanine which originally functioned as an apparatus room.

At the south end, a single laboratory classroom occupies the width of the building. (It has been subdivided with a makeshift partial-height partition into Room 201E and 201W, but the original space is intact and easy to under-
The flooring is battleship linoleum, the walls are plaster with plaster base and inset horizontal channels for mounting laboratory equipment, and the original plaster ceiling has been covered with square acoustic tiles. The flush metal doors are not original. Like most rooms and all laboratories in the building, this space has exposed pipes and ducts. There are ventilation grilles in the ducts and radiators under the windows. The room has long fixed wood laboratory tables and chain-suspended fluorescent light fixtures. Rooms 206 and 207 at the north end are nearly identical to Room 201. They have porcelain enamel laboratory sinks mounted on open wood counters very similar to the laboratory tables. Room 207 has a DC electrical switching panel which appears to be original. Room 202 is a similar laboratory space. Rooms 204 and 205 are the same as the other laboratories, except that between them is a series of original wood windows (See Photographs 24, 25 and 27). There are seven windows, each divided into ten panes, with wood doors topped with glazed transoms at each end. There are two grilles at the transom level to provide ventilation between the spaces. The doors in the common wall are two-panel wood construction.

Room 203 has a steel mezzanine and many wood cabinets, all of which appears to be original. The elevator has a stop on the mezzanine level. There are two small rooms on the second floor connected to the main Room 203. Room 203 was apparently designed as a storeroom called an apparatus room. It retains its original function as a storage space, although it no longer services the large lecture hall 310 which has been converted for use as third and fourth floor office spaces. The flooring of Room 203 is vinyl composition tile at the second floor level and sheet steel with a raised diamond pattern on the mezzanine. The walls and ceiling are finished in plaster, and the simple rectangular wood baseboard is slightly smaller than the typical plaster base in other rooms. There are windows to the main corridor from Room 203B (See Photographs 20-23).

The remaining rooms on the second floor are a series of similar office or laboratory spaces on the east side of the main corridor. They typically have battleship linoleum flooring, and plaster walls, with a wood chair rail in some cases. Some rooms have original or period slate chalkboards. Most doors are original two-panel wood construction. There are exposed ducts and piping, as well as radiators in niches under the windows to provide heat. The lighting is by suspended fluorescent fixtures.

Because the spaces on the second floor are generally intact and include many original materials which convey the design and function of the building, the floor is SIGNIFICANT. The exception to this is Rooms 210, 211 and 212, which have been reconfigured and are rated CONTRIBUTING. Because Room 203 is unchanged and reflects the original design of large lecture hall 301 which was lost to renovation, is rated VERY SIGNIFICANT.

THIRD FLOOR

The third floor has been renovated extensively since completion; although many spaces are not original, this level is important because of its associations with historic persons and events. In addition to the main corridor between the stairways which exists on all floors, the third floor has a parallel double-loaded corridor further west, creating a rectangular circulation path serving many office and laboratory spaces. Odd-numbered Rooms 309-325 on the west side of the building are nearly identical, with carpeted floors, gypsum board walls, generally with vinyl base, and “T-bar” ceilings. Most doors are of two-panel wood construction. Most doors are original two-panel wood construction. Modern radiators on the exterior wall provide heat. There are suspended fluorescent light fixtures. Most rooms do not have exposed ductwork or piping. Rooms 314, 316, 318, 334, 336, 338, 340 and 342 are similar, except that they have square vinyl-composition tile flooring; some rooms have surface-mounted metal channels on the walls for securing laboratory apparatus, and all except 334 have DC electrical panels. These rooms have a wide variety of exposed ductwork, piping, and conduit; almost all have a built-in cabinet and sink and an exposed sealed rectangular electrical raceway below the finish ceiling. Because these rooms are not original and do not have a high degree of elements which are compatible with the original portions of the building, they are all NON-CONTRIBUTING.

The remainder of the third floor has laboratories, offices and lecture rooms. Room 308 is a lecture hall with a stepped floor. It has vinyl-composition tile flooring, plaster walls with a wood baseboard and picture rail, and acoustic tile applied to the plaster ceiling surface. The doors are non-original flush wood construction in metal frames with wood trim. There is a modern chalkboard. The room has typical original radiators and chain-hung fluorescent light fixtures. Because it is relatively intact, this room is SIGNIFICANT. Room 351 was originally
similar, but its floor has been leveled and the original trim has been removed from some walls. Now part of the Physics Library, it has built-in bookshelves on most of its walls. Otherwise similar to 308, it is rated CONTRIBUTING. Now a lecture hall which appears similar to 308, Room 329 was originally a laboratory. It has a stepped floor with vinyl-composition tiles, plaster walls with a grass wallpaper wainscot, and acoustic tile applied to the plaster ceiling. The baseboard is wood and there is a wood molding between the wallpaper and the plaster wall. The doors are non-original flush wood construction. The suspended fluorescent light fixtures, though not original, are unique in the building because of the thunderbird design on their end panels. The original radiators were moved and remounted on the non-original stepped floor. Although the floor construction and many finish materials are not original, the room retains its wall configuration from the period when Dr. Lawrence assembled the first cyclotron in it, making it SIGNIFICANT.

Most of the other rooms on the third floor are offices on the south end (301-307) or teaching/laboratory spaces on the east side (odd-numbered Rooms 331-349). The offices have carpeted floors, plaster (original) and gypsum board (newer partitions) walls and plaster or “T-bar” ceilings. Most original walls have plaster base, a wood chair rail and a wood picture rail. The doors are original two-panel wood construction. There are original radiators in niches under the windows and suspended fluorescent light fixtures. The laboratory and teaching spaces are similar, except that some have battleship linoleum or vinyl-composition tile flooring and plaster ceilings (some with acoustic tile finish). Some rooms have considerable exposed ductwork, piping and conduit, including a vent hood at Room 333. The laboratory, teaching and office spaces which are little changed from original construction, including 302, 303, 305, 306, 331, 335 and 339, are SIGNIFICANT while those which have been altered appreciably, including 301, 304, 307, 333 and 347, are CONTRIBUTING.

The men’s and women’s toilet rooms on the third floor have six-inch-square ceramic tile flooring, plaster walls with four-inch-square ceramic tile wainscoting, and plaster ceilings. None of the tile is original. The entry doors are non-original flush wood; the closet door in the men’s room is original wood panel construction. The plumbing fixtures are all modern, as are the painted metal toilet partitions and pendent fluorescent light fixtures. The lack of original materials and hierarchical importance give these spaces a rating of NON-CONTRIBUTING.

FOURTH FLOOR

The fourth floor is similar in layout to the third floor, except that most of the perimeter of the floor is occupied by small rooms used as offices or laboratories. Rooms 408, 409, 411, 412, 413, 414, 415, 434, 436, 438, 440 and 442 are similar to the corresponding offices and laboratories immediately below them on the third floor. The offices on the west side in this group have skylights because there is no vertical exterior wall surface on this floor, only a sloping roof. Like the ones below them, these spaces were added when the original two-story lecture hall was demolished, and have no significant materials; they are NON-CONTRIBUTING.

Most of the rooms on the perimeter of this floor have a pair of wood French doors leading out onto a small deck created by a void in the roof plane. This affords light and air to the spaces and provides each with a private garden; it also makes the building appear from the exterior to be one story lower than it is. The typical flooring in these spaces is battleship linoleum, although some spaces have carpet. Walls are plaster with plaster base, most with inset metal channels to secure laboratory apparatus. Ceilings are plaster, some with acoustic tile finish. Doors are typically two-panel wood construction. Some rooms have one or more of the following original or period items: wood cabinets, built-in wood drawers with hinged faces, closet shelving and chalkboards. Original radiators typically heat the rooms, while suspended fluorescent fixtures provide lighting. Variations include Room 405, an original space which is equivalent to three of the typical perimeter rooms, and Room 407, which was originally the glass blowing shop and still functions partially as such. It is an odd shaped room occupying space left over between the circulation spaces and the other perimeter rooms, with two roof decks, a skylight in the roof plane, and a horizontal glass block laylight below one of the skylights near the ridge line of the roof. The perimeter rooms on this floor have a high degree of original finishes and elements and are good examples of the details which distinguish John Galen Howard’s work from the simpler campus architecture of later years. They are SIGNIFICANT, except for Rooms 426 and 431, which are VERY SIGNIFICANT because of their associations with Oppenheimer and McMillan, respectively, and Room 407, which is CONTRIBUTING because it has been reconfigured.
The men's and women's toilet rooms on the fourth floor are identical in materials to those on the third floor. They are NON-CONTRIBUTING, while their vestibules, which retain the original materials of the perimeter rooms, are SIGNIFICANT. Room 418, a darkroom, retains almost all its original features. In addition to the typical finishes of perimeter rooms, it has a labyrinthine metal-partitioned light lock entry and casework and plumbing. It is VERY SIGNIFICANT.
CONDITIONS

ELEMENTS AND MATERIALS

Vinyl Composition Tile Flooring
Most of the floors are finished in 12-inch square tile glued to the concrete slab. There is a wide variety of colors and ages of tile; all is NON-CONTRIBUTING. The condition of this material varies greatly throughout the building, from VERY GOOD to FAIR.

Ceramic Tile
Toilet rooms which have been renovated relatively recently have ceramic tile flooring. It is NON-CONTRIBUTING. It is in GOOD condition.

Carpet
This material has been added in some rooms, mostly offices. It is NON-CONTRIBUTING. The condition of this material varies, from POOR to GOOD.

Concrete
Plain concrete floors, or concrete scored in squares of about three feet, is found in service spaces such as mechanical rooms and janitors’ closets. It is CONTRIBUTING. It is generally in GOOD or FAIR condition.

Battleship Linoleum
This material is found in many rooms which have not been remodeled in recent years. It is uniform dark mustard yellow color, and was extremely common in low-profile spaces in public and institutional buildings between World Wars I and II. Although much of the existing battleship linoleum in LeConte is probably not original, it dates from the period of significance of the building. It is SIGNIFICANT. The condition of this material varies greatly throughout the building, from POOR to GOOD.

Terrazzo
This material occurs in the stairs and the men’s toilet room in the basement. It is SIGNIFICANT.

Steel Mezzanine
The steel mezzanine in Room 203 is unique in the building. Its straightforward construction is characteristic of the practical design of laboratory-related portions of the building, while its materials and detailing are good examples of the period when the building was constructed. It is VERY SIGNIFICANT and in GOOD condition.

Plaster Walls and Ceilings
Painted flat plaster is the original finish material for walls and ceilings. It remains in many rooms. Most walls are plaster on metal lath; plaster is applied on metal lath and directly on structural concrete on ceilings. This material is generally in GOOD condition, although there are many rooms where repainting is needed, sometimes with limited plaster repair. Original plaster is rated SIGNIFICANT as are the metal channels set in the plaster in original laboratory spaces to allow mounting of apparatus.

Gypsum Board Walls
Most walls added during remodelings in the last several decades are constructed of gypsum board on metal framing. They are compatible with the original materials, but add nothing to the historical integrity of the building. They are NON-CONTRIBUTING. This material is generally in GOOD condition.

Moldings and Trim
The typical original base is a simple rectangular one measuring six inches by about one inch. The original drawings show it in all rooms. They identify it as “cement,” but it appears to be a softer material than concrete, perhaps plaster. It is SIGNIFICANT. The base is generally nicked, but is otherwise in GOOD condition. The wood chair rail and picture rail found in some rooms appear to be original and in GOOD condition. They are SIGNIFICANT. The vinyl base found in more recently remodeled rooms is NON-CONTRIBUTING and in GOOD condition.

Acoustic Ceiling Tiles
Glued-on tiles, 12 inches square, with holes which absorb noise, have been applied to plaster ceilings, and in some cases, walls. This material is incompatible with the original design of the building. It is NON-CONTRIB-
CONDITIONS

UTING. Its condition varies greatly throughout the building from GOOD to POOR.

Suspended “T-bar” Ceilings

Two-by-four foot acoustic tiles dropped into a metal grid suspended below the original ceiling are part of many remodel projects in the building (See Photographs 37, 42 and 43). This system is cheap and easy to install and can hide pipes, ducts, conduit and equipment. It is visually incompatible with the building, obstructs the top of windows in some rooms, fails to provide full concealment of pipes and ducts in many rooms and is typically subject to relatively rapid deterioration. It is NON-CONTRIBUTING. The condition of these ceilings varies greatly throughout the building but is generally in GOOD condition.

Wood Panel Doors

The building has original two-panel wood doors (See Photographs 20, 60 and 69) and similar doors added during remodeling projects, especially the project which demolished the third-fourth floor lecture hall and replaced it with offices and laboratories. The original doors generally have obscure glass in the upper panel and sometimes have a grille in the lower panel; otherwise both panels are wood. The original doors are SIGNIFICANT, while the newer ones are CONTRIBUTING NON-HISTORIC. The condition of the doors varies greatly throughout the building with some doors in VERY GOOD condition, and others in POOR condition due to the addition of plywood or other materials for security.

Door hardware varies greatly. Original hardware on corridor doors is a knob and Yale-type lock on a plate roughly either two by eight inches (vertical) or three-and-a-half by five inches (horizontal), all with oil-rubbed bronze finish. Newer hardware includes knob and lever entry sets with key or combination locks, some with lacquered brass finish and some with chrome finish. The original hardware is SIGNIFICANT, while the newer hardware is NON-CONTRIBUTING. Most hardware appears to be in FAIR or GOOD condition.

Flush Doors

Wood and metal flush doors, most in metal frames (some of which have wood trim) have been added in recent remodel projects. Most appear to have been added to comply with modern building code regulations on openings in corridors. These doors are not compatible with the design of the building. They are NON-CONTRIBUTING. Most appear to be in GOOD condition.

Windows

Windows are double-hung, with four panes in each sash. The transoms over the doors on the east elevation and the windows between Room 204 and 205 are clear-finished fixed sash. The original drawings show the typical exterior sash as wood, while some office windows in the third floor remodeled area are metal. The glazing is clear except at some toilet rooms. The windows make a crucial contribution to the interior and exterior character of the building. They are VERY SIGNIFICANT. Windows have been modified unsympathetically in some rooms with addition of fans, louvers or air-conditioners, but most appear to be in GOOD condition.

Most rooms on the perimeter of the fourth floor have French doors leading to small decks at voids in the roof. These paired wood doors appear to have originally had brass hardware with cremona bolts. They are VERY SIGNIFICANT because they play a large role in defining the character of rooms which contribute to the architectural significance of the building. Most appear to be in FAIR condition.

Skylights

The building has two types of exterior skylights and retains one type of interior laylight. The main skylight is hipped, with a gabled clerestory at its ridge. The other skylights are installed in the plane of the roof. The main skylight has steel truss framing, copper-faced muntins, Mullions and edge flashing, and wire-glass glazing. The laylight originally below the main skylight has been demolished. What appear to be glass block laylights exist elsewhere on the fourth floor (See Photograph 64); they have been inappropriately painted or obscured by installation of new ceilings. (The original drawings refer to them as “vault lights;” they are apparently the same product used to provide natural light to basement vaults under sidewalks.) The skylights are VERY SIGNIFICANT because of their contribution to the architectural character of the original design. They are in GOOD condition.


**Stairways**

The stairways appear to be original. The stairs have terrazzo treads and iron center balusters with wood railing caps. The outer wood railings are supported by brass brackets. The walls and ceilings are painted flat plaster. The stairways are VERY SIGNIFICANT. They are in VERY GOOD condition.

**Elevator**

The building’s elevator appears to be original, with later modifications. It is a traction model. The hoistway doors are metal with small wire glass windows; the cab has a folding mesh gate. There are push button controls. It is SIGNIFICANT. The elevator is in GOOD condition, but does not comply with current accessibility requirements. It is not used by the public.

**Plumbing Fixtures**

Except for the fixtures in the men’s toilet room in the basement, only the janitor’s sinks, the porcelain enamel steel laboratory sinks mounted on open wood counters, and individual lab sinks in offices 401 and 305 appear to date from the period of significance of the building. The laboratory sinks are SIGNIFICANT, while the janitor’s sinks are CONTRIBUTING. The fixtures in the men’s room in the basement are also SIGNIFICANT. The rest of the plumbing fixtures are a variety of more recent models from various alteration projects. They are NON-CONTRIBUTING. The condition of the plumbing fixtures varies widely.

**Radiators and Heating**

The typical heating equipment is radiators mounted under the windows. Large centrifugal fans and steam coils in the basement supply warm air to larger rooms through a series of ducts, most of which rise through a chase near the center of the building. The radiators are SIGNIFICANT, the grilles and fans for the forced air system are CONTRIBUTING, and the rest of the system is NON-CONTRIBUTING. The heating system appears to be in good condition; no survey of its operation was performed. According to the Physical and Environmental Survey of Campus Buildings written in 1974 by Kaiser Engineers, “only a few areas in the building are using the original heating and ventilation systems with relatively poor results.”

**Laboratory Equipment**

This survey does not include equipment which is not permanently attached to the building and original or from the period of significance. The laboratories have a great deal of equipment and apparatus, some of which is “permanently” installed, but in the history of the building, change has apparently been the constant in the laboratories. The original DC electrical equipment, particularly that in the basement, Room 111 and Room 207, is SIGNIFICANT. (Room 111 is shown with cross hatching on the significance rating plan at the end of this document to indicate the presence of this equipment.) The darkroom in Room 418 appears to be identical to the configuration shown on the original plans. It is VERY SIGNIFICANT. The wood laboratory tables in the large second floor laboratories date from the period of significance of the building, and may be original, as are various counters in other rooms. As a group, these elements are SIGNIFICANT and in GOOD condition.

**Lighting**

Only four incandescent fixtures were observed during the building survey. Two are in the stairwells (See Photographs 55 and 70), one is in a fourth floor closet, and one is in the darkroom in Room 418. They are all original or from the period of significance. They are VERY SIGNIFICANT. The fluorescent fixtures in Room 329 exhibit a high design value for such devices and may date from the period of significance. They are in GOOD condition and are rated CONTRIBUTING. The rest of the fixtures are fluorescent and are NON-CONTRIBUTING.
CHANGES SINCE COMPLETION

The most significant interior changes are shown on annotated plan diagrams at the end of this report. The descriptions of the individual changes are below:

BRIDGES TO BIRGE AND LECONTE ANNEX
A visually “light” bridge connects LeConte to Birge near the south end of the west elevation. LeConte Annex meets the original building on the west side, adjoining about one-third of the original west elevation of LeConte.

LABORATORY SERVICES AND BUILDING SYSTEMS
A series of vent stacks and other equipment and systems for laboratories has been added on the west elevation. A variety of fans and room air-conditioners has been installed at windows on all elevations.

BASEMENT
The workshops in the basement have been re-partitioned extensively since the building was completed. The original layout included three large workrooms, surrounded by a series of smaller rooms. Most of the original spaces have been combined by demolishing original partitions, creating a single workshop which takes up most of this floor. One new room has been created by the construction of a partition within an original room.

FIRST FLOOR
The south corridor has been extended to a new door on the west elevation into the bridge to Birge Hall. The north corridor now leads into LeConte Annex instead of the exterior of the building. Rooms 109 and 109A have been partitioned out of what was originally all part of Room 118. Minor partition changes have affected Rooms 115, 117, 124, 125 and 128. The major changes on this floor have been to finishes and equipment in the rooms. These issues are discussed above. Rooms 134-6 have been recently remodeled as laboratory space, with extensive new finishes, laboratory items and “T-bar” ceilings.

SECOND FLOOR
A partial-height partition has been erected in Room 201. A blackboard installed in Room 204 obscures most of the windows between it and Room 205. A stair from the mezzanine of Room 203 originally led to the third floor; it was apparently removed and the floor opening closed when the lecture room on the third and fourth floors was demolished. Room 203B and the windows from it to the main corridor are not shown on the original drawings. It was apparently built to allow the storeroom staff to dispense supplies through the corridor windows, limiting traffic into the storeroom itself. Rooms 211 and 212 were created after completion of the building by partitioning Room 210.

THIRD FLOOR
The greatest change since the completion of the building has been the demolition of the two-story lecture hall which originally occupied the center-west portion of the third and fourth floors (see Historic Illustration 6) in 1963-1964. This space stepped up from the lectern on the west side at the third floor to seating which culminated on the east side at the fourth floor. There were entrances on the third floor from a space on the west side of the building which functioned as a storeroom, from half-flights of stairs which connected the center of the seating tiers to doors on the main third floor corridor, and from the main fourth floor corridor, which opened onto the top seating tier. A laylight centered under the main hipped exterior skylight occupied about a third of the ceiling, with suspended incandescent fixtures providing additional light. Room 351 lost its stepped floor when it was converted from lecture hall use to library use, and because it is now entered from LeConte Annex, it no longer functions as part of the original building. Changes in partitions and ceiling materials, plus other finish work, have altered the configuration or appearance of Rooms 301, 304, 307, 333 and 347.

FOURTH FLOOR
The primary change to this floor has been the demolition of the two-story lecture hall, described above, in 1964. The next greatest change has been the obscuring of the skylights in spaces such as Room 407. The French doors onto the roof decks have been modified in a number of rooms, usually to add exhaust fans or air-conditioners.
**Electrical**

In the south stairway at the second floor level is a simple incandescent wall sconce with a round white glass shade. It is similar to the fixture in the fourth floor closet, which does not have a shade. These fixtures are original or at least date from the period of significance of the building.
RECOMMENDATIONS

EXTERIOR

The exterior elevations of LeConte Hall, specifically the east, north and south elevations, are relatively intact and in good condition. The west elevation has been compromised by the additions of the bridge to Birge and LeConte Annex. As the exterior is in good condition and reflects Howard’s design program, it should be preserved. The roof was replaced in 1987.

INTERIOR

LECTURE HALL ON THIRD AND FOURTH FLOORS

If a master plan shows a need for an additional large lecture hall in a Physics Department building, strong consideration should be given to restoration of this space. The design might reflect the original plan for the lecture hall, with modifications for life safety, accessibility, and acoustic considerations. The plan should recall the original space, replicating the auditorium seating, light fixtures, major demonstration area and interior wood finishes.

INTACT ORIGINAL LABS

The best preserved original laboratories, especially Rooms 201, 202, 204, 205, 206 and 207 should be preserved if possible. If programming does not permit for the preservation of all spaces, it is strongly recommended that historic features in Rooms 204 and 205 be consolidated into another space, either in a large lab such as Room 201, or by combining Rooms 204 and 205 into one space.

STAIRWAYS-CIRCULATION DIAGRAM

The stairways and the basic circulation skeleton of LeConte Hall should not be changed. More detailed discussion of circulation is contained in Appendix C.

OFFICES ON FOURTH FLOOR

The fourth floor offices are significant spaces which demonstrate the enduring substance of John Galen Howard’s architecture. They are reportedly popular as office space, and would probably be quite sought-after if sympathetically restored. Such a project should be planned now, as even excellent historic spaces can go unnoticed and deteriorate to the point where they are demolished because their original quality is no longer evident. Important elements include plasterwork, wall details such as inset channels and picture rails; doors and wood cabinetry; roof decks; battleship linoleum; individual lab sinks and wash rooms; and any furniture of the period including the large cabinets in Rooms 421 and 426. Given the high level of integrity including light fixtures and equipment, consideration should be given to the restoration of the fourth floor dark room in Room 418.

SKYLIGHTS

The original skylights greatly enhanced the quality of the spaces they illuminated. New materials allow far greater control over light and heat from skylights than was possible when the building was completed. The campus is vigilant in trying to reduce lighting costs; restoration of the skylighting would allow it to get free, high-quality light from the sun.

DOORS AND HARDWARE

Original doors should be retained wherever possible. The possibility of installing fire sprinklers, alarm systems and other devices throughout the building to allow retention of original corridor doors should be explored. The ventilation openings in the lower panel of existing doors may be closed on the room side without removal of the grilles on the corridor side. Where replacement doors must be fire-rated, applied moldings which are compatible with the original doors should be considered. The original door hardware should be retained. Where accessibility requires levers instead of the original knobs, the original hardware should be retrofitted, with a lever extension added to the knob. A single hardware design should be chosen where new hardware is to be installed; it should be compatible with the original hardware.
TRANSOMS

Original transoms should be treated the same way as original doors.

PLASTER

Where original plaster must be cut, it should be patched in kind after new work has been incorporated. In SIGNIFICANT and VERY SIGNIFICANT spaces, new wall and ceiling finishes should be added in plaster which matches the original. In CONTRIBUTING and NON-CONTRIBUTING spaces, gypsum board can be used to match plaster.

WINDOWS

The existing original windows should be maintained. A master plan for the building which reduces or eliminates the louveres, fans and air-conditioners in the windows should be prepared.

LIGHTING

The few original or period incandescent lighting fixtures which remain in the building should be retained. If it is possible to document the original lighting and replace it in the most historically important spaces in the building, that would add to the historical integrity of the structure. The type of utilitarian fluorescent fixtures found throughout the building is generally acceptable.

LABORATORY APPARATUS AND EQUIPMENT

If possible, a study of old apparatus in the building might make it possible to retain and preserve, or donate to scientific history institutions, important apparatus which is unused and apparently forgotten at this point. Fixed laboratory equipment, such as tables and counters, should not be removed without consideration of its contribution to the integrity of the building and the spaces in which it is located.

FIRE SPRINKLERS

As discussed in the Fire and Life Safety report by Rolf Jensen Associates (included as Appendix C), a building-wide fire sprinkler system is desirable. It would add an important level of protection for the users and the contents of the building, it would address some current code issues, and it would make retention of important historic elements easier to permit under current building codes. It should be noted that while fire sprinklers can be expensive to add to many historic buildings because they must be carefully concealed, in LeConte Hall the sprinkler system could be entirely exposed in almost all spaces.

STRUCTURAL

Given that seismic upgrade to LeConte will certainly include the construction of shear walls and collectors, every effort should be made to minimize impacts on historic ceiling finishes, light fixtures and architectural features. This becomes less important in utilitarian spaces such as laboratories with exposed pipes and duct work and workshops. However, in more finished public spaces such as corridors, lecture rooms and classrooms which display a high level of finish and integrity, the impacts of shear walls and collectors should be considered.

LIFE SAFETY AND ACCESSIBILITY

Included as Appendix C is a life and fire safety survey of LeConte Hall performed in April, 1998 which deals specifically with compliance issues with the Current California Code of Regulations, Titles 19 and 24, and other fire and life safety standards.
Historic Photograph 1.
Aerial photograph, central campus, looking east, 1931. The shadow of the Campanile is striking the west elevation of LeConte Hall. Note that before Campbell, new LeConte and Birge Halls were built, the north and west elevations of LeConte were as important hierarchically as the south elevation is today. Photograph courtesy of Physical and Environmental Planning, University of California, Berkeley.
**Historic Illustration 2.**

Sketch of the east elevation of LeConte Hall by John Galen Howard. Note the single central entry instead of the two entries of the design as it was executed. Undated. *Drawing courtesy of Bancroft Library/University Archives, University of California, Berkeley.*
**Historic Photograph 3.**
Photograph of south end of east elevation, 1924. Note the lack of foundation plantings. Photograph courtesy of Bancroft Library/University Archives, University of California, Berkeley.
Historic Photograph 4.
Photograph of the east elevation, ca. late 1920s. Note the foundation plantings. Photograph courtesy of Bancroft Library/University Archives, University of California, Berkeley.
Historic Photograph 5.
Photograph of west elevation, c. 1940s. Note entry at first floor in the same bay as north entry on east elevation. This became an interior entry to New LeConte when that building was constructed. Photograph courtesy Bancroft Library/University Archives, University of California, Berkeley.
Historic Photograph 6.
Photograph of original lecture hall on third and fourth floors, c. 1940s. View is from upper seating tiers on fourth floor, looking west towards blackboards and lecture bench on west side of lecture hall on third floor. Photograph courtesy Bancroft Library/University Archives, University of California, Berkeley.
The following plans show historic significance ratings in this report for the spaces in the building. The following is the key to the ratings.

- **VERY SIGNIFICANT**

- **SIGNIFICANT**

- **CONTRIBUTING**

- **NON-CONTRIBUTING**
PHOTOGRAPHS

EXTERIOR

PHOTOGRAPH 1.
East elevation, showing Ionic order at center. Note fan installed in window on second floor.
Photograph 2.
East elevation looking west. View of pavilion at north end of elevation.
PHOTOGRAPH 3.
East elevation, showing pediment over north pavilion.

PHOTOGRAPH 4.
East elevation, detail of Ionic capitals. Note fan installed in window on third floor.
PHOTOGRAPH 5.
East elevation, detail of molding surrounding south door.
PHOTOGRAPH 6.
East elevation, detail of pilasters on south pavilion, Ionic entablature and anthemia spandrel panel.

PHOTOGRAPH 7.
East elevation, detail of Ionic capitals and entablature.
Photograph 8.
East elevation, north entrance.
PHOTOGRAPH 9.
Room B-1, basement machine shop featuring exposed pipes and ductwork.
PHOTOGRAPH 11.
Room B-2A, hazardous materials storage area. Note addition of fume hoods above chemical storage.
PHOTOGRAPH 13.
Room 111 featuring large DC electrical panel.
PHOTOGRAPH 14.
Second floor North/South corridor C-201 with “Apparatus Room” 203 on the left. The two service window openings have been sealed. The north window has been converted for use as a display case.
PHOTOGRAPH 15.
Laboratory room 201e in use by students.

PHOTOGRAPH 16.
Partial height partition dividing Room 201e and 201w. Photograph taken from Room 201e.
PHOTOGRAPH 17.
Partial height partition dividing Room 201e and 201w. Photograph taken from Room 201e.

PHOTOGRAPH 18.
Partial height partition dividing Room 201e and 201w. Photograph taken from Room 201w.
Photograph 19.
Room 201w featuring detail of original lab benches.
PHOTOGRAPH 20.
Entrance to “Apparatus Room” 203. The service window is no longer in use. Note original door and hardware.
**Photograph 21.**
Room 203, view of storage space and mezzanine level.
PHOTOGRAPH 22.
Room 203, view from mezzanine. Note diamond-pattern steel floor material.

PHOTOGRAPH 23.
Detail of mezzanine stairs and steel floor, Room 203.
PHOTOGRAPH 24.
Room 204. Originally used as a laboratory, the original lab benches were removed. Windows to Room 205 have been covered by chalkboards.
Photograph 25.
Room 204. Originally used as a laboratory, the original lab benches were removed. Note damage to the battleship linoleum floor resulting from this alteration. Windows to Room 205 have been covered by chalkboards.
PHOTOGRAPH 26.
Room 205.

PHOTOGRAPH 27.
Room 205, windows to Room 204 are visible.
Photograph 28.
Room 206.

Photograph 29.
Room 206, detail of porcelain sink and lab benches.
PHOTOGRAPH 30.
Room 206. View shows original chalkboards next to more recently added surface mounted chalkboards encased in aluminum.

PHOTOGRAPH 31.
Room 207. This laboratory features inset plaster channels with wooden brackets for mounting laboratory equipment. These fixtures are original.
PHOTOGRAPH 32.
Room 207, view of DC panel.

PHOTOGRAPH 33.
Room 207, detail of porcelain sink, lab benches and original chalkboard.
PHOTOGRAPH 34.
Room 207, detail of porcelain sink.
PHOTOGRAPH 35.
Room 213. View shows typical interior finish of second floor classrooms. Note original wood floor board, chair rail and picture rail. Photographs shows original radiators set within shallow niches beneath windows. The surface mounted acoustical tile and fluorescent light fixtures are not original.
PHOTOGRAPH 36.
Room 214. View shows typical interior finish of second floor offices. Note original wood floor board, chair rail and picture rail as well as battleship linoleum floor, and wood panel door with privacy glass and original brass hardware. The surface mounted acoustical tile is not original.
PHOTOGRAPH 37.
East/West corridor C-303 leading to New Le Conte.
Photograph 38.
Room 309. This third floor office reflects the 1963-1964 renovation project which converted room 310 for use as third and fourth floor office space. Note new radiator and gypsum board walls.
PHOTOGRAPH 39.
Room 326. This is the laboratory where Ernest Lawrence tested the first five- and eleven-inch cyclotrons. A subsequent renovation resulted in the loss of the majority of original historic fabric.

PHOTOGRAPH 40.
Room 326. This is the laboratory where Ernest Lawrence tested the first five- and eleven-inch cyclotrons. A subsequent renovation resulted in the loss of the majority of original historic fabric. The stepped floor is not original.
Photograph 41.
Room 326. This is the laboratory where Ernest Lawrence tested the first five- and eleven-inch cyclotrons. A subsequent renovation resulted in the loss of the majority of original historic fabric. The stepped floor is not original.
Photograph 42.
Room 343. Note the later addition of suspended “t-bar” ceiling.
PHOTOGRAPH 43.
Fourth floor corridor created as a result of the 1963-1964 renovation of Room 310. Note the gypsum board walls to the left and suspended “t-bar” ceiling.
Photograph 44.
Elevator door, fourth floor. Due to accessibility requirement, the elevator is no longer in use.
**PHOTOGRAPH 45.**
Room 401, formerly part of the Department of Optometry.
PHOTOGRAPH 46.
Room 401a, small lab space adjoining Room 401. The lab sink and fixtures are original.
PHOTOGRAPH 47.
Room 402, formerly part of the department of Optometry. Non-original chalkboard mounted over original doorway.

PHOTOGRAPH 48.
Room 402, formerly part of the Department of Optometry. Detail of French doors leading to roof deck. Blinds are mounted beneath original wood valences.
PHOTOGRAPH 49.
Room 402, formerly part of the Department of Optometry. Upper wood panel of door has been replaced although hardware is original.

PHOTOGRAPH 50.
Room 405a. This fourth floor laboratory space retains a majority of original elements including battleship linoleum, window valances, French doors with original hardware and wood cabinetry. Indentations and markings on the linoleum indicate where original furnishings may have been located.
PHOTOGRAPH 51.
Room 405b. Storage space for 405a has original cabinetry.
Photograph 52.
Room 418, darkroom.
PHOTOGRAPH 53.
Room 418, darkroom.
PHOTOGRAPH 54.
Room 418, darkroom.
PHOTOGRAPH 55.
Room 418, darkroom, light fixture.
Photograph 56.
Room 421.

Photograph 57.
Room 421. Note the addition of a surface mounted dry-erase board over the doorway.
Photograph 58.
Room 423, women’s toilet.
PHOTOGRAPH 59.
Room 423, roof deck detail.
PHOTOGRAPH 60.
Room 426, Oppenheimer’s office.
PHOTOGRAPH 61.
Room 426, Oppenheimer’s office with cabinet.

PHOTOGRAPH 62.
Room 426, Oppenheimer’s office.
Photograph 63.
Room 426, Oppenheimer’s wash room.
Photograph 64.
Glass block laylight, or horizontal interior skylight.
PHOTOGRAPH 65.
Door to skylight.
Photograph 66.
Skylight detail.
PHOTOGRAPH 67.
Skylight detail.

PHOTOGRAPH 68.
Main skylight on roof.
PHOTOGRAPH 69.
Typical original interior door.
PHOTOGRAPH 70.
Incandescent light fixture, probably original, in stair hall.
ENDNOTES

1 Partridge, p. 11.

2 Partridge, p. 12.

3 Partridge, p. 3-5.

4 Partridge, p. 4.


6 Birge Vol. 4, p. 5.


9 Simpson, 251.

10 Birge Vol. 8, p. 2-3, Simpson, 251.

† LeConte Annex is often referred to as “New” LeConte. For the purposes of this report, LeConte Annex will be the working term.

11 Birge Vol. 9, p. 36.


13 National Register Listing Nos. 82004638-82004654.

14 Partridge, 3-5.


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APPENDIX A. BUILDING SUMMARY AND EVALUATION

The following chart summarizes major features, areas of significance and conditions of LeConte Hall.
APPENDIX B. THE SECRETARY OF THE INTERIOR’S Standards for Rehabilitation

The Secretary of the Interior is responsible for establishing standards for all programs under Departmental authority and for advising Federal agencies on the preservation of historic properties listed or eligible for listing in the National Register of Historic Places. In partial fulfillment of this responsibility, the Secretary’s Standards have been developed to direct work undertaken on historic buildings.

The Standards that follow were originally published in 1977 and revised in 1990 as part of Department of the Interior Regulations (36 CFR Part 67, Historic Preservation Certifications). They pertain to historic buildings of all materials, construction types, sizes, and occupancy and encompass the exterior and the interior of historic buildings. The Standards also encompass related landscape features and the building’s site and environment as well as attached adjacent or related new construction.

The Standards are to be applied to specific rehabilitation projects in a reasonable manner, taking into consideration economic and technical feasibility. The application of these Standards to rehabilitation projects is to be the same as under the previous version so that a project previously acceptable would continue to be acceptable under these Standards.

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.

4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.

5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.

6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

8. Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.