The Architecture, Art, and Geology of the Natural Resources Building

Architect’s color drawing for the proposed Natural Resources Building – February 27, 1939
1939 architectural drawing of the Natural Resources Building.

Future site of Natural Resources Building as it appeared in 1938. Stock Pavilion is at the left, constructed in 1914.
NRB as it appeared during final construction in 1940 (rear perspective from Pennsylvania Ave).

The Natural Resources Building as it appeared in 1942 (front view of building from Peabody Ave).
Architectural Drawings for the two Wing Additions to the Natural Resources Building

1940’s proposed plan.

1943 – This plan proposed completely detached additions with and full height chimneys and intervening courtyards.

1945 – Final approved plan showing attached additions and new entrances for the ISGS and INHS. Note the small Inset in the lower right of the drawing shows a planned, but never constructed rear central addition.
“Front Elevation – Natural Resources Building (Suggested Revision)”, color architectural drawing dated February 27, 1939. Original 17” x 29” drawing is archived at Facilities Information Resources, University of Illinois Facilities and Services building.
“End Elevation – Natural Resources Building”, color architectural drawing dated February 27, 1939. Original 17” x 16” drawing is archived at Facilities Information Resources, University of Illinois Facilities and Services building.
“Rear Elevation – Natural Resources Building (Suggested Revision)”, color architectural drawing dated February 27, 1939. Original 17” x 31” drawing is archived at Facilities Information Resources, University of Illinois Facilities and Services building.
1946 – Dr. Morris Leighton, ISGS Director, breaking ground for the new additions.

1947 – The two wing additions to the Natural Resources Building as they appeared during final construction.
1950 – Completed construction of the Natural Resources Building.

The Natural Resources Building as it appears today.
The Art of the Natural Resources Building

One of two dedication panels in the main foyer entrance to the Natural Resources Building.
NATURAL RESOURCES BUILDING
ERECTED 1939


THIS BUILDING WAS CONSTRUCTED TO PROVIDE INCREASED FACILITIES FOR THE EMPLOYMENT OF MODERN SCIENCE IN FURTHERING THESE OBJECTIVES.

ERECTED IN CO-OPERATION WITH THE UNIVERSITY OF ILLINOIS

Second dedication panel in the main foyer entrance to the Natural Resources Building.
Decorative Metal Plaques in the Main Foyer of the Natural Resources Building

ISGS plaque denoting the ancient world of the Pangaea protocontinent and Panthalassa ocean. Fossils decorate the lower panel.

INHS plaque denoting the modern world with present-day continents oceans. Examples of modern life decorate the lower panel.
ISGS plaques denoting (above) surveying, mining and mineral extraction, geophysical exploration; (below) industry.
INHS plaques denoting (above and below) investigation of modern life species through Entomology (insects), Ichthyology (fish), Zoology (animal life), and Botany (plant life).
The Illinois State Geological Survey assumed the responsibility in the planning and construction of the Mines and Minerals Exhibit held in the Court of States at the 1933 Century of Progress World’s Fair in Chicago. A prominent element of the exhibit was an 8’ x 54’ mural (see photograph below) with the theme of, “the mineral kingdom and its effect upon society”. Painted by University of Illinois artist LaForce Bailey over a period of six weeks with the assistance of six senior art students, Bailey stated that a great deal of time was spent in arranging the colors to visually radiate the process of heat as the transforming medium between the raw minerals and the fabricated products. An equal amount of time was spent studying the equipment used in the mines and factories, and Dr. Morris Leighton, ISGS Director, provided detailed descriptions to ensure scientifically accuracy. After the Fair, the mural was removed and subsequently remounted in the Natural Resources Building.

Photograph taken of the Mines and Minerals Exhibit at the Century of Progress World’s Fair, May 27th—November 1st, 1933 showing the placement of the mural painting in relationship to the rest of the exhibit.
April-May 1933 – LaForce Bailey (center) working with two students in the basement of the Architecture Building on the mural for the Century of Progress World’s Fair.

Portion of the 8’ x 54’ mural as it appears today on the wall of the Natural Resources Building 4th floor conference room.
ART COLLECTING AT THE UNIVERSITY OF ILLINOIS
A HISTORY AND CATALOGUE

BY

MURIEL SCHEINMAN
A.B., Brooklyn College, 1961
A.M., University of Illinois, 1969

THESIS
Submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Art History in the Graduate College of the University of Illinois at Urbana-Champaign, 1981

Urbana, Illinois
La Force Bailey and students, *The Mineral Kingdom and its Effects Upon Society* (left), oil on canvas, 8 x 43' total, 1933, Map Room, Natural Resources
62. La Force Bailey and students, *The Mineral Kingdom and its Effects Upon Society* (center), oil on canvas, 8 x 43 total, 1933, Map Room, Natural Resources
63. La Force Bailey and students, *The Mineral Kingdom and its Effects Upon Society* (right), oil on canvas, 8 x 43' total, 1933, Map Room, Natural Resources
Oriental and Russian culture. In candor, Faulkner's feathered brave has more in common with nightclub "Apache Indian" fandancers than to any indigenous Americans once roaming the Illinois Prairie.

La Force Bailey and art students
The Mineral Kingdom and its Effect Upon Society
Mural, oil on canvas, 8 x 43', 1933
Made for State Geological Survey, Chicago
"Century of Progress"
Map Room, Illinois Natural Resources

With the long canvas in the Map Room of the Illinois Natural Resources Building, one can see that a major change had come about in mural painting since the execution of the Library murals. Anecdotal classical allegory and innocuous decoration no longer appealed or seemed appropriate to a public severely affected by nineteen-thirties' economic chaos, and in this mural—as if in answer to workers' yearnings—heroized, hard-toiling men wrest minerals from the abundant earth, refine them and put them to use for society's welfare. Optimism (if not social reality) is communicated, the dignity of labor extolled and the beauty of common folk celebrated.

Bailey and six seniors in art painted the "modernistic" work for the Illinois Mineral Resources and Commodities display at the "Century of Progress" Exposition, Chicago, 1933-34. Brought afterwards to campus to the new structure housing the geological and natural history surveys (1939), it had to have twenty-four inches cut off the center portion to fit around the doorway (Fig. 61) and be bent at the side walls in order to conform to the room's smaller dimensions. The original panoramic sweep is thus diminished and besides that, four enormous hanging fluorescent light fixtures further limit continuity and obscure details.

Still, The Mineral Kingdom and its Effect Upon Society is impressive, an art object described in its time as "inspiring." Copper-hued and covering the upper half of a relatively limited space, it is a scene crowded with bricklayers, machinists, carpenters, coalminers, steelworkers, engineers and draftsmen of diverse ethnicity, age and race, working in a tangle of industrial furnaces, derricks, beams, girders, vehicles and power tools. Multitudinous activities occur simultaneously, but because of the nearly monochromatic color scheme of closely related metallic tones, the bold design's overall effect is unfrenzied, quiet. The copper tonality does more, in fact, than serve as a unifying agent, for it underscores one of the mural's major themes: the significance of heat in transforming raw materials into fabricated products. Bailey told of the great deal of time he spent "to bring out the heat theory in full force"; heat was an element so important to the process, he said, that all objects in the composition radiate it.

Even more attention was given to the study of scientifically accurate safety equipment used by factory and mine workers, as for instance, in the most modern, explosion-resistant miners' electric headlamps which Bailey later had to paint over the out-of-date hats in the original version. The geological survey chief expressed satisfaction in the entire enterprise: "...the mural as an exhibit of art has been highly complimented in this country....Colors are in keeping with the mass of detail and are
Art students under direction of La Force Bailey

**Genesis and Growth of the University of Illinois**

Figs. 64-66

3 murals, oil on canvas, approx. 11 x 8 1/2', 1933-34
Made for University display, Chicago "Century of Progress"
Storage, Krannert Art Museum

Art students under Bailey's direction made these three murals for the second year of the Chicago Exposition, 1934-35. They are stored now in the Krannert Art Museum. Bearing a close affinity to Thomas Hart Benton's folksy midwestern compositions in their distorted perspectives, multiple actions and figural types, they also hint at more avant-garde influences, namely in the expressionistic landscape, tree and sky details and mysteriously empty, sharply angled buildings and open spaces, reminiscent of de Chirico.

In the first, **Genesis of the University** (Fig. 64), Bronson Murray, who presided over the Illinois Agricultural Society which promoted an industrial university, speaks at the State Fair in favor of an institution of "learning and labor"; early founders Jonathan Turner and Congressman Morrill promote the cause, and Lincoln examines the land-grant college act; Governor Oglesby stands behind the first Regent, John Milton Gregory, meeting with the first class in 1868 (a depiction historically inaccurate as women were not admitted until 1870). At center is the first University building, a former seminary known as the "Elephant."44

In **Academic Life at the University** (Fig. 65), President Willard, who posed for the portrait, points "the ascending way of University accomplishment." Around him students study, attend an anatomy lesson and a class discussion, graduate "out into life" and march off to industrial and professional careers. Buildings represent the new Library (left) and Altgeld Hall, then the Law Building.45

In **Student Life at the University** (Fig. 66), students engage in earnest political discussion, play in the band and at sports, dance at the Senior Ball, snack at a local soft drink parlor and read the student publication, *Illio*.46

Fair attendants observing visitors' reactions to this set of murals had "no recollection of hearing any favorable comments" about them. They reported, too, of their being "repeatedly asked if higher education inevitably made people look as unhappy as the figures in the murals."47 Ever constructive, Dean Newcomb responded by asserting that

It is just this sort of criticism from a large popular mind that I believe will be of vital interest to those of our artists who are working in such fields...At any rate the murals appear to have been looked at and did get some sort of reaction from those who saw them. We are rapidly, I think, emerging from the ultra-sentimental epoch and I think people in general are more willing than they were a few years ago to look life straight in the face. Some still resent, however, having reality presented in pictures and object strenuously to any overdrawing of the facts, such as apparently were incorporated in our second year murals.48
30. The war memorial at the American Academy (1923) symbolizes the Voyage of Youth, wherein (according to Charles Henry Dorr, "The Thrasher-Ward Memorial in Rome," Architectural Record, LVIII, July 1925, 90-91, ill.) a young man is shown steering his little sailboat through stormy seas bound for the port of Art. In his boat are "the books, the chisel of the sculptor, the palette of the painter, and a violin, all emblems of the artist's life in the city where art is fostered and where is located the American Academy with its traditions. Overhead, in the heavens, the stars are guiding his destiny. The constellation with its symbolic signs seems to signify that Youth will not carve out his destiny in art, but that he will meet the dark angel on the field of battle." The sculpture was by Paul Manship, the wall painting by Faulkner.


32. Phineas Windsor to James M. White, March 30, 1927 (UA 35/1/2-23).

33. The mural is illustrated in the Blue Book of the State of Illinois, 1933-1934 (Springfield, 1933), 501. When it was hung at the Illinois Mineral Industries exhibit at the Chicago Fair (1933-34), four large oil sketches relating to it hung underneath. Only the one to the right (as shown in the illustration) has been located, listed here in Appendix C: Steel Worker by V.S. Etler, in 469 Natural Resources. There is another photograph of the mural, in the University Archives (39/2/20-92), on which a label affixed to its back reads in part: "This work...is modernistic and in keeping with the rest of the Fair...."


44. Adapted from mimeographed information sheet, "Description of Mural for College of Fine and Applied Arts at the University of Illinois Exhibit, States' Building, Century of Progress, 1934-1935," (UA 37/1/1-1).
Notes to pages 94-102

28 Ibid.
29 Barry Faulkner to James M. White, May 9, 1926 (PP/AO).
30 The war memorial at the American Academy (1923) symbolizes the Voyage of Youth, wherein (according to Charles Henry Dorr, "The Thrasher-Ward Memorial in Rome," Architectural Record, LVIII, July 1925, 90-91, Ill.) a young man is shown steering his little sailboat through stormy seas bound for the port of Art. In his boat are "the books, the chisel of the sculptor, the palette of the painter, and a violin, all emblems of the artist's life in the city where art is fostered and where is located the American Academy with its traditions. Overhead, in the heavens, the stars are guiding his destiny. The constellation with its symbolic signs seems to signify that Youth will not carve out his destiny in art, but that he will meet the dark angel on the field of battle." The sculpture was by Paul Manship, the wall painting by Faulkner.
31 James M. White to David Kinley, May 13, 1926 (UA 2/6/1-138).
32 Phineas Windsor to James M. White, May 10, 1926 (UA 2/6/1-138).
33 Card, "Paintings Being Erected in New Library Building," c. March 1927 (Library Reference Room); Barry Faulkner to James M. White, September 18, 1926 (PP/AO).
34 Phineas Windsor to James M. White, March 30, 1927 (UA 35/1/2-23).
35 James M. White to Barry Faulkner, April 1, 1927 (PP/AO).
36 Barry Faulkner to James M. White, c. April 12, 1927 (PP/AO).
37 Whitney, 200 Years, 138.
39 LaForce Bailey (1903-1962) studied with Charles W. Hawthorne and at the University of Illinois, and taught at the University from 1934 to 1960. A photograph of Bailey with recent graduates Richard E. Hult and Harley McKee at work on the mural is published in UI, 52nd, 13. Hult, later a member of the University art faculty, specialized in portraiture (see Chapter VIII); McKee became a professor of architectural history at Syracuse University and an active advisor to the National Park Service. Information on McKee courtesy Professor Walter Creese.
30 The mural is illustrated in the Blue Book of the State of Illinois 1933-1934 (Springfield, 1933), 501. When it was hung at the Illinois Mineral Industries exhibit at the Chicago Fair (1933-34), four large oil sketches relating to it hung underneath. Only the one to the right (as shown in the illustration) has been located, listed here in Appendix C; Steel Worker by V.S. Etler, in 469 Natural Resources. There is another photograph of the mural, in the University Archives (39/2/20-92), on which a label affixed to its back reads in part: "This work...is modernistic and in keeping with the rest of the Fair..." 40 Merle Bruninga, "Mural in Natural Resources Building Tells the Effects of the Mineral Kingdom," Daily Illini, October 4, 1940.
31 Ibid.
32 Ibid.
42 Ibid.
43 Ibid. The Map Room, on the fourth floor of the building, was used first as the Library.
44 Adapted from mimeographed information sheet, "Description of Mural for College of Fine and Applied Arts at the University of Illinois Exhibit, States' Building, Century of Progress, 1934-1935," (UA 37/1/1-1).
45 Ibid. The painting was exhibited in the Illini Union, 1969, in a show entitled "Ars Longa Vita Brevis Est."
46 "Description."
48 Rexford Newcomb to Ernest L. Stouffer, December 11, 1934 (PAA).
49 Illinois Alumni News, XIX (October 1, 1940), 8.
51 Eric Bransby, a student of Thomas Hart Benton and Fletcher Martin at the Kansas City Art Institute, received his MA and MFA at Yale University. He is presently on the faculty at the University of Missouri, Kansas City. Who's Who in American Art (New York, 1978), 78.
52 Norman A. Parker to George Stoddard, February 22, 1951 (correspondence courtesy Department of Mechanical Engineering).
The Natural Resources Building: Origin and Evolution
A Profile of the Architect

The Natural Resources Building as it appeared in 1961. The view is of the south elevation of the building. The Animal Pathology Building is seen at the upper right, which was later razed.

Joseph F. Booton, Chief of Design, Division of Architecture and Engineering for the Illinois Department of Public Works from 1930 until the mid-1950s, stated in 1944, “…Illinois is now well equipped to learn more about her resources. The Natural Resources Building, occupied by the State Geological and Natural History Surveys, on the campus of the University of Illinois, was completed in 1940. The completion of this structure concluded a vital period of planning and construction, important to the future growth and development of the State of Illinois…” (IPW, 1944).
Biographical of Joseph Francis Booton (1897-1983),
Supervising Architect for the Natural Resources Building (const. 1939-1940)

(From: PIONEERS IN PRESERVATION: Biographical Sketches of Architects Prominent in the Field Before World War II, The American Institute of Architects Committee on Historic Resources in celebration of the centennial of its founding, February 1990.)

Mr. Booton received a certificate of proficiency from the University of Pennsylvania in 1924. He entered the program after working as a draftsman for several architectural firms. His apprenticeship began in 1915 and was interrupted by service in the U. S. Navy Reserve (1918-1919). Booton's formal education was capped by the award of a Stewardson Memorial Scholarship, which allowed him to travel in Europe for a year. In 1926 he joined the [Chicago] firm of John A. Nyden as a partner; in 1930 he left the firm to work for the State of Illinois' Division of Architecture and Engineering. As one of the state architects, Booton handled many restoration projects on state-owned land. His first such project was the development of New Salem, Illinois, one of the towns in which Abraham Lincoln had lived. Booton's goal was to develop the long-vanished community into a state park containing replicas of houses and shops that existed when Lincoln lived there from 1831 to 1857. The task he began there in 1931 included archaeological excavations and extensive document research. Booton chronicled the New Salem project in a Record of the Restoration of New Salem (1934). This was a step that neither the National Park Service nor Colonial Williamsburg had taken up to that time. Booton's 88-page book covered in detail the historical and archaeological evidence used for the reconstruction of each of the cabins. The book even dealt with the careers of the different citizens of the little Illinois town so that the visitor could see why certain homes had been furnished as they had. The Record of the Restoration of New Salem was a monumental achievement for its day and received deserved recognition at the time.

Booton's other restoration/reconstruction projects included the home of Ulysses S. Grant in Galena (1931), the early Illinois capital at Vandalia (1932), Fort de Chartres (1933), the Pierre Menard Home in Chester (early 1930s), and the Mount Pulaski and Cahokia courthouses (late 1930s). For the Vandalia project Booton and the staff studied all the alterations made in the building over the years and then came to the unprecedented decision to restore the interior to the late 1830s but to keep the 1858 exterior. The conversion to the 1836 appearance represented a comprehensive alteration and dismantling of the building attended by the disturbance of materials which had been hallowed by some 95 years of county occupancy, and therefore demanded a respectful handling. All of Booton's projects demonstrated similar "respectful handling" of the structures involved. If there was evidence to support a change, he went ahead with it; if not, he let the materials remain in place, stabilizing them as necessary in order not to compromise their integrity. His projects included written descriptions of the work, reasons for the actions taken, and well-researched histories of the structures. The Vandalia report is one of
the most impressive documents to come out of a state governmental agency in those years, complete with historic photographs and proposed floor plans for the fully furnished legislative and judicial chambers. Mr. Booton remained with the Illinois Department of Architecture and Engineering until the mid-1950s, even though he did few restoration projects for the state after 1950. Mr. Booton joined the firm of Burnham & Hammond in Schaumburg in the early 1950s and continued to practice architecture with that firm until his retirement in the 1960s.
Architect Joseph Booton’s background is important in understanding his work. Born in Urbana, Illinois in 1897, Booton moved to Chicago and graduated from high school there in 1915. While in Chicago he gained practical experience by working at multiple architecture firms. During World War I, Booton served in the Navy. He gained technical skills and studied architectural history at the University of Pennsylvania, receiving his certificate in 1924. Barbara Burlison Mooney, author of “Lincoln’s New Salem: Or the Trigonometric Theorem of Vernacular Restoration,” argues “If Booton had been introduced to a modern stylistic idiom during his years at the University of Pennsylvania, these new ideas would have been situated within a Beaux Arts context of the appreciation of multiple historical styles. This instruction led to Booton’s love of system and effortless design flexibility.” After Booton studied in Europe, he went to work for an architect in Chicago who also, according to Mooney had “his own historicizing inclination.” Although Mooney wrote about Booton and Lincoln’s New Salem, her observations are still valuable to understanding Booton’s work later in his career. Mooney argues, “Under Hammond’s supervision, Booton adroitly shifted from style to style to meet the requirements of the state’s architectural needs by utilizing the systematic approach to solving design problems that he had learned at University of Pennsylvania.” It would have been impractical for him to stick with one design philosophy in the state office because of the variety of projects that he undertook. According to Mooney, “On the contrary, the appearance of rationalized, efficient output was valued more than aesthetic or historical values,” especially by C. Herrick Hammond, the supervising architect at the Illinois Division of the Architecture and Engineering.29 Booton had been the chief of design at the Division of Architecture and Engineering for twenty-five years before this project, working on a variety of projects and historical styles. According to the Booth Library Dedication program:

The Illinois Host Building for the Century of Progress in Chicago, and the Illinois Building at the Golden Gate Exposition in San Francisco…attested to his feeling for the modern. The Natural Resources building University of Illinois, Milner Library Illinois State Normal University …indicate his grasp of educational requirements. The restoration of Lincoln’s New Salem, Cahokia courthouse…evidence of his interest in things historical. The Archives Building near the State Capitol and the Northwest Armory in Chicago illustrate his feeling for classical design. The lodge at Starved Rock…exhibit his ability to create in harmony with Nature. Booton was not a stranger to adapting a historical architectural form to invoke the cultural and social needs of the building and its environment.
ARCHITECTS CONTRIBUTE TO ILLINOIS DEVELOPMENT

By JOSEPH F. BOOTOON
Chief of Design, Division of Architecture and Engineering

"Take interest, I implore you, in these sacred dwellings which one designates by the expressive term Laboratories. Demand that they be multiplied, that they be adorned. These are the temples of the future—temples of well-being and of happiness. There it is that humanity grows greater, stronger, better."

Pasteur.

World War II has forcefully brought to our attention that it takes more than a "will to win" to bring the enemy to his knees. Germany is losing, not because of a lack of determination, but largely because it does not have sufficient natural resources to hold out and to compete with the allies, particularly the United States, which does have them, along with the necessary skill to develop them for use. A nation or state is as strong and as prosperous as her natural resources and her ability to use them.

Illinois is now well equipped to learn more about her resources. The Natural Resources Building, occupied by the State Geological and Natural History Surveys, on the campus of the University of Illinois, was completed in 1940. The completion of this structure concluded a vital period of planning and construction, important to the future growth and development of the State of Illinois. This period of planning began with the study of the purposes, aims and work of the two Surveys, an examination of their meager existing and scattered facilities, and their desire to unify their services on one plot and largely under one roof, and ended with the completed structure, a "tailor-made" plant, ready for action. In between is the record of the assembling of technical and scientific requirements and the solution of endless knotty problems, resulting in a modern plant for the adequate study of the potential-

Natural Resources Building, University of Illinois Campus, Urbana-Champaign. Completed 1940.
ties of our state’s resources. This study is too little known generally, and is a fascinating story, part of which we are able to disclose at this time.

Today a trip through the building gives the impression of order, dignity, batteries of pipes, test tubes, machinery, instruments, files, cases, soft colors and pleasant working conditions. How was this order achieved? How were the many complex problems simplified and solved? What behind-the-scenes processes were employed in planning this complicated structure?

STARTED IN 1935

In 1935, Dr. M. M. Leighton and Dr. T. H. Frison, Chiefs of the Geological and Natural History Surveys, respectively, first presented their problems and aims to the Division of Architecture and Engineering. First we examined their existing facilities, scattered in eleven different locations about the University of Illinois campus. Rough requirements were determined and preliminary sketches started to establish the size of the building in a general way. At this time no site had been chosen. Establishing the approximate building size made it possible to begin negotiations with the University relative to the selection of a site.

The two Surveys date back to 1851 (Geological) and 1862 (Natural History) and are divisions of the Department of Registration and Education, a code department under the Governor of the state. The law creating these Surveys requires them to be located at the University of Illinois which furnishes light, heat, power, maintenance and janitor service. An agreement was consummated between the University of Illinois and the Department of Registration and Education, providing among other things, that the University approve the drawings and specifications prior to the award of contracts. A site was selected on the south campus, the front facing the Fine Arts Building on the north and the rear on Pennsylvania Avenue to the south. In 1937 an appropriation of $300,000 was made by the General Assembly for the erection of a portion of the group and the work of assembling exact requirements began in earnest. (Additional funds were provided by subsequent federal grants and state appropriations, making the grand total expended $768,363.00.)

PURPOSE OF BUILDING

Any building is a machine, in a sense, designed to do a certain piece of work. To fully understand the Natural Resources Building and how it was planned one should know its purpose—the job it is required to do. This job requirement relates back to the beginning of all things and continues through the ages when the natural resources of the state became what they are today. Illinois is rich. Most of its surface is fertile soil producing abundant crops. Underneath are extensive deposits of coal, oil, stone, clays, fluorspar, zinc and lead, silica sand, tripoli, fuller’s earth, sand and gravel, ground water, brines, etc. But the mere existence of these is not enough. Dr. Leighton believes that instead of taking the viewpoint expressed by one writer, “Tell me what your resources are and I shall tell you what your society is,” the thought should be: “Tell me what can be done with your resources and I will tell you what your society can become.” Following this trend of thought, the building was to be a tool to make it possible for the two Surveys to carry on work leading to the discovery, development, and rational conservation of our state’s resources and to present their findings to the public.

The two Surveys describe this work as dealing with resources which are renewable and non-renewable. When a lump of coal is burned, it is gone, as coal. There is no way to grow or produce more coal, for example, as we produce or grow apples, cereals, fish and game. The Natural History Survey, dealing with growing things, contends that with care, proper regulation and enlightenment, the renewable resources can be maintained or increased. The Geological Survey on the other hand, is constantly on the alert for new resources and new ways to use and conserve the old ones. How, then, is the average citizen served by these Surveys? A land-owner has an unusual deposit of clay on his acreage. What is it good for, is there a market for it, if so where? He is about to drill an oil well. How far must he go down to test the commercially potential oil sands? He wishes to sell his farm with coal beneath it. What is the coal worth? A blight has attacked his orchard. What shall he do? The chinch bugs may be out in force and he wishes to be instructed in the best methods and materials to combat them. Many written requests are made unnecessary by announcements over the radio, originated by the Natural History Survey, to the effect, for instance, that the following four or five days will be ideal for spraying orchards to combat some pest currently rampant.

How is industry served? An industrialist may wish to know the relative merits of coal from various sources for his purpose. Mineral producers inquire regarding preparation processes for their particular kind of resources to improve their competitive position. A railroad company seeks information on resources for a prospective industry. Inquiries of this sort pour in daily in a constant stream. How is the state as a whole benefited? Industry is served and can depend with assurance on the facts and data relating to Illinois resources and what they are capable of producing. New uses and methods of manufacturing are developed thereby increasing present industrial facilities and paving the way for new ones. Plant diseases and insects are kept under control, new disease resistant plants are developed, safeguarding the state’s greatest industry—agriculture. We will describe this vital work, more in detail, as we go along.

ASSEMBLING REQUIREMENTS

All of the foregoing is designated as “routine” work. Answering inquiries and adding data to the ever growing foundation of accumulated knowledge calls for various sectional staffs, laboratory work and experiments. Therefore among our first requirements were offices and special laboratories. An example of the constant accumulation of knowledge and the building requirements to accommodate this phase of the work is the storage of well cutting samples. By law, the Geological Survey receives a log or record of every well drilled in the state and has the right to demand samples, if it desires, to learn more of a particular region. Special bags are furnished for the purpose and are sent to the driller. This practice results in the necessity for extensive storage areas. Many typical inquiries can be answered by special pamphlets and bulletins on related subjects and past experiments. They must be printed.
stored and ready for mailing. This also requires heavy storage areas. As developed in the finished building, every nook and corner, even the peak of the attic and a mezzanine in the garage, are devoted to the storage of the materials forming the basis of this vital and growing source of information.

In the life cycle of growing things, disease organisms and insects are a powerful and evil force. Since 1880 the Natural History Survey has accumulated the most extensive representative collection of insect fauna of any single state in the nation. The collection consists of over one and one-half million specimen insects. The housing of this and other research collections was a major consideration in the planning of the structure.

Illinois is a great agricultural state and therefore it is not surprising that the Section of Economic Entomology is the oldest section of the Survey and the most developed. Many new offices and laboratories were required to accommodate this important work. At one time in the state’s history, about 40 per cent of its area was forested, but now this area has been reduced to about 3,000,000 acres or 9 per cent. The forestry staff required offices and laboratories to carry on its important work. The rivers and lakes present problems of Aquatic Biology. This study required the installation of the “last word” in aquatic tanks. Game must be studied, and policies formulated to prevent their extermination. Greenhouse concerns and growers look to the Natural History Survey to solve many of their problems. This requirement called for a modern greenhouse in which to experiment under actual commercial growing conditions.

Both Surveys are in constant communication with their field studies and fact-finding parties. Their fleet of trucks and cars must be housed and maintained, calling for a garage for 42 cars.

The Geological Survey divides its staff into various sections to devote individual study to coal, oil and gas, industrial minerals, etc., and in addition, a division of geochemistry to work with the entire survey from a chemical point of view. Therefore, in addition to the physical laboratories, a complete chemical section was required. Thus the inherent characteristics and potentialities of any material can be studied and determined from a factual point of view. The desire was to carry out these investigations in the light of possible use in commercial manufacturing, on a pilot plant scale. In this way “theory” would progress through “practice” and the solution passed on to the public to be used in a practical way. This called for the Applied Research Laboratory complete with huge stacks and traveling crane—a factory on a small scale.

The Surveys’ routine work and requirements have been described in a general way, but in addition they are constantly at work on significant special projects—but we are getting ahead of our story. To summarize to this point, we had arranged a program calling for a group to house offices, laboratories, both physical and chemical, great storage areas, aquatic tanks, libraries for books and research collections, greenhouses, garage, parking areas and a small factory (applied research laboratory). Now we were ready to begin our architectural planning and strive for a solution. What steps were taken in reducing these generalized requirements to specific information so contract drawings for bidding could be prepared?

**FUTURE DEVELOPMENT CONSIDERED**

C. Herrick Hammond, Supervising Architect, at this stage suggested a list of general objectives be formulated. The two Surveys formed a joint committee to act in their interest, Dr. M. M. Leighton and Dr. T. H. Frison, Chiefs; Dr. Frank Reed, Chief Chemist, Geological Survey; Fred Squires, a former practicing Architect; and now Petroleum Engineer, Geological Survey; and Dr. Herbert Ross, Systematic Entomologist, Natural History Survey. Six general objectives were established to the effect that the finished building should (1) have an exterior in harmony with the buildings of the south campus, clothed in a style of Georgian architecture; (2) have an interior which would be businesslike—a work shop; (3) have an interior which would be cheerful, light and a comfortable place in which to work and think; (4) have a flexible plan, permitting alterations and future growth and a system of construction which would allow the movement of the equipment and partitions without structural difficulties; (5) have its mechanical service lines (cold and hot water, air, steam, distilled water, etc.) exposed to view for easy maintenance, extensions or cut-offs, from their points of origin in the building to the laboratory tables throughout their entire length; (6) have its corridors “off center” creating a larger side on the north for laboratories and a smaller one on the south for offices and conferences.

We then set about the establishment of a master plan—involving the future development of the entire plot 554 ft. x 343 ft. Future requirements were determined and the entire group was considered. An E shaped structure was chosen with the stem facing north and the three “stubs” reaching to the south. The central stub was to be the Applied Research Laboratory, but later on this unit was placed adjacent to the University Power House in an area near the Illinois Central Railroad because of anticipated smoke and fumes from fuel experiments. In later studies, this central wing to the rear, became the lecture room and additional chemical laboratories. The garage and greenhouse were to be separate units placed in the southern corners of the lot with suitable pedestrian walks, service roads, parking areas and screen walls, tying the buildings together and forming a complete working plant. Having this, how much of it could be erected as a first unit, considering the funds available?

Building costs (past, present and anticipated future) were taken into consideration. We obtained from the University, costs of some of their similar projects. The cost of our building appeared to be intermediate between one of their normal structures and their Chemical Laboratory building. Costs of many other similar projects were tabulated and analyzed. Original dates of erection were considered and corrected to the new date of construction, taking into account the rise and fall of construction prices during the years. This gave us anticipated future unit costs and we were then able to determine how large our first building could be—the size of our first bit. This proved to be most of the main stem of our letter “E” with the stub wings omitted for future construction.

We then roughed up a preliminary plan of the structure, establishing stairs, corridors, columns, elevators and most important of all, the available floor space. This was a renting plan, so to speak, similar to the diagrams office building managers furnish prospective
renters. The two Surveys then agreed on the major division of the building and set about allocating their various departments. This was largely a family affair, but we were able to assist them in a professional and technical capacity. The Chemical Laboratories were placed on the third floor so that fumes could be readily discharged through the roof; beyond this the Surveys were free to place their departments where they would serve their purposes best. At the completion of this process attention was focused on the individual department or research "set up".

Now we have arrived at one of the main considerations in the planning of this structure.

"TAILOR-MADE" LABORATORIES

Each unit is in charge of a special scientist and since research is largely a matter of personal approach, best results are obtained when the laboratory is planned to suit his own methods of approach and work. Therefore, each head was asked to arrange his allotted space as he believed it would serve him best. After consultations, he stated his requirements, steam, distilled water, electric current, fume hoods, laboratory tables, tables, chairs, bookcases, shelves and similar details. These diagrams were sent to us and we edited them, so to speak, calling attention to requirements difficult or costly to fulfill, fitting in columns, doors, windows, and considering them as portions of the whole plant. Drawings were prepared of each unit and returned for correction and approval. Finally after several months of collaborative study they were all complete and approved. We believe this to be an unusual approach, at least it is different from customary planning of most structures. It is different because, at this stage when the building was still in rough layout form, we knew exactly where every piece of equipment and furniture was to be located, where each plug was to be placed—in short, each unit was completely planned with reference to the job it was to do. Now the requirements were really established and it was up to us to integrate them, to fit the parts together and create one smooth working machine.

We made a supreme effort to fit these individual units into the proposed shell of the building without radically changing their layouts. This was difficult to do, taking into account that the exterior windows, ceiling heights and similar features were determined for us by the exterior architecture. How much simpler it would have been, had we been able to start from scratch and design the exterior to fit the interior. However, the finished result is a union of these exterior and interior problems and, we believe, have been worked out in such a fashion that no one, unless made aware of the problem, realizes that the problem even existed. To cite an example, the
laboratory fumes are discharged through large Georgian brick chimneys, which in other campus buildings, serve as ornamental features or in some cases, ventilators.

The matter of piping twelve different laboratory services through the building was a problem in itself. Undoubtedly, the reader will be interested to know that the following twelve services are piped throughout the structure: high pressure, low pressure, and medium pressure steam, gas, hot water, cold water, distilled water, compressed air, vacuum, refrigeration (in some rooms), waste lines, and electrical outlets. It is interesting to compare our distribution system with other similar so-called “last word” buildings recently erected. In these structures invariably the lines run through “special spaces,” through special floor trenches in connection with complete loops around the structure, both in basement and the attic with vertical risers rising up and down for the purpose of permitting great flexibility. We arrived at the same goal but our system is utterly simple and reduced to the bare minimum. Our two stair halls were designed with spaces for the main lines to rise in the open from basement to attic. At each floor, branches lead to the corridor ceiling adjacent, where they run the length of the structure. From this stem they branch at right angles to the room ceilings on each side of the corridor, thence up to the laboratory tables on the floor just above. Thus the pipes are a feature of the building, open to view for maintenance, extensions, additions and eliminations—not something to hide and run through trenches and inaccessible spaces.

PRACTICAL PURPOSE ACHIEVED

The reader will remember that one of the requirements was that the building be a workshop, a practical building. We believe this requirement has been accomplished in the completed structure. The pipes are exposed as described, there are no suspended plaster ceilings covering them. The reinforced concrete floor system, exposed to view, was given special consideration, the beams and joists were spaced with care and order, plywood forms were used and the completed smooth ceiling surfaces were painted. One piece metal door bucks were installed—no wood bucks and trim expensive to fabricate and install. The room bases are of painted concrete and the finished floor is asphalt tile and linoleum laid direct to the concrete floor; glazed terra cotta wall blocks were used in the chemical laboratories, otherwise the partitions are tile and plaster, easy to knock down and replace if changes are ever required. Utility was not the only factor, however, for the structure was to provide comfort, dignity and grace. Designed rooms were confined to the entrance lobby, the administrative rooms of the two Surveys on the first floor and the corridors connecting them. Color was an important consideration and was employed to offset any ordinary workshop character and to provide quiet and cheerful surroundings. Soft, grayish tones were chosen. The average visitor realizes the interiors are pleasing, but hardly believes there are about twenty-five separate and distinct colors in the finished building.

After the designing was completed and the goals established, complete contract documents were prepared, comprising drawings and specifications of the building and its numerous details, each piece of equipment and each item of furniture. This herculean task was finally completed, the work was advertised, bids received and contracts awarded.

The structure was built largely using Illinois products and resources. Rather than list the face-brick, wall tile, terra cotta, glass, cements, etc., originating in Illinois, it is easier to list the raw materials which did not come from this state, such as the roof slate from Vermont and the iron ore from the Superior regions, raw copper from the west, etc. Many non-originating products were processed here so it can be safely stated that Illinois industry contributed the bulk of the labor and materials comprising the structure.

WAR SERVICE

Now after four years’ service how have things worked out? “The proof of the pudding is in the eating” so a brief description of some of the “special projects” previously referred to, will serve to show how the building is serving both the state and nation, during these war years. In 1937, the oil boom in Illinois brought great activity to southeastern Illinois. Hundreds of new wells were drilled in the geologists’ “virgin” territory. These wells passed through hitherto uncharted coal veins. After awhile wells cease to pay pumping and other costs—they must be rejuvenated by artificial water, air or gas pressures, which are termed secondary recovery methods. The Geological Survey numbers among its staff, experts on secondary recovery. There are large demands for domestic and industrial waters in Illinois. With the advent of great new war industries and munition plants, each well came to have geological as well as engineering interest. Geological and geophysical methods of a special sort, many of them drawn from oil field practice, gave the water well engineer new light. Great strides have been made in coal and its related fields. A study is now in progress to utilize Illinois coal in the manufacture of metallurgical coke for the steel industry. This war project is seeking a way to reduce railroad transportation problems. Current progress is very encouraging. Active projects are under way to see if the normally wasted “fines” from Illinois mines can be manufactured into “smokeless” briquets. At present the processes of manufacturing are being studied in the Applied Research Laboratory. The aluminum industry requires a mineral known as Cryolite, formerly imported from Greenland. Fluorspar, from Southern Illinois, is now used to produce synthetic Cryolite. Research is being pursued to enlarge still
further the use of fluorine from fluorspar in the chemical field. Hydrofluoric acid has become important in the refining of high octane gas. New zinc mines have been opened in the old Galena district of northwestern Illinois and this one-time busy and prosperous city may be a Rip Van Winkle, waking up after a long sleep. Geological research has aided in the finding of new pools of oil, so much needed right now. Thus has the Geological Survey linked our building with the war effort.

The Natural History Survey likewise has been busy on many war and related projects. The large amount of grain in storage at the start of the war necessitated special studies in connection with the control of stored grain pests. Among rather recent newcomers to this country, the Japanese beetle has been moving in on Illinois and has now reached Chicago and East St. Louis. Control measures for it have been under investigation for some time because of the likelihood that it might become a serious pest. Advanced preparation for insect pests is a feature of the Survey's program, and, indirectly, through the studies of resistant corn hybrids the Survey has been preparing for 15 years for the time when the European corn borer would enter Illinois, something which has now occurred. The series of aquatic tanks planned for fisheries research have been used during the war in a cooperative investigation with the Federal Government to carry on secret experiments which could only be performed in a research laboratory so equipped. DDT (Dichloro-diphenyl-trichloroethane) the new revolutionary insecticide so successfully employed by the U. S. Army in Naples to prevent a typhus epidemic, is now being investigated so the citizens of Illinois can be safeguarded in its postwar use and to determine new uses for it. It will kill mosquitoes and flies and many other insects. How will it affect humans, fish, game, domesticated animals or other small forms of beneficial life which need to be increased or preserved? It may have many undesirable qualities as well—that remains to be determined. The scarcity of meat called for inventories of fish and game resources to determine if the restrictions now in force can be relaxed without a harmful long term effect to these resources.

As this is written, the Division of Architecture and Engineering is hard at work on contract drawings for the additions to the present building, virtually completing the group. After the war when labor and materials are available, Illinois will be ready to begin construction at once and when completed will have a plant second to none in this field. What its problems of the future will be no one really knows or can hardly guess. The horizon is limitless. Some day a new use for some material or plant will be discovered in one of these laboratories and a whole new industry will be born! Others are sure to follow. Our Division is extremely proud of its part in the development of this scientific group of buildings and feels it has had at least a small share in the development and future growth of our great state.

(Errata's Note: This is the second of a series of articles by Mr. Booth on the work of the Division of Architecture and Engineering. The third will appear in the next issue.)

Entrance Lobby—Natural Resources Building.
**PRESERVATION AND CONSERVATION ASSOCIATION HISTORIC PROPERTY INVENTORY**

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**PROPERTY LOCATION — STREET & NO.**
607 East Peabody Drive

**CITY, TOWN/VICINITY OF**
Champaign

**TOWNSHIP**
Champaign

**COUNTY**
Champaign

**PRESENT OWNER**
University of Illinois

**STREET & NO./P.O. BOX**

**CITY, TOWN**
Champaign

**STATE**
Illinois

**ZIP**
61820

**FORM PREPARED BY**
Bret Johnson

**PHOTO BY**
Karen Kummer

**DATE**
6/86

**DATE**
3/86

**VIEW**
southwest

**NEG. NO.**
74-19, 20, 23, 24

**HISTORIC USE**
office, laboratory

**PRESENT USE/OCCUPANT**
office, laboratory

**ACREAGE/SQ. FOOTAGE**
134,193

**ARCHITECT/BUILDER**
C. Herrick Hammond

**CONSTRUCTION/MODIFICATION DATES**
1939

**STYLE**
Georgian Revival

**PHYSICAL DESCRIPTION**

3 1/2 stories; brick (flemish bond); "U"-plan; hip roof (slate); stone foundation.

Main (north) facade — 19 bay center block with 3 bay hyphens and 3 bay end pavilions. Main block with 5 bay projecting center pavilion. Center entry with engaged stone composite columns with full entablature; frieze over columns with lions heads, frieze over entry with carved foliage in corners and plain center plaque; dentilated cornice. Entry with molded stone architrave, concrete porch, handicap ramp to west, metal railings. Deeply recessed 8-lite double door with 12-lite transom; stone paneled vestibule with lantern. Basement with paired 6/6 double hung sash with brick flat arches and window wells; molded brick watertable at first story sill line. First story with paired 6/6 double hung sash with 6-lite transoms, stone sills and lintels with keystones: east and west second bays with stone window surrounds with wide projecting sills and stone spandrels/"pedestals". Stone string course. Second story with paired 6/6 double hung sash with stone sills, brick flat arches and stone keys. Center sash with elaborate stone surround; continued
STATEMENT OF SIGNIFICANCE/HISTORY

C. Herrick Hammond, supervising architect; Department of Public Works and Buildings
Federal Works Agency, Public Works Administration

built: center - 1939-40 cost $582,335
        garage - 1942 $70,00
        wings - 1950

SOURCES OF ABOVE INFORMATION/BIBLIOGRAPHY


GEOGRAPHICAL DATA/LEGAL DESCRIPTION/VERBAL BOUNDARY DESCRIPTION
SECTION, TOWNSHIP, RANGE, QUARTER-SECTION

GENERAL COMMENTS
description continued

similar details as remainder of building. west end "hyphen" 2-1/2 stories with door to east similar to 5 bay projecting section entry; 4 6/6 dormers. west "pavilion" 3-1/2 stories with details similar to north facade hyphens, 1 dormer. west inner "hyphen" 3-1/2 stories with same details, door to west, 5 dormers. east "hyphens" and "pavilions" mirror images of west. center "pavilion" 3 stories with attic. first and second stories project to south further, defined by brick end "pilasters"; stone coping with stone balls atop pilasters. concrete loading dock; center entry way with wide quoin surround and large metal canopy hung from string course; recessed metal elevator doors, flanking paired 6/6 sash with 6-lite transom. second story with center bull’s-eye window with stone surround and keys, flanking paired 6/6 sash. third story with 6/6 sash at ends. attic with two large brick roof slope chimneys with large brick attic "pent" to south with stone pediment roof with center bull’s-eye sash with elaborate surround with lower swags and upper console key.

interior - main entry foyer oval shaped with brass elevator trim and coved plaster ceiling.
Natural Resources Building
607 East Peabody Drive, Champaign

description continued

foliated frieze above sash with center rosette flanked "19" and "39", swag below; flanking end plaques, east with "G.S.", west with "N.H.", with swags above. flat stone cornice on brackets; projecting stone paneled spandrel. second bays with stone surround with stone key and foliated spandrel. third story with paired 6/6 double hung segmental arch sash with stone sills, recessed brick spandrel panels, brick segmental arches and hoods. center sash with stone surround and hood; flanking stone plaques. stone horizontal cornice with "NATURAL RESOURCES BUILDING" inscribed in center. center pavilion as pediment with stone raking cornice; large center bull's-eye sash with elaborate stone surround and flanking smaller bull's-eye sash with brick surrounds. large roof slope brick chimneys with stone caps and multiple clay pots flank pavilions. 4 paired 9/9 double hung segmental arch dormers between chimneys, east and west end dormers. ornamental scuppers. 2-1/2 story hyphens with similar details as main block. secondary entries in center with cushion architrave, stone surround with stone quoins; wide foliated frieze with exaggerated console over architrave and supporting plain cornice in line with string course and projecting in segmental curve; flanking metal lanterns. slightly recessed 8-lite double door with 12-lite transom, 2-tiered stone steps with lower stone podiums with stone balls atop. center bull's-eye sash above entry with very elaborate foliated stone surround. 3 dormers. 3-1/2 story end pavilions with similar details. center first and second story sash with details similar to second sash of main block. 1 dormer; side of double ridge chimney.

east and west facades - 8 bays. same sash details. 2 large ridge chimneys to north and south with 4 center dormers and north and south end dormers.

south facade - 25 bay center section with 3 bay projecting end pavilions; east and west end pavilions project to south 5 bays with details similar to main facade. west end with small concrete loading dock with door to basement below, center sash with stone surround; east end with center sash with stone spandrel and without flanking sash; door to basement below spandrel; southwest corner attached to Natural Resources Garage (#133). projecting 5 bay section with 8-lite double door with 4-lite transom entry in second bay from north, quoin surround with paired 6-lite transom with stone flat arch above surround, center metal lantern. north bay with single 10/10 sash with 10-lite transom, second story with 6/6 sash, third story with 8/8 sash; remaining details similar to main facade. six 9/9 dormers. 25 bay center section composed of four 4 bay "hyphens" between slightly projecting 3 bay "pavilions" with.

continued
Chimney detail on Natural Resources Building
1996 photograph
Natural Resources Building
1996
By: Ben Holpourn

Page # 19
Line Screen 133

Date Wanred 3/5

Other

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Customer

Job # 15189
HISTORIC PROPERTY EVALUATION SUMMARY
Campus Committee on Historic Sites
University of Illinois at Urbana-Champaign

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**SUMMARY of Overall Evaluations by individual members:**

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**TOTAL 29.75 / 8 = 3.72**

**PRESERVATION INDEX**

(enter in top right corner)

**ADDITIONAL RECOMMENDATIONS by the Committee:**

This building is one of the landmark buildings of the South Campus both by its size and by the quality of its Georgian Revival styling. An excellent opportunity exists to create a courtyard to the north using the Architecture and Education buildings and a duplicate of the latter structure placed to the east. Such courtyards were part of the Platt plan of the 1920s.

**date 4-3-89**

**signature John Doe**

**title**
HISTORIC PROPERTY EVALUATION WORKSHEET
Campus Committee on Historic Sites
University of Illinois at Urbana-Champaign

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Date of first construction: 1939

NOTE: Mark on a scale of 1 to 5 (5 being most significant) your own judgment for each factor you feel applies to this property, then weight each factor at the left, and average all weighted factors to arrive at an overall evaluation for the property.

Weight factor

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OVERALL EVALUATION

Your Overall Evaluation will be averaged with those of other committee members to determine the "Preservation Index" to be recommended as a guide for treatment of the property.

ADDITIONAL COMMENTS for consideration by the Committee:

Date: 3/15/89
Signature: [Signature]

412
### Historic Property Evaluation Worksheet

**Campus Committee on Historic Sites**  
**University of Illinois at Urbana-Champaign**

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**Name:** Natural Resources  
**Address:**

**Date of First Construction:**

**Note:** Mark on a scale of 1 to 5 (5 being most significant) your own judgment for each factor you feel applies to this property, then weight each factor at the left, and average all weighted factors to arrive at an overall evaluation for the property.

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**Overall Evaluation:**

Your Overall Evaluation will be averaged with those of other committee members to determine the "Preservation Index" to be recommended as a guide for treatment of the property.

**Additional Comments** for consideration by the Committee:

**Date** __________  
**Signature** ________________
### Historic Property Evaluation Worksheet

**Campus Committee on Historic Sites**  
University of Illinois at Urbana-Champaign

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#### Note:
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**Overall Evaluation**: 2.75

Your Overall Evaluation will be averaged with those of other committee members to determine the "Preservation Index" to be recommended as a guide for treatment of the property.

#### Additional Comments
for consideration by the Committee:

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Date: 3/16/81  
Signature: [Signature]

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414
**HISTORIC PROPERTY EVALUATION WORKSHEET**

Campus Committee on Historic Sites  
University of Illinois at Urbana-Champaign

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**name:** Natural Resources Bldg.  
**date of first construction:** 1979

**address:** 607 E. Peabody

**NOTE:** Mark on a scale of 1 to 5 (5 being most significant) your own judgment for each factor you feel applies to this property, then weight each factor at the left, and average all weighted factors to arrive at an overall evaluation for the property.

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**OVERALL EVALUATION**

Your Overall Evaluation will be averaged with those of other committee members to determine the "Preservation Index" to be recommended as a guide for treatment of the property.

**ADDITIONAL COMMENTS** for consideration by the Committee:

> An unusually impressive and attractive structure.

**date:** 5-25-89  
**signature:** [Signature]

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415
## HISTORIC PROPERTY EVALUATION WORKSHEET

**Campus Committee on Historic Sites**  
**University of Illinois at Urbana-Champaign**

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**Name:** Natural Resources  
**Bldg:**  
**Address:** 607 East Library Dr.

**Date of first construction:** 1939

**NOTE:** Mark on a scale of 1 to 5 (5 being most significant) your own judgment for each factor you feel applies to this property, then weight each factor at the left, and average all weighted factors to arrive at an overall evaluation for the property.

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**OVERALL EVALUATION**

Your Overall Evaluation will be averaged with those of other committee members to determine the "Preservation Index" to be recommended as a guide for treatment of the property.

**ADDITIONAL COMMENTS for consideration by the Committee:**

One of the grand buildings on the University of Illinois Campus, both by size and by the quality of its Georgian Revival styling, excellent opportunity exists to create a new courtyard to the north using a more courtyard to the north using a more architectural, educational and a decorative architecture, education and a decorative.

If the Education Bldg. on the east. Such construction were part of the overall plans.

**Date:** 3-13-69  
**Signature:** [Signature]

416
HISTORIC PROPERTY EVALUATION WORKSHEET
Campus Committee on Historic Sites
University of Illinois at Urbana-Champaign

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NOTE: Mark on a scale of 1 to 5 (5 being most significant) your own judgment for each factor you feel applies to this property, then weight each factor at the left, and average all weighted factors to arrive at an overall evaluation for the property.

weight factor | don't know | 5 | 4 | 3 | 2 | 1 |
|--------------|------------|---|---|---|---|---|

- Historic association (persons/events)
- Landscape contribution (ensemble/open space)
- Architectural value (exterior)
- Architectural value (interior)
- Locational significance (sense of place/site integrity)

OVERALL EVALUATION

Your Overall Evaluation will be averaged with those of other committee members to determine the "Preservation Index" to be recommended as a guide for treatment of the property.

ADDITIONAL COMMENTS for consideration by the Committee:

I would have noted this building as a 4:00 - 4:50 use of site for the problem of the rear side space.

date | signature
--- | ---
HISTORIC PROPERTY EVALUATION WORKSHEET
City Campus Committee on Historic Sites
University of Illinois at Urbana-Champaign

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name: NATURAL RESOURCES BUILDING
date of first construction: 1939

NOTE: Mark on a scale of 1 to 5 (5 being most significant) your own judgment for each factor you feel applies to this property, then weight each factor at the left, and average all weighted factors to arrive at an overall evaluation for the property.

weight  factor  5 4 3 2 1 know

5 Historic association (persons/events)

4 Landscape contribution (ensemble/open space)

1 Architectural value (exterior)

2 Architectural value (interior)

3 Locational significance (sense of place/site integrity)

OVERALL EVALUATION

Your Overall Evaluation will be averaged with those of other committee members to determine the "Preservation Index" to be recommended as a guide for treatment of the property.

ADDITIONAL COMMENTS for consideration by the Committee:

date: May 10, 1980  signature: James Miller
HISTORIC PROPERTY EVALUATION WORKSHEET
Campus Committee on Historic Sites
University of Illinois at Urbana-Champaign

Code number: 109 X □ □ □ □

OVERALL EVALUATION: 400

Name: Natural Resources Building

Address: 607 East

Date of first construction: 1939

NOTE: Mark on a scale of 1 to 5 (5 being most significant) your own judgment for each factor you feel applies to this property, then weight each factor at the left, and average all weighted factors to arrive at an overall evaluation for the property.

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OVERALL EVALUATION: □ □ □ □ □

Your Overall Evaluation will be averaged with those of other committee members to determine the "Preservation Index" to be recommended as a guide for treatment of the property.

ADDITIONAL COMMENTS for consideration by the Committee:

This is one of the nicest Georgian Revival buildings on campus but is now in an obscure campus setting. Surrounding landscape should be redeveloped to do justice with this building.

Date: 3/10/89
Signature: [Signature]

Form ONE
Natural Resources Building

Coleshill
The charming village of Coleshill abounds in beautiful picturesque cottages, a fine church and a once noble house, the *chef d'ouvre* of one of the best of English architects. Coleshill House, the seat of the Pleydell-Bouveries, was built by Sir Roger Pratt, with the advice of Inigo Jones who died only two years later. A receipt for one of the chimney-pieces, dated 21st April 1660 is still in the possession of the Earl of Radnor. *This receipt fixes the date of the building.* In olden days, the manor belonged to the Edingdon family and was given by William de Edingdon, Bishop of Winchester, to the Priory of Bonnes-Hommes at Edington in Wiltshire. After the dissolution of that priory, it was given to Thomas, Lord Seymour, Lord Admiral of the Fleet, who secretly married Catherine Parr, the last of Henry VIII's many queens, and had the custody of the Princess Elizabeth and Lady Jane Grey. He wanted to marry the former, who used to dance and flirt with him, but fell out with and defied the power of Protector Somerset and, for his pains, was beheaded. The manor became the property of Anne, Duchess of Somerset, and then of Arthur Grey of Wilton.
In 1601, Coleshill belonged to Sir Thomas Freake who sold it, in 1626, to Sir Henry Pratt, Alderman of the City of London, created a baronet in 1641. He died suddenly in 1647, one Sunday morning in church, and was succeeded by his son, Sir George Pratt, the second and last baronet. Upon his death, his sister became the heir and brought Coleshill, by marriage, to the Pleydell family. She married Thomas Pleydell of Shrivenham. This Pleydell family is an ancient one and had an estate in Coleshill which they inherited from the family which took their name from the place, and possessed this estate as early as the reign of Edward I. We constantly meet with William de Coleshill and other members of the family, occupying positions of trust and importance in the early records of the county. In the south transept of the church, built by Thomas Pleydell, there is a tablet showing his will and a genealogical account of the family. The elder branch of the Pleydells lived at Shrivenham. The younger resided at Coleshill till the time of Queen Elizabeth, when Anthony Pleydell died without issue, and the Shrivenham branch inherited the estate.

Thomas Pleydell, who married Sir George Platt's sister, was the grandfather of Sir Mark Stuart Pleydell, Bart., whose only daughter and heiress, Harriet, married the Hon. William Bouverie, Viscount Folkestone and Baron Longford, and afterwards created Baron Pleydell Bouverie of Coleshill and 2nd Earl of Radnor in 1765. Thus the names of Pleydell and Bouverie were conjoined and Coleshill manor passed to the Earl of Radnor, whose principal seat is Longford Castle, near Salisbury.

The builder of the house was Margaret, the wife of Sir George Pratt. It is one of the best works of Inigo Jones and his pupils. The former was, at the same time, building the south side of Wilton House. Aubrey states that being then very old, he could not be at Wilton in person, but left the superintendence of the work to his kinsman and assistant Webb. John Webb had also prepared drawings for Coleshill but these were rejected in favour of the work of the owner's cousin. One of the great attractions of the house was that it remained unchanged since its building, at least as regards the exterior and the principal parts of the interior.

The exterior had a simple, dignified and imposing character: the doorway with its handsome flight of steps, the windows with their bold casings, the cornice at the foot of the sloping roof which had dormer windows, and the handsome chimneys. The interior was most charming and pleasing: the entrance with the grand staircase, the nine niches in the wall (in which an old legend said, when evil threatened the family, nine spectral cats would take up their seats) and the handsome doors with fine casings and pediments. A double staircase led to the gallery with balustrades of unusual form and wreaths of fruit and flowers. The ceilings were the most important feature of the internal decoration and differed much in character. The mantelpieces had coupled Ionic columns. There were many interesting family portraits and beautiful old furniture. The gardens and grounds are still very delightful today, but the house was completely gutted by fire in 1952 and subsequently pulled down.
On the opposite side of the road is the parish church, in front of which stands the village cross. It is dedicated to St. Faith and has been partially rebuilt. The old chantry founded by Thomas Pleydell in 1499 has disappeared and, in its place, Sir Mark Stuart Pleydell, in 1787, built the present south chapel containing the family pews. On a brass appears the request of the founder of the chantry:

“Pray for the Souls of Thomas Pleydell; Agnes, his wife; William, his father; Isabella, his mother; Rose, his daughter; and all Christian Souls.”

He called his chantry the Chapel of Salutation of the Blessed Virgin.

The older parts of the church are the arcades of the nave which date back to the end of the twelfth and beginning of the thirteenth century. There are several interesting monuments of members of the great families who have lived and reigned at Coleshill, whose names have already been mentioned, including a sculptured figure of the "Honourable prudent and pious Sir Henry Pratt, who by God’s providence acquired ye eminence of Sheriff and Alderman of London and dignity of Knight and Baronet. He lived 75 years and deceased ye 6th day of April 1647. Pheenix Moriendo revivescit". The east window contains some excellent glass that was brought from Angers in 1787.

Edited from P.H. Ditchfield’s "Byways in Berkshire and the Cotswolds" (1920)
Coleshill Gate Piers

ENGLISH BUILDINGS
MEETINGS WITH REMARKABLE BUILDINGS

TUESDAY, JUNE 29, 2010

Coleshill, Berkshire

Gone, but not forgotten

http://englishbuildings.blogspot.com/2010/06/coleshill-berkshire.html

Coleshill was the archetypal large house of the mid-17th century. Designed by the gentleman architect Sir Roger Pratt for his cousin, Sir George Pratt, apparently with the advice of Inigo Jones and perhaps also the involvement of John Webb, it had all the features of a grand house of its period – the Italianate proportions with rows of sash windows, the semi-basement storey to raise up the main floors, the strong cornice, the
hipped roof with dormer windows, the big chimney stacks, and the best in classical mouldings and details. The interiors were impressive too, especially the grand double symmetrical staircase, lit by a cupola from above.

Alas, one day in September 1952 the whole lot went up in flames. In a chain of events similar to the fire at Uppark in Sussex in 1989, the blaze began during repair work, and house staff and estate workers ferried antiques and paintings out of the house, dodging molten lead from the roof as teams of firemen tried to bring the blaze under control. In spite of their efforts, the building was gutted and – here the resemblance to Uppark ends – the remaining masonry shell was later demolished. So Coleshill is a memory, one that lives on in black and white photographs in old architecture books.

But the great house has left its traces – estate buildings such as a farm and cottages, and these gate piers, which, with their accompanying stone wall, signal to the passer-by that there was once a grand building hereabouts. It’s initially a surprise that these piers are more ornate on the inside, away from the road. And then one realises that they signal no entrance drive and are a few paces away from a ha-ha surrounding the park. Clearly, they were designed to be looked at from the park, perhaps from the house itself, to enhance the view, a charming bit of visual punctuation amongst the water meadows and parkland that were once home to a very special English house.

**Natural Resources Building**
The Natural Resources Building is the direct descendant of a type of manor house built in Britain and America during the 17th and 18th centuries. A building in this style is characterized by a hipped slate roof with narrow leaves. The roof bears a row of dormers on several sides and several pairs of tall brick chimney stacks with chimney pots. The lower building is a several-story, brick-walled rectangular structural block. The Survey Building is composed of three pavilions connected by two wings. The walls are divided horizontally by light-colored bands of stone trim between stories and by uniform rows of large windows in each story. The walls are laid in Flemish bond and brick. The spacing of entries, windows, and other elements is regular and symmetrical.

Except for its much greater size and the addition of wings, the Natural Resources Building closely resembles at least three old British and American homes still in existence. Two are in England: Coleshill House constructed between 1650 and 1662 in Berkshire, and Oakly House in Bedford, dated to the early 18th century. The American home is Westover, built in 1730 on the James River, Charles City County, Virginia.

The building style is loosely termed "Georgian," a name that really includes several British styles that came into prominence during the reigns of the first four Georges, the period from 1714 through 1820. Like other English fashions, this architecture was quickly taken up and adapted by well-to-do...
colonial Americans who, for the most part, patterned their lives after their British counterparts. After the American Revolution the Georgian styles in the new republic were gradually supplanted by others.

It is perhaps remarkable that the architect, Joseph Button, so successfully enlarged a domestic style of architecture to the institutional scale of the Natural Resources Building. Despite its block-long, four-story dimensions and the plainness of its basic lines and shapes, the building avoids a monotonous box- or barracks-like appearance. The basic structural units of the building shapes vary in size. Trimmed openings divide and lighten the large, flat roof and wall surfaces. The earthy, low key colors of the slate, brick, and trim create division and detail.

If the building styles of the Georgian period may be compared to its costumes, this building and its ancestors seem to have a distinctly soldierly appearance. Other Georgian building styles—like the contemporary court and ceremonial costumes—attained more splendid, ornate, and dynamic effects with finer materials, curved major lines, and with soaring and descending projections of mass and line. Here we have a comparatively plain style, somewhat like a military uniform: one color above for the coat, another color below for the breeches, and a third narrowly applied for accessory belts and facings for button hole bindings, and for trim at cuff, lapel, or collar. The whole effect is one of imposing stability and balance.

III. **Outside steps and platform:** The stone is a light gray, medium-grained granite composed of translucent white feldspar crystals (65 to 80 percent), light gray glassy quartz grains (15 to 20 percent), and black biotite mica crystals (5 to 10 percent). Supplied by the Cold Springs Granite Company of Cold Springs, Minnesota, the rock is probably from the Warman area, Kanabec County, in east-central Minnesota. Its commercial name may be the "Warman Gray Granite." An igneous rock, the granite formed from molten magma that cooled under the surface of the earth during the Precambrian Era, more than a billion years ago.


IV. **Outside door trim:** The light gray, faintly mottled limestone framing the doors contains fossils, fossil fragments, and pellets and was originally a shell sand deposit like the Salem Limestone. Unlike the Salem, this limestone is not visibly porous--calcite cement fills all the spaces--and it takes a polish.

This stone and three others used inside the building were supplied by the Carthage Marble Corporation of Carthage, southwestern Missouri. The company called it the "Ozark Tavernelle Marble." The stone industry applies the name marble both to limestones that take a high polish and to metamorphic marbles--the white and varicolored carbonate rocks used to make gravestones, statues, and buildings. "Tavernelle" is an old building stone term that means spotted or mottled.
"Ozark Tavernelle" is cut from a 2- to 3-foot thick bed in the company's Carthage Quarry. It is the lowest of the three beds in the quarry that supplied cut stone for the Natural Resources Building. All three beds are part of the Warsaw Formation of Mississippian Age.


Now step inside the east entrance into the foyer.

V. Foyer floors and stairway: The brown to dark brown limestone with very light brown speckles is the "Nerobi Marble" sold by the Carthage Marble Corporation. The "Nerobi Marble" is taken from a bed in the Warsaw Formation in the company's Carthage Quarry. The marble occurs above the "Ozark Tavernelle" and "Ozark Veined" beds. The speckles in the rock are round, bead-like crinoid columnals—skeletal parts of animals related to starfish and ancestors of the still-living crinoids. Like the other limestones used in the Natural Resources Building, the "Nerobi Marble" formed in a shallow, warm sea. It was originally a calcium carbonate sand largely composed of animal plates and columnals, and was deposited by sea currents strong enough to sort the grains by size and to wash away a good deal of any fine-grained chalky muds that were present.

(See N. S. Hinchey, Missouri marble, cited above.)

VI. Pillar and lower wall veneer ("baseboard"): The dark grayish brown stone with the streaks of light grayish brown mottles is the "Dark Plattin Marble."
The Carthage Marble Company, which supplied it, probably obtained the rock from a quarry in the vicinity of Batesville in north-central Arkansas. The geologic name of the stone is the Plattin Limestone of Ordovician Age.

The rock was originally a layered calcium carbonate mud containing a little clay. It was deposited in a shallow marine, possibly tidal, environment. It shows sections of thin wafer-like brachiopods and a few coral colonies--types of these animals that were adapted to life in soft mud. Many of the light brown mottles appear to be sections of mud-filled animal burrows.

The limestone is cut at right angles to the bedding to show the various bedding colors and accentuate the marbled effect. The burrows and other large pores filled with mud from the bottom upward, and where the top of a pore was not filled, glassy gray calcite crystals grew in the space. These calcite fillings--"birds-eyes"--indicate which side of the slabs were up when the sediments were deposited. Stylolites occur between the sediment layers in the stone. These features show on the polished stone as dull, clay-filled, zigzag lines usually parallel to bedding. Stylolites indicate that parts of the rock along the stylolite plane were dissolved and carried away by water.


VII. Hall and foyer walls and door frames: The blocks of mottled, light yellowish gray stone are cut from a native Illinois rock called dolomite. It was quarried and finished at Joliet by the Adam Groth Stone Company. In that area the dolomite was called the "Joliet Marble." A few miles north, in the
vicinity of Lemont, it was known as the "Athens Marble," Lemont once having been called Athens. The stone comes from the Sugar Run Formation of Silurian age.

Beds of the Sugar Run Formation in the Joliet-Lemont region have supplied more building stone than any other rock unit in the state. The dolomite was a very popular stone in the latter part of the 19th century and the early decades of the 20th. Generally the stone was used for outside walls where weathering turns it a distinctive pale yellow. It is found in older public and private buildings throughout the state but particularly in the northeast.

Dolomite is a sedimentary rock. It was originally a calcite sea mud. From time to time a little mud from the land--clay and silt--was added to the sediment. The land mud is the darker gray streaks and mottles in the stone. At some point, water carried magnesium into the calcium carbonate mud and changed it to the calcium-magnesium carbonate called dolomite.

Few, if any, animal skeletons or hard parts can be seen in this stone. There are traces of burrowing animals. The streaks of sooty black, rust-spotted pyrite (an iron sulfide mineral) probably formed in fecal matter. (Rusty specks of pyrite are very noticeable on the southeast pillar of the east entrance.) Also, burrowing animals likely distorted continuous, nearly straight gray mud films to produce the wavy, broken gray lines--the edges of the mud films--visible on the ends of some blocks.

The stone has a honed finish: it has been ground smooth but not polished.
The gray marbling is produced by cutting the exposed face parallel to the rock bedding so that the gray mud films, or laminae, are intersected.


VIII. Restroom partitions and wall veneer: The polished limestone panels are "Ozark Veined Marble" taken from the Carthage (Missouri) Quarry of the Carthage Marble Corporation. The limestone is light gray and light olive gray and has wispy dark gray figures in it. "Ozark Veined Marble" comes from the same quarry ledge as the "Ozark Tavernelle" stone, the "Veined" rock being about the upper three-fourths of the ledge and the "Tavernelle" the lower one-fourth. The "veins" in the stone are stylolites. These panels are cut parallel to the bedding and to the stylolite seams. The dark gray, wispy figures occur where the cut intersects stylolites.

The limestone is part of the Warsaw Formation of Mississippian age. Patches of horn corals and brachiopods can be seen in the panels as dark gray skeletal sections. These fossils are the remains of animal communities that lived in the shell sands on the bottom of one of the Mississippian seas.

(See N. S. Hinchey, Missouri marble, cited above.)