The Iowa State University Campus and Its Buildings 1859-1979

by

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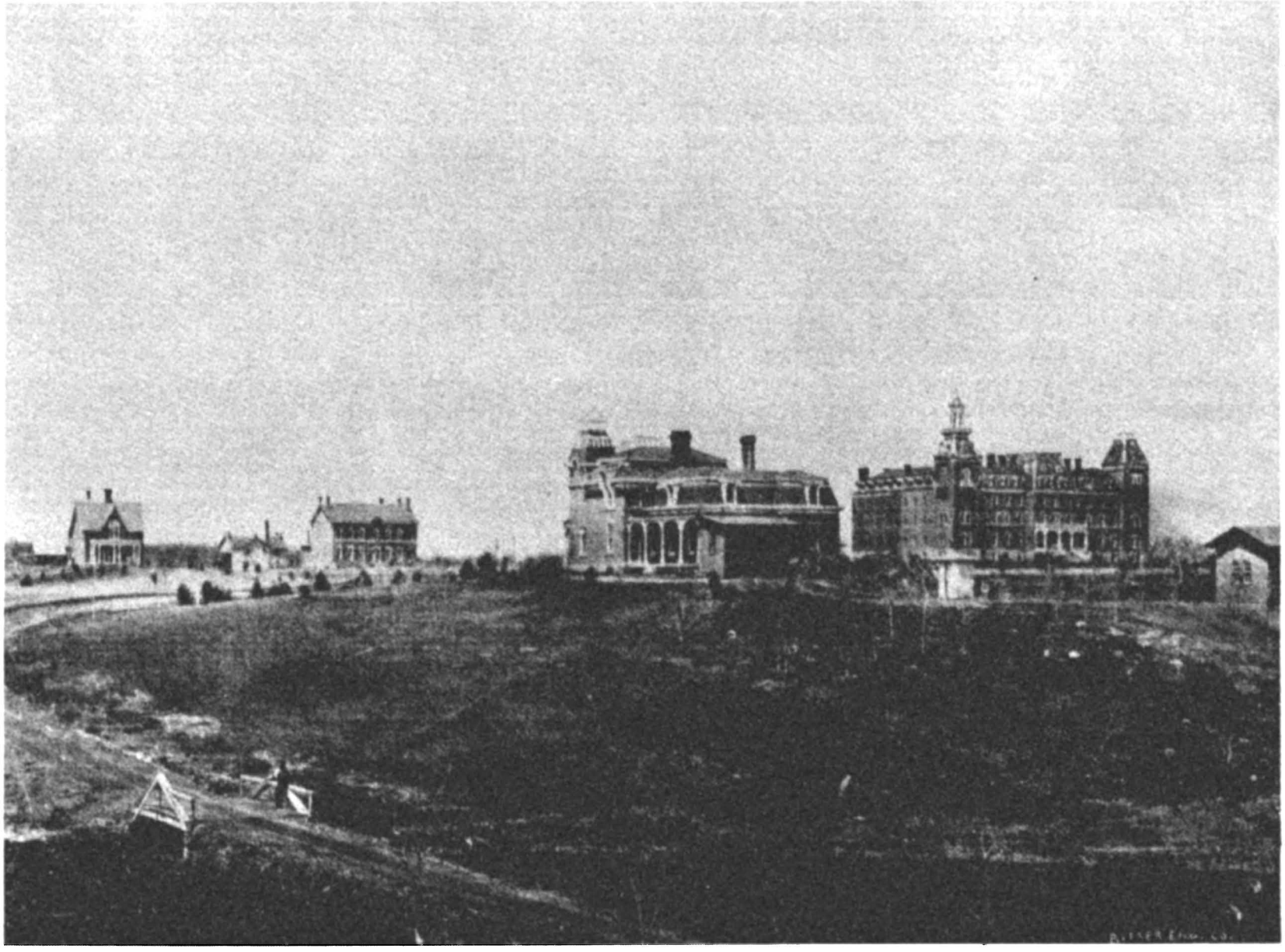
1980



Music Hall | Workshop | Chemical & Physical Laboratory | South Hall | Main | President's Barn

About 1875

CONTENTS

ACKNOWLEDGMENTS

I am grateful for the cooperation given me by the University Administration in the compilation of this history. Although the gathering of notes and reference material has extended over a twelve-year period, the actual writing of the manuscript has been possible only during the last two years before retirement from the university staff. During those two years I have been able to spend the major part of my time putting the work into its final form.

Everett Swagert, University Architect, in whose office I have continued to headquarter, has been especially considerate in limiting the responsibilities assigned to me in order that I could complete this history.

Encouragement to undertake and finish the work has come from a number of people who have expressed sincere interest in the project. Carl Hamilton, Vice President for Information and Development, has been especially helpful with suggestions for editorial arrangement. Toby Fishbein, University Archivist, has been an enthusiastic supporter of the project and has helped in locating source materials.

A number of people have assisted in clarifying questionable points. Older faculty and staff members who have been on the campus for many years have helped in separating speculation from facts. However, it is essential to recognize that memories may not always be as accurate as one would like.

The efforts and patience of several office secretaries is appreciated and acknowledged. Typing the excerpts from the long-hand original Board Minutes was often a difficult task. And for the typists of the later material and that in the student papers it was often a monotonous chore.

To my wife, Betty Vinje Day, I give special thinks for reading of the manuscript, for her suggestions for improvement in writing, and for assistance in proofreading.

The maps reproduced in the volume were drawn in their final form by Vanitha Venugopal, a student in Community and Regional Planning.

INTRODUCTION

Less than twelve years after Iowa attained statehood (on December 28, 1846) the legislature enacted the law establishing the "State Agricultural College and Model Farm," and providing for a Board of Trustees to manage the college. Governor Ralph P. Lowe signed the bill on March 22, 1858, the date now recognized as that of the founding of the institution.

During the spring of 1859 the Trustees studied the question of the location for the new college. Limited funds available from the state treasury influenced the Board in its decision to accept donations pledged by citizens of Story and Boone counties, and the site west of Squaw Creek was selected on June 21, 1859. A picnic to celebrate that event was held the following July 4 at a location east of what is today the university cemetery.

The earliest developments on the grounds for the new college were more concerned with the Model Farm needs than with the academic aspects. Construction of the Farm House and the Cattle Barn began in 1860; the College Building, Old Main, was not started until 1865, due partly to financial burdens of the Civil War period.

Since that time the institution has grown and changed in many ways. It is the aim of this volume to record the history of the physical development of what is now Iowa State University -- its buildings and its grounds -- through the years since it was a "monotonous plain of waving grass only broken here and there by scattered groves."(1)

Those people who were instrumental in organizing the college and who saw its beginnings would be utterly astounded if they could return today to view what can best be described as an academic park.

The compilation of the material herein was prompted by my inability to find ready answers to questions I asked about the campus and its buildings when I came to Iowa State as University Architect in October 1966. It is hoped that questions others may ask about earlier buildings and campus changes will be adequately answered here.

There are some gaps in the history that cannot be filled to complete satisfaction. Some of the missing facts are tantalizing, such as the exact location of the brickyard where the first bricks were made for Old Main. Precise locations of some early minor buildings -- sheds, small barns, poultry houses, etc. -- cannot be determined, nor do the records contain dates of construction or dates when they were razed or otherwise removed.

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(1) From speech by Benjamin F. Gue at the inauguration of President Welch on March 17, 1869.

Every effort has been made to incorporate only factual information that can be obtained from official documents, including maps from different periods. Where assumptions are made these are distinguished from known, verifiable data.

It should be understood that only the physical aspects of the campus and its buildings are discussed here, leaving the academic, organizational and social parts of the history to others. Much more detail could be written about some of the buildings while, for a few, it has been difficult to find adequate documentation to determine even minimum facts.

Many campus buildings have been known by different names at different times. The articles prepared for individual buildings are arranged alphabetically under the current (or most recent) names, but each shows the earlier names as well, and the earlier names are also cross-referenced in the index to make identification relatively simple.

A discussion of the farms and farm buildings is not included in the scope of this volume. That story can be a challenge to some future researcher. My notes include numerous references to help should such a project be undertaken. Those notes will become a part of the University Archives for future reference.

All of the material developed for use in the preparation of this volume will also be in the archives for anyone wanting to pursue greater detail on any of the subjects covered here. It includes excerpts from the Minutes of the Boards, from the Biennial Reports and from the student newspapers, with indexes prepared to make quick reference possible.

SOURCE MATERIAL

Many publications have been consulted in the preparation of this work. The principal ones are listed in the Bibliography. The major sources, however, have been the Minutes of the Boards governing the institution, and the student newspapers. The annual and biennial reports of the Boards to the governor or legislature have also been very helpful.

In using the student newspapers it is essential to be careful in assuming accuracy in all items. Where contemporary activities are reported the accounts can be trusted but in stories of past events there are frequent errors of fact. Other publications, also, may incorporate false information.

Old maps of the campus have been the primary source for determining locations of buildings no longer extant, and for the routes of earlier roads and drives. Minor structures did not always appear on contemporary maps, probably because they were considered too unimportant; or if shown they were not identified as to name or use.

Early photographs of buildings, and general campus views, have been helpful. It is unfortunate that more pictures of more sections of the campus were not taken and preserved from the nineteenth century.

Research done by Dorothy Kehlenbeck (now Mrs. Ralph Bean) while she was curator of the college history collection has been helpful, especially in the records of the occupants of the various houses once on the campus.

LAND USE

LAND

The original college and farm grounds consisted of a tract of 648 acres purchased from five different owners. That property included the area bounded on the south by Lincoln Way, on the north by a line from Thirteenth Street to Ontario Street, on the east by Riverside Drive (extended north to Thirteenth) and on the west by Sheldon Avenue north to the north boundary, plus a ten acre tract between the Sheldon extension and Hyland Avenue from a line about at the north side of the cemetery to Ontario Street. (All names here used are current street names.)

That area, plus an additional eight acres (between Sheldon and Hyland south from the cemetery to the diagonal street joining those two streets) acquired in 1936, form what is today thought of as "central campus."

Nearby property, exclusive of outlying farms, has been acquired over the years to bring the total to 1727 acres.

The University Annual Financial Reports list all the acquisitions, with dates and areas, so those figures will not be repeated here. Farm holdings amount to 6574 acres at a number of locations around the state.

ARBORETUM

During the 19th and early 20th century various references to an arboretum have been found. However, those items all referred to areas other than that known today as the Arboretum. The earlier citings are incorporated under the headings Landscaping, Campus Planning or Pammel Woods.

The land which became the Arboretum was acquired by the college in 1924, including the property between Hayward and Sheldon Avenues which is now used as parking space, but was originally included with the College Creek valley westward to State Avenue as part of the proposed Arboretum. The earliest extant plat of the area is dated March 1, 1924. It shows a curving driveway running west from Hayward Avenue, across Sheldon and continuing to State (then Wells) Avenue with a branch turning north to Arbor (then Leek) Street. It is interesting to note that golf links and a golf house are shown on that plan on the south side of College Creek between Sheldon and State.

An article in the Iowa State Student on May 20, 1925, outlines the plans for the area at that time:

> The horticulture department has recently acquired several new farms which include the college creek south west of the campus for about a mile and one-quarter. Since the land on the sides of the creek was rough and could not be used for farm lands the area has been given to the landscape department for an arboretum.
>
> Part of the old arboretum north of Chemistry and Physics buildings has already been moved. Several hundred dollars worth of plants including over 500 trees have already been purchased and planted near the creek this spring. Over 1000 more trees have been ordered. The object is to get a background of trees as soon as possible. The dump south of Wesley hall has been filled up with dirt furnished by the city and trees have been planted there.
>
> At the present time the grounds include over 100 acres and the plans for development have a specimen garden near the entrance of Hayward, south of Lincoln way. It is planned that every type of plant that will grow in this region will be planted and used for class study in this garden.
>
> A road will follow the creek to the back of the arboretum. The land will be developed with park-like treatment including borders of trees, shrubs, lakes and flowers. The far end will include only native plants. These will be planted in a natural development. All of it will be very informal except the specimen garden at the entrance.

Elaborate plans for the Arboretum were prepared at various dates over the next decade, particularly by Rothacker, who used the term "Curator" as his title on the plans. Most of those studies included an area along the creek valley extending a half mile west of State Avenue, as well as that acreage previously referred to between Hayward and State. A December 14, 1929, story in the college paper records some of Rothacker's ideas:

> " 'The Ames Arboretum' is suggested as the name of the botanical garden and arboretum now under development at Iowa State College," states Prof. R. R. Rothacker, of the Landscape Architecture Department.
>
> "Four years ago," says Professor Rothacker, "the plan for the garden was outlined which, when completed, will cover an area of 50 acres. The site chosen is in the College Creek valley, one mile west of the corner of Lincoln Way and Hayward Avenue."
>
> The arboretum will serve as an outdoor laboratory for several college departments, containing testing grounds and model arrangements of plant materials in planting composition and design. A series of soil tests for acidity have been made thruout the area, and the planting is being arranged as it is best suited to the condition of the soil, as well as to the topography of the land.
>
> Altho the prime function of the arboretum will be for research and survey, the park should be one of the most beautiful areas around the campus, Rothacker says. The grading and design for a formal garden have been completed, and the garden will be one of the important features of the arboretum.
>
> Hundreds of woody plants have been collected from all over the world and will be placed in the garden. Many of the plants have been secured from the Arnold Arboretum, in Boston, one of the largest arboretums in the world.
>
> There are very few arboretums in the United States, because of the great length of time, the large amount of money, and the technical knowledge necessary to create such a project. Other arboretums are being developed at Pennsylvania State College, Cornell University and the University of Michigan. The government is planning to finance the development of such a garden near Washington, D.C., on a site adjacent to the Anacostia river.

The development of those early plans was slow. Some help came in 1934 with federal participation in a Civil Works Administration project, described in the Iowa State Student on February 10 of that year:

> Destined in coming years to become one of the most important plots in the Midwest for the introduction of new plants, shrubs,

and trees, the Arboretum will be constructed on land owned by the college along the creek south of the Collegiate Methodist Church, extending about one-half mile upstream. It will cover about 35 acres and will vary in width from 250 to 300 yards.

A show garden will mark the east entrance to the wooded park, and paths will wind throughout the whole area. Different species of trees and shrubs will be grouped together for the convenience of classes in botany and forestry. An effort will be made to put into the Arboretum every plant and tree native to Iowa, with special pools constructed for water plants.

An herbaceous garden, used in growing various kinds of grasses, grains, herbs and other small plants, will be located east of the cemetery at the spot now used as a forestry nursery. About 45 acres of heavily wooded land just north of the campus will be used as a game preserve.

The arboretum is not a new project. Plans for an introductory garden were developed in the Landscape Architecture Department in 1924. So many departments were interested in such a project and would be served by it that it has become an all-college project supervised by a general committee of several departments.

Work has been started under the direction of George Godfrey, agricultural assistant to Pres. R. M. Hughes, and will be taken up more extensively in the spring. CWA financial help is expected and CCC workers probably will be employed on the job. Cooperating with the college is the Federal Bureau of Plant Industry.

Working in conjunction with Mr. Godfrey and the general committee are R. R. Rothacker of the Landscape Architecture Department, chairman and curator; J. M. Aikman of the Botany Department; T. J. Maney of the Horticulture Department and J. A. Larsen of the Forestry Department. On the committee for the herbaceous garden are J. N. Martin, Botany Department, chairman and curator; E. C. Volz, Horticulture Department; and J. C. Eldredge of the Farm Crops Department. J. E. Guthrie, professor of zoology, has charge of the Wild Life Preserve.

By 1938 the paper could report on some accomplishment and on continuing dreams for the future:(1)

Visualize 70 acres of land, a stream running through it, 2,450 species and varieties of shrubs and trees that may be found in

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(1) Iowa State Daily Student, December 13, 1938.

Iowa and surrounding states and you have an idea of the Iowa State College arboretum that will be well established by 1942.

Iowa State's arboretum -- which is a short name for botanical tree garden -- begins at the junction of Chamberlain and Hayward streets and extends for nearly a mile, past State street and ends near the Agronomy Farm.

Aided by the local CCC camp and NYA help from the college the work is carried on as funds are appropriated, according to R. R. Rothacker, professor of landscape architecture and chairman of the committee in direct charge of the project.

Ten foot-bridges, a concrete culvert and a cinder path stretching the entire length have been constructed to date. The creek has been widened in three places by dams built for erosion control. Work is also being carried on to have the ground ready for planting as funds are appropriated. Thus far, only a few of the final forestry plots have been actually established.

A modification in the use of a portion of the area is reported in the Iowa State Daily Student on September 27, 1940:

Iowa State herbaceous gardens, covering 5 acres near State and Leek streets, is one of the show places at the college rapidly becoming better known, according to its curator, Dr. J. N. Martin.

This plot of ground, formerly used by the college Horticulture and Forestry Departments as a nursery, has for the last 3 years been under the supervision of a joint committee on institutional gardens and parks, of which George Godfrey, director of Agricultural Relations, is chairman.

Varieties of herbs and grasses and oats, wheat, rye and corn from all corners of the world, are planted and tested for climatic and soil reactions. Decorative grasses as well as those used for pasture and hay are sown in the plots. Bent grass for golfing greens, blue grass for fairways and soil binders grow under usual Iowa weather conditions.

It has taken much of the 3 years of development to regrade and resoil this acreage, which replaces the arboretum now located on 70 acres across State street.

Yet in this time grasses have been produced which vary in height from 1 inch to 20 feet. Classes studying farm crops, botany and horticulture use the gardens in laboratory fashion to search out the results of such precise cultivation of wild species as Dr. Martin works with daily.

Weeds are given a special growing area, so that farmers can see what they are and how they multiply. Among the blocks are strawberry plants, hops, blackberries, and raspberries, with a plot devoted to wild asters, boneset, medicinal plants, such as Gimson weed and helinum. The north section is colorful with flowers in full bloom.

Over the succeeding years little mention is made of any activity in the arboretum.

On July 8, 1965 the Iowa State Daily tells of the then current conditions:

Hopes for the building of an arboretum, originally scheduled for completion in 1942, are still alive in the various natural science departments on campus.

The arboretum, which was first begun in 1938, is located south of Lincoln Way on the west side of Sheldon Avenue. It extends nearly a mile and ends near the agronomy farm.

The piece of land is one of the few natural undisturbed areas owned by the University which still exists within walking distance of central campus.

Development of this area would help solve the problem of lack of outdoor teaching laboratories for the botany, horticulture, landscape architecture, forestry, and zoology departments.

The original arboretum was to cover 70 acres and was to be planted with 2,450 species and varieties of trees and shrubs native to the Midwest and others adapted to this region.

The first work was done by the local Civilian Conservation Corps and National Youth Association with help from the college. Ten footbridges, a concrete culvert, and a cinder path were constructed. A creek, which flows through the land, was widened in three places by dams built for erosion control. Only a few of the planned 54 forestry plots were established.

Included in the completed plantings were groups of pines, junipers and other evergreens now a part of the Maney Memorial Park. This memorial was established to honor the late Thomas Maney, professor of horticulture at Iowa State. Maney took active participation in the development of the original arboretum plans.

Work was discontinued some years ago apparently due to lack of funds, but plans are again stirring in hopes of finally completing the project.

Two years later the paper reported on the deplorable conditions of the Arboretum: (1)

> "It's the shame of Iowa State." That's how Prof. John M. Aikman, botany, describes the University arboretum.
>
> Aikman, who was one of the arboretum's major enthusiasts, pointed out the arboretum's five bridges and memorials are "going to Pot." He condemned the University as lacking the "missionary spirit" necessary to gain better coordination within the departments concerned. "If you look at Wisconsin's arboretum and then come back here it makes you sick." Aikman wondered why more hasn't been done considering the number of people interested in its development.
>
> The arboretum is located southwest of the main campus along the valley of College Creek. The bulk of it is sandwiched between Sheldon Avenue on the east and State Avenue on the west.
>
> It contains some 74 acres of bottomland, side hills, and crests of varied soil types and plant materials. It extends along the creek on both sides for about one mile.
>
> Horticulture director E. L. Denisen said the department has taken over the maintenance and upkeep of the Maney Memorial, an area in the arboretum composed of benches and juniper trees dedicated to the late horticulture director, Dr. Maney. Denisen expressed concern about its future.
>
> In two years the horticulture department will transfer all mowers and maintenance equipment to its new farm north of Ames.
>
> Denisen regards the name arboretum as unfortunate because "the plants have gone wild or deteriorated and the arboretum is of no real use as such. Only Girl Scouts and Brownies use it for picnics." Denisen said, "the arboretum is like someone's back yard needing a good deal of upkeep, what can you do about it but complain?"
>
> Prof. Robert W. Dyas, landscape architecture, pointed out that cars drive on the mowed sections, that the largest tract of land is unkept, that the creek smells badly, and that most of the signs used for labeling have disappeared.
>
> Dyas still has some hope for the future, pointing out that the plans to complete the arboretum are still on the University agenda.

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(1) Iowa State Daily, June 29, 1967.

As originally planned in 1953 there was to have been some 2,450 individual species and varieties of plants, all labeled. The arboretum was to have been used as teaching laboratories by individuals of at least seven university departments: botany, agronomy, horticulture, forestry, landscape architecture, zoology, and entomology.

A committee representing the seven departments in the spring of 1961 and again in April of 1962 stated that there are only a few natural areas still existing within walking distance of central campus on University owned property. The problem is to preserve these few areas without interfering with the future development of the University and city.

Prof. R. E. Buchanan, who was the director of the experiment station when the arboretum was begun, said 12 acres located between Wilmoth and State Streets have been sold to the city for a proposed west side junior high school, and the remaining portion is not being maintained as an arboretum. Buchanan blamed the administration for its lack of interest.

Aikman suggests planting the arboretum as an actual prairie, using prairie grasses and natural plant materials. According to Aikman this would require a minimum of maintenance. Both Aikman and Denisen cited the need for stronger central control over the arboretum. "We should either decide to have an arboretum or not to have one," Aikman concluded.

By 1979 maintenance had improved but the early dreams of the nineteen-thirties never materialized as originally planned.

CEMETERY

Concern for the final resting place for college faculty was expressed by the Board of Trustees at its meeting of August 16-19, 1876. It was then "Ordered, That five acres of land be surveyed under direction of President Welch; that the same be set aside for the purposes of a College Cemetery and be transferred from the department of Horticulture and Forestry to the department of Ornamental Grounds."

It seems reasonable to assume that the selection of the site was then made by President Welch. In 1883 an appropriation of $75.00 was made for fencing the cemetery. No road served the cemetery until 1888 or 1889. The Biennial Report for those years states that provision was made for the construction of a road sixteen and one-half feet wide running from the cemetery gate east until intersecting the road running north from the College. The new road was the first section of what has now become Pammel Drive. At that time the road north from the College was on the west side of Old Main and ran just west of what is today the center line of Gilman and Spedding Halls.

In November 1895 the Trustees authorized enlargement of the cemetery "as much as necessary for cemetery purposes," and authorized an expenditure of $100.00 in order that "the cemetery be beautified and ornamented and thoroughly cared for."

Funds for completion of the cemetery plat were made available in 1904. In the 21st & 22nd Biennial Reports, 1903-1906, references were made to inadequate care of the cemetery.

In 1906 the President was authorized to assign lots "as occasion arises" and report such assignments to the Board "in order that they may be entered of record." The first regulations governing the use of the cemetery were adopted by the Board of Trustees at their meeting of April 12, 1907. They were stated:

> The privilege of interment in the College Cemetery shall be restricted to the College Faculty and their immediate connections.
>
> The general care and supervision of the Cemetery shall be vested in the Public Grounds Committee.
>
> The Public Grounds Committee may assign lots in the College Cemetery subject to the following conditions:
>
> > No coping or enclosures will be permitted around lots.
> > Burial lots shall not be filled above the established grade.
> > The surface of the grave shall conform to the lot grade.
> > Corner stones must not project above the surface.
> > Plans of proposed monuments shall be submitted to the Public Grounds Committee for approval.

The foundation for monuments shall be of the length and width of the monument and the floor for the same shall be level with the bottom of the grave.

The construction may be either of Portland cement concrete in the proportion of one, three and five or rubble stone laid in one to three Portland cement mortar.

The planting, pruning and removal of all trees in the Cemetery shall be under the direction of the Public Grounds Committee.

To insure the perpetual care of the lots the lessee shall be required to deposit with the College Treasurer previous to the first interment a sum equal to ten cents per square foot multiplied by the number of square feet in the lot assigned. This fund is to be invested by the College. Its proceeds are to be kept under a separate account and expended for the care of the said lot, under the direction of the Public Grounds Committee and bills for the same are to be paid under the rules of the College Board of Audit.

It is recommended that persons now holding lots in said Cemetery be requested to conform to the above named regulations.

Some modifications of those rules were made in 1915.

Current regulations preclude assignment of lots to anyone with less than fifteen years of service to the university, and to those of less than assistant professor or equal non-academic rank. Lots are not deeded to the families, but remain university property. Permanent privileges are granted. Today less than one-sixth of the 240 plotted lots remain unassigned.

LAKE LA VERNE

The first reference to a lake on campus appeared in the November 19, 1914, edition of the Iowa State Student:

> O. C. Simonds, the well known landscape gardener of Chicago, whose services have been donated to the college by LaVerne W. Noyes, graduate of the class of '72, spent the first 3 days of this week studying the needs of the campus.
>
> He gave most of his time to the south part of the campus, which he thinks could be maintained and developed as a park, as has been the policy up to this time. Mr. Simonds thinks it might be possible to make a dam in College Creek a short distance above the new culvert under the interurban line. If his suggestion is carried out there would be a lake about 500 feet long and 100 to 150 feet wide. This would extend nearly to the new concrete bridge at the Welch street entrance and cover most of the low ground which is now in grass.

The "culvert under the interurban" was just a few feet east of Lynn street at Lincoln Way (using current street names).

Action was taken quickly, for just a month later the paper carried this report:

> "When students come back from vacation a skating pond will be ready for them," said Supt. Thomas Sloss today. College Creek is to be dammed just above the interurban bridge. The water will be raised two feet. This will make a pond which will extend nearly to Champlin's bridge.
>
> Superintendent Sloss has men working on the dam at present. The Cardinal Guild will keep the ice cleared of snow. It is thus assured that the skaters of the college will have a chance to use their skates this winter.

On January 9, 1915, the paper noted that over 200 people had enjoyed skating on the new pond the previous night. That "pond" was welcomed by the skaters, but it was considerably less elaborate than Mr. Simonds' idea of what the lake should be.

President Pearson presented the Board of Education, at its meeting on June 15, 1915, letters from Simonds to Noyes and from Noyes to the Board setting forth the concept of a lake. Simonds explained how the work might be accomplished and what needed to be done. Dr. Noyes' letter is of particular interest and significance:

> If agreeable to you, I shall be glad to bear the expense of constructing a lake at the Iowa State College Grounds in the valley

south of Dean Stanton's house, substantially in accordance with the accompanying design. If you accept my offer, I should like to have the work prosecuted under the direction of Mr. O. C. Simonds. The making of a lake is, in many respects, like painting a picture, and the same freedom should be given to the one who designs the outlines and shapes the banks that would be given to the painter of a landscape. The work ought to be finished in time for planting the coming fall, and so should be commenced without delay and followed up as outlined in the accompanying discussion and letter signed by said O. C. Simonds.

Upon receiving from you a letter stating that your Honorable Board approved of my offer, I will deposit from time to time, with the college Treasurer, such sums as may be needed up to ten thousand dollars, and payments can be made by him upon orders signed by O. C. Simonds, or his representative.

The Board unanimously approved acceptance of "the generous offer" and allocated $500 to help fund the cost of a new entrance drive from Boone Street to "the main drive near the Music Building" (Sanitary Building). That is approximately the present drive west of the Union between Lincoln Way and Union Drive.

Construction of the new lake began in September and was substantially completed, except for plantings, by December.

The name "Lake LaVerne" was suggested at a Story County Alumni meeting on May 10, 1916, and was formally approved by the Board the following month.

The improvements of the lake did not last long. Spring rains, and sometimes floods, brought in large amounts of silt. Various methods were attempted -- digging, dredging and hosing -- to reduce the amount of sediment, but none was successful. Some years there was enough water to permit skating when the lake froze in the winter. But much of the time there was only a disreputable creek bed often referred to by the students as "Lake LaMud."

Engineering plans for modifications to improve the appearance were started in 1928 by Dean Marston, but funds to implement them were not forthcoming until 1933 when a Civilian Conservation Corps project provided manpower to begin construction of a channel to by-pass the lake when silt-laden runoff from the creek occurred. This was a concrete conduit installed on the south side of the lake. That work was completed and the lake filled the following spring. Stone rip-rap was placed on the banks in 1937 and 1938 along with up-stream silting beds.

The by-pass conduit did not eliminate all silting and by 1959 it became necessary to dredge the lake to remove the accumulation of sedi-

ment. This was done in the spring of that year by two alumni, R. R. Manatt '21 and J. D. Armstrong '37, without charge to the college. Modifications were made in the by-pass system in 1963.

Since then the lake has been well maintained and is a campus attraction, especially when the swans, Lancelot and Elaine, sometimes with four or five small cygnets accompanying them, grace the surface of the lake.

LANDSCAPING

Including ORCHARDS and GARDENS

(Also see Campus Planning, Pammel Woods and Arboretum)

On July 4, 1859, the early settlers of Story and Boone counties held a picnic to celebrate the purchase of the land that was to become the Iowa Agricultural College and Model Farm. The gathering was in the area just east of what is now the cemetery at the edge of the woods along Clear Creek. Between there and Squaw Creek where some trees were seen there was only rolling prairie without shade of any kind. The beauty of today's campus could not have been envisioned at that time.

The First Annual Report of the Secretary, for the years 1858 and 1859, stated "We must also improve the farm with additional breaking, fencing, planting of trees, orchards and gardens." By 1862 it could be reported that "About one hundred and twenty acres are under good fence, and about 80 acres under cultivation, part of which is occupied with an orchard of about six hundred apple trees."(1)

Peter Melendy, Superintendent in 1865, wrote:

> There have been several hundred ornamental and shade trees, and shrubbery, set out. I deemed it essential to make an ample lawn, with here and there a tree, with shrubs for fragrance, and evergreens to relieve the golden of the summer day; with bordered walks and quiet nooks, the embowering shade of trees, with beautiful trailing vines, and shrubs, and flowers....By the judicious employment of trees we may effect almost any amount of alteration and improvement within the scope of landscape scenery.
>
> There has been a large lot of small evergreens experimented with the past year, which have not done well. We have now about 160 Cedars that are growing nicely, 600 Balsam Fir, Norway Spruce, White Cedar and Hemlock that are doing well, and will, if care is taken with them, make good symmetrical trees.
>
> There has been about one mile of willow cuttings set out on the north side of the rail road, and along the west side of the farm. The season was favorable for starting the cuttings, and if they have a fair chance this coming season, will make a fine belt for a wind breaker. We would recommend the planting, on the north line of the farm the entire length, this fine willow for a screen background and protection from north and west winds. The cuttings planted this year were obtained by Mr. Foster, from Overman &

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(1) Third Annual Report, Feb. 6, 1862.

Edwards, of Illinois, as a gift to the farm. The cost was but for the transportation.

The following is a list of grapes that have been set out the past year: 6 Delawares, 2 Isabellas, 4 Hartford Prolifics, 4 Logan, 4 Diana, 6 Rebecca, 2 Iowa. We have mislaid the list of fruit trees.

The amount of tame grass sown on the farm is not large, and I would recommend the seeding of all the meadows and pastures in tame grass as soon as it can be done. Whole amount of land sown, 43½ acres. On old ground -- Timothy, 12 acres; Timothy and Clover, 4 acres; Clover and Blue Grass, 2½ acres; sown on prairie soil and harrowed in, and is doing well, 25 acres.

I would recommend the platting and dividing the farm into fields and lanes according to the Superintendent's plat. I think the land on the south side of the orchard fence should be used as lawns for our fine stock, to be kept at the proper seasons, and that we group native and foreign trees promiscuously through the ground, taking for the center of the group, the oak and the chestnut, which are among the largest and the noblest of our trees; the spruce, hemlock, ash and beach, locust and hickory, the cottonwood, sycamore, walnut, soft maple -- the arrangement of these should be the subject of careful study. Groups should be always composed of one principal tree, larger and taller than the rest, with others grouped around as subordinates. Plant trees most certainly, and wherever they would be a beauty or a refreshment, let their roots begin to pierce the mould above which their branches may year after year wave with a fascinating grace and a variety -- like which there is nothing else in nature.(1)

In 1868, H. M. Thompson, Superintendent, reported to the Board that "The Orchard produced some few apples but of inferior quality owing to the drought. The young vines also produced a few grapes, which with currants, gooseberries etc. were all used in the House."(2)

At the May 1868 meeting of the Board it was resolved "That the Building Committee be instructed to procure immediately the services of a first class landscape gardener to lay out the grounds of the College Farm with a view to the exact location of the Professors residences and the beautifying of the grounds." The following November the Board asked the Secretary to "notify the Landscape Gardener that the Board

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(1) Sixth Annual Report ... for 1865.

(2) Minutes Jan. 13-17, 1868.

do not require his services he having failed to furnish plans in proper time so agreed upon with the Committee." At the same meeting approval was requested to relocate the orchard to the west side of the grounds.

In his report at the January 1870 meeting of the Board Thompson said

> A young orchard of 300 apple trees were planted on a piece of land selected by Dr. Townsend near the west end of the farm. It is sheltered by the natural timber on the west and north & is I think the most suitable site or location for a successful orchard on the farm....
>
> Of the evergreens that had been under cultivation on the farm, a considerable number were very successfully transplanted under the direction of the President by students into ornamental groups on different parts of the College grounds and already make a very marked improvement in the appearance of the landscape.

It was also reported at the same meeting that the terrace in front of the College building had "its three sides neatly turfed, its surface covered with gravel and finished with a border suitable for the planting of shrubbery next spring."

The following order was adopted by the Board in July 1874:

> That the Professor of Horticulture with the advice of the President, prepare ground N.W. of the College buildings for an arboretum and make such arrangements for contributors, as they may deem advisable.

In June 1875 the Board ordered

> That the timber in the northwest corner of the Farm lying south of the rail road be held as ornamental grounds and the same is hereby placed in charge of the Horticultural Department; And it is further ordered, That the Professor of Horticulture shall at the proper season prepare a strip of ground fifty feet wide along the entire length of the north side of the farm lying south of the railroad and plant the same in timber in the spring of 1876.

The Aurora in the August 1875 issue observed "The college has received a one-horse lawn mower. We have examined the machine to our satisfaction and find that where the grass is of proper length it does splendid work."

J. L. Budd summarized the then existing condition of the orchards and gardens in the Biennial Report for 1876-77:

> The original fruit trees, small fruits, etc., planted in this garden for use of farm household, being either entirely dead or in a dilapidated, sod-bound condition, the work was attempted last spring of replanting, and replacing it in respectable shape.
>
> Nearly one hundred cherry, plum, and apple trees were planted, and all have made fair growth. The grape vines, raspberries, currants, etc., planted, have also under good care, made a splendid growth, and bid fair, if continued attention be given, to furnish an abundant supply of fruit in a very short time to this department. The vegetable garden belonging to the farm house, has been managed in connection with the care of the fruit plantation, and has entirely supplied the wants of the large family. A supply of potatoes for nearly the whole year is also now in cellar from this garden.
>
> The first orchard set out on the College farm occupied a plat near the farm house. This plat has necessarily since become a part of the ornamental grounds. The few trees that could be left, are now fine symmetrical specimens, even bearing a fair crop during the past unfavorable season.
>
> The orchard as it now stands contains about twelve hundred trees, planted and re-planted at various times since 1869.

The last paragraph refers to the orchard on the west side of the grounds.

In March 1878 The Aurora gave this account of a new development:

> Prof. Budd has commenced in earnest with his horticultural department this spring. The new Russian orchard which he has started will contain over twelve hundred trees, grafted with six hundred varieties from northern Europe. He also has seventy thousand grafts which will be immediately put into a nursery on the farm. The next year he will follow this up by taking hold of the plums, grapes, raspberries, currants, etc.

A re-platting of the grounds was made in 1887 and specific areas were allocated for "the farm on the one hand and the horticultural and ornamentals on 'Public Grounds' and steward's garden on the other." The map showing the divisions referred to is still in existence. An accompanying tabulation is of interest:

Land occupied by horticulture, ornamental grounds, etc.	130 acres
Land occupied by sloughs, creeks, forests, creek bed, bayous, roads, etc.	300 acres
Total land not subject to use for farming purposes (about)	430 acres

Total good land arable and pasture used in actual farming (about)	465 acres
Total College domain	895 acres

The original Russian Orchard was completely removed in 1888 by which time all but a few trees had died out. In June of that year The Aurora noted that

> The committee on public grounds....have made some changes in old groups, taking out trees where they are too plentiful or out of order, and making new plantings where needed. The cottages have long been neglected, but we are well supplied with groups of trees now. The coming generation will find the college of the I.A.C. a beautiful place.... We notice a small group of oaks between the main building and farm house, the first of the kind on the grounds.

Professor Budd wrote, with obvious pride, in a report in the 14th Biennial Report for 1890-91:

> In laying out and planting the public grounds the thought has been kept in mind of combining landscape effect and practical instruction to students and visitors. In the form of groups and isolated specimens we now have about every tree and shrub that will succeed fairly well in our climate.
>
> On the campus, and over the horticultural grounds, varieties and species are labelled and constitute a constant object lesson on a large scale for the study of students and visitors. Taken as a whole the trees and shrubs of the grounds form the best arboretum found west of the Arnold arboretum at Boston. With embellishements, we could soon say that, as a park and landscape garden, our public grounds are not equalled in the west.

A similar expression of pride in the campus, though on a lesser scale, appeared in the July 1892 Aurora:

> The finest grove of evergreens on the college grounds is found on the grounds surrounding the houses occupied by Profs. Osborn and Pammel. It is hereafter to be known as the Pinetum. The trees are not only beautiful examples of their kind, but there are a good many species represented. This spring a dozen additional species have been planted. As most of these are hardy the college Pinetum will contain nearly all conifers that will grow in Iowa.

The houses referred to in the above paragraph are those now called Osborn Cottage and Sloss House.

The Student, on June 15, 1897, editorialized on the Russian olive tree:

> The wild olive is distinctively our college tree. With its silver leaves, its yellow blossoms and its black stems, it shows a perfect combination of our college colors. We are thoroughly gratified that Prof. Budd introduced these beautiful trees among the native ones upon the campus.

In the spring of 1902, on President Beardshear's recommendation, shade trees -- 90 hard maples and 70 white elms -- were planted along what is today known as Stange Road. O. C. Simonds was retained in late 1902 to advise on building locations and other matters of campus planning. His contributions are covered in the section "Campus Planning." He also supervised installation of new plantings.

Responsibility for the maintenance of the Public Grounds was assigned to the head of the Horticulture department by the Board in July 1904 but in August of the same year a Public Grounds committee was established to supervise the care and development of the grounds.

The personal gardens of faculty members living on campus received the attention of the Board in 1905 when these rules were adopted:

> No poultry will be allowed about the houses of those living on the campus. Vegetable gardens will be allowed on the campus only by special permission of the Board of Trustees, exception the case of lettuce and other salad crops.

Those residents were also "requested to secure the advice and cooperation of the Head of the Horticultural Department in any planting or lawn matters which they may contemplate making."(1)

In the Biennial Report for 1903-05 is a general summary of the then existing condition of the campus and recommendations for improvement. Parts of that concerning walks, athletic fields, roads and bridges are included under those headings elsewhere in this volume. Specific reference to the landscaping needs follows:

> A large part of the trees on the campus consist of soft maple and Scotch pines. Both of these are quick growers but very short lived trees, and are now rapidly dying out. A definite appropriation should be made for replanting. The border plantation on the old west lines of the campus just back of the Library Building and west of the Faculty Club House is also rapidly dying out. In the erection of new Engineering Hall the boundary of the campus has been extended considerably beyond this, and a new

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(1) Minutes March 11, 1905.

> border plantation should be established on the line west of Engineering Hall. The erection of these new buildings has also enlarged the area of the campus considerably and the maintenance funds should be increased proportionately.

For clarification of the above, the Library Building is Morrill Hall, the Faculty Club became Farm Boarding Club after it was moved, and Engineering Hall is Marston Hall.

In the Biennial Report for 1905-06 the following reference to an arboretum is included:

> The arboretum was at one time much more extensive and contained a better collection than it does at present. Inroads upon it have been made from time to time in locating new buildings and roads and in extending the campus. It was designed to contain a pretty complete collection of economic and ornamental plants of interest in horticulture and forestry. It is now planned to make that part which pertains to forestry a part of the Forest Garden. This now contains coniferous trees only, but it should be developed by adding as complete a collection as possible of deciduous trees.

The exact location of that arboretum is uncertain but it is thought to have been in the general area of the Campanile. The Forest Garden is probably the area earlier referred to as the Pinetum.

The Olmsted Brothers were employed as consultants in 1906. Their report, discussed under campus planning, was primarily concerned with building locations and general campus development and gave little direct attention to the plantings on the campus except to propose replacement of the soft woods by longer lived trees.

In 1908 the line of sycamores was set out along the cinder path between the campus and Ames, and other young trees were put in elsewhere on the campus.(1) The next spring the paper reported that "The Hort. department has just finished planting five thousand white pine trees in the forestry plots on Squaw Creek."

A new policy in landscape development came in 1909, as recorded in the ISC Student on June 7:

> For the coming year Pofessor A. T. Erwin will give his entire time to the ornamental and landscape work of the college and severs his connection with the experiment station work. As a part of this plan he has been made superintendent of public grounds and he is to use the campus as a practical laboratory in connection with the class room work in this subject.

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(1) ISC Student, May 4, 1908.

Christmas 1914 saw electric lights on the pine tree in front of Beardshear Hall (then Central) for the first time, and a special program was held on December 20. Through the generosity of Dr. LaVerne W. Noyes the services of O. C. Simonds were made available to the college during the years 1915 through 1917. His work in developing Lake LaVerne is covered under that heading. He also worked in an advisory capacity with college personnel in the planting of many trees and shrubs at other locations on the campus. (See "Campus Planning" and "Lake LaVerne.") Early in 1917 Dr. Noyes proposed construction of a second lake on the campus, to be approximately in the area now used as the parking lot east of Knoll Road and south of Union Drive. That plan never materialized.

Plans for a perennial garden were announced in the Iowa State Student on March 30, 1917:

> This spring Prof. A. S. Thurston of the Horticultural department will start a flower garden consisting of herbaceous perennial plants on the plot northeast of the Plant Industry building. This plot has been used as a sheep pasture up until last fall.
>
> All of the plants will be hardy to this climate and will be perennial flowers. Prof. Thurston expects to have as many as 250 varieties of blooms which will be laid out in 12 beds, twelve by fifty feet.

On February 25, 1919, the same paper reported:

> Supt. Thos. Sloss, Prof. F. H. Culley, associate professor of landscape architecture, and Mr. Simonds will have charge of the plans for the planting of various varieties of shrubs, trees and bushes. Many of those planted during the past few years were only temporary and will be replaced this year by a more permanent variety.

A year later, at the April 1920 meeting the Board took action of a similar nature:

> The President of the College was authorized to appoint a committee, including the superintendent of Buildings and Grounds and the professor of Landscape Architecture, to have charge of the plantings on the campus, but to act under the direction of the President of the College.

Removal of dead and dying trees and shrubs and their replacement with new specimens has been an ongoing activity on the campus almost from the beginning of the college. No attempt is made here to record the frequent allocation of funds for landscape improvements entered in the minutes or articles about new plantings included as news items in the student paper. A typical account appeared in the Iowa State

Student on February 11, 1933:

> One hundred fifty-five distinct species of trees are growing on the Iowa State campus, according to Asst. Prof. R. R. Rothacker of the Landscape Architecture Department.
>
> These include 32 species of coniferous or cone-bearing trees and 123 species of deciduous or leaf-dropping trees. Some of the less familiar species are the shadblow, Chinese tree-of-heaven, Russian olive, magnolia and tulip tree.
>
> Of the well-known species, there are 10 varieties of willow, 11 of oak, 10 of maple and 6 of birch.
>
> ....Each year the department recommends setting out certain trees and supervises their planting by the Department of Buildings and Grounds. Last year 150 trees were set out.

In April of that year American lindens were planted north of the Landscape Architecture building to replace the European lindens which had died the year before. The new trees were furnished, without charge, by the Henry Kohnakie Nurseries of Painesville, Ohio.

During the winter of 1933-34 a project under the Civil Works Administration included the transplanting of many trees.

The Iowa State Student on October 30, 1934, carried an excellent account of some of the earlier plantings and is worth including here:

> Many of the old trees which are now campus landmarks were planted while the present site of Dean C. F. Curtiss' home was the location of the old stagecoach tavern. In front of Memorial Union is a tree grafted from the original Washington Elm and brought here by Prof. T. J. Maney. A row of soft maple stumps, 2 and 3 feet in diameter were left about the flag pole on central campus and were cut down later when the inner circle of hard maples had become large enough.
>
> The former boundary of the college farm land is marked by a line of honey locusts which runs past the women's dormitories. Another row of trees just south of the walk from the Landscape Architecture Building to the cinder path, marks part of the original fence rows of the farm.
>
> Several groups of trees remain to mark the location of the old forestry test plots. The trees in these plots were planted in rows, but many have died. The Scotch pines southeast of Memorial Union were planted when the old Veterinary Hospital was located on the site of the Union. A grove of small trees has recently been planted to fill in where others have passed from existence.

Larch Knoll, near the Cranford Apartments, was a test plot for evergreens. Plans are for trees to be replanted on this hill to give Lake LaVerne a proper background.

An old apple tree and a pear tree east of Margaret Hall are all that remain of the old college orchard and vineyard. Physics Building now marks the spot of the old nursery orchard. The Armory polo field was formerly another orchard plot, and the land east of the Campanile was used as a nursery area.

Dr. Pammel was instrumental in having groups of trees dedicated to prominent individuals in the history of the college. These groups are marked by large boulders with bronze plates fastened to them. Dr. Pammel was also responsible for introducing more native trees on the campus, and the Landscape Architecture Department placed them in various locations.

Among the foreign trees are the Russian Mayday tree, which blooms in early spring; the Siberian pea tree and shrub, and the Chinese elm.

The redbud trees in front of Home Economics Hall were brought here and placed by Professor Culley, the first head of the Landscape Architecture Department.

About 5 or 6 years ago it was found that drouth, disease and difficult growing conditions were killing out many of the old trees. The Department of Landscape Architecture under the direction of Prof. P. H. Elwood, has adopted a long time plan of planting oaks and hard maples, trees that will be long lived, and putting in some short lived trees till the others become larger. Evergreens are being planted each year to gradually extend out and make all the campus as finished as the central campus. In connection with this plan, more planting of trees and shrubs will be done about Lake LaVerne.

At present there are on the campus 93 kinds of trees belonging to 23 different families. Among the more common and more largely represented families are the willow, poplar, walnut, birch, oak, elm, mulberry, rose, pea, maple, dogwood and ash.

The stone wall with its flowers, at the hill on the north side of Union Drive and Knoll Road was well described in the Iowa State Daily Student on May 22, 1946:

That walls may be decorative as well as useful is proved by Iowa State's well-known flowering wall at the corner of Knoll road and Union drive.

This garden spot was planted with perennials in 1940 after the retaining wall was built with the help of WPA labor.

Niches between the rocks contain soil which was worked in around the stones to connect with the earth in back. Now and then plants have died and new perennials and annuals have taken their places.

The various flowers tell their own seasonal story each year. Spring finds the garden turning from brown and grey to grey and a thin film of green and finally to shades of blue and fuchsia lighted by the grey background.

Summer clothes the wall with Missouri evening primroses, coral bells and violet queens, giving a different range of color. California poppies, flaunting their orange and gold, greet students as they return to school each fall.

Through the three seasons the background flower remains the same --blue catmint. Waves of this flower lead the eye along the wall and form "pockets" at intervals.

Along with the campanile the flowering wall has become a feature of Iowa State, changing yet always the same.

New formal gardens were set out east of the greenhouses in 1952 to replace the perennial garden on the site for the Agronomy Building. "The garden will be on two levels. Cannas and tropical bedding plants will be planted next to the greenhouses, with annuals finishing the higher level. The lower level, two steps down, will be devoted to perennials."(1)

Dutch elm disease first appeared on the campus in 1961 and although every effort was made to eradicate the beetles causing it, the next few years saw the removal of practically all of the elms on the campus.

Relocation of the horticulture gardens from near the greenhouses was foreseen in 1965 when plans for Bessey Hall were initiated. The new site north of Sixth Street and east of Haber Road was selected at that time, but the actual move was not completed until 1969.

As new buildings have been erected on the campus each has been landscaped appropriately under the direction of the campus landscape architect, in full recognition of its relationship not only to the new structure but with concern for its appropriateness in conjunction with other campus planting.

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(1) Iowa State Daily, February 21, 1952.

A recurring maintenance problem arises annually as students, in an effort to save a few minutes of time, take short cuts across the grass and make paths in the lawn. The problem has existed and editorials condemning the practice have appeared in the student paper since the nineteenth century. Snow fences erected in the fall and left standing during the early spring have helped to keep some paths from completely killing all grass, but that method has not been completely successful. The problem remains.

The firm of Johnson, Johnson & Roy, retained in 1967, developed a long-range campus plan which is discussed under "Campus Planning." Their contribution to landscape planning was minimal.

The Physical Plant carries the primary responsibility for design, planning and planting of landscape materials at the present time.

PAMMEL WOODS

The northwest corner of the college grounds received little attention during the first forty years of the college history. The brickyard of 1860 had minimal effect. The cemetery was established in 1876. (See separate section on those two subjects.) In June 1875 the Board had ordered "That the timber in the northwest corner of the farm lying south of the railroad be held as ornamental grounds and the same is hereby placed in charge of the Horticultural Department."

In July 1889 The Aurora noted that "part of the timber land near the college cemetery (has) been cleared away, and the land is now growing crops."

The earliest suggestion for maintaining the area as a practical outdoor natural habitat appeared in The Aurora for June 1893:

Some Reasons Why We Need an Arboretum

> That students may be able to study botany in a practical sense, they should have the advantage of studying all plants in their native conditions. The study of an herbarium specimen is as dry a subject for a beginner as the specimen itself is. Besides a beginner should have access to the native plants first.
>
> The cultivation of all tillable land and the pasturage of all that cannot be tilled destroys or drives out a large number of our native plants....
>
> During his last college years Dr. Welch took considerable interest in the case of a few fine specimens of White Oak in the cemetery. A year or two ago some person with a larger stock of greed than sense, cut one of them partly down to get a handful of beecomb. The other specimens are dying from exposure, since the timber to the south and east of the cemetery has been grubbed out.
>
> True we have many trees represented on our campus and in the nursery, but if the ground where they stand is wanted for other purposes, the mattock and grubhoe is applied without reference to the value of the plant, or an attempt to save it. There is one single specimen of Hemlock left on the grounds, where I am told there was once a group of them, and that group happened to be in the way of a graceful curve in a road, so the group was grubbed out.
>
> To the Sophomore in botany the arboreal are not as useful as the herbaceous plants. The Sophomore must go beyond the old "two-mile" limit to find prairie, or woodland plants that are good representatives of what the plant is, as described in the manual.

A few distorted dwarfed speciments can be found in the woodland meadows on the farm.

....it is just as essential to the work of the student, to have an arboretum as it is to have a campus, athletic grounds, or experimental farm lands....

The state ought to have a place where the native plants could be grown and preserved. Aside from an economical standpoint a well arranged arboretum would be an ornament well worth the having. Hence it would not only benefit the department of botany, but the state and college as a whole. It should be the duty of the college to work for and help maintain an arboretum.

There is a piece of college land on Clear Creek, to the north and west of the cemetery, that is too rough to be of much value for farming purposes, in fact too rough, if the timber was removed to make good meadow land; which contains nearly as many of our native plants as any woodland to be found on the farm. Here, with a little care and expense, they could be preserved. There is a natural bend in the creek to the north of the cemetery that could be taken advantage of, to make an artificial lake (that would not leak!).

....the right to use that land for such a purpose, with a small amount of means would accomplish something. Our native plants will shift for themselves and do well if given half a chance.

Whether that editorial in the paper initiated response or merely reflected generally accepted student and faculty thinking of the period cannot now be determined. Whichever was the case, at the Board meeting of November 12-15, 1895, two policies affecting the area were adopted:

First: That there be set aside for forestry and park purposes the remainder of the land belonging to the College lying west and north of the College cemetery bounded on the south by the extension of the south line of the College cemetery westward to the public road, on the west by the public road, on the north by the railroad and on the east by the irregular line bounding the cultivated land of the farm extending from the railroad to the southeast corner of the College cemetery.

Second: That it be ordered by the Board that no trees on said tract be cut and that notice to this effect be posted upon the tract.

The following year the May 26, 1896, issue of the IAC Student carried this account about the same area:

> Some of us have heard rumors that the woodlands to the northwest of the grounds were to be made over into a park. The gist of the matter seems to be this: the trustees have decided to begin in a small way the task of making this part of the ground beautiful. Work will first be done in that portion of the tract lying northwest of the cemetery and this side the stream, extending to the stone arch. Paths will be made through the present tangled growths and Prof. Pammel will begin a system of scientific forestry, culling inferior trees and planting more valuable ones in their stead. The stream too will have trees planted along its banks. We rejoice at the commencement of this new enterprise which is but a continuation of that policy which has already resulted in making the I.A.C. campus almost a synonym for beauty.

A year later the Public Grounds committee reported to the Board that "we have examined College Park and find that it would require a large expenditure of money to make such improvements as would be any practical benefit, and as we have not any funds at our disposal at this time, would not recommend any improvement at present."(1) During 1913 and again in 1914 a temporary camp was set up "in the woods near the college cemetery" for prisoners from the Anamosa reformatory. They lived in tents and were employed on various campus improvement projects.

At the April 13, 1920, meeting of the Board President Pearson submitted the following report concerning the area then called College Park:

> This area is not included in the Campus proper nor is it wholly under the jurisdiction of the Farm Department. In a general way it has been looked after by the Superintendent of Buildings and Grounds. The area in question comprises about sixty acres located at the northwest corner of the campus and extended to the North Western Railroad tracks. It is mostly covered by woods. At present this tract is in bad condition and it is discreditable to the institution and carries a fire danger on account of dry grass and weeds along the railroad. To a certain extent these have been kept down by grazing. The grazing, unfortunately has had a bad effect on other features of the woods and has largely destroyed their educational value.
>
> It is proposed now to let this ground and the trees on it serve as an outdoor laboratory for the departments already named. It would provide valuable material for the Botany Department. We could establish in this area also a grass garden in cooperation with the United States Department of Agriculture and for the special use of the Botany and Plant Pathology Section of the

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(1) Minutes, May 18-21, 1897.

Agricultural Experiment Station. This work greatly interests Dr. Pammel and promises to be of high value to the state.

The Board responded to the report:

> Upon the recommendation of President Pearson, the grounds designated above and known as College Park are to be transferred to the management of a committee to be appointed by the President of the College, the said committee to include representatives of the Botany, Forestry and Landscape Architecture Departments, with the understanding that the expenses will not exceed $800 a year, which will be paid out of the fund entitled Maintenance and improvement of Public Grounds.

The Board action was promptly respected as seen in the April 23 issue of the Iowa State Student:

> Work will be commenced immediately on the college park, which is located north of the experimental plots, in an effort to get it into the best of condition. Trees will be trimmed up, shrubs will be planted and a general cleanup will be made.
>
> The work is under the direction of Dr. L. H. Pammel, Prof. G. B. McDonald, Prof. F. H. Culley, Prof. A. T. Erwin and Supt. of Grounds Thomas Sloss.
>
> The park will be used as a laboratory for the departments that are represented on the committee. Walks will be laid out to the park and will be built when funds are available.

During the next three or four years the Military Stables and Shed and the Powder Magazines were built on the east edge of the timber area.

College Park became Pammel Park by Board action on December 12, 1939. It honors Dr. L. H. Pammel who died in 1931 after many years of service to the college. Today the area is more frequently referred to as Pammel Woods.

Since that time efforts have continued to preserve the area in as natural a condition as possible. Richards and Landers, in their 1970 report on Pammel Woods, have adequately documented the developments to that date. In the last decade little change has been made.

ROADS and BRIDGES

In thinking about the roads to and on the campus it must be remembered that during all of the nineteenth century and well into the twentieth travel on those roads was entirely by horse-drawn vehicles and a good gravel surfaced road was the best that anyone then expected. But that goal was not always achieved during that period. The Minutes of the Board and the student papers record the frequent need to improve roads and repair or replace bridges damaged by floods or high water. This account will not attempt to incorporate all of those changes but will record only the more significant developments leading up to the current road system serving the campus and the city of Ames. This can best be done under separate headings dealing with the roads within the boundaries of the campus and those serving primarily as access routes to and from Ames. (Walks for pedestrians and the part played by railroads are discussed elsewhere in this volume.)

A "Map of Agricultural College Farm," probably made in 1867,(1) shows the college land with three buildings (Main, the Farm House and the Cattle Barn) and no roads except "County Road" on the south side. That road is on the line of today's Lincoln Way.

The original access to the farm from the county road was described by Professor Charles E. Bessey in an address in 1908:(2)

> It was a raw February day on which I reached the quite forlorn looking village of Ames. It impressed me with its treelessness and small houses with no shrubs and no dooryards, as a village which was all out of doors, and lonesome and unprotected. The drive over the rough, mud road, over a rickety bridge and the "bottoms" of Squaw Creek, was not reassuring. The mean approach to the college just at the base of the hill, and up through the barnyard, by the old Farm House, and then across the fields to the president's house might well have dampened the ardor of the newcomer.... Look back with me, and see this campus as the young botanist saw it. There were no drives, no walks, no paths, no smooth lawn, and only a few small trees.

Professor Bessey arrived in 1870. The route he remembered would have taken him north from the county road about where the Maple-Willow-Larch towers stand today and then west up the hill near the south side of the Power Plant and on to the Farm House.

President Welch's stepdaughter recalled her arrival by the same route in September 1869: "the patient mule team plodded wearily through the

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(1) Second Report of the Trustees, January 27, 1868.

(2) Annals of Iowa, April 1909.

mud."(1)

I. P. Roberts, recalling the same year, noted that the kitchen door of the Farm House "faced on what was then the main drive."(2)

ON-CAMPUS ROADS

During 1870 a new approach road to the college from the county road was opened approximately in the location of what is now called Knoll Road. In addition, a road was built from that approach drive past South Hall then curving northwest past Main and around the north to the front of the Farm House, thus establishing the basic delineation of the open central campus. These roads were built with a solid fill of six inches at the edges to a foot at the crown, using as fill material the rejected brick from the original foundations for old Main and the rubble from the fallen concrete blocks used in the walls of the original construction of South Hall.(3)

A bridge with stone abutments was constructed where the new approach road crossed College Creek, and "in two places when the road crossed deep depressions."(3)

By 1873 roads had been built to serve the buildings known most recently as Marston Cottage and Music Hall.

In 1881 a new bridge was constructed over College Creek "on the road leading from the front entrance to the Main College building."(4) That bridge was at about the point where the present walkway crosses the creek at the north end of the Memorial Union Parking Ramp. At the same meeting the Board approved an expenditure of $50.00 "for the purpose of building a bridge over the road leading to Professor Thomson's residence." (Marston Cottage)

When the two new faculty houses (Osborn Cottage and Sloss House) were built in 1883 a new road was run on the west side of them from about the southwest corner of the Farm House south to the road near South Hall which was the primary drive to Main from the entrance road.

During the 1890's several road changes were made, resulting principally from the construction of Botany Hall and Margaret Hall. Other roads were built to provide access to the several farm field areas.

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(1) Bomb, 1897.

(2) Roberts, 1916.

(3) Minutes, December 14-15, 1870.

(4) Minutes, July 26, 28, 1881.

A new campus entrance road with a bridge across College Creek was developed north from Welch Avenue in 1911.

Paving of some of the campus roads was started in 1910 on an experimental basis sponsored by the Iowa Highway Commission, the U.S. Dept. of Agriculture and "one of the large companies manufacturing artificial asphalt road material." That company donated a carload of the artificial asphalt binder and the work was to be done under the direction of an "expert furnished by the United State Agricultural Department."(1)

On October 4, 1913, the ISC Student reported:

> Asphalt is being added to the new concrete pavements as the last step in the completion of the campus roads.... The covering of asphalt will make the concrete wear longer, be easier on the horses' feet, and will not be so slippery as it will be covered with sand as soon as it is laid.

The entrance road to the campus at the east end of the lake (Lynn Avenue) was built in 1916.

During the next couple of decades additional roads were built and paved and general repairs undertaken as needed to serve the campus buildings.

A road east of the women's residence halls was put in in 1928. This was about on the line of what is now Wallace Road.

Funds provided by the Civil Works Administration in 1934 allowed additional paving of several campus roads, thus eliminating a serious dust problem caused by cinder drive surfaces. The Works Progress Administration similarly made possible further paving in 1936-38.

Campus road and street names were formally assigned in November 1941. Pammel Drive was extended west and down the hill to Hyland Avenue in 1959, providing another campus access route from west Ames.

Pammel Court streets received asphalt surfacing in 1957. They were later resurfaced on various occasions.

Bissell Road was widened to four lanes and paved between Pammel Drive and Union Drive in 1965.

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(1) Biennial Report, 1908-10.

LINCOLN WAY

The condition of the road connecting the College with Ames was described in the Biennial Report for 1876-77:

> There is an urgent necessity that the graded road which runs some seventy rods through the bottom land of the College farm should be improved by widening, paving with stone and covering it with twelve or fifteen inches of gravel. This portion of the highway to Ames consists of a low, narrow causeway which, being frequently overflowed by freshets, is in such condition as to render access to the College from Ames unpleasant and often difficult. In fact the causeway with its perpetual mud and ruts which deepen with every rain is a serious evil, and the success of the institution demands that it should be thoroughly repaired. The citizens of the district in which it lies are unable to do the work, the College funds cannot properly be used for such a purpose, and we are therefore compelled to ask for a small appropriation from the Legislature. The cost of thorough grading and graveling will be $2,000.

That requested appropriation was apparently not made because in the July 1878 issue of the Aurora it was reported:

> This season will see the road between the College and Ames thoroughly repaired. The grade of the entire length will be raised about two feet. The expense will be defrayed by subscriptions by the professors of the College and the business men of Ames.

At the November 1881 meeting of the Board it was ordered

> That the President of the College and the Professors of Agriculture and Horticulture be directed to give to the Supervisor of District No. 2 notice to put the highway on the South side of the College farm in passable order before the 20th of November, and said officers are ordered to close the gates on that date and to prevent further travel through the College grounds. They are hereby directed to prosecute any parties who force their way through after that date.

The Biennial Report for 1882-83 refers to an appropriation of $300 which was used for the road which "was put in excellent condition." There is no record of prosecution of trespassers. One can only speculate that the campus roads may have been better maintained than the county road and therefore provided a more inviting travel route.

The Aurora for June 1892 reported that a "flood broke through the levee near the wagon road between Ames and the college in such a way as to be deflected upon the road in the form of a whirl-pool which washed out

a hole eighty feet in diameter and thirty feet deep."

"An automobile was seen upon our highways last Saturday," reported the ISC Student on June 12, 1900. And thus a new era opened.

Maps of the 1890's identify the present Lincoln Way as "Highway from Ames to Boone." A map printed in the ISC Student in October 1904 is the earliest item found referring to the road as Boone Street. Its extension eastward in Ames was probably so designated in the original city plat.

By city ordinance of April 23, 1914, Boone Street east of Sheldon Avenue (then Pike Street) was renamed Lincoln Way in recognition of it as a segment of the new transcontinental Lincoln Highway. The name Lincoln Way was also applied to Pike Street north to what is now Oakland Street (which was then known as Ontario Street). That portion of the highway was more generally referred to as Lincoln Way - North.

Before 1915 Boone Street had been only a dirt and gravel road, often damaged by high water from Squaw Creek. In July of that year the college agreed to participate in the cost of paving the portion adjacent to the college land. Delays developed and, although the City of Ames had by then paved Boone Street east from the corner of the college property (Riverside Drive), it was September of 1921 before concrete paving from there west to Welch Avenue was open to traffic.

Plans for widening of Lincoln Way were initiated in 1955, but disagreements between the college and the city about the proposed width of the right-of-way led to long delays. No controversy existed about the portion of the road east of Beach Avenue and in 1958 widening of that section and construction of a new bridge was undertaken, as was the widening of the highway west from Sheldon Avenue. In 1962 the Board approved plans for the widening of the section adjacent to the campus and dedicated the necessary strip of land to the project. Construction started in late spring of 1963 and was completed about the first of October.

STANGE ROAD

In July 1893 the Board appropriated $150 "to repair the north farm bridge." It is surmised that the bridge was across Squaw Creek on about the line of today's Stange Road, but this can only be conjecture unless other information or a contemporary map can be located.

Construction of North Road (as Stange Road was then called) was first discussed following receipt of a petition from people living north of the college property to the Board at its June 1904 meeting. However, it was 1915 before that road was ready for use, with a new concrete bridge over Squaw Creek and a one lane underpass at the North Western track crossing.

The road was paved in 1952.

Contracts for construction of the four-lane underpass were awarded in November 1962. Works was completed and the new pavement ready for traffic in September 1963.

The new bridge over Squaw Creek was built in 1965 and the following year the four lanes of Stange Road were paved from 13th Street north to the north side of University Village.

EAST and WEST ROADS

The earliest mention found of a proposed road extending across the campus from east to west parrallel and adjacent to the south side of the Chicago and North Western right-of-way appears in the Biennial Report for 1912-14. The section of that road from the east property line to what is now Stange Road was referred to as East Road and was to be constructed first; the section from Stange Road to the west boundary at what is now the corner of Hyland Avenue and Ontario Street was called West Road.

The Board, at its July 14, 1914, meeting, dedicated the two strips of land, sixty feet wide, along the tracks for the development of the highway. Other than constructing a fence to identify the boundary for East Road no action was taken on the development of the highway during the next seven years.

In June 1921 the Board rescinded the 1914 dedication and all further consideration of that road across the campus was dropped.

THIRTEENTH STREET

When the city of Ames agreed to drop its request for an extension of Sixth Street to the campus, in 1921, a plan was developed to extend Ninth Street across the campus north of the railroad to North Road (Stange Road) and thence west to an underpass and connection with Lincoln Way (now Ontario Street) at the west boundary of the campus.

The chief engineer of the Iowa Highway Commission made a study and reported on the Ninth Street and two alternative Thirteenth Street roads to cross the campus. His report, dated July 6, 1923, was presented to the Board that month. The Board and the city subsequently agreed on a route extending Thirteenth and intersecting North Road (Stange) south of Squaw Creek, although the Board had earlier preferred an intersection north of the creek, Final Board approval of the route came on June 17, 1925, and the road was ready for use in the spring of 1926.

An ice jam in February 1946 resulted in loss of piling on the Squaw Creek bridge and its resultant closing to traffic. Thirteenth Street thus became unusable as a campus access from Ames until a new bridge and resurfacing of the road was completed in December 1947. The roadway was resurfaced in 1949 and again in 1961.

Although the extension of 13th street west from Stange Road to the Ontario Street-Hyland Avenue corner had been contemplated since 1921, it was 1966 before serious study of a proposed route was undertaken. Much concern was expressed by faculty interested in the preservation of Pammel Woods about the potential damage to that area. Plans were finally developed for a route, almost entirely on the north side of the tracks, resulting in a minimum of encroachment on the sensitive grounds.

In 1972 title to the land for the 13th Street extension was transferred from the University to the City of Ames. The agreement with the city included a condition that the University would widen the portion of 13th Street from Stange Road east across University land and construct a new four lane bridge over Squaw Creek. That was accomplished in 1974-75.

The planned route for the extension west to Ontario Street was graded by the city, and at that time a grade crossing of the Northwestern tracks was contemplated. However, the railroad demanded a separation and plans had to be revised to include an underpass for the highway. As of this writing the city expects the road to be open for travel sometime in 1981.

SIXTH STREET

The subject of a new road between Ames and the College was first introduced at a Board meeting in November 1899 when a committee of Ames citizens urged that a new connecting link be established. Action was postponed until the following year when the public grounds committee was asked to prepare a report. At its meeting on November 21, 1902, the Board voted to open a road from Iowa Street (now Sixth Street) in Ames to the College, but that action was rescinded at the October 4, 1907, meeting of the Board.

In the summer and fall of 1921, after the Board had dropped the concept of East and West Roads along the railroad, Ames city officials again began to press for access across the campus by way of an extension of Sixth Street from Ames. The Board refused to accept the idea and much ill-will developed between Ames and the College. Not until the following year, when a compromise was agreed to, did the hard feelings recede. Agreement came with the proposal to develop an extension of Ninth Street to run north of the railroad. The development of that plan is discussed under the heading of Thirteenth Street.

Early in 1948 agreements were reached between the City of Ames, the Board of Education, Story County and the Highway Commission to develop plans for a Sixth Street bridge over Squaw Creek and extension of that street to a junction with existing campus drives. Agreement was also executed with the Chicago & North Western Railway to use their "overflow bridge" as an underpass for the new road.

Construction work began early in 1949 and a ceremony to open the new route was held on September 24, 1949.

Changes to the west end of Sixth Street in 1961 improved the intersection at Wallace Road and Osborn Drive.

ELWOOD DRIVE

The planning and development of Elwood Drive extended over a long period of time. Its status in 1963 was described in the Iowa State Daily on September 26 of that year:

> A preliminary survey has been taken by the Lechner Engineering Company for Elwood Drive, a new roadway to be built from 13th Street South to Squaw Creek and Riverside Drive. The road will also connect the new Iowa State Center to the highway 30 bypass under construction south of Ames. The high grade of this road will also act as a dyke in case of high water and channel traffic from 6th Street to the campus. The project has been in the planning stage since 1955.

In December of 1963 the student paper reported:

> Boyne Platt, vice-president of business and finance pointed out that construction of Elwood Drive is in line with the University's long range plan of rerouting traffic around the central campus area. Elwood Drive will extend from 13th Street south to the airport road.

The route of Elwood Drive was entirely on University property and it was therefore necessary for the land to be sold and dedicated to the city in order for it to become a city street. That transaction was executed in 1969 for the portion of Elwood Drive from Lincoln Way south to the Highway 30 bypass interchange. That new highway was opened to traffic in 1970. Whether Elwood Drive will sometime be extended north to 13th Street can only be known in the future.

WALKS

Dirt paths probably developed in the vicinity of Old Main as soon as the college was opened. The early roads on the campus were undoubtedly used as pedestrian ways as well as for wagons between Main and the Farm House and the barn, and between Main and the president's house (South Hall).

The first reference to a separate walk appeared in the April 1874 issue of the Aurora:

> A new walk extending from the east end of the laboratory to Profs. Hutchin's and Thomson's house, greatly adds to the comfort, convenience, and beauty of the residence of these gentlemen.

That walk was from the Chemical Laboratory to Marston Cottage. Whether it was gravel, cinders or some other surface cannot be determined now.

In January 1876 the Board ordered

> That a plank walk eight feet wide made of two in. plank on 4 x 4 stringers be built from the Main College Building to the Physical Laboratory, the same to be constructed under the direction of the President of the College, and there is hereby appropriated from Interest Fund the sum of $250.00 or so much thereof as may be necessary.

The Aurora in May 1876 recognized the improvement:

> The new plank walk between the College and Laboratory is much appreciated by the students, first, because it is a step higher than the mud, and second, on account of its dimensions, it will admit a group walking together.

By 1882 that walk was referred to in the Aurora as in a dilapidated condition, and in November of the same year the Board ordered the Public Grounds Committee to "take charge of the walk....and if they think best replace the present wooden walk with a gravel one."

As other buildings were erected on the campus walks were put in to serve them.

> Now we have a two plank walk to North Hall....Walks to the greenhouse and to the cottages will be next in order.(1)

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(1) Aurora June 1886

Early in the 1890's concrete walks were being used as seen in the Biennial Report for 1890-91:

> The buildings and grounds have been greatly improved by the cement walks and some newly graveled driveways all of which add greatly to the beauty of the grounds and the comfort of the people. There should be much additional work by way of cement walks connecting the main building with the other buildings adjoining. A good cement walk is economical in cost and outlasts any other ordinary walk that could be used.

Conditions where walks were not provided are reflected in an editorial comment in the September 17, 1895, IAC Student:

> The cement walk is now finished and wading to Agricultural Hall in the mud is a thing of the past.

The loss of Main by fire in 1902 resulted in many students finding residence rooms in private homes south of the campus. As a result new walks across the south part of the campus became important. At the Board meeting of September 11, 1903,

> The President submitted a petition from students and others asking for the construction of a cinder path and bridge and the placing of additional lights on the south campus.

The Board referred the matter to the Committee on Grounds with power to act. A 1904 map shows walks across the south campus, leading to Stanton and Lynn Avenues (then called Ridge Street and Swamp Street).

During 1906 and 1907 a number of new concrete walks were built, particularly on the west side of the campus serving the engineering buildings and to the west gate.

On March 13, 1900, the ISC Student editor wrote:

> There are several things we need. One is a footbridge across the motor bridge that will be safe alike for industrious hustlers and loitering lovers. From each end of this we need a sidewalk leading toward Ames and leading toward the college.

By December 1904 the paper could report that

> The authorities of the college are seriously considering the matter of constructing foot bridges on the sides of the two trestles near Ames. On account of the safety and the increased travel it is thought that they are desirable.

Another three years passed before that plan matured; its completion was not seen until December 1907. It then served a much needed,

safe route to Ames. It became known as "the cinder path" and continued in use over many years as the principal pedestrian walkway between the campus and Ames.

A cinder walkway to connect the college and the city was put in on the south side of Lincoln Way in 1916. Other new walks were built as funds were made available, and the most used cinder walks were gradually replaced with concrete. By 1936 it could be reported that

> More than a mile of sidewalk will be added to the 7 miles of concrete paths already on the campus. (1)

The pedestrian underpass from west Pammel Court was constructed under the railroad in 1947. The first concrete walks in Pammel Court were placed in 1955.

The walk from Hawthorn Court through the underpass was installed in 1962. By 1979 practically all major walks had been built with concrete, although a few less heavily used routes have only gravel surfaces.

Through the years a major problem has been the formation of dirt paths across the lawn areas, developed by students (and frequently faculty and staff) wanting to short-cut the surfaced walks. The student papers ever since about 1892 have editorially criticized the practice. Snow fences to minimize the paths have been placed in the fall and remain until spring when the grass has become well established, but even these do not eliminate the formation of new paths which kill the grass. There seems to be no fool-proof way to resolve the annual recurrence of the practice of taking short-cuts.

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(1) Iowa State Student Sept. 22, 1936

WEST COURT and TRAILERS

The earliest record of student use of trailers for housing appeared in the September 19, 1936, issue of the Iowa State Student:

> "Iowa State College does not encourage students living in trailers during the winter and is not providing any space for them this year," according to B.H. Platt, superintendent of buildings and grounds.
>
> The parking space northwest of the Armory is no more. It is being made into a recreational area, and students with trailers for their homes must find other parking spaces. And the city ordinances require that all houses must have proper sewer and water connections.
>
> Last year the new recreational area accommodated several house trailers for students. Several requests have already been made by students this fall for a place to park their trailers, so that they may cut down their living costs at college.

Two years later the paper carried an account of "Trailer Town" at West Gate with seven trailers. These were undoubtedly on the west side of Sheldon Avenue but the exact location has not been determined.

At the time Pammel Court was started on the north side of Pammel Drive in 1946-7, an area in the northwest corner, adjacent to what was then the recreational area, was allocated for privately owned trailers. This was inadequate space for all of the requests and West Court was established in the area now known as Franklin Park on Franklin Avenue south of Lincoln Way. That area had formerly been a C.C.C. camp and the college, in 1944, had purchased four acres and the buildings. The trailer area included some land to the north rented for the purpose. At its peak West Court had a total of about 130 units including both trailers and small prefabricated houses.

The facilities at West Court were described in the Iowa State Daily Student on February 12, 1947:

> The court has progressed to a well organized community of trailers with a governing council and mayor, traffic checkers and police protection....
>
> Street lights were installed last quarter and most of the wards have walks. A community wash house is available with four washing machines. On meeting nights the washroom also doubles as a clubroom for the group although it will accommodate barely 75 of the 260 members.

By August of that year the paper could report that a 24 by 54 feet recreation building was being constructed at West Court.

On July 1, 1953, the entire West Court area was eliminated from the housing program, and all privately owned units were removed.

In 1960 the four-acre tract owned by the University that had formed part of West Court was leased to the city and it became what is now Franklin Park.

TRANSPORTATION

RAILROADS

THE CHICAGO & NORTH WESTERN RAILWAY

At the time of the acquisition of the original acreage for the campus there was no railroad crossing the prairie land,nor did the sound of a steam engine or train whistle come to the ears of the men building the Farm House or the barns in 1860.

It was 1865 when the Cedar Rapids and Missouri River Railroad was built between Nevada and Boone. It had reached Nevada from the east in 1864 and was completed to Council Bluffs by the end of 1866. In 1862 the entire line had been leased to the predecessor of the Chicago & North Western Railway Company, and under a new lease in 1865 to the latter company, until its purchase of the line in 1884.(1)

During construction of the railroad,"an opening for the accommodation of the farm was put in on the bottom high and wide enough for a load of hay to pass through."(2) This is the underpass at today's Haber Road. In 1882 arrangements were made to have the railroad install a switch and spur track to serve the college needs, especially for delivery of coal and building materials.

Land to provide for another track, parallel to and on the north side of the original, was deeded to the railroad in 1900 and the second line was constructed across the campus that year.(3)

Underpasses are discussed with "Roads" rather than under this heading.

AMES and COLLEGE RAILWAY ("THE DINKEY")

The earliest known reference to a rail line between the college and Ames is in the first issue of the IAC Student, August 7, 1890, where it is reported:

> The Junior Civils are at work in laying out a railroad to Ames. There has been much speculation upon the advisability of putting in a motor line between the college and town. The first cost,

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(1) Yesterday and Today. A History of the Chicago & North Western Railway System 1910.

(2) Minutes March 23-24, 1865

(3) Minutes July 17-20, 1900 and IAC Student, Oct. 22, 1900

> it is true would be rather great, but think of the advantages of a rapid transit line. We believe if such a line was constructed and properly managed, that the attendance of the college could be easily doubled, provided, that students were given the option of rooming in Ames or at the College. Again, this would result in more friendly relations between the people of the city and school; under the present system, they know little and care less for college matters, because they know but little about them. Three hundred students boarding in town would change all this. It would change Ames into one of the most enthusiastic college towns in the west, and we would no longer be regarded as the inmates of some charitable institution.

During the fall of 1890 various proposals for a rail line were made. The October issue of The Aurora records one for an electric line:

> C.D. Davidson and J.A. Bramhall of the senior class in mechanical engineering, in working up their theses, the subject being an electrical railroad between Ames and the college, have succeeded in working up, also, sufficient interest in the matter so that a company has been incorporated to build the road. A representative of the Edison company, B.M. Barr & Co., of Chicago, has been out to look over the ground. He pronounces the line run to establish the grade an excellent one for an electric motor. Judge Stevens, of Ames, Whitaker and Jordan, of Boone, furnished the enterprise and capital. It is a noteworthy fact that they are all I.A.C. men.

The October 2, 1890, issue of the IAC Student also reports:

> The rapid transit line is to be a reality. Since our last issue a company has been incorporated to put it in. The company is composed of the best business men of Ames and Boone. This one thing alone will do more to advance the interests of the college, as well as Ames, than $10,000 spent in advertising, or the erecting of a dozen college buildings. When this line is completed the college will be in communication with the world at large, and the people all over the state will know that there is such a place as the I.A.C. Truly we are entering an era of increasing prosperity.

The first recorded action, on a rail line, by the Board of Trustees appears in the minutes of its meeting of November 12-14, 1890, when a proposal for a horse car railway was submitted by the Ames Railway Co. The proposal was rejected because the Board committee to whom the matter was referred felt that a better solution was possible.

In January 1891 the Trustees entered into a formal agreement for construction of the railroad. The terms of that agreement are of sufficient interest to justify their inclusion here.

Report on Ames Street Ry. Co.

Be it resolved by the Board of Trustees of the Iowa Agricultural College and Farm that there is hereby granted to the Ames Street Railway Company their successors and Assigns right of way not exceeding fifty feet wide across the College grounds from the East line of the College Farm owned by said Agricultural College to the machine shops on said Farm for Railway purposes. Said strip to be twenty five feet wide on each side of the centre of the rail-way track to be built by said Company said road to be built substantially in conformity with the survey and plat made by Bramhall and Davidson in the year 1890, and that the several requests and privileges asked by said Ames Street Railway Company contained in the eight (8) propositions hereto annexed and made a part of this concession be granted subject to the following modifications.

1°. That said right of way hereby granted shall not at any point upon the ornamental grounds or through the stock yards of the Farm be wider than actually necessary for road-bed, berm ditches necessary siding platform Y and turn table.

2°. That after said road is fenced by the College the said railway Company shall maintain keep in repair and renew said fences as may be required from time to time. That said Railway Company shall construct and maintain all needed crossings over said road and protect the same by proper cattle guards and shall also provide where needed suitable undercrossings.

3°. That said College shall not be liable for any damage to the property of said Company or any other persons who may patronize said road.

4°. That nothing in this contract shall be construed to prevent any department of the College from doing its own necessary hauling to or from the College to Ames or elsewhere. It being only intended to grant to said Railway Company the franchise as common carrier between Ames and the College reserving to the College the right to do such part of its own hauling as convenience or necessity may require.

5°. That no unnecessary cuts or fills or accumulation of dirt shall be permitted upon the ornamental grounds and all such cuts, fills or removal of dirt shall be made under the supervision of the Committee of Public grounds or some person to be designated by the Board.

Eight Propositions of Said Company

1°. The Ames Street Railway Company request the Board of Trustees of the Iowa Agricultural College to grant said Company the right of way over a strip of land for railway purposes from some point on or near the Machine shops on the college grounds substantially in accordance with the survey made by Bramhall and Davidson to the East side of said farm including also grounds for a turn table switches side tracks and borrowing pit.

2°. We ask said Board of Trustees to fence said ground so granted wherever the same passes over or through any cultivated field or pasture land and to keep fence and gates if any in proper repair.

3°. To erect suitable platforms for the accommodation of passengers and such stations on the College grounds as will accommodate the traffic and such facilities as the board may require for loading stock or freight.

4°. We also ask an agreement from the said Board not to allow or permit the College authorities to run or operate any teams or trains or other conveyances for the carrying of freight, the same to be used as common carriers of passengers or freight between Ames and the College Grounds.

5°. We ask the Board to relinquish the carrying of mail and express and to contract with the said Company for carrying the same.

6°. To at all times give said Company the preference in conveying of all freight merchandise and other articles between said College grounds and Ames but not at a higher rate than could be contracted for with any common carrier or teamster provided said rates shall include terminal charges for loading and unloading.

7°. In consideration of the granting of the privileges rights and requests above mentioned the said Ames Street Railway Company hereby agrees to construct and have in operation a standard gauge railway to be operated by a steam motor or other improved motive power as may be hereafter determined--animal power is hereby expressly prohibited said railway to be completed and in operation on or before November 1, A.D. 1892.

8°. That during the time the said College is in regular session and during the day time thereof said Company shall make hourly round trips between the College and Ames and during vacations such trips as will accommodate the needs of the College. That the passenger fare shall not exceed five cents for each person

> one way over said road. That said Company will provide comfortable and suitable passenger cars for the transportation of passengers between said College and Ames.

Construction started the following April (1891) and by August the Ames and College Railway was in service. The route from the east was on a line just south of what is today the Power and Heating Plant, and a little north of the Farm House; then in a west south west direction across the open campus to a point between Morrill Hall and Old Main where it went straight west to about where Marston Hall stands now, thence on a large curve to the south to terminate just west of the old Workshop. The depot (see The Hub) was built in 1892 on the south side of the track, north of Old Main and southwest of Morrill Hall.

In one twenty-four hour period in November 1892 the railroad carried over a thousand passengers.(1) Operation was not without problems. Snow frequently delayed or stopped the running of the motor during the winter; derailments often occurred; on some occasions the tracks were damaged by flood water.

Complaints by the students about the rail service are voiced from time to time in the student paper. Typical is the editorial in the January 27, 1904, copy of the ISC Student:

> Every student of the last decade has cheerfully, or otherwise, parted with his cherished nickels for the privilege of riding in a dirty tram car which follows in the wake of an engine which beggars description.

On March 5, 1904 the editor of the student paper wrote:

> In our last issue we mentioned an accident on the motor line in a sort of joking manner, but there is really a serious side to this question. These numerous little accidents are only the forerunners of something that may be more than funny. The present motor track is constructed of about the smallest rails that could possibly be obtained, and yet, the regular, heavily loaded freight cars are run over it continually till it is a great wonder that the track is not always breaking. And run over in your mind the list of rolling stock upon this wonderful railroad. Two locomotives that are in themselves the most wonderful relics of antiquity, and three cars that would not be used for anything but junk carriers upon a decent street car line; place these upon mere ribbons of steel laid upon a roadbed that has more jogs in it than the road to success, and you have the entire equipment of a road that is listed as the best paying railroad in the United States....

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(1) The Aurora Nov. 1892

Other problems were of even more concern to the Board of Trustees, principally the threat of fire from the sparks from the engine's smokestack. Smoke and soot were also problems as were maintenance of fences and control of weeds along the right-of-way. By the fall of 1905 these various complaints had created sufficient aggravation to prompt the Board to consider changing the route and having the owners convert to electric power for the line.(1)

In February of 1906 The ISC Student reported that the Ames & College Railway had been sold to the Newton & North Western. The first of May the line became part of the Des Moines, Fort Dodge & Southern Railroad Co.(2)

The Dinkey made its final trip in early September, 1907, when it was replaced by an electric line, on a new route through the campus.(3)

THE INTERURBAN

The Fort Dodge, Des Moines and Southern Railway was granted a right-of-way across the campus by act of the Legislature in 1906.(4) The terms of the agreement were approved at the Board meeting of June 27, 1906. The agreement provided for the "main line" between Ames and Des Moines as well as for a new route to serve the Ames and College line.

The main line extended southwest from the Power Plant along what is now Union Drive between Wallace Road and Knoll Road, and continued on to cross Boone Street (now Lincoln Way) at Lynn Avenue, thence south along a line between Welch and Stanton Avenues on past the east side of today's Tower Residence Halls and along the east boundary of the Dairy Farm.

The campus line was changed from the route of the "Dinkey" south of Botany and Morrill Halls by having it turn north just north of the Farm House and thence west along what is now Osborn Drive until it turned south to terminate at West Street on Sheldon Avenue, where a

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(1) Minutes Sept. 29, 1905

(2) ISC Student, May 5, 1906

(3) ISC Student Sept. 9, 1907

(4) Biennial Report 1905-06

platform served passengers. Central Station was built in 1908 on the south side of Osborn across the street from where Gilman Hall stands today. Another platform was constructed on the curve northwest of the Farm House, providing a third loading point for the campus. A platform was also provided on the main line south of the Dairy Building (East Hall now).(1)

The new lines were electrically operated and eliminated the old problems created by sparks, soot and smoke. The line between Ames and Des Moines began service on July first 1907, and the college line started operation in September.(2)

The interurban came in for its share of criticism by the students. The reason was explained in an ISC Student editorial on February 10, 1908:

> The great trouble was that the cars did not run on time and passengers had to wait nearly every time they went down town or came out to the college. The second difficulty was that the service was inadequate to accommodate the number of passengers at certain hours.

Again, on April 12, 1909, the editor complained:

> The Ames students and townspeople all winter have tried to swallow the poor accommodations offered by the college branch of the Ft. Dodge, Des Moines and Southern electric railway, without giving publicity to their sentiments. Some times the cars are on time, and sometimes not. If waiting at the West Gate or Farm Stations, we stood under the corrugated iron roofing, so the cold raw northwest wind could get a strong sweep through our clothing and over the goose flesh. If fortunate enough to have to wait at the Central Station, we danced and kicked about, trying to forget there was no heat in the building, and we said we didn't need lights anyhow. Last Saturday morning, however, was capped the climax, which legalizes the student body to land on the company with both feet, and ten finger nails. The west bound college car met an unloaded baggage car at the Farm Station. Mr. college-car conductor says "Your're imposing on our regular schedule, give us the right of way." Mr. Baggage conductor answers "There's a switch right behind you. Back onto it and let us pass." Both conductors waited there for half-an-hour, while passengers with important business suffered the consequences. How long will we submit to the pigheaded stub-

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(1) 1909 campus map

(2) ISC Student, Sept. 2 and 9, 1907

born tyranny of the man in the baggage car?

A change in the interurban approach from Ames was made in the summer of 1914. This new route eliminated the two sharp curves north of the Farm House and brought the track north of the Power Plant on a line to reach the Osborn Drive section with gradual curves, allowing large engines access to the Transportation Building (now Engineering Research Institute), by means of a spur from the west segment of the Osborn Drive run.(1) Various switches and spurs were installed from time to time as needed for specific college building operations.

In 1915 discussions began regarding the extension of the campus line to serve the residents south of Lincoln Way. The track was built to run south on Sheldon from West Street to Knapp, then east on Knapp to the intersection with the main line (Ames to Des Moines) and north on it back to the campus and on into Ames. It was put into operation in October 1916.(2)

From the time the original Ames to College line had been started the one-way fare had been five cents. In 1920 the railway requested approval of an increase to eight cents or sixteen tickets for a dollar.(3) That request was referred to a committee whose action is not recorded. However, in the Minutes for the meeting of the Board on May 6, 1927, when an increase to ten cents was asked for, it was said that "some years ago....this was raised to a seven cent fare."

A sharp drop in patronage of the line was reported, due primarily to the competition of bus service between downtown Ames and the campustown area, in March 1921.(4)

The combination of bus use and of more private automobile use resulted in continuing reduction of the street car patronage in the decade of the twenties. In the summer of 1928 the tracks south of Lincoln Way, on Sheldon Avenue and Knapp Street, were removed, but service was continued to the campus area.(5) By 1930 the electric line service was discontinued and the tracks across the campus, except those serving the Physical Plant, were removed.(6)

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(1) Iowa State Student, Sept. 13, 1914

(2) Iowa State Student, Oct. 17, 1916

(3) Minutes Sept. 15, 1920

(4) Iowa State Student, May 23, 1921

(5) Minutes, July 6, 16 and Oct. 9, 1928

(6) Minutes, April 15 and Oct. 16-17, 1930

The tracks along Union Drive, part of the original main line, were removed in late 1965 and 1966.(1)

The automobile and the bus had become the dominant forms of transportation and the railroad era had come to an end.

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(1) Iowa State Daily Oct. 29, 1965 and June 29, 1966

BUS

Very little has been learned about the early bus operation between the college and Ames. The vehicle was, of course, horse drawn, but beyond that a description is not to be found. The first reference to it, extremely short, appeared in the August 1874 Aurora:

> Here at last! The new College bus.

In the April 1878 edition of the paper we learn that

> It would be hard to tell how we could get along without our tri-daily bus between the College and Ames.

By September of 1880 service seems to have been even better:

> Besides the regular mail carrier two busses each make three regular trips daily.

In the cyclone of April 8, 1882, as reported in the Aurora the bus was one of the victims as the winds

> ....blew the top and body of the bus which was within 50 rods of the college over into the evergreens together with its passengers numbering not less than 10 or 12, among whome were Mrs. Prof. Bessey receiving slight injuries in the face, and Mr. Connell having three of his ribs broken and sustaining other internal injuries which have left him in a very critical condition.

Funds to operate the bus at a rate of $1.50 per day were provided in 1882 and 1883 for two trips a day during the winter vacation period. In 1889 an appropriation of $225 was made "to supply bus service for the College during the coming year."(1) On June 17, 1891, the IAC Student recorded that

> The bus is on the retired list.

No more is heard about it after that date and the following year the "Dinkey" was in operation to provide transportation.

A jitney service was proposed in April 1915 but there is no evidence that it was put into operation.

Motor bus service between Ames and campustown was initiated in March or April 1921. This service had a drastic effect on the use of the

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(1) Minutes Nov. 11-15, 1889

interurban line whose ridership dropped rapidly. Three new buses were added in 1925 and at that time the fare was seven cents, the same as for the street cars. When that service was discontinued has not been determined.

In the early 1970's bus service during the winter months was initiated from the Towers Residence Halls to campus and from University Village to campus. The latter route was subsequently extended to serve Schilletter Village as well. That bus system resumes in the late fall of each year.

BICYCLES

"A good bicycle path to the town" was listed as a need by the editor of the ISC Student on March 13, 1900, and in September of that year the paper reported:

> Bicycle racks have been provided for wheels left at Ag. Hall. It would be a pleasing surprise to find racks at each of the principal buildings about the grounds.

Bicycles were first seen as a problem on the campus when on October 2, 1911, the ISC Student editor wrote:

> Campus authorities invite us to stay on the walks and then proceed to make life miserable for us by allowing them to be overrun with bicycles. Those cyclists who take to the walks are evidently well meaning and ordinarily the practice is not so very objectionable. But since school started the number of these two wheeled craft has multiplied so rapidly that the thing has become a nuisance....last week four accidents occurred....

A year later the paper objected to bicycles -- and motorcycles -- using the cinder path to Ames and stated that walk should be limited to pedestrian use. Bicycle racks were asked for in an editorial in the Iowa State Daily Student on October 3, 1942. The same editorial requested ramps at street curbs. Twenty years later the paper noted that new racks had been installed in front of the Library, East Hall and the Agronomy Hall. Thirty more racks were placed in 1966. Special bicycle paths have been built from Wallace Road east along the south side of 6th Street to Hazel Avenue in Ames, from Hawthorn Court to Brookside Park, along the south side of 13th Street from Stange Road to Ridgewood, and from the south end of University Village to 16th Street and Ridgewood Avenue.

In 1979 even more bicycles than before are in use, due, in part, to the gasoline shortage and its higher cost. Many additional bicycle racks have been installed.

TRAFFIC and PARKING

The first recognition of motorized traffic problems seems to have come in 1913.

On September 30 the ISC Student said:

> Minor accidents due to careless driving of automobiles and motorcycles are constantly occurring about the campus, and narrow escapes are frequently reported. It is becoming more and more unsafe to cross the street. If the speed maniacs and careless drivers do not discontinue reckless driving on the campus some more serious accidents will result.

In December of the same year the Board ordered

> that a speed limit of ten miles per hour be put into effect on the campus roads, and the Superintendent of Grounds is authorized and instructed to put up signs to this effect.

Motor busses were banned from campus drives by action of the Board in June 1921. "Development of space for parking automobiles" was among several improvements for which funds were allocated by the Board in Dec. 1923.

In 1925 new parking space was prepared west of the Post Office (the Hub).

President Hughes, in the March 29, 1928, edition of the Iowa State Student, wrote:

> Owing to the fact that Iowa State has extremely large parking areas available, it has been possible to permit the students to use cars, provided they park them on one of the parking areas and do not drive them over the campus from building to building between classes. In general, the students have cooperated in an effective way and on the whole we are getting along pretty well in spite of the fact that we have between 300 and 350 student automobiles on and about the campus at different times during the year. .... We will greatly appreciate the cooperation of the students and the faculty in making it possible to keep the college drives open to automobiles.

A traffic count in June 1928 showed that 1265 cars crossed the sidewalk just south of the Library in one day. That was across an access drive to reach the central parking lot from Morrill Road at that time.

Student operated cars were increasing in number. The Iowa State Student, on February 16, 1929, reported that there were 460 registered in the fall of 1928. In the fall of 1929 students were required

to display Iowa State license tags for the first time. Those were cardinal and gold plates.

During the early 1930's more parking lots were built and various regulatory steps were taken. Numerous stop signs were installed at intersections and crossings.

The 20-year plan for the campus developed in 1935 included the elimination of Morrill Road and other changes to improve pedestrian safety on the campus.

Additional development of parking lots increased the total parking capacity to between 1200 and 1500 cars by May 1938.(1)

New traffic regulations in the fall of 1938 called for all student vehicles to be inspected and proof of liability insurance presented before the car could be registered, and for the first time a registration fee ($1.00) was charged.

Morrill and Knoll Roads, north of Union Drive, became one way streets in the spring of 1946.

In September 1947 it was reported that "2000 vehicles found their way to the campus the first week of school."(2) By 1955 it was noted that

> More than 5,000 cars on the campus with only approximately 2,000 parking spaces available creates one of the biggest problems facing Iowa State College personnel.(3)

Until 1958 parking lots were cinder or gravel surfaced, or in some lots only dirt. The central parking lot west of the Hub was hard surfaced that year, using funds collected from parking fees. Additional lots were built in the fifties thru seventies, and older lots were black-topped.

The fall of 1961 saw 2625 staff cars and 5073 student vehicles on the campus.

A new concept was introduced in 1972 to reduce traffic in the central campus area. Morrill and Knoll Roads, north of Union Drive, Osborn

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(1) Daily Iowa State Student, May 12, 1938

(2) Iowa State Daily, September 24, 1947

(3) Iowa State Daily, March 10, 1955

Drive and parts of Union Drive were closed to vehicular access by the installation of gates. Access to those routes was then limited to service vehicles, some delivery trucks and to police and fire equipment during daytime weekday hours. That system continues in force and has been helpful in reducing accidents and in improving pedestrian conditions for the campus.

Automobile parking space continues to be less than the demand for it, and is especially lacking in readily available space for visitors to the campus.

ATHLETIC AND

RECREATIONAL AREAS

ATHLETIC FIELDS

The earliest reference found to what could be called an athletic field is seen in the 1897 Bomb where events of 1884 included the statement. "A base ball association was organized to give direction and control to our movements on the diamond." In May 1890 the Aurora noted that "The Athletic Association has been making improvements on its track." On March 10, 1892, the IAC Student reported that "The athletic grounds will need a great many repairs." Just where those sports were practiced at that time is uncertain.

In 1892 the Board set aside the large area west of Morrill Hall, consisting of about 12 or 13 acres, for the athletic grounds.(1) Early in 1893 work began on installing an underground tile drainage system in the area and also the operation of leveling the field.

On May 27, 1893 the IAC Student briefly described the new athletic fields:

> Our race track on the new grounds is to be constructed in the shape of the figure 8, three laps to the mile. It will enclose the football grounds in its southern eye and its northern eye will enclose apparatus for acrobatic training. The diamond is to be placed to the east of center of the figure.

It was a year later, however,before the work of grading, leveling and layout of the track was completed and ready for use.

The field was fenced (for football) in 1900(2); wood bleachers were built the same year.(3) Four new sections were added in 1904.

The November 16, 1901, issue of the ISC Student suggested that a name be given to the athletic field. Just when a name was adopted is uncertain. During 1902 and 1903 there were more editorials and names proposed. The area is identified as "State Field" on a map printed in the ISC Student in October 1904, but no record has been found relating to a formal dedication or adoption of that name. By 1905 the addition of portable bleachers provided a seating capacity of "well over two thousand,"(4) and for the first time reserved

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(1) Minutes, Sept. 27-29, 1892 and Aurora, October 1892

(2) ISC Student, Oct. 1, 1900

(3) ISC Student, Oct. 15, 1900

(4) ISC Student, Sept. 16, 1905

seating for "a nominal sum" was charged.

Moving of the field was formally discussed about that same time, as recorded in the Biennial Report for 1903-05:

> The development of the College has been such as to necessitate the early removal of the athletic grounds from their present location near Engineering Hall to the Southwest corner of the campus. Quite extensive grading will be necessary to put the grounds in shape.

Shortage of funds delayed development of the new field, although grading was done spasmodically over the next few years. But it was 1914 before the field was in full use.

That field became known as "New State Field" or just "State Field". As early as January 13, 1916, the Iowa State Student was editorially calling for the field and the gymnasium to be designated by more appropriate names. The field was dedicated as "Clyde Williams Field" in the fall of 1938 in honor of the man who served Iowa State from 1906 to 1919 and as athletic director for the last five of those years.

In later years various improvements were made to the field and maintenance was necessarily continuous.

Clyde Williams Field continued as the site for all home football games through the 1974 season. Since then it has been used primarily as a recreational area. The track remains and is used regularly by joggers and runners. The Stadium was razed in 1978.

Since 1975 football has been seen at the new South Campus field and Stadium.

A separate women's athletic field was first mentioned in 1921 when this item appeared in the Iowa State Student on April 4:

> Inadequate facilities for women's athletics would be greatly relieved, it is thought, by a proposed plan for the development of new playgrounds south of the temporary dormitories. Provision would be made for a baseball diamond, tennis courts and soccer field. Hockey grounds would remain at the present location north of engineering hall. Although plans are complete, exectution of the program must await the provision of funds, according to Miss W.R. Tilden, head of women's athletics....
>
> Miss Tilden has asked that, in connection with the development of this field for the girls, that boys remain off the field.

The next reference to women's fields occurs in the May 14, 1925, issue of the Iowa State Student:

> Extensive addition to the women's athletic field at the east of the dormitory group will be made. When the plan is completed the field will extend south to Lincoln Way and east to the bend in the creek. It will include a new track, volley ball courts, handball, archery, soccer, quoits, jumping pits, a baseball diamond and the tennis courts.

On December 10, 1929, the Board approved President Hughes recommendation

> That a strip wide enough for hockey fields be taken off the animal husbandry field east of the Women's Dormitory and added to the athletic grounds for girls.

Discussing the plans for the proposed women's gymnasium an article in the Iowa State Student on June 2, 1937, also mentions outside activities:

> Plans for playfields and a riding school also are included in the predictions for the next 20 years. Outdoor playfields will cover 20 to 30 acres, which will be divided into four baseball diamonds in spring, two hockey fields in fall, six deck tennis and badminton courts in fall, and 15 to 16 tennis courts (ten hard and five clay).

That plan did not materialize until 1943 when the area was made useable for the fall term. It was the 17 acre field identified as bounded on the west by Wallace Road, on the north by the cinder path along the railroad, on the east by pasture and on the south by the channeled part of College Creek. Except for a small parking lot cut out of the northwest corner that area has remained relatively intact since it was first established.

BASEBALL DIAMONDS

The "Old State Field", west of Morrill Hall, was the site of the first formal baseball diamond, although the game had apparently been played somewhere prior to the establishment of that field in 1894. On those new grounds the diamond was located on the east side of the track and football field, and was first used in 1895.

A map dating from 1915 shows the ball diamond just northeast of the track in the new State Field (later Clyde Williams Field). When the east Stadium stands were built in 1926 the baseball diamond was moved farther east on "ground which was once occupied by West Gate Cottage."(1) (Georgia White House).

In 1957 the varsity diamond was moved from that location to an area west of where Town Engineering Building now stands, about on the north extension of Sheldon Avenue, and remained there until 1968 when it was moved again to its present site at what was called the Old Horticulture Farm, north of Knapp Street and west of Hayward Avenue.

Underground drainage and watering systems were installed when the new diamond was constructed. A second ball field was also built as a practice diamond just to the south of the varsity diamond. Team dugouts were included as part of the new construction.

In 1974 that field was formally named "Cap Timm Field" in honor of Professor of Physical Education L.D. "Cap" Timm, who had coached the baseball teams since 1938.

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(1) Iowa State Student, June 4, 1926

GOLF COURSE

An interest in golf, among faculty members, is first recorded in the ISC Student on May 22, 1900:

> The golf links of the faculty golf club are being laid out in the pasture north of the experiment barn.

That was either unsatisfactory or abandoned soon thereafter because the paper of March 23, 1901 reported:

> The faculty golf club have decided to lay out a nine-hole ground, bounded by the cottages and Emergency Hall on the north, the Sanitarium on the east, Professor Marston's on the west, and the road on the south.

No other mention of golf has been found during the next quarter of a century.

On April 12, 1927, an article in the Iowa State Student presents a new approach:

> For several years a campus golf course has been one of the dreams of a large number of professors and students of Iowa State who are interested in the game and follow it closely.
>
> A demand for a convenient, economical course which would be available for students, faculty members and college employees has been discussed by various groups and at one time the matter was considered by former President Pearson. However, in each instance the campaign fell thru before accomplishing concrete results....
>
> Interest in a golf course located near the campus is present in the minds of a sufficient number of students and faculty members to make its success certain, once it could be obtained....

The next year Professor P.H. Elwood had his senior students in landscape architecture plan a golf course in the Arboretum area, which was favorably received except for the legality of using the Arboretum for that purpose.(1)

In 1930 President Hughes, in addressing the faculty at the start of the fall term, mentioned "the possibility of establishing a golf course on wasteland now belonging to the school."(2)

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(1) Iowa State Student, May 18, 1928

(2) Iowa State Student, Sept. 22, 1930

During the following two or three years various sites were mentioned, including the Horticulture Farm. On May 2, 1931 the Iowa State Student proposed the land "north and west of the college cemetery.... It is the hope of many that a golf course will be built near the campus by next fall so that this sport may be included on the intramural schedule for next year."

A practice green and two approach tees were built in an area just south of State Gymnasium in 1933. That was initiated by Director of Athletics George Veenker.

In June 1935 the Board approved the proposal of President Hughes to develop a golf course north of the Chicago and North Western tracks. In his statement to the Board he said that "It further seems probable that a great part of the development of this course can be carried out with relief labor or some other form of publicly paid labor, with little expense to the College."(1)

By later summer of that year construction of the golf course was under way, as reported on September 21, 1935.(2)

> An Iowa State recreational area which will include an 18-hole golf course, bridle paths, picnic areas and lagoon for canoeing is now under construction in the North Woods, a scant 500 yards from the middle of the campus....
>
> Already a great amount of work has been done on the project since its inception approximately a month and a half ago. CCC labor has cleared a number of trees from the ground to become fairways on the opposite side of the Chicago and Northwestern railway tracks from the campus....
>
> According to George Veenker, director of athletics, the course and recreational area will be ready for use in May of 1937. The fairways will be seeded next August and the bent grass greens put in place so that the area may be used the following spring....
>
> There will be two holes on the south side of the railroad tracks, the first and the eighteenth, but the land for those two is as yet unavailable....
>
> The golf course itself is now planned to be approximately a 6,000-yard course, which may be extended to 6,500 yards through construction of large teeing spots....

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(1) Minutes, June 19, 1935

(2) Iowa State Student

> When the golf course is completed, it will offer the golfer a different problem on practically every hole. It was designed by Perry Maxwell, one of the outstanding golf architects in the United States....

Unavailability of pipe for the irrigation system prevented the seeding of the greens in 1936, with the result of a year's delay in the planned date for opening of the course for use. The status of the work was fully described in the issue of the Iowa State Student for September 19, 1936, which also noted that the project was largely built with CCC labor and WPA employees with only a small amount of state money going into the project. (CCC stands for the Civilian Conservation Corps and WPA represents the Works Progress Administration, both federal agencies of depression days.)

The golf course was dedicated and opened for use on May 12, 1938.(1) The paper on that date also included a plat of the course.

In late 1959 the name "George F. Veenker Golf Course" was formally adopted to honor the man who was primarily responsible for its planning and development. He had been Iowa State's football coach from 1931 to 1936 and athletic director from 1937 to 1945. He died September 8, 1959.

The proposed extension of 13th Street west from Stange Road to Ontario Street resulted in forced changes to be made in the golf course in the early 1970's. The two holes south of the railroad tracks were relocated to the north side and several of the other fairways were modified to adapt to that change.

In 1971 responsibility for the operation of the course was transferred from the Athletic Council to the Physical Plant Department. The Club House was built in 1972.

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(1) Daily Iowa State Student, May 12, 1938

RECREATIONAL and INTRAMURAL AREAS

In addition to the athletic fields, used primarily for football and baseball varsity teams, there were less formal areas designated for general recreational and minor sports activities.

Playfield North of State Gymnasium

Before construction of Beyer Hall and later Town Engineering Building, the entire area north of Union Drive to Pammel Drive and all college land west of Bissell Drive had been set aside as "playground area". It included tennis courts at the south end and other open and intramural fields north of those courts, including football practice fields. This came about in 1913 when the farm experimental work was moved from that area to the Zumwalt farm.

Five Baseball diamonds were made in this area in 1915, one for "contests among the members of the inter-fraternity baseball league, one to the inter-club league, and the remaining three to the inter-class teams."(1)

East Intramural Fields

The fields north of Lincoln Way, east of Wallace Road, south of College Creek and east to Squaw Creek were set apart for use of intramural activities in 1957. The original 27 acres was reduced in the late sixties when the new residence halls and their parking lots were erected.

Hockey

The April 15, 1905, edition of the ISC Student records that "The girls of Margaret Hall have a new hockey field, which is situated east of the Campanile and just west of Prof. Bissel's residence." (That residence is the one known today as Sloss House.)

In 1917 the Minutes for September 21 note that "Superintendent Sloss is authorized to provide a hockey field for women students on the old athletic field north of Engineering Hall." Presumably that location continued until 1929 when land was added for hockey fields adjacent to the women's athletic grounds.

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(1) Iowa State Student, March 30, 1915

Handball

The Board Minutes of August 6, 1919, authorized the expenditure of $500 for handball courts. These were built just south of State Gymnasium. The sport grew in popularity and four additional courts were built in the adjoining area in 1922. Six more courts were added on the east side of the gym in 1931, "to replace the obsolete old ones on the south side of the gym."(1)

Bowling

Outdoor or lawn bowling was introduced in 1934 with the construction of eight lanes 14 by 112 feet.(2) The courts were ready for use the following June.

On June 2, 1938, this account appeared in the Daily Iowa State Student:

> Lawn bowling enthusiasts will get their first 1938 fling at the sport at Iowa State within a week or 10 days....Starting next fall....lawn bowling will be included as a regular intramural sport on the Cyclone program....Lawn bowling was so popular among faculty and townspeople last summer that the heavy usage wore down the grass, necessitating reseeding the green. By next fall the newly-construsted bowling green south of the gymnasium will be open for intramural play. This new green will be superior to the older one, Director Veenker believes.

Polo

The only reference found to a polo field occurred in the May 16, 1931, copy of the Iowa State Student, although there were several articles in that general period about the polo team. The article commenting on the field states

> The polo practice grounds west of the Armory are in danger of being made unfit for use because of the thotlessness and carelessness of a few persons....all offenders were either faculty members or college employees who were driving their automobiles across the polo field....

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(1) Iowa State Student, Sept. 18, 1931

(2) Iowa State Student, May 19, 1934

Drill Field

The June 8-9, 1921, Minutes of the Board authorized the Department of Military Tactics to use for drill purposes the area lying between the east line of the Armory and the west boundary of the campus, and between the street car track and the road which is about 200 feet north of the Armory.

In 1931 the drill field was relocated to an area north of the Physics building, to be closer to the Military Stables.

More recently the fields east of Bissell Road have been used by the military units and also by the marching band as drill fields.

Ice Skating

The earliest request for a place for ice skating appeared in the ISC Student in 1904, but no specific location was suggested. In 1912 and 1913 consideration was given to the possibility of flooding the old athletic field west of Morrill Hall but that proved unfeasible because of the topography.

It was the winter of 1914-15 that ice skating became possible for the first time when a dam was built on College Creek to flood the low area that is now Lake LaVerne. The weather turned cold enough in early January to permit use of the pond so formed.

Construction of Lake LaVerne assured good skating the next year. However, there were many years when the condition of the lake did not permit skating. More recently the weather has been the only determining factor as to when the ice is ready for skating.

TENNIS COURTS

When tennis was first played on the campus has not been determined. The earliest reference located occurs in the July 1885 copy of the Aurora which noted that "The lawn has been cross-barred with white-wash for accommodation of Lawn Tennis." By June 1890 that paper recorded that "Tennis courts literally cover the campus, and the evening recreation hour seems not nearly long enough."

The Athletic Grounds, west of Morrill Hall, were established in 1892 and most of the tennis courts were moved to that area. However, work in developing the courts area was slow, and in April 1893 the IAC Student wrote, "The campus is dotted with many new tennis courts." Three months later that source said there were twenty-three courts on the campus.

The first mention of tennis courts for women appeared in the ISC Student on April 15, 1905: "Two dirt tennis courts have been prepared for the girls just north of the Faculty club which will be for the exclusive use of the girls." In 1909 the women's courts were relocated to the north side of the street at about the location where Physics Hall stands now. Four new courts for women were installed west of the Home Economics building in 1913.(1)

After construction of State Gymnasium new tennis courts were built across the street to the north, on the land now occupied by Beyer Hall. The September 11, 1914, issue of Iowa State Student records that work was about to start on fourteen courts in that location. Clay for the surface of the courts came from Marshalltown. It was late in 1916 before any of those courts were ready for play.

> Only two weeks remain before the eight new tennis courts north of the gymansium will be completed....Four new courts will be built immediately north of Engineering hall where the old courts now are, sometime this fall. These courts will not be ready for use until next spring. Eventually four new courts will also be built east of those across from the gymnasium, making twelve courts in a row. Just when these will be built has not been announced.(2)

In 1922 work on additional courts was started. Four were added north of those across from the gym and four, for women, north of College Creek, east of Wallace Road. Concrete surfaced courts for

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(1) Minutes, July 1913

(2) Iowa State Student, Sept. 19, 1916

varsity use were first discussed in 1925. Two of these were authorized at the May Board meeting that year. However, by 1928 only one concrete court had been completed. The following year it was noted that

> Six new tennis courts are being established at a cost of $2,650. The new courts, three of cement and three of clay, will be added to the east of the old courts in the space formerly used as a car parking area.(1)

The eight women's courts were resurfaced in 1948, using a specially prepared material providing a hard yet resilient surface. Nine men's courts were resurfaced in 1959, in preparation for the Big Eight Tournament scheduled in 1960.

Construction of Beyer Hall in 1963-64 resulted in the loss of most of the courts in that area and an appropriation of $90,000 was made to permit the building of twenty-one new courts as replacement. Those were completed in 1965.

In 1979 six new courts were built in the area of the old Horticulture Farm, west of the baseball diamonds.

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(1) Iowa State Student, Sept. 26, 1929

UTILITIES

WATER SUPPLY

During the first years of the college the only source of water was from natural springs. The First Annual Report, for the years 1858-59, mentions "the large spring" lying to the north-north east of the barn. That spring was about at what is today the intersection of Sixth Street and Wallace Road. It was originally thought that water from that spring could be "conveyed by means of an Hydraulic Ram to all these building sites." The sites referred to were those for the barns, the Farm House and the College (Main).

By 1865 the Minutes record that "Your committee have not been as successful as they would desire in conveying the water from the spring to the building." (Main) A pipe line of 1 1/2" drain tile laid in cement had been built "but the pipe leaked and is probably a failure. It is supposed that the tile is not laid well in the mortar....We would recommend the finishing of the water Ram for the benefit of the College, Farm House and Barn. It is much needed at the barn."(1)

A well was dug at the Farm House, 32 3/4 feet deep as reported in the Minutes of the January 14-16, 1867, meeting. This was said to provide "good water and plenty of it." For the College building a well was dug at the head of a spring "about three hundred yards west of the Building and by the use of a wind mill force the water to the upper story of the Building." That report expanded on the description:

> The supply of water has been abundant and of good quality for drinking and cooking purposes. It is quite hard, however, and I recommend to your consideration the importance of building cisterns of large size for the supply of water in the Laundry.
>
> In the summer season the water in the tanks cannot but be very warm and insipid. I respectfully recommend the construction of capacious ice houses.
>
> I am happy to report that windmill and pump work successfully and that during the late cold weather there was no interruption in the supply of water.(2)

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(1) Minutes, March 23-24, 1865

(2) Minutes, Jan. 11-13, 1869

That operation was short-lived as seen in the Biennial Report for 1871:

> There can be no justifiable delay in providing for a permanent supply of good water for the buildings. So far our expedients for obtaining water have, on account of limited means, been quite inadequate. The well, seventy rods west, from which the water was pumped into the building by means of a windmill, has the last two years failed about midsummer, and compelled us to depend on water wagons for a precarious supply. This method of getting water is expensive, and intolerably vexatious, and calls for immediate remedy.

The solution adopted was to install a pump at the spring northeast of the barn and thence by new pipe to the buildings. The pump was operated by compressed air with an alternative use of steam. That system was completed by 1873. It was replaced in 1879 by a windmill, as reported in the Aurora for July of that year:

> Prof. Thomson has in active operation a windmill of his own invention. It has a governor or self-regulator attachment that throws the vanes in or out of the wind according to its force, so that the mill approximates a regular or unchangeable speed. The proper steps are being taken to secure a patent. The mill built by the Professor last winter, for supplying the College with water, has proven entirely successful, and it is a great saving over the old way of pumping by steam.

1879 also saw the construction of an outdoor water storage tank behind Main "from which the kitchen, laundry, and everything in the basement of the building, are to be supplied with water."(1)

Both wells and cisterns were dug at the two professors' houses built in 1883 (Osborn Cottage and Sloss House). Earlier wells had been dug for President Welch's house (South Hall) and for the Boarding Cottages. Although no confirmation has been found, it is probable that the two earlier residences, Marston Cottage and Music Hall, had their own wells. A windmill and well were constructed for the Veterinary Hospital in 1885.

By 1890 the need for a more adequate system of water supply for the entire campus had become a necessity as recorded in the Biennial Report for 1890-91:

> With the number of inhabitants that we now have upon the grounds and the important necessity for water in the buildings on the

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(1) Aurora, June 1879

campus for the providing of the green and horticultural gardens with abundant water, we should have an economical and general water supply for the campus.

The developments and construction of a new water supply and distribution system for the campus are summarized in a report by Professor Anson Marston, included in the 1896-97 Biennial Report, from which the following excerpts have been taken:

> In 1893 I was instructed by your honorable body to prepare plans for a college waterworks system....I prepared plans for the system substantially as now completed, and these were adopted by the board of trustees in 1893. Funds for construction were not available at that time, and it was not until 1896 that the necessary appropriation was secured from the legislature. In the meantime the necessity for the system had been demonstrated by the enforced closing of the college for two weeks in 1895 on account of lack of water, and by two or three fires, which had to be extinguished by the primitive method of carrying water in buckets.
>
> The failure of the college spring in 1895 made it necessary to sink a deep well instead of developing the former supply as contemplated at first. In 1896 I made the modifications of the first plans rendered necessary by this fact and by the construction of Margaret Hall....
>
> It has been a source of satisfaction to me that the plans, both for the general system and for the tower and its details, which were originated and fully worked out by me, have been completely approved by the competent consulting engineers to whom they were submitted....
>
> In July, 1896, the contracts for the distribution system and the foundations of the water tower were awarded to Crellen & Lovell of Des Moines, who finished their work in November, 1896. At the same time the contract for the super-structure of the water tower was awarded to the King Bridge company of Cleveland, Ohio, who completed erection in August, 1897.
>
> The contracts for the pumping station were let in May, 1897. Jackson & Moss of Des Moines, constructed the station, installed the pump, and laid the pipe line connecting with the distribution system. Their contract has just been completed....
>
> The college [water] tank is of steel, 24 feet in diameter by 40 feet high, besides the hemispherical bottom. Its capacity is 162,000 gallons, or 5,200 barrels. The balcony floor is 110 feet above the capstones, and the total height of the structure is 168 feet....

> The [pumping station] building communicates directly with the boiler room of the college power and lighting station, the boilers of which are utilized to supply steam for pumping. The building is located directly over the artesian well, 2,215 feet deep, from which the college water supply is taken....

The report then showed a total cost of $34,000 plus $2,000 for a temporary water supply while the deep well was being drilled.

Over the next few years the distribution system was extended to additional buildings and to new fire hydrants. Repairs were needed on the pump and in 1907 a new well was drilled east of the spring to provide needed additional water.

The water filtration plant was erected in 1915-16 from plans prepared by Professor M.I. Evinger of the Sanitary Engineering department. This eliminated the iron sediment in the water which had been making it "as brown as coffee when drawn from spigots in the buildings."(1)

Another well, #3 was drilled 1919 to supplement the diminishing yield from the older wells. In 1922 one more well was drilled. In that same year meters were installed to measure water usage in each building.

Wells #5 through #10 have subsequently been added to ensure an adequate supply of water for the campus. Some of the earlier wells have been plugged because they no longer furnish enough water to justify pumping.

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(1) Biennial Report, 1912-14

SEWERS and DRAINAGE

During the earliest years on the college farm a main problem was disposal of surface waters -- by what today we refer to as storm sewers. In 1868 the Farm Superintendent reported to the Board:

> I had a ditch wide and deep enough to carry all the water ordinarily flowing in the slough that skirts along and near the south side of the farm, directly east from where the slough debauches from the bluffs to Squaw Creek, length a little over 100 rods. This improvement conveys the water in a straight due east line into the creek instead of letting it flow over some forty acres of bottom pasture.

That channel still carries College Creek water in a straight line across the intramural fields to Squaw Creek.

In the Minutes for January 1869 it is recorded that

> About 130 feet of two inch tile was used to drain the cellar of 2 of the Prof. Houses and properly half that number will yet be used in the cellar of the 3d house. The Drain already cut is doing valuable service.

Those first two houses are those now known as South Hall and Music Hall, while the third one was Marston Cottage.

A year later the Minutes include the first mention of a sewer to serve the College building:

> The sewer....consists of a hallow cylinder of Brick made for the purpose laid in mortar. It is over 80 rods long and its interior diameter is 26 inches. It lies every where below frost & in many places runs 8 or 10 feet below the surface. It has sufficient decent and its capacity is such that it will serve for the drainage of all the buildings hereafter erected on the College grounds....
>
> Provision should also be made to run some drains through the land set apart for a garden for the College as portions of it are entirely too wet for garden purposes.

That sewer line from Main was by no means as successful as the 1870 account would indicate. By 1877 it was determined that the sewer was "defective in very many respects and altogether unsuited for the purpose for which it was originally designed." Its condition and a proposed replacement system are well defined and described in the "Report of the Committee on College Sewerage" included in the Minutes of November-December 1877. The old sewer had created conditions which led to an undue amount of sickness among the students as well as obnoxious odors both in and outside of the building.

The first sewer had discharged into the slough south of Main (about at a point where Union Drive nears the northermost part of Lake LaVerne today). A new sewer was installed in late 1877 and extended east to empty at a location near where Knoll Road crosses the creek. The improvement was noted in the Aurora for March 1878:

> The college sewer which formerly emptied into the small creek just south of the building, has been changed so that it now runs east and empties in further down. This change has long been needed, as the odor, which every south wind wafted to the building, was very disagreeable.

Over the next few years changes and extensions were made to the system and by November 1892 the IAC Student reported:

> When the work is completed this fall over 6000 feet of sewer line will have been added to that already laid, a line now running from every important building on the grounds.

Filter beds, as a more sanitary disposal system, were installed in 1898 at a location on the north side of College Creek just west of what is today Wallace Road. The system had been designed by Professor Anson Marston, and construction was under contract with J.L. Black of Boone. It proved to be a very successful method of operation.

Much subsurface drain tile had been installed at several areas of the campus to improve soil conditions for plantings as well as to minimize puddles and pools of accumulated surface water.

In 1906 an agreement was reached with the City of Ames granting the city the right to connect a Fourth Ward sewer system into the college disposal plant. The city would be obligated to pay part of the cost of expanding the filterbed area and an annual maintenance and operating fee. It was 1908 before the sewer system for the Fourth Ward was under construction.

By 1916 the load on the disposal plant had become excessive and the following year a new plant was built north of the railroad and just east of the underpass on Haber Road. Construction of that plant included the Imhoff tank and Dosing Chamber, both added in 1920.

The filter beds of the old disposal plants were removed in 1922, and the area was then developed for tennis courts.

In 1925 the responsibility for the operation of the sewer system was transferred from the Engineering departments to the Department of Buildings and Grounds.

The Biennial Report for 1929-30 called attention to the need for expansion of the disposal system:

> The college sewage from nine dormitories and all other college buildings passes through a septic tank and filter on the college grounds and thence to a small stream. The filter beds are not only wholly inadequate in size, but are entirely out of repair and all the college sewage is now running into the stream with very slight purification.

Ten years later the Biennial Report (1938-40) shows no improvement in conditions:

> During the past year a great number of complaints have been received from residents of the City of Ames living near Squaw Creek below the outlet from the College Sewage Disposal Plant. On account of the overloaded conditions in the plant the treatment of sewage is not complete and it is discharged into the creek at certain times in a condition approaching untreated sewage. In checking the design of the present plant, it is apparent that it was designed for approximately 200,000 gallons per day. Weir readings taken on our main outlet sewer last year indicate that the present flow of sewage ranged from 400,000 to 500,000 gallons per day. In other words, the plant is attempting to treat about twice the flow for which it was designed.

The following year (1941) a joint college-city project was initiated to study and recommend solutions to the problems of sewage disposal for both the college and the city. In 1943 a temporary by-pass sewer was installed to transfer part of the college load to the city system, thus relieving the load on the college plant. An agreement with the city for construction of a new disposal plant was entered into in 1947. Construction contracts were awarded in 1949 and the plant was placed in operation in January 1951.(1)

The college disposal system was then abandoned and the area of the filter beds cleaned out and converted to open field space.

During the fifties there was extensive development of the storm sewer system on the campus to minimize the volume of water into the sanitary system.

By 1979 plans were underway to relocate the city disposal plant farther south on the Skunk River and to increase its capacity to handle the heavier loads of the city and the university.

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(1) Minutes, April 10-11, 1952

ELECTRIC POWER and LIGHT

The first electric lights on the campus were installed in old Main and the Office Building in the fall of 1884 under a contract with Western Edison Light Company. The agreement called for the company to furnish a dynamo to be operated by "Suitable belting and counter shafting" to the college steam plant, to provide "250 ten candle Edison Incandescent lamps placed on suitable fixtures or attachemnts" and connected with "a two hundred ten candle light Edison dynamo." The lamps had a guaranteed life of six hundred hours "when burned at normal candle power."(1)

Two years later the number of lamps installed had been almost doubled with a new dynamo added.

In 1892 the supervision of the electrical system was transferred from the office of the Steward to that of the Professor of Electrical Engineering. The July 29, 1893, issue of the IAC Student records:

> During the summer vacation several of the electrical engineering students were engaged in putting the Edison three wire lighting system in the college buildings. This gives much better satisfaction than the old and now all rooms are abundantly supplied with light.

The Biennial Report for 1894-95 records that "Our electric light plant has been thoroughly overhauled and its efficiency eminently improved, greatly promoting the welfare of the students.

Lighting of the campus grounds was first discussed by the Board in 1896, but it was at least two years later before any light was placed outside of buildings, when the Board referred to the building committee, with power to act, "the matter of putting in new electric light poles."(2) On October 15, 1900, the ISC Student noted that "An incandescent light has been placed at the foot of the hill by Music Hall." The building named is what was later known as South Hall, originally built as the residence for President Welch in 1809.

By November 1902 the paper could say "Each night shows more lights distributed over the campus, their friendly rays lending light to the wandering pedestrian."

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(1) Minutes, Aug. 21-22, 1884

(2) Minutes, July 13-15, 1898

An Agreement was made with the Ames Electric Power Company to extend their service to the college to provide a supplementary power source to the campus in the event of failure of the college plant. In 1909 an agreement with the city provided for the college to furnish power to the Fourth Ward. In 1931 the interconnecting lines were changed from overhead to underground.

During the 1940's extensive revisions were made in the power distribution systems and expansion of plant generating capacity. The load created by the Pammel Court units was carried almost entirely by power from the Ames plant until a new turbo-generator was installed at the campus Power Plant in 1950 after which Ames power was no longer needed. At that time the campus distribution was changed from three-wire to four-wire with an increase in capacity and efficiency of the system. The new cable was installed in buried conduit, replacing the use of electric lines in the tunnels. The change was accomplished over a period of several years.

Installation of new street lighting and additional lights for campus walks and parking lots were major developments in the 1960's.

Improvement, extension and replacement of electrical equipment, generating capacity and lighting is an on-going operation. New substations have been built for greater efficiency in power distribution.

Agreements with the Ames municipal plant have been continued and updated to maintain interconnecting lines for either plant to supplement the other in the event of accidental power outages.

GAS SUPPLY and DISTRIBUTION

In order to provide light in the College Building a gas generator was installed in 1869. The apparatus was furnished and installed by a Mr. Stryker of Chicago, operating under a Rand patent. This equipment was mounted outside at the rear of the building. A gas fitter from Des Moines, John M. Pearce, was employed to install the gas lines and fixtures inside the building.

This equipment worked satisfactorily except in cold weather. It was decided the following year to construct a brick gasometer house around the apparatus, at a cost of $500.

In 1877 it was determined that a different gas generating system would be less expensive to operate. The new equipment was installed in 1878 and resulted in a saving of $61.00 per month.

Twice the gasometer caught fire, but each time the flames were extinguished before serious damage had resulted.

By 1883 the potential danger of the gas house location close to Old Main was fully recognized and a new gas house was built farther to the west, just north of the workshops. The new equipment was larger and also furnished gas for the Chemical department.

Electricity replaced gas for lighting in the College Building in 1884. In 1886 a new engine and dynamo for the electric plant were installed in the gas house, at which time a new floor and ceiling were put in and the walls were whitewashed. The original gasometer structure was razed in 1887.

Independent gas generation was provided for North Hall in 1891 and it "will be a great advantage to the Botanical Department."(1)

In 1898 "A new gas plant is being put in west of Morrill Hall for the use of the geological and zoological departments."(2)

Other gas generating equipment was installed until by 1910 there were eight separate plants on the campus. None operated satisfactorily and all required frequent repairs. It was therefore determined that a better solution would be to install gas mains throughout the campus and to purchase gas from the Ames Gas Company. A contract with that company was executed in December 1910.(3) That contract expired at the

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(1) Aurora, August 1891

(2) ISC Student, Sept. 20, 1898

(3) Minutes, November and December 1910

end of 1913 and a new agreement was made then with Iowa Public Service Co. to furnish gas to the college.

On January 26, 1933, the Iowa State Student reported a new tentative agreement and proposed contract with the Iowa Electric Light and Power Company to provide gas for the entire college at a wholesale rate. It can be assumed that the contract was subsequently executed.

Old age was catching up with the distribution system. The Biennial Report for 1938-40 records that the "pipe was installed in 1913 and is beginning to rust out in many locations. Innumerable repairs on the gas mains have been made in the last year and it will be necessary to replace all of this piping in the very near future." An appropriation of $30,000 was requested for that purpose. But it was 1959 before an appropriation of $25,000 was made. Much of the system was replaced and some new extensions were then made.

Normal maintenance and extensions to new buildings have been made as needs have arisen since that time.

STEAM DISTRIBUTION, TUNNELS and CHILLED WATER

A contract to build a tunnel from the old Power Station to the new Engineering Hall (Marston Hall), to carry a steam line for heating, was awarded in October 1901.(1)

This was the beginning of the extensive tunnel system for heating pipes currently existing on the campus.

Before the then new Power and Heating Plant was started a contract had been entered into for constructing new tunnels, as recorded in the Biennial Report for 1903-05:

> The Board has authorized the construction of tunnels, reaching from the present heating plant, adjacent to Engineering Hall, to connect with the new main building, Morrill Hall and East and West Cottages. These tunnels can be used later to convey heat from the central plant wherever it may be established.

In 1907 the tunnel from the site of the proposed new plant to connect with the existing system was contracted for with Bartlett & Kling at a cost of $4.45 per lineal foot. The extent of that tunnel was described in the Biennial Report for 1906-08:

> The main tunnel is constructed of cement reaching from the plant to a point north and west of Central Building, from which a tunnel branches to the southward, entering Central building, and to the westward connecting with another tunnel that leads to the shops and Engineering Hall. On this tunnel already completed we now carry the director's house, the New Hall of Agriculture, Central building, Morrill Hall, in which the Library is placed, Engineering Hall, the Engineering Shops, Chemistry building and Alumni Hall.
>
> The following buildings remain to be connected and the necessary tunnels must be built for this purpose: Margaret Hall, Horticulture building, the Dairy building, Experiment Station barn and Stock pavilion.

Since that time the system has been extensively expanded as more buildings have been erected on the campus. A major undertaking was the steam line to serve the Veterinary Medicine Facilities where that service is installed in insulated pipe rather than in a tunnel. In 1978 a connecting extension was added to form a loop system for the campus,

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(1) ISC Student, Oct. 26, 1901

adding to the reliability of the entire operation.

The central chilled water system was first planned in 1966 when Brown Engineering Company was directed to prepare plans for that installation. Construction began in 1968 and was in operation by 1970.

Expansions and additions, as well as modifications, continue on both systems as the needs arise.

TELEPHONES

Before the advent of the telephone the telegraph was the best system of long distance communication. In June 1874 The Aurora reported:

> The Board of Trustees contemplate introducing telegraphy as one of the branches of study....Besides serving as a branch of study for those desiring it, it will be of great practical value to the institution, as a wire will be run from the College building to the telegraph office at Ames. The necessary apparatus will probably be provided by the opening of the fall term in July.

By August the same paper could record that "A wire extending from the farm house to the College is now in successful operation, and the ra-atat-tat of your operators is music in the ears of Miss Bowen."

The first telephone installation was noted in The Aurora in April 1878:

> In a few days the President's office will be connected, by telephone, with Prof. Macomber's room in the laboratory. The instruments have arrived in good shape and Prof. Macomber is energetically at work arranging them.

In 1881 a report to the Board of Trustees relating to connecting the college with Ames by telephone was made at the May meeting of the Board. The estimated costs are of some interest:

For installation of poles and lines	$ 84.00
Cost with one instrument	98.00
Cost with two instruments	112.00
For each additional instrument	14.00

Action was postponed at that meeting, but at the Nov.-Dec. meeting the Board approved payment of $63.40 to the Ames and Nevada Telephone Co. for putting up telephone lines on the college grounds.

In 1892 IAC Student on May 14 reported that "The telephone line has been extended from the President's office to the Exp. station."

A complete system of telephones, with 20 instruments was installed between buildings in August-September 1898. The ISC Student noted the event on September 6:

> Of the many new improvements upon our campus and in the various departments none will be more useful and none is more needed than the [new telephone] system. This new system which is now being put in, will connect all the offices and buildings on the campus, the motor depot included. It means much to the pro-

fessor in the engineering room wishing to talk to a person in agricultural hall or the green house; it means the saving of many steps and much time to all members of the various departments.

A new system was installed in January 1903 by the Boone County Telephone Co. providing each phone with a direct connection to the exchange in Ames. Over the next ten years various agreements were entered into with telephone companies. By 1908 underground lines were called for to eliminate poles on the campus.

In 1930 the first PBX system was installed in Beardshear Hall and later that year a similar switchboard was put in Welch Hall.

Dial phones came to the campus system in 1937. A new switchboard was put in at the same time. It carried 300 extensions and 23 trunk lines.

Pammel Court received its first individual phones to units in 1953. Before that only pay phone booths had been available.

An expanded system was installed in 1957 with a change from three digit to four digit numbers and a capacity of 700 total numbers.

1961 saw the first installation of telephones in residence hall rooms and at the same time the introduction of direct dialing without going through an operator. The system was also expanded to provide for 2700 phones.

The most recent change in systems came in 1965 when all university phones were placed in a new Centrex system and all carried the 294 prefix. At the same time the capacity was increased to provide for 4000 lines.

SPECIAL AREAS

AMES LABORATORY

Atomic Energy Commission

and

Energy and Mineral Resources Research Institute

The Iowa State College Institute for Atomic Research (IAR) was organized on November 1, 1945, but not formally dedicated until May 17, 1947, the date considered as that of the establishment of the IAR and the Ames Laboratory.(1) The IAR was the administrative body while the Ames Laboratory was the operational organization. Both were under control of the United States Atomic Energy Commission.

Iowa State was selected as one of seven laboratories in the country to cooperate in atomic research because of the important part it had played in developing inexpensive processing of uranium during World War II and its capabilities and experience in research on atomic energy elements.

The various buildings erected for the Ames Laboratory are discussed under their individual names in the buildings section of this volume.

In February 1974 the IAR became EMRRI, the Energy and Mineral Resources Research Institute.

On January 19, 1975 the Atomic Energy Commission was superseded by the Energy Research Development Administration which, in turn, became part of the newly formed Department of Energy on October 1, 1977.

The Ames Laboratory buildings have all been constructed on land owned by the college or university (State of Iowa), but not until a long term lease had been entered into with the federal agency which funded the construction.

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(1) The News of Iowa State, May-June 1972

IOWA STATE CENTER

The need for an auditorium on the campus was first expressed by President Beardshear in the Biennial Report for 1900-01:

> We have a chapel with a seating capacity of 625 and an enrollment of about 1,000 students a term. We are off in a community by ourselves, away from halls and opera houses, so that it is impossible to rent a room adequate for the needs of our public assemblies. A room with a sufficient capacity for the public work and gatherings of the college is an unavoidable demand, but in view of our other needs this matter must go over.

During the next fifteen years the request was repeated in various Biennial Reports. In the 1914-16 report President Pearson proposed an asking of $10,000 for the construction of a "temporary auditorium." State Gymnasium had been completed in 1913 and had provided some relief but conflicts with athletic events created numerous problems.

The first student input occurred in 1917 when the Iowa State Student on January 23, carried an editorial calling for an auditorium, and in the February 17 edition questioned the wisdom of a temporary building for the purpose.

In 1923 President Pearson entered a request for an appropriation of $350,000 for an auditorium. No further references to such a structure appear for another thirteen years, during which time State Gymnasium, the Armory and the Curtiss auditorium were used for most large gatherings.

On March 28, 1936, the following editorial appeared in the Iowa State Student:

> Again Thursday night we saw the need for a large activity center at Iowa State. We need a center that can accomodate at least 6000 people.
>
> There are many students who have paid for their activity books and who want to see the games, but there isn't room for all who want to come. Many have to miss these events. The same was true at the Minneapolis Symphony concerts, the Don Cossack review, many of the lectures and most of the games.
>
> Students alone aren't disappointed. Many Ames and Des Moines people, too, were disappointed at not hearing Ormandy on his last tour with the Minneapolis Symphony--but there wasn't room. These people would have come to this concert, and they would come to future concerts and lectures.

> True, the activities the students alone are concerned with would not make a large activity center pay. But other factors would. Why do Iowa farm people hold their meetings in Chicago, the industrial center of the country? Because there is no other place to hold these meetings.
>
> The Iowa State campus, the most centrally located spot in Iowa is the center of agricultural study and farm life of the state. But because Iowa itself is the national center of agriculture our campus could readily become the center for most national agricultural activity -- shows, exhibits, concerts, plays, lectures, meetings and conventions.
>
> Such a center, kept open all year around, would soon pay for itself. The activities of the student body are already dove-tailed with those of various groups, but neither is able to completely enjoy its own show. Iowa State is the natural center for the farm life of the nation. Why not make the most of our opportunity and thereby benefit both our student body and the people in agriculture?

In September that same year the paper headlined an editorial "We Need an Auditorium Now!" A year later, on September 25, the paper included this report on a talk by President Friley:

> ....Particularly strong was appeal for a new auditorium. At the present time, Iowa State's total seating capacity in Auditoriums is as follows: Physics lecture room, 300; Chemistry lecture room 300; Engineering assembly 400; MacKay auditorium, 500; Agricultural assembly, 800; Great Hall, 1000, and Gymnasium, 2500.
>
> Quoting Friley, "With a student body of 5,000 not to mention the staff of the College, and with an increasing number of concerts, lectures, convocations and other attractions, none of these meeting places is adequate for the increasingly large audiences. Several times during the session 1936-37 from 3,000 to 4,000 people were crowded into the Gymnasium, which has a normal seating capacity of only 2,500. For one concert more than 5,000 people had applied for tickets."

The Board minutes for May 3, 1938, include an Auditorium in the list of important building needs.

New interest was generated in 1939 and 1940. On December 14, 1939, this account appeared in the Iowa State Daily Student:

> Dreams for a new combined auditorium and fieldhouse took on a note of reality yesterday, when Pres. Charles E. Friley appointed a special committee to consider the "feasibility and desirability of erecting such a structure," and to draw up suitable plans.

A month later, on January 24, the paper could report:

> Tentative plans, in blueprint form, for a proposed auditorium-fieldhouse are to be submitted to the general committee this week for approval, Dean M.D. Helser, chairman, revealed yesterday.
>
> Plans have been drawn by Prof. A.H. Kimball, head of the Architectural Engineering Department.
>
> Maximum seating capacity probably will be between 7,500 and 8,000 Helser stated. Plans indicate the building will consist of two stories, incorporating a large stage, a basketball court, a track and basement locker rooms.
>
> Two possible sites are being studied by the committee, one immediately north of State Gymnasium and the other north of the Armory and Agricultural Engineering Building.
>
> Several plans for financing the project have been proposed, Helser said, but none has been accepted.

In May, 1940, the committee decided to postpone further action for a year "for proper consideration of all the proposals for the structure, further study of the two possible sites, and solution of financing."(1)

World War II interrupted all thoughts of building and it was October 1945 before further references to the proposed building appear. On the 26th of that month the student paper reported:

> Committees to push plans for a field house have been formed by the Iowa State Alumni Association....
>
> The fieldhouse will be known as the Cyclone Memorial Fieldhouse in memory of members of the original cyclone team and the Iowa State men and women who gave their lives during World War II.

During the years from 1946 through 1949 the push continued for a fieldhouse-auditorium and recommended that an increase of $3.00 in student fees be implemented to help finance the project. Cardinal Guild and the Alumni Association joined the Athletic Council in urging the adoption of that procedure. The proposals were discussed on various occasions by the Board during 1949 and at the December 14 meeting voted to drop the plans entirely

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(1) Iowa State Daily Student, May 7, 1940

A completely new concept was introduced in 1954 when President James H. Hilton addressed the Staff Convocation on September 15, with the following presentation:

> There are many needs of the institution beyond these which the legislature can normally be expected to provide. The most important of such items at this institution is what I am going to call, for lack of a better term, an Iowa State College Center. In this Center I would envision an auditorium, a little theatre, a coliseum, and space to house our music organizations, play shop, radio, television and other phases of our regular educational and extracurricular programs.
>
> Such a center could be used for lectures, concerts, plays, commencements, intercollegiate basketball and as a Center for large groups of people who would hold meetings on our campus.
>
> Where would we build such a layout as this if we had the money? The best location would be on the levee east of the girls' dormitories, north of Lincoln Highway. Naturally this area would have to be filled in so that it could not overflow when we have our periodic floods.
>
> Well, that is one of my dreams for the future. It probably will take years to complete it. You may think I am unrealistic, a dreamer, a visionary or just plain crazy. But may I say to you that I have already been called all those things and some other things, too, about this project, and if any of you feel that I should be discouraged in this venture you should think up some other terms -- because I am quite determined about this Center.
>
> Now seriously we cannot at this time plan on state appropriations for this type of building. It will take all the money we can hope to get in the immediate years ahead for classroom and laboratory buildings to provide the necessary facilities for <u>increased</u> enrollments and expanded research programs.
>
> Funds for such a Center will have to come from some other source. I am hoping that somewhere, sometime, we might find an individual or individuals who will give us a large grant to start the project. Such buildings have been given to other state supported institutions and I cannot see why this institution -- one of the truly great education centers of the country -- should not try to secure things which will add culture and enjoyment and dignity to our total educational processes. In my books this is a Must.

A month later Dr. Hilton spoke to a group of students and the talk was reported in the October 13 <u>Iowa State Daily</u>:

> ....Then Dr. Hilton explained his "dream" for Iowa State, the

> building he calls "the Iowa State College Center." "I have no money for the Center," he said, then firmly added, "I'm determined I'll find money for this."
>
> An architect's front-view drawing of the Center was shown on a movie screen.....The new Center would have an auditorium with about 4,000 seats, a coliseum with a 12,000 to 15,000 seating capacity and space for radio, TV and cultural activities.

The drawing referred to in that article showed three separate but connected buildings facing south and located on the north side of Lincoln Way in what is now the intramural field. That was before any plans had been considered for the construction of residence halls east of Wallace Road. Those first schematic drawings had been prepared by Leonard Wolf, Supervising Architect and head of the department of Architecture and Architectural Engineering.

Just when the proposed site was shifted from the north to the south side of Lincoln Way has not been determined, but "Progress Report No. 1" of the Long-Range Campus Planning Committee, dated June 20, 1955, includes this item under the heading of "Basic Planning Principles for Expanding Campus":

> A new stadium gym and baseball field should be located east of Beech Avenue and south of Lincoln Way. The intramural field can also be expanded in this area. The plan for this development should be integrated with President Hilton's proposed Iowa State College Center.

The first contribution to the Center was reported to have been a two-dollar bill sent to President Hilton by a faculty member immediately after his first announcement of the original "dream". In the spring of 1956 the Iowa State Daily reported gifts of $200 from Greek Week Hilltoppers, $500 from the senior class and $1500 from the Homecoming Interim Committee. But it was not until after the incorporation of the Iowa State College Foundation in July 1958 that real progress was made in obtaining funds for the project. (After the College became a University the Foundation name was modified to reflect that change.)

At its first annual meeting on May 28, 1959, a motion was carried unanimously:

> that this Foundation undertake the establishment of a general cultural center for Iowa State College, said project entailing the erection of various buildings and structures, and that this Foundation, for the present devote its efforts to the financing of that portion of said project involving the combined auditorium-coliseum as described by the President in his presentation

of the future needs of said College.(1)

The following year John Brooks, of Brooks-Borg, Architects, presented a plan for a round structure providing the multipurpose facilities of a coliseum and auditorium. That plan was further developed in 1960-61 and at the 1961 meeting of the Board of Governors of the Foundation when the general scheme was approved but with the request to study alternative exterior treatments. That scheme showed a circular building located about where the Scheman Continuing Education Building now stands, with access from Lincoln Way and parking in a U-shape around the perimeter and with a reflecting pool between the auditorium and the highway.

By 1963 the concept of the planning changed as recorded in the minutes of a meeting of the Board of Directors of the Foundation:

> It was suggested, and agreed by the directors present, that the Foundation consider now that it is a three-building complex, but that an architect be given the latitude to develop the Center in another manner if he feels it can be done.(2)

At the same meeting a Building Committee was appointed to select an architect, the cost of the project for construction, operating and maintenance and to estimate "probable income through rent, concessions, etc." The three units then contemplated were a "Little Theater" and auditorium in one building, a coliseum and a "continuation center."

In March 1964 the Building Committee announced the selection of architects for the Center and the Board of Regents concurred in the appointment the following month. The architects were named as a joint venture of Crites and McConnell of Cedar Rapids, and Brooks-Borg of Des Moines.

On February 26, 1965, the architects presented drawings and a model of the Center project to the Board of Directors. This envisioned the four separate structures, interconnected by walk ways, very similar to the plans finally executed. A cost estimate at that time came to $12,730,000. That scheme was given basic approval.

Groundbreaking ceremonies for the Center were held on October 30, 1965.

The individual buildings are included in the section on campus buildings.

The Iowa State Center was essentially completed with the opening of the Scheman Continuing Education Building in September 1975.

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(1) Minutes, Board of Governors Iowa State Foundation

(2) Minutes, Board of Directors, Oct. 25, 1963

POULTRY FARM and BUILDINGS

The area long known as the Poultry Farm included a 20 acre block purchased in 1906 and a 3 acre plot at the north end of that property acquired in 1921. The combined tract is the block where today's Towers Residences are located, between Storm Street on the north, Mortensen Road on the south and Hayward Avenue on the west.

Information on the farm buildings erected there is meager and incomplete.

On May 20, 1913, the ISC Student noted that "the legislature has also approved....a poultry husbandry laboratory."

Minutes of the Board for August 9, 1916, record authorization to proceed with construction of Poultry House -- $776.87. The next month the paper mentioned a "new poultry shed at the poultry farm" among the minor improvements to be seen by new or returning students.

The following account of a proposed building appeared in the Iowa State Student on October 14, 1916:

> Simplicity of construction, economy of outlay and a unique ventilating system characterize the new farm poultry house to be built at the poultry farm this fall. It is a popular type of poultry house, designated by the agricultural experiment station to meet the requirements of typical farm conditions.
>
> Hollow tile walls, concrete tile floor and a shed roof outline the construction. Eight feet high in front, six feet in rear, 14 feet wide and 80 feet long, the house is composed of 4 identical sections, each 20 x 14 feet. Each section accommodates 100 birds. Any number of sections can be added to increase the house to any capacity.
>
> To secure ample ventilation and yet protect the interior from rain, the windows are built of four cellar sash, each sash overlapping the one below it and hung on sash centers to swing out and allow air entrance. Any or all sashes can be opened at once and yet the overlapping feature excludes possible rain. There are groups of 4 sash in each section. Besides these, there is a ventilation hinge box on the cornice for summer ventilation. Nests and roosts are removable.
>
> The house costs but $150 a section to build and is of most simple construction throughout. Because of the heretofore heavy call for poultry house plans it is thought that the present plans which are now available will prove very popular.

In December the paper included "an $800 poultry house at the poultry farm in a list of buildings" which Superintendent Sloss is now erecting

or will soon start. The next developments came in 1920. The April 13 Minutes that year show a recommendation by President Pearson for the construction of a brooder house, but a meeting on the 30th of that same month record that a decision regarding the brooder house "will be postponed." But on May 3 the following article appeared in the Iowa State Student:

> Construction of the new $8,000 Poultry building at Iowa State College will be completed this week, according to H.A. Bittenbender, head of the poultry husbandry department. In equipment, no poultry plant in the United States surpasses the one now under construction at Ames.
>
> The building was built largely to care for the incubation work carried on by the poultry students. Four rows of small and mammoth incubators will be placed on the ground floor. One candling aparatus will be furnished for every two incubators. On the upper floor, culling and selection will be taught with sufficient room for practical judging work.
>
> During the fall, when the incubators are not in use, candling and grading eggs will be taught. Poultry will be kept at the laboratory and carried thru a two week feeding period under student supervision, after which the proper method of killing farm fowls will be demonstrated.
>
> "Iowa State College has long felt the need of such equipment," said President R.A. Pearson. "We feel that this building will greatly increase the efficiency of our poultry department."

A year later (May 18, 1921) the paper reported additional work at the poultry farm:

> A new poultry building costing $18,000, 10 semi-monitor poultry houses and 25 colony brooder houses will be built immediately at Iowa State to accommodate ex-service men who are being sent to Iowa State to study poultry raising. This plant, which will be part of the college poultry farm, will comprise the most complete poultry equipment at any college in America, according to H.A. Bittenbender, head of the poultry department.
>
> The main building will be brick; three stories in height, covering a space of 40 by 60 feet and will care for incubators, storage and laboratories. The semi-monitor poultry houses will be 22 by 24 feet and each will accommodate 150 laying hens. The 25 brooding houses will be 10 by 12 feet and will accommodate 5000 young chicks. The college is furnishing the buildings and the poultry for the foundation stock and the United States government is installing the necessary equipment such as incubators, brooders and stoves.

Students who take two years of poultry work will follow a course which will require them to carry the chickens thru a year. It will give them an opportunity to handle all phases of the work on their own responsibility.

"Iowa is fortunate in securing this equipment," says Mr. Bittenbender, "since it affords an excellent opportunity to gather data and do experimental work with individual flocks, such as the every day farmer has to handle. With the large number of pens of different breeds, many problems will present themselves, the solution of which will help the industry."

Funds for this work are provided by a bill fathered by Senator W.S. Kenyon of Iowa.

This building was constructed in connection with the Federal Board for Vocational Education. A contract with that agency provided rent would be paid on the use of the building for their program.(1)

Quonset type buildings were added in 1946.(2)

In 1964 all of the buildings were razed to make way for the new residence halls.

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(1) Minutes, March 9 and 15, 1921

(2) Minutes, March 12, 1946

VETERINARY MEDICINE RESEARCH INSTITUTE

(VMRI)

The land for the "Research Farm," in what is now the southwest corner of the South Campus, was purchased for that purpose in 1921. A frame residence and a garage (also frame) were there at that time.

The Research Laboratory was built in 1927 by Superintendent of Buildings Thomas Sloss, from plans by Proudfoot, Rawson & Souers. An addition to it was constructed in 1968.

Numerous small buildings, barns and sheds were subsequently added to the site, but are not significant enough to be individually described.

An Isolation Laboratory was erected in 1962--plans by Russell and Lynch and contracted by James Thompson & Sons. A second unit addition to that structure was built in 1976, along with a separate Equipment Storage Building. Architects for both were Lynch-Payne-Champion-Bernabe, and construction contracts for both went to Allen Construction Co.

A new Poultry Isolation Building, from plans by Engineer Norval H. Curry, was erected by R. Friedrich & Sons, Inc., in 1971. This replaced an earlier structure destroyed by fire in 1967.

The research section of the Division of Veterinary Medicine became the Veterinary Medicine Research Institute in 1943.

THE YMCA and LYNN FUHRER LODGE

The Young Men's Christian Association has been an active organization on the campus since 1890, in which year the earlier Christian Association was divided into Y.M.C.A. and the Y.W.C.A. Both groups were leaders in the effort to obtain a building for their use and that of other societies on the campus, as well as a headquarters for alumni. Their actions resulted in the erection of Alumni Hall, completed in 1907.

Since that date both groups have maintained their headquarters in that building (except for a brief period during World War II when it was used by the Navy).

LYNN FUHRER LODGE

This building was erected as a memorial to Lynn Fuhrer who had been killed in an automobile accident two weeks before his anticipated graduation in 1930. His parents made a gift to the YMCA of a fund to build the lodge in memory of their son who had been student secretary of the "Y" when he was on the campus.

The lodge was built on land owned by the "Y" lying between what is now Veenker Golf Course and the Ames Laboratory Research Farm.

A.H. Kimball, head of the architectural engineering department and supervising architect for the college, designed and drew plans for the building. It was built by Ben Cole and Sons.

The lodge was dedicated on September 27, 1931. It has been the scene of many campus meetings, conferences and other gatherings ever since.

MISCELLANEOUS

BRICKYARDS

The first brick made on the college grounds were those for the walls of the Farm House.(1) The exact location of that 1860 brickyard has not been identified.

When construction for the College Building was started in 1864 the contract for the manufacture and laying of the bricks was awarded to Chamberlin & Co. of Jones County

> to burn seven hundred and fifty thousand at $5.85 per thousand and the College furnish the wood. The first kiln of 200,000 was burned well, but unfortunately too much lime gravel was in the clay which burst the brick; in accepting this kiln there was a deduction of 10 per cent. We have paid them on this kiln $1010.00.
>
> The second kiln contained about 100,000 of better made than the first, but not as a burn. We have paid $451.00 on this kiln. The kiln is on the land of Mr. Porter, formerly owned by W.J. Graham, adjoining the farm. We will have to pay Mr. Graham 20 cts. per thousand. The first hundred thousand nothing to be paid on. The whole amount paid to Chamberlin & Co. is $1338.82.(2)

Whether the kiln on Mr. Porter's land refers only to the second burn is uncertain. Perhaps the first kiln was on the farm. In a letter requesting additional compensation, on March 20, 1865, B.K. Bronson of Chamberlin & Co. refers to the first kiln burned (200M) "and those made in the yard (some 60M more)."(3) This seems to indicate that there were two different locations.

At the same Board meeting A.J. Graves, then farm manager reported that in August of 1865 he had "commenced to haul away first brick kiln.... moved about one hundred thousand to college." In October he had "hauled thirty-five cords of wood to brick yard." And in November "hauled lumber from brick yard for fence." (Mr. Bronson's request for additional funds was rejected.)

Charles A. Dunham, the architect retained in 1865 to replace the previous architect, expressed his opinion of the bricks made earlier:

> The Brick that were made in the year 1865 were good solid bricks

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(1) Report of the Commissioner of Agriculture for the Year 1865. p. 174

(2) Sixth Annual Report....for 1865

(3) Board Minutes, March 1865

but were filled with lime pebbles and when the rains came in contact with them and afterwards the frost the lime in the pebbles slacked and burst to pieces destroying them for facings for the building, but they will answer every purpose for the interior walls.(1)

In 1865 a new contract for brick work was entered into with S.A. Robertson of Des Moines. He, with Dunham, determined the site of the brickyard. He reported:

I selected a site in the timber as the most eligible location notwithstanding it would cost heavily to clear and grade the same....In the month of April work was commenced on the yard and pushed forward as rapidly as possible and we were ready for brick making in May. There being no suitable place for boarding men employed, it was necessary to build suitable buildings and in accordance with your instructions to build the same with the least possible expense compatible with the health and comfort of the men, a building 16 x 60 feet was commenced upon my arrival on the ground....The buildings were completed early in May. The necessary bedding, cooking utensils, etc. were procured, cooks employed and from that time on the men were well satisfied, and I think considerable money saved besides having the men close to their work....

"Notwithstanding the extremely bad weather during the greater part of the first four months----hard on brickmakers and masons---- losing thousands of brick on account of the heavy storms and rains----the character of the clay and the scarcity of covering lumber, yet I think I can with some little pride refer to the amount of work done and quality of brick made. The clay was difficult to work cracking in the yard and at times I almost despaired but after experimenting, working and trying, first class brick were made and can be made hereafter.

On the 16th day of August I received a notice from you to suspend operations the money appropriated by the General Assembly being nearly exhausted....Before I left the farm, the tools used in the work were gathered together and safely stored away, the boarding house goods and chattels cleaned and packed and all things left in good shape for a renewal of operations in the spring. The missing and broken tools and articles I am happy to say made but a small list.(2)

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(1) Board Minutes, Jan. 1866

(2) Board Minutes, Jan. 1866

Robertson then itemized his labor costs, including the following:

Preparing Brickyard	$350.50
Boardinghouse Building	96.00
Lime House, Tool House etc.	30.00

Building the Boarding house took 1520 feet of native lumber and 5475 feet of pine. For the Lime House he used 450 feet of native lumber and 2000 feet of pine. Brickyard lumber, all pine came to 8000 feet. The lumber was apparently furnished by the College.

The following May (1866) the Building Committee spent $47.50 for lumber to repair the "Boarding Shanty."(1)

During that summer brickmaking was continued under Mr. Banks, the foreman. He estimated upwards of 50,000 lost due to bad weather. A total of $3857.56 was expended for brick making in 1866. By the end of the season

> The material for making the brick became quite scarce, sometimes the foreman despaired of being able to succeed in finding suitable clay accessible to the yard and had to haul it much farther than on the previous year. The brick made are of excellent quality and much superior the workmen say to those made the previous year.(2)

With all needed bricks made it was decided to close out the brickyard and a public sale to dispose of household goods used in the boarding house, tools and other articles. Bad weather on the appointed date of December 12 resulted in only a few potential buyers appearing. A few items were sold then and subsequently for a total of $119.30. The remainder of the goods and lumber were left in the hands of Mr. Owens to dispose of.

Thus ended the brickyard operations on the College farm.

The location of the brickyard cannot be established with certainty. In the January 1868 Board Minutes there is a reference to "15 or 16 acres of flat wetish land" northwest of the College and between that and the brickyard. It was earlier stated that the yard would be set up on land requiring timber to be cleared. Thus, it seems it would

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(1) Board Minutes, Jan. 1866

(2) Board Minutes, Jan. 1867

have been in the timber along Clear Creek, probably in what is now Pammel Woods. Positive identification can only be made if exploratory archeological excavations were undertaken. The evidence is undoubtedly in the ground, but the end would probably not justify the cost or the damage to existing plant life in the area.

FIRE PROTECTION

The danger of fire was recognized early in the history of the college. In November 1868 the Board adopted a resolution "That the President be empowered to procure rope ladders and hooks and a sufficient quantity of hose to be used in case of fire."(1)

In 1876, at the March 30-31 meeting, the Board ordered,

> That the sum of $135.00 or so much there of as may be necessary be appropriated from Interest Fund for the purpose of purchasing a ladder, hooks, buckets, ropes, axes and a trumpet for the fire department of the College.
>
> And it is further Ordered, that a fire company be organized under the direction of Gen. Geddes from among the students of the College, that said company shall drill not less than one hour per week, and for the time spent in such drill they shall receive a compensation to be fixed by the Industrial Committee, said compensation not to exceed the rate per hour paid for uninstructive labor, and the company shall at all times respond promptly to the usual fire signal whatever that may be.

A fire drill was reported in the May 1883 issue of the Aurora.

Five hundred feet of rubber hose and two nozzles were purchased in 1896.(2)

Additional funds were provided in 1899. The April 18, 1899 ISC Student could report that "Fifteen hundred feet of hose and hook and ladder outfit have been ordered," and the Minutes of the June Board meeting records that

> Competitive bids were received on building for truck and hose-cart, and a building covered with corrigated [sic] iron has been erected at a cost of $166.33.
>
> Prof. Beyer has charge of the department. 3 companies have been organized and arrangements made for practical drills....

The burning of the Experimental and Feeding Barns provoked this editorial in the ISC Student on October 26, 1901:

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(1) Minutes, Nov. 19-21, 1868

(2) Minutes, Nov. 23-25, 1896

> The need of more ample fire protection was again evidenced yesterday, when the station barn was destroyed by fire. The thousand feet of hose with which the college is equipped is entirely inadequate to reach a fire so distant from the water plugs as the one yesterday. The need of efficient fire drill was again evident, although good work was done considering the means at hand. We would suggest that if no other means can be found to make time for drilling fire companies, that a part of the men be excused from military drill to take regular training in fire drills and fire protection. Almost the entire loss by fire yesterday could have been obviated had there been plenty of apparatus and twenty men who knew how to use it.

The following July the Board approved the expenditure of $900 "for extension of water mains for fire protection at Station barn."

In April 1905 it was reported to the Board that a dozen fire extinguishers had been purchased for $156 and that they had been "placed in different buildings under the direction of the President."

The City of Ames was granted permission to erect a "hose house" on the southwest corner of the campus in 1911.(1) A 1915 map of the campus includes an unidentified small structure at that location, but a 1921 map does not include it. The 1921 map does show a "hose house" slightly north of the Hub. This would have housed the college apparatus, not that of the city.

Following the burning of the Armory in December 1922, the ISC Student expressed the need for and importance of providing a fire department station in the Fourth Ward.

On February 7, 1923, the Iowa State Student reported that additional precautions against fire damages had been taken by the college:

> Approximately $1500 has been spent by Iowa State for new fire fighting equipment, part of which has already arrived on the campus and been put in place, according to Herman Knapp, college treasurer.
>
> Six new 30-gallon chemical trucks were purchased. These trucks, which are operated by hand, are chemical tanks mounted on two wheels. Forty feet of hose is attached to each. Five of the vehicles have already arrived and been put into position.
>
> Two of the trucks are located at the lodges, one at Margaret Hall, one at the auto laboratory, and one at Agricultural Hall. The management has not decided where the sixth one will be located.

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(1) Minutes, Nov. 1911

> During the past week 50 new fire extinguishers have been put in place in the college buildings. In the little shed behind the book store are two fire trucks which have not been used for some time. One is a small hook and ladder truck, the other a hose cart. This equipment, according to Professor Knapp, is not in good condition, but is usable.

An item in the same paper two days later adds interest for the history of college equipment:

> Iowa State has had fire fighting equipment but many of us did not know it. Two pieces of fire fighting apparatus, which are stationed in the little red shed behind the book store, have been on the Iowa State campus so long that college officials do not remember when they first made their appearance.
>
> One of these implements is a two-wheeled hose cart--the kind that one sees in many of Iowa's small towns. This spool with its rubber hose has been used twice during the past school year, at the experiment barn and the Armory.
>
> A hook and ladder truck is the other vehicle which aids in making up the rest of the old flame extinguishing equipment. Along with one scaling, one extension and two second floor ladders are a rusty axe and a long pike pole.
>
> "Iowa Agricultural College" is the name painted on the equipment which shows that these implements were first used many years ago.
>
> Altho no course in fire fighting is offered at Iowa State, by using the old and new material which is now available on the campus, students may learn how to prevent small blazes from becoming dangerous, according to the plans of the college officials.

Another piece of fire-fighting equipment was added in October of that same year, as recorded in the student paper for October 8, 1923:

> Iowa State has a valuable addition to its fire fighting equipment in the form of a new chemical truck. This truck is an American-LaFrance type E body, mounted on a Ford one-ton chassis.
>
> This truck is painted with the official fire department red, with black and white finishing lines. The chassis is a one-ton Ford with a wheel-base of 124 inches, capable of making a speed of thirty-five miles per hour; 30 x 3 1/2 pneumatic tires are used on the front wheels and 32 x 4 1/2 on the rear. The tires are mounted on demountable rims. The body is constructed of light wood, reinforced with steel rods. An eight-inch locomotive bell is mounted on the dash. An ordinary Ford lighting system is used, two extra lanterns being included in the outfit.

> The compartment which holds a thousand feet of 2 1/2 inch hose is under the chemical tanks, which have a capacity of twenty-five gallons each. The tanks are made of one-piece seamless steel, and in tests have withstood a pressure of 400 pounds per square inch. Beneath the tanks are drippans, which catch any chemicals that might drip down during the process of filling the tanks. Four fifty-foot lengths of 3/4 inch four-ply hose make up the chemical hose equipment.
>
> The nozzle of this hose cannot stick shut, insuring a free flow of chemicals at all times. The chemical hose basket holds 250 feet of this hose. Two non-corrosive receptacles, bolted to the running board, contain the extra acid, and two heavy sheet steel soda cannisters hold the extra soda.
>
> The piping system is so arranged that one large tank can be filled from the smaller containers while the other large tank is being discharged, and plain water can be pumped through the large hose, if the supply of chemicals runs out. Two three-gallon extinguishers complete the chemical apparatus. An axe, with a pick head, a 36-inch crowbar, one 20-foot extension ladder, with rapid hoisting device, and a 12-foot solid roof ladder with folding hooks make up the new equipment for getting at fires in out-of-the way places.

The Laundry and Chemical Truck Building (later known as the Electric and Paint Shop) was built in 1924 and became the headquarters for the college fire apparatus. In 1930 the Iowa State Student noted that it housed "the college fire truck, which is manned by five students staying at the building during the night and by one of the carpenters in the shop next door during classes."

An agreement between the Ames fire department and the college was entered into by Board action on January 19, 1925. It follows:

> In case of fire on the campus of Iowa State College the College Department shall respond at once. When City Fire Department arrives, the Fire Chief of the City Department shall take active charge of both departments and issue all orders. In case our hose is connected to hydrant before the arrival of the City Fire Department, the Chief of the Ames Department can make whatever disposition he sees best of our men and materials.
>
> In case of fire in the Business district of the fourth ward (outside of College campus) the college fire truck shall respond to the call. The truck shall be stationed at a point near enough the fire so that the Fire Chief can get hose from the truck or order our men to use the chemicals. Our fire truck and men shall be at call of the Chief for anything he may want of us up to our capacity. In case College truck should be at fire first, they can use chemicals until Fire Chief arrives, when he will take full

charge and give our men orders how to proceed. Fire trucks have right of way on streets going to fire but not returning.

In 1931 a new approach was taken to protection of the campus buildings and those in the west part of Ames when it was agreed to build a fire station under the west stadium bleachers. Costs of the new construction and maintenance and operation of the unit would be shared by the college and the city. This arrangement proved satisfactory and was continued until the city built its new substation on Welch Avenue in the fall of 1966. The university contributed to its construction and continues to make annual payments for its support.

Other fire protective steps have been taken to minimize danger to the campus community. Sprinkler systems have been installed, more fire hydrants have been placed about the campus, fire and smoke detectors and alarms have been put in a number of buildings and fire extinguishers have been generously located in all buildings.

FIRES

The gas house, which housed the equipment providing lights in Old Main, was the site of several early-day fires. The 1897 Bomb records the following incident among the entries for 1875:

> One evening something was the matter with the gas meter. Prof. Thompson and Mr. Kimberly, with a lighted candle, went into the gas house to see what was the trouble. It appeared that the gas meter was leaking and filled the room with gas which instantly took fire from the candle. For a moment they were enveloped in a sheet of flame. Their faces and hands were badly burned but under the care of college physician, Dr. Hutchins, they speedily recovered.

The Aurora, in June 1881, reported that lightning caused a fire in the gas house, but with minimal damage. Another blaze there occurred just two years later.

In 1885 the hog barn was destroyed by fire. It was not replaced until 1891.

A fire in one of the dormitory rooms in Main resulted in the loss of most of the furnishings and possessions of the occupants but it was confined to the one room.(1)

Several fires not related to buildings were noted as having been caused from sparks from the railroad engine in the 1890's.

Major fires have destroyed several campus buildings. These are discussed under the individual buildings but are tabulated here for quick reference:

Dec. 7, 1900 and Aug. 14, 1902	Main
Oct. 25, 1901	Experimental Barn and Feeding Barn
Jan. 5, 1912	South Hall
Jan. 31, 1912, 1922 Jan. 7, 1951, March 30, 1963	The Gables
March 25, 1913	Chemical & Physical Laboratory
Jan. 8, 1922	Hog House
Oct. 6, 1922	Experiment Station Barn
Dec. 16, 1922	Armory (rebuilt)
Oct. 7, 1931	Cattle Barn (rebuilt)
Aug. 16, 1935	Dairy Barn & Feed Barn (on Dairy Farm - rebuilt)

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(1) Aurora, Oct. 1892

April 9, 1938	Margaret Hall
May 31, 1938	Sheep Shed
April 27, 1940	Livestock Shelter (west of Brookside Park)
March 31, 1941	Davidson Hall (rebuilt)
June 16, 1956	Barn at Vet. Med. Research Institute
Oct. 19, 1958	Cattle Barn (eastwing) (rebuilt)
March 5, 1959	Sheep Barn
Feb. 15, 1967	Poultry House at Vet Med. Research Institute

Other fires, less damaging than those listed above, have occurred from time to time in campus buildings. A number of the fires resulted from assumed or suspected acts of arson, but no one was ever apprehended as responsible.

FLAG POLES

When the first free-standing flag pole was set up on the campus cannot be determined, but there is an 1895 reference in the ISC Student to its having been blown down in a gale in 1889. The flag was also flown from the staff on top of the north tower of Old Main, probably only in the years when no campus pole existed.

A new replacement pole was erected in October 1895. It is described as one "whose timber was purchased in the state of Washington. It is one hundred and twenty feet above the ground."(1) That flagpole was erected in central campus at almost the same location as the one standing now. It served the college until rotting of its base resulted in its fall and destruction in January 1903.

In September 1904 the Board appropriated $144 for the purchase of a new flagstaff. LaVerne Noyes (class of '72), Manager of Aermotor Windmill Works of Chicago, donated a steel windmill tower to serve as a flagstaff. Erected in November it was 133 feet high, set in concrete. Reaction to the new structure came rapidly. An editor of the ISC Student, on November 26, wrote:

> If there is one thing above all others that we feel inclined to talk about just now, it certainly is this new addition to what was once our campus but must now be known as our barnyard. Imagine, if it is possible, such a flagstaff for a state institution. Think how you will like to hear strangers say, "Yes, this is the agricultural college, for there is the windmill. Sure enough: and there are the cowpaths leading up to it." Won't a picture of central barnyard, pasture or ? look pretty now? Why, the short course men will say, "Where was the cyclone? It must have been a hard one to blow the entire wheel off your pumping machine." To tell the plain truth, this is about the worst frost we have seen on campus this fall.

Only a day or two later the tower was torn down at night, and the editor apologized November 30:

> The editorial which appeared in the last issue of this paper was not intended to incite the student body or any portion of it to deeds of dare deviltry or acts that would lead to the destruction of college property. The intention was, however, to make the fact public that a sentiment was abroad to the effect that the tower under course of erection was unsuited for a flag pole on the college campus. This sentiment has not died, but notwithstanding there is a better way of making the wish of the students known

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(1) 16th Biennial Report, 1894-95

than by violence and property destruction. We would suggest that in the future the use of a petition be resorted to instead of such hasty methods.

The individuals responsible for the end of the windmill tower were never identified. Whether a flag ever flew on its top is questionable.

Beardshear Hall (then Central Building) was completed in 1906, and the flag was flown from the staff above its east entrance.

A new steel flag pole was set up in March 1908.(1) This was the gift of the class of 1907 with some help from the class of 1906. Located where the original wood pole had stood, it was 128 feet high and carried the American flag, and in later years the Iowa flag as well, until January 1974. After serving the campus for over sixty-six years it then succumbed to erosion and collapsed as it was being taken down for repairs.

A replacement came in June 1975 when an eighty-eight feet high aluminum pole was raised at the location of previous ones. This a counter-weighted pole that allows it to be tipped to the ground for repair or replacement of pulleys or lines. The national and state flags now fly daily above the cluster of trees in the middle of the campus.

In April 1979 a new flagpole was erected by the Memorial Union in the area between that building and the Parking Ramp. Funds for the project, including the pole, flag and landscaping, were donated for that purpose by the Veishea Central Committee.

The display of weather service flags was started by Captain James R. Lincoln, professor of military tactics, in the late 1880's. In the Aurora of April 1888 it is reported that he "now dispenses weather tidings from the top of a most unbecoming staff, which has been erected near the tomb of '76, on the campus."

In 1895 a staff was placed on Botany Hall (then Agricultural Hall) for the display of the weather signals.

Flagstaffs are also mounted on Marston and Curtiss Halls.

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(1) ISC Student, March 31, 1908

MEMORIALS and CLASS GIFTS

Over the years various people, classes and events have been recognized by the placement of memorial plaques or other types of markers about the campus. Names of buildings and streets, as well as houses in the residence halls, also are forms of memorials but these will not be included here. Where personal names have been given to buildings they are mentioned in the statements on the individual buildings elsewhere in this volume. Street names are similarly discussed in that section. For the residence hall house names refer to the works of J.C. Schilletter. Memorials in the form of tablets, fountains and other features inside of buildings are not discussed here.

Many individual classes have made gifts of one kind or another. Only those which are visible on the campus itself are included here. The office of the Alumni Association maintains a complete list of all class gifts.

The earliest memorial on record is the large boulder near the flagpole, inscribed "Class 1876". The bronze tablet, later mounted on the boulder and listing the names of the class members, was placed about 1925.

The class of 1891 erected a fountain, as recorded in the IAC Student on November 11, 1891:

> The class of '91 leave a lasting and more pleasurable souvenir than any previous class. In the triangle, just between Main Building and Morrill Hall, it has erected a large, beautiful fountain. May its flowing waters ever keep the memories of Class '91 fresh in the minds of those following in its footsteps.

Less than two years later the paper complained in an editorial comment that "The fountain acts sick and needs attention these days". On April 5, 1905, the ISC Student reported, "The fountain which has stood for so many years in front of the motor station and otherwise known as the '91 class memorial has been removed to the machine shop for refitting." Whether the fountain was put in operation again after that time is uncertain. No later references to it have been found. The area between Central (Beardshear) and Morrill Hall was completely regraded in 1907 and the fountain would definitely have been gone after that date if not earlier.

The Campanile, a memorial erected in 1897, is discussed under that heading in another section. The gift of the classes of 1906 and 1907 is included in the section entitled Flagpoles.

Concrete benches were provided by the class of 1916. The exact number originally is uncertain. One later reference indicated "a dozen," and another reference reports the loss of some through vandalism. Six

can be found on the central campus today. Some of these still retain a small bronze plate on the top reading "Made by Industrial Arts Students Iowa State College." The supports and the edges of the benches are decoratively treated.

At commencement on June 6, 1917, groups of trees on the central campus were dedicated to six highly respected former faculty members: Dr. A.S. Welch, Dr. William M. Beardshear, Dr. Seaman A. Knapp, Dr. Charles E. Bessey, Dr. Millikan Stalker and Prof. J.L. Budd. A seventh man, Dr. LaVerne Noyes, was also honored by having Lake LaVerne and trees at its west end dedicated to his memory. Another group of trees was dedicated to Dr. Edgar W. Stanton on June 10, 1923. The boulders and bronze tablets marking the tree groups were placed in the spring of 1925.

Three more sites were marked with bronze tablets in 1927. One marks the site where a picnic was held on July 4, 1859, celebrating the acquisition of the land for the new college. It is on the north side of Pammel Drive and south of the southwest corner of the Communications Building. The second marker is in honor of W.T. Hornaday and his work as a zoologist and conservationist. The third tablet was placed at the Farmhouse where it incorrectly identifies that as "the site of the old tavern and trail through Story County in pioneer days." See discussion of Farmhouse.

The classes of 1920 through 1923 joined in funding the construction of the columns at the west entrance to the campus at Sheldon Avenue and Union Drive. The adjacent gates to Clyde Williams Field were the gift of W.G. Lane '09 in 1938.

The largest memorial on the campus is the Memorial Union which is separately discussed in the section on buildings. Various class and other gifts have been made to the interior of the building. The Scotch pines to the south of the building are dedicated to the men whose lives were lost in World War I.

A bronze tablet "In memory of Benjamin F. Gue, founding farther of Iowa State College, March 22, 1858" was given by the class of 1923. It is in the northwest section of central campus.

Two granite benches flanking the east doorway of the Library were the gift of the class of 1906 on that class' 50th anniversary. Three granite benches in the north part of central campus mark the 50th anniversary contribution of the class of 1910.

A bronze tablet and associated grove of trees was dedicated to the memory of Henry Cantwell Wallace '92, in 1929.

A marker on a boulder on the north side of Lake LaVerne reads:

> The original swans "Sir Lancelot and Elaine", on Lake LaVerne were presented during Veishea of Nineteen Hundred Thirty Five to Iowa State College by the students of Iowa State who supported Veishea during its first fourteen years.

In 1937 two more groups of trees on central campus were dedicated. One of these honors Prof. L.H. Pammel, "dedicated by his fellow conservationists". The second remembers W.H. Wynn who was a revered faculty member from 1872 to 1900. Prof. Pammel is also honored with the designation of Pammel Woods and Pammel Drive.

The contribution of Iowa State and Dr. H.F. Spedding to the development of uranium for the war effort in 1942-46 is recognized by a bronze tablet on a boulder just east of the Food Technology Building on the site where a temporary building served as headquarters for that operation.

The MacDonald Forest (or Woods), a seven-acre tract on the east side of the Skunk River about a half mile north of 13th Street, was donated to the college in 1954 by the alumni of the forestry department in memory of the former head of that department, Professor G.B. MacDonald.

In recognition of the one hundredth anniversary of the founding of the college the class of 1958 made a special presentation. This was called a "time capsule" -- a copper box filled with current letters and publications about the centennial and ongoing activities. The box, encased in concrete below a granite bench inscribed "Class of 1958" is on the south side of the front steps to Beardshear Hall. A plaque on the concrete under the bench reads:

> On the 100th anniversary of Iowa State the class of 1958 has here below sealed historical documents to be opened by the class of 2058.

The plaza on the west side of the Computer Science Building is a 50th anniversary gift of the class of 1919. A plaza built in 1979 between Marston and Pearson Halls was funded by the class of 1969.

POST OFFICES and MAIL SERVICE

The early history of post offices and mail service on campus is not well documented. William G. Allen(1) noted:

> About 1861 or '62 W.H. Fitchpatrick was appointed post-master at "College Farm" but resigned in 1864, and A.J. Graves succeeded him. While Mr. Graves was acting the office was moved to Ames and the name of the office, in accordance. The first post-master in Ames was Henry F. Kingsbury, in 1865.

For the balance of the nineteenth century the only post office was in Ames. Mail was received at the Ames office and delivered to the college by horse-drawn vehicle.

In May 1889 the Board moved to request the Post Office Department to establish a post office on the campus, and that fall requested an appropriation of $800 for an addition to the (English) Office Building "for accommodation of Post Office, to furnish committee rooms and college guest rooms".

Presumably prior to construction of that addition all mail had been delivered to Main. The Biennial Report for 1890-91 records that "Our present room for post-office, book room for students, etc., is in an out-of-the-way place, and entirely too small, so that it should be changed at the earliest convenience." That space in the Office Building was referred to as the post office but it was not yet an official postal sub-station.

When the Ames and College railway started operation in the fall of 1891 that company was granted the franchise to carry mail and express destined to and from the college. The station (Hub) built for the rail line the following year included facilities for the post office and an express office as well as the waiting room for passengers.

In 1903 the first official sub-station, known as College Station or Station A, was established by agreement between the Post Office Department and the College. It began operation on June 1, with Clayton Paxton, a former student, in charge.

Later that same year the Board authorized the initiation of messenger services instead of the U.S. mail for the transmission of inter office correspondence. This action was prompted by an estimated saving of $160 per year.(2)

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(1) Allen, 1887

(2) Minutes, Nov. 12, 1903

Compensation for messenger service was increased in 1909, to authorize payment to the mail boy of "30 cents per day for July and August and 40 cents per day during the remainder of the year".

In 1904 the ISC Student noted that the "Dinkey" no longer carries the college mail. "It is now hauled to and from college by a team."

When the station was moved in 1908 to its location west of Morrill Hall the paper reported "It is now thoroughly rearranged inside giving much more room to the bookstore and the post office."

By 1915 Station A was feeling growing pains as reported in an article dated January 23 in the Iowa State Student:

WANTED--A NEW POST OFFICE

> "We are doing a city business here at Station A," says Benton Stull, "and I don't know of a single post office that tries to get along under conditions similar to ours. These old boxes were shipped here years ago from Carroll where they were discarded for more up to date ones. We are cramped terribly for room!"
>
> It's about time this flourishing United States government looked into matters around Station A. Does anyone know of a post office that is serving as many individuals, to say nothing of an institution like the college, whith as little equipment as our medieval relic? It keeps three carriers busy constantly carrying the mail about the campus and the Fourth ward, the outgoing mail is enormous, the bulletin room sending out as high as twenty mail sacks full in one day, and then the parcel post,--did you ever notice the people strolling into Station A with stuffed laundry bags and suitcases to mail "to the folks?" There are hundreds of them. It often requires a dozen mail sacks a day to hold this class of mail matter alone.
>
> Mr. Stull says he known he is not giving the students and residents here the proper service but it is the best that can be done until Uncle Sam can afford a larger building and better equipment.--H.C.P.

Later that year a new agreement with the Post Office Department resulted in improvements to the equipment and an increase in the rental paid to the College.(1) The new equipment was described in the Iowa State Student on September 18, 1915:

> Improvements valued in the neighborhood of $2,000 have been

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(1) Minutes, May 22 and June 15, 1915

made in the college postoffice, doubling the efficiency of the office and making it a comparatively easy matter to handle the greatly increased amount of mail that comes and goes from the college students.

Four hundred fifty-three modern lock boxes have been installed, the best on the market, according to Postmaster Stull. New filing cases, desks and other office equipment have been put in. Still other time saving articles are a distributing case for railroad mail and an up-to-date cancelling machine. A stamping machine is expected to arrive soon.

Three clerks and three carriers are now required to handle the business. Individual lockers have been provided for the carriers and they have also been equipped with new mail bags.

This office with its new equipment has been rented to the United States postoffice department for $700 a year.

Identity appeared to be a problem as judged by the following item in the paper on October 28, 1915:

In compliance with the terms of the contract in which the government leased the college postoffice building, a bright new sign has appeared on the little red building north of Central Hall.

Postmaster Stull said that many newcomers on the campus wondered where the postoffice was located, and as the building is not pretentious enough to command attention, the sign was put up.

Motor power in lieu of horses reached the mail service operation in October 1917 as somewhat humorously reported in the Iowa State Student on the 6th of that month:

When an ambitious young barn on wheels sallied forth to air its new gray paint for the first time, the general enquiry was "who's hurt"? But the observant few who watched its graceful bulk lurch and halt before the various halls identified it as the new mail truck. It is the herald of better speed and service among us, but is at present decapacitated by a broken axle and has been temporarily replaced with a very common affair without any gray paint or any top. The new truck is a Ford, partially disguised by a somewhat roofy top construction to protect the mail and deliverer when the weather is bad. It has a driver and official carrier, and covers Ames as well as the campus and college community....The first trip is made at 7:30 and service has been found very prompt. When it has demonstrated its efficiency, and people realize it is not an ambulance and cease to ask where they are moving it, no doubt the Ford curiosity will be duly appreciated and hailed as an indispensible minister to public satisfaction.

An Addition was made to the building in 1920 to increase the space available for both the post office and the bookstore.(1)

By 1937 interoffice mail was a major problem on the campus as seen in this account appearing in the Daily Iowa State Student on February 4 of that year.

> Imagine a 5-mile jaunt around the campus each day in addition to walking to and from classes. Whether the weather is inclement or mild that distance is traveled each day by James Lien, A.H. Sr., and Fred Bergmeyer, For. So. in delivering the campus mail.
>
> The campus mail system, which is not affiliated in any manner with the United States mails, was originated a number of years ago by the late Herman Kanpp, then treasurer of the college. Until 1930 the volume was comparatively small and deliveries were made during the noon hour but since that time the mail has been carried by two college students, each working half the day.
>
> In delivering the 400,000 pieces of campus mail each calendar year these student carriers make two trips of 2 1/2 miles each day, making a total of four deliveries a day to the college buildings. The United States mail distributed from Station A to the buildings on the campus is approximately twice the volume of that of the campus system.
>
> The student mail carriers maintain a definite schedule of delivery between the 30 college buildings which comprise the route. Starting from Morrill Hall, the college-trained mailmen travel over the western side of the campus, then up to the northern edge, over to the east side and finish at the starting point approximately 2 hours later.
>
> While it is comparatively simple, the campus system is quite fast. As deliveries are made at each station, the outgoing mail is picked up, sorted in the carrier's mailbag, and delivered to the other stations along the route.

A proposal by the federal government to erect a new building to house Station A and offices for other governmental agencies came to the Board at its meeting on November 22, 1939. To enable this project to proceed it was the responsibility of the college to provide an acceptable site for the proposed building. Three possible sites were considered. The northeast corner of Lincoln Way and Welch Avenue was selected and deeded to the federal government in February 1940. However, defense projects starting that year delayed work on the new

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(1) Minutes, April 13, April 30 and Nov. 304, 1920 and Iowa State Student, Oct. 11, 1920

building and the project was ultimately abandoned. In 1963 title to the property was returned to the State.

The war had its effect on mail delivery on the campus as reported in the Iowa State Daily Student on April 22, 1944:

> The manpower shortage has made it impossible to continue delivery of campus mail to individual offices, J.F. Hall, chief accountant, explained.
>
> It is now necessary for a representative of each building to bring correspondence from that building to Beardshear Hall and to pick up and deliver any mail for his own building.
>
> A sorting station similar to the one outside Room 103, Beardshear Hall, is located in each building. Correspondence is exchanged between the central station and offices at least twice a day.
>
> When regular carriers worked, the mail deliveries were made four times every day. College students were usually employed to carry the business correspondence of the college, picking up the mail pieces, sorting and delivering on the route.
>
> The present system is purely an experiment born of necessity and may be discontinued shortly, providing some means is found of making the regular delivery, Hall stated.

In June 1945 deliveries were resumed as explained in the paper on the 6th of that month:

> Campus secretaries will be relieved from daily treks to Beardshear Hall with the resumption of campus mail delivery this week.
>
> The manpower shortage has prevented intra-campus service since March, when the last mail carrier left, states B.H. Platt, college business manager. Student part-time workers handled the job before the war, one working in the morning and one in the afternoon, but since the war's outbreak one full-time carrier has been employed.
>
> Duane Raver, Jr., is the new mailman. He will continue the work during the summer months.

The Hub was still the center of U.S. mail service for the campus in 1959 and its activities were described in the Iowa State Daily on February 21:

> Once the scene of bustling activity, the old brown building on central campus near Beardshear Hall, which housed the College bookstore, now receives fewer students within its walls. But

it still is full of action. Every day, the mail enters and leaves the post office.

The post office is staffed by a superintendent and two clerks. Eight carriers get letters to their destination on campus by foot. There is one rural route carrier from this station.

In seven of the eight routes, the carrier handles approximately 1800 pieces of mail per day. An average of 2500 pieces of mail are delivered by the carrier on the office building route.

This station handles all college mail. It is received from the post office in Ames. The only mail delivered directly from the Ames Post Office to the campus is that delivered to the dormitories. No difference has been made in the amount of business done in the post office since the removal of the bookstore. The only noticeable effect has been the quiet that has settled over the building.

In 1960 the Post Office Department decided to erect a new building for Station A on an off-campus site on Welch Avenue. Construction began in 1963 and the new facility was opened for use later that year.

The Post Office Department, in 1968, proposed erecting a self-service postal unit to be located on the campus for the convenience of the university community. This was suggested as a free-standing structure accessible from the outside only. That idea was not developed and instead a comparable type unit was installed on the ground floor of the Memorial Union.

Today both U.S. and campus mail is handled by the University Mail Service, a unit of the Physical Plant, with twice-daily delivery and pick-up to a distribution box in most buildings on the campus.

RADIO and TELEVISION

WOI - AM-FM - TV

A "Wireless telegraph station" was operating on the campus in 1913, with Prof. A.H. Hoffman in charge of it.(1) On November 23, 1915, the Iowa State Student noted that "new wireless receiving apparatus is being installed by the college on the new steam laboratory chimney" while "the old apparatus will be used to send messages." The messages being sent at that time included weather reports.

The start of station WOI came in 1922, with the first broadcast on May 31 and the beginning of regular programs on July 1. At that time the station was operating on a 100 watt transmitter which was increased to 500 watts in 1924. The first studios were on the third floor of Engineering Annex. In October 1924, "Besides the regular program of crop and weather reports, the management are endeavoring to broadcast two musical programs weekly, one program consisting of classical music and one of dance music." The station was then in charge of Professor H.B. Deal with the musical programs in charge of Professor Tolbert MacRae.(2)

A new antenna tower was built in late 1938 and early 1939 with the first broadcast from it in late March 1939. The tower was located north of Pammel Drive and east of the Communications Building where the lower portion still remains in place. The tower was described in the November 15, 1938, Iowa State Daily Student:

> Construction was begun Thursday on the new 400-foot WOI radio tower which will be located just west of the polo field. The J.E. Lovejoy Company, Des Moines, was awarded the contract for the erection of the tower with a bid of $8,174.
>
> The project is being financed in part by a PWA grant for 45 percent of the costs. The total cost will be approximately $11,000, according to W.E. Stewart, chief engineer of WOI, and the work will require 2 1/2 months for completion.
>
> The tower is triangular in shape measuring 22 feet on each side at the base. It will stand on reinforced concrete piers. The steel frame is fabricated in 20 foot sections which will be hoisted into position and welded in place.
>
> To comply with regulations of the United States Bureau of Air

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(1) ISC Student, Oct. 4, 1913

(2) Iowa State Student, Oct. 20, 1924

> Commerce, a beacon to flash 40 times a minute will be mounted at the top of the tower. Additional stationary lights will outline the shape of the structure.
>
> George Weiler, '73, Indianola, is the contractor in charge of the installation of the electric wiring. The length of the coaxial transmission line from the studio in Engineering Annex to the new antenna will be over 2100 feet.
>
> The ground system, composed of 100 wires spreading fanlike from the base of the tower, will require more than 9 miles of wire, according to Chief-engineer Stewart. Special equipment to be used in burying the grounds will eliminate digging trenches, Stewart stated.
>
> Although no guy wires will be used for support, the new tower is designed to withstand a wind velocity of 90 miles per hour.

Studios were moved to Snedecor Hall in the fall of 1939.

Planning for a television studio was mentioned in the student paper on November 20, 1945, where L.L. Lewis, chief engineer of WOI was quoted as saying "It is all a vision of the future now, but there is concrete evidence that this future is not far off."

A new transmitter building and FM antenna were erected on the Swine Research Farm (about four miles southwest of the campus) in 1949. The first FM broadcast from the new facility was on July 1, 1949. The 580 feet high tower was planned to support a television antenna as well as the FM antenna.

TV broadcasting was started on February 21, 1950. WOI-TV became the first television station owned and operated by an educational institution. The first "live" TV program was broadcast on September 30, 1950.

In 1952 the television studios were moved to Exhibit Hall. Transmission of AM programs was changed to the FM-TV tower in 1960 and the following year the campus antenna was dismantled except for the lower 139 feet.

When the Communications Building was completed in 1964 all WOI-AM-FM-TV facilities, except the transmitter, were moved to that location.

SCULPTURE

PETERSEN WORKS

Christian Petersen, a native of Denmark, came to Iowa State on a Civil Works Administration project in March 1934. In 1937 he was appointed to the faculty as an instructor in applied art, and in 1944 he became an assistant professor. He was also designated artist-in-residence. He continued teaching until 1955 when he had reached the age of seventy. He remained on the faculty on a part-time basis and continued to use his studio in the Quadrangle until his death, at age 76, in 1961.

The project which brought Petersen to Ames for the first time is described in the March 1, 1934, edition of the Iowa State Student:

> Grant Wood, state director of art projects under the CWA, and Christian Petersen, director of projects in sculpture, will come to Iowa State College on Friday to collect data for the planning of art projects in Dairy Industry Building in connection with the CWA work.

Following are listed the major works by Petersen on the Iowa State campus.

Bas-relief panels in the lobby and in the courtyard of Dairy Industry Building. 1934-35.

Bas-relief panels on the north side of State Gymnasium. 1935-36.

Veterinary Medicine sculptured mural, originally in the Quadrangle courtyard but now facing the entrance plaza at the Veterinary Medicine Facilities building; and "The Gentle Doctor", also originally in the Quadrangle but now in Scheman Continuing Education Building. 1936-38.

Bas-relief figures at sides of fountain on east side of Roberts Hall. 1940.

Indian Figures on the four sides of the fountain in front of the Memorial Union. 1940-41.

Fountain south of MacKay Hall. Three small children. 1942.

Statue of a male and a female student on the sides of the main steps inside the original section of the Library. 1943-44.

Small statue (about four feet high) of George Washington Carver '94, in lobby of Carver Hall. 1943.

Typical students -- three groups of statues depicting students of the period. Sculpted between 1945 and 1952, the figures, all life size, and the wall on which they rest, were not erected on the campus until 1961. They are located south of Oak and Elm Halls.

Other smaller examples of Petersen's work exist on the campus inside various buildings.

OTHER SCULPTURE

An abstract sculpture "End All War", located in an interior court of Physics Hall, is the work of Peter Layton and was purchased by donations of individual members of the Physics department. 1967.

South of Ross Hall is a large steel-plate stabile sculpture called "Prairie Teton". The design, by sculptor Frederic Rennels, was selected from about thirty entries in a competition after funds were provided for a monument to honor Earle D. Ross, earlier on the history faculty at Iowa State. It was erected in 1975.

SIGNS

The desire for public recognition of the college by means of an identifying sign seems to have been first expressed at the Board meeting of December 11-14, 1894, when a motion was made and carried

> that there be placed upon the Experiment barn a conspicuous sign, lettered in bold characters upon both sides, one facing the motor track, the other to the north, this inscription, "I.A.C. Experiment Barn", and that the cost of said inscription and ornament be paid for out of the Station funds under the supervision of the Director of the Station.

The sign on the north side would have been visible to passengers on the Chicago and North Western trains, while the one on the south would be seen by people riding on the "Dinkey". Those signs were, of course, lost when the barn was destroyed by fire in 1901.

When the next sign was put up has not been determined, but in November 1910 the I.S.C. Student reported that the veterinary buildings were to be erected "west of the 'Iowa State College' sign". In 1911 a reference in the paper was made to the "dilapidated sign" and expressed concern that its condition would give train passengers a false impression of the college. On December 18, 1911, the paper stated:

> We understand on reliable authority that the present dilapidated sign is soon to be taken down and replaced by a much more attractive structure. The sign will be located nearer the railroad track. The posts will be set in cement and the whole structure will be electrified. The work will be done just as soon as weather conditions permit.

Two years elapsed before more is learned about the sign. On November 11, 1913, the ISC Student records that

> The Iowa State College sign, torn down two years ago is to be replaced....The sign will be put up again, but will not be electrified.
>
> It is also proposed to place various signs on the different experimental plots lying along the Northwestern tracks, telling of the nature of the work being carried on.

Apparently further delays developed. The next reference to the sign did not appear until May 1, 1915, when it was said

> A large electric sign advertising Iowa State college is being erected in the pasture east of the serum plant and facing the Northwestern tracks. The letters are four feet high and are wired. The sign reads "Iowa State College", and is being put up

at the suggestion of the college advertising committee. It is reported that many inquiries are made on trains going east and west, regarding the name of the institution. It is estimated that several hundred thousand people will read the sign during the year. Transcontinental tourists to and from the Pacific coast fairs will know where and what Iowa State College is.

The next notice about that sign appeared in the November 7, 1923 issue of the Iowa State Student:

> Along the side of the Chicago & Northwestern railroad tracks, across the road from the Vet buildings, stands a huge sign, "Iowa State College". It is well up in the air and passengers, traveling in the day time can see the sign easily.
>
> The expenditure of a few additional dollars would equip the sign with electric lights and the upkeep cost in keeping them lighted during the night would be small in comparison with the additional hundreds who would be able to see the sign.

When that sign was lighted and when not becomes difficult to determine on the basis of the preceding items from the papers. No subsequent reports have been found and it is not possible to say when the sign was ultimately removed.

A sign identifying the college was apparently erected on Lincoln Way sometime prior to 1941 because on October 10 of that year the Iowa State Daily Student carried this article:

> This corner has heard several remarks lately, most of them coming from the alumni, about the removal of the IOWA STATE COLLEGE concrete sign on the east side of the campus.
>
> A majority of these remarks have been criticisms, especially opinions voiced by alumni members. Seems as though they were impressed by the white letters against a green background when driving out on Lincoln Way from downtown Ames. They feel the identification made a favorable impression on travelers and visitors. And, of course, there's the sentimental reason which carries a lot of weight in voicing opinions.
>
> We can see why the sign should have been removed; it was old and getting a bit shabby, but we feel another such identification would add to the college and make the alumni feel more at home.
>
> A point we'd like to make clear is we're not criticizing the college for removing the old letters; we merely believe another identification mark -- modern and more appropriate -- would be an asset. Everyone passing by on Lincoln way doesn't know the name of our college, and we don't mind telling everybody this is IOWA STATE COLLEGE, the home of the Cyclones.

No other references to that particular sign have been found.

The senior class of 1949 made a gift to the college of four signs as described in an account in the Iowa State Daily on May 25, 1949:

> "Iowa State College" signs will be placed at the four Lincoln way entrances to the campus before the close of the current school year. They are being placed there as the Class of '49 Memorial according to Neil Berndt, E. Sr., chairman of the Senior Class Memorial Committee.
>
> The signs will bear the name and official seal of Iowa State as well as words signifying they were erected by the Class of '49. They will also say to where the entrance leads.
>
> Signs will be made of cast aluminum, according to Berndt. They will be 30 inches wide and 42 inches high. The lettering will be raised and will be on a black background. They will be given an aluminite treatment which is a process that will keep the letters bright without polishing, according to Berndt.
>
> The signs, which will be lettered on both sides, will be suspended from steel poles and will be perpendicular to Lincoln way so that they will be readable from both directions. The bottoms of the signs will be about 7 and one-half feet from the ground.
>
> According to Berndt, the lettering indicating where the various entrances lead will be as follows: Beech avenue entrance, "Women's Residence and Veterinary Medicine", women's dormitory entrance which goes by Roberts Hall, "Agriculture and Home Economics", Memorial Union entrance from Lynn avenue, "Memorial Union, Administration, and Science", and the Friley Hall entrance from Welch avenue, "Men's Residence and Engineering".

The gift of the signs was accepted by President Friley at a special ceremony on June 14, 1949. After the college became the university those signs were out-moded and they were replaced by new signs reading "Iowa State University. Founded 1858. Presented by the class of 1949". The new signs are located at the corner of Lincoln Way and Sheldon Avenue and at Lincoln Way and Wallace Road.

Street signs, identifying the streets by name, were installed at thirty street intersections on the campus in 1958. Before that little attention had been given to the use of street names although the designations had been made some years earlier.

Signs showing names of buildings are varied in materials, styles and locations. Many buildings have no indication of the structure's identity or use.

During the late nineteen sixties and the seventies various studies and proposals for campus signs have been developed. The need for signs is clear: to provide information to the public and to the campus community as well. No program to achieve uniformity and consistancy in types of signs has yet been approved.

STORMS, FLOODS and CYCLONES

Iowans are accustomed to harsh weather and, except when it results in damage, accept it as a part of normal life in the state. The first reference to weather found in the student paper appeared in the Aurora in May 1880:

> The weather has furnished a fruitful topic of conversation this spring; much of the time it has been dry, windy, and cold. There has been one storm, however, as those rooming in the tower can testify. The night of April 19th, the rain fell in torrents, accompanied by wind, hail, and lightning. It beat into the south tower so badly as to leak through the ceilings, down to the second floor.

The following year again brought its troubles. In May lightning struck the gas house and started a fire which was soon brought under control. In July a storm resulted in the loss of a chimney on the Chemical Laboratory. In August the Aurora records that "terrible storms and great extremes of heat and cold are making 1881 a year to be remembered", and "All around the farm are to be seen the marks of the recent floods. Bridges and fences are gone, and all along the banks of the creek are mounds of debris."

On April 8, 1882, a cyclone struck across the campus as reported in the Aurora:

> After completely demolishing the house occupied by Mr. and Mrs. McCarthy, residing about three-fourths of a mile south from the college, and injuring them quite seriously, it then removed a few of the chimneys on the President's new house and entered the college campus from the south side making sad havoc of all that was before it.
>
> The first that fell victims to its angry fervor was the aprons and floor of the new bridge, which were lifted bodily from their foundation, leaving the frame work of the bridge undisturbed, and were carried from 8 or 10 rods to the hill north of it, where it plowed a deep furrow into the hillside. The South Hall, now temporarily occupied by Prof. Bessey as a dwelling, and in which Mrs. Welch had her Domestic Economy Laboratory and recitation room was next visited and partially destroyed by having its walls blown down, windows smashed in and chimneys removed. It then seemingly divided, one portion promiscuously tearing up the trees about the lawn, blowing off the chimneys to Prof. Budd's house and partially destroying the Horticultural barn, while the other portion blew the top and body of the bus which was within 50 rods of the college over into the evergreens together with its passengers numbering not less than 10 or 12, among whom were Mrs.

> Prof. Bessey receiving slight injuries in the face, and Mr. Connell having three of his ribs broken and sustaining other internal injuries which have left him in a very critical condition. It next visited the college, borke up the chapel exercise, smashed a few of the window lights, destroyed the railing on the south tower, removed a few chimneys and then passed to the North Hall, where it joined hands with its fellow and completely ruined the upper part of this large and beautiful brick building.
>
> The damage is estimated to be from $2500 to $3000. Active steps are being taken to replace the buildings in their former condition. The debris is being removed and operation will commence at once.

This provided the first recorded occasion on which the Board requested contingency funds from the State Executive Council.(1)

Flooding in May of 1892 (2) was severe:

> The heaviest floods of this rainy season came on May 18th. Squaw creek reached the highest point for several years covering the adjacent college fields and inflicting serious damage to the motor track. The greatest damage there was done by the waves which were caused by a strong northwest wind. The flood broke through the levee near the wagon road between Ames and the college in such a way as to be deflected upon the road in the form of a whirl-pool which washed out a hole eighty feet in diameter and thirty feet deep, occupying the place of the road. The motor was unable to run during the day, and trains on the north and south line of the C. & N. W. were delayed for several hours south of Ames. Notwithstanding the inclement weather nearly all students visited the scene of the flood during the day.

The Aurora for May 1893 records problems that year:

> The high winds during the first week of April blew over the top of the smoke stack to the furnace that furnishes steam for Morrill Hall. During the blizzard of the week of April 22, the smoke stack was completely demolished.

Squaw Creek flooded from time to time. One example was recorded in the ISC Student on June 2, 1903:

> During the last week the heavy rains have flooded Squaw Creek until all the lowlands bordering the creek, some places a half mile on each side have been under water. Much damage has been

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(1) Minutes, May 2-3, 1882

(2) Aurora, June 1892

done to the college, as much of its corn land lies next to the creek.

A blizzard in late January 1909 caused some damage to the Marston Hall roof and in other areas.(1)

It was 1944 before another major storm was reported. That one was recorded in the Iowa State Daily Student on May 23, of that year:

> Professors lectured in semi-darkness and Daily Student reporters typed by candlelight yesterday as a partial power shutdown on the campus extinguished lights in many buildings.
>
> Only a few buildings were adequately supplied with power and the street lights were in operation as a result of damage to auxilliary equipment in the basement of the power plant. Service was expected to return to normal today with repair of a motor soaked in Friday's storm. Meanwhile partial service was supplied by a small generator not dependent on the damaged motor.
>
> Both Thursday's and Friday's storms were classified as 100-year rains, not likely to happen oftener than once in a century, by Prof. A. Englehorn, of the Agricultural Experiment Station. The odds against two 100-year rains coming within the same week or even year are astronomical, he said.
>
> The storm Friday night reached the greater intensity, with an average of 1/2 inch of rainfall every 15 minutes during the first hour. Thursday's rainfall reached its height between 9 and 11 p.m., when almost 3 inches fell.
>
> The weekend's rainfall total reached 8.37 inches. Thursday's storm was the heaviest, 4.53 inches with Friday's total of 3.68 not far behind. A .16 inch rain fell Saturday. Yesterday's rainfall was estimated unofficially at .85.
>
> Chemistry, Science, Home Economics and Dairy Industry Buildings as well as the College Hospital were among the few buildings adequately supplied with power. A limited amount was made available to the Memorial Union and to the newsroom in Agricultural Annex for its teletype machine. The Library had lights in its stacks again, and college business office accounting machines were operating.
>
> Navy and college dormitories had lighted halls, parlors, kitchens and dining-rooms. Students dragged chairs and desks from darkened rooms to study in the dimly lighted halls.

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(1) ISC Student, Feb. 1, 1909

Supplied with enough power for two linotype machines and one press but not enough for lighting, the Daily Student was put out by candlelight last night.

Under water for several hours, the motor on a pump which supplies water to the generator condenser had to be sent to Des Moines for drying and rewinding. Its return will make service normal again except for the farm line. Buildings and Grounds staff members have not yet located the cause of the rural power failure.

Although power for the naval Diesel laboratories was cut off, the navy men set up their own engines and generators, keeping the laboratories well supplied.

There never was a general power shut-down on the campus, Platt emphasized, although "we came pretty close to it". All water pumps for the campus water system are out of commission, and campus faucets and fountains now are operating on city water.

Storm damage on the campus was not great in dollars and cents, Platt said. Property loss was slight despite flooded basements and washouts along Squaw Creek and Lake LaVerne. The latter overflowed its banks Friday night, covering the street north of it with almost 4 feet of water.

Stokers and oil burners in fraternity houses now occupied by women will require servicing before they can be operated again. Although the loss of heat presents no problem, many women are inconvenienced by lack of hot water, he said.

Cinder path traffic was curtailed Friday night when the storm destroyed the footbridge. Water covered fenceposts on the college golf course Friday and rose still higher Saturday.

Water reached a depth of 10 feet in the power plant's deepest pump pit with 3 feet of water throughout the remainder of the basement.

Yesterday 22 college telephones still were out of order. Only inter-office communication was possible on college extension phones Saturday morning, but the damaged trunk lines which cut the college, navy and highway commission extensions from the Bell Telephone Company office were repaired Sunday morning.

The disaster was the worst ever to strike the Ames company, they reported. Water in the cables left 1,500 Ames telephones out of order Saturday, and, although the cables were repaired Sunday, 200 phones still were not functioning yesterday afternoon. The company hoped to have service normal again by the end of the week,

but weather conditions were considered the controlling factor.

Fire trucks were called to the Dairy Industry Building at midnight Sunday when a transformer burned out. "There was a lot of smoke but no fire," Platt reported.

Radio Station WOI suffered principally from lack of illumination. Station engineers wired up makeshift generators so that announcers could read their scripts, Edward Wegener, acting production manager, reported.

Damage to underground cables for campus broadcasts outside the studio made transmission of Sunday's concert impossible. Connections also were poor for Saturday's baseball game. The cable to the newsroom still is in bad shape, Wegener said.

A windstorm on May 5, 1950 was the cause of damage recorded in the Iowa State Daily the next day:

Winds raging through the Ames area, yesterday, reaching at times a velocity of 100 miles per hour, knocked out power lines, ripped branches from trees and peeled shingles from roofs causing considerable property damage on the campus and in Ames.

On the campus, Ben Schaefer, physical plant director, reported extensive damage to trees and temporary buildings. Large trees next to the bookstore, the Campanile, Lake LaVerne and Barton hall were twisted off and bowled over by the raging winds. The doors of temporary buildings D, C, E, and H, and a door of Friley hall were damaged.

The college greenhouses suffered extensive damage to glass in the tropical greenhouse and general damage to the rest of the houses.

In Pammel Court the roofs of two of the communal washhouses were torn off, telephone booths and wires were blown down and metal and asphalt roofs were loosened by the gale. The roof of Harriman Cottage next to the college hospital was loosened and many windows were blown out.

Reimbursement to the college from the contingency account in the amount of $3720 resulted from damage in that storm.

An electrical storm resulted in a $2000 replacement cost to the Memorial Union for damage to carved stone blocks when the northwest corner of the building was struck by lightning on June 12, 1961.

The Board Minutes record damage to university property as the result of wind storms in May and June 1963 and again in July of 1964, mostly

on farm structures away from the main campus.

A storm on June 18, 1974, resulted in total damages exceeding $470,000, most of the cost at the Ankeny Research Station. The major damage on the campus was to the Horticulture Greenhouse which had to be almost completely rebuilt.

Heavy rains in June 1975 brought another flood to Squaw Creek which resulted in flooding of much of the Iowa State Center area with considerable damage in the mechanical room of Scheman Continuing Education Building, then just approaching completion.

VICTORY BELL

The first bell at the college was placed on old Main, as recorded in the report of the Building Committee for 1868 wherein it is entered: "A bell has been procured and is now in the belfry. Cost in place $184.11."(1)

In June 1876 The Aurora recorded that "The college bell is to be removed to the west side of the building." That bell cracked and in 1890 was replaced by a new one, weighing 850 pounds.(2)

Those bells were first used to mark the time of routine events of the day: time to get up, meals, chapel, classes, lights out. They were also tolled vigorously in the event of a fire in a campus building.

When old Main burned the shelter and bell standing just west of the building remained intact. After the Campanile was built and its chimes installed the old bell no longer served its original needs except in the event of fire.

The first reference found to the term "Victory Bell" appeared in the I.S.C. Student on September 17, 1912, although that article was so written that it seems the term had been in use for some time because it implies the ringing of the bell "only upon occasion of an intercollegiate victory and never any other" was one of the "customs or traditions of the college".

Suggestions to move the bell and its housing were recorded in 1923-24, 1954 and 1955.

In 1931 a campaign to obtain funds -- nickels -- from students was successful as a means of financing a much-needed new paint job for the tower. The housing received replacement of some rotten timbers and a re-shingling of the roof in 1955.

The Victory Bell was moved to a new frame mounting at the new stadium in 1976 where it still is rung for Iowa State victories. The old housing was subsequently razed.

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(1) Minutes, Jan. 10-13, 1870

(2) The Aurora, Oct. 1890

CAMPUS PLANNING

Planning for the physical development of the college grounds and location of new buildings is not a new phenomenon at Iowa State University. The Board of Trustees, in January 1865, adopted a resolution presented by Peter Melendy, Farm Superintendent:

> Whereas, The interests of the College and Farm demand that the operations on the same should be started right, and that to understand what is needed for the successful carrying out of the designs of the institution we should as a board meet on the farm at an early day. Therefore be it Resolved -- That the Executive Committee present to the board a plat of the farm showing the position of the buildings & C. ["C" referred to the "College" or main building.]

Just two years later Superintendent M.W. Robinson reported to the board:

> I cannot close without urging you to have made at an early day, a Topographical Survey of the Farm, showing the location of the Buildings, Railroad, Springs, Streams, Timber & Prarie, also that the Farm be platted off, showing fields, ornamental ground, orchard, garden, building sites, experimental grounds, and all other usefull features, such as will be required to make this Farm a model in every sense of the word, so that hereafter we can have a system to work upon and finally make a harmonious whole. After carefully reading the reports of other institutions of this kind I have found that there has been no regular system adopted in regard to these matters hence their partial unpopularity among those whom they were designed to benefit and the public generally.
>
> Let us establish a system, for by so doing we will economize the Funds at our disposal & have something worthy to show for them, as this enterprize is a new thing among us, and we have had no guide to follow, we have laboured under many disadvantages, hence the little progress made towards getting many things into proper working order.(1)

At the same meeting the Board adopted a motion to retain J.W. Williams "to make a Topographical Survey of the College Farm & he in connection with the Architect be instructed to prepare a plat for the future improvement of the Farm & submit it to the Executive Committee for Adoption." It was later reported that Hon. J. Wilson Williams made the survey about April first.

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(1) Board Minutes, Jan. 14-15, 1867. Spelling and punctuation as in original.

In May 1868 the Building Committee was instructed to employ "a first class landscape gardner to lay out the grounds of the College Farm with a view to the exact location of the Professors residence and the beautifying of the grounds." Apparently the man selected was not "first class" because in November he was discharged for "having failed to furnish plans in proper time". Instead, the Board adopted a resolution "That the President Elect & Profs. of Agriculture be & they are hereby authorised to proceed and layout the farm College grounds upon such plans & in such manner as may be determined by them and to superintend & direct all improvements relating to the grounds."(1) The concept of the open central campus must be credited to Dr. A.S. Welch, first college president. "He planned a unique campus. It was his idea to have a road circle the campus, around which the buildings were to be located....Doctor Welch studied the landscape problem carefully and decided that the trees should be planted in groups, each species by itself."(2)

That basic concept has been generally followed in later planning, although adjustments and modifications have been made in the road patterns and extent of the open area, resulting from growth entirely unpredictable in the 1870's.

All planning of grounds changes and building site selection remained in the hands of the president and faculty, with Board approval, from 1869 until 1902 when Mr. O.C. Simonds, a Chicago landscape architect, was retained to "advise the Board as to location of buildings, roads, walks, and make suggestions as to general ornamentation of the college campus."(3)

During the nineteenth century land use was of prime consideration as indicated in the 1886-87 charge to a committee "to systematize the Agricultural and Horticultural Departments, assign land for garden to Capt. Lincoln, the Steward, and replan the farm and public grounds in a systematic manner." That committee was composed of President Chamberlain, J.L. Budd and Herman Knapp.

Mr. Simonds recommendations to the Board are recorded in the Minutes of the Dec. 31, 1902 meeting:

> After looking the situation over it seems to me that the proposed Main Building should be placed substantially on the site of the old building, the only change being to move it a little further

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(1) Board Minutes, Nov. 19-21, 1868

(2) L.H. Pammel: 1930

(3) Board Min., Nov. 21, 1902

> west....The "circle" which was planted years ago and has since been developing by the growth of trees until it is the most beautiful feature of the grounds should not be encroached upon. This feature is one of the pleasant things that students will remember in after years with great satisfaction. It also impresses visitors most favorably, and makes an admirable foreground for the various college buildings.

His services were continued for another year and in September 1903 he submitted a new report which included drawings of the campus. That report stated:

> I send you a plat of the college grounds, showing the present buildings, and sites for proposed buildings; also location of the drives and the location recommended for the dummy line.

That plat showed the railroad on what is now Osborn Drive, where it was subsequently relocated. It showed the Library and Domestic Economy sites approximately in the locations where they were eventually built. Some of the other proposed sites were not adopted in accordance with that recommendation. The Simonds map proposed removal of the Farm House with the then proposed Agricultural Hall on its site. It showed a gymnasium west of the Library site and an auditorium south of the proposed gymnasium, with athletic fields farther west (and north of what is today Marston Hall). Faculty residence sites were shown in the area now used for the Richardson Court residence halls west of Wallace Road.

Two major decisions confronted the Public Grounds committee at the beginning of the year 1906: The location of the new Agricultural Hall (Curtiss Hall) and the route of the proposed interurban line to replace the old steam railroad across the campus. Upon the recommendation of A.T. Erwin, committee chairman, John Charles Olmsted of the Olmsted Brothers, the highly respected landscape architect, was employed "in order that satisfactory plans for general campus development for the future may be perfected."(1)

Olmsted came to Ames for two days in early May, and in June submitted a written report and recommendations to President Storms. The full report is reproduced as Appendix Four in Ross's "History of Iowa State College" and will not be repeated here. His proposals included locating Agricultural Hall due east of Central Building (Beardshear) and rerouting the rail line onto what is today's Osborn Drive. By action of the Board of Trustees at the September 1906 meeting Curtiss Hall was finally placed about 100 feet farther east than in the Olmsted recommendation.

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(1) Minutes, Feb. 9, 1906

Other features of the Olmsted plan met serious objections from all sides. The rectilinear grid with formally aligned buildings was considered too "urban" in appearance and not in keeping with the desired informal and open prairie image of the campus.

The Olmsted plan was not adopted by the Trustees, but it did influence later thinking about how the campus should be planned and where buildings should be placed.

During the next decade numerous plans were prepared for proposed development of the campus, largely under the direction of Professor Erwin and the Building and Grounds committees. Some campus plans were made by Proudfoot Bird and Rawson in conjunction with their development of plans for specific buildings.

Through the generosity of LaVerne Noyes the services of O.C. Simonds were made available to the college, primarily for the development of the lake financed by and named for Mr. Noyes. Simonds also contributed to the development of landscape plantings elsewhere on the campus during the next three years.

An article by C.H. Schemann appearing in the Iowa State Student on December 14, 1916, provides an excellent statement of the planning as it appeared at that time:

> ....The Board of Education realizes the importance of having at hand a well thought out plan for future developments in order that no mistake may be made in the location of any of the numerous buildings which are now under consideration and it is with their approval that the recent studies for the future development of the campus have been made.
>
> The general scheme of development of the campus provides for the housing of agricultural departments on the east side of the campus; engineering departments on the west side; veterinary medicine at the northeast of the main quadrangle; fundamental sciences on the north and in the central portion of the campus; and home economics can be provided for on the main quadrangle or in close proximity to the residential hall group as may seem best for the welfare of this rapidly growing and important division of the college. Eventually the main or central campus will be surrounded on three sides by stone buildings and it is planned to have it open toward the south except for the Campanile and the trees. The four corners of the main quadrangle will be marked by the present Central Building at the southwest, Agricultural Hall at the southeast, the Library at the northwest, and probably a Plant Industry Building at the northeast, one wing of this last named building already erected with extensive modern greenhouses attached. The north boundary of this portion of the campus will provide a location for a large building which may include an auditorium and with provision for college instruction as well.

The main campus will project to the west between Central building and the Library where it will be bounded on the west by the present Engineering Hall and a similar structure directly north and this extension will be bounded on the north and south respectively by additions to the Library and Central Buildings. A similar extension of the main campus is provided on the east side which will be bounded on the east and north and south by Agricultural Buildings.

Outside of the circle of stone buildings will be a larger circle of brick buildings including the Veterinary Buildings, Science Buildings, Chemistry Building, Engineering Shops, Animal Husbandry and other agricultural laboratories, barns, etc. Near the Heating and Power Station at the extreme eastern edge of the campus locations are provided for service buildings devoted to the upkeep of the entire plant.

Two large interests of the college are provided for at locations detached from the central campus, namely the Gymnasium and play fields for men at the extreme west side of the campus, and the group of Women's Dormitories which recently was established near the southeast entrance to the campus.

All the area at the west side of the campus has been given over to the gymnasium site and connecting athletic fields and the tennis courts and play fields across the road north of the gymnasium. It is planned to bring these play fields to a more uniform grade as soon as funds are available. In its present irregular state it is difficult to lay out baseball diamonds, football fields, etc., so as to use the space to the best advantage. The question of location of Men's Dormitories is occasionally discussed but as the policy of putting up these buildings has not been decided by the state, no definite location has been set aside for them. They might however, be placed adjacent to the play grounds near the northwest corner of the campus grounds unless a better location can be provided off from the campus on land to be purchased.

The final arrangement of the group of Women's Dormitories at the southeast corner of the campus is beginning to show up more clearly now that the third building of the group has been started. It is planned in the future to have a center of interest for the women of the college in this part of the campus with space for playfields in close connection with the dormitories. The Board of Education has not decided as to the best location for the Home Economics Building. The first steps have been taken however, to provide a commodious and well equipped building for this branch of work which will compare favorably with the principal buildings on the campus. A suitable location will be found in one of the different possible locations that are under consideration.

The experts that have been consulted and those who are interested in the development of a beautiful campus are in agreement that the south portion of the grounds between the Women's Dormitories on the east and the athletic field on the west should be developed as a park without large college buildings being placed in this area. The recent improvements made in this portion of the campus are in harmony with this idea. The lake donated by Dr. LaVerne W. Noyes of the class of 1872 and which has just been completed and the new road which follows along the easterly side, have done much to add to the beauty of this area besides furnishing the opportunity for healthful recreation on the part of the student body in the winter. When the planting which has been set out around the lake has had time to attain its growth the lake and its surrounding trees and shrubs will be an integral and attractive feature of the campus.

The entrances to the campus on the south side have proven to be most fortunately located. Especially are the natural progression from attractive landscape features to imposing college structures which unfolds before them as they enter upon the campus. As Lincoln Way, which is perhaps the most traveled transcontinental route in the country, passes along the south side of the college grounds and as it is possible to make a short cut through the college grounds. It is hoped that the state will see fit to provide funds for the paving of Lincoln Way which is also the main thoroughfare connecting community with the City of Ames.

The scheme for planting the campus, which is now being followed under the direction of O.C. Simonds of Chicago, is an elaboration of that which long as been followed -- namely a natural arrangement of trees and shrubs. This form of planting is today recognized as the best form of landscape gardening, especially in such an area as our college campus which contains at the present time 125 acres and will need to be extended somewhat in the future. Hundreds of different varieties of trees and shrubs which are adapted to this climate may be found among the plantings. Besides performing their function of beautifying the landscape, these trees and shrubs afford the best kind of a laboratory for work in Botany, Landscape Gardening and Forestry. During the spring and fall, classes of students can be seen studying the trees and shrubs on almost every day. The planting also serves as an excellent example to the state of how residence grounds may be beautified at small expense. In order to make the planting as useful as possible for the purpose of instruction it is proposed to label the most important types of trees and shrubs. Labels are now being placed on a limited number of trees in order to try out their lasting qualities over the winter before all trees are labeled in this manner.

Adjacent to the campus at the northwest corner is a considerable

area which it is also planned to develop as a natural park. Across the Northwestern tracks are the north woods still within the college grounds which are open to the college community.

Up to this time our campus has been sadly deficient after dark because we have not had a comprehensive system of lighting to properly illuminate the walks and drives. Recently a plan was worked out through the aid of the Electrical Engineering Department and funds were set aside by the Board of Education to cover the cost of installing the necessary wires and lights. The Superintendent of Grounds is now at work on a portion of the proposed installation and when it is completed a marked improvement will be observed in the appearance of the campus at night.

In developing the plans for the campus the older and non-fireproof buildings are not being considered except that it is expected to use them as long as possible. In the natural course of events these buildings will disappear as is evidenced by our own misfortune in several cases and more extensive losses of the same kind by almost every university and college in the United States.

The responsibility for the planning decisions was shared by a number of people during the time preceding and following Mr. Schemann's account. The contributions of some are recognized by Professor Pammel in his account concerning planning of the campus in Horizons, Spring 1930:

....I think I was the first to suggest that all the Science Buildings be grouped together north of the [interurban] tracks.... Another problem which came up before the Grounds Committee was the location of the Women's Dormitory group. President Pearson suggested the little eminence from the valley near the present east entrance to the college at the "Knoll" (the President's residence) and I heartily concurred in this suggestion. The group was finally located here, and, I think, it was a well chosen site....

....The location of the curved paved road leading from Lynn Avenue into the campus was a suggestion from the committee on public grounds during the administration of Dr. Pearson. This was fully and heartily endorsed by Mr. Simonds.

The Agricultural Division has always had some representation on the Public Grounds Committee. Dean Curtis, Dr. Wilson, Professors Budd and Erwin have served on this committee at various times. Thomas Sloss, the superintendent of buildings and grounds, has always served on this committee.

Since my connection with the college, the Department of Buildings

> and Grounds has always designated a man to look after the grounds. They are entrusted with the care and planting of the grounds according to the plans furnished by the Department of Landscape Architecture. Since the organization of the professional course in Landscape Architecture, the head of that department has served on the Public Grounds Committee, providing plans for the superintendent of buildings and grounds, giving advice and supervising the campus development generally. This includes location of buildings, roads, walks, plantings and other features.
>
> Thus it is seen that the campus of Iowa State College from the first has had careful, intelligent and conscientious planning and guidance by men in full sympathy with or trained in the complicated landscape problems involved in a rapidly growing public institution....

Dr. Pammel unfortunately failed to credit the contributions of A.H. Kimball, head of architectural engineering during this period. Kimball was as concerned and as involved in the decisions on building locations and campus development as were those people more directly associated with landscape materials.

Kimball, together with P.H. Elwood, head of the department of Landscape Architecture from 1923 to 1951, were the dominant figures in campus planning during that period. They collaborated in the preparation of many studies on the locations of individual campus buildings and in over all planning of future development of roads, walks, landscaping and building siting. In the "Twenty-Year Development Program" prepared under the direction of President Hughes in 1935, the President wrote:

> I strongly recommend that the policy of recent years be continued of allowing Professor Kimball about $2300 to $1500 a year to employ a graduate to work under him in developing plans for future buildings. From time to time funds should also be available for the study of our grounds and building locations under the joint supervision of Professor Elwood and Professor Kimball.

The head of the department of architectural engineering (and later, architecture) was designated the campus architect or supervising architect until the death of Leonard Wolf in the fall of 1962. Preliminary plans for new buildings were developed in that office and then given to the project architect for preparation of the construction drawings and specifications. That practice continued between 1962 and 1965 under the direction of Walter Hotchkiss who was employed then as Supervising Architect for the university when that office became separated from the academic administration of the department of architecture.

The Campus Planning Committee, with Leonard Wolf as chairman, was

established by President Hilton in 1955 with its function "to report and make recommendations to the administration concerning the best location of future buildings, as well as alterations in walks, drives or parking areas, and other physical aspects of the campus". Professor Clair B. Watson became chairman of the committee in 1963 and retained that position until his retirement in 1978. During his term the responsibilities of the committee were modified substantially. The principal charge to the committee became the determination of priorities for the many requests for new buildings or additions to or remodeling of existing buildings, and in 1976 this change was reflected in the new name, Capital Improvement Advisory Committee.

The Physical Facilities Committee was appointed in January 1971 by President Parks, with Burl Parks as chairman.

> Its functions will include review of proposed physical developments on the campus, provision of communication among faculty and students concerning such proposed developments, collection of relevant comments and recommendations from among faculty members and students and transmission of such information as is appropriate to the university administration through the Office of Vice President for Business and Finance.(1)

With the appointment of H. Summerfield Day as University Architect in the fall of 1966 a basic change in planning procedure was made. Instead of preparing preliminary plans in his office he introduced the concept of preparing written programs for the project architects to use in their development of the designs for buildings.

The employment of a consultant for a long-range development plan for the campus had been discussed in the Campus Planning Committee in early 1965 but no action was taken until November 1966 when President Parks appointed a committee to recommend such a consultant. The firm of Johnson, Johnson & Roy of Ann Arbor, Michigan, was selected, and agreement entered into in April 1967. A Long-Range Development Committee with Day as chairman worked with the planners throughout the project.

The Johnson, Johnson & Roy study resulted in the publication of "A Guide for Continuing Physical Development" dated December 1968, but not actually completed and available until the following May.

That plan was never formally adopted or rejected by the university administration, but its basic concepts have been generally followed although with some modifications since its appearance.

In 1976 Everett D. Swagert replaced Day as University Architect. He has continued the same procedures as were then being followed.

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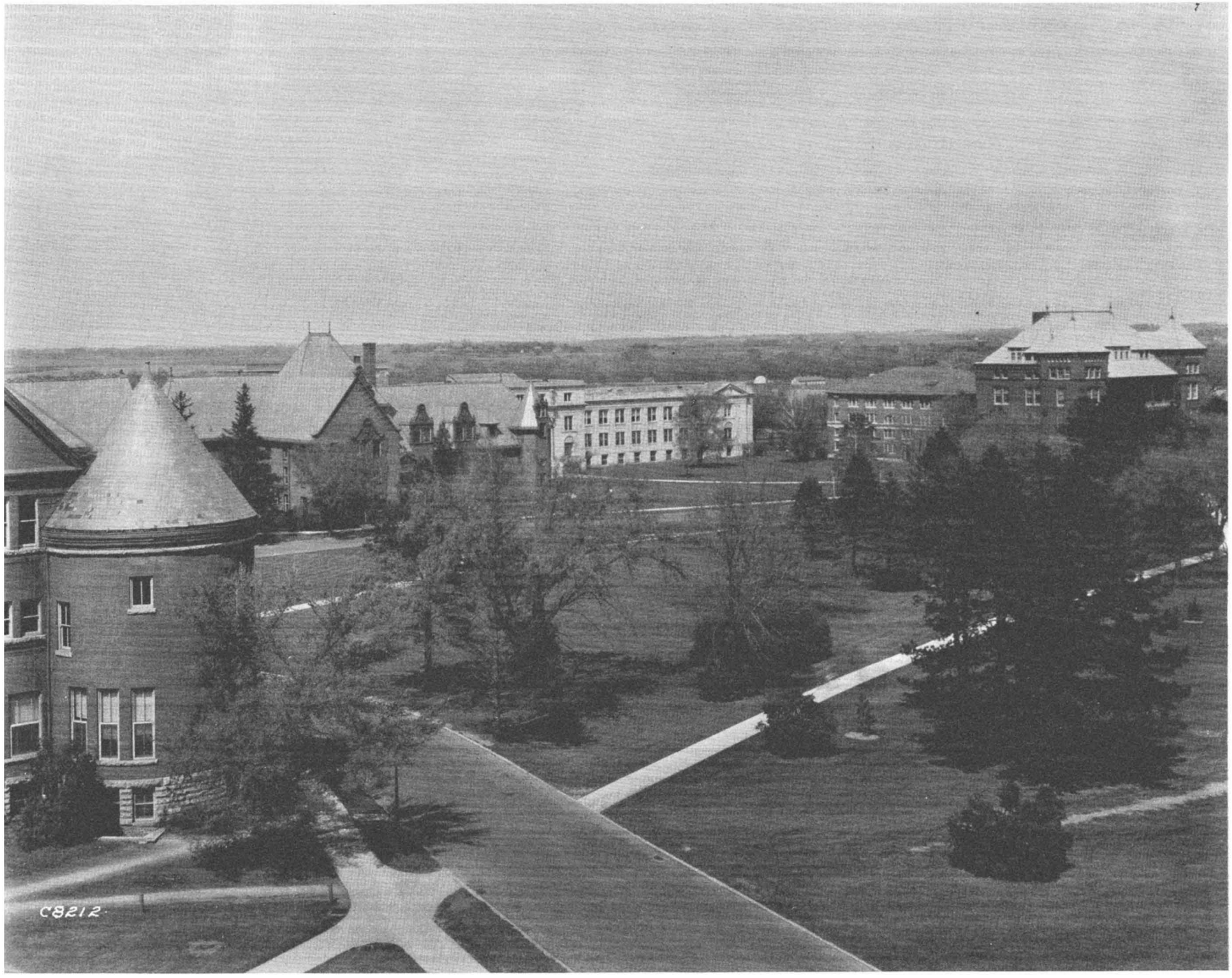
(1) Faculty News Letter, Jan. 29, 1971

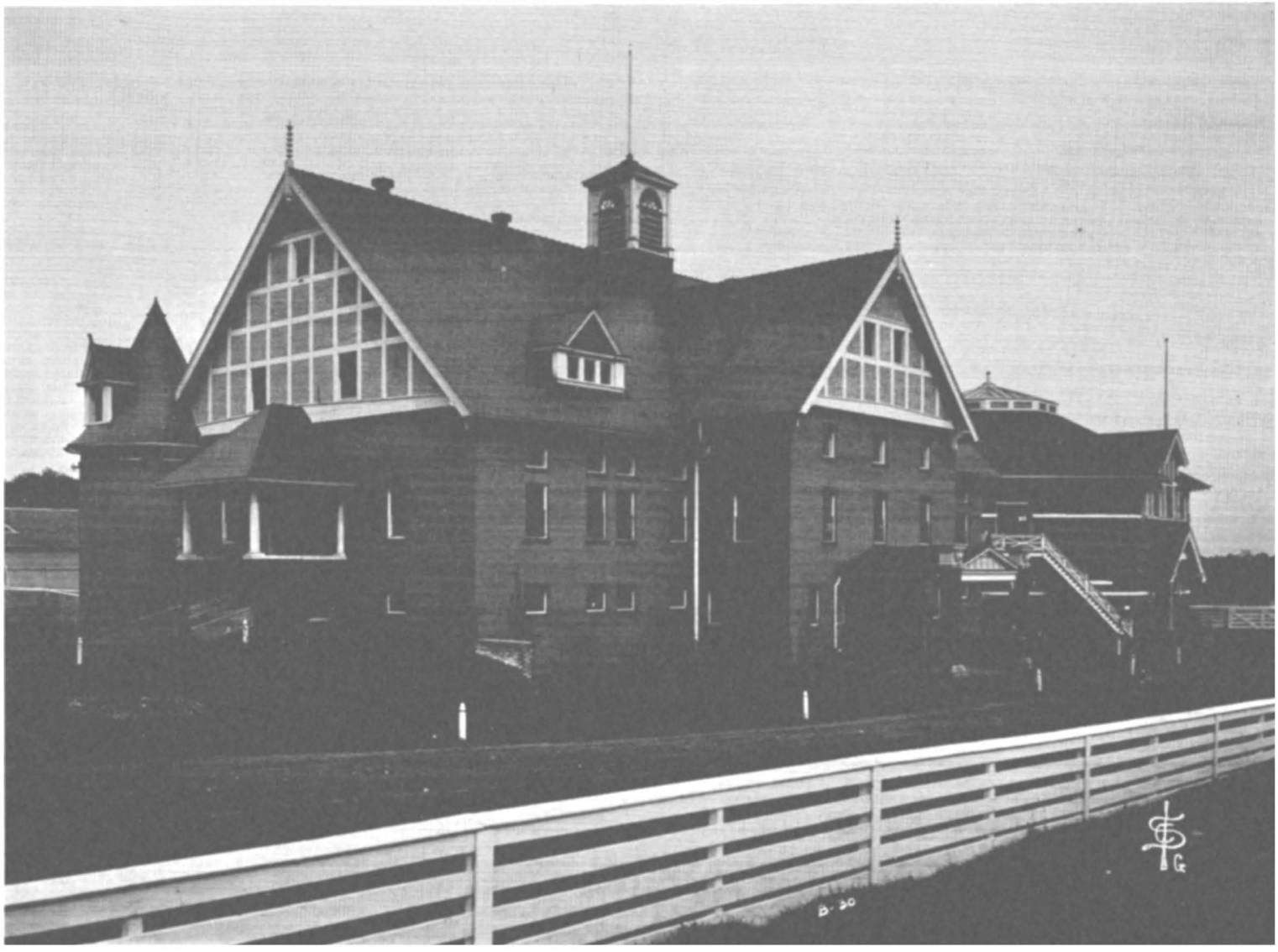
CAMPUS BUILDINGS

(Alphabetically Arranged)

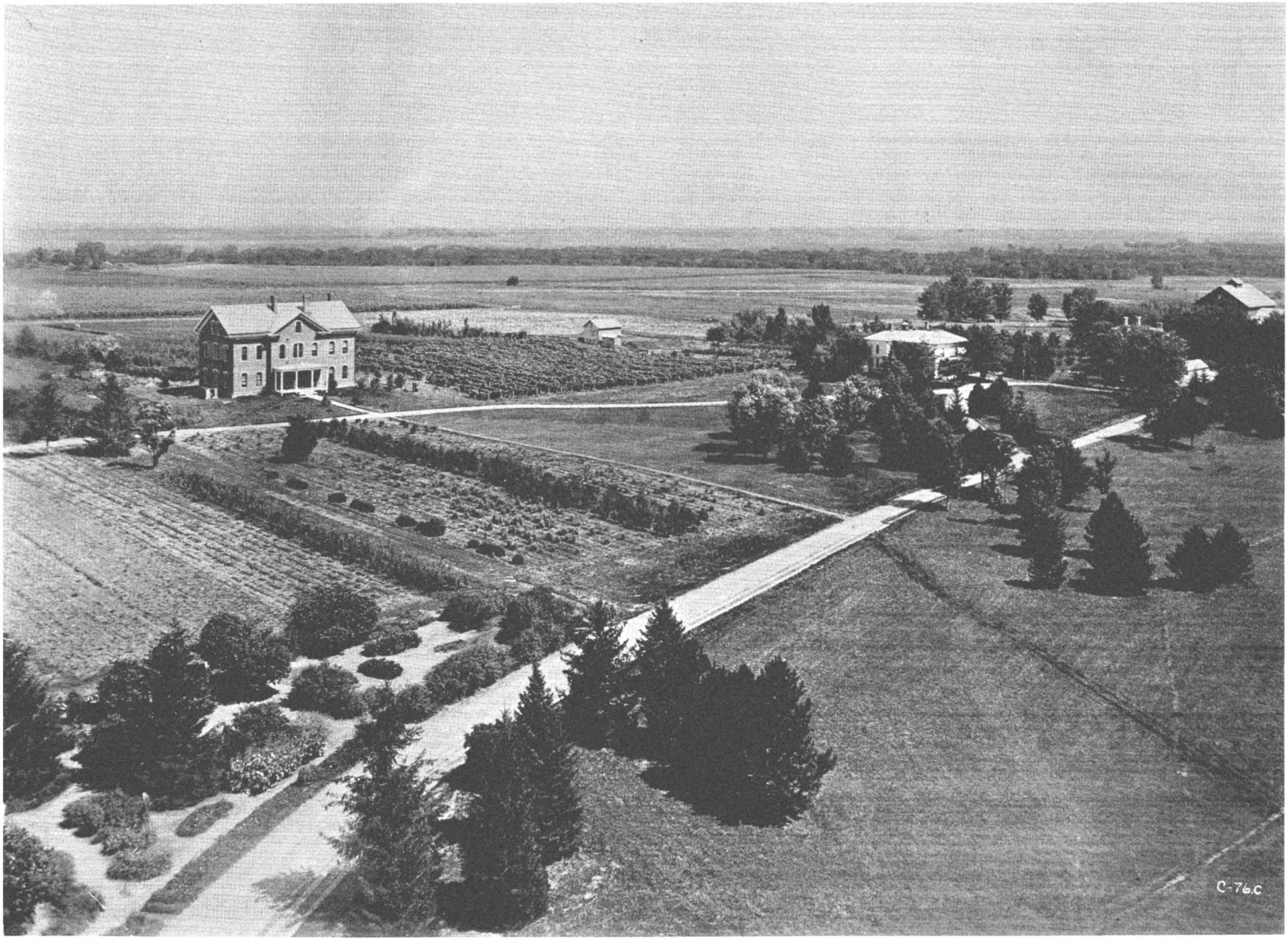


Morrill Hall Margaret Hall MacKay Hall Botany Hall

Sanitary Building

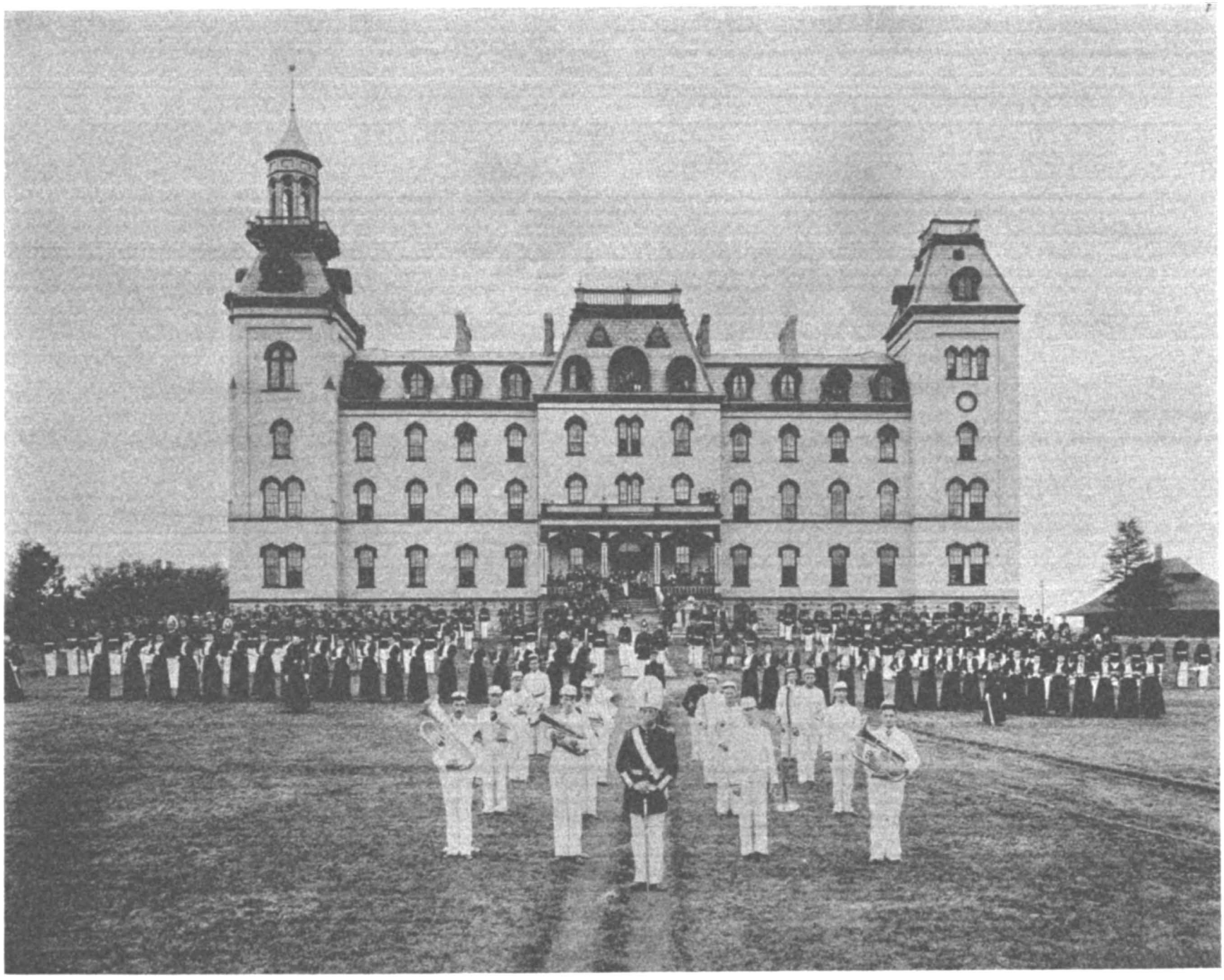


Experiment Station Barn with
Agronomy Farm Crops Laboratory beyond

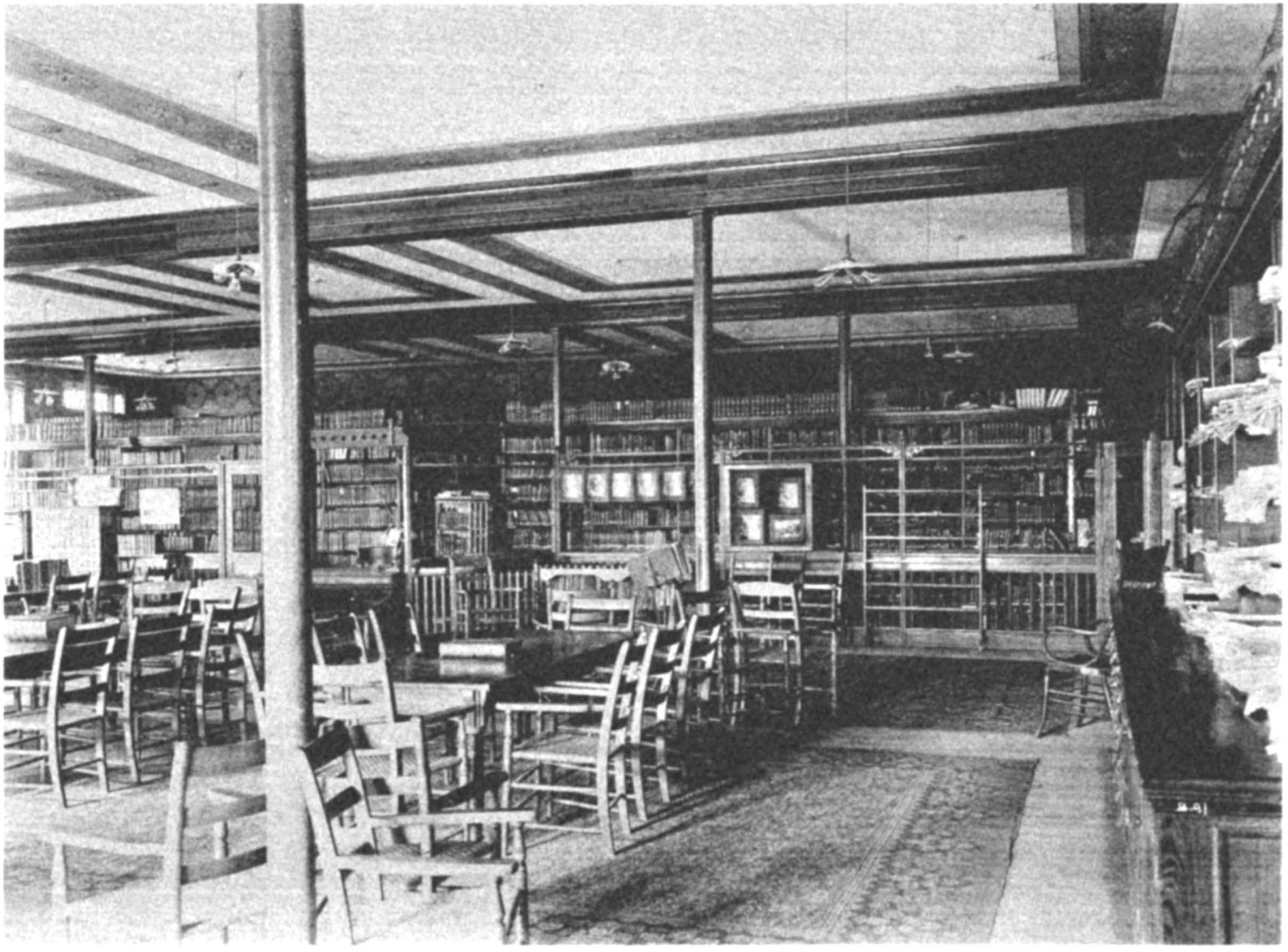


North Hall Vinyard Field Barn Mortensen House Exp. Sta. Cattle Barn

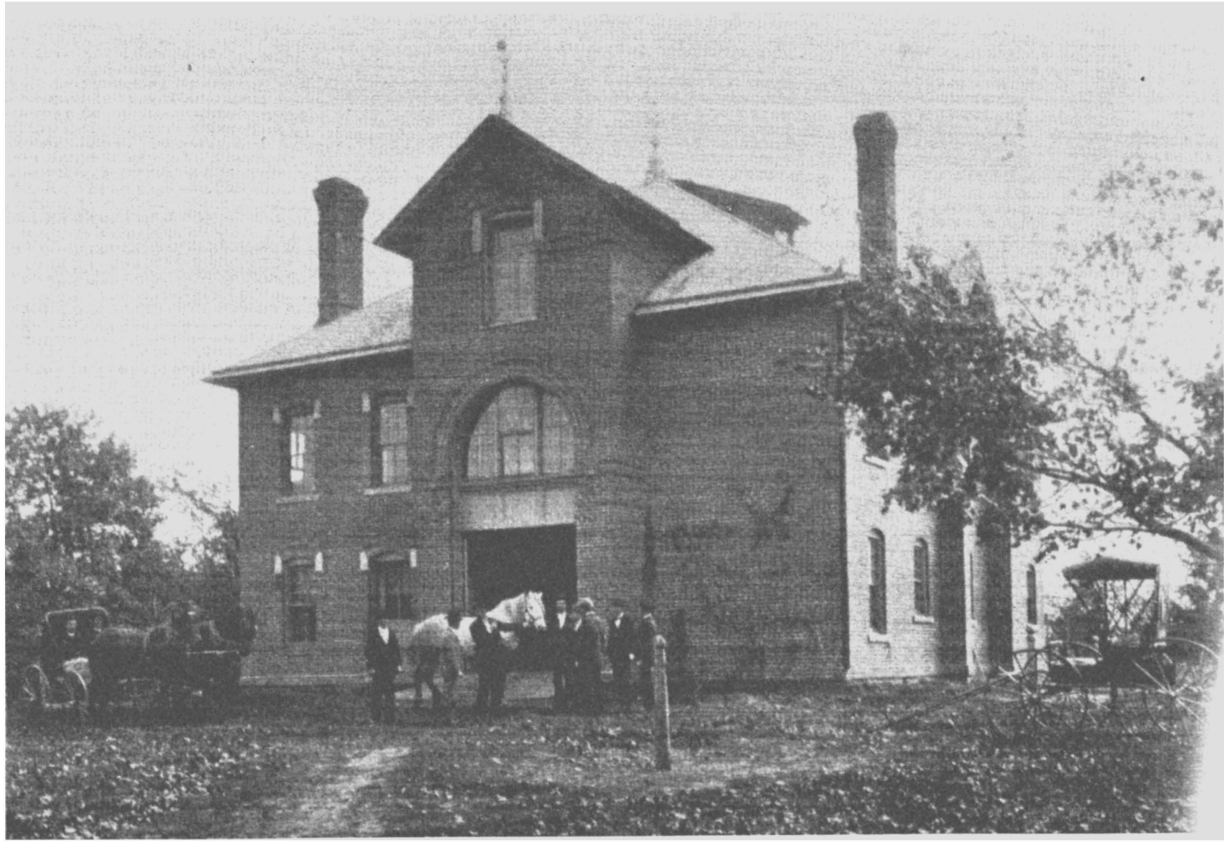
Photo about 1889 or 1890



Old Main at Full Dress Parade. Hub at far right



The Library in Morrill Hall



Veterinary Hospital

AEROSPACE LABORATORY

Carpenter Shop, Pattern Shop

Aeronautical Engineering Laboratory

Located 100 feet south of Engineering Annex. Long axis east-west.

Built: 1898
Architect: Not recorded
Contractor: Zitterell & Atkinson
Razed: 1973

The contract for construction of the Carpenter Shop was let in May 1898, in the amount of $4,387.

> In this department each student is supplied with a set of tools, most of which are new. These tools are kept, while not in use, in a pretty glass case just over each bench. Such tools as are not used much are obtained by checks, thus making each student individually responsible for tools used.(1)

The building was listed as "Pattern Shop" in the Biennial Reports through 1932. In 1934 it's name became Aeronautical Engineering Laboratory, presumably with a change in function at that time.

AGRICULTURAL ENGINEERING GARAGE

Tractor Garage

Built: 1914
Razed: 1925 (?)

Location: directly north of the north wing of Old Botany.

The first request for a building to house large equipment for the Agricultural Engineering Department appears in the Biennial Report for 1908-10 when the cost of a building 50 x 120 feet of steel frame, brick walls and slate roof was estimated at $6000. In the report two years later the cost estimate was $10,000.

It was September 1914, however, before any funds were allocated and then only $100 was provided--for "a shed which shall contain two stalls for freight trucks, one stall for Superintendent's automobile, and three stalls for the dept. of Ag. Engr."(2) It was a frame building, 23 x 73 feet open to the east.

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(1) ISC Student, September 6, 1898

(2) Minutes, September 1914

In 1916 an additional sum of $300 was provided to build a chimney and forge, to provide steam radiation in the forge compartment, and to make "a few slight improvements in the remaining five compartments."(1)

The building is shown on a 1923 map but does not appear on one made in 1926. No specific reference has been found to determine the exact date it was razed.

AGRICULTURAL ENGINEERING MACHINE SHED

Built: 1931
Architect: Henry Geise, Professor of Agricultural Engineering
Contractor: Thomas Sloss, Supt. Bldgs. & Grounds

A capital appropriation request of $5000 for this building was not allowed in 1928 or 1929. In 1930 the Board approved using money from the General Improvements Fund "when funds are available."(2)

The following spring the student paper reported on the work under way, referring to its being under construction on April 11 and expected to be completed in May.(3) It was then described:

> The new addition is to be a storage shed for machinery that is being stored in various places at present. It will be open on the east. The brick work is the same as that of the present building. The construction is of special interest to the department because the bricks are backed up by a type of cement block that was developed in the department.

Since it was first built dividing partitions have been installed and doors added for better weather protection.

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(1) Minutes, August 9, 1916

(2) Minutes, May 17, 1930

(3) Iowa State Student, April 11 and 23, 1931

AGRICULTURAL ENGINEERING SHOP AND SHED

Farrier's Shop

Built: 1923
Razed: 1962

Very little is recorded about this small concrete block building which stood just north of the east wing of Davidson Hall.

It is shown in the secretary's report for the year 1923-24 as having been built in that year at a cost of $2457.44. It is carried on the financial reports from 1928 through 1952 at a value of $2400. In the 1953 report the value was increased to $3344 and continued at that figure through the 1961 report.

The building was razed in 1962 to make way for the Industrial Education addition to Davidson Hall.

No references to this Farrier's Shop have been found in the minutes of the Board or in the student paper.

AGRONOMY FARM CROPS LABORATORY

Stock Pavilion, Judging Pavilion #2,

Crop Science Laboratory

Built: 1903
Architect: Proudfoot & Bird
Contractor: C.E. Atkinson (Gen'l)
Campbell Heating Co. (Plbg. & Htg.)
Razed: 1972

Located at what is now the west end of south wing of Physical Plant Shops and Central Stores Building

At its meeting of November 21, 1902, the Board of Trustees allocated money from the special building tax fund for "erecting a judging pavilion for Agronomy and Animal Husbandry sixty feet in diameter, two stories and veneered with pressed brick."

Construction contract was awarded in March 1903, and the building was described: "This will be of buff brick, two stories high and octagonal shape. The first floor will be occupied by the department of Animal Husbandry and the second by the Agronomy department."(1) In the next issue of the paper the added information was given that "there will be

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(1) ISC Student, March 25, 1903

three elevated rows of seats extending entirely around the room."

At the time of his resignation in 1910, President Storms said: "This building, thoroughly equipped in every way is conceded to be the best building of its kind on the continent."(1)

In 1911 it was connected to the central heating system.

The building was razed in 1972 to make room for the new Physical Plant Shops and Central Stores Building.

AGRONOMY GREENHOUSE

Built: 1940-41 Addition: 1950-51
Architect:
Contractor: Building & Grounds Dept. (Headhouse) 1940
Ickes-Brown Greenhouse Mfg. Co. (1950)

The proposed new greenhouse for the Agronomy Department was described in the November 15, 1940 issue of the Iowa State Daily Student:

> The greenhouse, which will consist of two greenhouse units and a head house, will be located in the area north of the Collegiate Press Building and west of Central Stores. The 20-year plan of Iowa State calls for the later addition of a third greenhouse unit and construction of an Agronomy Building west of the new greenhouse.
>
> The greenhouse units, 100 by 33 feet in size, will feature overhead heating, the latest inovation in greenhouse temperature control....
>
> The head house, 120 by 24 feet, will connect the two greenhouse units and will contain a freezing chamber for study of winter hardiness and frost resistance of seeds....

On December 3 the paper reported that ground had been broken for construction of the greenhouse. At the September 16, 1941, Board meeting President Friley reported that the greenhouse project had been completed.

The contract for the third greenhouse wing was awarded in March 1950. Work was accepted as complete in June 1951.

A fire in January 1953 resulted in a $2650 loss to the building and equipment.

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(1) ISC Student, March 15, 1910

AGRONOMY HALL

Built: 1950-52
Architect: Dougher, Rich & Woodburn
Contractor: Olson Construction Co.

As early as 1914 a request was initiated for funds for a new building for the Agronomy Department. The estimate then was for $100,000 for the proposed building.(1) The need was again stated two years later. In 1925 the Board asked the President "to present estimate and recommendation for the location of an agronomy building."(2) By the year 1940 the Biennial Report listed a building for the department as one of those needed "in the near future", and the Minutes for Agust 28, 1940, put it first on the "most urgent" list.

But it was 1945 before the 51st General Assembly allocated an appropriation of $360,000 for an Agronomy Building, and 1947 before the architect was selected.(3) Preliminary plans were approved in December 1948 and final plans in June 1949. Bids were received and contracts awarded in January 1950.(4)

Faculty and staff moved into the building in late July and August 1952(5) and formal acceptance from the contractors came in September.

AGRONOMY LABORATORY

Antigenic Laboratory

Built: 1960-61
Architect: Tinsley, Higgins, Lighter & Lyon
Contractor: James Thompson & Sons

Lease of a site for a laboratory to be erected by the Atomic Energy commission first came to the attention of the Board at the meeting of November 19-21, 1959. A lease for the project was executed in June 1960.(6)

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(1) Biennial Report, 1912-14

(2) Minutes, April 15, 1925

(3) Minutes, March 10-11 and May 12-13, 1947

(4) Minutes, February 14, 1950

(5) Iowa State Daily, July 11 and August 15, 1952

(6) Minutes, June 8-10, 1960

The building was designed as an "Antigenic Laboratory" for the study of irradiation effects on swine. The A.E.C. awarded the construction contract in June 1960, and the facility was put into use the following year.

By 1969 the A.E.C. research project had been completed, the building was conveyed to the University, and the lease was terminated.(1)

The space was then allocated for use by the department of Agronomy and the building name changed accordingly.

ALUMNI HALL

Association Building

Built: 1904-07 Additions: 1914, 1943
Architect: Proudfoot & Bird
1914: Proudfoot Bird & Rawson
Contractor: H.W. Schleuter

The first recorded reference to the building which became Alumni Hall was in a report by President Chamberlain to the Board of Trustees at their meeting in July 1890. He proposed a building to be used by the Christian Associations and the Literary Societies, to be erected by subscription and to be called "The Welch Memorial Hall." The project was approved as presented.(2)

The IAC Student, September 4, 1890, reported "The college has long needed such a hall, and the prospect that it will be in existence before '92 seems very flattering. $9000 is already subscribed and it is thought the fund can easily be made to reach $25000."

During the next ten years there are references to a "Society Hall" from time to time in the student paper, but little formal action was taken until October 1901 when the Trustees approved providing a site and furnishing "heat, light, water and janitor service" for the proposed building.(3)

The first really concerted effort to raise funds began with a mass meeting of the students in March 1902.(4) Iowa Governor Cummins and

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(1) Minutes, June 26-27, 1969

(2) Minutes, July 1890

(3) Minutes, October 1901 and IAC Student, October 26, 1901

(4) ISC Student, March 15, 1902

YMCA traveling secretary, E.T. Colton, and J.G. Olmsted, "a practical business man of Des Moines" were the scheduled speakers.

By the fall of 1903 sufficient progress had been made to establish that construction could begin in the near future:

> On excursion day the alumni building committee met with the building committee of the proposed Christian Association Hall, and agreed to add an additional floor to the building to be used by the alumni. The estimated cost of this addition is $15,000, which will be paid by the alumni association in addition to what individuals have already subscribed. This will make the total cost of the building $50,000 and it has been definitely decided to place it just south of Emergency hall. Messrs. Proudfoot & Bird are now working on plans which will include all the recent changes [and if they] are completed, the contract for the foundation will probably be laid this fall. The building as now proposed will have a basement and three floors. The basement will contain a swimming pool, shower baths, lockers, bowling alleys and a cafe. The first floor entrance opens into a large reception hall which will be one of the features of the building. A library, reading rooms, leisure room, the secretary's office, and separate from these is a reception hall and a parlor for women. On the second floor is an assembly room seating four hundred and fifty-people, a kitchen, a serving room, and five smaller rooms which ordinarily will be used for bible class rooms and such purposes, but which can be thrown together into one large dining room. The third floor will be a dormitory and the rooms will be let to students during the term but reserved for the alumni during commencement here. Several rooms will be held for the use of alumni visiting during the term. The building will fill a long felt want both in the religious and the social student life and will also be a step toward a future alumni hall."(1)

The construction contract was awarded in March 1904 and excavation started soon thereafter. By September the paper could record that the Y.M.C.A. Building "is almost enclosed".(2)

A formal agreement was executed in May 1904 between the College, the Y.M.C.A. and the Alumni Association, describing the responsibilities of each of the three bodies.(3) Work did not proceed as hoped for.

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(1) ISC Student, October 3, 1903

(2) ISC Student, September 10, 1904

(3) Minutes, May 12, 1904

On February 1, 1905, the ISC STUDENT explained:

> The Y.M.C.A. building was enclosed before the holidays and since then no work has been done upon it. Everyone would like to see it finished and furnished before very long but as long as some of those who subscribed for its erection do not speed up a little more it will have to rest.

The building stood unfinished for almost two years because of lack of funds to continue construction work. An article in the ISC STUDENT of August 31, 1906 discusses the situation at that time:

> We had hoped very much that at the opening of this school year the students would find the new association building well under way. This would have been the case had it not been for the arrangements which were made for the completion of the building.
>
> The students were appealed to during the latter part of last term and responded very liberally indeed to the call, subscribing over nine thousand dollars. The Alumni association pledged fifteen thousand dollars and in raising this, Mr. Noyes, a wealthy graduate living in Chicago, was appealed to for a large gift. He would help the matter along only under the condition that the whole matter of finishing the building, making collections, etc., be turned over to him. During last commencement the committee of the Alumni association met with the Y.M.C.A. board of directors and presented the proposition of Mr. Noyes to complete the building and subscribe what was needed in addition to subscriptions already made.
>
> The advantages of having the building completed at once and free from debt without further anxiety and expense to the board appealed to them so strongly that the following resolution was passed: "Resolved that all accounts, notes, pledges and cash that are on hand for the completion of Alumni Hall, together with the contracts, estimates and all information in regard to the same be turned over to Mr. LaVerne W. Noyes of Chicago, Ill., for the purpose of making settlement with the contractor and the completion of the building with sole authority to act for the board."
>
> A good deal of time was required to get everything ready to be turned over to Mr. Noyes as the accounts were all audited by an expert accountant. Mr. Noyes prolonged his vacation on this account but is now expected to return to Chicago about September fifteenth. It will then be possible to receive word from him as to what immediate action can be taken.
>
> We trust that the students will look at this in a reasonable light and bear with us in this short delay. In the end the building will be finished sooner and in better shape than could otherwise have been done.

On September 17, 1906, the paper was able to report: "Definite contract was made last week in Chicago between the Y.M.C.A. here, Mr. Noyes and contractor Schleuter by which the building will be finished as soon as men and material can be gotten here."

A year later the building was finished:

> After many trials and tribulations, several years of patient waiting, the endurance of the storms of winter and the rains of summer, without doors or windows, Alumni hall, better known to us as the Y.M.C.A. building, is completed. The interior wood work finishing is of oak throughout with hard wood floors. The swimming pool is of enameled brick on both walls and bottom. The assignment of rooms has not yet been definitely made, but the first floor will be used for general purposes, the second floor as assembly room, reading rooms, Bible study room, etc. The rooms of the third floor will be rented out for living rooms or for whatever purpose they may be needed. The furniture for the building is ordered and will be installed sometime during the month of September.(1)

Late in the year a dining room was established as reported in the paper:

> The dining room in the basement of the Y.M.C.A. building will be opened at the beginning of next term. The cafe is to be a thoroughly up-to-date establishment, everything being new and of the latest model. The plan on which it is to be run will be so arranged as to meet the demands of all the people. Those who want a full dinner served to them and those who want but a cup of coffee and sandwich will have found in the cafe a long felt want.
>
> The associations are to be highly complimented in their attempt to open up a cafe upon the campus for the college has suffered a great deal of knocking on the part of visitors and business men who come here, thinking that naturally there would be a cafe of some kind on the campus and then find out about 12 o'clock after the last car has gone that they must go down town to dinner.(2)

In 1914, after opening of the new State Gymnasium swimming pool, it was decided to eliminate the pool in Alumni Hall and turn the entire basement level into dining facilities. At the same time an addition to the south of the building was built to provide new space for the kitchen.(3) This addition included the basement and first floor level

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(1) ISC Student, September 2, 1907

(2) ISC Student, December 16, 1907

(3) Iowa State Student, May 9 and 23, 1914

of the south wing.

With the opening of the Memorial Union in 1928 some of the functions of Alumni Hall were changed. The dining room ("College Inn") was closed, game rooms were modified and additional study rooms and offices were provided.

During World War II Alumni Hall became the Administration Building for the Naval Training School and during that period the upper floor of the south wing was added to provide more dormitory space.(1) The Navy moved out in December 1944 and Y.M.C.A. and Y.W.C.A. operations returned to the buildings and continue now.

AMES LABORATORY SERVICE BUILDINGS

(On Campus)

A group of five small buildings stands adjacent to and parallel to the North Western tracks north of the Metals Development Building. These were all built for the Ames Laboratory, funded by the Atomic Energy Commission. The basic data is given here for the buildings rather than in the alphabetical sequence.

MECHANICAL MAINTENANCE BUILDING

Built: 1963-64
Architect: Brooks-Borg
Contractor: Caldbeck, Inc.

WAREHOUSE & SHOP

Built: 1965-66 Addition: 1969-70
Architect: Tinsley, Higgins, Lighter & Lyon
Addition: Ames Laboratory Building & Engineering Services
Contractor: King-Bole, Inc.
Addition: James Thompson & Sons

MAINTENANCE SHOP

Built: 1966-67
Architect: Tinsley, Higgins, Lighter & Lyon
Contractor: King-Bole, Inc.

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(1) Iowa State Daily Student, February 23 and April 28, 1943

PAINT and GRAPHITE SHOP

Built: 1966-68
Architect: Brown, Healey and Bock
Contractor: Carlson-Rockey, Inc.

CONSTRUCTION STORAGE SHED

Built: 1967
Architect: Ames Laboratory Building & Engineering Services

COMPUTER GARAGE

Built: 1948
Architect: Tinsley Higgins & Lighter, and Ames Lab Bldg. & Engr. Services
Located on north side of Physics Hall Addition

AMES LABORATORY SERVICE BUILDINGS

(At Reactor Site)

These buildings, like those on the campus, were built for the Ames Laboratory with funds furnished by the Atomic Energy Commission.

WEATHER STATION

Built: 1962
Architect: Ames Laboratory Building & Engineering Services
Contractor: Ames Laboratory

WASTE DISPOSAL FACILITY

Built: 1963
Architect: Ames Laboratory Building & Engineering Services
Contractor: Ringland-Johnson, Inc.

WAREHOUSE

Built: 1965-66
Architect: Brooks-Borg
Contractor: King-Bole, Inc.

ANDREWS-RICHARDS HOUSE

Duplex "C", Ellen H. Richards House

Built: 1955-56
Architect: Gerald I. Griffith
Contractor: Lippert Brothers, Inc.

This third duplex house for Home Management had been considered even before the first two were built, but it was late in 1954 before financing as part of the dormitory system was arranged.(1) Schematic plans by Professor Wolf were approved and the architect was selected in February 1955.(2)

Construction started in September 1955 and was completed a year later in time for the opening of the fall quarter. The September 22, 1956, Iowa State Daily reported:

> This duplex includes several economy measures such as no fireplaces in the living rooms, but one fireplace in the single recreation room to be used by both groups, and a classroom, which is in a new idea, to be used by the group for studying and by the department as an extra classroom....
>
> Among the many objectives of the home management program is to help the home economics student get an integrated view of homemaking responsibilities and to learn to make decisions on how to use time, money, and other resources to accomplish desired goals."

In September 1957 the house name was changed from Duplex "C" to Ellen H. Richards house, named for the first president of the American Home Econmics Association. In December 1962 the east unit retained the name and the west unit became the Benjamin R. Andrews House, named for the early 1900's editor of the AHEA journal.(3)

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(1) Minutes, October 14-15, 1954

(2) Minutes, February 10-11, 1955

(3) Iowa State Daily, December 12, 1962

APIARY

Built: 1916
Moved to Bee Farm: 1924

A honey and bee house was authorized for the Entomology Section of the Agricultural Experiment Station at the October 11, 1916, meeting of the Board. A small building called "Apiary" appears on the 1921 campus map, located just north of Osborn Drive about on a line with what is today the west side of Davidson Hall. It appears to have been about 10 x 15 feet in size (if drawn to reasonably accurate scale on that map).

In the spring of 1924 authorization was given to move "the smaller bee house used by the experiment station to the new bee farm (the Kimble ten acres), as soon as convenient."(1)

The Apiary was shown on the building list from 1918 to 1924 with a valuation of $167. There is no subsequent record of its value or even its existence on the Apiary farm (Kimble acreage on Arbor Street -- now referred to as Farm Maintenance area).

ARMORY

Built: 1920-21 Burned: 1922 Rebuilt: 1923
Architect: Proudfoot, Bird & Rawson
Contractor: Supt. Thos. Sloss
Addition: 1941
Major remodeling: 1955-56
Architect: Brooks, Borg
Contractors: Structural Steel: Pittsburgh-Des Moines Steel Co.
General: Lippert Brothers, Inc.

The earliest reference to an Armory was found in the May 1871 minutes of the Board of Trustees when a motion was carried to ask for $500 for the erection of an armory. What was in the minds of the Board members then cannot be learned. But in the Biennial Report for 1886-87 the use was expressed in detail in the "pressing needs of the College":

> An armory, to be used also as a gymnasium, and on commencements, junior exhibitions and similar occasions as an assembly room, instead of our chapel in the main building, small and overcrowded. Military tactics and drill are by law required in this College as a part of our courese of study. To make the instruction most valuable mentally, and the drill most effective physically, daily

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(1) Minutes, May 21, 1924

> practice is needed, which is impossible in severe and stormy weather without a suitable armory. This building can be utilized as above indicated for other valuable purposes....A building 60 x 100 feet, of brick, with self-supporting roof and asphalt or cement floor, and sufficient for our needs, can be built for about ten thousand dollars. I can see no good reason why the State should not provide one, since it is essential to giving properly the instruction required of us by our organic law both State and Nation.

Although similar requests were repeated in each subsequent Biennial Report (with higher cost figures recorded) it was not until 1917, that progress toward obtaining a building was actually undertaken. On March 8 of that year the Iowa State Student reported that the armory was to be built east of the gymnasium. A month later a decision had been reached to locate the armory "directly west of the Chemistry Bldg., the long axis being north and south."(1) The architect was asked in June to prepare plans for armories at Iowa State and at the State University, "the buildings to be alike and the dimensions of each to be 150 ft. by 300 ft."(2) In September all activity on the two armories was postponed because of escalating materials costs, especially steel, resulting in inadequate appropriations for the buildings.(3)

It was 1919 before further steps were taken to obtain the armory. On July 23 of that year the Board Minutes show that the architect was asked to

> prepare plans for an armory at the I.S.C.; said armory to consist of a drill shed and steel arches which are to be built after the most economical design for a clear span of 150 feet, the length of the drill shed to depend upon the money available ($125,000) which amount shall include space for offices, shooting galleries, recitation rooms, storage space, etc., and care for all heating, plumbing, lighting and tunnels necessary to complete the building for use.

Bids for the steel trusses were taken and a contract was awarded on September 19, 1919 to McClintic Marshall Co. of Pittsburgh, on the basis of their low bid of four received. The bid assumed a building

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(1) Minutes, May 11-12, 1917

(2) Minutes, July 6, 1917

(3) Minutes, September 13-14, 1917

150 feet wide and 210 feet deep.(1) No general contract was awarded. Supt. of Grounds, Thomas Sloss, was appointed to take charge of construction and to receive bids for and purchase all necessary materials. Excavation started about the first of February in 1920, and construction was completed in the fall of 1921.

The night of December 16, 1922, the Armory was gutted by a major fire. In addition to the building loss more than $150,000 of army equipment was destroyed by the blaze. A charge of arson was filed but lack of evidence resulted in no sentencing on that charge. Actual cause of the fire was never conclusively determined.

Rebuilding started as soon as spring weather conditions permitted, and after the State Legislature appropriated $125,000 for the purpose(2) Work was completed in the spring of 1924.

Between 1925 and 1930 several schemes were proposed for building an addition to the west side of the building to balance the extension on the east, but none of those suggestions materialized until 1941 when, with funds from the Works Progress Administration, an addition was constructed along the full west side of the building at a cost of $47,000.(3)

Home basketball games were transferred from State Gymnasium to the Armory in the 1946-47 season, allowing for much greater spectator space.(4) Fifteen hundred seats were added the following season to raise the capacity to 7500. A new hardwood floor was installed in the fall of 1948.(5)

In May, 1955, an appropriation of $150,000 was made for remodeling the Armory. The architect was appointed in June and construction contracts were awarded in October. Structural steel work was accepted in May and the other contracts in September of 1956. That work increased the seating capacity to 8500 and improved the main and subsidiary exits; the ventilating system was improved and roof repairs made. Final cost of this work came to $202,500. Further improvements were made in 1960-62, especially on the heating and ventilating systems and for roof repairs.

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(1) Minutes, October 8, 1919

(2) Iowa State Student, March 26, 1923

(3) Iowa State Daily Student, January 4, 1941

(4) Iowa State Daily Student, October 17, 1946

(5) Iowa State Daily, October 20, 1948

BARTON HALL

South Hall; Dormitory #3 for Women

Contract: 1916 Occupancy: 1918
Architect: Proudfoot, Bird & Rawson
Contractor: Thomas Sloss

In the fall of 1914 President Pearson expressed the need for "additional women's dormitory quarters."(1) The following February the architect presented schematic plans for two dormitories, but it was not until the fall of 1916 that excavation was started for the foundations. Bids were received on October 31, but all were rejected and Supt. Sloss was authorized to construct the building.(2) Work was completed in March 1918.

From its opening until 1923 Barton Hall operated as a typical dormitory with its own kitchen and dining room for the sixty-five girls occupying it. In 1928 it became a cooperative hall and continued on that basis until 1943. From April 1943 until the spring of 1944 the hall was used by Navy Air Cadets.(3)

A major renovation was undertaken in 1967 from plans prepared by Savage and VerPloeg and under contract with James Thompson and Sons. Plumbing and wiring were replaced, the kitchen and dining rooms eliminated and the building was generally modernized and refinished.

Known as South Hall originally, the name was changed to Clara Barton Hall in 1928.

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(1) Minutes, October 1914

(2) Minutes, January 4-5, 1917

(3) Schilletter, J.C., 1970

BEACH HOUSE

Beach Home Management House (1923-26)

Ellen H. Richards Home Management House (1926-1952)

Built: 1905-06
Contractor: W.J. Gordon
Razed: 1961

Located in area between what is now Gilman Hall and Spedding Hall

This house was built for the head of the Horticulture department, Prof. S.A. Beach at a cost of $5500. He lived there until his death in 1922.

In 1923 the house was repaired and remodeled to adapt it to use as a Practice Cottage, at a cost of $2600. This was one of four such houses called by that name or Student Management Houses at that period.

The house continued as the Ellen H. Richards Home Management House until 1952. In 1956 it was being used for storage by WOI-TV. In 1960 the basement was being used as a work area for geology students in a rock collection project. The building was razed the following year.

BEARDSHEAR HALL

Central Building

Built: 1903-06
Architect: Proudfoot & Bird
Contractor: H.W. Schleuter (General) L.H. Kurtz Co.
Electrical by College (Mechanical)

Less than a month after the fire which destroyed the north wing of Old Main the Board of Trustees discussed the need for a replacement of the main college building.(1) Discussions continued during the rest of 1901 and through 1902 concerning the cost and nature of the building, with much emphasis placed on the need to ensure a fireproof structure.

In April 1902 a reporter for the ISC Student interviewed President Beardshear and obtained these comments about the status of the proposed building:

> The work will be begun as soon as definite plans can be made and the contracts let. State Architect Liebbe had drawn tentative plans for the building which will be of stone, four stories, and thoroughly fire proof throughout. The frontage of the building will be three hundred feet. As regards location, that is not yet settled. Of course, if the present location is selected, the old Main must go soon. The space, however, is not ample for a building of this size without seriously covering the engineering building. The site may be south of the present emergency hall. In that case the old building will remain until the new one is completed.(2)

The fire of August 14, 1902, which resulted in the loss of the balance of old Main resolved the question of site for the new building. It was November of that year, however, before architects were retained to prepare final plans for the new building.(3) Plans included provisions of space for the departments of Mathematics, English, Botany, History, Modern Languages, Elocution, and offices for the President of the College, Secretary and Treasurer, and Board of Trustees.(4)

The structure was referred to as the Central Building during this

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(1) Minutes, January 3, 1901

(2) ISC Student, April 23, 1902

(3) Minutes, November 21, 1902

(4) Minutes, December 1902

planning period and retained that designation until 1938 when it was renamed Beardshear Hall.(1) That name had been proposed as early as 1905, just three years after the President's death.(2)

Bids for the new building were opened on March 26, 1903, but all were rejected because they exceeded available funds. Low bidder was Henry W. Schleuter, of Chicago. The architect subsequently worked with him in developing modifications in the plans and specifications to reduce the bid to $262,000, and a contract was executed in June. Construction started the following month. One of the deletions from the original plans was the dome and attic story. This was reinstated, however, in September 1904 when additional funds were made available by the legislature.

Construction continued through 1904 and 1905. No formal completion date is recorded and it was determined that "As soon as any of the rooms in Central Hall are ready for occupancy they will be occupied."(3)

By March, 1906, most of the work was completed and the newspaper(4) provides an excellent description of the space assignments at that time:

> Owing to so many alterations of plans and delays in getting material, the completion of the building is still a matter of the future, considerable work in decorations, ornamental work, lighting and work on the outside of the columns being yet undone. The new hall occupies the site of the old main, is built throughout thoroughly fire-proof of buff Bedford stones and other durable materials, there being nothing inflamable in the building but hardwood furniture. It has a frontage of 216 feet, is 112 feet deep and has 78,000 square feet of floor space. It has been described as designed in the classic rennaisance style with a strong Grecian feeling running through the detail of its exterior. The interior is plainly furnished with the exception of the trustees' room, the secretary's room and the president's reception room, which are ornamented with stucco cornices and plastered wall treatment. Looking down the main corridors, one sees the massive columns of scagliola work, so good an imitation of marble that experts are deceived. Taken together with the rotunda and two stair halls in

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(1) Minutes, June 14, 1938

(2) ISC Student, December 13, 1905

(3) ISC Student, December 16, 1905

(4) ISC Student, March 3, 1906

the first story form an immense apartment 166 feet long and 36 feet wide, in which the work of registration can be carried on rapidly and comfortably without using any of the offices.

The building is already occupied, although complete furnishings are not yet in place. The whole first floor, consisting of 18 rooms, is devoted to the English department. Along the west corridor are the offices of Prof. Noble, Miss Maclean and six recitation rooms and a room furnished with six tables and 24 chairs to be used as a study room of our future debating teams. Just south is the English library, which, when it is equipped will be used by the English instructors and students alike in research work. It contains 54 chairs and nine tables. The southeast corner contains the essay filing room, Prof. Noble's private office and the general English office.

The main or first floor is largely devoted to executive offices of the school. The main entrance is on the east side of this floor. Opposite the main entrance are the six rooms given to the President, consisting of a general reception and a private room, a catalogue and stenographer's room, a room for his secretary and a faculty room. Directly opposite and to the south are Treasurer Knapps' private office, two bookkeepers' rooms, the main office and a stenographer's room. The southwest corner is occupied by the department of Civics and consists of Prof. Barrett's office, a seminar room and a class room. To the right of the main entrance are the German and French departments, occupying two rooms on the right side of the corridor, and two on the left. At the north end of the floor are six rooms occupied by the board of trustees, board of audit, the purchasing committee, the secretary of the board of trustees and the dean of the junior college.

The second floor is occupied by the mathematical, economics and history departments. The economics department has an office, a seminar room and one classroom on the southwest corner. The history department has three offices, a reading room and three classrooms on the north end. The mathematical department has the rest of the floor, consisting of nine class rooms and four offices, ample blackboard room has been supplied.

On the third floor at the north end is Prof. Newen's office, three classrooms and a second office. One of the rooms is equipped with folding chairs and a movable platform. The remaining part of the floor is occupied by the botanical department. Prof. Pammel has ample quarters here, having nineteen rooms on the third floor and seven in the attic in all. The corridor on third floor will contain museum cases, showing organisms, illustrating the structure and biology, and going from this to higher organisms. It is the intent to show the natural relationship of plants and the uses they serve. The east side of the corridor contains a lecture room,

> Prof. Pammel's private office, a combined seminar and office room, Prof. Pammel's private dispensary in which the supplies of the department will be kept, and at the southeast corner is Miss King's room. It will contain all the drawings, photographs and illustrations used in the department and Experiment Station. At the south end of the stair is an office, and a bacteriology laboratory with a small side room for preserving pure cultures. This laboratory, as is the one just north, is fitted up with glass top tables, incubators, ice-chests, etc., for the individual use of the student. Further on north are the rooms for general botany and ecology. The herbarium occupies a large room in the center of the hall and accomodates ninety herbarium cases, three high, all made of a distinct kind of wood. Next comes the library of the department and then the room for general botany, accomodating 30 students at separate tables with microscopes. The attic in front of the dome is devoted to economic botany. North of the dome is the unmounted material, the mounting room being south of the dome. North of the dome is a large room with skylight, where some very exact experimentation such as germination of seeds and infection experiments are to be carried out.

The total cost of the building was reported, with a detailed itemization, in the 21st Biennial Report for 1903-1905, as $406,934.85. By the end of 1908 additional costs as reported in the 23rd Biennial Report brought the total cost to $415,502.84.

In the years since the building was first occupied there have been many changes in use and various changes in room arrangements, but the main halls and stairways have remained essentially as originally built.

The first major change in use came in 1913 when the library was moved from Morrill Hall to Central because of the greater protection of the fireproof building. It took space on the west side of both the ground and first floors, and remained in the building until the new Library was ready in 1925.

The Botany department was moved out (to Botany Hall) in 1928.

As the institution has grown, more and more space became needed for administrative and staff offices, and classrooms have been remodeled to satisfy those needs. Air conditioning from the central chilled water system was installed in much of the building in the 1970's.

Little has changed on the exterior of the building. After the college became a university it was necessary to change the inscription over the main entrance to show the new name, Iowa State University.

BESSEY HALL

Plant Sciences Building

Plant Industry Building

Built: 1965-67
Architect: Durrant & Bergquist
Contractor: Wm. Knudson & Son, Inc.

A Plant Industry Building was named as an important need in the Biennial Report for 1922-24. In a discussion of the future building program for the campus the Iowa State Daily Student, on December 14, 1946, included the building in a list of those under "tentative plans". A Plant Science Building was mentioned under the same heading in the paper for June 3, 1950. Six years later it was in the category of "desperately needed".(1)

Funds became available for the project with the appropriation of $2,800,000 by the 60th General Assembly in the spring of 1963, and with a National Science Foundation grant of $1,099,500.(2) The agreement with the architect was executed in September of that year. Construction contracts were awarded in January 1965. The building was put into use in the fall of 1967 although all equipment was not installed until later.

Bessey Hall was named for Charles E. Bessey, one of the original college faculty members and a notable research botanist.

The building provides facilities for both the botany and forestry departments and was designed with a greenhouse on the top level.

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(1) Iowa State Daily, October 20, 1956

(2) Minutes, June 26-28, 1963

BEVIER HOUSE

Experiment Station Building, Klatter Klub,

Sloss House

Built: 1888
Architect: Foster & Liebbe
Contractor: Smith & Tusant

The Agricultural Experimentation Station was established in 1888, and a first concern was the erection of a headquarters building. Three thousand dollars was the sum allocated for that purpose.

The building was erected on a site a little over a hundred feet east of Botany Hall and with its north face on line with the south wall of that building. The Station building was two stories high, frame, with a propagating house attached. In August 1888 The Aurora reported:

> The building connected with the Experimentation Station is now complete and the various departments are being furnished with the very best apparatus, books, etc. It is a neat and commodious building and the abundant funds the officers of the station have had at their disposal, enabled them to procure all the advantages for the most thorough work in their line.

In December 1892 the Trustees ordered that the building be assigned to the Music department. That was a rather temporary home for that department because in May 1894 it was also assigned to the department of Botany, and underwent some repair, remodeling and painting.(1)

The building was moved in 1896 to a location at what is now the center of the west wing of MacKay Hall, just north of Margaret Hall. It became a home for employees of the boarding department in Margaret Hall, and was known as the Klatter Klub.

It was moved again, in 1910, to the east about the center of the east wing of MacKay Hall. It then became the residence of Thomas Sloss, Superintendent of Buildings and Grounds, who made it his family home until 1924. The sum of $3800 was expended to prepare the house for Sloss.

With construction of MacKay Hall about to begin the house was again moved, between December 1924 and March 1925, to a location just southwest of the southwest corner of the Metallurgy Building where it became the Isabel Bevier Home Management House. Estimated cost of re-

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(1) Minutes, May 15-18, 1894

pairs for that use was $1500.(1)

When plans for the Metallurgy Building were developed it became necessary to move the Bevier House and the Coburn House from the site, and the project budget for that building, provided by the Atomic Energy Commission, included $25,000 for the cost of moving the two Home Management houses.

They were moved to the north of Pammel Drive, facing west on what is now called North Morrill Road.

Bevier House continued as a home management house until 1953 and again served that function in 1955-56. In 1953-55 and 1956-61 it was home for graduate women. It then became office space for retired and emeritus faculty members.

BEYER HALL

Men's Physical Education Building

Built: 1963-64
Architect: Savage & VerPloeg
Contractor: Woodruff-Evans Construction Co.

In 1956 the head of the Physical Education Department and the director of athletics were requesting new facilities because State Gymnasium was no longer adequate for their programs.(2) But it was the spring of 1961 before an appropriation was allocated by the 59th General Assembly to fund an addition to the old building.(3)

The first mention of a separate building instead of an addition appeared in the Iowa State Daily on September 8, 1961, when the present location was reported as a change of plan.

Bids were received on July 10, 1962, and contracts were awarded at the Board meeting of July 12-13.(4) Construction began the first week of August 1962 and the building was ready for use at the beginning of the fall quarter in 1964.

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(1) Minutes, April 15, 1925

(2) Iowa State Daily, October 20, 1956

(3) Minutes, June 22-23, 1961

(4) Minutes, July 12-13, 1962

The name "Beyer" was assigned by the Board in March 1965, in honor of Samuel Walker Beyer, described by Ross as "a father of Iowa State athletics".(1)

BEYER HOUSE

Child Nursery Annex Nurses' Home

Built: 1901
Razed: 1948 (1949)

This house was built by Professor S.W. Beyer on a site north of the Marston Cottage. It stood at a point about at the center of the court formed by the southern two east wings of today's Helser Hall.

In 1910 a request was made by Beyer to erect a barn near his house. The question was "referred to Supt. Sloss with power to grant such permission if in his judgment deemed advisable."(2) It seems doubtful that the barn was built because there is no subsequent reference to it and it does not appear on a 1915 map.

The College purchased the house from Professor Beyer in 1924. It was the last privately owned house on the campus. It was purchased for $9,000 and title transferred January 1, 1925.(3)

In 1925 the house was moved to a location at a point where today's driveway to the west dock of Spedding Hall is located. It was then used as a Nurses' Home and later, from 1930-48 served as the Child Nursery Annex.

A contract to raze and remove the house was entered into on December 15, 1948, with the American Lumber and Wrecking Company, Des Moines.(4)

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(1) Ross, 1942

(2) Minutes, February 1910

(3) Minutes, May 1924

(4) Minutes, December 1948

BIRCH HALL

Welch East, Dormitory #5 and #6

Built: 1922 Addition: 1924-25
Architect: Proudfoot Bird & Rawson
Contractor: (1927) Western Construction Co.
(1924) F.M. Weller
Remodeled: 1969-70
Architect: Savage & VerPloeg
Contractor: James Thompson & Sons

The north wing of Birch Hall (Dormitory #5) was funded in June and work started in September of 1922, although the complete building was planned originally. No dining facilities were included in the first unit.(1) The foundation was prepared by the Building and Grounds department, who also performed all plumbing and heating work for the building. The superstructure (three stories) was built under contract as was the electrical installation.

The hall was ready for occupancy in the fall term of 1923 and the name Birch Hall was selected.(2)

The addition to Birch Hall, comprising the south wing and the "L" to the west, and known as Dormitory #6, was bid in January 1924, although excavation for the foundation had been started the preceding month. It was completed early in 1925.

In 1928 Birch Hall was officially renamed Welch Hall East, but in 1937 it reverted to Birch Hall.

Extensive renovation of Birch-Welch-Roberts Halls was undertaken in 1969-70. After the remodeling Birch and the other two halls became homes for men instead of women.

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(1) Minutes, September 21, 1922 and Iowa State Student, September 27, 1922

(2) Iowa State Student, October 3, 1923

BOARDING COTTAGE (EAST)

Kirkwood Hall, The Quarters

Located just west of Alumni Hall

Built: 1882
Architect: Prof. Belanger
Contractor: V. Tomlinson
Razed: 1907

The success of the first (west) Boarding Cottage resulted in the decision to construct another one to care for additional students. The contract was awarded in July 1882 in the amount of $5,420.

The Aurora of March 1883 reported:

> The "new cottage" was opened at the beginning of the present term, and every room ready for occupancy is now filled. It has been proven in the last two years that this system of boarding is by far the most satisfactory as regards both cheapness for the student and a lessening demand for the exercise of executive ability on the part of our President.
>
> When good accommodations can be furnished for the small sum of two dollars per week, the time has come when no young man in the State of Iowa need fail to secure a higher education. The demand is for more of these Boarding Cottages; and we are in hopes our claims will be so persistingly pressed that they will be furnished.
>
> But why build so small? There is not a man whose vote helped make the appropriation in our last General Assembly that would wish to be cramped up in a room ten by twelve eight months out of the year. Did we say must? He would not endure it. But here are rooms of just that size each occupied by two inmates; these rooms have no transoms, and no means of ventilation. It is currently reported that a man officially connected with the erection of our two cottages declared that such a thing as a transom was an outrage, "letting any impure air in a room directly into the hall, and rendering thereby the hall extremely unhealthy." This report may not be well founded; but the fact that such an important omission was made in their specification is sufficient proof of the lack of thought given to such a matter. We would rejoice to see future buildings of such a nature built after a more liberal plan, and with more reference to the comfort and health of those who must use them."

A porch was added in 1886. In 1890 "the third floor....was partitioned off into six fine rooms. The boys successful in securing these

rooms were in luck and now put on more style than is in vogue on the second floor Main Building."(1)

The two lower floors were remodeled in 1894, following plans by Capt. Whiting. The work was done under contract by A.H. Chaffee. In 1897 East Cottage became a living quarters for teachers. Four years later a change in use to training quarters for the football team resulted in a new name as "The Quarters". A bathroom was installed in the basement in 1902 and "the football men are not so short on accomodations as they were for a long time."(2)

An interesting note appeared in the IAC Student on March 7, 1903: "The college carpenter has been busily engaged this week putting in new doors at the Quarters. The old doors were kicked out the night after the Cornell game last fall."

In 1905 both East and West Cottages were repaired and steam heat was piped to each room.

East Cottage was torn down in 1907.

BOARDING COTTAGE (WEST)

Stanton Hall, Hospital, Detention Ward

Located just south of the west wing of Student Services Building

Built: 1880 Addition: 1882
Architect: Prof. T.L. Smith
Contractor: F.S. Whiting (1880)
O.P. Stuckslager (except brick) (1882)
David Dale (Brickwork) (1882)
Razed: 1934

Enrollments at the College were increasing to the extent that Old Main could not accomodate all of the students. In 1870 it had been proposed that a dormitory building, harmonizing with the College Building, should be erected northwest of it, and provide facilities to house 120 students. No funds were appropriated by the legislature for that structure.

Ten years later funds were made available for Boarding Cottages. Bids

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(1) IAC Student, August 7, 1890

(2) IAC Student, October 1, 1902

were taken on proposals for six-room and eight-room houses. The final decision was the award of a contract to F.S. Whiting to build a 16 room building at a savings over erecting two eight-room cottages. The final cost exceeded the $3,500 appropriation by $206.50.

The addition in 1882 came to $935 but what was done or included at that time cannot now be learned. The porch was built in August 1886.

In 1894 remodeling was undertaken on both floors of the cottage. Plans had been prepared by Captain Whiting and the contract was awarded to A.H. Chaffee.

The following year the three north rooms in the basement were cemented and made available for an electrical laboratory.

In August 1899 the IAC Student reported: "The outside woodwork of the cottages has been painted recently. This is a decided improvement which helps the appearance of these buildings greatly."

The Building Committee reported to the Board in July 1905:

> In the matter of heating lighting, and repairing the East and West Cottages, which was referred to this committee for investigation, and report, your committee made a careful investigation of both of these buildings and found that both buildings were heated by stoves and that they were in very unsanitary and filthy condition, especially East Cottage. The conditions at West Cottage are not in such bad shape but the building needs general repairing, some of the door panels being broken, floors worn in many places and there is no closet or bath in this building. The conditions of these cottages are such that if they are to be used for college dormitories for our students they should be repaired and made sanitary during this vacation and your committee recommends that the sum of $4500, or so much there of as may be needed, be appropriated from the repair and improvement fund for this work and that the matter be referred to the Building Committee with power to act.(1) The report was adopted by the Board.

In 1907 West Cottage was further remodeled and became the College Hospital. It served that function until the new Hospital was completed in 1918, when West Cottage then became the detention ward. Further remodeling took place in 1920.

The building was razed in 1934.

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(1) Minutes, July 1905

BOILER HOUSE

At Main Building

Built: 1876
Contractor: Peter Raff & Son
Removed: 1903

Located in the space between the wings of Old Main directly adjacent to the front section of the building.

When a new steam heating plant was to be installed in Old Main, it became necessary to provide housing for the boilers. Haxton Steam Heating Co. of Kewanee, Illinois, had been awarded the contract for the heating plant including two 16 ft. long, 4 ft. diameter boilers and all other equipment for heating the Main Building.

The contract for construction of the Boiler House was awarded to Peter Raff & Son in May 1876 for $2600, including a 16 feet diameter cistern. The building, one story high, was 31 ft. 6" by 38 feet inside, 18 1/2 feet high.(1) The work was completed by November.

By 1893 the Boiler House roof had to be replaced.(2) This was again needed in 1900 when W.M. Rich was awarded the contract for $385.(3)

In reporting on the inspection he made after the fire of 1900, H.F. Liebbe, State Architect said "I find, also, that the boiler room roof was entirely consumed, and, in my judgement, was the source of the fire."(4)

After the second fire (August 14, 1902) it was reported that "the Main Building heating plant was saved intact, and with some minor repairs will be in shape for heating Morrill Hall and Emergency Halls the coming winter."(5)

The February 14, 1903, ISC Student reported that "the boilers in the old heating plant are soon to be moved." No later references to the Boiler House have been found, and it can be assumed that it was removed during 1903.

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(1) Minutes, August 1876

(2) Biennial Report, 1892-93

(3) Minutes, August 1900

(4) Biennial Report, 1900-01

(5) Minutes, August 21, 1902

BOTANY GREENHOUSE, FORESTRY GREENHOUSE

Greenhouse and Controlled Environmental Center

Built: 1966-67
Architect: Durrant, Deininger, Dommer, Kramer, Gordon
Contractor: Wm. Knudson & Son

The capital expenditure program for 1963-71 included $545,000 for Greenhouse and Controlled Environment Center.(1) In 1963 the project was scheduled in the 1965-67 biennium.(2) A contract with the architect was executed in August 1965.(3) That project was for a greenhouse for Botany research.

An appropriation was also made by the U.S. Dept. of Agriculture Forest Service for a greenhouse for their and university forestry department use. The two funds were combined for a single project with separate buildings. A lease for the site of the forestry building was executed in late 1965.

Construction contracts were signed in March 1966,(4) and were completed early in 1967.

BOTANY HALL

(Old) Agricultural Hall; Ag. Engineering Hall

Addn. called Farm Mechanics Building

Built: 1892 Addition: 1903
Architect: 1892 Josselyn & Taylor
1903 Proudfoot & Bird
Contractor: 1892 Whiting & Wood
1903 C.E. Atkinson

An appropriation of $35,000 for a new building for Agriculture, Horticulture and Veterinary Science was made early in 1892. Plans for the building were presented to the Board at their April meeting by Josselyn & Taylor. The site selected was on the knoll where Professor Kent's house stood. (Built by Prof. Budd and later known as Mortensen

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(1) Minutes, June 8-10, 1960

(2) Iowa State Daily, November 14, 1963

(3) Minutes, September 9-10, 1965

(4) Minutes, March 10-11, 1966

Cottage.) The house was moved in July.

The construction contract was awarded to Whiting and Wood in June 1892,(1) and work was started the following month. The building was occupied in October 1893.(2) The building was described in the 1892-93 Biennial Report:

> The new agricultural hall is one of the finest on the campus -- --. The building is composed of stone through the basement and second floor and the rest is made of brick. The building is four stories and a basement, with a ground dimension of sixty-four feet by one hundred and six feet. The basement is devoted to horticulture. Therein the winter work in horticulture is prepared and preserved. This is constructed so as to drive in with a team on one side and out at the other, making a most convenient arrangement for the purpose. The first floor above the basement is given, in the west half, to the department of agricultural chemistry. Testing and experimental laboratories are herein provided. The east part of this floor is given to general bulletin room and grafting room of horticultural department. There also is a live stock room for class purposes in which an animal of the farm may be brought before the class adjudged according to the most recent methods of becoming acquainted with farm animals from life.
>
> The second floor is devoted to offices for Professors Wilson, Kent, Curtiss, Hensen and Budd, and recitation rooms for agriculture and horticulture.
>
> On the third floor there are offices for Drs. Stalker and Niles of the veterinary department, bacteriological laboratories, two recitation rooms for veterinary department and room for agricultural museum.
>
> The fourth floor is a half story and probably these rooms will be employed for some of the literary and scientific societies of the college. The building is heated througout by steam. It has one of the most commanding locations on the campus and is in every way a credit to the State and an inspiration to our work.

By 1897 there had been noticeable floor settlement and considerable amounts of plaster cracking. George E. Hallet, architect, recommended "that a stone pier and an iron column be placed under the center of the

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(1) Minutes, June 1892

(2) ISC Student, October 14, 1893

truss above the livestock recitation room."(1)

A new Farm Mechanics and Soil Physics Building was constructed as an addition on the north side of Agricultural Hall in 1903. The Biennial Report for 1902-03 reported:

> The Farm Mechanics Building is strongly constructed and admirably well adapted to its purpose....It is 60 x 100 feet in size and four stories high, will be occupied by the new department of farm mechanics. The building is of brick and steel, and fire-proof throughout.
>
> On the first floor will be a private workshop for the repair of farm machinery for the College farm. There will be also a student's blacksmith shop, and a place for study and operation of farm motors such as gas engines, steam traction engines, etc. On the balcony of this floor will be carpenter shops for students of this department.
>
> On the second floor will be offices for the head of the department, a large lecture room, drafting room, and students' study and reading room. The latter will contain all the periodicals on farm machinery, farm papers, etc. On this same floor will be a large machine operating room for the construction operation and testing of various kinds of farm machinery. Students are furnished practical training in setting up and adjusting farm implements, such as binders, mowers, corn planters, corn shredders, wagons, etc.
>
> On the third floor machinery not in use will be stored. There will be on this floor photographic rooms and dark rooms for instructing students in the farm mechanics department in photography. There will also be on the third floor mailing rooms and offices for assitants in the department.
>
> When completed it will be the finest and best equipped building in this country, or any other, erected for the purpose of teaching students farm mechanics.

Various modifications, alterations and repairs were made over the next twenty to twenty-five years. After the Agricultural Engineering department moved to its new building in 1922 the old quarters were used primarily for storage.

In 1928 the Botany department moved into the old Agricultural Hall (from Central) and the building was renamed Botany Hall.(2)

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(1) Minutes, May 1897

(2) Minutes, July 1928

The Botany department remained in that location until 1967 when it moved to Bessey Hall. The Seed Laboratory remained until 1977 when it, too, moved to a new building. The Psychology department was moved from Beardshear Hall to Botany Hall in early 1968.

BUCHANAN HALL

Graduate Student Dormitory

Built: 1963-64
Architect: Brooks-Borg
Contractor: James Thompson & Sons

The earliest mention of a program to include a graduate dormitory appears in the Minutes for June 26, 1945, when $350,000 was the suggested cost. The next reference was in 1949 when a graduate dormitory was listed in the group of buildings in the "Long Term Future (after 1955)" but with no dollar value shown. In 1960 the Board gave approval to a proposal to proceed with development of preliminary plans for a building "to house 150 men and 75 women, with food service at an estimated cost of $1,000,000, with the understanding that appointment of an architect would be scheduled for mid-1961, bid letting in 1962, and occupancy in 1964."(1)

It was April 1962 before the architect was selected, and February 1963 when bids were received.(2) In the meantime legal problems concerning the use of the property for the purpose planned had been resolved. Those problems are well recorded by Schilletter.(3)

The building was completed and ready for occupancy at the start of the fall quarter 1964.

In March 1965 the building was named in honor of Dean Robert E. Buchanan.(4) Dedication was held in June 1966.(5)

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(1) Minutes, October 13-14, 1960

(2) Minutes, March 14-15, 1963

(3) Schilletter, 1970

(4) Minutes, March 11-12, 1965

(5) Schilletter, 1970

BUILDING "A"

Foundry

Located just north of east end of Mechanical Engineering Laboratory

Built: 1897
Architect: Hallett & Rawson
Contractor: J.F. Atkinson & Bro.
Razed: 1973

An appropriation of $5000 was made in the spring of 1897 for Forge Shop and Foundry. Bids were received on June 30 and the contract was awarded for the one building in the amount of $3464. Professor Bissell was appointed local superintendent for the construction.

The ISC Student described the building in August 1897:

> The new forge shop and foundry for the department of mechanical engineering, the contract for which was let in June and which is to be completed in October, will be located thirty feet due north of the engine room, and will front east with it. The building will be eighty feet long by forty feet wide and the same length as the engine room. The roof is to be of slate, supported by strong steel trusses. On the north, large sky lights, together with many windows will admit ample light for the foundry, as well as add greatly to the general appearance. The shop will be floored with brick and will contain the forges together with all other equipment necessary for that work. In general appearances as to roof, windows and outer finish it will be similar to the electric light plant. (That is, the M.E. Lab.)

It was subsequently reported in the paper that work on the building was completed in December.

The April 25, 1899, Student reported: "An automatic pneumatic hoist for the foundry is now under construction. Those who heretofore have had it in hand to elevate the coal to the landing of the smelting furnace will best know how to appreciate this improvement."

The building continued in use as a foundry until that function was moved to the Mechanical Engineering Laboratory in 1936. In later years it was the headquarters for the Technical Institute.

BUILDING "B"

Forge Shop

Built: 1906
Architect: Proudfoot & Bird
Contractor: Western Steel Construction Co.

The Forge Shop built under a contract for $4444.44, executed in September 1906 with Western Steel Construction Co. of Des Moines.(1) It was completed and put in use in 1907. Thirty forges were installed.(2) Cost of completed building and equipment was $5518.77.(3)

Improvements made in 1930 were reported in the September 27 issue of the Iowa State Student:

> During the summer months the mechanical engineering forge shop realized several much needed improvements. The main room is now lighted by 12 110-watt bulbs with new reflectors. A new 36-foot line shaft was installed overhead. The additional equipment consists of a new surface grinding machine. The big improvement, however, is a 30-inch ventilating fan which was reclaimed from a junk pile where it had lain for two years. It was installed near the roof in the south end of the shop by the forge instructors.

At the Board meeting of Dec. 11-12, 1958, authorization was granted to construct an $8000 addition to the building for the Engineering Experiment Station. On November 7, 1959, the student paper reported that a west enlargement of the building was for Bituminous Research Laboratories.

Building "B" is still in use by the Engineering Research Institute, the successor to the Engineering Experiment Station.

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(1) Minutes, September 1906

(2) ISC Student, May 13, 1907

(3) Biennial Report, 1906-08

CAMPANILE

Built: 1897
Architect: George E. Hallett
Contractor: J.F. Atkinson & Bro.

The idea of a bell tower was first expressed in a letter from Professor E.W. Stanton to the Board of Trustees:

> I have been informed by your committee of the action of the Board in giving to the new women's building the name of Margaret Hall.. ..Since the suggestion that the friends of the College desired it named in memory of Mrs. Stanton was mentioned to me there has grown up in my mind the desire to present to the building, if it were given her name, a chime of bells. I wish that I were able without injury to other interest to do this and bear myself all the expense connected therewith. There is, however, the question of a tower in which to place the bells and the purchase of a clock which generally goes with them. I desire that my offering shall be confined to the chimes themselves in order that they may be of a superior quality....

The Board accepted the gift with deep appreciation and on the conditions proposed.(1)

Plans for the tower were prepared by George E. Hallett, architect, without charge. The construction contract was awarded in July 1897. The tower was completed in October 1898 at a total cost of $6510.20.(2) The contract for the clock was awarded to Seth Thomas Clock Co. in March 1899.

The chimes reached the campus near the end of October 1899. They were cast at the foundry of John Taylor & Co., Loughborough, England. There were ten bells in this set of chimes. Before shipment the bells had been tested by Arthur Page, Fellow of the Royal College of Organists, who, after testing, wrote "The bells are, in my opinion, of quite unusual excellence: the tone is resonant, full and mellow. Even when quite close to them there is no element of harshness; while from a little distance they are very pure and sympathetic."(3)

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(1) Minutes, November 1895

(2) Minutes, November 1898 and the Aurora, October 1898

(3) ISC Student, October 17, 1899

Mr. Page also reported the physical characteristics of the bells:

No.	Diameter in feet inches	Note	Weight cwt.	gr.	lbs.
1	2 - 2 1/2	E	4	0.	15
2	2 - 4 1/4	D	4	2.	10
3	2 - 6	C	5	1.	7
4	2 - 7	B	5	3.	15
5	2 - 9 3/4	A	7	1.	3
6	3 - 2	G	9	2.	19
7	3 - 6 3/4	F	13	3.	21
8	3 - 9 1/2	E	16	1.	21
9	4 - 2 1/2	D	21	2.	21
10	4 - 9	C	32	0.	0

The amount for "cwt" in England is 112 pounds rather than 100 pounds as in U.S. usage, so bell No. 1 weighs 463 lbs. and No. 10 3584 lbs.

Each bell carries an inscription. The quotations used are included here for easy reference, for few people have the opportunity to inspect the bells themselves:

E And soften down the rugged road of life.
- Kirke White

D Ring merrily, ye chimes, evermore
- Charles MacKay

C Harmonizing this earth with what we feel above.
- Shelley

B My language is understood all over the world
- Haydn

A Every deed of goodness done is like a cord set in the heart. - Thomas MacKellan

G Sweetly on the evening air
Sounds the vesper chime of prayer

F And rings a thousand memories
At vesper and at prime.
- Coxe

E Music is the child of prayer,
The companion of religion.
- Chateaubriand

D A woman that feareth the Lord, she shall be praised - Proverbs XXXI:30

C Then pealed the bells more loud and deep:
"God is not dead; nor does He sleep!
The Wrong shall fail
The Right prevail --
With peace on earth, good will to men."

This last inscription is from Longfellow but his name does not appear on the bell. All spellings shown are as they appear on the bells.

The largest bell also notes that the carillon is dedicated to Margaret McDonald Stanton.

The first record of the playing of the chimes appears in the February 20, 1900, copy of the ISC Student:

> The Chimes
> Clear, complete, musical, came the message of the bells as each student, new and old, heard the greeting of the chimes. A new tie is formed and the campus that we all love is still more charming -- still more dear to our affections.
>
> On Friday night when we listened to the playing of the chimes, it seemed fitting that their tuneful praise should first greet our beloved Secretary Wilson.
>
> The hour is heralded by the Westminster chime and the houring is a pleasant relief from the discordant jangle of the old bell. The quarter hour is sounded by a corresponding number of notes.
>
> Each evening the chimes are to be played for a time before chapel service. The musician is Mr. Eldon Usry, of Des Moines -- one of our students.
>
> The clock too, with its gilded hands set off in contrast to its dark face is a great convenience to the student hastening to classes.
>
> Who can measure the value of the chimes? Long after distance has sought to shut out the sound they will be heard chiming in hundreds of hearts -- an unconscious appeal to all that is true and beautiful and noble in those whose high privilege it has been to listen to their melody.

At the Board meeting of July 6, 1928

> President Hughes reported that Mrs. E.W. Stanton, Dean of Women, has made a formal tender of $24,000.00, or such part thereof as

> is needed, to purchase and install complete twenty-six additional bells in the campanile, converting the chimes of ten bells to a carillon of thirty-six bells, this to be known as the Edgar W. and Margaret MacDonald Stanton Memorial Carillon of Bells; that the installation of these additional bells will necessitate some alterations in the bell tower and a resetting of the clock, this expense of not to exceed $2,000.00 to be borne by the College; that this gift will give Iowa State College one of the most beautiful sets of bells in the country; and that it will be a worthy memorial to one of the greatest teachers in the College, Dean Edgar W. Stanton.

During the course of the next year the bells were cast and tuned by the same firm which made the original ten bells, and the necessary modifications were made in the Campanile to mount the new units. The Iowa State Student carried this story in the edition of September 23, 1929:

> Dedication of the new Stanton Carillon at the Iowa State College will be held on Sunday afternoon, Oct. 6, at 4 o'clock, with a concert played by Anton Brees, internationally known carillonneur.
>
> This will be the first time the new bells will be heard and all Iowa is invited to listen to the program, which will be broadcast by the college radio station, WOI. This feature of the program has been arranged so that the program may be heard at other places about the campus and state, as well as in the vicinity of the Campanile....

The new bells extended both ends of the range, the largest with a diameter of sixty-four inches, weighing 5737 pounds, and the smallest one with a weight of only 27 pounds.

The clock dials were illuminated at night following their relocation in conjunction with the alterations to the bell space, and this prompted some adverse editorial comment in the student paper on October 8 where it was stated that "the lights, which in the idea itself are not in keeping with the spirit of one of our finest traditions, are the blatant flares characteristically associated with billboards and the selling of someone's better pancake flour."

On November 23, 1929, the editor could write: "Last night the campanile stood out again in the beauty it has held for 30 years. The lights are gone, permanently according to Herman Knapp, business manager."

In the spring of 1931 the question of lighting the tower came up again, and on May 14 the Iowa State Student reported that "The present plan.. ..is to flood the upper fourth of the Campanile with cardinal and gold, the school colors...." That plan died and nothing was done.

The senior class of 1934 voted to make their class gift the lighting of two dials of the clock. That would be internal light with translucent dials, thus making the clock legible at night.

The Stanton Memorial Carillon Foundation had an additional thirteen treble bells installed in the spring of 1956 and at the same time a new clavier, or keyboard, was put in. The new bells were cast and tuned by the maker of the previously made bells. One more bell was added in 1967 to make a total of fifty bells in the carillon.

The Campanile is 110 feet high and the main shaft is 16 feet square.

CARPENTER SHOP

Stock Judging Pavilion

Pavilion #3

Built: 1911 Occupied: 1912
Architect: Proudfoot & Bird
Contractor: Direction by Thomas Sloss
Razed: 1972

This building was erected as a Stock Judging Pavilion and used as such until 1925 when it was remodeled to a shop for the Building and Grounds department. It was the easternmost of two buff brick octagonal judging pavilions located where the south wing of the Physical Plant Shops and Central Stores building now stands. It had two floors plus attic, and was 64 feet across.

Completion of the building was reported in the September 5, 1912, issue of the ISC Student where it was said to be "the best fitted and equipped pavilion on the campus."

It was the Carpenter Shop from 1926 until it was razed.

CAR POOL OFFICE BUILDING

Built: 1969-70
Architect: Norval H. Curry
Contractor: Siedlemann Construction Co.

In mid 1967 the decision was reached to establish a special area to keep university owned vehicles used for off-campus travel. Part of the total project was a building to provide office space for the dispatcher and records and a service and repair space for vehicles. The Physical Plant prepared the area with a surrounding fence, surfacing of the parking space and approach drives.

After changing the concept from that of a masonry building, which proved to be too expensive, Mr. Curry was retained to prepare plans for a prefabricated steel building.

The contract for construction was awarded in August of 1969. The work was completed the following April.

CARVER HALL

Classroom & Office Building #2

Built: 1967-69
Architect: Durrant, Deininger, Dommer, Kramer, Gordon
Contractor: W.A. Klinger, Inc.

Rapidly increasing student enrollments during the 1960's made additional classroom and office space a top priority item. An appropriation was made in the spring of 1965 and this, coupled with grants from the U.S. Office of Education (Higher Education Facilities Act) made this building possible.

The original plans for the building were based on providing classrooms and two lecture halls for general use and to make adequate office space available for the faculty of the departments of mathematics and industrial administration.

A change to provide offices for the Dean of the College of Sciences and Humanities was made in the plans before they were completed for bidding.

In 1966, before construction had been started, the building was named Carver Hall in honor of George Washington Carver who had been both a student and instructor at the College before 1900, and before he had established his nation-wide reputation as a research botanist and chemist.

A small statue of Carver, by Christian Petersen, is displayed in a case in the building lobby.

Construction of the building started in September 1967 and it was ready for occupancy in December 1969.

CATTLE BARN (FIRST)

Farm Barn

Built: 1860 Addition: 1873
Architect: Milens Burt of Muscatine
Razed: 1928

As important as the Farm House to initiating operations of the college farm was the need for shelter for animals and feed. Plans for the barn were provided at the same time as those for the house by Milens Burt. It can be assumed that work was carried on simultaneously in the construction of the house and the barn, but the barn was completed earlier. It was described in the Annual Report of 1862(1) as follows:

> There is an excellent frame barn completed 42 x 60 feet, upon a gentle slope of ground, with underground stables, built with heavy stone walls on three sides, eight feet high, 16 foot posts, with floor lengthwise, so that any length can be added at the south end.

By 1865 the developing operations on the farm made some changes necessary. The Farm Committee reported to the Trustees that

> Your committee would recommend that some improvement be made on the barn to accomidate [sic] the stock we would suggest that lean be put to the barn on three sides, and that there should be a root cellar under the barn. A light board fence has been built around the back barnyard and it is contemplated to put a good substantial fence around the front door of the barn.(2)

Superintendent Robinson submitted to the Board that he "had the Barn raised two feet and built the cellar wall up to the sills....fitted stalls for horses and cattle which is nearly completed....at a cost already of $217.11. Estimated to finish it $20.00."(3)

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(1) Third Annual Report of the Secretary, February 6, 1862

(2) Minutes, Board of Trustees, March 23-24, 1865

(3) Minutes, Board of Trustees, January 14-16, 1867

Still further changes were made in 1868, described in the Superintendent & Secretary's Report in the January 1869 minutes of the Board of Trustees:

> Under the old arrangement of the basement of the barn a considerable amount of room was of little avail I have had the north half rearranged by changing the alley and making one across the barn east and west a tier of five stalls eight feet wide for our largest cattle on one side and a tier of seven stalls six feet wide for yearlings and small cattle on the other the alley for clearing is wide and laid with two inch plank the floors of the stalls are also of two inch plank, instead of the inconvenient (to the cattle) stanchion by which they were previously secured the cattle are now pastured by a strap round their necks which is attached by a swivil and two links to a 3/4 round iron rod secured to the division post between the stalls - the rod is of sufficient length to permit the cattle to lay down or rise free from the restraint imposed by the Stanchion mode of securing it was not thought advisable to change the south half the present season as the acomadation reqisite for the Horses would not be suitable for cattle next year when the new Horse stable was build had a shoot and reservoir constructed for moving prepared feed from barn proper to the basement in lieu of carrying. Cost of the whole less team and farm hand is $146.57.(1)

The first addition to the barn was made in 1871 when

> A corn crib and henhouse, 14 x 42 feet, 16 feet high, with basement 12 x 15 foot, has been added to the old barn and the entire barn painted. A portion of the basement of the barn has been fitted up for a root cellar, and the remainder prepared for cattle stalls - all of which cost $565.61.(2)

In that same report it was pointed out that the increasing number of stock has "outgrown the barn" and "we want a new barn, of adequate dimensions."

Funds were made available and the new barn was erected in 1873. It is described in the Board minutes of November 1873:

> The Executive and Building Committee report that they authorized the building of the new Barn at their April meeting and appointed Prof. I.P. Roberts and G.W. Jones to superintend the construction

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(1) Spelling and punctuation as in Minutes.

(2) Fourth Biennial Report, December 6, 1871

of the same. The Barn is completed and is of size and capacity as follows: Seventy by fifty four feet and is in elevation twenty four feet to top of plates, with a rise of twenty one feet to the ridge, and a stone basement under all of nine feet. The basement is arranged for stableing forty eight head of cattle with necessary breeding and calf pens with a root cellar, estimated to hold four thousand bushels. Upon the principle floor a drive way sixteen feet wide runs the length of the barn, and upon either side thereof there is five rooms each fourteen by nineteen feet. One is set apart as a herdsmans room, one for farm implements four for granaries, and four for breeding boxes. These several rooms are eight feet in height. Over these rooms and part of the driveway is space for one hundred and fifty tons of hay. Shoots have been erected for carrying the hay to the basement. The Barn is built of well seasoned pine lumber and covered, on the sides with good stock boards and battened. It is roofed with the best of pine shingles, and mounted with a cupola with slatted sides for ventilation. The wing designed for a wagon shed is sixty two by twenty four with twelve feet posts built and covered like the Barn under which is a nine foot stone basement containing a covered passage between the two barns with four Bull boxes. The whole is built and finished in a good and workman-like manner at a cost without evetroughs or painting of $4916.44.

Rather extensive modifications were made in 1897. These seem to have included increasing the width and height of the link connecting the old and new barns.

During the first quarter of the twentieth century the barns continued to need maintenance, and, under changing conditions of agricultural instruction, had lost much of their early utility.

The recommendation of President Hughes, approved by the Board on October 9, 1928, that the barns be razed, was carried out either that fall or early in 1929.

CATTLE BARN

Built: 1924-25 Destroyed by fire: Oct. 6, 1931
Architect: Proudfoot, Bird & Rawson
Contractor: Netcott Bros.
Rebuilt: 1931-32
Architect: Proudfoot, Rawson, Souers & Thomas
Contractor: Fred Fisher
Contractor: 1958 repairs after fire: J.E. Whitfield Construction Co.

An appropriation of $10,000 for a cattle barn was made in 1923 and the architect was requested to provide plans for the building. Bids were received in January 1924. The lowest bid then was $17,000, but an increase in bricklayers' scale of wages at that time resulted in failure to execute a contract.(1) New bids were taken in December 1924, after an appropriation increase to $20,000, and a construction contract for the east wing was awarded to Netcott Bros. That firm was low bidder for the construction to complete the barn when bids were taken in June 1925.

The building was described in the Iowa State Student on March 25, 1925:

> Part of what will eventually be the new U-shaped beef cattle barn has been recently completed. The east wing of this building is now practically ready for occupancy.
>
> When the barn is completed, it will be a complete U-shaped structure, protected on the north by the base of the U. and will have a court facing the south. The west wing of the completed barn will line on the Meat laboratory and on the Judging pavilion.
>
> The east wing is 168 feet long and 32 feet wide. Fire resisting materials were used thruout the external structure in building, but the inside is of shed construction. When the barn is completed, the two wings will be joined by a section 80 feet long. In the finished building heated rooms, feed bins, and other furnishings of the barn will be located in the west wing. The east wing will be used as a supplement to the old barns, until such time as the barn is completed, when beef cattle headquarters will be moved into the structure.
>
> Lack of funds prevented construction of the west wing first, as had been desired, and as a result the east wing was built first. This unusual procedure has caused much wonderment, according to Prof. H.H. Kildee, head of the animal husbandry department. Many

(1) Minutes, September 23, 1924

people thought it strange that the new barn should be constructed with the court facing the west. This will be remedied when the barn is completed, and the court enclosed by the west wing.

The construction was completed in the late fall of 1926, including silos at the northeast and northwest corners of the building.

On the night of October 6, 1931, lightning struck the building, causing a fire that destroyed the entire barn. Steps were taken immediately to replace it. The contract to rebuild was awarded to Fred Fisher later that month, and the new structure was occupied the following February.(1) The silo which received the lightning blow was not rebuilt until 1935.(2)

Fire struck again on October 19, 1958, when the east wing roof was burned along with a large quantity of hay. Cost of replacement came to $23,000.(3)

The silos were razed in 1968.

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(1) Minutes, February 17, 1932

(2) Minutes, September 24, 1935

(3) Minutes, December 11-12, 1958

CENTRAL STATION

Built: 1908
Razed: 1933

Located on the south side of Osborn Drive across street from Gilman Hall.

Central Station was built by the Fort Dodge, Des Moines and Southern Railroad in 1908, soon after the route of the railroad had been changed to run on Osborn Drive instead of across central campus. It was provided with electricity for lighting and steam for heating by the college.(1)

The building was described as "a beautiful and commodious station of vitrified brick with Bedford stone trimmings."(2)

Apparently the agreement calling for heat from the college plant was not carried out because the next year the railroad stated: "We will put in a hardcoal stove and hard coal, and keep fire and light in the station building so long as we can or when we are not interfered with by the students or others destroying our property."(3)

In November 1909 the Board of Education ordered that smoking in the building would not be permitted.

Water to the station was provided in 1910.(4)

In 1921 an agreement with the railroad transferred control of the building to the college, rent free, and it was remodeled to make offices and classrooms for the Federal Board of Vocational Education.(5)

At an undetermined date the college purchased the building from the railroad for $500. It was razed in 1933.(6)

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(1) Minutes, December 18, 1908

(2) ISC Student, September 7, 1908

(3) Minutes, August 1909

(4) Minutes, September 1910

(5) Minutes, February 15, 1921

(6) Minutes, January 1933

CHEMICAL AND PHYSICAL LABORATORY

Physical Laboratory

This building stood at what is now the south end of Pearson Hall.

First unit built: 1870-71 Second unit: 1872-75
Architect: (1872) Hugh Brown of Iowa City
Burned: March 25, 1913

The first request for a separate laboratory was made by President-Elect Welch in 1868 when room arrangements for the Main building were still being developed. He expressed the need again in 1870:

> The Sophomore Class, 80 in number, will commence the study of Chemistry next spring and continue (general and analytical) through the year. There is an appropriation of $2,000, made by the Trustees at the annual meeting, for Chemical apparatus, but no room in the building for a laboratory. Indeed there is no proper place for a laboratory in a building in which students eat and sleep.
>
> The only relief from this dilemma that I can devise is to fix up a rough structure which stands near Prof. Jones house and is now used as a Carpenter Shop and to occupy it temporarily for a laboratory until a small brick building convenient for the purpose can be put up.(1)

An appropriation of $5,000 provided for the "small brick building". It was described as follows: "This building, 30 x 60 feet, one story high, with a basement fitted up for lecture-rooms, and with convenient rooms above was entirely finished for $4,996.40. The walls are made thick, so that the roof may be raised for an additional story when the necessary means are provided."(2)

In November of 1871 the Trustees appointed a committee "to examine all of the expenditures and bills for the erection of the Chemical Laboratory." It can be assumed that the building was then completed.

In the same year the President requested funds for construction of a Physical Laboratory. It was 1872, however, before funds became available, and then an inadequate sum for the finished building. During that year the basement and foundation were excavated, a start was made on the stone foundation walls, and some site drainage work was accomplished. In May 1874 the Trustees authorized President Welch to contract for brick and stone for the building.

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(1) Minutes, January 1870

(2) 4th Biennial Report, December 6, 1871

In July 1874 bids for construction of the building were received. Hugh Brown's low bid of $13,500 was accepted. In November an additional $110 was authorized for the steps and portico.

The new Physical Laboratory was erected at the east end of the Chemical Laboratory, with the main entrance facing east. At the completion of the new section, in January 1875, the Board authorized the expenditure of an additional $500 "For the purpose of bringing the old laboratory building into proper working connection with the new".(1) Total cost for the building came to $24,850, just $150 below the authorized appropriation.

The building is described in the 6th Biennial Report (1874-75):

> In size it is seventy feet long, by forty in breadth, and three stories and a half high, including the basement. This building, together with the old laboratory which joins it, affords commodious apartments for the purpose for which it was designed.
>
> The basement of the new portion contains a boiler for heating the entire building, and valuable machinery for working in iron; power being transmitted from the workshop by means of an endless wire rope. The old laboratory and the first floor of the new, are occupied solely by the department of Chemistry. The rooms are furnished with tables, gas, water, and all conveniences needed in a first class chemical laboratory. The second floor is occupied by the department of Physics. An excellent lecture room well furnished, occupies the south half of the floor, and rooms for the physical cabinet and private work the remainder. The upper floor is lighted by skylights from the roof, and furnishes an excellent drawing room for the Mechanical Department, and a room to be used as an observatory.

In 1891 a second floor was added to the original building, built by W.B. Christie, a Des Moines contractor. This provided space for Electrical Engineering as well as added space for the Mechanical and Chemistry departments. The following year steam heat was brought to the laboratory.

Repairs and improvements were made in 1903. By 1909 the building was overcrowded and requests were made for additional space for Chemistry. The following year the Board authorized a third floor on the west wing.

On the night of March 25, 1913, fire of undetermined origin totally destroyed the laboratory.

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(1) Minutes, January 1875

CHILD DEVELOPMENT BUILDING

Nursery School, Duplex "A"

Paulena Nickell House

Built: 1951-52 Addition: 1962
Architect: 1951 Griffith & Haines
1962 Gerald I. Griffith
Contractor: 1951 and 1962 James Thompson & Sons

The Biennial Report for 1928-30 included a request of $35,000 for a Nursery School for Home Economics and explained the need:

> For several years past we have been using a remodeled horse barn for the nursery school. This year we are adding a remodeled residence located near it. The Nursery School and the work with small children by the students in Home Economics is rapidly growing in significance and value, and there is every reason to increase the capacity of the nursery school as soon as possible in order to give the girls in Home Economics more adequate opportunity to study small children. A new and suitably planned building with greater capacity than our present makeshift building is needed.

No improvement or change in the Nursery School facilities was made until 1948 when the Temporary Building L became the school building (with staff offices in Morrill Hall).(1)

The building now known as Child Development was built, together with the Nickell-Fisher House, as Duplexes A and B for Home Management. Both were built at the same time under the same contract. In 1957 Duplex A became the Paulena Nickell House and continued as a Home Management House until it was remodeled in 1962 when it became the Child Development Building.(2)

Also see entry under Nickell-Fisher House.

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(1) Eppright & Ferguson

(2) Minutes, December 6-7, 1962

COAL HOUSES

Several different coal houses or coal sheds are mentioned in the Minutes, but little detail can be found.

In December 1872 President Welch and Professor Jones were authorized "to construct a coal house for the use of the college at such place and of such size as they may judge most suitable for the wants of the Institution and charge to draw-back freight fund."

The Aurora in September 1877 mentions "a large coal house" as one of the improvements during the month. Whether this was a replacement for the earlier one cannot be determined. The 1883 map shows a coal house just across the road west of the north wing of Main. In 1892 a bill of $30 was paid for "moving coal shed." At the same meeting the building committee was asked to investigate the ownership of the college coal shed and to sell the Mechanical department coal shed "if they consider such action desirable."(1)

At the Board meeting in July 1895 a report was adopted "that the old coal house and ice house be torn down." (The ice house appears next to the coal house on the 1883 map.)

A different coal house apparently served Morrill Hall at one time. In 1894 "The President called attention to the desirablility of moving the old coal shed now located back of Morrill Hall."(2) At the same meeting it was agreed "that the old coal house north of the main building be torn down." That was undoubtedly a variant designation of the Morrill Hall coal house.

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(1) Minutes, November - December 1892

(2) Minutes, August 1894

COBURN HOUSE

Knapp Residence, Practice House, Mary B. Welch House

Gertrude Coburn Home Management House

The house most recently called Coburn House was built by Herman Knapp in 1888 at a site on Knoll Road approximately at the west end of what is today Welch Hall. Neither the architect (if any) nor the contractor is known.

The Board of Trustees granted Knapp the privilege of building a residence and out-buildings on a one-acre site with a lease for ten years at an annual rental of one dollar, with provisions "that the buildings to be erected shall be satisfactory to the Building Committee and kept in repair and on failure to keep in repair the lease to be forfeited. It shall not be rented to any other person unless by permission of the Board of Trustees."(1)

The October 1888 issue of The Aurora reported "the foundation for Prof. Knapp's new residence may be seen rising abruptly from the hill north of Prof. Bennett's house." (Bennett's house is today known as Pope Cottage.) The following April the paper recorded that the Knapps were occupying the house and: "It is very neatly and tastily built and adds greatly to the appearance of the college grounds."

A water line to the house was authorized in 1896. In 1900 permission was granted to build an addition onto the house. The Knapps lived in the house until 1920 when it was sold to the College for $8000, two-thirds of its estimated valuation.

In August of 1920 the house was remodeled for use as a Home Economics Division practice cottage. Five years later it was moved to an area north of the Physics Building, approximately at the west end of today's Metallurgy Building. Also, in 1925 the name Mary B. Welch Home Management House was adopted, but in 1928 the name was changed to Gertrude Coburn Home Management House.

The Coburn House, along with the Bevier House, were moved again in 1947 when Metallurgy Building was about to be built. Moving and repairing of the two houses came to $24,085, paid from Atomic Energy Commission funds as part of the cost of the new building (Metallurgy).(2)

The house continued to serve the Home Management function until the fifties when new buildings for that use were built on Richardson Court.

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(1) Minutes, July 31 - August 2, 1888

(2) Minutes, October 1947

Genetics research next occupied the house until 1967 when it was assigned to Psychology. It was condemned in the early seventies and razed in 1975.

COLLEGE OF DESIGN

Design Center

Built: 1975-1978
Architect: Charles Herbert & Associates
Contractors: Caissons: The Weitz Co.
Superstructure: Bor-Son Construction, Inc.

A building to house the three departments primarily concerned with design had been talked about for several years, but activity leading to the development of a building program did not begin in earnest until February 1974. At that time the three departments involved were Architecture (College of Engineering), Landscape Architecture and Urban Planning (College of Agriculture) and Applied Art (College of Home Economics).

Many hours were consumed in arriving at an acceptable allocation of assignable space for each department and for the building as a whole. The requests for space far exceeded the available footage within the budget limits of the project. Selection of the site for the location of the building also resulted in objections and strong arguments over a period of months. All problems were finally resolved and the building program was completed and furnished to the architect in October 1974. Preliminary plans were approved by the Board in May 1975.

In order to get construction started as early as possible a separate contract for placement of the foundation caissons was awarded in November 1975, before final documents for the building were completed. When contracts for the superstructure were awarded in March 1976 the foundations were complete and ready to accept the building construction, thus enabling an earlier start than would otherwise have been possible. The building was ready for occupancy in September 1978. In the meantime the departments had become units in the new College of Design, and some changes had been made in the earlier plans to provide additional administrative space.

COMMUNICATIONS BUILDING

Telecommunications Building; WOI Radio - TV

Built: 1962-64 Addition: 1979-80
Architect: 1962 Amos Emery & Assoc.
1979 Rudi Lee Dreyer & Assoc.
Contractor: 1962 Lovejoy Construction Co.
1979 Grabau Construction Co.

When planning for this building started in March 1969, it was studied with the concept of providing for four elements:(1)

1. Television Station facilities
2. Radio Station facilities
3. Film Production Service facilities
4. Television teaching facilities

After study of the schematic designs and in consideration of funds available it was decided to proceed with plans for only the first two facilities, with the others to be provided at a later time.(2)

Plans were completed and bids received in August 1962, and construction started shortly thereafter. The project was financed entirely by WOI-TV accumulated funds with no tax money included.(3)

During the last week of March 1964 the radio facilities moved from the Service Building (Snedecor Hall) to the new Communications Building, and the first WOI-AM radio broadcast from the new location came on March 27.(4) It was another two months, however, until TV and some other facilities were able to move into the then completed building.(5)

In 1978 planning began for an addition to the north side of the building. The new structure provides a large storage area, a garage for operational vehicles and a new scene shop. Remodeling in the original building makes an expanded news area and offices for the news director and sports editor.

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(1) Minutes, March 10-11, 1960

(2) Minutes, January 11-12, 1962

(3) Iowa State Daily, March 26, 1964

(4) Iowa State Daily, March 26, 1964

(5) Iowa State Daily, May 19, 1964

COMPUTER SCIENCE

Built: 1967-69
Architect: James Lynch & Associates
Contractor: Mueller Construction, Inc.

An appropriation by the 61st General Assembly (1965) together with a grant from the federal government under the Higher Education Facilities Act financed this building.

Its function was given in the project description presented to the Board when preliminary plans were completed:

> The building will house the Computer Science group of the Computation Center, including administrative, clerical and research offices, and computer equipment rooms. It will also contain three research laboratories, three conference and seminar rooms and five classrooms varying in size from 40 to 50 student capacity.(1)

Contracts for construction of the building were awarded on August 1, 1967,(2) and it was ready for occupancy in the fall of 1969.

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(1) Minutes, March 9-10, 1967

(2) Minutes, August 10-11, 1967

COOVER HALL

Electrical Engineering Building

Built: 1948-53 Addition: 1958-59
Architect: 1948 Brooks-Borg
1958 Leonard Wolf
Contractor: 1948 The Weitz Company
1958 James Thompson & Sons

An Electrical and Mechanical Engineering Building was on a list of building needs in 1938. In 1945 an appropriation of $440,000 was allocated for the Electrical Engineering Building, but another two years passed before activity began. In May 1947 the architect was retained, and by October the funding was increased to $900,000.

Construction contracts were awarded in September 1948. Separate contracts were subsequently executed for the completion of the third floor (in 1950) and for completion of the auditorium and installation of the freight elevator (in 1952). All of those contracts were completed by the spring of 1953.

A location to house the new Cyclotron computer became a problem when that equipment was nearing completion in 1957. It was then decided to construct an addition on the west end of the south wing of the Electrical Engineering Building for that purpose.(1) Contracts were awarded for that project in June 1958 and work was accepted in March 1959.

The Electrical Engineering Building was renamed "Coover Hall", in honor of Mervin Sylvester Coover, at the November 13-14, 1969, meeting of the Board of Regents.

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(1) Minutes, November 14-15, 1957

CORN CRIBS

Although corn cribs had been reported as needed as early as 1859, it was 1871 before the first ones were erected as an addition to the Farm Barn. (See description under Cattle Barn). A request to the legislature for $1,200 for "swine houses, corn cribs, and fowlhouses" was made in 1874, but it was 1880 before an appropriation was made. In May of that year F.S. Whiting was awarded the contract to erect corn cribs for $275.(1) The work was accepted in November 1880. The exact location is uncertain, but it is thought to have been about where the Power Plant is now.

The corn-cribs (and swine houses) were destroyed by fire in 1885 and $2,000 was requested for replacements. The records do not show whether they were rebuilt but it is reasonable to assume that they were.

It was 1914 before Minutes of the Board of Education show a new corn crib. The tile for the structure was contributed. This corn crib was located about at the northwest corner of today's Physical Plant Shops and Central Stores Building. A photograph of that area taken prior to the burning of the Experiment Station Barn (Oct. 1922) shows no structure at the location shown on the 1921 map and identified as a "corncrib", which means it was razed prior to that date.

In August 1920 "The question of installing of motor and electric service for elevator and corn crib located north of the feeding sheds and belonging to the Animal Husbandry sect. of the Ag. Exp. Station, is referred to the President of the College with power to act."

A Corn Crib and Granary is shown for the first time on the list of buildings in the 1922 Financial Report and is there identified as being north of the Experiment Station Barn. It was eliminated from the list in 1933.

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(1) Minutes, May 22-26, 1880

COTTAGES

Silver City

Built: 1946-47
Razed: 1960

The increase in enrollments following the end of World War II necessitated special provisions for single male students as well as for the married students in Pammel Court. To meet that problem temporary housing was provided by the erection of a group of metal barracks type buildings on the campus. The site was north of the Hospital (today's Student Services Building) and east of the Laboratory of Mechanics.

The complex consisted of a central core unit oriented east and west with four wings extending north and four south.

The Cottages, as they were officially designated, were sometimes referred to as "Silver City" but that term was also applied to Pammel Court, especially the original portion on the north side of Pammel Drive.

The center core provided lounge and bathroom space for all residents and each of the eight wings housed sixteen men for a total capacity of 128 students. It was occupied for the first time in the fall of 1947. Unitl 1951 it was filled to capacity, but then it was used only as temporary housing.

Three wings were used by Driver Education from 1951 and the following year offices for television were provided. Three wings continued as emergency housing for the Residence department.(1)

The Cottages were razed in 1960 when construction of Pearson Hall was to begin.

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(1) Schilletter, 1970

CREAMERY (FIRST)

Farm Foreman's Cottage, Teamster's Cottage No. 1

Built: 1879 Addition: 1882
Remodeled and moved: 1891
Razed: 1927

Originally located across the road east of the Farm House.

The decision to operate a creamery on the College farm was made in late 1878 and an appropriation of $300 was provided the following spring, with the funds to be paid from sales of wood and lumber from the farm. The 1878-79 Biennial Report describes the building:

> A neat and convenient creamery building, sixteen by twenty-four feet, has been erected without cost to the State. All the necessary apparatus, including an engine and boiler, churn, butter-worker, Cooley creamer, milk-vat, cans, buckets, etc., have been supplied at a cost of $379.50.

In 1882 a creamery, ice house and cold storage building was erected with $1000 appropriated by the legislature. This was apparently an addition to the original building. Plans were prepared by a Prof. Bellanger of Des Moines.

The 18th Biennial Report (1888-89) reported: "The creamery has been pronounced by some of the best dairymen in the state to be entirely unfit for our purposes. There is surely no inducement for a student to pursue the study of dairying there."

In 1891 the Creamery was moved east a few yards and remodeled for the farm foreman's residence. It also served as a boarding house for farm workmen.

It was razed in 1927 to make way for the new Dairy Industries Building.

CREAMERY (SECOND)

Built: 1891-93 Addition: 1898
Razed: 1905

Located at the south end of what is now East Hall.

Early in 1891 it was deemed essential to replace the old Creamery with a wholly new structure. The sum of $4000 was made available and construction was undertaken.(1) The Biennial Report for 1890-91 describes what was accomplished:

> The money already appropriated for creamery has been most judiciously expended, but the amount was not adequate to make sufficient room for instruction in all departments of dairying, and especially for the making of cheese. The foundation is in for an addition that will be adequate for cheese-making as well as butter-making. With small additional expense rooms can be fitted up in the second story of the creamery that will be quite convenient for the rooming of students. The second story adds much to the architectural effect of the building and affords room that will be quite desirable.

An appropriation of $5000 was made by the General Assembly in April 1892 for completion of the Creamery. The work done with those funds was described in the Biennial Report for 1892-93:

> The amount appropriated for the creamery and repairing farm barns enabled us to finish the dormitories above the creamery, put in cement floors, to finish the large work room in the creamery, a room and laboratory for the professor of dairying, and put the main part of the creamery in good working condition. The heating plant of the creamery was extended to the dormitory rooms, thereby affording them safe and convenient heating.

The same Report, however, states that the building is still short of space.

Between then and 1898 minor changes and repairs were made.

In May 1898 a contract was awarded to W.M. Rich for an addition to the creamery and to the sheep barn for $1795. The figure is not broken down between the two buildings.

By 1903 the Creamery was past its prime as pointed out in the

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(1) Minutes, January and May 1891

Biennial Report for 1902-03:

> The Creamery Building, as is well known, is a dilapidated structure and entirely inadequate for the present needs, and not at all in keeping with the dairy interests of a state like Iowa. This building is one of the first college creameries erected, and served its purpose in pioneer days, but we have entirely outgrown it and aside from its deficiencies it is an expensive building to maintain and operate and an unsightly structure on the College campus.

Authorization to wreck the Creamery was granted in September 1904, but subsequently it was used for an additional school term. It was finally razed in mid or late 1905.

CURTISS HALL

Agriculture Hall

Built: 1906-1909
Architect: Proudfoot & Bird
Contractor: Henry W. Schleuter
Metal Constr. Co. of Des Moines (Plbg. & Htg.)
Ames Engineering Co. (Electrical)

The Twenty-Ninth General Assembly (1901-03) had provided a one-fifth mill tax levy for capital improvements at the college. The Board of Trustees, in September of 1902, held lengthy discussions on priority of construction for a new central building and a new hall for agriculture. The final decision resulted in postponement of the new Agricultural Hall until after Central Building had been built.(1)

The architect was retained in November 1904. The following year, in December, plans were approved. At the same time it was agreed to ask Olmstead Brothers, landscape architects, to recommend the site for the building.(2)

Bids were first received in February 1906, but they proved to be too high. Plans were then revised and new bids taken in August, and a contract for general construction was awarded to H.W. Schleuter in the amount of $212,000. This did not include the "assembly hall" east wing of the building.(3)

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(1) Minutes, September 11 and 16, 1902

(2) Minutes, December 14, 1905

(3) Minutes, August 10, 1906

The site selected for the building was "one hundred (100) feet directly east of the site recommended by Olmsted Brothers."(1) The ISC Student explained the change: "A great deal of indignation has been stirred up by the proposed location of the building on the central lawn. Faculty and students alike have felt that it was not right to mar our beautiful lawn by placing a building in the center of it."(2)

Authorization for the east wing was made in May 1907 with a revised contract for construction. Total estimated cost then amounted to $318,000.(3)

In September 1907 all work on the building was suspended when contractor Schleuter was declared bankrupt. Work soon resumed under the Empire State Surety Co., the bonding company.

Contracts for the mechanical and electrical work were awarded in January 1908.(4)

The building was ready for occupancy in June 1909, but it was 1912 before all accounts with the surety company had been settled.

A change in name from Agricultural Hall to Curtiss Hall was made in June 1944 in honor of long-time Dean of Agriculture Charles F. Curtiss.

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(1) Minutes, September 20, 1906

(2) ISC Student, September 24, 1906

(3) Minutes, May 15, 1907

(4) Minutes, January 8, 1908

DAIRY INDUSTRY BUILDING

Dairy and Food Technology

Built: 1927-28 Remodeled: 1967-68; 1973
Architect: 1927 Proudfoot Rawson & Souers
1967 Savage & VerPloeg
1973 Physical Plant
Contractor: 1927 J. & W.A. Elliott Co.
1967 King-Bole, Inc.
1973 Physical Plant

The earliest request for a new building for the Dairy department was made in 1923, and repeated in the next two biennia. In 1927 the 42nd General Assembly appropriated $500,000 for the project.

The site for the new building was agreed upon when

> President Knapp recommended that the Dairy Building be located so that the center of the front door shall be on a straight line north of the east wall of the Old Dairy Building; and the axis of the Dairy Building shall be on the axis of Engineering Hall and directly east of that building, and the west side shall be on the frontage of the Old Dairy Building.(1)

(The Old Dairy Building is today's East Hall and Engineering Hall is now Marston Hall. The reference to the front door to be on line with the "east" wall appears to be an error, that the "west" wall was intended.)

A contemporary account records the construction start and describes the configuration of the building:

> Actual work was begun Sept. 13, and as the grading and excavating progresses, it will not be long before the foundation can be poured. The plans call for a main building 204 feet long from north to south, 64 feet wide, and two stories high, built of Bedford stone. The main part will be flanked by two wings each extending from the east side about 225 feet, to be constructed of brick similar to the stone, which, when finished, is to be rendered a complete quadrangle by the erection of a wall on the east.(2)

The cornerstone of the building was placed with due ceremony on

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(1) Minutes, June 14, 1927

(2) Iowa State Student, September 29, 1927

November 29, 1927,(1) and the formal dedication occurred on November 14, 1928.(2)

The interior court of the quadrangle was improved, as described in the Iowa State Student on April 20, 1929:

> Plans for the garden of the new dairy building are almost complete. Professor P.H. Elwood, head of the Landscape Architecture Department, is making the final plans for the garden now.
>
> The garden will be surrounded by a gravel walk and several walks will lead to the center from this outer walk. There will be a flower bed in the center and a fountain also has been proposed. The fountain, if it is built, will be supplied with water from the ammonia ice machine inside the building. It is also planned to put benches in the garden and upon the veranda overlooking the garden. When visitors go through the building they will be served ice-cream in the garden or up on the veranda.

In September 1930 it was reported that the Ceramic Engineering Department was constructing the "ornamental fountain".(3) Development of the court continued over a period of several years. It was completed by 1937 as recorded in the Iowa State Student on May 13, that year:

> Prof. C.A. Iverson's 8 years' dream of a model dairy court is being realized. Eight years ago the space was used as a tennis court. Three years ago terra cotta plaques depicting typical dairy scenes were made by Christian Petersen and placed below the middle plaque. Last year the debris was removed from the court and the court was filled in with dirt.
>
> This spring Professor Hanson of the Landscape Architecture Department made plans for the formal arrangement and landscaping of the court. The court has a large central gravel walk and several paths surrounded by clipped hedges and is shaded by four elm trees.
>
> The court may be entered from the terrace which is being planted with tall cedars and vines. Four tables shaded by huge multicolored umbrellas will soon be placed on the terrace to furnish a restful spot where customers may enjoy dairy products.

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(1) Iowa State Student, November 29, 1927

(2) Minutes, October 9, 1928

(3) Iowa State Student, September 30, 1930

A new ice cream hardening room was installed in 1940.(1) A cheese storage room to accommodate 40,000 pounds of cheese was added in 1949.(2)

As extensive remodeling of the laboratories was undertaken in 1967-68, partly funded by a grant from the Department of Health, Education and Welfare. Total cost of this project came to about $94,000. It was principally used for changes and equipment in the laboratories at the east end of the building.

In 1973 the auditorium was completely renovated by Physical Plant at a cost of $71,000.

DAVIDSON HALL

Agricultural Engineering Laboratory

Built: 1921 Occupied: 1922 Burned: 1941
Architect: Proudfoot Bird & Rawson
Contractor: Supt. Thomas Sloss
Rebuilt: 1942
Architect: Buettler and Arnold; Revised by Bldg. & Grounds Dept. with A.H. Kimball
Contractor: James Thompson & Sons

The Biennial Report for 1912-1914 stated "The Ag. Engr. Dept. in this institution has entirely outgrown its present quarters and a new building is urgently needed. Such a building should constitute one of the permanent fireproof buildings of the campus, and if properly planned and constructed to meet the immediate and future needs, a suitable building will cost $200,000." The "present quarters" refer to the north wing of Old Botany, built in 1903 as the Farm Mechanics Building.

In January, 1915, a request was made for $150,000 for the building and the following month Mr. Proudfoot presented tentative plans for an agricultural engineering building. No further action was taken, however, until April 1920 when the Architect was asked to prepare plans for the building.(3)

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(1) Iowa State Daily Student, January 4, 1940

(2) Iowa State Daily, August 20, 1949

(3) Minutes, April 13, 1920

Construction of the building started in the summer of 1921, with a budget of $72,000.(1) It was described in the Iowa State Student on November 4, 1921:

> The structure is to be a one-story brick building, 220 feet long by 180 feet wide, with a large court in the center and entrances at each end. At present this will house, mainly, the tractor and gas engine laboratory....work will be started some time later on the three-story building to be built directly in front of the laboratory in which the balance of the agricultural engineering work will be carried on. This will contain office and class rooms.

Construction was completed at the end of January 1922.

The building was gutted by a major fire in March 31, 1941. The account in the Iowa State Daily Student the following day reported the loss:

> The fire broke out in the farm statistics laboratory at the northeast corner of the building where the United States Department of Agriculture has been conducting corn storage research. Prof. J.B. Davidson, head of the Agricultural Engineering Department, said the flame apparently started from a short circuit in some equipment being used to dry corn cobs in the research experiments.
>
> The flame appeared to be under control at 8 a.m., but the blaze spread between the ceiling and roof and gushed forth again with vast volumes of smoke and flame at 9:30. It swept from the northeast corner to the south and western end and retraced its path. The eastern and southern wings were completely destroyed... A study room, draft room, store room, carpenters' room, machine shop, experiment room, the research laboratory and office of the teaching staff were demolished. The large tractor and machinery laboratory at the northwest corner of the brick and steel structure was the only room escaping damage.

Replacement funds were made available from the state in April 1941 and the firm of Buettler and Arnold, Sioux City, was employed as architect. Bids were received on August 19 but exceeded the budget and were rejected. Plans were revised by the architect and new bids taken on September 9 but these also were too high and were rejected. In November 1941 the architect was paid for his work to that time and was discharged, and the Department of Buildings and Grounds and A.H. Kimball were authorized to revise the drawings and specifications.(2)

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(1) Minutes, April 13, 1920

(2) Minutes, November 11, 1941

New bids, based on the revised plans, were received on December 29, 1941, and construction contracts were awarded to the low bidders, as follows:(1)

General Contract	James Thompson & Sons	$82,800
Plumbing & Heating	Palmer Plmbg. Co.	16,452
Electrical	Maier Elect. Co.	7,025

The February 17, 1942, issue of the Iowa State Daily Student described the new plans:

> The old building....will be replaced by a structure which will have a second story on the south wing. The rest of the new building will be similar to the old structure....with the second story addition adding approximately 20 percent more floor area to that of the old building.
>
> The second story will contain four classrooms, two drafting laboratories, 10 offices, a seminar room and a graduate students' room. The first floor will include two large classrooms, nine offices, and storage rooms in the south wing. The west wing, least affected by the fire will remain practically the same as it was....
>
> The east wing will be reconstructed, using the wall of the former building which was not destroyed in the fire. There will be five laboratories, a materials laboratory, farm mechanics laboratory, structural research and machinery research laboratory in the west wing as well as a carpenter shop and a farm mechanics shop. The open service court in the center of the building will be retained....
>
> The south wing will measure 189 by 42 feet. The whole building will be 226 feet deep. The building will have the same ground area and the foundations will remain the same with the exception of the south facade and the east and west ends of the south wing. As in the original building there will be no basement....

Construction started the end of February 1942(2) and was completed in time for the start of the fall quarter.

In 1975 the building was renamed Davidson Hall in honor of J. Brownlee Davidson who served as head of Agricultural Engineering from 1919 to 1946.

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(1) Minutes, January 13, 1942

(2) Iowa State Daily Student, February 27 and March 12, 1942

DRIVER TRAINING LABORATORY

Recreation Building

Built: 1947

The origin of this building is documented in the following article which appeared in the May 9, 1947, edition of the Iowa State Daily Student:

> The Pammel Court children, through the efforts of their fathers and the aid of the college, are going to have a recreation building. The building is located on the east side of Pammel Court just north of the Insectary.
>
> Students are doing the terracing and building under the guidance of the Physical Plant Department. The college is furnishing the materials and paying for the construction.
>
> The main part of the building will be a barrack-type building 109 feet long. There will be three wings extending to the west, each 20 by 54½ feet. Concrete floors have already been laid.
>
> Last Saturday students of Pammel Court started removing sod from parts of the campus where construction is in progress. They have taken it and sodded all around the front of the building. The sodded area is about 8,400 feet square and will have a fence around it, so that it can be used for an outdoor play area.

In 1960 the building was remodeled and it became the Driver Training Laboratory and has continued in that function since then. That department occupies only the front and two north wings. The south wing was for many years a workshop for Pammel Court maintenance operations. A westward extension of the south wing was added to provide a paint shop. It is currently used for storage purposes.

DRIVER TRAINING STORAGE

Garage - Extension Service; Equipment Storage

Built: 1931

Some uncertainties exist in regard to the way this building has been recorded in the Financial Reports which are the only documents in which any information has been found other than on maps of the campus.

It is first listed in the 1932 report with a valuation of $859 and carried under the name "Garage - Extension Service", and continued that way until 1939 when it became "Garage (8 cars)" in the listing of buildings allocated to Agricultural Extension. That same name and value continued through the 1958 report.

In the 1959 Financial Report it was combined with the Equipment Storage

Building with a new valuation of $2359 and listed in Service Area. This was apparently an unfortunate error, since the building was not changed or added to then.

In 1959 the building was transferred from the Service Area to the College of Education listing but retained the same valuation.

It is this writer's opinion that the original Equipment Storage Building was removed in 1960 or 1961 to make way for the Genetics Storage Building, erected in 1960 or 1961, and that it should have been eliminated from the Financial Report at that time instead of combining it with the Extension Service Garage.

Another building, just south of this one, and the same size, had been erected in 1944 and was identified on the 1955 map as Drivers Training Storage. It was razed in 1961.

DUPLEX

Built: 1917 Occupancy: 1918
Contractor: Thomas Sloss
Razed: 1970

Location: This was the center one of the five frame houses across the road south of the Power Plant

Plans for a duplex house were prepared and submitted to the Board in April 1917 and an estimate of $4000 was made. Who prepared those plans is not recorded, but the description of them is of interest:

> Each department consists of four rooms and bath, with living room and kitchen on the first floor and two bedrooms and bath on the second floor. The kitchen would also be used as dining room. In the attic would be provision for storage and possibility of fitting up as another room. The apartments would be heated by separate furnaces.(1)

The Duplex was planned for occupancy by the Experiment Station Foreman and for the shepherd. It was completed early in 1918.

Occupancy of the building continued through June 1970. It was then razed to make space for the addition to the Women's Gym.

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(1) Minutes, May 3, 1917

EAST HALL

Dairy Building (until 1928)
Agricultural Annex (1928-1961)

Built: 1904
Architect: Proudfoot & Bird
Contractor: Henry W. Schleuter (Gen'l)
L.H. Kurtz Co. (Plbg.)
Wallace & Linnane (Heating)

Late in 1903 the Board of Trustees requested $75,000 from the legislature for a new Creamery Building. The request included this justification and description:

> The dairy interests of the State are second to those of no state in the Union, and our state annually manufactures nearly one-fifth of all the creamery butter put upon the markets of our country; $75,000, is probably the least amount that would build a modern, well-equipped and substantial creamery building, suitable to the needs of the College for years to come, and a structure of an enduring and pleasing character and architectural design. A building of this kind should contain a modern ice manufacturing plant and it should be connected with the central heating plant of the College and the power obtained from the electric plant, thus avoiding the necessity of maintaining a separate ice-house and a boiler and engine in connection with the building. This building can be so constructed and located that it will be brought more prominently into the group of educational buildings on the campus and will present a pleasing view from every approach with no objectionable features.(1)

In April 1904 the legislature appropriated $45,000 for the Dairy Building(2) and the architects were retained.(3) Bids were opened at the June Board meeting and a contract awarded in the amount of $43,192.(4)

Contracts for plumbing ($3837) and heating ($2358) were awarded in November and $500 was allocated for electrical work by the College.(5)

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(1) Biennial Report, 1902-03

(2) ISC Student, April 13, 1904

(3) Minutes, April 1904

(4) Minutes, June 1904

(5) Minutes, November 1904

The ISC Student, on Feb. 1, 1905, was able to report:

> The exterior of the new creamery is now finished. The plumbing, heating and lighting is also practically completed and it is now ready to receive furniture and machinery. Our dairy students are looking forward with delight to the day when they can take up the work in one of the most complete and best arranged creamery buildings in the world.

In September 1905 the paper recorded that the building was complete and ready for use. The building is more fully described the following month:

> ....The outer walls of the building are of pressed brick, while the interior floors and walls of white tile, with the exception of a green border which extends about the upper part of rooms and hallways. The building is built fireproof throughout and everything is as sanitary as modern ideas can possibly make it.
>
> One of the most important and interesting of the many new features to be found in the building is the new refrigerator machine, by which different rooms may be brought to the freezing point or below, as in the case of one room the temperature of which can be lowered to 10^{o} below. There are four of these rooms for storing cheese and four for packing butter, the idea being to make certain tests as to the best temperature at which to store the above products....
>
> On the first floor is a cream-testing room, wash room, toilets, lunch room and a laboratory for bottling cream. The second floor is given over to the testing laboratories and offices, while the third floor is taken up almost entirely by the Bacteriology department. The fourth floor is to be left for some time, on account of the lack of sufficient funds. There are also two rooms on the third floor which will remain in an unfinished condition for some time for the same reason....(1)

The Biennial Report for 1906-08 reports the total cost of the project as $71,921.81. Dedication of the building was held on January 4, 1907.(2)

The building continued in use for dairy activities, with some equipment and machinery changes, until 1928 when the Dairy department

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(1) ISC Student, October 18, 1905

(2) Minutes, January 1907

moved to the new Dairy Industry Building. Major changes were then made in the Dairy Building to provide "offices and classrooms (for use) by the Agricultural Economics and Vocational Education Departments."(1) The building then became known as Agricultural Annex.

The fourth floor was remodeled in 1948 and the basement in 1955.

The name East Hall was adopted in February 1961.(2)

The East Hall Addition is separately described.

EAST HALL ADDITION

Built: 1969-70
Architect: Woodburn & O'Neil
Contractor: James Thompson & Sons

An appropriation of $900,000 for this building was made in 1965 and the architect was chosen in September of that year. Additional funds were obtained later from grants under the Higher Education Facilities Act and a second state appropriation in 1967.

The original concept for the design of the building was for a completely separate structure to be located between East Hall and the Dairy Industries Building or in that area. One of the early schemes showed it on a north-south axis to the east of East Hall.

The final plans incorporated the connecting link to make access easier between the new structure and East Hall. Both buildings are used by the Departments of Economics and Sociology and Anthropology.

Contracts for construction were awarded in January 1969 and work was completed in November 1970.

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(1) Minutes, July 6, 1928

(2) Minutes, February 9-10, 1961

EASTWOOD COTTAGE

Farm Workman's Cottage

Built: 1878

Located just northeast of cemetery on open land.

A one-acre farm site was allocated in November 1877 to L.L. Eastwood for a farm workman's house which he would lease from the college. In the spring of 1879 he was furnished wire and posts to enclose the acre of land. At the end of that year Eastwood was granted permission to remove his house from the college grounds, but he apparently decided against that action, because two years later he offered to sell it to the college. The sale was executed in the spring of 1882.

Removal of the house was considered later but in 1888 it was being used by the Experiment Station. No subsequent references to the house have been found.

The house appears on an 1883 map but is not shown on an 1896 map. It was apparently razed or removed sometime between 1888 and 1896.

ELECTRIC AND PAINT SHOP

Laundry Building; Chemical Truck Building

Built: 1924
Architect: Proudfoot, Bird & Rawson
Contractor: Garner - Stiles Co.
Razed: 1972

This shop was located in the Physical Plant area, a site now covered by the south wing of the Physical Plant Shops and Central Stores Building.

A building to be constructed as a college laundry was first discussed by the Board in June, 1923, but it was the following March before action was taken. It was then recorded:

> In developing plans (for a Laundry Building) it has seemed best to enlarge the building and after inspecting the plant at Vinton it was decided to make the laundry room 40 x 50 feet. For good reason, also, space for the chemical truck has been provided in the plans for this building.

A maximum allocation of $18,500 was then authorized. The construction contract was awarded at the May 22, 1924, Meeting of the Board.

The Iowa State Student of September 22, 1924, reported that the building has "just been completed" and described it:

> The plant has been made large enough to take care of all the college laundry, including the linen from the halls, the gymnasium towels, hospital materials, and, in fact, everything that belongs to the college which has a possibility of getting dirty.
>
> With the completion of the building, in which has been built a room for the college fire department, the three college fire fighters are planning to move the truck in soon....

The building was still serving the same functions in 1930.(1) In 1958 the building is recorded as the "Electric Shop".

EMERGENCY HALL

Built: 1901
Architect: H.F. Liebbe
Contractor: H.W. Schleuter
Razed: 1906

Built south of Old Main, west of English Office Building.

When Old Main was largely destroyed by fire in December, 1900, it became immediately necessary to provide new classroom space. On December 21 the State Executive Council appropriated $10,000 for a temporary building. A contract was awarded to H.W. Schleuter on January 3, 1901, for $8000.(2) Work was completed in March and a contemporary account describes the activity:

> One bright morning, early in the new year, forty men gathered on the spot west of the president's office, and by night the foundation for a new building had sprung up. The next day, and still the next, was the work continued -- each day with a crowd of men that reminded the interested spectators of a raising bee in "ye olden times", when all of the neighbors came from miles around to lend a helping hand. Finally, at the end of thirty days, a long, low building was the latest addition to the campus. Almost immediately it was christened Emergency Hall; but it has since been re-christened and nicknamed until almost any strange name is supposed to belong to it. To those who still retain a trace of the

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(1) Iowa State Student, February 15, 1930

(2) Minutes, January 1901

"blanket stage" it is known as "The wigwam", while others call it "Prexie's greenhouse".

This building was erected at a cost of $10,000, and is but a temporary structure, planned to be used about two years, or until the magnificent new recitation hall can be erected upon the site of Old Main. The cost was great because of the limited time required for its construction. According to the contract for each day the building was completed before a certain date the contractor received $50. Four days before the specified time the building was finished and, according to agreement, the contractor received $200.

The building is 170 feet long and 52 feet wide, and contains ten large rooms, three of which are used as offices. It is heated from Old Main and is wired for electric lights. Each room is furnished with neat "black-boards", which are made of paper and covered with prepared slating; likewise with new chairs, teachers' desks and tables. The principal features of recommendation are its convenient arrangement and good lighting.

Although Emergency Hall is but a temporary structure, and not particularly pleasing in appearance, it furnishes a home for the classes and tells louder than words could do of the energy and push of the college in overcoming difficulties.(1)

Mr. Schleuter's bill for $8200 was approved by the Board on March 13, 1901.

When the second fire completely destroyed Old Main in August 1902 it became necessary to add more classrooms to Emergency Hall. Quick action followed with award of a contract to Schleuter for $4675 for eight classrooms and an additional $150 to include two offices.(2) The ISC Student for Sept. 13, 1902 reported:

An addition consisting of six large recitation rooms has been added to Emergency Hall and will be ready for occupancy about the first of the week. The west end of the building has been extended and now reaches within thirty feet of the Physics Building. The building as it now stands is about 270 feet long. Fortunately, the heating plant at the west end of Old Main was not damaged by the fire and Morrill Hall and all of Emergency Hall will be heated from the old plant.

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(1) ISC Student, March 2, 1901

(2) Minutes, August 21, 1902

The building was far from satisfactory as is pointed out in the Biennial Report for 1902-03:

> "Emergency Hall" is rightly named for it is the cause as well as the result of emergency. Its walls are unplastered and its rooms are narrow and noisy. At times during the day no less than six hundred students gather in the main hall preceding class hour, unavoidably making much confusion and disturbing classes in session. The classes reciting in emergency hall have a total enrollment of 2,979. The efficiency of the work is thereby crippled, and the wear on the patience and energy of the teacher as well as students is great. We must get out of "Emergency Hall" and into the new central hall now building at the earliest possible moment.

After the building was torn down in 1906 a poem appeared in the ISC Student, of September 10, 1906, that serves as an epitaph.

TO "EMERGENCY" HALL

Let others sing of marbled halls,
Of oaken stairs and pictured walls;
But dearer far it is to me
To praise despised "Emergency."
Long and narrow, worn and low,
With its windows all arow,
There it stood, the scorn of all,
Waiting for its own down-fall.

Daily thru its echoing halls,
We've heard the voices and foot-falls
Of Seniors wise and Freshmen green,
Of Juniors, and Sophomores serene.
Here Seniors met to walk and talk,
And Sophomores went to get their "calk",
Juniors, to lecture and debate,
And Freshmen, to learn to demonstrate.
You tell me it has only served its day!
I know it, and you may have your way'
But remember this if you are wise,
"Great men from Emergencies arise."

An Alumnus.

ENGINEERING ANNEX

(Includes Ceramics Building)

Built: 1909-1910
Architect: Proudfoot & Bird (1909)
Proudfoot, Bird & Rawson (1914)
Contractor: Benson & Marxer (1909)
Nelson Construction Co. (Ceramics Wing)
Neumann Co. (1914)

Dean Anson Marston made a request in 1906, for "A two-story draughting room and laboratory building with some offices and classrooms, say 200 feet by 50 feet."(1) Legislature allocated $30,000 for the building early in 1907, to be taken from the Special Building Tax.

The following year a request was initiated for $15,000 for a Ceramics Building proposed as a wing on the Engineering Annex.

Bids for Engineering Annex were received on January 28, 1909; bids for the Ceramics Building on May 6, 1909. Separate contracts were awarded for the two sections. Both units were accepted in Jan. 1910.(2) In July of that year Supt. Sloss was directed to install the plumbing in both structures.

Both the main building and the ceramics wing on the southwest were built with two stories and third floor over which the roof construction allowed the use of only the center part of the floor.

The building when completed provided space for civil, electrical and chemical engineering, for ceramics, and some office and laboratory space for the Engineering Experiment Station.(3) In 1916 chemical engineering moved to the Chemistry Building. By 1921 about one fourth of the floor area was being used by the Highway Commission.(4)

In 1914 a small addition, one story, was made on the west side of the center of the Engineering Annex "to accommodate the power station of the electrical department and the electrical department and the electrical and civil engineering shops."(5) That addition was extended

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(1) Biennial Report, 1905-06

(2) Minutes, Jan. 1910

(3) Arnold, Lionel K., 1970, p.5

(4) Iowa State College Floor Plans, 1921

(5) Biennial Report, 1910-12

west, in 1919, to the same length as the ceramic wing to the south. A second and third floor were added to this wing in 1921.

A $15,000 renovation project was undertaken in 1956 using plans prepared by Leonard Wolf, Supervising Architect. This involved various partition changes, installation of fluorescent lighting in drafting rooms, renovation of rest rooms and miscellaneous other work.(1)

The Engineering Annex was the home of Architectural Engineering (later the Department of Architecture) and Civil Engineering for many years, except for that portion occupied by Ceramic Engineering.

The Civil Engineering activities were transferred to Town Engineering Building in 1971 and Architecture moved into the new College of Design Building in 1978. Ceramics remains there and other space is used by Materials Science and Engineering, Industrial Engineering and freshman engineering drafting classes.

ENGINEERING RESEARCH INSTITUTE

Transportation Building (or Laboratory)

Industrial Arts (in part)

Built: 1913
Architect: Proudfoot, Bird & Rawson
Contractor: Arthur H. Neumann & Co.

The Biennial Report for 1903-05 shows a request for an appropriation of $500 for a "railway laboratory". No further mention of this need is found until the ISC Student, on January 21, 1913, included an amount of $65,000 for a Railroad Engineering Building as one of the projects to be funded from the millage tax for that year.

The construction contract was awarded in July, 1913 and was completed in March of the following year.(2) A description of the building as published in the ISC Student on December 2, 1913, is of interest:

> The building itself is composed of two wings connected by a corridor. Both wings are two and one half stories high. The south wing is 50 feet wide and 101 feet and six inches long. The first floor will be used for the study of automobile and

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(1) Minutes, June 14-15, 1956

(2) ISC Student, March 17, 1914

locomotive materials and a signal laboratory. The second floor will contain offices and recitation rooms, and a large drawing room will occupy the entire third floor.

The north wing is 43 x 120 feet and will be used as an automobile and locomotive testing laboratory. It is proposed to build a spur to the plant from the Chicago and Northwestern track and to test any of their locomotives or those of any other road.

The building is fireproof throughout; the floors are of concrete and tile and the walls are of brick and tile. The roof will be made of cement slabs the same as those on the mechanical engineering laboratory. All windows are steel sashed and provided with ventilators. By the use of this construction, the windows are made larger and afford much better light than the ordinary wooden sash window.

In 1920 a fund of $2200 was provided to move the automobile and engine laboratories from this building to the one now known as Exhibit Hall. Freehand drawing classes were assigned on the third floor in 1930.

Both wings of the building were remodeled in 1931 when the old locomotive laboratory became a testing laboratory for the Engineering Experiment Station.(1) Further remodeling occurred in 1937.(2) From about that time until 1963 the south wing was used by the Industrial Arts department.

More extensive changes were made during a project in 1956-57. Leonard Wolf was the architect and W.A. Klinger the contractor. The connecting link between the wings was expanded on both sides to provide more office space. Other changes were also made, especially in the north wing, for the Engineering Experiment Station.(3)

In 1965 the south wing was remodeled by the Physical Plant Department after that area was vacated by Industrial Education, and additional laboratories were provided for the Engineering Experiment Station (now known as Engineering Research Insititute).

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(1) Minutes, January 14, 1931 and Iowa State Student, April 14, 1931

(2) Iowa State Student, April 1, 1937

(3) Minutes, September 1956 and June 1957

ENGINEER'S COTTAGE

Edgerton House

Built: 1989 Moved: 1915
Contractor: W.M. Rich
Razed: 1970

Located about fifty-feet west of Horticulture Hall (site of 1978 addition)

This two-story frame house was built for J.J. Edgerton with an appropriation of $1,000.(1) A bath tub was installed in 1904 while Professor Holden lived there. Steam was extended to the house in 1913.

In 1915 the building was moved to the area south of the Physical Plant where it was the easternmost of the five frame houses located there until the addition to the Women's Gymnasium was built. It was razed in 1970.

Occupants:

1898 -	J.J. Egerton Prof. P.G. Holden
1907 - 1914	George Mitchell
1935 - 1954	S.C. Edwards
1954 - 1963	Frank Pepin
1963 - 1967	Ronald Rasmussen
1967 - 1970	Donald Kluck

(1) Minutes, April 1898

ENGLISH OFFICE BUILDING

Office Building

Built: 1884 Addition: 1892
Architect: Foster & Liebbe 1884
Josselyn & Taylor 1892
Contractor: V. Tomlinson 1884
Whiting & Wood 1892

This building was designed originally to provide offices for the President, Secretary and Treasurer and to include a fireproof vault.

> Respecting the necessity for this building, we have only to say that the college books and vouchers, embracing fifteen years, are exposed to constant danger from fire. Moreover, the continually increasing business of the College has far outgrown the capacity of its present office.(1)

The contract for construction amounted to $2990.00. Other expenses, including $119.60 for the architect brought the total cost to $3,117.10.

Requests for funds for an addition were made from year to year between 1887 and 1891 when an appropriation was made for this and other buildings. Five bids were received in June 1892. Cost of the addition was $3970.54.

During the next few years rooms in the office building were rented to staff personnel. Various repairs were undertaken. A new furnace was installed in 1904.

In 1905 the Public Grounds Committee recommended "the removal of the old Office Building and Emergency Hall. Definite steps should be taken to clear away both of these buildings as it will not be possible to complete the grading [for Central Building] satisfactorily with them standing where they are."(2) That recommendation was never carried out for the Office Building.

In 1908 the college book store was given the use of the first floor and the custodian and Head of the Military Department were quartered on the second floor.

The building was connected to the central heating system in 1914, at

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(1) 10th Biennial Report, 1882-83

(2) 21st Biennial Report, 1903-05

which time it was the headquarters for the Buildings and Grounds department, and two rooms on the second floor were rented to the YMCA for their food service employees.

Some time later the Music Department was allocated space in the building until the end of 1928 when they moved into their new quarters in the Maples (Music Hall). In 1929 the second floor was converted into office space for the English Department, and in 1940 the name of the building was changed to English Office Building.

In 1973 all English and Speech offices were relocated to other buildings and the old Office Building became the headquarters for International Education Services.

EXHIBIT HALL

Truck Building, Garage, Automobile Laboratory

Aeronautical Laboratory

Built: 1918

As its meeting of May 9, 1918, the Board authorized the construction of "a wooden building approximately 80' x 150' for housing of trucks used for War Training work" with the cost to be paid from the War Training fund. No reference has been found to identify who prepared plans; nor is there any record of the change from a frame building to the structural tile walls as it was built. Construction was done by college personnel.

Five classrooms for automotive training were added inside on the west in 1919, using plans prepared by Dean Marston.(1) Additional partitions were installed in 1920.(2)

Some remodelling was undertaken in 1930.

> The southwest corner of the building will be used by the Industrial Arts Department for a metal-working shop, while the Engineering Experiment Station will use the machine shop in the north end. The central part of the building will be cleared of partitions and used by the Engineering Extension Department as a demonstration laboratory for the various short courses which it conducts throughout the year.(3)

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(1) Minutes, August 12, 1919

(2) Minutes, August 18, 1920

(3) Iowa State Student, September 27, 1930

The following year the southwest corner was assigned to the Mechanical Engineering Department as a laboratory of aeronautics.(1)

In 1936 the aeronautical lab was moved out and the space made available for the college band.(2) The band was forced out in 1942 to make room for the navy program in progress on the campus.

The date when the name "Exhibit Hall" was first applied to the building is uncertain. The Financial Report for June 30, 1938, lists it as "Aeronautical Laboratory". A map dated 1938 identifies it as "Exhibits", and it appears as "Exhibit Hall" on a 1939 map. The 1940 Financial Report calls it "Exhibition Hall".

Remodeling of Exhibit Hall was authorized in 1951 to provide space for WOI-TV, and the studios were moved there the following February. At that time the Driver Training Laboratory was moved to a temporary building and the Engineering Experiment Station machine shop was moved to the Mechanical Engineering Building.

On June 30, 1960, the Iowa State Daily reported that "The rooms in the southeast part of Exhibit Hall are being changed into a laboratory for surveyors." In 1964 the WOI-TV studios were moved to the new Communications Building, and on October 16 of that year the new uses of the building were described in the paper:

> Four departments will acquire extra space in Exhibit Hall since WOI has moved out of the building into its all-new facilities. The vacant area is being remodeled into offices and classrooms for aerospace engineering, civil engineering, telecommunicative arts, and the Iowa State Bands.

When Town Engineering Building was completed in 1971 the engineering uses of Exhibit Hall were moved to that location and since then only music and telecommunicative arts have used the building.

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(1) Iowa State Student, October 15, 1931

(2) Iowa State Student, September 22, 1936

EXPERIMENTAL BARN

Experiment Barn

Built: 1894
Architect: Nourse & Hallett
Contractor: Bisbee & Potter
Burned: 1901

Located just north of east wing of ISU Press Building.

A request for $5000 for an Experiment Barn was made to the legislature late in 1893. An appropriation of $4000 was granted and plans were prepared the following spring. Bids were received in July, but all were above the funds available. Bids were taken on revised plans in August and the contract was awarded to Bisbee and Potter in the amount of $3830.

The Biennial Report for 1894-95 states: "The new experimental barn makes a new period in the practical work of farms and animal husbandry, and gives much better scientific tone to all that part of our work."

This barn had a relatively short life. Its end is recorded in the Biennial Report for 1900-1901:

> At noon, October 25, 1901, the cattle-barn* and new experimental barn were burned. The fire started in the cattle-barn and extended to the experimental barn. The origin of the fire is unknown. These two barns with their contents of hay, feed stuffs, corn and grain were worth about $13,000. The work of the experiment station was carried on in these two barns.

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* Identified herein as Feeding Barn.

EXPERIMENT STATION BARN

Built: 1902
Architect: Liebbe, Nourse and Rasmussen
Contractor: H.W. Schleuter
Burned: 1922

Located at what would today be on Wallace Road between the ISU Press Building and the south wing of the Physical Plant Building.

When the Experiment Barn burned in October 1901 it became immediately necessary to provide new facilities. Plans were prepared, bids taken and a contract for construction executed in May 1902.(1) By October it was possible to record that "Work on the new experiment station barn is about completed, and the station expects to move into its new quarters the early part of next week."(2)

Total cost of the project was $17,858.59 as itemized in the Biennial Report for 1902-03.

This was a substantial brick building, 100' long east to west, by 50' wide, with two floors and a loft. It faced south and had an 18 foot diameter conical roofed silo on the northwest corner.

The building was struck by lightning and completely destroyed by fire on October 6, 1922. Combined loss of building and contents was listed as $25,771.66.(3)

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(1) Minutes, May 1 and 29, 1902

(2) ISC Student, October 4, 1902

(3) Minutes, October 1922

FAIR OAKS MANSION

Bus House

Built: 1879

At the November 1878 meeting of the Board of Trustees it was

> Ordered, that President Welch and Professor Budd be appointed a committee with full power to grant the request of students desiring to erect houses on the college farm, to choose the location, approve plans and have full control in the matter of the erection of said houses.

Fair Oaks Mansion was built by students the following year. The house was built at a location on the east side of the present Communications Building. It appears there on the 1883 map. It is not shown there on a map prepared in 1887. On the later map there is a residence shown about 300 feet west by south of the old Horticulture Hall. This location agrees with Margaret Kooser's statement of location: "300 ft. west of south end of present library."(1) Although no record has been found relative to moving the building it seems safe to assume that such a move was made about 1884 or 1885. This is almost certainly the same building as the one referred to as the Bus House in 1892 and 1893. Two references in March 1892, one in The Aurora and one in the IAC Student report that the Bus House was being used to house students.

Herman Knapp, in 1934, attempted to obtain more information about the building through correspondence with men who had been students in the 1880's, trying to determine who built it. He wrote:

> When I came to Ames in the spring of 1880, there was a frame building probably 20 x 24, a story and a half high under a large oak tree quite a little west of the present college cemetery. This building was occupied by boys and I was told at the time that these boys built the house and owned it.(2)

The reference here to "west of the cemetery" undoubtedly should have been written "east of the cemetery".

How or when title to the house may have been transferred from the student builders to the college is not recorded.

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(1) Kooser, 1939

(2) Herman Knapp to Elmer Reeves, March 20, 1934 (ISU Archives)

At the May 2-4, 1893, Board meeting

> Pres. Beardshear presented the following: The necessity of moving the house and barn belonging to the Steward's department from the grounds set aside for the Athletic Association. Referred to Building Committee with instructions to act at once.

It is probable that this house was moved to the south side of the road at the west gate in 1893. It is known that it was moved somewhere that year. The only map that shows a building at west gate is one dated 1896. There is no record of any buildings erected at that location.

In the Board minutes for May 1897 the following entry is made:

> Prof. Curtiss has called attention to the gardener's house and barn, near the west gate. The house has never been plastered and the roof is worn out. The barn is practically a worthless shed. Your committee recommend a new roof and plastering for the house and that the little barn back of South Hall be moved out to make an addition of two rooms to this house. Also that the abandoned stable near the present club house near Morrill Hall be moved out for the services of the Gardener.
>
> (Also see Horticulture Barn-First)

The following month the minutes report that "the barn north of the depot has been moved to gardener's house near west gate at a cost of ten dollars. We recommend it to be placed in repair."

The March 14, 1899, issue of the I.A.C. Student recorded: "The unsightly house near the west gate is also removed and one feels as relieved as though a plague had ceased."

FARM BOARDING CLUB

Horticulture Hall (or Laboratory), Garden House, Faculty Club

Built: 1879 Moved to Wallace Road 1915
Razed: 1970

Original site just east of Library east front, west side of Morrill Road.

The Horticulture Department expressed the need for a "garden-house" as early as 1871 when Professor Bessey prepared plans for a building estimated to cost $2500. By 1877 the estimated cost was $3500.

The building did not become a reality until the summer of 1878. The 17th General Assembly had appropriated $2500 for the building but those funds would not be available until January 1, 1879. Professor J.L. Budd loaned the College $2500 (at 8% interest) on July 1, 1878 and construction of the building was possible that summer. That amount was only 42% of the estimated $6000 requested. The result is summarized in the 8th Biennial Report (1878-79):

> This reduction compelled the committee to plan a cheap wooden structure for class room, office, seed room, specimen room, store room, with attached propagating pits, grafting room, etc., of restricted size and cheap construction. In carrying out these modest plans, neither creditable to the College nor the State, the appropriation would still have been inadequate had not firms, in Clinton, Iowa, generously furnished the lumber, doors, sash, etc. at prices below dealers rates. Active completion also permitted letting contracts for labor at hard time prices.

The total expenditures came to $2500.

In the same report the building is further described:

> The Horticulture Building is a neat structure, containing on the first floor a well-furnished lecture room, professor's room, and seed room. On the second floor is the Horticulture museum. The cellar has two spacious rooms, one for the storage of garden products, the other for the use of the nursery propagating department. A grafting neat room and propagating structure are attached, heated with hot-water pipes.

In 1894, after the Horticulture department had moved to the new Agriculture Hall (Botany Hall), Horticulture Hall was remodeled as a residence, following plans by Mr. Whiting, at an estimated cost of $850. Miss Marie Chambers, director of music, rented the house in 1895 and established it as a boarding club. Water and sewer connections were installed in 1896. The building continued as a faculty or sub-faculty club until 1906, when it was reserved for contagious hospital purposes.

Whether it was actually used for this purpose is uncertain. In 1908 the suggestion was made that it "be moved to some obscure location and used as a detention hospital."(1)

The old building remained in place until 1915 when it was moved to the south side of what is now called Wallace Road at the west end of the new addition to the Women's Gym. It was the westernmost of the five frame buildings in the group of five "employees' cottages" moved or built there between 1915 and 1924.

It was used as an employees' boarding house for some years thereafter. Later it was an employees residence.

Edgar P. Swanson	1945-1953
Dwight Evans	1954-
Leon Halterman	1962-1970

It was razed in 1970 to make way for the Gymnasium addition.

THE FARM HOUSE

Knapp-Wilson House

Construction started: 1860 Completed: 1865
Architect: Milens Burt of Muscatine
No contractor, built by day labor

The first building started on the new college land was the Farm House. Plans for it and the barn, prepared by Milens Burt, architect and builder of Muscatine, had been approved in 1859.

William G. Allen recorded that beginning:

> About the year 1860, the College Farm House site was fixed by Mr. Suel Foster, of Muscatine County, and Daniel McCarthy, of Story County. Mr. Foster was one of the locating Trustees and had desired to meet Mr. E.G. Day, also a locating Trustee, on the Farm so they could select the site for the Farm House and the Barn. Mr. Day did not appear. Mr. McCarthy, I believe, had a compass and met with Mr. Foster, and they scared up a surveyor's chain or tape line and went to work fixing the site for the house. It became the arduous duty of Esq. Daniel to drive the first stake on the Farm, looking to its improvement.(2)

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(1) Minutes, May 1908

(2) Allen, 1887

Construction of the house was primarily by day labor but there was a contract for the stone work. The bricks used were made on the farm. (See Section on "Brickyards")

The house is described in the 1862 Annual Report:

> The brick work of a Farmers' House, 32 by 42 feet, two stories high, with pantries and kitchen back, 16 by 24, one and a half stories, also brick, have been erected during the past two years. There is attached to this a wash-room, milk-room and wood-shed, 24 x 24, one story of wood. The back buildings were erected in 1860 and finished; the front building was put up in 1861 at a cost of $950, besides the cellar and the brick. The inside of the main building is not finished, but it is enclosed from the weather. To finish it will cost about $650. Each story is nine feet high, of good brick on solid stone walls, with a cellar under the whole of the house.

The house was not completed until 1865. In March of that year the Executive Committee reported to the Board of Trustees as follows:(1)

> Your committee desired to have reported the Farmers House finished at this meeting. The inside carpenters work has been completed also the plastering is finished. The painting should be done immediately.
>
> Your committee would recommend the building of a neat verandah on the front of the farm house also the building of a wood house and privy also that the outside of the farm house be coated with a composition of lime.
>
> We have divided the cellar into three departments with brick partitions and would recommend that the bottom of the cellar be paved or cemented and that a drain should be dug from the cellar. Also that there should be new lightning rods put up to the house.

Then recorded is an itemization of expenses incurred on the building in 1864, a total of $1772.67. Another $30 was spent for a cistern of 100 barrels capacity and $99 for stoves and furniture for the office. The committee additionally recommended "that the well be rewalled and dug deeper, and to put a good wellhouse and pave around the same."

That the recommendations of the committee were generally carried out can be seen in the Annual Report for 1865:

> A beautiful verandah has been put up since our last meeting, in front of the farmhouse, at a cost of $300. It is built substantially,

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(1) Minutes, March 23-24, 1865

and it relieves the bare walls of the house, and will be a protection to it.

A wood-house and workshop has been erected, east and adjoining the back part, on the lean-to of the house. It has been built of wood and put up in a substantial manner, at a cost of $646.75. It is well painted, with blinds to the windows, with a division in the center - one part for wood-house and the other for workshop, and room for the hands to spend their leisure hours. Length of building 18 x 30 ft.

A good double privy has been built of brick, 10 x 10, in a good substantial manner, at a cost of $150.

A neat and substantial smoke and ash house has been built of brick, 8 x 12 feet, got up in a tasty style, suitable for model building, at a cost of $130.

A book case has been put into the office the entire length of the north side of the office, made of good black walnut, with cupboard and solid doors below the glass doors above, with room for 2,000 volumes, at a cost of $200.

The area between the wood-house and main building has been paved, making a good dry walk, at a cost of $25.

The cellar has been drained, taking about one hundred feet of four-inch tile (the small tile were used, but would not do). The cellar is now completed, drained, and in good condition, at a cost for 100 feet of tile at 25 cents per foot, of $25; cost of labor, $21.81. Total cost, $46.81.

There is a sketch made by Herman Knapp (in the History Collection of the Library) showing a plan of the Farm House as it was about this period. It has been redrawn and is included here to clarify the dates when the several parts of the house were built.

In 1871 some modifications were made "to enlarge the kitchen, fix up the east wing or the secretary's office and reporting room and to rearrange the old office for a parlor."(1)

Maintenance of the Farm House was a continuing problem as evidence by the Superintendent's report(2) in 1877:

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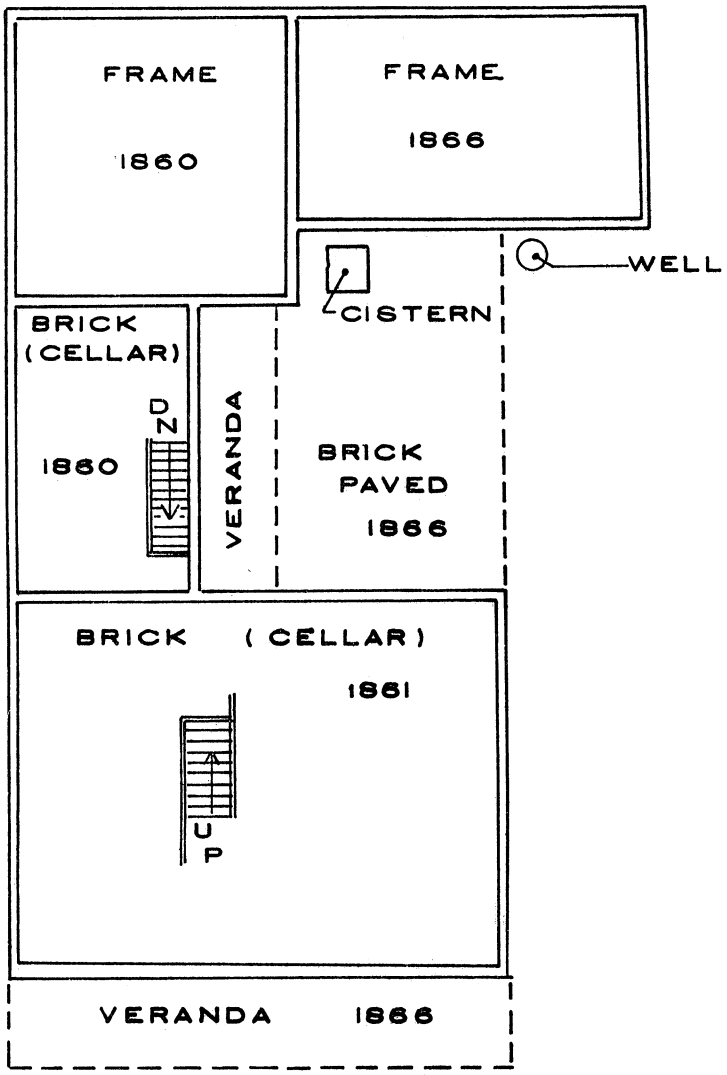
(1) Biennial Report, 1871

(2) Biennial Report, 1876-77

FARMHOUSE



FIRST FLOOR PLAN

> The farmhouse cellars were found in condition utterly unfitted for any practical use, winter or summer.
>
> The floors have been paved with brick, the outer courses being made of hard brick, laid in cement. The walls, riddled with rat holes, were refitted and neatly plastered, as were also the ceilings. The rotted jambs and doors were refurnished, and the stairways bricked, and placed in usable shape.
>
> This imperatively needed improvement will allow of the safe storage of potatoes and other vegetables for spring use, in place of selling such products in the fall, and buying at enhanced prices in the spring, as was done last year. The temporary use of these cellars is also kindly permitted for storing the vegetables of the Horticulture department for the spring term of school, and for the storage of stocks for winter grafting. Without this privilege, nothing could have been done in the way of commencing a nursery next spring.
>
> The farm house roof was also found in rotted, leaky condition. The roof, in part, has been re-shingled and the balance repaired, but a new roof will be necessary on the main building next summer.

Roof repairs were made again in 1880 and 1881, and the building was reported as being greatly improved by a coat of paint (in the 1890-91 Biennial Report).

Residences for faculty were always short of demand. In 1886 it was decided to alter the Farm House to permit two families to occupy it, one on the east, the other on the west side of the central hall and stairway. The sum of $200 was appropriated in May 1887 for an addition to the building, presumably to provide for the second kitchen for a second family.

In 1896 the house was connected to the sanitary sewer line. Late that same year Professor James Wilson put in a new heating plant at a cost of $220 for which he was reimbursed the following February when he left to become U.S. Secretary of Agriculture. That furnace served until 1907 when the house was connected to the central system.

The frame portion, built as the wood-shed and workshop, was removed in 1891 to be joined with the old creamery to form the building later called the Farm Foreman's Cottage.

The north 24 x 24 brick addition was apparently removed in 1897. At the May meeting of the Board of Trustees the Building Committee recommended "tearing down the north section of the farm house, which is but a harbinger for rats. Cost of tearing down, clearing brick and piling all up neatly $23.00."

The May 17, 1898 issue of the I.A.C. Student reported that "the porch along the south side of the farmhouse was torn down, and is now replaced by a smaller one."

The Board Minutes of October 1910 state:

> ....it was ordered: that it is not considered advisable to plaster or cement the outside of brick residence occupied by Professor Curtiss, and that when improvements to said building are completed, the outside of the building shall be painted two coats.

The following August $1,450 was authorized for remodeling and repair of the house by Superintendent Thomas Sloss. The porch on the west side of the house was almost certainly a part of this remodeling. It was built from plans prepared by Proudfoot and Bird in 1909. The repair work probably included the exterior stucco coating because in 1913 Professor Curtiss called attention to more needed repairs, including a new roof. He reported "while the roof was covered with snow, it leaked in places so as to damage the interior walls of the building. This leak, causing a saturation of the brick walls, followed by freezing, will lead to damage of the outside plaster finish." The following month, May 1913, the Board appropriated $495 for a new asbestos shingle roof.

A garage, 20 x 19 feet, was built from a drawing by the Architectural Engineering department, dated Dec. 6, 1926. Actual construction was probably in 1927.

The Farm House, or the Knapp-Wilson House, was designated in 1965 as a Registered National Historic Landmark by the National Park Service of the U.S. Department of the Interior.

After Dean Andre moved out in 1970 the University administration determined that the house would no longer be used as a residence nor would it serve for classroom or offices. Soon thereafter the decision was reached to preserve the house as a museum and to restore it as closely as possible to its appearance as it was about 1900-1910, when it was the residence of Dean Curtiss.

President Parks appointed a committee to direct the research, renovation and restoration of the Farm House and to seek furnishings to place in it, representative of those that might have been there prior to 1910. That committee consisted of Carl Hamilton, vice-president for information and development, Neva M. Peterson, professor of applied art, Wesley I. Shank, professor of architecture and Robert R. Harvey, associate professor of landscape architecture.

Extensive repair and restoration work was undertaken between 1972 and 1975. The roof was replaced with wood shingles and new copper flash-

ings and gutters were installed. Chimneys were rebuilt. The garage was removed. Inside, sagging floors were leveled and reinforced, damaged or fallen plaster was replaced, mechanical and electrical systems were renovated. Careful study was undertaken to ensure that final finishes - varnish and paint color, wallpaper, hardware, and lighting fixtures - were appropriate to the time portrayed.

Alumni and the public were asked to donate furniture and other objects which had once been in the Farm House or which were typical of the period to which the house was being restored. Response was good and the building now is well furnished and open, on occasions, for public viewing.

The first occupant of the Farm House was W.H. Fitzpatrick who rented the farm for two years. The following list of occupants was prepared by Mrs. Dorothy Kehlenbeck, long-time curator of the University history collections:

1861-1863	W.H. Fitzpatrick, tenant farmer and postmaster.
1864-1866	A.J. Graves, Farm manager and postmaster until 1865 when post office was moved to Ames.
1867-1868	Hugh M. Thomson, Secretary of the Board of Trustees and Superintendent of the farm.
1869	Norton S. Townsend (Townshend), Professor of Agriculture.
1870-1873	I.P. Roberts, Secretary and Superintendent.
1874-1878	Millikan Stalker, Secretary and Superintendent, Professor of Agriculture (and later Veterinary Science).
1879	J.C. Hiatt, Farm Superintendent.
1880-1885	Seaman A. Knapp, Farm Superintendent, Professor of Agriculture, College President 1883-84.
1886-1887	Herman Knapp, Head of Agriculture.
1887-1890	Loran P. Smith, Farm Superintendent, Professor of Agriculture, lived in east half.
	C.F. Barrows, Professor of English, lived in west half.
1891-1895	James F. Wilson, Farm Superintendent and Professor of Agriculture.
1897-1946	Charles F. Curtiss, Dean of Agriculture and director of Agricultural Experiment Station.
1946-1948	Three women professors: Hoyt, Carlin, McBride.
1948-1949	Home Management.
1950-1970	Floyd Andre, Dean of Agriculture.

FARM LABORER'S COTTAGE

Leighton House, McKay House

Located at about present main entrance to East Hall Addition.

Built: 1882
Architect: Professors Knapp and Budd
Removed: 1904

The Trustees acted to initiate construction of two farm cottages at their May 1882 meeting. The Board

> Ordered, that Professors Kanpp and Budd be appointed a committee to construct the laborers cottages for farm and horticultural departments, making their own plans and specifications, purchasing all materials, employing the necessary labor and superintending the work. Ordered further, that the sum of $1700 or so much thereof as may be necessary be appropriated from the State Fund for the erection of these cottages, the same to be divided as evenly as possible and practicable between the two cottages and to be extended under the direction of the committee, duplicate bills of all expenditures to be made out and audited in usual form previous to payment.(1)

New siding was installed and the house was painted in 1895. "As to internal repairs, it is recommended that Mr. McKay advance money for the same, such repairs to be made under direction of the Building Committee, and to be paid from repair fund when its condition will warrant."(2)

Further repairs and improvements were made the following year under contract with E.C. Potter.

First occupant of the house was William Pierce. Fred Leighton lived there 1892-94 and from 1894 to 1904 it was the home of Professor G.L. McKay.(3)

In 1904 the house had to be moved to permit construction of the new creamery (East Hall). It was sold and removed from the campus.

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(1) The second cottage is the Grounds Cottage, which is described separately.

(2) Minutes, May 1895

(3) D. Kehlenbeck, Manuscript, 1969

FEEDING BARN

Built: 1880
Architect: Prof. T.L. Smith
Contractor: F.S. Whiting
Burned: 1901

The "Feed Barn" is shown on the 1883 map in a location about 600 feet east of the Farm Barn. This is at a location just at the southeast corner of the present Agronomy Greenhouse.

This barn was built in 1880 under contract with F.S. Whiting in the amount of $725. Painting and other costs brought the total expenditure to $792.10.

In 1890 Experimental Station Director Speer was authorized to use proceeds from sale of Station products for repair of the barn.

A fire starting in this barn in October 1901 destroyed it and the Experiment Station Barn.

FEEDING SHEDS

Cattle Shed; Hog Barn

Built: 1902 (?) Addition: 1903, 1916

These sheds were apparently started soon after the fire which destroyed the earlier Feeding Barn and the original Experiment Station Barn in October 1901. They were built at about the same location as the burned structure. The March 25, 1903, issue of the ISC Student reported that "The experiment station feed sheds will be enlarged by a forty-foot addition" and three days later stated "The contract for the feeding shed went to C.E. Atkinson, of Webster City, for $1565."(1) The building list for 1903 shows a valuation of $2500 for the Feeding Sheds.

In 1916 the Iowa State Student records that "Superintendent of Grounds, Thos. Sloss, is also adding a new experiment feeding shed....in the feed lots near the power house. This is reflected in the valuation increase to $3659 in the 1918 Financial Report.

The Feeding Sheds as shown on the 1921 map formed an L-shaped structure with a north-south leg at the west end about 150 feet long and an east-west leg on the north 280 feet long. The feed lots were on the inside of the L.

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(1) Minutes, May 16, 1903

In 1928 the Feeding Sheds were moved to the Animal Husbandry farm on Beach Avenue south of Lincoln Way, today's Iowa State Center area, and razed in 1957.

FEED STORAGE ELEVATOR

Feed Barn

Built: 1929
Architect: Proudfoot, Rawson & Souers
Contractor: L.D. Anthony (masonry only)
Razed: 1969

A fund of $22,500 was allocated for a Feed Barn in the spring of 1927.(1) According to the Iowa State Student of April 16, 1972, "The feed barn will be the central feed storage and feed grinding building for all the college feeds." In August of that year the preliminary plans were approved and authorization was given to prepare final plans and specifications and to advertise for bids, with the total project cost not to exceed $24,193.55 and for the building itself a maximum cost of $21,268.00.(2)

Bids were received the following April but were rejected because all exceeded the available funds. New bids were taken in April 1929 and the contract award was made to L.D. Anthony "for the brick, hollow tile, and labor on the masonry work" in the amount of $3,559.77.(3)

The building stood just east of the (old) Meat Laboratory and was described in the Dec. 17, 1929, issue of the Iowa State Student:

> A grain storage building made of hollow tile, which has the appearance of an elevator with a silo at each of the four corners, was erected during the past summer by the Agricultural Engineering Department for the Animal Husbandry Department at Iowa State. The building is causing considerable comment among those interested in farm buildings.
>
> The structure of the granary is such that it will easily hold 10,000 bushels of ear corn and an equal amount of small grains. Air hoists, electrically controlled, elevate the grain into the various bins. One unusual feature of the corn bins is the fact

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(1) Minutes, April 12, 1927

(2) Minutes, August 31, 1927

(3) Minutes, April 17, 1929

that they have solid tile walls in contrast to the usual corn crib construction. These two bins are equipped with false bottoms to provide the necessary circulation of air through the corn.

The entire building was erected at a cost of $9,000 with an additional cost of $2,000 for equipment including hoists, electric controls, a corn sheller, a feed grinder, scales and other lesser items.

The Feed Storage Elevator was razed in 1969 when it was no longer of use or value to the university.

FICK OBSERVATORY

Mather Observatory

Built: 1968-70
Architect: Norval H. Curry
Contractor: Boone Construction Co.

This building is located off-campus in Boone County, near Moingona, on land acquired specifically for the needs of the observatory functions in 1967. In April 1968 the project description was recorded in the Board minutes:

> The scope of the project has been enlarged to provide space for the radio-telescope research operations of the Department of Electrical Engineering in addition to the visual telescope research operations of the Physics Department.
>
> When completed, the Observatory Building will contain the telescope and associated equipment provided in part by a gift to the University by Robert L. Mather and in part by an NSF Equipment Grant in the amount of $60,000, and will also contain computer equipment with an original value of approximately $1,000,000 which will be used in support of the radio-telescope research operations.

The construction contract was awarded in November 1968 and work was completed in February 1970.

In November 1970 the Board named the new building Erwin Fick Observatory, honoring Erwin Fick "who has demonstrated strong interest in astronomy and in the University. Mr. Fick, a native Iowan, now residing in Davenport, is retired from service in the U.S. Corps of Engineers. He devotes considerable time to refractor and reflector telescopes. He established a trust with Iowa State University Foundation that has grown to a substantial 5-figure amount, and he has deeded his home to the Iowa State University Foundation."(1)

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(1) Minutes, November 23-13, 1970

FIELD HOUSE - PHYSICAL EDUCATION FOR WOMEN

Home Economics Annex, Chemistry Annex #1, "Little Ankeny"

Built: 1920 Moved: 1926 Addition: 1943
Architect: 1920 A.H. Kimball
Contractor: 1920 Thomas Sloss
Addition: James Thompson & Sons
Razed: 1953

Locations: Originally built just west of Home Economics Building (MacKay Hall). In 1926 moved to site just south of Press Building, now marked by a bronze tablet on a boulder there.

The large increase in enrollment in the Home Economics department in 1920 created an urgent need for additional space and the construction of a temporary frame building was authorized.(1) It was described in the April 28, 1920, edition of the Iowa State Student:

> The new building will be a wooden structure, and the rooms extend, end to end, in a half circle, beginning on the northeast corner, thirty feet from the main building. The rooms will measure 28 feet in width. The frontage on the north road will continue 125 feet to the west, and turn south in an L, 95 feet.
>
> Five good sized laboratories will be accommodated in the new structure. In addition, a kitchen and pantry, as well as an office for the instructing staff, will be centrally located.

Construction was completed shortly after the start of the fall term.

With completion of the new Home Economics Building in 1926 the Annex was no longer needed for laboratories and was moved to the new site to become "a girl's fieldhouse and W.A.A. headquarters."(2)

When the Women's Gymnasium became available in 1941 the Field House was no longer needed by the women and it became temporarily a storage building.

In 1943 two additions were constructed to make the building suitable for "the Army's research program." Cost of the additions was financed by that program.(3)

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(1) Minutes, April 13, 1920

(2) Iowa State Student, April 30, 1926

(3) Minutes, February 8, 1943

Later it became known that the "Army's research program" was the development of a method for the preparation of pure uranium for use in the atomic bomb and for use in nuclear energy projects of various kinds. Over 2,000,000 pounds of uranium were produced there.

The annex became known as "Little Ankeny" during the war years as a comparison with the large ordnance plant then operating at Ankeny.

The building was completely dismantled and removed in the fall of 1953.

FILM STORAGE

Built: 1930 (?) Razed: 1942 (?)

The structure referred to as Film Storage is very meagerly documented and the dates shown are rather uncertain.

The Board Minutes for December 10, 1929, record this recommendation by President Hughes, which was approved:

> A large number of celluloid films, which are distributed to the schools and colleges of the State by the Department of Visual Instruction, are housed in the Engineering Building. During the last two years, there have been several very serious fires, destructive to both property and lives, which originated in the room in which films were stored. We feel that we must immediately erect a small building, either in the form of a cellar or of an isolated structure on the campus, at an estimated cost of $2000 or $3000 for the housing of films.

There is no further reference to the structure in the Board Minutes but a thesis of 1954 gives some added information:

> ....an experimental concrete culvert, discarded by the Engineering Experiment Station, was placed at the disposal of the Visual Instruction Service. The culvert was located in the space now occupied by the Naval Reserve Officers' Training Corps Building on the western part of the campus and motion picture films were safely stored in that structure.(1)

The Financial Report first included Film Storage, at a valuation of $500, in the list of buildings in the 1934 edition. It was finally written off in 1948, although the structure was undoubtedly removed or razed in 1942 when construction of the Naval Armory was started.

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(1) Williams, 1954

Harold Kooser, long-time director of Visual Instruction, once told this writer about the "culvert" storage stucture and its location, but he made no mention of a relocation to another site.

FIREMANSHIP TRAINING BUILDING

Built: 1966-67
Architect: Brown, Healey & Bock
Contractor: Carlson-Rockey, Inc.

At the Board meeting of December 9-10, 1954, "President Hilton reported that people interested in the Short Course for Firemen at the Iowa State College have indicated a desire to construct a building on the campus which would provide needed facilities for the short course. It was the consensus that the Board's attitude would be favorable toward such a project."(1)

On May 26, 1956, the Iowa State Daily reported that "A project involving the erection of a $350,000 building on the Iowa State campus for a firemanship training and engineering extension continuation center was proposed at the Firemanship Training School here this week." By December 4 of that year the concept had grown larger as shown in the Daily's story of that date:

> The Iowa Fire Chiefs Association plans to ask the 1957 legislature for a $250,000 appropriation to aid in building a $500,000 Civilian Defense and Firemanship Training Center at Iowa State.
>
> Civilian defense officials said that the Federal Civil Defense Administration would supply the other $250,000 for the center.
>
> Iowa State officials approved the plan and agreed to assume responsibility for maintenance if the funds are made available. The proposed center would contain a 500-seat auditorium suitable for conversion into an emergency hospital, a 100-seat classroom, four 60-seat classrooms and an equipment display room.
>
> The center would also have a fire and materials testing laboratory, a paved training yard for rescue work and fire fighting apparatus and a fire station for Iowa State. Civil defense structure such as bomb shelter would be included. A fire training tower would be at the rear of the building.

Those elaborate plans remained dormant for almost nine years, until a state appropriation of $150,000 for the building was made by the

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(1) Minutes, December 9-10, 1954

legislature in the spring of 1965.(1) It would then be a much smaller structure than what had been thought about earlier as indicated in the approved project description:

> The proposed structure will be one story of steel and load-bearing masonry construction with brick exterior. The building will be air-conditioned throughout. It will house a short course lecture classroom seating 90 at tables or 225 with lecture seating, a laboratory demonstration area in which sprinkler systems, pumps, extinguishers, fire detection equipment, etc., can be demonstrated, and offices for the Firemanship Training Staff of the Engineering Extension Service.(2)

Construction contracts were awarded in July 1966 and the building was ready for use by the middle of 1967.

FISHER THEATER
Little Theater

Built: 1972-73
Architect: Crites & McConnell and Brooks Borg & Skiles
Acoustical Consultant: Paul S. Veneklasen & Associates
Contractor: Blackhawk Construction Co.

The third building at the Iowa State Center was the Little Theater. Contracts for construction were awarded February 11, 1972, those for construction were let February 11, 1972, and work began in March.

The building was completed in time for the dedication ceremony on January 19, 1974, when the contributions of J.W. (Bill) Fisher of Marshalltown were recognized by naming the building for him.

The copper and bronze statue, "The Prophet", in the second level lobby, was also a gift from Mr. Fisher.

The Fisher Theater has a seating capacity for 424 people in an attractive, intimate setting. It serves for presentation of drama, dance, music and lectures.

A freight elevator, serving the stage area and shops below, was installed in 1976.

The building was funded entirely from donations including the $325,000 gift by Mr. Fisher for a total amount of $900,000.

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(1) Minutes, June 23-25, 1965

(2) Minutes, October 14-15, 1965

FOOD TECHNOLOGY LABORATORY

Food Processing Laboratory

Built: 1960-62
Architect: Amos Emery & Associates
Contractor: Carlson-Rockey, Inc.

An appropriation for a Food Processing Building was requested in 1956, in the amount of $350,000. Two years later, when a new asking was presented, the cost was increased to $367,500. That sum was appropriated in the spring of 1959.(1)

In June 1959 the architect was selected and the proposed project description was given:

> This building will be constructed as an addition on the east end of the north wing of the Dairy and Food Industry Building. It is planned to be of masonry construction, two stories in height. The building will be of utilitarian design, accommodating primarily research laboratories but with a minimum of office space for research personnel.(2)

A grant of $119,500 was received from the U.S. Public Health Service in 1960. Plans were completed and construction contracts were awarded in November.(3)

Acceptance of the project came on June 15, 1962.(4)

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(1) Minutes, July 26-27, 1956; July 10-11, 1958; May 7-8, 1959

(2) Minutes, June 18-19, 1959

(3) Minutes, November 10-11, 1960

(4) Minutes, June 14-15, 1962

FORAGE SHED

Built: 1923
Razed: ca. 1929

This structure was just to the south of the frame Military Stables near Pammel Woods.

The only formal record occurs in the Board minutes for December 13, 1922:

> $2,700.00, or so much thereof as may be necessary, is hereby appropriated from the Fund for Additional Construction and Equipment for the construction of a forage shed in connection with the military stable, and installing electric lights in this group of buildings. The college is under obligation to furnish buildings and up to the present time feed has been stored out of doors. The government furnishes horses, feed and men.

The Forage Shed is included in the list of buildings in the Secretary's Report for June 30, 1928, but is not included in the 1930 list, so it can be assumed it was removed between those two dates.

FOUR-APARTMENT HOUSE

Built: 1921 Moved: 1940
Sold and removed: 1967

This building was originally located on the west side of Wallace Road at about the southeast corner of the addition to the Physical Education Building (Women's Gym). There is no available record to indicate who designed it or by whom it was built.

It was first mentioned at the Sept. 15, 1920, Board meeting when

> President Pearson submitted tentative plans for a house of four apartments, and he suggested that such a building be constructed for the use of employees of the College, the cost to be paid from the fund for the construction of small buildings.

Construction was approved in June 1921. Presumably it was built by the Building and Grounds Department.

The Sept. 28, 1921, edition of the Iowa State Student makes this brief reference:

> ....new apartments have been provided for the engineers at the power plant. The apartment is located across the tracks, south of the plant. Room has been provided for four families.

The Board minutes for April 14, 1921, stated, "At least two apartments to have three rooms with bath and the other two or three rooms with bath." The minutes of the August 31-September 1, 1921, meeting added

> ....this building will be heated by steam from the Power Plant. Each apartment will have its own meter and occupants will pay for the heat on bills rendered....similarly, occupants will pay for water and electric current. The rental to be collected each month will be twenty-five dollars for each of the two center apartments and twenty-seven dollars for each of the two end apartments....

In 1940, just before the construction of the Women's Gym was started, the building was moved to a site on the east side of Beech Avenue, just north of the intersection with Sunset Drive. The Biennial Report for the period ending June 30, 1940, reports the cost of moving the building was $604.68.

To make way for the development of the Iowa State Center, the Board approved of the disposal of this and two other houses at the meeting of March 9-10, 1967. The Four-Apartment house was purchased and moved by a private investor and now, with a brick facing, stands on the south side of S. Fourth Street approximately opposite the south access drive to Lincoln Plaza.

FREEMAN HALL

Dormitory #2, East Hall

Built: 1915-16 Remodeled: 1967
Architect: 1915 Proudfoot, Bird & Rawson
1967 Savage & Ver Ploeg
Contractor: 1915 J.B. Evans Construction Co.
1967 James Thompson & Sons

Increasing enrollments of women made necessary additional housing "located in buildings that are entirely under college control."(1) Tentative plans for "two additional units to the dormitory for women" were presented to the Board at the February 1915 meeting and at the June meeting of that year the architect was instructed to prepare final plans and specifications. The construction award was made in September. Contracts for heating and plumbing equipment were approved in November.

The contractor went into bankruptcy in March 1916 and work on the building was temporarily interrupted. Construction was then resumed under the direction of Superintendent Sloss who completed work by September.(2) The building was then named East Hall.

The building "accommodates 93 young women and has a guest room for parents, an accommodation that has been greatly needed."(3) Fire escapes were added in 1918.

East Hall was renamed Alice Freeman Hall by Board action on October 9, 1928.

A major renovation of Freeman Hall was undertaken in 1966-67. The project description states:

> Freeman Hall is the second oldest women's dormitory at Iowa State University, having been constructed in 1916. It is of brick masonry, fire-resistant construction with a slate roof, and structurally is in excellent condition. However, the plumbing, heating and wiring are inadequate; and particularly the plumbing piping has deteriorated to the point where maintenance costs are excessive. This type of work will require considerable patching of plaster after the mechanical work is completed and also complete redecoration.(4)

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(1) Biennial Report, 1912-1914

(2) Biennial Report, 1914-1916 and Minutes, September 15, 1916

(3) Biennial Report, 1914-1916

(4) Minutes, August 11-12, 1966

FRILEY HALL

Including Hughes Hall

Built: First Unit (Hughes Hall) 1927
Second Unit (Friley Hall - north) 1939
Third Unit (Friley Hall - central) 1941-42
Fourth Unit (Friley Hall - south east) 1949-51
Fifth Unit (Friley Hall - south) 1953-54
Sixth Unit (Friley Hall - food stores) 1964-65

Architects: 1927 - Proudfoot, Rawson & Souers
1939 - Oren Thomas and Brooks-Borg
1941 - Oren Thomas and Brooks-Borg
1949 - Brooks-Borg
1953 - Brooks-Borg
1964 - Russell and Lynch

Contractors: 1927 - Tapager Construction Co.
1939 - Kucharo Construction Co.
1941 - C.C. Larsen & Sons
1949 - Lippert Brothers, Inc.
1953 - W.A. Klinger Company
1964 - Carlson-Rockey, Inc.

Major Remodeling: 1961 (Hughes Hall Unit)
Architect: Brooks-Borg
Contractor: Arthur H. Neumann & Brothers, Inc.

1964 (Plumbing Replacements)
Architect: Brooks-Borg
Contractor: King-Bole, Inc.

1966 (Hughes Hall Unit)
Architect: Brooks-Borg and Skiles
Contractor: James Thompson & Sons

1978 (North Unit Remodel)
Architect: Brooks-Borg and Skiles
Contractor: Story Construction Co.

For a quarter of a century following the burning of Old Main no provisions were made for the housing of male students on the campus. The need for action was pointed out in an editorial in the Iowa State Student on September 22, 1919:

> The most important question confronting the college and community is the housing of students. Temporary housing will probably work out satisfactory but inconvenience to students will be a serious handicap in getting the right start in their college work.
>
> Though the year is an extraordinary one, as far as college attendance is concerned, it is a well established fact that the Fourth ward has not in the past and probably will not in the future take care of all the students in the way that it should. Even in normal times students have been forced to take rooms up town owing to the scarcity of suitable quarters in the Fourth ward. Rooming a mile and a half from college is a disadvantage that cannot be overlooked. The crowded street cars with unreliable service, the time wasted riding back and forth, the necessity of having two boarding places and many other such draw-backs make living in town hard for students and especially hard for the first year men.
>
> The college cannot depend upon the Fourth ward to house the students properly and the down town district has disadvantages that make it lessen its value as a rooming district. It remains for the college itself to solve the question.
>
> Dormitories for men would be the solution. This system of housing men has proven satisfactory in almost every college in the country. Iowa has just completed a large men's dormitory and expects to build more. Our own girls' dormitories have shown that a dormitory under proper supervision is the most satisfactory form of housing students to be had.
>
> There are, of course, many arguments to be advanced against men's dormitories. The fact that men are rough on property is admitted but if these dormitories are run on a business basis as they should be, these troubles could be easily settled. The management of the dormitory would be the big problem. First year men are usually occupants of dormitories and have some respect for upper-class men. At the Washington State College, upper-class men are picked to have charge of certain sections and no trouble of any sort is experienced.
>
> College authorities feel that dormitories will eventually come. The increase of women students has necessitated the continual building of suitable quarters for them, but when these students are completely taken care of, men's dormitories will undoubtedly be built.

On February 28, 1923, the same paper again expressed concern:

> One of the most evident needs at Ames is housing facilities for the 60 or 70 per cent of the men not taken care of by organized houses. Many of them are living in attics, some of which are unfinished and many of which are unsanitary. Others are in rooms that don't permit of effective study or reasonably good living. Those familiar with the situation will affirm that this statement is not exaggerated. Freshmen men in particular have difficulty in getting located as they should and some go home every year because the housing situation is so acute. These facts are realized by some students, but by comparatively few people over the state. How can they be expected to know when no one tells them?

The state legislature, in 1925, passed a law permitting the borrowing of funds, through the issuing of bonds for the purpose of constructing dormitories at the three state colleges. Iowa State immediately took advantage of this opportunity and began consideration of kinds and possible locations of dormitories, with the emphasis on housing for freshmen. By the fall of 1926 the architect had been selected and the site chosen for the first unit of what would ultimately become Friley Hall as it stands now.(1)

Contracts for construction of the first unit of the men's dormitory were awarded in February 1927(2) and the building was occupied in the fall of that year.(3)

This unit was officially named Hughes Hall on May 28, 1936. It retained that name until 1957 when the complex became known as Friley-Hughes Hall. In the mid sixties the Hughes name was dropped and the total structure is now called Friley Hall.

At the end of 1937 a minor remodeling operation in Hughes Hall resulted in dividing two lounges into six student rooms.(4)

The second men's housing unit constructed was the north section of today's Friley Hall.

This part was built with the help of a grant from the Public Works Administration. Excavation started in November 1938 under a separate

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(1) Iowa State Student, September 30, 1926

(2) Minutes, February 9-10, 1927

(3) Iowa State Student, September 29, 1927

(4) Iowa State Student, January 8, 1938

contract. The general construction contract was not executed until January 1939.(1) The building was occupied in late October of that year.(2) Acceptance of the contract work was made the following month. Total cost of the project was about $206,000 of which $93,013 came from the federal grant.

Demand for more housing resulted in steps being taken, just a year later, to initiate work to "complete the remaining unit". In November 1940 President Friley expressed the need to the Board and in January 1941 the architect was instructed to prepare plans for what was to be the east and central section of Friley Hall, although that designation was not applied to the building until May 1942.

Construction started in the summer of 1941 and the building was occupied in July 1942. In June and July of that year Hughes Hall and Friley Hall were completely assigned to navy trainees, who were in control of the buildings for the next three years during World War II.(3) Women student occupied Hughes Hall in the fall of 1945 for a period of one year, and it was used for married students the following year. From 1947 until 1969 only men were housed in the hall. Beginning in the fall of 1969 some sections were allocated to women.

During 1945 and 1946 additions were being planned for both Hughes Hall and Friley Hall. The proposed new wings appear on a campus map published in the student paper on November 2, 1945. This showed an eastward expansion of Hughes Hall and a southern extension on Friley Hall.

It was 1949 before a final decision was reached and funding arranged. This addition was then limited to a southward and southwest wing on Friley Hall. Contracts for construction were awarded in December 1949. Work started immediately and the building was ready for students in September 1951.

The next unit built connected Friley and Hughes Halls to make a single structure. That section was constructed in 1953-54. Construction began in July 1953 and was completed in time for the fall term of 1954. The next fall Beyer Court and Parking Area was paved under a separate contract with W.A. Klinger Company.

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(1) Minutes, January 12, 1939

(2) Iowa State Daily Student, October 28 and 31, 1939

(3) Schilletter, 1970, p. 202

A major remodeling of the toilet rooms in the Hughes Hall section was undertaken in 1961 at a cost of $75,000. Similar improvements were made in other units of the building in 1964 and 1966.

The Food Stores Addition, to provide facilities for all residence halls, was erected in 1964-65.

In 1975 the East Dining Room was extensively remodeled and renovated. H. Summerfield Day, University Architect, prepared the plans and work was done by Boone Construction Company.

A major remodeling of the 1939 unit was made in 1978.

FRUIT STORAGE SHED

Horticulture Fruit Shed

Built: 1916
Razed: 1925 (?)

A building for fruit storage was first requested in the Biennial Report for 1912-14. In September 1915 the Board authorized its construction. At the October 27, 1915, meeting of the Board the sum of $600 was appropriated and the proposed building was described:

> It was understood that the walls of the shed will be constructed of tile and that the walls will be approximately 20 ft. high from foundation to rafters and the foundation plan will be about 12 ft. 10 inches by 30 ft. 10 inches. The exact location of the shed is left to the President of the College and the Superintendent of Grounds and Buildings for decision.(1)

The location of the building is uncertain as it has not been found on any maps. The location in the "north experimental orchard" is mentioned in the September 1915 minutes. That would place the site north of the tracks in what is now west part of west Pammel Court.

On October 28, 1916, the Minutes of the Board record the final cost of the building was $749.53. It was carried on the building list in the Biennial Reports from 1918 to 1924 at a valuation of $594. It can only be assumed that the structure was razed about 1925, since it does not appear on subsequent lists.

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(1) Minutes, October 27, 1915

THE GABLES

International House

Built: 1879-80
Razed: 1963

President Welch purchased land and built a home just south of the College property in 1879. This is the present location of Buchanan Hall.

The house was built by a Mr. Turner.(1) The Welch family moved into the house in late 1880. The cyclone of April 8, 1882 "removed a few of the Chimneys".(2) The house was described at the time the Welch heirs were planning to sell it:

> It consists of a two-story brick house and four acres of ground. In contains nine rooms and a commodious hallway, with a cellar under the entire house. It is well constructed and tastefully furnished throughout. The grounds are finely landscaped and beautifully ornamented by shrubs and trees, which have now grown to pleasing proportions. The property can be bought for $3,000.(3)

Professor Millikan Stalker purchased "The Gables", as it was called, in 1898 or 1899 and moved into it in 1899. He willed it to his sister, Sallie Stalker Smith, who, in turn willed it to her sisters, Margaret Stalker and Julia Stalker Swearingen during their lifetimes. After their deaths the property was to go to Iowa State College in the names of Milliken Stalker and Sallie Stalker Smith to further the cause of international good will.

Ownership of the property passed to the College in 1928. The Gables became International House as a residence for foreign male students in compliance with Mrs. Smith's will.

A fire on January 7, 1951 resulted in extensive damage to the house. Repair costs were covered by the dormitory insurance policy. General construction costs came to $9,366 and the work was done by James Thompson & Sons. Painting, electrical and plumbing work was done by the Physical Plant department at a cost of $1,634.

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(1) The Aurora, June 1880

(2) The Aurora, April 1882

(3) 17th Biennial Report, 1896-97

The house continued in use by foreign students until it was purposely burned down in 1963 to make way for Buchanan Hall which continued as a foreign student residence.

Occupants of the house are listed by Dorothy Kehlenbeck(1) as follows:

1880-1885	President Welch
1886-1891	President Chamberlain
1892-1898	President Beardshear
1899-1906	Milliken Stalker
1897-1921	Sallie Stalker Smith
1922-1926	Kappa Sigma
1927-1928	Sigma Alpha Epsilon
1928-1963	International House

GENETICS LABORATORY

Built: 1932 Additions: 1940-41, 1952-53
Architect: 1932 - A.H. Kimball
1952 - T.K. Fitzpatrick
Contractor: 1932 - Tapager Constr. Co.
1952 - James Thompson & Sons

The Tenth Biennial Report for 1926-28 included a Genetics Building in the list of needed buildings at an estimated cost of $100,000. The next Report, two years later was more conservative with a request of $18,000 for "A small two-story brick building." By 1932 the cost was established at $10,000,(2) but after bids were received in August of that year the allocation was increased to $12,000.(3) Construction started that summer and was completed by December of that year.(4)

In 1940 funds provided by the Rockefeller Foundation resulted in the construction of a wing to the north, about 20' x 35', providing addi-

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(1) Dorothy Kehlenbeck, Manuscript 1969

(2) Minutes, July 5-6, 1932

(3) Minutes, September 26-28, 1932

(4) Minutes, December 16, 1932

tional laboratory space.(1) The west side of that addition was on line with what was then the west wall of the original building. There is no reference to architect or contractor in the Board Minutes so it may be assumed that the work was done by the Physical Plant Department.

An addition along the west side, about half again the width of the original building, was made possible by grants from the Atomic Energy Commission in 1952. Those funds were related to research projects on the biological effects of penetrating radiations. The College paid only for the cost of the construction of the building shell while the federal funds covered the costs of all plumbing, electrical work and equipment for the interior. The work was accomplished under three sets of contracts and all were completed at the end of 1953.

GENETICS AND PLANT PATHOLOGY GREENHOUSE

Built: 1929-30
Contractor: Foley Greenhouse Mfg. Co.
Razed: 1969

The Board authorized the use of $12,000 for this greenhouse at the meeting of July 9, 1929. The construction contract was awarded in September.

This greenhouse was located north of Science Hall. It was a U-shaped structure with the bottom of the U facing Pammel Drive and the legs extending to the south.

The structure was razed in 1969 to prepare the site for the construction of Science Hall Addition #2.

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(1) Minutes, N vember 1, 1940

GILMAN HALL

Chemistry Hall

Built: 1913 Remodeled: 1954, 1956, 1960
Addition: 1963-64
Architect: 1913 Proudfoot, Bird & Rawson
Contractors: 1913 McCarthy Improvement Co., Davenport
1954 J. Thompson & Sons
1956 Ringland-Johnson, Inc.
1960 W.A. Klinger, Inc.
Gethmann Construction Co.
1963 P.L. Carson Co.

As early as 1901 the need for larger facilities for the cheimistry department were reported to the Board of Trustees. In the Biennial Report for 1906-08 a new chemistry building was called "one of the imperative needs of the college." No funds were made available until 1913 when the disastrous fire on March 25 destroyed the old Chemical and Physical Laboratory. Then an allocation of $250,000 was made for a new building. The construction contract was awarded in August 1913.(1)

A story in the May 23, 1914 Iowa State Student describes the new building:

> The new chemistry hall at Ames, for which the last legislature appropriated $250,000 and which is being built to replace the Chem. hall, the old landmark which went up in smoke on a night last spring when the general assembly was in session, will be completed, structurally, easily by the first of July, the time limit in the contract. If the structure is not completed by July 1, Superintendent of Buildings and Grounds Sloss will tax a $100 daily penalty on the contractor; but the contractors declare they will have the roof on the laboratory and the building ready for use a few weeks early.
>
> The laboratory will be ready for use by student classes by the opening of the college year in September. Superintendent Sloss will put in the plumbing, desks and all interior construction, during the summer after the structural contractors are through.
>
> The building will be three stories in height, with a basement about half to be above ground level. Through the wings, the building is 159 feet wide; and through the main body of the building, 164 feet. The wings are 57 by 76 feet. The main part of the building is 244 feet 8 inches by 149 feet including three courts.

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(1) Minutes, September 1913

Large Auditorium in Center

The total, useable floor space will be 110,000 square feet. An auditorium will be in the center of the building, it beginning on the ground floor at the lowest elevation of the floor and rising at the rear to the level of the first floor. The auditorium lighting will be by a top skylight, to be darkened by a curtain controlled by a motor. The seating capacity of the auditorium is to be 396, which is about that of the auditoriums of the chemistry buildings of the larger universities. The auditorium will be equipped with a reflectoscope and stereoptican. A large lecture table will be arranged in triplicate so that the central portion of it can be off the stage into the preparation rooms, where the experiments may be set in place and then set up in the lecture room.

The general ventilation of the building will be controlled by two 30 horse power motors driving fans which will pump into, and force out of, the building 180,000 cubic feet of air a minute. Each floor of each wing will be under damper control so that the air may be shut off. By this ventilating system, the air comes in from the bottom of the floor and is ejected at the top, which in most of the chemistry buildings of the country, is vice versa. The ventilating system is a special one for the Ames chemistry building, and by it the building is divided into units of electrically operated ventilating machinery which controls the opening and closing hoods of the ventilating apertures. Its advantages are positive ventilation and cheapest operation.

Store Room for Each Floor

The building has a store room system. All floors have storerooms in vertically the same parts of the building connecting with each other by an elevator and dumb waiter. The administrative office, the office of Prof. W.F. Coover, the new head of the chemistry department succeeding Prof. A.A. Bennett, who went to California soon after the old Chem hall fire, will be on the second floor. The offices of the associate and assistant professors will be located throughout, and in different parts of the building, adjacent to their particular work and departments. The instructors will have offices, immediately in their sections of the various laboratories.

Room for 2500 Students

The capacity of the building is to be between 2,000 and 2,500 lockers. There were, last semester, 1500 students in the whole college, taking some form of chemistry work. Prof. Coover and the faculty planned the building with the idea in mind to have it accommodate the chemistry department for ten years. "But,

at the present rate of development of the college, the building will not do more than do this," says Prof. Coover.

The first floor of the building will be devoted to inorganic analysis, physical chemistry, food and sanitary chemistry and applied organic chemistry, and photographic chemistry. The basement will contain all the work in technical chemistry and the two year short courses in agriculture, engineering and home economics.

Rooms will be provided for graduate work in applied science, along the lines demanded by the various divisions of the college. It is the purpose of the department of chemistry to offer only that graduate work which is essential to the proper development of the institution.

Asphalt Floors Provided

One of the most important features of the new hall is that the building was planned with the idea of getting away from cement floors, which have a decided and detrimental tiring effect on the body. Asphalt floors will go down in all the working floors of the building. Asphalt flooring is elastic and is said to be much more satisfactory than hard, unelastic concrete where students work entire half days at a time always standing.

The building is of brick. It has three main entrances. It is a few hundred feet directly north of Central hall.

Although the building was opened for classes in September 1914, the conditions were not the most ideal. Two items in the current student paper explain the situation:

Classes in Chemistry will begin their work promptly at 8:00 Monday in the new building, is the latest announcement from the Chemistry department. The men have been working night and day for the past few weeks and the laboratories will be in shape to accommodate every one on schedule time. The gas and water pipes are in and will be ready. The ventilation system is complete and the temporary lockers are up. Due to the rush the equipment has not all been placed but there is plenty to keep the freshmen busy.

The Chemistry department will not have a monopoly on the building by any means. Engineers, Ags and Science each have appropriated a part of the new space. Miss Maclean will have a class in 2 year English and Professor Bowman will have a class in collegiate English in the new building. Prof. Bartholemew has dragged his bug cages up on the second floor and the usual zoology smell will battle with the fumes of gases.

The Engineering department have taken a room for their chemical and photo departments. The Agricultural Experiment Station has also shifted their Chemistry department to the third floor. The first floor looks like a section of a county fair since the poultry department moved in. Down in the basement the Home Economics girls have a sewing laboratory. In fact, chemistry hall holds a little bit of everything besides caring for the classes in chemistry.(1)

Without an office, a laboratory or a class room completed, the new chemistry building is at present one of the busiest places on the campus. Laboratories, although equipped with nothing but temporary boxes as lockers and with rough boards for benches, are accomodating more than a thousand students.

The chairs in the assembly room and class rooms have been rented from a furniture company, and to be returned when permanent chairs are installed.

Fifty or more instructors are making their headquarters in offices, each of which is furnished with hardly more than a nail to hang their wraps upon. Over more than a hundred workmen are fitting doors, putting in concrete, finishing stairways and doing innumerable other things necessary to the completion of the greatest chemistry hall of the middle west. With the exception of the state capitol no other building in Iowa contains as many square feet of plastered walls as chem. hall.

But not only is the chemistry building a headquarters for the chemistry department. It contains almost everything from the offices of the agricultural and engineering experiment stations to Miss Maclean's English class of the two year ags, and from Colburn's photography offices to a lab in poultry 46.

Even under these adverse circumstances of an uncompleted building and a mixture of courses, every thing seems to be working as smoothly as if arranged months ago.(2)

The Biennial Report for 1914-16 shows total expenditures for the building at $361,905.49.

Additional laboratory equipment was acquired and various interior changes made from time to time over the next thirty years. The most obvious

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(1) Iowa State Student, September 13, 1914

(2) Iowa State Student, September 20, 1914

exterior change occured in 1942 when a new entrance was made on the south front. This is described in the Iowa State Daily Student on August 11 of that year:

> Work began Saturday on a new $3,000 entrance to the Chemistry Building. The project is expected to be completed about Sept. 1.
>
> The entryway will be 25 feet wide with cut stone balusters on each side of the approach, according to B.H. Platt, head of buildings and grounds. The platform will be of red quarry tile.
>
> A lamp post will be placed at either side of the entryway near the curb, and six new doors will be installed in the building. The sidewalk in front of the building and extending about half way to the Agricultural Engineering Building will be lowered about 1½ feet.
>
> Platt said the approach to the chemistry building was built in 1912 and has worn more rapidly than any other spot on the campus.
>
> Work on the project is being done by James Thompson and Sons, of Ames.

By 1947 the expansion of activities of the Institute for Atomic Research required new facilities for that work. Professor T.K. Fitzpatrick, Architectural Engineering, was authorized to prepare preliminary plans for the third and fourth wings of the building.(1) However, sixteen years elapsed before that addition was undertaken. A Tracer Laboratory was installed by remodeling in 1948, with A.E.C. funds and in 1950-51 the same source provided $30,000 for new laboratory equipment.

Appropriations of $70,000 for "modernizing classrooms, offices and laboratories", $175,000 for repairing and rebuilding equipment and $9,000 for replacing heating coils were made in May 1953. Two years later an additional $250,000 was appropriated for "repairs, replacements, alterations and equipment". Another appropriation in the same amount was made in 1959. The work under that fund was used principally for remodeling of third floor laboratories for Bio-chemistry.

A $2,000,000 appropriation in the spring of 1961 assured the construction of a major addition to the building. An additional $617,500 was received as a grant from the National Science Foundation. The addition was completed in 1965.

Modifications and replacements have continued in the old portion of the building. Chemistry Hall became "Henry Gilman Hall" by action of the Board of Regents in June 1973.

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(1) Minutes, December 9, 1947

GOLF CLUB HOUSE

Built: 1972
Architect: Physical Plant Department
Contractor: Physical Plant and Siedelmann Construction Co.

This building was built as part of the development for the re-designed golf course resulting from the planned extension of 13th Street between Stange Road and Ontario Street.

It is located on the north side of the course with access from Stange Road.

The building was designed to reflect the architectural style of the apartments across Stange Road in University Village. Inside it provides men's and women's dressing and locker rooms on the lower level and on the upper floor a pro shop and snack area with vending machines as well as a large club storage room.

GREENHOUSE

(East of Botany Hall)

Built: 1896 Addition: 1903
Architect: 1903 Proudfoot and Bird
Contractor: 1896 Lord & Burnham; M. Hullabarger (foundation)
1903 C.E. Atkinson
Razed: 1968

The need for more adequate greenhouse space to serve the college was expressed in the Biennial Report for 1894-95, and the cost of a suitable structure was estimated at $12,000. Funds were appropriated and bids were received in July 1896. Costs at that time amounted to $5142.50. Estimate for heating plant was $1250.

The greenhouse proper was L-shaped, with the north-south leg 60' long by 34' wide and the east-west leg 42' long and 20' wide. At the east end of that leg was a frame potting house. The greenhouse structure was built on a brick base.

When the Horticulture Laboratory was built in 1901 it replaced the potting shack which was "moved to the north side of the greenhouse, and there used for general construction work."(1)

Funds for greenhouses for Agronomy, Soils and Horticulture were made available through the proceeds of the one-fifth mill building tax

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(1) I.A.C. Student, October 19, 1901

then in force (1902).(1) These greenhouses were built as an addition, or extension, to the north of the 1896 greenhouse.

The new construction included a 65' long by 12' wide link extending north from the earlier building, to a 95' by 42' unit on an east-west axis. On the west side of it was a brick potting and storage building 75' by 13'. This isthe building known as the Ceramic Studio from 1969 to 1978. The greenhouses of 1896 and 1903 vintage were all razed in 1967 and 1968.

GREENHOUSE

(At Experiment Station Building)

Propagating House

Built: 1888
Architect: Foster & Liebbe
Contractor: Smith & Tusant
Razed: 1897

A propagating house was built as an attached unit when the Experiment Station Building (Bevier House) was built in 1888.(2)

When the Experiment Station Building was moved in 1896 the propagating house remained. During the spring of 1897 there was consideration of a plan to move it to the rear of Morrill Hall.(3) That plan was discarded and the building was razed in the fall. It was recorded in the November 1897 minutes:

> We report the old greenhouse torn down, as ordered by the Board. The brick are piled back of Agricultural Hall for future use. The glass frames were sold by the President to Mr. Foster for $8.00. The grounds have been graded by Public Grounds Committee under the direction of the President.

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(1) Minutes, November 1902

(2) Minutes, May 1888

(3) Minutes, February and May 1897

GREENHOUSE

(At First Horticulture Laboratory)

Propagating House

Built: 1879
Razed: 1894

The need for a greenhouse was first stated in the Biennial Report for 1876-77:

> We also need a neat, durable and commodious Propagating House, not in the way of a show Green House stocked with rare and expensive plants, but mainly for the propagation and winter preservation of bedding plants needed in the flower borders, for the propagation of plants for study in the Botanical classes, and most important of all for the propagation of plants, small fruits, shrubs, etc., for the vegetable garden and nurseries. Built in neat modern style, of brick, iron and glass with best heating apparatus, the cost of such a structure would not exceed twenty-five hundred dollars.

State funds were not forthcoming, but a solution was reached as reported in The Aurora of April 1879: "Our last legislature, wisely or unwisely, refused to grant an appropriation for building a greenhouse. Yet 'where there's a will, there is a way'. Prof. Budd improvised a neat little plant room at the horticulture laboratory which is like a New York omnibus, as it will always hold one more flower."

This greenhouse served, though inadequately, until the Experiment Station Building (Bevier Hall) was built with its propagating house in 1888. It continued in use for another few years until it was razed in 1894.

(The Horticulture Laboratory referred to here is the building carried under the name Farm Boarding Club.)

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(1) Minutes, May 1888

GROUNDS COTTAGE

Sexton Cottage, Old Horticultural Cottage

Gardener's Cottage

Built: 1882
Architect: Professors Knapp and Budd
Razed: 1970

Original location where Gilman Hall addition stands now. Later moved twice.

For planning and construction see first paragraph under Farm Laborer's Cottage.

In 1886 the Building Committee recommended the addition of a cheap porch. A water line was extended to the house in 1892.

The first tenant in the house was Jerry Sexton, gardener and custodian of the greenhouse. He occupied it until late in 1899, when the house was ordered vacated.

In January 1901 the cottage was repaired and fitted up for the new gardener, Al Duebendorfer.

By 1905 a decision was reached to provide a new house for the horticulture department and the old building was moved to a site west of the Marston Cottage. That would be about in the center of the southwest wing of Helser Hall. The moving and repairs cost $1202.

In that location the cottage became the residence of Ben Edwards, superintendent of buildings and grounds, until 1910. It was subsequently occupied by grounds department employees until it was again moved in 1924. Its new site was on Wallace Road south of the Physical Plant area where it was the second from the east in the group of five employees houses along that street. It remained there until it was razed in 1970.

Tenants: 1934-1956 John Hamilton

1962-1968 Dwight Evans

GROUNDS SHOP

General Shops

Built: 1924-25
Contractor: F.M. Eller
Razed: 1972

Located at the inside base of the U formed by the present Physical Plant Shops and Stores Building.

This building was conceived as a "Storage Building for Buildings and Grounds Department" at the time the construction contract was awarded in September 1924, in the amount of $6,537.

In 1928 the record shows an increased value of $10,500 and thirty years later $11,746.72, and retained that value until it was razed to make room for the new building.

GUN SHED

Built: 1916
Moved to Dairy Farm: 1924

A building for the storage of rifles was authorized by the Board at their meeting of Aug. 9, 1916. By the end of October of that year it was noted that the final cost was $1536.06.

It was built at a location along what is now the east side of Exhibit Hall. A forty foot long extension was added in 1918, and in the same year the building was moved to a location across the road to the north of Engineering Annex where its east end lined with the front of that building. The gun shed was then about 130 feet long and 24 feet wide.

In the fall of 1922 after the new Armory had storage space for the rifles, the gun shed became an electric wiring laboratory, where practical electrical work was taught.

By 1924 this was no longer a needed use and the building was moved to the Dairy Farm where it was fitted out as a dormitory.

GYMNASIUM

Built: 1883
Removed: 1886

Located about 175' west and slightly north of the south wing of Old Main. (Shown on 1883 map.)

In the fall of 1882 The Aurora reported: "A majority of the students have organized themselves into a stock company for the purpose of establishing a gymnasium." Elsewhere in the same issue(1) it was stated that the students were aided by the faculty. The following April the paper was able to note that "Our Gymnasium Association....is getting ready as rapidly as possible to perfect its plans for active work." Work on construction must have started very soon thereafter because in June the editor asked "Why isn't the Gymnasium completed?" A couple of months later it was recorded that the gymnasium was "at last finished."(2)

In May of 1883 a committee of students requested funds from the Board of Regents, $25.00 for completion of the building and $200 for equipment. The Board stated that they could not legally appropriate any money for the building and that since the building was not completed they would defer action on equipment. At completion of the gymnasium in August the Board appropriated $75 for apparatus.(3)

The Gymnasium Association never received enough funds to pay off the indebtedness on the building and in March 1886 it was removed by Professor Mount to his property in payment of his aid in financing the construction.

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(1) The Aurora, October 1882

(2) The Aurora, August 1883

(3) Minutes, May and August 1883

HAWTHORN COURT

Built: 1956-57, 1958-59
Architect: 1956 Leonard Wolf, Ray Crites and Physical Plant
1958 Crites and Peiffer
Contractor: 1956 Lindholm Lumber Co.
1958 Gethman Constr. Co.

The need for married student housing was becoming more acute by 1954 and Pammel Court facilities were too limited to take care of the requests. During 1955 plans for duplex type units were developed and financing for the project was worked out.

Construction contracts were awarded for the first 96 units in April 1956.(1) In June the name "Hawthorn" was adopted. By September the paper was able to report that "the first 28 families have moved into Hawthorn Apartments....the second 82-apartment area should be occupied about a month later and the third section available around Dec. 1."(2)

These apartments proved very successful and satisfactory to the tenants.

Approval to build an additional 100 units came early in 1958. Construction began in September and was completed the following September. Only minor changes were made in the plans for the second group of apartments.(3)

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(1) Minutes, April 12-13, 1956

(2) Iowa State Daily, September 22, 1956

(3) Schilletter, 1970

HELSER HALL

Built: 1956-57 Addition: 1962-63
Architect: Brooks-Borg
Contractor: 1956 W.A. Klinger
1962 James Thompson & Sons

In January 1954 the President included a new men's dormitory, with an estimated cost of $1,800,000 on the list of housing needs.(1) By late 1955 authorization to arrange financing was approved and the architect was chosen.(2) The project moved rapidly and construction of the 600-man hall was started in May 1956.(3)

The decision had been reached before the planning stage that this hall would not be provided with dining room and kitchen, but instead that the residents would eat meals at Friley Hall. This permitted a more economical construction.

The name "Helser Hall" was assigned in honor of Dean Maurice D. Helser, at the Board meeting of Feb. 7-8, 1957. It was first occupied in September 1957.(4)

Increasing enrollments created the need for more housing and plans for an addition were initiated in late 1960. By February of 1961 plans were approved.(5) Bids were received in May but were rejected when financing could not be arranged because of an impending suit by the Iowa Hotel Association against the Board to stop construction of an addition to the Memorial Union at the University of Iowa.(6)

By 1962 the legal problems had been settled, new bids on the Helser Hall addition were received and work started in late May or June. The project was completed and ready for use with the opening of the 1963 fall term.

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(1) Minutes, January 14-15, 1954

(2) Minutes, November 9-10, 1955

(3) Minutes, May 10-11, 1956

(4) Schilletter, 1970

(5) Minutes, February 9-10, 1961

(6) Minutes, June 22-23, 1961 and Iowa State Daily, May 18, 1961

HERDSMAN'S COTTAGE

Built: 1912
Designed and built: Thomas Sloss
Sold and moved: 1966

This house was located at what is today the southeast corner of the East Hall addition. Late in 1911 the Board authorized $1500 for erection of a five or six room house for the farm herdsman.(1) Work was not started until the following spring when Supt. Sloss was "ordered to wreck the old veterinary barns, and to commence work on the herdsman's house."(2)

In 1915 the Board authorized the removal of the house to a site opposite the Power Plant and appropriated $150 for that purpose. No explanation has been found of why the house was not moved, but it remained at its original site until 1966 when it was sold and moved to Gilbert, to make room for the East Hall Addition.

George Edwards, Herdsman, lived in the house from 1925 until 1965.

HILTON COLISEUM

Fieldhouse-Auditorium

Built: 1968-1971
Architect: Crites & McConnell and Brooks Borg & Skiles
Acoustical Consultant: Paul S. Veneklasen & Associates
Contractor: James Thompson & Sons

The original plans for the field house were for a building quite different in appearance from that which was finally erected. Those drawings showed a structure with massive ribs supporting a roof carried by steel suspension cables between the ends of the ribs. Bids based on that scheme were received on September 8, 1967, but were rejected because they were excessively high.

Revised plans were then prepared by the architects on the scheme which became the Hilton Coliseum. New bids were received on June 4, 1968, and construction contracts were awarded on the 13th of that month.

Dedication of the building took place on June 5, 1970, while construction was still in progress. The fieldhouse then became the James H.

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(1) Minutes, November & December 1911

(2) Minutes, May 1912

Hilton Coliseum in honor of the university's President Emeritus and his concept of the Iowa State Center project which his efforts were bringing to fruition. The formal opening of the building took place on December 2, 1971.

The size of the playing floor was established on the basis of requirements for a standard size hockey rink. Seating capacity is 12,680 when the full arena floor is needed for performances. For other occasions seating on the arena floor with movable bleachers and folding chairs permits a maximum seating of about 15000.

The $8,000,000 cost of the Coliseum was financed largely through student fees and some additional funds from donors to the Iowa State University Foundation.

Modifications were made in 1979 in improvements to access by the handicapped, increased exit facilities, changes in locker rooms, improvements in the ventilation system, and expansion of storage and shop areas, together with a new exterior ticket booth.

HOG BARN AND PAVILION

Built: 1921-22
Architect: Proudfoot, Bird & Rawson
Contractor: Supt. Thomas Sloss
East Wing razed: 1969
Balance of building razed: 1976

This building was situated on the site where the Seed Laboratory is located now.

The original request for this building was made by President Pearson in May 1921 when he recommended that $20,000 be made available for a Hog Barn and Judging Pavilion.(1) The requested funds were made available in July and the site was determined in September of that year.(2)

By October the site had been prepared by leveling and grading.(3) The building was described in the November 28, 1921, issue of the student paper.

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(1) Minutes, May 26-27, 1921

(2) Minutes, August 31 - September 1, 1921

(3) Iowa State Student, October 14, 1921

> The hogs that are being fed on dry lots north of the tracks now will be moved and the land used in development of a new pure-bred hog plant. This plant will have as its center the new swine barn and pavilion, the cost of which will be $20,000. This barn will be built of hollow tile with matted surface and will have sunlight roofs. One wing of the house will run north and south with windows on the east and west sides. The other wing will run east with a south slope and continuous windows. This arrangement will be of advantage both on account of centralization and also for the value of a comparison of the types of roofs. There will also be a large judging pavilion in connection with the swine barns and much of the swine husbandry work will be given there.

The move into the new building was made in February 1922.(1) It was August of 1923, however, before provisions were made for heating the building.(2)

The east wing of the structure was razed in 1969 and the balance of the building was removed in 1976 to make way for the new Seed Laboratory.

HOG HOUSES

The need for a hog-house was expressed in the First Annual Report for 1858-59. Over the years a number of different hog pens, houses and barns were built. These are not adequately documented, in most cases, and locations cannot always be determined.

Apparently the first housing for hogs was erected in 1865, as reported by the farm superintendent: "Mr. Graves, the farmer, reported that he tore down the shanty and built a hog pen."(3) Where that hog pen was located is unknown.

At that March 1865 Board meeting it was recommended that "a first class hog pen" be built. That was accomplished during 1866 and 1867. In January 1867 Supt. Robinson was able to report:

> A hog pen was also partly built 24 x 24 feet square, with a

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(1) Iowa State Student, February 10, 1922

(2) Minutes, August 15, 1923

(3) Minutes, March 1865. The "shanty" was undoubtedly one of the structures at the original brickyard.

passage or feed room through the center 4 feet in width, with six apartments capable of each containing 10 grown hogs, with shingle roof, and the upper part capable of housing 1,000 bushels of corn, nearly completed and would have been done if hands could have been procured. Cost $39.75. Estimated cost $60.00. Agreeable to directions the old Brickyard shanty lumber was used wherever it was suitable for the construction of the pens the estimate of which is not taken into this account.

The following year the Superintendent reported that the building had been completed at a cost of $85.87½, and that "I have had open yards made to four of the pens at odd times by hands on the farm using old timber."(1)

This was the "Piggery" pictured on page 39 of Earle Ross' "The Land Grant Idea at Iowa State College". It appears on the 1883 map, located at approximately the northwest corner of today's addition to the Women's Gym.

In 1880 it was recorded that $760.88 had been expended for a swine house built by day labor. This was undoubtedly an addition to the existing Piggery.

The Piggery was destroyed by fire in 1885 and a request for $2000 was made to permit new quarters to be built.(2) Those funds were not immediately forthcoming. In 1886 the Professor of Agriculture was directed "to move the hen house and rearrange and repair the same in such a manner as to fit it for use as a swine house."(3)

It was 1891 before a new piggery could be built. In that year $1500 was allocated and the hog house was erected in a location that is now the parking lot west of the original Women's Gym. This building became known as the Hog Barn. It burned on January 10, 1922.

The building lists from 1899 through 1922 include 15 Movable Hog Houses, with valuations ranging, in different years, from $150.00 to $500.00.

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(1) Minutes, January 1868

(2) Minutes, November 1885

(3) Minutes, May 1886

HORSE BARN (FIRST)

Built: 1870
Razed: 1900

Located where Landscape Architecture stands now.

The need for a stable was first expressed at the January 1868 meeting of the Trustees. In May the Executive Committee was instructed to "procure plans for the proposed farm building and make the location for the same."(1)

Steps were taken the following year to acquire materials but the project was abandoned until 1870. No contract for construction is recorded. It is probable that the work was accomplished using farm and student labor.

The building is described in the 4th Biennial Report (1870-71):

> The hourse barn, likewise of brick 30 x 40 feet, and provided with suitable stalls, loft, harness-room, and granary, was put up with an appropriation granted by the legislature of 1868. The construction and fitting up of a basement made the aggregate expense of one hundred and fifteen dollars and twenty-five cents more than the sum appropriated, which was two thousand five hundred dollars. This excess was paid by the transfer, made according to a law of 1868, of a part of the amount saved in the building of a hen-house and a corn crib.

This barn served well enough for a quarter of a century, but in 1897 funds were requested for larger quarters.

In 1900 the old horse barn was razed to be replaced by a new barn.

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(1) Minutes, May 1868

HORSE BARN

Horse Barn #2 and Horse Barn & Machine Shed

Horse Barn #2: Built: 1923
Horse Barn & Machine Shed: Built: 1926
Architect: Proudfoot Rawson & Souers (both buildings)
Contractor: E.B. Castle & Son (2nd building only)

The east leg of the U-shaped Horse Barn was the first unit built, in 1923, and was then called Horse Barn #2. It was designed to provide twelve stalls and a paddock room.(1)

The second unit comprised the base of the U, on the north side, planned as the machine shed, and the east leg for horse stables. It was constructed in the summer and fall of 1926.

The two units were carried separately on the records until 1969 when they were combined under the designation "Horse Barn".

HORSE BARN AT SERVICE AREA

Public Grounds Barn

Built: 1924
Architect: Proudfoot, Bird & Rawson
Contractor: Peterson, Netcott & Martin
Razed: 1972

This building was located at a site which was about the center of the north wing of the present Physical Plant Shops and Stores Building.

Authorization of a building for "horse stable and sheds" at a cost not exceeding $10,000 was granted in June 1924 and the construction contract was awarded the following month.(2)

The value of the building in 1928 was shown as $9500 and remained unchanged until the building was razed in 1972.

This was a two-story structure approximately 32 x 44 feet with a one-story shed section 38' x 27'.

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(1) Iowa State Student, October 4, 1922

(2) Minutes, July 16, 1924

HORTICULTURE BARN (FIRST)

At the May 1881 meeting of the Board of Regents a letter from Professor Budd was read. He requested approval to purchase a team and "to erect a small barn to shelter the same and for storing tools, etc." The Board authorized the purchase of the horses but not building a barn.

The following January the Board appropriated $202 "for the purpose of reimbursing Prof. Budd the amount expended by him in the erection of a barn for the Horticultural Department."(1)

During the cyclone of April 8, 1882, this barn was practically destroyed.(2)

The 1883 map shows a small structure just west of Horticulture Hall (Farm Boarding Club). That is in all probablility this barn.

In 1897 the Building Committee recommended "that the abandoned stable near the present club house near Morrill Hall be moved out for the service of the Gardener."(3) The following month the Committee reported that "the barn north of depot has been moved to gardener's house near west gate at a cost of ten dollars. We recommend it to be placed in repair."

HORTICULTURE BARN

Child Nursery Building (1928-48)

Built: 1904
Architect: Proudfoot & Bird
Contractor: M. Hullibarger
Removed: 1949

Located at what is now the southeast corner of Spedding Hall.

About 1900 the need for a barn for horticulture was first expressed.(4) Plans were prepared and bids taken in 1903, but the project was post-

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(1) Minutes, January 1882

(2) The Aurora, April 1882

(3) Minutes, May 1897

(4) Biennial Report, 1900-1901

poned until the following year when new bids were received. The contract was awarded to M. Hullibarger for $5,040 in September 1904. The architect was paid $151.20.(1) Additional funds of $306 for lighting, plumbing and fencing were allocated in December of that year.

The building was used "for the storing of seeds and nursery stock, and for housing the teams, wagons and implements belonging to the Department."(2) A cold storage room was added in the basement in 1905 and a sewage disposal field in 1911 for the Horticultural house and barn.

In 1925 "some members of the faculty are studying interior plans for a house to be developed from the brick Horticulture Barn north of the Chemistry Building."(3) In April $500 was allocated for the remodeling which was undertaken immediately.

The new function is described in the Biennial Report for 1928-30:

> For several years past we have been using a remodeled horse barn for the nursery school. This year we are adding a remodeled residence located near it. The Nursery School and the work with small children by the students in Home Economics is rapidly growing in significance and value, and there is every reason to increase the capacity of the nursery school as soon as possible in order to give the girls in Home Economics more adequate opportunity to study small children.

When construction of Spedding Hall was about to be started it was essential to remove the Horticulture Barn and the Beyer House (Nursery School Annex). Bids on the sale and removal of the two buildings were called for on December 14, 1948. Only one bid was received and it was accepted from the American Lumber and Wrecking Company of Des Moines. They paid the college $310 for the structures and removed them from the grounds.

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(1) Minutes, September 1904

(2) Biennial Report, 1903-05

(3) Minutes, January 1925

HORTICULTURE COTTAGE

Built: 1916
Contractor: Building & Grounds Dept.
Moved off campus: 1959

Located just in front of and east of the center of the Metals Development Building.

Dean Curtiss first requested a house for the field superintendent in September of 1914, when he was directed to have plans prepared and a site recommended.(1) However, it was August 1916 before funds were provided.

By the next January it could be reported:

> We have completed a house for our horticultural foreman at a cost of $2100. This will enable the man having direct charge of the horticultural barn and orchards to live adjacent to where he works, instead of a mile and a half distant. It will give us more of his time, and this will be especially valuable during the fruit-growing and ripening seasons.(2)

The first tenant was L.V. Gowdey with rent free starting Jan. 1, 1917.

Later tenants:

1926 - 1935	H.J. Bechtel, Field Foreman
1935 - 1936	Christian Petersen, Artist-in-Residence
1936 - 1948	Ben Schaefer; Rent $300 in 1936
1948 - 1952	Wm. A. Schworm, Mech. Engr.; Rent $420
1954 - 1955	Hugo Plant.; Rent $420
1955 - 1956	Hugo Plant.; Rent $480

In May 1959 the house was sold to C.A. Haugsted, who moved it to Ontario. He paid $826.50 to the college and the Atomic Energy Commission paid the difference between that figure and the appraised value of $7500.(3)

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(1) Minutes, September 1914

(2) Minutes, January 4-5, 1917

(3) Minutes, May 7-8, 1959

HORTICULTURE GARDENS BUILDING

Built: 1968-69
Architect: Physical Plant Dept.
Contractor: Ringland-Johnson-Crowley

This building was one element of the larger project involving the relocation of the Horticulture Gardens from the area of Bessey Hall to the present site east of Haber Road and north of Sixth Street.

Bids were received in June 1968 and the project was completed in February 1970.

The work included the building to provide storage for maintenance materials and equipment, but also involved the construction of the gardens, walks, and total area development.

The horticulture gardens are used as a part of the teaching process as well as providing a display for the public.

HORTICULTURE HALL AND GREENHOUSE

Plant Propagation Building

Built: 1914 Addition: 1978-80
Architect: Proudfoot, Bird and Rawson (1914)
Brooks, Borg & Skiles (1978)
Contractor: A.H. Neumann Co. (1914 Building)
Foley Mfg. Co. (1914 Greenhouse)
McHan Construction, Inc. (1978)

The building originally called the Plant Propagation Building was designed as the southeast wing of a large Plant Industry building to be erected on line with Curtiss Hall at the northeast corner of the open campus area. This can be seen in a perspective drawing of the proposed building published in the April 14, 1914 edition of the ISC Student (and again on Nov. 17, 1914). Earlier a site had been selected northeast of the chemistry building (Gilman Hall), but the final site was chosen as better for sunlight on the greenhouse and greater accessibility for a larger number of students.(1)

A contract was awarded to the Foley Mfg. Co., Chicago, in July 1914, in the amount of $16,095. In September the A.H. Neumann Co., Des Moines, was awarded a contract for construction of the building, including the basement and a cistern, for $26,654. The cistern was

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(1) Biennial Report, 1912-14

described as 37 feet in diameter, 15 feet deep with a capacity of 4000 barrels of water. An alternate bid for a brick exterior showed a deduction of only $520, and the decision was made to use limestone.

Final acceptance of the building was taken on Oct. 6, 1915, and a formal opening was held for visitors on November 5 and 6, 1915.

The addition to the west of the original building was started in 1978 and will be ready for use in 1980. An expansion of the greenhouse and remodeling of the existing greenhouse is part of this project.

HORTICULTURE LAB (Old)

Built: 1901-02
Architect: Hallett & Rawson
Contractor: W.J. Zitterell
Razed: 1978

Plans for this building were prepared in the spring of 1900 and bids were received in July. Costs exceeded available funds, all bids were rejected and the project was postponed until the following year.

New bids were taken in September 1901 and a contract was awarded to W.J. Zitterell in the amount of $4900. Bids for plumbing and heating work were received in March, 1902, but these proved to be too high and the work was done by the Mechanical Department of the college.

Construction started in November 1901.(1) An open house to recognize the formal opening of the laboratory was held on February 22, 1902.(2) The ISC Student included a picture of the new building in the issue of April 9, 1902, and said about it: "The laboratory is of pressed brick, two stories and a basement, and is the only building in America used by an agricultural college exclusively for practical instruction in horticulture."

The Old Hort Lab was well described by John Brooks in the "Report of Study.Horticulture Facilities" made in March 1976:

> One objective of this Study is to evaluate "Old Hort" not only from its functional location and economic aspects, but from the architectural standpoint. There is a feeling among some University personnel that this building should be retained as an example of the architecture of its period.

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(1) ISC Student, November 16 and 20, 1901

(2) ISC Student, February 22, 1902

The building is a two story and basement wood framed structure with exterior bearing walls of red brick. Its dimensions are 45' x 35' with a 6' x 22' projection to the south. The location is on a prominent knoll at the northeastern edge of central campus and the levels of the two floors approximately match those of the upper floors of Horticulture Hall.

The building is now used for basement storage for the Horticulture Department and the first floor is a woodworking studio for the Applied Art Department. The second floor houses offices for some graduate students and professors emeriti of the Horticulture Department. Access to this floor is up a steep difficult stairway or an exterior wood fire escape which violates all codes.

"Old Hort" was never a good building, architecturally. It is difficult to imagine that it ever could have been considered well designed, or desirable from any standpoint because access to the upper floor involved negotiating a narrow, dangerous stairway.

The exterior is a random assemblage of standard architectural motifs, chosen without discrimination and improperly scaled. In short, the south front could serve as an example of poor design. The treatment of the entrance is not offensive and would be acceptable if no other architectural embellishment had been added. But above it is a Palladian window, much too small and redundant, and above that a crude oversized lunette in the tympanum or gable. The brick quoins offer a jarring note of complexity, and the rough-faced stone sills under the windows are inconsistent with the character intended in the building.

The entrance steps and platform are presently in bad condition, but assuming that the cracks and settlement had not occurred, the design of this feature detracts substantially from the appearance worthy of a building of this importance.

If no costly reconstruction were required and if the plan were functionally adequate, the exterior design alone would serve as a compelling reason to remove this building from the campus of Iowa State University.

Should the propriety of this criticism be questioned, a photograph of the south front might be submitted to fifty qualified architects and their opinion sought.

The exterior brick bearing walls appear to be structurally sound but should be painted and the windows replaced. There is no evidence of settlement or cracking except at the entrance steps and platform. There is evidence of major plaster failure on the interior of the exterior walls and at the wood lath and plaster ceiling of the second story. The roof and perimeter cornice give

evidence of leaking badly. The floors sag badly and require shoring or replacement. In our opinion, if this building is to be used for the expanded Horticulture facilities, a restoration program as opposed to rehabilitation would be required.

The decision to raze the building was made subsequently and it was taken down prior to start of construction for the addition to Horticulture Hall in 1978.

At the time the building was being razed it was learned that the exterior walls were not "brick bearing walls" but instead brick veneer on wood framing.

THE HUB

Depot, Bookstore and Post Office

Built: 1892 Additions: 1920, 1946, 1952
Architect: Josselyn & Taylor
Contractor: Whiting & Wood

The need for a new college Bookstore and Post Office coincided with the need for a waiting room for the Ames and College Railway which had been built in the summer of 1891. An appropriation was made early in 1892. Plans were drawn, the contract for construction was awarded and the building was completed about the first of November of that year.

The new structure, then located just west of the intersection of the sidewalks which now extend north from Beardshear Hall and east from the center of Marston Hall, was a rectangular building with a covered platform along the north side and extending east about twenty feet.

It served for its intended functions until 1908 after the steam railway had been discontinued the previous September. With its use as a depot no longer required it was decided to relocate the building in order to make an open area in front of the then relatively new Engineering Hall (Marston Hall). It was moved north to its present location just west of Morrill Hall.

An addition was built on the north side in 1920 to expand the space for both the bookstore and post office. In 1946 a 20 x 60 foot CCC building was moved from the College Farm Service area and attached to the north of the bookstore (west half of the building).(1) Still another addition was made in 1952, this on the east side of the north end of the previous addition.

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(1) Minutes, March 1946 (CCC - Civilian Conservation Corps)

The bookstore was moved to the Memorial Union in 1958.

The building continued to serve as a post office until 1963.

On May 5, 1959 the old depot, bookstore, post office, became "The Hub" and has since been operated as a Memorial Union satellite to provide food services via vending machines.(1)

A copy center was installed in 1967 and a ticket office for campus functions was established in the building in 1964.

Since 1970 the university traffic office has occupied the north section of the building.

INDUSTRIAL EDUCATION

Agricultural Engineering Addition for Industrial Arts

Built: 1962-63
Architect: Russell and Lynch
Contractor: R.H. Grabau Construction, Inc.

An appropriation for this building was made in the spring of 1961 and the architectural agreement was approved in August of that year. Construction contracts were awarded the following March.(2)

The building was designed as an addition to the northeast corner of the Agricultural Engineering Building (Davidson Hall) and was "to include woodworking, metalworking and electrical shops, wood finishing room, drafting room and offices. The addition will be used for industrial arts until a new industrial arts building can be constructed at a later date."(3)

Work on the project was completed and accepted in March 1963.(4)

Remodeling to the extent of about $10,000 was done in 1973.

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(1) Pride, 1972

(2) Minutes, March 8-9, 1962

(3) Iowa State Daily, August 17, 1961

(4) Minutes, March 14-15, 1963

INSECTARY (First)

Built: 1903
Architect: Proudfoot & Bird
Contractor: C.E. Atkinson

Herbert Osborn, in the 1894-95 Biennial report expressed the need for an "insectary and bee house" for the entomological section of the Experiment Station. However, it was 1903 before funds became available. In May of that year the Board approved a recommendation

> That an insectary for the Entomological Section of the Experiment Station be built, provided the total cost does not exceed $1500.00. $300.00 of this amount to be paid from the college improvement fund, the balance from the Experiment Station fund.(1)

The Biennial Report for 1902-03 stated that "these agricultural buildings will be ready for occupancy by the beginning of the second semester in January, 1904." Those buildings included the Insectary. Construction cost of the Insectary was $1982, of which the Experiment Station paid $750.(2)

The exact location of this building has not been determined. In the April 15, 1903, issue of the ISC Student it was reported that the trustees "decided to erect in connection with the new greenhouse, an insectarium for the use of the entomological department of the experiment station."

On November 14, 1910, the ISC Student reported: "The removal of the ramshackle building that stood just north of the greenhouse will add a pleasing touch to that part of the campus." Whether that building was the Insectary or the old greenhouse potting house is uncertain. It might instead have been the Fruit House(q.v.).

No other references to the Insectary have been found and it does not appear on any known maps of the campus.

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(1) Minutes, May 6, 1903

(2) Biennial Report, 1903-05

INSECTARY and GREENHOUSE

Entomology Building

Built: 1927-28 Addition: 1967-69
Architect: 1927 Proudfoot, Rawson & Souers
1967 Louis C. Kingscott & Asoc.
Contractor: 1927 Tapager Const. Co.
1967 R.H. Grabau Const. Co.

An appropriation in the spring of 1927 provided funds for an Insectary building. The function was explained in the April 16, 1927, issue of the Iowa State Student:

> An entomology building will be used for studying the insect pests which are already in Iowa, as well as insects which may harm Iowa farmers in the near future such as the corn borer.

The building was more completely described the following month:

> According to present plans, the main building is a two-story brick construction about a hundred feet long. At one end will be a 70-foot greenhouse where plants will be grown for the purpose of studying insects injurious to them. On one side will be a screened-in house about 100 feet long for the purpose of raising insect specimens for study, and near this will be a cave for studying the life of underground insects.
>
> The building will be used entirely for research work and will contain laboratories with equipment for studying insects and for handling insecticides. A few offices may be moved to the new building but no classes will be held in it.(1)

Construction of the building started in September 1927 and it was completed the following spring.

An addition providing more laboratory and office space was made to the east end of the building in 1967-69. That project was partially funded by a grant from the Cooperative State Research Service of the U.S. Department of Agriculture.

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(1) Iowa State Student, May 5, 1927

ISU PRESS BUILDING

Collegiate Press Building

Built: 1940 Additions: 1947-48, 1951, 1955-56, 1964-66

Architect: 1940 John Normile
1947, 1951, 1955 Thomas K. Fitzpatrick
1964 Griffith-Kendall

Contractor: 1940 Robt. W. Scott & Co.
1947 Wickes Engineering and Construction Co.
1951 Weitz Company, Inc.
1955 James Thompson & Sons
1964 Carlson-Rockey, Inc.

A request to the Public Works Administration for funds to help finance a Collegiate Press Building was rejected in 1938 and delayed the construction of the building for two years. All construction since then has been funded entirely by monies from the funds of the Collegiate Press, Inc. (later Iowa State College Press, Inc. and Iowa State University Press, Inc.).

Ground-breaking for the first unit of the building was on April 8, 1940 and acceptance of the contract work came on September 17 of that year.(1) The original building is now all but lost in the center of the existing structure. When first occupied it was described by the student paper:

> The $40,000 structure, started last spring, will house the Iowa State Daily Student, the Bomb, the Iowa Homemaker, the Iowa Engineer and the Iowa Agriculturist offices on the main floor. The printing plant of the Collegiate Press will be on the ground floor. A photographic dark-room, to be used by publications, and offices for the book department of the Collegiate Press also are located on the main floor.(2)

In 1947 a 26 x 90 foot addition on the north side was started. This expanded the ground floor to increase the press work area. It was completed in the spring of 1948. In 1951 an addition of the main floor above the 1947 construction was built, providing new storage and work space.

Plans for the east wing addition had been started by Fitzpatrick in 1951 but it was 1955 before the Griffith-Kendall documents were com-

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(1) Iowa State Daily Student, April 9, 1940, and Minutes, October 4, 1940

(2) Iowa State Daily Student, September 23, 1940

pleted and put out for bids. The construction contracts were awarded in August of that year and the new wing was completed in the fall of 1956.(1) The east wing included ground, first and second floors.

In 1964 plans were developed for an extension of the original building to the south, providing a completely new front entrance as well as new office space on the ground and main floors. That construction was finished early in 1966.

Title to the land on which the building is located was transferred from the State to the Corporation on April 11, 1955, in order to satisfy the legal requirements in negotiating a bank loan for the building construction.(2) Title will revert to the State when the corporation is free of indebtedness on building costs.

JUDGING PAVILION

Built: 1924-25
Architect: Proudfoot, Bird & Rawson
Contractor: Thomas Sloss

Planning for a judging pavilion was discussed in 1921(3) but it was 1924 before work on the building was started. Bids were received in September of that year.(4) All bids exceeded the $18,000 appropriated and were rejected. The following month an additional $2,000 was made available and the construction of the building was made a project for Superintendent Sloss and his department.

The pavilion was completed by October 1925 when funds were allocated for fencing of the adjacent areas.(5)

In 1931 President Hughes reported that "the Judging Pavilion had been remodeled somewhat in order to make it serviceable for public speaking."(6)

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(1) Minutes, December 13-14, 1956

(2) Minutes, April 14-15, 1955

(3) Iowa State Student, May 23, 1921

(4) Minutes, September 23, 1924

(5) Minutes, October 20, 1925

(6) Minutes, November 26, 1931

KILDEE COTTAGE

Cessna Cottage

Built: 1900 Occupied: 1901
Razed: 1973

Located at northeast corner of Lincoln Way and Knoll Road.

Dr. O.H. Cessna requested a building lot on campus in July 1900, but it was September of that year before a specific site was determined. Certain terms and conditions were imposed on him and others who built homes on the college property:

> 1. The said persons shall pay an annual rental of $1. on each of the sites chosen, the lease for each to run for ten years with the privilege of renewal. The exact limits of the land included in said leases shall be determined by the building committee of the board.
>
> 2. No buildings shall be erected except upon plans approved by the building committee.
>
> 3. The said buildings shall be kept in first class repair and any failure to do so shall work a forfeiture of the leases at the option of the board of trustees.
>
> 4. Any sale or lease of the buildings erected shall be subject to the approval of the board of trustees.(1)

The ISC Student, Sept. 4, 1901 reported that Dr. Cessna had moved into his new home during the summer.

The Building and Business Committee, in March 1914, recommended that the college buy the Cessna house, or if funds were not immediately available that the property be leased for the school year 1914-15.

The following month Supt. Sloss reported on his inspection of the house:

> This house is 30' x 32' on the ground with 30' studding. The house contains nine rooms. There are 19,200 cu. ft. of space in the house. There is also an ideal Hot water Plant in the basement, and 500 sq. ft. of porch enclosed with screen. The house will soon need a new shingle roof. I would say that the house is worth $4750.00.(2)

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(1) Minutes, Sept. 1900

(2) Minutes, April 1914

In the spring of 1915 final agreement was reached on the purchase of the house by the college for $4750.(1)

From 1915 to 1918 the house was rented to Carl H. Scheman, then Secretary to President Pearson.(2) From 1918 to 1964 it was the home of Herbert H. Kildee, Dean of Agriculture from 1933 to 1949.

Between 1965 and 1973, when it was razed, the house served as headquarters for the building services section of the Physical Plant.

KILDEE HALL and LUSH AUDITORIUM

Animal Industries Building, Animal Science Building

Built: 1963-65 Auditorium addition: 1964-66
Architect: Dougher-Frevert-Ramsey
Contractor: 1963 Gethmann Construction Co.
1964 Wm. Knudson & Co.

At the Board meeting of February 8, 1923, President Pearson recommended asking for an appropriation of $250,000 for an Animal Husbandry Building. The next recorded reference to such a facility was in the June 3, 1950, issue of the Iowa State Daily where it was said, "Other tentative plans include the construction of an Animal Science building." The Daily reported, on September 23, 1954, that the next legislature was being asked for an appropriation of $1,500,000 for an Animal Industry Building. In 1956 the request was for $1,800,000 and in 1958 for $1,890,000.

The 59th General Assembly, in the spring of 1961, appropriated the sum of $1,738,000 for an Animal Industries Building without Equipment.(3) A grant of $200,000 from the United States Public Health Service and one of $50,000 from the National Science Foundation supplemented the state appropriation.

Construction contracts were awarded in May 1963.(4)

In August of 1963 it was decided to proceed with plans for the auditorium addition to the building, and contracts for that work were

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(1) Iowa State Student, October 23, 1915

(2) Ibid.

(3) Minutes, June 22-23, 1961

(4) Minutes, May 24, 1964

signed in September 1964.(1)

Discussing the function of the building on October 16, 1963, the Iowa State Daily reported, "Animal, dairy and poultry science offices and animal nutrition and physiology laboratories will be moved into the new building."

The mural in the south corridor was painted by artist-in-residence Dwight Kirsch.

The main building was ready for use in the fall of 1965 and the lecture hall a year later.

Herbert H. Kildee, for whom the building was named in March 1965, was head of the Animal Husbandry department from 1918 until 1933 when he became Dean of Agriculture, a position he retained until 1949.

The lecture hall became the Lush Auditorium by action of the Board in June 1973, named for Jay L. Lush, distinguished professor and member of the National Academy of Sciences.

KNAPP & STORMS HALLS AND COMMONS

The Towers (with Wallace & Wilson Halls)

Built: 1964-66
Architects: Crites and McConnell
Contractor: James Thompson & Sons

Increasing enrollments led to the need for additional housing. The decision was reached to construct a hall for 1200 men with associated dining facilities. This was planned as the first unit in a complex ultimately to house 3600 men. However, only the first and second units were constructed as part of what is now called the Towers Residence area.

Various sites were considered for the location of this large complex. One was the location on the portion of the golf course then south of the railroad on the north side of Pammel Drive; another was the old horticulture farm. It was decided to use the poultry farm area and to relocate facilities thereon to a new off-campus site to the south.(2)

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(1) Minutes, September 24-25, 1964

(2) Minutes, October 4-6, 1962

The architect agreement was approved in March 1963; plans were completed and bids were received in March 1964 with construction contracts awarded the following month.(1) This project was planned with two buildings, each to house 600 men, and a connecting commons building for food service, lounges and other needs for general use.

At that time it was scheduled for the first hall to be completed for occupancy in the fall of 1965 and the second one the following year. Bad weather during the construction period and strikes of workmen delayed completion of the project.(2)

At the opening of the fall term in 1965 only enough work had been completed to allow 300 men to move in while the other 300 assigned to the hall had to be placed in triple rooms in Helser Hall. With the commons still unfinished, food service for those in the new building was provided at Linden Hall and Oak-Elm Hall. By November all rooms could be occupied and the commons was ready to provide food service after the Christmas vacation.(3)

The second tower was ready for use in the fall of 1966.

Storms Hall was named for Albert Boynton Storms, President of the college from 1903 to 1910.

Knapp Hall was named for Seaman Asahel Knapp, college president 1883-84.

In 1970 Knapp became coeducational with women's houses established in the hall.(4)

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(1) Minutes, March 14-15, 1963, April 9-10, 1964

(2) Iowa State Daily, July 29, 1965 and August 12, 1965

(3) Schilletter, 1970

(4) Ibid.

THE KNOLL

President's House

Built: 1900-01 Remodeled: 1966
Architect: 1900 Liebbe, Nourse & Rasmussen
1966 Bernard J. Slater
Contractor: 1900 C.R. Cushman (General)
1966 Carlson-Rockey, Inc.

The need for a house for the president of the college was first expressed formally at the November 1898 meeting of the Board of Trustees when the Building Committee was asked to study the feasibility of construction and prepare an estimate of the cost. "The Gables", which had been rented as a home for President Beardshear, had been sold in 1898 and the president was forced to move elsewhere.

At the May 2-4, 1900, meeting of the Board the Building Committee was "authorized to contract with Liebbe, Nourse and Rasmussen to prepare and complete plans and specifications for the president's residence" and established that it "be located on the knoll west of Prof. Knapp's residence."(1)

Construction contracts were awarded in August 1900 in the amount of $10,067.75 for general work and $1850 for mechanical. An additional sum of $112.50 was authorized for the use of Omaha grey brick.(2) The building was officially accepted in March 1901, but the Beardshears had moved into it in February.(3) Mrs. Beardshear was permitted to remain in the house, after the president's death in August 1902. She moved to her new house (Lincoln Way Cottage) in 1903.

New furnishings and carpets were provided and various other improvements were made in 1904.(4)

When South Hall burned on Jan. 5, 1912, The Knoll was selected as the best temporary housing for the music department.

> Superintendent Sloss is directed to put the President's house in shape for occupancy during the remainder of the college year by the department of Music. It is ordered that the rugs and other

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(1) Knapp residence later known as Coburn House

(2) Minutes, August 1900

(3) ISC Student, February 23, 1901

(4) Minutes, May and September 1904

fine furnishings be removed from the rooms to be used as class and practice rooms, and other suitable furniture provided.(1)

This use of the house was possible at that time because it was during a period when Edgar W. Stanton was serving as acting president and the house was not then occupied. Before September the Music department moved to the Sanitary Building and The Knoll became available as the residence for President Pearson.

A new bathroom was installed on the third floor and the "servant's bath room" remodeled in 1915. At the same time the main porch was provided with winter sash and also screened.(2) A garage was added in 1919. In 1919 a sleeping porch was authorized to be built on the second floor and the porch beneath it enlarged to accommodate the new construction. Apparently that was not undertaken then because in March 1922 it was unanimously carried by the Board that the kitchen be enlarged, a sleeping porch be constructed and the living room remodeled, all under the direction of Supt. Sloss. The financial report for the year shows an increase of $3,300 in the valuation of the house.

The living room was enlarged in 1928 and the following year a new furnace was installed and new bookshelves built in the library.

An allocation of $11,000 was made in April 1936 for repairs and renovations to The Knoll at the start of President Friley's residence in the house. A new roof was installed, the house was insulated, the interior was largely repainted, new electric wiring and fixtures were installed, and improvements were made in the plumbing and heating equipment.(3)

In 1953 an extensive modification was made in the heating system for the Knoll. Plans and specifications were prepared by Brooks-Borg and the contract was awarded to Paul Titus, Des Moines, in the total amount of $13,453.(4)

When the change in administration from President Hilton to President Parks was pending in the spring of 1965 serious questions were raised about the desirability of retaining The Knoll as the residence of the President. In March the Board of Regents asked the Campus Planning Committee to study and make recommendations. That report is recorded

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(1) Minutes, January 1912

(2) Minutes, June 1915

(3) Minutes, May 1936

(4) Minutes, May, June and September 1953

in the Minutes of the April meeting:

> This report provides recommendation in answer to the following questions: (a) Is the present site of the President's residence suitable and proper for its current and future use, (b) if it is not suitable, what functions should ultimately be located there, and (c) what interim use should be made of The Knoll in the event a different activity will use this area in the future?
>
> The committee examined the questions concerning the use of the site in terms of the President's personal convenience and the need of the University. For the President's personal and family needs, it was felt that the present site is inadequate in providing a proper degree of privacy and freedom. The close proximity of the women's dormitories on the east, the nearness of a major highway on the south, and the possibility of Union expansion on the west, all create problems and conditions which are not conducive for a private personal and family life. For fulfilling professional obligations, such as recognition functions, lawn parties, faculty teas, etc., the location of the President's home is not critical due to the mobility of the people who attend these functions. It was noted that some of these activities now occur elsewhere because of the inadequacy in the size or design of The Knoll itself, and the increasing numbers of people who must be accommodated.
>
> Since the site of the Knoll is strategically placed with respect to the overall campus plan, it has the advantage of being well located if the President's residence is to assume a ceremonial function. Such location may also have a symbolic meaning to some students, contribute to the feeling of a more "personal" campus, and represent the prestige of the University. These factors were not thought to be of decisive importance.
>
> Considering the University's long-range needs, the committee concluded that the site and its adjacent area are too valuable for continued use as a residence. The site is strategically located and is readily accessible from outside the University. It appears to be best suited for one of the following functions: (a) administration and student services, (b) semi-public facilities such as an art gallery, bookstore, museum or Union expansion, or (c) a school of design, music or drama. Use for dormitory expansion was considered inappropriate because the amount of land would be insufficient for the next major dormitory complex. Neither was this site considered a proper location for a classroom building. The accessibility for the public and the distance from existing instructional areas make it undesirable for this use.
>
> Appropriate parking facilities must be included with any development of this area.

> In the interim period, the Knoll can most logically be used for staff offices and seminar rooms to temporarily accommodate the needs of rapidly growing departments.
>
> As a final note, the committee pointed out that the site of The Knoll, including the surrounding area, is one of the remaining natural beauty spots on the campus. As such, they strongly emphasize that careful attention should be given to the overall development of this area. It is urged that any new facility, including any expansion plans by the Union, be attractively designed to provide an attractive view of the campus.

The Building and Business Committee of the Board studied the report and at the May meeting made this recommendation:

> The Building and Business Committee recommended that ultimately the site of The Knoll be used for institutional buildings, and that the University officials be instructed to explore potential sites suitable for a new residence for the President and report back to the State Board of Regents. On motion by Mr. Redeker, which was seconded and passed, the recommendation of the Building and Business Committee was approved.

Study of the question continued for another year, until June 1966 when it was decided to remodel the Knoll for continued use as the President's home.(1) Plans were completed and the contract for the remodeling was awarded in September 1966. President Parks had moved into the Knoll at the time of his inauguration, July 1, 1965, and he and his family put up with the many inconveniences during the remodeling operation.

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(1) Minutes, June 16-17, 1966

LABORATORY OF MECHANICS

Engineering Hall, Hydraulics Laboratory

Structural Engineering Lab, Mechanics Laboratory

Built:	1882-3	Additions: 1884, 1933
Architect:	1882 J.B. Ballenger	1884 Foster & Liebbe
	1907 Proudfoot & Bird	1933 A.H. Kimball
	1967 Wilkins & Bussard	
Contractor:	1882 & 1884 V. Tomlinson	
	1907 R.G. Coutts	1933 U.S. Griffith & Son
	1967 King Bole, Inc.	

The contract for the original Engineering Hall was awarded in July 1882 to V. Tomlinson in the amount of $4890, just slightly below the $5000 appropriation. Even before the building was completed in the fall of 1883 it was recognized that it was too small for the growing engineering demands, and a request to the legislature was made for funds for an addition.

The addition, completed in 1885, is the present wing on the south extending to the west.

Remodeling of the basement in 1898-99 provided facilities for a hydraulics laboratory.

Major remodeling was undertaken in 1907 and completed at a total cost of $10,550. Dean Marston described the project at the time:

> I would further say that the College is securing by this work out of this old building, which was formerly practically of little account, what amounts to a good, substantial, modern laboratory building of fireproof construction except as to the roof, which I believe, could not be built new for less than $25,000. I would further say that the building in its present condition will be of no value whatever and that, in fact, it will be so exposed to the elements as it is, as to be greatly damaged to go through the winter without being completed.(1)

Toilet facilities were installed in 1923.

A one story addition was built in 1933, making a rectangular plan by filling in the earlier L-shape. This became the concrete laboratory.

Further remodeling came in 1967, described as follows:

> This project will provide additional office space, classroom and

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(1) Minutes, October 1907 (before project was completed)

improved laboratory facilities to make the existing building more functional and efficient. The very antiquated rest room will be made more usable. Fire escapes from the second and third floors will reduce the dangers now imminent in the event of fire in a building with only one stairway. Because this is one of the oldest buildings on campus it is not justifiable to attempt any major improvements, and the contemplated renovation has been kept to a bare minimum to extend the useful life of the building as long as possible.(1)

Total project cost of the 1967 remodeling came to $30,577.

LANDSCAPE ARCHITECTURE

Horse Barn

Built: 1900 Remodeled: 1930
Architect: Liebbe, Nourse & Rasmussen
Contractor: Main & McKee (Gen'l)

Discussion of need for a new horse barn was expressed as early as 1891 when the first request was submitted for funds. Other askings went to the legislature in 1895 and 1897. In 1899 a request was submitted for $10,000 for horse barn and live stock judging arena.(2) The General Assembly, in 1900, appropriated $12,000 for the two buildings.

First bids were taken on May 2, 1900, but all were rejected because they exceeded the budget. Some revisions were made in the plans and new bids received on May 11. The contract for general construction of the Horse Barn and Judging Pavilion was awarded to Main and McKee for $13,555. Contracts were awarded two months later for the mechanical and electrical work totalling $707.50. The building served as a horse barn for almost thirty years.

In January of 1930 an appropriation of $18,000 was made to remodel the structure to be used as headquarters for Landscape Architecture. A contract was entered into with Tapager Construction Company of Albert Lea, Minnesota in the amount of $15,526. Their work was accepted in October of that year.(3)

The building continued in use by Landscape Architecture until 1978 when that department moved to the new College of Design. It is currently being used for agronomy and journalism overflow.

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(1) Minutes, March 1967

(2) Minutes, August 31 - September 1, 1899

(3) Minutes, October 1930

LIBRARY

Built: 1923-25 Additions: 1960-61; 1967-69, 1980-
Architect: 1923 Proudfoot Bird & Rawson
1959 Brooks - Borg
1968 Brooks - Borg
1979 Charles Herbert & Asso. and Brooks Borg & Stiles
Contractor: 1923 Sugarman Construction Co.
1960 Howard Thomas Construction Co.
1967 The Weitz Company

Prior to 1925 the Library and its collections had been housed in three different buildings: from 1868-1891 in Old Main; 1891-1914 in Morrill Hall, designed in part as the library; and 1914-1925 in Beardshear Hall because that building was deemed more fire proof than Morrill Hall.

Requests for a new fireproof building were made as early as in the 1902-03 Biennial Report, and were repeated in subsequent reports. In 1909, March 22, the ISC Student reported that

> It had been planned all along to put a library in on the millage tax list next after the buildings already authorized, but at a meeting last Wednesday the board of trustees yielded to faculty and student sentiment and put the gymnasium in ahead of the library.

In 1911 the legislature allocated $225,000 of millage tax money for a new library. However, another four years passed before positive steps were taken to initiate the project. A committee was appointed at the Nov. 18, 1915, Board meeting with its purpose "to inspect college and city library buildings, so as to obtain the best ideas concerning such buildings." The Board architect, Mr. Proudfoot, was authorized to accompany the committee. Tentative plans and specifications were prepared for presentation to the legislature in January 1917.(1) The Board minutes for Feb. 7, 1919, record that the sum of $400,000 for construction of Library Building was approved. A special committee was appointed in October of that year to inspect other recent libraries. The following excerpt is from their report presented to the Board at the Jan. 29, 1920, meeting:

> It should be borne in mind that modern college libraries are centralized libraries with departmental collections outside as few and small as possible, and that this centralization reduces the study, recitation, and reading rooms outside and necessitates larger accommodations in the central building and consequently a larger building.

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(1) Minutes, January 25, 1917

It was not until September 1922 that the project got fully under way. The Sept. 21 minutes show approval of the architect's plans, with some revision to be made, and authorization for the Superintendent of Buildings and Grounds to make the excavations and construct the foundation. This work started the last week of October.(1) Bids for the superstructure were received on Jan. 30, 1923. The general contract was awarded to Sugarman Construction Company, of Des Moines, for $376,835.(2) Mechanical and electrical work was to be done by the Building and Grounds department. Foundations were finished and the superstructure started in April 1923.

The Board minutes for August 15, 1923, record "that a contract for bas relief panels for the new Library Building, has been entered into between the Iowa State Board of Education and Miss Nellie Verne Walker," in the amount of $2,625. These are the panels over the second floor end windows and on the east front of the building. The designs were Miss Walker's but much of the actual carving was executed by J.G. Zimmerman.(3)

The names of fourteen famous men are inscribed in a band above the main floor windows on the east front and north and south ends of the original building. The ones so recognized are: Washington, Lincoln, Shakespeare, Emerson, Agassiz, Pasteur, Faraday, Newton, Darwin, Liebig, Morrill, Hatch, (Seaman) Knapp, and (James) Wilson.

Laying of the cornerstone took place on October 11, 1923.

The building was first opened (in part) for use on January 6, 1925. Moving of books from Central (Beardshear) continued for another month. Dedication of the building occured on January 21, 1926.(4)

As early as 1928 the Library had reached the point where additional stack space was needed.(5) Although the request for an addition was repeated in subsequent biennia, it was 1959 before funds for it were appropriated.

The Grant Wood murals in the Library came into being during the Great Depression of the 1930's. At the December 12, 1933, Board meeting

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(1) Iowa State Student, October 30, 1922

(2) Iowa State Student, February 9, 1923

(3) Iowa State Student, June 4, 1924

(4) Iowa State Student, January 15, 1926

(5) Biennial Report, 1926-1928

"President Hughes reported that he had recommended to the Civil Works Administration that a mural by Grant Wood be made for the library at Iowa State College at a cost of approximately $1400.00 for labor and $600.00 for materials and supplies...." The scope of the project, as approved by the CWA was provided in the January 3, 1934, issue of the Iowa State Student:

> Murals signifying the various functions of the college are being painted by the college library by unemployed Iowa artists this winter. Work which is being done in the respective artist's studios about the state is to begin as soon as canvas purchased for the paintings is delivered to the painters.
>
> Grant Wood, of Cedar Rapids, eminent Iowa artist, is chairman of the CWA committee in charge of the project. Mr. Wood has not yet completed the list of artists to be employed.
>
> Preliminary sketches for the murals have already been submitted and approved. Three groups of paintings are to be placed at various points in the library. The first set, consisting of eight works, will depict the practical arts as taught at Iowa State, according to Wood. Another group of six will present the fine arts. These are to be placed in the reference reading room of the building. The third set, to be located in the lower rotunda, will show the work of the pioneer Iowa farmer.
>
> These murals will be based upon Daniel Webster's quotation: "When tillage begins, the other arts follow. The farmer, therefore, is the founder of American civilization."

Much of the work on the murals was done in a temporary studio set up in Iowa City where twenty-one artists worked on the project. The CWA project was terminated in the spring of 1934, but the College continued the work on the murals with allocation of its own funds.(1) That year only the murals in the stairway were completed. The large painting of the pioneer farm was executed in 1936. Seven artists worked on that project. All of the murals were painted under the supervision of Grant Wood and from his original drawings. Close attention was given to accuracy of the details in all of the portrayals.

The limestone figures of two students, located at the foot of the original stairway,were the work of Christian Petersen and were completed and set in place in 1944.

The first addition to the Library was designed in 1959 and construction contracts were awarded in March 1960. It was completed in time for the start of the fall quarter of 1961. This construction, on the

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(1) Minutes, April 24-25, 1934

west side of the original building, was devoted largely to stack and reader space, although new stairs, an elevator and rest rooms were also included. Perhaps the most obvious feature of the addition was the new entrance rotunda on the south side of the building, making the original east entrance a secondary access, primarily for emergency exit. Final cost of the addition, including equipment, came to $1,172,903.51.

Funds of $1,800,000 for a second addition were appropriated by the legislature in 1965. The following year a federal grant was made by the Higher Education Facilities Commission in the amount of $595,300. Contracts for construction were awarded in July 1967. This addition included construction of the multi-tier stacks and also an extension to the west and north of the first addition. It was opened for use in the fall of 1969.

Continued growth of the Library holdings and the need for additional study and reader space made further expansion of the building a necessity by the mid seventies. In 1978 the Iowa State Foundation made $400,000 available for planning and steps were taken to initiate that work. Architects were selected in January 1979. Contracts for construction of the third addition are expected to be awarded in 1980.

LIBRARY STORAGE BUILDING

Built: 1940
Contractor: Truscon Steel Company

Plans to erect a prefabricated building for the storage of infrequently used books were first presented to the Board at the meeting of December 12, 1939. Bids for such a structure were received the following spring and the contract was awarded on April 5, 1940.(1) At the same time the Department of Buildings and Grounds was authorized to construct the floor and install the necessary mechanical services for the building.

Authorization for the purchase of library stacks for the building was given at that meeting.

The Daily Iowa State Student reported on May 17, 1940:

> Construction has begun on a $9,000 storehouse for least-used library books to be located north of the Insectary. The warehouse will accommodate two stack levels of 80,000 volumes each.... ....Work on the building is being done by WPA laborers under

(1) Minutes, April 5, 1940

the supervision of B.H. Platt, superintendent of buildings and grounds.

In June 1940 the Board approved an expenditure of $225 for insulation of the building.

LINCOLN WAY COTTAGE

Beardshear House, East Hall Annex

Built: 1903
Razed: 1973

Located on north side of Lincoln Way, second lot east of Knoll Road.

Mrs. Beardshear was granted a building site for her home in November 1902, under the same terms and conditions established for Dr. Cessna. (See Kildee Cottage.)

In April, 1903, it was reported that "the foundation brick for Mrs. Beardshear's house are on the grounds and work is to be begun soon."(1)

In 1914 the college expressed the desire to buy the house from Mrs. Beardshear. She set a value of $8000 on it and the sale was made.(2)

Remodeling was undertaken the following year and the house became known as East Hall Annex, a women's residence hall. (1915-21) During 1918 it was an emergency hospital for women.(3) From 1919 on it was called Lincoln Way Cottage. The Sloss family lived there briefly in 1925. Until 1944 it served variously for different student groups and in some years as a tenant house.

From 1944 until 1972 it housed residence hall employees. It was razed in 1973.

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(1) ISC Student, April 29, 1903

(2) Minutes, August 1914

(3) Schilletter, J.C., 1970

LINDEN HALL

Built: 1955-57
Architect: James A. Dougher
Contractor: Thomas Construction Co.

A new dormitory for women was programmed in June 1945, and in September the Iowa State Daily Student reported that it was "ready to erect as soon as contracting costs decrease to a less inflated level and materials become more available." At that time the appropriation was $450,000.(1) In 1946 the cost estimate was raised to $500,000 and an architect was retained to initiate plans.(2)

In December 1946 the name Linden Hall was assigned to the proposed building and preliminary plans were approved.(3) But inflation and the more immediate need to provide housing for returning veterans further delayed construction, and it was 1954 before further action was taken. By that time revision of the plans had become necessary to provide a larger facility and the cost had risen to an estimated $1,900,000.(4) The revised plans were approved in February 1955. Contracts for construction were awarded in October of that year and construction began in November.(5)

Linden Hall was completed and in use in September 1957.

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(1) Minutes, June 26, 1945

(2) Minutes, March 23 and July 2, 1946

(3) Minutes, December 9-10, 1946

(4) Minutes, November 4-6, 1954

(5) Iowa State Daily, December 1, 1955

LYON HALL

West Hall

Built: 1914
Architect: Proudfoot, Bird & Rawson
Contractor: W.F. Kucharo & Co.

The earliest reference to a new residence hall for women was in the Minutes of the Board meeting of January 4, 1907, when the request for appropriation was being prepared. The list of needs included $40,000 for an addition to Margaret Hall. Three years later an allocation of $55,000 was made from the millage tax fund.(1)

No further action seems to have been taken until 1913 when

> The executive Council being in joint session with the Board, the matter of using for a dormitory on another part of the campus the $55,000 authorized by the 34th General Assembly to be expended in building an addition to Margaret Hall was discussed informally, and the Building Committee was directed to present the matter to the council in writing, with blue prints showing the plan recently adopted for the campus.(2)

The question of the legality of a separate building rather than the addition was settled by an opinion from the attorney general that the change was permissable under the state law.(3)

Considerable discussion then developed around the actual location. The faculty favored the site where Memorial Union now stands.(4) The final decision was reached at the March 1914 Board meeting with the knowledge that additional halls would be built in the same area at a later time.

In May, 1914, Superintendent Sloss was authorized to begin excavation for the building and in July the construction contract was awarded.(5)

The Iowa State Student, on Dec. 19, 1914, reported that the building

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(1) Minutes, February 1911

(2) Minutes, July 1913

(3) Minutes, February 1914

(4) ISC Student, March 7, 1914

(5) Minutes, July 1914

would be ready for occupancy after the Christmas vacation. On January 30, 1915, the paper carried this item:

> Miss Mildred Walls opened the new dining room in the dormitory Thursday morning to the twenty-six girls who are rooming there and to the twenty girls of the Lakota club who are occupying the Beardshear house. The room is furnished in fumed oak and will seat 108 people.
>
> The kitchen which is one of the finest in the west is furnished in white, with a large built-in refrigerator. Two large ranges and a pastry oven will ensure plenty of 'eats' for the girls.
>
> The kitchenette, on the first floor, will surely be the scene of many merry fudge parties and boxes from home 'feeds'.
>
> The drawing rooms are furnished in mahogany and tapestry with floor coverings in two toned brown rugs. A large fireplace adds much to the cheerfulness of the rooms.

The top (third) floor had been left unfinished under the original contract. When funds from the millage tax were made available in August 1915, Superintendent Sloss was authorized to complete the rooms on that floor to accomodate twenty-six more girls.(1) Total cost of the building, including about $6700 for the third floor, came to $58,981.68.(2)

The building was officially designated as West Hall in September 1916, and retained that name until October 1928 when it became Mary Lyon Hall.

Fire excapes were installed in 1918.(3)

An extensive renovation of the building was undertaken in 1964. Smith-Voorhees-Jensen, Architects Associated, was selected as architect in September 1963; the construction contract was awarded to James Thompson & Sons in February 1964 and the completed work was accepted the following September. Total cost of the renovation came to $124,120.19.

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(1) Minutes, August 10, 1915

(2) Biennial Report, 1914-16

(3) Minutes, January 8, 1918

MACHINERY and STORAGE SHED

Storage Shed - Service Area

Built: 1926 Addition: 1938
Razed: 1972

This building, parallel to 6th Street, was located with its center about on the east face of the north wing of the present Physical Plant Shops and Stores Building.

It was built in 1926 after two years of discussion and delay. It was planned primarily to house vehicles and equipment for the Building and Grounds department.

A reference in the College Controller's notes show a frame addition was built on the east end for $1200 in 1938.

The building was razed in 1972 to make room for the new Physical Plant Building.

MAC KAY HALL and LEBARON HALL

Domestic Technology Building; Home Economics Building

Built: 1910-11; 1925-26; 1956-58
Architects: 1910 Proudfoot and Bird
1925 Proudfoot, Bird and Rawson
1956 Smith, Voorhees, Jensen, Siletto & Assoc.
Contractors: 1910 Benson & Marxer
1925 J. & W. A. Elliott Co.
1956 P.L. Caron Co.

The inadequacy of space in Margaret Hall and North Hall for "Domestic Economy" was first expressed in the Biennial Report for 1902-03. However, it was 1909 before funds became available. In July of that year the architect was directed to prepare detailed plans for the Domestic Technology Building.(1) Plans were approved in December and the construction contract was awarded in January 1910, in the amount of $57,900, not including heating, plumbing or lighting.(2)

The building was described in the I.S.C. Student on March 28, 1910:

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(1) Minutes, July 1909

(2) Minutes, January 1910

> The Domestic Technology Building for which ground was broken a few weeks ago is to be 56 feet by 181 feet, and 42 feet in height. It is to have three floors. The first or basement story is 11 feet high, and will contain reading rooms, locker room, laundry and recitation room. The second story is 13 feet high and will contain offices, sewing laboratory, and textile room. The third story is 12 feet high and will contain foods laboratory, dining rooms, reception room and the domestic art department. There will be a toilet room on each floor.
>
> The outside walls are to be of Acme red faced bricks, trimmed with dark pavers. All other trimmings not of dark pavers are to be of terra cotta. The plans call for a forced system of Ventilation....
>
> One feature new at I.S.C. is in the concrete floors. They are 11 inches thick and supported by reinforced concrete beams.

The new building was located north of and parallel with Margaret Hall, and it was then planned to later build connecting wings to that building on the east and west sides to form a rectangular court between the two structures. This explains why the west wing of today's MacKay Hall is not parallel with Osborn Drive.

The Home Economics department moved into the building about the first of April, 1911,(1) but it was May 1, 1912, when formal dedication ceremonies were held.(2)

A cistern was built in 1915 to provide soft water for the laundry.

Rapidly increasing enrollments in the department resulted in various alterations to interior partitions and also requests for a larger structure. The first request for a new building was made in the Biennial Report for 1912-14, but it was not until 1920 that funds were appropriated, in the amount of $110,000 for an addition. However, this amount was inadequate for the size and kind of structure contemplated. A temporary frame building (See Field House-P.E.W.) was erected west of the Home Economics Building to partially provide space for the expanding department.(3)

Funds in the amount of $500,000 were made available in late 1923(4) and

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(1) ISC Student, April 3, 1911

(2) ISC Student, April 30, 1912 and Minutes, May 1912

(3) Minutes, April 13, 1920

(4) Minutes, October 23, 1923

the architect was asked to revise his sketches accordingly. Final plans were completed and bids were received at the Dec. 10, 1924, meeting of the Board. Contracts were awarded two days later.

The design of the new building incorporated the then existing building as its west wing with a new center section and an east wing of the same size as the west one. The new building was to be faced with limestone and the west wing would receive a matching facing over the original brick. The west wing was not parallel to the street on the north. In the new plans the central section was built parallel to the street while the east wing was set at a slight angle to make it symmetrical with the west wing. Construction began about the first of March 1925. A cornerstone laying ceremony was held on May 9. The building was completed just a year later and dedication took place on June 11, 1926. The auditorium had been designated the Catherine J. MacKay Auditorium by the Board in March 1926.(1) In 1957 the building as a whole was given the name MacKay Hall.(2).

An addition to the building had been considered in 1945, but it was ten years later before funding became available with a $950,000 appropriation.(3)

Construction of the addition at the west and south of the original building began in October 1956 and was completed during the summer of 1958.(4)

Various remodelings have occurred in the building over the years.

The 1956-58 addition was named LeBaron Hall in 1975.

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(1) Iowa State Student, March 15, 1926

(2) Minutes, September 12-13, 1957

(3) Minutes, May 12-13, 1955

(4) Iowa State Daily, October 25, 1956

MAIN BUILDING

College Building, The College, Old Main

Built: 1864-68 Addition: 1871-73
Architect: C.A. Dunham (see text for earlier studies)
Contractor: Jacob Reichard (and others - see text)
North Wing burned December 1900
South Wing burned August 1902

Stood approximately in the same location as Beardshear Hall.

The first statement of intent to erect a college building is included in the First Annual Report of the Secretary of the Iowa State Agricultural College to the General Assembly of the State of Iowa for the years 1858 and 1859, as follows:

> The President pro tempore and Chairman of the Executive Committee, has taken a good deal of pains in procuring a plan for a College building....We have not yet come to the conclusion whether we had better build our college in three separate buildings, one at a time, and far enough apart to be safe from fire from each other. This will be a matter for further consideration.
>
> We have studied every way to economize the funds of the State, having all the time in view a good school rather than a display of architectural beauty, no costly dome, or curious winding stairs - but a solid stone foundation, a plain brick superstructure with four stories, with pilasters, dental brick cornice, projecting roof with brackets, with portico over the doors at each end: all of good respectable appearance, about good enough for the farmers of our state, and good enough for anybody else. For further details you are referred to the plans and specifications prepared by Mr. Milens Burt, of Muscatine, architect and builder, a prudent, judicious, and excellent mechanic, and a man of much care and prudence in all things.
>
> We have had a good deal of deliberation in regard to building three or four stories, 120 x 42 feet. To get the same accomodations [sic] with three stories, must extend the length to 150 feet, at an additional cost of $1,500 to $2,000. We think the convenience of the building will well pay for the change, if the State can afford it.
>
> The cost of this building is estimated at $30,000, without stoves, furnaces, or steam for warming; of sufficient size to accomodate [sic] 100 students, a President and his family, two or three Professors, lecture and recitation rooms, library and reading rooms, etc.; and in the basement, store rooms, pantries, steward's rooms, kitchen, dining room, homes, lodging and boarding for 120 persons.

It has required much time and effort and skill to arrange all of this in one convenient building.

It was not until the spring of 1864, after the financial stress of the Civil War, that funds became available to start construction of the building. At that time Mr. John Browne was retained as architect at a fee of five percent of the cost of the building. Presumably he prepared new plans. There is no mention at this period of the earlier plans by Milens Burt. In July bids were received and contracts awarded for certain work:

Excavation - W.J. Graham, 24½ cents per yard

Stonework - Scott & Kerney, $6 per perch of 25 feet and 70¢ per foot for cut stone, door, and window sills

Brick - Chamberlin & Co. $5.85 per thousand

Problems soon began to develop. Mr. Browne failed to obtain the contractor's signature for timber and failed to provide adequate plans for the excavator or stonework contractor to work from, creating delays in completion past the contract date of September. Browne was discharged that month by the Building Committee, an action subsequently sustained by the Board of Trustees. He was paid a total of $350.

Brick which had been ordered was found to be unusable because of too much lime gravel which burst the brick. As a whole, the work of 1864 had to be completely removed and a new start made the following spring.

A new architect, Charles A. Dunham, of Burlington, was employed in February 1865. His report to the Board, written in November and recorded in the January 1866 minutes summarizes the 1865 operations and his changes from the Browne plans:

> On the first day of February 1865, I received the appointment as Architect of the College Building from Hon. W.H. Holmes, Chairman of the Executive Committee. In his letter to me he suggested that the form and dimensions of the lecture room might be greatly improved, and authorized me to make any other improvements in the original plans, which I might deem beneficial curtailing the cost whenever it could be done without injury to the convenience and general appearance to the Building.
>
> Upon inspection of the original drawings it was found that the Lecture Room was in such a form that would be impossible to use it for the purpose for which it was intended. There was no place to put the speakers stand so that what he was talking about could be heard understandingly half way across the room and it could not be seated so as to accommodate one fourth of the number of scholars with a full attendance.

The staircases came next under my observation found them to be one half the usual width of stairs in buildings of this and similar classes. They were arranged in the worst form conceiveable. I enlarged that part of the building and put in two good broad staircases easy of ascent and decent [sic] and giving by the arrangements two more external doors to the rear of building.

The Library and Laboratory were next taken in hand. Upon inspection of the original plans you will find four small rooms where there are but two in the plans now presented. As Chemistry is one of the most important studies to be taught in the institution I concluded that it should have as large a room as could be made for it without changeing [sic] its location or increasing the size of the building. The same might be said of the Library.

The towers were found to be of great size and out of proportion to the balance of the building at the external angles of the towers there were long meaningless buttresses looking like strangers in a strange place. The dimensions of the towers were diminished seven feet each on the ground which will reduce the cost considerably.

The buttresses were discarded, also the large balconies of a costly character and workmanship. These were to be constructed of wood liable to decay in a few years, unless given the best attention with paint and brush and the use of them is more than I am able to discover. They certainly could not have been intended for ornament; if so it was a bad intention. In the northeast tower the construction of two of its sides was found to be most remarkable. Some 16 feet in height was intended to be a truss without any mechanical principle of construction being properly applied to resist the load which it was designed to sustain. I doubt very much whether it would sustain its own weight any considerable time.

The walls will now receive their support from iron columns. All of these changes were made in the plans and submitted on the 22nd day of February 1865, to the building committee at the College Farm and on that day I saw what had been done the year previous on the College building. The foundation walls were about one fourth built, some were up their full height, they were covered in on the top with straw and well protected around this basis. The walls looked very good what could be seen of them. There were a few slight fractures which I could not account for at the time but which will be accounted for hereafter. Met with the Committee and the changes were discussed.

Mr. Melendy suggested that there should be a Museum room close to the lecture rooms where anatomical and other specimens should be kept close at hand to be readily introduced upon the lecturers

stand whenever wanted to illustrate and convey more forcibly the ideas of the lecturer. For arrangement of room see plans accompanying this report.

The next and most important change was the abandonment of the system of heating the building by steam which would cost not less than thirty thousand dollars, three fifths of the estimated cost of the entire building, besides the entailment of a heavy expense annually. A first class engineer would have to be employed to attend to it, one who could do the necessary repairs or otherwise in case of a derangement of its proper working or bursting of pipes, etc. There would have to be a Machinist from some city to do the necessary repairs, while the whole school might be left in a very cool condition for some length of time. Mr. Melendy advocates the system of warming the building by hot air furnaces on the principle of great economy and yearly savings to the institution and it was approved by the other members of the committee.

In making excavations for the furnace cellars, it became necessary to take down some of the walls that were built and then the cause of the fractures was discovered.

It appears that the excavations for the cellar and foundation walls had been made just the size that the building was to have been. The contractors made single faced walls using the best stone on the inner face where it would show their work to the best advantage. In many places the walls were several inches thicker at the top than they were at the base. Those parts of the wall between the bank and the inside cover of Stone were found to be filled with all kind of Stone rubbish, occasionally bedded in mortar composed of sand and loam. If there was any lime in its composition my eyes failed to discover it. You all know that it requires the best wall where it has the greatest weight to sustain. The walls referred to were exactly the reverse, and let me say to you, there never could have been a brick wall twelve inches thick built upon it two stories in height without its falling down or fracturing so badly that it would have to be taken down, and it was of such bad workmanship and partly of such bad materials that it had to be rebuilt this past season and now in place of theirs you have good substantial double-faced walls built true to a line, on both sides well bonded and tied together.

In the original plans there was no provision made for the thorough ventilation of the rooms. The plans now submitted the rooms are designed to be ventilated as follows. Opposite to where the warm air is admitted into the rooms, registers will be placed in the floors of the same size as those that admit the warm air opening to flues in the walls which will lead the vitiated air to the roofs, it will then be thrown off through ejectors. There will be small registers placed near the line of the ceiling in each room opening into the flues above mentioned.

A few other items I wish to say a few words about in regard to the defects in the original plans. The author of the specifications says the principal roof must be covered with Slate but the towers and dormer windows are to be covered with pine boards not exceeding ten inches in width and their joints covered with moulded battens three inches wide. A style of finish not much used on public buildings in this country to my knowledge. The sashes to the dormer windows could only be raised about five inches to admit air, which would make the attic rooms anything but desireable study or sleeping apartments on a hot summer day or night.

The cornice of the building was to have been of the most elaborate design and workmanship and of a style wholly unsuited to a building of this character. The elevations are so different in design that it is, almost impossible to believe that they were for the same building, in fact it would be impossible to work them up together, nor do they agree with the story plans. The second section of form of roofs was not developed in the drawings, or referred to in the specifications. The form of the roofs was to be of a very expensive kind requiring two sets of timbers. This has been made straight in the design accompanying, useing [sic] but one set of timbers. There was but one external door on the principal floor plan, now there are three.

I trust that you will excuse me for this going into details but I wished to be thoroughly understood in the reasons for changes being made. A few words about the brick making and the present conditions of the works and then I am through. The Brick that were made in the year 1864 were good solid bricks but were filled with lime pebbles and when the rains came in contact with them and afterwards the frost, the lime in the pebbles slacked and burst to pieces destroying them for facings for the building, but they will answer every purpose for the interior walls. On the 22nd day of February 1865 the Building Committee received propositions from several brickmakers and finally made a contract with S.A. Robertson of Des Moines who has moved to be master of his profession to make one million of brick, the number necessary to complete the building. After looking over the ground I directed him to make a new yard and use the top soil instead of the bank clay which was used the year previous and the institution has been well paid by so doing. They will have a superior quality of brick, the best I have seen west of the Mississippi River. There are now made 850,000. The stone foundations walls are one foot above the final grade line over eight hundred perch having been built the last summer. They have all been covered in and the premises properly graded. Accompanying this will be found detailed estimates of costs for erecting and completing the balance of the work on the building. Accompanying this estimate will be the drawings as now approved by the Committee. These estimates

are taken and based upon quantities measured on the plans, and drawings by a builder of large experience. The cost of workmanship and materials has been ascertained with great labor and considerable trouble. All of which is very respectfully submitted.

Your obedient Servant,

C.A. Dunham

Architect Iowa Agl. College Building
Burlington Iowa, Nov. 22nd, 1865

During 1865 and the spring of 1866 the foundations were completely rebuilt and most of the basement finished. On June 25, 1866 a contract was signed with Jacob Reichard for completion of the building. About the same time an agreement was executed with Dunham for preparing plans and specifications and for superintending construction. The construction contract called for the building to be completed by the first day of October 1867. That was not accomplished. Delays were caused by harsh weather, difficulties in getting materials and lack of adequate appropriations.

The question of how the building would be heated was still being debated in May of 1868. The Building Committee was in favor of a steam system, but after learning that would cost considerably more than the available fund they contracted for a warm air heating and ventilating installation, the patented Ruttan System. The contractor, W.S. Pennal & Co. of Normal, Illinois

> proposed to warm the building to at least 65 degrees Farenheit [sic] during the coldest weather for six thousand five hundred dollars on condition that the committee would make changes in the building as were then pointed out....The work ordered....has been completed according to their instructions and we are sorry to say the building has not yet been sufficiently warmed to meet the requirements of the contract. We understand their agent has been at the building and ordered more furnaces with a view to a full compliance with their contract.(1)

In the same report the Building Committee stated that they had procured a bell, installed in the belfry, and had provided a water supply for the building from a dug well about 300 yeards west of the building with a windmill to provide power to force the water through a two-inch pipe to the building, with smaller pipes conveying water through the building. At the same time a gas works was built outside the building with gas piped into the rooms for lighting.

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(1) Report of Building Committee, Board Minutes, January 1869

The College Building was dedicated on March 17, 1869, with appropriate addresses by state dignitaries. The president was inaugurated and the new College was formally initiated.

The building was described by the architect, C.A. Dunham, as follows:

> The outline of the ground plan is that of the letter E, one hundred and fifty-six feet in length by seventy feet in width, through wings which are so arranged that they can be extended at any future time as may be desired. The building is five stories in height - first story nine feet, second story fourteen feet, third and fourth stories twelve feet, attic story ten feet six inches. Forty-two feet of the central portion of principal front projects seven feet, with a veranda ten feet in width. At the ends of the principal front there are two towers twenty-one feet square, projecting four feet from face of main walls. The principal tower rises to the height of one hundred and thirty-six feet, and at the elevation of one hundred feet there is a bell-turret, with projecting balconies on the four sides, to accommodate those who wish to view one of the most beautiful prairie landscapes in the west. The principal story is gained by ascending a flight of stone steps of ample dimensions, landing upon the veranda heretofore mentioned. After passing through the entrance doors, which open into a hall eight feet in width, to the right is the reception room, sixteen feet by twenty-four feet; chamber, sixteen by sixteen feet, with ample closet room. Opposite these rooms is the library, eighteen feet by forty, located in the central part of the building. There is a corridor of ample width running through the center of the building and wings in each story. After leaving the library room, turning to the left, on the right side of the corridor, is located the museum, eighteen by fifty-two feet, which is fitted with cases and shelves for specimens. Returning back to the halls, to the right is the entrance to the lecture-room, which is in the north wing of the building, thirty-four by fifty feet, with seats around on the arcs of circles, radiating from the lecturer's stand. In the rear of the lecturer's stand is a doorway communicating with the museum, for the more ready introduction of anatomical and other specimens upon the lecturer's desk and stand. It is the design to have around the walls of this room a series of pictures, painted in oil, representing scenes in the life of the agriculturist and the arts and sciences. Retracing our steps, we return to the corridor and approaching the library, to the right and on each end of the library room there will be found the two principal staircases, eight feet in width, circular in form, incased in two octagon towers leading from the basement to the attic story. Further on down the corridor is to be found the recitation rooms. At the ends of the veranda, on the principal front, stepping down four steps into an area of nearly the width of the veranda the principal entrance to the basement story, is found halls and corridors running the same

as those described in the principal story. After passing through the doorway to the left is the steward's room; to the right is the laboratory, and adjoining is the bathroom. At the end of the long corridor, entrance is to be had to the diningroom which is thirty-three feet by forty feet. Passing on through the dining-room, to the left is to be found the kitchen, twenty by twenty-four feet, fitted with range, sink, pump and boiler. Opening out of the kitchen is a doorway leading to cellar below, and another door leads to a pantry for dishes, with communication with dining-room. Further along is to be found a scullery and store room of ample size. There is a door from the kitchen communicating with steps in the area to exterior. Returning to the long corridor, and passing by one flight of principal stairs, and opening the door on the right hand, can be found the laboratory, a room eighteen by thirty-six, with closets and other fixtures. This is but a temporary location for the laboratory, as it is the intention to put up a building somewhat isolated from the main building for that purpose. Further along, passing the other staircase and turning to the right, are to be found the wash-rooms, sixteen by twenty-two feet. Opposite is the laundry, sixteen feet by twenty-two, and at one end of the laundry is the dry-room, fourteen by sixteen feet. In front of these rooms, and running parallel with the front, is to be found four large servants' rooms and one large room for the housekeeper. There are five external doors in this story, four leading out of the corridors, and one out of the kitchen.

Ascending either of the flights of stairs, and landing in the principal corridor of the third story, can be found in the rear of the central portion of the building and over the library room the armory, sixteen by eighteen feet, opposite the cabinet room, sixteen by eighteen feet. Returning and passing down the corridor either way can be found professors' and recitation rooms, fifteen by eighteen feet, and twenty-one students' rooms, fourteen by sixteen feet each.

The fourth and fifth stories are nearly the same as the third, each story containing thirty rooms, each ten feet by fourteen feet, and two recitation rooms, each fourteen feet by twenty. There is a cellar seven feet high under the dining room, kitchen, laboratory, and corridors. Also fuel vaults in rear of cellar under laboratory. The building is heated with eight hot-air furnaces. Opposite to where the warm air is admitted into the rooms there is a register of the same capacity as that of the warm air register, to draw off the vitiated air downwards by flues built in the hollow core of the walls. There is also a small register near the ceiling line, for summer ventilation, opening into flues which will conduct it to the summit of the roofs. The basement story is faced up with cut-stone seven feet above the ground. The walls above are built of brick. Cut-stone dress-

> ings to the doors and windows, with string and belt courses of the same. The roof is of the Mansard style, covered with slates in two patterns. The roof of the centre portion of the building is made to rise at a more acute angle, to give the principal entrance more prominence, and to give a more pleasing sky outline. All the openings have circular heads. The east, north, and south sides stand upon a terrace extending out 100 feet from the walls of the building. The outer edge of the terrace is some five feet above the natural formation of the earth. The terrace will have two fountains and other appropriate decorations.(1)

It did not take long to outgrow the College Building. At the January 1870 meeting of the Trustees President Welch asked for additions to it and also for other buildings. He proposed that two wings be built extending west from the existing structure. He knew precisely what was needed and specified how those wings would be used:

> The extension of the south wing would furnish 1st a basement 35 x 50 feet for a laundry adequate to the wants of the college.
>
> 2nd the first two floors above the basement 35 x 50 feet for the library, the upper one to be used as a gallery.
>
> 3rd the next two floors above (3 story attic) of the same dimension for a museum, the attic to be used as a gallery.
>
> These public rooms would be accessible, spacious and every way adequate.
>
> The extension of the north wing 50 feet would enable us 1st to enlarge the dining room in the basement to such dimensions that it would seat 350 pupils.
>
> 2nd to extend the present Chapel so that it would be large enough to seat an audience of 600.
>
> 3rd to get three ample recitation rooms in each of the two stories immediately above the enlarged Chapel.
>
> 4th to construct a room for practice in drawing 35 feet square in the attic.
>
> All these public rooms would be accessible from the inside through the halls in the corresponding stories and from the outside through a hall running across the west end of the extended wings. I am of the opinion that the kitchen should be in a small separate building.

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(1) Report of the Commissioners of Agriculture for the Year 1865. pp. 178-179;Washington D.C. 1866

> The extension of these wings as contemplated in the original draft will give symmetry and completeness to the entire building and furnish just the public space we need, neither more nor less.

The 13th General Assembly appropriated funds for the proposed wings and in May 1870 the Trustees instructed the Building Committee to proceed to obtain plans and enter into construction contracts for the project. Five bids were received and the contract awarded to Fawcett & Bro., the low bidder, for $39,475. This did not include heating which was let under a separate contract to Pennal & Co. for $4,000. By May 1872 the wings were completed and associated changes made in the original building.

Maintenance and repairs created problems and costs before the Main building had served very many classes. By 1875 it became necessary to replace the warm air heating system with a steam system. The inadequacy of the old plant is summarized in the 6th Biennial Report (1874-75):

> As a means of warming the main college building the Rutan furnaces were purchased and put in eight years ago. During the storms and high winds that occur frequently in the spring and fall these furnaces have proved entirely inadequate. Indeed, both officers and students and especially the young ladies, have suffered not a little from the failure to warm the building in cold weather. They are now worn out and many of them are cracked; the brick work that surrounds them is crumbling, and the timbers directly overhead have become so seasoned by hot air that any further use of these furnaces is extremely perilous to the building.

At the same time other repairs on the building were needed:

> Thorough repairs of the College building cannot be longer delayed. Serious defects in its structure require immediate remedy. The walls of the north tower are of brick and seem to be settling from a lack of adequate support. Some means must be found for strengthening the pillars on which the inner angle of these walls rests. When the north wing was extended, in 1871, the outer wall of the old wing, to which the extension was joined, was left standing in two upper stories, but was removed in the lower story to make room for the lengthened chapel. Two iron columns were substituted for the wall so displaced and the whole weight of the wall above made to rest on these columns and on the lateral wall on either side. Several wide fissures in the superincumbent wall give unmistakable evidence that the means of support are insufficient....There is moreover, a pressing need that the outside woodwork, such as cornice, frieze, window frames, and sashes, should be re-painted. The first painting was done eight years ago,

> and all outside wood finishings being now nearly bare, are exposed to the danger of immediate decay. The whole interior wood-work of the building, with the exception of the library and a few rooms, also need graining, and some very thorough means should be put in and the conductors made secure and perfect. All these repairs....are urged not only for the comfort of those who occupy the building, but as a measure of sound economy to the state.(1)

R.S. Finkbine, the architect who had inspected the building, estimated the total cost of a new heating plant and the necessary repairs outlined at $31,720.

Bids for the "Steam Heating Apparatus" were received in May 1876 and contract was awarded to Haxtun Steam Heater Co., Kewanee, Illinois. About the same time other contracts were entered into: for engine house and cistern, Peter Raff & Son; for exterior painting, R.A. Wilson; for general interior repairs, the Mechanical department of the College; for tin work, Wright Little of Ames. By August Dr. C. Warden, Supt. of Repairs, was able to report:

> The work has progressed very favorably and has been done in thorough and substantial manner, nearly all of the contracts, including that for putting in the heating apparatus will be completed by the first of September.
>
> The labor of removing the old furnaces and cleaning out the subcellar was performed by students as well as taking down the brick wall, cleaning brick, etc. Much other labor during the summer vacation was given to students who for want of means to return to their homes were obligated to remain here. The taking up the air ducts and refilling with dirt and cleaning brick; the painting of the building, putting in stone keys and caps, taking out brick and rebuilding walls; removal of bell tower etc. was let to Peter Raff & Son.(2)

Students were aware of the repairs made. The Aurora for April 1877 recorded:

> The plasterers and painters have been busily at work during the winter, and so improved the appearance of the rooms and halls that we could scarcely recognize the place as being the one we left last fall....One of the very noticeable improvements in our college this term, is the reading room, since it has been repainted, it is now a model of convenience and attractiveness.

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(1) 6th Biennial Report

(2) Board Minutes, August 1876

In 1882 (April 8) a small tornado seriously damaged the south tower of Old Main as well as South and North Halls. The State Executive Council appropriated $1,500 from the Providential Contingent Fund for repairs.

Electric lights were installed in Main in the fall of 1884. The contract with Edison Electric Light Co. provided for "250 ten candle Edison incandescent lamps placed on suitable fixtures or attachements as you may direct and connect with a two hundred ten candle light Edison dynamo to be placed in your machinery department and connect the same by suitable belting and counter shafting to your present steam plant so that it will operate properly."(1) The work was accepted and paid for in December.

Separate, but connected, towers on the west end of each wing of the College building were built in 1888 for restrooms, greatly improving the sanitary conditions.

Minor repairs and repainting continued to be needed. The next major changes came when the library, museum, and chapel were moved to Morrill Hall. This remodeling provided rooms for an additional 54 students in Main. Relocation of the dining hall to Margaret Hall in 1895 made space for "additional recitation and recreation room for the students."(2)

Concern had developed about the structural condition of the towers and an architect, George E. Hallett was employed to inspect them. At the November 1897 Board meeting it is reported that "He reports the walls are safe, for the present, but that careful measurements should be made and recorded as to their movements; that none of the settling is of recent occurrence; that the south tower is a solid square brick structure while the north tower is a frame in its interior construction."

A new roof was installed on the boiler room in September 1900 and the boilers were cleaned the following month.

Tragedy struck the Main about 3:30 in the morning of December 8, 1900, when fire, starting in the boiler room quickly spread to the north staircase and very soon the entire north tower and north wing were in flames, forcing most students to abandon practically all of their property as they fled from the building. With help from the Boone fire department the fire was brought under control before the center section was entirely destroyed and before it reached the south tower and

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(1) Board Minutes, August 1884

(2) 16th Biennial Report 1894-95

south wing.

The ISC students reported some humorous incidents: "Dr. Pammel's bottomless office chair was saved." "Mr.____ carried Miss____'s flat iron down stairs and tossed her china bric-a-brac from the window."

The condition of the building following the fire was described by the State Architect, H.F. Liebbe, in a letter dated Dec. 19, 1900, to the Board of Trustees:

> Having this day made an inspection of remains of the burned main building I beg to report as follows:
>
> First. I find that the north wing is entirely destroyed and the rebuilding of this wing is wholly out of the question.
>
> Second. I find further that the attic story of the center section is also wholly destroyed and much of the interior of said central section is also destroyed: that is the floors and wood partitions, doors, and windows are practically all destroyed but the brick walls stand erect and are safe.
>
> Third. I also find that the attic and roof of the adjacent south wing are damaged to a considerable extent - which can however be repaired. I also find that the now remaining south wing is quite generally damaged by smoke and water, and other damage incident to a fire such as broken doors, window, etc.
>
> Fourth. I find also that the boiler room roof was entirely consumed and in my judgement was the source of the fire.
>
> Recommendations. As the part that remains is only too poor to much longer serve its purpose being old - walls badly cracked on all sides, and badly out of line, with wooden floors badly settled and out of level and all finish severly worn with many years use, I cannot advise the rebuilding of the destroyed wing at any time. The best that can now be done is to finish the central part with a flat gravel roof, and refitting with doors, and windows, and such restoration of floors as will be necessary when all rubbish is removed; also replastering and such other repairs as will be necessary to make this part tenantable, together with general renovation and repair of the whole south wing, so that the repaired structure will serve for a brief time as a temporary domicile for the students. But all this should be done in an inexpensive manner, for whatever money is thus expended will serve no useful purpose beyond affording needed temporary relief.
>
> The remnants of standing walls north of center section should of course be torn down and all useless debris removed.

Those recommendations were followed and the remaining portion of the building was made useable. At the same time Emergency Hall was built.

The college had scarcely recovered from the shock of the first fire when disaster struck a second time. On the morning of August 14, 1902 fire again broke out and demolished the south wing of Old Main. Fortunately the botanical collection and most of the furniture was saved. Arson was suspected but never proved.

The brick and stone from the burned building was used to pave the college drives and the other usable material was salvaged for repair work in other buildings. It was spring of the following year before all of the debris could be cleaned up.

For just a third of a century Old Main served Iowa State College.

The contract for the new Central Building (Beardshear Hall) was awarded in May 1903.

MAPLE, WILLOW and LARCH HALLS and COMMONS

Wallace Road Residence Halls

Built: Maple Hall 1965-67
Willow Hall and Commons 1967-69
Larch Hall 1968-71
Architect: Charles Herbert and Associates
Contractor: James Thompson & Sons

Prior to the 1960's student housing provided by the institution had always clearly separated the men's and women's areas with the men located on the west side of the campus and the women on the east. The first recorded change in this policy is seen in the IOWA STATE DAILY on October 25, 1961, when it was reported:

> Co-educational living facilities are among expansion projects presently being planned in preparation for 13,000 students anticipated to be enrolled at Iowa State University by 1969, J.C. Schilletter, director of residence, revealed.
>
> One thousand, two hundred men from one residence hall will share common dining, study and recreation facilities with 200 women from another hall by 1966, Schilletter said. These residence halls will be located on the intramural field at Lincolnway and Beech Avenue.

By August 1964 the project had reached a more positive planning stage and the architect had been retained. The project description for the

first unit included the following statement:

> The proposed building is the first structure of a complex of residence halls to be located east of the present women's dormitory area and north of Lincoln Way. The complex is designed to permit continued growth, in increments of about 500 students, and when fully developed could provide housing and food service for approximately 3000 to 3500.(1)

The first unit, Maple Hall, was designed without food service and with a capacity of 536 women who would go to other halls for meals. Contracts were awarded for construction in March 1965. In July and again in September the student paper reported that the project was behind schedule.(2)

A fire occurred on February 5, 1966, resulting in an estimated $15,000 to $20,000 damage to the still incomplete building, and causing further delay in completion.(3)

By July the paper could report that the roof was on the building, and occupancy was planned for December 1. The first residents moved into the building in early January 1967.

Planning for the second unit, Willow Hall, and the Commons was started in the summer of 1965. To save time a separate contract for installation of the piling to support the building was awarded in January 1967, and general construction contracts were entered into in May of that year.(4) The tower was occupied in March 1969.

The Commons, directly connected to all three of the residence halls was in use by 1970.

The third tower, Larch Hall, was redesigned to some extent to modify it for use by men. The contracts for construction were executed in December 1968 and the building was occupied in 1971.

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(1) Minutes, August 5-7, 1964

(2) Iowa State Daily, July 29 and September 10, 1965

(3) Ibid. February 8, 1966

(4) Minutes, May 11-12, 1967

MARGARET HALL

Ladies Hall

Built: 1894-95
Architect: Nourse & Hallett
Contractor: Whiting & Wood
Burned: 1938

Located about where LeBaron Hall stands now.

The first request for funds for a Ladies Hall was in November 1885, and was reported in each subsequent biennium until an appropriation of $45,000 was made in 1894. Preliminary plans for the building had been prepared by Nourse & Hallett in the fall of 1893 and these were submitted with the request to the legislature for an appropriation of $75,000.

The sharply reduced budget necessitated extensive changes in the plans. A formal agreement was entered into in May 1894 and the architect then revised drawings and bids were received in August 1894. The bids ranged from $41,000 to $48,143 and the contract was awarded to Whiting & Wood at the low figure, with some alternates for various changes.(1)

The building was described in the Biennial Report for 1894-95:

> The erection and completion of the women's building marks a new era in our advancement. It is designed with choice architecture, composed of brick, roofed with slate and finished with taste. It occupies one of the most sightly locations on the campus, giving the most pleasing outlook to its occupants. It is provided with steam heat, electric lights, ample parlors, bath rooms and the most improved modern conveniences. It is neatly and tastefully furnished throughout. A large dining room is in connection with the building, with a capacity for eight hundred students. It tones for the better our entire college life. Most noteworthy of all it was comfortably filled the first term. It is named Margaret Hall in memory of Mrs. Margaret MacDonald Stanton, whose estimable life and character were given in large measure to moulding the college through a greater part of its history.

Construction was started with ground breaking the last of August 1894.(2) The contract for plumbing and heating was executed in the fall with

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(1) Minutes, August 1894

(2) IAC Student, September 3, 1894

Wallace & McNamara. North Hall was connected to the rear (north of Margaret Hall) and served for the Steward's office and the Domestic Economics department. This resulted in an amusing story in the IAC Student of March 30, 1895:

> The Stroller(1) could not repress a smile as he remembered the remark of someone, who, when asked what the style of the building was, said that the front of the building was Queen Anne style and the rear was Mary Anne style. He did not need to go round the building to find the reason for the latter application, remembering that the dilapidated North Hall, which joins the new building on the north, was sufficient for applying the name.

Margaret Hall was completed in July 1895 and occupied at the beginning of the term. The name was formally adopted at the November Board meeting. The hall had accommodations for about a hundred girls. Fire escapes were installed at each end of the building in 1897. They were replaced in 1903.

The Botany department was headquartered in Margaret Hall, after the loss of the south portion of old Main, from 1902 until 1906 when they moved to the new Central Building.

In 1913 authorization was made to excavate the basement of Margaret Hall to provide for installation of lockers and shower baths.(2) Two years later a swimming pool was added.(3)

From its opening until 1929 Margaret Hall had been used for undergraduate women. In that year, when additional halls were available, it became a hall for graduate women, and all food service was discontinued.(4)

Margaret Hall was completely destroyed by a fire the night of April 9, 1938.

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(1) The Stroller was the name used by an unidentified writer for the paper at that period.

(2) Minutes, November 1913

(3) Minutes, August 1915

(4) J.C. Schilletter, 1970

MARSTON COTTAGE

Built: 1868-70 Razed: 1958
Architect: C.A. Dunham
Contractor: N.P. Starks

The third of the three original "Professors' Houses" was first occupied by Professor William A. Anthony. He resigned in 1872, and his successor, Alexander Thomson moved into the house. He was there until he, too, resigned in 1884. During his stay he shared the house for a couple of years with Albert E. Foote and later E.R. Hutchins. The next occupant was General James Rush Lincoln who lived there from 1885 to 1891. From 1892 until his death in 1949, this was the home of Anson Marston, shared with Samuel W. Beyer. Mrs. Marston continued to live there until the house was razed in 1958 to permit construction of Helser Hall addition.

The house was brick, with basement, two full floors and large attic. The back stairs were added in 1874. Major repairs were undertaken in 1904. The front porch was screened in 1913 and in 1923 a garage was built into the basement.

MARSTON HALL

Engineering Hall

Built: 1900-1903
Architects: Proudfoot & Bird
Contractor: H.W. Schleuter

The legislature appropriated $150,000 for a new engineering building early in 1900. In May the trustees determined to invite architects to submit drawings in a competition. This is the only building on the campus for which selection of the architect was by competition based on design. Because of that unique procedure the rules of the competition are included here:(1)

1. Cost of Building. The cost, including heating, lighting, and plumbing shall not exceed $150,000.

2. General Specifications. The general type of construction, the materials and other features shall be in accordance with the general specifications prepared by the college engineer and obtainable on application.

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(1) Minutes, May 2-4, 1900

3. Floor Plans. The floor plans shall be in substantial accordance, so far as total area and the areas and general arrangements of the several rooms, with the floor plans now on file at the college, copies of which are obtainable on application.

4. Drawings. Each competing architect shall submit the following drawings: Front elevation, side elevation, rear elevation, longitudinal section, transverse section, plans of each floor, and perspective drawing.

5. Scale of Drawings. Drawings shall be made to the scale of 1/8 inch to one foot.

6. Rendering of Drawings. All drawings shall be finished in black and white, without borders or other irrelevant embellishments.

7. Specifications. With each set of plans there shall be submitted a set of general specifications, setting forth clearly all general structural features not shown on the drawings.

8. Memoir. With each set of plans there shall be submitted a memoir not exceeding 2000 words in length, setting forth succinctly the merits of the design.

9. Marking of Drawings, Specifications and Memoirs. All drawings, specifications and memoirs shall be plainly marked with a motto or emblem, and shall be accompanied by a sealed envelope, having on the outside nothing but the same motto or emblem, and containing on the inside the name and address of the architect submitting them. No other clue to the identity of the architect shall appear on any of the drawings or documents submitted.

10. Method of Specification. From the designs submitted the board of trustees, the president of the college and the heads of the engineering departments of the college will select the design to be adopted and built, unless no design submitted shall be by them considered worthy of adoption. From the remaining designs the second and third will then be selected in a similar manner. After this the sealed envelopes will be opened and the names of the architects announced.

11. Compensation. The architect of the adopted design will be employed as the architect of the building and shall receive for his service the sum of $2500. The architect shall perform the usual duties of an architect in connection with the building except the superintendence of the construction, which shall be done by the college engineer. The right is reserved to consult the architect by mail at all times without extra charge. The

architect shall visit the college for consultation at the opening of bids and during the construction whenever requested by the college, and shall receive therefore the sum of $10. per day and travelling expenses. The architect submitting the designs selected as second and third best shall receive respectively the sums of $50. and $25.

12. Date. All designs for this competition must be placed in the hands of Secretary E.W. Stanton, Ames, Iowa, on or before 1:30 P.M., May 24, 1900.

Seven architects submitted designs to the Board at the meeting on May 24, 1900. Voting was held on the following day. Twelve board members together with engineering professors Marston, Bissell, Spinney and Beyer were present.

By unanimous decision the design by Proudfoot and Bird was selected as the first award. Second place was given to the design of Liebbe, Nourse & Rasmussen and third place to Hallett & Rawson. All three were Des Moines firms. Other entrants were Patton, Fisher & Miller, Chicago, J.C. Llewellyn, Chicago, Cox & Schoentgen, Council Bluffs, and Pearson and Makepeace, Des Moines.

Bids were received at the August 15-16, 1900, meeting of the Board and the contract for construction was awarded to Henry W. Schleuter, Chicago, for $153,000. The painting contract was awarded to A.N. Harding for $1800.

The original plans for the building had called for the exterior of the building to be face brick. A change to Bedford limestone was authorized at the March 1901 Board meeting at an increased cost of $4000.

The new Engineering Hall was occupied in January 1903.(1) Formal dedication took place the end of May.(2)

The elevator was installed in 1903 and final project cost of the building came to $218,647.71(3)

A blizzard late in January 1909 resulted in damage to the building. The ISC Student, Feb. 1, 1909 reported: "The asphalted roofing was

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(1) ISC Student, January 24, 1903

(2) ISC Student, May 23, 1903

(3) Biennial Report, 1903-05

ripped off Engineering Hall and pretty throughly distributed over the surrounding country while the skylights were also badly damaged." A contract in the amount of $2786 was awarded to St. John & Barquist for roof repair in May.(1)

The Physics department and the State Highway Commission moved out of the building in 1924 and $4000 was allocated for repairs and improvements.(2)

The name Marston Hall was formally moved and accepted on July 1, 1947.

Extensive remodeling and repairs, including removal of the elevator, were made in 1955 at a cost of $45,000.(3) Further repair and remodeling projects were undertaken in 1972 and 1973.

MEAT LABORATORY

Abattoir; Animal Husbandry Laboratory

Built: 1916-18
Architect: Proudfoot Bird & Rawson
Contractor: Thos. Sloss, Supt. of Buildings and Grounds

The first recorded reference to this building appeared in the 21st Biennial Report (July 1, 1903 to June 30, 1905):

> Among our needs for additional buildings one of the most urgent is that of a building to be used as an Animal Husbandry laboratory. A building of this kind would serve a most useful prupose in connection with both the instruction and research work of the College and Experiment Station.

It was not until 1913 that the building was approved.(4) Two years later "The Board Architect was instructed to prepare tentative plans."(5) Final plans were approved in August 1916(6) and the decision was made

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(1) Minutes, May 1909

(2) Minutes, April 1924

(3) Minutes, June 1955

(4) ISC Student, May 20, 1913

(5) Minutes, January 22, 1915

(6) Minutes, August 9, 1916

to have the building erected by Supt. Sloss. Work was started in September of that year and completed in December 1917.

> Equipment for the new animal husbandry laboratory will be completely installed and the building ready for use immediately after the Christmas holidays. The work on the equipment is being carried on now and is nearing completion.
>
> Killing and working with meats will start immediately after the holidays under the direction of Prof. J.D. Helser. The work will be carried on from then on until the end of the semester. This semester there is only one class in meats and meat cutting but next semester more work will be given to give all classes the advantage of the new building and equipment.
>
> The building will be used also to assist in the better instruction during the short course. All of the killing for the short course banquet will be done in this building. The stock will first be judged on foot and later killed....(1)

The original building is well described in a story in the March 28, 1918, edition of the Iowa State Student:

> As a part of the program of the Cattle Feeders conference the new college abattoir was dedicated yesterday.
>
> For years Iowa State college has desired a building suitable for demonstrating to the students the ways of making the correct meat cuts, of slaughtering animals and of judging animals with reference to their dressing percentage. The students then actually kill and dress out the animal that they may see their error and the condition of the carcass. Now they have such an abattoir as would bring a smile of joy to the eye of any man who really appreciated what part modern and up-to-date fixtures play in the successful killing, cooling, packing and preserving of the carcasses of the common farm animals.
>
> The new abattoir contains all the modern conveniences needed in the slaughter of meat producing animals. Iowa State college can now boast of having the best equipment of any college in the country for instruction along this line.
>
> On entering the main part of the building, one passes into a large judging ring, where the livestock is judged before being killed. On one side of the ring rises a large balcony which seats 500 people. However, room can be made, by putting additional chairs in the balcony and at the ring side, for the seat-

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(1) Iowa State Student, December 15, 1917

ing of 1,000 people. This insures seating room sufficient to hold all who wish to come at times when there is a special meat demonstration. Opposite the balcony and on the other side of the judging ring, is a platform with several meat blocks and other devices for the cutting of the carcass into the various meat cuts.

After the stock has been judged in the ring they are placed in a small adjoining room, where they are allowed to shrink for approximately twenty-four hours.

The animals are now taken to the killing pen. Hogs are put in the sticking pen, where they are first stunned and then bled. Cattle are placed in the killing stall, one side of which opens outward so that the carcass will lie on a sort of table as soon as the animal is killed. Gutters are placed in each of these pens that all of the blood may be collected and saved for future use.

From the sticking pen the hogs are rolled into the scalding vat and are then pulled out onto the scraping table, where they are thoroughly cleaned. After the cleaning operation the hog is hung on a gambrel. If a beef has been killed, it is skinned on the table upon which it fell and is then hung on the gambrel in the same manner as the hogs. The entrails are next removed and dropped through a chute into a room in the basement below. The carcasses are now pushed along a track toward the cooling rooms. Before entering the cooling rooms, the carriers pass over a portion of track suspended on scales, so that the warm weight of the carcass may be obtained.

Five of the rooms in this building are cooled by a circulating brine system. Of these rooms, two are used for cooling purposes, two as refrigerators and the remaining room is provided on one side with windows and may thus be used as a show room for the carcasses. These rooms are each under a separate cooling system so that they may be individually held at the same temperature.

The carcasses are allowed to shrink in the cooler about a week before they are cut into the various retail cuts for market. As each carcass comes out of the cooler it again passes over the scales and is weighed. After being weighed, the carcass is pushed into the room where the cutting tables are located and the students are allowed to make the different retail cuts and prepare the meat for market.

The entrails fall from a chute in the dressing room into a vat in the offal room located in the basement. Here they are cleaned and all parts that may be used as food are saved and the remainder is thrown into a rendering tank and thus converted into fertilizer.

> In another room in the basement will be a sausage grinder and a wiener and sausage stuffer. This gives the student a chance to make sausage and wieners.
>
> Another room concerns a cooking vat, where the pickled and smoked hams may be boiled for the market trade. Here is also found a rendering vat for the lard that is stripped from the intestines and cut from other pork cuts. After rendering the fat it is placed in a compressor and is then ready for sale.
>
> The refrigeration system used is the brine circulating system.

In 1941 it was reported that "cork insulation in the four new cold storage rooms in the meat laboratory will give quick freezing of meat and vegetables. The rooms will be set at temperatures of 30, 20 and 10 degrees below zero, and 10 degrees above zero."(1)

More extensive remodeling was undertaken in 1955. It was described as follows:

> The work contemplated consists of remodeling to permit more efficient use of the space and to improve sanitation. It includes rearrangement of partitions and trackage in the cooler rooms, conversion of the hand-operated elevator to power-operated, constructions of a partition separating the cutting room from the judging arena, installation of ventilating fans, new lighting, screens for doors and windows, gas service to the building, acoustic improvement in the classroom and complete interior painting.(2)

That work was done by the Physical Plant Department at a cost of $10,000.

The building continued in its function until 1977 when the new Meats Laboratory was completed and all of the operations were moved to the new facility.

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(1) Iowa State Daily Student, January 4, 1941

(2) Minutes, December 809, 1955

MEATS LABORATORY

Built: 1975-77
Architect: Frevert, Ramsey & Drey
(Globe Engineering Co., Consultants)
Contractor: Allen Construction Co.

This building was needed and designed to replace the functions of the old Meat Laboratory, built in 1916-18, which could no longer meet health standards and was very much outmoded and outgrown.

An appropriation to fund this building was made by the 65th General Assembly (1973-74), under heavy pressure from the Iowa Cattlemen's Association. An additional appropriation was also granted in the next biennium to cover increased costs due to escalation and more complex mechanical equipment than was anticipated in the original estimates.

The building program had been prepared in the early months of 1974 and was ready to present to the architect in May of that year when the architect and his consultant were selected. The very specialized nature of the operations of the laboratory demanded the need for a consultant with a detailed knowledge of and experience with the kinds of processes and equipments to be designed.

Schematic drawings were approved in September 1974, but final documents were not completed for another year. Bids were received and contracts for construction were awarded in November 1975.

MECHANICAL ENGINEERING LABORATORY

This building is composed of three units built at different times, but now forming a single structure. These units are discussed under their earlier names as headings.

MACHINE SHOP

Built: 1907-08
Architect: Proudfoot & Bird
Contractor: H.W. Schleuter

The Machine Shop was the first part of the laboratory to be built and forms the west portion of the present building. Plans were prepared early in 1907 and the construction contract was awarded in May of that year.(1)

"During the construction of this building the board became convinced that much additional room could be obtained at small additional cost by building a gallery around the main floor."(2) An additional $1000 was made available for that construction and the building was completed in the summer of 1908.

STEAM AND GAS LABORATORY

Built: 1913-1914
Architect: Proudfoot Bird & Rawson
Contractor: C.E. Heaps

This unit includes the east 120 feet and north wing of the Mechanical Engineering Laboratory. The contract was let in October 1912, but construction did not start until the following spring.(3) The 125 feet high smoke-stack of radial brick was built in conjunction with the laboratory. The stack was razed in 1978. The building was ready for occupancy in February 1914.(4) This unit, too, had a second floor around the perimeter with a large area open from first floor to the roof.

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(1) Minutes, May 1907

(2) Biennial Report, 1906-08

(3) ISC Student, April 1, 1913

(4) ISC Student, March 3, 1914

ADDITION TO STEAM AND GAS LABORATORY

Built: 1936
Architect: A.H. Kimball
Contractor: James Thompson & Sons

This addition filled in the space between the two older buildings to make a single building for the Mechanical Engineering Laboratory. It was funded with $20,900 of State money and $17,100 from the Public Works Administration.

MECHANICAL ENGINEERING LABORATORY

Since completion of the third unit the combination of the three structures in a single building has been identified as the Mechanical Engineering Laboratory. Extensive remodeling was undertaken in two stages between 1956 and 1961.

The first phase of the remodeling was done in 1956 from plans prepared by A.H. Kimball and constructed by James Thompson and Sons. The Board Minutes of May 1956 describe the project:

> This project includes the construction of a reinforced concrete floor to close an open area between the second floor balconies in order to provide more usable floor space. It also includes a major repair of the roof of the building. The present roof is of a monitor-type framed with structural steel. The monitor windows are in bad condition, and it is proposed to alter the roof to a plain gable roof without monitors and to remove the windows entirely. The roof is covered with cement tile which are in bad condition and permit considerable leakage. These will be removed and a wood sheathing installed which will be shingled with composition or asbestos shingles. In addition, certain rooms in the north wing of the building will be finished for classroom use by installing ceilings, lighting and repainting....It is proposed to award contracts up to the maximum amount of funds available, $40,000, but this amount of money will cover only the basic work outlined above. This must be done in order to make the building weather-tight and to provide a floor for future subdivisions into rooms.

The above work was completed in February 1957.

In March, 1959, an appropriation of $50,000 was made for further remodeling:

> This project will consist of remodeling to provide five more classrooms and to improve all of the existing classrooms in the building. The work will include construction of partitions, installation of plumbing, heating and ventilating services, re-

wiring and installation of fixtures in the remodeled areas, painting, and asphalt tile floors.(1)

Plans for this remodeling were prepared by the Physical Plant Department and construction work was by that department "on a job order basis for individual sections as they can be vacated."(2)

The final report, April 1962, showed a total cost of $51,757.86 expended on this second phase of remodeling.

MEMORIAL UNION

Built:	1927-28	
	1938-39	South wing
	1948-49	Bowling lane addition & dishplant
	1950-52	Northwest wing and west terrace
	1957-58	Sun room, bookstore
	1964-65	Northeast wing
	1972-73	Southeast expansion
	1978-79	Upper floors of southeast expansion
Architects:	1927	Proudfoot, Rawson & Souers
	1938	Proudfoot, Rawson, Brooks, & Borg
	1948-64	Brooks, Borg
	1972-78	Brooks, Borg & Skiles
Contractors:	1927	Arthur H. Neumann & Co.
	1938	Arthur H. Neumann & Co.
	1948	Kucharo Construction Co.
	1950	Olson Construction Co.
	1957	James Thompson & Sons
	1972	Allen Construction Co.
	1978	Story Construction Co.

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(1) Minutes, June 1959

(2) Minutes, November 1959

(The Memorial Union Parking Ramp is duscussed separately under the heading "Parking Ramp - Memorial Union.")

The concept of a memorial to the men who lost their lives In World War I developed almost at the same time the Armistice was signed on November 11, 1918. Various ideas were suggested: a grotto, a piece of sculpture, a park, a gateway, a fountain, a union building.(1) Committees were formed and votes taken to establish preferences. It was not until June 1920 that a firm decision was reached by students, faculty and alumni. The Memorial Union then became the goal of an extended campaign to raise funds for the building.

The site for the proposed building was chosen only after lengthy discussions extending from 1923 until April 1925, when the present location was dedicated on the 22nd of that month. Other sites seriously considered were the knoll where Friley Hall is now located and the Music Hall (Maples) site, now the new Music Building location.

Selection of an architect created some discussion between the Memorial Union board president and the president of the college. That will not be discussed in detail here because it is recounted very adequately in Harold Pride's volume.

Pond and Pond, Chicago architects were chosen by the board president in June 1923 and they worked with the board for the next two years. A short-lived, unproductive contract with James Gamble Rogers of New York came in 1926. The first contract with Proudfoot Rawson & Souers and acceptance of William T. Proudfoot's basic design came in May 1926.(2) The perspective of the building published at that time shows the north side very much as it looks today, although it was not until the northeast wing was completed in 1965 that the front reached that stage. Mr. Proudfoot died in June of 1928, only three months before the building was opened to the public. Ground had been broken and construction started in April 1927.

On September 23, 1928, the cafeteria line was first put into operation and the following day the Memorial Union and Alumni Association offices were occupied.(3) At that time the construction included the main five story section, the Great Hall with adjacent east and west sections and Gold Star Hall on the north. The two upper floors were left unfinished until 1936-37 when Ben Cole & Son were retained as contractors to complete those areas for occupancy.

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(1) Pride, (1972) pp. 5-6

(2) Iowa State Student, May 23, 1926

(3) Pride, (1972) p. 82

1936 also saw the installation of the organ as a gift from two alumni. The following year the fountain in the area outside of the north entrance was built with funds provided by Veishea Central Committee. However, it was 1942 before the Christian Petersen sculptured Indian women were placed on the four sides of the fountain.

The west elevator was installed in 1937, a necessity with the opening of the two upper floors.

By 1938 just ten years after the building was opened, the demand for more space had become acute. Three factors entered into the decision to build an extension to the south rather than constructing the northwest or northeast corners at that time. These were the need for a larger dance floor, for more space for the Commons dining area and the desire for bowling alleys. The only possible location for these facilities was to the south.(1) Plans were developed to incorporate the South Ball Room, the expanded Commons with the Pine Room and '39 Room, and bowling alleys in the basement. Construction began in the summer of 1938 and was completed the following February.

When Gold Star Hall was finished in 1928 clear glass was installed in the windows because funds then did not allow for the planned stained glass. Harold W. "Pat" Cummings, '18, was a stained glass craftsman and a veteran of World War I. He was selected to design and execute the construction of the windows and they were completed and the hall was rededicated on June 5, 1943.(2)

The next construction work on the Memorial Union was started in August 1948. That project included a south extension to provide for eight additional bowling lanes topped by an outdoor terrace, and an addition to the southeast corner of the building, three levels high, making space on the basement level for a service area for bowling activities, on the ground level for dishwashing facilities and on the first floor for improved food service functions. Work was completed during the summer of 1949.

Even before that project had been completed planning was initiated for the next addition.(3) This became the longest and most costly expansion project undertaken. It included the northwest corner construction, the west terrace, the Chapel and the Browsing Library. Construction contracts were awarded in June 1950 and work was started before the end of that month. It was "officially" accepted on the last day of

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(1) Daily Iowa State Student, April 23, 1938

(2) Iowa State Daily Student, May 26, 1943

(3) Pride, (1972) p. 132

1952, but not fully completed until later in 1953.

Plans for another addition to the building were started in 1956. This construction was for the bookstore and the Sun Room. Bids were received and contracts awarded in April 1957. The Sun Room was first used for the 1958 Senior Prom and the Bookstore was completed in time for opening of the 1958 fall quarter.

The northeast section of the building was part of the original design, but many years passed before that unit was built to complete the north front as intended from the beginning. In 1962 the architect was developing the plans for that construction, but it was the summer of 1964 before ground was broken. This addition provided space for three new dining areas on the main floor -- the Campanile Room, the Regency Room and the Cardinal Room; on the second floor the Pioneer Room made possible an additional meeting room and display area; student organization offices and meeting spaces were arranged on the ground floor level. This wing was completed late in 1965.

Increased demands on the food service area and for the bookstore brought about a southeast expansion of the building in 1972-73. This unit extended the basement and ground floors to the east, and also included new mechanical equipment space in a sub-basement. A service dock on the south side provided better truck access for the bookstore and other needs of the building. Additional storage and sales space was made available for the bookstore, a building maintenance shop was constructed and food service kitchen facilities were expanded. This wing was started in mid 1972 and completed the following year.

The southeast wing had been designed with foundations to carry two additional floors. In 1978-79 those floors were constructed to complete the wing. On the first floor a new dining area was added, known as the Gold Room, and office space was incorporated on the second floor. Access to the parking ramp was provided directly from the new addition.

Through the years of its operation the Memorial Union also underwent various minor alterations and changes which have not been mentioned in this account. Most of those are well documented in Pride's book.

METALLURGY BUILDING

Built: 1947-1949
Architect: Tinsley, Higgins and Lighter
Contractor: James Thompson & Sons

The first reference to this building appears in the Minutes of November 1-2, 1946, when "President Friley stated that the Federal Government probably would make funds available for an atomic research building, and that the Government had requested the Iowa State College to designate architects for the project." In January the Board was informed "that the United States Army had selected....architects to design the Atomic Institute Building."

In March 1947 a lease was executed for the building site, which had been determined the previous month. Bids for construction were received and the contract awarded in July 1947.(1) In January 1948 the construction contract was modified to incorporate additional work:

(a)	Erection of temporary pre-fab storage buildings for Atomic Institute	$50,000
(b)	Installation of equipment in the Metallurgy Building	121,700
(c)	Moving of two Home Management houses from the Metallurgy Building site	25,000
(d)	Connection of utilities, grading, landscaping walks and drives for the Metallurgy Building	40,000
		$236,700

Payment of the above projects to be out of funds furnished by the Atomic Energy Commission.(2)

During 1948 contracts for the laboratory equipment and for an intercommunicating system were entered into.

The cornerstone was laid in a dedicatory service on May 14, 1948.(3)

The building was completed in 1949.

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(1) Minutes, October 10-11, 1947

(2) Minutes, January 14, 1948

(3) Iowa State Daily, May 15, 1948

METALS DEVELOPMENT BUILDING

Built: 1959-61 Addition: 1966-67
Architect: Tinsley, Higgins, Lighter & Lyon
Contractor: 1959 W.A. Klinger Co.
1966 James Thompson & Sons

The Atomic Energy Commission proposed this building in 1951 and requested that land be leased for the site.(1) However, it was April of 1959 before a lease was executed.(2) Bids were taken in June by the A.E.C.(3)

Bids for equipment items -- an extrusion press, rolling mill, laboratory equipment and elevator -- and for the storm sewer extension, were taken by the university under separate contracts, although all costs were reimbursed by the Atomic Energy Commission.

A machine shop addition on the north side of the building was constrcted in 1966-67.(4)

MILITARY GARAGE

Built: 1931, 1941
2 Sections razed: 1977

The structure carried on the records under this name was actually three buildings. The first two were apparently erected in 1931 and were located on the west side of Winlock Drive, the northernmost unit west of what was then the south Military Stable (later Veterinary Surgery), and the other unit across from the west wing of the Veterinary Clinic.

Only those two units are shown on maps prior to 1942. A map dated that year includes a third unit, attached to the south end of the southern of the original two buildings. No references have been located to indicate anything about construction of the third element.

The Financial Report first records the value at $650 in 1932 and con-

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(1) Minutes, April 12-13, 1951

(2) Minutes, May 7-8, 1959

(3) Iowa State Daily, June 18, 1959

(4) Minutes, June 16-17, 1966

tinues it at that figure until 1977 when a reduction to $188.06 was made to allow for the value of the original two units which were razed early that year.

The remaining unit is currently used as a storage area.

MILITARY POWDER MAGAZINES

(Two Structures)

Built: 1924 and 1929
Razed: 1948

These two magazines were built on the east edge of Pammel Woods, between the corral north of the old Military Stables and the Northwestern tracks.

The first magazine is shown in the list of college buildings in the secretary's report for 1924, with a value of $322.23.

Board minutes for October 9, 1928, show authorization for a "black powder magazine to separate this powder from the other kinds of explosives, of necessity stored in the magazine, to conform to the regulations of the War Department for the protection of all property." This unit carried a value of $300 in the reports.

Both magazines were eliminated from the building list in 1948.

An entry in the Board minutes for April 17-18, 1919, indicates an earlier structure had been erected, but its location is unknown today:

> Powder House. One hundred dollars, or so much thereof as may be necessary, is hereby appropriated from the Repairs and Minor Improvements Fund to provide for the storage of powder to be furnished by the War Department.

MILITARY STABLES (Frame)

Military Horse Barn

Built: 1921
Razed: ca. 1932

This building was located northeast of the cemetery, just east of the edge of Pammel Woods.

The Board minutes for June 8-10, 1921, provide about the only information available on this structure:

> This building to accommodate approximately 100 horses and to be constructed with lumber donated by the War Department in buildings at Camp Dodge, will be located on the site of the former serum hog yards in the east border of College Park and directly west of the Horticulture Department nursery. The plans and the exact location are to be determined by the President of the College with the approval of the Building and Business Committee.

The following month the Minutes record that $8000 was allocated for "Military Horse Barn, including special provision for blacksmith, harness, and guard in separate small building on account of fire risk," and an additional fund of $400 to provide water for the building. The site was changed from that mentioned the previous month.

When new masonry stables were constructed north of the Veterinary Clinic building the old frame stables were used for storage of machinery of the Agricultural Engineering department.(1)

The exact date when the frame stables were razed is not known. The building value is recorded at $300 in the June 30, 1932, annual report. The June 30, 1933, report shows that value removed from the records, indicating the elimination of the building between those two dates.

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(1) Iowa State Student, April 23, 1931

MORRILL HALL

Built: 1890-91
Architect: Josselyn and Taylor, Cedar Rapids
Contractor: General O.J. King, Omaha

The need for a library and a museum was recognized from the very start of the College. The minutes of the Board in January 1870 state: "Next to the men that teach its students and to the men that control its affairs the library and museum are the most important means of building up a great institution."

But it was twenty years later before action was taken to meet that need. The Legislature funded the building in 1890, and it was then determined to include a chapel as well as library and museum.

On May 15, 1890, the Board accepted the preliminary sketches by the architects and their proposal to prepare final plans and superintend construction. Bids were received in July. At the same meeting the name "Morrill Hall" was adopted in honor of the Senator who sponsored the Morrill bill establishing the land-grant college system. Seven bids for general construction and three for electrical work were received. Contracts were awarded to the low bidder in each case, in the amounts of $28,404 and $335 respectively.

The site for the building was identified as follows: "The center of the tower shall be due North on the east line of the central projection of the Main Building."(1)

The building was dedicated on June 16, 1891, with an address by Professor Charles E. Bessey.

President Beardshear prepared this description of the building for the 14th Biennial Report (1890-91):

> The erection of Morrill Hall has enabled us to provide well for the work of zoology, entomology, and geology. For these branches of science it provides ample recitation, laboratory and depository room. The basement is well utilized by a flourishing gymnasium and rooms for the preparation of subjects of natural history and the display of fishes. This building makes pleasing accommodation for the exhibit of the museum and scientific collections in geology and natural history. We have provided a gem of a chapel that aids greatly in the social, intellectual and moral phases of our college work. The crowning service of Morrill Hall is its provision for a most admirable library room. The

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(1) Minutes, July 1890

room is well located, cheerfully lighted and tastefully furnished, making one of the most inviting rooms of the kind in the state.

Fire escapes were added in 1904. The following year new seats were provided for the chapel and a barber shop was installed in the basement. In 1908 the barber shop was moved out to make space for a library reference room and office for assistant.

Alterations costing $3249 were made in 1914, at the same time the Library was moved from Morrill Hall to Central Building. The Agricultural Extension offices and document room were then moved into Morrill Hall.

Concern for the safety of the building resulted in an inspection by H.W. Hartupee, Structural Engineer with Proudfoot, Bird, and Rawson, in May 1922. He made a number of recommendations for additional bracing of the roof trusses, all of which were executed by Thomas Sloss, Superintendent of Buildings and Grounds, within the month. Subsequent alterations in the building were made in 1938 and 1955, and some minor modifications since then.

MORTENSEN COTTAGE

Budd House

Built: 1877	Addition: 1884
Relocated: 1892	Razed: 1927

Originally located on site where Botany Hall stands now.

An acre of land was leased to Professor J.L. Budd in May 1877, and he began immediately to build a home for his family. He sold the house to the College in 1884 at which time an addition was built from plans by Foster & Liebe. Tomlinson built the addition for $780. Budd received $2,000 for the house. The addition was two stories 14 x 22 feet. Chimneys of the house were blown down in the cyclone of April 8, 1882.

Selection of the location where Budd's house stood as the site for Agricultural Hall (Botany Hall) resulted in the removal of the house in 1892 to a location at about what is now the southwest corner of Dairy Industries Building. Cost of moving, including a new foundation came to approximately $1000.

Tenants of the house are listed by Dorothy Kehlenbeck(1) as follows:

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(1) Manuscript, 1969

1877 - 1890	J.L. Budd
1891 - 1894	D.A. Kent
1895 - 1903	J.B. Weems
1904 - 1907	G.L. McKay
1908 - 1926	Martin Mortensen

The house was razed in 1927 to make room for the new Dairy Industries Building.

MUSIC BUILDING

Built: 1978 -
Architect: The Durrant Group, Inc.
Contractor: Vulcan Construction Co.

For many years the Music Department had outgrown Music Hall and had overflowed into several other buildings as well. It was not until 1974 that funds for planning a new building were made available and the project became more than a dream.

In November 1976 the architect was selected and provided with the Building Program prepared by the University Architect. This would become the first building erected on the campus designed specifically to satisfy the special space and acoustical requirements for music teaching and performance. R. Lawrence Kirkegaard was retained as a consultant for the acoustic conditions of the building.

Plans were developed and schematic drawings were approved in May of 1977. Final construction documents were completed in early summer of 1978 and construction contracts were awarded in August of that year.

Occupancy of the building is scheduled for the fall of 1980.

MUSIC HALL

The Maples, Stanton House

Built: 1868-70 Addition: 1899
Architect: 1868 C.A. Dunham
1899 H.F. Liebbe
1914 Proudfoot Bird & Rawson
Contractor: 1868 N.P. Starks
1899 W.M. Rich
1914 Thos. Sloss (Bldgs. & Grounds Dept.)
Razed: 1978

This was the second "Professor's House" erected on the campus. It was first occupied in 1870 by Professor George W. Jones, mathematics, who also served as college cashier. In that same year Edgar W. Stanton entered the college and lived with the Jones family. From 1874 through 1878 the house was the residence of General Geddes and Stanton retained his room there. From 1879 until his death in 1920 this building was the Stanton home.

In 1899 the ISC Student reported that "Prof. Stanton's residence is being remodeled and enlarged."(1) That enlargement consisted principally of a twenty foot extension to the east, giving the house an entirely new front appearance. Repairs costing about $680 were made in 1904.(2) In 1914 the house was connected to the central heating system and the old coal room in the basement was converted to a garage with an entrance drive from the south.

Mrs. Stanton continued to live in the house after her husband's death, and in 1922 she started the tea room in "the Maples" as the house then became known.(3) She moved to Osborn Cottage in 1924, but the tea room continued operation under a faculty organization with the food service provided by the Home Economics department.

In 1926 the front (east) porch was enclosed, the kitchen was enlarged and more equipment was installed.(4) The tea room continued in operation until 1928 when the Memorial Union opened and began operation of its food service.

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(1) ISC Student, August 15, 1899

(2) Minutes, December 23, 1904

(3) Iowa State Student, January 4, 1922

(4) Iowa State Student, January 8, 1927

After minor remodeling to the building the Music Department moved into it in November 1928.(1)

The new name "Music Hall" was formally applied to the building by action of the Board on March 7, 1929.

The building continued as the home of the Music Department until the summer of 1978 when it was razed to make way for a new music building.

NAVAL ARMORY

Naval Diesel School Laboratory

Addition to Mechanical Engineering Laboratory

Built: 1942
Architect: A.H. Kimball
Contractor: James Thompson & Sons

The steps taken in the development of this project are not well brought out in the Board Minutes. The earliest reference was at the October 4, 1940, meeting when authorization was given "to accept works Progress Administration funds if they are made available for improvement and building projects for the Reserve Officers Training Corps, if and when needed, subject to final approval by the Iowa State Board of Education."

The next entry in the Minutes was for the meeting of September 8, 1942, when the Building and Business Committee of the Board reported that bids for the construction of an "Addition to the Mechanical Engineering Shop Building, to be used as a laboratory for the Naval Diesel School" had been received on August 11 and that contracts had been awarded for the project. The chairman of that committee also reported that "Iowa State College is to be reimbursed by the United States Navy to the extent of $70,000 for the cost of the Addition."

The project was accepted from the general contractor as of December 8, 1942.

In January 1945 negotiations were initiated by the Navy to sell the building to the College. It was March 1946 before a final agreement was reached and the sale was consummated at a price of $25,000.(2)

The Iowa State Daily for April 4, 1952, reported that the building

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(1) Iowa State Student, November 17, 1928

(2) Minutes, March 12, 1946

"is now used for training students as reserve officers in the navy. Featured in the building is a simulated destroyer, complete with a bridge, intercommunication system, plotting room, and a simulated submarine."

NICKELL - FISHER HOUSE

Duplex "B" - Genevieve Fisher House

Built: 1951 - 52
Architect: Griffith & Haines
Contractor: James Thompson & Sons

This building was constructed under the same contracts as the Child Development Building. Both were built as Home Management houses and financed with dormitory construction funds.

Home Management Duplex B became the Genevieve Fisher House in 1957. In 1962 the east portion retained that name but the west portion was renamed the Paulena Nickell House. This continued the recognition of Miss Nickell when the building formerly carrying her name was changed to Child Development Building.

When the College of Education became a separate entity in 1968 the Nickell-Fisher House became its headquarters and continued in that use until 1976. Since then the house has served as student living quarters.

Also see entry under Child Development Building.

NORTH HALL

Servants' Hall, Margaret Hall Annex

Built: 1880
Architect: Prof. T.L. Smith
Contractor: F.S. Whiting
Razed: 1926

Located just south of present west wing of MacKay Hall.

An appropriation was made in the spring of 1880 for "a building to be occupied by the schools of Agriculture and Veterinary Science and the Botanical Department." Contract for construction was awarded in May in the amount of $5752 to F.S. Whiting. Professor S.A. Knapp was appointed superintendent, who reported in December as follows: "The plans for this building were somewhat carefully matured to secure a very substantial structure and one that would in all respects meet the necessities of the several departments to be accommodated. The Professors interested express themselves as more than gratified at the results achieved."(1)

The building was completed for occupancy early in 1881. On April 8, 1882 a tornado crossed the campus. "North Hall had both gable ends blown in above the first floor, and all the roof carried away except a small portion in the center."(2) Repairs were made the next month. A porch was added on the front (south side) in 1886. Two years later a water supply and coal stoves were provided.

When Margaret Hall was built in 1894 North Hall became an attached wing of the new building. The lower floor was made into a kitchen, the second floor was remodeled for the Department of Domestic Economy and living rooms, while the attic was set up for servants' rooms.

North Hall was taken down in 1926.

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(1) Minutes, December 1880

(2) 10th Biennial Report, 1882-83

NORTH STUDIO

YMCA Hut; Applied Arts Studio

Forage Crops Laboratory, Soil Testing Laboratory

Built: 1918 Moved: 1919, 1925, 1926
Razed: Part 1935; part 1957

In September 1918 the YMCA was granted permission to erect a 30' x 80' building as a "Y" Hut for student soldiers. It was built the next month just north of the bleachers on State Field.(1) It was "Y" No. 2 with Alumni Hall "Y" No. 1. By the following year it was no longer needed for its original purpose and was purchased by the college for $1300 and moved to a site just south of Central Station (just north of today's Library) with the east end close to what is now Morrill Road. It was then called "The House Studio" and used by Home Economics for laboratories.(2)

"1925....North Studio....was cut in half and moved near the present Dairy Industry Building where both halves were used as temporary agricultural laboratories. In 1926 they were moved to an area east of the Agronomy Building and became the Forage Crops Laboratory and the Genetics Laboratory. The Genetics Laboratory was torn down in 1935. The Forage Crops Laboratory was remodeled in 1950 for a Soil Testing Laboratory and was torn down in 1957."(3)

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(1) Minutes, September 21, 1918 and Iowa State Student, October 1, 1918

(2) Iowa State Student, September 26, 1919

(3) Kehlenbeck, 1958

NORTON HOUSE

Allis House, Coover House, Practice House, Gray Cottage

Miss Lizzie May Allis, Professor of German, was granted permission to build a residence on the campus at the September 1, 1899, meeting of the Trustees. The site allocated was at about the north end of what is now Roberts Hall.

Judging from a report in the ISC Student dated October 8, 1900, construction of the house was not undertaken until that year:

> Miss Allis already has her residence in process of construction on the slope north of Prof. Knapp's residence on southeast campus. The house is to be of three stories and fitted with all the modern conveniences. As soon as completed Miss Allis will bring her father and mother from New York and take up a permanent abode here. Messrs. Main and McKee of Des Moines have the work.

With approval of the Board of Trustees (a provision of the lease of the property) Miss Allis sold the house to Professor R.C. Barrett in 1907. His widow asked for and received permission, in 1912, to sell the house to Professor W.F. Coover. He in turn, sold it to the College in 1921 for $10,381.80.

From then until 1929 it was used as a practice cottage and was called Gray Cottage. In that year it was moved to a site at what is now the west end of Spedding Hall, and it was renamed the Alice P. Norton Home Management House.

When Spedding Hall was about to be built in 1948, the site had to be cleared and the Norton House was moved north to its present location on north Morrill Road.

In recent years it has been the headquarters of the Film Production Unit.

NUCLEAR ENGINEERING LABORATORY

Agricultural By-Products Laboratory

West Chemical Engineering Building

Built: 1934
Architect: A.H. Kimball
Contractor: Buildings and Grounds Dept.

The earliest reference to this building appears in the Minutes of November 3-4, 1933, where the following quotation from a letter of October 4, 1933, to members of the Board is cited:

> I have already informed the Board about the prospects of securing a federal building, entirely independent of college and state, from the government for the use of the Department of Agriculture in studying the utilization of agricultural wastes. It seems that we have good prospects of securing this building which, with equipment, would cost about $300,000.00.

Transfer of title to the land on which the building was to be constructed from the State to the federal government was then authorized. Although funds were provided through the Department of Agriculture and the Public Works Administration, the actual design and construction was left in the hands of the College.(1)

No references have been found to determine the exact dates of the beginning and completion of construction, but the Iowa State Student on April 26, 1934, reported that the date of June 1 for completion would be delayed about a month because of lack of materials.

In 1946 title to the land and building was re-conveyed, at no cost, to the State.(2) The building then became known as West Chemical Engineering and was used by that department until 1958-59 when the nuclear reactor was installed and the name Nuclear Engineering Laboratory was adopted.

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(1) Minutes, December 12, 1933

(2) Minutes, April 9, 1946

OAK-ELM HALLS

Elm Hall, Oak Hall

Oak-Elm Addition

ELM HALL

Built: 1937-38
Architect: Dougher Rich & Woodburn
Contractor: Ben Cole & Son

About the time construction was starting on Roberts Hall President Hughes was already looking ahead to the need for additional women's housing. At the October 18, 1935, Board meeting he reported:

> While we hope to open another dormitory for women in 1936, there is every indication that within a few years still another dormitory for women should be built. I bring this up now not for action but for your information and to advise you that in my judgment we should begin this year to formulate our plans for the location and design of this building.

It was January of 1937 before action was taken by the Board, and approval of the new dormitory was granted. The following month the architect was retained. Construction started in June 1937 and was completed and the building occupied in March 1938.(1)

Elm Hall was built on the site of the earlier Elm Lodge and continued the use of that name.

OAK HALL

Built: 1938-39
Architect: Dougher Rich & Woodburn
Contractor: W.A. Klinger

Increasing enrollments continued the pressure for more housing and in May 1938 another building project was authorized. A federal grant of $119,988 from the Public Works Administration was approved in August.(2) Bids were received in October and construction initiated about the first of November.(3) The PWA grant was increased by $2700

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(1) Minutes, March 22 and May 3, 1938; and Iowa State Student, March, 12, 1938

(2) Minutes, August 15, 1938

(3) Iowa State Daily Student, November 2, 1938

in August 1939.(1) The new Oak Hall, named after Oak Lodge which earlier occupied its site, was ready for use in September 1939.(2)

OAK-ELM ADDITION

Built: 1964-65
Architect: Smith-Voorhees-Jensen Architects Associated
Contractor: James Thompson & Sons

A report on long range plans for the campus, in the December 10, 1960, edition of the Iowa State Daily said that "A connection will be made between Oak and Elm Halls on the north ends." It was 1963, however, before steps were taken to begin the project. The architect began work on drawings in March of that year and final plans were approved in December. Construction contracts were awarded in February 1964 and the addition was completed in June 1965,(3) and occupied that fall.

The addition was designed to eliminate the two separate kitchens and dining rooms in the halls and provide a single facility capable of serving 600 people. New student rooms were also provided.

In 1968 a renovation project was undertaken to modernize the showers and other plumbing facilities. Brooks, Borg and Skiles were architects and James Thompson & Sons the contractor for that work.

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(1) Minutes, August 2, 1939

(2) Iowa State Daily Student, September 16, 1939

(3) Minutes, June 23-25, 1965

OAK-ELM LODGES & DINING ROOM

The Lodges

Built: 1920
Architect: Proudfoot, Bird & Rawson
Contractor: Thomas Sloss - Bldg. & Grounds Dept.
Razed: Elm Lodge 1937; Oak Lodge 1938

These buildings were built on the site where Oak and Elm Halls are standing today.

Increasing enrollments of women precipitated the need for additional housing in 1920. $130,000 was appropriated for the construction of the four units and the dining hall to serve them. To save both time and money the two-story buildings were of frame construction, with no basements, and were considered temporary at the time they were built.

Other cost-savings were achieved "by eliminating closet doors, dormer windows, window weights, window and door frames, transoms. They (the architects) were instructed to use plain rafter overhang eaves. No shower baths to be placed on the second floor; tub baths to be installed....eliminating the master key and thus effecting a considerable savings."(1)

Construction was completed in time for fall occupancy, and the buildings were described in the Iowa State Student on September 27, 1920:

> An unusual record in dormitory construction has been made in the Colonial group of buildings that will house two hundred and forty young women who are enrolled for school here this fall....
>
> The arrangement of the buildings is unique. The four dormitories are connected by corridors in which are located offices and parlors and library. In the fifth building are located the dining halls and kitchens for each dormitory, reached by means of passage ways, all well lighted, and amply designed for larger numbers than the usual design.
>
> A feature of the construction has made it possible for amusement in abundance in the lodges. The dining rooms are so arranged that they can be opened into one large room, where recreation hours may be spent. The floors of hardwood, will make ideal dancing for the women, also....
>
> All thru this new group, the architects have managed to give the entire inside an atmosphere of luxury and dignity, which is re-

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(1) Minutes, August 18, 1920

> markable considering the hurried erection during the few summer months.
>
> Superintendent of Grounds, Thos. Sloss, who has had the work in charge declares that the accomplishment on time was only made possible by the use of student labor. In fact throughout the operation, he said, nearly four-fifths of the work force were college men....

The new buildings were officially named at the September 15, 1920, Board meeting when the minutes record:

> The two west dormitories to be known as Elm Lodge, the two east dormitories to be known as Oak Lodge, the dining room on the north to be known as North Hall, and the entire group of temporary dormitories to be known as the Lodges.

In September 1930, the Iowa State Student reported that $42000 had been spent on the repair and painting of the Lodges during the past summer. The following year adequate housing for women was provided elsewhere and a group of thirty men moved into the east wing of Oak Lodge on a cooperative system. A couple of years later 120 men were occupying the Lodges.(1)

By 1935, principally as a result of the Depression, various government programs had been established on the campus. That fall these several offices were moved into Elm Lodge.(2)

Elm Lodge was razed in 1937 to make room for the new Elm Hall. The College sold the buildings to J.F. Heable, a Cedar Rapids contractor, who removed it from the campus. At the start of his operation his crew went on strike when they were paid only forty cents an hour while the prevailing rate was fifty cents an hour.(3)

Oak Lodge was razed the following fall, 1938.(4)

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(1) Schilletter, 1970

(2) Iowa State Student, October 22, 1935

(3) Iowa State Student, April 27, 1937

(4) Iowa State Daily, September 17 and 23, 1938

OFFICE AND LABORATORY BUILDING

The Link

Chemistry and Physics Buildings Addition

Built: 1947-1950
Architect: Dougher, Rich & Woodburn
Contractor: Kucharo Construction Co.

This four-level building became a connecting link between the Physics Building and Gilman Hall and was paid for "from funds accumulated in our overhead charges on our contracts with OSRD, the Army and the Atomic Energy Commission."(1)

The architect was selected in February 1947 and the plans were approved and bids received in October of that year. Construction started shortly thereafter and was completed in the spring of 1950.

The intended use of the building was described in the Iowa State Daily Student on August 2, 1947:

> The connecting link will be air-conditioned, for scientific reasons, and will contain in the basement, spectro-graphic laboratories and facilities for tracer chemistry. The first floor will contain the administrative offices of the Insititute, a large conference room for seminars and the research laboratories of Dr. Spedding and Dr. E.I. Fulmer, assistant to the director of the Institute for Atomic Research. The top floor will contain a library reading room for joint use of the Physics and Chemistry Departments, the Atomic Institute and offices for the theoretical physicists.

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(1) Minutes, December 9, 1947

OLSEN BUILDING

Facilities Building

Built: 1973-75
Architects: Durrant Deininger Dommer Kramer Gordon and Finch-Heery
Contractor: Huber Hunt & Nichols

This building was constructed under the same contract as the stadium and was an integral part of that project although it is a separate structure.

In November 1976 the building was formally named the Ralph A. Olsen Building, recognizing Olsen's long support of the university and its athletic programs. A graduate of the class of 1923 Olsen and his wife donated $250,000 to the stadium project.

The Olsen building serves as the administrative headquarters for the athletic department, offices for the football coaching staff and provides team locker and training rooms.

OSBORN COTTAGE

Built: 1882-83
Architect: J.B. Ballenger
Contractor: V. Tomlinson

Appropriations for two residences for professors were made in 1882. Bids were received in July with the bid for Osborn Cottage at $2490. An extra cost of $25 was approved in November 1883 for putting an extra window in the house. In 1898 Professor Osborn was reimbursed $87 for his expenses in installing furnace, grate, storm windows and pump. Five years later $300 was expended for heating plant and other repairs on the house.

A temporary porch was built in 1914 and in 1920 major repairs and improvements were made. In 1924 an allocation of $100 was made "for the purpose of changing the shed north of Osborn Cottage into a garage and putting a sleeping porch above, and the Superintendent of Buildings and Grounds is authorized to proceed with the improvements."(1)

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(1) Minutes, January 1924

Occupants of the house have been:

1883 - 1898	Herbert Osborn
1899 - 1914	Henry E. Summers
1915 - 1916	Warren H. Meeker
1917 - 1919	Henry E. Summers
1920 - 1922	Hazel Harwood
1923 - 1928	Julia W. Stanton
1929 - 1932	Black
1933 - 1935	Charles S. Gwynne
1936 - 1967	Boyne H. Platt
1968 - 1974	Foreign Student Services
1975 - 1976	Student Alumni Assoc. & Landscape Arch.
1976 -	Honors Program

PAMMEL COURT

Built: 1946 - 47
War surplus structures
Portions removed over many years

The end of World War II and the return of Veterans to the campus resulted in a serious housing shortage. The fall enrollment in 1945 was 8407; the following year it jumped to 9216 of whom 1100 were married students. The influx of families introduced an entirely new problem for the residence department. Until that time housing had been provided only for single students in the existing residence halls.

In October 1945 the first steps were taken to prepare for the influx of married couples through the acquisition of trailers and demountable houses, obtained from the federal government from war production sites where they were no longer needed. By January 3, 1946, the Iowa State Daily Student could report that "Thirty-six of the proposed 150 temporary housing units for Iowa State's married veterans will be ready for occupancy by noon today. Seven families have moved in to date."

These first units were set up in what had been the polo field, on the north side of Pammel Drive (which gave the name to the total development) north to the railroad, in the area now occupied by the Communications Building, Ames Lab buildings and parking lots.

In March 1946 a grocery store was erected, utilizing a structure that had previously been a storage bin on the Agricultural Engineering Farm. In May 50 quonset huts and 50 more trailers were added.

During the fall of 1946 the college obtained 317 barracks type buildings, providing 734 living units. Erected by the Kucharo Construction Company most of these units were set up in the area north of the railroad in the areas known today as east and west Pammel Court. Others were erected to the northeast of the previously developed area south of the tracks.

In all areas the college provided water, sewer and electricity, and developed the roads and general site improvements. A map of the Pammel Court Housing Project, showing all units both north and south of the railroad, appeared in the Iowa State Daily Student on February 15, 1947. Schilletter(1) records the peak occupancy as follows:

152 trailers

50 quonset huts (2 families each)

79 demountable houses

704 metal barracks (534 two bedroom, 200 one bedroom)

65 private trailer lots

A recreation building for children was built by Pammel Court residents in the spring and summer of 1947. This later became today's Driver Education Building.

The original ownership of the various units was in the name of the Federal Housing Administration, but that was transferred to the College on July 1, 1947.(2)

A contract to install ceiling insulation in the barracks type buildings was awarded in January 1948 and the work was accepted two months later.(3)

A new grocery store was built in "North Pammel Court" in the fall of 1947. It was closed and out-of-business in March 1952.(4) It then became a recreation center.

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(1) Schilletter, 1970

(2) Minutes, June 30 - July 1, 1947

(3) Minutes, February and March 1948

(4) Iowa State Daily, April 1, 1952

In 1949 electric meters were installed on all units except the trailers.

All of the trailers were "decommissioned" and removed between 1950 and 1952.(1) By 1967 all units south of the tracks were eliminated from the program, and most had been removed from the campus. A few remained and were used for storage for another two or three years.

By 1968 there were 668 units in use in the east and west areas north of the tracks. Sixty-six units were eliminated in 1973 when grading for the 13th Street extension was undertaken. Other units, those in the greatest need of repair, were decommissioned as new units in Schilletter Village became available in 1974-76. In 1979 there are still 522 units in use.(2)

PARKING RAMP AT MEMORIAL UNION

Built: 1966-67
Architect: Brooks Borg & Skiles
Contractor: Piling: L.H. Bolduc Co., Inc.
General: James Thompson & Sons

The earliest reference to special parking facilities for the Memorial Union seems to be in a story in the Iowa State Daily on July 1, 1955:

> As for future plans for parking areas, (H.E.) Pride commented that it was only a matter of time until people would realize the necessity of underground parking.
>
> He said that a plan for such a lot between Memorial Union and the Campanile has already been drawn up. This underground parking would accommodate 1,000 cars and, if built now, would cost approximately $2,500,000.

An underground facility was again in the news in March 1957. But by 1962 the concept had shifted to construction of a ramp.(3) In 1964 the architects began preliminary studies for a ramp.(4) The Board of

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(1) Schilletter, 1970

(2) Letter from Charles F. Frederiksen, Director of Residence, May 1, 1979

(3) Iowa State Daily, November 8, 1962

(4) Iowa State Daily, October 17, 1964

Regents recommended and the State Executive Council approved transfer of title to the land needed for the site and in January 1966 the piling contract was awarded. Two months later the contract for general construction was signed.

The ramp was opened for use on July 1, 1967.(1)

PEARSON HALL

Classroom Building(#1)

Built: 1960-62
Architect: Wetherell & Harrison
Contractor: James Thompson & Sons

Even before an appropriation was made for the Classroom Building its site was under discussion. In 1956 it was reported that it "would be located west of Morrill Hall between Beardshear Hall and the Library."(2) By 1959, when the funds were made available, the final decision on location had not been reached but it was thought it would be "either north or south of Marston Hall."(3)

Design of the building started in 1959 and the construction contracts were awarded in October 1960.(4) This was the first campus building to incorporate television viewing equipment as a feature for instructional use, and to provide special "language laboratories". An area for campus-wide data processing was provided in the ground floor area.

The building was completed and in use in June 1962.(5)

In 1964 the name, Pearson Hall was assigned to the building in recognition of one-time President Raymond Allen Pearson.

It has provided office space for the departments of English, Foreign Languages, and for Media Resources in recent years.

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(1) Iowa State Daily, July 27, 1967

(2) Iowa State Daily, November 29, 1956

(3) Iowa State Daily, May 11, 1959

(4) Minutes, October 13-14, 1960

(5) Iowa State Daily, June 28, 1962, and Minutes, June 14-15, 1962

PHYSICAL EDUCATION BUILDING

Women's Gymnasium

Built: 1940-41 Addition: 1970-72
Architect: 1940 Tinsley McBroom & Higgins
1970 Frevert-Ramsey
Contractor: 1940 Hagstrom Constr. Co.
1970 James Thompson & Sons

"A suitable gymnasium for girls is on the list of college needs that I will present to the board in the near future, and is near the top of the list." That statement by President Pearson was quoted in the Iowa State Student on November 16, 1925. Funds were requested in subsequent years but it was not until after the destruction of Margaret Hall by fire in 1938, and the loss of women's facilities there, that action was finally taken to provide money for a new building.

The 48th General Assembly, in 1939, appropriated $250,000 for a gymnasium for women. Plans and specifications were approved in December and contracts were awarded in January 1940. The building was accepted on January 16, 1941.(1)

A good description of the original building appeared in the January 3, 1940, issue of the Iowa State Daily Student:

> The structure, to be of brick with stone trim, will be located just north of the women's tennis courts and west of the road which runs north and south past the playfield. It will face south.
>
> The building will measure 226 x 103 feet, with a main gymnasium 112 x 70 feet. At one end of the gymnasium will be a stage 18 x 12 feet.
>
> Seven offices occupy the front section, with the gymnasium directly back of them.
>
> A 30 x 75 foot swimming pool room, tiled in medium green and pastel green, will occupy one end of the building. The pool proper will be the pool on the second floor, along one side, is a balcony, which has four tiers of seats.[sic]
>
> An archery court 34 x 84 feet, is located in the basement. The building will provide a dance studio measuring 32 x 45 feet, with several smaller locker, shower and storage rooms.

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(1) Minutes, January 16, 1941

> Walls throughout the building will have 6 feet of glazed brick wainscoting, and plaster from there to the ceilings. In the gymnasium, however, the glazed brick will reach to the doors.

Plans for an addition on the north were first recorded in 1945.(1) However, it was 1966 before the next request for funds reached the priority list and 1969 before an appropriation was made. In that year a federal grant was also made in the amount of $739,287, to participate in the total project cost of $2,680,000.

Contracts for the addition were approved in October 1970 and the building was completed for occupancy in December 1972.

PHYSICAL PLANT SHOPS and CENTRAL STORES

Central Stores, Physical Plant

Built: 1933 Additions: 1936-37; 1971-73
Architect: 1933, 1936 - A.H. Kimball
1971 Woodburn & O'Neil
Contractor: 1933 Kucharo Const. Co.
1936 Ben Cole & Sons
1971 Mueller Const. Co.

At the Board meeting of April 26, 1933, President Hughes made the following recommendation which was approved and referred to the Special Building Committee with power to act:

> I recommend that $30,000 of the Book Store fund be spent in the erection of the first unit of the Central Stores Building, this building to be of the simplest possible construction of brick and concrete and having two stories and a basement, the floor of the first story to be on a level with a truck bed so that material can be loaded in and out most readily. The erection of this building will free the rear of Botany Building from use as a store room and would thus make available some very much needed space for the Botany Department. It would also make possible the consolidation of two store rooms and save some money in help. There are many other advantages in this arrangement, and I hope the Board will approve this recommendation.

It seems probable that the preliminary plans had been developed prior to that date since construction bids were received on June 27, including an alternate proposal to omit the three south bays. A contract was awarded on the basis of the smaller size building. The mechanical and electrical work was to be provided by the Buildings and Grounds

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(1) Iowa State Daily Student, November 2, 1945

Department.(1)

When excavation was made for the foundations a layer of quick sand was encountered. This resulted in a change in footing design and a separate contract for the additional labor and material, in the amount of $3258.15, was negotiated with the contractor for the extra costs.(2)

Construction was completed and the project accepted in November 1933.

In 1936 a grant of $13,500 from the Federal Emergency Administration of Public Works, together with a State appropriation of $16,500, made possible the construction of a south addition to the Central Stores Building. Contracts were awarded in September and the building was completed and accepted on January 30, 1937.(3)

This building became the headquarters for the Buildings and Grounds Department (later Physical Plant Department) as well as for Central Stores.

Minor remodeling in 1958-59 added about $7500 to the building valuation and included construction of a covered dock on the east side.(4)

Long-range planning to replace the numerous small, outmoded buildings in the Physical Plant service area with new facilities is first recorded in the Iowa State Daily for December 10, 1960: "The old buildings around the physical plant will be removed and adequate buildings constructed." By 1963 the plans were somewhat more developed: "The expansion of physical plant shops and stores will provide additional shop space for the University's maintenance force, additional storage space for maintenance materials, and garage space for the storage and servicing of University-owned vehicles."(5)

An appropriation of $1,000,000 for Physical Plant Shops and Stores was requested in 1966 and in subsequent years, but it was 1971 before funds were made available for construction. The architect had been retained in 1968 to enable plans to be prepared so that bids could be received and construction started at the earliest possible date.(6)

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(1) Minutes, June 28-29, 1933

(2) Minutes, October 11, 1933

(3) Minutes, February 25, 1937

(4) Iowa State Daily, November 7, 1959

(5) Iowa State Daily, November 14, 1963

(6) Minutes, September 12-13, 1968

The schematic drawings for the proposed building were approved by the Board as recorded in the Minutes of the January 14-15, 1971, meeting when the following project description was presented:

> The proposed building will house all Physical Plant Shops and Central Stores Warehouse facilities and Central Receiving, as well as Physical Plant and Purchasing Department administrative offices. It will replace eleven miscellaneous outdated and inefficient buildings.
>
> New construction will consist of a "U" shaped one-story structure with full ground floor in the shops wing and partial ground floor in the warehouse wing. This building will abut the existing Central Stores and Physical Plant office building which will be renovated to accommodate all administrative office functions of the Physical Plant and Purchasing Departments. The new structure will be of steel framing with a composite steel and concrete floor system and exterior walls of precast concrete and metal siding.

Bids for the construction of the new building were received and contracts awarded in October 1971.(1) The project was completed and occupied late in 1973.

PHYSICAL PLANT STORAGE SHED

Built: 1973-74
Contractor: Advanced Building Systems, Inc.

This prefabricated metal building was erected to provide storage space for equipment used by the Physical Plant, particularly grounds maintenance machines. It also houses supplies of materials used in maintenance operations.

Prior to construction of this building many tractors, snow plows, street cleaners and similar pieces of major equipment were kept in the open where they were exposed to the elements and consequently subject to more rapid deterioration. The enclosed space also ensures easier starting of motors in cold weather.

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(1) Minutes, October 13-15, 1971

PHYSICS HALL

Built: 1921-23 Court enclosures: 1950; 1960-61
Addition: 1964-68

Architect: 1921 Proudfoot Bird & Rawson
1950 T.K. Fitzpatrick
1960 Brooks, Borg
1964 Russell & Lynch

Contractor: 1921 Supt. of Buildings & Grounds
1950 James Thompson & Sons
1960 J.E. Whitfield
1964 Woodruff-Evans Construction Co.

The earliest request for funds for a building for the department of Physics was made in the Biennial Report for 1908-10 when $150,000 was requested. That request was repeated in subsequent years but it was 1921 before the project was authorized and in that year $225,000 was appropriated for the building.

Foundations for the structure were placed in the fall of 1921, but it was the following spring before any superstructure was started, and then work progressed slowly because of a shortage of brick masons. The building was not completed until the fall of 1923.

An interesting aspect of the construction of this building was the making of bricks at the job site, as reported in the Iowa State Student on October 23, 1922:

> One of the features in the construction of the new Physics building is the use of cement brick which are being made on the job.
>
> The finishing brick used in the first 6½ feet are of white cement and sand. This type of brick is much lighter than the clay brick and easier to handle, although they crack and break easily.
>
> For the upper part of the construction a buff brick is being made in which rock dust is used in place of sand and has proven very successful, the finished brick taking a fine lustre.
>
> The plant for turning out the brick is located just east of the new building. The economy in the use of the cement brick instead of the clay has already been proven and it is expected that a considerable amount of money will be saved thru their use.

About a month later, on November 27, the paper reported:

> Construction work on the new Physics building is progressing rather slowly due to the shortage of brick layers, insufficient supply of cement brick, and the day labor method of construction, according to those in charge.

> The most serious shortage is in brick layers. Two nine-hour shifts of laborers are working on the brick machines turning out about 2500 completed bricks every nine hours. Five hundred thousand of these bricks will be needed to complete the building.
>
> With the exception of the facing brick for the inside walls, all the material for finishing the building is now on hand....

The cornerstone for the building was laid on December 6, 1922, with President Pearson presiding at the ceremony.

By September "The 277 x 181 foot Physics building with its outside row of rooms practically completed, is the largest and most nearly complete building under construction on the Iowa State campus...."(1)

A general description of the building appeared in the student paper on November 23, 1923:

> The new Physics building....is now occupied, although it is not completely finished inside. It is located just east of the Chemistry and Science building. It is a one story construction, built of brick, and faced with Bedford limestone. The walls of the recitation rooms and laboratories are finished in gray and buff brick, the floor being concrete. The corridors are floored with red tile which was made by the ceramics department. The work was rushed during the summer so that the building would be ready for occupation during the fall quarter. It is said to be the best equipped physics building in the country. Each room has connections for alternating and direct electrical current, gas, water, and compressed air. Switchboards in various rooms are so arranged that apparatus can be connected to any of the various sources of current in the building. The heat is supplied from the college power plant, and is connected to the building by a new heating tunnel which joins the old one. A fully equipped machine shop is included in the building. Except for some work in the basement, and inside finishes the building is completed. The total cost of the building was $250,000, while new equipment valued at more than $50,000 will be installed.

The instrument maker's shop was installed in 1930.(2) Acoustic panels were installed in the large lecture hall in 1931.(3)

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(1) Iowa State Student, September 24, 1923

(2) Iowa State Student, September 22, 1930

(3) Iowa State Student, December 15, 1931

In 1950 the north courts were filled in providing additional room, especially for the instrument shop and glass fabrication facilities. Enclosure of the south courts was accomplished in 1960-61, making added research laboratories available to the department.

A National Science Foundation grant of $1,106,000 plus a state appropriation of $1,350,000 in 1963 made possible the planning and construction of a basement plus five story addition adjoining the north side of the original physics building. Construction contracts were awarded in November 1964, but it was April 1968 before the new addition was completed and ready for occupancy.

In 1968 a major renovation was undertaken in the original building especially in the heating and air conditioning systems.

PLANT INTRODUCTION GREENHOUSE

Built: 1948-49 Additions: 1953, 1962-63
Architect: Physical Plant
Contractor: 1948 American - Moninger Greenhouse Mf. Co.
James Thompson & Sons
1962 Winandy Greenhouse Constructors
Physical Plant

Plans for this building were authorized in March 1948 and a contract for the greenhouse construction was awarded in May and for the foundations and headhouse in June.

This original building was U-shaped with the headhouse and offices on the east side and two greenhouse wings built to the west. Funds for the project were provided by the United States Department of Agriculture. Work was completed and accepted in February 1949.(1)

The Iowa State Daily for August 7, 1953, reported that "The Department of Plant Introduction now has the glassed-in portion of its new greenhouse completed" and that "work which was started last spring will be completed before winter." This project apparently was handled by the Physical Plant and enclosed the area between the two original greenhouse wings. There is no mention of this work in the Minutes.

The 1962 project was an extension westward of the north wing of the original greenhouses. It was funded by United States Department of Agriculture Regional Research Funds. It was completed in May 1963.

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(1) Minutes, February 8, 1949

PLUMBING SHOP

Chemistry Annex #2

Built: 1943-44
Architect: A.H. Kimball
Contractor: Weitz Company
Razed: 1972

This building stood east of the Central Stores Building, about in the center of the court between the two wings of today's Physical Plant Shops and Central Stores Building.

Some confusion exists in the 1943-44 references to this building in the Minutes. In the entries of that period it is called "Addition to Annex #2, Physical Chemistry Building." Nothing has been found to indicate a structure in that location to which this Annex might have been an addition. The building was U-shaped with the bottom of the U to the north. The west wing was 22 feet wide, the east wing 40 feet, with a 15 foot wide court between the two legs of the U.

The contract to construct the building was entered into in December 1943 and it was completed in February 1944.(1) Funds came from the federal government.

In 1953 the College purchased the Annex from the Atomic Energy Commission for $3,150.(2)

The building was subsequently used for and became known as the Plumbing Shop. It also housed the Credit Union in the southeast corner until that organization erected a new building.

The Plumbing Shop was razed in 1972.

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(1) Minutes, March 23, 1944

(2) Minutes, September 10-11, 1953

POPE COTTAGE

Built: 1877 Purchased by College: 1884
Architect: Unknown
Contractor: Unknown
Purchased for $3,000

Professor of Chemistry, Thomas E. Pope, built this house on the south side of what is now Lincoln Way in 1877. When he was called to M.I.T. he offered the property to the college and the purchase was agreed to in 1884. Professor Wynn had rented it from Professor Pope before the purchase was made and remained there through 1885. Subsequent occupants are listed:

1886 - 1897	Alfred A. Bennett
1898 - 1936	Alvin B. Noble
1937 - 1944	Arthur C. Bunce
1944 - 1954	George R. Fowler
1954 - 1960	James H. Jensen
1961 - 1963	E.M. Bartels
1963 - 1964	Lynden Faris
1964 - 1967	Everett M. Bartels
1967 -	Music Department

This frame house was typical of the residential design of its period with two stories and basement. Inside plumbing and electricity were installed in 1902. The porch on the southeast corner was added in 1924.

POULTRY HOUSES

Hen Houses

The need for a hen house was first recorded in the January 1868 minutes of the Board. A hen house was built in 1871 as an addition to the Cattle Barn and is described under that heading.

In December 1874 the Board included in its legislative request an item of $1200 "for swine houses, corn cribs and Fowl Houses."(1) Not until 1880 were funds for those structures made available. A total of $158.22 was used for the Poultry House.(2)

By 1886 there had been a change in need because the minutes of the May meeting of the Board that year directed that the hen house be moved, rearranged and repaired for use as a swine house.

There is no way to determine just where these early, minor structures were located.

The IAC Student on May 14, 1892, records that "they've built a hen house near the grape patch."

Subsequent buildings for poultry are covered separately and were built on the new Poultry Farm,which is the site where the Tower Residences are located now.

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(1) Minutes, December 1874

(2) Minutes, December 1880

POWER and HEATING PLANT

Built: 1906-07 Additions: 1910, 1948-50
Architect: 1906 Proudfoot and Bird
Mechanical System by Professor G.W. Bissell
1910 Proudfoot Bird & Rawson
1948 (& subsequent) Brown Engineering Company
Contractor: 1906 Bartlett & Kling
1910 C.W. Ennis
1948 Fuel Economy Engineering Co.
1968 Ringland-Johnson-Crowley

The idea of a central heating system for all college buildings was expressed as early as 1891 as recorded in the Biennial Report for 1890-91:

> We should have a general central heating system connecting all of these buildings, thereby making janitor hire much less, diminishing the cost of fuel and adding greatly to the security of all of our buildings from fire, as well as contributing to the cleanliness and general culture of the whole institution.

For the next ten years, with expansion of the Power Station on the west side of the campus it was possible to "get by". Construction of Engineering Hall (Marston) in 1900-03, and Central (Beardshear) in 1903-06 would add new loads impossible to meet at the Power Station and the need for a new facility became imperative. In 1904 the architect was retained to prepare plans for the new structure and Professor Bissell was authorized to draw up plans and specifications for all of the mechanical equipment.

At that time the site for the new plant was assumed to be north of Margaret Hall. The Simonds landscape plan of 1903 showed the site at a location where the Quadrangle was built later. The present location was finally determined in May 1906.(1)

Construction bids had been received in January and again in March 1905, but both times they exceeded available funds and were rejected. New bids for construction at the east side of the campus, and subsequent to a new appropriation, were submitted at the June 5-6, 1906, Board meeting and the contract was then awarded to Bartlett & Kling.

When the building construction was completed the following year the generating equipment was ready and power was then furnished to the entire campus. By 1908 one boiler had been installed and heat was being furnished, through the tunnel system to the major buildings on the campus.

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(1) Minutes, May 9, 1906

An addition to the plant to make room for additional boilers was erected in 1910. In 1912 coal and ash handling equipment was installed. A new concrete smoke stack, 225 feet tall, was built in 1913-14. The older portion of the building received a new tile roof in 1914. Two new boilers were added in 1915, as were new stokers.

A new 2200 volt 1250 KVA 3-phase steam generator was installed in 1919.(1) The item in the paper about the installation stated that "the new generator will carry the full load of the college and the lighting of the Fourth Ward."

In 1928 a new 1500 KW turbine was purchased and a cooling pond was built in association with it. Ten years later a new steam boiler was put in to replace two older ones, and other related equipment was also included.

A contract for engineering services in the design of alterations and additions to the Power and Heating Plant was executed with Brown Engineering Company in 1946. This initiated a project involving extensive remodeling and changes in the building and equipment, a process that has continued to the present in several stages. A turbo-generator unit, surface condensor, steam generator, switchgear cooling tower, and coal handling and ash handling equipment were contracted for in 1947. The following year enlargement of the building was started to provide space for the new equipment. That contract was completed in 1950.

The steam generator was converted to gas instead of coal in 1951, and a new generator unit was added in 1952.

In 1952 contracts were awarded for an additional steam generator and for a turbo generator for electric power, both with various items of associated equipment. These replaced older units no longer adequate for then current needs. The new equipment necessitated some changes within the building.

Numerous equipment additions, modifications and replacements within the building were made in the sixties and seventies, and continue as new loads are generated by additional buildings on the campus.

A central chilled water system for the cooling of campus buildings was initiated in 1966 with the retention of Brown Engineering Company to design the system. Contracts for the chilled water equipment and for addition to the building to provide for it were executed in 1968.

A fire on July 2, 1979, seriously damaged an electrical turbine in the building and also destroyed sections of the roof and south wall of the plant.

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(1) Iowa State Student, October 1, 1919

POWER STATION

Power House, Boiler House, Pumping Station

Built: 1891 Addition: 1897
Architect: Foster & Liebbe
Contractor: W.B. Christy 1891
Jackson & Moss 1897

Located just north of Laboratory of Mechanics, where east part of Mechanical Engineering Laboratory stands now.

The contract for construction of a new boiler house was awarded to W.B. Christy in July 1891, in the amount of $2849.(1) Later in the year $400 was appropriated for purchase of a boiler.

A pump house was an integral part of the new water system designed by Anson Marston in 1896. That structure was erected as a westward extension of the Power Station in 1897 under contract with Jackson & Moss for $1330 with an additional $290 for building the foundations for and installation of the pumping machinery.(2)

In 1899 a new boiler was installed in the Power Station at a cost of $1109.65.(3) Another addition and boiler were added in 1902.(4)

The Power Station housed the electrical generating plant as well as the pumping station and also served as a laboratory facility for Mechanical Engineering.

The building was razed in 1912 to make room for the new Mechanical Engineering Building.(5)

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(1) Minutes, July 1891

(2) Minutes, May 1897

(3) Minutes, July 1899

(4) Minutes, May 1902

(5) Minutes, June 1912

PRESIDENT'S BARN

Built: 1874
Razed: 1905

This barn, located about 175 feet east of South Hall, was apparently built by President Welch with his own funds. The 1874 date of construction rests on an entry in the May 1874 minutes when funds were appropriated "for the painting of the new barn and the wood-shed to the President's house."

At the December 1878 Board meeting purchase of the barn was discussed, but no action was taken. Apparently it was then bought by Professor Stalker for use by his department. The March 1879 issue of The Aurora reported:

> The barn, formerly used by the President, is being fitted up for a dissecting room for the use of the veterinarians. It is to be ceiled throughout. Professor Stalker says that, when completed, it will be better that the dissection rooms in the Veterinary College in New York or Toronto.

In December 1880 Professor Stalker asked the Board of Trustees to reimburse him for a barn he purchased to use for a veterinary hospital. Not until 1882 was he paid and then he paid the college $40 in cash, in addition to his $225.61 investment in the barn, and received in exchange 40 acres of land owned by the college in Boone County.

In 1889 the barn was "set apart as a tool room and stable in charge of the committee on Public Grounds."(1) A few years later the upper floor was assigned to Domestic Economy for storage.(2)

At the Board meeting of December 23, 1904, the custodian was authorized "to remove the old barn back of Music Building." (i.e. South Hall)

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(1) Minutes, November 1889

(2) Minutes, May 1893

PRINTING BUILDING

Printing Services and Publications Building

Built: 1967-68
Architect: Brown, Healey & Bock
Contractor: Carlson, Rockey, Inc.

The function of the building is, in part, well defined in the project description presented to the Board on Jan. 13-14, 1966, when the project was approved:

> For more than thirty-five years mimeographing, printing, and related services have been carried on at Iowa State University by what is referred to as the Printing Department. This department is not a commercial printing plant, but instead provides a variety of office-type duplicating and mailing services. Its equipment includes electric typewriters, mimeographs, small offset presses, an ozalid machine, and machines for assembling, addressing and stuffing mailing pieces. It sets no type. All of the larger long-run and more complicated printing jobs are sent off campus to commercial shops. The Printing Department is operated primarily for the internal or departmental convenience of the University and is not a commercial-type printing plant. Examples of its work are examination questions, laboratory manuals, pamphlets for the Extension Service, printed programs, circular letters, the Faculty Newsletter, and a great variety of leaflets, forms and announcements from various campus departments. It mails catalogues and other materials to prospective students, publications to alumni and parents, and special printed pieces to specialized lists maintained by the Alumni Office, the Extension Services and others. The purpose of the centralized service is to avoid duplication of equipment and personnel in the many departments of the university and to produce quickly and economically the day-to-day printing needs of the University. This service is a self-supporting activity, and income to meet its operating and capital costs is derived from intramural charges to the departments which use the service.

During development of the drawings for the building the decision was reached to enlarge its scope to provide space for the Information Service storage and mailing office for bulletins and brochures.(1)

Construction contracts were awarded in June 1967 and the building was put into operation in May 1968.

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(1) Minutes, September 7-9, 1966

PUMP HOUSE

Engine House

Built: 1884
Architect: Foster & Liebbe
Contractor: V. Tomlinson
Burned: 1904

Located at about the intersection of today's Osborn Drive and Wallace Road, or perhaps a little farther south.

A structure to cover the pump and boiler near the spring had been built as part of the water system installed in 1872.(1) (See section on Water Supply in this volume.)

In 1897 a recommendation was made "that the old grinding house and engine room be fitted over for an implement store house and suitable provisions made therein for instruction in agricultural physics."(2) It is thought that the structure here referred to was the 1872 pump house. At the same meeting the Board adopted a report against making repairs because "your committee after an examination of the building find it dilapidated and badly out of repair, and its convenience very poor, really unfit for an implement shed."

In 1884 a new Pump House was erected in the same area near the spring which served as the main campus water supply until the new system was installed in 1897. This was built under contract with V. Tomlinson at the same time he was building the addition to Engineering Hall (Laboratory of Mechanics). Cost was $750 for construction and $30 for architect's fees. A boiler house was added in 1894, built by A.H. Chaffee for $383.

In September 1904 authorization was given to install an electric motor-driven pump.

In November the building burned and request was made for funds to replace it with a fireproof structure.(3)

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(1) Biennial Reports, 1871 and 1872-73

(2) Minutes, May 1897

(3) Minutes, November 1904

PURCHASING WAREHOUSE

Bookstore Storage

Built: 1956-57
Architect: None
Contractor: Abild Construction Co. and Physical Plant

Authorization to purchase two metal prefabricated buildings to be "used as storage warehouses for the College Bookstore, Inventory Clerk, Central Stores, and Physical Plant" was given at the Sept. 20-21, 1956, Board meeting. The buildings were to be 40 x 80 feet each.

It was established that the foundations and floor would be built by Physical Plant. The contractor submitting the low bid for furnishing and erecting the building proposed a single structure of 76 feet by 98 feet, with an alternate to omit one bay. That alternate was accepted.(1)

The following June 6 the Iowa State Daily reported that the building was under construction. No record has been seen to determine when the project was finished, but it was probably late in that summer or early in the fall.

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(1) Minutes, November 1-3, 1956

QUADRANGLE

Veterinary Quadrangle

including Biomedical Engineering Laboratory

Built: 1910-12 Biomed. Engr. Lab.: 1960-62
Architect: 1910 Proudfoot, Bird & Rawson
1960 Dougher-Frevert-Ramsey
Contractor: 1910 Benson & Marxer
1969 W.A. Klinger Company

Requests for appropriations for new facilities for the Veterinary Medicine Division were introduced in 1893 and in subsequent biennia until $150,000 was allocated in 1909. Preliminary plans had been started in 1908 and final drawings were made in 1910.

Several sites were considered for the location of the new building: (1) the site of the then existing Veterinary Hospital; (2) the site of what is now Clyde Williams Field; (3) a site north of today's Davidson Hall; (4) the actual site where the building was erected.(1)

The construction contract was awarded in the amount of $135,700 in November 1910, and excavation was underway by December.(2) Actual construction began the following spring. The building was occupied in March 1912.(3)

The new structure was described in the Biennial Report for 1910-12:

> During the past year the group of new veterinary buildings planned has been completed with the exception of the Experiment Station and Diagnostic Laboratories. The group of five completed includes the Administration building with dean's and surgeon's offices, assembly room, library, general museum, and faculty room; the Pathology building accommodating the Department of Pathology and Bacteriology; the Anatomy building for the Department of Anatomy and Histology; the Physiology building in which the work of the Department of Physiology and Pharmacology is carried on; and the Hospital or Clinic building for the use of the Department of Surgery and Practice. Each building has the necessary offices, laboratories, store rooms, and rooms for animals for laboratory purposes. Each building is adapted to the work of its respective

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(1) ISC Student, October 11, 1909 and Minutes, May 1910

(2) ISC Student, December 5, 1910

(3) ISC Student, March 12, 1912

> department without interfering with work or plans of any other. This arrangement has proven eminently successful, and is stimulating individual work in a very effective way.

Minor modifications and repairs were made in subsequent years. In 1929 a frame addition was erected at the northwestern corner of the Quadrangle as reported in the student paper for September 26:

> A $6,000 temporary frame structure, to be used by the Veterinary Anatomy Department and built on the north of the present laboratory, will be ready for use soon after college starts this fall. It will be a one-story building, measuring 40 by 50 feet, and will double the present laboratory space. The old accommodations were barely able to take care of half of the class enrollment.

That frame structure continued in use until it was razed to make room for the new Diagnostic Laboratory in 1954.

The Christian Petersen mural sculpture and his free-standing figure of "The Gentle Doctor" were installed in the Quadrangle court in 1938. The mural was subsequently removed to the new facilities when the college moved there in 1975. (See "Sculpture".) The southwest wing of the Quadrangle, most recently known as the Biomedical Engineering Laboratory, has been called Instrumentation Research Laboratory in all of the Board proceedings. It had also been referred to as Physiological Instrumentation Research Laboratory (title on contract drawings), and Biomedical Electronics Laboratory.

A grant of $200,000 from the United States Public Health Service covered about half the first cost of the building and equipment. Construction contracts were awarded in December 1960 and it was completed for use in the fall of 1962.(1)

In 1964-65 a $40,000 remodeling project was completed in the wing for Physiology and Pharmacology. King-Bole was the general contractor for that project.

When the College of Veterinary Medicine moved from the Quadrangle in 1976 the vacated structure was allocated to the College of Education and to the Department of Psychology.

Frevert-Ramsey-Drey were selected as architects for a major remodeling of the building in 1976. Bids on that project were received in October 1979, and work on the remodeling was started late in the fall by Webster Construction Co.

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(1) Iowa State Daily, October 31, 1962

The building name was modified to Quadrangle when the Veterinarians moved out and the Diagnostic Laboratory wing became known as Quadrangle-North. (See that separate entry.) The Biomedical Engineering wing then lost separate identity and is now considered part of the Quadrangle.

QUADRANGLE - NORTH

Veterinary Diagnostic Laboratory

Built: 1954-56
Architect: Dougher, Rich & Woodburn
Contractor: W.A. Klinger Co.

The first reference to the Diagnostic Laboratory appeared in the Iowa State Student on June 7, 1928, as follows:

> A new diagnostic laboratory has been installed in the basement of the Pathology Department of the Veterinary building for the purpose of examining the large numbers of specimens that are sent into the department for diagnosis.
>
> The new laboratory includes four rooms, the waiting and reception room, the animals room, the bacteriology room, and the post mortem room. The equipment has not all been installed but the laboratory will be ready for use by next fall.
>
> From an average of fity towns there are at least 375 specimens sent weekly into this department for free diagnosis. These specimens include all kinds of livestock and poultry, especially baby chicks, cattle,swine, and sheep. A large number of dogs are sent in on the assumption that they have rabies.

Funds for a new facility were included in the appropriations made in 1945 and 1947, and in the latter year the architect was selected. Final plans were approved in July 1950.(1) Bids were received in September but were rejected. New bids were taken in 1951, but again were rejected. The site at that time was on the north side of the Veterinary Clinic. In 1953 the decision was reached to change the site to the Quadrangle area.(2) A new appropriation, totalling $600,000 had been made that year.

Construction contracts, based on new plans and the new site, were awarded in November 1954.(3)

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(1) Minutes, July 20, 1950

(2) Minutes, September 10-11, 1953

(3) Minutes, December 9-10, 1954

During construction of the new facility Dean I.A. Merchant was quoted in the paper as follows:

> The present building is so crowded that the new addition will be completely used as soon as it is finished. It is a good example of building for crowded conditions of the past rather than expansion of the future, but the laboratory should be adequate for diagnostic services for a number of years.(1)

The building was accepted as complete in May 1956.

For changes in 1976 and later see entry for Quadrangle.

RENDERING PLANT

Refuse Disposal Plant

Post-Mortem & Rendering Plant

Built: 1917
Architect: Proudfoot, Bird & Rawson
Contractor: Direction of Thomas Sloss
Razed: 1936

Recommendation for this building was made in March 1914 and was approved. However, it was another three years before the project was funded for a total of $6350 of which $3850 came from the Serum fund and $2500 from the Small Buildings Fund.(2)

The building was located about in the center of the west side of the present Clinic Building.

When the structure was razed in 1936 the student paper described its functions:

> The rendering plant....has been used to take care of hog carcasses used in the production of hog cholera serum. It was equipped with vats, distilling apparatus, grinders, and other machinery relative to extracting from the carcasses fat which was still further processed into the syrup. Much of the machinery was transferred to the Chemical Engineering Building where it will be utilized for the manufacture of wallboard. During recent years, the building was also pressed into service as an emergency laboratory and for the performing of post mortems on large animals.(3)

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(1) Iowa State Daily, March 24, 1955

(2) Minutes, May 3, 1917

(3) Iowa State Student, November 21, 1936

RESEARCH REACTOR

Built: 1961-64
Architect: Burns & Roe, Inc.(a division of the American Machine and Foundry Company)
Contractor: Mason Construction, Inc.

The earliest reference to this project appeared in the August 14, 1958, edition of the Iowa State Daily where it was recorded that the building had been approved by Congress and by the President but that the appropriation bill was still subject to congressional action. This was an Atomic Energy Commission operation for the Ames Laboratory with only federal funding to cover costs.

By the end of 1959 the appropriation had been made and in January 1960 design of the facility was started.(1) The construction contract was awarded in April 1961, at which time the building was described:

> The facility....will have a total gross area of 38,900 square feet. The reactor will be a 5,000 kilowatt, heavy-watt moderated research reactor with all embedded systems sized for future conversion to 10,000 kilowatts.
>
> ....The reserach reactor facility will be used to help determine what happens to materials in a radiation field, to produce radioactive nuclides for inorganic and analytical chemistry studies, to search for a better understanding of the relationships between structure and properties of materials, to study the behavior of materials in the environment of an operating reactor and to investigate corrosion of metal containers by liquid metals in the prescence of high neutron flux.(2)

In April of 1962 it was reported that the project was about 20% completed. A cornerstone unveiling ceremony was held during Veishea in May 1963. On September 11, 1965, the paper reported that this was one of the buildings that had been completed.

Actual operation of the reactor was started on February 17, 1965.(3)

The reactor was deactivated and completely removed from the building in 1978. The building has since been used for other Ames Laboratory activities.

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(1) Iowa State Daily, January 26, 1960

(2) Iowa State Daily, April 21, 1961

(3) Iowa State Daily, February 18, 1965

RIDGEWAY HOUSE

Gladstone Hotel

This house, located at 128 Lynn Avenue, was apparently rented in 1938 when, on September 17 the Iowa State Daily Student states that "the Gladstone Hotel has been converted into a supervised women's dormitory and renamed Ridgeway Hall."

The College purchased the building (and site) in July 1941.(1) On September 23 of that year the student paper reported:

> A nameless dormitory, which has been in turn, a fraternity, a hotel, a rooming house, and a temporary shelter for a burned-out fraternity, will house 29 Iowa State women this fall. The most common name for the edifice is Gladstone Hotel, but it will have a new name when the women move in, for theirs is the task of choosing a name....the building was completely redecorated, inside and out....

Schilletter tells that the name Ridgeway was the choice of the new occupants.(2) In 1942 it housed men, but in 1943 again became a women's residence.

The house was rented to Kappa Kappa Gamma sorority from 1946-50. Later it housed graduate men students.

Ridgeway House was sold, on a bid basis, to St. Thomas Aquinas Church in 1958.(3)

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(1) Minutes, June 28 and September 16, 1941

(2) Schilletter, 1970

(3) Minutes, September 11-12 and October 23-25, 1958

ROBERTS HALL

Built: 1935-36
Architect: Oren Thomas
Contractor: James Thompson & Sons

This women's hall project was initiated in the spring of 1935 with the retention of the architect, as recorded in the Minutes of April 15. It was planned to finance the building with a combination of a federal grant and borrowed funds.(1) However, that grant was not approved and the full cost of the project fell on the borrowed funds.

Contracts for construction were awarded on October 30, 1935, and the work was completed and accepted by October of 1936.

Roberts Hall completed the complex of structures around Carrie Lane Court.

The sculptured panel behind the fountain on the east wall of Roberts Hall was made by Christian Petersen and installed in the spring of 1940.

In 1969-71 this hall, along with Birch and Welch, was extensively remodeled. Since then it has housed men.

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(1) Minutes, June 19, 1935

ROSS HALL

Classroom and Office Building #3

Built: 1970-73
Architect: Hansen Lind Meyer, Inc.
Contractor: James Thompson & Sons

The building program for this building, as furnished to the architect in June of 1968, called for a net assignable area of 60,000 square feet, and with a total project budget of $3,000,000. The schematic drawings presented to and approved by the Board in December 1968 showed a seven-story building with an attached wing with three lecture halls, one story in height. The plans showed the site as due north of Curtiss Hall, with the lecture hall wing on the south side of the higher structure.

Uncertainty about financing resulted in temporary suspension of architectural work on the project between February 19 and May 22, 1969, following announcement of the state appropriation of funds for the project. Continuing high rates of cost escalation made it apparent that the building as originally programmed could not be built within the funds budgeted. In June the architect was instructed to delete one story from the seven-story unit and to delete the two 100 station lecture rooms from the lecture hall unit, and to include the low unit as an alternative in the bidding.

During the next year the drawings were developed and completed and bids for construction were received on October 6, 1970. As a result of the bidding it became necessary to omit the construction of the lecture wing entirely, and on that basis the contracts were awarded on October 7.

Concern had earlier been expressed about the location of the building, principally in the effect its shadow would have on the greenhouses to its north, and also its relationship to the long-range campus plan then completed by Johnson, Johnson & Roy.

The decision was then reached to relocate the building from the original site north of Curtiss Hall to its present location to the northeast of that building. That decision resulted in a number of objections, particularly from some students, but the controversy soon died out. Construction of the new building started in November 1970 and the building was occupied and in use in the fall term of 1973.

Ross Hall houses the offices for the departments of English, History, Philosophy and Political Science.

The building is named for Earle Dudley Ross who was a professor of history and College historian. He first came to Iowa State in 1923. Dr. Ross died in 1973, shortly after the building had been named in his honor.

RUMINANT NUTRITION LABORATORY

Horse Barn #3

Built: 1929 Remodeled: 1957
Architect: 1929 Buildings & Grounds Department
1957 Physical Plant Department
Contractor: 1929 L.D. Anthony
1957 James Thompson & Sons

The construction of Horse Barn #3 was authorized and undertaken in 1929.

Kooser recorded that the contractor was L.D. Anthony, that the work was done under the direction of the Superintendent of Buildings and Grounds, and that the project cost was $9900.(1)

In 1952 plans were prepared for remodeling the building for use as a Nutrition Research Laboratory, and the Physical Plant proceeded with extension of utility lines to the building. The actual remodeling for the laboratory was not started until about five years later when a construction contract was awarded in February 1957, and the work was accepted in November of that year.(2)

SAFFORD COTTAGE

Hibbard House

Built: 1903
Moved to Ag 450 Farm in: 1958

Professor B.H. Hibbard built this two-story and basement house on Lincoln Way just east of Mrs. Beardshear's house in 1903. This was a location about 200 feet west of what is now Linden Hall.

In 1912 he sold the house to Miss Ruth B. Safford, instructor in English, who lived in it until September 1923 when it was purchased from her by the College for $5700, including the garage.

Subsequents occupants were:(3)

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(1) Kooser, 1939

(2) Minutes, February 7-8 and November 14-15, 1947

(3) D. Kehlenbeck, typed notes

1923 - 24	Dean John Foster
1925 - 39	Swan Eckberg (Gardener)
1939 - 43	Grad dormitory for girls
1943 - 47	Dormitory employees
1947 - 57	Dean J.F.D. Smith

In 1958 the house was moved to the Ag 450 farm where it is still standing.

SANITARY BUILDING

Hospital, Music Hall, Cranford Hall

Built: 1884-5 Remodeled: 1900
Architect: Foster & Liebbe (1884)
Contractor: V. Tomlinson (1884)
Razed: 1927

Located about 200 feet northwest of the northwest corner of Memorial Union.

"Prominent among the urgent necessities I have mentioned, is a college hospital for sick students....We believe that we could secure the College from the inroads of the various infections if we had the means of isolating the patient so that we could at once disinfect his room. A college hospital, which could be built at limited expense would thus enable us, in nearly all cases, to save the suffering, if not the lives, of the young people committed to our charge."(1)

Funds were made available in the following year, 1884, when plans were prepared and contract for construction was awarded at a cost of $4000.

The hospital facilities were located on the second floor of the building with the first floor allocated for use by the Veterinary Department for theoretical classwork. This use prevailed until 1893 when the Veterinary Department moved into Botany Hall (then Agricultural Hall), and the Sanitary Building was used exclusively as a hospital.

In 1900 a remodeling project was undertaken. General work was by C.R. Cushman for a sum of $1795. Two furnaces were installed by Lennox Machine Co. for $365 and L.H. Kurtz did the plumbing and gas fitting for $600. The work accomplished was described in the Biennial Report of 1900-01:

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(1) 10th Biennial Report, 1882-83. President's Report

> The building for the college hospital has been entirely rearranged during the biennial period and put in a much improved condition. The space has been enlarged by the change; the heating facilities have been made adequate; a nurse and cook provided, and a general homelike atmosphere created throughout the building.

On January 1, 1902, the hospital caught fire from an over-heated air pipe from the furnace. The fire was extinguished by the college fire department. Repairs and repainting were completed in time for the re-opening of school in February at a total cost of $384.34.

In 1907 the hospital functions were moved to West Boarding Cottage. The following year, after some remodeling, the Sanitary Building became a sub-faculty rooming house. In 1912, when South Hall burned, the Music Department was moved to the Sanitary Building which then became Music Hall. It served in that capacity until 1927 when the building was razed.

Sanitary Hall was a two-story frame building with a third floor small square tower at the front, topped by a sharp pyramidal roof. There was also a basement under about three fourths of the building.

SCHEMAN CONTINUING EDUCATION BUILDING

Built: 1973-75
Architect: Crites & McConnell and Brooks-Borg & Skiles
Acoustical Consultant: Paul S. Veneklasen & Associates
Contractor: Adolfson & Peterson, Inc.

This fourth and last building brought the Iowa State Center to completion in September 1975. This was the only one of the Center buildings planned on the basis of a written building program prepared by the University Architect. That program was given to the design architects in March 1972 and their schematic drawings were approved in June of that year.

Bids for construction were received and contracts were awarded in September 1973. Two years later construction was completed and the building was dedicated on September 21, 1975.

The five million dollar building was financed entirely by donations through the Iowa State University Foundation, including a $1,000,000 gift from Carl H. Scheman, a retired civil engineer who had graduated from Iowa State College in 1910. Between 1912 and 1918 he served as assistant to President Pearson. He then became associated with the Chicago Bridge and Iron Company for the balance of his career.

A gallery on the third floor of the building is the museum area for the Brunnier collection of China and other art objects and a doll

collection. Other art displays are shown there on a temporary basis. Henry J. Brunnier, class of 1904, was also a civil engineer.

The auditorium, which seats about 440 people, was named for Thomas H. Benton, an agronomy graduate in 1914, who donated $250,000 for that purpose while he was a member of the Board of Governors of the ISU Foundation.

SCHILLETTER VILLAGE

Built: 1973-76

More married student housing units to the north of University Village were originally contemplated as Phase III of that project. In 1969 a revised project description was presented to the Board:

> ....it was deemed desirable to introduce a different type of unit in order to avoid a monotonous appearance by too frequent repetition of the same type of structure. A new building type was, therefore, designed consisting of 12 units with 4 units on each of 3 floors....(1)

That plan was abandoned, and after erection of a trial prefabricated four-plex unit at the Swine Nutrition Farm had proved satisfactory it was decided to use that type of structure for the next married student housing project.

Approval of a contract with Jon Crose and Associates for site planning design was given in May 1972.(2) In February 1973 contracts were awarded for the site work and for the erection of 11 prefabricated buildings. The prefabricated units were made by Sandler-Bilt Homes; site work and general construction was by H&F Builders, Inc. The buildings were occupied that fall.

Another 25 units were added in 1974, again using Sandler-Bilt structures but with Allen Construction Co. as general contractor.

Two more additions, in 1975 and 1976, added another 39 units to the village.

The name of the village, authorized in May 1974, honors Dr. J.C. Schilletter who directed the residence systems over twenty years.

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(1) Minutes, November 13-14, 1969

(2) Minutes, May 11-12, 1972

SCIENCE HALL

Built: 1915-16 Addition: 1953-55
Architect: 1915 Proudfoot, Bird & Rawson
1953 Tinsley, Higgins & Lighter
Contractor: 1915 J.B. Evans Const. Co.
1953 James Thompson & Sons

The Biennial Report for 1906-08 expressed the problems of space for the Zoology department:

> The zoology laboratories have crowded into the basement (of Morrill Hall) and even to the window sills. The students positively cannot be accommodated if there be any increase, as there certainly will be according to the natural rate of growth. The trustees are nonplussed.

Two years later the first biennial report of the new Board of Education reported on the Science Division: "A new building for this department is a practical necessity."

An allocation of $65,000 became available for a building for bacteriology and zoology (Science Building) in January 1915, and the Board architect was asked to prepare tentative plans.(1) The plans and specifications were presented and approved on February 3, 1915. The following June the architect was instructed to prepare final plans and specifications. At the September Board meeting it was reported that bids had been received, but all were too high. The architect was authorized to negotiate with the low bidder and a contract was awarded on the basis of certain changes from the original plans, including a substitution of Bedford stone for granite, plaster instead of marble walls in toilet rooms and reinforced concrete in lieu of structural steel frame.(2)

An interesting description of the building appeared in the Iowa State Student on February 26, 1916:

> When fully equipped and ready for occupancy next fall, the new Iowa State science building will represent an investment of nearly $95,000, and will be without a peer in the country from the standpoint of laboratory facilities and equipment. Four stories and a basement are to be included in the new structure which is 114 feet long by 50 wide. Absolute fireproof construction is used throughout, the building being built entirely of concrete with red brick and Bedford stone facing.

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(1) Minutes, January 22, 1915

(2) Minutes, September 28, 1915

The present structure is planned as a unit in a larger hall to be added to as conditions warrant. North light laboratories with 5 by 8 plate glass windows will give excellent lighting for microscope work. The Ames architects have taken for their model, the buildings of the Boston Institute of Technology, on which over $4,000,000 have been expended.

Bacteriology class rooms and laboratories will occupy the lower two floors while the top floors will be devoted to zoology, human physiology and embryology. The botany department will move into the quarters in Central building vacated by the bacteriology staff and the temporary laboratory structure at Central station torn down. A large basement in the new building will probably be devoted to the rearing of rabbits and guinea pigs for experimental work. Work in entomology and apiculture is to continue in chemistry hall.

J.B. Evans declared bankruptcy and completion of the building became the responsibility of Superintendent Sloss. It was ready for use in the fall of 1916. Change orders during construction resulted in, among other items, reinstatement of the marble in the rest rooms.

At the time plans for the building were prepared it was known that additions would be needed, and the first request for funding such an addition was made in the amount of $100,000 at the February 8, 1923, Board meeting. By the time the Biennial Report for 1926-28 was issued the estimated cost had doubled. Two years later the 1928-30 Report showed a figure of $250,000 for a new wing to the building.

It was not until 1947 that an appropriation was made for the Science Building addition and the architect was retained. In 1949 an additional appropriation was made. However, bids were not received until April 1951, and then all bids were rejected. New bids were received, on modified plans in December 1952 and contract awards were made the next month.(1)

During the 1970's remodeling of various laboratories and offices was required as new space allocations were made in conjunction with the new facilities made available in Science Addition #2.

The latter building is reported separately inasmuch as it is a separate structure and not physically connected with Science Hall.

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(1) Minutes, January 8-9, 1953

SCIENCE HALL ADDITION #2

Built: 1969-73
Architect: James Lynch & Associates
Contractor: James Thompson & Sons

The Board of Regents request for capital improvement funds for the 1965-67 biennium included $1.1 million for a science building addition.(1) The money was not allocated that year, but two years later an appropriation was made in the amount of $2,400,000. An additional $996,000 came from Higher Education Facilities grants.

The addition was planned as a completely seperate building. The building program showed most of the net useable area (48,500 sq. ft.) allocated for zoology and entomology, with 11,150 sq. ft. for psychology and 7800 sq. ft. for general classroom area, and an alternate to provide 1300 sq. ft. for earth science observation space on the roof. The building program was given to the architect on the first of November 1967 and his preliminary plans were approved by the Board at the April 1968 meeting.

Bids for construction were received on October 2, 1969, and construction started the following month. The building was substantially completed by the end of 1972 but it was the following March before occupancy came about.

Before the building had been completed some changes in space assignments had been made. Facilities were provided to house the Fish and Wildlife Biology and space for psychology was eliminated, resulting from a reduction in total area necessitated by cost inflation.(2)

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(1) Iowa State Daily, August 13, 1964

(2) Minutes, January 14-15, 1971

SEED PROCESSING PLANT

Utility Barn (Beach Avenue)

Built: 1926-27 Addition: 1955-56
Architect: 1926 Agricultural Engineering Department (J.B. Davidson and Bruce E. Russell)
1955 A.E. Department (Norval Curry)
Contractor: 1926 A.E. Dept. & Physical Plant
1955 W.A. Klinger Co.

The original building was built by the Agricultural Engineering department as an experimental undertaking. It was described in the May 5, 1927, issue of the Iowa State Student:

> Construction work on the new masonry roof barn at the Iowa State Animal Husbandry Experimental Farm, which was started last fall has been resumed and the structure should be completed within the next two months, according to Prof. J.B. Davidson, head of the Agricultural Engineering Department at Iowa State.
>
> The novel feature of the barn will be the fact that no wood is to be used except for door and window construction. The shape of the roof will be what is known in structural circles as an inverted catenary. By use of this style of construction the roof acts as its own support leaving the room in the hay mow entirely free of the usual framing timbers. Even the hay mow floor is made of concrete which will allow for the storage of grain as well as hay.
>
> The idea of a masonry barn was conceived about 15 years ago by Professor Davidson. Shortly after that, his idea was partially carried out by the construction of one section of a masonry roof on a barn in the animal husbandry lot which stood for about 10 years, then was torn down. From much valuable information gained from experience with this section, plans were drawn and a one-sixth scale model was built last summer by Bruce E. Russell, A.E. '25. Following this college officials agreed to build a barn under these plans to be used by the animal husbandry experiment farms.
>
> From previous experiences it has been proven that the structure is sound as far as wind resistance is concerned; in fact in this respect it is stronger than a wooden barn, says Professor Davidson. He also states that the shape is satisfactory from the feed and masonry standpoint but the one big problem is to find some method of putting the material in place without spending too much labor on it.
>
> The barn is the first of its kind in the country, the plans having

been originally worked out by Professor Davidson and others in the Agricultural Engineering Department. The construction work going on at the present time is under the supervision of Henry Giese, an assistant in the department.

The Financial Report for 1930 called this "Utility Barn" and valued it at $11,600.

Bids for an addition to the building were received in November 1954, but these were rejected, plans were modified, new bids were taken and contracts awarded in February 1955.(1) The work was accepted the following January.(2)

SEED SCIENCE BUILDING

Seed Laboratory

Built: 1976-77
Architect: Wilkins, Bussard & Kikis
Contractor: Allen Construction Co.

The Seed Laboratory which had been housed in Botany Hall and had long been in need of larger and more efficient space received a state appropriation for a new building in 1975. Work on the building program had started the preceding fall and it was ready when the architect was selected in March 1975.

Schematic drawings were presented to and approved by the Board in September 1975. During the next eight months the drawings were developed and specifications were written. Contracts for construction were awarded in July 1976 and work on the building began later that month. The building was occupied in December 1977.

The laboratory includes space for seed testing operations, administrative offices, research space, teaching space and an area for the Iowa Crop Improvement Association facilities. A contribution of $275,000 had been made to the project by that organization.

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(1) Minutes, February 10-11, 1955

(2) Minutes, January 12-13, 1956

SERUM PLANT

Hog Serum Plant, Biological Laboratory

Built: 1913
Architect: Mr. King of Building & Grounds Dept.
Contractor: LThomas Sloss, Supt. Bldgs. & Grounds
Razed: 1926(1)

This building was located at what is now the northwest corner of the Veterinary Clinic. It was a U-shaped structure 100 feet wide with the two wings, each 40 feet wide by 150 feet long, built of brick and with cement floor. It faced south.

A hog-cholera epidemic in 1913 resulted in the loss of 25 per cent of the state's swine population.(2) The Serum Plant was erected that year, on an emergency basis, to produce a serum to counteract the disease. A special state appropriation provided for construction, equipment and some operating costs, although the total operation was assumed to be self-supporting.

The plant continued in operation until 1920 when the governor ordered it shut down when operational costs became too high for the reduced demand for the serum.(3)

From then until the building was razed it was used for research by the veterinary medicine division.

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(1) M. Kooser, 1939

(2) C.H. Stange, 1929

(3) ISC Student, February 16, 1920

SHEEP BARN

Built: 1922 Addition: 1925
Architect: Proudfoot, Bird & Rawson
Contractor: Supt. of Buildings and Grounds
Razed: 1969

The Sheep Barn was built on the site, now open, just north of the Antigenic Laboratory (Agronomy Laboratory).

Prior to about 1921 many of the animals used by the "animal husbandry" department were housed in the area east of the buildings on the east side of Knoll Road, south of the physical plant area and north of College Creek. It was then decided that animals should be relocated to the north to the area in the vicinity of the then fairly new Meat Laboratory, and steps were taken to effect that move.

The Sheep Barn was one element in the new complex, and was described in the Iowa State Student on September 27, 1922:

> The new sheep barn north of the hog barns that were built recently, will be roofed over this week and should be completed this fall. The front part and one wing are being built this year, leaving another wing to be completed in the future. Animal husbandrymen believe they have a sheep barn that is as near model as would be practical to build. It forms the northeast corner of a quadrangle of barns which the proposed horse barn will complete when constructed.

The wing was added in 1925.(1)

By 1969 the building was no longer needed and it was razed.

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(1) Minutes, April 16, 1925

SHEEP BARNS and SHEDS

Various structures have been erected on the campus and designated as Sheep Barns, Sheep Houses or Sheep Sheds. The locations of these different buildings are not always identified with any degree of certainty.

The earliest reference found occurs in the Minutes for March 23-24, 1865, wherein the committee recommends "a modle sheep house for the accomodation of six breeds of two each, also a fatning pen for mutton sheep." (Spellings as originally written.)

Apparently the first shelters were built in 1867 as described in the Farm Superintendent's report included in the Minutes on January 13-17, 1868:

> From lumber that had been used about the brick yard I had 3 sheep houses or sheds erected 24 feet by 12 each with double board roofs of sound lumber, each having access to an open yard for air and exercise yet so constructed that the different lots can be kept apart from each other. The work all done by farm hands. Cost for nails $10.00.

In 1882 "Prof. Knapp submitted to the Board bills paid by him for the erection of the present sheep barn" The Board ordered that $71.94 be appropriated from the State Appropriation for Sheep barns to pay the bills.(1)

A year later the Board "ordered that upon completion of the sheep barns" the remaining balance in the appropriation be transferred to another account. This may refer to the 1882 barns or to new ones.(2) At the same meeting it was "ordered that the proposition of V. Tomlinson herewith submitted to erect sheep barns for the sum of $415.00 be accepted."

An 1883 map shows two buildings called sheep barns located in the area where the Food Technology Building stands now.

By 1897 further action had become necessary as recorded in the Minutes for November 16-19:

> We recommend an appropriation of $600 for removing and remodeling the old sheep barn, the sheep shed and barn now being decayed and very discreditable in appearance and unworthy of a state institution.

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(1) Minutes, May 23-26, 1882

(2) Minutes, May 22-25, 1883

A contract for "the addition and alteration to the sheep barn" was executed with W.M. Rich in June 1898.(1) That building was razed in 1927.

Three sheep sheds were built in the pasture north of the North Western railroad (to the east of what is now Hawthorn Court). The 1940 Financial Report shows the date of acquisition of two of them as 1911. The third had been destroyed by fire in 1938, but was probably built at the same time. The other two burned in 1959 under strong suspicions of arson.

The Sheep Barn built in 1922 is separately covered.

The Financial Reports from 1940 to 1959 show another Sheep Barn, presumably replacing the one lost in 1938. This newer building, valued at $1912 was written off in 1959, perhaps another fire loss of that year.

SILOS

The earliest reference to a silo appeared in The Aurora in the July 1883 issue:

> One of the most practical and important experiments prosecuted by Prof. Knapp is now subjected to the test, and if successful will prove of great advantage to the farming public. A silo has been built in one corner of the barn 16.66 x 11.8 feet, and about 20 feet deep. This was made with air tight sides, and on the 16th and 17th inst. was filled with clover and other grasses from the college lawns and farm. The grass was raked as soon as cut and hauled directly to the silo where it was spread and packed as thoroughly as possible. Twenty-one and one-fifth tons of grass was put in the pit and a loose floor of two inch plank fitted over it, a loose cross floor was put in and on this boxes of sand were placed to the amount of about five tons. The grass settled under this weight in twentyfour hours from fifteen to ten feet, and the Professor expects it to settle five feet more, making "canned grass" with a weight of about 40 pounds per cubic foot.
>
> Ensilage has been in use in the east for several years and we think will be a success here, and if so, the Professor will "can" large quantities of corn and grass another year. We shall watch with interest the outcome of the experiment.

In the Biennial Report for 1896-97 it is stated, "We are seriously in need of a commodious horse barn....It is desirable to build, in connection with it, a silo with a capacity of 400 tons in order that we may have proper facilities for feeding in accord with this important method of preserving foods."

The September 23, 1905, issue of the ISC Student reported that "the brick silo located on the northwest corner of the experiment station barn was filled with corn from the fields north of the Chicago & Northwestern tracks."

About a year later it was recorded that "The Experiment Station is constructing a new silo. It is of hollow building brick and is called the Iowa Silo. It will have several advantages: a well insulated wall; durability; and reasonable cost."(1)

In 1912 a new development, a concrete silo, was undertaken. That is described in the following account from the the October 5, issue of the ISC Student:

> "As solid as the rock of Gibralter," was the claim made yesterday by Mr. A.M. Lawrence for the big forty foot reinforced concrete silo he is building for the college at the northeast corner of the cattle barns. "This type of silo is absolutely indestructible by wind or fire; it will never cost a cent for repairs, is absolutely vermin proof, and will protect the ensilage as well or better than any other type of silo against spoilage from air or moisture" said he.
>
> The new silo is a present to the farm department of the college. The Universal Portland Cement Company of Chicago has sent Mr. Lawrence here to Superintend the erection of the silo, and is furnishing all the cement used in its construction with out charge to the college. The steel forms for the concrete are furnished by the Enterprise Monolithic Silo Construction Company of Chicago, and the metal roof is supplied by the Hyrib Roofing Company. The concrete mixer is loaned by the Cement Tile and Machinery Company of Waterloo. So apart from the labor, and the gravel used, this silo is a gift to the college of a most practical kind.
>
> The silo under construction has a diameter of fourteen feet, and will be forty feet high. Its capacity of ensilage will be about one hundred forty tons. Six inch solid concrete walls from a one part cement to a five part bank run gravel sand mixture, are reinforced at the bottom by steel triangle mesh two layers, one of No. 4 and one of No. 6 mesh being placed in the first twenty

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(1) ISC Student, September 14, 1908

feet, and a single No. 6 layer reinforcing the remaining twenty feet. The silo will have a continuous door and a chute, the door frame being entirely of concrete construction. The metal roof is also coated with cement.

The Universal Portland Cement company is not in the silo construction business, but is making a demonstration here in this silo of the advantages of concrete construction in silo building. "Engineers the world over all agree that the best building material known to man is reinforced concrete," said Mr. Lawrence. "It is true that the initial cost of a concrete silo is somewhat greater than that of a wooden silo of equal capacity, and in some cases the tile block silo can be erected more cheaply, but when the farmer takes into consideration the stability and permanence of his concrete silo, its unquestioned imperveriousness to air and moisture, and the fact that once properly built he will never be at additional expense for repairs, he will conclude that the concrete silo is the cheapest in the long run."

"Concrete silos have been built in many of the eastern states for some time past, and are now being rapidly introduced in the middle west. The price of concrete construction ranges from ninety cents to four dollars per ton capacity, depending upon local conditions, labor, accessibility to gravel, and etc. Any farmer who has had some experience in concrete construction can put up his own silo, although we advise the farmers to secure the services of a competent contractor whenever possible."

Completion of that silo was reported on October 29.

When the new Cattle Barn was built in 1925 hollow tile silos were included at the northeast and northwest corners of the barn. They were 16 feet in diameter and 45 feet high.(1)

A short review of the silos appeared in the October 18, 1927 issue of the Iowa State Student:

The first block silo to be built in the state of Iowa was constructed on the Iowa State farm and now stands north of the old cattle barns, where it was erected in 1907 by the Agricultural Engineering Department.

When this silo was contemplated as an experiment, most people considered the project foolish and when the contract for the properly shaped blocks was let, taxpayers appeared impressed by the fact that their money was being spent foolishly.

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(1) Iowa State Student, November 6, 1925

The silo has been in use up until this year, when the new barns were completed and the stock moved to the new location.

Another silo, partially constructed for experimental work, and located north of Old Agricultural Hall, was one of the earlier silos. It consisted of only six compartments and was used as a test for water-proofing compounds on its walls. It was also used to show farmers the methods of constructing a permanent, hollow clay block silo.

SLOSS HOUSE

"The Pines"

Built: 1882-83
Architect: J.B. Ballenger
Contractor: V. Tomlinson

Bid for construction of this residence for a professor came to $2200. A porch was added in 1884. In November of 1884 Professor Bessey submitted a request for reimbursement of $104.50 for expenses he had incurred in making the house fit for occupancy, including sheeting the house with tarred paper, building a wood shed and well house and a privy.

Minor repairs were made in 1897 and 1904, and again in 1915. In 1925 extensive repairs were made, including an extension of the south porch, and removal of the porch across the west front. The garage was also added on the northwest corner at that time.(1) A total of $6500 was allocated for the work.

Occupants of the house:

1883 - 1884	Charles E. Bessey
1885 - 1888	Byron D. Halsted
1889 - 1892	Louis H. Pammel
1893 - 1894	G.E. Patrick
1895 - 1896	W.S. Franklin
1897 - 1908	George W. Bissell
1909 - 1915	Warren H. Meeker
1916 - 1924	J.G. Hanmer

(1) Conversation with Dr. Margaret Sloss, May 1977

1925 - 1936	Thomas Sloss
1937	Delta Zeta
1938 - 1947	Home Management House
1948 - 1969	Ben W. Schaefer
1970 - 1978	Applied Art
1978 -	Agricultural Education and Sociology

SNEDECOR HALL

Service Building

Built: 1938-39 Addition: 1960-61
Architect: 1938 Thorwald Thorson
1960 Russell & Lynch
Contractor: 1938 Harlan Contracting Co.
1960 Carlson-Rockey, Inc.

Construction of a building to house various service functions of the college was authorized by the Board in July 1938, subject to obtaining a 45% grant from the Public Works Administration. Those services were itemized in the Iowa State Daily Student on September 20, 1938:

> Housed in the new structure will be the mimeograph machines now in the basement of Morrill Hall; visual instruction and film storage which now occupies part of the first floor of Engineering Hall; the statistical laboratory now located on the top floor of Beardshear Hall; Station WOI, which is now located in Engineering Annex; the photographic studio now on the first floor of Agricultural Hall and offices for the equipment and inventory clerks.

An agreement with the architect was reached in August 1938, the grant was approved, bids were received on November 23, and construction work started by December 1.

By the fall of 1939 the building was ready for occupancy, and the contracts were accepted as completed in November of that year.(1)

Long range planning during the years 1945-47 made references to an addition on the south of the Service Building, but it was 1959 before the project was activated, when the architect was retained in October. The building became ready for use in the summer of 1961. A National Science Foundation Grant of $4300 had been received to defray a small part of the construction cost.

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(1) Minutes, November 10, 1939

In 1964 the studios and other facilities of WOI moved to the new Communications Building, thus freeing the third floor of the Service Building for other use. A remodelling project resulted with planning and design by the Physical Plant and with Carlson-Rockey, Inc. as general contractor. A grant of $26,600 from the National Science Foundation paid for approxiamtely fifty percent of the project cost.(1)

The Service Building became Snedecor Hall in November 1969, named for Professor George Waddel Snedecor.

SOIL TESTING LABORATORY

Poultry Laboratory

Built: 1919 Addition: 1956
Architect: 1919 Proudfoot Bird & Rawson
Contractor: 1919 Supt. of Buildings & Grounds
1956 James Thompson & Sons

The first unit (east section) of this building was erected in 1919 as a poultry laboratory. It was 20' x 80' with basement and first floor, of brick construction. It's cost was $5836.33. It had first been requested in 1910.(2)

The poultry laboratory continued in use until 1965 when it moved to Kildee Hall.

The Soil Testing Laboratory addition on the west end of the building was built in 1956-57.

Soil Testing had been housed in the old Forage Crops Lab (see North Studio) and on the upper level of the Poultry Lab before the addition was completed, and has used the entire building since 1956.

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(1) Minutes, November 11-12, 1965

(2) Biennial Report, 1908-10

SOUTH HALL

Built: 1868-69 Burned: January 5, 1912
Architect: C.A. Dunham
Contractor: N.P. Starks (construction foreman)

This, the first of three "professors' houses" contracted in 1868, became the first college president's house when President Welch moved into it in 1869. The original plans called for the building to be of concrete block, but in September 1868, before it was finished, the walls collapsed and it was rebuilt with brick. The Board of Trustees, in March 1869, authorized the president to buy blinds for the house at his own expense. An addition was built in 1871.

In the fall of 1879 the Welches moved to their new home, the Gables, and South Hall was made available to the departments of Botany and Veterinary Medicine. In 1880, it was modified for use by Domestic Economy. It was damaged by a tornado in 1882 (as were several other campus buildings). Not until the fall of 1897 was South Hall connected to the campus sewer system. South Hall became Music Hall from 1896 until it was destroyed by fire in 1912.

South Hall was located on what is now Union Drive just east of the drive to the east side of the Memorial Union. It faced west with a porch across the front end. It was two stories high with mansard roof. The second story windows extended into the roof with dormers. A square tower-like element at the southwest corner added character to the house. Its style has been referred to as Italian in some early references.

SOUTH STUDIO

Emergency Chemistry

Built: 1913
Designed by: Supt. Sloss and Professor Coover
Built by: Thomas Sloss
Razed: 1925

Located about 50 feet north of east wing of Library and extending to within a few feet of Morrill Road.

Destruction by fire of the old Chemical and Physical Laboratory in March 1913 resulted in the construction of a new building on an emergency basis. $7000 was appropriated from the Repair and Contingent Fund in July and by late September the building was ready for use.(1)

It was a frame building 32 feet wide by 106 feet long. It was described as "A temporary wooden shed of the cheapest construction possible....it has been allowed to remain although it is not as well built a structure as many a barn or cheap warehouse in the State."(2)

With completion of the new Chemistry Building (Gilman Hall) in 1914, South Studio was remodelled for Plant Physiology and Zoology laboratories.(3) The following spring its use was assigned to the Home Economics department who continued to use it until it was torn down in 1925.(4)

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(1) Minutes, July 1913 and ISC Student, September 27, 1913

(2) Biennial Report, 1912-14

(3) ISC Student, September 13, 1914

(4) D. Kehlenbeck, 1958

SPEDDING HALL

Research Building

Fifth Wing to Chemistry Building

Built: 1949-51
Architect: Tinsley, Higgins & Lighter
Contractor: James Thompson & Sons

At the February 10, 1948, meeting of the Board "President Friley reported that the Atomic Energy Commission desires to expand its research program at the Iowa State College, including the construction of additional buildings; and that tentative plans call for the construction of a building which would constitute a 5th wing of the present Chemistry Building at an estimated cost of $2,000,000."

During the same meeting the Board authorized negotiations for a new 99 year lease of the property to be used for the building site.

Construction started in the spring of 1949. On September 25, 1951, the Iowa State Daily reported:

> Occupancy of the new research building of the Ames Laboratory, Atomic Energy Commission, at Iowa State will begin this week.... Construction of the two million dollar building has been completed....Administrative personnel who have already moved into the building are members of the A.E.C. Area Office, the Receiving Department, the Medical Sections, and the Personnel and Security Division. The Technical Information Services, with the document library, expect to occupy new quarters on the second floor, possibly by Sept. 20.

The name "Frank H. Spedding Hall" was assigned to the building at the Board meeting of June 28-30, 1973.

STADIUM

(at Clyde Williams Field)

Built: 1914-15 Additions: 1925, 1930, 1932, 1961, 1966

Architect: 1914 ?
1925, 1930, 1923 Proudfoot Rawson & Souers
1961, 1965 Brooks-Borg

Contractors: 1914 Turner Improvement Co.
1925 F.M. Eller
1930 Fred Fischer
1932 Physical Plant
1961 Arthur H. Neumann & Bors.
1966 Mueller Construction Co.

Razed: 1978

The earliest reference to what would become the Stadium was in the May 22, 1911, issue of the ISC Student where it was reported that "The new athletic field is to be equipped with cement bleachers along the west side of the field." On December 7, 1912, the paper announced that plans for the new field were complete and that a concrete grandstand to seat 5000 people would be built.

The first real description of the project appeared in the Iowa State Student on September 11, 1914:

> Permanent concrete bleachers to seat 3,000 are being constructed along the west side of the gridiron on State field and will be completed by November 1. The funds are being provided by the Athletic Council and by gifts from alumni.
>
> The stands to be built this year will be 203 feet long, 64 feet wide, and a little more than 38 feet high at the rear side. When completed this west stand will be 366 feet long.
>
> The front of the stands will come close to the straightaway cinder track at the west margin of the football field. There will be an abrupt, closed wall rising from the ground to a height of 6 feet, 6 inches, the level of the first row of seats. At this 6 feet, 6 inch level there will be a 4 feet walk running the length of the stand in front of the seats and the stairways from the ground level will run to this walk underneath the stand. Above the 6 feet 6 inch level there will be 28 tiers of seats, running back about 60 feet from the walk and going to a height of 38 feet.
>
> The entrance to the stands will be at the ends; no gates or other openings will open from it to the football field or track, making certain that the field will not be overrun by spectators. Underneath the seats will be a wide ground space, 203 feet long by nearly 60 feet wise. About 24 feet of it will be finished off as

a concourse for the passage of spectators to the seats above via the stairways, which will be six in number. The remainder of the space will be reserved for an indoor cinder track and for dressing and storage rooms which will be installed later. The seats will be divided into 6 sections, each with its own stairway exit. At the top of the stand, near the middle, a special section is to be reserved for the press, with desks and telephone and telegraph connection.

In making the plans for the bleachers, careful study was made of various successful stands. In general, the seating arrangement will conform to the arrangements in the new stands at the University of Missouri. Each seat ledge will be 28 inches wide, and height to the next ledge will be 10 inches, giving every spectator 10 inches higher seating than his neighbor next below him. Bleacher seats will be installed, consisting of a raised bench of finished planks, set up on blocks. Each spectator will have a 12 inch seat and 16 inch space in front of the seat for his knees.

The cost of the improvement will be $18,000 and the contract was awarded to the Turner Improvement Company of Des Moines. No fence will be erected this year and the old canvas enclosure will be used again.

At the meeting of the Board in October, 1914, that body gave permission to build the bleachers on college property.(1)

Another section was added from a balance in the Student Repair Fund providing an additional 250 seats.(2) Two weeks later the paper would report another section could be financed as a gift from the senior class. The same day the paper recorded some interesting figures:

> The first 11 sections cost $18,974 or $1,643.09 each, while the remaining ten sections are to be built at a cost of $1550 each. Each section will seat 280 people or the 21 sections will accommodate 3,640.(3)

The next week the other three classes pledged funds for two more sections. In November a pledge for the twentieth section was announced by the Ames Commercial club and the Ft. Dodge, Des Moines and Southern R.R.(4)

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(1) Minutes, October 1914

(2) Iowa State Student, October 1, 1914

(3) Iowa State Student, October 14, 1915

(4) Iowa State Student, November 14, 1914

The last section built in the fall had to be torn out and replaced in the spring of 1915 because of frozen concrete, and additional sections were then built.(1)

On April 10 the paper could say that "the athletic council has secured the funds for finishing the concrete bleachers." In May the contractor offered to donate one section if the balance of the construction were completed in that spring.(2) The Biennial Report for 1914-1916 summarized the activities: "New bleachers constructed of reinforced concrete have been built on the west side of the athletic field. Funds for this purpose were contributed by alumni, faculty members, and students the total cost being about $32,000." That report should have included "friends" among those who contributed.

The first major change in the stadium occurred as a result of the first World War in 1918. At its meeting on March 29 the Board took this action:

> $6,000.00 or so much there of as may be necessary, is hereby appropriated from the balance remaining in the Repairs and Minor Improvements Fund to cover cost of the permanent work in connection with the enclosing of the bleachers for the housing of soldiers who will take special automobile work under contract to be entered into with the War Department. It is understood only such part of the work as will remain permanently in place for future use in accordance with plans for utilizing the space under the bleachers for Physical Training work shall be charged to this appropriation.

Action was taken quickly. On April 6, 1918, the student paper described the changes:

> Plans drawn up by C.H. Scheman, secretary to the president, have been completed and handed over to Supt. Sloss, who is already working on some parts of the construction. The plans call for the building of walls around the west side and both ends of the large concrete bleachers on State Field with two rows of windows, four feet and twenty feet from the ground. The walls are to be of tile, which is already being hauled over to the location, and the window frames are nearly completed by workmen at the carpenter shop.
>
> The openings formerly used as entrances to the bleachers from underneath will be closed up by doors, giving a dormer effect and

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(1) Iowa State Student, March 30, 1915

(2) Iowa State Student, May 15, 1915

will serve admirably as exits. The space afforded by the building of partitions between the pillars and the stairs leading to the exits will give more ample room per man than is provided even at the cantonments. The floors will be of wood, which will be the only part of the building subject to destruction by fire, except the partitions and windows.

Electricity is to be run to the barracks and an abundance of water will be furnished the men. Two or three furnaces are to be installed to guard against cool or damp weather, although they will probably be little used. The furnaces will no doubt be of the same nature as those used in cantonments.

At one end of the structure, two good sized lavatories of the cantonment type are to be erected. They will provide showers, baths and the like with plenty of hot water and will be lighted like the barracks.

The first recorded mention of adding stands on the east side of the field is found in the Iowa State Student on December 19, 1923, where it is said that new bleachers will be built in two years "if plans of the Athletic Council are carried to completion." On January 9, 1925, a committee of four met to prepare a report on a new stadium.(1)

This is the first time the term "stadium" was used, as opposed to "bleachers" or "grandstand". The next month it could be reported that architectural plans were to be completed "by the last of the week",(2) and in March the Board acted to approve the project

> with the understanding that this improvement will not be paid for from funds appropriated by the Legislature, and with the further understanding that the general progress of the work and the supervision of the bleachers when completed will be subject to the authority of the State Board of Education, in the same manner as other improvements on the campus.(3)

The plans at that time showed the existing west stands and the new east stands as two units in a much larger U-shaped stadium. A perspective drawing of the whole structure appears in the March 2, 1925, issue of the Iowa State Student.

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(1) Iowa State Student, January 9, 1925

(2) Iowa State Student, February 9, 1925

(3) Minutes, March 17, 1925

The Athletic Council awarded construction contracts for the east stands on April 10, 1925, to F.M. Eller for general work in the amount of $61,900, to Palmer Plumbing Company for plumbing at $5383, and to Capital City Electric Company for electrical work at $584. An option to build a brick enclosing wall under the bleachers was accepted, with funds for that work only provided by the Board of Education.(1)

The east stands were dedicated on October 10, 1925, and the combined seating capacity became 14,000.(2)

A contract for additional work under the east stands was awarded on July 1, 1930, to Fred Fischer in the amount of $15,668.40 for general construction. Other work brought the total project budget to $24,616.40.(3) The project included construction of "six handball courts, squash courts, wrestling rooms, and locker rooms."(4) The work was completed and approved in November.(5)

In the fall of 1931 an agreement was reached between Ames and the College to provide for a fire station to be built under the south end of the west bleachers. At the January 1932 Board meeting $4000 was allocated for the necessary alterations to the Stadium and the work was done by the Building and Grounds department. Work was completed about the first of June 1932.(6) Use for the fire station continued until the fall of 1966.

$1800 was allocated for repairs in the summer of 1934 and the Iowa State Student of September 25 reported that "worn out seats have been replaced." In the summer of 1939, $10,000 was spent on remodeling the stadium. The press box on the west stands was built and an underground watering system was installed. The first public address system was also used that year.(7)

In 1947 the east stands were remodeled to make living quarters for varsity team players.

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(1) Minutes, April 16, 1925

(2) Iowa State Student, October 9, 1925

(3) Minutes, July 1, 1930

(4) Iowa State Student, September 22, 1930

(5) Minutes, December 20, 1930

(6) Iowa State Student, May 26, 1932

(7) Iowa State Daily, October 24, 1959

In 1960 architects were retained and planning started for expansion of the stadium. At that time one scheme proposed was to remove the running track, lower the field by about eight feet and extend the east and west bleachers down to that level.(1) However, that scheme was abandoned. Instead the old press boxes were removed and eighteen rows of seats were added at the top of the east stands and a new press box built on the west side.(2) The construction was completed for the 1961 football season.

By 1965 further increase in the seating capacity was required and the decision was reached to add the south end construction providing an estimated 10,700 additional seats.(3) Construction began in May of 1966. Some seats were available for use that fall but work was not completed until after the football season was ended. The addition brought the total capacity to about 35,000 seats.

The stadium continued in use through the 1974 season. The new south campus stadium was first used in 1975.

The old stadium was razed in 1978.

STADIUM

(South Campus)

Built: 1973-75
Architect: Durrant Deininger Dommer Kramer Gordon and Finch-Heery
Contractor: Huber Hunt & Nichols

By the fall of 1971 it had become obvious that the old stadium could no longer meet the needs of the football crowds wanting to attend the games. The problems were summarized by President Parks in an address to the Faculty Council on January 11, 1972:

> Our present stadium not only is small, but, unfortunately, it has even more critical deficiencies. The fact is that it is an old stadium, it has serious structural problems, and it lacks adequate ancillary facilities, such as rest rooms, to handle the size of crowds that are attracted to the games. More importantly, the

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(1) Iowa State Daily, October 14, 1960

(2) Iowa State Daily, February 15, 1961

(3) Minutes, November 11-12, 1965

> stadium is in a serious state of disrepair that will require an investment of 1 to 1½ million dollars over the next 10 years to keep it minimally operable. If this investment is made, what will you have? Obviously, something less than optimum for parking and seating. No convenient place for adequate parking could be made available. One third of the seats (10,000) are in the end zone, and there are only 5,900 seats in the west stands....We do not think it is good economics to continue, over the years, to send large amounts of good money after bad in an attempt to make the present stadium into an adequate one for the future.

At a meeting of the Executive Committee of the Iowa State University Foundation on March 11, 1972, President Parks made a similar presentation, and that Committee approved the retention of "an experienced stadium consultant". The New York firm of Praeger, Kavanaugh and Waterbury was called on to make a preliminary design, which was presented to the Foundation and the University in June. However, that design was too costly and did not meet other requirements of the program.

In 1973 it was decided to proceed on a new concept: proposals were asked for on the basis of a total firm cost for design and construction of the project. It was believed that this procedure would save both time and money.

Proposals were received on September 20, 1973, from six different design-build firms. Each presented either a perspective or a model of the proposed stadium and the firm cost proposal. All schemes were reviewed carefully and the one presented by Architects Finch-Heery and Durrant, Deininger, Dommer, Kramer, Gordon with contractor Huber Hunt & Nichols was selected as the most visually appealing as well as at the lowest cost for construction.

A groundbreaking ceremony was held on October 26 and the project was then underway. It was completed in time for the game against the Air Force Academy on September 20, 1975.

The 42,500 seating capacity of the main structure was increased to 48,000 in 1976 by the addition of end-zone bleachers.

STATE GYMNASIUM

Built: 1911-13 Remodeling: 1967-68
Architect: 1911 Proudfoot, Bird & Rawson
1967 Porter-Brierly Associates
Contractor: 1911 Building & Grounds Department
1967 Garmer Construction Co.

A Gymnasium, built by students in 1883, without state funds, is discussed elsewhere, as is the Training Shed built in 1905 by the Athletic Council and students.

The earliest recorded expression by the Board of Trustees of the need for a gymnasium was in the minutes of the meeting of July 7-8, 1891, when the committee on State Appropriations included "A building for Armory and gymnasium" as one of the pressing needs. In 1893 the sum of $15,000 was requested for such a building.(1) Two years later the asking was raised to $28,000.(2) By 1903 the estimated cost was up to $100,000.(3) In 1908 the Board moved to ask the legislature for $150,000 for a Gymnasium Building to be used also as an Auditorium and Armory.(4)

It was September 1910 before funds -- from the millage tax account -- were finally made available for the long-sought gymnasium, and the architect was asked to prepare construction drawings and specifications.(5)

Bids were received in January, 1911, but they exceeded the appropriation and all were rejected. At that time the ISC Student reported the action and described the proposed building and anticipated changes:

> The fact that all the bids for the construction of the gymnasium were rejected does not necessarily mean that the final completion of the building will be delayed, or that the building will be any smaller than planned at the present time. The bids, based upon the specifications drawn up by the architect, were beyond the $150,000 mark, which is the amount allowed by the appropriation.

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(1) Minutes, November 21-24, 1893

(2) Minutes, November 12-15, 1895

(3) Biennial Report, 1902-03

(4) Minutes, October 9, 1908

(5) Minutes, September, 1910

At the present time it is thought that modifications in the exterior of the building will enable the contractors to bid within the $150,000 limit. The rejected plans called for rather ornate exterior details and it is believed that the interior plans can be retained without change, making changes from the ornate exterior to one of more plain appearance.

The plans call for a building 90 x 290 feet. Locker accommodations for 900 men will be provided for those who are taking gymnasium work. Shower baths in abundance are provided for. A regulation swimming pool, handball courts, a room for visiting athletic teams, a running track with twelve laps to the mile and other features usually found in a first class gymnasium are all included in the plans. The main room will be something like 170 by 80 feet. The ceiling girders in this room will be 24 feet from the floor. All in all, I.S.C. will have the largest and best equipped gym in the state when it is completed.

The question now comes--when we may expect the completion of the "gym"? This is rather a difficult question to answer, but in all probability the basket ball games of 1912 will be played in the new building. It is safe to say that at least a year will be needed for the completion of the work. A new gymnasium, an athletic field with concrete wall with concrete bleachers, a field surrounded by a substantial brick or concrete wall with entrance gates in keeping with it all, this is the dream of the students of I.S.C. The dream will come true, but only with the passing of the years.(1)

In April 1911 the Board adopted the following resolution:

Resolved: That the Building Committee is directed to proceed with the erection of the Gymnasium Building at the Iowa State College of Agriculture and Mechanic Arts by direct employment of labor and purchase of supplies, with authority to contract for such portions of the work or material as it deems desirable, and employ necessary assistance for the Superintendent of Buildings and Grounds.(2)

On May 22, 1911, the ISC Student reported that construction was starting that day. Early the following year Clyde Williams and Professor Beyer were authorized to visit other gymnasiums "to acquaint themselves with the detail equipment necessary to the most efficient gymnasium work, and that then they shall be held strictly responsible for seeing

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(1) ISC Student, January 21, 1911

(2) Minutes, April 1911

that, within the limit of the money allowed, the Gymnasium is properly equipped."(1)

The building was ready for use in the spring of 1913.

> The workmen in charge of putting up the apparatus in the gymnasium will have their work completed in a couple of weeks and Dr. Hackett can start his classes as soon as the students have taken their physical examinations and the lockers are assigned.
>
> The entire east end of the main floor is to be used for horizontal bars, traveling rings, parallel bars, horses ladders, ropes for climbing and weight lifting machines. At present about half of the rest of the floor is occupied by the two new batting cages which went into use Saturday afternoon. The varsity are using these from 4:30 on, every afternoon so all those wishing to try their hand with the bat must get out before that time.
>
> No definite schedule has been arranged for as yet for the men taking gym work and will probably not be before next fall, because it will be necessary to experiment with the time schedules of the other college courses this spring. Dr. Hackett promises to keep all comers busy, however, so nobody should be afraid to get gym clothes and appear on the floor, fearing that there will be no excitement.(2)

It was fall, however, before the swimming pool was ready for use according to an item in the ISC Student for Oct. 21, 1913:

> With the announcement that the swimming pool in the new gymnasium is ready to use, it is worth while to remind many who will enjoy this equipment that the credit for having a pool is largely due to Mr. Thomas Sloss, superintendent of grounds and buildings. When plans for the new gymnasium which had been prepared with great care by Professors Beyer, Williams and Jack Watson and others had been finished and submitted to building contractors it was found that the pool would have to be omitted in order to keep the cost of the building within the available appropriation. Mr. Sloss who is a builder of many years experience told the board of education he would undertake to put up the building in addition to his regular work without extra salary and thus save the contractors profit for the construction of the pool. The board was glad to accept the offer and there is no question that the entire student body is now glad that he did.

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(1) Minutes, January 1912

(2) ISC Student, March 25, 1913

A cinder track was installed on the ground floor level in December 1915.(1)

In the fall of 1918 the gym became the dining hall for the army recruits on the campus. On October 1 the Iowa State Student recorded that

> The Dining hall....occupies the whole bottom floor of the big men's gymnasium and will accommodate 2,500 men in an hour. The dirt track, vaulting pits, and other obstacles have all been removed, and in their place rests a floor containing no less than forty-four mess tables. The former brick walls have been whitened, making the big room more sanitary and clean.

Two weeks later the paper reported that the gymnasium was one of a number of buildings fitted up as a hospital for use during that fall's influenza epidemic.

Use by the army did not last long. In January, 1919, it was noted that the gym was about to be restored to its earlier condition and use.(2)

Over the next fifty years various changes and repairs were made, the most significant being the new exterior stairs at the center of the north side, providing a needed exit from the second floor level. This was completed in February 1936.(3) The Christian Petersen sculptured panels were installed shortly thereafter.

A fire in November 1962 caused a loss of $8500 for building repairs and between $8000 and $9000 loss to equipment.(4)

In 1967 a renovation project was undertaken to improve various facilities in the building. The swimming pool was partially filled in to obtain an even water depth of about four feet for the entire pool, a new track was installed replacing the dusty cinder track, and improvements were made in locker and rest rooms.

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(1) Iowa State Student, December 14, 1915

(2) Iowa State Student, January 10, 1919

(3) Minutes, March 30, 1936

(4) Minutes, December 6-7, 1962

C.Y. STEPHENS AUDITORIUM

Theater - Auditorium

Built: 1966-69
Architect: Crites & McConnell and Brooks-Borg
Acoustical Consultant: Paul S. Veneklasen & Associates
Contractor: Martin K. Eby Construction Co.

This was the first building constructed at the Iowa State Center, and brought to reality the dream of President Hilton which he had first proposed in 1954. (See section on Iowa State Center.)

Architects were selected by the Board of Governors of the Iowa State University Foundation and their action was concurred in by the Board of Regents at the latter's April 9-10, 1964, meeting. The appointment was for the four buildings and the site development of the Iowa State Center project.

Plans for the Theater-Auditorium were completed by the end of 1965 and bids were received, after a month's postponement, on May 4, 1966. The bids exceeded the budget by $700,000 and all bids were rejected.

Revisions to the plans were made during the summer, modifying some materials and reducing total excavated space in the basement. New bids were received the end of September and construction contracts were awarded in October 1966.

The first plan for the building foundation involved a pressure-grouting operation -- forcing a cement based slurry into the soil to harden and strengthen it. When this system proved unsatisfactory a change to a compacted sand fill was made, and construction then proceeded satisfactorily.

The building was completed and ready for the opening performances by the New York Philharmonic Orchestra in September 1969.

The cost of this project, about $4,500,000, was met entirely from gifts and grants from alumni, students, faculty and other friends of the university. No tax money was involved.

The Theater-Auditorium was named for C.Y. Stephens, a 1925 graduate of Iowa State College. In 1962 he made a (then anonymous) gift of $1,000,000 to the Center project, which helped greatly as an inspiration in the fund-raising drive which he headed until his unfortunate death in an automobile accident in 1963.

The immense, colorful, Japanese-made stage curtain was the gift of J.W. Fisher of Marshalltown, Iowa. It covers the 80 feet wide by 30 feet high proscenium arch.

Seating capacity of the auditorium:

Main floor	1618
First balcony	457
Second balcony	352
Third balcony	210
Total normal	2637

Expansion possible with 112 seats on orchestra lift when that is not used for the production.

STUDENT SERVICES BUILDING

Hospital

Built: 1916-18 Addition: 1923-25
Remodeled: 1967, 1974

Architect: 1916, 1923 Proudfoot Bird & Rawson
1967 Wilkins & Bussard
1974 Wilkins, Bussard & Dikis

Contractor: 1916 Thomas Sloss
1923 A. Emmert
1967 James Thompson & Sons
1974 Proctor Plumbing & Heating

Although President Pearson expressed the need for better hospital facilities in 1913, it was almost two years later before the Board Architect was directed to start planning for a new building.(1) Construction started at the end of October 1916. Contracts for cut stone and for steel were awarded to Arthur Watson and Western Builders Supply Co., respectively at the Nov. 10, 1916, Board meeting.

This first unit is the east-west section, facing north. A north-south wing on the east was also planned then. The new building was opened for use in May 1918. It was fully described at that time:

> Iowa State College's new $50,000 hospital, one of the best of its kind on the college campus' of America, will be opened this week. No plans have been made for the dedication of the new building but its formal opening may be held at some time in the future. Plans for commencement week and the closing of school has made such arrangements an impossibility at this time.

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(1) Minutes, July 1913 and January 1915

The equipment and furniture are of the very best and have been chosen both for simplicity and durability.

The kitchens are up-to-date and practical. On the first floor is the large general kitchen and on second and third floors are the smaller dietary kitchens. The food is prepared in the general kitchen, then is sent on the dumb waiter to the others, where the trays are arranged and taken to the patients. Extension phones connect the three kitchens.

An electric elevator has been installed at a great expense. The electric signal system in all the rooms does away with the unnecessary noise of bells. The patient pushes a button which lights a red light over the door and thus calls the nurse.

On the first floor are boys and girls waiting rooms, the big dispensary rooms, and doctor's office.

The big airy wards are a feature of the hospital. One end of the hospital is for the boys and the other for the girls. These are wards for two, three or four patients and the big windows make them most desirable places. Another feature is the parents' room. Here special accomodations have been provided so parents may stay near their children who are ill if they wish.

There are also many single rooms for patients which are light and cheerful.

On each floor there is a supply room and "report" room for the nurses. Thus they are enabled to keep their reports easily and systematically and of easy access.

The sterilizing equipment is of the very best. Steam pressure sterilizers for all the instruments and utensils have been provided. The articles to be sterilized are placed in a vat and steam pressure turned on which sterilizes them in a few minutes.

The operating room on the top floor has the newest equipment. The room is walled with green tile and has the white furniture. The sterilizing room and cupboard for the special linen open off from this room. Here also they have a gas burner in which to burn all refuse.

Large linen closets, special rooms for eye, ear and nose cases, janitors quarters and dining room for the nurses add to the efficiency of the hospital.

The walls are all white, with white woodwork, tile floors and mahogany doors. There are living rooms and waiting rooms on all floors, furnished in oak and wicker furniture, which is

most inviting. The rooms are furnished in oak and white hospital beds.

The hospital has been pronounced as second to none of this kind. Dr. Tilden will be the doctor in charge and Miss Crouston and Mrs. Knipe will be nurses in charge.(1)

By 1923 a larger facility was needed. In the February 26, 1923, copy of the Iowa State Student it was reported that

> The legislators would find the college hospital running over, and patients lining both sides of the halls and in emergency quarters elsewhere. Not only now, when the number of patients is higher than usual, but for the greater part of the year they would find the hospital overcrowded and inadequate.

Plans for the addition were prepared during the year and the construction contract was awarded at the December 7, 1923, meeting of the Board. The building became ready for use in January 1925. The construction included the east wing and also an enlarged kitchen and a sun room on the west end of the original unit.

Minor changes were made in 1934, 1940, 1950 and 1951. In 1960 the elevator was replaced as was the dumbwaiter.(2)

A major renovation was undertaken in 1967. This involved considerable remodeling of the ground and first floors with a new ambulance access platform at the west end of the building and new kitchen access at the south end of the east wing.

In 1974 the contract was awarded for extensive remodeling of the building to provide office spaces for the Dean of Students and for Student Counseling Service, with Student Health Services remaining in a portion of the building.

The building was renamed Student Services Building in 1978.

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(1) Iowa State Student, May 21, 1918

(2) Minutes, June 8-10, 1960

SWEENEY HALL

Chemical Engineering Building

East Chemical Engineering

Engineering Building #1

Built: 1927, 1938, 1962-64
Architect: 1927 Proudfoot Bird & Souers
1931 A.H. Kimball
1962 Brooks, Borg
Contractors: 1927 Lippert Bros.
1931 Ben Cole & Son
1962 Gethman Construction Co.

The first unit of the complex now called Sweeney Hall was the south section known for years as the Chemical Engineering Building. It was built in 1927 at a cost of $55,000. Before that date the curriculum had been taught in Engineering Annex and in the basement of Gilman Hall. The original building is described by Lionel K. Arnold:(1)

> The new building was a two-story concrete and steel structure, about 100 feet long by 70 feet wide, faced on the outside with red brick with white stone trim and finished on the inside with concrete bricks. The center part of the building extended up through the second floor with a total height of thirty-five feet. Except for a narrow row of laboratories across the west end and another laboratory on part of the north side, the second floor formed a balcony around the open space in the center. Several points in the design were put in at Dr. Sweeney's insistance. The balcony around the first floor center allowed the use of tall equipment for pilot plant work. The unpainted concrete bricks on the interior provided good acoustics. A firehouse type brass pole allowed quick access to the first floor from the balcony. To ensure good drainage part of the first floor was slanted towards the floor drains to such an extent that it was very noticeable to a person walking over it. There were no classrooms in the building which was designed primarily for research.

In 1930 it was reported that "A wing of the Chemical Engineering building was built in 1926-27 when 139 students were enrolled in the department. Last year the enrollment had grown to 244 and it is impossible to carry on the teaching and the research in agricultural waste utilization in this building."(2) The following year the sum of $15,000 was made available to provide an addition to the building.

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(1) Arnold, 1970

(2) Biennial Report, 1928-30

Construction of the new wing to the north was started in July 1931 and completed that fall. It is a one story building, without basement, and provided a "general laboratory, a smaller research laboratory, a classroom, three office rooms, and a chemical storage room."(1)

In 1958 an appropriation of $2,500,000 was requested for an Engineering Building. In 1961 the legislature made an appropriation of $1,255,000 for the project. The architect was retained in August of that year; construction contracts were awarded in July 1962. Acceptance of the building from the contractors was formalized on March 13, 1964.

On that same date the Board named the new building "Orland Russell Sweeney Hall". Since then the name Sweeney Hall has been extended to include the earlier parts of the building.

The new building was designed and built to allow for a possible addition of three more floors.(2) It was dedicated on May 23, 1964.

SYNCHROTRON BUILDING

Built: 1948-49
Architect: Tinsley, Higgins & Lighter
Contractor: Kucharo Construction Co.

Authorization to acquire a synchrotron was given by the Board in January 1947, and at the same time planning for a building to house the equipment was initiated.(3) Architects were selected the following month, at the same time the site for the installation was approved.

Bids for construction were received in October 1947, but all were rejected and the project was rebid and contracts were awarded in May 1948.(4) It was also necessary to develop a water supply system and electric power, and to provide an access road to the site in the area previously referred to as Recreation Area.

The construction was completed and accepted in September 1949.(5)

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(1) Iowa State Daily Student, September 26, 1931

(2) Iowa State Daily, April 24, 1963

(3) Minutes, January 15-16, 1947

(4) Minutes, May 1, 1948

(5) Minutes, October 14, 1949

Cost of the synchrotron and the building was paid for from fees received from the federal government on the atomic project.(1)

The synchrotron was deactivated on January 1, 1971, and subsequently removed.(2) Since then the building has been used for other academic and office functions.

TEAMSTER'S COTTAGE #2

Experiment Station Farm Foreman's House

Built: 1890 Razed: 1970
Architect: Josselyn & Taylor

Located where Bessey Hall stands now.

The July 1890 Board minutes record an appropriation of $750 from the Experiment Station fund for building a house for station employee, located on the Northwest corner of the lot known as the calf-pasture.

In the September issue of the I.A.C. Student there is a statement that the house was to be occupied by Capt. Speer and family.

In 1900 the recommendation was made "that the Hoover house be refitted for Prof. Jas. Atkinson by diagonal partition, closets, etc., as recommended by Prof. Curtiss, but we do not favor supplying the house with bath room or furnace."(3)

The house was moved in 1915 to a site across the road from the power plant. It was the second from the west in the group of five houses formerly in that area.

The Teamster's Cottage was razed in 1970.

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(1) Minutes, February 10-11, 1947

(2) Conversation with Dr. Daniel Zaffarano (February 6, 1979)

(3) Minutes, April 1900

TEMPORARY BUILDINGS "C" thru "S"

Built: 1947
Razed: Various dates - see text

Late in 1946, at the same time that negotiations were in progress to acquire war surplus buildings for Pammel Court, plans were also developed to obtain similar structures for academic use. Fifteen of these were allocated the letter designations "C" through "S". (There was no "I" or "Q".) All were set up on the campus in 1947.

Buildings "C" and "D":

These were one-story frame barracks buildings used as classrooms, laboratories and offices. They were located south of Marston Hall and were removed just before construction of Pearson Hall was started in September 1960.

Buildings "E", "F", "G", & "H":

These four buildings were two-story frame barracks buildings. Building "H", the largest of the group, was erected close to and parallel with the west front of Beardshear Hall and was connected to it by an enclosed passageway. The other three had their long dimensions running east and west and were a short distance from and perpendicular to Building "H" and Beardshear Hall. They all started as classroom facilities. In 1957 Building "E" was remodeled to provide conference rooms. It became the quarters for the art department in 1962.

By 1965 Building "H" had become the headquarters for the Counseling Service and the Center for Industrial Research occupied Building "E".

Building "G" was razed in 1973 and Building "H" in 1975. In the fall of 1978 the Music Department moved into Building "F" as temporary headquarters until the new Music Building becomes ready for occupancy in 1980.

Building "J":

This two story frame building was originally used for engineering classrooms and laboratories. In 1960 it was in part used for the "Art Shed". Later it became a drafting room for the architecture department. It was located just south of the Engineering Annex. Building "J" was razed in 1979.

Building "K":

This building was located in what is now the parking lot on the east side of the Nuclear Engineering Laboratory. It was used primarily for electrical engineering classrooms, and later housed the WOI-TV art

department. In 1962 it became the office for the contractor building Sweeney Hall addition. It was razed in 1967.

Building "L":

This was a one-story frame T-shaped building made by combining two barracks units. It stood at the west end of what is today's Computer Science building. Originally used for classrooms and a study hall it was remodeled in 1948 and became headquarters for Child Development. In 1962 it was used by economics, sociology and engineering. It was razed in 1968 to make space for Computer Science.

Building "M":

Another of the two-story frame barracks buildings, this one stood east of the north wing of Physics Hall. First planned for the Biology department it was used for Geology Department classes and laboratories for many years before it was razed in 1972 when Science Addition #2 was finished.

Building "N":

This was erected west of the original Library, where the second addition now stands. It was taken down in 1968 before that addition was started. It was first used as a reading room and classroom. Later it housed statistical research space, some faculty offices and offices for the Iowa State Foundation.

Building "O":

This, too, was a two-story barracks building. It was erected between Davidson and Gilman Halls and originally used by the chemistry department. More recently it housed Applied Art until that department moved to the College of Design. Part of the building is still occupied by Industrial Education.

Building "P":

A frame building, two stories, this barracks structure was considered from the time of its erection as a facility for Food Processing. It was located just north of what was then the Poultry Laboratory, and east of what is today the northeast wing of Agronomy Hall. When Food Processing moved to the Food Technology Laboratory in 1962 Building "P" was used by the Agronomy department. For a few years prior to 1973 the second floor was used for a Physical Plant shop. Building "P" was razed in 1979.

Building "R":

A quonset type building was the first of the temporary buildings

erected outside of Pammel Court. It was located to the southeast of Snedecor Hall for the expanding needs of the Statistical Laboratory. It remained in that capacity until it was razed, along with Buildings "S" and "L" when construction of Computer Science was about to begin.

Building "S":

Erected immediately south of Building "R" this one-story building was also used by the Statistical Laboratory It was razed in 1968.

Student demonstrations were not uncommon in the late sixties, but one held in 1959 justifies mention as one of the most unusual. The Iowa State Daily for April 18 of that year included a story about it:

> A large group of Iowa State students yesterday afternoon staged a protest against the removal of the temporary buildings from the campus.
>
> The students demonstrated after the announcement yesterday morning by officials of the Board that the "buildings will probably be razed sometime about 1975." The chairman stated that as soon as the announcement was made, Iowa State students held a mass demonstration in front of Building "M".

The article went on to say that "the Board has received many telegrams from alumni, also protesting the removal of the buildings." The president of the "Student Chapter of the Society for the Prevention of Razing of Historical Iowa Landmarks" then was quoted in a resume of the history of the buildings wherein he stated they had been Union barracks during the Civil War.

The one story is the only reference found to the "society" or its protests.

THEATER - WORKSHOP

Judging Pavilion, Stock Pavilion, Shattuck Theater

Built: 1900 Razed: 1979
Architects: Liebbe, Nourse & Rasmussen
Contractor: Maine & McKee

This round, frame building was erected under a contract that included the Horse Barn (Landscape Architecture Building). It was built as a stock judging pavilion.

An appropriation of $325 was made in 1911 for repairing and shingling the roof.(1) The change in use for the theater-workshop came in the fall of 1931 as recorded in this account from the Iowa State Student on October 22:

> After years of patient struggling and persevering hope, the Iowa State Players are at last going to realize an ambition. The gray circular horse-judging pavilion just east of the Landscape Architecture Building is now being converted into a player's workshop for practicing dramatic production.
>
> In recognition of the importance to the college community of the activities of the Iowa State Players, Pres. R.M.Hughes began last year to search for room that might be used by the Iowa State Players, and this building has been selected.
>
> This is an ideal structure for its new use. It contains one large circular room, 60 feet in diameter and 12 feet high, with numerous windows and several skylights for lighting purposes. The large barn doors make the interior accessible on three sides and facilitate the passage of stage furniture and scenery.
>
> A new floor is being laid, the interior painted and a lavatory and deep sink for shop use installed. The building is steam-heated and will have hot and cold running water. It is to be well equipped for night lighting.
>
> All activities of the Iowa State Players, except public performances, will be conducted there. Scenery will be built and painted, costumes made and fitted, experiment in stage lighting will be carried on, business, properties and makeup departments will meet and work there and plays will be rehearsed in this new location.
>
> Occasional programs of one-act plays will be presented to private and invited audiences.

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(1) Minutes, June 1911

> The classes in Play Production and Stagecraft, conducted by the Department of Public Speaking, will also meet there.

On February 9, 1932, the paper announced that the formal opening of the remodeled facility would take place that evening.

Further remodeling occurred in 1936(1):

> The entire inside has been torn out and the built-up stage demolished. The floor will serve as a foundation for the new rehearsal location.
>
> Permanent seats have been constructed for the use of theater-goers. The new stage is so placed that better sight lines and lighting facilities may be recognized, as well as the use of complete sets of scenery now available on the 9 and 12-foot sets.

An inspection of the building in 1944 by the Ames Fire Chief and the superintendent of buildings and grounds resulted in a declaration that it was "unfit for public theater performances."(2) It was not used for that purpose again until Jan. 23, 1947.(3)

A new concrete floor was installed over the old dirt floor of the basement in 1949.(4)

The building became known as Shattuck Theater in 1960 when a plaque honoring FredricaShattuck was installed in the lobby. She had established the Iowa State Players shortly after coming to the campus as an instructor in English in 1914.

Further remodeling took place in 1960.

The building continued as a theater-workshop until the new Fisher Theater was ready for use in 1973. It was razed in 1979.

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(1) Iowa State Student, September 22, 1936

(2) Iowa State Daily Student, February 15, 1944

(3) Iowa State Daily Student, January 23, 1947

(4) Iowa State Daily, March 26, 1949

TOWN ENGINEERING BUILDING

Engineering Building #2

Built: 1969-1971
Architect: Architects Associated
(Smith, Voorhees, Jensen)
Contractor: Woodruff-Evans, Inc.

The eight-year capital improvement plan prepared in 1963 included Engineering Building #2 scheduled for the 1967-69 biennium. At that time it was described:

> Engineering Building #2, tagged at $2.5 million, will be designed to house the Departments of Aerospace Engineering and Civil Engineering. Not actually a separate building, Engineering Building #2 will probably consist of three additional floors on top of the new chemical engineering building and a six-story wing extending north on the west end of the present structure.(1)

In August 1964 the Iowa State Daily reported that the Board of Regents had approved the capital improvement budget which included "a $1.7 million engineering building." On June 22, 1966, the paper recorded that a $2.2 million cost was in the request to the legislature for the 1967-69 biennium. By August the request was reduced to $1.8 million.(That amount was appropriated in the spring of 1967 and in May the architect was selected.

This was the first building for which a formal written building program was prepared by the University Architect and furnished to the contract architect for his guidance in developing the design of the building. The building program was given to the architect in May 1967 and his schematic drawings were approved by the Board in November of that year. It had earlier been decided that the building would be an independent structure located "at the intersection of Pammel Drive and Bissell Road."

Applications for federal funds under the Higher Education Facilities Act were filed in August and September 1967. These were approved the following year.

The first schematic drawings showed the front of the building facing south, but this was subsequently changed, before construction drawings were started, to provide for the building to face east toward Bissell Road.

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(1) Iowa State Daily, November 14, 1963

(2) Ibid. August 18, 1966

Construction contracts were awarded at the May 8-9, 1969, Board meeting. The building was ready for occupancy by July 1971.

In March 1973 the Board authorized the name "George R. Town Engineering Building" for Engineering Building #2.

George R. Town had joined the Iowa State faculty September 1, 1949, as professor of electrical engineering. He was appointed Dean of the College of Engineering on March 1, 1959, and remained in that position until he retired from administrative duties on June 30, 1970. Dean Town died in 1978.

TRAINING SHED

Built: 1905
Architect: Probably designed by Professor S.W. Beyer
Contractor: Probably student labor
Razed: 1913 or 1914

The Athletic Council, in December 1904, submitted a request to the Board of Trustees:

> 1. Permission to build a training shed about 35 x 100 feet, located just south of the water tower. The long way of the shed to run east and west.
>
> 2. Permission to use such doors and windows, which have accumulated from the wreckage of buildings and are now in charge of the Custodian, as may be found serviceable.
>
> 3. Permission to use the stone near the Veterinary Barn and other wreckage foundation material in charge of the Custodian, for the foundation of the training shed.
>
> 4. Permission to purchase such supplies as may be desirable for use in the construction of the building through the Purchasing Committee of the College.
>
> It is highly desirable that whatever you may see fit to do with these petitions should be done at once, in order that the shed may be ready for service before the opening of the Spring Semester.

The trustees referred the request to the Building and Public Grounds Committees with power to act.(1)

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(1) Minutes, December 23, 1904

That affirmative action was taken quickly is evidenced by the report in the January 25, 1905, issue of the ISC Student: "The training shed is practically completed. As soon as the cinders have been put in, training will immediately commence." On February 1 the paper referred to it as "not a thing of particular beauty."

In April it was reported to the Board of Trustees that "The lumber of the old Public Grounds barn and the stone in the foundation of the same were turned over to the Athletic Assoc. to be used in the erection of an athletic training shed." The Public Grounds barn referred to is undoubtedly the building elsewhere recorded as the President's Barn.

Improvements were made in 1907.

> When the state ordered East Cottage torn down they were asked for seventy dollars with which to remodel the training shed so it could be used for dressing rooms. From the decided way in which they refused, one would have thought they had been asked for seventy thousand. The athletic council has decided to fix the shed at its own expense and a dressing room will be built, lathed and plastered, where the men can change clothes without making a noise like an icicle.(1)

There is no record of when the building was razed. It is shown on a 1912 campus map. It had to have been removed before the addition to Engineering Annex was started in 1914. It was probably taken down in that year or perhaps in 1913.

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(1) ISC Student, September 23, 1907

UNIVERSITY VILLAGE

Married Student Housing Phases I and II

Built: Phase 1 1964-1966 Phase II 1967-1968
Architect: Savage & VerPloeg
Contractor: Phase I Wm. Knudson & Son, Inc.
Phase II The Weitz Co.

In July 1958 the proposal was made to purchase the 80-acre farm then owned by Helen Kooser Campbell and "that the property continue to be used by the Animal Husbandry Department until that department moves to an outlying farm, and that the property then be used for married students and/or dormitory development."(1) The farm was located on the east side of Stange Road extending from a line a little way north of Squaw Creek to 24th Street. In October of that same year, after the purchase of the land had been formalized, Dr. J.C. Schilletter, director of residence, was quoted as saying "About 500 units for married housing will eventually be built" on the farm.(2)

But five years passed before action started with the retention of the architect in April 1963. A year later the preliminary plans were approved for a total of 300 units.(3) Contracts for construction of the housing units were awarded at the August 5-7, 1964, Board meeting. A project budget of $3,285,000 was approved at that time. Separate contracts were entered into for building the streets and parking lots and for the sewer and water main systems.

The first 70 units were ready for occupancy in November 1965 and the remaining ones were completed by September 1966.

Approval to proceed with Phase II of the project was granted by the Board at its meeting of October 6-7, 1966. Phase II included 200 new housing units, a laundry building and an administration-maintenance building. Construction began in April 1967 and was completed by September 1968.

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(1) Minutes, July 10-11, 1958

(2) Iowa State Daily, October 18, 1958

(3) Minutes, April 9-10, 1964

VETERINARY BARN

Veterinary Hospital

Built: 1883
Contractor: Fremont Turner

On the map of the campus in the 1882-83 Biennial Report the Veterinary Hospital is shown at a location at the northwest corner of today's Library. On later maps it is identified as a barn.

In the same report it is recorded that a contract has been awarded to F. Turner to build a veterinary hospital for which $500 had been paid. At the November 1883 Board meeting an additional $33 was paid to Turner for his balance.

In 1885, after the new Veterinary Hospital was completed, the barn was transferred to the use of the boarding department upon payment by that department of $300 to the College Treasurer.(1)

This is almost certainly the barn referred to in the Sept. 1892 action of the Board approving transfer of the "bus house and barn" to the Agricultural department and approval of moving them to a new location. The following May the Building Committee was instructed "to act at once" to remove the "house and barn belonging to the steward's department, from the grounds set aside for the Athletic Association."(2) The Biennial Report for 1892-93 reports that the two buildings had been "moved to a more suitable location and put in better repair and condition."

It is thought that the site selected for the new location of the house was on the south side of the road near the west gate, but where the barn was moved is not known. (See discussion under Fair Oaks Mansion.)

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(1) Minutes, November 1885

(2) Minutes, May 1893

VETERINARY CLINIC

Stange Memorial Clinic

Built: 1926 Addition: 1936-37
Remodeled: 1964

Architect: 1926 Proudfoot Rawson & Souers
1936 A.H. Kimball
1964 Physical Plant

Contractor: 1926 E.B. Castle
1936 James Thompson & Sons
1964 King-Bole, Inc.

The Cow Wing of the Clinic was the first unit of this building. It is the east wing of the structure. The construction contract was awarded on June 30, 1926, and the work was completed and accepted on December 1 of that year. It was planned as part of a larger structure to be completed at a later date. This unit was designed "for the purpose of carrying on special instruction concerning the diseases of cattle. This will be strictly educational work and will be used by a large group of our undergraduate students and by a group of veterinarians who already have gone out with not enough instruction in regard to the handling of cattle."(1)

At the Board meeting of June 5, 1934, President Hughes reported: "At the present time the clinical facilities for giving the upper class students actual practice in treating diseased animals is wholly inadequate and very unsatisfactory in arrangement. An expenditure of $133,000.00 for the completion of the Veterinary Clinic unit is very urgently needed."

A state appropriation of $99,000 was made in early 1935, and a grant of $81,000 was received from the federal Public Works Administration in September 1936, assuring adequate funds for the construction of the second phase of the building. At the same time the name "Charles Henry Stange Memorial Veterinary Clinic" was approved by the Board.(2)

Construction of the new unit started in November 1936(3) and it was completed a year later.(4)

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(1) Minutes, April 13, 1926

(2) Minutes, May 28, 1936

(3) Iowa State Student, November 21, 1936

(4) Minutes, December 9, 1937

Dedication of the building took place on May 17, 1939.

A very complete description of the building appeared in the Iowa State Daily Student on May 29, 1943. Only one sentence of that article is given here: "The clinic is divided into two sections, for the care of large and small animals and each is complete with separate examination and operating rooms."

In 1959 provisions were made to take care of the ambulatory service.(1)

Remodeling to provide an amphitheater for the operating room was a major change accomplished in 1964.

The building was left vacant temporarily when the Veterinary Medicine College moved to the new facilities in 1976.

In 1978 Industrial Education moved some of its operations into the building in anticipation of a remodeling project to provide all functions of that department with space in the old Clinic.

VETERINARY HOSPITAL

Carpenter Shop

Built: 1884-85
Architect: Foster & Liebbe
Contractor: V. Tomlinson
Razed: 1926

Located approximately where Pine Room is situated in Memorial Union.

The original building is well described by Professor Stalker in his report included in the 11th Biennial Report for 1884-85:

> The hospital is a substantial brick building, forty-five by fifty feet, and two stories high, with hay and other storage room on the third floor. There is a communication between the first and second floors by means of a nicely adjusted elevator, and also by a runway, with an easy grade by means of which animals pass from one floor to the other with greatest facility. On the ground floor is a large, well-lighted central court, where clinics are held, and surgical operations performed. Also a number of closed and open box stalls for the patients, office, harness room, room for heating apparatus, etc. On the second floor are single and box stalls, pharmacy, house surgeon's room, and a convenient dis-

(1) Iowa State Daily, November 7, 1959

> secting room cut off from the other portions of the upper floor. All interior brick work is covered with alabastine, or plastered with hard finish. All wood work is neatly done in hard wood finish. The system of drainage is complete throughout the entire building. The J.L. Mott System of iron drain troughs with perforated iron tops and supplied with the bell water traps is employed. The drainage pipes may be flushed from either floor. From a sanitary point of view, this is one of the best, if not the best, infirmary in the United States....A fine paddock of six acres lies just back of the hospital. This is set with mixed tame grasses and clover. There is fine shade and running water in this meadow, which makes it a very valuable adjunct to the hospital.

The building faced north and the "running water" was College Creek.

Within four or five years of its first use the building was in need of repairs and, in addition, it had become inadequate to serve the increasing number of students. In 1898 it was connected to the central water supply and the windmill that had served to pump water from a well was removed. Other modifications were made in the next decade. In 1912 the Veterinary Department moved to the new Quadrangle.

The Superintendent of Buildings and Grounds took over the building at that time as a storage area for supplies and equipment for maintenance functions. Sometime between then and 1921 a frame one-story shed was added for additional storage across the west side of the building. It was during this period it became known as the Carpenter Shop.

In 1926 the building was razed to make room for the new Memorial Union Building.

VETERINARY MEDICINE FACILITIES

Built: 1972-76
Architect: Henningson, Durham & Richardson
Contractor: Thompson - Klinger (joint venture)

This is the largest, most costly and most complex project built at Iowa State.

In August 1964 the Board included a $3 million veterinary medicine building in the legislative request for the next biennium. Two years later the request was for a "new veterinary medicine complex, step one. This $4 million project would begin plans to build a completely new veterinary medicine college to replace the cramped and out-dated present buildings."(1)

The 62nd General Assembly, in 1967, appropriated $3,150,000 for Phase I of the project and in August the Board approved taking steps to select an architect. At the same time work began on the preparation of the building program. It was completed the following April. The architect had been retained in September 1967 and participated in many of the meetings between the University Architect and College of Veterinary Medicine faculty during the development of the building program.

Two separate agreements were entered into with the architect. One was for the overall, long-range schematic planning for the complete project, and one for development of drawings for the first phase of the work. Later, in December 1968, a new agreement was executed to provide for the increased project scope to include the drawings and specifications for the entire complex.

The schematic drawings were completed and approved in October 1968 and used in the applications for federal grants. Those drawings showed a three-level building. At the time the schematic drawings were completed the total project cost estimate was shown at $16 million, with half of the funds anticipated from federal grants.(2)

The years 1969 and 1970 were spent developing the drawings to meet the many detailed requirements of the several departments of the college. This entailed many meetings to work out all of the problems in reaching satisfactory and acceptable solutions.

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(1) Iowa State Daily, June 22, 1966

(2) Minutes, October 17-18, 1968

A number of lengthy reviews of the drawings by the U.S. Public Health Service officials resulted in other modifications to the plans.

In 1971 the decision was reached to change from the three-level to a two-level building and all plans had to be redrawn. The documents were finally completed and were released to bidders in February 1972.

Construction contracts for phase 1 (the northwest half of the complex) were awarded in June 1972 and for phase 2 just a year later.

Construction of the entire complex was substantially completed in December 1975 and the building was occupied and in full use early in 1976.

The building houses the several departments of the College of Veterinary Medicine, including the large and small animal clinics, an extensive professionsl library, the Biomedical Engineering facilities and the Veterinary Diagnostic Laboratory.

VETERINARY OBSTETRICS LABORATORY

Military Stables - North

VETERINARY SURGERY

Military Stables - South (or West)

VETERINARY PHYSIOLOGY RESEARCH LABORATORY

Military Barracks

Built: 1925-26 Barracks razed: 1979
Architect: Proudfoot Rawson & Souers
Contractor: Netcott Bros.
Remodeled: 1955
Contractor: W.A. Klinger Co.

These three buildings were planned and built as a single project. Construction contracts were entered into in June 1925, and the work was approved and accepted early in 1926.

The two larger buildings, on the north and west, were built as stables for military horses and the smaller structure in the east as a barracks for the personnel in charge of the animals.

An extensive remodeling of the buildings was undertaken in 1955 when they were made available for the use of the Division of Veterinary Medicine. They continued in that function until 1975 when all of those functions were moved to their new facilities on South Campus.

WALLACE HALL, WILSON HALL and COMMONS

The Towers (with Knapp and Storms)

Built: Wallace Hall 1966-67
Wilson Hall & Commons 1967-69
Architect: Crites & McConnell
Contractor: James Thompson & Sons

These two high-rise halls and the adjoining food service building are, in general duplicates of the first set of Towers. Some changes were made to remedy deficiencies which developed during use of the first buildings.

The third tower, Wallace Hall, was started in the spring of 1966 and occupancy began in March 1967.

The fourth tower, Wilson Hall, and the Commons went under contract in June 1967. It was completed in 1969.

Wallace Hall was named for Henry A. Wallace who served as Vice President under Franklin D. Roosevelt from 1941-44.

Wilson Hall was named for James (Tama Jim) Wilson who served the College as Dean of Agriculture from 1898-1902 and the country as U.S. Secretary of Agriculture for 16 years.

WELCH HALL

Built: 1928-29 Remodeled: 1969-71
Architect: 1928 Proudfoot, Rawson & Souers
1969 Savage & Ver Ploeg
Contractor: 1928 Tapager Construction Co.
1969 James Thompson & Sons

Planning for this hall started in the spring of 1927 and construction contracts were awarded in May 1928. The building was accepted on March 1, 1929.

This unit completed the south side and southwest corner of the dormitory group which included Lyon, Freeman, Barton and Birch Halls. It was completed at a cost of $194,450.

The building was described in the April 23, 1929, issue of the Iowa State Student:

> The Mary B. Welch West Hall, which held its open house last Saturday, is named after the wife of the first president of Iowa State. She was also the founder of the Home Economics Division.
>
> The new hall is a dignified brick colonial of four stories with a solid, massive front door which is characteristic of the northern colonial style. One of the parlors is attractively furnished with comfortable chairs of various styles; a davenport and chair in futuristic design; a magazine chest; and tables including end tables and davenport table. In the Fireplace Lounge, there is a huge fireplace of interesting design. This room has been furnished to carry out the early American idea. Chintz curtains, hooked rugs, colonial wrought iron fixtures, ladder-back chairs, butterfly table, and the old-fashioned geranium plant have been used to make a typical setting for the fire place of natural wood with nails showing. In another parlor, wicker furniture with gay cushions make the room comfortable.
>
> Special features of the new hall are buzzers which are connected with each room from the office. The office is set off by a high counter. There is a service closet for packages and a long distance telephone booth. Another feature is the kitchenette near one of the parlors which may be used for candy making by the girls and their friends as well as teas and parties. At the heads of three stairs are large mirrors.
>
> The dining room holds 18 tables with 8 girls at a table. Hard wood floors have been laid so that the room can be used for dancing when parties are given. There is a storage room for the tables during this time. The kitchen is fully equipped with the latest type of institutional equipment. The kitchen is used in common

with Mary B. Welch East which is an entirely separate unit.

The chaperone has a suite consisting of a parlor, bedroom, large closet and bath. The furniture is walnut of colonial style. On the first floor is a suite for four girls. The middle room has two double decked cots and on each side is a study and dressing room for two. A tower room on the fourth floor accommodates six girls.

The rooms are similar to those in the other dormitories. There is running hot water as well as cold in each of the rooms. Every room has cots, study table, chest of drawers, and three chairs. The chairs are straight, posture chairs specially designed for girls.

Similar to the other halls, the girls are given positions of responsibility by serving as hostess at the heads of the tables in the dining room and by attending to the routine duties in the corridor. Special care is given to the emphasis of the college rulings.

In 1969 a complete remodeling of the interior of this hall, together with Birch and Roberts Halls, was started. With completion of that work in 1971, these became men's residence halls.

WESTGATE HALL

Built: 1954-55
Architect: Brooks-Borg
Contractor: James Thompson & Sons

Increasing enrollments had created a shortage of housing, especially for women, and it was decided to build a new hall in other than conventional manner. The reasons were stated by Schilletter:(1)

(1) speed of construction to take care of anticipated increase in enrollment for women students and

(2) an experiment in building a non-conventional hall at a low cost per bed. The economy depended largely upon eliminating refinements and reducing room sizes including ceiling heights.

The decision to build such a structure was reached at the Board meeting of July 8-9, 1954. The architect was selected the end of that month, bids were received in October and construction began in November of that year.(2)

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(1) Schilletter, 1970

(2) Minutes, September 8-9, 1955

The building was of steel frame with precast exterior wall panels. Construction was completed in September 1955 when it was ready for the opening of the fall term.

Women occupied the hall from the beginning until the fall of 1957 when Linden Hall was completed. From then until the fall of 1965, when it again became a women's hall, it was occupied by male students.

GEORGIA WHITE HOUSE

Lanphear; Holden; Westgate Cottage

Margaret Hall Annex; Nurses' Home

Built: 1901
Moved: 1925
Razed: 1972

This house was built by Professor Lanphear (Lamphear) in 1901 "on the knoll west of Professor Stanton's."(1) This was a site now identified as the court between the north and center east wings of Helser Hall. It was sold by his widow in 1906 to Professor Perry G. Holden who resided there until 1913 in which year he sold the house to the college for $5,600.

The house was then called Margaret Hall Annex until 1919 when it became known as West Gate Cottage. It was damaged by fire on March 15, 1921. It housed women students from 1913 until 1922 when it was allocated to the Department of Hygiene to serve as a nurses' home. From January until June 1922 it was used for offices by the Military Department.(2)

In 1925 the house was moved to a site immediately north of the Industrial Education wing of Davidson Hall. The name Georgia White Cottage was adopted in October 1928.(3) It housed women from then until 1958 when Fred Tonne, Security Chief, rented it for his family home. He died in 1970 and his widow remained in the house until 1972.

The house was razed in 1972.

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(1) Minutes, January 1901

(2) Minutes, December 1922

(3) Minutes, October 1928

WORKSHOP

Machine Shop, Engine House, Carpenter Shop, Wash House

Built: 1870
Moved: 1885
Razed: 1898

Originally built at what is now west wing of Laboratory of Mechanics. Subsequently moved about 50-60 feet north.

President Welch expressed the need "to build a work shop large enough for the accomodation of students who take the course in Mechanic Arts. I hazard nothing in saying that with such a shop together with a competent instructor and foreman the young men could do all the carpenter and joiner work needed on the farm, even to the finishing of dwelling houses and other necessary buildings."(1) At the same time he asked for an appropriation of $5,000 for the Workshop.

Funds were granted and in May 1870 the Board instructed the building committee to proceed at once with construction.

The building was described in the 4th Biennial Report (1870-71):

> A frame workshop 30 x 50 feet, two stories high, with an engine house containing two laundry rooms 27 x 23½ feet, also two storied, with a brick smoke-stack fifty feet high and necessary fixtures, was erected under the direction of the committee, at a cost of five thousand dollars.

When the workshop was moved in 1885 the laundry room wing was torn down and rebuilt. The functions of the building were set forth in the 13th Biennial Report (1888-89):

> The carpenter and pattern shop is a two-story building 30 feet by 50 feet with a wing 24 feet by 32 feet, containing the Corliss Engine, condenser, and air-pump, feed-pump, etc. The lower floor is used for the wood-working machines, the second story for tool-room and benches at which carpentering is taught. The equipment consists of seven wood-turning lathes, one pony planer, one mortising machine, one Fay rip and cross-cut circular saw, one jigsaw, one 3 foot grindstone, twelve sets of small tools in the toolroom, also seventy-five tool lockers.

An 1894 map shows an odd shaped building. Apparently various lean-to sheds or other increments had been added to the building over the years, but these are not otherwise recorded.

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(1) Minutes, January 1870

By 1893, when funds were being requested for a new building, the old shop was described:

> Our present building for shop work in carpentry and manual training is quite deficient and inefficient. It is an antiquated wooden building, poorly lighted, too small for our classes, and so constructed that we cannot heat it comfortably in cold weather. It is not capable of making a good stable, let alone being a building for the education of young men in the important skill and industry of the hand in the preparation and uses of wood.(1)

The Workshop served the college well, both for instruction and for what can be thought of as the original Physical Plant Department. It was razed in 1898 after completion of the new Foundry and the new Carpenter Shop that year.

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(1) Biennial Report, 1892-93

MISCELLANEOUS MINOR

BUILDINGS

ANIMAL HUSBANDRY RESEARCH (or EXPERIMENTAL) LABORATORY

This building is known only from its inclusion in the list of buildings in the annual financial reports where it appears between 1918 and 1924 with a valuation of $1625. In the 1928 report the building appears with a value of $1600 on the Animal Husbandry Farm, and continues at that figure through 1966. It was razed when the site was developed for the Iowa State Center. Where it was originally located on the campus has not been determined.

ARCHERY HUT

This was a small structure, only 8 x 12 feet, erected on the west side of the men's play field in 1938. That would be at a location just north of the parking lot on the west side of Beyer Hall. The $100 building was razed in 1957.

BARN - Jones

Only one reference has been found to this building. In the January 1870 Minutes it is referred to as "a rough structure stands near Prof. Jones house and is now used as a Carpenter Shop." (The Jones House is the building known since 1929 as Music Hall.)

The 1883 map shows a small building about 80 feet west and slightly south of the house. It does not appear on later maps. However, the maps may not always have depicted minor sheds and out-buildings.

BARN - Geddes

At its meeting in November 1877 the Board appropriated the sum of $64.00 "to reimburse Gen. J.L. Geddes for investment of that amount in building a barn."

Where that structure was located has not been determined, but it was probably somewhere in the area that had been allocated for the Steward's use.

In December 1894 the Board recommended "that the barn of the steward be removed farther east on the road as soon as building funds can be arranged."

No other references have been found.

BARN - at the Knoll

This barn was built in 1900 for the use of the President at the Knoll.

In 1914 the Iowa State Student reported that "the men working on the dormitories are sleeping in President Pearson's barn and do their

cooking near the creek west of the Knoll."

The following year the barn was moved to the poultry farm.

BARN - Grounds Department

This barn was located south west of Marston Cottage as shown on a 1909 map, but not on one dated 1905. When it was built is not recorded. Repairs were made to it in 1909.

No specific date of its removal can be found. It is identified on a 1921 map but is not shown on a map of 1925.

BUNK HOUSE

This small structure is included in the building lists from 1940 to 1968 in which year it was written off. It is probable that it had been razed some years before that date, however, because there has been no recollection of the structure by any of the oldest employees of the Physical Plant department.

The reports show a valuation of $100, unchanged throughout the years. The later financial reports indicate that the building dates from 1932.

CADDY HOUSE

Located near the Club House this 12 x 21 feet structure saw use from 1938 until the change in the golf course eliminated the fairways south of the Northwestern tracks. It was razed in 1973. It was valued at $258.

CATTLE SHED (Cooking Shed)

The only reference to this structure is found in the Minutes of October 1911 where it was stated that

> The sum of $200.00 is appropriated from Repair and Contingent Fund for fireproof cooking shed to be built north of large cattle barn.

It appears, but unidentified, on a 1915 map. On a 1921 map it is called Cattle Shed. It is found, without a name, on a 1923 map, but is not shown on a 1926 map, so it was evidently removed between those two dates.

CENTRAL STORES STORAGE

Two buildings, each 20 x 74 feet, were built in 1944, north of what was then Central Stores Building. They were razed in 1972 to make space for the north wing of the new Physical Plant Shops and Central Stores Building.

CHEMICAL STORAGE BUILDINGS (2)

Two buildings, each 20 by 74 feet, were located north of what was then the Chemistry Building. The west ends of the two were on line with the west side of that building. They first appeared on the building list in the Financial Report in 1944 and remained with a constant value of $1500 each through 1964. They were removed before the wing was added to the Chemistry Building (Gilman Hall).

CLUB HOUSE

This building served the players at the Veenker Golf Course from 1938 until the course was revised in the early seventies when the two fairways on the south side of the Northwestern tracks were eliminated. It was located about midway between the Communications Building and the Cemetery, a short distance north of Pammel Road. It carried a valuation of $1800. It was razed in 1973.

EXPERIMENT STATION MACHINE SHED
Implement Shed (Dept. of Farm Mechanics)

This building, built in 1904,(1) was located just northeast of the Experiment Station Barn and due north of the westernmost of the two octagonal brick judging pavilions (now about the southwest corner of the present Physical Plant Shops and Central Stores Building). In 1911 it was repaired and a 16 foot addition made to it.(2) It is shown on a 1921 map but is not found on a 1925 map, so had apparently been moved or razed by that time.

FIELD SHED (Horticulture Barn; Machine Shed)

This small building stood a short distance east of the Horticulture Barn (later Child Nursery). It was first included in the building list in 1908, and on a map dated 1909. On some later maps it is identified by the term Horticultural Barns, used for the two buildings. On the 1921 map it is called Machine Shed. It was last included on a building list in 1924 with a valuation of $250. It was probably removed shortly before the Bevier House was moved to about the same location in 1925.

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(1) Minutes, September 7, 1904

(2) Minutes, June 1911

FOUNDRY STORE HOUSE

All that is known about this building is its inclusion on building lists between 1899 and 1906. The 1899 entry shows it with a value of $100. In 1906 the value is only $75. No map has been found dating from that period and the location of the building cannot be determined, but it was probably close to what was then the Foundry(later known as Building A).

FRUIT HOUSE

Built: 1888
Plans by Professor of Horticulture (J.L. Budd).
Location not determined. Not shown on any maps.

This building was authorized in May 1888.(1) Its cost of $600 was recorded in the Biennial Report for 1888-89.

When the new greenhouses were being built in 1896 it was decided that "we omit the potting house, using therefore the present frame fruit storage house belonging to Horticultural Dept. standing northeast of Agricultural Hall."(2)

No record has been found as to razing or removal of this building, unless it be the structure referred to in the November 14, 1910 issue of the ISC Student. See that item under Insectary (First).

GARAGES

As automobiles came into use the need for garages also became important. Records on those built on the campus are meager.

Kildee Cottage: Cessna was granted permission to build a 10' x 16' garage there in 1913. Five years later permission was given to Scheman to build a garage. Whether the first one was never built, in disrepair, or gone is not recorded.

Coburn House: In 1914 Knapp was granted permission to build a 12' x 20' garage about 30' northeast of his house.

Knoll: A garage was built there in 1919.

Curtiss: A small structure south of the Machine Shed is identified as the Curtiss garage on the 1921 map.

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(1) Minutes, May 1888

(2) Minutes, June - July 1896

Lodges: In 1931 or 1932 a garage was erected north of the Oak-Elm Lodges and lasted until 1938 or '39.

10-Car: This large structure was built in 1933, to the north of the Central Stores Building. It was first used to house Physical Plant vehicles, but in later years it served as a storage place for building materials and other supplies stocked by Central Stores. It was razed in 1972 to make room for the Physical Plant Shops building.

GENETICS CHICK ISOLATION

Built: 1948-49
Contractor: Ringland-Johnson, Inc.

This relatively small building, about 70 x 30 feet, was built for "studies....on the effect of inheritance of the chicken on its resistance to diseases to which it has been subjected."(1)

Construction started in November 1948 and was completed the following August.(2)

In 1979 it is being used for growing birds -- primarily for doves, but also some pigeons.

GENETICS POULTRY LABORATORY

Built: 1933
Architect: Henry Geise, Prof. of Agric. Engineering
Contractor: Building and Grounds Dept.

This small building was erected in the latter weeks of 1933. The Iowa State Student of Nov. 25, 1933, said it "....will be just north of the Genetics Building which was erected last fall. It will be of tile construction, 24 feet by 42 feet in size."

GENETICS STORAGE BUILDING (Genetics Shavings Storage)

Built: 1961

This small metal faced building is first recorded in the Financial Report for 1961 with a valuation of $2500. It replaced an earlier frame structure which was known as Driver's Training Storage, and which was razed that same year.

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(1) Iowa State Daily, November 10, 1948

(2) Minutes, September 13, 1949

HOSE HOUSE

The earliest mention of a building to house fire fighting equipment was in April 1899. The ISC Student of April 25 reported: "The hose, hook and ladder building for the college fire department is now complete."

That construction was recorded in the Minutes of June 1899: "Competitive bids were received on building for truck and hose-cart, and a building covered with corrigated (sic)iron has been erected at a cost of $166.33."

The Iowa State Student, on February 7, 1923, records that "in the little shed behind the book store are two fire trucks which have not been used for some time. One is a small hook and ladder truck, the other a hose cart."

A 1921 map identifies a small structure north of the Hub as Hose House and it also appears there, without identification, on a 1925 map.

It is first included on a building list in 1899 with a value of $175. In 1903 its value is $400. The last entry occurs in 1928 where the value is down to $150. The exact date of its removal has not been determined.

ICE HOUSE - COLLEGE

The Farm Superintendent's report for 1869, recorded in the Board Minutes of January 1870 stated: "A temporary ice house was erected for the College and 2500 cubic feet of ice securely stored in it." Repairs were made in 1873.

In 1875 discussion of more repairs was held but instead an appropriation of $100 was made for building a new College Ice House.(1) The following March $235 was appropriated "for the purpose of completing and painting the College Ice House." This was still an insufficient amount, as in August 1876 an additional $29.05 was appropriated.

The Ice House is shown alongside the Coal House across the road west of the north wing of Main.

At the June 1892 meeting the Board adopted a resolution "That the Faculty Committee on Public Grounds be instructed....to remove the garbage house and ice house at the rear of Main building to some more obscure location.

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(1) Minutes, November 1875

Later that year the Board approved a bill of "$12.72 for taking down and moving debris of ice house."(1)

ICE HOUSE - CREAMERY

An ice house was built in 1883 in conjunction with the First Creamery. By 1889 it was reported that the ice house (as well as other buildings) was badly in need of repairs. A new ice house was provided as an adjunct to the new Creamery when it was erected in 1892.

ICE HOUSE - EXPERIMENT STATION

The only references to this Ice House occur in 1896 when a motion carried at the June 30 - July 2 meeting "that Mr. Sexton be granted the use of the old ice house back of the present budding house." In November an $8.00 payment "for moving old ice house to its new location near house occupied by Jerry Sexton" was not allowed.

INTRAMURAL HUT

A 12 x 21 feet building was erected near the Archery Hut on the west side of the men's playing field in 1940. It was razed in 1957. It was valued at $250.

ISOLATION BARN

The Minutes for April 13, 1920, record that "President Pearson discussed the need of an animal quarantine shed, and he requested that such a building be constructed near the new cattle barn and north of the meat laboratory, at an estimated cost of $1000.00."

The 1921 map shows the Isolation Barn at a site about at the northeast corner of what is now the Seed Science Building. This is the approximate location of the Hog Barn and Pavilion which was started in September 1921. Therefore, the Isolation Barn was either razed or relocated before that date. It may have been taken to the Animal Husbandry Farm because in 1934 the recommendation was made for improvements to the Animal Husbandry Isolation Barn for $2000.(2)

LAUNDRY STORAGE

This 20 x 50 feet building was erected in 1944 at the northeast corner of the Electric and Paint Shop and was razed in 1958. It carried a

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(1) Minutes, November - December 1892

(2) Minutes, January 23, 1934

valuation of $1000 over the period of its existence. It originally served as an adjunct to the Laundry Building (Electric and Paint Shop), but later was used for other storage.

LOCOMOTIVE SHEDS

In July 1900 the Chicago and North Western Rail Road presented a locomotive to the College. In September Professor Bissell was authorized to build a protective house for it, not to exceed $500 in cost.(1)

The September 10, 1900, issue of the ISC Student records that "A building 20 x 60 is being built over the college locomotive which stands just west of the carpenter shop." That places it in what is now the right-of-way of Riggs Court, just east of the end of the north wing of the Naval Armory.

Late in 1904 another locomotive, the engine "Iowa", was presented to the college and the following April a shed was built over it.(2)

A 1906 campus map shows a locomotive shed in the location described above. Presumably that would be the one built the year before, but what became of the 1900 shed cannot be determined. There is no record of when the 1905 shed was razed, but by 1921 the locomotive, without a shed, had been relocated to the northeast of its original location.

MACHINE SHED (Granary)

This structure is known only from its occurrence on maps as no references have been found elsewhere. It was located a short distance to the west of the first Cattle Barn (Farm Barn) on a north-south axis. It appears to have been about 70 feet long and 20 feet wide. It first is seen on an 1887 map, but without identification; an 1894 map calls it a Granary; on the 1921 map and building list it is Machine Shed. It is included on a map dated 1925 but is unidentified by name. A 1928 map does not show it, so it was removed between those last two dates.

QUARANTINE HOSPITAL (Hospital Annex; Isolation House)

The first appearance of this structure is on a map dated 1909, where it is found a short distance west of what is now the Laboratory of Mechanics, but it is not given any identification on that map. In the October 21, 1913, copy of the ISC Student there is this report:

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(1) Minutes, September 1900

(2) Minutes, December 1904 and April 1905

> The old carpenter shop is being completely renovated and will soon be known as the pest house. Four rooms with all modern conveniences will take care of the overcrowded hospital. Contagious diseases will be banished there, and this will be a great relief to present conditions. This house will be used temporarily until the new hospital is built.

In January 1914 the paper records that this "emergency hospital" was connected with the steam heating plant.

A 1915 map identifies this as "Hospital Annex", while the 1921 map calls it "Isolation House". It is included on building lists from 1914 through 1920 at a value of $1000 but is omitted from the 1922 list so apparently was removed between 1920 and 1922.

RABBIT HUTCH

"A $2000 rabbit hutch is to be erected for Professor C. Lloyd Jones. It will be located just south of the horse barn," reported the Iowa State Student on Oct. 21, 1916. On December 7 the paper mentioned it among buildings "now erecting or will soon start." It appears on the 1921 map in a location at about the center of what is today the north side of Dairy Industries. It did not appear on building lists and there is no record of when it was moved or razed.

SLAUGHTER HOUSE

No record can be found to determine when the Slaughter House was built, although it was probably an adjunct to the Piggery. In 1879 the Farm Superintendent was directed "to remove the Slaughter House from its present location to such place near the mouth of the new sewer as he may deem most suitable."(1)

The Aurora, August 1880 refers to a slaughter house as one of the improvements to be noted. In November of that year the Board appropriated $73.65 for repair of slaughter house.

In 1891 Prof. Wilson was authorized to tear down the building "and use the lumber in repair of fences and farm buildings."(2)

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(1) Minutes, May 1879

(2) Minutes, May 1891

SORGHUM WORKS

Very little can be found about this building. In the 10th Biennial Report (1882-83) a list of farm buildings includes "the sorghum works, also supplied with steam power." The October 1889 issue of The Aurora records: "The sugar factory was shut down for the year. The directors are not fully satisfied as to its being a success. Experiments will be carried farther next year."

By 1892 the building was ordered removed. The minutes for September 27-29 record that the Board "Moved that the Committee on Public Grounds and Railroad be directed to investigate the building erected by the Sugar Refining Co., and prevail upon the company if possible to settle up its affairs and remove its property from the college grounds." Carried.

Two months later the committee reported that the promise has been received that the building would be removed.

The location of the building has not been determined. The fact that it had steam power would indicate that it was probably in the area of the shops or possibly a lean-to on that building. It is not identified on either an 1883 or 1887 map, the only two extant contemporary maps of the campus.

STORAGE BUILDING 7 - 10

This warehouse type building was constructed in the fall of 1947. From then until about 1969 it was used for storage by the Atomic Research Institute. Subsequently it was turned back to the university and has been used for miscellaneous storage since that time. The two easternmost units were sold and removed in 1977. The other sections were razed in 1979. The structure stood just a short distance east of the Printing Services and Distribution Building.

TILE STORAGE SHED (Incinerator)

The need for a college incinerator was first recorded in the Board Minutes of July 1, 1930 when it was referred to Dr. Knapp "for investigation, consideration and report." The following year, in October, the Board approved an expenditure of $1,500 for the Incinerator.(1)

It was built in 1932 and was first carried on the Financial Report at a value of $2096, in 1934

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(1) Minutes, October 7, 1931

A fire of unknown origin destroyed the roof in 1937.(1)

When the use of the structure as an incinerator was discontinued has not been learned.

From 1968 through 1970 the structure was identified as "Tile Storage Shed", but in other years it has been listed as "Incinerator". In 1976 it was transferred from Service Area classification to the College of Engineering lists and is still carried with the original valuation.

TOOL HOUSE (Implement Shed)

The 1st Annual Report (1858-59) includes a tool-house as one of the necessities for developing the college farm. In 1865 a committee recommended "the building of a tool house for the safe keeping and preservation of the farm implements and tools."(2) Again in January 1868 such a building was in the list of needs.

Between that year and 1878 a tool house was built since the November 1878 minutes record funding of $60 "for the purpose of moving the old tool house and fitting it up as a tool and coal house in connection with the Horticulture Laboratory."

The only other record came in 1894 when the Board adopted a recommendation "that Prof. Budd be requested to remove the old tool house to some place designated by Public Grounds Committee of the Faculty, or to tear down the same and remove the old material." (3)

WOOD SHED at SOUTH HALL

Funds for a "wood-house" on the east side of the President's house were appropriated at the November 1873 meeting of the Board. The following May painting of the shed was authorized indicating that it had been erected between those two dates.

This shed was close to the east end of South Hall. What became of it is not recorded. However, in July 1890 an allocation of $350 was made to build a "wood-house and store-room for the Domestic Economy department."(4) This would indicate that the original shed was no longer existing at that time.

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(1) Iowa State Student, May 20 and 25, 1937

(2) Minutes, March 1865

(3) Minutes, December 1894

(4) Minutes, July 1890

APPENDICES

INSTITUTION NAMES

State Agricultural College and Model Farm (Informally Iowa Agricultural College IAC)		1858 - 1898
Iowa State College of Agricultural and Mechanic Arts	(ISC)	1898 - 1959
Iowa State University of Science and Technology	(ISU)	1959 -

GOVERNING BOARDS

The Board of Trustees	March 22, 1858 - March 31, 1909
State Board of Education	March 31, 1909 - June 23, 1955
State Board of Regents	June 23, 1955 -

PRESIDENTS

Adonijah S. Welch	May 11, 1868 - Nov. 27, 1883
Seaman Asahel Knapp	Dec. 1, 1883 - Dec. 5, 1884
Leigh Smith John Hunt	Feb. 1, 1885 - July 20, 1886
William Isaac Chamberlain	July 20, 1886 - Nov. 13, 1890
William Miller Beardshear	July 20, 1891 - Aug. 5, 1902
Albert Boynton Storms	Sept. 1, 1903 - Aug. 31, 1910
Raymond Allen Pearson	Sept. 1, 1912 - Aug. 31, 1926
Raymond Mollyneaux Hughes	Sept. 1, 1927 - March 17, 1936
Charles Edwin Friley	March 17, 1936 - June 30, 1953
James H. Hilton	July 1, 1953 - June 30, 1965
William Robert Parks	July 1, 1965 -

ARCHITECTS (STAFF)

Supervising Architects

1915 - 1946	Allan Holmes Kimball
1946 - 1953	Thomas K. Fitzpatrick
1953 - 1962	Leonard Wolf
1962 - 1966	Walter Hotchkiss

University Architects

1966 - 1976	H. Summerfield Day
1976 -	Everett D. Swagert

LANDSCAPE ARCHITECTS (STAFF)

1909 -	A.T. Erwin
1920 - 1923	F.H. Culley
1923 - 1951	P.H. Elwood
1951 - 1960	Ralph R. Rothacker
1960 - 1962	John R. Fitzsimmons
1960 - 1967	George W. Cumming
1971 -	John P. Harrod, Jr.

PHYSICAL PLANT PERSONNEL

1909 - 1910	Ben Edwards, Custodian of Public Buildings and Supt. of Repairs and Improvements
1910 - 1936	Thomas Sloss, Supt. of Buildings and Grounds
1936 - 1945	Boyne H. Platt, Supt. of Buildings and Grounds
1945 - 1968	Ben W. Schaefer, Supt. of Buildings and Grounds Director, Physical Plant
1968 -	William W. Whitman, Director, Physical Plant

ENROLLMENTS

Year	Total Enrollment	Women		Graduate				Married	
		No.	%	No.	%	Women	%	No.	%
1870	216								
1880	252			3	1.2				
1890	336								
1900	1062			7	0.7				
1910	1562			20	1.3				
1915	2511			15	0.6				
1920	3584	894	24.9	103	2.9				
1925	3780			204	5.4				
1930	4318			278	3.7				
1935	4412	1161	26.3	352	8.0				
1940	6567	2019	30.7	560	8.5				
1945	3407	1928	56.6	258	7.6				
1950	8135	2066	25.3	1220	15.0			1425	18.4
1955	9176	1900	20.7	972	10.6			1897	21.0
1960	9726	2105	22.6	1300	13.4	127	13.4	1921	19.8
1965	14014	3525	25.2	2124	15.2	291	13.7	2519	18.0
1970	19620	6169	31.4	3021	15.4	603	20.0	3897	19.9
1975	21205	8055	37.9	2990	14.1	787	26.32	3680	17.4
1979	23486	9181	39.1	3342	14.2	1057	31.63	3626	15.7

Enrollments are all for fall quarter

All of above figures from Dean of Admissions and Records

CHRONOLOGICAL LIST OF CAMPUS BUILDINGS

The following list is not complete since a number of minor structures of relative unimportance have been omitted. Date started is that of the year in which a contract was awarded and construction begun. Date of occupancy and use may vary from the year shown to two or more years later. "Year gone" is that of the year in which the building was razed, burned, moved, or otherwise gone from its site.

Valuations shown are those included in the 1979 Financial Report or, for buildings no longer existing, the last reported figure of value. Where * is shown in valuation column it indicates title to building is not in the name of the University and it is not listed in the Financial Report for the University.

The building name used is the name currently applied to the structure. Earlier names are identified under each building in section on Campus Buildings, and in the Index.

Building Name	Year Started	Year Gone	Valuation
Farm House	1860		$ 36,234
Cattle Barn (Old)	1860,73	1928	10,000
Main	1864,71	1901,02	150,000
South Hall	1868,71	1912	4,500
Music Hall	1868,99	1978	6,000
Marston Cottage	1868	1958	5,200
Chemical Laboratory	1870,73	1913	25,000
Horse Barn (First)	1870	1900	500
Workshop	1870	1898	5,000
Mortensen Cottage	1877,84	1927	2,250
Pope Cottage	1877		2,700
Eastwood Cottage	1878	ca.1890	400
Creamery (First)	1879,82	1927	700
Fair Oaks Mansion	1879	1899(?)	?
Farm Boarding Club	1879	1970	800
Gables	1879	1963	10,000
Boarding Cottage - West	1880	1934	7,500
Feeding Barn	1880	1901	600
North Hall	1880	1926	10,455
Horticulture Barn (First)	1880	1899(?)	200
Boarding Cottage - East	1882	1907	2,500
Farm Laborer's Cottage	1882	1904	2,500
Grounds Cottage	1882	1970	2,500
Laboratory of Mechanics	1882,84		28,053
Osborn Cottage	1882		2,000
Sloss House	1882		8,500
Gymnasium	1883	1886	?
Veterinary Barn	1883	1899(?)	200(?)
English Office Building	1884		6,000
Sanitary Building	1884	1927	5,000
Veterinary Hospital	1884	1926	2,500
Bevier House	1888		10,500
Coburn House	1888	1975	8,000
Morrill Hall	1890		71,025
Teamster's Cottage No. 2	1890	1970	2,000
Creamery (Second)	1891	1905	12,000
Power Station	1891	1912	2,500
Botany Hall	1892,03		122,036
Hub	1892		19,939
Experimental Barn	1894	1901	4,000
Margaret Hall	1894	1938	50,000
Green House	1896,03	1968	5,000
Building A	1897	1973	4,500
Campanile	1897		6,600
Aerospace Laboratory	1898	1973	6,596
Engineer's Cottage	1898	1970	3,000
Kildee Cottage	1900	1973	5,050
Knoll	1900		41,623

Building Name	Year Started	Year Gone	Valuation
Landscape Architecture	1900		$ 27,800
Marston Hall	1900		287,275
Norton House	1900		10,300
Theater Workshop	1900	1979	4,000
Beyer House	1901	1948	9,700
Emergency Hall	1901	1906	11,200
Horticulture Lab (Old)	1901	1978	8,000
White House, Georgia	1901	1972	11,500
Experiment Station Barn	1902	1922	17,100
Agronomy Farm Crops Lab.	1903	1972	12,000
Beardshear Hall	1903		604,630
Lincoln Way Cottage	1903	1973	8,000
Safford Cottage	1903	1958	5,700
Alumni Hall	1904		*
East Hall	1904		67,000
Horticulture Barn	1904	1949	10,300
Beach House	1905	1961	9,000
Training Shed	1905	1912-13	?
Building B	1906		12,922
Curtiss Hall	1906		340,000
Power & Heating Plant	1906		1,366,312
Machine Shop	1907	(See Mech. Engr. Lab.)	
Central Station	1908	1933	500
Engineering Annex	1909		88,100
Domestic Technology Bldg.	1910	(See MacKay Hall)	
Quadrangle	1910		707,464
Carpenter Shop	1911	1972	1,500
State Gymnasium	1911		195,040
Herdsman's Cottage	1912	1966	2,000
Engineering Research Institute	1913		87,525
Gilman Hall	1913,63		2,642,662
Serum Plant	1913	1926	11,821
South Studio	1913	1925	2,000
Steam & Gas Laboratory	1913	(See Mech. Engr. Lab.)	
Agric. Engineering Garage	1914	1925(or 6)	1,000
Horticulture Hall & Greenhouse	1914		661,848
Lyon Hall	1914		178,869
Stadium (Clyde Williams Field)	1914 (25,30,32,61,66)	1978	1,100,183
Freeman Hall	1915		299,676
Science Hall	1915,53		1,537,124
Barton Hall	1916		261,048
Gun Shed	1916	1924	500
Horticulture Cottage	1916	1959	4,000
Meat Laboratory	1916		53,485
Student Services Building	1916,23		901,921

Building Name	Year Started	Year Gone	Valuation
Duplex	1917	1970	$ 5,900
Rendering Plant	1917	1936	2,500
Exhibit Hall	1918		59,035
North Studio	1918	1935,57	2,000
Soil Testing Lab	1919, 56		55,507
Armory	1920,23		532,480
Field House, P.E.W.	1920	1953	11,250
Oak-Elm Lodges	1920	1937,38	153,400
Davidson Hall	1921,42		135,489
Four Apartment House	1921	1967	10,800
Hog Barn & Pavilion	1921	1969,76	23,620
Physics Hall	1921,50,60		2,344,687
Birch Hall	1922		716,300
Sheep Barn	1922	1969	24,500
Ag. Engr. Shop & Shed	1923	1962	3,344
Horse Barn *2	1923	(See Horse Barn and Machine Shed)	
Library	1923,60,67		3,855,238
Cattle Barn	1924,31		38,969
Electric & Paint Shop	1924	1972	18,000
Grounds Shop	1924	1972	11,746
Horse Barn at Service Area	1924	1972	9,500
Judging Pavilion	1924		20,000
MacKay Hall (Includes Domest. Tech)	1925		586,037
Veterinary Obstetrics Lab	1925		110,934
Veterinary Surgery	1925		
Veterinary Physiology Res. Lab.	1925	1979	
Horse Barn & Machine Shed (Includes Horse Barn #2)	1926		40,100
Industrial Education II	1926,36		215,709
Sweeney Hall (Chem. Engr.) (See 1962)	1927,31		1,262,743
Dairy Industry	1927		599,303
Hughes Hall (See Friley Hall)	1927	(with Friley)	
Insectary & Greenhouse	1927,67		252,654
Memorial Union	1927,78		*
Welch Hall	1928		692,850
Feed Storage Elevator	1929	1969	9,889
Genetics & Plant Path Greenhouse	1929	1969	13,500
Ruminant Nutrition Lab	1929		62,661
Ag. Engr. Machine Shed	1931		7,200
Driver Training Storage	1931		2,359
Military Garage	1931		189
Genetics Laboratory	1931,48,52		166,284
Central Stores	1933,36	(See Phys. Plant Shops)	
Genetics Poultry Lab	1933		1,715

Building Name	Year Started	Year Gone	Valuation
Nuclear Engineering Lab	1934		127,120
Roberts Hall	1935		487,687
Mech. Eng. Lab (Connecting Link)	1936		127,854
Elm Hall	1937		1,329,501
Oak Hall	1938		
Snedecor Hall	1938,60		421,009
Friley Hall	1939,41,49,53		3,968,162
Agronomy Greenhouse	1940,50		44,035
ISU Press Bldg.	1940,47,51,55,64		*
Library Storage Bldg.	1940		11,472
Physical Educ. (Women's Gym)	1940,70		2,822,149
Naval Armory	1942		68,499
Plumbing Shop	1943	1972	25,000
Cottages	1946	1960	?
Pammel Court	1946		199,352
Driver Training Lab	1947		12,712
Metallurgy Bldg. (Ames Lab)	1947		*
Office & Laboratory (Link)	1947		593,990
Temporary Buildings "C" thru "S"	1947	Various dates (see text	
Coover Hall	1948		1,223,538
Genetics Chick Isolation	1948		27,227
Plant Introduction Greenhouse	1948,53,62		58,897
Synchrotron Building	1948		207,272
Spedding Hall (Ames Lab)	1949		*
Agronomy Hall	1950		863,483
Child Development Bldg.	1951		255,421
Nickell-Fisher House	1951		118,017
Quadrangle-North	1954		552,046
Westgate Hall	1954		356,628
Andrews-Richards House	1955		134,760
Linden Hall	1955		178,869
Hawthorn Court	1956,58		1,343,139
Helser Hall	1956,62		1,823,033
Purchasing Warehouse	1956		16,712
Metals Development Bldg. (Ames Lab)	1959,66		*
Agronomy Laboratory	1960		58,179
Biomedical Eng. Lab. (Part of Quadrangle)	1960	(with Quadrangle)	
Food Technology	1960		467,230
Pearson Hall	1960		1,442,714
Genetics Storage Building	1961		2,500
Research Reactor	1961		*
Communications Building	1962,79		1,009,648
Industrial Education	1962		176,094
Sweeney Hall (includes Chem. E. - 1927)	1962		1,262,743
Beyer Hall	1963		1,834,575

Building Name	Year Started	Year Gone	Valuation
Buchanan Hall	1963		1,373,844
Kildee Hall & Lush Auditorium	1963		2,102,130
Mechanical Maint. (Ames Lab)	1963		*
Knapp-Storms & Commons	1964		4,163,405
Physics Hall Addition	1964		2,344,687
University Village	1964,67		6,165,699
Bessey Hall	1965		3,502,127
Maple-Willow-Larch Halls	1965,67,68		7,908,325
Warehouse (Ames Lab)	1965		*
Warehouse & Shop (Ames Lab)	1965		*
Maintenance Shop (Ames Lab)	1966		*
Botany Greenhouse	1966		370,852
Forestry Greenhouse	1966		*
Firemanship Training	1966		165,287
Paint & Graphite Shop (Ames Lab)	1966		*
Parking Ramp (Memorial Union)	1966		*
C.Y. Stephens Auditorium	1966		4,353,586
Wallace-Wilson & Commons	1966,67		5,104,511
Carver Hall	1967		2,671,554
Computer Science	1967		936,752
Construction Storage Shed (Ames Lab)	1967		*
Printing Building	1967		291,452
Hilton Coliseum	1968		8,176,888
Horticulture Gardens Bldg.	1968		20,000
Car Pool Office Bldg.	1969		88,474
East Hall Addition	1969		1,849,731
Science Hall Addition #2	1969		4,185,214
Town Engineering Bldg.	1969		3,252,684
Ross Hall	1970		2,749,258
Physical Plant Shops & Central Stores	1971		2,224,277
Fisher Theater	1972		907,912
Golf Club House	1972		39,931
Veterinary Medicine Facilities	1972		20,459,674
Olsen Building	1973		*
Stadium (South Campus)	1973		*
Physical Plant Storage Shed	1973		80,225
Scheman Continuing Education Bldg.	1973		4,811,831
Schilletter Village	1973		5,417,248
College of Design	1975		7,058,251
Meats Laboratory	1975		3,379,140
Seed Science Building	1976		1,786,133
Music Building	1978		Incomplete
Horticulture Hall Addition	1978		Incomplete

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CAMPUS MAPS

CAMPUS MAPS

The following six maps are included to show the appearance of the campus at selected dates. They will be of assistance in visualizing the location of some of the buildings no longer standing.

The building lists which follow the maps give the names by which the structures are known now, with the then contemporary names shown in parentheses. .

The maps are based on the best information available, using existing maps of about the same dates plus references from other sources. Complete accuracy cannot be claimed.

THE CAMPUS - 1875

No. on Map	Building Name
1	Farm House
2	Cattle Barn
3	Horse Barn
4	Windmill
5	Sheep Barns
6	President's Barn
7	South Hall (President's House)
8	Music Hall (Professor's House)
8A	Barn (Jones)
9	Marston Cottage (Professor's House)
10	Workshop
11	Chemical and Physical Laboratory
12	Main (College)
13	Gas Works
14	Coal and Ice Houses

C & NW RAILWAY

1
2
3
4
5
6
7
8
8A
9
10
11
12
13
14

COLLEGE CREEK

COUNTY ROAD

THE CAMPUS
1875

N

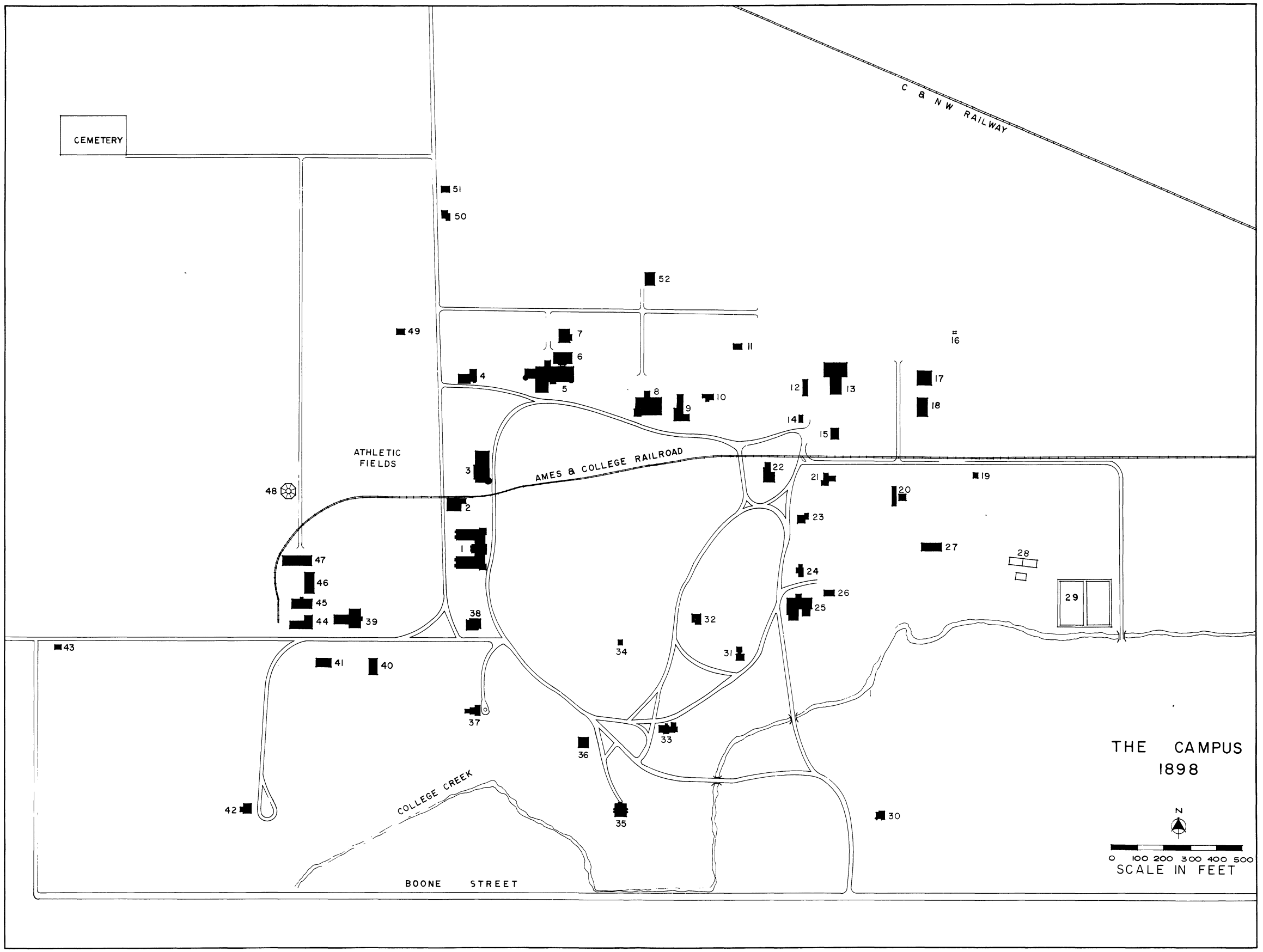
0 100 200 300 400 500
SCALE IN FEET

THE CAMPUS - 1898

No. on Map	BUILDING NAME
1	Main
2	Hub (Motor Depot)
3	Morrill Hall
4	Farm Boarding Club (Hort. Lab)
5	Margaret Hall
6	North Hall
7	Bevier House (Exp. Sta. Bldg.)
8	Botany Hall (Agricultural Hall)
9	Greenhouses
10	Engineer's Cottage (Edgerton)
11	Teamster's Cottage No. 2 (Exp. Sta. Foreman)
12	Machine Shed (Granary)
13	Cattle Barn (Farm Barn)
14	Granary
15	Horse Barn (First)
16	Windmill
17	Feeding Barn
18	Experimental Barn
19	Hog House
20	Sheep Barns
21	Creamery (First); (Farm Foreman's Cottage)
22	Farm House
23	Mortensen Cottage (Budd House)
24	Farm Laborer's Cottage (McKay House)
25	Creamery (Second)
26	Ice House
27	Hog House
28	Settling Tanks
29	Filter Beds
30	Coburn House (Knapp House)
31	Osborn Cottage
32	Sloss House (Bissell House)
33	South Hall (Music Hall)
34	Campanile
35	Veterinary Hospital
36	Sanitary Building
37	Music Hall (Stanton House)
38	English Office Building (Office Building)
39	Chemical and Physical Laboratory
40	Boarding Cottage - East (Kirkwood Hall)
41	Boarding Cottage - West (Stanton Hall)
42	Marston Cottage
43	Horticulture Barn (first)
44	Laboratory of Mechanics (Engineering Hall)

1898

45	Power Station
46	Building "A" (Foundry)
47	Aerospace Lab (Carpenter Shop)
48	Water Tower
49	Veterinary Barn (Bus House)
50	Grounds Cottage (Sexton Cottage)
51	Barn
52	Barn


C & N W RAILWAY
CEMETERY
ATHLETIC FIELDS
AMES & COLLEGE RAILROAD
COLLEGE CREEK
BOONE STREET
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THE CAMPUS
1898
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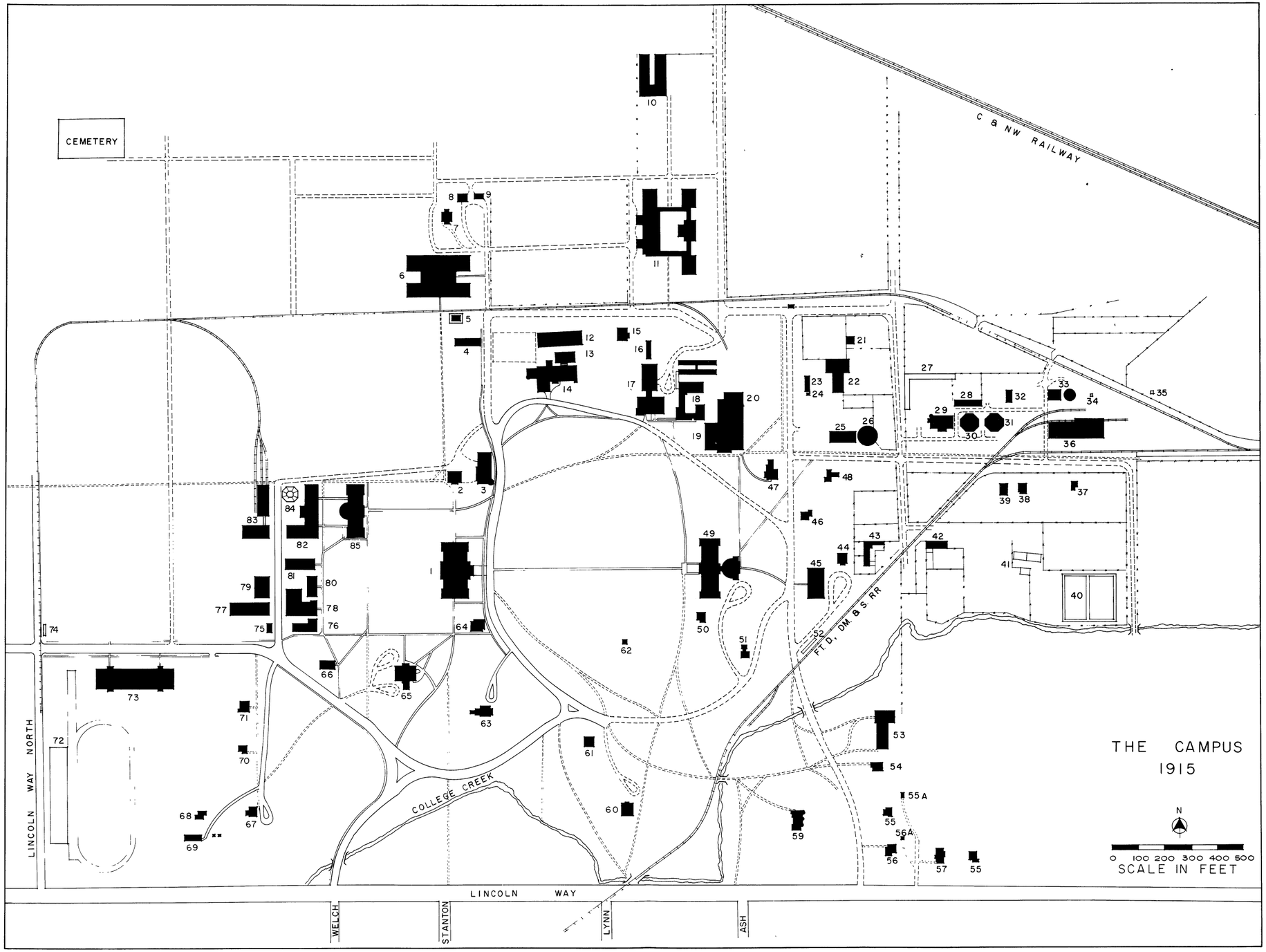
0 100 200 300 400 500
SCALE IN FEET

THE CAMPUS - 1915

No. on Map	Building Name
1	Beardshear Hall (Central)
2	Hub (Bookstore & Postoffice)
3	Morrill Hall
4	South Studio (Emergency Chemistry)
5	Central Station
6	Gilman Hall (Chemistry Building)
7	Beach House
8	Horticulture Barn
9	Field Shed
10	Serum Plant
11	Quadrangle (Veterinary Building)
12	Domestic Technology Building
13	North Hall
14	Margaret Hall
15	Bevier House (Sloss House)
16	Agricultural Engineering Garage
17	Botany Hall (Agric. Engr. Bldg.)
18	Greenhouses
19	Horticulture Lab (Old)
20	Horticulture Hall & Greenhouses
21	Cattle Shed
22	Cattle Barn (Old)
23	Machine Shed (Granary)
24	Garage (Curtiss)
25	Landscape Architecture (Horse Barn)
26	Theater Workshop (Judging Pavilion)
27	Feeding Sheds (Hog Barn)
28	Experiment Station Machine Shed
29	Experiment Station Barn
30	Agronomy Farm Crops Lab. (Judging Pavilion #2)
31	Carpenter Shop (Judging Pavilion #3)
32	Hog House
33	Filter Plant
34	Well
35	Well
36	Power & Heating Plant
37	Engineer's Cottage
38	Teamster's Cottage #2 (Farm Foreman's Cottage)
39	Farm Boarding Club
40	Filter Beds
41	Settling Tanks
42	Hog House
43	Sheep Barn
44	Herdsman's Cottage
45	East Hall (Dairy Building)

1915

46	Mortensen Cottage
47	Farm House
48	Creamery (First)
49	Curtiss Hall (Agricultural Hall)
50	Sloss House
51	Osborn Cottage
52	Railroad Platform
53	Lyon Hall
54	Norton House (Coover House)
55	Coburn House (Knapp House)
55A	Knapp Garage
56	Kildee Cottage (Cessna House)
56A	Kildee Garage
57	Lincoln Way Cottage (Women's Dormitory)
58	Safford Cottage
59	Knoll
60	Veterinary Hospital
61	Sanitary Building (Music Hall)
62	Campanile
63	Music Hall (Stanton House)
64	English Office Building (Supt's Office)
65	Alumni Hall
66	Boarding Cottage - West (Hospital)
67	Marston Cottage
68	Grounds Cottage
69	Barns - Grounds Dept.
70	Beyer House
71	Georgia White House (Women's Dormitory)
72	West Stadium
73	State Gymnasium
74	Interurban Platform
75	Quarantine Hospital
76	Laboratory of Mechanics
77	Machine Shop)
78	Steam & Gas Lab) Mechanical Engineering Building
79	Building "B" (Forge Shop)
80	Building "A" (Foundry)
81	Aerospace Laboratory (Pattern Shop)
82	Engineering Annex
83	Engineering Research Institute (Transportation Building)
84	Water Tower
85	Marston Hall (Engineering Hall)


CEMETERY
C & NW RAILWAY
LINCOLN WAY NORTH
COLLEGE CREEK
LINCOLN WAY
WELCH
STANTON
LYNN
ASH
FT. D. DM. & S. RR
THE CAMPUS
1915
N
0 100 200 300 400 500
SCALE IN FEET

THE CAMPUS - 1930

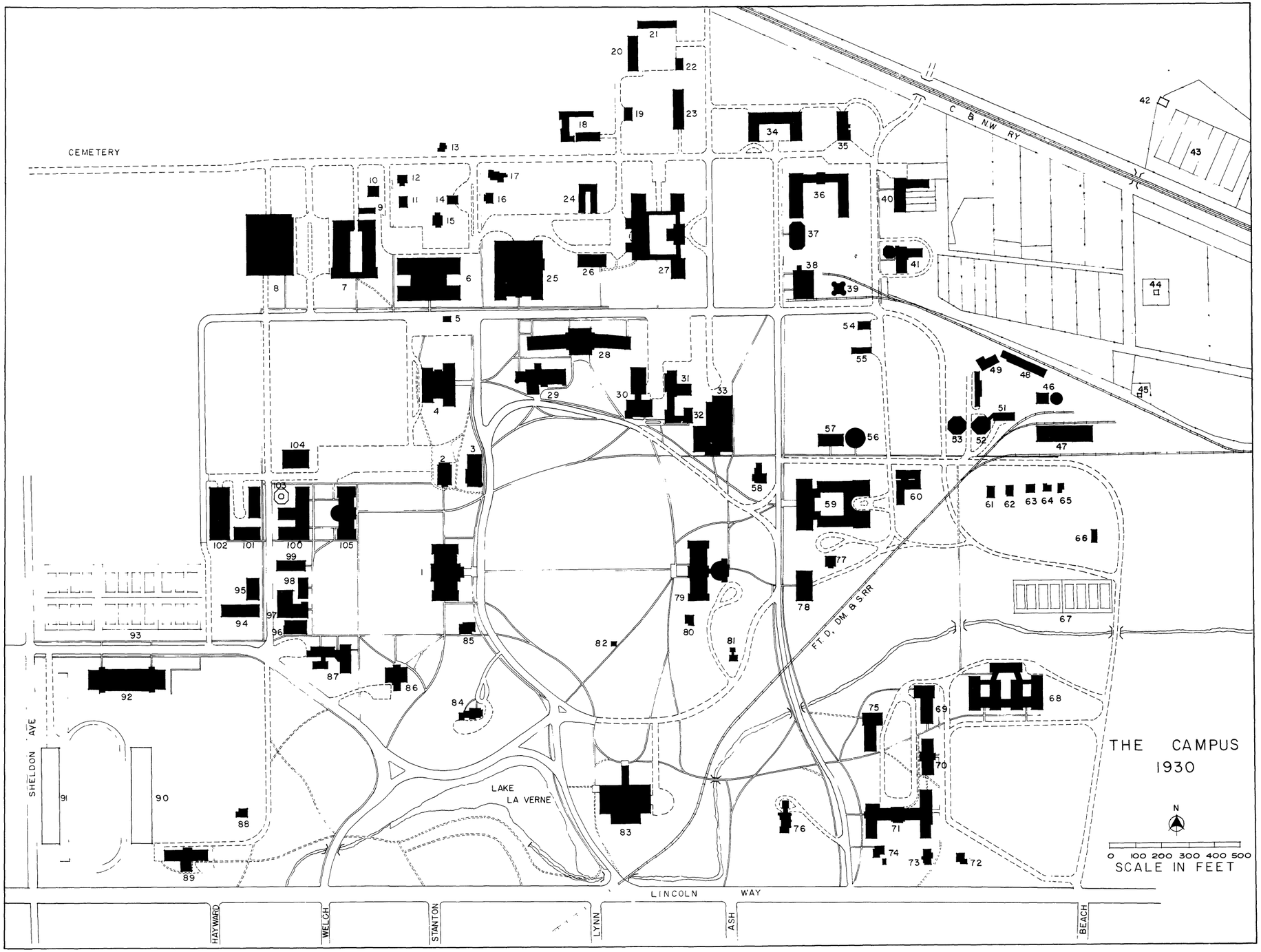
No. on Map	Building Name
1	Beardshear Hall (Central)
2	Hub (Post Office & Book Store)
3	Morrill Hall
4	Library
5	Central Station
6	Gilman Hall (Chemistry)
7	Davidson Hall (Agric. Engr.)
8	Armory
9	Agric. Engr. Shop & Shed
10	Georgia White House
11	Beyer House (Nurses' Home)
12	Norton House (Practice House)
13	Horticulture Cottage
14	Horticulture Barn (Child Nursery)
15	Beach House (Ellen Richards House)
16	Bevier House
17	Coburn House
18	Insectary & Greenhouse
19	Rendering Plant
20	Veterinary Surgery (Military Stables)
21	Veterinary Obstetrics Lab (Military Stables)
22	Veterinary Physiology Research Lab (Military Barracks)
23	Veterinary Clinic
24	Genetics & Plant Pathology Greenhouse
25	Physics Hall
26	Science Hall
27	Quadrangle (Veterinary Quadrangle)
28	MacKay Hall (Home Economics Hall)
29	Margaret Hall
30	Botany Hall
31	Horticulture & Botany Greenhouses
32	Horticulture Lab (Old)
33	Horticulture Hall & Greenhouse
34	Horse Barn & Machine Shed
35	Ruminant Nutrition Lab (Horse Barn #3)
36	Cattle Barn
37	Judging Pavilion
38	Meat Laboratory
39	Feed Storage Elevator
40	Sheep Barn
41	Hog Barn & Pavilion
42	Imhoff Tank
43	Disposal Beds
44	Well
45	Well
46	Filter Plant

1930

47 Power & Heating Plant
48 Machinery & Storage Shed
49 Horse Barn at Service Area (Machine Shop)
50 Grounds Shop
51 Paint Shop
52 Carpenter Shop
53 Agronomy Farm Crops Lab
54 North Studio (Forage Crops Lab)
55 Soil Testing Lab (Poultry Lab)
56 Theater Workshop (Stock Pavilion)
57 Landscape Architecture
58 Farm House
59 Dairy Industry
60 Field House - P.E.W.
61 Farm Boarding Club
62 Teamster's Cottage #2
63 Duplex
64 Grounds Cottage
65 Engineer's Cottage
66 Four Apartment House
67 Tennis Courts
68 Oak-Elm Lodges
69 Freeman Hall
70 Barton Hall
71 Welch Hall (including Birch Hall)
72 Safford Cottage
73 Lincoln Way Cottage
74 Kildee Cottage
75 Lyon Hall
76 The Knoll
77 Herdsman's Cottage
78 East Hall (Agricultural Annex)
79 Curtiss Hall (Agricultural Hall)
80 Sloss House
81 Osborn Cottage
82 Campanile
83 Memorial Union
84 Music Hall
85 English Office Building
86 Alumni Hall
87 Student Services Bldg. (Hospital, includes Boarding Cottage - West)
88 Marston Cottage
89 Friley Hall (Hughes Hall)
90 Stadium - East
91 Stadium - West
92 State Gymnasium
93 Tennis Courts

1930

94	Mechanical Engineering Lab (Machine Shop Unit)
95	Building "B" (Forge Shop)
96	Laboratory of Mechanics (Hydraulics Lab)
97	Mechanical Engineering Lab (Steam & Gas Lab Unit)
98	Building "A" (Foundry)
99	Aerospace Lab (Pattern Shop)
100	Engineering Annex
101	Engineering Research Institute (Transportation Bldg.)
102	Exhibit Hall
103	Water Tower
104	Sweeney Hall (First unit - Chemical Engineering)
105	Marston Hall (Engineering Hall)


CEMETERY
C & NW RY
FT. D, DM & S RR
SHELDON AVE
LAKE
LA VERNE
LINCOLN WAY
HAYWARD
WELCH
STANTON
LYNN
ASH
BEACH
THE CAMPUS
1930
N
0 100 200 300 400 500
SCALE IN FEET

THE CAMPUS - 1948

No. on Map	Building Name
1	Beardshear Hall
2	Temporary Building "H"
3	Temporary Building "G"
4	Temporary Building "F"
5	Temporary Building "E"
6	Morrill Hall
7	Hub
8	Library
9	Temporary Building "N"
10	Temporary Building "L"
11	Temporary Building "S"
12	Temporary Building "R"
13	Snedecor Hall (Service Building)
14	Armory
15	Davidson Hall (Agricultural Engineering)
16	Temporary Building "O"
17	Ag. Engr. Machine Shed
18	Ag. Engr. Shop
19	Georgia White House
20	Gilman Hall (Chemistry)
21	Chemical Storage Bldg.
22	Chemical Storage Bldg.
23	Beach House (Ellen Richards Home Mgmt.)
24	Office and Laboratory (Link)
25	Physics Hall
26	Metallurgy Building
27	Temporary Building "M"
28	Science Hall
29	Genetics & Plant Pathology Greenhouse
30	Quadrangle (Veterinary Medicine Quadrangle)
31	Club House - Recreational Area
32	Pammel Court
33	Horticulture Cottage
34	Bevier House
35	Genetics Laboratory
36	Coburn House
37	Norton House
38	Driver Training Storage (Extension Garage)
39	Genetics Storage
40	Genetics Chick Isolation
41	Genetics Poultry Lab
42	Library Storage
43	Insectary & Greenhouse
44	Military Garages
45	Veterinary Clinic (Stange Memorial Clinic)

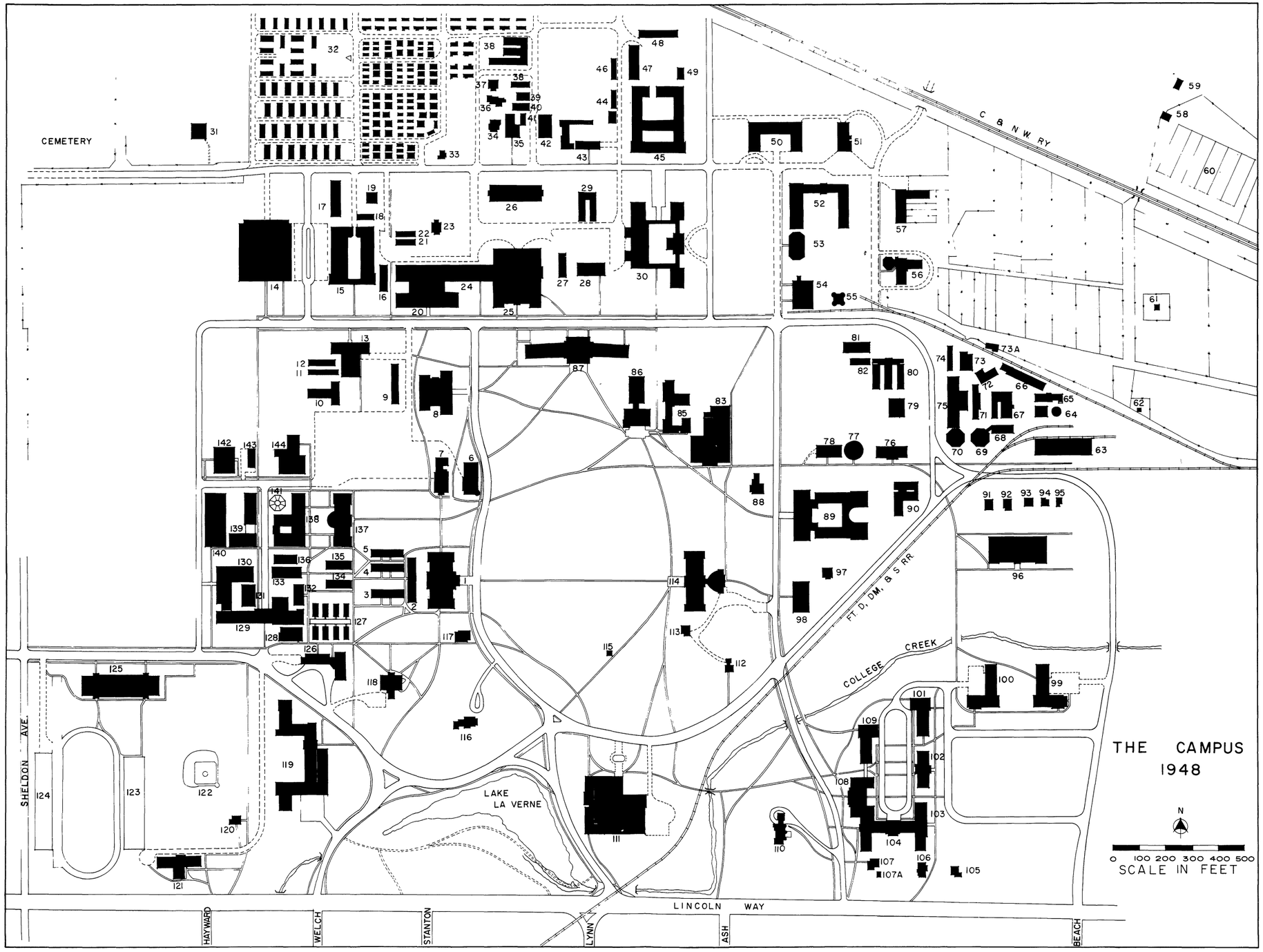
1948

46	Military Garage
47	Veterinary Surgery (Military Stables)
48	Veterinary Obstetrics Lab (Military Stables)
49	Veterinary Physiology Research Lab (Military Barracks)
50	Horse Barn & Machine Shed
51	Ruminant Nutrition Lab (Horse Barn #3)
52	Cattle Barn
53	Judging Pavilion
54	Meat Laboratory
55	Feed Storage Elevator
56	Hog Barn & Pavilion
57	Sheep Barn
58	Imhoff Tank
59	Tile Storage Shed (Incinerator)
60	Disposal Field
61	Well
62	Well
63	Power & Heating Plant
64	Filter Plant
65	Cooling Tower
66	Machinery & Storage Shed
67	Plumbing Shop
68	Electric & Paint Shop
69	Carpenter Shop
70	Agronomy Farm Crops Laboratory
71	Grounds Shop
72	Horse Barn at Service Area
73	Storage Building #2
73A	Storage Building #3
74	Storage Building #1
75	Central Stores Building
76	ISU Press Building (ISC Press Bldg.)
77	Theater Workshop
78	Landscape Architecture
79	Plant Introduction Greenhouse
80	Agronomy Greenhouse
81	Temporary Building "P"
82	Soils Testing Laboratory (Poultry Lab)
83	Horticulture Hall & Greenhouse
84	Horticulture Lab (Old)
85	Greenhouses
86	Botany Hall
87	MacKay Hall (Home Economics Building)
88	Farmhouse
89	Dairy Industry
90	Field House - P.E.W. (Chemistry Annex #1)
91	Farm Boarding Club
92	Teamster's Cottage #2

93	Duplex
94	Grounds Cottage
95	Engineer's Cottage
96	Physical Education Bldg. (Women's Gymnasium)
97	Herdsman's Cottage
98	East Hall (Agricultural Annex)
99	Oak Hall
100	Elm Hall
101	Freeman Hall
102	Barton Hall
103	Birch Hall
104	Welch Hall
105	Safford Cottage
106	Lincoln Way Cottage
107	Kildee Cottage
107A	Kildee Cottage Garage
108	Roberts Hall
109	Lyon Hall
110	The Knoll
111	Memorial Union
112	Osborn Cottage
113	Sloss House
114	Curtiss Hall
115	Campanile
116	Music Hall
117	English Office Building
118	Alumni Hall
119	Friley Hall
120	Marston Cottage
121	Friley Hall (Hughes Hall)
122	Baseball Diamond
123	Stadium - East
124	Stadium - West
125	State Gymnasium
126	Student Services Building (Hospital)
127	Cottages
128	Laboratory of Mechanics
129	Mechanical Engineering Laboratory
130	Naval Armory
131	Building "B" (Forge Shop)
132	Building "A" (Foundry)
133	Aerospace Laboratory (Aeronautics Lab)
134	Temporary Building "D"
135	Temporary Building "C"
136	Temporary Building "J"
137	Marston Hall
138	Engineering Annex

1948

139	Engineering Research Institute (Industrial Arts & Engr. Expt. Station)
140	Exhibit Hall
141	Water Tower
142	Nuclear Engineering Laboratory (Chemical Engineering - West)
143	Temporary Building "K"
144	Sweeney Hall (Chemical Engineering)


CEMETERY
C & N W RY
FT. D, DM, B & S RR.
COLLEGE CREEK
LAKE LA VERNE
SHELDON AVE.
LINCOLN WAY
HAYWARD
WELCH
STANTON
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THE CAMPUS
1948
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SCALE IN FEET

THE CAMPUS - 1979

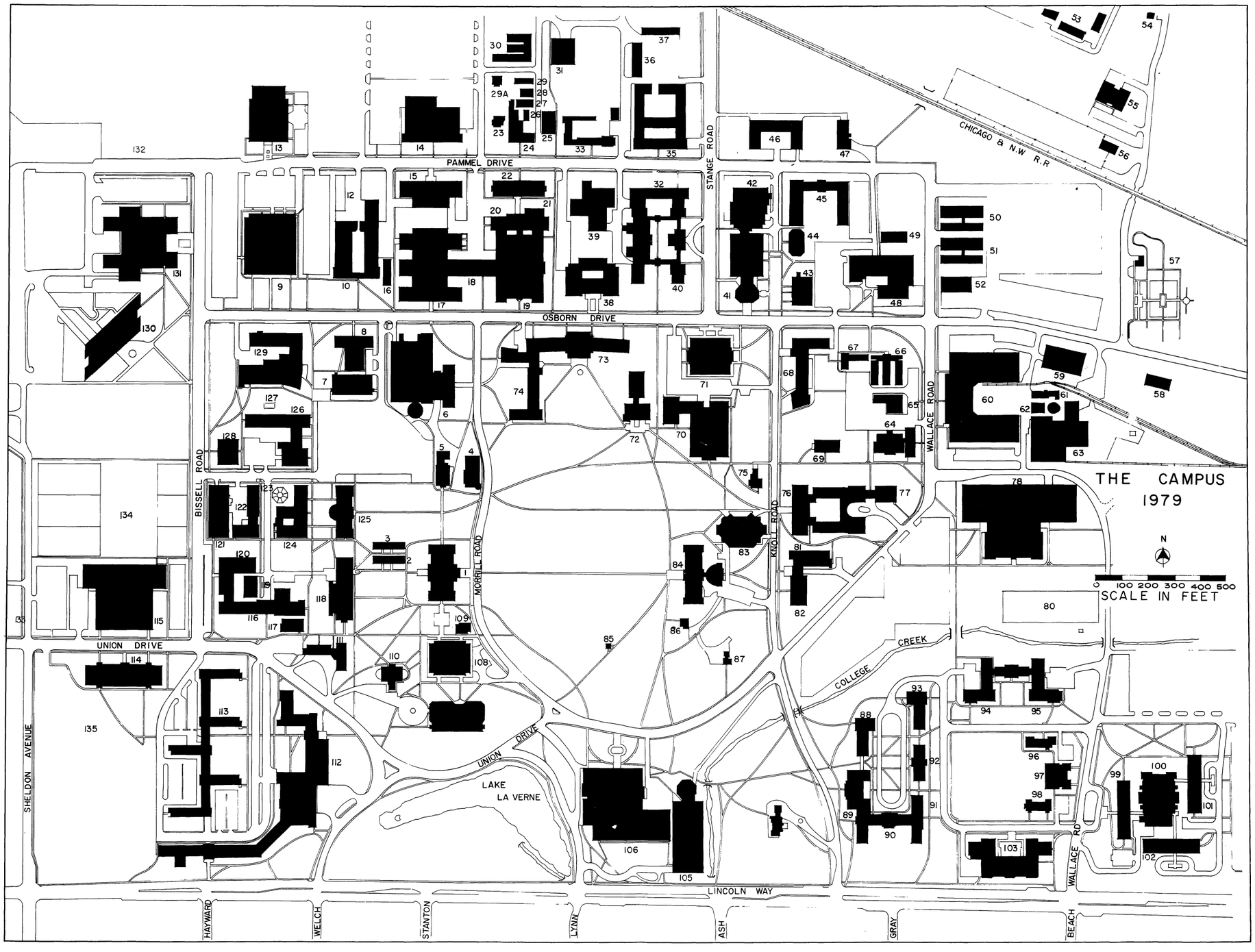
No. on Map	Building Name
1	Beardshear Hall
2	Temporary Building "F"
3	Temporary Building "E"
4	Morrill Hall
5	The Hub
6	Library
7	Computer Science
8	Snedecor Hall
9	Armory
10	Davidson Hall
11	Industrial Education
12	Agric. Engr. Machine Shed
13	Communications Building
14	Metals Development
15	Spedding Hall
16	Temporary Building "O"
17	Gilman Hall
18	Office and Laboratory Building
19	Physics Hall
20	Physics Hall Addition
21	Computer Science
22	Metallurgy
23	Bevier House
24	Genetics Laboratory
25	Library Storage
26	Genetics Poultry Lab
27	Genetics Chick Isolation
28	Genetics Storage Building
29	Driver Training Storage
29A	Norton House
30	Driver Training Laboratory
31	Purchasing Warehouse
32	Quadrangle North
33	Insectary & Greenhouse
34	Military Garage
35	Industrial Education II
36	Veterinary Surgery
37	Veterinary Obstetrics
38	Science Hall
39	Science Addition #2
40	Quadrangle
41	Kildee Hall & Lush Auditorium
42	Meats Laboratory
43	Meat Laboratory
44	Judging Pavilion

1979

45 Cattle Barn
46 Horse Barn & Machine Shed
47 Ruminant Nutrition Laboratory
48 Seed Science Building
49 Agronomy Laboratory
50 Forestry Greenhouses
51 Botany Greenhouses
52 USDA Greenhouse
53 Hawthorn Court
54 ISU Credit Union
55 Firemanship Training
56 Car Pool Office Building
57 Horticulture Gardens Building
58 Coal Preparation Plant
59 Physical Plant Storage Shed
60 Physical Plant Shops & Central Stores
61 Cooling Tower
62 Filter Plant
63 Power & Heating Plant
64 ISU Press Building
65 Plant Introduction Greenhouse
66 Agronomy Greenhouse
67 Soil Testing Laboratory
68 Agronomy Hall
69 Landscape Architecture
70 Horticulture Laboratory & Addition & Greenhouse
71 Bessey Hall
72 Botany Hall
73 MacKay Hall
74 LeBaron Hall
75 Farm House
76 Dairy Industry
77 Food Technology
78 Physical Education Building
79 East Intramural Storage
80 Tennis Courts
81 East Hall Addition
82 East Hall
83 Ross Hall
84 Curtiss Hall
85 Campanile
86 Sloss House
87 Osborn Cottage
88 Lyon Hall
89 Roberts Hall
90 Welch Hall
91 Birch Hall
92 Barton Hall

1979

93	Freeman Hall
94	Elm Hall
95	Oak Hall
96	Nickell-Fisher House
97	Child Development Laboratory
98	Andrews-Richards House
99	Maple Hall
100	Maple Willow Larch Commons
101	Willow Hall
102	Larch Hall
103	Linden Hall
104	The Knoll
105	Parking Ramp - Memorial Union
106	Memorial Union
107	Music Building
108	Carver Hall
109	English Office Building
110	Alumni Hall
111	Student Services Building
112	Friley Hall
113	Helser Hall
114	State Gymnasium
115	Beyer Hall
116	Mechanical Engineering Laboratory
117	Laboratory of Mechanics
118	Pearson Hall
119	Building "B"
120	Naval Armory
121	Exhibit Hall
122	Engineering Research Institute
123	Water Tower
124	Engineering Annex
125	Marston Hall
126	Sweeney Hall
127	Transformer Station
128	Nuclear Engineering Laboratory
129	Coover Hall
130	College of Design
131	Town Engineering Building
132	Golf & Phys. Educ. Storage Shed
133	Westgate Hall
134	Tennis Courts
135	Clyde Williams Field


THE CAMPUS
1979
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SCALE IN FEET
PAMMEL DRIVE
OSBORN DRIVE
UNION DRIVE
UNION DRIVE
LINCOLN WAY
STANGE ROAD
BISSELL ROAD
MORRILL ROAD
KNOLL ROAD
WALLACE ROAD
WALLACE RD
COLLEGE
CREEK
CHICAGO & N.W R.R
LAKE
LA VERNE
SHELDON AVENUE
HAYWARD
WELCH
STANTON
LYNN
ASH
GRAY
BEACH

INDEX

- C -

- D -

- E -

- F -

- G -

- H -

- I -

- J -

- K -

- L -

- M -

- T -

- U -

- V -

- W -

- Y -