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.
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> 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.
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> 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.
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> 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.
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> These public rooms would be accessible, spacious and every way adequate.
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> 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.
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> 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.