“BRICK, STONE, STEEL AND IRON” . . . AND LOTS OF VISION

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When Henry Harrison Culver opened his hotel and tabernacle for the Culver Park Assembly Grounds on Lake Maxinkuckee in the summer of 1889, he took financial inspiration from the Methodist Church’s already successful encampment on Lake Chautauqua, New York. For two summers he brought the country’s most renowned religious speakers and musical directors to his Assembly, drew large crowds – and made no profit.

While Culver was an entrepreneur and willing to take risks, he was not prepared to suffer continued losses and terminated his chautauqua project after the 1890 season. He was, however, left with the Culver Park Hotel which, at best, generated only seasonal business while standing empty for the most of the year.

At the urging of friends, he decided to fulfill a long-held dream to start a school and set aside forty of his more than 300 acres for that endeavor. The hotel became the school’s focal point, while the tabernacle was converted to a gymnasium, drill hall, and auditorium.

On Sept. 24, 1894, Culver opened the Culver Academy with 47 students led by a recently ordained Episcopal priest, The Rev. J.H. McKenzie, recruited from the Ohio Military Institute. Even before the first cadets arrived there was dissention between owner and headmaster over the name of the school.

Culver acquiesced, briefly, to McKenzie’s request that it be named St. Paul’s, then recanted when faced with a family revolt. By the time Thanksgiving arrived, the word “Military” had been added to the school’s name and the relationship between Culver and his headmaster was growing increasingly frigid.

On the afternoon of Feb. 4, 1895, the hotel/barrack caught fire and by nightfall lay in ruins. The 47 cadets and bachelor faculty who

resided there escaped safely but with little more than the clothes on their backs. The boys took up residence in the homes of married faculty and local residents. The tabernacle was converted into a mess hall, several smaller buildings were adapted for classrooms, and school continued uninterrupted.

Culver rushed from his home in St. Louis, bringing with him architect Albert Knell, a partner in the firm of Baker and Knell. During the trip Culver outlined his concept for a replacement building. He insisted it be constructed of brick, stone, steel, and iron and must be fireproof. By the time they returned to St. Louis, Knell's conceptual thoughts were being committed to paper and what emerged from his drawing board was a three-story structure.

Its name, Main Barrack, and a dominating presence overlooking the lake, reflected Culver's determination to see the Academy succeed. "Main" was not simply a convenient word, it was a presumption of growth and permanence.

The new barrack became the all-purpose centerpiece of the campus, housing administrative offices, classrooms, a library, infirmary, and a mess hall on the ground level, dormitory space for 90 cadets on the upper two floors, and a coal-fired boiler for central heating.

Knell's proposal that excess steam be used to power electric generators, thus providing light for the entire campus, was quickly embraced. This equipment was included in a two-story brick addition at the rear of the barrack and became known as the Engine Annex. Water was supplied to the barrack, the gymnasium, and power-

generating equipment from a large storage tank on the roof of Main Barrack and masked from view by its crenellated façade.

Amazingly, construction of the three-story building took less than eight months and opened for its first residents in September of 1895. By that time McKenzie had departed and the new headmaster, Major Clinton Tebbetts, had only 37 cadets to fill his new building. Things looked grim for the Academy's future.

The story of the fire that destroyed the Missouri Military Academy in September of 1896 and left Superintendent Colonel Alexander Frederick Fleet with 72 cadets and no place to go has become a part of the Culver legend. Indeed, it was Fleet's acceptance of H.H. Culver's invitation to bring his students and faculty to Indiana that ensured the founder's dream and launched his school toward greatness.

Relatively little is known about the actual construction of Main Barrack but recently discovered files tell much about the addition of its fourth floor during 1903-04. Extrapolating from that data provides an interesting look at the campus-wide development of the entire physical plant. It is also a primer to the construction practices of the day, a remarkable informality of agreements and contracts, and the great faith between owner, architect, and builder.

To accommodate the influx of new students following Fleet's arrival, West and East barracks, and the massive Riding Hall, home to the Black Horse Troop, were completed before the turn of the century. Sadly, H.H. Culver did not live to see this burst of construction in all its glory.

While vacationing at his summer residence on the northeast shore of Lake Maxinkuckee, he became ill. He was rushed to St. Louis where he died on Sept. 27, 1897. He was only 57 years old. On Edwin and Bertram, two of his five sons, fell the responsibility of bringing his dream of a school to reality.

By the end of the 1902 school year, enrollment under the leadership of Fleet and his Commandant of Cadets, Major Leigh

Gignilliat, had jumped to 247 and prospects for further growth were bright. It was clear to Fleet that existing laboratory facilities located on the first floor of West Barrack were inadequate for projected enrollments.

After reviewing various expansion possibilities with Knell, the Culvers decided to add a fourth floor to Main Barrack and assign it to the Science Department, except for one room reserved for the Academy dentist. The laboratory space in West Barrack could then be converted to additional student rooms.

In June of 1903, an agreement with the construction firm of J.E. Barnes and Sons of Logansport was signed for $14,225.70. A materials drawing account of $5,000 was set up on Aug. 29, and by the end of September, construction was underway and the work site was covered with lumber, stone, lime, cinders, brick, cement, and other requirements for the new addition. Knell received $420 toward his three and a half percent commission for design and engineering duties performed as of September 30. The balance of $77 was withheld pending completion of the project.

Barnes' contract for Main Barrack was, in terms of 2001 legal agreements, the utmost in simplicity: "The contractor shall furnish and provide all material, workmanship, tools, scaffolding, etc. to construct a fourth story to the present three story main barrack building . . . [and] furnish all materials necessary to the entire completion of this work . . . " Though there was no expressed mention of indemnity for cadets and faculty, the contractor was expected to "perform work in [a] manner to avoid accidents and shall be responsible for all damages done to persons or things . . ."

Construction-related specifications for "Brickwork," Carpenter's Work," "Mill Work," "Copper and Metal Work," "Plastering," "Steel and Iron Work," etc. were precise. A Clerk of the Works was appointed to protect the interests of the owners and he, in addition to supervision by E.R. Culver and Knell, did much to keep the project on time and ensure adherence to the specifications.

Interior brick, for instance, was “ordinary hard and red brick laid up in mortar composed of 1/3 Utica cement and 2/3 good lime and sand mortar, bonded every fifth course.” Exterior brick, on the other hand, was specified as “selected red brick of a uniform color, laid with concave joints in red oxide of iron mortar” and “delivered in a perfect condition on final completion.”

Carpentry was expected to be of top quality. Floor beams were specified as 2-inch joists, 12 feet in length, set on 16-inch centers, and spiked together. Flooring was of “7/8-inch clear straight grained yellow pine and not to be laid until all plastering was completed.” Millwork, i.e. window casing, doors, picture moldings, and stairways, was specified to be of the “best quality.”

Requirements for fireproofing, roofing, plumbing, electric work, painting and glazing, hardware and heating were precise. The specifications for heating the fourth floor stated, “The radiation [is] to be arranged to heat the story to a temperature to 70 degrees, Fahrenheit, when the temperature outside is 10 degrees below 0.”

E.R. Culver was enamored with the use of Indiana limestone and, in keeping with a policy of “build to last,” specified that the “best Bedford stone be thoroughly bedded, pointed, set, anchored, bonded, rubbed, and cleaned.” As with all other building specifications, the work was to be “delivered in a perfect condition . . .”

Since the fourth floor was to be devoted to the Science Department, special laboratory equipment was required. Zinc and enameled counter tops and sinks, drip boards, and ventilation fans were mandated. The contract provided that the original rooftop water tank on Main Barrack be replaced when the addition was completed, then tested to “deliver perfect with water turned on to all [campus] fixtures.”

As construction picked up, Barnes billed the Culvers $4,000 in October and another $4,000 in November. The Culvers also agreed to pay over-runs amounting to an additional $967.09 for items they had ordered after the agreement had been signed.

Having launched into these new projects, and with a seemingly open purse, Edwin and Bertram Culver authorized a survey of the

1895 power plant in the Engine Annex. An engineering firm in St. Louis, Bradley and Co., recommended a major up-grade including new boilers, engines, and a dynamo at a cost of $4,998. This was approved, along with a new Westinghouse Electric Company switchboard, for $285. Barnes and Sons was given the contract to remodeling the Annex for $910.

The Culvers were not particularly surprised to learn that the replacement water tank on the roof of Main Barrack would be inadequate to supply campus needs or, as engineering studies revealed, would the roof support any additional weight.

Given the engineer's report, they approved $1,223 for a tower and larger water tank. Fairbanks, Morse and Company in St. Louis constructed the water tank on the hill just south of the new gymnasium. Barnes and Sons did the site preparation and received $140.30 for construction of the foundation. Water lines were connected to the Engine Annex and other campus buildings for $127.40 by Bradley and Co.

Virtually lost to the Academy's historical memory is the method of supplying fuel to the Engine Annex's coal-fired furnaces. With the campus void of buildings north of Main Barrack, the Culvers laid a single line of railroad track along what is now the sidewalk from Main Barrack northward to the main line of the Vandalia Railroad near today's varsity baseball diamond.

The rail spur proved to be invaluable in the construction of Main Barrack and several other interior buildings, including the Armory in 1908 and the Mess Hall in 1911. Since all contracts carried the provision that "the owner will pay freight on all brick, stone, and other materials and tools in carload lots of 20,000 lbs. from any point on the Vandalia R.R. [a branch of the Pennsylvania System] to the above mentioned switch [i.e. the junction of the spur]," the ability to reach the very heart of the construction site was significant. It may have been an eyesore, but it provided efficient transport for supplies and bunker coal.

There was no OSHA at the start of the 20th century and building codes were the exception rather than the rule. This often resulted in

wiring being strung by post-and-knob carriers and often in a rather casual manner to the end-user. Overloads were frequent as cadets "experimented" with this new technology by tapping into existing lines.

It was, in all likelihood, an improper use of the electrical grid for unapproved lighting, i.e. coil heaters, or the use of an occasional penny to replace a blown fuse, that caused a number of early fires, including those that destroyed the first Little Gym (1905), the stables of the Black Horse Troop (1915), and the first Recreation Building (1922).

The threat of fire was such an obvious concern to the Culvers that when Baker and Knell set the specifications for the fourth floor of Main Barrack, they imposed the standards of the National Board of Fire Underwriters, specifying that "all wiring [be] concealed and installed in iron armor conduits [and] wired for the number of lights indicated."

"Perfect condition on final completion" had become the mantra for the entire Main Barrack addition and as the project neared completion, Knell made frequent trips to the Academy to check the progress. Most of Edwin Culver's managerial responsibilities at the Wrought Iron Range Company in St. Louis had been taken over by his financially gifted brother, Bertram, during the Main Barrack project.

This long-distance collaboration proved so satisfactory that Edwin, the more artistically creative of the two siblings, settled into his late father's cottage, the Farmhouse, from whence he supervised the foot-printing of all campus buildings. About 1910, he built a lovely Swiss-style chalet just east of the Palmer House Hotel (later known as the Maxinkuckee or Culver Inn), where he remained until 1920 when most of his work on the campus was complete. He returned to St. Louis, but not before conveying the property to the Academy as the residence for the superintendent, Colonel Gignilliat.

Edwin Culver's creative impact in the design and architecture of the campus, and the close collaboration he enjoyed with Knell lasted from 1895 to 1924. Together they developed the distinctive pseudo-Gothic-Tudor architectural design of red brick buildings,

> crenellated walls, faux towers, arched entryways, and Indiana limestone, which became the hallmarks of the Academy campus.
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> Construction on Main Barrack continued during 1904 and on Oct. 31 as the project neared completion, Baker and Knell presented two bills, one for $197.94 for travel expenses from St. Louis to Culver to supervise the construction process, and a second for $77, the final payment for design and engineering fees. On Jan. 3, 1905, Barnes and Sons received a final payment of $1,110.20 for overruns and the account was closed. Excluding the cost of furnishings, the totals came to $15,765.23.

Shortly after the cadets returned from Christmas leave, the laboratories and classrooms for chemistry, physics, and biology were moved from West Barrack. By the fall of 1905, the West Barrack renovation was complete and its first floor was ready for its use as a dormitory.